



AGENDA

Gainesville Work Session
Thursday, June 1, 2017, 9:00 AM
Administration Building, Board Room
300 Henry Ward Way, 3rd Floor
Mayor or Mayor Pro Tem Presides

DEPARTMENT ISSUES

Administrative Services	Resolution: Authority to Create an Inactive Position as Needed	Janeann Allison
Community Development	Public Hearing Item for the June 6, 2017 Council Meeting Request from Oak Hall Companies, LLC to annex a 26.16± acres tract located east of Dawsonville Highway and on the north side of the intersection of Strickland Drive and Sportsman Club Road, with road frontage on Karen Lane (a/k/a 0 and 2209 Karen Lane; 2106, 2234 and 2242 Sportsman Club Road; and 2049 Strickland Drive) and to establish zoning as Planned Unit Development (P-U-D). Ward Number: One. Tax Parcel Number(s): 00-109-003-001, 004, 005; 00-109B-000-001, 002A and 036. Request: Active adult community.	Matt Tate
Community Development	Public Hearing Item for the June 6, 2017 Council Meeting Request from Oak Hall Companies, LLC to annex a 50.81± acres tract located on the east side of Dawsonville Highway (S.R. 53), having road frontage on Dawsonville Highway, Ahaluna Drive, Skyview Drive and Strickland Drive (a/k/a 0 and 1758 Ahaluna Drive; 1508, 1550, 1740, 1746, 1758, 1760, 1934 and 1982 Dawsonville Highway; 300 and 301 Skyview Drive; 0, 2008 and 2016 Strickland Drive) and to establish zoning as Planned Unit Development (P-U-D) and General Business (G-B). Ward Number: One. Tax Parcel Number(s): 00-110-000-005 (part), 028, 032 (part) and 039; 00-110A-004-001 (part), 002A, 004 (part), 005 (part), 007 (part), 007A (part), 007X, 014 (part), 016 (part), 017 (part) and 018. Request: Mixed-use development.	Matt Tate
Community Development	Public Hearing Item for the June 6, 2017 Council Meeting Request from Oak Hall Companies, LLC to rezone a 157.98± acres tract located on the east side of Dawsonville Highway (S.R. 53), having road frontage on Ahaluna Drive, Skyview Drive, Strickland Drive, Lakeshore Circle, West Lake Drive and Karen Lane (a/k/a 0, 1264 and 1817 Ahaluna Drive; 1876 Dawsonville Highway; 2208 Karen Lane; 0 and 2029 Strickland Drive; 0 and 1489 West Lake Drive) from Residential-I-A (R-I-A), Residential-I (R-I), Planned Unit Development (P-U-D) and Regional Business (R-B) to Planned Unit Development (P-U-D) and General Business (G-B). Ward Number: One. Tax Parcel Number(s): 00-109B-000-003A; 00-110-000-001, 006, 030, 031, 034, 035, 036, 037 and 038; 01-110-001-006; 01-110A-004-022; 01-114-001-001, 026, 145 and 161. Request: Mixed-use development.	Matt Tate
Community Development	Public Hearing Item for the June 6, 2017 Council Meeting Request from Brightstone Transitions to amend the existing Planned Unit Development (P-U-D) zoning on a 0.50± acre tract located at the east side of Green Street, across from its intersection with Forrest Avenue (a/k/a 446 Green Street, NE).	Matt Tate

	Ward Number: Four. Tax Parcel Number(s): 01-024-001-005. Request: Group home and office.	
Community Development	Public Hearing Item for the June 6, 2017 Council Meeting Request from Montecito Development to rezone a 0.48± acre tract located on the south side of Enota Avenue, west of its intersection with Thompson Bridge Road (a/k/a 149 Enota Avenue, NW) from Office and Institutional (O-I) to Neighborhood Business (N-B), with a special use. Ward Number: Two. Tax Parcel Number(s): 01-074-004-001. Request: Convenience store with fuel pumps.	Matt Tate
Community Development	Public Hearing Item for the June 6, 2017 Council Meeting Request from Montecito Development for a special use on a 0.80± acre tract located at the southwest side of the intersection of Enota Avenue and Thompson Bridge Road (a/k/a 1281 Thompson Bridge Road, NW), having a zoning of Neighborhood Business (N-B). Ward Number: Two. Tax Parcel Number(s): 01-074-004-020. Request: Convenience store with fuel pumps.	Matt Tate
Community Development	Public Hearing Item for the June 6, 2017 Council Meeting Request from Gainesville Market, LLC for a special use on a 5.0± acres tract located west of Shallowford Road within the Gainesville Market Shopping Center (a/k/a 600 Shallowford Road), having a zoning of General Business (G-B). Ward Number: Five. Tax Parcel Number(s): 01-119C-001-029. Request: Commercial outdoor recreational facility.	Matt Tate
Community Development	Public Hearing Item for the June 6, 2017 Council Meeting Request from Manor Lake Development, LLC for a special use on a 9.24± acres tract located on the northwest side of McEver Road, between Browns Bridge Road and Orchard Brook Drive (a/k/a 2900 McEver Road), having a zoning of Office and Institutional (O-I) and Residential-I (R-I). Ward Number: Four. Tax Parcel Number(s): 08-022-000-005. Request: Assisted living facility.	Matt Tate
Community Development	Public Hearing Item for the June 6, 2017 Council Meeting Request from Carriage North, LLC for a special use on a 0.71± acre tract located on the southwest side of the terminus of Corporate Drive, west of Browns Bridge Road (a/k/a 2425 Corporate Drive), having a zoning of General Business (G-B). Ward Number: Five. Tax Parcel Number(s): 08-007-001-042. Request: Helipad.	Matt Tate

CITY MANAGER ISSUES

Resolution: Lease Agreement for Installation of Public Art	Angela Sheppard
Resolution: Fiscal Year 2018 Budget	Jeremy Perry
Ordinance: Fiscal Year 2018 Ad Valorem Tax Rate - Board of Education	Jeremy Perry
Ordinance: Fiscal Year 2018 Ad Valorem Tax Rate - City of Gainesville	Jeremy Perry

MAYOR/COUNCIL ISSUES

Appointment(s): Metropolitan Planning Organization Citizens Advisory Committee	Danny Dunagan
Ex-Officio Report(s)	

CITY ATTORNEY ISSUES

CITY CLERK ISSUES

EXECUTIVE SESSION

ADJOURNMENT

**THE CALLED MAYOR/COUNCIL MEETING WILL
BEGIN IMMEDIATELY AFTER THE WORK SESSION.**

Final: Tuesday, May 30, 2017, 9:20 AM

CITY OF GAINESVILLE

WORKSESSIONREQUEST

Date Submitted: 5/22/2017
Presenter: Janeann Allison
Item of Business: Resolution: Authority to Create an Inactive Position as Needed
Meeting Date: 6/1/2017

Purpose of Request:

To give the City Manager authority to create an inactive position as needed.

History/Background:

Facts & Issues for Consideration:

On occasion, City employees are placed on long term service, or choose to serve in an active duty capacity, ranging from several months to several years, in the United States Military leaving a void in the Department.

This authority would allow the City Manager, to assist the Departments by creating an inactive position in the affected Department. The employee serving in the military would move to that inactive position for the time period they are away from the City of Gainesville. Upon their return to work with the City, if no vacant positions are available, this created position would become active and absorbed back into the department through attrition or further budgetary process.

Department Recommendation:

Approval of Resolution.

Department Director:

Janeann Allison

If funding is involved, are funds approved within the current budget?

N/A

Amount Requested:

Source of Funds:

Finance Comments:

Administrative Comments:

ATTACHMENTS:

Description	Type
☐ Authority to Create an Inactive Position as Needed	Resolution

RESOLUTION BR-2017 - ____

AUTHORITY TO CREATE AN INACTIVE POSITION AS NEEDED

WHEREAS, the City of Gainesville strives to hire and retain the most qualified personnel possible in order to provide efficient services to the citizens of Gainesville; and

WHEREAS, the City frequently has employees that are serving in the United States Military; and

WHEREAS, the City is in full support of its employees and their service in the United States Military; and

WHEREAS, on occasion, City employees are placed on long term service, or choose to serve in an active duty capacity, ranging from several months to several years, in the United States Military leaving a void in the department; and

WHEREAS, the City Manager, can assist us with following the law, and supporting our employees, the military, and our departments by creating an inactive position within the affected department; and

WHEREAS, the employee currently serving our country will be moved into the inactive position, while still being afforded the rights and benefits under the law, and the Department will be able to fill the vacated position.

THEREFORE, BE IT RESOLVED THAT the governing body for the City of Gainesville hereby authorizes the City Manager to create an inactive position as needed to ensure the services to the citizens of Gainesville continue at the highest level possible.

BE IT FURTHER RESOLVED THAT once the employee in the inactive position returns to full-time status with the City, the position will be absorbed back into the department through attrition or further budgetary processes.

Adopted this ____ day of _____, 2017.

C. Danny Dunagan, Jr., Mayor

This is to certify that I am City Clerk of the City of Gainesville. As such, I keep its official records, including its minutes. In that capacity, my signature below certifies this resolution was adopted as stated and will be recorded in the official minutes.

ATTEST:

Denise O. Jordan, City Clerk

CITY OF GAINESVILLE

WORKSESSIONREQUEST

Date Submitted: 5/22/2017

Presenter: Matt Tate

Item of Business: **Public Hearing Item for the June 6, 2017 Council Meeting**
Request from **Oak Hall Companies, LLC** to annex a 26.16± acres tract located east of Dawsonville Highway and on the north side of the intersection of Strickland Drive and Sportsman Club Road, with road frontage on Karen Lane (a/k/a **0 and 2209 Karen Lane; 2106, 2234 and 2242 Sportsman Club Road; and 2049 Strickland Drive**) and to establish zoning as Planned Unit Development (P-U-D). **Ward Number: One.** Tax Parcel Number(s): 00-109-003-001, 004, 005; 00-109B-000-001, 002A and 036. **Request: Active adult community.**

Meeting Date: 6/1/2017

Purpose of Request:

The applicant is proposing to annex the subject property with a zoning of Planned Unit Development (P-U-D). The property is currently zoned Planned Residential Development (P-R-D) within Hall County and is contiguous to the city limits to the east. Presently, the tract of land consists of six parcels which are heavily wooded and contain three single-family homes. The property was previously rezoned in 2006 and later amended in 2008 in Hall County for a similar proposal. The applicant is requesting sanitary sewer services and is required to annex as the property is now adjacent to the city limits. The proposed development consists of 90 active adult units to include a mixture of terrace homes / townhomes. The development will include a community clubhouse and pool. Access is proposed from Karen Lane and storm water detention is proposed underground. It is the intent for the proposal to complement the adjacent mixed-use development.

History/Background:

On June 1, 2016, the applicant withdrew their annexation application for the same property.

All three **Oak Hall Companies, LLC** agenda items were tabled at the March 14, 2017 PAB meeting after staff reviewed the requests and determined that the applicant needed to provide additional traffic data prior to staff giving an official recommendation. The PAB tabled the items for a period of 60-days until the May 9, 2017 Planning and Appeals Board meeting.

Facts & Issues for Consideration:

Department Recommendation:

Planning staff recommended approval with 16 conditions.

The Planning and Appeals Board recommended approval with 16 conditions.

See the PAB Recommendation Report for details and excerpts from the PAB meeting minutes.

SAMPLE MOTIONS

Approve Annexation

I move to conditionally approve first reading of an ordinance to annex the 26.16 acres subject property with 16 conditions.

Approve Zoning

I move to conditionally approve first reading of an ordinance to establish zoning of the 26.16 acres subject property as Planned Unit Development with 16 conditions.

Deny
I move to deny this annexation request.

Department Director:
Rusty Ligon

If funding is involved, are funds approved within the current budget?
N/A

Amount Requested:

Source of Funds:

Finance Comments:

Administrative Comments:

ATTACHMENTS:

Description		Type
☐	Legal Ad	Legal Ad
☐	PAB Recommendation Report	Report
☐	Proposed Annexation Ordinance	Ordinance
☐	Proposed Zoning Ordinance	Ordinance
☐	Location Maps	Backup Material
☐	Narrative	Backup Material
☐	Reservation of Constitutional Rights	Backup Material
☐	Survey	Backup Material
☐	Site Plan	Backup Material
☐	Overall Concept Plan	Backup Material
☐	Elevations and Floor Plans	Backup Material
☐	Traffic Impact Study	Backup Material
☐	Brochure	Backup Material
☐	Handout from Applicant at PAB Meeting	Backup Material
☐	Letters of Opposition	Backup Material

COMBINED LEGAL AD
Gainesville Planning and Appeals Board
Gainesville City Council

Publish Sunday, April 23, 2017
THE TIMES

NOTICE OF PLANNING AND APPEALS BOARD PUBLIC HEARING

Notice is hereby given that the **Gainesville Planning and Appeals Board** will conduct a public hearing on **Tuesday, May 9, 2017** at **5:30 p.m.** in the **Gainesville Justice Center** (Municipal Courtroom at the Public Safety Complex), 701 Queen City Parkway in midtown Gainesville on the following requests:

- 1) Request from **Oak Hall Companies, LLC** to annex a 26.16 acres tract located east of Dawsonville Highway and on the north side of the intersection of Strickland Drive and Sportsman Club Road, with road frontage on Karen Lane (a/k/a **0 and 2209 Karen Lane; 2106, 2234 and 2242 Sportsman Club Road; and 2049 Strickland Drive**) and to establish zoning as Planned Unit Development (P-U-D).
Ward Number: One
Tax Parcel Number(s): 00-109-003-001, 004, 005; 00-109B-000-001, 002A and 036
Request: Active adult community
- 2) Request from **Oak Hall Companies, LLC** to annex a 50.81± acres tract located on the east side of Dawsonville Highway (S.R. 53), having road frontage on Dawsonville Highway, Ahaluna Drive, Skyview Drive and Strickland Drive (a/k/a **0 and 1758 Ahaluna Drive; 1508, 1550, 1740, 1746, 1758, 1760, 1934 and 1982 Dawsonville Highway; 300 and 301 Skyview Drive; 0, 2008 and 2016 Strickland Drive**) and to establish zoning as Planned Unit Development (P-U-D) and General Business (G-B).
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Request: Mixed-use development
- 3) Request from **Oak Hall Companies, LLC** to rezone a 157.98± acres tract located on the east side of Dawsonville Highway (S.R. 53), having road frontage on Ahaluna Drive, Skyview Drive, Strickland Drive, Lakeshore Circle, West Lake Drive and Karen Lane (a/k/a **0, 1264 and 1817 Ahaluna Drive; 1876 Dawsonville Highway; 2208 Karen Lane; 0 and 2029 Strickland Drive; 0 and 1489 West Lake Drive**) from Residential-I-A (R-I-A), Residential-I (R-I), Planned Unit Development (P-U-D) and Regional Business (R-B) to Planned Unit Development (P-U-D) and General Business (G-B).
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Request: Mixed-use development
- 4) Request from **Brightstone Transitions** to amend the existing Planned Unit Development (P-U-D) zoning on a 0.50± acre tract located at the east side of Green Street, across from its intersection with Forrest Avenue (a/k/a **446 Green Street, NE**).
Ward Number: Four
Tax Parcel Number(s): 01-024-001-005
Request: Group home and office

- 5) Request from **Montecito Development** to rezone a 0.48± acre tract located on the south side of Enota Avenue, west of its intersection with Thompson Bridge Road (a/k/a **149 Enota Avenue, NW**) from Office and Institutional (O-I) to Neighborhood Business (N-B), with a special use.
 Ward Number: Two
 Tax Parcel Number(s): 01-074-004-001
 Request: Convenience store with fuel pumps
- 6) Request from **Montecito Development** for a special use on a 0.80± acre tract located at the southwest side of the intersection of Enota Avenue and Thompson Bridge Road (a/k/a **1281 Thompson Bridge Road, NW**), having a zoning of Neighborhood Business (N-B).
 Ward Number: Two
 Tax Parcel Number(s): 01-074-004-020
 Request: Convenience store with fuel pumps
- 7) Request from **Gainesville Market, LLC** for a special use on a 5.0± acres tract located west of Shallowford Road within the Gainesville Market Shopping Center (a/k/a **600 Shallowford Road**), having a zoning of General Business (G-B).
 Ward Number: Five
 Tax Parcel Number(s): 01-119C-001-029
 Request: Commercial outdoor recreational facility
- 8) Request from **Manor Lake Development, LLC** for a special use on a 9.24± acres tract located on the northwest side of McEver Road, between Browns Bridge Road and Orchard Brook Drive (a/k/a **2900 McEver Road**), having a zoning of Office and Institutional (O-I) and Residential-I (R-I).
 Ward Number: Four
 Tax Parcel Number(s): 08-022-000-005
 Request: Assisted living facility
- 9) Request from **Carriage North, LLC** for a special use on a 0.71± acre tract located on the southwest side of the terminus of Corporate Drive, west of Browns Bridge Road (a/k/a **2425 Corporate Drive**), having a zoning of General Business (G-B).
 Ward Number: Five
 Tax Parcel Number(s): 08-007-001-042
 Request: Helipad

NOTICE OF PUBLIC HEARING ON PROPOSED AMENDMENTS TO THE GAINESVILLE ZONING MAP

Notice is hereby given that the **Gainesville City Council** will conduct a public hearing on **Tuesday, June 6, 2017 at 5:30 p.m.** in the **Gainesville Justice Center** (Municipal Courtroom at the Public Safety Complex), 701 Queen City Parkway in midtown Gainesville on the following requests:

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 Request: Mixed-use development

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 Ward Number: Four
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 Request: Group home and office

- 5) Request from **Montecito Development** to rezone a 0.48± acre tract located on the south side of Enota Avenue, west of its intersection with Thompson Bridge Road (a/k/a **149 Enota Avenue, NW**) from Office and Institutional (O-I) to Neighborhood Business (N-B), with a special use.
 Ward Number: Two
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 Request: Convenience store with fuel pumps

- 6) Request from **Montecito Development** for a special use on a 0.80± acre tract located at the southwest side of the intersection of Enota Avenue and Thompson Bridge Road (a/k/a **1281 Thompson Bridge Road, NW**), having a zoning of Neighborhood Business (N-B).
 Ward Number: Two
 Tax Parcel Number(s): 01-074-004-020
 Request: Convenience store with fuel pumps

- 7) Request from **Gainesville Market, LLC** for a special use on a 5.0± acres tract located west of Shallowford Road within the Gainesville Market Shopping Center (a/k/a **600 Shallowford Road**), having a zoning of General Business (G-B).
 Ward Number: Five
 Tax Parcel Number(s): 01-119C-001-029
 Request: Commercial outdoor recreational facility

- 8) Request from **Manor Lake Development, LLC** for a special use on a 9.24± acres tract located on the northwest side of McEver Road, between Browns Bridge Road and Orchard Brook Drive (a/k/a **2900 McEver Road**), having a zoning of Office and Institutional (O-I) and Residential-I (R-I).

Ward Number: Four

Tax Parcel Number(s): 08-022-000-005

Request: Assisted living facility

- 9) Request from **Carriage North, LLC** for a special use on a 0.71± acre tract located on the southwest side of the terminus of Corporate Drive, west of Browns Bridge Road (a/k/a **2425 Corporate Drive**), having a zoning of General Business (G-B).

Ward Number: Five

Tax Parcel Number(s): 08-007-001-042

Request: Helipad

Additional information is available from the Community Development Department, Planning Division, by calling 770-531-6570.

NOTE: In accordance with Georgia law, anyone who wishes to express opposition to the proposed zoning action, and has made, within two years immediately preceding the filing of the proposed zoning action, campaign contributions aggregating \$250 or more to a local government official who will consider the application, shall file a disclosure of contribution(s) with the Planning Division at least five (5) days prior to the first reading of the proposed zoning action by the City Council. (OCGA § 36-67A-3 3 {c})

**GAINESVILLE PLANNING and APPEALS BOARD
RECOMMENDATION**

Applicant Oak Hall Companies, LLC
Property Owners Kibisons, LLLP
Location 0 and 2209 Karen Lane; 2106, 2234 and
2242 Sportsman Club Road; 2049 Strickland
Drive
Request Annex 26.16[±] acres with Planned Unit
Development (P-U-D) zoning
Ward One
Proposed Use Active adult community
Planning Division Staff Recommendation **Approval, with conditions**
Planning and Appeals Board Recommendation **Approval, with conditions**
Date May 9, 2017

▪ **Applicant's Proposal and Background Information**

The subject property was rezoned to Planned Residential Development (P-R-D) in Hall County during 2006 and was later amended with conditions in 2008 for a similar proposal which included a total of 95 age-restricted residential units containing a mixture of 40 terrace homes, 28 cottages, 27 condominiums and a clubhouse/pool. Presently, the tract of land consists of six parcels which are heavily wooded and contain three single-family homes. The property has road frontage on Sportsman Club Road, Strickland Drive and Karen Lane.

The applicant's current request proposes to annex the subject 26.16[±] acres tract of land with a zoning of Planned Unit Development (P-U-D). The property is contiguous to the city limits to the east. The applicant is requesting sanitary sewer services and is required to annex as the property is now adjacent to the city limits of Gainesville. The proposal is intended to compliment the adjacent 208.79[±] acres proposed mixed-use development and is proposed as an "age in place" community.

The proposal consists of 90 age-restricted, active adult units that will comply with applicable U. S. Department of Housing and Urban Development (HUD) rules for age-restricted communities. Specifically, the request proposes 90 residential attached terrace home / townhome units. The development will include a common green space/park areas, community clubhouse and pool. One access road is proposed from Karen Lane and storm water detention is proposed underground. Some of the proposed development standards are listed below. A full description is provided with the application.

Residential

- Proposed Density: 3.43 units/acre
- Average anticipated home price: \$300,000
- Proposed Minimum House Size: 1,100 square feet
- Maximum Building Height: 30-feet

- Building Materials: No vinyl or aluminum siding allowed. Exterior facade may include brick, stone, hard coat stucco, hardiboard or a combination thereof. Accent material such as copper roofing, cedar shake, hardiboard or a combination of such materials may be used not to exceed 50% of the facade. Roofing materials may include cedar shake, architectural shingles or metal as appropriate to the architectural style of each home.
- Each unit will have a minimum of 18-feet from the back of the sidewalk or 20-feet from the back of the curb when there is no sidewalk.
- Setbacks: (excluding steps, roof overhangs, chimneys, bay windows and patios) Zero foot (0') – Front, side and interior rear; (10') separation between blocks of units.
- Buffer: 50-foot perimeter buffer against all adjacent properties and roads consisting of a 25-foot undisturbed perimeter buffer and a 25-foot planted buffer.
- Water and Sewer: Provided by the City of Gainesville. When all phases are complete water will be looped from Ahaluna Drive to Strickland Drive. Sewer will require several pump stations with gravity to Dawsonville Highway which has ample capacity.
- Streets: All interior streets and driveways are proposed to be publically owned and maintained. 50-foot right-of-way widths; 24-foot pavement widths; 4-foot wide sidewalks on at least one side of each residential road. It is intended that the side streets serving the terrace homes/townhomes will be private.
- Parking: Each unit will have a two car garage and parking pad (4 spaces total); An additional 56± guest parking spaces are planned.
- Garbage Pickup: Provided by the City of Gainesville.

▪ **Adjacent Land Use and Zoning**

The subject property is positioned near the northwestern edge of the city limits between Dawsonville Highway (S.R. 53) and Lake Sidney Lanier. Single-family homes and undeveloped land are located on all sides of the subject property. Most of these homes are located within unincorporated Hall County and are zoned Agricultural Residential-III (AR-III), Residential-I (R-I) and Vacation Cottage (V-C) located off of Sportsman Club Road, Strickland Drive, Karen Lane, Boy Scout Camp Road, Mount Crest Place and Whippoorwill Lane. The adjacent land in the city limits is zoned Planned Unit Development (P-U-D) to the south of which is being considered for rezoning for a mixed-use development.

Commercial properties can be found primarily to the south located along Dawsonville Highway. Most notably the Martin Boat Dock Company is located adjacent and south of the property across Strickland Drive. Other uses include an auto repair shop, various retail stores, restaurants, convenience store/gas station, mini warehouses, boat sales, and multi-family apartments. These properties are zoned Highway Business (H-B) within Hall County and General Business (G-B), Regional Business (R-B), Residential-II (R-II) and Planned Unit Development (P-U-D) within Gainesville. Recent significant development includes the Northlake Square shopping center and several outparcel developments located to the south zoned General Business (G-B) within Gainesville.

▪ **Traffic Impact Study Summary**

A Traffic Impact Study was completed for the proposed development on January 24, 2017 and later revised on April 7, 2017 by Marc R. Acampora, PE, LLC Traffic Engineering. Most of the traffic counts were collected on Thursday, November 17, 2016 from 7:00 A.M to 9:00 A.M. and from 4:30 P.M. to 6:30 P.M. The counts at the North Lake Square entrance were collected on Wednesday, March 22, 2017. The magnitude of the side street volumes was found to be very

comparable with the counts performed for this current study, and generally slightly higher. However, the volumes on the major streets were consistently notably higher for this current study. Historic Georgia DOT 24-hour traffic counts were also collected in the vicinity from the year 2015. The annual daily traffic volume on SR 53 north of Sportsman Club Road was 25,600 vehicles per day. The entire project is expected to generate 189 new trips in the a.m. peak hour, 274 new trips in the p.m. peak hour, and 3,387 new trips during a 24-hour weekday. The study extended one mile from the limits of the proposed site and included the following ten intersections:

1. Sportsman Club Road at Strickland Drive
2. Dawsonville Highway at Sportsman Club Road
3. Dawsonville Highway at Avonlea Way
4. Dawsonville Highway at Canterbury Road
5. Dawsonville Highway at Ahaluna Drive
6. Dawsonville Highway at North Lake Square Shopping Center Entrance
7. Dawsonville Highway at Beechwood Boulevard
8. Dawsonville Highway at McEver Road
9. Dawsonville Highway at Green Hill Circle
10. Dawsonville Highway at Shallowford Road

A summary of the study revealed that future operations, upon the project being fully constructed and operational, at the below intersections would have extremely heavy traffic flows rated LOS F. LOS "F" is a condition of extremely heavy flow, with frequent stoppage and very slow speeds. Traffic is unstable and often comes to a complete halt. These intersections include:

1) A.M. and P.M. peak hour southbound approach at Dawsonville Highway at Sportsman Club Road; 2) A.M. and P.M. peak hour eastbound and westbound left turn at Dawsonville Highway and Avonlea Way; 3) A.M. and P.M. peak hour eastbound and westbound left turn at Dawsonville Highway and Canterbury Road; 4) A.M. and P.M. peak hour westbound approach at Dawsonville Highway and Ahaluna Drive; 5) A.M. and P.M. peak hour eastbound left turn at Dawsonville Highway and Beechwood Boulevard; 6) P.M. peak hour northbound Dawsonville Highway at McEver Road; 7) A.M. / P.M. peak hour eastbound approach at Dawsonville Highway and McEver Road; 8) P.M. peak hour westbound approach at Dawsonville Highway at Green Hill Circle; and 9) P.M. peak hour eastbound approach at Dawsonville Highway and Shallowford Road.

The summary of findings and recommendations of the study are as follows:

Sportsman Club Road at Strickland Drive

No changes are recommended at this intersection for the existing, no-build, or Future Phase One and Future Phase Two conditions.

Dawsonville Highway at Sportsman Club Road

The side street delays at this intersection are significant now and will increase in the future. 1) While a warrant analysis was not performed as part of this traffic impact study, the low side street volumes make the intersection an unlikely candidate for signalization. The potential for justifying signalization will increase in the future, but side street volumes will continue to remain moderate. 2) This study also identifies the need for a northbound exclusive right turn lane to be added on GA 53 at Sportsman Club Road. Northbound and southbound exclusive left turn lanes are currently provided at this median break.

Dawsonville Highway at Avonlea Way

Side street delays are high at the existing eastbound approach of Avonlea Way, and these delays will increase in the no-build and future conditions. The side street volumes are predominately right turners, with extremely low left turn volumes. 1) The Lanier Tract will introduce a new fourth leg at the Avonlea Way intersection (there is an existing private residential driveway at this median break, which would be replaced by the Lanier Tract access). Northbound and southbound exclusive left turn lanes are currently provided at this median break. The volumes exiting the new Lanier Tract access will be low and many of them will be right turners. Therefore, this intersection is considered unlikely to be a candidate for signalization in the existing, no-build, and Future Phases One and Two, even with the addition of the Lanier Tract trips. 2) The Georgia DOT right turn lane analysis suggests that a northbound exclusive right turn lane should be considered at this access and the site plan includes the addition of this lane. 3) The new site access should be constructed with one entering lane and one exiting lane. 4) The side street approach exiting the site should be controlled by side street stop sign and accompanying stop bar.

Dawsonville Highway at Canterbury Road

Side street delays are high on the existing eastbound approach of Canterbury Road and these delays will increase in the no-build and future conditions. As with Avonlea Way, the side street volumes at this intersection are predominately right turners, with extremely low left turn volumes. For this reason, this intersection is considered an unlikely candidate for signalization in the existing, no-build, and Future Phase One conditions. The outparcel access will align with Canterbury Road and the Lanier Tract will connect through the outparcels to GA 53 at this location. Northbound and southbound exclusive left turn lanes are currently provided at this median break. A short southbound deceleration lane is provided on GA 53 at Canterbury Road, though this lane does not appear to have been constructed to current Georgia DOT design standards. The northbound right turn volume will be low in the Future Phase One condition, and the Georgia DOT right turn lane analysis indicates that no decel lane will be required for Future Phase One. 1) However, with the future development of the retail outparcels, by others, the right turn volumes will be significant, primarily due to the outparcels, and a northbound deceleration lane is recommended for this location. The Future Phase Two side street volumes exiting the outparcels will be notable and this intersection will likely be a prime candidate for signalization upon development of the outparcels. 2) It is recommended that at such time as the outparcels are planned to be developed, a signal warrant study be performed for this intersection according to the standards set forth in the Federal Highway Administration's *Manual On Uniform Traffic Control Devices* (MUTCD). 3) This new access at the Canterbury Road median break should be constructed with at least one entering lane and an exiting shared left/through lane and an exclusive right turn lane. The two westbound lanes are in anticipation of the development of the outparcels. With only the Lanier Tract volumes, only one entering and one exiting lane would be required. 4) Until signalization is warranted, the side street approach exiting the outparcel tracts should be controlled by side street stop sign and accompanying stop bar.

Dawsonville Highway at Ahaluna Drive

1) The review of Georgia DOT auxiliary lane standards indicates that a northbound right turn lane should be added on GA 53 at Ahaluna Drive in the existing condition. 2) The future volumes exiting Ahaluna Drive would benefit from the addition of a second westbound lane, resulting in a shared left/through lane and an exclusive right turn lane on Ahaluna Drive at GA 53. This second lane would reduce the demand for side street green time on the signal and improve side street levels of service. It was noted that the need for relocation of the signal steel strain pole, a drainage structure, and possibly a large brick monument sign, may reduce the feasibility of adding this second westbound lane. 3) With the addition of Lanier Tract DRI

southbound left turns, consideration should be given to adding a protected / permissive southbound left turn phase, which would match the existing protected / permissive phasing for the northbound left turn. The Georgia DOT left turn phase warrants are not satisfied for this southbound left turn based on volume projections alone. However, other factors such as high speeds on GA 53 and the senior residents expected to reside at the Lanier DRI, merit consideration. 4) Field observations suggest that there may be an opportunity to shorten the cycle length, which would reduce time spent by vehicles waiting on the side street.

Dawsonville Highway at North Lake Square Access

This intersection operates acceptably in all analysis conditions. The side street approaches do incur some delays at all times, primarily due to the long cycle length on the signal, which allocates most of the green time, appropriately, to GA 53. The side street delays are incurred by minimal volumes in the a.m., since the retail served by the side streets are generally not operational at that time. Higher volumes incur the side street delays in the p.m., when the retail is operational. However, overall this intersection operates appropriately and no mitigation is recommended for any analysis condition.

Dawsonville Highway at Beechwood Boulevard

At the GA 53 / Beechwood Boulevard intersection, it is noted that a fourth leg is currently stubbed-out across from Beechwood Boulevard and a retail development is under construction on that site. Auxiliary left and right turn lanes are provided on GA 53 serving Beechwood Boulevard and the future fourth leg appears to be designed for right-in / right-out access only, with a northbound deceleration lane provided on GA 53. No other changes are recommended at this intersection based on this study.

Dawsonville Highway at McEver Road

The lane configuration and signal phasing at this intersection are generally appropriate. 1) The existing southbound right turn volume is sufficiently-high (828 a.m., 481 p.m.) to merit consideration of the addition of a second exclusive right turn lane and/or the addition of a protected right turn overlap phase. The justification for adding this phasing and/or second right turn lane will increase as volumes increase. 2) Finally, there may be an opportunity to reduce the cycle length and fine-tune the signal timing at this intersection.

Dawsonville Highway at Green Hill Circle

This signalized intersection incurs high side street delays, again, due to the allocation of the majority of green time to the Dawsonville Highway approaches. 1) There may be an opportunity to reduce the cycle length and fine-tune the signal timing at this intersection.

Dawsonville Highway at Shallowford Road

The lane configuration and signal phasing are appropriate for this intersection. 1) Reduction of the cycle and optimization of the allocation of green time could reduce delays and queuing at this intersection.

▪ Other Departmental Comments

The Gainesville Public Works Department has recommended additional transportation improvements which are stated within the traffic zoning conditions listed below.

The Gainesville Department of Water Resources states that the City currently has adequate water and sanitary capacity for the proposed development. The developer will be required to construct extensions for both water and sanitary sewer to connect the existing City facilities,

along with pump stations required for areas of the development unable to utilize gravity sanitary sewer for conveyance.

The Gainesville Police Department's primary concern will be the increased traffic accidents from the additional cars on the Dawsonville Highway corridor.

▪ **Zoning History**

The following zoning actions have taken place in the immediate area during the last ten years:

2015 – A request by West Ahaluna, LLC to annex a 8.74± acres tract with a zoning of Residential-I-A (R-I-A) located at 0 and 1264 Ahaluna Drive was conditionally approved for no proposed use.

2014 – A request by West Ahaluna, LLC to annex a 70.23± acres tract with a zoning of Planned Unit Development (P-U-D) located at 0 and 1817 Ahaluna Drive; 1982 Dawsonville Highway; 2208 Karen Lane; 2008, 2016 and 2029 Strickland Drive was approved with conditions. In addition, the same applicant requested to rezone a 31.93± acres tract located at 0 Ahaluna Drive NW and 1489 West Lake Drive NW from Residential-I (R-I) to Planned Unit Development (P-U-D) which was also approved with conditions for a 199-lot single-family subdivision.

2013 – A request by America's Home Place, Inc. to rezone a 25.11± acres tract located at 0 and 1198 Dawsonville Highway; 1232 Ahaluna Drive and 1162 Lakeshore Circle from Residential-I (R-I), Residential-II (R-II) and Office and Institutional (O-I) to General Business (G-B) zoning for a commercial shopping center was approved with conditions.

2012 – A request by America's Home Place, Inc. to rezone a 4.711± acres tract located at 0, 1122, 1138, 1162 and 1198 Dawsonville Highway from Residential-II (R-II), Office and Institutional (O-I) and General Business (G-B) to General Business (G-B) zoning for retail, restaurant and vehicle service uses was approved with conditions.

2011 – A request by Kauffman Tire Inc. for a special use within Regional Business (R-B) zoning on a 1.19± acres tract located at 801 & 805 Dawsonville Highway was approved with conditions for an automotive tire and service store.

2010 – A request by Bill Dupree to annex a 7.11± acres tract with General Business (G-B) zoning and rezone a 2.44± acres tract from Residential-II (R-II) to General Business (G-B) located at 0, 1293, 1297 and 1139 Dawsonville Highway was approved with conditions for a business center with retail, office and restaurant uses.

▪ **Staff Analysis**

(1) Is the proposed use suitable in view of the zoning and development of adjacent and nearby property?

The adjacent and nearby property includes mostly single-family homes located within unincorporated Hall County and are zoned Agricultural Residential-III (AR-III), Residential-I (R-I) and Vacation Cottage (V-C). The existing housing consists of a mixture of small cottage homes and newer large lake homes on lot sizes ranging from 10,000 square feet to over five acres. The proposed use was previously planned and was approved in Hall County for a 95-unit development. The applicant is proposing a similar development with a total of 90-units which is suitable given the approved use for the property.

(2) Will the proposed use adversely affect the existing use or usability of adjacent or nearby property?

Given the proposal is for an active adult community, there should be less of an impact on the surrounding properties, roads and the Gainesville City School System than if the property were developed as a traditional single-family subdivision.

The proposed use will add additional traffic and have impacts to traffic movements along Dawsonville Highway and its intersection with Sportsman Club Road. Transportation improvements as identified within the traffic study and zoning conditions will be necessary to help reduce negative impacts to Dawsonville Highway and nearby intersections.

The proposed development is located adjacent to Lake Lanier. Environmental impacts should be properly mitigated through improved storm water measures. Sedimentation ponds and bioretention areas will be required within the development to help protect the lake. The applicant is proposing underground storm water detention for the development.

(3) Is the proposed use compatible with the purpose and intent of the Comprehensive Plan?

The Gainesville 2030 Future Development Map for the City of Gainesville places the subject property within the *Low-Medium Density Residential* land use category which includes areas containing or planned for single-family detached or semi-detached housing at densities up to 4.0 dwelling units per acre. The proposed Planned Unit Development (P-U-D) zoned portion of the proposal seeks a density of 3.43 dwelling units per acre.

According to the Character Area map for the City of Gainesville, the subject property is located within the *Suburban Residential* character area. The goal of this character area is to preserve older, stable residential subdivisions and encourage newer projects with smaller lot sizes, pedestrian infrastructure, and buildings patterned after traditional local housing, possibly containing a small neighborhood-serving "village center". Mixed-use neighborhood design is desired but not required. In areas where natural features or sensitive environments are important, cluster housing or conservation subdivision design may be appropriate. Community access points and shoreline restoration are encouraged as part of future development on greenfield parcels between Dawsonville Highway and Lake Lanier. Land uses allowed within this area include low-density residential, medium density residential, multi-family residential, public / institutional, commercial, and parks / recreation / conservation and mixed-use.

(4) Are there substantial reasons why the property cannot or should not be used as currently zoned?

The development proposes to utilize city water and sewer services, which requires the property to be annexed when contiguous to the city limits. The subject property was previously approved for a similar project in Hall County; however the property was not adjacent to the city limits at that time.

(5) Will the proposed use cause an excessive or burdensome use of public facilities or services, including but not limited to streets, schools, water or sewer utilities, and police or fire protection?

As the development builds out, additional vehicular traffic will increase at the intersection of Dawsonville Highway and Sportsman Club Road. The proposed use did not meet the thresholds to require an independent Traffic Impact Study. However, the proposed 90-residential units were added to the Traffic Impact Study submitted with the adjacent mixed-use

development. A summary of this study is provided above within this staff recommendation report. According to the study this 90-unit development at build out would generate an average of 290 new trips per weekday, 18 A.M. peak hour trips and 23 P.M. peak hour trips at full occupancy. The entire project combined will generate 189 new trips in the a.m. peak hour, 274 new trips in the p.m. peak hour, and 3,387 new trips during a 24-hour weekday. The improvements as identified within the study and the proposed zoning conditions are strongly recommended by staff to help mitigate some of the traffic concerns.

The proposed annexation will increase the load on water and sewer services; however, sewer and water is available and there is sufficient capacity to serve the development.

Existing public safety services respond to the adjacent and nearby properties and Gainesville Fire Station #1 is located approximately 3.8 miles away from the furthest proposed residential lot. As well, Hall County Fire Station #13 off of Sardis Road is also located approximately 3.4 miles away. Gainesville and Hall County currently have an “automatic aid” agreement for emergency services that was first established in 1997. The agreement allows the agency that is closest to an incident to respond despite municipal boundaries. Regardless, the amount of proposed single-family homes will put additional strain on fire services due to the subject properties proximity to the existing city limits which could impact the City’s ISO rating. However, the adjacent mixed-use development proposes a 3.0 acres tract of land to be reserved for a future City fire station.

According to the Gainesville Police Department, increased traffic accidents from the additional cars on the Dawsonville Highway corridor are a primary concern.

Impacts to the school system are expected to be minimal as the development is designed as an age restricted community for individuals over the age of 55. However, there may be a small number of school aged children that will live in the community. No comments or concerns were received by the school system regarding this request.

(6) Is the proposed use supported by new or changing conditions not anticipated by the Comprehensive Plan or reflected in the existing zoning on the property or surrounding properties?

The proposed use is consistent with the Gainesville Comprehensive Plan and is within acceptable density range. The property is located within a residential area between Dawsonville Highway and Lake Lanier, and is just north of Gainesville’s most active regional commercial corridors. Existing uses along Dawsonville Highway south of the bridge consists of mostly commercial in nature excluding a few large apartment complex developments (Park Creek, Carrington Park and Lake Lanier Club), and some isolated single-family homes within Hall County. Numerous properties fronting this segment of Dawsonville Highway have been developed for non-residential purposes over the past 15 to 20 years. Some examples of this include the Northlake Square shopping center, Carrington Park retail center, Village Shoppes of Gainesville, Home Depot, Best Buy, McEver Corners shopping center, Texas Roadhouse, Olive Garden, Cheddar’s, Buffalo Wild Wings and a child day care facility. A 94-room Holiday Inn Express is currently under construction behind the Cheddar’s restaurant.

The proposed active-adult community appears to be of high quality and would serve as an appropriate transitional use for the area between Dawsonville Highway and the residential uses adjacent to Lake Lanier. As well, the proposed use is consistent with the housing proposed within the adjacent mixed-use development proposed to the south.

(7) Does the proposed use reflect a reasonable balance between the promotion of the public health, safety, morality, or general welfare and the right to unrestricted use of property?

Due to the subject property's proximity to existing residential and commercial land uses, the proposed use, with the recommended conditions of zoning appears to promote a reasonable balance between the interests of the City, the property owner, and neighboring residents and property owners.

▪ **Staff Recommendation**

The Planning Division staff is recommending **conditional approval** of this request based on the Comprehensive Plan and the adjacent residential and non-residential land uses.

Conditions

Development Standards

1. The development standards within the applicant's narrative, concept plan and architectural renderings shall be made part of the zoning ordinance, and shall be subject to the Community Development Director approval. Any zoning conditions adopted as part of this zoning ordinance that conflict with the applicant's narrative, concept plan and architectural renderings shall take precedence over the applicant's development standards.
2. The approved use for the property shall be limited to an active adult community for seniors not to exceed 90 terrace homes / townhome units as stated within the applicant's revised concept plan and narrative.
3. The development shall comply with applicable U. S. Department of Housing and Urban Development (HUD) rules for age-restricted communities. The organization established for the management of the development shall comply with HUD rules for verification of occupancy and shall maintain procedures for routinely determining the occupancy of each unit. Such procedures may be part of a normal leasing or purchasing agreement and must provide for regular updates as required by HUD.
4. A minimum 50-foot perimeter buffer shall be required against all adjacent roads and the adjacent private properties. The exterior 25 feet of this perimeter buffer will be undisturbed, except where disturbance is required for erosion control, storm water management, or the installation of utilities; the interior 25 feet of this buffer may be graded and replanted. Any additional plantings required will be in accordance with City of Gainesville's Buffer Standards. The Community Development Director shall have the final determination on the number, location and type of trees to be planted, as required by Article 9-16 of the Unified Land Development Code.
5. The minimum heated floor space for the terrace homes / townhomes shall be 1,100 square feet.
6. Covenants shall be put in place by the developer restricting against the parking of boats, trailers, and campers within driveways.

7. The proposed amenity clubhouse shall include a minimum 3:12 roof pitch and exterior facade materials shall be similar in architecture to the proposed terrace homes / townhomes.
8. A Uniform Sign Plan as identified within Section 9-18-7-4 of the Unified Land Development Code shall be required from the developer and is subject to approval by the Gainesville Community Development Director. All signs associated with residential uses shall be limited to indirect lighting. All signs shall be located outside of utility areas and shall not block visibility of vehicular traffic.
9. The proposed erosion control and water quality measures for the development shall at minimum meet the Georgia Storm Water Management Manual requirements. Storm water management for the development must provide water quality treatment for no less than 110% of the State required treatment volume. The City of Gainesville shall approve the final design of all water quality measures.

Transportation / Traffic

10. Prior to the issuance of a land disturbance permit, the developer shall provide a signal warrant analysis be performed per Georgia Department of Transportation (GDOT) standards for the following intersection:

- a. Dawsonville Highway (SR 53) at Sportsman Club Road

All costs associated with the signal warrant analysis study and, if warranted by such study, any costs associated with the installation of a traffic signal and intersection improvements shall be at the full expense of the developer.

11. The developer shall perform the following traffic improvements identified within the Summary of Study Findings and Recommendations as stated within the revised Traffic Impact Study, dated April 7, 2017, for the proposed development:

- a. Dawsonville Highway (SR 53) at Sportsman Club Road; add a northbound exclusive right turn lane on Dawsonville Highway (SR 53).

The developer shall coordinate these improvements with GDOT and the Gainesville Public Works Director prior to permitting. The Gainesville Public Works Director and GDOT shall have the final determination of the time line of these improvements based on the developer's proposed construction schedule. All costs associated with the improvements shall be at the full expense of the developer.

12. Prior to the issuance of a land disturbance permit, the developer shall evaluate, design and construct the left turn lane on Dawsonville Highway (SR 53) and Sportsman Club Road to meet GDOT storage and design requirements. If the existing left turn lane at this location meets these requirements, this condition will be deemed satisfied.
13. Prior to the issuance of a land disturbance permit, the intersection of Strickland Drive, Karen Lane and the new access road to the proposed development shall be redesigned to include realignment for better traffic circulation, and to meet current roadway design criteria. The improvements shall be completed prior to permitting direct access from the development onto Karen Lane and Strickland Drive and prior to the construction of the most northern Pod of terrace and cottage homes. All costs associated with the improvements shall be at the full expense of the developer.

14. All new streets shall meet the standards within the current Gainesville Unified Land Development Code. All proposed residential uses and amenities shall provide for pedestrian connectivity throughout the development. All costs associated with the improvements shall be at the full expense of the developer.
15. Prior to the issuance of a land disturbance permit, the developer shall seek documentation from Hall County to verify that no improvements will be required to the intersection of Sportsman Club Road and Strickland Drive.
16. Access to the development shall be from either Strickland Drive or Karen Lane; provided that if the application to annex and rezone the adjacent 188.78± acres tract zoned Planned Unit Development (P-U-D) submitted concurrently with this application is not approved, access to this development shall be from Strickland Drive. In either case, there shall be no driveways from individual homes allowed onto Sportsman Club Road, Strickland Drive or Karen Lane.

Excerpts from the May 9, 2017 Planning and Appeals Board Meeting Minutes

Applicant Presentation: Ethan Underwood, stated he was an attorney with Miles Hansford & Tallant, LLC located at 202 Tribble Gap Road, Suite 200, in Cumming. He stated they were excited about the project because while it is a big change, people will look back on it in 10 years and say it was the right thing to do. Mr. Underwood used a Power Point Presentation to explain the project. Overall the project is about 235 acres, with part of it being in Hall County which they are requesting to come into the City of Gainesville. He stated they are asking for 20 acres of the development to be zoned as General Business, noting it is already zoned as such in Hall County and could be developed for commercial uses now but they want to come into the City. The 26 acres portion is already approved in the County for 95 units and they are proposing to reduce that to 90 units in the City. The remainder of the acreage is proposed for different housing types which include single-family detached residential, single-family cottages, detached terrace homes, townhouses and for-rent residential units for independent living, assisted living and memory care. The land for the zero-lot line residential units (cottages and terrace homes) will be maintenance free and managed by a homeowners association so they do not have to maintain yards. The 90 units to the north within the 26.16± acres portion are proposed as townhomes.

Mr. Underwood stated they are proposing a total of 880 units, however, 325 of those units would be within the independent living, assisted living, and memory care community. He stated this would be the fourth such community the developer has completed, with others being in Peachtree City, Canton and Cumming. The monthly cost to live in the assisted living/memory care would range from \$3,500 to \$4,000 per month which is all inclusive with meals, rent and utilities, noting some have found it less expensive than paying bills and mortgages. Property taxes and school taxes will be paid on these units since there will be a landlord who is not exempt from those taxes.

Mr. Underwood stated there would be high quality commercial use as they have agreed to certain development standards and certain prohibited uses. The developer has also agreed to donate 3 acres for a new fire station, with the City having the final decision on the architectural design. In regards to economic impact, at full build out, the project is expected to bring almost 1.7 million in property taxes to the City alone. They are also estimating almost another half million in additional sales tax. In their conservative estimation, this would generate over

\$400,000 per year in net revenue as they do not anticipate the residents would require as much services as typical residents. One time impact fees are estimated at nearly 2 million.

Mr. Underwood acknowledged the elephant in the room was traffic. He stated the subject property is already zoned for about 200 non age restricted homes which would bring more traffic than an age restricted development, noting the residents would typically be on the road less often and during non-peak drive times. He stated they completed a traffic study and some people had questioned the methodology of the study because they used Georgia Department of Transportation (GDOT) numbers which are projections and they wanted the requests to be postponed again to do further study. However, they used the methodology as requested by the Georgia Mountains Regional Commission (GMRC), GDOT and the City of Gainesville. He stated that even if they did a real time study, the recommendations that come back would not have different results because there is no plan to make Dawsonville Highway a six lane highway so the only options are to make intersection improvements, traffic light improvements and contributions from the developer to make the necessary improvements. They have agreed to make improvements at Canterbury Road, Avonlea Way, Sportsman Club Road, Strickland Drive and Karen Lane. Mr. Underwood confirmed that Tad Braswell with Oak Hall Companies, LLC has agreed to the conditions as proposed by staff which includes the following traffic improvements: 1) Signal warrant studies at the intersections of Dawsonville Highway with Canterbury Road, Avonlea Way and Sportsman Club Road. If a signal is warranted, the developer will absorb that cost; 2) Turn lane improvements at the intersections of Dawsonville Highway and Canterbury Road, Avonlea Way and Sportsman Club Road. If those improvements are warranted, the developer will absorb that cost; and 3) Road improvements to Ahaluna Drive and Strickland Drive will also be completed and paid for by the developer as they will have to be widened and straightened which will make them much safer roads. The developer has also agreed to make a \$425,000 contribution to make road improvements along Dawsonville Highway from McEver Road to Ahaluna which is located south of the proposed development. However, they are taking responsibility of the traffic because they want to be a good neighbor and we are all in this together because you can't sell houses to angry neighbors because of traffic.

In conclusion, Mr. Underwood stated the property is already zoned for 200 single-family homes and General Business uses along the corridor, so something is coming to the area and the question is, what something do you want there? He felt the age restricted community is the right something because it will be a lower impact development, schools will not be affected even though residents will be paying taxes, and drive time will have a much lower impact than folks with young families. There will be a positive economic impact for the City, traffic improvements made in the area which otherwise would not be completed, and property donated for a new fire station. He asked to reserve time for questions and rebuttal.

FAVOR: **Carl Simmons, Jr.**, 2322 Sportsman Club Road, stated he did not want to be annexed into the City and complained he could not go down Dawsonville Highway on Friday evenings because of the restaurant traffic. He suggested a bypass to avoid the area. He stated he was all for progress and didn't care what they did with the subject property but asked the Board not to hurt others to improve the developer's pockets.

OPPOSE: **Clyde Morris**, 2375 Whippoorwill Lane, in Hall County, stated he was speaking on behalf of a large contingency of residents who live within the Dawsonville Highway corridor and asked them to stand. There were approximately 75-100 people who stood in opposition. He stated their concerns were focused on traffic since they already experience gridlock at times, noting it takes 25 minutes to get from Sportsman Club Road to Home Depot at times which

should only take 2 or 3 minutes. They have studied the information available from all traffic studies by GDOT, Oak Hall and the City, and have re-analyzed it to determine what is wrong because it shows far too few vehicle trips. They concluded the data is defective which projects a 2% growth rate in traffic instead of a 9.8% growth rate which is more accurate in his opinion. Traffic has become significantly worse over the past year or year and a half since Northlake Square opened. The Oak Hall traffic study projected an additional 3,387 trips per day and he believed it should be 6,000 trips per day. Also, 3,260 trips per day will be added by the commercial component which is believed to be constructed about the same time. Mr. Morris believed the entire development, when completed, would generate 9,000 to 10,000 trips per day which would be catastrophic in his opinion. Mr. Morris stated they did not intend to disparage the development or the company and was sure they are reputable and put out a good product. They are asking the Board to consider the impact on traffic and the quality of life for those living in this corridor. He stated as of today, two studies are being planned or underway, one by Arcadis contracted by GDOT, and the other has been commissioned by the City of Gainesville and the Metropolitan Planning Organization (MPO) for funding of improvements at the intersection of McEver Road and Dawsonville Highway. He stated the studies are needed and should be completed and the recommended improvements implemented before any additional development along this corridor is given approval. Therefore, Mr. Morris asked the Board to table the requests until those studies can be completed, infrastructure improvements can be planned and preliminary engineering can be undertaken so that road and traffic control improvements can keep pace with the population growth and the inevitable increases in traffic in an already traffic challenged gateway to Gainesville.

Gary Lawrence, 3537 Water Front Drive, stated he was the President of the Board for the Harbour Pointe Community Association which is a community of 290 households located off S.R. 53 approximately 5.5 miles west of the proposed development. The residents enjoy being a part of greater Gainesville and make abundant use of the restaurants, shops and businesses. They also serve Gainesville by volunteering through many organizations such as Meals on Wheels. Their Board recently received a presentation on the increased traffic from this development and two members participated in a follow up meeting. As representatives of Harbour Point, they have the following three concerns: 1) Residents are currently experiencing significant delays in exiting their community onto S.R. 53 not only during morning and evening rush hour but throughout the day, 7 days a week. He stated GDOT has reported a growth of more than 2,000 vehicles per day which pass the entrance of Harbour Point from 2015 and 2016 due to the widening project and the new businesses along the corridor. The traffic will continue to increase with new development, and as a consequence, some residents are already going to Dawsonville for dining and shopping; 2) The Oak Hall Development will exacerbate the traffic that is already in the congested corridor. The PAB tabled these requests in March to obtain more traffic data and he asked the Board to table the requests again to look at the data which is forthcoming before making any decisions in order to see the impact of this development. The developer forecasted a 1.8% annual traffic growth rate and analysis he reviewed projected between 6% and 9.8%. He asked the Board to allow adequate time for the appropriate review of the consultant's findings on the new traffic studies and develop traffic remediation efforts before approval; and 3) There appears to be no plan to re-prioritize traffic enhancement critical Tier 2 and Tier 3 projects to bring them up to Tier 1 status to address the immediate need for something to be done in time for the added traffic from the Oak Hall development. It is perceived that the current plan is to approve the project then worry about the resulting traffic later. Mr. Lawrence stated the City and County should at least have a plan for traffic remediation and controlling signal light sequences but fears it will not be enough. They are asking for additional actions like additional lane capacity and turning lanes before the project comes online, otherwise during construction, some entrances would be backed up for lengths of

time on a regular basis. In conclusion, Mr. Lawrence stated that Harbour Point understood the value of the new development and the need for additional affordable housing in Gainesville, but to approve the project without having a clear plan to remediate potential traffic problems and a short-term plan to address these issues is dangerous for the overall image and livability of Gainesville and Hall County. They recommend the developer, GDOT and all other parties, develop a traffic remediation plan and locate the funds to make it happen before approval.

Jerry Hulsey, 2389 Sportsman Club Road, stated you don't know somebody until you live with them and he has worked and lived within 3 square miles of Dawsonville Highway all his life and felt it is a wonderful place to live. He stated we are talking about quality of life, noting the more you have, the more you have to take care of, the more it costs and the more you spend. He couldn't understand why, even with all the people moving into the area, taxes haven't gone down but continue to rise. He referred to the west by-pass, Pearl Nix Parkway, which never came to its full fruition. He stated City Council said they do not have the money to complete road improvements, but look at the building we are in, noting the City has built two police stations and the Civic Center but no roads. Mr. Hulsey stated Chick-fil-a causes a traffic jam so they extended the left turn lane for customers to get in there and that is just one business. He reiterated it is all about quality of life and he understood something is going to be developed there but no one wants to get stuck in traffic.

Gene Korzeniewski, 1813 Watuga Drive, stated he believed it would be a quality development but was concerned whether the infrastructure, specifically Dawsonville Highway, could handle the increased traffic. If the traffic study is based on a 2% traffic growth rate per year, that would mean traffic has only increased 10% on Dawsonville Highway in the past 5 years and asked the audience to raise their hands if they felt traffic had increased more than 10%. He stated fundamentally, we are relying on an unrealistic growth rate. He stated it was reported that the majority of traffic from the 55 plus community would be during non-peak hours. However, we don't really know when peak hours are since 24-hour traffic counts were not taken at the intersections. Mr. Korzeniewski stated the GDOT practice manual states you should take 24 hour traffic counts in areas with shopping centers, restaurants, and recreational activities to determine the peak hours. Historical data between the hours of 9am and 4pm prove the traffic there is growing year to year. Therefore, what we think is rush hour, the normal work hour, may no longer be the case and the project could be adding traffic during the times we could least absorb it. He was concerned that the stores were closed in the morning hours when intersections were monitored so how do we know they won't be a problem if the data we have was taken at the wrong time. In conclusion, he was concerned about procedures, noting he thought the purpose of the public hearing was for the Board to hear from the public before making any decision or recommendations. He felt the decision and recommendation had already been made and this is the first time the Board was hearing from the public. He stated he was sure the Board had met with the developer multiple times in order to formulate their recommendations, but there hasn't been a single meeting between the Board and the public which is unfair and in some regards, irresponsible. Chairman Carter corrected Mr. Korzeniewski and clarified that none of the Board Members had met with the developers prior to this meeting. Mr. Korzeniewski stated he should clarify that certain members of the Board have met with the developers. Community Development Director Rusty Ligon clarified that he was not on the Board but on staff and meeting with developers was part of his job. Mr. Korzeniewski stated the staff recommendations were made based on meetings with the developer. Chairman Carter stated part of the process was for staff to meet with any applicant.

Bob Abernathy, 3311 Marina View Way, stated he moved into Gwinnett County in 1972 and moved to Hall County in 2003 because of the growth Gwinnett County was and still is

experiencing, noting their current population is over 900,000. He stated Gwinnett County is a parking lot and they did not provide for adequate transportation to pace the growth. He stated it is a real problem and he was afraid Hall County would make the same mistake.

Cyril Pcolinsky, 2200 Sportsman Club Road, stated he would not speak of traffic since his neighbor, Jerry Hulsey, spoke in a very clear and comprehensive way. He was concerned with the 26.16± portion of the development because of the proposed terrace units in a small, hilly area with curvy, narrow roads. His fear was the project would change the character of his neighborhood which consists of single-family detached homes with larger lots. Mr. Pcolinsky believed the city limits would progress beyond Sportsman Club Road in the future and he was concerned about a more densely populated area. He proposed the developer consider single-family homes there instead which would decrease the number of people living there and would be less of a traffic burden. He felt the quality of life would suffer with the proposed density and character of buildings.

REBUTTAL: Ethan Underwood introduced **Tad Braswell** with Oak Hall Companies, LLC. Mr. Braswell stated he grew up in Dekalb County, 3 miles from Perimeter Mall and used to walk to the mall by cow pastures on both sides of the road. He stated things change and people move here and Atlanta and Gainesville were great places to live. We make sure we do smart growth and plan things correctly which is the reason for the GMRC reviewing large projects like this one. He stated there was a lot of thought process going into how this traffic study was completed, noting it was not just the City, Hall County, or GDOT standards but a conglomeration of national standards that were utilized for the study grid network based on the number of houses they are proposing. He stated they did additional study as requested by the City and the standards used in the traffic studies which are proven time and time again, come from actual active adult communities. He confirmed the intersections studied were completed in real time peak hours, noting the stores were open in the evenings. Mr. Braswell stated the traffic study is scientific and has been reviewed with recommendations made by the GMRC, City Transportation, Hall County and GDOT, so he did not see the need for another traffic study. He stated that some people disagreed with the methodology of the way the counts were taken which leads him to question why they would believe another study which would be completed with the exact same standards. He stated there were a lot of good people present who were concerned about traffic, but everywhere you go in Atlanta there is traffic. However, they are bringing a lot of money to the table to improve the traffic situation which would otherwise not happen if the property is used as currently zoned. He wants everyone to be safe to get in and out of the development and wants to have a positive impact on the community.

Ethan Underwood thanked everyone for their comments because they wanted to hear from the residents, so they held two public participation meetings and were enlightened about some issues in which they were unaware until they met with the residents. He agreed with the public comments that the project should not be approved without accommodating traffic improvements which is why Oak Hall is going above and beyond to comply with conditions as proposed by staff. He stated some folks warned the Board not to get caught in a catch 22; however, those road improvements would not occur until a development comes in to pay for them, which is exactly what Oak Hall is proposing. Mr. Underwood stated this project aligns with the Comprehensive Plan as it was anticipated for this site; they have reduced units to meet the Plan; they have a solution for traffic issues; and they have a product which will build the community. Mr. Underwood asked the Board to recommend approval of the requests and they would be happy to answer any questions.

Planning and Appeals Board Comments: Upon inquiry by Vice-Chair Fleming, Tad Braswell clarified the standard traffic study peaks hours were from 7:00am to 9:00am and 4:00pm to 6:00pm. Vice-Chair Fleming stated along that corridor, there is a lot of restaurants and shopping which takes place after those hours and asked if there was another traffic study they could have access to with more extended hours. Mr. Braswell stated no, they completed the traffic study with the standards required by GMRC. He stated the standards are taken into consideration when the study is around a mall or shopping centers.

There was a motion to recommend conditional approval of all three Oak Hall Companies, LLC requests with conditions as follows:

CONDITIONS FOR 26.16± ACRES

Development Standards

1. The development standards within the applicant's narrative, concept plan and architectural renderings shall be made part of the zoning ordinance, and shall be subject to the Community Development Director approval. Any zoning conditions adopted as part of this zoning ordinance that conflict with the applicant's narrative, concept plan and architectural renderings shall take precedence over the applicant's development standards.
2. The approved use for the property shall be limited to an active adult community for seniors not to exceed 90 terrace homes / townhome units as stated within the applicant's revised concept plan and narrative.
3. The development shall comply with applicable U. S. Department of Housing and Urban Development (HUD) rules for age-restricted communities. The organization established for the management of the development shall comply with HUD rules for verification of occupancy and shall maintain procedures for routinely determining the occupancy of each unit. Such procedures may be part of a normal leasing or purchasing agreement and must provide for regular updates as required by HUD.
4. A minimum 50-foot perimeter buffer shall be required against all adjacent roads and the adjacent private properties. The exterior 25 feet of this perimeter buffer will be undisturbed, except where disturbance is required for erosion control, storm water management, or the installation of utilities; the interior 25 feet of this buffer may be graded and replanted. Any additional plantings required will be in accordance with City of Gainesville's Buffer Standards. The Community Development Director shall have the final determination on the number, location and type of trees to be planted, as required by Article 9-16 of the Unified Land Development Code.
5. The minimum heated floor space for the terrace homes / townhomes shall be 1,100 square feet.
6. Covenants shall be put in place by the developer restricting against the parking of boats, trailers, and campers within driveways.
7. The proposed amenity clubhouse shall include a minimum 3:12 roof pitch and exterior facade materials shall be similar in architecture to the proposed terrace homes / townhomes.
8. A Uniform Sign Plan as identified within Section 9-18-7-4 of the Unified Land Development Code shall be required from the developer and is subject to approval by the Gainesville Community Development Director. All signs associated with

residential uses shall be limited to indirect lighting. All signs shall be located outside of utility areas and shall not block visibility of vehicular traffic.

9. The proposed erosion control and water quality measures for the development shall at minimum meet the Georgia Storm Water Management Manual requirements. Storm water management for the development must provide water quality treatment for no less than 110% of the State required treatment volume. The City of Gainesville shall approve the final design of all water quality measures.

Transportation / Traffic

10. Prior to the issuance of a land disturbance permit, the developer shall provide a signal warrant analysis be performed per Georgia Department of Transportation (GDOT) standards for the following intersection:

- a. Dawsonville Highway (SR 53) at Sportsman Club Road

All costs associated with the signal warrant analysis study and, if warranted by such study, any costs associated with the installation of a traffic signal and intersection improvements shall be at the full expense of the developer.

11. The developer shall perform the following traffic improvements identified within the Summary of Study Findings and Recommendations as stated within the revised Traffic Impact Study, dated April 7, 2017, for the proposed development:

- a. Dawsonville Highway (SR 53) at Sportsman Club Road; add a northbound exclusive right turn lane on Dawsonville Highway (SR 53).

The developer shall coordinate these improvements with GDOT and the Gainesville Public Works Director prior to permitting. The Gainesville Public Works Director and GDOT shall have the final determination of the time line of these improvements based on the developer's proposed construction schedule. All costs associated with the improvements shall be at the full expense of the developer.

12. Prior to the issuance of a land disturbance permit, the developer shall evaluate, design and construct the left turn lane on Dawsonville Highway (SR 53) and Sportsman Club Road to meet GDOT storage and design requirements. If the existing left turn lane at this location meets these requirements, this condition will be deemed satisfied.

13. Prior to the issuance of a land disturbance permit, the intersection of Strickland Drive, Karen Lane and the new access road to the proposed development shall be redesigned to include realignment for better traffic circulation, and to meet current roadway design criteria. The improvements shall be completed prior to permitting direct access from the development onto Karen Lane and Strickland Drive and prior to the construction of the most northern Pod of terrace and cottage homes. All costs associated with the improvements shall be at the full expense of the developer.

14. All new streets shall meet the standards within the current Gainesville Unified Land Development Code. All proposed residential uses and amenities shall provide for pedestrian connectivity throughout the development. All costs associated with the improvements shall be at the full expense of the developer.

15. Prior to the issuance of a land disturbance permit, the developer shall seek documentation from Hall County to verify that no improvements will be required to the intersection of Sportsman Club Road and Strickland Drive.
16. Access to the development shall be from either Strickland Drive or Karen Lane; provided that if the application to annex and rezone the adjacent 188.78± acres tract zoned Planned Unit Development (P-U-D) submitted concurrently with this application is not approved, access to this development shall be from Strickland Drive. In either case, there shall be no driveways from individual homes allowed onto Sportsman Club Road, Strickland Drive or Karen Lane.

Motion made by Board Member White

Motion seconded by Board Member Thompson

Vote – 5 favor, 2 opposed (Fleming, Delgado)

First Reading: _____
Passed: _____

AN ORDINANCE

No. 2017-

AN ORDINANCE ANNEXING A 26.16± ACRES TRACT LOCATED EAST OF DAWSONVILLE HIGHWAY AND ON THE NORTH SIDE OF THE INTERSECTION OF STRICKLAND DRIVE AND SPORTSMAN CLUB ROAD, WITH ROAD FRONTAGE ON KAREN LANE (A/K/A 0 AND 2209 KAREN LANE; 2106, 2234 AND 2242 SPORTSMAN CLUB ROAD; AND 2049 STRICKLAND DRIVE); ADJACENT TO BUT NOT NOW WITHIN THE CORPORATE LIMITS OF THE CITY OF GAINESVILLE, GEORGIA; REPEALING CONFLICTING ORDINANCES; TO PROVIDE FOR SEVERABILITY; TO PROVIDE FOR AN EFFECTIVE DATE; AND FOR OTHER PURPOSES.

(Amendment to City Limit Boundary)

WHEREAS, a 26.16± acres tract located east of Dawsonville Highway and on the north side of the intersection of Strickland Drive and Sportsman Club Road, with road frontage on Karen Lane (a/k/a **0 and 2209 Karen Lane; 2106, 2234 and 2242 Sportsman Club Road; and 2049 Strickland Drive**), lies within the unincorporated lands of Hall County and adjoins the existing corporate limits of the City of Gainesville; and

WHEREAS, the hereinafter described lands be incorporated and annexed into the City of Gainesville.

NOW, THEREFORE, BE IT HEREBY ORDAINED BY THE GOVERNING BODY OF THE CITY OF GAINESVILLE, GEORGIA, AS FOLLOWS:

SECTION I.

That from and after the passage of this Ordinance the following described lands are and shall be annexed into the existing corporate limits of the City of Gainesville, Georgia, so that said lands shall constitute a part of the land within the corporate limits of the City of Gainesville, Georgia, as fully and completely as if the limits had been so defined by the General Assembly of Georgia.

Legal Description

ALL THAT TRACT OR PARCEL OF land lying and being in Land Lots 161 and 174, of the 9th District Hall County, Georgia, being more particularly described as follows:

Commencing at a Point of Beginning formed by the intersection of the Northern right of way of Strickland Drive and the Eastern right of way of Sportsman Club Road; proceed thence along the northern right of way of Sportsman Club Road North 01 Degrees 52 Minutes 49 Seconds West a distance of 104.27 feet to a Point; Thence North 40 Degrees 41 Minutes 42 Seconds East a distance of 63.56 feet to a Point; Thence leaving the northern right of way of Sportsman Club Road North 38 Degrees 33 Minutes 40 Seconds East a distance of 67.92 feet to a Point;

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Thence North 19 Degrees 50 Minutes 03 Seconds East a distance of 55.17 feet to a Point;
Thence North 05 Degrees 05 Minutes 36 Seconds East a distance of 146.71 feet to a Point;
Thence North 40 Degrees 01 Minutes 34 Seconds West a distance of 134.21 feet to a Point;
Thence North 16 Degrees 22 Minutes 12 Seconds East a distance of 88.48 feet to a Point;
Thence North 05 Degrees 38 Minutes 20 Seconds East a distance of 49.24 feet to a Point;
Thence North 04 Degrees 58 Minutes 06 Seconds West a distance of 37.69 feet to a Point;
Thence North 07 Degrees 26 Minutes 03 Seconds West a distance of 169.49 feet to a Point;
Thence South 75 Degrees 58 Minutes 36 Seconds West a distance of 19.54 feet to a Point located on the eastern right of way of Sportsman Club Road; Thence along a curve to the left having a radius of 190.02 feet and a chord direction of North 11 Degrees 59 Minutes 21 Seconds East and a chord length of 41.57 feet and an arc length of 41.65 feet along said curve; Thence along a curve to the left having a radius of 237.42 feet and a chord direction of North 08 Degrees 00 Minutes 52 Seconds West and a chord length of 89.73 feet and an arc length of 90.27 feet along said curve; Thence leaving the eastern right of way of Sportsman Club Road North 59 Degrees 56 Minutes 16 Seconds East a distance of 68.82 feet to a Point located on the Land Lot Line common to land Lots 161 and 174; Thence along said land Lot Line North 30 Degrees 49 Minutes 32 Seconds West a distance of 60.01 feet to a Point; Thence leaving said Land Lot Line North 60 Degrees 18 Minutes 36 Seconds East a distance of 91.64 feet to a Point; Thence North 60 Degrees 18 Minutes 36 Seconds East a distance of 99.33 feet to a Point; Thence North 60 Degrees 26 Minutes 47 Seconds East a distance of 100.23 feet to a Point; Thence North 60 Degrees 22 Minutes 29 Seconds East a distance of 194.57 feet to a Point; Thence North 60 Degrees 24 Minutes 20 Seconds East a distance of 337.51 feet to a Point; Thence South 60 Degrees 37 Minutes 15 Seconds East a distance of 338.29 feet to a Point; Thence South 30 Degrees 25 Minutes 32 Seconds East a distance of 194.70 feet to a Point; Thence South 59 Degrees 37 Minutes 29 Seconds West a distance of 400.01 feet to a Point; Thence South 29 Degrees 59 Minutes 40 Seconds East a distance of 154.91 feet to a Point; Thence South 59 Degrees 15 Minutes 19 Seconds West a distance of 161.84 feet to a Point; Thence South 31 Degrees 14 Minutes 22 Seconds West a distance of 162.21 feet to a Point; Thence South 28 Degrees 52 Minutes 26 Seconds East a distance of 580.51 feet to a Point located on the western right of way of Karen Lane; Thence South 07 Degrees 01 Minutes 32 Seconds East a distance of 21.97 feet to a Point; Thence along a curve to the left having a radius of 381.37 feet and a chord direction of South 11 Degrees 55 Minutes 32 Seconds East and a chord length of 44.99 feet and an arc length of 45.02 feet along said curve; Thence along a curve to the left having a radius of 164.51 feet and a chord direction of South 20 Degrees 57 Minutes 18 Seconds East and a chord length of 35.42 feet and an arc length of 35.49 feet along said curve; Thence South 29 Degrees 09 Minutes 24 Seconds East a distance of 65.68 feet to a Point; Thence South 28 Degrees 51 Minutes 27 Seconds East a distance of 56.99 feet to a Point; Thence South 27 Degrees 53 Minutes 34 Seconds East a distance of 14.69 feet to a Point; Thence along a curve to the right having a radius of 75.59 feet and a chord direction of South 19 Degrees 30 Minutes 52 Seconds East and a chord length of 32.32 feet and an arc length of 32.57 feet along said curve; Thence along a curve to the right having a radius of 19.90 feet and a chord direction of South 19 Degrees 04 Minutes 43 Seconds West and a chord length of 12.58 feet and an arc length of 12.79 feet along said curve; Thence along a curve to the right having a radius of 72.45 feet and a chord direction of South 47 Degrees 14 Minutes 18 Seconds West and a chord length of 17.78 feet and an arc length of 17.83 feet along said curve; Thence South 52 Degrees 46 Minutes 58 Seconds West a distance of 1.61 feet to a Point; Thence leaving the western right of way of Karen Lane North 28 Degrees 35 Minutes 50 Seconds West a distance of 107.48 feet to a Point; Thence South 58 Degrees 45 Minutes 57 Seconds West a distance of 179.19 feet to a Point located on the northern right of way of Strickland Drive; Thence along a curve to the left having a radius of 262.32 feet and a chord direction of North 87 Degrees 06 Minutes 53 Seconds West and a chord length of 25.48 feet and an arc length of 25.49 feet along said curve; Thence South 88

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Degrees 25 Minutes 25 Seconds West a distance of 10.62 feet to a Point; Thence North 29 Degrees 29 Minutes 45 Seconds West a distance of 10.85 feet to a Point; Thence South 89 Degrees 38 Minutes 52 Seconds West a distance of 19.25 feet to a Point; Thence South 85 Degrees 55 Minutes 28 Seconds West a distance of 24.20 feet to a Point; Thence along a curve to the right having a radius of 191.64 feet and a chord direction of North 84 Degrees 13 Minutes 43 Seconds West and a chord length of 47.28 feet and an arc length of 47.40 feet along said curve; Thence North 77 Degrees 07 Minutes 41 Seconds West a distance of 90.43 feet to a Point; Thence along a curve to the right having a radius of 153.21 feet and a chord direction of North 67 Degrees 02 Minutes 01 Seconds West and a chord length of 65.04 feet and an arc length of 65.54 feet along said curve; Thence South 35 Degrees 13 Minutes 15 Seconds West a distance of 10.00 feet to a Point; Thence North 53 Degrees 44 Minutes 51 Seconds West a distance of 5.88 feet to a Point; Thence North 44 Degrees 25 Minutes 57 Seconds West a distance of 22.63 feet to a Point; Thence North 43 Degrees 04 Minutes 51 Seconds West a distance of 57.72 feet to a Point; Thence along a curve to the left having a radius of 532.11 feet and a chord direction of North 46 Degrees 19 Minutes 06 Seconds West and a chord length of 60.10 feet and an arc length of 60.14 feet along said curve; Thence North 51 Degrees 13 Minutes 53 Seconds West a distance of 60.13 feet to a Point; Thence along a curve to the left having a radius of 985.27 feet and a chord direction of North 53 Degrees 01 Minutes 08 Seconds West and a chord length of 61.47 feet and an arc length of 61.48 feet along said curve; Thence North 56 Degrees 18 Minutes 03 Seconds West a distance of 33.11 feet to a Point; Thence along a curve to the left having a radius of 151.77 feet and a chord direction of North 62 Degrees 21 Minutes 01 Seconds West and a chord length of 31.99 feet and an arc length of 32.05 feet along said curve; Thence along a curve to the left having a radius of 181.63 feet and a chord direction of North 86 Degrees 14 Minutes 10 Seconds West and a chord length of 111.27 feet and an arc length of 113.08 feet along said curve; Thence South 69 Degrees 46 Minutes 36 Seconds West a distance of 172.17 feet to a Point being the Point of Beginning.

Tract contains 26.16 acres more or less.

The annexation is to include all that portion of right-of-way known as Karen Lane located between the subject property and the existing city limits of Gainesville.

SECTION II.

The Secretary to the City Council of the City of Gainesville is directed to make and file with the Department of Community Affairs of the State of Georgia a certified copy of this Ordinance together with a plat describing lands annexed to the City of Gainesville by this Ordinance.

SECTION III.

All Ordinances and parts of Ordinances in conflict herewith are hereby repealed.

SECTION IV.

If any portion of this Ordinance shall be held to be invalid or unconstitutional, such invalidity or unconstitutionality shall not affect or impair the remaining portions unless it clearly appears that such other parts are wholly and necessarily dependent upon the part held to be invalid or unconstitutional.

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SECTION V.

The effective date of this Ordinance shall be upon approval by the governing authority of the City of Gainesville, Georgia.

C. Danny Dunagan, Jr., Mayor

This is to certify that I am City Clerk of the City of Gainesville. As such, I keep its official records, including its minutes. In that capacity, my signature below certifies this resolution was adopted as stated and will be recorded in the official minutes.

ATTEST:

Denise O. Jordan, City Clerk

First Reading: _____
Passed: _____

AN ORDINANCE

No. 2017-

AN ORDINANCE AMENDING THE ZONING MAP OF THE CITY OF GAINESVILLE, GEORGIA BY ESTABLISHING THE ZONING ON A 26.16± ACRES TRACT LOCATED EAST OF DAWSONVILLE HIGHWAY AND ON THE NORTH SIDE OF THE INTERSECTION OF STRICKLAND DRIVE AND SPORTSMAN CLUB ROAD, WITH ROAD FRONTAGE ON KAREN LANE (A/K/A 0 AND 2209 KAREN LANE; 2106, 2234 AND 2242 SPORTSMAN CLUB ROAD; AND 2049 STRICKLAND DRIVE) AT THE TIME OF ANNEXATION AS PLANNED UNIT DEVELOPMENT, WITH CONDITIONS (P-U-D-c); REPEALING CONFLICTING ORDINANCES; TO PROVIDE FOR SEVERABILITY; TO PROVIDE FOR AN EFFECTIVE DATE; AND FOR OTHER PURPOSES.

(Amendment to Zoning Map)

BE IT HEREBY ORDAINED BY THE GOVERNING BODY OF THE CITY OF GAINESVILLE, GEORGIA, AS FOLLOWS:

SECTION I.

That from and after the passage of this Ordinance the following described lands shall be zoned and so designated on the Zoning Map of the City of Gainesville as **Planned Unit Development, with conditions (P-U-D-c)**:

Conditions

Development Standards

1. The development standards within the applicant's narrative, concept plan and architectural renderings shall be made part of the zoning ordinance, and shall be subject to the Community Development Director approval. Any zoning conditions adopted as part of this zoning ordinance that conflict with the applicant's narrative, concept plan and architectural renderings shall take precedence over the applicant's development standards.
2. The approved use for the property shall be limited to an active adult community for seniors not to exceed 90 terrace homes / townhome units as stated within the applicant's revised concept plan and narrative.
3. The development shall comply with applicable U. S. Department of Housing and Urban Development (HUD) rules for age-restricted communities. The organization established for the management of the development shall comply with HUD rules for verification of occupancy and shall maintain procedures for routinely determining the occupancy of each unit. Such procedures may be part of a normal leasing or purchasing agreement and must provide for regular updates as required by HUD.

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- 4. A minimum 50-foot perimeter buffer shall be required against all adjacent roads and the adjacent private properties. The exterior 25 feet of this perimeter buffer will be undisturbed, except where disturbance is required for erosion control, storm water management, or the installation of utilities; the interior 25 feet of this buffer may be graded and replanted. Any additional plantings required will be in accordance with City of Gainesville's Buffer Standards. The Community Development Director shall have the final determination on the number, location and type of trees to be planted, as required by Article 9-16 of the Unified Land Development Code.**
- 5. The minimum heated floor space for the terrace homes / townhomes shall be 1,100 square feet.**
- 6. Covenants shall be put in place by the developer restricting against the parking of boats, trailers, and campers within driveways.**
- 7. The proposed amenity clubhouse shall include a minimum 3:12 roof pitch and exterior facade materials shall be similar in architecture to the proposed terrace homes / townhomes.**
- 8. A Uniform Sign Plan as identified within Section 9-18-7-4 of the Unified Land Development Code shall be required from the developer and is subject to approval by the Gainesville Community Development Director. All signs associated with residential uses shall be limited to indirect lighting. All signs shall be located outside of utility areas and shall not block visibility of vehicular traffic.**
- 9. The proposed erosion control and water quality measures for the development shall at minimum meet the Georgia Storm Water Management Manual requirements. Storm water management for the development must provide water quality treatment for no less than 110% of the State required treatment volume. The City of Gainesville shall approve the final design of all water quality measures.**

Transportation / Traffic

- 10. Prior to the issuance of a land disturbance permit, the developer shall provide a signal warrant analysis be performed per Georgia Department of Transportation (GDOT) standards for the following intersection:**
 - a. Dawsonville Highway (SR 53) at Sportsman Club Road**

All costs associated with the signal warrant analysis study and, if warranted by such study, any costs associated with the installation of a traffic signal and intersection improvements shall be at the full expense of the developer.

- 11. The developer shall perform the following traffic improvements identified within the Summary of Study Findings and Recommendations as stated within the revised Traffic Impact Study, dated April 7, 2017, for the proposed development:**
 - a. Dawsonville Highway (SR 53) at Sportsman Club Road; add a northbound exclusive right turn lane on Dawsonville Highway (SR 53).**

The developer shall coordinate these improvements with GDOT and the Gainesville Public Works Director prior to permitting. The Gainesville Public Works Director and GDOT shall have the final determination of the time line of these improvements based on the developer's proposed construction schedule. All costs associated with the improvements shall be at the full expense of the developer.

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12. Prior to the issuance of a land disturbance permit, the developer shall evaluate, design and construct the left turn lane on Dawsonville Highway (SR 53) and Sportsman Club Road to meet GDOT storage and design requirements. If the existing left turn lane at this location meets these requirements, this condition will be deemed satisfied.
13. Prior to the issuance of a land disturbance permit, the intersection of Strickland Drive, Karen Lane and the new access road to the proposed development shall be redesigned to include realignment for better traffic circulation, and to meet current roadway design criteria. The improvements shall be completed prior to permitting direct access from the development onto Karen Lane and Strickland Drive and prior to the construction of the most northern Pod of terrace and cottage homes. All costs associated with the improvements shall be at the full expense of the developer.
14. All new streets shall meet the standards within the current Gainesville Unified Land Development Code. All proposed residential uses and amenities shall provide for pedestrian connectivity throughout the development. All costs associated with the improvements shall be at the full expense of the developer.
15. Prior to the issuance of a land disturbance permit, the developer shall seek documentation from Hall County to verify that no improvements will be required to the intersection of Sportsman Club Road and Strickland Drive.
16. Access to the development shall be from either Strickland Drive or Karen Lane; provided that if the application to annex and rezone the adjacent 188.78± acres tract zoned Planned Unit Development (P-U-D) submitted concurrently with this application is not approved, access to this development shall be from Strickland Drive. In either case, there shall be no driveways from individual homes allowed onto Sportsman Club Road, Strickland Drive or Karen Lane.

Legal Description

ALL THAT TRACT OR PARCEL OF land lying and being in Land Lots 161 and 174, of the 9th District Hall County, Georgia, being more particularly described as follows:

Commencing at a Point of Beginning formed by the intersection of the Northern right of way of Strickland Drive and the Eastern right of way of Sportsman Club Road; proceed thence along the northern right of way of Sportsman Club Road North 01 Degrees 52 Minutes 49 Seconds West a distance of 104.27 feet to a Point; Thence North 40 Degrees 41 Minutes 42 Seconds East a distance of 63.56 feet to a Point; Thence leaving the northern right of way of Sportsman Club Road North 38 Degrees 33 Minutes 40 Seconds East a distance of 67.92 feet to a Point; Thence North 19 Degrees 50 Minutes 03 Seconds East a distance of 55.17 feet to a Point; Thence North 05 Degrees 05 Minutes 36 Seconds East a distance of 146.71 feet to a Point; Thence North 40 Degrees 01 Minutes 34 Seconds West a distance of 134.21 feet to a Point; Thence North 16 Degrees 22 Minutes 12 Seconds East a distance of 88.48 feet to a Point; Thence North 05 Degrees 38 Minutes 20 Seconds East a distance of 49.24 feet to a Point; Thence North 04 Degrees 58 Minutes 06 Seconds West a distance of 37.69 feet to a Point; Thence North 07 Degrees 26 Minutes 03 Seconds West a distance of 169.49 feet to a Point; Thence South 75 Degrees 58 Minutes 36 Seconds West a distance of 19.54 feet to a Point located on the eastern right of way of Sportsman Club Road; Thence along a curve to the left having a radius of 190.02 feet and a chord direction of North 11 Degrees 59 Minutes 21 Seconds East and a chord length of 41.57 feet and an arc length of 41.65 feet along said curve;

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Thence along a curve to the left having a radius of 237.42 feet and a chord direction of North 08 Degrees 00 Minutes 52 Seconds West and a chord length of 89.73 feet and an arc length of 90.27 feet along said curve; Thence leaving the eastern right of way of Sportsman Club Road North 59 Degrees 56 Minutes 16 Seconds East a distance of 68.82 feet to a Point located on the Land Lot Line common to land Lots 161 and 174; Thence along said land Lot Line North 30 Degrees 49 Minutes 32 Seconds West a distance of 60.01 feet to a Point; Thence leaving said Land Lot Line North 60 Degrees 18 Minutes 36 Seconds East a distance of 91.64 feet to a Point; Thence North 60 Degrees 18 Minutes 36 Seconds East a distance of 99.33 feet to a Point; Thence North 60 Degrees 26 Minutes 47 Seconds East a distance of 100.23 feet to a Point; Thence North 60 Degrees 22 Minutes 29 Seconds East a distance of 194.57 feet to a Point; Thence North 60 Degrees 24 Minutes 20 Seconds East a distance of 337.51 feet to a Point; Thence South 60 Degrees 37 Minutes 15 Seconds East a distance of 338.29 feet to a Point; Thence South 30 Degrees 25 Minutes 32 Seconds East a distance of 194.70 feet to a Point; Thence South 59 Degrees 37 Minutes 29 Seconds West a distance of 400.01 feet to a Point; Thence South 29 Degrees 59 Minutes 40 Seconds East a distance of 154.91 feet to a Point; Thence South 59 Degrees 15 Minutes 19 Seconds West a distance of 161.84 feet to a Point; Thence South 31 Degrees 14 Minutes 22 Seconds West a distance of 162.21 feet to a Point; Thence South 28 Degrees 52 Minutes 26 Seconds East a distance of 580.51 feet to a Point located on the western right of way of Karen Lane; Thence South 07 Degrees 01 Minutes 32 Seconds East a distance of 21.97 feet to a Point; Thence along a curve to the left having a radius of 381.37 feet and a chord direction of South 11 Degrees 55 Minutes 32 Seconds East and a chord length of 44.99 feet and an arc length of 45.02 feet along said curve; Thence along a curve to the left having a radius of 164.51 feet and a chord direction of South 20 Degrees 57 Minutes 18 Seconds East and a chord length of 35.42 feet and an arc length of 35.49 feet along said curve; Thence South 29 Degrees 09 Minutes 24 Seconds East a distance of 65.68 feet to a Point; Thence South 28 Degrees 51 Minutes 27 Seconds East a distance of 56.99 feet to a Point; Thence South 27 Degrees 53 Minutes 34 Seconds East a distance of 14.69 feet to a Point; Thence along a curve to the right having a radius of 75.59 feet and a chord direction of South 19 Degrees 30 Minutes 52 Seconds East and a chord length of 32.32 feet and an arc length of 32.57 feet along said curve; Thence along a curve to the right having a radius of 19.90 feet and a chord direction of South 19 Degrees 04 Minutes 43 Seconds West and a chord length of 12.58 feet and an arc length of 12.79 feet along said curve; Thence along a curve to the right having a radius of 72.45 feet and a chord direction of South 47 Degrees 14 Minutes 18 Seconds West and a chord length of 17.78 feet and an arc length of 17.83 feet along said curve; Thence South 52 Degrees 46 Minutes 58 Seconds West a distance of 1.61 feet to a Point; Thence leaving the western right of way of Karen Lane North 28 Degrees 35 Minutes 50 Seconds West a distance of 107.48 feet to a Point; Thence South 58 Degrees 45 Minutes 57 Seconds West a distance of 179.19 feet to a Point located on the northern right of way of Strickland Drive; Thence along a curve to the left having a radius of 262.32 feet and a chord direction of North 87 Degrees 06 Minutes 53 Seconds West and a chord length of 25.48 feet and an arc length of 25.49 feet along said curve; Thence South 88 Degrees 25 Minutes 25 Seconds West a distance of 10.62 feet to a Point; Thence North 29 Degrees 29 Minutes 45 Seconds West a distance of 10.85 feet to a Point; Thence South 89 Degrees 38 Minutes 52 Seconds West a distance of 19.25 feet to a Point; Thence South 85 Degrees 55 Minutes 28 Seconds West a distance of 24.20 feet to a Point; Thence along a curve to the right having a radius of 191.64 feet and a chord direction of North 84 Degrees 13 Minutes 43 Seconds West and a chord length of 47.28 feet and an arc length of 47.40 feet along said curve; Thence North 77 Degrees 07 Minutes 41 Seconds West a distance of 90.43 feet to a Point; Thence along a curve to the right having a radius of 153.21 feet and a chord direction of North 67 Degrees 02 Minutes 01 Seconds West and a chord length of 65.04 feet and an arc length of 65.54 feet along said curve; Thence South 35 Degrees 13 Minutes 15 Seconds West a distance of 10.00 feet to a Point; Thence North 53 Degrees 44 Minutes 51

ORDINANCE NO. 2017-

Seconds West a distance of 5.88 feet to a Point; Thence North 44 Degrees 25 Minutes 57 Seconds West a distance of 22.63 feet to a Point; Thence North 43 Degrees 04 Minutes 51 Seconds West a distance of 57.72 feet to a Point; Thence along a curve to the left having a radius of 532.11 feet and a chord direction of North 46 Degrees 19 Minutes 06 Seconds West and a chord length of 60.10 feet and an arc length of 60.14 feet along said curve; Thence North 51 Degrees 13 Minutes 53 Seconds West a distance of 60.13 feet to a Point; Thence along a curve to the left having a radius of 985.27 feet and a chord direction of North 53 Degrees 01 Minutes 08 Seconds West and a chord length of 61.47 feet and an arc length of 61.48 feet along said curve; Thence North 56 Degrees 18 Minutes 03 Seconds West a distance of 33.11 feet to a Point; Thence along a curve to the left having a radius of 151.77 feet and a chord direction of North 62 Degrees 21 Minutes 01 Seconds West and a chord length of 31.99 feet and an arc length of 32.05 feet along said curve; Thence along a curve to the left having a radius of 181.63 feet and a chord direction of North 86 Degrees 14 Minutes 10 Seconds West and a chord length of 111.27 feet and an arc length of 113.08 feet along said curve; Thence South 69 Degrees 46 Minutes 36 Seconds West a distance of 172.17 feet to a Point being the Point of Beginning.

Tract contains 26.16 acres more or less.

The annexation is to include all that portion of right-of-way known as Karen Lane located between the subject property and the existing city limits of Gainesville.

SECTION II.

All Ordinances and parts of Ordinances in conflict herewith are hereby repealed.

SECTION III.

If any portion of this Ordinance shall be held to be invalid or unconstitutional, such invalidity or unconstitutionality shall not affect or impair the remaining portions unless it clearly appears that such other parts are wholly and necessarily dependent upon the part held to be invalid or unconstitutional.

SECTION IV.

This Ordinance is enacted as an amendment to the Code of the City of Gainesville, Georgia, and is to be codified as a part of Section 9-1-1-5.

SECTION V.

The effective date of this Ordinance shall be upon approval by the governing authority of the City of Gainesville, Georgia.

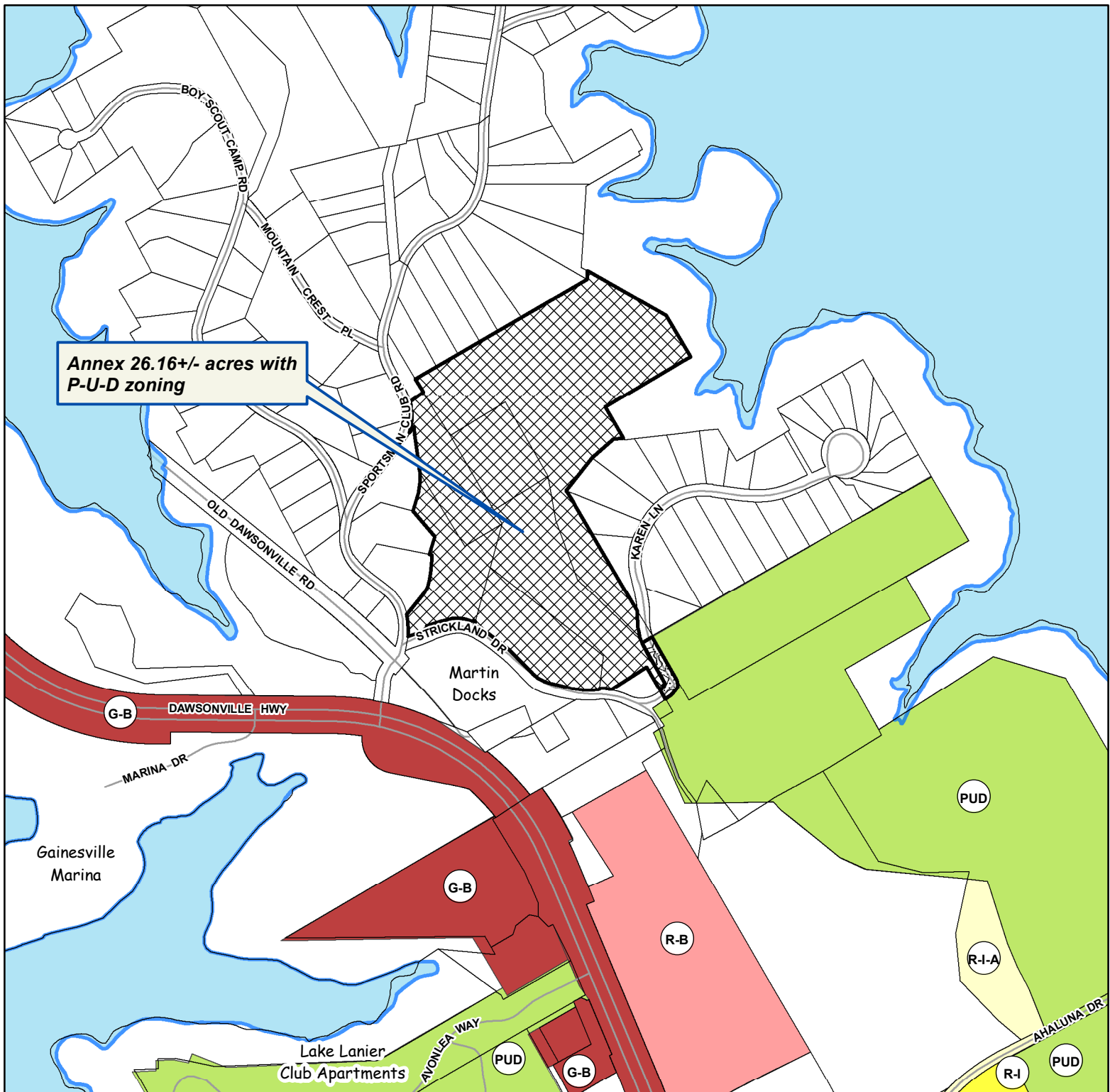
ORDINANCE NO. 2017-

C. Danny Dunagan, Jr., Mayor

This is to certify that I am City Clerk of the City of Gainesville. As such, I keep its official records, including its minutes. In that capacity, my signature below certifies this resolution was adopted as stated and will be recorded in the official minutes.

ATTEST:

Denise O. Jordan, City Clerk



Applicant:

ANNEXATION REQUEST

OAK HALL COMPANIES, LLC



Request:

Annex 26.16+/- acres with Planned Unit Development (P-U-D) zoning for an active adult community

Subject Area Address:

2049 Strickland Drive; 2106, 2234 and 2242 Sportsman Club Road; 0 and 2209 Karen Lane

Meeting: 5/9/2017

Prepared: 3/14/2017

Gainesville Community Development Department



Subject Property



Right of Way to be Annexed



0 330 660 990 1,320 Feet

1" = 550'

Tax Parcel: 00-109-003-001, 004, 005;
00-109B-000-001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012, 013, 014, 015, 016, 017, 018, 019, 020, 021, 022, 023, 024, 025, 026, 027, 028, 029, 030, 031, 032, 033, 034, 035, 036, 037, 038, 039, 040, 041, 042, 043, 044, 045, 046, 047, 048, 049, 050, 051, 052, 053, 054, 055, 056, 057, 058, 059, 060, 061, 062, 063, 064, 065, 066, 067, 068, 069, 070, 071, 072, 073, 074, 075, 076, 077, 078, 079, 080, 081, 082, 083, 084, 085, 086, 087, 088, 089, 090, 091, 092, 093, 094, 095, 096, 097, 098, 099, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 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1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2



Applicant:

ANNEXATION REQUEST

OAK HALL COMPANIES, LLC



Request:

Annex 26.16+/- acres with Planned Unit Development (P-U-D) zoning for an active adult community

Subject Area Address:

2049 Strickland Drive; 2106, 2234 and 2242 Sportsman Club Road; 0 and 2209 Karen Lane

Meeting: 5/9/2017

Prepared: 3/14/2017

Gainesville Community Development Department



Subject Property

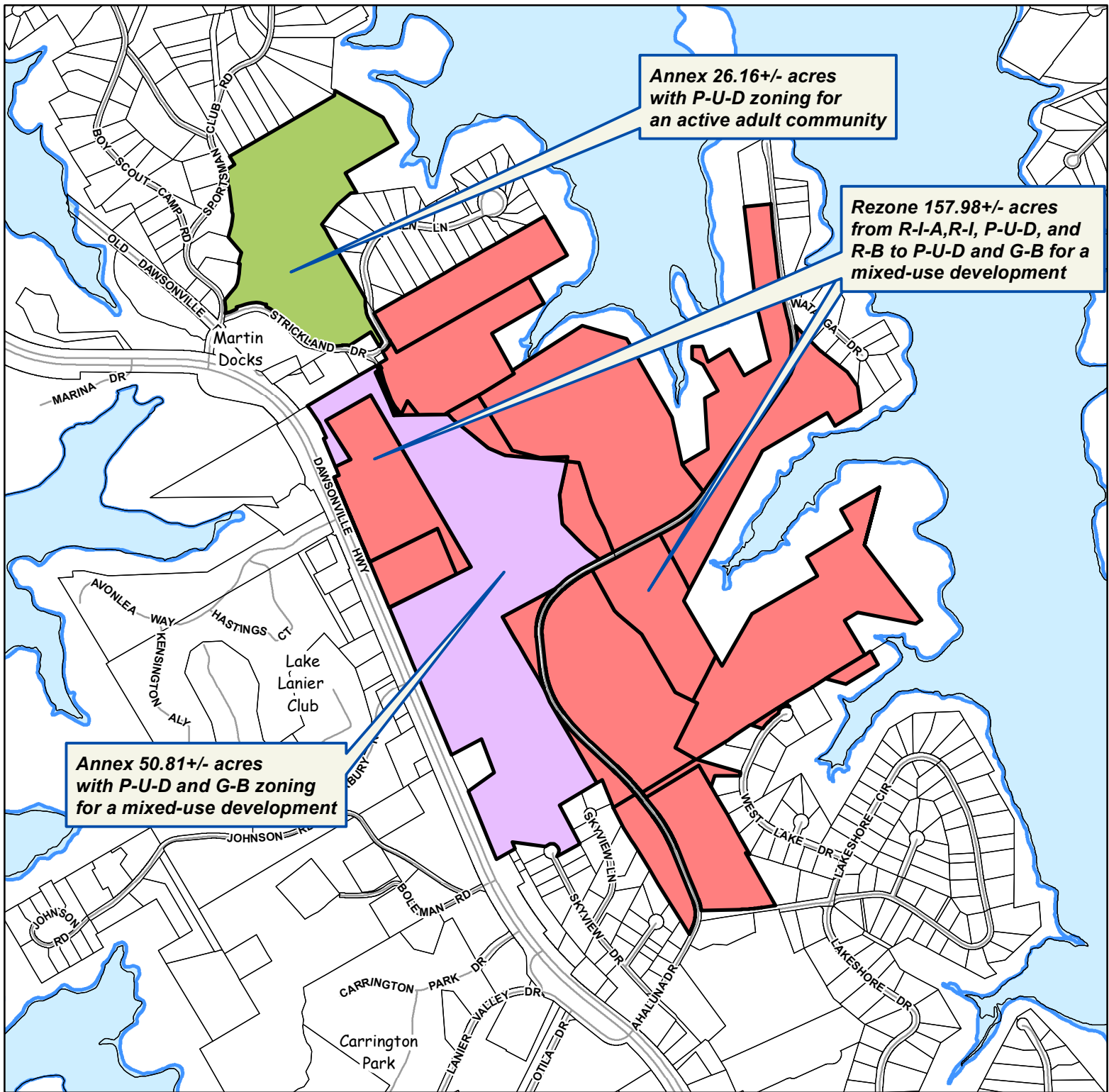
Aerial from 2015

0 330 660 990 1,320 Feet



1" = 550'

Tax Parcel: 00-109-003-001, 004, 005;
00-109B-000-001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012, 013, 014, 015, 016, 017, 018, 019, 020, 021, 022, 023, 024, 025, 026, 027, 028, 029, 030, 031, 032, 033, 034, 035, 036, 037, 038, 039, 040, 041, 042, 043, 044, 045, 046, 047, 048, 049, 050, 051, 052, 053, 054, 055, 056, 057, 058, 059, 060, 061, 062, 063, 064, 065, 066, 067, 068, 069, 070, 071, 072, 073, 074, 075, 076, 077, 078, 079, 080, 081, 082, 083, 084, 085, 086, 087, 088, 089, 090, 091, 092, 093, 094, 095, 096, 097, 098, 099, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 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1497, 1498, 1499, 1500, 1501, 1502, 1503, 1504, 1505, 1506, 1507, 1508, 1509, 1510, 1511, 1512, 1513, 1514, 1515, 1516, 1517, 1518, 1519, 1520, 1521, 1522, 1523, 1524, 1525, 1526, 1527, 1528, 1529, 1530, 1531, 1532, 1533, 1534, 1535, 1536, 1537, 1538, 1539, 1540, 1541, 1542, 1543, 1544, 1545, 1546, 1547, 1548, 1549, 1550, 1551, 1552, 1553, 1554, 1555, 1556, 1557, 1558, 1559, 1560, 1561, 1562, 1563, 1564, 1565, 1566, 1567, 1568, 1569, 1570, 1571, 1572, 1573, 1574, 1575, 1576, 1577, 1578, 1579, 1580, 1581, 1582, 1583, 1584, 1585, 1586, 1587, 1588, 1589, 1590, 1591, 1592, 1593, 1594, 1595, 1596, 1597, 1598, 1599, 1600, 1601, 1602, 1603, 1604, 1605, 1606, 1607, 1608, 1609, 1610, 1611, 1612, 1613, 1614, 1615, 1616, 1617, 1618, 1619, 1620, 1621, 1622, 1623, 1624, 1625, 1626, 1627, 1628, 1629, 1630, 1631, 1632, 1633, 1634, 1635, 1636, 1637, 1638, 1639, 1640, 1641, 1642, 1643, 1644, 1645, 1646, 1647, 1648, 1649, 1650, 1651, 1652, 1653, 1654, 1655, 1656, 1657, 1658, 1659, 1660, 1661, 1662, 1663, 1664, 1665, 1666, 1667, 1668, 1669, 1670, 1671, 1672, 1673, 1674, 1675, 1676, 1677, 1678, 1679, 1680, 1681, 1682, 1683, 1684, 1685, 1686, 1687, 1688, 1689, 1690, 1691, 1692, 1693, 1694, 1695, 1696, 1697, 1698, 1699, 1700, 1701, 1702, 1703, 1704, 1705, 1706, 1707, 1708, 1709, 1710, 1711, 1712, 1713, 1714, 1715, 1716, 1717, 1718, 1719, 1720, 1721, 1722, 1723, 1724, 1725, 1726, 1727, 1728, 1729, 1730, 1731, 1732, 1733, 1734, 1735, 1736, 1737, 1738, 1739, 1740, 1741, 1742, 1743, 1744, 1745, 1746, 1747, 1748, 1749, 1750, 1751, 1752, 1753, 1754, 1755, 1756, 1757, 1758, 1759, 1760, 1761, 1762, 1763, 1764, 1765, 1766, 1767, 1768, 1769, 1770, 1771, 1772, 1773, 1774, 1775, 1776, 1777, 1778, 1779, 1780, 1781, 1782, 1783, 1784, 1785, 1786, 1787, 1788, 1789, 1790, 1791, 1792, 1793, 1794, 1795, 1796, 1797, 1798, 1799, 1800, 1801, 1802, 1803, 1804, 1805, 1806, 1807, 1808, 1809, 1810, 1811, 1812, 1813, 1814, 1815, 1816, 1817, 1818, 1819, 1820, 1821, 1822, 1823, 1824, 1825, 1826, 1827, 1828, 1829, 1830, 1831, 1832, 1833, 1834, 1835, 1836, 1837, 1838, 1839, 1840, 1841, 1842, 1843, 1844, 1845, 1846, 1847, 1848, 1849, 1850, 1851, 1852, 1853, 1854, 1855, 1856, 1857, 1858, 1859, 1860, 1861, 1862, 1863, 1864, 1865, 1866, 1867, 1868, 1869, 1870, 1871, 1872, 1873, 1874, 1875, 1876, 1877, 1878, 1879, 1880, 1881, 1882, 1883, 1884, 1885, 1886, 1887, 1888, 1889, 1890, 1891, 1892, 1893, 1894, 1895, 1896, 1897, 1898, 1899, 1900, 1901, 1902, 1903, 1904, 1905, 1906, 1907, 1908, 1909, 1910, 1911, 1912, 1913, 1914, 1915, 1916, 1917, 1918, 1919, 1920, 1921, 1922, 1923, 1924, 1925, 1926, 1927, 1928, 1929, 1930, 1931, 1932, 1933, 1934, 1935, 1936, 1937, 1938, 1939, 1940, 1941, 1942, 1943, 1944, 1945, 1946, 1947, 1948, 1949, 1950, 1951, 1952, 1953, 1954, 1955, 1956, 1957, 1958, 1959, 1960, 1961, 1962, 1963, 1964, 1965, 1966, 1967, 1968, 1969, 1970, 1971, 1972, 1973, 1974, 1975, 1976, 1977, 1978, 1979, 1980, 1981, 1982, 1983, 1984, 1985, 1986, 1987, 1988, 1989, 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 20



Applicant:
ANNEXATION AND REZONING REQUEST

OAK HALL COMPANIES, LLC



Request:
 Rezone 157.98+/- acres from R-I-A, R-I, P-U-D, and R-B to P-U-D and G-B and annex 76.97+/- acres with P-U-D zoning for a mixed-use development/active adult community

Subject Area Address:
 See attached list

Meeting: 5/9/2017
Prepared: 2/16/2017

Gainesville Community Development Department

- Annex 26.16+/- Acres
- Annex 50.81+/- Acres
- Rezone 157.98+/- Acres

0 540 1,080 1,620 2,160 Feet



1" = 900'

Tax Parcel: See attached list

REVISED 2017-04-17

**NARRATIVE REPORT, LAND USES AND DEVELOPMENT SUMMARY, IMPROVEMENT REQUIREMENTS
COMPARISON, AND COMMUNITY BENEFIT STATEMENT FOR ANNEXATION APPLICATION**

Applicant:	Oak Hall Companies, LLC
Annexation Property:	26.16 Acres Designated as Hall County Tax Parcel(s): 00109B000001, 00109003004, 00109003005, and 00109003001, 00109B000002A, 00109B000036
Current Zoning:	PRD
Proposed Zoning:	PUD
Proposed Use:	Planned Unit Development, with 90 Age-Restricted, Single-Family Attached Dwellings (townhouses)
ROW Access:	Karen Lane

This statement is intended to comply with the application procedures established by The City of Gainesville, GA for submittal of applications for annexation as required by the City of Gainesville Unified Land Development Code (the "ULDC"), City of Gainesville Public Hearing Application Requirements, and other City of Gainesville Ordinances and Standards and is intended to serve as the Narrative Report required by the ULDC. As part of this Narrative Report, the Applicant asserts the statements contained in the Application for annexation package, submitted herewith incorporated herein by reference, and as may be amended (the "Application"), describing justification for the requested annexation, zoning and for any request of variances, in any, as if such were fully stated herein.

The Applicant proposes to develop the Proposed Use on the Subject Property. The Applicant requests to annex into the City of Gainesville the Annexation Property, which is currently located in unincorporated Hall County. The proposed annexation would not create an unincorporated island in violation of O.C.G.A. § 36-36-4. In the event the annexation is approved, there will be contiguity between any remaining unincorporated lands.

I. Land Uses and Development Summary

The Applicant proposes to develop the Proposed Use on the Annexation Property. The Subject Property is adjoined by residential dwellings along Lake Lanier to the north (zoned R-I), east (zoned R-I, AR-III, PUD, V-C), residential dwellings to the south (zoned AR-III), and by residential dwellings to the southwest, along zoned properties to the southwest, along SR53 (zoned R-I).

The Proposed Use is consistent with the intent of the Comprehensive Plan and the Future Development Map. The Annexation Property is depicted on the Gainesville 2030 Comprehensive Plan, as Low Density

Residential (1 to 4 Dwelling Units per Acre). To accomplish this, the Applicant proposes to utilize the PUD zoning category, with a residential density of 3.43 units per acre.

A. Zoning and Land Use

The Applicant proposes to subject the Annexation Property to the land uses and performance standards depicted on the Willow Springs Concept Plan, dated April 14, 2017, prepared for Oak Hall Companies, LLC by Site Development Consultants, Inc. (the “**Concept Plan**”), submitted concurrently with this Application and incorporated by reference. In addition, the Applicant also proposes to subject the PUD Annexation Property to the **PUD Performance Standards**, attached to and incorporated with this Narrative Report for Annexation.

B. Traffic Impact Analysis

The Applicant also submits with this Narrative Report, and incorporates herein, a Trip Generation Report and Traffic Study Network Determination.

Permanent access to the development will be from the ROW Access. All of the development’s interior streets and driveways will be publicly-owned and maintained.

Traffic generated from the development will be minimal and the entrance will be at a location where sight distance is sufficient. All curb cuts shall be coordinated and approved by the City of Gainesville and GDOT and acceleration and deceleration lanes will be installed as required. All streets within the development will be constructed to conform to standard requirements. Parking will be provided onsite as required by the ULDC.

C. School System

As the Annexation Property will be age-restricted use, impact on schools will be minimal.

D. Utilities

With regard to public utilities, water, sanitary sewer, electricity and cable are available to the site. The development’s water and sewer needs will be served by the City of Gainesville. The Applicant will install underground utility lines within the development to serve the project on an as-needed basis.

E. Economic Impact

The Applicant submits and incorporates herein the attached **Economic Impact Statement**. The calculations therein assume the owners of the residential units will have no children and be exempt from School Property Taxes. The number of residents with children will be nominal, and any such persons would likely be required to pay School Property Taxes.

F. Environmental Impact

The project should also have a minimal impact on the environment. There should be no impact on air quality. Drainage, soil erosion, and sedimentation controls will be extensively utilized on the site after obtaining all required approvals from the Soil Conservation Service and the City of Gainesville. Best management practices will be utilized to protect natural resources. The Applicant will submit plans detailing the development for approval by all applicable and appropriate governmental agencies, based on conformity with subdivision and zoning requirements, as well as other applicable ordinances, statutes and regulations.

II. Improvement Requirements Comparison

	<u>City Standards</u>	<u>Proposed Standards</u>
ROW Widths	50 feet	50 feet
Pavement Widths	24 feet	24 feet
Sidewalk Width	4 feet	4 feet
Sidewalk Location	At least 1 side of each residential road, with connector sidewalks to commercial areas.	At least 1 side of each residential road.

III. Community Benefit Statement

The community will benefit from the Proposed Use, which will provide high quality housing for seniors, improved fire service, and commercial and recreational benefits to the community. The Proposed Use will have little impact on school attendance, as most age-restricted units will not house school-aged children. Residents of age-restricted housing also tend to drive less and, when they do, they drive during off-peak hours, thereby lessening the impact on community traffic.

The Proposed Use will provide quality architectural designs, and extend utility services to areas currently unserved by water and sewer. The Proposed Use will also improve road access on Ahaluna Drive.

CONCLUSION

Approval of the Application will be in the best interest of the City. The Applicant respectfully requests that the Application, as requested by the Applicant, be approved. The Applicant also reserves the right to amend this statement and the Application by supplementing further responses and documents.

Sincerely,



Ethan Underwood,
Attorney for the Applicant

Willow Springs PUD - Residential Performance Standards

RESIDENTIAL USE

Maximum 90 Age-Restricted, active adult dwellings on 26.16 acres with a gross density of approximately 3.43 residential units per acre.

AGE RESTRICTION

Each residential unit shall, at a minimum, have 80% of the occupied units be inhabited by at least one person 55 years of age or older.

BUILDING MATERIALS

Exteriors of all homes and residential structures constructed on the subject property must be of brick, stone, hard coat stucco, or a cement-based material such as hardi-board. Accent materials such as, but not limited to, copper roofing, cedar shake, a cement-based material such as hardi-board, or a combination of such materials, may be used with such accent material not to exceed fifty percent (50%) of the facade. There shall be no vinyl or aluminum siding.

The roofing material used on all detached homes must be cedar shake, architectural/dimensional style asphalt shingles or metal as appropriate to the architectural style of each home.

PROPERTY OWNER ASSOCIATIONS

The development shall have covenants that require maintenance of the landscaped entrance area, open space, and amenity areas by a homeowners association. Membership in the homeowners association is mandatory for owners of properties.

AMENITIES

An amenity area, including a swimming pool and club house, will be available in adjoining senior housing community.

On-street parking will be allowed for the amenity area. On-street parking will be the responsibility of the homeowner's association to maintain.

UNIT TYPE

Independent living products will consist of 90 Age-Restricted, Single Family Attached Dwellings (townhouses).

I. Attached Residential

Type	Maximum # of Units
• Dwelling, single-family attached (townhouses)	90 units

The building footprint for each unit will comprise the boundaries of the individual lots; all other improved areas will be maintained by a mandatory homeowner association as “common area” and all undeveloped area will be maintained as “open space”.

PERFORMANCE STANDARDS – ATTACHED RESIDENTIAL (TOWNHOUSES)

- Minimum unit width – 24 feet
- Minimum Heated Floor Area (1,100 sf)
- Maximum building height – 30 feet
- Each unit will have a minimum 2 car enclosed garage
- Each unit will have a minimum of 18 feet of driveway from the back of sidewalk to the building face or 20 feet from the back of the curb to the building when there is no sidewalk
- Setbacks, excluding steps, roof overhangs, chimneys, bay windows, and patios:
 - 0' front
 - 0' side
 - 0' interior rear
 - 10' separation between blocks of units



City Economic Impact Statement: Oak Hall Companies, LLC

Population	36,306		Millage Rate	0.00298	(Non-Public Safety)	\$ 9,657,458.00
Households	12,967				Local School Expenditures Per Child (40%)	\$ 3,401.41
			School Millage Rate	0.00685	Police Expenditures	\$ 8,471,549.00
Impact Fees per Unit	\$ 1,589.81		Sales Tax Revenue	\$ 5,036,730.00	Fire Expenditures	\$ 6,542,453.00

Table 1: Projected Residential Population			
Year	New Houses	Total Houses	Population
1	15	15	42
2	15	30	84
3	15	45	126
4	15	60	168
5	15	75	210
6	15	90	252

Table 2: Projected Annual General Property Tax Revenue from Residential		
Average Home Price	Year	Revenue
\$325,000.00	1	\$14,438.10
	2	\$28,876.20
	3	\$43,314.30
Avg. Prop Tax per	4	\$57,752.40
\$963	5	\$72,190.50

Table 3: Projected Annual Sales Tax Revenue from Residential	
Year	Revenue
1	\$5,826.40
2	\$11,652.80
3	\$17,479.20
4	\$23,305.61
5	\$29,132.01
6	\$34,958.41

Table 4: Projected Annual School Property Tax Revenue from Residential (Assume 40% Exempt from School Tax)		
Average Home Price	Year	Revenue
\$325,000.00	1	\$20,036.25
	2	\$40,072.50
	3	\$60,108.75
Avg. Prop Tax per House	4	\$80,145.00
\$2,226	5	\$100,181.25
	6	\$120,217.50

Table 5: Projected Residential Impact Fees: One Time Fee per Annum	
Year	Total
1	\$ 23,847.15
2	\$ 23,847.15
3	\$ 23,847.15
4	\$ 23,847.15
5	\$ 23,847.15
6	\$ 23,847.15

Table 6: Cost of Law Enforcement Services		
Year	Total Households	Annual Law Enforcement Expenditures
1	15	\$9,799.74
2	30	\$19,599.48
3	45	\$29,399.22
4	60	\$39,198.96
5	75	\$48,998.70
6	90	\$58,798.44

Table 7: Cost of Fire Protection Services		
Year	Total Households	Annual Fire Expenditures
1	15	\$7,568.20
2	30	\$15,136.39
3	45	\$22,704.59
4	60	\$30,272.78
5	75	\$37,840.98
6	90	\$45,409.17

Table 8: M&O Expenditures		
Year	Total Households	Annual M&O Expenditures
1	15	\$11,171.58
2	30	\$22,343.16
3	45	\$33,514.74
4	60	\$44,686.32
5	75	\$55,857.90
6	90	\$67,029.48

Table 9: Summary of Annual Impact at Completion		
Impact Summary	Column1	Totals
Revenues		
Property Taxes to		\$192,408.00
Sales Taxes to City		\$34,958.41
Total Revenue		\$227,366.41
Expenditures		
Police		\$58,798.44
Fire		\$45,409.17
M&O		\$67,029.48
School Expenditures (1% of Homes have a school-age child)		\$8,571.17
Total Expenditures		\$179,808.26
Annual Net Revenue		\$47,558.15
Total Impact Fees		\$143,082.90

J. Ethan Underwood
eunderwood@mhtlegal.com

REVISED 2017-04-17

RESERVATION OF CONSTITUTIONAL AND LEGAL RIGHTS

Applicant:	Oak Hall Companies, LLC
Annexation Property:	26.16 Acres Designated as Hall County Tax Parcel(s): 00109B000001, 00109003004, 00109003005, and 00109003001, 00109B000002A, 00109B000036
Current Zoning:	PRD
Proposed Zoning:	PUD
Proposed Use:	Planned Unit Development, with 90 Age-Restricted, Single-Family Attached Dwellings (townhouses)
ROW Access:	Karen Lane

This Reservation of Constitutional and Other Legal Rights (“the Reservation”) is intended to supplement and form a part of the annexation and rezoning application (including any request for zoning, conditional use permit and variances)(the “Application”) of the Applicant and the owners of the Subject Property and to put the City of Gainesville on notice of the Applicant’s assertion of its constitutional and legal rights.

The Applicant has filed a timely application, has provided all required information and has submitted the appropriate application fees. The application meets all judicial and statutory requirements for approval.

The Current Zoning of the Subject Property is unconstitutional in that it affords no reasonable use of the Subject Property and no resulting benefit to the public from designation under this zoning classification. The Applicant and the owners of the Subject Property have filed the Application to remedy this unconstitutionality.

A refusal by the City of Gainesville to approve the Application, as requested by the Applicant, will impose a disproportionate hardship on the Applicant and owners of the Subject Property without benefiting any surrounding property owners. There is no reasonable use of the Subject Property under any other zoning classification and no resulting benefit to the public from designation to any other classification.

Any provisions in the City of Gainesville Unified Land Development Code (the “ULDC”) that classify, or may classify, the Subject Property into any non-requested zoning classification or zoning classification that does not permit the Proposed Use as a matter of right, or at a density less than as requested by the Applicant, are, or will be, unconstitutional in that they will constitute a taking of the Applicant’s and owners’ property rights without first paying fair, adequate, and just compensation for such rights in violation of Article I, Section III, Paragraph I of the Georgia Constitution of 1983, as amended, and the Fifth and Fourteenth Amendments to the Constitution of the United States.

The Subject Property is suitable for development under the Proposed Zoning district requested by the Applicant and it is not suitable for development under any other zoning classification, including without limitation the Current Zoning category of the Subject Property, or at a density or use less than that requested by the Applicant. A denial of the Application, as requested by the Applicant, will constitute an arbitrary and capricious act by the City of Gainesville without any basis for such, and will constitute an abuse of discretion in violation of Article I, Section

Page 2 of 2
April 17, 2017

I, Paragraph I of the Georgia Constitution of 1983, as amended and the Due Process Clause of the Fifth and Fourteenth Amendments to the Constitution of the United States.

A refusal by the City of Gainesville to approve the Application, as requested by the Applicant, will prohibit the only viable economic use of the Subject Property, will be unconstitutional and will discriminate in an arbitrary, capricious and unreasonable manner between the Applicant and owner and the owners of similarly situated properties in violation of Article I, Section I, Paragraph II of the Georgia Constitution of 1983, as amended and the Equal Protection Clause of the Fourteenth Amendment to the Constitution of the United States.

The City of Gainesville cannot lawfully impose more restrictive standards on the Subject Property's development than are presently set forth in the ULDC. To do so will constitute a taking of the Subject Property as set forth above, and also amount to an unlawful delegation of the Board's authority in response to neighborhood opposition, in violation of Article IX, Section II, Paragraph IV of the Georgia Constitution of 1983, as amended. Any zoning conditions or other restrictions imposed on the Subject Property without the consent of the Applicant and property owners that do not serve to ameliorate the negative impacts of the development are invalid and void. As such, the Applicant and owners reserve the right to challenge any such zoning conditions and other restrictions. The Applicant and owners also reserve the right to challenge any unlawful exactions, whether they are in the form of illegal impact fees or otherwise.

Furthermore, this Reservation also constitutes an Ante Litem Notice pursuant to O.C.G.A. § 36-11-1, which places the City of Gainesville and all other agents of the City on notice of the Applicant's and owners' intent to seek monetary damages and attorney's fees against the City of Gainesville for any rezoning action, zoning condition, illegal impact fee and any other unlawful restrictions and exactions that are imposed on the Subject Property, the Applicant and the owners.

Finally, the Applicant and owners assert that the ULDC, Future Development Map and Comprehensive Plan were not adopted in compliance with the laws or constitutions of the State of Georgia or of the United States, and a denial of the Applicant's request based upon provisions illegally adopted will deprive the Applicant and owners of due process under the law.

By filing this Reservation, the Applicant reserves all rights and remedies available to it under the United States Constitution, the Georgia Constitution, all applicable federal, state, and local laws and ordinances, and in equity.

The Applicant and owners respectfully request that this Application be approved as requested by the Applicant and in the manner shown on the Application, which is incorporated herein by reference. This Reservation forms an integral part of the Application, and we ask that the City of Gainesville include this Reservation with the Applicant's other application documents. The Applicant and owners reserve the right to amend and supplement this Reservation at any time.

Sincerely,

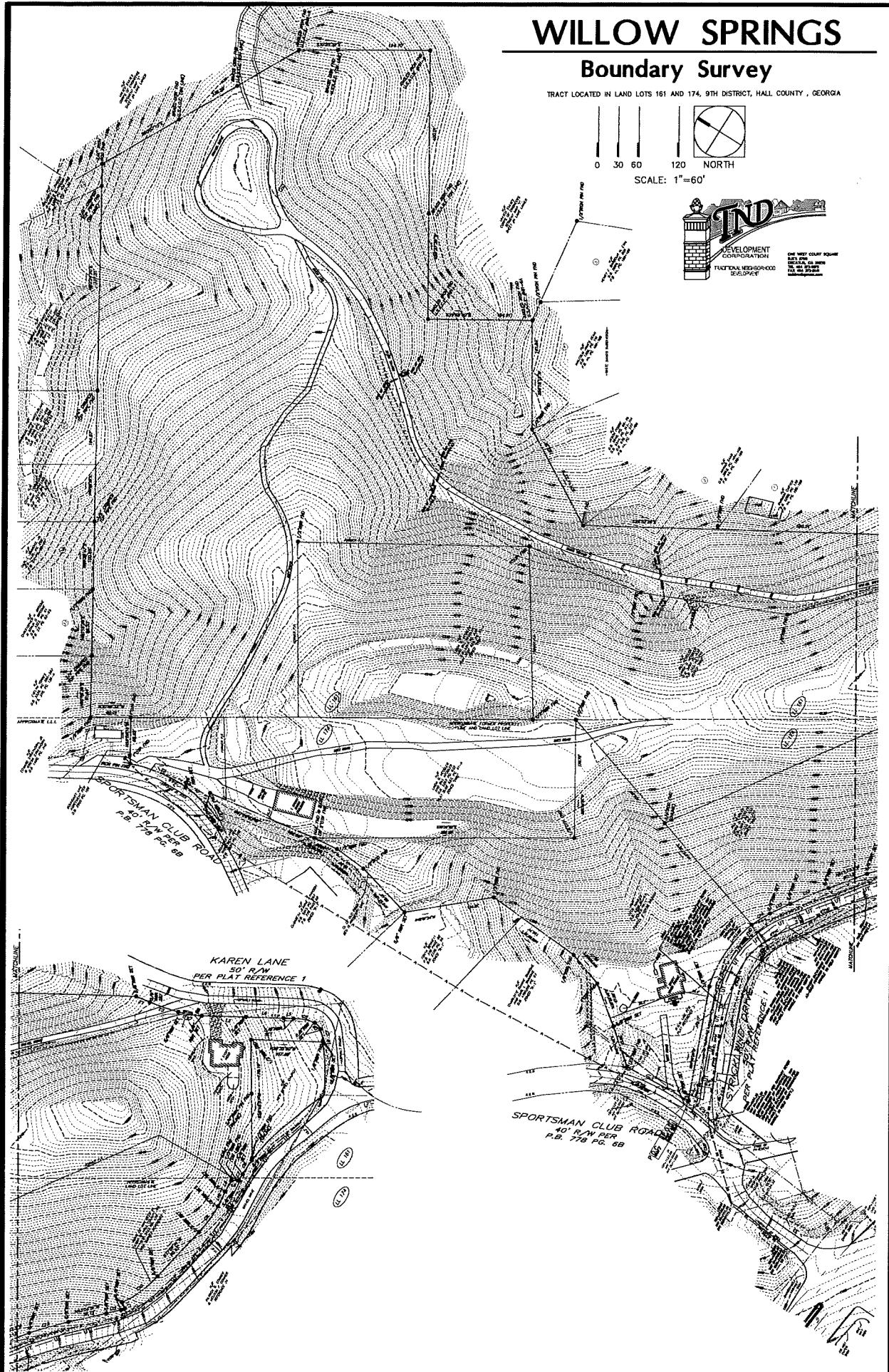
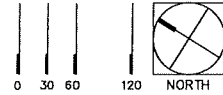


Ethan Underwood,
Attorney for the Applicant

WILLOW SPRINGS

Boundary Survey

TRACT LOCATED IN LAND LOTS 161 AND 174, 9TH DISTRICT, HALL COUNTY, GEORGIA



PROJECT DATA

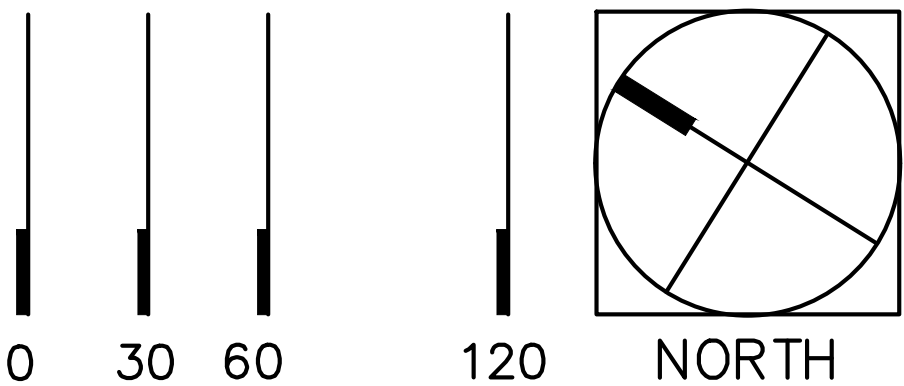
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CURRENT ZONING	PRD
SITE AREA	26.2 ACRES
RESIDENTIAL	
SENIOR TERRACE HOMES	90 UNITS
DENSITY	
OVERALL DENSITY	90 UNITS/ 26.2 ACRES = 3.43 UN/ACRE
PARKING INFORMATION	
SENIOR TERRACE HOMES PARKING PROVID	4 SPACES/UNIT
GUEST PARKING PROVID	360 SPACES
	56 SPACES
	416 SPACES



OAK HALL
— COMPANIES LLC —

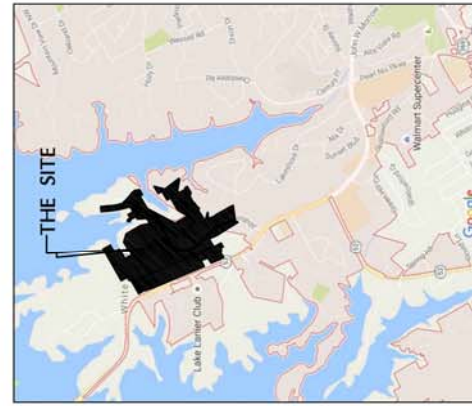
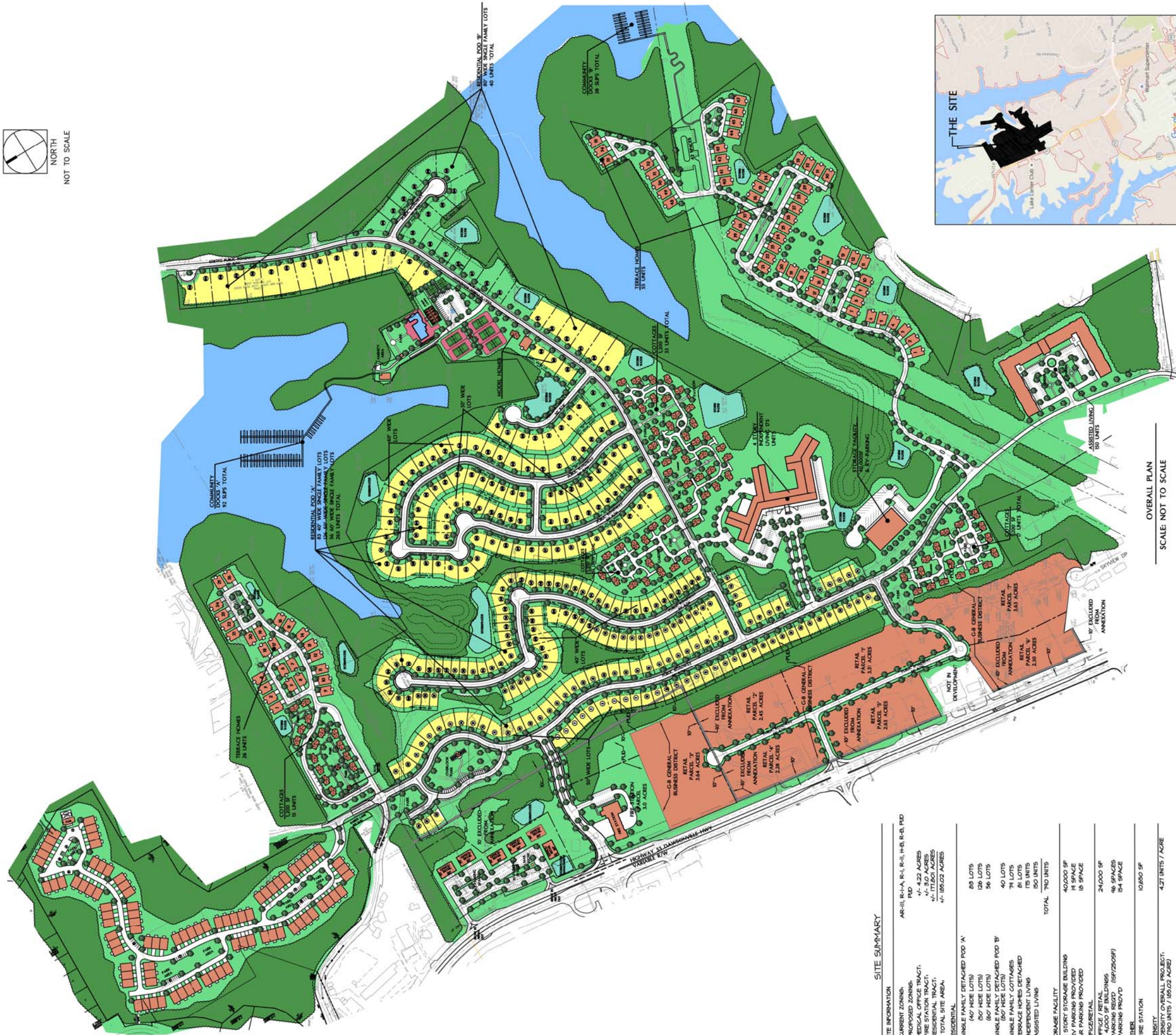
WILLOW SPRINGS
CONCEPT PLAN

Prepared for
Oak Hall Companies, LLC
5256 Peachtree Road, Suite 195
770-662-5995
Atlanta, GA 30341
DATE: 4/14/2017



SCALE: 1"=60'





OVERALL PLAN
SCALE: NOT TO SCALE

LOCATION MAP
NTS

Lanier Tract

Zoning Plan

PROJECT LYING IN LAND LOTS 161, 162, 163 & 173 OF THE 9TH DISTRICT, CITY OF GAINESVILLE, HALL COUNTY, GEORGIA

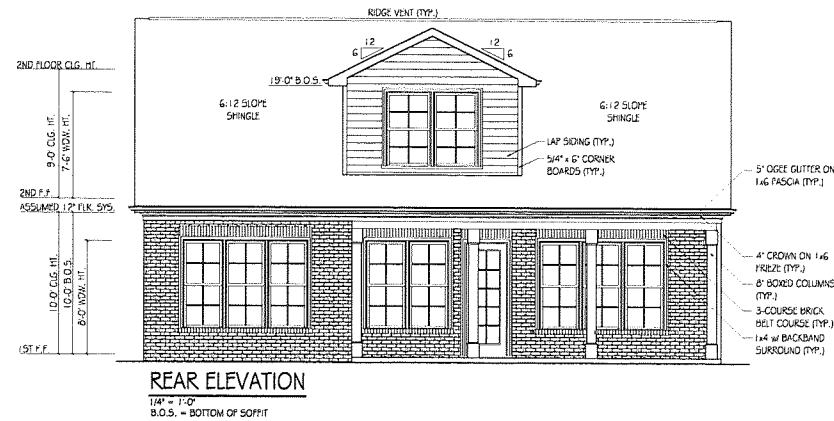
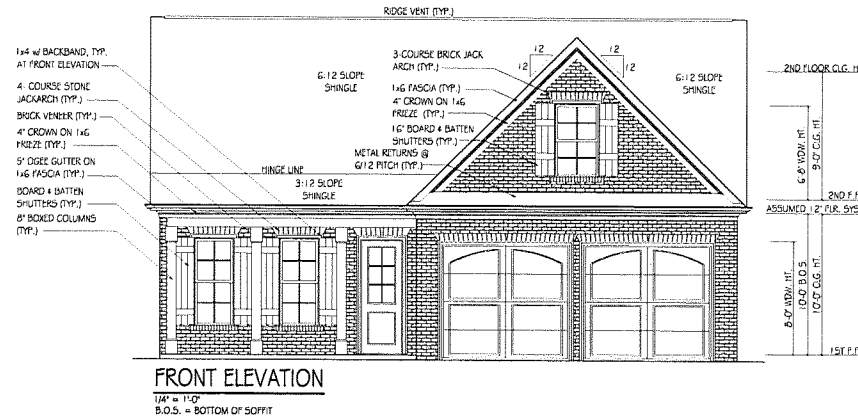
Prepared for
Oak Hall Companies, LLC
5256 Peachtree Road, Suite 195
Atlanta, Georgia 30341
DATE: 4/17/2017



Development Consultants, Inc.
Lead Planning • Site Development • Landscape Architecture
4432 Grand View, Morris, GA 30866, Tel: 678-285-2885, Cell: 678-523-4888

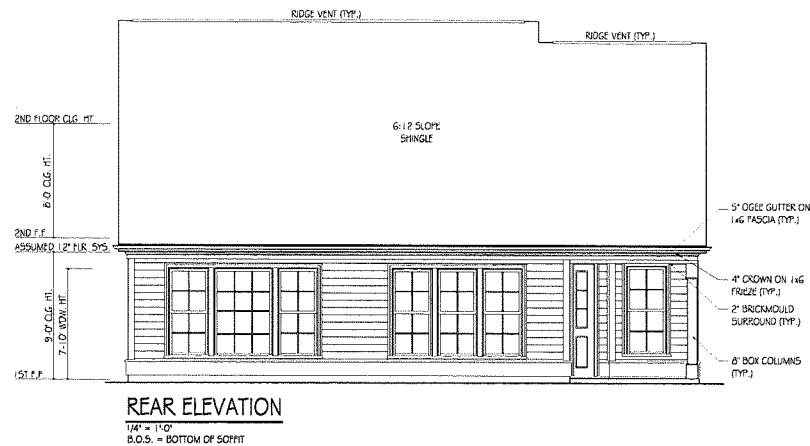
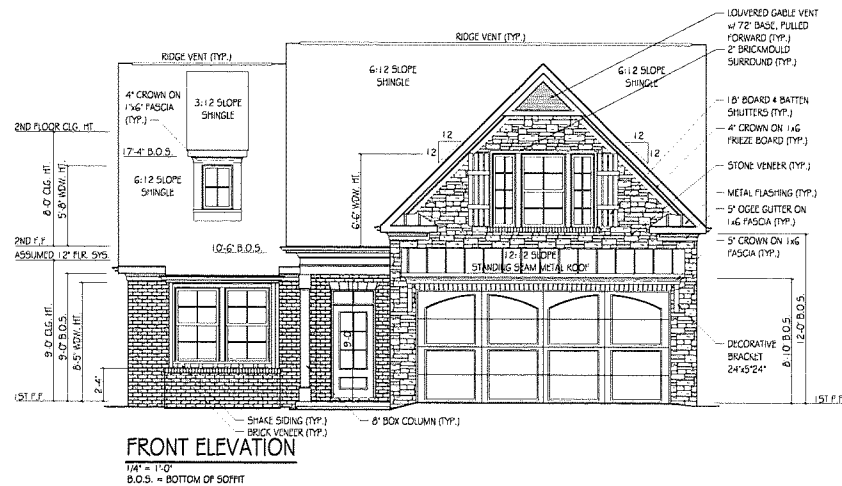
SITE SUMMARY

SITE INFORMATION	
CURRENT ZONING:	AR-III, R-1A, R-1, H-B, R-B, PUD
PROPOSED ZONING:	PUD
MEDICAL OFFICE TRACT:	17- 4.32 ACRES
FIRE STATION TRACT:	17- 3.0 ACRES
RESIDENTIAL TRACT:	17- 171.801 ACRES
TOTAL SITE AREA:	17- 189.02 ACRES
RESIDENTIAL	
SINGLE FAMILY DETACHED POD 'A'	
63 LOTS	
126 WIDE LOTS	
56 LOTS	
60' WIDE LOTS	
40 LOTS	
74 LOTS	
80' WIDE LOTS	
175 LOTS	
150 UNITS	
ASSISTED LIVING	
TOTAL	740 UNITS
STORAGE FACILITY	
2 STORY STORAGE BUILDING	40,000 SF
RV PARKING PROVIDED	18 SPACE
CAR PARKING PROVIDED	10 SPACE
OFFICE/RETAIL	
OFFICE/RETAIL	24,000 SF
PARKING REQ'D (159/250SF)	46 SPACES
PARKING PROVIDED	154 SPACE
OTHER	
FIRE STATION	10,650 SF
DENSITY	4.21 UNITS / ACRE
DENSITY OVERALL (740 UNITS / 189.02 ACRES)	
OPEN SPACE	41- 69.0 ACRES
OPEN SPACE PROVIDED	56.6%
NOTES	
1. THIS PLAN IS TO BE USED FOR PLANNING PURPOSES ONLY AND IS NOT INTENDED TO BE A CONSTRUCTION DOCUMENT. PLAN IS PREPARED FOR USE ONLY BY OAK HALL COMPANIES, LLC.	
COMMERCIAL PARCEL	
COMMERCIAL PARCEL TOTAL ACRES	23.11 ACRES
6-B GENERAL BUSINESS DISTRICT	
PROPOSED ZONING:	7 COMMERCIAL PARCELS
RETAIL SPACE	6,000 SF AVERAGE PER PARCEL
ADJACENT MILLON SPRINGS TOWNHOME PROJECT	
SITE AREA:	26.2 ACRES
ATTACHED SENIOR TERRACE HOMES	3.44 UNITS PER ACRE
DENSITY: 40 UNITS/ 26.2 ACRES	



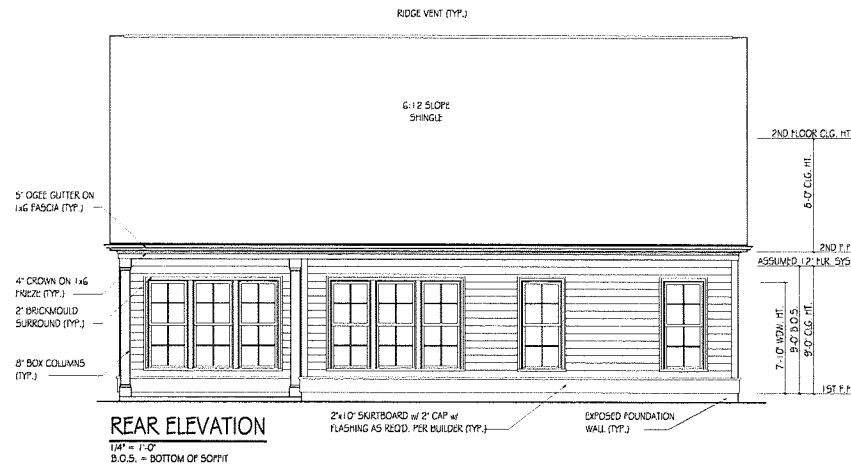
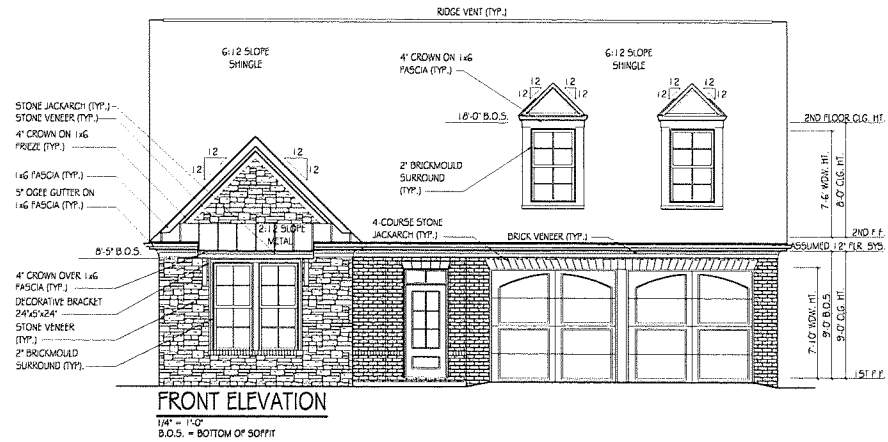
GENERAL NOTE:
 ALL DIMENSIONS MAY VARY FROM ACTUAL SIZE CONDITIONS IN THE FIELD. THE NUMBER OF STAIRS, TREADS AND RISERS AT GARAGE, TERRACES, PORCHES, DECKS, ETC., ARE TO BE DETERMINED BY THE BUILDER / CONTRACTOR, ACCORDING TO ACTUAL CONDITIONS.

TUBE	JOB #
1203	15143
DATE	REVISED
08/19/16	
SQUARE FOOTAGE	
2303 SF	
LOT #	SUBDIVISION
	THE OVERLOOK AT OLD ATLANTA
PROJECT	
CUSTOM HOME FOR JIM CHAPMAN COMMUNITIES	
THE NEWBURY -A	
CLASSICAL CONCEPTS ATLANTA	
P.O. BOX 732 FLOWERY BRANCH, GA. 30542	
404-226-6964 (DAVID)	404-401-7298 (MARY)
CCADORAN@YAHOO.COM MFITZDORAN@AOL.COM	
This plan is the property of CLASSICAL CONCEPTS and may not be used reproduced without their permission.	
Please Note: CLASSICAL CONCEPTS is not responsible for and does not warrant the accuracy of the information contained in this plan. It is the responsibility of the client to obtain all necessary permits and approvals from the appropriate authorities. 1. Builder is to maintain the plan and all dimensions and details as shown on the plan. 2. Client and builder agree that all final building details are the responsibility of the builder. 3. Plans are to be used only for the purpose of building and are not to be used for any other purpose. 4. Client and builder agree to maintain the plan and all dimensions and details as shown on the plan.	
DRAWN	SHEET #
BCLLC	D1 of 6



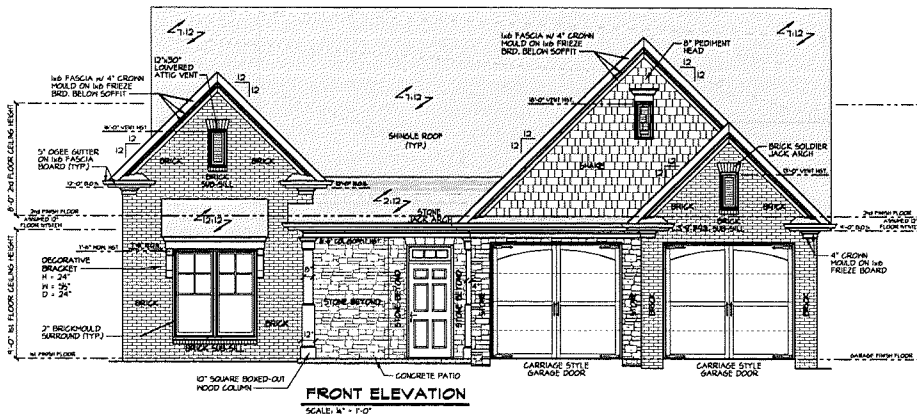
GENERAL NOTE:
 ALL GRADES SHOWN MAY VARY PER ACTUAL SITE CONDITIONS IN THE FIELD. THE NUMBER OF EXTERIOR TREADS AND RISERS AT GARAGE, TERRACES, PORCHES, DECKS, ETC., ARE TO BE DETERMINED BY THE QUALITY CONTRACTOR ACCORDING TO ACTUAL GRADES.

TUBE	JOB #
1283	16178
DATE	REVISED
09/10/16	
SQUARE FOOTAGE	
2229 SF	
LOT #	SUBDIVISION
	NESTLE DOWN FARMS
PROJECT	
CUSTOM HOME FOR JIM CHAPMAN COMMUNITIES	
THE DALTON - A	
CLASSICAL CONCEPTS ATLANTA	
P.O. BOX 732 FLOWERY BRANCH, GA. 30542	
404-226-6964 (DAVID)	404-401-7298 (MARY)
CCADORAN@YAHOO.COM MFTZDORAN@AOL.COM	
This plan is the property of CLASSICAL CONCEPTS and may not be used reproduced without their permission.	
Please Note: CLASSICAL CONCEPTS is not responsible for any errors or omissions in this plan. It is the responsibility of the contractor to verify all dimensions and existing conditions before construction. 1. The owner is responsible for obtaining ALL NECESSARY permits for governing local, state and federal laws. 2. The owner is responsible for obtaining all utility lines for the project. 3. The owner is responsible for obtaining all utility lines for the project. 4. The owner is responsible for obtaining all utility lines for the project.	
DRAWN	SHEET #
BCLLC	D1 of 5



GENERAL NOTE:
ALL GRADES SHOWN MAY VARY PER ACTUAL SITE CONDITIONS IN THE FIELD. THE NUMBER OF EXTERIOR STAIRS AND RISERS AT PORCHES, TERRACES, PATIOS, DECKS, ETC., ARE TO BE DETERMINED BY THE SUBMITTER. CONTRACTOR ACCORDING TO ACTUAL GRADES.

TUBE	JOB #
1284	16179
DATE	REVISED
09/10/16	
SQUARE FOOTAGE	
2375 SF	
LOT #	SUBDIVISION
	NESTLE DOWN FARMS
PROJECT	
CUSTOM HOME FOR JIM CHAPMAN COMMUNITIES	
THE HANOVER - A	
CLASSICAL CONCEPTS ATLANTA	
P.O. BOX 732 FLOWERY BRANCH, GA. 30542	
404-226-6964 (DAVID)	404-401-7298 (MARY)
CCADORAN@YAHOO.COM MFITZDORAN@AOL.COM	
This plan is the property of CLASSICAL CONCEPTS and may not be used reproduced without their permission.	
Please Note: CLASSICAL CONCEPTS is not responsible for any errors or omissions in this plan. It is the responsibility of the submitter to verify all information and conditions before construction. 1. All work shall conform to the latest edition of the International Building Code (IBC) and all applicable local codes. 2. All materials and workmanship shall be in accordance with the specifications and standards of the building industry. 3. The submitter shall be responsible for obtaining all necessary permits and approvals from the local authorities. 4. The submitter shall be responsible for ensuring that the construction is completed within the specified time frame and budget. 5. The submitter shall be responsible for ensuring that the construction is completed in accordance with the specifications and standards of the building industry.	
DRAWN	SHEET #
BCLLC	D1 of 5



ALL GRADES SHOWN MAY VARY PER ACTUAL SITE CONDITIONS IN THE FIELD. THE NUMBER OF EXTERIOR TREADS AND RISERS AT CARAC TERRACES, PORCHES, DECKS, ETC. ARE TO BE DETERMINED BY THE BUILDER / CONTRACTOR ACCORDING TO ACTUAL GRADES.

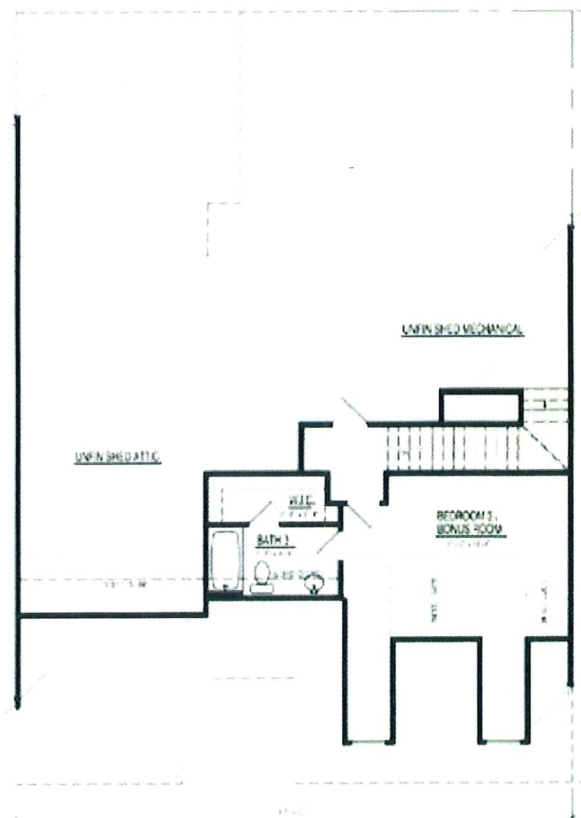
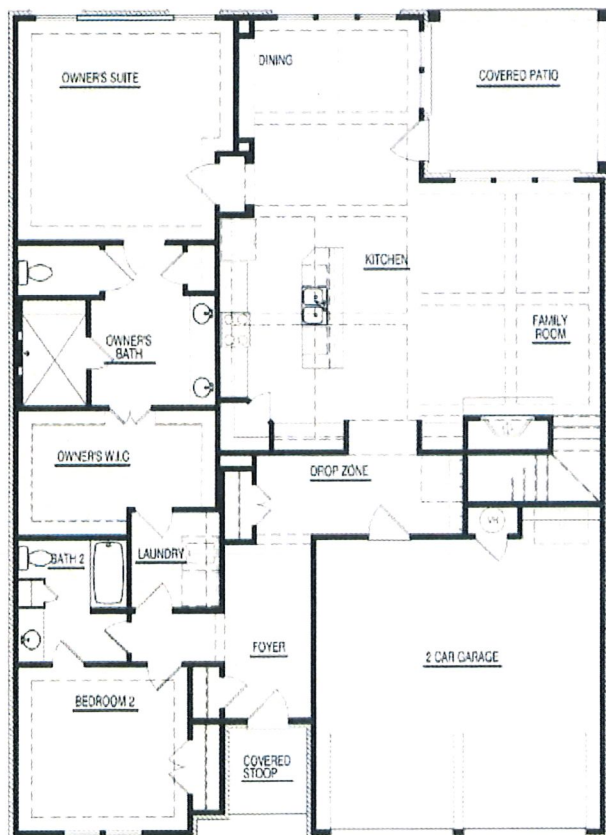
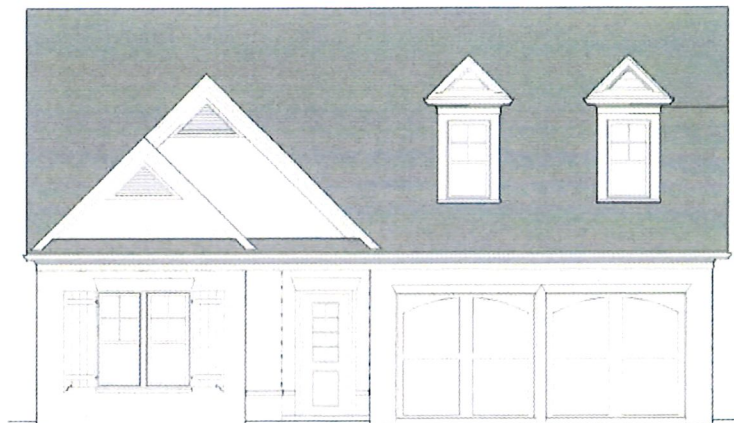
FRONT & REAR ELEV.'S

THE OVERLOOK

AT OLD ATLANTA

Attached Villas

Hanover A Plan
2,339 Square Feet



Due to the evolutionary nature of our design improvement process, there may be actual versus design variations in room dimensions, door swings and window and door locations. These floor plans and any dimensions and square footages shown herein are only approximations. Any homeowner who is concerned about any representations regarding the floor plans should do his or her own investigation as to the dimensions, measurements and square footage of his/her home. We reserve the right to substitute materials of comparable quality. These plans are the sole and absolute property of Jim Chapman Communities, Inc. Use or copying of these plans, without the express written consent of Jim Chapman Communities, Inc., is illegal. Revised 3/31/2016



**JIM
CHAPMAN**
COMMUNITIES

Building Trust. Building Futures.

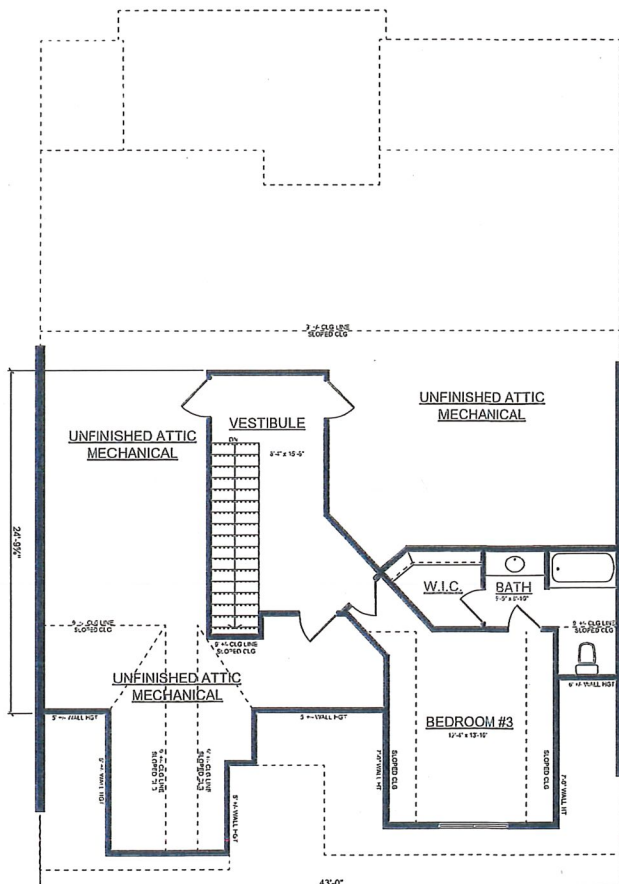
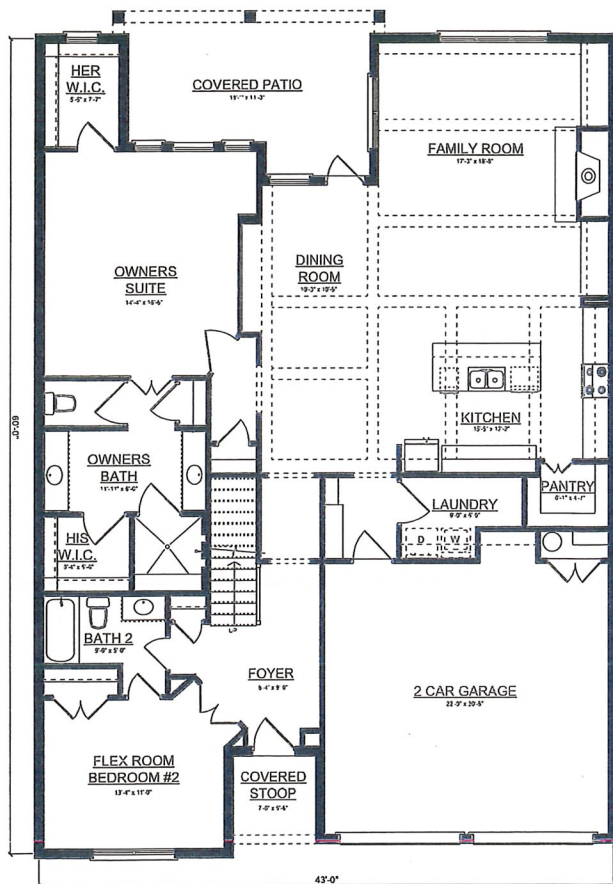
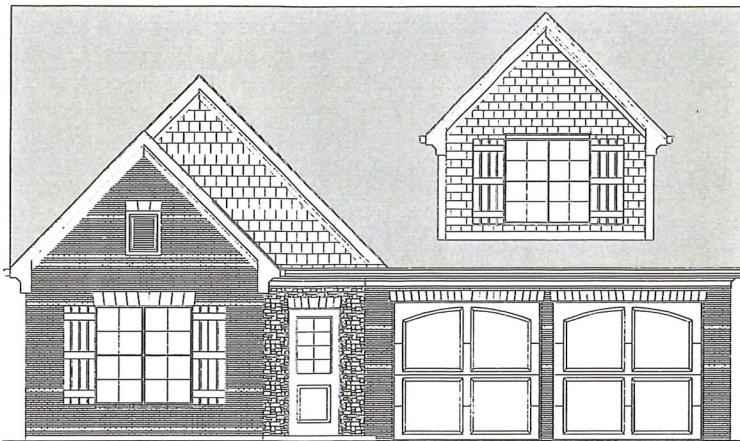
JimChapmanCommunities.com

THE OVERLOOK

AT OLD ATLANTA

Attached Villas

Avery Plan
2,305 Square Feet



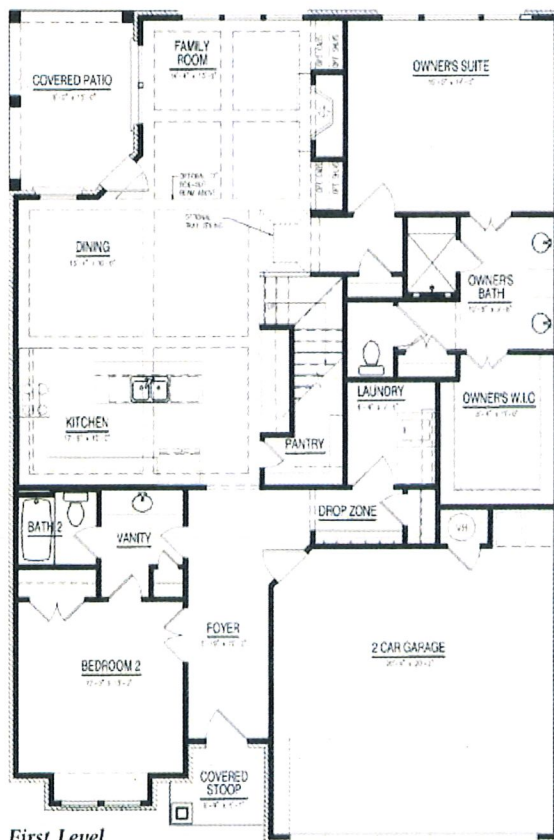
**JIM
CHAPMAN**
COMMUNITIES

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JimChapmanCommunities.com

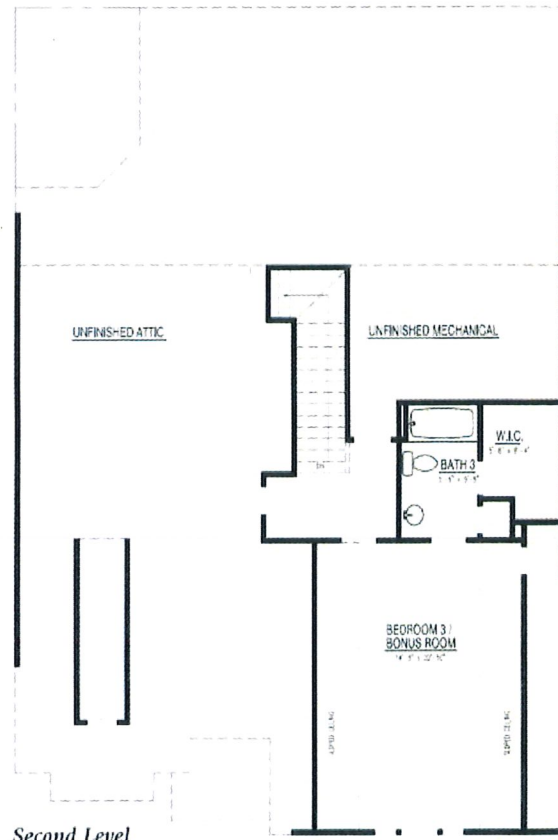
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THE OVERLOOK AT OLD ATLANTA Attached Villas

Dalton Plan
2,270 Square Feet



First Level



Second Level

Due to the evolutionary nature of our design improvement process, there may be actual versus design variations in room dimensions, door swings and window and door locations. These floor plans and any dimensions and square footages shown herein are only approximations. Any homeowner who is concerned about any representations regarding the floor plans should do his or her own investigation as to the dimensions, measurements and square footage of his/her home. We reserve the right to substitute materials of comparable quality. These plans are the sole and absolute property of Jim Chapman Communities, Inc. Use or copying of these plans, without the express written consent of Jim Chapman Communities, Inc., is illegal. Revised 3/31/2016



**JIM
CHAPMAN**
COMMUNITIES

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Traffic Impact Study

Proposed Lanier Tract Multi-Use Development City of Gainesville, Georgia

revised April 7, 2017
for 3/31/2017 site plan

MARC R. ACAMPORA, PE, LLC
TRAFFIC ENGINEERING



Traffic Impact Study

Proposed Lanier Tract Multi-Use Development
City of Gainesville, Georgia

study prepared for:

Oak Hall Companies, LLC
5256 Peachtree Road, Suite 195
Atlanta, Georgia 30341

revised April 7, 2017
for 3/31/2017 site plan



MARC R. ACAMPORA, PE, LLC
TRAFFIC ENGINEERING

858 Myrtle Street, NE
Atlanta, Georgia 30308
(678) 637-1763

e-mail: acamporatraffic@comcast.net
web: www.acamporatraffic.com

Summary

The Lanier Tract DRI is a primarily senior-age-restricted residential community that will be developed along Ahaluna Drive and Strickland Drive. There will be an office/retail node along GA 53, north of Avonlea Way. A fire station of 10,650 square feet is also proposed to be constructed along GA 53. Vehicular access will be provided at several locations, primarily along Ahaluna Drive, with connections to GA 53 via Strickland Drive, at the median opening at Avonlea Way, and through adjacent outparcels, aligning with Canterbury Road. The office/retail node will have a two right-in / right-out accesses directly on GA 53, with no anticipated internal connection to the balance of the development.

The project will generate 171 new trips in the a.m. peak hour, 251 new trips in the p.m. peak hour, and 3,097 new trips during a 24-hour weekday.

The following recommendations are made at each study intersection:

1. **Sportsman Club Road at Strickland Drive** – No changes are recommended at this intersection for the Existing, No-Build, or Future Phase One and Future Phase Two conditions.
2. **Dawsonville Highway at Sportsman Club Road** – The side street delays at this intersection are significant but the low side street volumes make the intersection a weak candidate for signalization. A northbound exclusive right turn lane should be added on GA 53 at Sportsman Club Road.
3. **Dawsonville Highway at Avonlea Way** – Side street delays are high at the existing eastbound approach of Avonlea Way. The volumes exiting the new Lanier Tract access will be low and many of them will be right turners. Therefore, this intersection is a weak candidate for signalization. A northbound right turn lane on GA 53 should be considered at this access and the site plan includes this lane. The new site access should be constructed with one entering lane and one exiting lane. The side street approach exiting the site should be controlled by side street stop sign and accompanying stop bar.
4. **Dawsonville Highway at Canterbury Road** – Side street delays are high on the existing eastbound approach of Canterbury Road. This intersection is a weak candidates for signalization in the existing, no-build, and Future Phase One conditions. No decel lane will be required for Future Phase One. With the future development of the retail outparcels, by others, a northbound deceleration lane on GA 53 is recommended. This intersection will be a prime candidate for signalization upon development of the outparcels. A signal warrant study should be performed for this intersection according to the standards set forth in the Federal Highway Administration's *Manual On Uniform Traffic Control Devices* (MUTCD). This new access at the Canterbury Road median break should be constructed with at least one entering lane and an exiting shared left/through lane and an exclusive right turn lane. The two westbound lanes are in anticipation of the development of the outparcels. With only the Lanier Tract volumes, only one entering and one exiting lane would be required. Until signalization is warranted, the side street approach exiting the outparcel tracts should be controlled by side street stop sign and accompanying stop bar.

5. **Dawsonville Highway at Ahaluna Drive** – A northbound right turn lane should be added on GA 53 at Ahaluna Drive in the existing condition. The future volumes exiting Ahaluna Drive would benefit from the addition of a second westbound lane, resulting in a shared left/through lane and an exclusive right turn lane on Ahaluna Drive at GA 53. There may be an opportunity to shorten the cycle length, which would reduce time spent by vehicles waiting on the side street.
6. **Dawsonville Highway at North Lake Square Access** – This intersection operates acceptably in all analysis conditions. No mitigation is recommended for any analysis condition.
7. **Dawsonville Highway at Beachwood Boulevard** – No changes are recommended at this intersection based on this study.
8. **Dawsonville Highway at McEver Road** – The existing southbound right turn volume is sufficiently-high (828 a.m., 481 p.m.) to merit consideration of the addition of a second exclusive right turn lane and/or the addition of a protected right turn overlap phase. There may be an opportunity to reduce the cycle length and fine-tune the signal timing at this intersection.
9. **Dawsonville Highway at Green Hill Circle** – This signalized intersection incurs high sides street delays, again, due to the allocation of the majority of greentime to the Dawsonville Highway approaches. There may be an opportunity to reduce the cycle length and fine-tune the signal timing at this intersection.
10. **Dawsonville Highway at Shallowford Road** – The lane configuration and signal phasing are appropriate for this intersection. Reduction of the cycle length and optimization of the allocation of greentime could reduce delays and queuing at this intersection.

Contents

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Introduction

This study assesses the traffic impact of a proposed multi-use Development of Regional Impact (DRI) in the City of Gainesville, Georgia. The site is located along the east side of Dawsonville Highway (Georgia State Route 53), and the east and west sides of Ahaluna Drive, as shown in the location map in Figure 1. The project will include a mix of senior living facilities, including senior-age-restricted single family homes, cottages, terrace homes, independent living apartments, and assisted living. In addition, the project will include a retail and office tract. This impact study includes the adjacent Willow Springs townhome development, to the north, and seven retail outparcels to be developed by others, located along the east side of GA 53.

The purpose of this traffic impact study is to determine existing traffic operating conditions in the vicinity of the proposed development, project future “no-build” and “build” traffic volumes, assess the impact of the subject development, then develop conclusions and recommendations to mitigate the project traffic impact and ensure safe and efficient existing and future traffic conditions in the vicinity of the project.

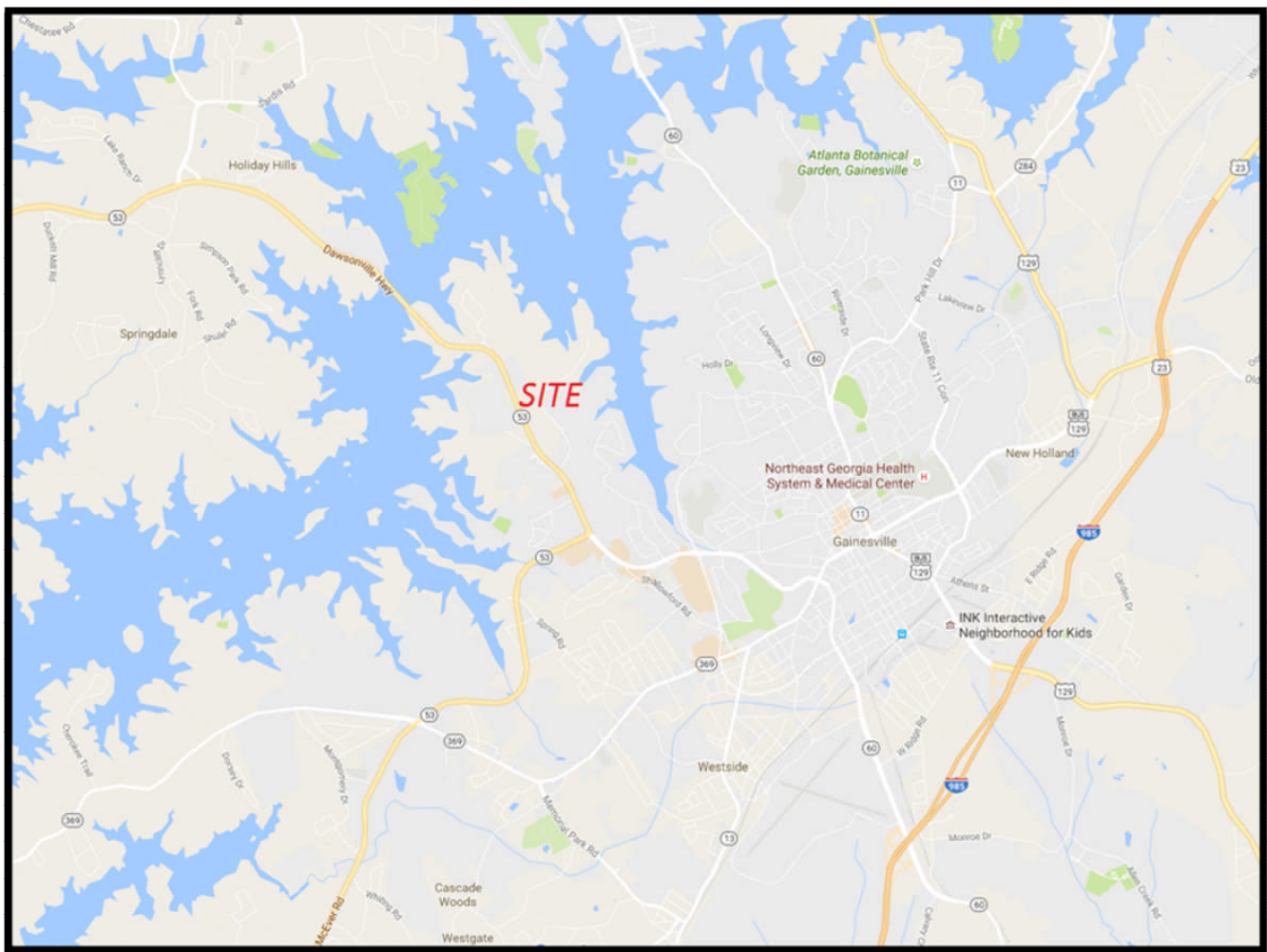


Figure 1 – Lanier Tract Location Map

Existing Traffic Conditions

Existing traffic operating conditions in the vicinity of the proposed Lanier Tract development were assessed. The following is a description of existing facilities, volumes, and intersection operations.

Description of Roadway Facilities

Georgia State Route 53 (Dawsonville Highway adjacent to the site) is a northwest to southeast principal arterial that extends from northwest Georgia, crosses US 19 and Lake Lanier, then passes the subject site and continues to the southeast. The State Route 53 designation turns to the southwest and continues along McEver Road to Mundy Mill Road, then follows Mundy Mill Road through its interchange with Interstate 985, and continues to the southeast. Adjacent to the subject development, GA 53 has two through travel lanes in each direction, is divided with a grassed median, and has exclusive turn lanes at major intersections. The terrain along this section of GA 53 is gently rolling and the posted speed limit is 45 mph.

Ahaluna Drive is a two lane rural local roadway that begins at a signalized intersection at GA 53 and winds through undeveloped land and low density residential development, to its terminus near the shore of Lake Lanier. The road is gently winding with rolling terrain. The proposed Lanier Tract development will develop some of the land on both sides of Ahaluna Drive, and the signal at GA 53 will provide one of the primary access points for this development to the roadway system.

Strickland Drive and Sportsman Club Road are two-lane residential streets that will provide access for the northern part of the proposed Lanier Tract DRI to GA 53. Strickland Drive is side street stop sign controlled at Sportsman Club Road and Sportsman Club Road is side street stop sign controlled at a median break on GA 53. Both roads are gently winding with gently rolling terrain and Strickland Drive becomes unpaved at its eastern terminus. The intersection of Sportsman Club Road at Strickland Drive is located in very close proximity to the intersection of Sportsman Club Road and Old Dawsonville Highway. However, lines of sight between the two intersections are clear and the volumes at these two locations are very low.

The following are photographs of intersections and roadways in the study area.



Photograph 1 – Sportsman Club Road Facing Strickland Drive From Old Dawsonville Highway



Photograph 2 – View From Sportsman Club Road Facing North Along GA 53



Photograph 3 – View From Avonlea Way Facing North Along GA 53



Photograph 4 – GA 53 Facing North at Ahaluna Drive



Photograph 5 – Ahaluna Drive Facing West with Retail Access to Left, SR 53 Ahead



Photograph 6 – Typical Section Along Ahaluna Drive



Photograph 7 – View From Beechwood Drive Facing Under-Construction Retail Across GA 53



Photograph 8 – Eastbound McEver Road at Dawsonville Highway



Photograph 9 – Northbound Dawsonville Highway at Shallowford Road

Existing Traffic Volumes

The City of Gainesville’s Unified Land Development Code (ULDC) specifies that the study area to be included in a traffic impact study will be determined by calculating the peak hour and daily trips that the project will generate, then applying the table provided in the code, shown as Table 1, below, to determine the distance from the project that must be included in the study area.

Table 1 – ULDC Study Area Size Requirements

Peak Hour Trips Generated	Daily Trips Generated	Distance from Perimeter of Proposed Development Along Roads
100 - 150	1,000 – 1,500	½ mile
151 - 500	1,501 – 5,000	1 mile
501 – 1,000	5,001 – 10,000	2 miles
1001 or more	10,001 or more	3 miles

from the City of Gainesville ULDC

The trip generation for the proposed development is presented later in this report, summarized in Table 6. The peak hour trip generation for the project was calculated at 251 trips and the 24-hour volume is 3,097 trips. Based on these numbers, applied to the ULDC standard presented above, the study network was determined to

extend for one mile from the limits of the proposed site. The one mile limits were presented to the City and, based on that information, the intersections to be included in this study were agreed upon with the City as follows:

1. Sportsman Club Road at Strickland Drive
2. Dawsonville Highway at Sportsman Club Road
3. Dawsonville Highway at Avonlea Way
4. Dawsonville Highway at Canterbury Road
5. Dawsonville Highway at Ahaluna Drive
6. Dawsonville Highway at North Lake Square Shopping Center Entrance
7. Dawsonville Highway at Beachwood Boulevard
8. Dawsonville Highway at McEver Road
9. Dawsonville Highway at Green Hill Circle
10. Dawsonville Highway at Shallowford Road

Existing full turning movement traffic volume counts were collected at each of these intersections. The counts at most intersections were collected on Thursday, November 17, 2016, from 7:00 a.m. to 9:00 a.m. and from 4:30 p.m. to 6:30 p.m. The counts at the North Lake Square entrance were collected on Wednesday, March 22, 2017. Area schools were in standard session on the dates of the traffic counts. From the count data, the highest four consecutive 15-minute interval volumes at each intersection, during each time period, were determined. These volumes make up the typical weekday a.m. and p.m. peak hour traffic volumes at that intersection. The existing a.m. and p.m. peak hour turning movement volumes are shown in Figure 2. The intersection raw count data is found in Appendix A. It is noted that these existing volumes were compared with the volumes in the Preliminary Timing Report, SR 53 Connector – SR 60, Hall County, Georgia, dated April 2016, as provided by the City of Gainesville's traffic consultant. The magnitude of the side street volumes were found to be very comparable with the counts performed for this current study, and generally slightly higher. However, the volumes on the major streets were consistently notably higher for this current study.

Historic Georgia DOT 24-hour traffic counts were also collected in the vicinity. These counts are summarized in Table 3 in the No-Build Conditions section of this report. The 2015 (the latest year for which Georgia DOT data is available) Georgia DOT Average Annual Daily Traffic (AADT) volume on SR 53 north of Sportsman Club Road was 25,600 vehicles per day (vpd).

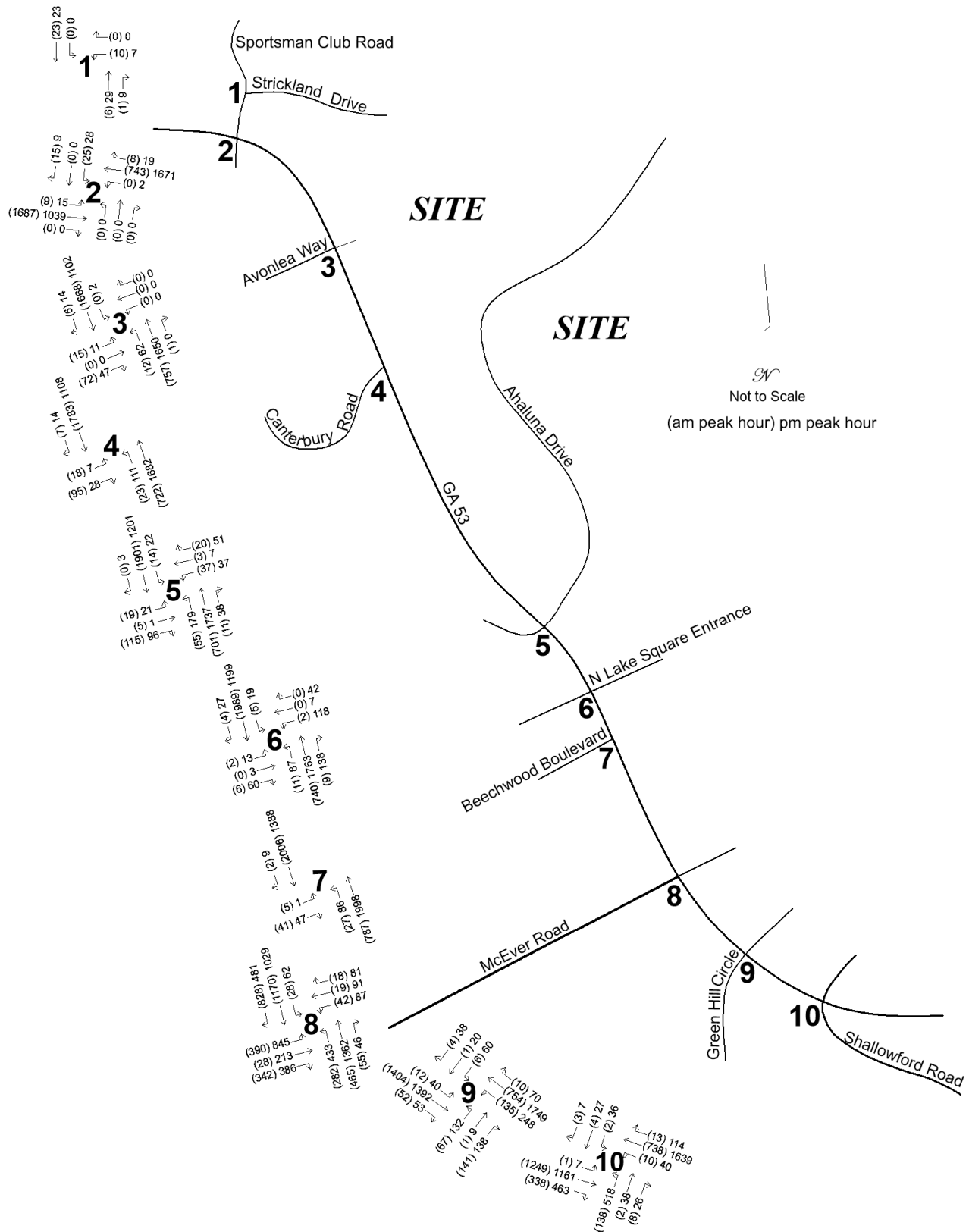


Figure 2 – Existing Traffic Volumes

Existing Intersection Operations

Existing traffic operations were analyzed at the counted intersections using Synchro software, version 8, in accordance with the methodology presented in the Transportation Research Board's 2010 *Highway Capacity Manual (HCM 2010)*. The *HCM 2010* methodology is presented in Appendix B. The results of the analysis are shown in Table 2. Computer printouts containing detailed results of the analysis are located in Appendix C.

Table 2 – Existing Intersection Operations

Intersection / Approach	A.M. Peak Hour		P.M. Peak Hour	
	LOS	Delay s/veh	LOS	Delay s/veh
1. Sportsman Club Road at Strickland Drive	A	2.6	A	1.6
southbound left turn	A	0.0	A	0.0
westbound approach	A	8.8	A	8.9
2. Dawsonville Highway at Sportsman Club Road	A	5.3	C	17.3
northbound approach (turn lane)	A	0.0	A	0.0
southbound approach (Sportsman Club Road)	F	224.6	F	901.3
eastbound left turn (GA 53)	A	9.7	C	15.7
westbound left turn (GA 53)	A	0.0	B	10.7
3. Dawsonville Highway at Avonlea Way	A	2.5	A	1.2
northbound left turn (GA 53)	C	17.6	B	11.4
eastbound left turn	F	275.4	F	144.1
eastbound right turn	D	26.4	B	13.7
4. Dawsonville Highway at Canterbury Road	A	3.8	A	1.2
northbound left turn (GA 53)	C	18.5	B	12.4
eastbound left turn	F	363.9	F	183.8
eastbound right turn	D	30.1	B	13.5
5. Dawsonville Highway at Ahaluna Drive	B	16.5	B	12.7
northbound approach (GA 53)	A	4.6	A	8.6
southbound approach (GA 53)	B	15.9	B	10.4
eastbound approach	D	43.6	C	26.1
westbound approach	F	127.8	F	97.4
6. Dawsonville Highway at North Lake Square	A	1.7	B	14.8
northbound approach (GA 53)	A	0.8	B	12.9
southbound approach (GA 53)	A	1.8	A	8.7
eastbound approach	E	69.5	C	22.9
westbound approach	E	70.0	E	68.3
7. Dawsonville Highway at Beachwood Boulevard	A	1.4	A	0.7
northbound left turn (GA 53)	C	23.0	B	14.0
eastbound left turn	F	393.1	F	235.1
eastbound right turn	D	28.6	C	16.4
8. Dawsonville Highway at McEver Road	D	37.1	F	98.0
northbound approach (GA 53)	E	57.3	F	105.0
southbound approach (GA 53)	B	17.1	D	54.2

eastbound approach	E	68.5	F	145.0
westbound approach	E	60.1	E	67.2
9. Dawsonville Highway at Green Hill Circle	B	11.6	D	40.7
northbound approach (GA 53)	A	6.2	C	31.6
southbound approach (GA 53)	B	10.9	D	48.1
eastbound approach	D	39.5	E	56.2
westbound approach	D	38.1	E	61.3
10. Dawsonville Highway at Shallowford Road	B	10.6	D	48.6
northbound approach (GA 53)	A	5.5	C	32.7
southbound approach (GA 53)	A	6.2	D	50.7
eastbound approach	E	75.9	F	86.2
westbound approach	D	49.9	E	78.0

The analysis of the existing conditions reveals generally acceptable traffic operations at the study intersections. However, Dawsonville Highway, McEver Road, and Shallowford Road carry significant through traffic. At unsignalized intersections, the heavy major roadway volumes contribute to high side street delays. At signalized intersections, the side street delays are also high, even at locations with moderate side street volumes, due to the heavy greentime demands placed on the signals by the major street volumes. The existing conditions at each intersection are discussed briefly as follows:

1. **Sportsman Club Road at Strickland Drive** – Operations at this intersection are excellent due to extremely low volumes. This intersection is located very close to the stop sign controlled intersection of Sportsman Club Road at Old Dawsonville Highway. However, the volumes at that intersection are extremely low, also, and the lines of sight between the two intersections are clear. Therefore, no changes are recommended at this intersection for the existing condition.
2. **Dawsonville Highway at Sportsman Club Road** – The overall operations at this intersection are good, but the Sportsman Club Road southbound approach operates with high delays. This is not unusual for side street stop sign controlled approaches at major thoroughfares such as GA 53, and the volumes incurring the high delays are low. The only way to achieve side street delays better than LOS F is to signalize this intersection. However, signalization would introduce new delays to GA 53 and could also increase the potential for rear-end collisions on GA 53. Signalization would require satisfaction of applicable warrants, as proscribed in the Federal Highway Administration's *Manual On Uniform Traffic Control Devices* (MUTCD). While a warrant analysis was not performed as part of this traffic impact study, the low side street volumes make this intersection a weak candidate for signalization in the existing condition. A review of Georgia DOT auxiliary lane standards is provided later in this report, which concludes that a northwest-bound exclusive right turn lane is likely to be justified, based on existing volumes, on GA 53 at Sportsman Club Road.
3. **Dawsonville Highway at Avonlea Way, 4. Dawsonville Highway at Canterbury Road, and 7. Dawsonville Highway at Beachwood Boulevard** – The operations at these three unsignalized intersections are comparable with one another, with the GA 53 approaches operating well, moderate delays for the side

street right turn movements, and high delays for the side street left turn movements. These side street left turn delays are high for the same explanation just provided for Sportsman Club Road. As with that intersection, signalization would be required at these three intersections, in order to reduce the side street left turn delays to better than LOS F. At all three of these intersections, the side street approach volumes are predominately right turners, with extremely low left turn volumes. For this reason, these three intersections are considered unlikely candidates for signalization in the existing condition. No signal warrant analyses were performed at these intersections as part of this traffic study.

5. **Dawsonville Highway at Ahaluna Drive** – While this intersection is signalized, the greentime on the signal heavily favors the GA 53 approaches. This is appropriate given the volume disparity between the GA 53 approaches and the significantly-lower-volume side street approaches. This results in high side street delays, particularly on the westbound approach exiting Ahaluna Drive. A second westbound lane, striped as an exclusive right turn lane, would allow the signal to process more side street traffic with its limited greentime allocation. In addition, this second lane would allow for more right-turns-on-red which are currently trapped behind left and through trips. The addition of this right turn lane would require relocation of the steel strain pole for the signal, a drainage structure, and possibly a large brick monument sign, which could reduce the feasibility of adding this lane. Field observations suggest that there may be an opportunity to shorten the cycle length, which would reduce time spent by vehicles waiting for the side street green signal. A review of Georgia DOT auxiliary lane standards is provided later in this report, which concludes that a northbound exclusive right turn lane should be constructed on GA 53 at Ahaluna Drive in the existing condition. The addition of the second westbound lane on Ahaluna Drive and the northbound exclusive right turn lane on GA 53 will improve operations, but the Ahaluna Drive approach will still operate at LOS F in the a.m. peak hour due to the long cycle length with the greentime heavily favoring GA 53.
6. **Dawsonville Highway at North Lake Square Access** – This intersection operates well in both peak time periods. In the a.m., the side street approach volumes are extremely low, attributed to most or all of the retail on the side street approaches being closed for business at that time. The side street volumes increase notably in the p.m. Side street approach delays are fairly high, though still within acceptable limits. This is attributed to the allocation of the majority of greentime on the signal to the Dawsonville Highway approaches, resulting in long waits on the side streets, even when volumes are low.
8. **Dawsonville Highway at McEver Road** – This is the major intersection in the area, where the route of GA 53 turns from Dawsonville Highway to McEver Road. The lane configuration and signal phasing at this intersection are generally appropriate. The southbound right turn volume is sufficiently-high (828 a.m., 481 p.m.) to merit consideration of the addition of a second exclusive right turn lane and/or the addition of a protected right turn overlap phase. The overlap phase would provide a protected right turn arrow that would operate concurrently with the westbound left turn protected phase on the McEver Road approach. This would replace the red ball indication for that movement which would increase capacity by not requiring each right turner to stop. However, even with these improvements, the intersection will still operate at LOS F in the p.m. peak hour. Finally, there may be an opportunity to reduce the cycle length and fine-tune the signal timing at this intersection.

9. **Dawsonville Highway at Green Hill Circle** – This signalized intersection generally operates acceptably, but does incur some side-street delays, again, due to the allocation of the majority of greentime to the Dawsonville Highway approaches. There may be an opportunity to reduce the cycle length and fine-tune the signal timing at this intersection.
10. **Dawsonville Highway at Shallowford Road** – The lane configuration and signal phasing are appropriate for this intersection. Reduction of the cycle length and optimization of the allocation of greentime could reduce delays and queuing at this intersection.

Future No-Build Traffic Conditions

A future no-build condition was developed. This represents the traffic conditions that will exist in the future at the date of the full build-out of the proposed Lanier DRI, but not including the Lanier DRI trips. The purpose of the no-build analysis is to isolate the traffic impacts of the proposed development from other growth and development that is expected to occur in the area while the Lanier DRI is under construction.

The no-build condition consists of the counted traffic volumes, increased by a general background growth factor. In order to develop the background growth factor, historic Georgia DOT 24-hour traffic counts were collected in the vicinity of the Lanier DRI. These counts were performed from 2011 through 2015 (the latest year for which Georgia DOT data is available) and, according to the Georgia DOT, the counts were adjusted for a variety of factors, including season, in order to arrive at the Average Annual Daily Traffic (AADT) volume. The Georgia DOT AADT counts are summarized in Table 3.

Table 3 – Georgia DOT Daily Traffic Volume Counts

Year	SR 53 N of Sportsman	Annual Growth	McEver W of SR 53	Annual Growth	Dawsonville S of Shallowford	Annual Growth	Shallowford S of Dawsonville	Annual Growth
Station ID	1390269		1390274		1390258		1390647	
2011	23,830	na	21,520	na	25,950	na	8,280	na
2012	23,520	-1.3%	21,150	-1.7%	25,610	-1.3%	8,140	-1.7%
2013	22,730	-3.4%	20,890	-1.2%	25,520	-0.4%	8,090	-0.6%
2014	22,700	-0.1%	20,900	0.0%	25,500	-0.1%	13,300	64.4%
2015	25,600	12.8%	21,600	3.3%	26,300	3.1%	13,700	3.0%
Annual Average		1.8%		0.1%		0.3%		13.4%

The annual growth trend has fluctuated from year to year, with generally negative growth during the first few count years, then strong growth in the most recent years. The average annual growth on GA 53 closest to the site has been 1.8%. A modest 2% annual growth factor was applied to the counted volumes when projecting the future no-build volumes. The growth was applied for five years, for a total of 10.4% growth, that will occur while the Lanier Tract DRI is under construction.

The existing, counted traffic volumes were increased by the 10.4% growth factor. The results are the no-build condition traffic volumes that will be on the roadway network in the future when the Lanier Tract DRI is completed, but excluding the Lanier Tract DRI trips. These no-build volumes are shown in Figure 3.

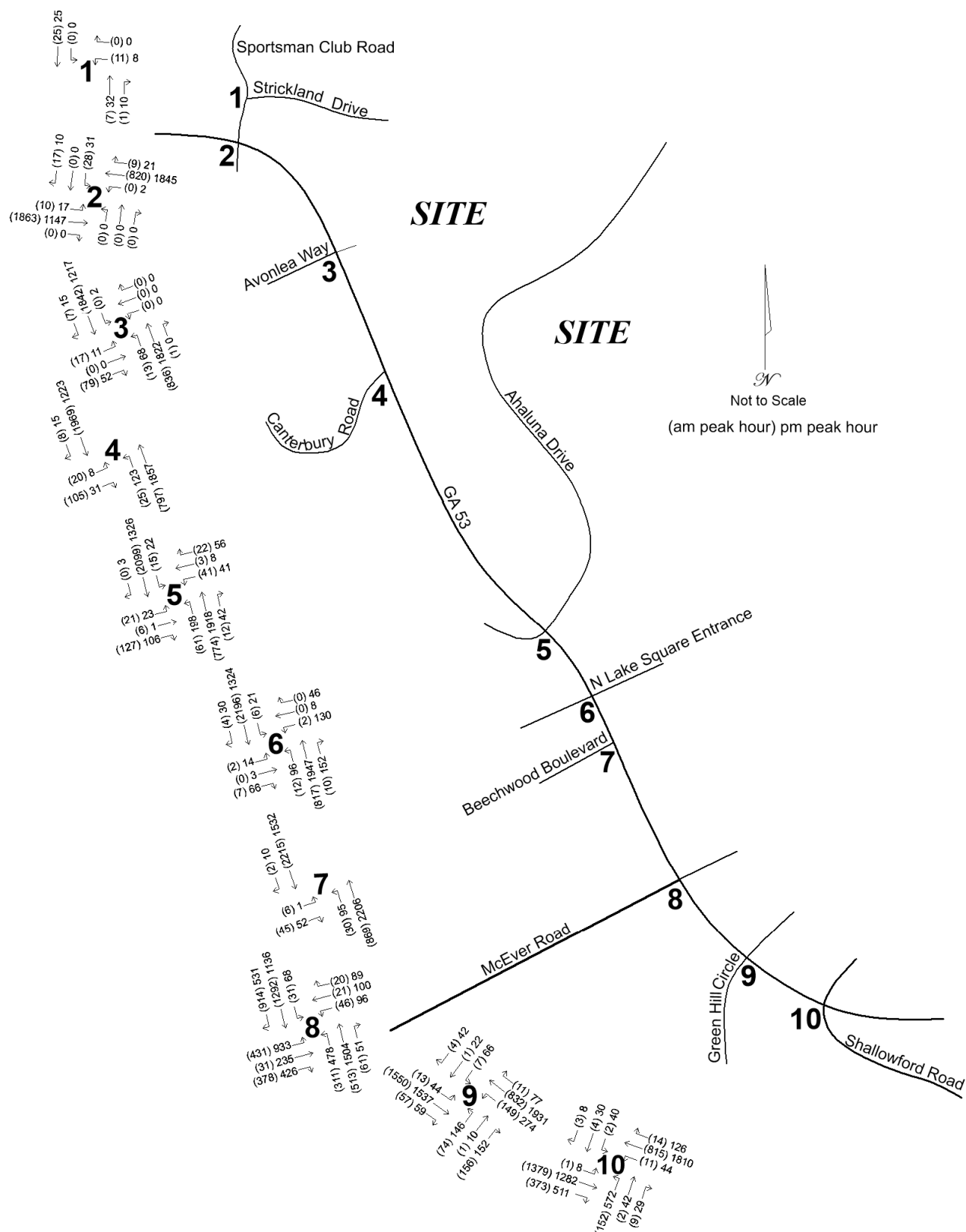


Figure 3 – Future No-Build Traffic Volumes

Future No-Build Intersection Operations

No-build traffic operations were analyzed at the counted intersections using Synchro software, version 8, in accordance with the methodology presented in the Transportation Research Board's 2010 *Highway Capacity Manual (HCM 2010)*. The *HCM 2010* methodology is presented in Appendix B. The results of the analysis are shown in Table 4. Computer printouts containing detailed results of the analysis are located in Appendix D.

Table 4 – Future No-Build Intersection Operations

Intersection / Approach	A.M. Peak Hour		P.M. Peak Hour	
	LOS	Delay s/veh	LOS	Delay s/veh
1. Sportsman Club Road at Strickland Drive	A	2.6	A	1.7
southbound left turn	A	0.0	A	0.0
westbound approach	A	8.9	A	8.9
2. Dawsonville Highway at Sportsman Club Road	B	11.8	D	34.3
northbound approach (turn lane)	A	0.0	A	0.0
southbound approach (Sportsman Club Road)	F	496.6	F	1,780.7
eastbound left turn (GA 53)	B	10.3	C	17.9
westbound left turn (GA 53)	A	0.0	B	11.3
3. Dawsonville Highway at Avonlea Way	A	4.5	A	1.5
northbound left turn (GA 53)	C	20.4	B	12.2
eastbound left turn	F	552.3	F	229.1
eastbound right turn	D	33.7	B	14.7
4. Dawsonville Highway at Canterbury Road	A	6.7	A	1.7
northbound left turn (GA 53)	C	21.7	B	13.7
eastbound left turn	F	715.5	F	349.9
eastbound right turn	E	41.5	B	14.4
5. Dawsonville Highway at Ahaluna Drive	C	22.3	B	15.5
northbound approach (GA 53)	A	5.6	B	11.5
southbound approach (GA 53)	C	22.7	B	14.0
eastbound approach	E	58.3	C	23.8
westbound approach	F	139.1	F	96.6
6. Dawsonville Highway at North Lake Square	A	3.2	B	16.6
northbound approach (GA 53)	A	1.0	B	14.8
southbound approach (GA 53)	A	3.9	B	10.7
eastbound approach	E	69.5	C	21.8
westbound approach	E	70.0	E	68.1
7. Dawsonville Highway at Beachwood Boulevard	A	2.6	A	0.9
northbound left turn (GA 53)	D	28.6	C	15.8
eastbound left turn	F	866.6	F	375.6
eastbound right turn	E	36.2	C	18.4
8. Dawsonville Highway at McEver Road	D	45.7	F	127.3
northbound approach (GA 53)	E	67.7	F	135.0

southbound approach (GA 53)	C	20.0	E	57.9
eastbound approach	F	92.6	F	208.0
westbound approach	E	61.8	E	70.6
9. Dawsonville Highway at Green Hill Circle	B	14.2	E	65.1
northbound approach (GA 53)	A	8.2	E	70.6
southbound approach (GA 53)	B	13.5	D	54.3
eastbound approach	D	44.0	E	58.1
westbound approach	D	38.8	F	112.9
10. Dawsonville Highway at Shallowford Road	B	12.5	E	73.1
northbound approach (GA 53)	A	6.0	E	72.0
southbound approach (GA 53)	A	9.1	E	57.5
eastbound approach	E	76.3	F	119.5
westbound approach	D	49.9	E	77.7

The analysis of the no-build condition reveals increases in delays at each of the study intersections, as would be expected. The no-build analysis did not include any of the potential mitigation discussed in the existing analysis. The no-build condition at each intersection is discussed briefly as follows:

- 1. Sportsman Club Road at Strickland Drive** – Operations at this intersection will continue to be excellent in the no-build condition. Therefore, no changes are recommended at this intersection for the no-build condition.
- 2. Dawsonville Highway at Sportsman Club Road** – The side street delays will become very high in the no-build condition. However, the volumes incurring these delays will remain modest and it is considered unlikely that this intersection would be a good candidate for signalization.
- 3. Dawsonville Highway at Avonlea Way, 4. Dawsonville Highway at Canterbury Road, and 7. Dawsonville Highway at Beachwood Boulevard** – The no-build operations at these three unsignalized intersections will be comparable to the existing condition, with the GA 53 approaches operating well, moderate delays for the side street right turn movements, and high delays for the side street left turn movements. As with the existing condition, at all three of these intersections, the side street volumes are predominately right turners, with extremely low left turn volumes. For this reason, these three intersections are expected to be unlikely candidates for signalization in the no-build condition.
- 5. Dawsonville Highway at Ahaluna Drive** – The Ahaluna Drive approach will continue to operate at LOS F and the delays will increase. The mitigation discussed in the existing condition is still applicable.
- 6. Dawsonville Highway at North Lake Square Access** – This intersection will operate comparably in the no-build condition, as in the existing condition. No mitigation is identified for this intersection in the no-build condition.
- 8. Dawsonville Highway at McEver Road** – Operations will continue to be congested at this intersection. The mitigation discussed in the existing condition is still applicable.

9. **Dawsonville Highway at Green Hill Circle** – Delays will increase from the existing to no-build conditions. A.M. peak operations will continue to be acceptable, while the p.m. peak will teeter between LOS E and LOS F. No new mitigation is identified for the no-build condition.
10. **Dawsonville Highway at Shallowford Road** – As with the other intersections, no new mitigation is identified for the no-build condition. Delays will increase from the existing condition, but will generally remain acceptable in the a.m. and at the LOS E to LOS F threshold in the p.m.

Lanier Tract Traffic Characteristics

This section describes the anticipated traffic characteristics of the proposed Lanier Tract development, including a site description, how much traffic the project will generate, and where that traffic will travel.

Project Description

The Lanier Tract DRI is a primarily senior-age-restricted residential community that will be developed generally along Ahaluna Drive and Strickland Drive. There will be an office/retail node along GA 53, north of Avonlea Way. A fire station of 10,650 square feet is also proposed to be constructed along GA 53 in conjunction with this development. Vehicular access will be provided at several locations, primarily along Ahaluna Drive, with connections to GA 53 via Strickland Drive, at the median opening at Avonlea Way, and through adjacent outparcels (which will be discussed in the Future Phase Two section of this report), aligning with Canterbury Road. The office/retail node will have a two right-in / right-out accesses directly on GA 53, with no anticipated internal connection to the balance of the development. The site plan is presented in Figure 4.

Trip Generation

The volume of traffic that will be generated by the proposed Lanier Tract DRI was calculated using the equations and rates in the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, 9th Edition. The trip generation for all of the detached homes was calculated using ITE Land Use 251 – Senior Adult Housing – Detached. The trips for the independent living units were calculated using ITE Land Use 253 – Congregate Care Facility. The trips for the assisted living facility were determined using ITE Land Use – 254 – Assisted Living. The storage facility trips were calculated using ITE Land Use 151 – Mini-Warehouse. The office / retail trip generation was calculated by dividing the total square footage of that commercial node in half and applying ITE Land Use 820 – Shopping Center to half of the square footage and ITE Land Use 750 – Office Park to the other half.

No multi-use adjustment was applied to the raw trip generation to account for the mixed-use nature of the project, because the office/retail node is not connected internally with the balance of the project. The retail trip generation was adjusted to account for pass-by trips. Pass-by trips are trips to the retail that are currently driving on GA 53 and which will turn into the site for shopping purposes then continue on the trip they are already making. The ITE *Trip Generation Manual* provides an average p.m. peak hour pass-by percentage of 38% for the shopping center land use. However, the plan for this development, with the retail mixed with office, suggests that this retail may be highly destination-oriented. To be conservative, a 25% pass-by adjustment was made for the p.m. peak hour trips, while a 15% adjustment was applied to the a.m. peak hour and 24-hour volumes.

The fire station will be located on the GA 53 adjacent to the project and will serve not just this project, but also the surrounding community. The trips that will be generated by the fire station are expected to be very low. Therefore, the trip generation of the fire station was excluded from this calculation.

The trip generation calculations are shown in Table 5.

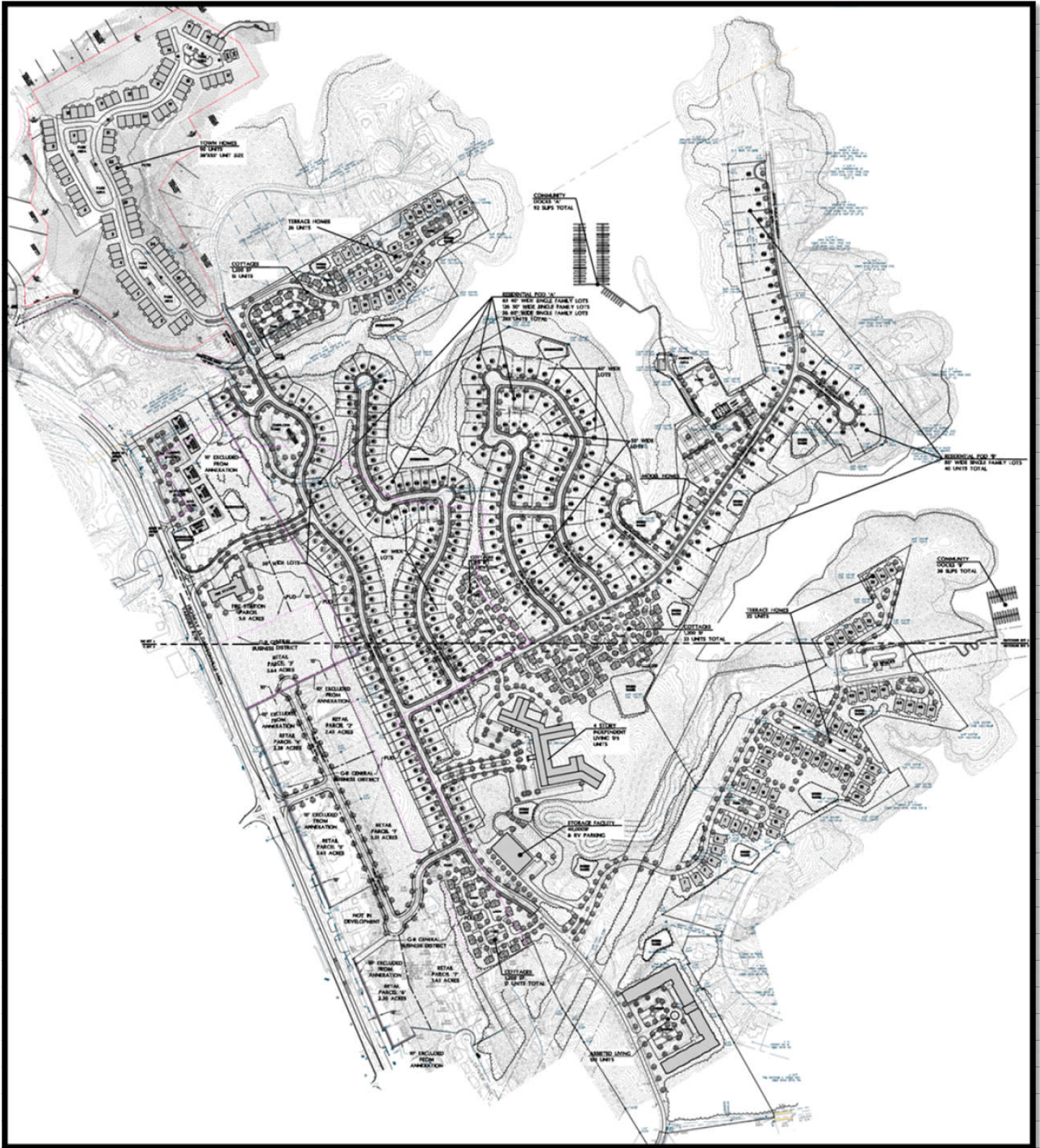


Figure 4 – Lanier Tract Site Plan

Table 5 – Lanier Tract Trip Generation

Land Use	ITE Code	Size	A.M. Peak Hour			P.M. Peak Hour			24-Hour
			In	Out	Total	In	Out	Total	2-Way
Terrace Homes Detached (at Strickland)	251	26 homes	2	4	6	4	3	7	96
Cottages Detached (at Strickland)	251	15 homes	1	2	3	2	2	4	56
Pod A Single Family Detached	251	265 homes	20	38	58	44	28	72	976
Pod B Single Family Detached	251	40 homes	3	6	9	6	5	11	147
Cottages Detached	251	64 homes	5	9	14	11	6	17	236
Terrace Homes Detached	251	55 homes	4	8	12	9	6	15	202
Independent Living	253	175 units	6	5	11	16	14	30	354
Assisted Living	254	<u>150 beds</u>	<u>14</u>	<u>7</u>	<u>21</u>	<u>15</u>	<u>18</u>	<u>33</u>	<u>356</u>
Total Residential New Trips		790 units	55	79	134	107	82	189	2,423
Storage	151	40,000 ft ²	3	3	6	5	5	10	100
Office	750	12,000 ft ²	18	3	21	2	16	18	138
Retail Total Trips	820	12,000 ft ²	7	5	12	21	24	45	512
-pass-by		15/25/15%	<u>-1</u>	<u>-1</u>	<u>-2</u>	<u>-5</u>	<u>-6</u>	<u>-11</u>	<u>-76</u>
Retail New Trips			<u>6</u>	<u>4</u>	<u>10</u>	<u>16</u>	<u>18</u>	<u>34</u>	<u>436</u>
Total Commercial New Trips			24	7	31	18	34	52	574
Total Project New Trips			82	89	171	130	121	251	3,097

Notes: The detached homes trip calculations employed ITE average rates due to numbers of units generally much smaller than average sizes in the ITE data. The office and retail calculations were based on ITE average rates due to square footages much smaller than average sizes in the ITE data.

Willow Springs Townhomes

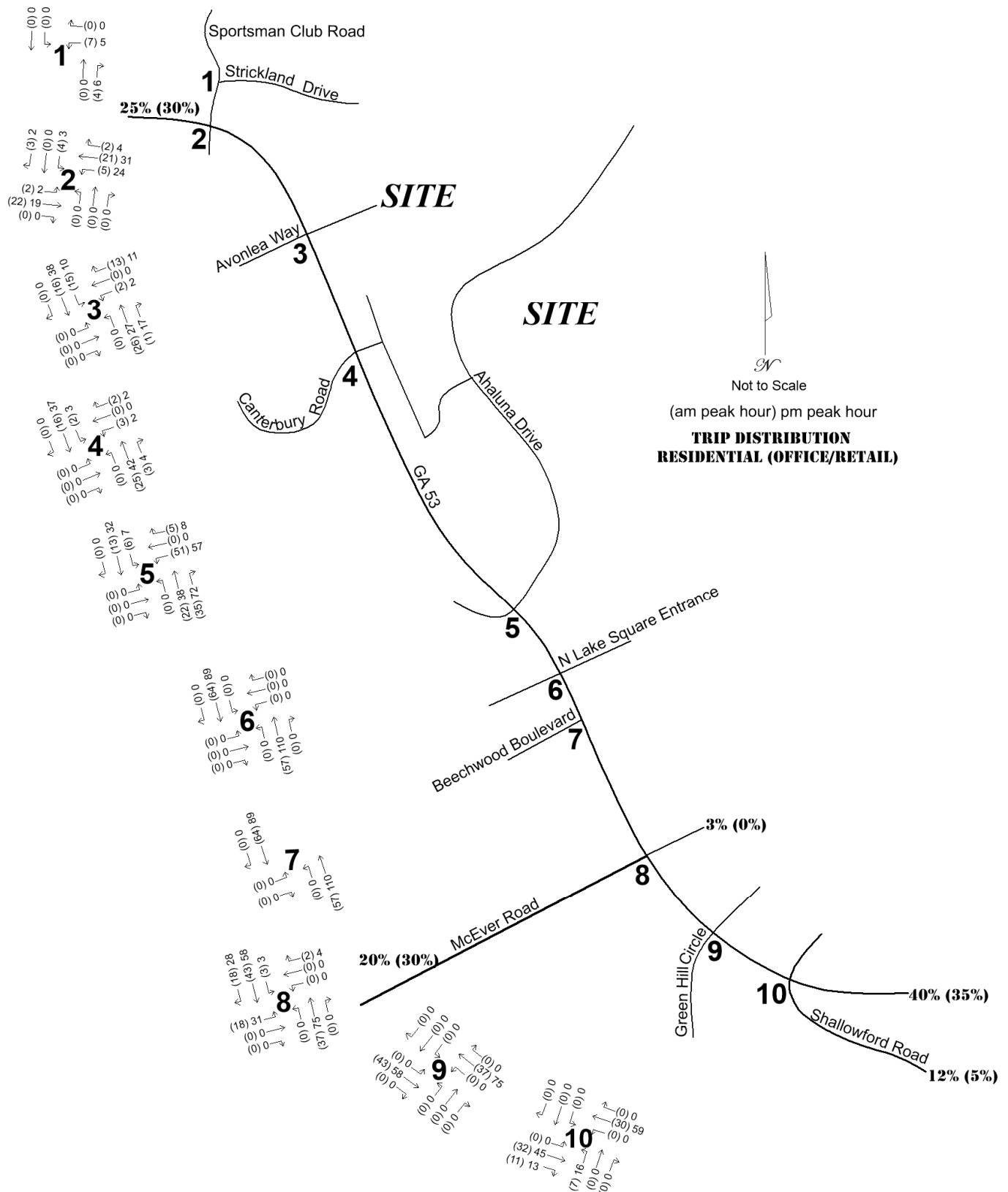
A small development of 90 senior-age-restricted townhomes is anticipated to be developed concurrently with the Lanier Tract DRI, along Karen Lane (shown in the site plan in Figure 4 at the northern end of the site, bordered in red). The trips for this development were calculated using ITE Land Use 252 – Senior Adult Housing – Attached. The Willow Springs trips are shown in Table 6.

Table 6 – Willow Springs Townhomes Trip Generation

Land Use	ITE Code	Size	A.M. Peak Hour			P.M. Peak Hour			24-Hour
			In	Out	Total	In	Out	Total	2-Way
Senior Adult Housing - Attached	252	90	6	12	18	12	11	23	290

Trip Distribution and Assignment

The trip distribution percentages indicate what proportion of the project's trips will travel to and from various directions. The new trips were distributed based on the locations and proximity of likely trip origins and destinations for each land use. The residential trips, including the Willow Springs Townhomes, were distributed based on the locations of urban centers and retail nodes, while the office and retail trips were distributed based on population densities. The new project trips, shown in Table 5, were assigned to the roadway network based on these distribution percentages. Pass-by trips were assigned, where appropriate, based on existing traffic flows passing the site. The new trip distribution percentages for each land use, and the total peak hour trips expected to be generated by the site, are shown in Figure 5. The Willow Springs trips, shown in Table 6, were distributed to the study intersections using the same distribution as the Lanier Tract residential trips. These trips are not included in the site generated trips shown in Figure 5, but they are included in the future analysis. Appendix A contains intersection volume worksheets that show the specific Willow Springs trips (as well as all other Lanier Tract residential, office, and retail trips) for each movement at each intersection.



Future Phase One Traffic Conditions

This section describes the anticipated future traffic conditions after the Lanier Tract DRI is fully constructed and operational.

Future Phase One Traffic Volumes

The trips from the Lanier Tract DRI (and Willow Springs) were added to the future no-build volumes (comprised of the counted volumes increased by 10.4%, as described previously). The resulting volumes are the traffic volumes that will be at each intersection when the Lanier Tract is fully operational. A strip of land between the Lanier Tract and the east side of GA 53 is anticipated to be developed by others with retail outparcels at some future date. The impact of this outparcel development is evaluated in the Future Phase Two analysis, discussed later in this report. However, as part of the Lanier Tract development, a roadway will be constructed through that strip of land, to connect the Lanier Tract to GA 53 at the existing median break at Canterbury Road. The Future Phase One volumes and analysis include this connection. The Future Phase One traffic volume projections are shown in Figure 6. These volumes are also shown in the intersection volume worksheets in Appendix A.

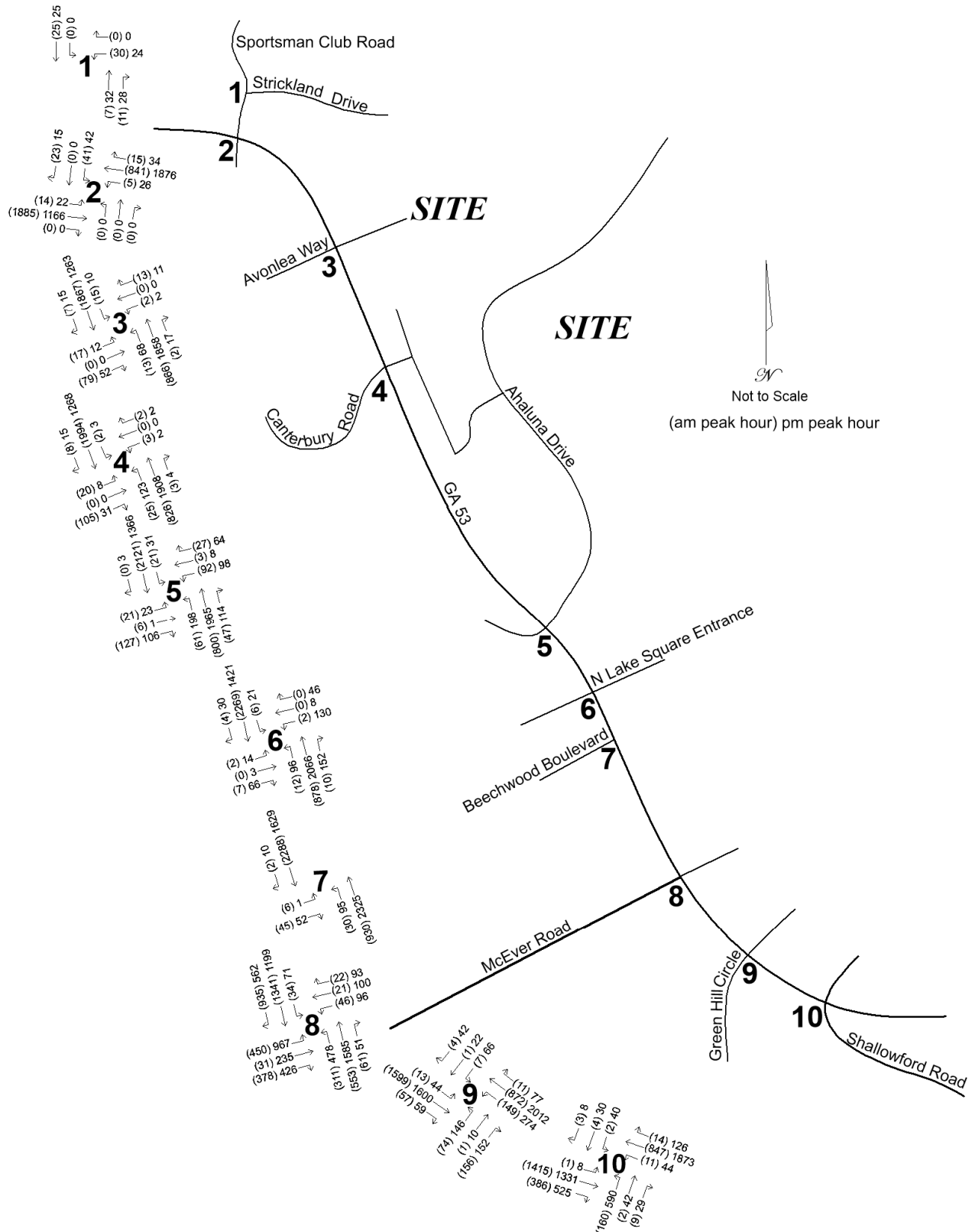


Figure 6 – Future Phase One Peak Hour Traffic Volume Projections

Future Phase One Intersection Operations

An operational analysis was performed for the Future Phase One conditions. Table 7 presents the results of this analysis. Computer printouts containing detailed results of the analysis are located in Appendix E.

Table 7 – Future Phase One Intersection Operations

Intersection / Approach	A.M. Peak Hour		P.M. Peak Hour	
	LOS	Delay s/veh	LOS	Delay s/veh
1. Sportsman Club Road at Strickland Drive	A	4.2	A	3.2
southbound left turn	A	0.0	A	0.0
westbound approach	A	9.1	A	9.2
2. Dawsonville Highway at Sportsman Club Road	C	23.0	F	74.4
northbound approach (turn lane)	A	0.0	A	0.0
southbound approach (Sportsman Club Road)	F	834.4	F	2,872.3
eastbound left turn (GA 53)	B	10.4	C	18.7
westbound left turn (GA 53)	C	20.5	B	11.7
3. Dawsonville Highway at Avonlea Way	A	9.8	A	4.2
northbound left turn (GA 53)	C	20.8	B	12.6
southbound left turn	B	10.3	C	17.9
eastbound left turn	F	1,381.4	F	653.3
eastbound right turn	D	34.9	C	15.1
westbound left turn	F	288.1	F	696.5
westbound right turn	B	12.1	C	20.5
4. Dawsonville Highway at Canterbury Road	B	12.4	A	3.8
northbound left turn (GA 53)	C	22.2	B	14.2
southbound left turn	B	10.1	C	17.8
eastbound left turn	F	1,504.7	F	767.5
eastbound right turn	E	43.3	B	14.8
westbound left turn	F	436.1	F	1,069.5
westbound right turn	B	11.8	C	20.0
5. Dawsonville Highway at Ahaluna Drive	C	31.7	C	21.4
northbound approach (GA 53)	A	6.8	B	15.7
southbound approach (GA 53)	D	35.3	C	20.4
eastbound approach	D	46.8	B	17.5
westbound approach	F	134.1	F	104.1
6. Dawsonville Highway at North Lake Square	A	3.9	B	17.4
northbound approach (GA 53)	A	1.1	B	15.9
southbound approach (GA 53)	A	4.9	B	11.8
eastbound approach	E	69.5	C	21.8
westbound approach	E	70.0	E	68.1
7. Dawsonville Highway at Beachwood Boulevard	A	3.3	A	0.9
northbound left turn (GA 53)	D	30.7	C	17.1
eastbound left turn	F	1,230.3	F	534.2

eastbound right turn	E	39.4	C	19.8
8. Dawsonville Highway at McEver Road	D	50.9	F	142.6
northbound approach (GA 53)	E	77.0	F	161.1
southbound approach (GA 53)	C	21.9	E	59.3
eastbound approach	F	104.0	F	230.3
westbound approach	E	60.9	E	74.4
9. Dawsonville Highway at Green Hill Circle	B	14.9	E	67.3
northbound approach (GA 53)	A	8.6	E	72.6
southbound approach (GA 53)	B	14.3	E	56.9
eastbound approach	D	47.1	E	59.7
westbound approach	D	38.8	F	119.2
10. Dawsonville Highway at Shallowford Road	B	13.3	E	78.6
northbound approach (GA 53)	A	6.2	E	73.6
southbound approach (GA 53)	B	10.1	E	66.1
eastbound approach	E	76.5	F	128.7
westbound approach	D	49.9	E	77.7

A note is made here about the high delays accompanying some of the LOS F. As delays increase, the model's average delay per vehicle projections exceed model capabilities and the results become unrealistic. For example, it is highly improbable that the eastbound left turn from Canterbury Road will incur an average delay of 1,504.7 seconds, or 25 minutes, per vehicle. These high delay numbers are reported to provide an indication of the severity of the LOS F, and were reviewed with engineering judgment when developing conclusions and recommendations.

The operational analysis of Future Phase One conditions reveals some increases in delays from the no-build condition. The most notable changes are increases in the side street delays at both unsignalized and signalized intersections. The Lanier Tract DRI generally contributes a small proportion to the increases in volumes between the existing condition and the Future Phase One, while the background growth contributes a significant proportion of the increases. At most intersections, aside from the site access points along GA 53, the Lanier Tract DRI will contribute primarily to the major roadway through movements. The project's most significant impact will occur at four locations – Sportsman Club Road at GA 53, Avonlea Way at GA 53, Canterbury Road at GA 53, and Ahaluna Drive at GA 53, with the greatest impact being at Ahaluna Drive. The Future Phase One condition at each intersection is discussed briefly as follows:

1. **Sportsman Club Road at Strickland Drive** – Operations at this intersection are will continue to be excellent in the no-build condition. Therefore, no changes are recommended at this intersection for the Future Phase One condition.
2. **Dawsonville Highway at Sportsman Club Road** – The side street delays will continue to be very high in the future. However, the volumes incurring these delays will remain modest and it is considered unlikely that this intersection would be a good candidate for signalization, even in the Future Phase One condition.

3. **Dawsonville Highway at Avonlea Way** – The Lanier Tract DRI will replace the existing private driveway at this location, with a main access to the project. The alignment with the median break will allow full movement operations at this site access. However, it is anticipated that volumes using this access will be modest for a few reasons. First, most of the site trips will be oriented to and from the south on GA 53. Therefore, the propensity of most trips will be to travel along Ahaluna Drive to the signal at GA 53, rather than to turn in and out of the unsignalized access across from Avonlea Way. Some trips traveling to and from the north will use this access and some will use the connection through the site to Strickland Drive. For these reasons, the volumes exiting the site at this location will be low, and will include more right turners than left turners. On the existing eastbound approach of Avonlea Way, the right turn volumes are also notably higher than the left turners. This is an indication that this intersection is unlikely to meet warrants for signalization in the future. No signal warrant analysis was performed at this intersection as part of this study. A right turn lane analysis (presented later) was performed for the northbound direction of GA 53 at the site access at Avonlea Way. The analysis indicates that it is likely that a right turn lane will be justified at this location in the Future Phase One condition and the site plan includes this lane.
4. **Dawsonville Highway at Canterbury Road** – As with the Avonlea intersection, the volumes entering and exiting the Lanier Tract at Canterbury will be very low. The circuitous road configuration through the adjacent future retail tracts will further discourage use of this access. Therefore, for Future Phase One, this intersection is considered unlikely to meet signal warrants. No signal warrant analysis was performed at this intersection as part of this study. A right turn lane analysis (presented later) was performed for the northbound direction of GA 53 at the site access at Canterbury Road. The analysis indicates that it is *not* likely that a right turn lane will be justified at this location in the Future Phase One condition.
5. **Dawsonville Highway at Ahaluna Drive** – The Ahaluna Drive approach will continue to operate at LOS F and the delays will increase. The mitigation discussed in the existing condition is still applicable, including the addition of a northbound right turn lane on GA 53 and a second westbound lane on Ahaluna Drive.
6. **Dawsonville Highway at North Lake Square Access** – This intersection will operate comparably in the future as in the existing and no-build conditions. No mitigation is identified for this intersection in the Future Phase One condition.
7. **Dawsonville Highway at Beachwood Boulevard** – The operations at this unsignalized intersections will continue comparable to the existing and no-build conditions, with the GA 53 approaches operating well, moderate delays for the side street right turn movement, and high delays for the side street left turn movement. The side street volumes will continue to be predominately right turners, with extremely low left turn volumes. For this reason, this intersection is considered unlikely to meet warrants for signalization in the future.
8. **Dawsonville Highway at McEver Road** – Operations will continue to be congested at this intersection, with the overall intersection operating at LOS F in the p.m., and several approaches operating at LOS F in the a.m. and/or p.m. The mitigation discussed in the existing condition is still applicable. This intersection is built-out and the mitigation discussed in the existing analysis includes the addition of a second

southbound right turn lane. Short of widening GA 53 with additional through lanes, or reducing volumes at this intersection, there are not many additional options to mitigate the high delays.

9. **Dawsonville Highway at Green Hill Circle** – Delays will increase from the no-build condition to the future. A.M. peak operations will continue to be acceptable, while the p.m. peak will teeter between LOS E and LOS F. No new mitigation is identified for the Future Phase One condition.
10. **Dawsonville Highway at Shallowford Road** – Delays will increase from the no-build condition, but will generally remain acceptable in the a.m. and at the LOS E to LOS F threshold in the p.m. No new mitigation is identified for the Future Phase One condition.

Future Phase Two Traffic Conditions

A strip of land along the east side of GA 53, west of the Lanier Tract, is anticipated to be developed by others at some future date. A Future Phase Two condition was developed to assess the traffic operations after this land is developed.

The land is anticipated to be developed as seven outparcels, with 8,000 square feet of retail shopping on each, for a total of 56,000 square feet of retail shopping. The trip generation of the outparcels is presented in Table 8.

Table 8 – Outparcel Trip Generation

Land Use	ITE Code	Size	A.M. Peak Hour			P.M. Peak Hour			24-Hour
			In	Out	Total	In	Out	Total	2-Way
Outparcel Total Trips	820	56,000 ft ²	68	41	109	195	211	406	4,658
-pass-by		30/40/30%	<u>-20</u>	<u>-12</u>	<u>-32</u>	<u>-78</u>	<u>-84</u>	<u>-162</u>	<u>-1,398</u>
Outparcel New Trips			48	29	77	117	127	244	3,260

The outparcels will be served by a full movement access that will align with the existing median break on GA 53 at Canterbury Road. A connecting roadway will run through the outparcel property and connect to the main roadway through the western portion of the Lanier Tract (connecting Strickland Drive to Ahaluna Drive). The connecting roadway through the outparcel property was assumed to be constructed during the development of the Lanier Tract, and was included in the Future Phase One analysis, as discussed previously. This will allow trips from the proposed Lanier Tract to access GA 53.

The trips that will be generated by the outparcels were distributed to the study intersections using the same trip distribution percentages developed for the retail portion of the Lanier Tract DRI (with one minor difference – five percent of the outparcel trips were distributed back into the Lanier Tract, in anticipation of the trips that will travel between the outparcels and the Lanier Tract DRI. This five percent was subtracted from the south, to and from McEver Road). The Lanier Tract distribution percentages were shown previously in this report, in Figure 5.

Future Phase Two Traffic Volumes

The trips from the outparcels were added to the Future Phase One volumes (comprised of the counted volumes increased by 10.4%, plus the Lanier Tract and Willow Springs trips, as described previously). The resulting volumes are the traffic volumes that will be at each intersection when the outparcels are developed and operational. The Future Phase Two traffic volume projections are shown in Figure 7. These volumes are also shown in the intersection volume worksheets in Appendix A.

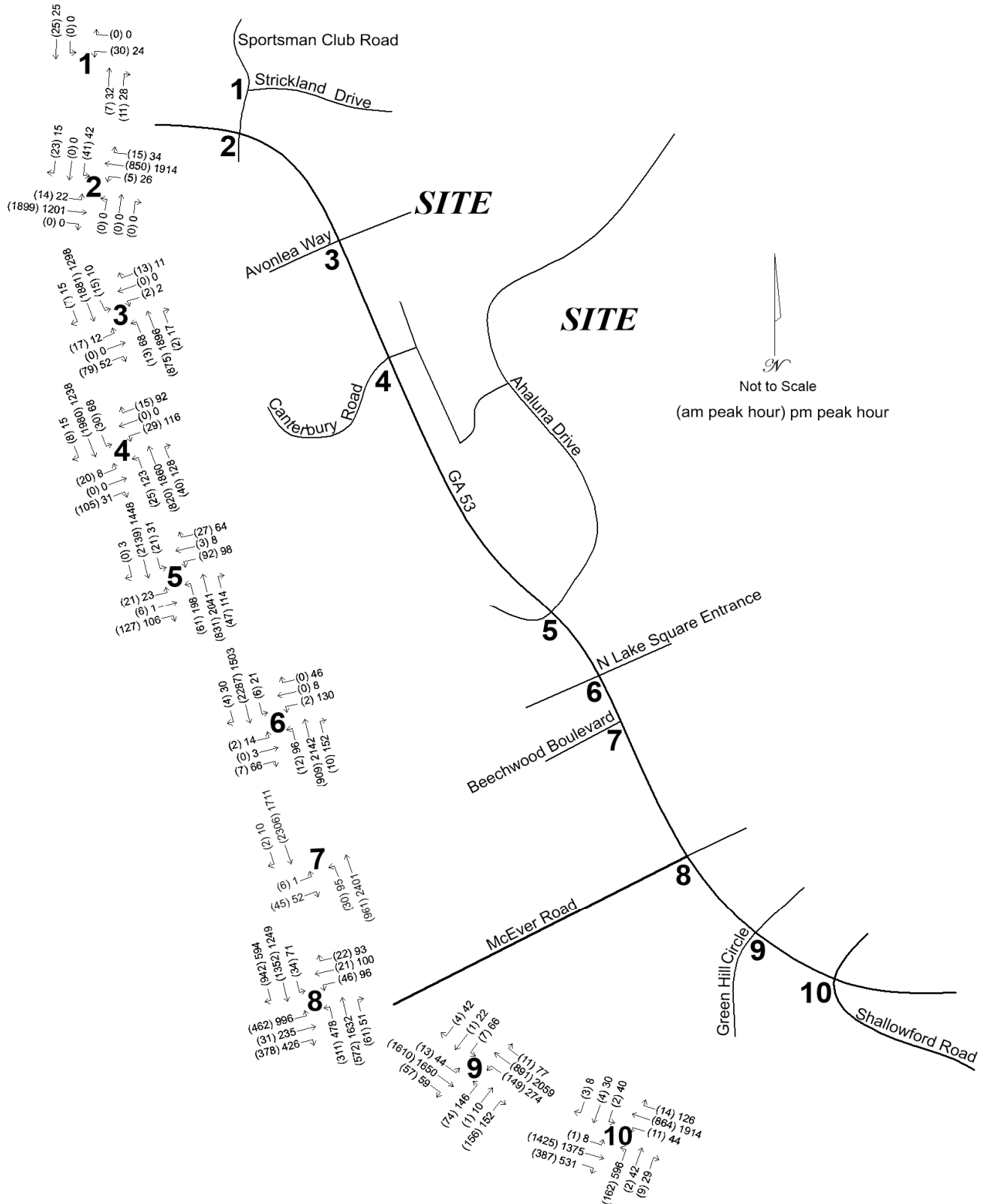


Figure 7 – Future Phase Two Peak Hour Traffic Volume Projections

Future Phase Two Intersection Operations

An operational analysis was performed for the Future Phase Two conditions. Table 9 presents the results of this analysis. Computer printouts containing detailed results of the analysis are located in Appendix E.

Table 9 – Future Phase Two Intersection Operations

Intersection / Approach	A.M. Peak Hour		P.M. Peak Hour	
	LOS	Delay s/veh	LOS	Delay s/veh
1. Sportsman Club Road at Strickland Drive	A	4.2	A	3.2
southbound left turn	A	0.0	A	0.0
westbound approach	A	9.1	A	9.2
2. Dawsonville Highway at Sportsman Club Road	C	23.7	F	74.3
northbound approach (turn lane)	A	0.0	A	0.0
southbound approach (Sportsman Club Road)	F	866.3	F	3,330.7
eastbound left turn (GA 53)	B	10.5	C	19.2
westbound left turn (GA 53)	C	20.8	B	11.9
3. Dawsonville Highway at Avonlea Way	B	11.1	A	4.5
northbound left turn (GA 53)	C	21.1	B	12.8
southbound left turn	B	10.4	C	18.4
eastbound left turn	F	1,593.4	F	722.2
eastbound right turn	E	35.6	C	15.5
westbound left turn	F	311.5	F	833.9
westbound right turn	B	12.2	C	21.0
4. Dawsonville Highway at Canterbury Road	D	29.0	F	852.3
northbound left turn (GA 53)	C	22.0	B	13.9
southbound left turn	B	10.5	C	20.7
eastbound left turn	F	1,733.4	F	2,303.8
eastbound right turn	E	42.2	B	14.6
westbound left turn	F	1712.5	F	19,977.6
westbound right turn	B	12.2	D	33.7
5. Dawsonville Highway at Ahaluna Drive	C	32.6	C	22.8
northbound approach (GA 53)	A	6.8	B	17.0
southbound approach (GA 53)	D	37.1	C	22.3
eastbound approach	D	46.8	B	17.7
westbound approach	F	134.1	F	106.1
6. Dawsonville Highway at North Lake Square	A	4.0	B	18.2
northbound approach (GA 53)	A	1.2	B	16.7
southbound approach (GA 53)	A	5.1	B	13.1
eastbound approach	E	69.5	C	21.8
westbound approach	E	70.0	E	68.1
7. Dawsonville Highway at Beachwood Boulevard	A	3.3	A	1.0
northbound left turn (GA 53)	D	31.5	C	18.4
eastbound left turn	F	1,230.3	F	620.4

eastbound right turn	E	40.4	C	21.0
8. Dawsonville Highway at McEver Road	D	52.3	F	154.3
northbound approach (GA 53)	E	75.8	F	163.8
southbound approach (GA 53)	C	22.2	E	60.3
eastbound approach	F	111.2	F	270.3
westbound approach	E	60.9	E	78.5
9. Dawsonville Highway at Green Hill Circle	B	15.0	E	68.5
northbound approach (GA 53)	A	8.7	E	73.0
southbound approach (GA 53)	B	14.4	E	59.3
eastbound approach	D	47.4	E	59.8
westbound approach	D	38.8	F	119.2
10. Dawsonville Highway at Shallowford Road	B	13.5	F	83.2
northbound approach (GA 53)	A	6.4	E	75.2
southbound approach (GA 53)	B	10.4	E	76.1
eastbound approach	E	76.4	F	127.7
westbound approach	D	49.9	E	77.7

The outparcels' trips will generally be added to the major through movements at each study intersection, and will increase overall intersection delays at each location. The most significant impact of the outparcels will be incurred at the Canterbury intersection, which will serve as the primary access point to GA 53 for all of the outparcels. The operational analysis at this intersection shows that the overall intersection will deteriorate to LOS F in the p.m. and the side street left turns will experience extremely high delays. Because many of the new side street trips exiting the outparcels will be left turners, this intersection becomes a more likely candidate for signalization in the Future Phase Two condition. It is recommended that a signal warrant analysis be performed for this location in the future when the outparcels are planned to be developed. The Georgia DOT right turn lane analysis provided in the next section of this report indicates that a northbound right turn lane on GA 53 at this site access will be necessary in the Future Phase Two condition, when the outparcels are developed and operational.

Georgia DOT Auxiliary Turn Lane Standards

The four primary site connection points to GA 53 will occur at Sportsman Club Road, across from Avonlea Way, across from Canterbury Road, and via Ahaluna Drive. All four locations are served by existing median breaks and southbound exclusive left turn lanes are already provided, which will serve the site entering left turn traffic, at each location. However, there are no northbound exclusive right turn lanes, which would serve site entering right turn traffic, at any of these locations. The standards proscribed in the Georgia DOT's *Regulations for Driveway and Encroachment Control* (Driveway Manual), revision 4.0, dated 3/15/2016, were reviewed for the requirements for right turn lanes. Table 10, below, is Table 4-6 from the Driveway Manual, and proscribes the right turn volume thresholds at which exclusive right turn lanes must be provided.

Table 10 – Georgia DOT Minimum Volume Requirements for Right Turn Lanes

Posted Speed	2 Lane Routes		More than 2 Lanes on Main Road	
	AADT		AADT	
	< 6000	>=6000	<10000	>=10000
35 MPH or Less	200 RTV a day	100 RTV a day	200 RTV a day	100 RTV a day
40 to 50 MPH	150 RTV a day	75 RTV a day	150 RTV a day	75 RTV a day
55 to 60 MPH	100 RTV a day	50 RTV a day	100 RTV a day	50 RTV a day
>= 65 MPH	Always	Always	Always	Always

Table 4-6 Minimum Volumes Requiring Right Turn Lanes

The AADT on GA 53 near Sportsman Club Road was identified previously in Table 2 in this report as 25,600 vpd in 2015, and the posted speed limit is 45 mph. For main roads with these conditions, a right turn lane must be provided when the right turn volume exceeds 75 right turn vehicles (RTV) per day. This study calculated a.m. and p.m. peak hour right turn volumes. As a general rule of thumb, p.m. peak hour volumes are typically about 10% of 24-hour volumes. However, field observations suggest that the off-peak activity turning into and out of these intersections currently is very low, so it is uncertain if the 10% rule of thumb is applicable. Using the a.m. and p.m. volume projections, and the 10% rule of thumb to estimate 24-hour RTVs, the existing, no-build, Future Phase One, and Future Phase Two volumes were tested against the Georgia DOT right turn lane standard at the four primary site access locations on GA 53. This analysis is summarized in Table 11.

Table 11 – Georgia DOT Right Turn Lane Standards for Northbound GA 53

Intersection GA 53 at:	24-Hour RTV Threshold	Existing			No-Build			Future Phase One			Future Phase Two		
		a.m.	p.m.	24-hr	a.m.	p.m.	24-hr	a.m.	p.m.	24-hr	a.m.	p.m.	24-hr
Sportsman	75	8	19	190	9	21	210	15	34	340	15	34	340
Avonlea	75	0	0	0	0	0	0	2	17	170	2	17	170
Canterbury	75	0	0	0	0	0	0	3	4	40	40	128	1,280
Ahaluna	75	11	38	380	12	42	420	47	114	1,140	47	114	1,140

The results in Table 11 indicate that a northbound right turn lane is possibly justified in the existing condition on GA 53 at Sportsman Club Road and almost certainly justified on GA 53 at Ahaluna Drive. The increase in volumes to the no-build condition will increase the justification for these right turn lanes. The Lanier Tract will add trips to each intersection and create the fourth approaches at the median breaks at Avonlea Way and Canterbury Road. Table 10 suggests that a northbound right turn lane is likely to be justified at the Avonlea Way access but not at the Canterbury access with the development of the Lanier Tract. With the development of the retail outparcels in Future Phase Two, a northbound right turn lane is also expected to be justified at the Canterbury access.

Table 12, below, is Table 4-8 from the Driveway Manual, and presents the Georgia DOT right turn lane design standards. Based on the posted 45 mph speed limit, each northbound right turn lane on GA 53 should include 175 feet of full-width storage and a 100 foot taper.

Table 12 – Georgia DOT Design Standards for Right Turn Lanes

Speed, mph	Full Width Storage, ft.	Taper, ft.
25		50
30	75	50
35	100	50
40	150	50
45	175	100
50	225	100
55	250	100
60	300	100
65	350	100

Table 4-8 Minimum Right Turn Deceleration Lengths

The site plan also anticipates providing two right-in / right-out RIRO accesses to the office / retail tract and the plan anticipates providing deceleration lanes on GA 53 at both of these accesses. It is recommended that these anticipated deceleration lanes also be constructed to satisfy the Driveway Manual standards.

The project site engineer is referred to the Georgia DOT Driveway Manual for other driveway design standards including driveway width, island design, and curb return radii.

Summary of Study Findings and Recommendations

The following is a summary of the findings and the recommendations of this traffic impact study at each intersection:

1. **Sportsman Club Road at Strickland Drive** – No changes are recommended at this intersection for the existing, no-build, or Future Phase One and Future Phase Two conditions.
2. **Dawsonville Highway at Sportsman Club Road** – The side street delays at this intersection are significant now and will increase in the future. While a warrant analysis was not performed as part of this traffic impact study, the low side street volumes make the intersection an unlikely candidate for signalization. The potential for justifying signalization will increase in the future, but side street volumes will continue to remain moderate. This study also identifies the need for a northbound exclusive right turn lane to be added on GA 53 at Sportsman Club Road. Northbound and southbound exclusive left turn lanes are currently provided at this median break.
3. **Dawsonville Highway at Avonlea Way** – Side street delays are high at the existing eastbound approach of Avonlea Way, and these delays will increase in the no-build and future conditions. The side street volumes are predominately right turners, with extremely low left turn volumes. The Lanier Tract will introduce a new fourth leg at the Avonlea Way intersection (there is an existing private residential driveway at this median break, which would be replaced by the Lanier Tract access). Northbound and southbound exclusive left turn lanes are currently provided at this median break. The volumes exiting the new Lanier Tract access will be low and many of them will be right turners. Therefore, this intersection is considered unlikely to be a candidate for signalization in the existing, no-build, and Future Phases One and Two, even with the addition of the Lanier Tract trips. The Georgia DOT right turn lane analysis suggests that a northbound exclusive right turn lane should be considered at this access and the site plan includes the addition of this lane. The new site access should be constructed with one entering lane and one exiting lane. The side street approach exiting the site should be controlled by side street stop sign and accompanying stop bar.
4. **Dawsonville Highway at Canterbury Road** – Side street delays are high on the existing eastbound approach of Canterbury Road and these delays will increase in the no-build and future conditions. As with Avonlea Way, the side street volumes at this intersection are predominately right turners, with extremely low left turn volumes. For this reason, this intersection is considered an unlikely candidate for signalization in the existing, no-build, and Future Phase One conditions. The outparcel access will align with Canterbury Road and the Lanier Tract will connect through the outparcels to GA 53 at this location. Northbound and southbound exclusive left turn lanes are currently provided at this median break. A short southbound deceleration lane is provided on GA 53 at Canterbury Road, though this lane does not appear to have been constructed to current Georgia DOT design standards. The northbound right turn volume will be low in the Future Phase One condition, and the Georgia DOT right turn lane analysis indicates that no decel lane will be required for Future Phase One. However, with the future development of the retail outparcels, by others, the right turn volumes will be significant, primarily due to the outparcels, and a northbound deceleration lane is recommended for this location. The Future Phase Two side street volumes exiting the outparcels will

be notable and this intersection will likely be a prime candidate for signalization upon development of the outparcels. It is recommended that at such time as the outparcels are planned to be developed, a signal warrant study be performed for this intersection according to the standards set forth in the Federal Highway Administration's *Manual On Uniform Traffic Control Devices* (MUTCD). This new access at the Canterbury Road median break should be constructed with at least one entering lane and an exiting shared left/through lane and an exclusive right turn lane. The two westbound lanes are in anticipation of the development of the outparcels. With only the Lanier Tract volumes, only one entering and one exiting lane would be required. Until signalization is warranted, the side street approach exiting the outparcel tracts should be controlled by side street stop sign and accompanying stop bar.

5. **Dawsonville Highway at Ahaluna Drive** – The review of Georgia DOT auxiliary lane standards indicates that a northbound right turn lane should be added on GA 53 at Ahaluna Drive in the existing condition. The future volumes exiting Ahaluna Drive would benefit from the addition of a second westbound lane, resulting in a shared left/through lane and an exclusive right turn lane on Ahaluna Drive at GA 53. This second lane would reduce the demand for side street greentime on the signal and improve side street levels of service. It was noted that the need for relocation of the signal steel strain pole, a drainage structure, and possibly a large brick monument sign, may reduce the feasibility of adding this second westbound lane. With the addition of Lanier Tract southbound left turns from GA 53, consideration should be given to adding a protected / permissive southbound left turn phase, which would match the existing protected / permissive phasing for the northbound left turn. The Georgia DOT left turn phase warrants are not satisfied for this southbound left turn based on volume projections alone. However, other factors such as high speeds on GA 53 and the senior residents expected to reside at the Lanier Tract, merit consideration. Field observations suggest that there may be an opportunity to shorten the cycle length, which would reduce time spent by vehicles waiting on the side street.
6. **Dawsonville Highway at North Lake Square Access** – This intersection operates acceptably in all analysis conditions. The side street approaches do incur some delays at all times, primarily due to the long cycle length on the signal, which allocates most of the greentime, appropriately, to GA 53. The side street delays are incurred by minimal volumes in the a.m., since the retail served by the side streets are generally not operational at that time. Higher volumes incur the side street delays in the p.m., when the retail is operational. However, overall this intersection operates appropriately and no mitigation is recommended for any analysis condition.
7. **Dawsonville Highway at Beachwood Boulevard** At the GA 53 / Beechwood Boulevard intersection, it is noted that a fourth leg is currently stubbed-out across from Beechwood Boulevard and a retail development is under construction on that site. Auxiliary left and right turn lanes are provided on GA 53 serving Beechwood Boulevard and the future fourth leg appears to be designed for right-in / right-out access only, with a northbound deceleration lane provided on GA 53. No changes are recommended at this intersection based on this study.
8. **Dawsonville Highway at McEver Road** – The lane configuration and signal phasing at this intersection are generally appropriate. The existing southbound right turn volume is sufficiently-high (828 a.m., 481 p.m.) to

merit consideration of the addition of a second exclusive right turn lane and/or the addition of a protected right turn overlap phase. The justification for adding this phasing and/or second right turn lane will increase as volumes increase. Finally, there may be an opportunity to reduce the cycle length and fine-tune the signal timing at this intersection.

9. **Dawsonville Highway at Green Hill Circle** – This signalized intersection incurs high sides street delays, again, due to the allocation of the majority of greentime to the Dawsonville Highway approaches. There may be an opportunity to reduce the cycle length and fine-tune the signal timing at this intersection.
10. **Dawsonville Highway at Shallowford Road** – The lane configuration and signal phasing are appropriate for this intersection. Reduction of the cycle length and optimization of the allocation of greentime could reduce delays and queuing at this intersection.

Appendix A

Traffic Count Data and Volume Worksheets

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Intersection 1: Sportsman Club Road at Strickland Drive

Weekday A.M. Peak Hour	Northbound Sportsman Club Road			Southbound Sportsman Club Road			Westbound Strickland Drive		
	T	R	Tot	L	T	Tot	L	R	Tot
Counted Volumes (Thursday, November 17, 2016)	6	1	7	0	23	23	10	0	10
Annual Background Growth	10.4%	10.4%		10.4%	10.4%		10.4%	10.4%	
No-Build Volumes	7	1	8	0	25	25	11	0	11
Willow Springs Townhomes	0	6	6	0	0	0	12	0	12
Lanier Tract Senior Living Residential New Trips	0	4	4	0	0	0	7	0	7
Lanier Tract Office/Retail New Trips	0	0	0	0	0	0	0	0	0
Total Lanier Tract Site Trips	0	4	4	0	0	0	7	0	7
Phase 1 Future Volumes	7	11	18	0	25	25	30	0	30
Retail Outparcels	0	0	0	0	0	0	0	0	0
Phase 2 Future Volumes	7	11	18	0	25	25	30	0	30

Weekday P.M. Peak Hour	Northbound Sportsman Club Road			Southbound Sportsman Club Road			Westbound Strickland Drive		
	T	R	Tot	L	T	Tot	L	R	Tot
Counted Volumes (Thursday, September 17, 2015)	29	9	38	0	23	23	7	0	7
Annual Background Growth	10.4%	10.4%		10.4%	10.4%		10.4%	10.4%	
No-Build Volumes	32	10	42	0	25	25	8	0	8
Willow Springs Townhomes	0	12	12	0	0	0	11	0	11
Lanier Tract Senior Living Residential New Trips	0	6	6	0	0	0	5	0	5
Lanier Tract Office/Retail New Trips	0	0	0	0	0	0	0	0	0
Total Lanier Tract Site Trips	0	6	6	0	0	0	5	0	5
Phase 1 Future Volumes	32	28	60	0	25	25	24	0	24
Retail Outparcels	0	0	0	0	0	0	0	0	0
Phase 2 Future Volumes	32	28	60	0	25	25	24	0	24

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Intersection 2: Georgia State Route 53 at Sportsman Club Road

Weekday A.M. Peak Hour																
	Northbound GA 53				Southbound GA 53				Eastbound turn lane				Westbound Sportsman Club Road			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Thursday, November 17, 2016)	0	743	8	751	9	1687	0	1696	0	0	0	0	25	0	15	40
Annual Background Growth	10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%	
No-Build Volumes	0	820	9	829	10	1863	0	1873	0	0	0	0	28	0	17	44
Willow Springs Townhomes	0	0	4	4	2	0	0	2	0	0	0	0	9	0	3	12
Lanier Tract Senior Living Residential New Trips	0	19	2	21	2	15	0	17	0	0	0	0	4	0	3	7
Lanier Tract Office/Retail New Trips	5	2	0	7	0	7	0	7	0	0	0	0	0	0	0	0
Total Lanier Tract Site Trips	5	21	2	28	2	22	0	24	0	0	0	0	4	0	3	7
Phase 1 Future Volumes	5	841	15	861	14	1885	0	1899	0	0	0	0	41	0	23	63
Retail Outparcels	0	9	0	9	0	14	0	14	0	0	0	0	0	0	0	0
Phase 2 Future Volumes	5	850	15	870	14	1899	0	1913	0	0	0	0	41	0	23	63

Weekday P.M. Peak Hour																
	Northbound GA 53				Southbound GA 53				Eastbound turn lane				Westbound Sportsman Club Road			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Thursday, September 17, 2015)	2	1671	19	1692	15	1039	0	1054	0	0	0	0	28	0	9	37
Annual Background Growth	10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%	
No-Build Volumes	2	1845	21	1868	17	1147	0	1164	0	0	0	0	31	0	10	41
Willow Springs Townhomes	0	0	9	9	3	0	0	3	0	0	0	0	8	0	3	11
Lanier Tract Senior Living Residential New Trips	0	21	4	25	2	14	0	16	0	0	0	0	3	0	2	5
Lanier Tract Office/Retail New Trips	24	10	0	34	0	5	0	5	0	0	0	0	0	0	0	0
Total Lanier Tract Site Trips	24	31	4	59	2	19	0	21	0	0	0	0	3	0	2	5
Phase 1 Future Volumes	26	1876	34	1936	22	1166	0	1188	0	0	0	0	42	0	15	57
Retail Outparcels	0	38	0	38	0	35	0	35	0	0	0	0	0	0	0	0
Phase 2 Future Volumes	26	1914	34	1974	22	1201	0	1223	0	0	0	0	42	0	15	57

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Intersection 3: Georgia State Route 53 at Avonlea Way

Weekday A.M. Peak Hour	Northbound GA 53				Southbound GA 53				Eastbound Avonlea Way				Westbound Lanier Tract Access			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Thursday, November 17, 2016)	12	757	1	770	0	1668	6	1674	15	0	72	87	0	0	0	0
Annual Background Growth	10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%	
No-Build Volumes	13	836	1	850	0	1842	7	1848	17	0	79	96	0	0	0	0
Willow Springs Townhomes	0	4	0	4	0	9	0	9	0	0	0	0	0	0	0	0
Lanier Tract Senior Living Residential New Trips	0	9	1	10	8	11	0	19	0	0	0	0	2	0	13	15
Lanier Tract Office/Retail New Trips	0	17	0	17	7	5	0	12	0	0	0	0	0	0	0	0
Total Lanier Tract Site Trips	0	26	1	27	15	16	0	31	0	0	0	0	2	0	13	15
Phase 1 Future Volumes	13	866	2	881	15	1867	7	1888	17	0	79	96	2	0	13	15
Retail Outparcels	0	9	0	9	0	14	0	14	0	0	0	0	0	0	0	0
Phase 2 Future Volumes	13	875	2	890	15	1881	7	1902	17	0	79	96	2	0	13	15

Weekday P.M. Peak Hour	Northbound GA 53				Southbound GA 53				Eastbound Avonlea Way				Westbound Lanier Tract Access			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Thursday, September 17, 2015)	62	1650	0	1712	2	1102	14	1118	11	0	47	58	0	0	0	0
Annual Background Growth	10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%	
No-Build Volumes	68	1822	0	1890	2	1217	15	1234	12	0	52	64	0	0	0	0
Willow Springs Townhomes	0	9	0	9	0	8	0	8	0	0	0	0	0	0	0	0
Lanier Tract Senior Living Residential New Trips	0	14	17	31	3	14	0	17	0	0	0	0	2	0	11	13
Lanier Tract Office/Retail New Trips	0	13	0	13	5	24	0	29	0	0	0	0	0	0	0	0
Total Lanier Tract Site Trips	0	27	17	44	8	38	0	46	0	0	0	0	2	0	11	13
Phase 1 Future Volumes	68	1858	17	1943	10	1263	15	1288	12	0	52	64	2	0	11	13
Retail Outparcels	0	38	0	38	0	35	0	35	0	0	0	0	0	0	0	0
Phase 2 Future Volumes	68	1896	17	1981	10	1298	15	1323	12	0	52	64	2	0	11	13

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Intersection 4: Georgia State Route 53 at Canterbury Road

Weekday A.M. Peak Hour	Northbound GA 53				Southbound GA 53				Eastbound Canterbury Road				Westbound Lanier Tract Access			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Thursday, November 17, 2016)	23	722		745		1783	7	1790	18		95	113				
Annual Background Growth	10.4%	10.4%				10.4%	10.4%		10.4%		10.4%					
No-Build Volumes	25	797		823		1969	8	1976	20		105	125				
Willow Springs Townhomes	0	4	0	4	0	9	0	9	0	0	0	0	0	0	0	0
Lanier Tract Senior Living Residential New Trips	0	8	3	11	2	11	0	13	0	0	0	0	3	0	2	5
Lanier Tract Office/Retail New Trips	0	17	0	17	0	5	0	5	0	0	0	0	0	0	0	0
Total Lanier Tract Site Trips	0	25	3	28	2	16	0	18	0	0	0	0	3	0	2	5
Phase 1 Future Volumes	25	826	3	855	2	1994	8	2003	20	0	105	125	3	0	2	5
Retail Outparcels	0	0	31	31	14	0	0	0	0	0	0	0	18	0	9	9
Retail Outparcels Pass-by	0	-6	6	0	14	-14	0	-14	0	0	0	0	8	0	4	4
Phase 2 Future Volumes	25	820	40	886	30	1980	8	2017	20	0	105	125	29	0	15	44

Weekday P.M. Peak Hour	Northbound GA 53				Southbound GA 53				Eastbound Canterbury Road				Westbound Lanier Tract Access			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Thursday, September 17, 2015)	111	1682		1793		1108	14	1122	7		28	35				
Annual Background Growth	10.4%	10.4%				10.4%	10.4%		10.4%		10.4%					
No-Build Volumes	123	1857		1980		1223	15	1239	8		31	39				
Willow Springs Townhomes	0	9	0	9	0	8	0	8	0	0	0	0	0	0	0	0
Lanier Tract Senior Living Residential New Trips	0	29	4	33	3	13	0	16	0	0	0	0	2	0	2	4
Lanier Tract Office/Retail New Trips	0	13	0	13	0	24	0	24	0	0	0	0	0	0	0	0
Total Lanier Tract Site Trips	0	42	4	46	3	37	0	40	0	0	0	0	2	0	2	4
Phase 1 Future Volumes	123	1908	4	2035	3	1268	15	1287	8	0	31	39	2	0	2	4
Retail Outparcels	0	0	76	76	35	0	0	0	0	0	0	0	82	0	38	38
Retail Outparcels Pass-by	0	-48	48	0	30	-30	0	-30	0	0	0	0	32	0	52	52
Phase 2 Future Volumes	123	1860	128	2111	68	1238	15	1322	8	0	31	39	116	0	92	208

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Intersection 5: Georgia State Route 53 at Lanier Valley Drive / Ahaluna Drive

Weekday A.M. Peak Hour		Northbound GA 53				Southbound GA 53				Eastbound Lanier Valley Drive				Westbound Ahaluna Drive			
		L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Thursday, November 17, 2016)		55	701	11	767	14	1901	0	1915	19	5	115	139	37	3	20	60
Annual Background Growth		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%	
No-Build Volumes		61	774	12	847	15	2099	0	2114	21	6	127	153	41	3	22	66
Willow Springs Townhomes		0	4	0	4	0	9	0	9	0	0	0	0	0	0	0	0
Lanier Tract Senior Living Residential New Trips		0	5	35	40	6	8	0	14	0	0	0	0	51	0	5	56
Lanier Tract Office/Retail New Trips		0	17	0	17	0	5	0	5	0	0	0	0	0	0	0	0
Total Lanier Tract Site Trips		0	22	35	57	6	13	0	19	0	0	0	0	51	0	5	56
Phase 1 Future Volumes		61	800	47	908	21	2121	0	2142	21	6	127	153	92	3	27	122
Retail Outparcels		0	31	0	31	0	18	0	18	0	0	0	0	0	0	0	0
Phase 2 Future Volumes		61	831	47	939	21	2139	0	2160	21	6	127	153	92	3	27	122

Weekday P.M. Peak Hour		Northbound GA 53				Southbound GA 53				Eastbound Lanier Valley Drive				Westbound Ahaluna Drive			
		L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Thursday, September 17, 2015)		179	1737	38	1954	22	1201	3	1226	21	1	96	118	37	7	51	95
Annual Background Growth		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%	
No-Build Volumes		198	1918	42	2157	24	1326	3	1354	23	1	106	130	41	8	56	105
Willow Springs Townhomes		0	9	0	9	0	8	0	8	0	0	0	0	0	0	0	0
Lanier Tract Senior Living Residential New Trips		0	25	72	97	7	8	0	15	0	0	0	0	57	0	8	65
Lanier Tract Office/Retail New Trips		0	13	0	13	0	24	0	24	0	0	0	0	0	0	0	0
Total Lanier Tract Site Trips		0	38	72	110	7	32	0	39	0	0	0	0	57	0	8	65
Phase 1 Future Volumes		198	1965	114	2276	31	1366	3	1401	23	1	106	130	98	8	64	170
Retail Outparcels		0	76	0	76	0	82	0	82	0	0	0	0	0	0	0	0
Phase 2 Future Volumes		198	2041	114	2352	31	1448	3	1483	23	1	106	130	98	8	64	170

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Intersection 6: Georgia State Route 53 at North Lake Square / Olive Garden Access

Weekday A.M. Peak Hour	Northbound GA 53				Southbound GA 53				Eastbound Olive Garden Access				Westbound North Lake Square			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Wednesday, March 22, 2017)	11	740	9	760	5	1989	4	1998	2	0	6	8	2	0	0	2
Annual Background Growth	10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%	
No-Build Volumes	12	817	10	839	6	2196	4	2206	2	0	7	9	2	0	0	2
Willow Springs Townhomes	0	4	0	4	0	9	0	9	0	0	0	0	0	0	0	0
Lanier Tract Senior Living Residential New Trips	0	40	0	40	0	59	0	59	0	0	0	0	0	0	0	0
Lanier Tract Office/Retail New Trips	0	17	0	17	0	5	0	5	0	0	0	0	0	0	0	0
Total Lanier Tract Site Trips	0	57	0	57	0	64	0	64	0	0	0	0	0	0	0	0
Phase 1 Future Volumes	12	878	10	900	6	2269	4	2279	2	0	7	9	2	0	0	2
Retail Outparcels	0	31	0	31	0	18	0	18	0	0	0	0	0	0	0	0
Phase 2 Future Volumes	12	909	10	931	6	2287	4	2297	2	0	7	9	2	0	0	2

Weekday P.M. Peak Hour	Northbound GA 53				Southbound GA 53				Eastbound Olive Garden Access				Westbound North Lake Square			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Wednesday, March 22, 2017)	87	1763	138	1988	19	1199	27	1245	13	3	60	76	118	7	42	167
Annual Background Growth	10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%	
No-Build Volumes	96	1947	152	2195	21	1324	30	1375	14	3	66	84	130	8	46	184
Willow Springs Townhomes	0	9	0	9	0	8	0	8	0	0	0	0	0	0	0	0
Lanier Tract Senior Living Residential New Trips	0	97	0	97	0	65	0	65	0	0	0	0	0	0	0	0
Lanier Tract Office/Retail New Trips	0	13	0	13	0	24	0	24	0	0	0	0	0	0	0	0
Total Lanier Tract Site Trips	0	110	0	110	0	89	0	89	0	0	0	0	0	0	0	0
Phase 1 Future Volumes	96	2066	152	2314	21	1421	30	1472	14	3	66	84	130	8	46	184
Retail Outparcels	0	76	0	76	0	82	0	82	0	0	0	0	0	0	0	0
Phase 2 Future Volumes	96	2142	152	2390	21	1503	30	1554	14	3	66	84	130	8	46	184

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Intersection 7: Georgia State Route 53 at Beechwood Boulevard

Weekday A.M. Peak Hour										
	Northbound GA 53			Southbound GA 53			Eastbound Beechwood Boulevard			
	L	T	Tot	T	R	Tot	L	R	Tot	
Counted Volumes (Thursday, November 17, 2016)	27	787	814	2006	2	2008	5	41	46	
Annual Background Growth	10.4%	10.4%		10.4%	10.4%		10.4%	10.4%		
No-Build Volumes	30	869	899	2215	2	2217	6	45	51	
Willow Springs Townhomes	0	4	4	9	0	9	0	0	0	
Lanier Tract Senior Living Residential New Trips	0	40	40	59	0	59	0	0	0	
Lanier Tract Office/Retail New Trips	0	17	17	5	0	5	0	0	0	
Total Lanier Tract Site Trips	0	57	57	64	0	64	0	0	0	
Phase 1 Future Volumes	30	930	960	2288	2	2290	6	45	51	
Retail Outparcels	0	31	31	18	0	18	0	0	0	
Phase 2 Future Volumes	30	961	991	2306	2	2308	6	45	51	

Weekday P.M. Peak Hour										
	Northbound GA 53			Southbound GA 53			Eastbound Beechwood Boulevard			
	L	T	Tot	T	R	Tot	L	R	Tot	
Counted Volumes (Thursday, September 17, 2015)	86	1998	2084	1388	9	1397	1	47	48	
Annual Background Growth	10.4%	10.4%		10.4%	10.4%		10.4%	10.4%		
No-Build Volumes	95	2206	2301	1532	10	1542	1	52	53	
Willow Springs Townhomes	0	9	9	8	0	8	0	0	0	
Lanier Tract Senior Living Residential New Trips	0	97	97	65	0	65	0	0	0	
Lanier Tract Office/Retail New Trips	0	13	13	24	0	24	0	0	0	
Total Lanier Tract Site Trips	0	110	110	89	0	89	0	0	0	
Phase 1 Future Volumes	95	2325	2420	1629	10	1639	1	52	53	
Retail Outparcels	0	76	76	82	0	82	0	0	0	
Phase 2 Future Volumes	95	2401	2496	1711	10	1721	1	52	53	

MARC R. ACAMPORA, PE, LLC

Lanier Tract Multi-Use DRI Traffic Impact Study
City of Gainesville, Georgia

April 2017

Intersection 8: Georgia State Route 53 - Dawsonville Highway at McEver Road / Commercial Access

Weekday A.M. Peak Hour	Northbound Dawsonville Highway				Southbound Dawsonville Highway				Eastbound McEver Road				Westbound Commercial Access			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Thursday, November 17, 2016)	282	465	55	802	28	1170	828	2026	390	28	342	760	42	19	18	79
Annual Background Growth	10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%	
No-Build Volumes	311	513	61	885	31	1292	914	2237	431	31	378	839	46	21	20	87
Willow Springs Townhomes	0	3	0	3	0	6	3	9	1	0	0	1	0	0	0	0
Lanier Tract Senior Living Residential New Trips	0	27	0	27	3	40	16	59	11	0	0	11	0	0	2	2
Lanier Tract Office/Retail New Trips	0	10	0	10	0	3	2	5	7	0	0	7	0	0	0	0
Total Lanier Tract Site Trips	0	37	0	37	3	43	18	64	18	0	0	18	0	0	2	2
Phase 1 Future Volumes	311	553	61	925	34	1341	935	2310	450	31	378	858	46	21	22	89
Retail Outparcels	0	19	0	19	0	11	7	18	12	0	0	0	0	0	0	0
Phase 2 Future Volumes	311	572	61	944	34	1352	942	2328	462	31	378	870	46	21	22	89

Weekday P.M. Peak Hour	Northbound Dawsonville Highway				Southbound Dawsonville Highway				Eastbound McEver Road				Westbound Commercial Access			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Thursday, September 17, 2015)	433	1362	46	1841	62	1029	481	1572	845	213	386	1444	87	91	81	259
Annual Background Growth	10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%	
No-Build Volumes	478	1504	51	2033	68	1136	531	1736	933	235	426	1594	96	100	89	286
Willow Springs Townhomes	0	6	0	6	0	5	3	8	3	0	0	3	0	0	0	0
Lanier Tract Senior Living Residential New Trips	0	67	0	67	3	44	18	65	26	0	0	26	0	0	4	4
Lanier Tract Office/Retail New Trips	0	8	0	8	0	14	10	24	5	0	0	5	0	0	0	0
Total Lanier Tract Site Trips	0	75	0	75	3	58	28	89	31	0	0	31	0	0	4	4
Phase 1 Future Volumes	478	1585	51	2114	71	1199	562	1833	967	235	426	1628	96	100	93	290
Retail Outparcels	0	47	0	47	0	50	32	82	29	0	0	0	0	0	0	0
Phase 2 Future Volumes	478	1632	51	2161	71	1249	594	1915	996	235	426	1657	96	100	93	290

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Lanier Tract Multi-Use DRI Traffic Impact Study
City of Gainesville, Georgia

April 2017

Intersection 9: Dawsonville Highway at Green Hill Circle / Commercial Access

Weekday A.M. Peak Hour	Northbound Dawsonville Highway				Southbound Dawsonville Highway				Eastbound Green Hill Circle				Westbound Commercial Access			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Thursday, November 17, 2016)	135	754	10	899	12	1404	52	1468	67	1	141	209	6	1	4	11
Annual Background Growth	10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%	
No-Build Volumes	149	832	11	993	13	1550	57	1621	74	1	156	231	7	1	4	12
Willow Springs Townhomes	0	3	0	3	0	6	0	6	0	0	0	0	0	0	0	0
Lanier Tract Senior Living Residential New Trips	0	27	0	27	0	40	0	40	0	0	0	0	0	0	0	0
Lanier Tract Office/Retail New Trips	0	10	0	10	0	3	0	3	0	0	0	0	0	0	0	0
Total Lanier Tract Site Trips	0	37	0	37	0	43	0	43	0	0	0	0	0	0	0	0
Phase 1 Future Volumes	149	872	11	1033	13	1599	57	1670	74	1	156	231	7	1	4	12
Retail Outparcels	0	19	0	19	0	11	0	11	0	0	0	0	0	0	0	0
Phase 2 Future Volumes	149	891	11	1052	13	1610	57	1681	74	1	156	231	7	1	4	12

Weekday P.M. Peak Hour	Northbound Dawsonville Highway				Southbound Dawsonville Highway				Eastbound Green Hill Circle				Westbound Commercial Access			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Thursday, September 17, 2015)	248	1749	70	2067	40	1392	53	1485	132	9	138	279	60	20	38	118
Annual Background Growth	10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%	
No-Build Volumes	274	1931	77	2282	44	1537	59	1640	146	10	152	308	66	22	42	130
Willow Springs Townhomes	0	6	0	6	0	5	0	5	0	0	0	0	0	0	0	0
Lanier Tract Senior Living Residential New Trips	0	67	0	67	0	44	0	44	0	0	0	0	0	0	0	0
Lanier Tract Office/Retail New Trips	0	8	0	8	0	14	0	14	0	0	0	0	0	0	0	0
Total Lanier Tract Site Trips	0	75	0	75	0	58	0	58	0	0	0	0	0	0	0	0
Phase 1 Future Volumes	274	2012	77	2363	44	1600	59	1703	146	10	152	308	66	22	42	130
Retail Outparcels	0	47	0	47	0	50	0	50	0	0	0	0	0	0	0	0
Phase 2 Future Volumes	274	2059	77	2410	44	1650	59	1753	146	10	152	308	66	22	42	130

MARC R. ACAMPORA, PE, LLC

Lanier Tract Multi-Use DRI Traffic Impact Study
City of Gainesville, Georgia

April 2017

Intersection 10: Dawsonville Highway at Shallowford Road / Commercial Access

Weekday A.M. Peak Hour	Northbound Dawsonville Highway				Southbound Dawsonville Highway				Eastbound Shallowford Road				Westbound Commercial Access			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Thursday, November 17, 2016)	10	738	13	761	1	1249	338	1588	138	2	8	148	2	4	3	9
Annual Background Growth	10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%	
No-Build Volumes	11	815	14	840	1	1379	373	1753	152	2	9	163	2	4	3	10
Willow Springs Townhomes	0	2	0	2	0	4	2	6	1	0	0	1	0	0	0	0
Lanier Tract Senior Living Residential New Trips	0	21	0	21	0	30	10	40	6	0	0	6	0	0	0	0
Lanier Tract Office/Retail New Trips	0	9	0	9	0	2	1	3	1	0	0	1	0	0	0	0
Total Lanier Tract Site Trips	0	30	0	30	0	32	11	43	7	0	0	7	0	0	0	0
Phase 1 Future Volumes	11	847	14	872	1	1415	386	1802	160	2	9	171	2	4	3	10
Retail Outparcels	0	17	0	17	0	10	1	11	2	0	0	0	0	0	0	0
Phase 2 Future Volumes	11	864	14	889	1	1425	387	1813	162	2	9	173	2	4	3	10

Weekday P.M. Peak Hour	Northbound Dawsonville Highway				Southbound Dawsonville Highway				Eastbound Shallowford Road				Westbound Commercial Access			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Thursday, September 17, 2015)	40	1639	114	1793	7	1161	463	1631	518	38	26	582	36	27	7	70
Annual Background Growth	10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%	
No-Build Volumes	44	1810	126	1980	8	1282	511	1801	572	42	29	643	40	30	8	77
Willow Springs Townhomes	0	4	0	4	0	4	1	5	2	0	0	2	0	0	0	0
Lanier Tract Senior Living Residential New Trips	0	52	0	52	0	33	11	44	15	0	0	15	0	0	0	0
Lanier Tract Office/Retail New Trips	0	7	0	7	0	12	2	14	1	0	0	1	0	0	0	0
Total Lanier Tract Site Trips	0	59	0	59	0	45	13	58	16	0	0	16	0	0	0	0
Phase 1 Future Volumes	44	1873	126	2043	8	1331	525	1864	590	42	29	661	40	30	8	77
Retail Outparcels	0	41	0	41	0	44	6	50	6	0	0	0	0	0	0	0
Phase 2 Future Volumes	44	1914	126	2084	8	1375	531	1914	596	42	29	667	40	30	8	77

MARC R. ACAMPORA, PE, LLC

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TMC Data
Sportsman Club Rd @ Strickland Dr
Gainesville, GA
7-9am I 4.30-6.30pm

File Name : 39520001
Site Code : 39520001
Start Date : 11/17/2016
Page No : 1

Groups Printed- Cars, Buses, Trucks

	Sportsman Club Rd Northbound					Sportsman Club Rd Southbound					Eastbound					Strickland Dr Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	0	4	0	0	4	0	7	0	0	7	0	0	0	0	0	0	0	0	0	0	11
07:15 AM	0	1	0	0	1	0	4	0	0	4	0	0	0	0	0	1	0	0	0	1	6
07:30 AM	0	3	0	0	3	0	6	0	0	6	0	0	0	0	0	2	0	0	0	2	11
07:45 AM	0	2	0	0	2	0	3	0	0	3	0	0	0	0	0	2	0	0	0	2	7
Total	0	10	0	0	10	0	20	0	0	20	0	0	0	0	0	5	0	0	0	5	35
08:00 AM	0	0	1	0	1	0	9	0	0	9	0	0	0	0	0	5	0	0	0	5	15
08:15 AM	0	1	0	0	1	0	5	0	0	5	0	0	0	0	0	1	0	0	0	1	7
08:30 AM	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
08:45 AM	0	2	3	0	5	0	4	0	0	4	0	0	0	0	0	1	0	0	0	1	10
Total	0	3	6	0	9	0	18	0	0	18	0	0	0	0	0	7	0	0	0	7	34
*** BREAK ***																					
04:30 PM	0	4	0	0	4	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	8
04:45 PM	0	3	1	0	4	0	8	0	0	8	0	0	0	0	0	0	0	0	0	0	12
Total	0	7	1	0	8	0	12	0	0	12	0	0	0	0	0	0	0	0	0	0	20
05:00 PM	0	6	1	0	7	0	4	0	0	4	0	0	0	0	0	1	0	0	0	1	12
05:15 PM	0	4	5	0	9	0	7	0	0	7	0	0	0	0	0	4	0	0	0	4	20
05:30 PM	0	10	1	0	11	0	4	0	0	4	0	0	0	0	0	3	0	0	0	3	18
05:45 PM	0	6	1	0	7	0	7	0	0	7	0	0	0	0	0	0	0	0	0	0	14
Total	0	26	8	0	34	0	22	0	0	22	0	0	0	0	0	8	0	0	0	8	64
06:00 PM	0	9	2	0	11	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	16
06:15 PM	0	5	1	0	6	0	6	0	0	6	0	0	0	0	0	2	0	0	0	2	14
Grand Total	0	60	18	0	78	0	83	0	0	83	0	0	0	0	0	22	0	0	0	22	183
Apprch %	0	76.9	23.1	0		0	100	0	0		0	0	0	0		100	0	0	0		
Total %	0	32.8	9.8	0	42.6	0	45.4	0	0	45.4	0	0	0	0	0	12	0	0	0	12	

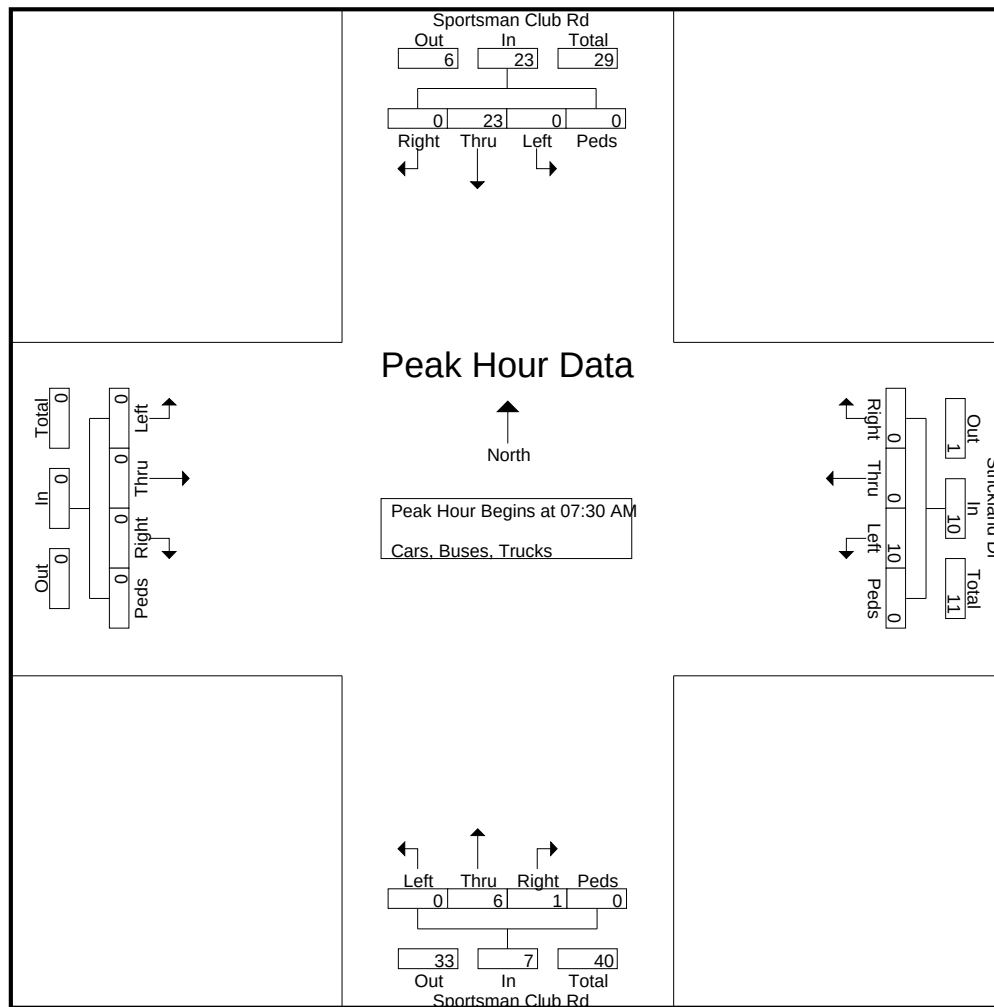
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TMC Data
Sportsman Club Rd @ Strickland Dr
Gainesville, GA
7-9am | 4.30-6.30pm

File Name : 39520001
Site Code : 39520001
Start Date : 11/17/2016
Page No : 2

	Sportsman Club Rd Northbound					Sportsman Club Rd Southbound					Eastbound					Strickland Dr Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	0	3	0	0	3	0	6	0	0	6	0	0	0	0	0	2	0	0	0	2	11
07:45 AM	0	2	0	0	2	0	3	0	0	3	0	0	0	0	0	2	0	0	0	2	7
08:00 AM	0	0	1	0	1	0	9	0	0	9	0	0	0	0	0	5	0	0	0	5	15
08:15 AM	0	1	0	0	1	0	5	0	0	5	0	0	0	0	0	1	0	0	0	1	7
Total Volume	0	6	1	0	7	0	23	0	0	23	0	0	0	0	0	10	0	0	0	10	40
% App. Total	0	85.7	14.3	0		0	100	0	0		0	0	0	0		100	0	0	0		
PHF	.000	.500	.250	.000	.583	.000	.639	.000	.000	.639	.000	.000	.000	.000	.000	.500	.000	.000	.000	.500	.667



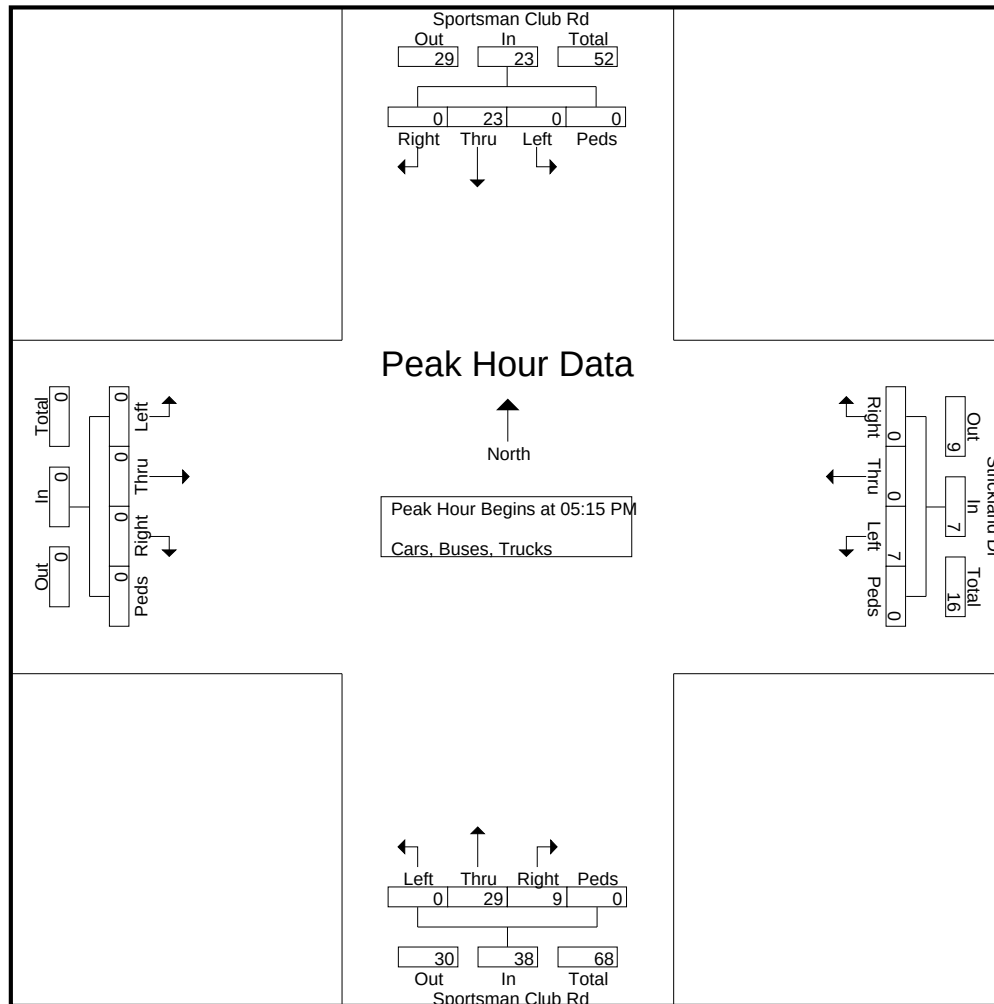
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TMC Data
Sportsman Club Rd @ Strickland Dr
Gainesville, GA
7-9am | 4.30-6.30pm

File Name : 39520001
Site Code : 39520001
Start Date : 11/17/2016
Page No : 3

	Sportsman Club Rd Northbound					Sportsman Club Rd Southbound					Eastbound					Strickland Dr Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:15 PM																					
05:15 PM	0	4	5	0	9	0	7	0	0	7	0	0	0	0	0	4	0	0	0	4	20
05:30 PM	0	10	1	0	11	0	4	0	0	4	0	0	0	0	0	3	0	0	0	3	18
05:45 PM	0	6	1	0	7	0	7	0	0	7	0	0	0	0	0	0	0	0	0	0	14
06:00 PM	0	9	2	0	11	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	16
Total Volume	0	29	9	0	38	0	23	0	0	23	0	0	0	0	0	7	0	0	0	7	68
% App. Total	0	76.3	23.7	0		0	100	0	0		0	0	0	0		100	0	0	0		
PHF	.000	.725	.450	.000	.864	.000	.821	.000	.000	.821	.000	.000	.000	.000	.000	.438	.000	.000	.000	.438	.850



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TMC Data
Dawsonville Hwy (SR53) @
Sportsman Club Rd, Gainesville, GA
7-9am I 4.30-6.30pm

File Name : 39520002
Site Code : 39520002
Start Date : 11/17/2016
Page No : 1

Groups Printed- Cars, Buses, Trucks

	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					Truck Turn Around Eastbound					Sportsman Club Rd Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	0	156	4	0	160	1	326	0	0	327	0	0	0	0	0	5	0	4	0	9	496
07:15 AM	0	165	2	0	167	4	391	0	0	395	0	0	0	0	0	3	0	6	0	9	571
07:30 AM	0	168	2	0	170	4	492	0	0	496	0	0	0	0	0	6	0	2	0	8	674
07:45 AM	0	189	1	0	190	1	448	0	0	449	0	0	0	0	0	4	0	2	0	6	645
Total	0	678	9	0	687	10	1657	0	0	1667	0	0	0	0	0	18	0	14	0	32	2386
08:00 AM	0	221	3	0	224	0	356	0	0	356	0	0	0	0	0	12	0	5	0	17	597
08:15 AM	0	175	3	0	178	1	364	0	0	365	0	0	0	0	0	4	0	1	0	5	548
08:30 AM	2	192	3	0	197	1	320	2	0	323	0	0	0	0	0	1	0	1	0	2	522
08:45 AM	1	164	4	0	169	3	267	0	0	270	0	0	0	0	0	8	0	0	0	8	447
Total	3	752	13	0	768	5	1307	2	0	1314	0	0	0	0	0	25	0	7	0	32	2114
*** BREAK ***																					
04:30 PM	0	344	9	0	353	1	258	0	0	259	0	0	0	0	0	4	0	1	0	5	617
04:45 PM	0	411	3	0	414	1	239	0	0	240	0	0	0	0	0	8	0	2	0	10	664
Total	0	755	12	0	767	2	497	0	0	499	0	0	0	0	0	12	0	3	0	15	1281
05:00 PM	2	410	3	0	415	6	271	0	0	277	0	0	0	0	0	4	0	2	0	6	698
05:15 PM	0	437	6	0	443	4	267	0	0	271	0	0	0	0	0	10	0	4	0	14	728
05:30 PM	0	413	7	0	420	4	262	0	0	266	0	0	0	0	0	6	0	1	0	7	693
05:45 PM	0	374	5	0	379	3	267	0	0	270	0	0	0	0	0	6	0	3	0	9	658
Total	2	1634	21	0	1657	17	1067	0	0	1084	0	0	0	0	0	26	0	10	0	36	2777
06:00 PM	1	421	12	0	434	0	250	0	0	250	0	0	0	0	0	6	0	1	0	7	691
06:15 PM	0	318	7	0	325	3	252	0	0	255	0	0	0	0	0	7	0	3	0	10	590
Grand Total	6	4558	74	0	4638	37	5030	2	0	5069	0	0	0	0	0	94	0	38	0	132	9839
Apprch %	0.1	98.3	1.6	0		0.7	99.2	0	0		0	0	0	0		71.2	0	28.8	0		
Total %	0.1	46.3	0.8	0	47.1	0.4	51.1	0	0	51.5	0	0	0	0		1	0	0.4	0	1.3	

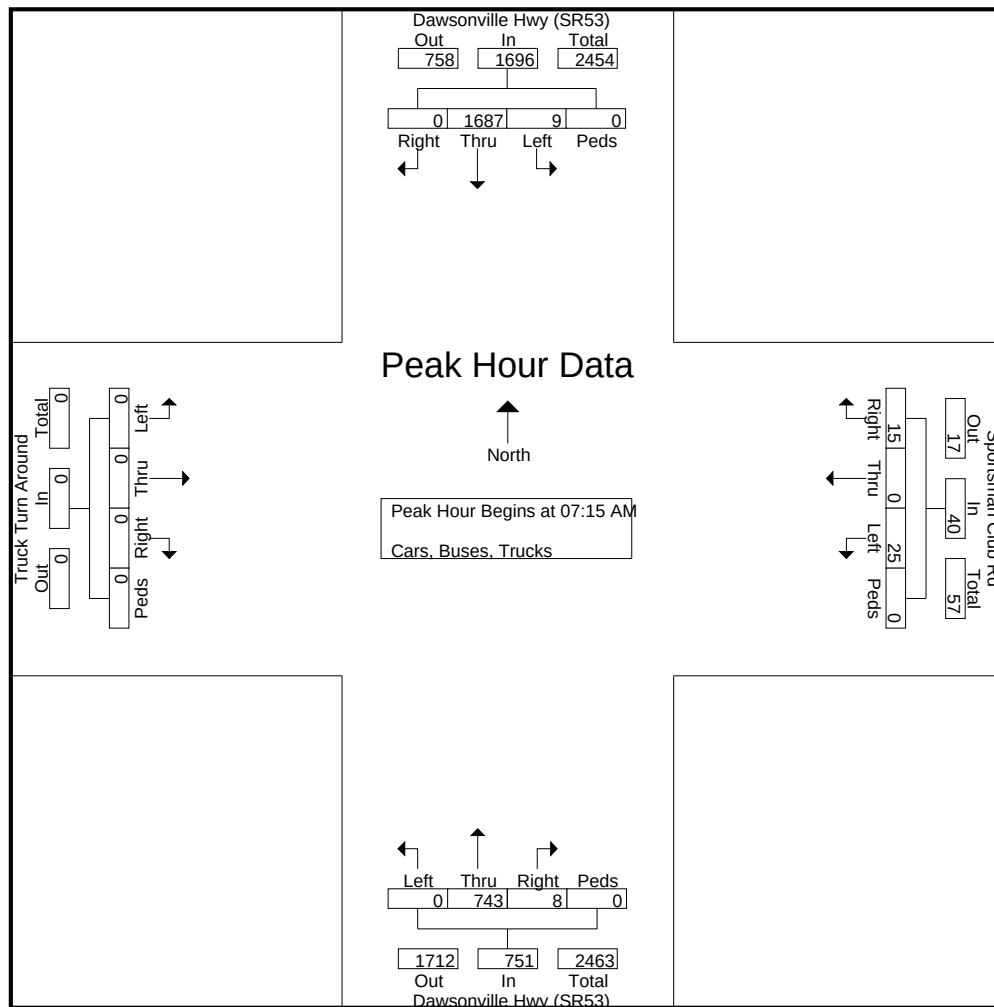
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TMC Data
Dawsonville Hwy (SR53) @
Sportsman Club Rd, Gainesville, GA
7-9am | 4.30-6.30pm

File Name : 39520002
Site Code : 39520002
Start Date : 11/17/2016
Page No : 2

	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					Truck Turn Around Eastbound					Sportsman Club Rd Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	0	165	2	0	167	4	391	0	0	395	0	0	0	0	0	3	0	6	0	9	571
07:30 AM	0	168	2	0	170	4	492	0	0	496	0	0	0	0	0	6	0	2	0	8	674
07:45 AM	0	189	1	0	190	1	448	0	0	449	0	0	0	0	0	4	0	2	0	6	645
08:00 AM	0	221	3	0	224	0	356	0	0	356	0	0	0	0	0	12	0	5	0	17	597
Total Volume	0	743	8	0	751	9	1687	0	0	1696	0	0	0	0	0	25	0	15	0	40	2487
% App. Total	0	98.9	1.1	0		0.5	99.5	0	0		0	0	0	0		62.5	0	37.5	0		
PHF	.000	.840	.667	.000	.838	.563	.857	.000	.000	.855	.000	.000	.000	.000	.000	.521	.000	.625	.000	.588	.922



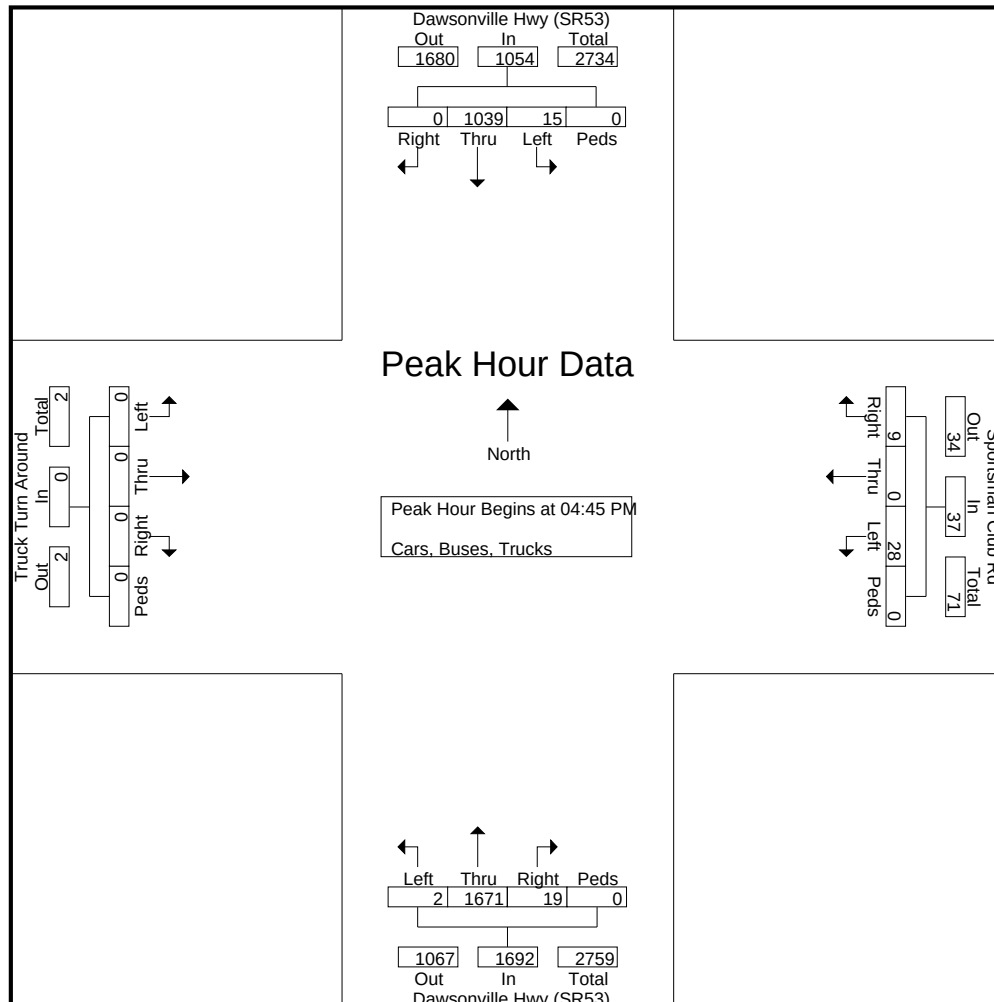
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TMC Data
Dawsonville Hwy (SR53) @
Sportsman Club Rd, Gainesville, GA
7-9am | 4.30-6.30pm

File Name : 39520002
Site Code : 39520002
Start Date : 11/17/2016
Page No : 3

	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					Truck Turn Around Eastbound					Sportsman Club Rd Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	0	411	3	0	414	1	239	0	0	240	0	0	0	0	0	8	0	2	0	10	664
05:00 PM	2	410	3	0	415	6	271	0	0	277	0	0	0	0	0	4	0	2	0	6	698
05:15 PM	0	437	6	0	443	4	267	0	0	271	0	0	0	0	0	10	0	4	0	14	728
05:30 PM	0	413	7	0	420	4	262	0	0	266	0	0	0	0	0	6	0	1	0	7	693
Total Volume	2	1671	19	0	1692	15	1039	0	0	1054	0	0	0	0	0	28	0	9	0	37	2783
% App. Total	0.1	98.8	1.1	0		1.4	98.6	0	0		0	0	0	0		75.7	0	24.3	0		
PHF	.250	.956	.679	.000	.955	.625	.958	.000	.000	.951	.000	.000	.000	.000	.000	.700	.000	.563	.000	.661	.956



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TMC Data
Dawsonville Hwy (SR53) @ Avonlea Way
Gainesville, GA
7-9am I 4.30-6.30pm

File Name : 39520003
Site Code : 39520003
Start Date : 11/17/2016
Page No : 1

Groups Printed- Cars, Buses, Trucks

	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					Avonlea Way Eastbound					Residential Drwy Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	3	160	0	0	163	0	324	0	0	324	6	0	18	0	24	0	0	0	0	0	511
07:15 AM	2	162	1	0	165	0	381	0	0	381	6	0	25	0	31	1	0	0	0	1	578
07:30 AM	6	164	1	0	171	0	485	2	0	487	2	0	22	0	24	0	0	0	0	0	682
07:45 AM	2	193	0	0	195	0	442	1	0	443	7	0	19	0	26	0	0	0	0	0	664
Total	13	679	2	0	694	0	1632	3	0	1635	21	0	84	0	105	1	0	0	0	1	2435
08:00 AM	2	216	0	0	218	0	367	1	0	368	4	0	15	0	19	0	0	0	0	0	605
08:15 AM	2	184	0	0	186	0	374	2	0	376	2	0	16	0	18	0	0	0	0	0	580
08:30 AM	4	198	0	0	202	0	326	3	0	329	3	0	21	0	24	0	0	0	0	0	555
08:45 AM	3	167	0	0	170	0	278	2	0	280	2	0	14	0	16	0	0	0	0	0	466
Total	11	765	0	0	776	0	1345	8	0	1353	11	0	66	0	77	0	0	0	0	0	2206
*** BREAK ***																					
04:30 PM	14	351	0	0	365	0	267	3	0	270	0	0	9	0	9	0	0	0	0	0	644
04:45 PM	10	412	0	0	422	0	248	6	0	254	1	0	6	0	7	0	0	0	0	0	683
Total	24	763	0	0	787	0	515	9	0	524	1	0	15	0	16	0	0	0	0	0	1327
05:00 PM	21	416	0	0	437	0	273	4	0	277	7	0	9	0	16	0	0	0	0	0	730
05:15 PM	10	442	0	0	452	0	279	2	0	281	1	0	18	0	19	0	0	0	0	0	752
05:30 PM	13	418	0	0	431	1	272	6	0	279	0	0	9	0	9	0	0	0	0	0	719
05:45 PM	18	374	0	0	392	1	278	2	0	281	3	0	11	0	14	0	0	0	0	0	687
Total	62	1650	0	0	1712	2	1102	14	0	1118	11	0	47	0	58	0	0	0	0	0	2888
06:00 PM	21	420	0	0	441	1	256	4	0	261	3	0	12	0	15	0	0	0	0	0	717
06:15 PM	13	328	0	0	341	0	247	3	0	250	1	0	10	0	11	0	0	0	0	0	602
Grand Total	144	4605	2	0	4751	3	5097	41	0	5141	48	0	234	0	282	1	0	0	0	1	10175
Apprch %	3	96.9	0	0		0.1	99.1	0.8	0		17	0	83	0		100	0	0	0		
Total %	1.4	45.3	0	0	46.7	0	50.1	0.4	0	50.5	0.5	0	2.3	0	2.8	0	0	0	0	0	

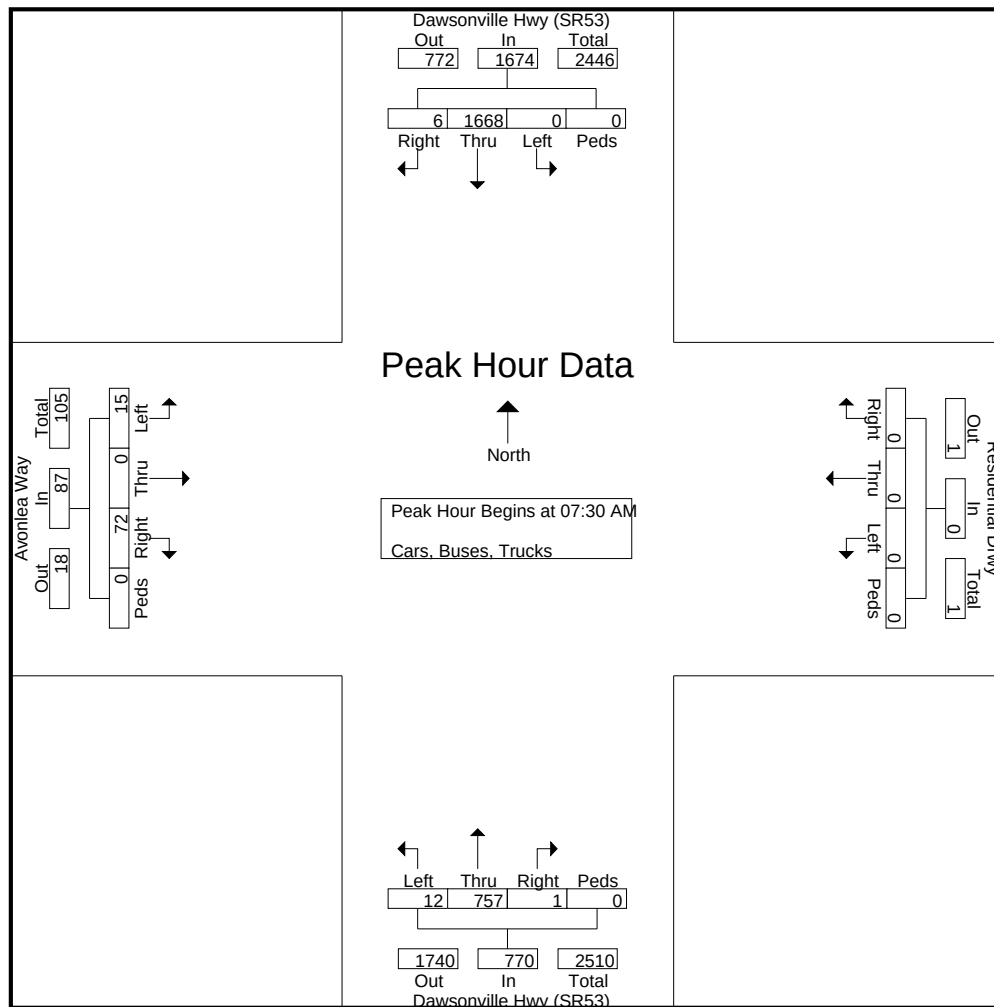
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TMC Data
Dawsonville Hwy (SR53) @ Avonlea Way
Gainesville, GA
7-9am | 4.30-6.30pm

File Name : 39520003
Site Code : 39520003
Start Date : 11/17/2016
Page No : 2

	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					Avonlea Way Eastbound					Residential Drwy Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	6	164	1	0	171	0	485	2	0	487	2	0	22	0	24	0	0	0	0	0	682
07:45 AM	2	193	0	0	195	0	442	1	0	443	7	0	19	0	26	0	0	0	0	0	664
08:00 AM	2	216	0	0	218	0	367	1	0	368	4	0	15	0	19	0	0	0	0	0	605
08:15 AM	2	184	0	0	186	0	374	2	0	376	2	0	16	0	18	0	0	0	0	0	580
Total Volume	12	757	1	0	770	0	1668	6	0	1674	15	0	72	0	87	0	0	0	0	0	2531
% App. Total	1.6	98.3	0.1	0		0	99.6	0.4	0		17.2	0	82.8	0		0	0	0	0		
PHF	.500	.876	.250	.000	.883	.000	.860	.750	.000	.859	.536	.000	.818	.000	.837	.000	.000	.000	.000	.000	.928



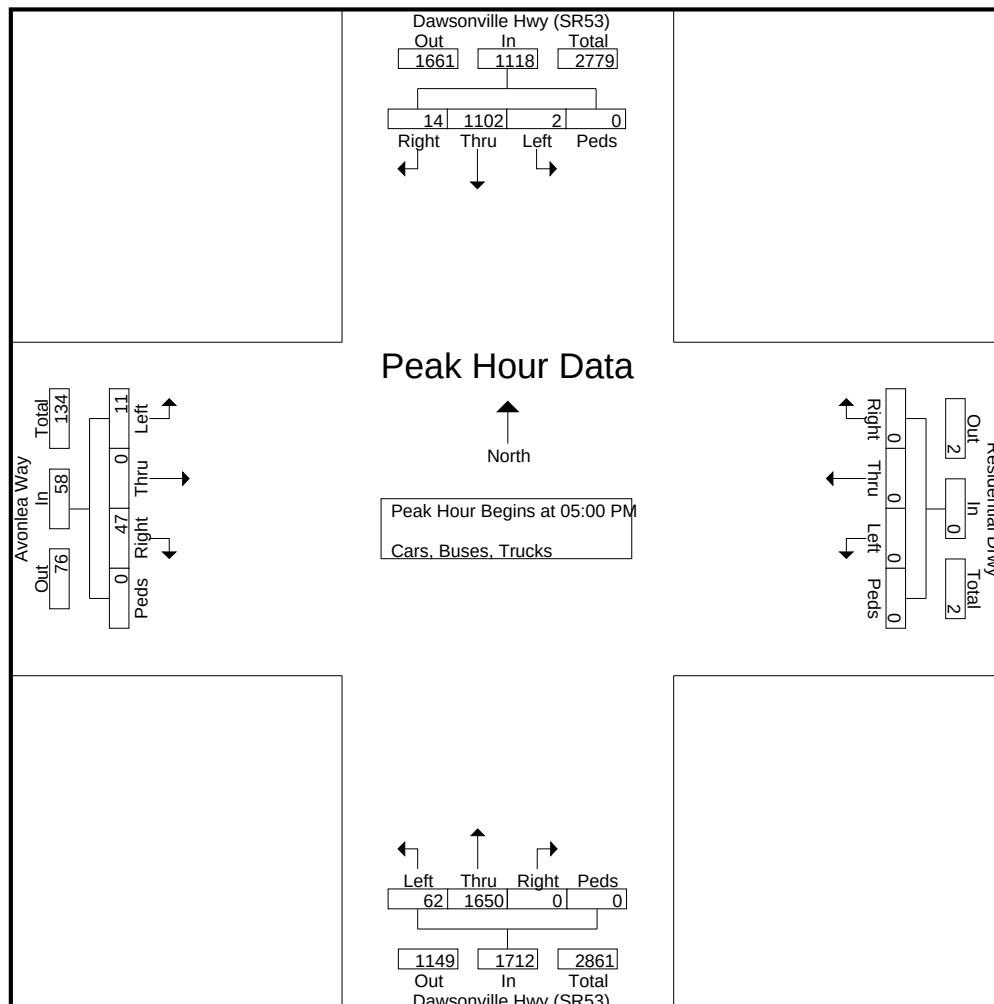
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TMC Data
Dawsonville Hwy (SR53) @ Avonlea Way
Gainesville, GA
7-9am | 4.30-6.30pm

File Name : 39520003
Site Code : 39520003
Start Date : 11/17/2016
Page No : 3

	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					Avonlea Way Eastbound					Residential Drwy Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	21	416	0	0	437	0	273	4	0	277	7	0	9	0	16	0	0	0	0	0	730
05:15 PM	10	442	0	0	452	0	279	2	0	281	1	0	18	0	19	0	0	0	0	0	752
05:30 PM	13	418	0	0	431	1	272	6	0	279	0	0	9	0	9	0	0	0	0	0	719
05:45 PM	18	374	0	0	392	1	278	2	0	281	3	0	11	0	14	0	0	0	0	0	687
Total Volume	62	1650	0	0	1712	2	1102	14	0	1118	11	0	47	0	58	0	0	0	0	0	2888
% App. Total	3.6	96.4	0	0		0.2	98.6	1.3	0		19	0	81	0		0	0	0	0		
PHF	.738	.933	.000	.000	.947	.500	.987	.583	.000	.995	.393	.000	.653	.000	.763	.000	.000	.000	.000	.000	.960



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TMC Data
Dawsonville Hwy (SR53) @ Canterbury Rd
Gainesville, GA
7-9am I 4.30-6.30pm

File Name : 39520004
Site Code : 39520004
Start Date : 11/17/2016
Page No : 1

Groups Printed- Cars, Buses, Trucks

	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					Canterbury Rd Eastbound					Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	U-Turns	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	4	151	0	0	155	0	342	2	0	344	5	0	22	0	27	0	0	0	0	0	526
07:15 AM	7	160	0	0	167	0	456	1	0	457	3	0	29	0	32	0	0	0	0	0	656
07:30 AM	6	168	0	0	174	0	487	4	0	491	5	0	23	0	28	0	0	0	0	0	693
07:45 AM	7	180	0	0	187	0	436	1	1	438	4	0	27	0	31	0	0	0	0	0	656
Total	24	659	0	0	683	0	1721	8	1	1730	17	0	101	0	118	0	0	0	0	0	2531
08:00 AM	3	214	0	0	217	0	403	1	0	404	6	0	16	0	22	0	0	0	0	0	643
08:15 AM	8	178	0	0	186	0	392	3	0	395	3	0	18	0	21	0	0	0	0	0	602
08:30 AM	3	180	0	0	183	0	326	2	2	330	3	0	11	0	14	0	0	0	0	0	527
08:45 AM	7	164	0	0	171	0	297	0	0	297	2	0	8	0	10	0	0	0	0	0	478
Total	21	736	0	0	757	0	1418	6	2	1426	14	0	53	0	67	0	0	0	0	0	2250
*** BREAK ***																					
04:30 PM	22	367	0	0	389	0	263	4	1	268	2	0	13	0	15	0	0	0	0	0	672
04:45 PM	25	398	0	0	423	0	267	1	1	269	1	0	16	0	17	0	0	0	0	0	709
Total	47	765	0	0	812	0	530	5	2	537	3	0	29	0	32	0	0	0	0	0	1381
05:00 PM	21	426	0	0	447	0	271	1	1	273	3	0	8	0	11	0	0	0	0	0	731
05:15 PM	33	432	0	0	465	0	278	3	0	281	2	0	4	0	6	0	0	0	0	0	752
05:30 PM	26	418	0	0	444	0	272	5	0	277	1	0	7	0	8	0	0	0	0	0	729
05:45 PM	31	406	0	0	437	0	284	5	2	291	1	0	9	0	10	0	0	0	0	0	738
Total	111	1682	0	0	1793	0	1105	14	3	1122	7	0	28	0	35	0	0	0	0	0	2950
06:00 PM	26	387	0	0	413	0	278	7	0	285	1	0	16	0	17	0	0	0	0	0	715
06:15 PM	23	364	0	0	387	0	267	5	0	272	2	0	11	0	13	0	0	0	0	0	672
Grand Total	252	4593	0	0	4845	0	5319	45	8	5372	44	0	238	0	282	0	0	0	0	0	10499
Apprch %	5.2	94.8	0	0		0	99	0.8	0.1		15.6	0	84.4	0		0	0	0	0		
Total %	2.4	43.7	0	0	46.1	0	50.7	0.4	0.1	51.2	0.4	0	2.3	0	2.7	0	0	0	0	0	

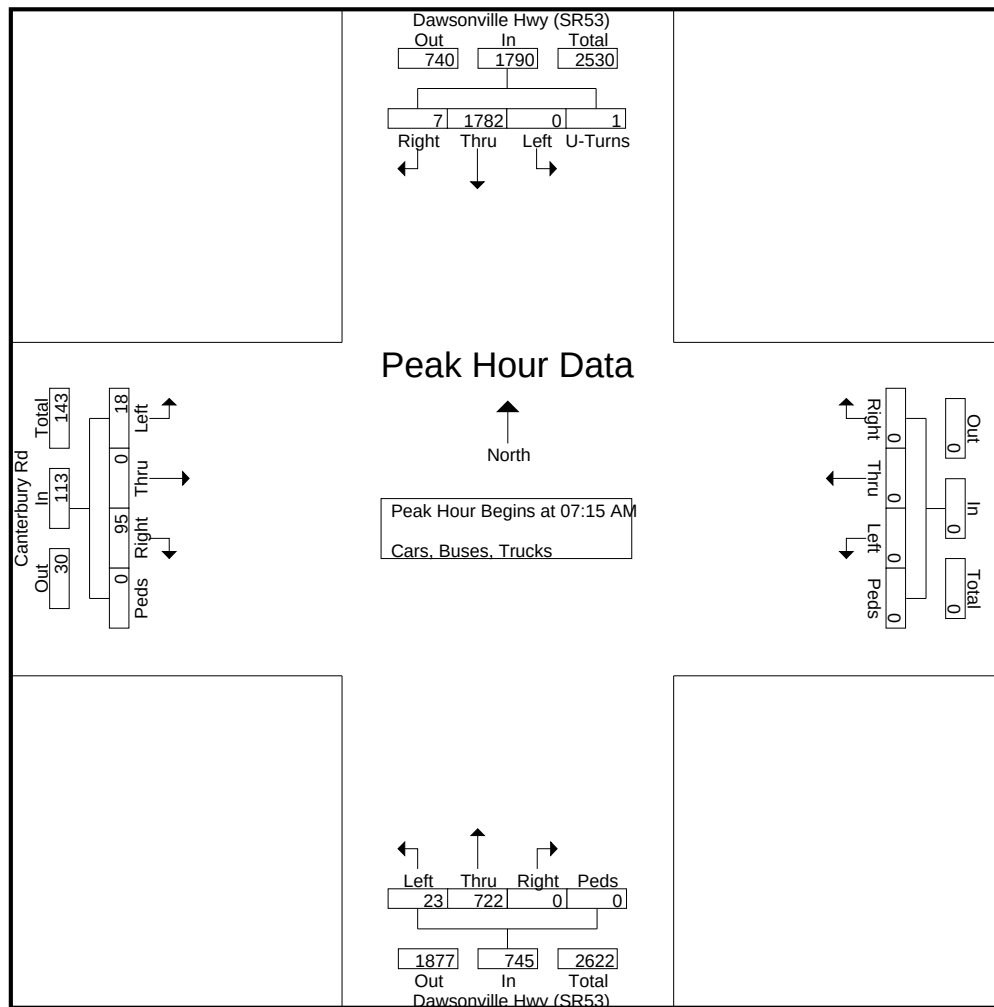
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TMC Data
Dawsonville Hwy (SR53) @ Canterbury Rd
Gainesville, GA
7-9am | 4.30-6.30pm

File Name : 39520004
Site Code : 39520004
Start Date : 11/17/2016
Page No : 2

	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					Canterbury Rd Eastbound					Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	U-Turns	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	7	160	0	0	167	0	456	1	0	457	3	0	29	0	32	0	0	0	0	0	656
07:30 AM	6	168	0	0	174	0	487	4	0	491	5	0	23	0	28	0	0	0	0	0	693
07:45 AM	7	180	0	0	187	0	436	1	1	438	4	0	27	0	31	0	0	0	0	0	656
08:00 AM	3	214	0	0	217	0	403	1	0	404	6	0	16	0	22	0	0	0	0	0	643
Total Volume	23	722	0	0	745	0	1782	7	1	1790	18	0	95	0	113	0	0	0	0	0	2648
% App. Total	3.1	96.9	0	0		0	99.6	0.4	0.1		15.9	0	84.1	0		0	0	0	0		
PHF	.821	.843	.000	.000	.858	.000	.915	.438	.250	.911	.750	.000	.819	.000	.883	.000	.000	.000	.000	.000	.955



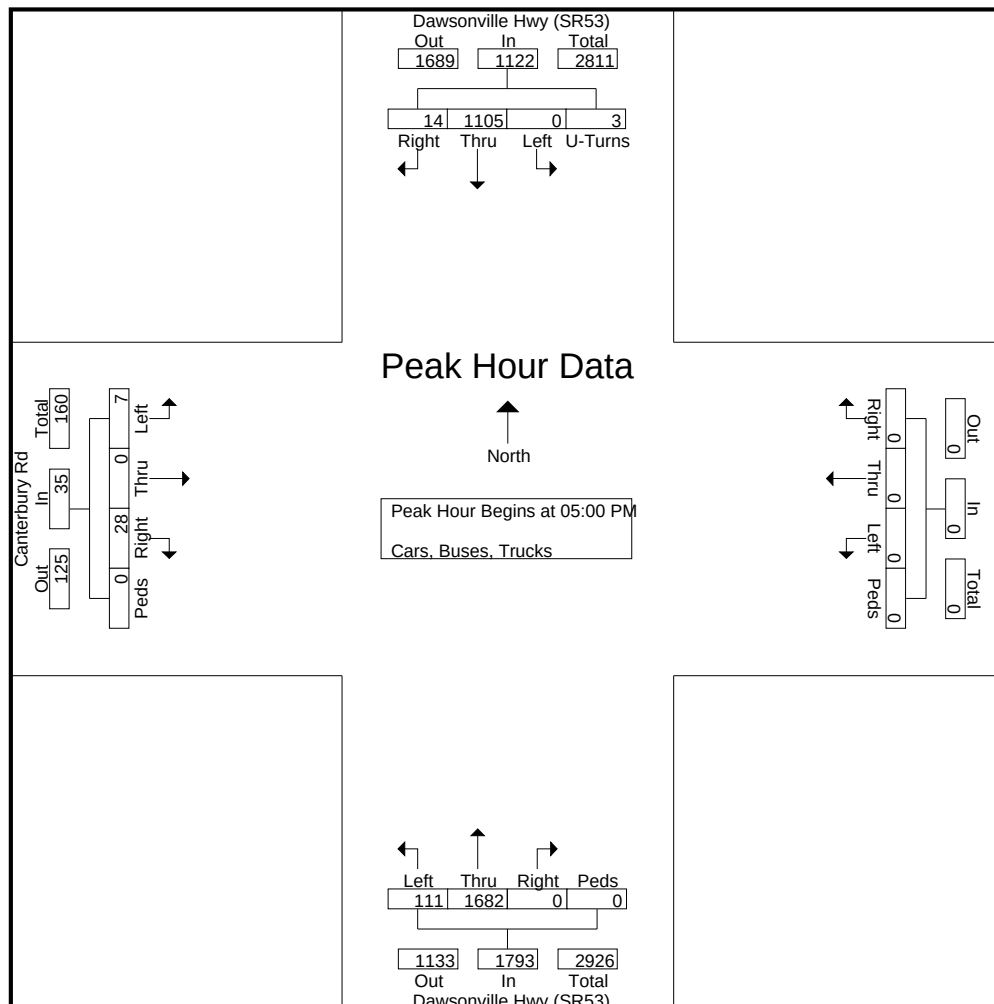
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TMC Data
Dawsonville Hwy (SR53) @ Canterbury Rd
Gainesville, GA
7-9am | 4.30-6.30pm

File Name : 39520004
Site Code : 39520004
Start Date : 11/17/2016
Page No : 3

	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					Canterbury Rd Eastbound					Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	U-Turns	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	21	426	0	0	447	0	271	1	1	273	3	0	8	0	11	0	0	0	0	0	731
05:15 PM	33	432	0	0	465	0	278	3	0	281	2	0	4	0	6	0	0	0	0	0	752
05:30 PM	26	418	0	0	444	0	272	5	0	277	1	0	7	0	8	0	0	0	0	0	729
05:45 PM	31	406	0	0	437	0	284	5	2	291	1	0	9	0	10	0	0	0	0	0	738
Total Volume	111	1682	0	0	1793	0	1105	14	3	1122	7	0	28	0	35	0	0	0	0	0	2950
% App. Total	6.2	93.8	0	0		0	98.5	1.2	0.3		20	0	80	0		0	0	0	0		
PHF	.841	.973	.000	.000	.964	.000	.973	.700	.375	.964	.583	.000	.778	.000	.795	.000	.000	.000	.000	.000	.981



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TMC Data
Dawsonville Hwy (SR53) @ Ahaluna Dr/
Lanier Valley Dr, Gainesville, GA
7-9am I 4.30-6.30pm

File Name : 39520005
Site Code : 39520005
Start Date : 11/17/2016
Page No : 1

Groups Printed- Cars, Buses, Trucks

	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					Lanier Valley Dr Eastbound					Ahaluna Dr Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	8	146	2	0	156	4	335	0	0	339	2	0	18	0	20	10	2	4	0	16	531
07:15 AM	8	158	3	0	169	4	461	0	0	465	4	0	31	0	35	10	1	6	0	17	686
07:30 AM	16	159	5	0	180	7	542	0	0	549	5	1	32	0	38	13	0	5	0	18	785
07:45 AM	17	173	2	0	192	1	506	0	0	507	5	2	29	0	36	5	2	4	0	11	746
Total	49	636	12	0	697	16	1844	0	0	1860	16	3	110	0	129	38	5	19	0	62	2748
08:00 AM	14	211	1	0	226	2	392	0	0	394	5	2	23	0	30	9	0	5	0	14	664
08:15 AM	13	161	4	0	178	5	424	0	0	429	3	0	17	0	20	5	4	3	0	12	639
08:30 AM	13	176	2	0	191	3	348	1	0	352	6	0	17	0	23	3	1	8	0	12	578
08:45 AM	7	175	1	0	183	3	312	1	0	316	5	1	29	0	35	4	1	5	0	10	544
Total	47	723	8	0	778	13	1476	2	0	1491	19	3	86	0	108	21	6	21	0	48	2425
*** BREAK ***																					
04:30 PM	23	377	7	0	407	9	270	1	0	280	9	2	22	0	33	10	3	12	0	25	745
04:45 PM	27	435	6	0	468	4	293	0	0	297	5	0	24	0	29	8	1	16	0	25	819
Total	50	812	13	0	875	13	563	1	0	577	14	2	46	0	62	18	4	28	0	50	1564
05:00 PM	40	423	7	0	470	4	270	1	0	275	8	0	21	0	29	7	0	10	0	17	791
05:15 PM	48	436	10	0	494	8	306	0	0	314	5	0	23	0	28	8	3	14	0	25	861
05:30 PM	39	432	12	0	483	4	316	0	0	320	3	0	25	0	28	14	2	12	0	28	859
05:45 PM	52	446	9	0	507	6	309	2	0	317	5	1	27	0	33	8	2	15	0	25	882
Total	179	1737	38	0	1954	22	1201	3	0	1226	21	1	96	0	118	37	7	51	0	95	3393
06:00 PM	38	392	6	0	436	6	247	2	0	255	2	0	17	0	19	8	1	17	0	26	736
06:15 PM	40	386	8	0	434	9	278	2	0	289	3	0	17	0	20	9	1	9	0	19	762
Grand Total	403	4686	85	0	5174	79	5609	10	0	5698	75	9	372	0	456	131	24	145	0	300	11628
Apprch %	7.8	90.6	1.6	0		1.4	98.4	0.2	0		16.4	2	81.6	0		43.7	8	48.3	0		
Total %	3.5	40.3	0.7	0	44.5	0.7	48.2	0.1	0	49	0.6	0.1	3.2	0	3.9	1.1	0.2	1.2	0	2.6	

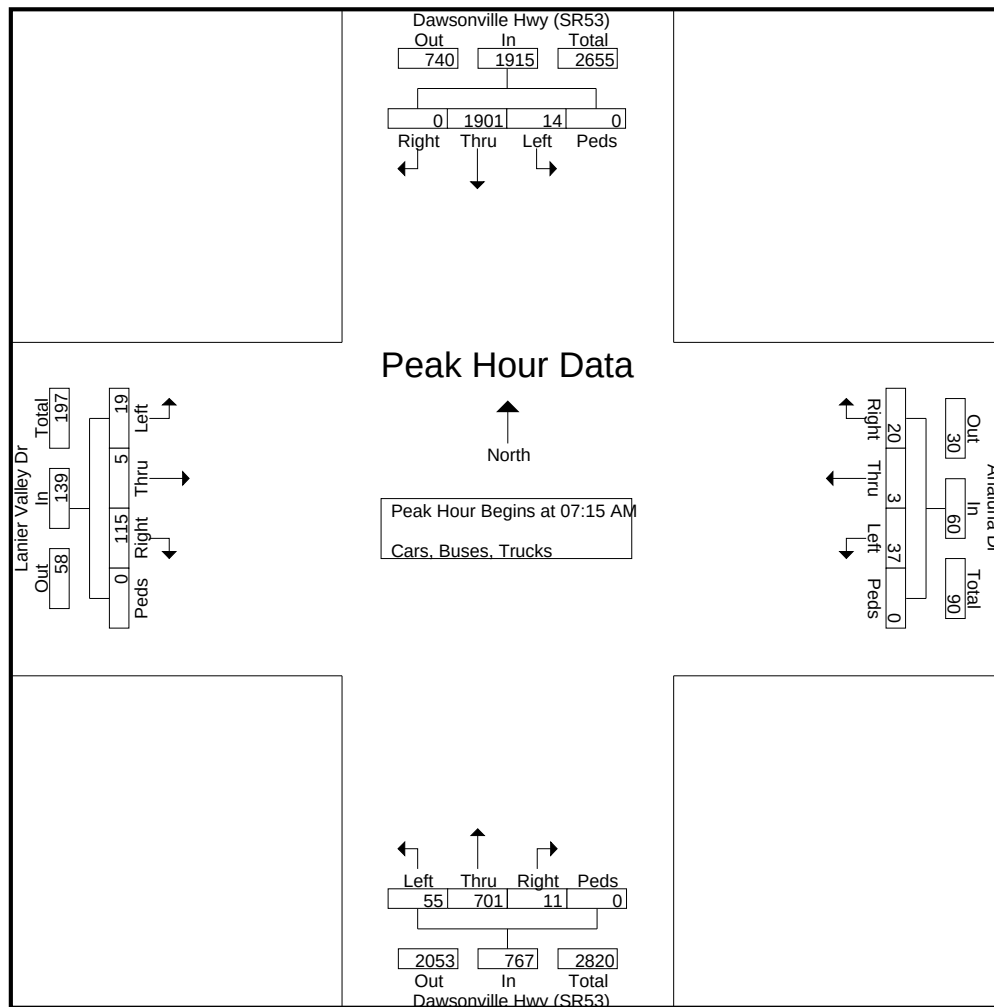
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TMC Data
Dawsonville Hwy (SR53) @ Ahaluna Dr/
Lanier Valley Dr, Gainesville, GA
7-9am | 4.30-6.30pm

File Name : 39520005
Site Code : 39520005
Start Date : 11/17/2016
Page No : 2

	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					Lanier Valley Dr Eastbound					Ahaluna Dr Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	8	158	3	0	169	4	461	0	0	465	4	0	31	0	35	10	1	6	0	17	686
07:30 AM	16	159	5	0	180	7	542	0	0	549	5	1	32	0	38	13	0	5	0	18	785
07:45 AM	17	173	2	0	192	1	506	0	0	507	5	2	29	0	36	5	2	4	0	11	746
08:00 AM	14	211	1	0	226	2	392	0	0	394	5	2	23	0	30	9	0	5	0	14	664
Total Volume	55	701	11	0	767	14	1901	0	0	1915	19	5	115	0	139	37	3	20	0	60	2881
% App. Total	7.2	91.4	1.4	0		0.7	99.3	0	0		13.7	3.6	82.7	0		61.7	5	33.3	0		
PHF	.809	.831	.550	.000	.848	.500	.877	.000	.000	.872	.950	.625	.898	.000	.914	.712	.375	.833	.000	.833	.918



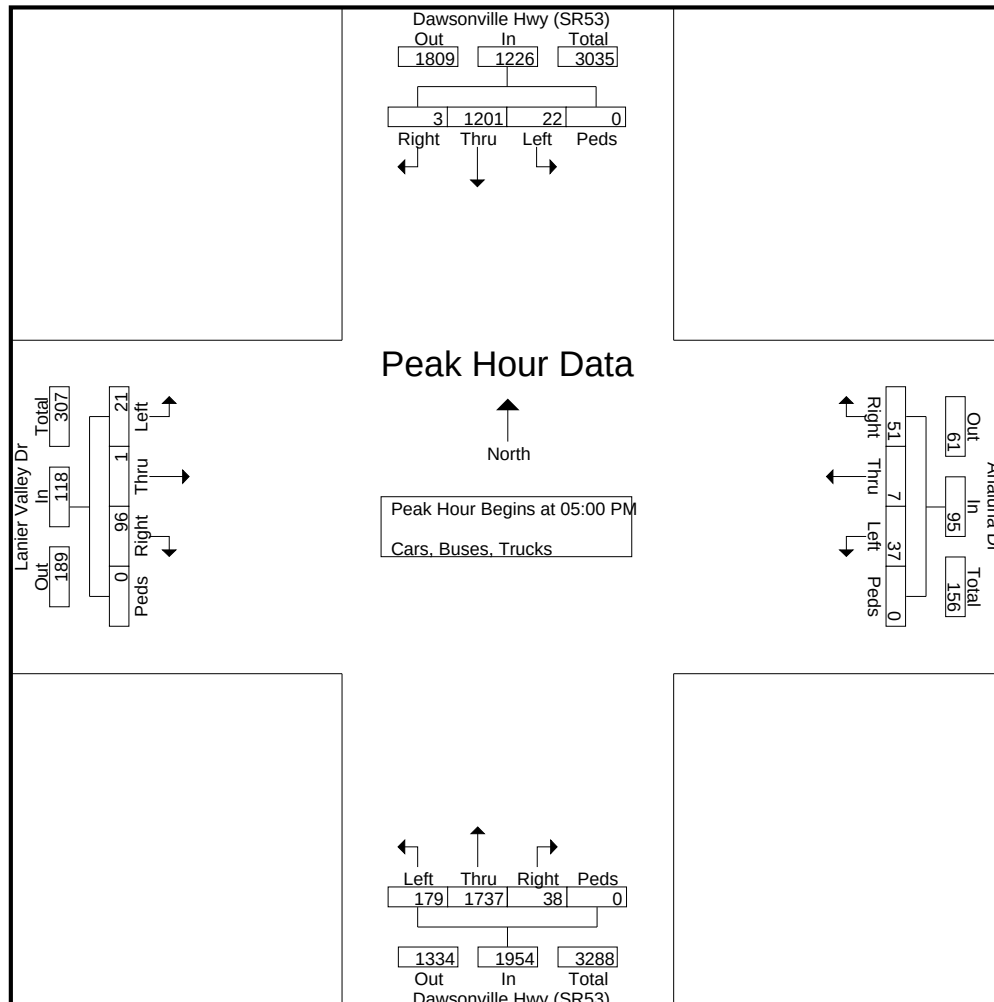
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TMC Data
Dawsonville Hwy (SR53) @ Ahaluna Dr/
Lanier Valley Dr, Gainesville, GA
7-9am | 4.30-6.30pm

File Name : 39520005
Site Code : 39520005
Start Date : 11/17/2016
Page No : 3

	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					Lanier Valley Dr Eastbound					Ahaluna Dr Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	40	423	7	0	470	4	270	1	0	275	8	0	21	0	29	7	0	10	0	17	791
05:15 PM	48	436	10	0	494	8	306	0	0	314	5	0	23	0	28	8	3	14	0	25	861
05:30 PM	39	432	12	0	483	4	316	0	0	320	3	0	25	0	28	14	2	12	0	28	859
05:45 PM	52	446	9	0	507	6	309	2	0	317	5	1	27	0	33	8	2	15	0	25	882
Total Volume	179	1737	38	0	1954	22	1201	3	0	1226	21	1	96	0	118	37	7	51	0	95	3393
% App. Total	9.2	88.9	1.9	0		1.8	98	0.2	0		17.8	0.8	81.4	0		38.9	7.4	53.7	0		
PHF	.861	.974	.792	.000	.964	.688	.950	.375	.000	.958	.656	.250	.889	.000	.894	.661	.583	.850	.000	.848	.962



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TMC Data
Dawsonville Hwy (SR53) @ North Lake
Square Shopp Ctr Drwy, Gainesville, GA
7-9am I 4-6pm

File Name : 40160001
Site Code : 40160001
Start Date : 3/22/2017
Page No : 1

Groups Printed- Cars, Buses, Trucks

	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					Olive Garden/others Drwy Eastbound					North Lake Square Shopp Ctr Drwy Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	1	155	4	0	160	1	367	0	0	368	1	0	1	0	2	0	0	0	0	0	530
07:15 AM	1	163	1	0	165	0	489	0	0	489	1	0	1	0	2	0	0	0	0	0	656
07:30 AM	4	174	1	0	179	1	552	0	0	553	1	0	2	0	3	0	0	0	0	0	735
07:45 AM	2	189	3	0	194	1	536	3	0	540	0	0	1	0	1	1	0	0	0	1	736
Total	8	681	9	0	698	3	1944	3	0	1950	3	0	5	0	8	1	0	0	0	1	2657
08:00 AM	4	214	4	0	222	3	412	1	0	416	0	0	2	0	2	1	0	0	0	1	641
08:15 AM	2	206	2	0	210	1	429	3	0	433	1	0	1	0	2	0	0	0	0	0	645
08:30 AM	0	197	7	0	204	1	358	0	0	359	0	0	0	0	0	3	0	1	0	4	567
08:45 AM	3	185	8	0	196	1	337	1	0	339	0	0	3	0	3	3	0	2	0	5	543
Total	9	802	21	0	832	6	1536	5	0	1547	1	0	6	0	7	7	0	3	0	10	2396
*** BREAK ***																					
04:00 PM	12	376	29	0	417	7	274	2	0	283	1	1	12	0	14	28	0	9	0	37	751
04:15 PM	11	382	30	0	423	11	277	4	0	292	2	0	15	0	17	48	0	8	0	56	788
04:30 PM	19	396	38	0	453	8	285	5	0	298	2	2	6	0	10	30	0	11	0	41	802
04:45 PM	22	435	32	0	489	6	287	5	0	298	7	0	16	0	23	32	2	10	0	44	854
Total	64	1589	129	0	1782	32	1123	16	0	1171	12	3	49	0	64	138	2	38	0	178	3195
05:00 PM	28	433	39	0	500	1	287	5	0	293	4	1	14	0	19	25	1	5	0	31	843
05:15 PM	18	439	24	0	481	6	296	7	0	309	3	2	12	0	17	31	2	11	0	44	851
05:30 PM	16	447	37	0	500	4	312	6	0	322	1	0	19	0	20	35	3	14	0	52	894
05:45 PM	25	444	38	0	507	8	304	9	0	321	5	0	15	0	20	27	1	12	0	40	888
Total	87	1763	138	0	1988	19	1199	27	0	1245	13	3	60	0	76	118	7	42	0	167	3476
Grand Total	168	4835	297	0	5300	60	5802	51	0	5913	29	6	120	0	155	264	9	83	0	356	11724
Apprch %	3.2	91.2	5.6	0		1	98.1	0.9	0		18.7	3.9	77.4	0		74.2	2.5	23.3	0		
Total %	1.4	41.2	2.5	0	45.2	0.5	49.5	0.4	0	50.4	0.2	0.1	1	0	1.3	2.3	0.1	0.7	0	3	

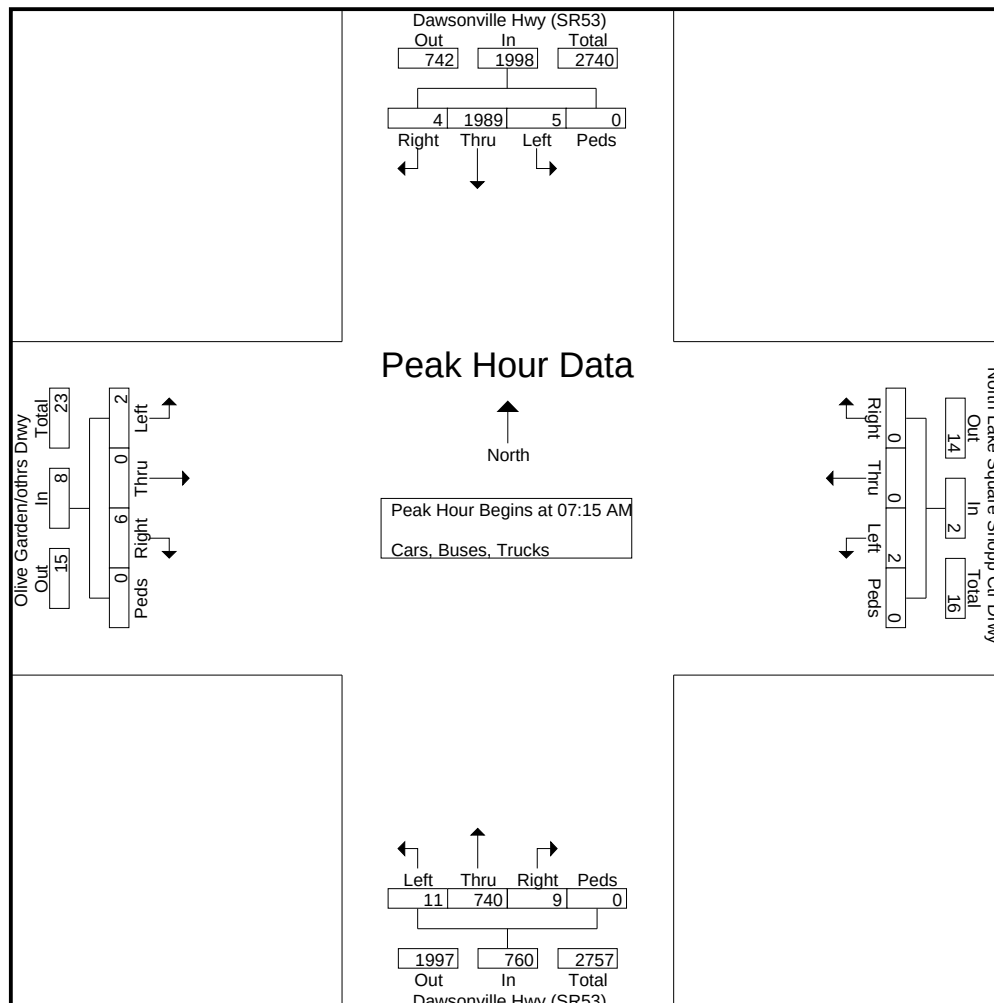
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TMC Data
Dawsonville Hwy (SR53) @ North Lake
Square Shopp Ctr Drwy, Gainesville, GA
7-9am I 4-6pm

File Name : 40160001
Site Code : 40160001
Start Date : 3/22/2017
Page No : 2

	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					Olive Garden/others Drwy Eastbound					North Lake Square Shopp Ctr Drwy Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	1	163	1	0	165	0	489	0	0	489	1	0	1	0	2	0	0	0	0	0	656
07:30 AM	4	174	1	0	179	1	552	0	0	553	1	0	2	0	3	0	0	0	0	0	735
07:45 AM	2	189	3	0	194	1	536	3	0	540	0	0	1	0	1	1	0	0	0	1	736
08:00 AM	4	214	4	0	222	3	412	1	0	416	0	0	2	0	2	1	0	0	0	1	641
Total Volume	11	740	9	0	760	5	1989	4	0	1998	2	0	6	0	8	2	0	0	0	2	2768
% App. Total	1.4	97.4	1.2	0		0.3	99.5	0.2	0		25	0	75	0		100	0	0	0		
PHF	.688	.864	.563	.000	.856	.417	.901	.333	.000	.903	.500	.000	.750	.000	.667	.500	.000	.000	.000	.500	.940



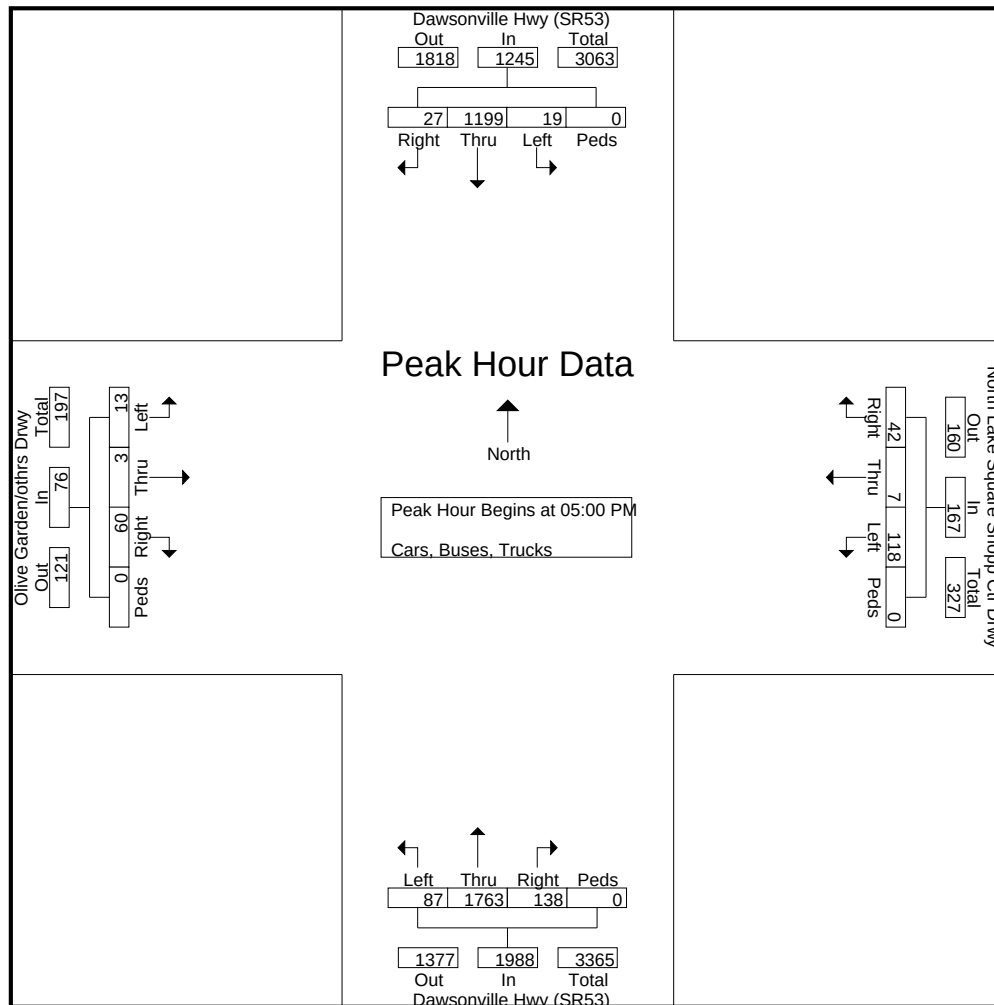
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TMC Data
Dawsonville Hwy (SR53) @ North Lake
Square Shopp Ctr Drwy, Gainesville, GA
7-9am I 4-6pm

File Name : 40160001
Site Code : 40160001
Start Date : 3/22/2017
Page No : 3

	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					Olive Garden/others Drwy Eastbound					North Lake Square Shopp Ctr Drwy Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	28	433	39	0	500	1	287	5	0	293	4	1	14	0	19	25	1	5	0	31	843
05:15 PM	18	439	24	0	481	6	296	7	0	309	3	2	12	0	17	31	2	11	0	44	851
05:30 PM	16	447	37	0	500	4	312	6	0	322	1	0	19	0	20	35	3	14	0	52	894
05:45 PM	25	444	38	0	507	8	304	9	0	321	5	0	15	0	20	27	1	12	0	40	888
Total Volume	87	1763	138	0	1988	19	1199	27	0	1245	13	3	60	0	76	118	7	42	0	167	3476
% App. Total	4.4	88.7	6.9	0		1.5	96.3	2.2	0		17.1	3.9	78.9	0		70.7	4.2	25.1	0		
PHF	.777	.986	.885	.000	.980	.594	.961	.750	.000	.967	.650	.375	.789	.000	.950	.843	.583	.750	.000	.803	.972



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TMC Data
Dawsonville Hwy (SR53) @ Beechwood Blvd
Gainesville, GA
7-9am I 4.30-6.30pm

File Name : 39520006
Site Code : 39520006
Start Date : 11/17/2016
Page No : 1

Groups Printed- Cars, Buses, Trucks

	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					Beechwood Blvd Eastbound					Commercial Drwy (Closed) Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	2	167	0	0	169	0	367	2	0	369	1	0	10	0	11	0	0	0	0	0	549
07:15 AM	6	172	0	0	178	0	492	1	0	493	1	0	9	0	10	0	0	0	0	0	681
07:30 AM	8	187	0	0	195	0	564	0	0	564	0	0	12	0	12	0	0	0	0	0	771
07:45 AM	5	203	0	0	208	0	535	1	0	536	3	0	11	0	14	0	0	0	0	0	758
Total	21	729	0	0	750	0	1958	4	0	1962	5	0	42	0	47	0	0	0	0	0	2759
08:00 AM	8	225	0	0	233	0	415	0	0	415	1	0	9	0	10	0	0	0	0	0	658
08:15 AM	5	203	0	0	208	0	441	0	0	441	0	0	3	0	3	0	0	0	0	0	652
08:30 AM	3	198	0	0	201	0	365	2	0	367	0	0	11	0	11	0	0	0	0	0	579
08:45 AM	3	192	0	0	195	0	341	1	0	342	1	0	3	0	4	0	0	0	0	0	541
Total	19	818	0	0	837	0	1562	3	0	1565	2	0	26	0	28	0	0	0	0	0	2430
*** BREAK ***																					
04:30 PM	16	443	0	0	459	0	312	1	0	313	0	0	14	0	14	0	0	0	0	0	786
04:45 PM	15	497	0	0	512	0	327	0	0	327	0	0	9	0	9	0	0	0	0	0	848
Total	31	940	0	0	971	0	639	1	0	640	0	0	23	0	23	0	0	0	0	0	1634
05:00 PM	18	488	0	0	506	0	347	0	0	347	0	0	5	0	5	0	0	0	0	0	858
05:15 PM	20	506	0	0	526	0	354	3	0	357	0	0	17	0	17	0	0	0	0	0	900
05:30 PM	31	494	0	0	525	0	346	0	0	346	0	0	10	0	10	0	0	0	0	0	881
05:45 PM	17	510	0	0	527	0	341	6	0	347	1	0	15	0	16	0	0	0	0	0	890
Total	86	1998	0	0	2084	0	1388	9	0	1397	1	0	47	0	48	0	0	0	0	0	3529
06:00 PM	23	484	0	0	507	0	338	1	0	339	1	0	9	0	10	0	0	0	0	0	856
06:15 PM	19	468	0	0	487	0	323	2	0	325	1	0	14	0	15	0	0	0	0	0	827
Grand Total	199	5437	0	0	5636	0	6208	20	0	6228	10	0	161	0	171	0	0	0	0	0	12035
Apprch %	3.5	96.5	0	0		0	99.7	0.3	0		5.8	0	94.2	0		0	0	0	0		
Total %	1.7	45.2	0	0	46.8	0	51.6	0.2	0	51.7	0.1	0	1.3	0	1.4	0	0	0	0	0	

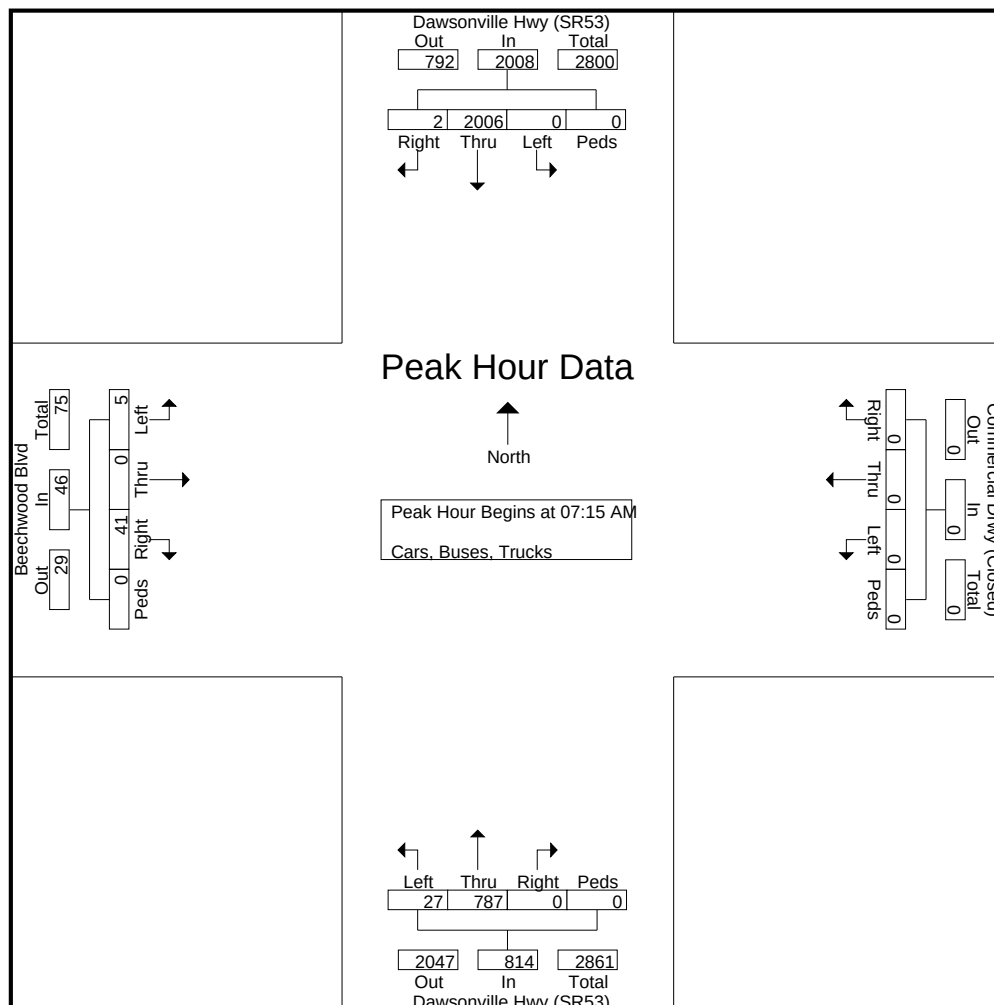
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TMC Data
Dawsonville Hwy (SR53) @ Beechwood Blvd
Gainesville, GA
7-9am | 4.30-6.30pm

File Name : 39520006
Site Code : 39520006
Start Date : 11/17/2016
Page No : 2

	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					Beechwood Blvd Eastbound					Commercial Drwy (Closed) Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	6	172	0	0	178	0	492	1	0	493	1	0	9	0	10	0	0	0	0	0	681
07:30 AM	8	187	0	0	195	0	564	0	0	564	0	0	12	0	12	0	0	0	0	0	771
07:45 AM	5	203	0	0	208	0	535	1	0	536	3	0	11	0	14	0	0	0	0	0	758
08:00 AM	8	225	0	0	233	0	415	0	0	415	1	0	9	0	10	0	0	0	0	0	658
Total Volume	27	787	0	0	814	0	2006	2	0	2008	5	0	41	0	46	0	0	0	0	0	2868
% App. Total	3.3	96.7	0	0		0	99.9	0.1	0		10.9	0	89.1	0		0	0	0	0		
PHF	.844	.874	.000	.000	.873	.000	.889	.500	.000	.890	.417	.000	.854	.000	.821	.000	.000	.000	.000	.000	.930



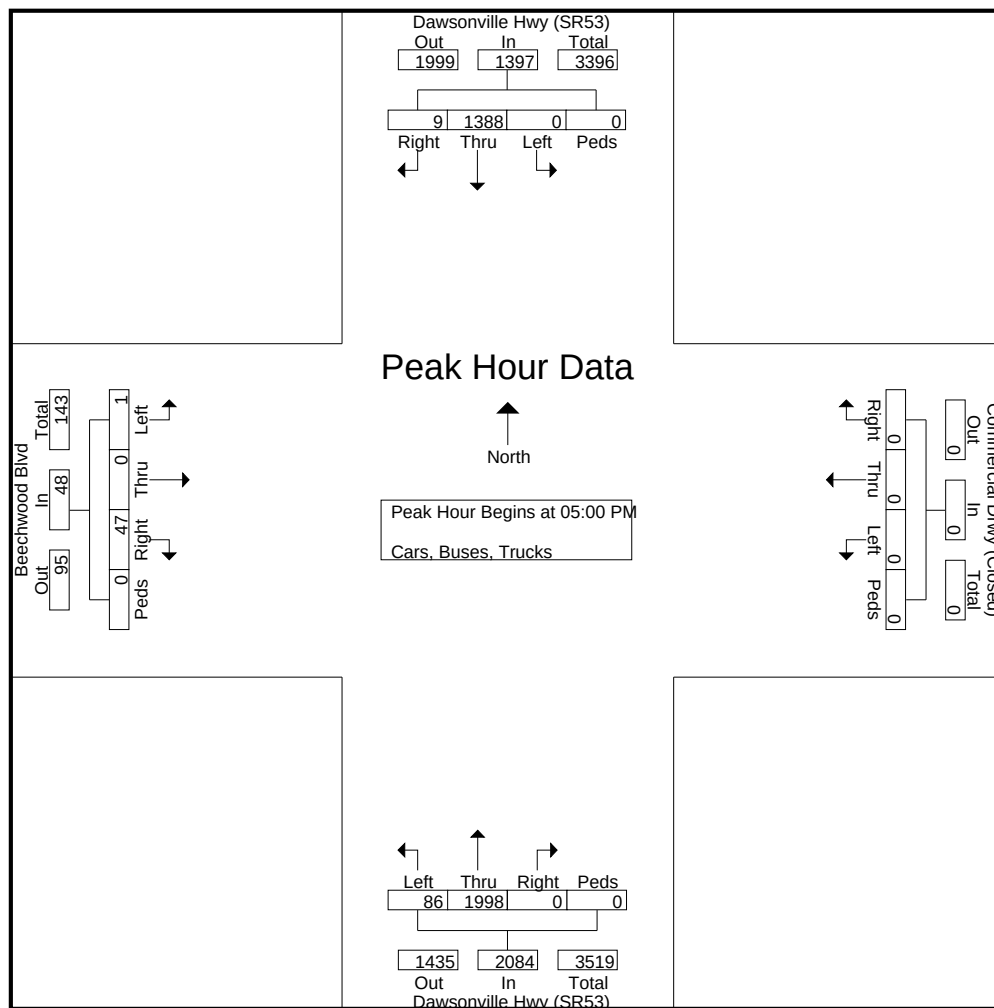
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TMC Data
Dawsonville Hwy (SR53) @ Beechwood Blvd
Gainesville, GA
7-9am | 4.30-6.30pm

File Name : 39520006
Site Code : 39520006
Start Date : 11/17/2016
Page No : 3

	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					Beechwood Blvd Eastbound					Commercial Drwy (Closed) Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	18	488	0	0	506	0	347	0	0	347	0	0	5	0	5	0	0	0	0	0	858
05:15 PM	20	506	0	0	526	0	354	3	0	357	0	0	17	0	17	0	0	0	0	0	900
05:30 PM	31	494	0	0	525	0	346	0	0	346	0	0	10	0	10	0	0	0	0	0	881
05:45 PM	17	510	0	0	527	0	341	6	0	347	1	0	15	0	16	0	0	0	0	0	890
Total Volume	86	1998	0	0	2084	0	1388	9	0	1397	1	0	47	0	48	0	0	0	0	0	3529
% App. Total	4.1	95.9	0	0		0	99.4	0.6	0		2.1	0	97.9	0		0	0	0	0		
PHF	.694	.979	.000	.000	.989	.000	.980	.375	.000	.978	.250	.000	.691	.000	.706	.000	.000	.000	.000	.000	.980



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TMC Data
Dawsonville Hwy (SR53) @ McEver Rd
Gainesville, GA
7-9am I 4.30-6.30pm

File Name : 39520007
Site Code : 39520007
Start Date : 11/17/2016
Page No : 1

Groups Printed- Cars, Buses, Trucks

	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					McEver Rd Eastbound					Home Depot Drwy Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	58	98	3	0	159	2	206	164	0	372	67	4	48	0	119	4	2	4	0	10	660
07:15 AM	67	104	7	0	178	5	276	187	0	468	93	4	88	0	185	8	1	2	0	11	842
07:30 AM	72	110	15	0	197	6	317	236	0	559	99	7	82	0	188	7	4	3	0	14	958
07:45 AM	78	115	18	0	211	10	325	226	0	561	96	6	93	0	195	15	4	3	0	22	989
Total	275	427	43	0	745	23	1124	813	0	1960	355	21	311	0	687	34	11	12	0	57	3449
08:00 AM	65	136	15	0	216	7	252	179	0	438	102	11	79	0	192	12	10	10	0	32	878
08:15 AM	66	121	20	0	207	14	264	153	0	431	83	14	67	0	164	14	6	10	0	30	832
08:30 AM	51	118	21	0	190	20	233	146	0	399	85	16	72	0	173	20	8	6	0	34	796
08:45 AM	57	106	29	0	192	15	221	108	0	344	102	14	81	0	197	18	5	10	0	33	766
Total	239	481	85	0	805	56	970	586	0	1612	372	55	299	0	726	64	29	36	0	129	3272
*** BREAK ***																					
04:30 PM	94	286	16	0	396	11	242	90	0	343	178	35	78	0	291	30	33	19	0	82	1112
04:45 PM	109	312	12	0	433	9	213	112	0	334	215	37	93	0	345	31	27	21	0	79	1191
Total	203	598	28	0	829	20	455	202	0	677	393	72	171	0	636	61	60	40	0	161	2303
05:00 PM	108	352	17	0	477	15	257	115	0	387	178	42	122	0	342	27	19	17	0	63	1269
05:15 PM	101	335	11	0	447	12	259	137	0	408	224	63	74	0	361	10	33	19	0	62	1278
05:30 PM	114	327	10	0	451	17	216	110	0	343	227	59	95	0	381	22	21	16	0	59	1234
05:45 PM	110	348	8	0	466	18	297	119	0	434	216	49	95	0	360	28	18	29	0	75	1335
Total	433	1362	46	0	1841	62	1029	481	0	1572	845	213	386	0	1444	87	91	81	0	259	5116
06:00 PM	106	292	15	0	413	22	236	102	0	360	230	24	88	0	342	32	18	28	0	78	1193
06:15 PM	98	290	12	0	400	11	238	86	0	335	191	16	92	0	299	29	14	12	0	55	1089
Grand Total	1354	3450	229	0	5033	194	4052	2270	0	6516	2386	401	1347	0	4134	307	223	209	0	739	16422
Apprch %	26.9	68.5	4.5	0		3	62.2	34.8	0		57.7	9.7	32.6	0		41.5	30.2	28.3	0		
Total %	8.2	21	1.4	0	30.6	1.2	24.7	13.8	0	39.7	14.5	2.4	8.2	0	25.2	1.9	1.4	1.3	0	4.5	

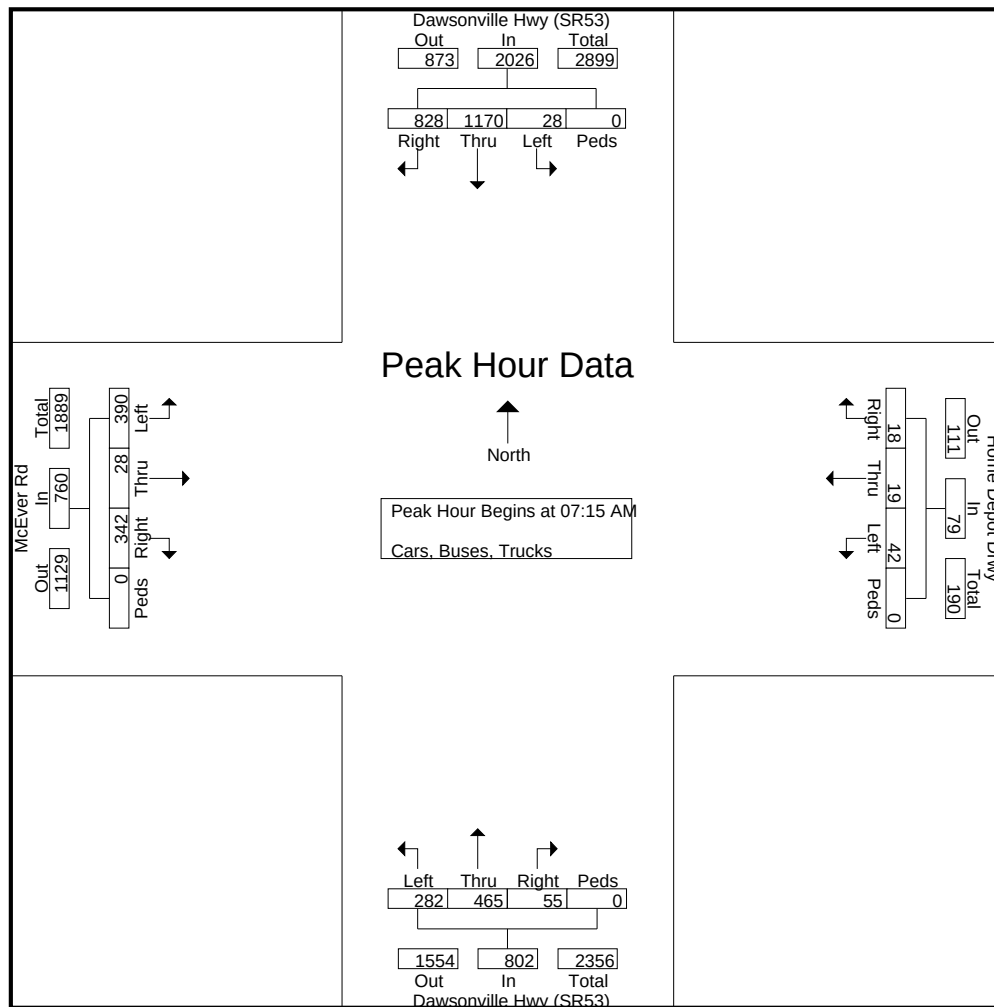
Reliable Traffic Data Services, LLC

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TMC Data
Dawsonville Hwy (SR53) @ McEver Rd
Gainesville, GA
7-9am | 4.30-6.30pm

File Name : 39520007
Site Code : 39520007
Start Date : 11/17/2016
Page No : 2

	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					McEver Rd Eastbound					Home Depot Drwy Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	67	104	7	0	178	5	276	187	0	468	93	4	88	0	185	8	1	2	0	11	842
07:30 AM	72	110	15	0	197	6	317	236	0	559	99	7	82	0	188	7	4	3	0	14	958
07:45 AM	78	115	18	0	211	10	325	226	0	561	96	6	93	0	195	15	4	3	0	22	989
08:00 AM	65	136	15	0	216	7	252	179	0	438	102	11	79	0	192	12	10	10	0	32	878
Total Volume	282	465	55	0	802	28	1170	828	0	2026	390	28	342	0	760	42	19	18	0	79	3667
% App. Total	35.2	58	6.9	0		1.4	57.7	40.9	0		51.3	3.7	45	0		53.2	24.1	22.8	0		
PHF	.904	.855	.764	.000	.928	.700	.900	.877	.000	.903	.956	.636	.919	.000	.974	.700	.475	.450	.000	.617	.927



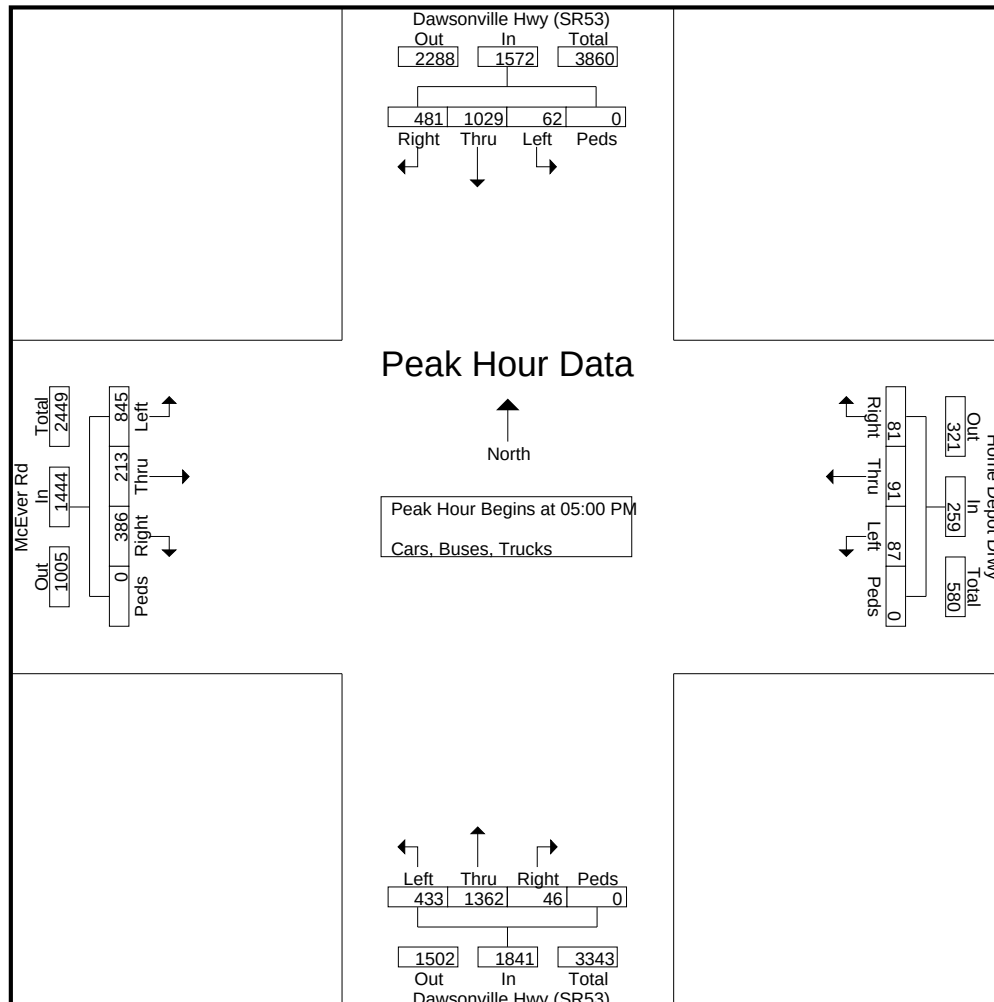
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TMC Data
Dawsonville Hwy (SR53) @ McEver Rd
Gainesville, GA
7-9am | 4.30-6.30pm

File Name : 39520007
Site Code : 39520007
Start Date : 11/17/2016
Page No : 3

	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					McEver Rd Eastbound					Home Depot Drwy Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	108	352	17	0	477	15	257	115	0	387	178	42	122	0	342	27	19	17	0	63	1269
05:15 PM	101	335	11	0	447	12	259	137	0	408	224	63	74	0	361	10	33	19	0	62	1278
05:30 PM	114	327	10	0	451	17	216	110	0	343	227	59	95	0	381	22	21	16	0	59	1234
05:45 PM	110	348	8	0	466	18	297	119	0	434	216	49	95	0	360	28	18	29	0	75	1335
Total Volume	433	1362	46	0	1841	62	1029	481	0	1572	845	213	386	0	1444	87	91	81	0	259	5116
% App. Total	23.5	74	2.5	0		3.9	65.5	30.6	0		58.5	14.8	26.7	0		33.6	35.1	31.3	0		
PHF	.950	.967	.676	.000	.965	.861	.866	.878	.000	.906	.931	.845	.791	.000	.948	.777	.689	.698	.000	.863	.958



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TMC Data
Dawsonville Hwy (SR53) @ Green Hill Cir
Gainesville, GA
7-9am I 4.30-6.30pm

File Name : 39520008
Site Code : 39520008
Start Date : 11/17/2016
Page No : 1

Groups Printed- Cars, Buses, Trucks

	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					Green Hill Circle Eastbound					Commercial Drwy Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	13	123	0	0	136	1	236	7	0	244	10	0	22	0	32	1	0	0	0	1	413
07:15 AM	33	134	2	0	169	3	372	12	0	387	14	1	25	0	40	2	0	1	0	3	599
07:30 AM	28	167	1	0	196	2	387	10	0	399	17	0	34	0	51	2	0	2	0	4	650
07:45 AM	39	174	1	0	214	2	379	14	0	395	21	1	36	0	58	2	1	0	0	3	670
Total	113	598	4	0	715	8	1374	43	0	1425	62	2	117	0	181	7	1	3	0	11	2332
08:00 AM	33	189	5	0	227	4	320	11	0	335	16	0	39	0	55	2	0	2	0	4	621
08:15 AM	35	224	3	0	262	4	318	17	0	339	13	0	32	0	45	0	0	0	0	0	646
08:30 AM	34	197	7	0	238	3	322	15	0	340	10	1	28	0	39	1	4	0	0	5	622
08:45 AM	29	205	7	0	241	5	324	10	0	339	15	2	30	0	47	3	2	1	0	6	633
Total	131	815	22	0	968	16	1284	53	0	1353	54	3	129	0	186	6	6	3	0	15	2522
*** BREAK ***																					
04:30 PM	51	374	12	0	437	11	352	11	0	374	23	1	30	0	54	20	0	9	0	29	894
04:45 PM	57	408	18	0	483	8	361	10	0	379	30	0	28	0	58	17	5	9	0	31	951
Total	108	782	30	0	920	19	713	21	0	753	53	1	58	0	112	37	5	18	0	60	1845
05:00 PM	60	436	20	0	516	7	348	13	0	368	21	1	45	0	67	16	8	4	0	28	979
05:15 PM	62	453	19	0	534	12	362	17	0	391	39	2	36	0	77	19	5	14	0	38	1040
05:30 PM	57	442	12	0	511	12	337	11	0	360	36	6	33	0	75	16	5	9	0	30	976
05:45 PM	69	418	19	0	506	9	345	12	0	366	36	0	24	0	60	9	2	11	0	22	954
Total	248	1749	70	0	2067	40	1392	53	0	1485	132	9	138	0	279	60	20	38	0	118	3949
06:00 PM	62	389	22	0	473	4	369	17	0	390	40	1	25	0	66	9	6	16	0	31	960
06:15 PM	78	374	7	0	459	11	361	22	0	394	29	1	19	0	49	16	6	17	0	39	941
Grand Total	740	4707	155	0	5602	98	5493	209	0	5800	370	17	486	0	873	135	44	95	0	274	12549
Apprch %	13.2	84	2.8	0		1.7	94.7	3.6	0		42.4	1.9	55.7	0		49.3	16.1	34.7	0		
Total %	5.9	37.5	1.2	0	44.6	0.8	43.8	1.7	0	46.2	2.9	0.1	3.9	0	7	1.1	0.4	0.8	0	2.2	

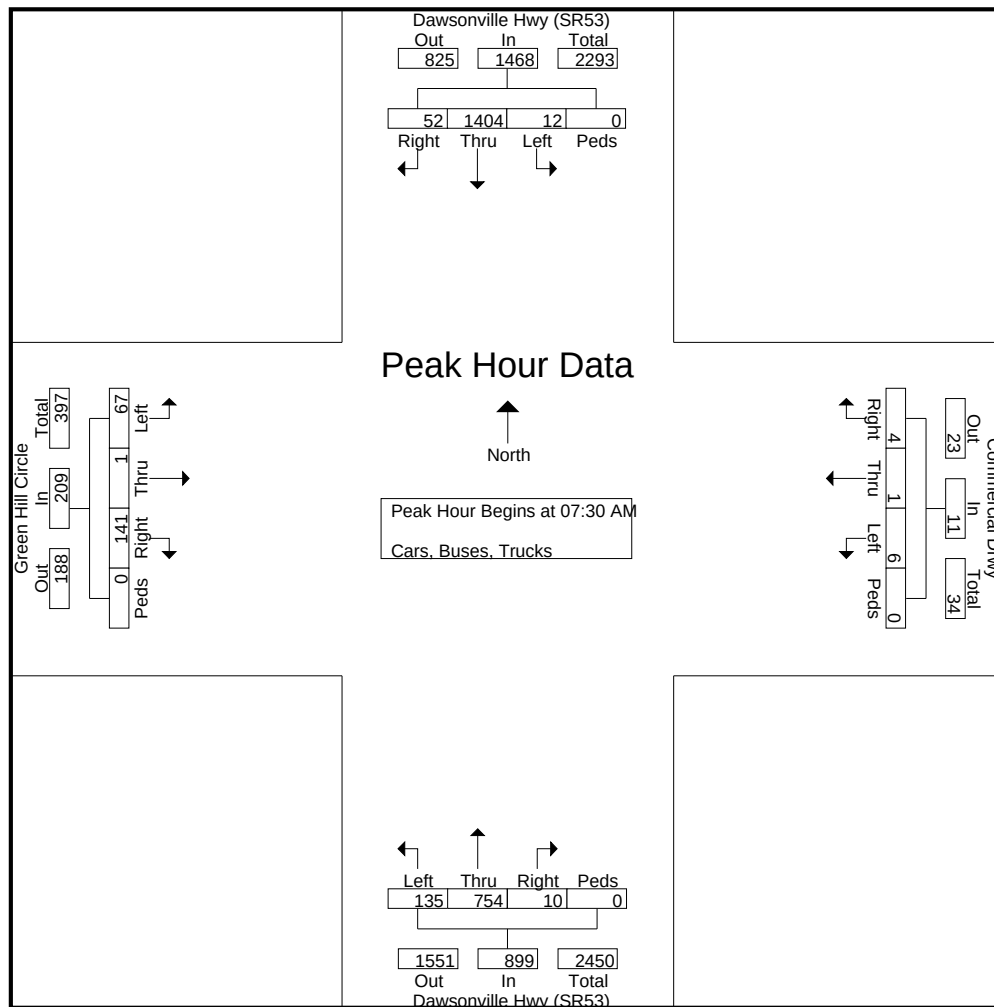
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TMC Data
Dawsonville Hwy (SR53) @ Green Hill Cir
Gainesville, GA
7-9am | 4.30-6.30pm

File Name : 39520008
Site Code : 39520008
Start Date : 11/17/2016
Page No : 2

	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					Green Hill Circle Eastbound					Commercial Drwy Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	28	167	1	0	196	2	387	10	0	399	17	0	34	0	51	2	0	2	0	4	650
07:45 AM	39	174	1	0	214	2	379	14	0	395	21	1	36	0	58	2	1	0	0	3	670
08:00 AM	33	189	5	0	227	4	320	11	0	335	16	0	39	0	55	2	0	2	0	4	621
08:15 AM	35	224	3	0	262	4	318	17	0	339	13	0	32	0	45	0	0	0	0	0	646
Total Volume	135	754	10	0	899	12	1404	52	0	1468	67	1	141	0	209	6	1	4	0	11	2587
% App. Total	15	83.9	1.1	0		0.8	95.6	3.5	0		32.1	0.5	67.5	0		54.5	9.1	36.4	0		
PHF	.865	.842	.500	.000	.858	.750	.907	.765	.000	.920	.798	.250	.904	.000	.901	.750	.250	.500	.000	.688	.965



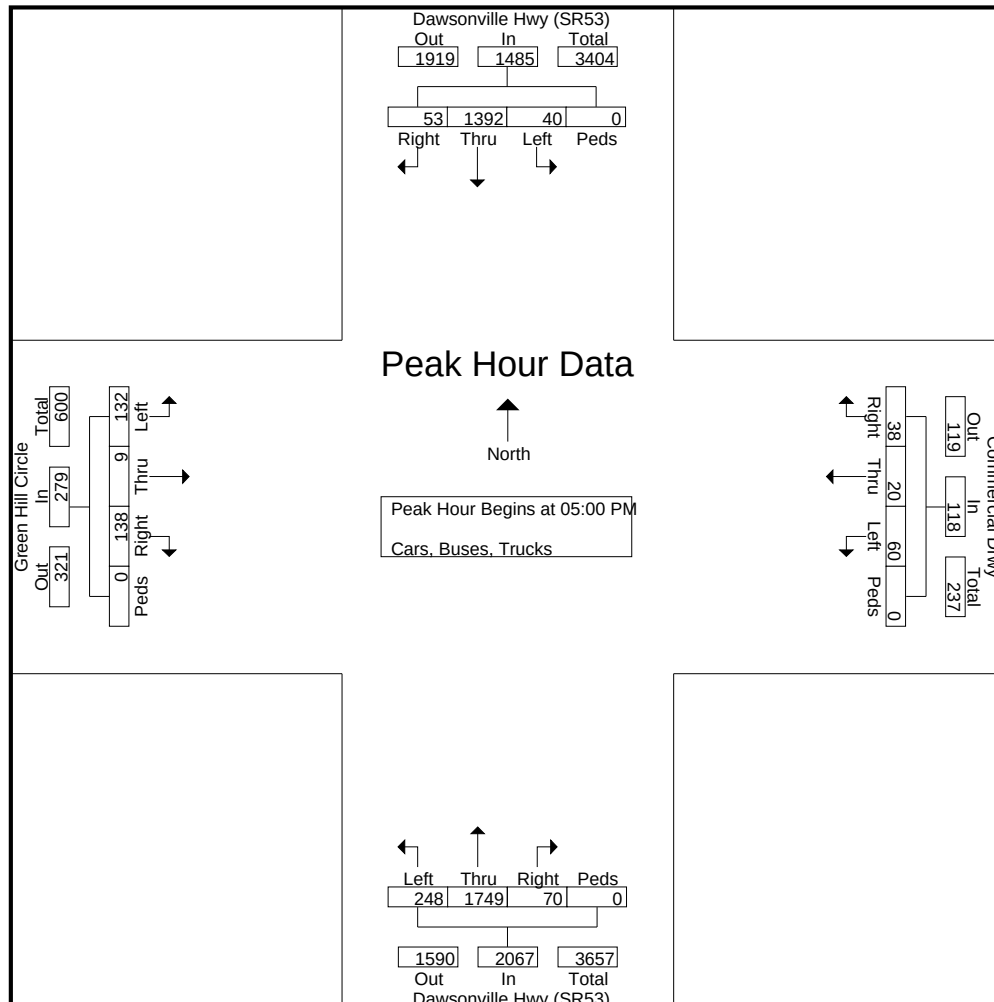
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TMC Data
Dawsonville Hwy (SR53) @ Green Hill Cir
Gainesville, GA
7-9am | 4.30-6.30pm

File Name : 39520008
Site Code : 39520008
Start Date : 11/17/2016
Page No : 3

	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					Green Hill Circle Eastbound					Commercial Drwy Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	60	436	20	0	516	7	348	13	0	368	21	1	45	0	67	16	8	4	0	28	979
05:15 PM	62	453	19	0	534	12	362	17	0	391	39	2	36	0	77	19	5	14	0	38	1040
05:30 PM	57	442	12	0	511	12	337	11	0	360	36	6	33	0	75	16	5	9	0	30	976
05:45 PM	69	418	19	0	506	9	345	12	0	366	36	0	24	0	60	9	2	11	0	22	954
Total Volume	248	1749	70	0	2067	40	1392	53	0	1485	132	9	138	0	279	60	20	38	0	118	3949
% App. Total	12	84.6	3.4	0		2.7	93.7	3.6	0		47.3	3.2	49.5	0		50.8	16.9	32.2	0		
PHF	.899	.965	.875	.000	.968	.833	.961	.779	.000	.949	.846	.375	.767	.000	.906	.789	.625	.679	.000	.776	.949



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TMC Data
Dawsonville Hwy (SR53) @
Shallowford Rd, Gainesville, GA
7-9am | 4.30-6.30pm

File Name : 39520009
Site Code : 39520009
Start Date : 11/17/2016
Page No : 1

Groups Printed- Cars, Buses, Trucks

	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					Shallowford Rd Eastbound					Commercial Drwy Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	1	123	1	0	125	3	226	58	0	287	15	0	1	0	16	1	0	0	0	1	429
07:15 AM	4	136	2	0	142	3	254	74	0	331	18	0	2	0	20	0	0	0	0	0	493
07:30 AM	3	146	1	0	150	0	334	82	0	416	28	0	4	0	32	0	1	2	0	3	601
07:45 AM	3	178	6	0	187	0	342	85	0	427	35	0	2	0	37	0	0	0	0	0	651
Total	11	583	10	0	604	6	1156	299	0	1461	96	0	9	0	105	1	1	2	0	4	2174
08:00 AM	3	188	3	0	194	0	307	87	0	394	34	1	0	0	35	0	1	1	0	2	625
08:15 AM	1	226	3	0	230	1	266	84	0	351	41	1	2	0	44	2	2	0	0	4	629
08:30 AM	7	186	8	0	201	0	268	82	0	350	45	0	3	0	48	0	1	0	0	1	600
08:45 AM	3	190	7	0	200	0	282	72	0	354	44	2	5	0	51	0	1	1	0	2	607
Total	14	790	21	0	825	1	1123	325	0	1449	164	4	10	0	178	2	5	2	0	9	2461
*** BREAK ***																					
04:30 PM	9	322	23	0	354	2	302	102	0	406	109	5	6	0	120	7	6	5	0	18	898
04:45 PM	9	379	24	0	412	1	297	107	0	405	107	2	6	0	115	17	3	1	0	21	953
Total	18	701	47	0	766	3	599	209	0	811	216	7	12	0	235	24	9	6	0	39	1851
05:00 PM	12	393	15	0	420	2	304	113	0	419	142	9	10	0	161	8	6	2	0	16	1016
05:15 PM	5	441	32	0	478	1	318	128	0	447	102	5	2	0	109	9	8	1	0	18	1052
05:30 PM	12	388	30	0	430	3	267	113	0	383	136	13	8	0	157	7	5	4	0	16	986
05:45 PM	11	417	37	0	465	1	272	109	0	382	138	11	6	0	155	12	8	0	0	20	1022
Total	40	1639	114	0	1793	7	1161	463	0	1631	518	38	26	0	582	36	27	7	0	70	4076
06:00 PM	12	356	17	0	385	4	284	150	0	438	108	2	11	0	121	16	5	1	0	22	966
06:15 PM	10	334	18	0	362	5	269	120	0	394	126	4	0	0	130	17	6	1	0	24	910
Grand Total	105	4403	227	0	4735	26	4592	1566	0	6184	1228	55	68	0	1351	96	53	19	0	168	12438
Apprch %	2.2	93	4.8	0		0.4	74.3	25.3	0		90.9	4.1	5	0		57.1	31.5	11.3	0		
Total %	0.8	35.4	1.8	0	38.1	0.2	36.9	12.6	0	49.7	9.9	0.4	0.5	0	10.9	0.8	0.4	0.2	0	1.4	

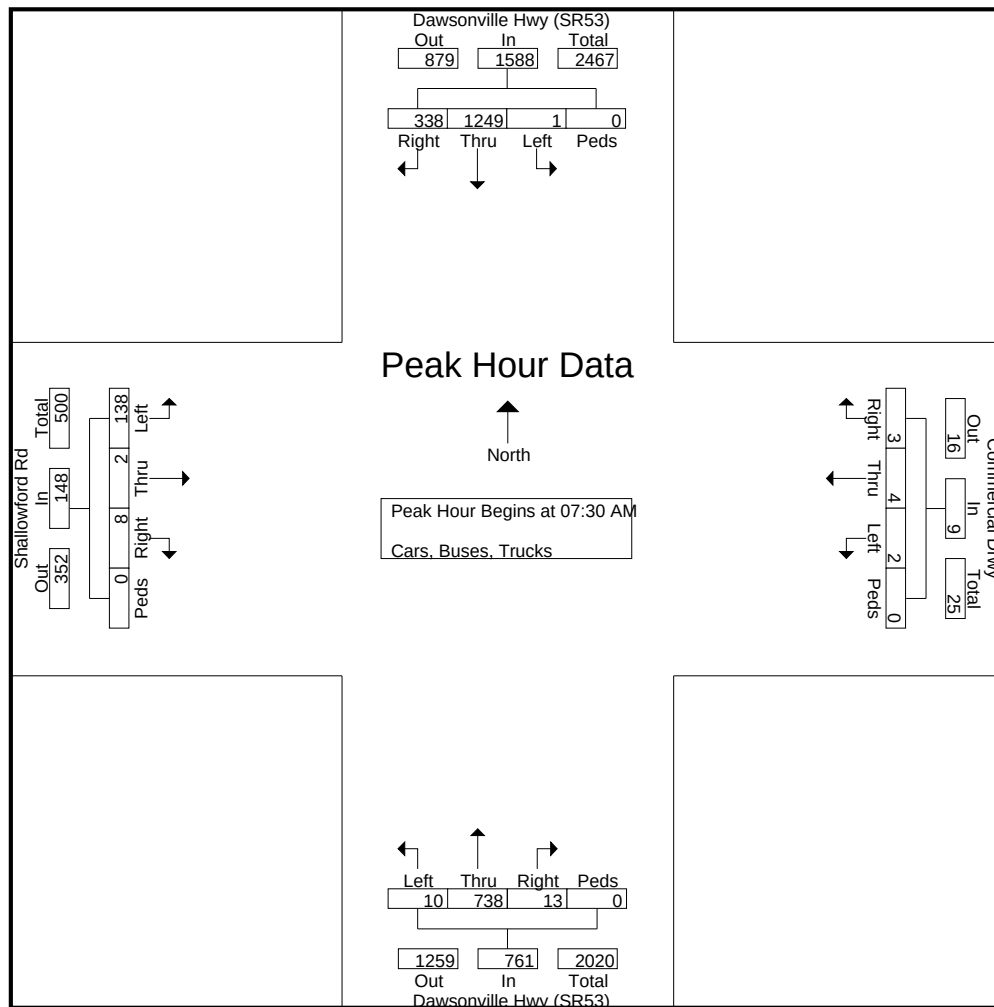
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TMC Data
Dawsonville Hwy (SR53) @
Shallowford Rd, Gainesville, GA
7-9am | 4.30-6.30pm

File Name : 39520009
Site Code : 39520009
Start Date : 11/17/2016
Page No : 2

	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					Shallowford Rd Eastbound					Commercial Drwy Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	3	146	1	0	150	0	334	82	0	416	28	0	4	0	32	0	1	2	0	3	601
07:45 AM	3	178	6	0	187	0	342	85	0	427	35	0	2	0	37	0	0	0	0	0	651
08:00 AM	3	188	3	0	194	0	307	87	0	394	34	1	0	0	35	0	1	1	0	2	625
08:15 AM	1	226	3	0	230	1	266	84	0	351	41	1	2	0	44	2	2	0	0	4	629
Total Volume	10	738	13	0	761	1	1249	338	0	1588	138	2	8	0	148	2	4	3	0	9	2506
% App. Total	1.3	97	1.7	0		0.1	78.7	21.3	0		93.2	1.4	5.4	0		22.2	44.4	33.3	0		
PHF	.833	.816	.542	.000	.827	.250	.913	.971	.000	.930	.841	.500	.500	.000	.841	.250	.500	.375	.000	.563	.962



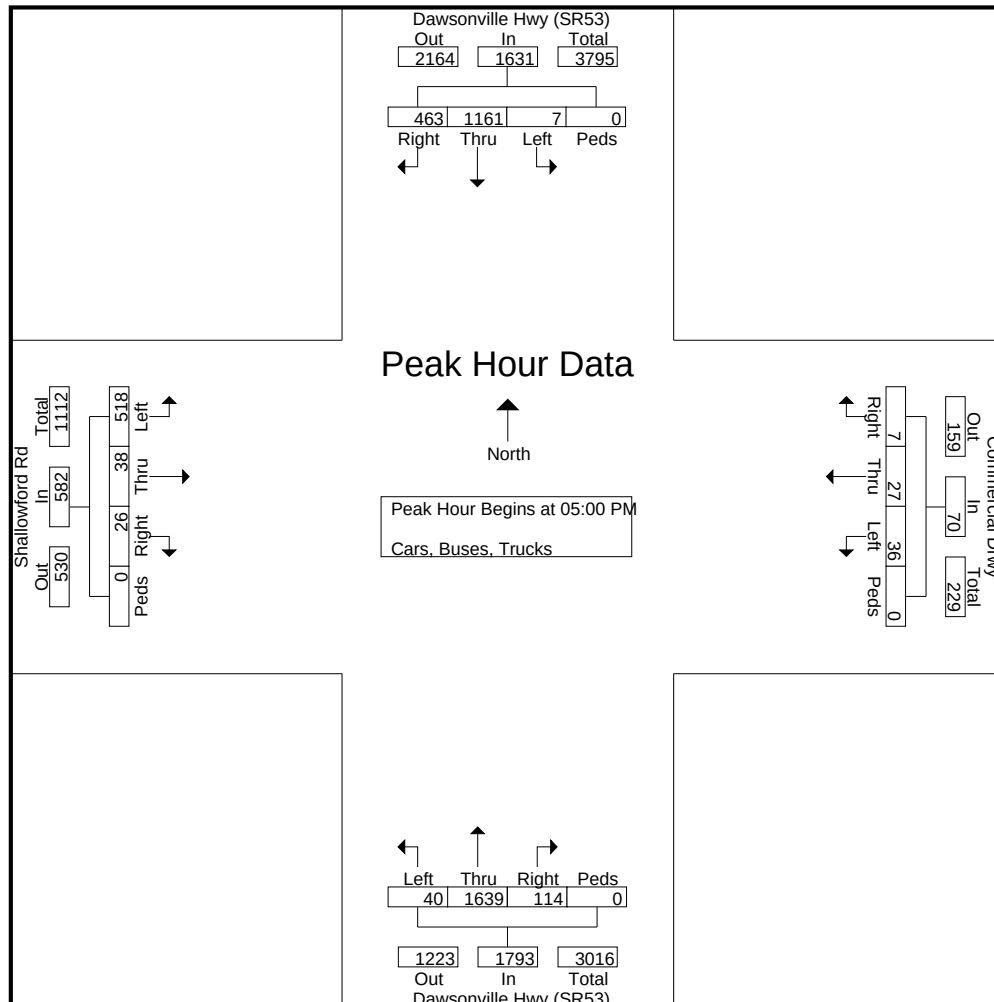
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TMC Data
Dawsonville Hwy (SR53) @
Shallowford Rd, Gainesville, GA
7-9am | 4.30-6.30pm

File Name : 39520009
Site Code : 39520009
Start Date : 11/17/2016
Page No : 3

	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					Shallowford Rd Eastbound					Commercial Drwy Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	12	393	15	0	420	2	304	113	0	419	142	9	10	0	161	8	6	2	0	16	1016
05:15 PM	5	441	32	0	478	1	318	128	0	447	102	5	2	0	109	9	8	1	0	18	1052
05:30 PM	12	388	30	0	430	3	267	113	0	383	136	13	8	0	157	7	5	4	0	16	986
05:45 PM	11	417	37	0	465	1	272	109	0	382	138	11	6	0	155	12	8	0	0	20	1022
Total Volume	40	1639	114	0	1793	7	1161	463	0	1631	518	38	26	0	582	36	27	7	0	70	4076
% App. Total	2.2	91.4	6.4	0		0.4	71.2	28.4	0		89	6.5	4.5	0		51.4	38.6	10	0		
PHF	.833	.929	.770	.000	.938	.583	.913	.904	.000	.912	.912	.731	.650	.000	.904	.750	.844	.438	.000	.875	.969



Appendix B

Intersection Analysis Methodology

Intersection Analysis Methodology

The methodology used for evaluating traffic operations at intersections is presented in the Transportation Research Board’s *Highway Capacity Manual*, 2010 edition (HCM 2010). Synchro 8 software, which emulates the HCM 2010 methodology, was used for all analyses. The following is an overview of the methodology employed for the analysis of signalized intersections and stop-sign controlled (unsignalized) intersections.

Signalized Intersections

The criteria for evaluating signalized intersections are capacity and level of service. The capacity analysis of an intersection compares the volume of traffic using the various lane groups at the intersection to the capacity of those lane groups. This produces a volume-to-capacity (v/c) ratio for each lane group. A v/c ratio greater than 1.0 indicates that the volume of traffic has exceeded the capacity available and indicates a temporary excess of demand. The HCM 2010 methodology computes a critical v/c ratio for an intersection based on the critical lane groups or approaches. This critical v/c ratio is an indication of overall intersection sufficiency.

Level of service for a signalized intersection is defined in terms of control delay per vehicle. For signalized intersections, a composite intersection level of service is determined. The thresholds for each level of service are higher for signalized intersections than for unsignalized intersections. This is attributable to a variety of factors including expectation and acceptance of higher delays at signals, and the fact that drivers can relax when waiting at a signal as opposed to having to remain attentive as they proceed through the unsignalized intersection. The level of service criteria for signalized intersections are shown in Table A.

Table A – Level of Service Criteria for Signalized Intersections

Control Delay (s/veh)	Level of Service by Volume-to-Capacity Ratio	
	≤1.0	>1.0
≤ 10	A	F
> 10 and ≤ 20	B	F
> 20 and ≤ 35	C	F
> 35 and ≤ 55	D	F
> 55 and ≤ 80	E	F
> 80	F	F

Source: *Highway Capacity Manual 2010*

Unsignalized Intersections

The operations at an unsignalized intersection are defined in terms of levels of service. Level of service (LOS) is a measure of driver discomfort, frustration, fuel consumption, and lost travel time. Level of service for an unsignalized intersection is defined in terms of control delay per vehicle. Control delay is that portion of delay attributable to the control device and includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. The delays at unsignalized intersections are based on gap acceptance theory,

factoring in availability of gaps, usefulness of the gaps, and the priority of right-of-way given to each traffic stream.

Levels of service are assigned letters A through F. LOS A indicates operations with very low control delay while LOS F describes operations with high control delay. LOS F is considered to be unacceptable by most drivers, while LOS E is typically considered to be the limit of acceptable delay. The level of service criteria for unsignalized intersections are presented in Table B.

Table B – Level of Service Criteria for Unsignalized Intersections

Control Delay (s/veh)	Level of Service by Volume-to-Capacity Ratio	
	≤1.0	>1.0
0 – 10	A	F
> 10 and ≤ 15	B	F
> 15 and ≤ 25	C	F
> 25 and ≤ 35	D	F
> 35 and ≤ 50	E	F
> 50	F	F

Source: *Highway Capacity Manual 2010*

Appendix C

Existing Intersection Analysis

Lanier Tract DRI
1: Sportsman Club Road & Strickland Drive

existing a.m.

Intersection						
Int Delay, s/veh	2.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	10	0	6	1	0	23
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	50	50	58	58	64	64
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	20	0	10	2	0	36
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	47	11	0	0	12	0
Stage 1	11	-	-	-	-	-
Stage 2	36	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	963	1070	-	-	1607	-
Stage 1	1012	-	-	-	-	-
Stage 2	986	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	963	1070	-	-	1607	-
Mov Cap-2 Maneuver	963	-	-	-	-	-
Stage 1	1012	-	-	-	-	-
Stage 2	986	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	8.8	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	963	1607	-	
HCM Lane V/C Ratio	-	-	0.021	-	-	
HCM Control Delay (s)	-	-	8.8	0	-	
HCM Lane LOS	-	-	A	A	-	
HCM 95th %tile Q(veh)	-	-	0.1	0	-	

Lanier Tract DRI
2: GA 53 & Sportsman Club Road

existing a.m.

Intersection												
Int Delay, s/veh	5.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	9	1687	0	0	743	8	0	0	0	25	0	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	84	84	84	92	92	92	59	59	59
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	1962	0	0	885	10	0	0	0	42	0	25
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	894	0	0	1962	0	0	2425	2877	981	1891	2872	447
Stage 1	-	-	-	-	-	-	1983	1983	-	889	889	-
Stage 2	-	-	-	-	-	-	442	894	-	1002	1983	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	755	-	-	293	-	-	17	16	249	43	16	559
Stage 1	-	-	-	-	-	-	63	105	-	304	360	-
Stage 2	-	-	-	-	-	-	564	358	-	260	105	-
Platoon blocked, %			-			-						
Mov Cap-1 Maneuver	755	-	-	293	-	-	16	16	249	43	16	559
Mov Cap-2 Maneuver	-	-	-	-	-	-	16	16	-	43	16	-
Stage 1	-	-	-	-	-	-	62	104	-	300	360	-
Stage 2	-	-	-	-	-	-	538	358	-	257	104	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0			0			224.6		
HCM LOS							A			F		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	-	755	-	-	293	-	-	66				
HCM Lane V/C Ratio	-	0.014	-	-	-	-	-	1.027				
HCM Control Delay (s)	0	9.8	-	-	0	-	-	224.6				
HCM Lane LOS	A	A	-	-	A	-	-	F				
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	5.2				

Lanier Tract DRI
3: GA 53 & Avonlea Way

existing a.m.

Intersection						
Int Delay, s/veh	2.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	15	72	12	758	1668	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	88	88	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	18	86	14	861	1940	7
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	2398	970	1940	0	-	0
Stage 1	1940	-	-	-	-	-
Stage 2	458	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	28	253	299	-	-	-
Stage 1	98	-	-	-	-	-
Stage 2	604	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	27	253	299	-	-	-
Mov Cap-2 Maneuver	27	-	-	-	-	-
Stage 1	98	-	-	-	-	-
Stage 2	576	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	69.3	0.3		0		
HCM LOS	F					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	299	-	27	253	-	-
HCM Lane V/C Ratio	0.046	-	0.661	0.339	-	-
HCM Control Delay (s)	17.6	-	275.4	26.4	-	-
HCM Lane LOS	C	-	F	D	-	-
HCM 95th %tile Q(veh)	0.1	-	2.1	1.4	-	-

Lanier Tract DRI
4: GA 53 & Canterbury Road

existing a.m.

Intersection						
Int Delay, s/veh	3.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	18	95	23	722	1782	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	86	86	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	20	108	27	840	1958	8
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	2431	979	1958	0	-	0
Stage 1	1958	-	-	-	-	-
Stage 2	473	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	26	249	294	-	-	-
Stage 1	96	-	-	-	-	-
Stage 2	593	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	24	249	294	-	-	-
Mov Cap-2 Maneuver	24	-	-	-	-	-
Stage 1	96	-	-	-	-	-
Stage 2	539	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	83.3	0.6		0		
HCM LOS	F					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	294	-	24	249	-	-
HCM Lane V/C Ratio	0.091	-	0.852	0.434	-	-
HCM Control Delay (s)	18.5	-	363.9	30.1	-	-
HCM Lane LOS	C	-	F	D	-	-
HCM 95th %tile Q(veh)	0.3	-	2.6	2.1	-	-

Intersection						
Int Delay, s/veh	1.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	5	41	27	787	2006	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	Yield	-	None
Storage Length	0	0	200	-	-	360
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	1	0	-
Peak Hour Factor	82	82	87	87	89	89
Heavy Vehicles, %	0	0	0	1	0	0
Mvmt Flow	6	50	31	905	2254	2
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	2768	1127	2254	0	-	0
Stage 1	2254	-	-	-	-	-
Stage 2	514	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	16	202	231	-	-	-
Stage 1	67	-	-	-	-	-
Stage 2	571	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	14	202	231	-	-	-
Mov Cap-2 Maneuver	14	-	-	-	-	-
Stage 1	67	-	-	-	-	-
Stage 2	494	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	68.2	0.8		0		
HCM LOS	F					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	231	-	14	202	-	-
HCM Lane V/C Ratio	0.134	-	0.436	0.248	-	-
HCM Control Delay (s)	23	-	393.1	28.6	-	-
HCM Lane LOS	C	-	F	D	-	-
HCM 95th %tile Q(veh)	0.5	-	1.1	0.9	-	-

Lanier Tract DRI

5: GA 53 & Lanier Valley Dr/Ahaluna Dr

existing a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	19	5	115	37	3	20	55	701	11	14	1901	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		2%			-4%			1%			-1%	
Storage Length (ft)	0		0	0		0	100		0	140		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	0			0			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.888			0.956			0.998				
Flt Protected		0.993			0.970		0.950			0.950		
Satd. Flow (prot)	0	1659	0	0	1797	0	1796	3516	0	1814	3628	0
Flt Permitted		0.941			0.405		0.037			0.337		
Satd. Flow (perm)	0	1572	0	0	750	0	70	3516	0	644	3628	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		86			13			4				
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		340			322			888			1417	
Travel Time (s)		7.7			7.3			13.5			21.5	
Peak Hour Factor	0.91	0.91	0.91	0.83	0.83	0.83	0.85	0.85	0.85	0.87	0.87	0.87
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	0%	0%
Adj. Flow (vph)	21	5	126	45	4	24	65	825	13	16	2185	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	152	0	0	73	0	65	838	0	16	2185	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	0.97	0.97	0.97	1.01	1.01	1.01	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		0	1	
Detector Template	Left			Left								
Leading Detector (ft)	20	40		20	40		40	336		0	336	
Trailing Detector (ft)	0	0		0	0		0	330		0	330	
Detector 1 Position(ft)	0	0		0	0		0	330		0	330	
Detector 1 Size(ft)	20	40		20	40		40	6		0	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		8			4		5	2			6	
Permitted Phases	8			4			2			6		
Detector Phase	8	8		4	4		5	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	23.0	23.0		23.0	23.0		10.6	23.0		23.0	23.0	

Lanier Tract DRI

5: GA 53 & Lanier Valley Dr/Ahaluna Dr

existing a.m.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	25.0	25.0		25.0	25.0		13.0	125.0		112.0	112.0	
Total Split (%)	16.7%	16.7%		16.7%	16.7%		8.7%	83.3%		74.7%	74.7%	
Maximum Green (s)	18.4	18.4		18.4	18.4		7.4	118.9		105.9	105.9	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	4.5		4.5	4.5	
All-Red Time (s)	2.6	2.6		2.6	2.6		2.6	1.6		1.6	1.6	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.6			6.6		5.6	6.1		6.1	6.1	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		C-Max	C-Max	
Act Effect Green (s)		14.0			14.0		123.8	123.3		113.3	113.3	
Actuated g/C Ratio		0.09			0.09		0.83	0.82		0.76	0.76	
v/c Ratio		0.68			0.90		0.49	0.29		0.03	0.80	
Control Delay		43.6			127.8		44.3	1.5		6.6	15.9	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		43.6			127.8		44.3	1.5		6.6	15.9	
LOS		D			F		D	A		A	B	
Approach Delay		43.6			127.8			4.6			15.9	
Approach LOS		D			F			A			B	

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 26 (17%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.90

Intersection Signal Delay: 16.5

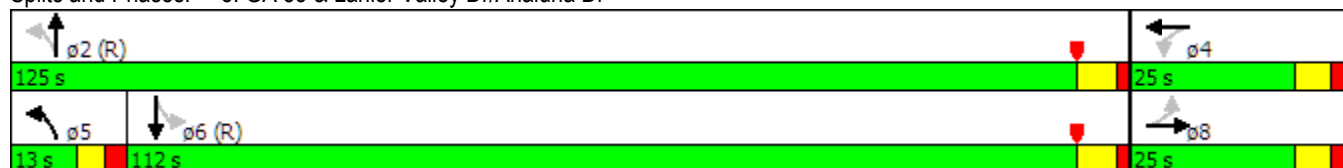
Intersection LOS: B

Intersection Capacity Utilization 73.2%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 5: GA 53 & Lanier Valley Dr/Ahaluna Dr



Lanier Tract DRI

6: 53-Dawsonville Hwy & Academy Sports

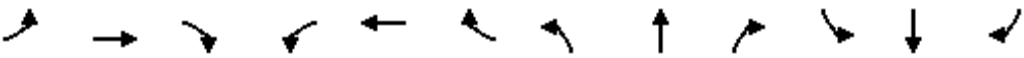
existing a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	2	0	6	2	0	0	11	740	9	5	1989	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)	0%			4%			1%			0%		
Storage Length (ft)	0		0	0		70	200		170	190		360
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	0			0			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850						0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1900	1615	1769	1862	1862	1796	3556	1607	1805	3610	1615
Flt Permitted							0.058			0.329		
Satd. Flow (perm)	1900	1900	1615	1862	1862	1862	110	3556	1607	625	3610	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			67						68			68
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		262			246			1836			685	
Travel Time (s)		7.1			6.7			27.8			10.4	
Peak Hour Factor	0.67	0.67	0.67	0.50	0.50	0.50	0.86	0.86	0.86	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%
Adj. Flow (vph)	3	0	9	4	0	0	13	860	10	6	2210	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	3	0	9	4	0	0	13	860	10	6	2210	4
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.03	1.03	1.03	1.01	1.01	1.01	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1	1	1	1	1	1	1	0
Detector Template												
Leading Detector (ft)	40	40	0	40	40	40	40	336	0	40	336	0
Trailing Detector (ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Size(ft)	40	40	0	40	40	40	40	6	0	40	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm		Perm	Perm		Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8		8	4		4	2		2	6		6
Detector Phase	8	8	8	4	4	4	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	42.0	42.0	42.0	42.4	42.4	42.4	11.4	30.3	30.3	11.0	29.3	29.3

Lanier Tract DRI

6: 53-Dawsonville Hwy & Academy Sports

existing a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	42.4	42.4	42.4	42.4	42.4	42.4	11.4	96.6	96.6	11.0	96.2	96.2
Total Split (%)	28.3%	28.3%	28.3%	28.3%	28.3%	28.3%	7.6%	64.4%	64.4%	7.3%	64.1%	64.1%
Maximum Green (s)	36.0	36.0	36.0	36.0	36.0	36.0	5.0	90.4	90.4	5.0	90.0	90.0
Yellow Time (s)	3.4	3.4	3.4	3.4	3.4	3.4	3.4	4.3	4.3	3.0	4.3	4.3
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	1.9	1.9	3.0	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.2	6.2	6.0	6.2	6.2
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0
Flash Dont Walk (s)	23.0	23.0	23.0	32.0	32.0	32.0		20.0	20.0		19.0	19.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0	0		0	0
Act Effect Green (s)	6.1		6.1	6.1			137.2	139.9	139.9	136.1	137.4	137.4
Actuated g/C Ratio	0.04		0.04	0.04			0.91	0.93	0.93	0.91	0.92	0.92
v/c Ratio	0.04		0.07	0.05			0.08	0.26	0.01	0.01	0.67	0.00
Control Delay	69.5		1.0	70.0			1.5	0.8	0.0	1.0	1.8	0.0
Queue Delay	0.0		0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.5		1.0	70.0			1.5	0.8	0.0	1.0	1.9	0.0
LOS	E		A	E			A	A	A	A	A	A
Approach Delay								0.8			1.8	
Approach LOS								A			A	

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 27 (18%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 145

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.67

Intersection Signal Delay: 1.7

Intersection LOS: A

Intersection Capacity Utilization 79.1%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 6: 53-Dawsonville Hwy & Academy Sports

 p1	 p2 (R)		 p4
11 s	96.6 s		42.4 s
 p5	 p6 (R)		 p8
11.4 s	96.2 s		42.4 s

Lanier Tract DRI

8: Dawsonville Highway/GA 53 & McEver Road/McEver

existing a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	390	28	342	42	19	18	282	465	55	28	1170	828
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			5%			1%			-1%	
Storage Length (ft)	180		0	0		0	310		185	255		0
Storage Lanes	2		1	1		0	2		1	1		1
Taper Length (ft)	50			0			50			50		
Lane Util. Factor	0.97	0.95	0.95	1.00	1.00	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Frt		0.872	0.850		0.927				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3484	1566	1527	1760	1717	0	3484	3487	1575	1814	3628	1623
Flt Permitted	0.950			0.629			0.950			0.950		
Satd. Flow (perm)	3484	1566	1527	1165	1717	0	3484	3487	1575	1814	3628	1623
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		166	187		29				184			538
Link Speed (mph)		45			45			45			45	
Link Distance (ft)		580			331			921			1624	
Travel Time (s)		8.8			5.0			14.0			24.6	
Peak Hour Factor	0.97	0.97	0.97	0.62	0.62	0.62	0.93	0.93	0.93	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	3%	2%	0%	0%	0%
Adj. Flow (vph)	402	29	353	68	31	29	303	500	59	31	1300	920
Shared Lane Traffic (%)			47%									
Lane Group Flow (vph)	402	195	187	68	60	0	303	500	59	31	1300	920
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.03	1.03	1.03	1.01	1.01	1.01	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1		1	1	0	1	1	0
Detector Template												
Leading Detector (ft)	40	40	0	40	40		40	336	0	40	336	0
Trailing Detector (ft)	0	0	0	0	0		0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0		0	330	0	0	330	0
Detector 1 Size(ft)	40	40	0	40	40		40	6	0	40	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	NA	Perm	pm+pt	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases			8	4					6			2
Detector Phase	3	8	8	7	4		1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	13.2	50.2	50.2	11.6	48.2		13.4	35.6	35.6	12.9	44.6	44.6

Lanier Tract DRI

8: Dawsonville Highway/GA 53 & McEver Road/McEver

existing a.m.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	24.0	60.4	60.4	11.8	48.2		20.2	63.9	63.9	13.9	57.6	57.6
Total Split (%)	16.0%	40.3%	40.3%	7.9%	32.1%		13.5%	42.6%	42.6%	9.3%	38.4%	38.4%
Maximum Green (s)	16.7	53.1	53.1	5.3	40.9		12.7	57.3	57.3	6.7	51.0	51.0
Yellow Time (s)	4.3	4.3	4.3	3.5	4.3		4.5	4.4	4.4	4.2	4.4	4.4
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	2.2	2.2	3.0	2.2	2.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.3	7.3	7.3	6.5	7.3		7.5	6.6	6.6	7.2	6.6	6.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)		4.0	4.0		4.0			4.0	4.0		4.0	4.0
Flash Dont Walk (s)		38.0	38.0		36.0			25.0	25.0		34.0	34.0
Pedestrian Calls (#/hr)		0	0		0			0	0		0	0
Act Effect Green (s)	16.7	20.5	20.5	13.3	8.5		12.7	96.3	96.3	8.0	86.0	86.0
Actuated g/C Ratio	0.11	0.14	0.14	0.09	0.06		0.08	0.64	0.64	0.05	0.57	0.57
v/c Ratio	1.04	0.55	0.51	0.55	0.48		1.03	0.22	0.05	0.32	0.63	0.79
Control Delay	119.1	18.3	12.1	67.7	51.5		133.7	17.6	1.2	85.8	19.6	11.3
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	119.1	18.3	12.1	67.7	51.5		133.7	17.6	1.2	85.8	19.6	11.3
LOS	F	B	B	E	D		F	B	A	F	B	B
Approach Delay		68.5			60.1			57.3			17.1	
Approach LOS		E			E			E			B	

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 19 (13%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.04

Intersection Signal Delay: 37.1

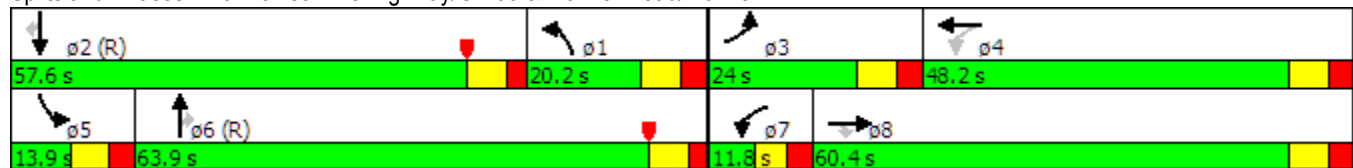
Intersection LOS: D

Intersection Capacity Utilization 81.3%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 8: Dawsonville Highway/GA 53 & McEver Road/McEver



Lanier Tract DRI

9: Dawsonville Highway & Greenhill Circle/Greenhill Circle

existing a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖	↗		↖	↗	↖	↕	↗	↖	↕	↗
Volume (vph)	67	1	141	6	1	4	135	754	10	12	1404	52
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		3%			7%			1%			0%	
Storage Length (ft)	0		0	0		0	190		190	185		100
Storage Lanes	0		1	0		1	1		1	1		1
Taper Length (ft)	0			0			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected		0.953			0.957		0.950			0.950		
Satd. Flow (prot)	0	1784	1591	0	1755	1558	1796	3522	1607	1805	3610	1615
Flt Permitted		0.722			0.755		0.116			0.324		
Satd. Flow (perm)	0	1351	1591	0	1384	1558	219	3522	1607	616	3610	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			151			102			57			101
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		288			254			778			921	
Travel Time (s)		7.9			6.9			11.8			14.0	
Peak Hour Factor	0.90	0.90	0.90	0.69	0.69	0.69	0.86	0.86	0.86	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	0%	0%
Adj. Flow (vph)	74	1	157	9	1	6	157	877	12	13	1526	57
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	75	157	0	10	6	157	877	12	13	1526	57
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.02	1.02	1.02	1.05	1.05	1.05	1.01	1.01	1.01	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1	0	1	1	0	0	1	0
Detector Template	Left			Left								
Leading Detector (ft)	20	40	0	20	40	0	40	336	0	0	336	0
Trailing Detector (ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Size(ft)	20	40	0	20	40	0	40	6	0	0	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8		8	4		4	6		6	2		2
Detector Phase	8	8	8	4	4	4	1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.0	23.0	23.0	39.9	39.9	39.9	11.0	28.0	28.0	10.0	36.0	36.0

Lanier Tract DRI

9: Dawsonville Highway & Greenhill Circle/Greenhill Circle

existing a.m.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	39.9	39.9	39.9	39.9	39.9	39.9	22.0	100.1	100.1	10.0	88.1	88.1
Total Split (%)	26.6%	26.6%	26.6%	26.6%	26.6%	26.6%	14.7%	66.7%	66.7%	6.7%	58.7%	58.7%
Maximum Green (s)	34.0	34.0	34.0	34.0	34.0	34.0	16.0	94.1	94.1	5.0	82.1	82.1
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	4.4	4.4	3.5	4.4	4.4
All-Red Time (s)	2.9	2.9	2.9	2.9	2.9	2.9	3.0	1.6	1.6	1.5	1.6	1.6
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.9	5.9		5.9	5.9	6.0	6.0	6.0	5.0	6.0	6.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)				4.0	4.0	4.0		4.0	4.0		4.0	4.0
Flash Dont Walk (s)				30.0	30.0	30.0		18.0	18.0		26.0	26.0
Pedestrian Calls (#/hr)				0	0	0		0	0		0	0
Act Effect Green (s)		13.7	13.7		13.7	13.7	124.4	120.0	120.0	113.0	106.3	106.3
Actuated g/C Ratio		0.09	0.09		0.09	0.09	0.83	0.80	0.80	0.75	0.71	0.71
v/c Ratio		0.61	0.56		0.08	0.03	0.51	0.31	0.01	0.03	0.60	0.05
Control Delay		85.1	17.7		60.9	0.2	17.8	4.2	0.0	3.6	11.3	0.4
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		85.1	17.7		60.9	0.2	17.8	4.2	0.0	3.6	11.4	0.4
LOS		F	B		E	A	B	A	A	A	B	A
Approach Delay		39.5			38.1			6.2			10.9	
Approach LOS		D			D			A			B	

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.61

Intersection Signal Delay: 11.6

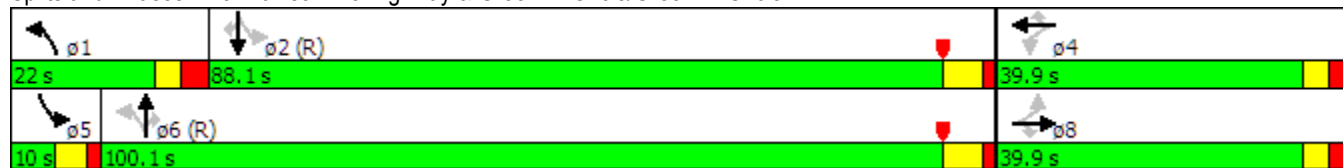
Intersection LOS: B

Intersection Capacity Utilization 71.6%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 9: Dawsonville Highway & Greenhill Circle/Greenhill Circle



Lanier Tract DRI

10: Dawsonville Highway & Shallowford Rd/Best Buy

existing a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	138	2	8	2	4	3	10	738	13	1	1249	338
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-1%			10%			-4%			-1%	
Storage Length (ft)	350		350	0		0	350		150	265		0
Storage Lanes	1		0	0		1	1		1	1		1
Taper Length (ft)	100			0			100			100		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950	0.953			0.982		0.950			0.950		
Satd. Flow (prot)	1723	1729	1623	0	1773	1534	1841	3646	1647	1814	3592	1623
Flt Permitted	0.950	0.953			0.982		0.154			0.320		
Satd. Flow (perm)	1723	1729	1623	0	1773	1534	298	3646	1647	611	3592	1623
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			113			119			70			218
Link Speed (mph)		45			25			45			45	
Link Distance (ft)		653			178			957			778	
Travel Time (s)		9.9			4.9			14.5			11.8	
Peak Hour Factor	0.84	0.84	0.84	0.56	0.56	0.56	0.83	0.83	0.83	0.93	0.93	0.93
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	1%	0%
Adj. Flow (vph)	164	2	10	4	7	5	12	889	16	1	1343	363
Shared Lane Traffic (%)	49%											
Lane Group Flow (vph)	84	82	10	0	11	5	12	889	16	1	1343	363
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes										
Headway Factor	0.99	0.99	0.99	1.07	1.07	1.07	0.97	0.97	0.97	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1	0	1	1	0	0	1	0
Detector Template				Left								
Leading Detector (ft)	40	40	0	20	40	0	40	336	0	0	336	0
Trailing Detector (ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Size(ft)	40	40	0	20	40	0	40	6	0	0	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases	3	3		4	4		1	6			2	
Permitted Phases			3			4	6		6	2		2
Detector Phase	3	3	3	4	4	4	1	6	6	2	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	36.7	36.7	36.7	38.9	38.9	38.9	10.8	28.8	28.8	30.8	30.8	30.8

Lanier Tract DRI

10: Dawsonville Highway & Shallowford Rd/Best Buy

existing a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	36.7	36.7	36.7	38.9	38.9	38.9	10.8	74.4	74.4	63.6	63.6	63.6
Total Split (%)	24.5%	24.5%	24.5%	25.9%	25.9%	25.9%	7.2%	49.6%	49.6%	42.4%	42.4%	42.4%
Maximum Green (s)	30.0	30.0	30.0	33.0	33.0	33.0	5.0	67.6	67.6	56.8	56.8	56.8
Yellow Time (s)	4.5	4.5	4.5	3.0	3.0	3.0	3.0	4.9	4.9	4.9	4.9	4.9
All-Red Time (s)	2.2	2.2	2.2	2.9	2.9	2.9	2.8	1.9	1.9	1.9	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.7	6.7	6.7		5.9	5.9	5.8	6.8	6.8	6.8	6.8	6.8
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes			Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	C-Min	C-Min	C-Min
Walk Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0
Flash Dont Walk (s)	26.0	26.0	26.0	29.0	29.0	29.0		18.0	18.0	20.0	20.0	20.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0	0	0	0	0
Act Effect Green (s)	12.7	12.7	12.7		6.5	6.5	119.4	118.4	118.4	113.7	113.7	113.7
Actuated g/C Ratio	0.08	0.08	0.08		0.04	0.04	0.80	0.79	0.79	0.76	0.76	0.76
v/c Ratio	0.58	0.56	0.04		0.14	0.03	0.04	0.31	0.01	0.00	0.49	0.28
Control Delay	81.0	79.9	0.4		72.5	0.3	5.5	5.6	0.0	7.0	6.7	3.5
Queue Delay	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0
Total Delay	81.0	79.9	0.4		72.5	0.3	5.5	5.6	0.0	7.0	6.9	3.5
LOS	F	E	A		E	A	A	A	A	A	A	A
Approach Delay		75.9			49.9			5.5			6.2	
Approach LOS		E			D			A			A	

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 45 (30%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.58

Intersection Signal Delay: 10.6

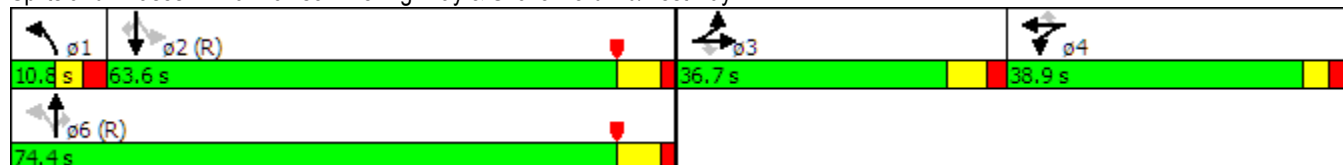
Intersection LOS: B

Intersection Capacity Utilization 59.0%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 10: Dawsonville Highway & Shallowford Rd/Best Buy



Lanier Tract DRI
1: Sportsman Club Road & Strickland Drive

existing p.m.

Intersection						
Int Delay, s/veh	1.6					
Movement	WBL	WBR		NBT	NBR	SBL SBT
Vol, veh/h	7	0		29	9	0 23
Conflicting Peds, #/hr	0	0		0	0	0 0
Sign Control	Stop	Stop		Free	Free	Free Free
RT Channelized	-	None		-	None	- None
Storage Length	0	-		-	-	- -
Veh in Median Storage, #	0	-		0	-	- 0
Grade, %	0	-		0	-	- 0
Peak Hour Factor	44	44		86	86	82 82
Heavy Vehicles, %	2	2		2	2	2 2
Mvmt Flow	16	0		34	10	0 28
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	67	39	0	0	44	0
Stage 1	39	-	-	-	-	-
Stage 2	28	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	938	1033	-	-	1564	-
Stage 1	983	-	-	-	-	-
Stage 2	995	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	938	1033	-	-	1564	-
Mov Cap-2 Maneuver	938	-	-	-	-	-
Stage 1	983	-	-	-	-	-
Stage 2	995	-	-	-	-	-
Approach	WB		NB		SB	
HCM Control Delay, s	8.9		0		0	
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	938	1564	-	
HCM Lane V/C Ratio	-	-	0.017	-	-	
HCM Control Delay (s)	-	-	8.9	0	-	
HCM Lane LOS	-	-	A	A	-	
HCM 95th %tile Q(veh)	-	-	0.1	0	-	

Lanier Tract DRI
2: GA 53 & Sportsman Club Road

existing p.m.

Intersection												
Int Delay, s/veh	17.3											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	15	1039	0	2	1671	19	0	0	0	28	0	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	96	96	96	92	92	92	66	66	66
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	1094	0	2	1741	20	0	0	0	42	0	14

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1760	0	0	1094	0	0	1999	2890	547	2333	2880	880
Stage 1	-	-	-	-	-	-	1125	1125	-	1755	1755	-
Stage 2	-	-	-	-	-	-	874	1765	-	578	1125	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	351	-	-	634	-	-	35	16	481	~ 20	16	290
Stage 1	-	-	-	-	-	-	218	278	-	88	137	-
Stage 2	-	-	-	-	-	-	311	136	-	468	278	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	351	-	-	634	-	-	32	15	481	~ 19	15	290
Mov Cap-2 Maneuver	-	-	-	-	-	-	32	15	-	~ 19	15	-
Stage 1	-	-	-	-	-	-	208	265	-	84	137	-
Stage 2	-	-	-	-	-	-	295	136	-	447	265	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0	0	\$ 901.3
HCM LOS			A	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	351	-	-	634	-	-	25
HCM Lane V/C Ratio	-	0.045	-	-	0.003	-	-	2.242
HCM Control Delay (s)	0	15.7	-	-	10.7	-	-	\$ 901.3
HCM Lane LOS	A	C	-	-	B	-	-	F
HCM 95th %tile Q(veh)	-	0.1	-	-	0	-	-	6.9

Notes												
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon												

Intersection						
Int Delay, s/veh	1.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	11	47	62	1650	1104	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	76	76	95	95	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	14	62	65	1737	1104	14
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	2103	552	1104	0	-	0
Stage 1	1104	-	-	-	-	-
Stage 2	999	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	44	477	628	-	-	-
Stage 1	279	-	-	-	-	-
Stage 2	317	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	39	477	628	-	-	-
Mov Cap-2 Maneuver	39	-	-	-	-	-
Stage 1	279	-	-	-	-	-
Stage 2	284	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	38.4	0.4		0		
HCM LOS	E					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	628	-	39	477	-	-
HCM Lane V/C Ratio	0.104	-	0.371	0.13	-	-
HCM Control Delay (s)	11.4	-	144.1	13.7	-	-
HCM Lane LOS	B	-	F	B	-	-
HCM 95th %tile Q(veh)	0.3	-	1.3	0.4	-	-

Lanier Tract DRI
4: Canterbury Road & GA 53

existing p.m.

Intersection						
Int Delay, s/veh	1.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	7	28	111	1682	1105	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	35	116	1752	1151	15
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	2258	576	1151	0	-	0
Stage 1	1151	-	-	-	-	-
Stage 2	1107	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	35	460	603	-	-	-
Stage 1	263	-	-	-	-	-
Stage 2	278	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	28	460	603	-	-	-
Mov Cap-2 Maneuver	28	-	-	-	-	-
Stage 1	263	-	-	-	-	-
Stage 2	225	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	47.6	0.8		0		
HCM LOS	E					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	603	-	28	460	-	-
HCM Lane V/C Ratio	0.192	-	0.313	0.076	-	-
HCM Control Delay (s)	12.4	-	183.8	13.5	-	-
HCM Lane LOS	B	-	F	B	-	-
HCM 95th %tile Q(veh)	0.7	-	1	0.2	-	-

Lanier Tract DRI
7: GA 53 & Beechwood Boulevard

existing p.m.

Intersection						
Int Delay, s/veh	0.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	1	47	86	1998	1388	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	Yield	-	None
Storage Length	0	0	200	-	-	360
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	1	0	-
Peak Hour Factor	71	71	99	99	98	98
Heavy Vehicles, %	0	0	0	0	1	0
Mvmt Flow	1	66	87	2018	1416	9
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	2599	709	1416	0	-	0
Stage 1	1416	-	-	-	-	-
Stage 2	1183	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	21	381	487	-	-	-
Stage 1	193	-	-	-	-	-
Stage 2	257	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	17	381	487	-	-	-
Mov Cap-2 Maneuver	17	-	-	-	-	-
Stage 1	193	-	-	-	-	-
Stage 2	211	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	21	0.6		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	487	-	17	381	-	-
HCM Lane V/C Ratio	0.178	-	0.083	0.174	-	-
HCM Control Delay (s)	14	-	235.1	16.4	-	-
HCM Lane LOS	B	-	F	C	-	-
HCM 95th %tile Q(veh)	0.6	-	0.2	0.6	-	-

Lanier Tract DRI

5: GA 53 & Lanier Valley Dr/Ahaluna Dr

existing p.m.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	33.0	33.0		33.0	33.0		28.0	127.0		99.0	99.0	
Total Split (%)	20.6%	20.6%		20.6%	20.6%		17.5%	79.4%		61.9%	61.9%	
Maximum Green (s)	26.4	26.4		26.4	26.4		22.4	120.9		92.9	92.9	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	4.5		4.5	4.5	
All-Red Time (s)	2.6	2.6		2.6	2.6		2.6	1.6		1.6	1.6	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.6			6.6		5.6	6.1		6.1	6.1	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		C-Max	C-Max	
Act Effect Green (s)		15.5			15.5		132.3	131.8		117.1	117.1	
Actuated g/C Ratio		0.10			0.10		0.83	0.82		0.73	0.73	
v/c Ratio		0.56			0.85		0.52	0.63		0.15	0.48	
Control Delay		26.1			97.4		9.9	8.5		11.5	10.4	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		26.1			97.4		9.9	8.5		11.5	10.4	
LOS		C			F		A	A		B	B	
Approach Delay		26.1			97.4			8.6			10.4	
Approach LOS		C			F			A			B	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 129 (81%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 65

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.85

Intersection Signal Delay: 12.7

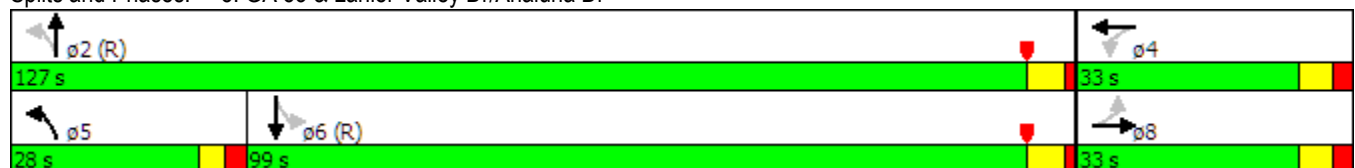
Intersection LOS: B

Intersection Capacity Utilization 79.8%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 5: GA 53 & Lanier Valley Dr/Ahaluna Dr



Lanier Tract DRI

6: 53-Dawsonville Hwy & Academy Sports

existing p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	13	3	60	118	7	42	87	1763	138	19	1199	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			4%			1%			0%	
Storage Length (ft)	0		0	0		70	200		170	190		360
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	0			0			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1900	1615	1769	1862	1583	1796	3592	1607	1805	3574	1615
Flt Permitted	0.752			0.756			0.177			0.083		
Satd. Flow (perm)	1429	1900	1615	1408	1862	1583	335	3592	1607	158	3574	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			63			63			69			64
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		262			246			1836			685	
Travel Time (s)		7.1			6.7			27.8			10.4	
Peak Hour Factor	0.95	0.95	0.95	0.80	0.80	0.80	0.98	0.98	0.98	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
Adj. Flow (vph)	14	3	63	148	9	52	89	1799	141	20	1236	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	14	3	63	148	9	52	89	1799	141	20	1236	28
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.03	1.03	1.03	1.01	1.01	1.01	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1	1	1	1	1	1	1	0
Detector Template												
Leading Detector (ft)	40	40	0	40	40	40	40	336	0	40	336	0
Trailing Detector (ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Size(ft)	40	40	0	40	40	40	40	6	0	40	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8		8	4		4	2		2	6		6
Detector Phase	8	8	8	4	4	4	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	42.0	42.0	42.0	42.4	42.4	42.4	11.4	30.3	30.3	11.0	29.3	29.3

Lanier Tract DRI

6: 53-Dawsonville Hwy & Academy Sports

existing p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	43.0	43.0	43.0	43.0	43.0	43.0	13.6	106.0	106.0	11.0	103.4	103.4
Total Split (%)	26.9%	26.9%	26.9%	26.9%	26.9%	26.9%	8.5%	66.3%	66.3%	6.9%	64.6%	64.6%
Maximum Green (s)	36.6	36.6	36.6	36.6	36.6	36.6	7.2	99.8	99.8	5.0	97.2	97.2
Yellow Time (s)	3.4	3.4	3.4	3.4	3.4	3.4	3.4	4.3	4.3	3.0	4.3	4.3
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	1.9	1.9	3.0	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.2	6.2	6.0	6.2	6.2
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0
Flash Dont Walk (s)	23.0	23.0	23.0	32.0	32.0	32.0		20.0	20.0		19.0	19.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0	0		0	0
Act Effect Green (s)	22.1	22.1	22.1	22.1	22.1	22.1	122.7	118.0	118.0	117.5	111.4	111.4
Actuated g/C Ratio	0.14	0.14	0.14	0.14	0.14	0.14	0.77	0.74	0.74	0.73	0.70	0.70
v/c Ratio	0.07	0.01	0.23	0.76	0.04	0.19	0.27	0.68	0.12	0.11	0.50	0.02
Control Delay	57.2	55.0	13.8	89.5	56.0	9.9	7.8	13.6	6.8	5.5	8.9	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
Total Delay	57.2	55.0	13.8	89.5	56.0	9.9	7.8	13.6	6.8	5.5	9.0	0.0
LOS	E	D	B	F	E	A	A	B	A	A	A	A
Approach Delay		22.9			68.3			12.9			8.7	
Approach LOS		C			E			B			A	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 120 (75%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 115

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.76

Intersection Signal Delay: 14.8

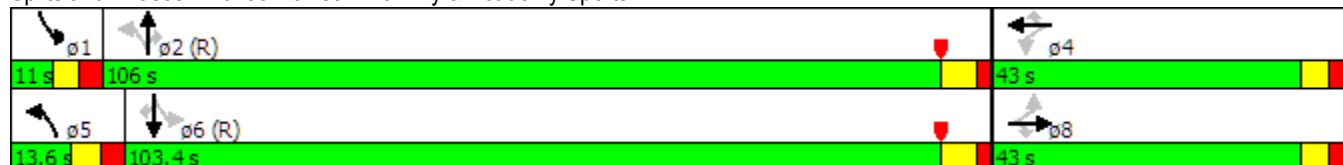
Intersection LOS: B

Intersection Capacity Utilization 81.6%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 6: 53-Dawsonville Hwy & Academy Sports



Lanier Tract DRI

8: Dawsonville Highway/GA 53 & McEver Road/McEver

existing p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	845	213	386	87	91	81	433	1362	46	62	1029	481
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			5%			1%			-1%	
Storage Length (ft)	180		0	0		0	310		185	255		0
Storage Lanes	2		1	1		0	2		1	1		1
Taper Length (ft)	50			0			50			50		
Lane Util. Factor	0.97	0.95	0.95	1.00	1.00	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Frt		0.951	0.850		0.929				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3484	1708	1527	1760	1721	0	3484	3592	1607	1814	3592	1623
Flt Permitted	0.950			0.550			0.950			0.950		
Satd. Flow (perm)	3484	1708	1527	1019	1721	0	3484	3592	1607	1814	3592	1623
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		19	296		27				172			307
Link Speed (mph)		45			25			45			45	
Link Distance (ft)		580			331			921			1504	
Travel Time (s)		8.8			9.0			14.0			22.8	
Peak Hour Factor	0.95	0.95	0.95	0.86	0.86	0.86	0.97	0.97	0.97	0.91	0.91	0.91
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
Adj. Flow (vph)	889	224	406	101	106	94	446	1404	47	68	1131	529
Shared Lane Traffic (%)			27%									
Lane Group Flow (vph)	889	334	296	101	200	0	446	1404	47	68	1131	529
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.03	1.03	1.03	1.01	1.01	1.01	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1		1	1	0	1	1	0
Detector Template												
Leading Detector (ft)	40	40	0	40	40		40	336	0	40	336	0
Trailing Detector (ft)	0	0	0	0	0		0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0		0	330	0	0	330	0
Detector 1 Size(ft)	40	40	0	40	40		40	6	0	40	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	NA	Perm	pm+pt	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases			8	4					6			2
Detector Phase	3	8	8	7	4		1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	13.2	50.2	50.2	11.6	48.2		13.4	35.6	35.6	12.9	44.6	44.6

Lanier Tract DRI

8: Dawsonville Highway/GA 53 & McEver Road/McEver

existing p.m.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	37.0	72.1	72.1	13.1	48.2		23.0	61.8	61.8	13.0	51.8	51.8
Total Split (%)	23.1%	45.1%	45.1%	8.2%	30.1%		14.4%	38.6%	38.6%	8.1%	32.4%	32.4%
Maximum Green (s)	29.7	64.8	64.8	6.6	40.9		15.5	55.2	55.2	5.8	45.2	45.2
Yellow Time (s)	4.3	4.3	4.3	3.5	4.3		4.5	4.4	4.4	4.2	4.4	4.4
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	2.2	2.2	3.0	2.2	2.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.3	7.3	7.3	6.5	7.3		7.5	6.6	6.6	7.2	6.6	6.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)		4.0	4.0		4.0			4.0	4.0		4.0	4.0
Flash Dont Walk (s)		38.0	38.0		36.0			25.0	25.0		34.0	34.0
Pedestrian Calls (#/hr)		0	0		0			0	0		0	0
Act Effect Green (s)	29.7	45.6	45.6	29.1	21.7		15.5	66.4	66.4	13.8	64.4	64.4
Actuated g/C Ratio	0.19	0.28	0.28	0.18	0.14		0.10	0.42	0.42	0.09	0.40	0.40
v/c Ratio	1.38	0.67	0.46	0.47	0.78		1.32	0.94	0.06	0.44	0.78	0.63
Control Delay	225.2	53.9	6.2	45.5	77.5		221.7	71.5	0.1	73.5	62.2	34.7
Queue Delay	0.0	0.4	0.1	1.2	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	225.2	54.3	6.4	46.7	77.5		221.7	71.5	0.1	73.5	62.2	34.7
LOS	F	D	A	D	E		F	E	A	E	E	C
Approach Delay		145.0			67.2			105.0			54.2	
Approach LOS		F			E			F			D	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 52 (33%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.38

Intersection Signal Delay: 98.0

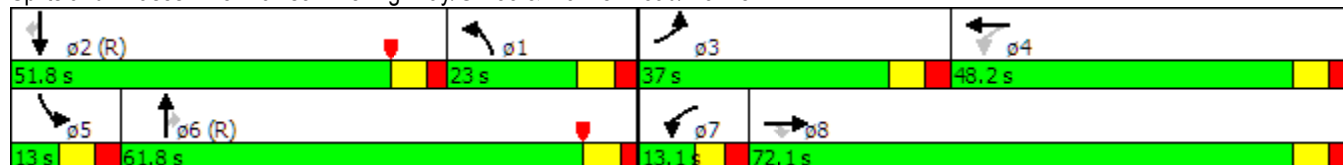
Intersection LOS: F

Intersection Capacity Utilization 99.3%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 8: Dawsonville Highway/GA 53 & McEver Road/McEver



Lanier Tract DRI

9: Dawsonville Highway & Greenhill Circle/Greenhill Circle

existing p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	132	9	138	60	20	38	248	1749	70	40	1392	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		3%			7%			1%			0%	
Storage Length (ft)	0		0	0		0	190		190	185		100
Storage Lanes	0		1	0		1	1		1	1		1
Taper Length (ft)	0			0			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected		0.955			0.964		0.950			0.950		
Satd. Flow (prot)	0	1787	1591	0	1767	1558	1796	3592	1607	1805	3610	1615
Flt Permitted		0.608			0.504		0.091			0.088		
Satd. Flow (perm)	0	1138	1591	0	924	1558	172	3592	1607	167	3610	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			152			95			54			95
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		288			254			778			921	
Travel Time (s)		7.9			6.9			11.8			14.0	
Peak Hour Factor	0.91	0.91	0.91	0.78	0.78	0.78	0.97	0.97	0.97	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	145	10	152	77	26	49	256	1803	72	42	1465	56
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	155	152	0	103	49	256	1803	72	42	1465	56
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.02	1.02	1.02	1.05	1.05	1.05	1.01	1.01	1.01	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1	0	1	1	0	0	1	0
Detector Template	Left			Left								
Leading Detector (ft)	20	40	0	20	40	0	40	336	0	0	336	0
Trailing Detector (ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Size(ft)	20	40	0	20	40	0	40	6	0	0	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8		8	4		4	6		6	2		2
Detector Phase	8	8	8	4	4	4	1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.0	23.0	23.0	39.9	39.9	39.9	11.0	28.0	28.0	10.0	36.0	36.0

Lanier Tract DRI

9: Dawsonville Highway & Greenhill Circle/Greenhill Circle

existing p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	40.0	40.0	40.0	40.0	40.0	40.0	35.0	109.0	109.0	11.0	85.0	85.0
Total Split (%)	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	21.9%	68.1%	68.1%	6.9%	53.1%	53.1%
Maximum Green (s)	34.1	34.1	34.1	34.1	34.1	34.1	29.0	103.0	103.0	6.0	79.0	79.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	4.4	4.4	3.5	4.4	4.4
All-Red Time (s)	2.9	2.9	2.9	2.9	2.9	2.9	3.0	1.6	1.6	1.5	1.6	1.6
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.9	5.9		5.9	5.9	6.0	6.0	6.0	5.0	6.0	6.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)				4.0	4.0	4.0		4.0	4.0		4.0	4.0
Flash Dont Walk (s)				30.0	30.0	30.0		18.0	18.0		26.0	26.0
Pedestrian Calls (#/hr)				0	0	0		0	0		0	0
Act Effect Green (s)		25.7	25.7		25.7	25.7	122.4	113.4	113.4	101.3	94.2	94.2
Actuated g/C Ratio		0.16	0.16		0.16	0.16	0.76	0.71	0.71	0.63	0.59	0.59
v/c Ratio		0.85	0.40		0.70	0.15	0.72	0.71	0.06	0.25	0.69	0.06
Control Delay		100.8	10.4		86.0	0.9	25.8	25.6	6.1	16.4	50.1	11.5
Queue Delay		0.0	0.4		3.9	0.0	0.0	7.9	0.0	0.0	0.4	0.0
Total Delay		100.8	10.8		90.0	0.9	25.8	33.5	6.1	16.4	50.4	11.5
LOS		F	B		F	A	C	C	A	B	D	B
Approach Delay		56.2			61.3			31.6			48.1	
Approach LOS		E			E			C			D	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow

Natural Cycle: 110

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.85

Intersection Signal Delay: 40.7

Intersection LOS: D

Intersection Capacity Utilization 81.6%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 9: Dawsonville Highway & Greenhill Circle/Greenhill Circle



Lanier Tract DRI

10: Dawsonville Highway & Shallowford Rd/Best Buy

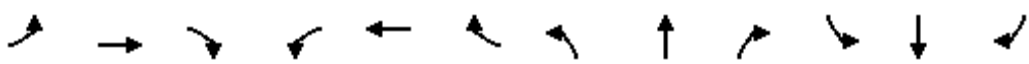
existing p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	518	38	26	36	27	7	40	1639	114	7	1161	463
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-1%			10%			-4%			-1%	
Storage Length (ft)	350		350	0		0	350		150	265		0
Storage Lanes	1		0	0		1	1		1	1		1
Taper Length (ft)	100			0			100			100		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950	0.959			0.972		0.950			0.950		
Satd. Flow (prot)	1723	1740	1623	0	1754	1534	1841	3682	1647	1814	3628	1623
Flt Permitted	0.950	0.959			0.972		0.113			0.060		
Satd. Flow (perm)	1723	1740	1623	0	1754	1534	219	3682	1647	115	3628	1623
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			106			111			65			321
Link Speed (mph)		45			25			45			45	
Link Distance (ft)		653			178			1046			778	
Travel Time (s)		9.9			4.9			15.8			11.8	
Peak Hour Factor	0.90	0.90	0.90	0.88	0.88	0.88	0.94	0.94	0.94	0.91	0.91	0.91
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	576	42	29	41	31	8	43	1744	121	8	1276	509
Shared Lane Traffic (%)	47%											
Lane Group Flow (vph)	305	313	29	0	72	8	43	1744	121	8	1276	509
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes										
Headway Factor	0.99	0.99	0.99	1.07	1.07	1.07	0.97	0.97	0.97	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1	0	1	1	0	0	1	0
Detector Template				Left								
Leading Detector (ft)	40	40	0	20	40	0	40	336	0	0	336	0
Trailing Detector (ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Size(ft)	40	40	0	20	40	0	40	6	0	0	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases	3	3		4	4		1	6			2	
Permitted Phases			3			4	6		6	2		2
Detector Phase	3	3	3	4	4	4	1	6	6	2	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	36.7	36.7	36.7	38.9	38.9	38.9	10.8	28.8	28.8	30.8	30.8	30.8

Lanier Tract DRI

10: Dawsonville Highway & Shallowford Rd/Best Buy

existing p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	37.0	37.0	37.0	38.9	38.9	38.9	10.8	84.1	84.1	73.3	73.3	73.3
Total Split (%)	23.1%	23.1%	23.1%	24.3%	24.3%	24.3%	6.8%	52.6%	52.6%	45.8%	45.8%	45.8%
Maximum Green (s)	30.3	30.3	30.3	33.0	33.0	33.0	5.0	77.3	77.3	66.5	66.5	66.5
Yellow Time (s)	4.5	4.5	4.5	3.0	3.0	3.0	3.0	4.9	4.9	4.9	4.9	4.9
All-Red Time (s)	2.2	2.2	2.2	2.9	2.9	2.9	2.8	1.9	1.9	1.9	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.7	6.7	6.7		5.9	5.9	5.8	6.8	6.8	6.8	6.8	6.8
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes			Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	C-Min	C-Min	C-Min
Walk Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0
Flash Dont Walk (s)	26.0	26.0	26.0	29.0	29.0	29.0		18.0	18.0	20.0	20.0	20.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0	0	0	0	0
Act Effect Green (s)	32.0	32.0	32.0		11.9	11.9	97.7	96.7	96.7	86.2	86.2	86.2
Actuated g/C Ratio	0.20	0.20	0.20		0.07	0.07	0.61	0.60	0.60	0.54	0.54	0.54
v/c Ratio	0.88	0.90	0.07		0.55	0.04	0.21	0.78	0.12	0.13	0.65	0.50
Control Delay	88.1	90.1	0.3		86.7	0.3	15.7	27.6	7.1	51.9	55.6	32.8
Queue Delay	1.0	1.2	0.0		0.0	0.0	0.0	7.4	0.0	0.0	2.0	0.4
Total Delay	89.1	91.3	0.3		86.7	0.3	15.7	34.9	7.1	51.9	57.6	33.2
LOS	F	F	A		F	A	B	C	A	D	E	C
Approach Delay		86.2			78.0			32.7			50.7	
Approach LOS		F			E			C			D	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 91 (57%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.90

Intersection Signal Delay: 48.6

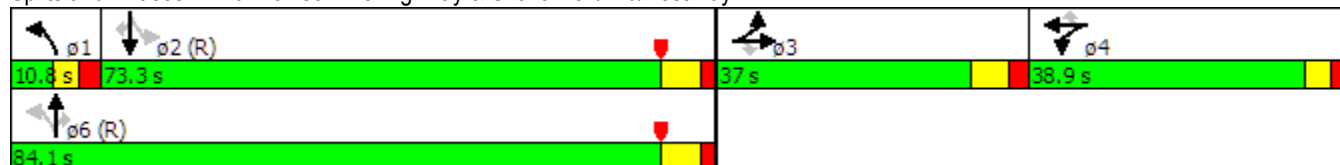
Intersection LOS: D

Intersection Capacity Utilization 81.0%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 10: Dawsonville Highway & Shallowford Rd/Best Buy



Appendix D

No-Build Intersection Analysis

Lanier Tract DRI
1: Sportsman Club Road & Strickland Drive

no build a.m.

Intersection

Int Delay, s/veh 2.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	11	0	7	1	0	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	50	50	58	58	64	64
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	22	0	12	2	0	39

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	52	13	0
Stage 1	13	-	-
Stage 2	39	-	-
Critical Hdwy	6.42	6.22	4.12
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	2.218
Pot Cap-1 Maneuver	957	1067	1604
Stage 1	1010	-	-
Stage 2	983	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	957	1067	1604
Mov Cap-2 Maneuver	957	-	-
Stage 1	1010	-	-
Stage 2	983	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.9	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	- 957	1604	-
HCM Lane V/C Ratio	-	- 0.023	-	-
HCM Control Delay (s)	-	- 8.9	0	-
HCM Lane LOS	-	- A	A	-
HCM 95th %tile Q(veh)	-	- 0.1	0	-

Lanier Tract DRI
2: GA 53 & Sportsman Club Road

no build a.m.

Intersection												
Int Delay, s/veh		11.8										
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	10	1863	0	0	820	9	0	0	0	28	0	17
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	84	84	84	92	92	92	59	59	59
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	2166	0	0	976	11	0	0	0	47	0	29
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	987	0	0	2166	0	0	2678	3177	1083	2088	3172	493
Stage 1	-	-	-	-	-	-	2190	2190	-	982	982	-
Stage 2	-	-	-	-	-	-	488	987	-	1106	2190	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	696	-	-	243	-	-	11	10	213	~ 30	10	522
Stage 1	-	-	-	-	-	-	46	82	-	267	325	-
Stage 2	-	-	-	-	-	-	530	324	-	224	82	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	696	-	-	243	-	-	10	10	213	~ 30	10	522
Mov Cap-2 Maneuver	-	-	-	-	-	-	10	10	-	~ 30	10	-
Stage 1	-	-	-	-	-	-	45	81	-	262	325	-
Stage 2	-	-	-	-	-	-	501	324	-	220	81	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0			0			\$ 496.6		
HCM LOS							A			F		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	-	696	-	-	243	-	-	47				
HCM Lane V/C Ratio	-	0.017	-	-	-	-	-	1.623				
HCM Control Delay (s)	0	10.3	-	-	0	-	-	\$ 496.6				
HCM Lane LOS	A	B	-	-	A	-	-	F				
HCM 95th %tile Q(veh)	-	0.1	-	-	0	-	-	7.5				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined			*: All major volume in platoon					

Lanier Tract DRI
3: GA 53 & Avonlea Way

no build a.m.

Intersection

Int Delay, s/veh 4.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	17	79	13	836	1842	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	88	88	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	20	94	15	950	2142	8

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	2647	1071	2142 0
Stage 1	2142	-	- -
Stage 2	505	-	- -
Critical Hdwy	6.84	6.94	4.14 -
Critical Hdwy Stg 1	5.84	-	- -
Critical Hdwy Stg 2	5.84	-	- -
Follow-up Hdwy	3.52	3.32	2.22 -
Pot Cap-1 Maneuver	~ 19	217	249 -
Stage 1	76	-	- -
Stage 2	571	-	- -
Platoon blocked, %			- -
Mov Cap-1 Maneuver	~ 18	217	249 -
Mov Cap-2 Maneuver	~ 18	-	- -
Stage 1	76	-	- -
Stage 2	537	-	- -

Approach	EB	NB	SB
HCM Control Delay, s	125.5	0.3	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	249	-	18	217	-	-
HCM Lane V/C Ratio	0.059	-	1.124	0.433	-	-
HCM Control Delay (s)	20.4	-	552.3	33.7	-	-
HCM Lane LOS	C	-	F	D	-	-
HCM 95th %tile Q(veh)	0.2	-	2.9	2	-	-

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lanier Tract DRI
4: GA 53 & Canterbury Road

no build a.m.

Intersection						
Int Delay, s/veh	6.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	20	105	25	797	1969	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	86	86	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	23	119	29	927	2164	9
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	2686	1082	2164	0	-	0
Stage 1	2164	-	-	-	-	-
Stage 2	522	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	~ 18	213	244	-	-	-
Stage 1	74	-	-	-	-	-
Stage 2	560	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 16	213	244	-	-	-
Mov Cap-2 Maneuver	~ 16	-	-	-	-	-
Stage 1	74	-	-	-	-	-
Stage 2	493	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	149.3	0.7		0		
HCM LOS	F					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	244	-	16	213	-	-
HCM Lane V/C Ratio	0.119	-	1.42	0.56	-	-
HCM Control Delay (s)	21.7	-	715.5	41.5	-	-
HCM Lane LOS	C	-	F	E	-	-
HCM 95th %tile Q(veh)	0.4	-	3.4	3	-	-
Notes						
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon						

Lanier Tract DRI
7: GA 53 & Beechwood Boulevard

no build a.m.

Intersection						
Int Delay, s/veh	2.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	6	45	30	869	2215	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	Yield	-	None
Storage Length	0	0	200	-	-	360
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	1	0	-
Peak Hour Factor	82	82	87	87	89	89
Heavy Vehicles, %	0	0	0	1	0	0
Mvmt Flow	7	55	34	999	2489	2
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	3057	1244	2489	0	-	0
Stage 1	2489	-	-	-	-	-
Stage 2	568	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	10	169	187	-	-	-
Stage 1	50	-	-	-	-	-
Stage 2	536	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	8	169	187	-	-	-
Mov Cap-2 Maneuver	8	-	-	-	-	-
Stage 1	50	-	-	-	-	-
Stage 2	439	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	133.9	1		0		
HCM LOS	F					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	187	-	8	169	-	-
HCM Lane V/C Ratio	0.184	-	0.915	0.325	-	-
HCM Control Delay (s)	28.6	-	866.6	36.2	-	-
HCM Lane LOS	D	-	F	E	-	-
HCM 95th %tile Q(veh)	0.7	-	1.6	1.3	-	-

Lanier Tract DRI

5: GA 53 & Lanier Valley Dr/Ahaluna Dr

no build a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	21	6	127	41	3	22	61	774	12	15	2099	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		2%			-4%			1%			-1%	
Storage Length (ft)	0		0	0		0	100		0	140		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	0			0			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.889			0.954			0.998				
Flt Protected		0.993			0.970		0.950			0.950		
Satd. Flow (prot)	0	1661	0	0	1793	0	1796	3516	0	1814	3628	0
Flt Permitted		0.940			0.380		0.035			0.309		
Satd. Flow (perm)	0	1572	0	0	703	0	66	3516	0	590	3628	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		71			14			4				
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		340			322			888			1417	
Travel Time (s)		7.7			7.3			13.5			21.5	
Peak Hour Factor	0.91	0.91	0.91	0.83	0.83	0.83	0.85	0.85	0.85	0.87	0.87	0.87
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	0%	0%
Adj. Flow (vph)	23	7	140	49	4	27	72	911	14	17	2413	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	170	0	0	80	0	72	925	0	17	2413	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	0.97	0.97	0.97	1.01	1.01	1.01	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		0	1	
Detector Template	Left			Left								
Leading Detector (ft)	20	40		20	40		40	336		0	336	
Trailing Detector (ft)	0	0		0	0		0	330		0	330	
Detector 1 Position(ft)	0	0		0	0		0	330		0	330	
Detector 1 Size(ft)	20	40		20	40		40	6		0	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		8			4		5	2			6	
Permitted Phases	8			4			2			6		
Detector Phase	8	8		4	4		5	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	23.0	23.0		23.0	23.0		10.6	23.0		23.0	23.0	

Lanier Tract DRI

5: GA 53 & Lanier Valley Dr/Ahaluna Dr

no build a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	24.0	24.0		24.0	24.0		12.0	126.0		114.0	114.0	
Total Split (%)	16.0%	16.0%		16.0%	16.0%		8.0%	84.0%		76.0%	76.0%	
Maximum Green (s)	17.4	17.4		17.4	17.4		6.4	119.9		107.9	107.9	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	4.5		4.5	4.5	
All-Red Time (s)	2.6	2.6		2.6	2.6		2.6	1.6		1.6	1.6	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.6			6.6		5.6	6.1		6.1	6.1	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		C-Max	C-Max	
Act Effect Green (s)		15.4			15.4		122.4	121.9		110.1	110.1	
Actuated g/C Ratio		0.10			0.10		0.82	0.81		0.73	0.73	
v/c Ratio		0.76			0.95		0.58	0.32		0.04	0.91	
Control Delay		58.3			139.1		52.0	2.0		6.3	22.8	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		58.3			139.1		52.0	2.0		6.3	22.8	
LOS		E			F		D	A		A	C	
Approach Delay		58.3			139.1			5.6			22.7	
Approach LOS		E			F			A			C	

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 26 (17%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 110

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.95

Intersection Signal Delay: 22.3

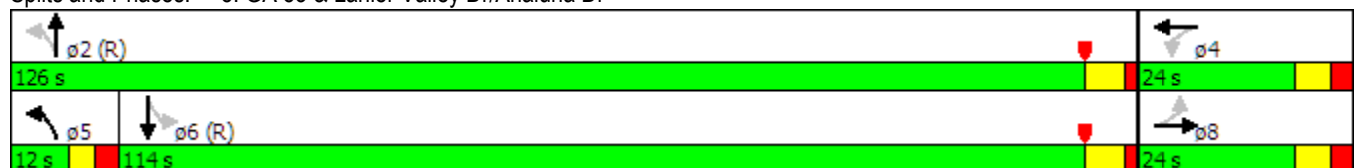
Intersection LOS: C

Intersection Capacity Utilization 80.9%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 5: GA 53 & Lanier Valley Dr/Ahaluna Dr



Lanier Tract DRI

6: 53-Dawsonville Hwy & Academy Sports

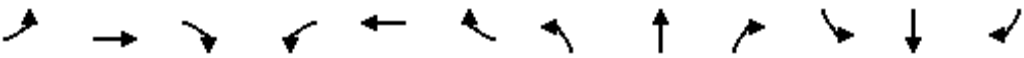
no build a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	2	0	7	2	0	0	12	817	10	6	2196	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			4%			1%			0%	
Storage Length (ft)	0		0	0		70	200		170	190		360
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	0			0			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850						0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1900	1615	1769	1862	1862	1796	3556	1607	1805	3610	1615
Flt Permitted							0.037			0.299		
Satd. Flow (perm)	1900	1900	1615	1862	1862	1862	70	3556	1607	568	3610	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			67						68			68
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		262			246			1836			685	
Travel Time (s)		7.1			6.7			27.8			10.4	
Peak Hour Factor	0.67	0.67	0.67	0.50	0.50	0.50	0.86	0.86	0.86	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%
Adj. Flow (vph)	3	0	10	4	0	0	14	950	12	7	2440	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	3	0	10	4	0	0	14	950	12	7	2440	4
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.03	1.03	1.03	1.01	1.01	1.01	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1	1	1	1	1	1	1	0
Detector Template												
Leading Detector (ft)	40	40	0	40	40	40	40	336	0	40	336	0
Trailing Detector (ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Size(ft)	40	40	0	40	40	40	40	6	0	40	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm		Perm	Perm		Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8		8	4		4	2		2	6		6
Detector Phase	8	8	8	4	4	4	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	42.0	42.0	42.0	42.4	42.4	42.4	11.4	30.3	30.3	11.0	29.3	29.3

Lanier Tract DRI

6: 53-Dawsonville Hwy & Academy Sports

no build a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	42.4	42.4	42.4	42.4	42.4	42.4	11.4	96.6	96.6	11.0	96.2	96.2
Total Split (%)	28.3%	28.3%	28.3%	28.3%	28.3%	28.3%	7.6%	64.4%	64.4%	7.3%	64.1%	64.1%
Maximum Green (s)	36.0	36.0	36.0	36.0	36.0	36.0	5.0	90.4	90.4	5.0	90.0	90.0
Yellow Time (s)	3.4	3.4	3.4	3.4	3.4	3.4	3.4	4.3	4.3	3.0	4.3	4.3
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	1.9	1.9	3.0	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.2	6.2	6.0	6.2	6.2
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0
Flash Dont Walk (s)	23.0	23.0	23.0	32.0	32.0	32.0		20.0	20.0		19.0	19.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0	0		0	0
Act Effect Green (s)	6.1		6.1	6.1			137.2	139.9	139.9	136.1	137.4	137.4
Actuated g/C Ratio	0.04		0.04	0.04			0.91	0.93	0.93	0.91	0.92	0.92
v/c Ratio	0.04		0.08	0.05			0.11	0.29	0.01	0.01	0.74	0.00
Control Delay	69.5		1.1	70.0			4.4	0.9	0.0	0.8	3.9	0.0
Queue Delay	0.0		0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.5		1.1	70.0			4.4	0.9	0.0	0.8	3.9	0.0
LOS	E		A	E			A	A	A	A	A	A
Approach Delay								1.0			3.9	
Approach LOS								A			A	

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 27 (18%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 145

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.74

Intersection Signal Delay: 3.2

Intersection LOS: A

Intersection Capacity Utilization 84.9%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 6: 53-Dawsonville Hwy & Academy Sports

 p1	 p2 (R)		 p4
11 s	96.6 s		42.4 s
 p5	 p6 (R)		 p8
11.4 s	96.2 s		42.4 s

Lanier Tract DRI

8: Dawsonville Highway/GA 53 & McEver Road/McEver

no build a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	431	31	378	46	21	20	311	513	61	31	1292	914
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			5%			1%			-1%	
Storage Length (ft)	180		0	0		0	310		185	255		0
Storage Lanes	2		1	1		0	2		1	1		1
Taper Length (ft)	50			0			50			50		
Lane Util. Factor	0.97	0.95	0.95	1.00	1.00	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Frt		0.872	0.850		0.927				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3484	1566	1527	1760	1717	0	3484	3487	1575	1814	3628	1623
Flt Permitted	0.950			0.598			0.950			0.950		
Satd. Flow (perm)	3484	1566	1527	1108	1717	0	3484	3487	1575	1814	3628	1623
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		183	207		31				184			544
Link Speed (mph)		45			45			45			45	
Link Distance (ft)		580			331			921			1624	
Travel Time (s)		8.8			5.0			14.0			24.6	
Peak Hour Factor	0.97	0.97	0.97	0.62	0.62	0.62	0.93	0.93	0.93	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	3%	2%	0%	0%	0%
Adj. Flow (vph)	444	32	390	74	34	32	334	552	66	34	1436	1016
Shared Lane Traffic (%)			47%									
Lane Group Flow (vph)	444	215	207	74	66	0	334	552	66	34	1436	1016
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.03	1.03	1.03	1.01	1.01	1.01	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1		1	1	0	1	1	0
Detector Template												
Leading Detector (ft)	40	40	0	40	40		40	336	0	40	336	0
Trailing Detector (ft)	0	0	0	0	0		0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0		0	330	0	0	330	0
Detector 1 Size(ft)	40	40	0	40	40		40	6	0	40	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	NA	Perm	pm+pt	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases			8	4					6			2
Detector Phase	3	8	8	7	4		1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	13.2	50.2	50.2	11.6	48.2		13.4	35.6	35.6	12.9	44.6	44.6

Lanier Tract DRI

8: Dawsonville Highway/GA 53 & McEver Road/McEver

no build a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	23.0	59.1	59.1	12.1	48.2		20.0	64.6	64.6	14.2	58.8	58.8
Total Split (%)	15.3%	39.4%	39.4%	8.1%	32.1%		13.3%	43.1%	43.1%	9.5%	39.2%	39.2%
Maximum Green (s)	15.7	51.8	51.8	5.6	40.9		12.5	58.0	58.0	7.0	52.2	52.2
Yellow Time (s)	4.3	4.3	4.3	3.5	4.3		4.5	4.4	4.4	4.2	4.4	4.4
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	2.2	2.2	3.0	2.2	2.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.3	7.3	7.3	6.5	7.3		7.5	6.6	6.6	7.2	6.6	6.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)		4.0	4.0		4.0			4.0	4.0		4.0	4.0
Flash Dont Walk (s)		38.0	38.0		36.0			25.0	25.0		34.0	34.0
Pedestrian Calls (#/hr)		0	0		0			0	0		0	0
Act Effect Green (s)	16.1	17.5	17.5	14.0	8.8		12.5	93.5	93.5	8.3	86.5	86.5
Actuated g/C Ratio	0.11	0.12	0.12	0.09	0.06		0.08	0.62	0.62	0.06	0.58	0.58
v/c Ratio	1.19	0.62	0.57	0.58	0.51		1.15	0.25	0.06	0.34	0.69	0.87
Control Delay	164.3	20.5	13.5	70.3	52.3		163.5	17.6	1.5	81.4	21.9	15.3
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	164.3	20.5	13.5	70.3	52.3		163.5	17.6	1.5	81.4	21.9	15.3
LOS	F	C	B	E	D		F	B	A	F	C	B
Approach Delay		92.6			61.8			67.7			20.0	
Approach LOS		F			E			E			C	

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 19 (13%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.19

Intersection Signal Delay: 45.7

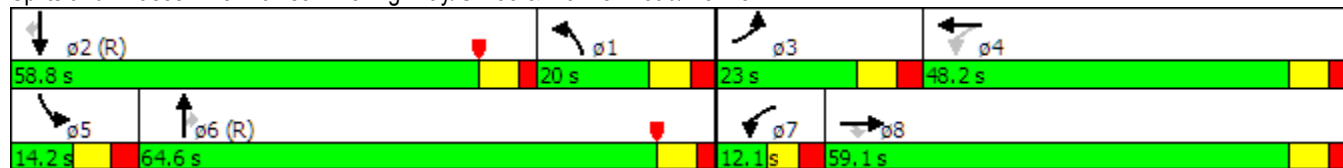
Intersection LOS: D

Intersection Capacity Utilization 87.5%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 8: Dawsonville Highway/GA 53 & McEver Road/McEver



Lanier Tract DRI

9: Dawsonville Highway & Greenhill Circle/Greenhill Circle

no build a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	74	1	156	7	1	4	149	832	11	13	1550	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		3%			7%			1%			0%	
Storage Length (ft)	0		0	0		0	190		190	185		100
Storage Lanes	0		1	0		1	1		1	1		1
Taper Length (ft)	0			0			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected		0.953			0.957		0.950			0.950		
Satd. Flow (prot)	0	1784	1591	0	1755	1558	1796	3522	1607	1805	3610	1615
Flt Permitted		0.721			0.751		0.082			0.296		
Satd. Flow (perm)	0	1349	1591	0	1377	1558	155	3522	1607	562	3610	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			143			102			57			101
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		288			254			778			921	
Travel Time (s)		7.9			6.9			11.8			14.0	
Peak Hour Factor	0.90	0.90	0.90	0.69	0.69	0.69	0.86	0.86	0.86	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	0%	0%
Adj. Flow (vph)	82	1	173	10	1	6	173	967	13	14	1685	62
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	83	173	0	11	6	173	967	13	14	1685	62
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.02	1.02	1.02	1.05	1.05	1.05	1.01	1.01	1.01	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1	0	1	1	0	0	1	0
Detector Template	Left			Left								
Leading Detector (ft)	20	40	0	20	40	0	40	336	0	0	336	0
Trailing Detector (ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Size(ft)	20	40	0	20	40	0	40	6	0	0	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8		8	4		4	6		6	2		2
Detector Phase	8	8	8	4	4	4	1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.0	23.0	23.0	39.9	39.9	39.9	11.0	28.0	28.0	10.0	36.0	36.0

Lanier Tract DRI

9: Dawsonville Highway & Greenhill Circle/Greenhill Circle

no build a.m.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	39.9	39.9	39.9	39.9	39.9	39.9	22.0	100.1	100.1	10.0	88.1	88.1
Total Split (%)	26.6%	26.6%	26.6%	26.6%	26.6%	26.6%	14.7%	66.7%	66.7%	6.7%	58.7%	58.7%
Maximum Green (s)	34.0	34.0	34.0	34.0	34.0	34.0	16.0	94.1	94.1	5.0	82.1	82.1
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	4.4	4.4	3.5	4.4	4.4
All-Red Time (s)	2.9	2.9	2.9	2.9	2.9	2.9	3.0	1.6	1.6	1.5	1.6	1.6
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.9	5.9		5.9	5.9	6.0	6.0	6.0	5.0	6.0	6.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)				4.0	4.0	4.0		4.0	4.0		4.0	4.0
Flash Dont Walk (s)				30.0	30.0	30.0		18.0	18.0		26.0	26.0
Pedestrian Calls (#/hr)				0	0	0		0	0		0	0
Act Effect Green (s)		14.6	14.6		14.6	14.6	123.5	119.1	119.1	108.8	102.1	102.1
Actuated g/C Ratio		0.10	0.10		0.10	0.10	0.82	0.79	0.79	0.73	0.68	0.68
v/c Ratio		0.64	0.61		0.08	0.02	0.58	0.35	0.01	0.03	0.69	0.05
Control Delay		85.5	24.1		59.9	0.2	29.1	4.6	0.0	4.0	14.0	0.8
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
Total Delay		85.5	24.1		59.9	0.2	29.1	4.6	0.0	4.0	14.1	0.8
LOS		F	C		E	A	C	A	A	A	B	A
Approach Delay		44.0			38.8			8.2			13.5	
Approach LOS		D			D			A			B	

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.69

Intersection Signal Delay: 14.2

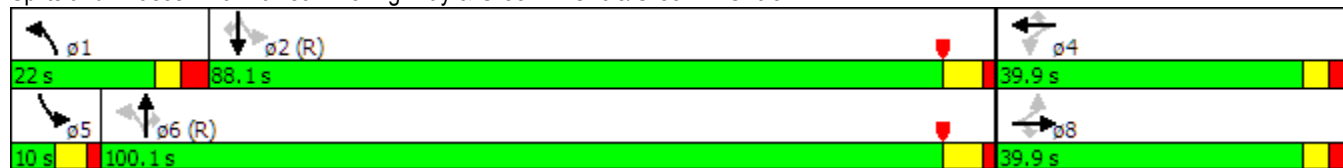
Intersection LOS: B

Intersection Capacity Utilization 76.8%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 9: Dawsonville Highway & Greenhill Circle/Greenhill Circle



Lanier Tract DRI

10: Dawsonville Highway & Shallowford Rd/Best Buy

no build a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	152	2	9	2	4	3	11	815	14	1	1379	373
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-1%			10%			-4%			-1%	
Storage Length (ft)	350		350	0		0	350		150	265		0
Storage Lanes	1		0	0		1	1		1	1		1
Taper Length (ft)	100			0			100			100		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950	0.953			0.982		0.950			0.950		
Satd. Flow (prot)	1723	1729	1623	0	1773	1534	1841	3646	1647	1814	3592	1623
Flt Permitted	0.950	0.953			0.982		0.125			0.292		
Satd. Flow (perm)	1723	1729	1623	0	1773	1534	242	3646	1647	558	3592	1623
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			113			119			70			218
Link Speed (mph)		45			25			45			45	
Link Distance (ft)		653			178			957			778	
Travel Time (s)		9.9			4.9			14.5			11.8	
Peak Hour Factor	0.84	0.84	0.84	0.56	0.56	0.56	0.83	0.83	0.83	0.93	0.93	0.93
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	1%	0%
Adj. Flow (vph)	181	2	11	4	7	5	13	982	17	1	1483	401
Shared Lane Traffic (%)	49%											
Lane Group Flow (vph)	92	91	11	0	11	5	13	982	17	1	1483	401
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes										
Headway Factor	0.99	0.99	0.99	1.07	1.07	1.07	0.97	0.97	0.97	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1	0	1	1	0	0	1	0
Detector Template				Left								
Leading Detector (ft)	40	40	0	20	40	0	40	336	0	0	336	0
Trailing Detector (ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Size(ft)	40	40	0	20	40	0	40	6	0	0	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases	3	3		4	4		1	6			2	
Permitted Phases			3			4	6		6	2		2
Detector Phase	3	3	3	4	4	4	1	6	6	2	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	36.7	36.7	36.7	38.9	38.9	38.9	10.8	28.8	28.8	30.8	30.8	30.8

Lanier Tract DRI

10: Dawsonville Highway & Shallowford Rd/Best Buy

no build a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	36.7	36.7	36.7	38.9	38.9	38.9	10.8	74.4	74.4	63.6	63.6	63.6
Total Split (%)	24.5%	24.5%	24.5%	25.9%	25.9%	25.9%	7.2%	49.6%	49.6%	42.4%	42.4%	42.4%
Maximum Green (s)	30.0	30.0	30.0	33.0	33.0	33.0	5.0	67.6	67.6	56.8	56.8	56.8
Yellow Time (s)	4.5	4.5	4.5	3.0	3.0	3.0	3.0	4.9	4.9	4.9	4.9	4.9
All-Red Time (s)	2.2	2.2	2.2	2.9	2.9	2.9	2.8	1.9	1.9	1.9	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.7	6.7	6.7		5.9	5.9	5.8	6.8	6.8	6.8	6.8	6.8
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes			Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	C-Min	C-Min	C-Min
Walk Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0
Flash Dont Walk (s)	26.0	26.0	26.0	29.0	29.0	29.0		18.0	18.0	20.0	20.0	20.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0	0	0	0	0
Act Effect Green (s)	13.4	13.4	13.4		6.5	6.5	118.7	117.7	117.7	113.0	113.0	113.0
Actuated g/C Ratio	0.09	0.09	0.09		0.04	0.04	0.79	0.78	0.78	0.75	0.75	0.75
v/c Ratio	0.60	0.59	0.04		0.14	0.03	0.05	0.34	0.01	0.00	0.55	0.31
Control Delay	81.2	80.6	0.3		72.5	0.3	5.8	6.1	0.0	7.0	10.2	4.2
Queue Delay	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0
Total Delay	81.2	80.6	0.3		72.5	0.3	5.8	6.1	0.0	7.0	10.5	4.2
LOS	F	F	A		E	A	A	A	A	A	B	A
Approach Delay		76.3			49.9			6.0			9.1	
Approach LOS		E			D			A			A	

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 45 (30%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.60

Intersection Signal Delay: 12.5

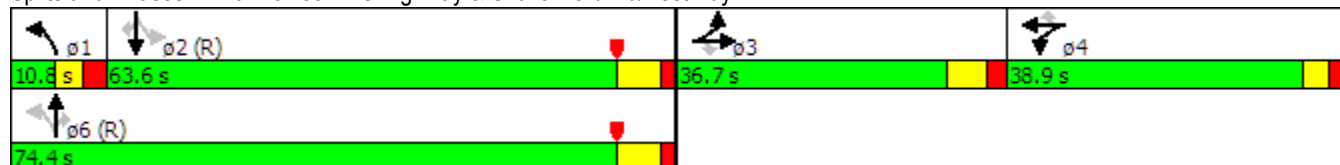
Intersection LOS: B

Intersection Capacity Utilization 62.6%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 10: Dawsonville Highway & Shallowford Rd/Best Buy



Lanier Tract DRI
1: Sportsman Club Road & Strickland Drive

no build p.m.

Intersection						
Int Delay, s/veh	1.7					
Movement	WBL	WBR		NBT	NBR	SBL SBT
Vol, veh/h	8	0		32	10	0 25
Conflicting Peds, #/hr	0	0		0	0	0 0
Sign Control	Stop	Stop		Free	Free	Free Free
RT Channelized	-	None		-	None	- None
Storage Length	0	-		-	-	- -
Veh in Median Storage, #	0	-		0	-	- 0
Grade, %	0	-		0	-	- 0
Peak Hour Factor	44	44		86	86	82 82
Heavy Vehicles, %	2	2		2	2	2 2
Mvmt Flow	18	0		37	12	0 30
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	73	43	0	0	49	0
Stage 1	43	-	-	-	-	-
Stage 2	30	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	931	1027	-	-	1558	-
Stage 1	979	-	-	-	-	-
Stage 2	993	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	931	1027	-	-	1558	-
Mov Cap-2 Maneuver	931	-	-	-	-	-
Stage 1	979	-	-	-	-	-
Stage 2	993	-	-	-	-	-
Approach	WB		NB		SB	
HCM Control Delay, s	8.9		0		0	
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	931	1558	-	
HCM Lane V/C Ratio	-	-	0.02	-	-	
HCM Control Delay (s)	-	-	8.9	0	-	
HCM Lane LOS	-	-	A	A	-	
HCM 95th %tile Q(veh)	-	-	0.1	0	-	

Lanier Tract DRI
2: GA 53 & Sportsman Club Road

no build p.m.

Intersection												
Int Delay, s/veh	34.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	17	1147	0	2	1845	21	0	0	0	31	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	96	96	96	92	92	92	66	66	66
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	18	1207	0	2	1922	22	0	0	0	47	0	15
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1944	0	0	1207	0	0	2208	3191	604	2576	3180	972
Stage 1	-	-	-	-	-	-	1243	1243	-	1937	1937	-
Stage 2	-	-	-	-	-	-	965	1948	-	639	1243	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	298	-	-	574	-	-	24	10	441	~ 13	10	252
Stage 1	-	-	-	-	-	-	185	245	-	68	111	-
Stage 2	-	-	-	-	-	-	274	110	-	431	245	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	298	-	-	574	-	-	21	9	441	~ 12	9	252
Mov Cap-2 Maneuver	-	-	-	-	-	-	21	9	-	~ 12	9	-
Stage 1	-	-	-	-	-	-	174	230	-	64	111	-
Stage 2	-	-	-	-	-	-	257	110	-	405	230	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			0			0			\$ 1780.7		
HCM LOS							A			F		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	-	298	-	-	574	-	-	16				
HCM Lane V/C Ratio	-	0.06	-	-	0.004	-	-	3.883				
HCM Control Delay (s)	0	17.9	-	-	11.3	-	\$ 1780.7					
HCM Lane LOS	A	C	-	-	B	-	-	F				
HCM 95th %tile Q(veh)	-	0.2	-	-	0	-	-	8.5				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined			*: All major volume in platoon					

Intersection						
Int Delay, s/veh	1.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	11	52	68	1822	1217	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	76	76	95	95	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	14	68	72	1918	1217	15
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	2319	609	1217	0	-	0
Stage 1	1217	-	-	-	-	-
Stage 2	1102	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	32	438	569	-	-	-
Stage 1	243	-	-	-	-	-
Stage 2	280	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	28	438	569	-	-	-
Mov Cap-2 Maneuver	28	-	-	-	-	-
Stage 1	243	-	-	-	-	-
Stage 2	245	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	52.1	0.4		0		
HCM LOS	F					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	569	-	28	438	-	-
HCM Lane V/C Ratio	0.126	-	0.517	0.156	-	-
HCM Control Delay (s)	12.2	-	229.1	14.7	-	-
HCM Lane LOS	B	-	F	B	-	-
HCM 95th %tile Q(veh)	0.4	-	1.6	0.5	-	-

Intersection						
Int Delay, s/veh	1.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	8	31	123	1857	1223	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	10	39	128	1934	1274	16
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	2497	637	1274	0	-	0
Stage 1	1274	-	-	-	-	-
Stage 2	1223	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	24	420	541	-	-	-
Stage 1	226	-	-	-	-	-
Stage 2	241	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	18	420	541	-	-	-
Mov Cap-2 Maneuver	18	-	-	-	-	-
Stage 1	226	-	-	-	-	-
Stage 2	184	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	83.2	0.9		0		
HCM LOS	F					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	541	-	18	420	-	-
HCM Lane V/C Ratio	0.237	-	0.556	0.092	-	-
HCM Control Delay (s)	13.7	-	\$ 349.9	14.4	-	-
HCM Lane LOS	B	-	F	B	-	-
HCM 95th %tile Q(veh)	0.9	-	1.5	0.3	-	-

Lanier Tract DRI
7: GA 53 & Beechwood Boulevard

no build p.m.

Intersection						
Int Delay, s/veh	0.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	1	52	95	2206	1532	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	Yield	-	None
Storage Length	0	0	200	-	-	360
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	1	0	-
Peak Hour Factor	71	71	99	99	98	98
Heavy Vehicles, %	0	0	0	0	1	0
Mvmt Flow	1	73	96	2228	1563	10
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	2869	783	1563	0	-	0
Stage 1	1563	-	-	-	-	-
Stage 2	1306	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	14	341	428	-	-	-
Stage 1	161	-	-	-	-	-
Stage 2	221	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	11	341	428	-	-	-
Mov Cap-2 Maneuver	11	-	-	-	-	-
Stage 1	161	-	-	-	-	-
Stage 2	171	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	25.1	0.7		0		
HCM LOS	D					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	428	-	11	341	-	-
HCM Lane V/C Ratio	0.224	-	0.128	0.215	-	-
HCM Control Delay (s)	15.8	-	375.6	18.4	-	-
HCM Lane LOS	C	-	F	C	-	-
HCM 95th %tile Q(veh)	0.8	-	0.3	0.8	-	-

Lanier Tract DRI

5: GA 53 & Lanier Valley Dr/Ahaluna Dr

no build p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	23	1	106	41	8	56	198	1918	42	22	1326	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		2%			-4%			1%			-1%	
Storage Length (ft)	0		0	0		0	100		0	140		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	0			0			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.890			0.928			0.997				
Flt Protected		0.991			0.981		0.950			0.950		
Satd. Flow (prot)	0	1659	0	0	1764	0	1796	3581	0	1814	3592	0
Flt Permitted		0.860			0.589		0.143			0.080		
Satd. Flow (perm)	0	1440	0	0	1059	0	270	3581	0	153	3592	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		119			31			4				
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		340			322			1002			1457	
Travel Time (s)		7.7			7.3			15.2			22.1	
Peak Hour Factor	0.89	0.89	0.89	0.85	0.85	0.85	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
Adj. Flow (vph)	26	1	119	48	9	66	206	1998	44	23	1381	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	146	0	0	123	0	206	2042	0	23	1384	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	0.97	0.97	0.97	1.01	1.01	1.01	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		0	1	
Detector Template	Left			Left								
Leading Detector (ft)	20	40		20	40		40	336		0	336	
Trailing Detector (ft)	0	0		0	0		0	330		0	330	
Detector 1 Position(ft)	0	0		0	0		0	330		0	330	
Detector 1 Size(ft)	20	40		20	40		40	6		0	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		8			4		5	2			6	
Permitted Phases	8			4			2			6		
Detector Phase	8	8		4	4		5	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	23.0	23.0		23.0	23.0		10.6	23.0		23.0	23.0	

Lanier Tract DRI

5: GA 53 & Lanier Valley Dr/Ahaluna Dr

no build p.m.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	33.0	33.0		33.0	33.0		28.0	127.0		99.0	99.0	
Total Split (%)	20.6%	20.6%		20.6%	20.6%		17.5%	79.4%		61.9%	61.9%	
Maximum Green (s)	26.4	26.4		26.4	26.4		22.4	120.9		92.9	92.9	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	4.5		4.5	4.5	
All-Red Time (s)	2.6	2.6		2.6	2.6		2.6	1.6		1.6	1.6	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.6			6.6		5.6	6.1		6.1	6.1	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		C-Max	C-Max	
Act Effect Green (s)		17.5			17.5		130.3	129.8		112.6	112.6	
Actuated g/C Ratio		0.11			0.11		0.81	0.81		0.70	0.70	
v/c Ratio		0.56			0.86		0.62	0.70		0.21	0.55	
Control Delay		23.8			96.6		18.7	10.7		18.1	13.9	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		23.8			96.6		18.7	10.7		18.1	13.9	
LOS		C			F		B	B		B	B	
Approach Delay		23.8			96.6			11.5			14.0	
Approach LOS		C			F			B			B	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 129 (81%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 75

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.86

Intersection Signal Delay: 15.5

Intersection LOS: B

Intersection Capacity Utilization 86.1%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 5: GA 53 & Lanier Valley Dr/Ahaluna Dr



Lanier Tract DRI

6: 53-Dawsonville Hwy & Academy Sports

no build p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	14	3	66	130	8	46	96	1947	152	21	1324	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			4%			1%			0%	
Storage Length (ft)	0		0	0		70	200		170	190		360
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	0			0			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1900	1615	1769	1862	1583	1796	3592	1607	1805	3574	1615
Flt Permitted	0.751			0.756			0.144			0.054		
Satd. Flow (perm)	1427	1900	1615	1408	1862	1583	272	3592	1607	103	3574	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			69			63			70			64
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		262			246			1836			685	
Travel Time (s)		7.1			6.7			27.8			10.4	
Peak Hour Factor	0.95	0.95	0.95	0.80	0.80	0.80	0.98	0.98	0.98	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
Adj. Flow (vph)	15	3	69	162	10	58	98	1987	155	22	1365	31
Shared Lane Traffic (%)												
Lane Group Flow (vph)	15	3	69	162	10	58	98	1987	155	22	1365	31
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.03	1.03	1.03	1.01	1.01	1.01	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1	1	1	1	1	1	1	0
Detector Template												
Leading Detector (ft)	40	40	0	40	40	40	40	336	0	40	336	0
Trailing Detector (ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Size(ft)	40	40	0	40	40	40	40	6	0	40	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8		8	4		4	2		2	6		6
Detector Phase	8	8	8	4	4	4	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	42.0	42.0	42.0	42.4	42.4	42.4	11.4	30.3	30.3	11.0	29.3	29.3

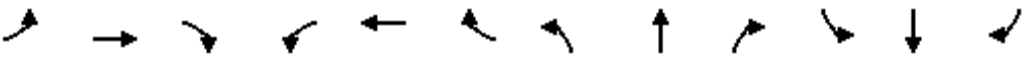
Synchro 8 Report

Marc R Acampora, PE, LLC

Lanier Tract DRI

6: 53-Dawsonville Hwy & Academy Sports

no build p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	42.4	42.4	42.4	42.4	42.4	42.4	15.6	106.6	106.6	11.0	102.0	102.0
Total Split (%)	26.5%	26.5%	26.5%	26.5%	26.5%	26.5%	9.8%	66.6%	66.6%	6.9%	63.8%	63.8%
Maximum Green (s)	36.0	36.0	36.0	36.0	36.0	36.0	9.2	100.4	100.4	5.0	95.8	95.8
Yellow Time (s)	3.4	3.4	3.4	3.4	3.4	3.4	3.4	4.3	4.3	3.0	4.3	4.3
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	1.9	1.9	3.0	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.2	6.2	6.0	6.2	6.2
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0
Flash Dont Walk (s)	23.0	23.0	23.0	32.0	32.0	32.0		20.0	20.0		19.0	19.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0	0		0	0
Act Effect Green (s)	23.7	23.7	23.7	23.7	23.7	23.7	121.3	116.4	116.4	115.8	109.6	109.6
Actuated g/C Ratio	0.15	0.15	0.15	0.15	0.15	0.15	0.76	0.73	0.73	0.72	0.68	0.68
v/c Ratio	0.07	0.01	0.23	0.78	0.04	0.20	0.35	0.76	0.13	0.16	0.56	0.03
Control Delay	55.8	53.3	13.0	89.1	54.6	11.7	9.3	15.7	7.2	7.5	10.9	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
Total Delay	55.8	53.3	13.0	89.1	54.6	11.7	9.3	15.7	7.2	7.5	11.0	0.0
LOS	E	D	B	F	D	B	A	B	A	A	B	A
Approach Delay		21.8			68.1			14.8			10.7	
Approach LOS		C			E			B			B	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 120 (75%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 135

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.78

Intersection Signal Delay: 16.6

Intersection LOS: B

Intersection Capacity Utilization 87.4%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 6: 53-Dawsonville Hwy & Academy Sports

 p1	 p2 (R)		 p4
11 s	106.6 s		42.4 s
 p5	 p6 (R)		 p8
15.6 s	102 s		42.4 s

Lanier Tract DRI

8: Dawsonville Highway/GA 53 & McEver Road/McEver

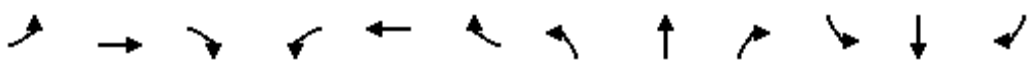
no build p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	933	235	426	96	100	89	478	1504	51	68	1136	531
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			5%			1%			-1%	
Storage Length (ft)	180		0	0		0	310		185	255		0
Storage Lanes	2		1	1		0	2		1	1		1
Taper Length (ft)	50			0			50			50		
Lane Util. Factor	0.97	0.95	0.95	1.00	1.00	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Frt		0.951	0.850		0.929				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3484	1708	1527	1760	1721	0	3484	3592	1607	1814	3592	1623
Flt Permitted	0.950			0.465			0.950			0.950		
Satd. Flow (perm)	3484	1708	1527	861	1721	0	3484	3592	1607	1814	3592	1623
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18	326		27				172			312
Link Speed (mph)		45			25			45			45	
Link Distance (ft)		580			331			921			1504	
Travel Time (s)		8.8			9.0			14.0			22.8	
Peak Hour Factor	0.95	0.95	0.95	0.86	0.86	0.86	0.97	0.97	0.97	0.91	0.91	0.91
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
Adj. Flow (vph)	982	247	448	112	116	103	493	1551	53	75	1248	584
Shared Lane Traffic (%)			27%									
Lane Group Flow (vph)	982	368	327	112	219	0	493	1551	53	75	1248	584
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.03	1.03	1.03	1.01	1.01	1.01	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1		1	1	0	1	1	0
Detector Template												
Leading Detector (ft)	40	40	0	40	40		40	336	0	40	336	0
Trailing Detector (ft)	0	0	0	0	0		0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0		0	330	0	0	330	0
Detector 1 Size(ft)	40	40	0	40	40		40	6	0	40	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	NA	Perm	pm+pt	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases			8	4					6			2
Detector Phase	3	8	8	7	4		1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	13.2	50.2	50.2	11.6	48.2		13.4	35.6	35.6	12.9	44.6	44.6

Lanier Tract DRI

8: Dawsonville Highway/GA 53 & McEver Road/McEver

no build p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	35.0	69.5	69.5	13.7	48.2		23.0	63.8	63.8	13.0	53.8	53.8
Total Split (%)	21.9%	43.4%	43.4%	8.6%	30.1%		14.4%	39.9%	39.9%	8.1%	33.6%	33.6%
Maximum Green (s)	27.7	62.2	62.2	7.2	40.9		15.5	57.2	57.2	5.8	47.2	47.2
Yellow Time (s)	4.3	4.3	4.3	3.5	4.3		4.5	4.4	4.4	4.2	4.4	4.4
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	2.2	2.2	3.0	2.2	2.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.3	7.3	7.3	6.5	7.3		7.5	6.6	6.6	7.2	6.6	6.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)		4.0	4.0		4.0			4.0	4.0		4.0	4.0
Flash Dont Walk (s)		38.0	38.0		36.0			25.0	25.0		34.0	34.0
Pedestrian Calls (#/hr)		0	0		0			0	0		0	0
Act Effect Green (s)	27.7	44.8	44.8	31.5	23.5		15.5	65.4	65.4	15.0	64.6	64.6
Actuated g/C Ratio	0.17	0.28	0.28	0.20	0.15		0.10	0.41	0.41	0.09	0.40	0.40
v/c Ratio	1.63	0.75	0.49	0.54	0.80		1.46	1.06	0.07	0.44	0.86	0.69
Control Delay	329.5	59.4	6.5	47.6	77.6		273.4	95.6	0.1	69.6	66.1	38.9
Queue Delay	0.0	2.9	0.6	9.2	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	329.5	62.2	7.0	56.8	77.6		273.4	95.6	0.1	69.6	66.1	38.9
LOS	F	E	A	E	E		F	F	A	E	E	D
Approach Delay		208.0			70.6			135.0			57.9	
Approach LOS		F			E			F			E	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 52 (33%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.63

Intersection Signal Delay: 127.3

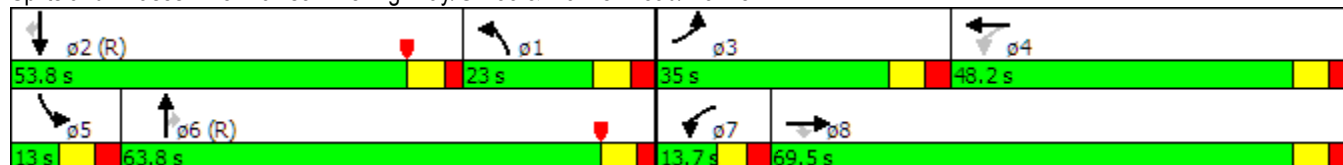
Intersection LOS: F

Intersection Capacity Utilization 106.7%

ICU Level of Service G

Analysis Period (min) 15

Splits and Phases: 8: Dawsonville Highway/GA 53 & McEver Road/McEver



Lanier Tract DRI

9: Dawsonville Highway & Greenhill Circle/Greenhill Circle

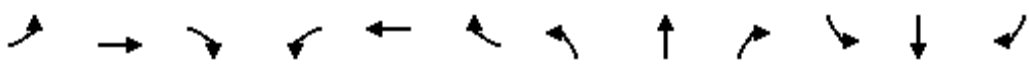
no build p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	146	10	152	66	22	42	274	1931	77	44	1537	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		3%			7%			1%			0%	
Storage Length (ft)	0		0	0		0	190		190	185		100
Storage Lanes	0		1	0		1	1		1	1		1
Taper Length (ft)	0			0			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected		0.955			0.964		0.950			0.950		
Satd. Flow (prot)	0	1787	1591	0	1767	1558	1796	3592	1607	1805	3610	1615
Flt Permitted		0.591			0.482		0.054			0.055		
Satd. Flow (perm)	0	1106	1591	0	884	1558	102	3592	1607	104	3610	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			167			95			54			95
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		288			254			778			921	
Travel Time (s)		7.9			6.9			11.8			14.0	
Peak Hour Factor	0.91	0.91	0.91	0.78	0.78	0.78	0.97	0.97	0.97	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	160	11	167	85	28	54	282	1991	79	46	1618	62
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	171	167	0	113	54	282	1991	79	46	1618	62
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.02	1.02	1.02	1.05	1.05	1.05	1.01	1.01	1.01	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1	0	1	1	0	0	1	0
Detector Template	Left			Left								
Leading Detector (ft)	20	40	0	20	40	0	40	336	0	0	336	0
Trailing Detector (ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Size(ft)	20	40	0	20	40	0	40	6	0	0	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8		8	4		4	6		6	2		2
Detector Phase	8	8	8	4	4	4	1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.0	23.0	23.0	39.9	39.9	39.9	11.0	28.0	28.0	10.0	36.0	36.0

Lanier Tract DRI

9: Dawsonville Highway & Greenhill Circle/Greenhill Circle

no build p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	39.9	39.9	39.9	39.9	39.9	39.9	32.0	110.1	110.1	10.0	88.1	88.1
Total Split (%)	24.9%	24.9%	24.9%	24.9%	24.9%	24.9%	20.0%	68.8%	68.8%	6.3%	55.1%	55.1%
Maximum Green (s)	34.0	34.0	34.0	34.0	34.0	34.0	26.0	104.1	104.1	5.0	82.1	82.1
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	4.4	4.4	3.5	4.4	4.4
All-Red Time (s)	2.9	2.9	2.9	2.9	2.9	2.9	3.0	1.6	1.6	1.5	1.6	1.6
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.9	5.9		5.9	5.9	6.0	6.0	6.0	5.0	6.0	6.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)				4.0	4.0	4.0		4.0	4.0		4.0	4.0
Flash Dont Walk (s)				30.0	30.0	30.0		18.0	18.0		26.0	26.0
Pedestrian Calls (#/hr)				0	0	0		0	0		0	0
Act Effect Green (s)		28.1	28.1		28.1	28.1	120.0	111.5	111.5	96.9	90.2	90.2
Actuated g/C Ratio		0.18	0.18		0.18	0.18	0.75	0.70	0.70	0.61	0.56	0.56
v/c Ratio		0.88	0.40		0.73	0.15	0.86	0.80	0.07	0.38	0.80	0.07
Control Delay		103.0	9.8		87.7	1.7	49.2	28.9	5.5	21.7	55.9	11.8
Queue Delay		0.0	2.3		78.3	0.0	0.0	47.3	0.0	0.0	1.0	0.0
Total Delay		103.0	12.1		166.0	1.7	49.2	76.2	5.5	21.7	56.9	11.8
LOS		F	B		F	A	D	E	A	C	E	B
Approach Delay		58.1			112.9			70.6			54.3	
Approach LOS		E			F			E			D	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow

Natural Cycle: 120

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.88

Intersection Signal Delay: 65.1

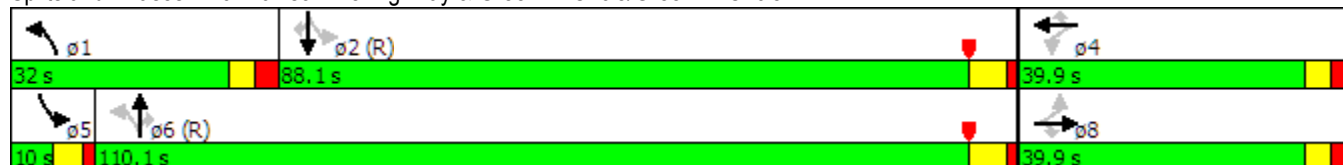
Intersection LOS: E

Intersection Capacity Utilization 87.9%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 9: Dawsonville Highway & Greenhill Circle/Greenhill Circle



Lanier Tract DRI

10: Dawsonville Highway & Shallowford Rd/Best Buy

no build p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	572	42	29	40	30	8	44	1810	126	8	1282	511
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-1%			10%			-4%			-1%	
Storage Length (ft)	350		350	0		0	350		150	265		0
Storage Lanes	1		0	0		1	1		1	1		1
Taper Length (ft)	100			0			100			100		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950	0.959			0.972		0.950			0.950		
Satd. Flow (prot)	1723	1740	1623	0	1754	1534	1841	3682	1647	1814	3628	1623
Flt Permitted	0.950	0.959			0.972		0.085			0.046		
Satd. Flow (perm)	1723	1740	1623	0	1754	1534	165	3682	1647	88	3628	1623
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			106			111			65			321
Link Speed (mph)		45			25			45			45	
Link Distance (ft)		653			178			1046			778	
Travel Time (s)		9.9			4.9			15.8			11.8	
Peak Hour Factor	0.90	0.90	0.90	0.88	0.88	0.88	0.94	0.94	0.94	0.91	0.91	0.91
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	636	47	32	45	34	9	47	1926	134	9	1409	562
Shared Lane Traffic (%)	46%											
Lane Group Flow (vph)	343	340	32	0	79	9	47	1926	134	9	1409	562
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes										
Headway Factor	0.99	0.99	0.99	1.07	1.07	1.07	0.97	0.97	0.97	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1	0	1	1	0	0	1	0
Detector Template				Left								
Leading Detector (ft)	40	40	0	20	40	0	40	336	0	0	336	0
Trailing Detector (ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Size(ft)	40	40	0	20	40	0	40	6	0	0	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases	3	3		4	4		1	6			2	
Permitted Phases			3			4	6		6	2		2
Detector Phase	3	3	3	4	4	4	1	6	6	2	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	36.7	36.7	36.7	38.9	38.9	38.9	10.8	28.8	28.8	30.8	30.8	30.8

Lanier Tract DRI

10: Dawsonville Highway & Shallowford Rd/Best Buy

no build p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	36.8	36.8	36.8	38.9	38.9	38.9	10.8	84.3	84.3	73.5	73.5	73.5
Total Split (%)	23.0%	23.0%	23.0%	24.3%	24.3%	24.3%	6.8%	52.7%	52.7%	45.9%	45.9%	45.9%
Maximum Green (s)	30.1	30.1	30.1	33.0	33.0	33.0	5.0	77.5	77.5	66.7	66.7	66.7
Yellow Time (s)	4.5	4.5	4.5	3.0	3.0	3.0	3.0	4.9	4.9	4.9	4.9	4.9
All-Red Time (s)	2.2	2.2	2.2	2.9	2.9	2.9	2.8	1.9	1.9	1.9	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.7	6.7	6.7		5.9	5.9	5.8	6.8	6.8	6.8	6.8	6.8
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes			Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	C-Min	C-Min	C-Min
Walk Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0
Flash Dont Walk (s)	26.0	26.0	26.0	29.0	29.0	29.0		18.0	18.0	20.0	20.0	20.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0	0	0	0	0
Act Effect Green (s)	30.1	30.1	30.1		12.6	12.6	98.9	97.9	97.9	87.3	87.3	87.3
Actuated g/C Ratio	0.19	0.19	0.19		0.08	0.08	0.62	0.61	0.61	0.55	0.55	0.55
v/c Ratio	1.06	1.04	0.08		0.57	0.04	0.27	0.86	0.13	0.19	0.71	0.55
Control Delay	126.3	121.6	0.4		86.5	0.4	16.6	30.7	7.4	58.2	54.5	33.0
Queue Delay	1.1	1.0	0.0		0.0	0.0	0.0	47.1	0.0	0.0	12.5	0.7
Total Delay	127.5	122.6	0.4		86.5	0.4	16.6	77.8	7.4	58.2	66.9	33.7
LOS	F	F	A		F	A	B	E	A	E	E	C
Approach Delay		119.5			77.7			72.0			57.5	
Approach LOS		F			E			E			E	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 91 (57%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.06

Intersection Signal Delay: 73.1

Intersection LOS: E

Intersection Capacity Utilization 87.3%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 10: Dawsonville Highway & Shallowford Rd/Best Buy

											
10.8 s	73.5 s					36.8 s			38.9 s		
											
84.3 s											

Appendix E

Future Phase One Intersection Analysis

Lanier Tract DRI
1: Sportsman Club Road & Strickland Drive

phase one a.m.

Intersection

Int Delay, s/veh 4.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	30	0	7	11	0	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	50	50	58	58	64	64
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	60	0	12	19	0	39

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	61	22	0 0 31 0
Stage 1	22	-	- - - -
Stage 2	39	-	- - - -
Critical Hdwy	6.42	6.22	- - 4.12 -
Critical Hdwy Stg 1	5.42	-	- - - -
Critical Hdwy Stg 2	5.42	-	- - - -
Follow-up Hdwy	3.518	3.318	- - 2.218 -
Pot Cap-1 Maneuver	945	1055	- - 1582 -
Stage 1	1001	-	- - - -
Stage 2	983	-	- - - -
Platoon blocked, %			- - - -
Mov Cap-1 Maneuver	945	1055	- - 1582 -
Mov Cap-2 Maneuver	945	-	- - - -
Stage 1	1001	-	- - - -
Stage 2	983	-	- - - -

Approach	WB	NB	SB
HCM Control Delay, s	9.1	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	- 945	1582	-
HCM Lane V/C Ratio	-	- 0.063	-	-
HCM Control Delay (s)	-	- 9.1	0	-
HCM Lane LOS	-	- A	A	-
HCM 95th %tile Q(veh)	-	- 0.2	0	-

Lanier Tract DRI
2: GA 53 & Sportsman Club Road

phase one a.m.

Intersection												
Int Delay, s/veh		23										
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	14	1885	0	5	841	15	0	0	0	41	0	23
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	84	84	84	92	92	92	70	70	70
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	2192	0	6	1001	18	0	0	0	59	0	33
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1019	0	0	2192	0	0	2737	3255	1096	2150	3246	510
Stage 1	-	-	-	-	-	-	2224	2224	-	1022	1022	-
Stage 2	-	-	-	-	-	-	513	1031	-	1128	2224	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	677	-	-	238	-	-	10	9	208	~ 27	9	509
Stage 1	-	-	-	-	-	-	44	79	-	253	312	-
Stage 2	-	-	-	-	-	-	512	309	-	218	79	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	677	-	-	238	-	-	9	9	208	~ 26	9	509
Mov Cap-2 Maneuver	-	-	-	-	-	-	9	9	-	~ 26	9	-
Stage 1	-	-	-	-	-	-	43	77	-	247	304	-
Stage 2	-	-	-	-	-	-	467	301	-	213	77	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.1			0			\$ 834.4		
HCM LOS							A			F		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	-	677	-	-	238	-	-	39				
HCM Lane V/C Ratio	-	0.024	-	-	0.025	-	-	2.344				
HCM Control Delay (s)	0	10.4	-	-	20.5	-	-	\$ 834.4				
HCM Lane LOS	A	B	-	-	C	-	-	F				
HCM 95th %tile Q(veh)	-	0.1	-	-	0.1	-	-	10				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined			*: All major volume in platoon					

Lanier Tract DRI
3: GA 53 & Avonlea Way

phase one a.m.

Intersection												
Int Delay, s/veh	9.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	17	0	79	2	0	13	13	866	2	15	1867	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	0	0	-	0	0	-	-	0	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	80	80	80	88	88	88	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	20	0	94	2	0	16	15	984	2	17	2171	8
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2728	3222	1085	2135	3221	493	2171	0	0	986	0	0
Stage 1	2206	2206	-	1015	1015	-	-	-	-	-	-	-
Stage 2	522	1016	-	1120	2206	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	~ 10	10	212	28	10	522	242	-	-	696	-	-
Stage 1	45	81	-	255	314	-	-	-	-	-	-	-
Stage 2	506	314	-	220	81	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 9	9	212	15	9	522	242	-	-	696	-	-
Mov Cap-2 Maneuver	~ 9	9	-	15	9	-	-	-	-	-	-	-
Stage 1	42	79	-	239	295	-	-	-	-	-	-	-
Stage 2	460	295	-	119	79	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	273.3			48.9			0.3			0.1		
HCM LOS	F			E								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR		
Capacity (veh/h)	242	-	-	9	212	15	522	696	-	-		
HCM Lane V/C Ratio	0.061	-	-	2.249	0.444	0.167	0.031	0.025	-	-		
HCM Control Delay (s)	20.8	-	\$	1381.4	34.9	288.1	12.1	10.3	-	-		
HCM Lane LOS	C	-	-	F	D	F	B	B	-	-		
HCM 95th %tile Q(veh)	0.2	-	-	3.5	2.1	0.5	0.1	0.1	-	-		
Notes												
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon												

Lanier Tract DRI
4: GA 53 & Canterbury Road

phase one a.m.

Intersection												
Int Delay, s/veh	12.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	20	0	105	3	0	2	25	826	3	2	1994	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	0	0	-	0	0	-	-	0	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	92	88	92	92	92	86	86	92	92	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	23	0	119	3	0	2	29	960	3	2	2191	9
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2734	3218	1096	2120	3216	482	2191	0	0	964	0	0
Stage 1	2196	2196	-	1020	1020	-	-	-	-	-	-	-
Stage 2	538	1022	-	1100	2196	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	~ 10	10	208	29	10	530	238	-	-	710	-	-
Stage 1	46	82	-	253	312	-	-	-	-	-	-	-
Stage 2	495	312	-	226	82	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 9	9	208	11	9	530	238	-	-	710	-	-
Mov Cap-2 Maneuver	~ 9	9	-	11	9	-	-	-	-	-	-	-
Stage 1	40	82	-	222	274	-	-	-	-	-	-	-
Stage 2	433	274	-	96	82	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	277.1			266.4			0.7			0		
HCM LOS	F			F								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR		
Capacity (veh/h)	238	-	-	9	208	11	530	710	-	-		
HCM Lane V/C Ratio	0.122	-	-	2.525	0.574	0.296	0.004	0.003	-	-		
HCM Control Delay (s)	22.2	-		\$ 1504.7	43.3	\$ 436.1	11.8	10.1	-	-		
HCM Lane LOS	C	-	-	F	E	F	B	B	-	-		
HCM 95th %tile Q(veh)	0.4	-	-	3.9	3.1	0.7	0	0	-	-		
Notes												
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon												

Intersection

Int Delay, s/veh 3.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	6	45	30	930	2288	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	Yield	-	None
Storage Length	0	0	200	-	-	360
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	1	0	-
Peak Hour Factor	82	82	87	87	89	89
Heavy Vehicles, %	0	0	0	1	0	0
Mvmt Flow	7	55	34	1069	2571	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	3174	1285	2571	0	-	0
Stage 1	2571	-	-	-	-	-
Stage 2	603	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	8	158	174	-	-	-
Stage 1	45	-	-	-	-	-
Stage 2	515	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 6	158	174	-	-	-
Mov Cap-2 Maneuver	~ 6	-	-	-	-	-
Stage 1	45	-	-	-	-	-
Stage 2	414	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	179.5	1	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	174	-	6	158	-	-
HCM Lane V/C Ratio	0.198	-	1.22	0.347	-	-
HCM Control Delay (s)	30.7	\$	1230.3	39.4	-	-
HCM Lane LOS	D	-	F	E	-	-
HCM 95th %tile Q(veh)	0.7	-	1.7	1.4	-	-

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lanier Tract DRI

5: GA 53 & Lanier Valley Dr/Ahaluna Dr

phase one a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	21	6	127	92	3	27	61	800	47	21	2121	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		2%			-4%			1%			-1%	
Storage Length (ft)	0		0	0		0	100		0	140		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	0			0			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.889			0.970			0.992				
Flt Protected		0.993			0.964		0.950			0.950		
Satd. Flow (prot)	0	1661	0	0	1812	0	1796	3497	0	1814	3628	0
Flt Permitted		0.945			0.481		0.037			0.288		
Satd. Flow (perm)	0	1580	0	0	904	0	70	3497	0	550	3628	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		58			8			12				
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		340			322			888			1417	
Travel Time (s)		7.7			7.3			13.5			21.5	
Peak Hour Factor	0.91	0.91	0.91	0.83	0.83	0.83	0.85	0.85	0.85	0.87	0.87	0.87
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	0%	0%
Adj. Flow (vph)	23	7	140	111	4	33	72	941	55	24	2438	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	170	0	0	148	0	72	996	0	24	2438	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	0.97	0.97	0.97	1.01	1.01	1.01	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		0	1	
Detector Template	Left			Left								
Leading Detector (ft)	20	40		20	40		40	336		0	336	
Trailing Detector (ft)	0	0		0	0		0	330		0	330	
Detector 1 Position(ft)	0	0		0	0		0	330		0	330	
Detector 1 Size(ft)	20	40		20	40		40	6		0	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		8			4		5	2			6	
Permitted Phases	8			4			2			6		
Detector Phase	8	8		4	4		5	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	23.0	23.0		23.0	23.0		10.6	23.0		23.0	23.0	

Lanier Tract DRI

5: GA 53 & Lanier Valley Dr/Ahaluna Dr

phase one a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	30.0	30.0		30.0	30.0		10.6	120.0		109.4	109.4	
Total Split (%)	20.0%	20.0%		20.0%	20.0%		7.1%	80.0%		72.9%	72.9%	
Maximum Green (s)	23.4	23.4		23.4	23.4		5.0	113.9		103.3	103.3	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	4.5		4.5	4.5	
All-Red Time (s)	2.6	2.6		2.6	2.6		2.6	1.6		1.6	1.6	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.6			6.6		5.6	6.1		6.1	6.1	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		C-Max	C-Max	
Act Effect Green (s)		23.4			23.4		114.4	113.9		103.3	103.3	
Actuated g/C Ratio		0.16			0.16		0.76	0.76		0.69	0.69	
v/c Ratio		0.58			1.01		0.65	0.37		0.06	0.98	
Control Delay		46.8			134.1		57.6	3.1		8.1	35.6	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		46.8			134.1		57.6	3.1		8.1	35.6	
LOS		D			F		E	A		A	D	
Approach Delay		46.8			134.1			6.8			35.3	
Approach LOS		D			F			A			D	

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 26 (17%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 130

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.01

Intersection Signal Delay: 31.7

Intersection LOS: C

Intersection Capacity Utilization 90.9%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 5: GA 53 & Lanier Valley Dr/Ahaluna Dr

								
120 s						30 s		
								
10.6 s			109.4 s			30 s		

Lanier Tract DRI

6: 53-Dawsonville Hwy & Academy Sports

phase one a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	2	0	7	2	0	0	12	878	10	6	2269	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			4%			1%			0%	
Storage Length (ft)	0		0	0		70	200		170	190		360
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	0			0			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850						0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1900	1615	1769	1862	1862	1796	3556	1607	1805	3610	1615
Flt Permitted							0.031			0.277		
Satd. Flow (perm)	1900	1900	1615	1862	1862	1862	59	3556	1607	526	3610	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			67						68			68
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		262			246			1836			685	
Travel Time (s)		7.1			6.7			27.8			10.4	
Peak Hour Factor	0.67	0.67	0.67	0.50	0.50	0.50	0.86	0.86	0.86	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%
Adj. Flow (vph)	3	0	10	4	0	0	14	1021	12	7	2521	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	3	0	10	4	0	0	14	1021	12	7	2521	4
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.03	1.03	1.03	1.01	1.01	1.01	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1	1	1	1	1	1	1	0
Detector Template												
Leading Detector (ft)	40	40	0	40	40	40	40	336	0	40	336	0
Trailing Detector (ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Size(ft)	40	40	0	40	40	40	40	6	0	40	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm		Perm	Perm		Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8		8	4		4	2		2	6		6
Detector Phase	8	8	8	4	4	4	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	42.0	42.0	42.0	42.4	42.4	42.4	11.4	30.3	30.3	11.0	29.3	29.3

Synchro 8 Report

Marc R Acampora, PE, LLC

Lanier Tract DRI

6: 53-Dawsonville Hwy & Academy Sports

phase one a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	42.4	42.4	42.4	42.4	42.4	42.4	11.4	96.6	96.6	11.0	96.2	96.2
Total Split (%)	28.3%	28.3%	28.3%	28.3%	28.3%	28.3%	7.6%	64.4%	64.4%	7.3%	64.1%	64.1%
Maximum Green (s)	36.0	36.0	36.0	36.0	36.0	36.0	5.0	90.4	90.4	5.0	90.0	90.0
Yellow Time (s)	3.4	3.4	3.4	3.4	3.4	3.4	3.4	4.3	4.3	3.0	4.3	4.3
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	1.9	1.9	3.0	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.2	6.2	6.0	6.2	6.2
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0
Flash Dont Walk (s)	23.0	23.0	23.0	32.0	32.0	32.0		20.0	20.0		19.0	19.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0	0		0	0
Act Effect Green (s)	6.1		6.1	6.1			137.2	139.9	139.9	136.1	137.4	137.4
Actuated g/C Ratio	0.04		0.04	0.04			0.91	0.93	0.93	0.91	0.92	0.92
v/c Ratio	0.04		0.08	0.05			0.12	0.31	0.01	0.01	0.76	0.00
Control Delay	69.5		1.1	70.0			6.2	1.0	0.0	0.8	4.9	0.0
Queue Delay	0.0		0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.5		1.1	70.0			6.2	1.0	0.0	0.8	4.9	0.0
LOS	E		A	E			A	A	A	A	A	A
Approach Delay								1.1			4.9	
Approach LOS								A			A	

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 27 (18%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 145

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.76

Intersection Signal Delay: 3.9

Intersection LOS: A

Intersection Capacity Utilization 86.9%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 6: 53-Dawsonville Hwy & Academy Sports

 p1	 p2 (R)	 p4
11 s	96.6 s	42.4 s
 p5	 p6 (R)	 p8
11.4 s	96.2 s	42.4 s

Lanier Tract DRI

8: Dawsonville Highway/GA 53 & McEver Road/McEver

phase one a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	450	31	378	46	21	22	311	553	61	34	1341	935
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			5%			1%			-1%	
Storage Length (ft)	180		0	0		0	310		185	255		0
Storage Lanes	2		1	1		0	2		1	1		1
Taper Length (ft)	50			0			50			50		
Lane Util. Factor	0.97	0.95	0.95	1.00	1.00	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Frt		0.872	0.850		0.924				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3484	1566	1527	1760	1712	0	3484	3487	1575	1814	3628	1623
Flt Permitted	0.950			0.599			0.950			0.950		
Satd. Flow (perm)	3484	1566	1527	1110	1712	0	3484	3487	1575	1814	3628	1623
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		183	207		34				184			542
Link Speed (mph)		45			45			45			45	
Link Distance (ft)		580			331			921			1624	
Travel Time (s)		8.8			5.0			14.0			24.6	
Peak Hour Factor	0.97	0.97	0.97	0.62	0.62	0.62	0.93	0.93	0.93	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	3%	2%	0%	0%	0%
Adj. Flow (vph)	464	32	390	74	34	35	334	595	66	38	1490	1039
Shared Lane Traffic (%)			47%									
Lane Group Flow (vph)	464	215	207	74	69	0	334	595	66	38	1490	1039
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.03	1.03	1.03	1.01	1.01	1.01	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1		1	1	0	1	1	0
Detector Template												
Leading Detector (ft)	40	40	0	40	40		40	336	0	40	336	0
Trailing Detector (ft)	0	0	0	0	0		0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0		0	330	0	0	330	0
Detector 1 Size(ft)	40	40	0	40	40		40	6	0	40	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	NA	Perm	pm+pt	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases			8	4					6			2
Detector Phase	3	8	8	7	4		1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	13.2	50.2	50.2	11.6	48.2		13.4	35.6	35.6	12.9	44.6	44.6

Lanier Tract DRI

8: Dawsonville Highway/GA 53 & McEver Road/McEver

phase one a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	23.0	59.1	59.1	12.1	48.2		19.0	63.0	63.0	15.8	59.8	59.8
Total Split (%)	15.3%	39.4%	39.4%	8.1%	32.1%		12.7%	42.0%	42.0%	10.5%	39.9%	39.9%
Maximum Green (s)	15.7	51.8	51.8	5.6	40.9		11.5	56.4	56.4	8.6	53.2	53.2
Yellow Time (s)	4.3	4.3	4.3	3.5	4.3		4.5	4.4	4.4	4.2	4.4	4.4
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	2.2	2.2	3.0	2.2	2.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.3	7.3	7.3	6.5	7.3		7.5	6.6	6.6	7.2	6.6	6.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)		4.0	4.0		4.0			4.0	4.0		4.0	4.0
Flash Dont Walk (s)		38.0	38.0		36.0			25.0	25.0		34.0	34.0
Pedestrian Calls (#/hr)		0	0		0			0	0		0	0
Act Effect Green (s)	16.1	17.6	17.6	14.0	8.9		11.5	93.2	93.2	8.5	87.4	87.4
Actuated g/C Ratio	0.11	0.12	0.12	0.09	0.06		0.08	0.62	0.62	0.06	0.58	0.58
v/c Ratio	1.24	0.62	0.57	0.58	0.52		1.25	0.27	0.06	0.37	0.70	0.89
Control Delay	183.1	20.5	13.4	70.0	51.0		197.4	17.7	1.4	74.8	23.9	17.1
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	183.1	20.5	13.4	70.0	51.0		197.4	17.7	1.4	74.8	23.9	17.1
LOS	F	C	B	E	D		F	B	A	E	C	B
Approach Delay		104.0			60.9			77.0			21.9	
Approach LOS		F			E			E			C	

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 19 (13%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.25

Intersection Signal Delay: 50.9

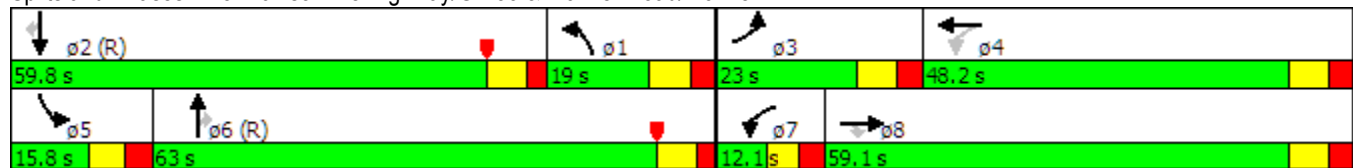
Intersection LOS: D

Intersection Capacity Utilization 88.8%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 8: Dawsonville Highway/GA 53 & McEver Road/McEver



Lanier Tract DRI

9: Dawsonville Highway & Greenhill Circle/Greenhill Circle

phase one a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	74	1	156	7	1	4	149	872	11	13	1599	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		3%			7%			1%			0%	
Storage Length (ft)	0		0	0		0	190		190	185		100
Storage Lanes	0		1	0		1	1		1	1		1
Taper Length (ft)	0			0			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected		0.953			0.957		0.950			0.950		
Satd. Flow (prot)	0	1784	1591	0	1755	1558	1796	3522	1607	1805	3610	1615
Flt Permitted		0.721			0.751		0.074			0.283		
Satd. Flow (perm)	0	1349	1591	0	1377	1558	140	3522	1607	538	3610	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			131			102			57			101
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		288			254			778			921	
Travel Time (s)		7.9			6.9			11.8			14.0	
Peak Hour Factor	0.90	0.90	0.90	0.69	0.69	0.69	0.86	0.86	0.86	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	0%	0%
Adj. Flow (vph)	82	1	173	10	1	6	173	1014	13	14	1738	62
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	83	173	0	11	6	173	1014	13	14	1738	62
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.02	1.02	1.02	1.05	1.05	1.05	1.01	1.01	1.01	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1	0	1	1	0	0	1	0
Detector Template	Left			Left								
Leading Detector (ft)	20	40	0	20	40	0	40	336	0	0	336	0
Trailing Detector (ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Size(ft)	20	40	0	20	40	0	40	6	0	0	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8		8	4		4	6		6	2		2
Detector Phase	8	8	8	4	4	4	1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.0	23.0	23.0	39.9	39.9	39.9	11.0	28.0	28.0	10.0	36.0	36.0

Lanier Tract DRI

9: Dawsonville Highway & Greenhill Circle/Greenhill Circle

phase one a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	39.9	39.9	39.9	39.9	39.9	39.9	21.0	100.1	100.1	10.0	89.1	89.1
Total Split (%)	26.6%	26.6%	26.6%	26.6%	26.6%	26.6%	14.0%	66.7%	66.7%	6.7%	59.4%	59.4%
Maximum Green (s)	34.0	34.0	34.0	34.0	34.0	34.0	15.0	94.1	94.1	5.0	83.1	83.1
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	4.4	4.4	3.5	4.4	4.4
All-Red Time (s)	2.9	2.9	2.9	2.9	2.9	2.9	3.0	1.6	1.6	1.5	1.6	1.6
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.9	5.9		5.9	5.9	6.0	6.0	6.0	5.0	6.0	6.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)				4.0	4.0	4.0		4.0	4.0		4.0	4.0
Flash Dont Walk (s)				30.0	30.0	30.0		18.0	18.0		26.0	26.0
Pedestrian Calls (#/hr)				0	0	0		0	0		0	0
Act Effect Green (s)		14.6	14.6		14.6	14.6	123.5	119.1	119.1	108.7	102.0	102.0
Actuated g/C Ratio		0.10	0.10		0.10	0.10	0.82	0.79	0.79	0.72	0.68	0.68
v/c Ratio		0.64	0.64		0.08	0.02	0.60	0.36	0.01	0.03	0.71	0.05
Control Delay		85.5	28.7		59.9	0.2	32.6	4.6	0.0	4.2	14.7	0.9
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
Total Delay		85.5	28.7		59.9	0.2	32.6	4.6	0.0	4.2	14.8	0.9
LOS		F	C		E	A	C	A	A	A	B	A
Approach Delay		47.1			38.8			8.6			14.3	
Approach LOS		D			D			A			B	

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow

Natural Cycle: 110

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.71

Intersection Signal Delay: 14.9

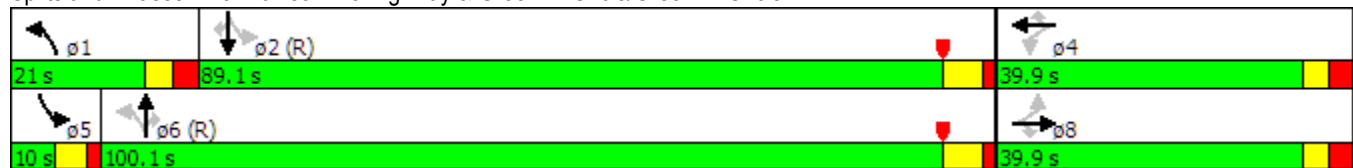
Intersection LOS: B

Intersection Capacity Utilization 78.2%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 9: Dawsonville Highway & Greenhill Circle/Greenhill Circle



Lanier Tract DRI

10: Dawsonville Highway & Shallowford Rd/Best Buy

phase one a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	160	2	9	2	4	3	11	847	14	1	1415	386
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-1%			10%			-4%			-1%	
Storage Length (ft)	350		350	0		0	350		150	265		0
Storage Lanes	1		0	0		1	1		1	1		1
Taper Length (ft)	100			0			100			100		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950	0.953			0.982		0.950			0.950		
Satd. Flow (prot)	1723	1729	1623	0	1773	1534	1841	3646	1647	1814	3592	1623
Flt Permitted	0.950	0.953			0.982		0.117			0.280		
Satd. Flow (perm)	1723	1729	1623	0	1773	1534	227	3646	1647	535	3592	1623
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			113			119			70			220
Link Speed (mph)		45			25			45			45	
Link Distance (ft)		653			178			957			778	
Travel Time (s)		9.9			4.9			14.5			11.8	
Peak Hour Factor	0.84	0.84	0.84	0.56	0.56	0.56	0.83	0.83	0.83	0.93	0.93	0.93
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	1%	0%
Adj. Flow (vph)	190	2	11	4	7	5	13	1020	17	1	1522	415
Shared Lane Traffic (%)	49%											
Lane Group Flow (vph)	97	95	11	0	11	5	13	1020	17	1	1522	415
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes										
Headway Factor	0.99	0.99	0.99	1.07	1.07	1.07	0.97	0.97	0.97	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1	0	1	1	0	0	1	0
Detector Template				Left								
Leading Detector (ft)	40	40	0	20	40	0	40	336	0	0	336	0
Trailing Detector (ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Size(ft)	40	40	0	20	40	0	40	6	0	0	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases	3	3		4	4		1	6			2	
Permitted Phases			3			4	6		6	2		2
Detector Phase	3	3	3	4	4	4	1	6	6	2	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	36.7	36.7	36.7	38.9	38.9	38.9	10.8	28.8	28.8	30.8	30.8	30.8

Lanier Tract DRI

10: Dawsonville Highway & Shallowford Rd/Best Buy

phase one a.m.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	36.7	36.7	36.7	38.9	38.9	38.9	10.8	74.4	74.4	63.6	63.6	63.6
Total Split (%)	24.5%	24.5%	24.5%	25.9%	25.9%	25.9%	7.2%	49.6%	49.6%	42.4%	42.4%	42.4%
Maximum Green (s)	30.0	30.0	30.0	33.0	33.0	33.0	5.0	67.6	67.6	56.8	56.8	56.8
Yellow Time (s)	4.5	4.5	4.5	3.0	3.0	3.0	3.0	4.9	4.9	4.9	4.9	4.9
All-Red Time (s)	2.2	2.2	2.2	2.9	2.9	2.9	2.8	1.9	1.9	1.9	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.7	6.7	6.7		5.9	5.9	5.8	6.8	6.8	6.8	6.8	6.8
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes			Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	C-Min	C-Min	C-Min
Walk Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0
Flash Dont Walk (s)	26.0	26.0	26.0	29.0	29.0	29.0		18.0	18.0	20.0	20.0	20.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0	0	0	0	0
Act Effect Green (s)	13.8	13.8	13.8		6.5	6.5	118.3	117.3	117.3	112.5	112.5	112.5
Actuated g/C Ratio	0.09	0.09	0.09		0.04	0.04	0.79	0.78	0.78	0.75	0.75	0.75
v/c Ratio	0.61	0.60	0.04		0.14	0.03	0.05	0.36	0.01	0.00	0.56	0.33
Control Delay	81.4	80.4	0.3		72.5	0.3	6.0	6.3	0.0	7.0	11.2	4.5
Queue Delay	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0
Total Delay	81.4	80.4	0.3		72.5	0.3	6.0	6.3	0.0	7.0	11.7	4.5
LOS	F	F	A		E	A	A	A	A	A	B	A
Approach Delay		76.5			49.9			6.2			10.1	
Approach LOS		E			D			A			B	

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 45 (30%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.61

Intersection Signal Delay: 13.3

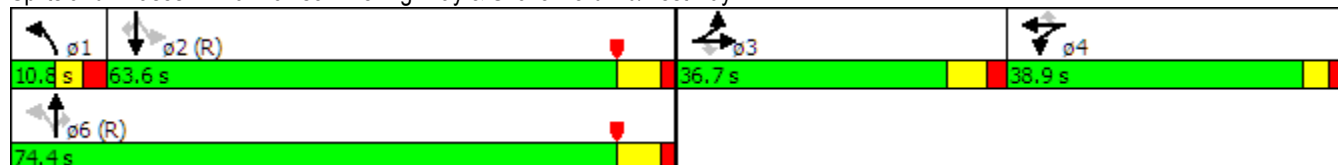
Intersection LOS: B

Intersection Capacity Utilization 63.6%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 10: Dawsonville Highway & Shallowford Rd/Best Buy



Lanier Tract DRI
1: Sportsman Club Road & Strickland Drive

phase one p.m.

Intersection						
Int Delay, s/veh	3.2					
Movement	WBL	WBR		NBT	NBR	SBL SBT
Vol, veh/h	24	0		32	28	0 25
Conflicting Peds, #/hr	0	0		0	0	0 0
Sign Control	Stop	Stop		Free	Free	Free Free
RT Channelized	-	None		-	None	- None
Storage Length	0	-		-	-	- -
Veh in Median Storage, #	0	-		0	-	- 0
Grade, %	0	-		0	-	- 0
Peak Hour Factor	44	44		86	86	82 82
Heavy Vehicles, %	2	2		2	2	2 2
Mvmt Flow	55	0		37	33	0 30
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	83	53		0	0	70 0
Stage 1	53	-		-	-	- -
Stage 2	30	-		-	-	- -
Critical Hdwy	6.42	6.22		-	-	4.12 -
Critical Hdwy Stg 1	5.42	-		-	-	- -
Critical Hdwy Stg 2	5.42	-		-	-	- -
Follow-up Hdwy	3.518	3.318		-	-	2.218 -
Pot Cap-1 Maneuver	919	1014		-	-	1531 -
Stage 1	970	-		-	-	- -
Stage 2	993	-		-	-	- -
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	919	1014		-	-	1531 -
Mov Cap-2 Maneuver	919	-		-	-	- -
Stage 1	970	-		-	-	- -
Stage 2	993	-		-	-	- -
Approach	WB		NB		SB	
HCM Control Delay, s	9.2		0		0	
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	919	1531	-	
HCM Lane V/C Ratio	-	-	0.059	-	-	
HCM Control Delay (s)	-	-	9.2	0	-	
HCM Lane LOS	-	-	A	A	-	
HCM 95th %tile Q(veh)	-	-	0.2	0	-	

Lanier Tract DRI
2: GA 53 & Sportsman Club Road

phase one p.m.

Intersection												
Int Delay, s/veh	74.4											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	22	1166	0	26	1878	34	0	0	0	42	0	23
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	96	96	96	92	92	92	75	75	75
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	23	1227	0	27	1956	35	0	0	0	56	0	31

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1992	0	0	1227	0	0	2306	3320	614	2688	3302	996
Stage 1	-	-	-	-	-	-	1274	1274	-	2028	2028	-
Stage 2	-	-	-	-	-	-	1032	2046	-	660	1274	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	285	-	-	564	-	-	21	8	435	~ 10	8	243
Stage 1	-	-	-	-	-	-	177	236	-	59	100	-
Stage 2	-	-	-	-	-	-	249	98	-	418	236	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	285	-	-	564	-	-	17	7	435	~ 9	7	243
Mov Cap-2 Maneuver	-	-	-	-	-	-	17	7	-	~ 9	7	-
Stage 1	-	-	-	-	-	-	163	217	-	~ 54	95	-
Stage 2	-	-	-	-	-	-	207	93	-	384	217	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0.2	0	\$ 2872.3
HCM LOS			A	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	285	-	-	564	-	-	14
HCM Lane V/C Ratio	-	0.081	-	-	0.048	-	-	6.19
HCM Control Delay (s)	0	18.7	-	-	11.7	-	-	\$ 2872.3
HCM Lane LOS	A	C	-	-	B	-	-	F
HCM 95th %tile Q(veh)	-	0.3	-	-	0.2	-	-	11.8

Notes												
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon												

Lanier Tract DRI
3: Avonlea Way & GA 53

phase one p.m.

Intersection												
Int Delay, s/veh	4.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	12	0	52	2	0	11	68	1858	17	10	1263	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	0	0	-	0	0	-	-	0	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	76	76	76	80	80	80	95	95	95	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	0	68	2	0	14	72	1956	18	10	1263	15
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2404	3400	632	2760	3391	987	1263	0	0	1974	0	0
Stage 1	1283	1283	-	2108	2108	-	-	-	-	-	-	-
Stage 2	1121	2117	-	652	1283	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	17	7	423	9	7	246	546	-	-	290	-	-
Stage 1	175	234	-	52	91	-	-	-	-	-	-	-
Stage 2	220	90	-	423	234	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 14	6	423	7	6	246	546	-	-	290	-	-
Mov Cap-2 Maneuver	~ 14	6	-	7	6	-	-	-	-	-	-	-
Stage 1	152	226	-	45	79	-	-	-	-	-	-	-
Stage 2	180	78	-	342	226	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	134.8			124.5			0.4			0.1		
HCM LOS	F			F								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR		
Capacity (veh/h)	546	-	-	14	423	7	246	290	-	-		
HCM Lane V/C Ratio	0.131	-	-	1.128	0.162	0.357	0.056	0.034	-	-		
HCM Control Delay (s)	12.6	-	-	\$ 653.3	15.1	\$ 696.5	20.5	17.9	-	-		
HCM Lane LOS	B	-	-	F	C	F	C	C	-	-		
HCM 95th %tile Q(veh)	0.4	-	-	2.5	0.6	0.7	0.2	0.1	-	-		
Notes												
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon												

Lanier Tract DRI
4: Canterbury Road & GA 53

phase one p.m.

Intersection												
Int Delay, s/veh	3.8											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	8	0	31	2	0	2	123	1908	4	3	1268	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	0	0	-	0	0	-	-	0	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	70	70	70	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	0	39	3	0	3	128	1988	4	3	1321	16

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2577	3575	660	2913	3573	996	1321	0	0	1992	0	0
Stage 1	1327	1327	-	2246	2246	-	-	-	-	-	-	-
Stage 2	1250	2248	-	667	1327	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	13	6	406	7	6	243	519	-	-	285	-	-
Stage 1	164	223	-	43	77	-	-	-	-	-	-	-
Stage 2	183	77	-	414	223	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	10	4	406	5	4	243	519	-	-	285	-	-
Mov Cap-2 Maneuver	10	4	-	5	4	-	-	-	-	-	-	-
Stage 1	124	221	-	32	58	-	-	-	-	-	-	-
Stage 2	136	58	-	371	221	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	169.2	\$ 544.8	0.9	0
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	519	-	-	10	406	5	243	285	-	-
HCM Lane V/C Ratio	0.247	-	-	1	0.095	0.571	0.012	0.011	-	-
HCM Control Delay (s)	14.2	-	-	\$ 767.5	14.2	\$ 1069.5	20	17.8	-	-
HCM Lane LOS	B	-	-	F	B	F	C	C	-	-
HCM 95th %tile Q(veh)	1	-	-	1.9	0.3	0.9	0	0	-	-

Notes										
~: Volume exceeds capacity	\$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon							

Intersection						
Int Delay, s/veh	0.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	1	52	95	2325	1629	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	Yield	-	None
Storage Length	0	0	200	-	-	360
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	1	0	-
Peak Hour Factor	71	71	99	99	98	98
Heavy Vehicles, %	0	0	0	0	1	0
Mvmt Flow	1	73	96	2348	1662	10
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	3028	832	1662	0	-	0
Stage 1	1662	-	-	-	-	-
Stage 2	1366	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	10	316	393	-	-	-
Stage 1	143	-	-	-	-	-
Stage 2	206	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	8	316	393	-	-	-
Mov Cap-2 Maneuver	8	-	-	-	-	-
Stage 1	143	-	-	-	-	-
Stage 2	156	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	29.5	0.7		0		
HCM LOS	D					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	393	-	8	316	-	-
HCM Lane V/C Ratio	0.244	-	0.176	0.232	-	-
HCM Control Delay (s)	17.1	-	534.2	19.8	-	-
HCM Lane LOS	C	-	F	C	-	-
HCM 95th %tile Q(veh)	0.9	-	0.4	0.9	-	-

Lanier Tract DRI

5: GA 53 & Lanier Valley Dr/Ahaluna Dr

phase one p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	23	1	106	98	8	64	198	1965	114	31	1366	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		2%			-4%			1%			-1%	
Storage Length (ft)	0		0	0		0	100		0	140		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	0			0			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.890			0.949			0.992				
Flt Protected		0.991			0.972		0.950			0.950		
Satd. Flow (prot)	0	1659	0	0	1788	0	1796	3563	0	1814	3592	0
Flt Permitted		0.906			0.613		0.117			0.049		
Satd. Flow (perm)	0	1517	0	0	1127	0	221	3563	0	94	3592	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		119			17			10				
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		340			322			1002			1457	
Travel Time (s)		7.7			7.3			15.2			22.1	
Peak Hour Factor	0.89	0.89	0.89	0.90	0.90	0.90	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
Adj. Flow (vph)	26	1	119	109	9	71	206	2047	119	32	1423	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	146	0	0	189	0	206	2166	0	32	1426	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	0.97	0.97	0.97	1.01	1.01	1.01	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		0	1	
Detector Template	Left			Left								
Leading Detector (ft)	20	40		20	40		40	336		0	336	
Trailing Detector (ft)	0	0		0	0		0	330		0	330	
Detector 1 Position(ft)	0	0		0	0		0	330		0	330	
Detector 1 Size(ft)	20	40		20	40		40	6		0	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		8			4		5	2			6	
Permitted Phases	8			4			2			6		
Detector Phase	8	8		4	4		5	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	23.0	23.0		23.0	23.0		10.6	23.0		23.0	23.0	

Lanier Tract DRI

5: GA 53 & Lanier Valley Dr/Ahaluna Dr

phase one p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	37.0	37.0		37.0	37.0		21.2	123.0		101.8	101.8	
Total Split (%)	23.1%	23.1%		23.1%	23.1%		13.3%	76.9%		63.6%	63.6%	
Maximum Green (s)	30.4	30.4		30.4	30.4		15.6	116.9		95.7	95.7	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	4.5		4.5	4.5	
All-Red Time (s)	2.6	2.6		2.6	2.6		2.6	1.6		1.6	1.6	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.6			6.6		5.6	6.1		6.1	6.1	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		C-Max	C-Max	
Act Effect Green (s)		27.1			27.1		120.7	120.2		102.6	102.6	
Actuated g/C Ratio		0.17			0.17		0.75	0.75		0.64	0.64	
v/c Ratio		0.41			0.92		0.73	0.81		0.53	0.62	
Control Delay		17.5			104.1		30.2	14.3		56.7	19.5	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		17.5			104.1		30.2	14.3		56.7	19.5	
LOS		B			F		C	B		E	B	
Approach Delay		17.5			104.1			15.7			20.4	
Approach LOS		B			F			B			C	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 129 (81%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.92

Intersection Signal Delay: 21.4

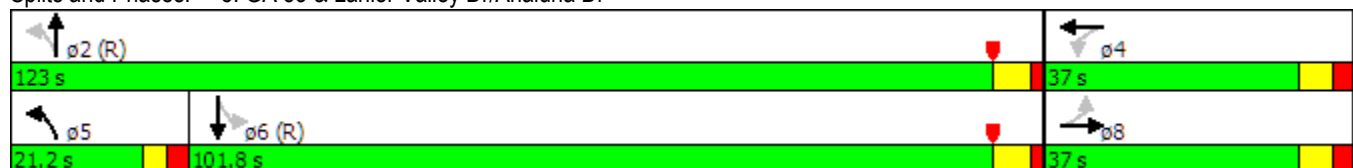
Intersection LOS: C

Intersection Capacity Utilization 94.2%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 5: GA 53 & Lanier Valley Dr/Ahaluna Dr



Lanier Tract DRI

6: 53-Dawsonville Hwy & Academy Sports

phase one p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	14	3	66	130	8	46	96	2066	152	21	1421	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			4%			1%			0%	
Storage Length (ft)	0		0	0		70	200		170	190		360
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	0			0			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1900	1615	1769	1862	1583	1796	3592	1607	1805	3574	1615
Flt Permitted	0.751			0.756			0.123			0.039		
Satd. Flow (perm)	1427	1900	1615	1408	1862	1583	233	3592	1607	74	3574	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			69			63			66			64
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		262			246			1836			685	
Travel Time (s)		7.1			6.7			27.8			10.4	
Peak Hour Factor	0.95	0.95	0.95	0.80	0.80	0.80	0.98	0.98	0.98	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
Adj. Flow (vph)	15	3	69	162	10	58	98	2108	155	22	1465	31
Shared Lane Traffic (%)												
Lane Group Flow (vph)	15	3	69	162	10	58	98	2108	155	22	1465	31
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.03	1.03	1.03	1.01	1.01	1.01	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1	1	1	1	1	1	1	0
Detector Template												
Leading Detector (ft)	40	40	0	40	40	40	40	336	0	40	336	0
Trailing Detector (ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Size(ft)	40	40	0	40	40	40	40	6	0	40	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8		8	4		4	2		2	6		6
Detector Phase	8	8	8	4	4	4	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	42.0	42.0	42.0	42.4	42.4	42.4	11.4	30.3	30.3	11.0	29.3	29.3

Lanier Tract DRI

6: 53-Dawsonville Hwy & Academy Sports

phase one p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	42.4	42.4	42.4	42.4	42.4	42.4	16.2	106.6	106.6	11.0	101.4	101.4
Total Split (%)	26.5%	26.5%	26.5%	26.5%	26.5%	26.5%	10.1%	66.6%	66.6%	6.9%	63.4%	63.4%
Maximum Green (s)	36.0	36.0	36.0	36.0	36.0	36.0	9.8	100.4	100.4	5.0	95.2	95.2
Yellow Time (s)	3.4	3.4	3.4	3.4	3.4	3.4	3.4	4.3	4.3	3.0	4.3	4.3
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	1.9	1.9	3.0	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.2	6.2	6.0	6.2	6.2
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0
Flash Dont Walk (s)	23.0	23.0	23.0	32.0	32.0	32.0		20.0	20.0		19.0	19.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0	0		0	0
Act Effect Green (s)	23.7	23.7	23.7	23.7	23.7	23.7	121.3	116.4	116.4	115.8	109.6	109.6
Actuated g/C Ratio	0.15	0.15	0.15	0.15	0.15	0.15	0.76	0.73	0.73	0.72	0.68	0.68
v/c Ratio	0.07	0.01	0.23	0.78	0.04	0.20	0.39	0.81	0.13	0.19	0.60	0.03
Control Delay	55.8	53.3	13.0	89.1	54.6	11.7	11.7	16.7	7.3	10.0	12.0	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
Total Delay	55.8	53.3	13.0	89.1	54.6	11.7	11.7	16.7	7.3	10.0	12.1	0.0
LOS	E	D	B	F	D	B	B	B	A	B	B	A
Approach Delay		21.8			68.1			15.9			11.8	
Approach LOS		C			E			B			B	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 120 (75%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 145

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.81

Intersection Signal Delay: 17.4

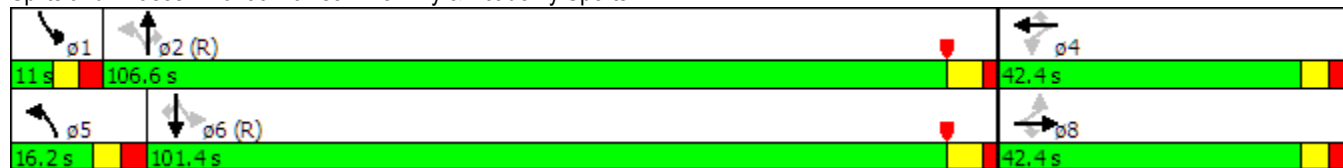
Intersection LOS: B

Intersection Capacity Utilization 90.6%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 6: 53-Dawsonville Hwy & Academy Sports



Lanier Tract DRI

8: Dawsonville Highway/GA 53 & McEver Road/McEver

phase one p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	967	235	426	96	100	93	478	1585	51	71	1199	562
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			5%			1%			-1%	
Storage Length (ft)	180		0	0		0	310		185	255		0
Storage Lanes	2		1	1		0	2		1	1		1
Taper Length (ft)	50			0			50			50		
Lane Util. Factor	0.97	0.95	0.95	1.00	1.00	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Frt		0.951	0.850		0.928				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3484	1708	1527	1760	1719	0	3484	3592	1607	1814	3592	1623
Flt Permitted	0.950			0.468			0.950			0.950		
Satd. Flow (perm)	3484	1708	1527	867	1719	0	3484	3592	1607	1814	3592	1623
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18	308		28				172			315
Link Speed (mph)		45			25			45			45	
Link Distance (ft)		580			331			921			1504	
Travel Time (s)		8.8			9.0			14.0			22.8	
Peak Hour Factor	0.95	0.95	0.95	0.86	0.86	0.86	0.97	0.97	0.97	0.91	0.91	0.91
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
Adj. Flow (vph)	1018	247	448	112	116	108	493	1634	53	78	1318	618
Shared Lane Traffic (%)			27%									
Lane Group Flow (vph)	1018	368	327	112	224	0	493	1634	53	78	1318	618
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.03	1.03	1.03	1.01	1.01	1.01	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1		1	1	0	1	1	0
Detector Template												
Leading Detector (ft)	40	40	0	40	40		40	336	0	40	336	0
Trailing Detector (ft)	0	0	0	0	0		0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0		0	330	0	0	330	0
Detector 1 Size(ft)	40	40	0	40	40		40	6	0	40	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	NA	Perm	pm+pt	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases			8	4					6			2
Detector Phase	3	8	8	7	4		1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	13.2	50.2	50.2	11.6	48.2		13.4	35.6	35.6	12.9	44.6	44.6

Lanier Tract DRI

8: Dawsonville Highway/GA 53 & McEver Road/McEver

phase one p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	35.0	69.5	69.5	13.7	48.2		22.0	63.8	63.8	13.0	54.8	54.8
Total Split (%)	21.9%	43.4%	43.4%	8.6%	30.1%		13.8%	39.9%	39.9%	8.1%	34.3%	34.3%
Maximum Green (s)	27.7	62.2	62.2	7.2	40.9		14.5	57.2	57.2	5.8	48.2	48.2
Yellow Time (s)	4.3	4.3	4.3	3.5	4.3		4.5	4.4	4.4	4.2	4.4	4.4
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	2.2	2.2	3.0	2.2	2.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.3	7.3	7.3	6.5	7.3		7.5	6.6	6.6	7.2	6.6	6.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)		4.0	4.0		4.0			4.0	4.0		4.0	4.0
Flash Dont Walk (s)		38.0	38.0		36.0			25.0	25.0		34.0	34.0
Pedestrian Calls (#/hr)		0	0		0			0	0		0	0
Act Effect Green (s)	27.7	45.2	45.2	31.9	23.9		14.5	64.6	64.6	15.4	65.2	65.2
Actuated g/C Ratio	0.17	0.28	0.28	0.20	0.15		0.09	0.40	0.40	0.10	0.41	0.41
v/c Ratio	1.69	0.74	0.50	0.53	0.80		1.57	1.13	0.07	0.45	0.90	0.73
Control Delay	354.5	58.6	7.9	46.9	77.3		314.1	120.2	0.1	67.2	67.6	40.5
Queue Delay	0.0	24.1	1.7	21.7	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	354.5	82.7	9.6	68.5	77.3		314.1	120.2	0.1	67.2	67.6	40.5
LOS	F	F	A	E	E		F	F	A	E	E	D
Approach Delay		230.3			74.4			161.1			59.3	
Approach LOS		F			E			F			E	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 52 (33%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.69

Intersection Signal Delay: 142.6

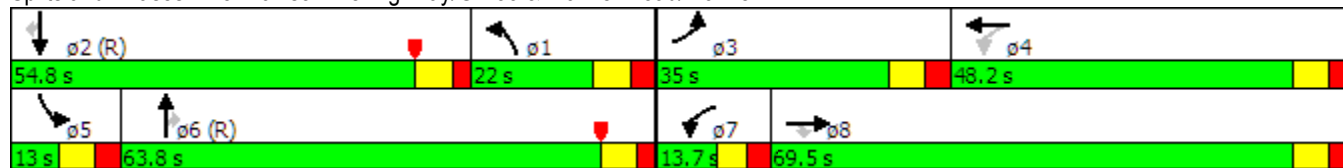
Intersection LOS: F

Intersection Capacity Utilization 110.2%

ICU Level of Service H

Analysis Period (min) 15

Splits and Phases: 8: Dawsonville Highway/GA 53 & McEver Road/McEver



Lanier Tract DRI

9: Dawsonville Highway & Greenhill Circle/Greenhill Circle

phase one p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	146	10	152	66	22	42	274	2012	77	44	1600	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		3%			7%			1%			0%	
Storage Length (ft)	0		0	0		0	190		190	185		100
Storage Lanes	0		1	0		1	1		1	1		1
Taper Length (ft)	0			0			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected		0.955			0.964		0.950			0.950		
Satd. Flow (prot)	0	1787	1591	0	1767	1558	1796	3592	1607	1805	3610	1615
Flt Permitted		0.591			0.482		0.043			0.044		
Satd. Flow (perm)	0	1106	1591	0	884	1558	81	3592	1607	84	3610	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			167			95			54			95
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		288			254			778			921	
Travel Time (s)		7.9			6.9			11.8			14.0	
Peak Hour Factor	0.91	0.91	0.91	0.78	0.78	0.78	0.97	0.97	0.97	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	160	11	167	85	28	54	282	2074	79	46	1684	62
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	171	167	0	113	54	282	2074	79	46	1684	62
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.02	1.02	1.02	1.05	1.05	1.05	1.01	1.01	1.01	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1	0	1	1	0	0	1	0
Detector Template	Left			Left								
Leading Detector (ft)	20	40	0	20	40	0	40	336	0	0	336	0
Trailing Detector (ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Size(ft)	20	40	0	20	40	0	40	6	0	0	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8		8	4		4	6		6	2		2
Detector Phase	8	8	8	4	4	4	1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.0	23.0	23.0	39.9	39.9	39.9	11.0	28.0	28.0	10.0	36.0	36.0

Lanier Tract DRI

9: Dawsonville Highway & Greenhill Circle/Greenhill Circle

phase one p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	39.9	39.9	39.9	39.9	39.9	39.9	31.0	110.1	110.1	10.0	89.1	89.1
Total Split (%)	24.9%	24.9%	24.9%	24.9%	24.9%	24.9%	19.4%	68.8%	68.8%	6.3%	55.7%	55.7%
Maximum Green (s)	34.0	34.0	34.0	34.0	34.0	34.0	25.0	104.1	104.1	5.0	83.1	83.1
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	4.4	4.4	3.5	4.4	4.4
All-Red Time (s)	2.9	2.9	2.9	2.9	2.9	2.9	3.0	1.6	1.6	1.5	1.6	1.6
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.9	5.9		5.9	5.9	6.0	6.0	6.0	5.0	6.0	6.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)				4.0	4.0	4.0		4.0	4.0		4.0	4.0
Flash Dont Walk (s)				30.0	30.0	30.0		18.0	18.0		26.0	26.0
Pedestrian Calls (#/hr)				0	0	0		0	0		0	0
Act Effect Green (s)		28.1	28.1		28.1	28.1	120.0	111.5	111.5	96.9	90.3	90.3
Actuated g/C Ratio		0.18	0.18		0.18	0.18	0.75	0.70	0.70	0.61	0.56	0.56
v/c Ratio		0.88	0.40		0.73	0.15	0.90	0.83	0.07	0.41	0.83	0.07
Control Delay		103.0	9.8		87.7	1.7	57.3	30.1	5.4	24.1	57.7	11.5
Queue Delay		0.0	5.5		87.6	0.0	0.0	47.1	0.0	0.0	1.7	0.0
Total Delay		103.0	15.3		175.3	1.7	57.3	77.2	5.4	24.1	59.4	11.5
LOS		F	B		F	A	E	E	A	C	E	B
Approach Delay		59.7			119.2			72.6			56.9	
Approach LOS		E			F			E			E	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow

Natural Cycle: 130

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.90

Intersection Signal Delay: 67.3

Intersection LOS: E

Intersection Capacity Utilization 89.6%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 9: Dawsonville Highway & Greenhill Circle/Greenhill Circle



Lanier Tract DRI

10: Dawsonville Highway & Shallowford Rd/Best Buy

phase one p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	590	42	29	40	30	8	44	1873	126	8	1331	525
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-1%			10%			-4%			-1%	
Storage Length (ft)	350		350	0		0	350		150	265		0
Storage Lanes	1		0	0		1	1		1	1		1
Taper Length (ft)	100			0			100			100		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950	0.958			0.972		0.950			0.950		
Satd. Flow (prot)	1723	1738	1623	0	1754	1534	1841	3682	1647	1814	3628	1623
Flt Permitted	0.950	0.958			0.972		0.074			0.046		
Satd. Flow (perm)	1723	1738	1623	0	1754	1534	143	3682	1647	88	3628	1623
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			106			111			65			318
Link Speed (mph)		45			25			45			45	
Link Distance (ft)		653			178			1046			778	
Travel Time (s)		9.9			4.9			15.8			11.8	
Peak Hour Factor	0.90	0.90	0.90	0.88	0.88	0.88	0.94	0.94	0.94	0.91	0.91	0.91
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	656	47	32	45	34	9	47	1993	134	9	1463	577
Shared Lane Traffic (%)	47%											
Lane Group Flow (vph)	348	355	32	0	79	9	47	1993	134	9	1463	577
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes										
Headway Factor	0.99	0.99	0.99	1.07	1.07	1.07	0.97	0.97	0.97	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1	0	1	1	0	0	1	0
Detector Template				Left								
Leading Detector (ft)	40	40	0	20	40	0	40	336	0	0	336	0
Trailing Detector (ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Size(ft)	40	40	0	20	40	0	40	6	0	0	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases	3	3		4	4		1	6			2	
Permitted Phases			3			4	6		6	2		2
Detector Phase	3	3	3	4	4	4	1	6	6	2	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	36.7	36.7	36.7	38.9	38.9	38.9	10.8	28.8	28.8	30.8	30.8	30.8

Lanier Tract DRI

10: Dawsonville Highway & Shallowford Rd/Best Buy

phase one p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	36.7	36.7	36.7	38.9	38.9	38.9	10.8	84.4	84.4	73.6	73.6	73.6
Total Split (%)	22.9%	22.9%	22.9%	24.3%	24.3%	24.3%	6.8%	52.8%	52.8%	46.0%	46.0%	46.0%
Maximum Green (s)	30.0	30.0	30.0	33.0	33.0	33.0	5.0	77.6	77.6	66.8	66.8	66.8
Yellow Time (s)	4.5	4.5	4.5	3.0	3.0	3.0	3.0	4.9	4.9	4.9	4.9	4.9
All-Red Time (s)	2.2	2.2	2.2	2.9	2.9	2.9	2.8	1.9	1.9	1.9	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.7	6.7	6.7		5.9	5.9	5.8	6.8	6.8	6.8	6.8	6.8
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes			Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	C-Min	C-Min	C-Min
Walk Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0
Flash Dont Walk (s)	26.0	26.0	26.0	29.0	29.0	29.0		18.0	18.0	20.0	20.0	20.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0	0	0	0	0
Act Effect Green (s)	30.0	30.0	30.0		12.6	12.6	99.0	98.0	98.0	87.4	87.4	87.4
Actuated g/C Ratio	0.19	0.19	0.19		0.08	0.08	0.62	0.61	0.61	0.55	0.55	0.55
v/c Ratio	1.08	1.09	0.08		0.57	0.04	0.29	0.88	0.13	0.19	0.74	0.56
Control Delay	131.3	135.2	0.4		86.5	0.4	17.3	32.6	7.4	56.8	55.1	33.4
Queue Delay	1.2	1.3	0.0		0.0	0.0	0.0	46.8	0.0	0.0	23.5	0.8
Total Delay	132.5	136.5	0.4		86.5	0.4	17.3	79.4	7.4	56.8	78.7	34.2
LOS	F	F	A		F	A	B	E	A	E	E	C
Approach Delay		128.7			77.7			73.6			66.1	
Approach LOS		F			E			E			E	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 91 (57%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.09

Intersection Signal Delay: 78.6

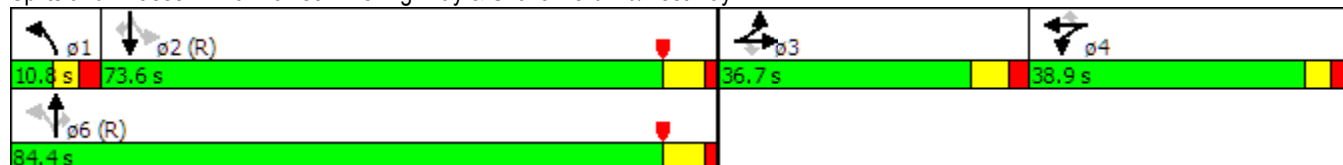
Intersection LOS: E

Intersection Capacity Utilization 89.6%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 10: Dawsonville Highway & Shallowford Rd/Best Buy



Appendix F

Future Phase Two Intersection Analysis

Lanier Tract DRI
1: Sportsman Club Road & Strickland Drive

phase two a.m.

Intersection						
Int Delay, s/veh	4.2					
Movement	WBL	WBR		NBT	NBR	SBL SBT
Vol, veh/h	30	0		7	11	0 25
Conflicting Peds, #/hr	0	0		0	0	0 0
Sign Control	Stop	Stop		Free	Free	Free Free
RT Channelized	-	None		-	None	- None
Storage Length	0	-		-	-	- -
Veh in Median Storage, #	0	-		0	-	- 0
Grade, %	0	-		0	-	- 0
Peak Hour Factor	50	50		58	58	64 64
Heavy Vehicles, %	2	2		2	2	2 2
Mvmt Flow	60	0		12	19	0 39
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	61	22	0	0	31	0
Stage 1	22	-	-	-	-	-
Stage 2	39	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	945	1055	-	-	1582	-
Stage 1	1001	-	-	-	-	-
Stage 2	983	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	945	1055	-	-	1582	-
Mov Cap-2 Maneuver	945	-	-	-	-	-
Stage 1	1001	-	-	-	-	-
Stage 2	983	-	-	-	-	-
Approach	WB		NB		SB	
HCM Control Delay, s	9.1		0		0	
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	945	1582	-	
HCM Lane V/C Ratio	-	-	0.063	-	-	
HCM Control Delay (s)	-	-	9.1	0	-	
HCM Lane LOS	-	-	A	A	-	
HCM 95th %tile Q(veh)	-	-	0.2	0	-	

Lanier Tract DRI
2: GA 53 & Sportsman Club Road

phase two a.m.

Intersection												
Int Delay, s/veh	23.7											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	14	1899	0	5	850	15	0	0	0	41	0	23
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	84	84	84	92	92	92	70	70	70
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	2208	0	6	1012	18	0	0	0	59	0	33

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1030	0	0	2208	0	0	2759	3283	1104	2170	3274	515
Stage 1	-	-	-	-	-	-	2241	2241	-	1033	1033	-
Stage 2	-	-	-	-	-	-	518	1042	-	1137	2241	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	670	-	-	234	-	-	9	9	206	~ 26	9	505
Stage 1	-	-	-	-	-	-	43	78	-	249	308	-
Stage 2	-	-	-	-	-	-	509	305	-	215	78	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	670	-	-	234	-	-	8	9	206	~ 25	9	505
Mov Cap-2 Maneuver	-	-	-	-	-	-	8	9	-	~ 25	9	-
Stage 1	-	-	-	-	-	-	42	76	-	243	300	-
Stage 2	-	-	-	-	-	-	464	297	-	210	76	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.1	0	\$ 866.3
HCM LOS			A	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	670	-	-	234	-	-	38
HCM Lane V/C Ratio	-	0.024	-	-	0.025	-	-	2.406
HCM Control Delay (s)	0	10.5	-	-	20.8	-	-	\$ 866.3
HCM Lane LOS	A	B	-	-	C	-	-	F
HCM 95th %tile Q(veh)	-	0.1	-	-	0.1	-	-	10.1

Notes												
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon												

Lanier Tract DRI
3: GA 53 & Avonlea Way

phase two a.m.

Intersection												
Int Delay, s/veh	11.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	17	0	79	2	0	13	13	875	2	15	1881	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	0	0	-	0	0	-	-	0	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	80	80	80	88	88	88	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	20	0	94	2	0	16	15	994	2	17	2187	8
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2749	3248	1094	2153	3247	498	2187	0	0	997	0	0
Stage 1	2222	2222	-	1025	1025	-	-	-	-	-	-	-
Stage 2	527	1026	-	1128	2222	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	~ 9	9	209	27	9	518	239	-	-	690	-	-
Stage 1	44	79	-	252	311	-	-	-	-	-	-	-
Stage 2	502	310	-	218	79	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 8	8	209	14	8	518	239	-	-	690	-	-
Mov Cap-2 Maneuver	~ 8	8	-	14	8	-	-	-	-	-	-	-
Stage 1	41	77	-	236	291	-	-	-	-	-	-	-
Stage 2	456	291	-	117	77	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	\$ 311.5			52.1			0.3			0.1		
HCM LOS	F			F								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR		
Capacity (veh/h)	239	-	-	8	209	14	518	690	-	-		
HCM Lane V/C Ratio	0.062	-	-	2.53	0.45	0.179	0.031	0.025	-	-		
HCM Control Delay (s)	21.1	-		\$ 1593.4	35.6	\$ 311.5	12.2	10.4	-	-		
HCM Lane LOS	C	-	-	F	E	F	B	B	-	-		
HCM 95th %tile Q(veh)	0.2	-	-	3.6	2.1	0.5	0.1	0.1	-	-		
Notes												
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon												

Lanier Tract DRI
4: GA 53 & Canterbury Road

phase two a.m.

Intersection												
Int Delay, s/veh	29											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	20	0	105	29	0	15	25	820	40	30	1980	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	0	0	-	0	0	-	-	0	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	92	88	92	92	92	86	86	92	92	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	23	0	119	32	0	16	29	953	43	33	2176	9

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2776	3296	1088	2186	3274	498	2176	0	0	997	0	0
Stage 1	2241	2241	-	1033	1033	-	-	-	-	-	-	-
Stage 2	535	1055	-	1153	2241	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	~ 9	8	211	~ 25	9	518	241	-	-	690	-	-
Stage 1	43	78	-	249	308	-	-	-	-	-	-	-
Stage 2	497	301	-	210	78	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 8	7	211	~ 10	8	518	241	-	-	690	-	-
Mov Cap-2 Maneuver	~ 8	7	-	~ 10	8	-	-	-	-	-	-	-
Stage 1	38	74	-	219	271	-	-	-	-	-	-	-
Stage 2	423	265	-	87	74	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	\$ 312.8	\$ 1132.9	0.6	0.2
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	241	-	-	8	211	10	518	690	-	-
HCM Lane V/C Ratio	0.121	-	-	2.841	0.565	3.152	0.031	0.047	-	-
HCM Control Delay (s)	22	-	-	\$ 1733.4	42.2	\$ 1712.5	12.2	10.5	-	-
HCM Lane LOS	C	-	-	F	E	F	B	B	-	-
HCM 95th %tile Q(veh)	0.4	-	-	4	3.1	5	0.1	0.1	-	-

Notes										
~: Volume exceeds capacity	\$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon							

Lanier Tract DRI
7: GA 53 & Beechwood Boulevard

phase two a.m.

Intersection						
Int Delay, s/veh	3.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	6	45	30	961	2306	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	Yield	-	None
Storage Length	0	0	200	-	-	360
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	1	0	-
Peak Hour Factor	82	82	87	87	89	89
Heavy Vehicles, %	0	0	0	1	0	0
Mvmt Flow	7	55	34	1105	2591	2
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	3212	1296	2591	0	-	0
Stage 1	2591	-	-	-	-	-
Stage 2	621	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	8	155	170	-	-	-
Stage 1	43	-	-	-	-	-
Stage 2	504	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 6	155	170	-	-	-
Mov Cap-2 Maneuver	~ 6	-	-	-	-	-
Stage 1	43	-	-	-	-	-
Stage 2	403	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	180.4	1		0		
HCM LOS	F					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	170	-	6	155	-	-
HCM Lane V/C Ratio	0.203	-	1.22	0.354	-	-
HCM Control Delay (s)	31.5	\$	1230.3	40.4	-	-
HCM Lane LOS	D	-	F	E	-	-
HCM 95th %tile Q(veh)	0.7	-	1.7	1.5	-	-
Notes						
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon						

Lanier Tract DRI

5: GA 53 & Lanier Valley Dr/Ahaluna Dr

phase two a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	21	6	127	92	3	27	61	831	47	21	2139	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		2%			-4%			1%			-1%	
Storage Length (ft)	0		0	0		0	100		0	140		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	0			0			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.889			0.970			0.992				
Flt Protected		0.993			0.964		0.950			0.950		
Satd. Flow (prot)	0	1661	0	0	1812	0	1796	3497	0	1814	3628	0
Flt Permitted		0.945			0.481		0.037			0.277		
Satd. Flow (perm)	0	1580	0	0	904	0	70	3497	0	529	3628	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		58			8			11				
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		340			322			888			1417	
Travel Time (s)		7.7			7.3			13.5			21.5	
Peak Hour Factor	0.91	0.91	0.91	0.83	0.83	0.83	0.85	0.85	0.85	0.87	0.87	0.87
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	0%	0%
Adj. Flow (vph)	23	7	140	111	4	33	72	978	55	24	2459	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	170	0	0	148	0	72	1033	0	24	2459	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	0.97	0.97	0.97	1.01	1.01	1.01	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		0	1	
Detector Template	Left			Left								
Leading Detector (ft)	20	40		20	40		40	336		0	336	
Trailing Detector (ft)	0	0		0	0		0	330		0	330	
Detector 1 Position(ft)	0	0		0	0		0	330		0	330	
Detector 1 Size(ft)	20	40		20	40		40	6		0	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		8			4		5	2			6	
Permitted Phases	8			4			2			6		
Detector Phase	8	8		4	4		5	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	23.0	23.0		23.0	23.0		10.6	23.0		23.0	23.0	

Lanier Tract DRI

5: GA 53 & Lanier Valley Dr/Ahaluna Dr

phase two a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	30.0	30.0		30.0	30.0		10.6	120.0		109.4	109.4	
Total Split (%)	20.0%	20.0%		20.0%	20.0%		7.1%	80.0%		72.9%	72.9%	
Maximum Green (s)	23.4	23.4		23.4	23.4		5.0	113.9		103.3	103.3	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	4.5		4.5	4.5	
All-Red Time (s)	2.6	2.6		2.6	2.6		2.6	1.6		1.6	1.6	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.6			6.6		5.6	6.1		6.1	6.1	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		C-Max	C-Max	
Act Effect Green (s)		23.4			23.4		114.4	113.9		103.3	103.3	
Actuated g/C Ratio		0.16			0.16		0.76	0.76		0.69	0.69	
v/c Ratio		0.58			1.01		0.65	0.39		0.07	0.98	
Control Delay		46.8			134.1		57.0	3.3		8.2	37.4	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		46.8			134.1		57.0	3.3		8.2	37.4	
LOS		D			F		E	A		A	D	
Approach Delay		46.8			134.1			6.8			37.1	
Approach LOS		D			F			A			D	

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 26 (17%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 140

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.01

Intersection Signal Delay: 32.6

Intersection LOS: C

Intersection Capacity Utilization 91.4%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 5: GA 53 & Lanier Valley Dr/Ahaluna Dr

					
120 s			30 s		
					
10.6 s	109.4 s		30 s		

Lanier Tract DRI

6: 53-Dawsonville Hwy & Academy Sports

phase two a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	2	0	7	2	0	0	12	909	10	6	2287	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			4%			1%			0%	
Storage Length (ft)	0		0	0		70	200		170	190		360
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	0			0			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850						0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1900	1615	1769	1862	1862	1796	3556	1607	1805	3610	1615
Flt Permitted							0.031			0.266		
Satd. Flow (perm)	1900	1900	1615	1862	1862	1862	59	3556	1607	505	3610	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			67						68			68
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		262			246			1836			685	
Travel Time (s)		7.1			6.7			27.8			10.4	
Peak Hour Factor	0.67	0.67	0.67	0.50	0.50	0.50	0.86	0.86	0.86	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%
Adj. Flow (vph)	3	0	10	4	0	0	14	1057	12	7	2541	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	3	0	10	4	0	0	14	1057	12	7	2541	4
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.03	1.03	1.03	1.01	1.01	1.01	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1	1	1	1	1	1	1	0
Detector Template												
Leading Detector (ft)	40	40	0	40	40	40	40	336	0	40	336	0
Trailing Detector (ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Size(ft)	40	40	0	40	40	40	40	6	0	40	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm		Perm	Perm		Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8		8	4		4	2		2	6		6
Detector Phase	8	8	8	4	4	4	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	42.0	42.0	42.0	42.4	42.4	42.4	11.4	30.3	30.3	11.0	29.3	29.3

Synchro 8 Report

Marc R Acampora, PE, LLC

Lanier Tract DRI

6: 53-Dawsonville Hwy & Academy Sports

phase two a.m.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	42.4	42.4	42.4	42.4	42.4	42.4	11.4	96.6	96.6	11.0	96.2	96.2
Total Split (%)	28.3%	28.3%	28.3%	28.3%	28.3%	28.3%	7.6%	64.4%	64.4%	7.3%	64.1%	64.1%
Maximum Green (s)	36.0	36.0	36.0	36.0	36.0	36.0	5.0	90.4	90.4	5.0	90.0	90.0
Yellow Time (s)	3.4	3.4	3.4	3.4	3.4	3.4	3.4	4.3	4.3	3.0	4.3	4.3
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	1.9	1.9	3.0	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.2	6.2	6.0	6.2	6.2
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0
Flash Dont Walk (s)	23.0	23.0	23.0	32.0	32.0	32.0		20.0	20.0		19.0	19.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0	0		0	0
Act Effect Green (s)	6.1		6.1	6.1			137.2	139.9	139.9	136.1	137.4	137.4
Actuated g/C Ratio	0.04		0.04	0.04			0.91	0.93	0.93	0.91	0.92	0.92
v/c Ratio	0.04		0.08	0.05			0.12	0.32	0.01	0.01	0.77	0.00
Control Delay	69.5		1.1	70.0			6.0	1.1	0.0	0.8	5.1	0.0
Queue Delay	0.0		0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.5		1.1	70.0			6.0	1.1	0.0	0.8	5.1	0.0
LOS	E		A	E			A	A	A	A	A	A
Approach Delay								1.2			5.1	
Approach LOS								A			A	

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 27 (18%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 145

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.77

Intersection Signal Delay: 4.0

Intersection LOS: A

Intersection Capacity Utilization 87.4%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 6: 53-Dawsonville Hwy & Academy Sports

	ø1		ø2 (R)		ø4
11 s		96.6 s		42.4 s	
	ø5		ø6 (R)		ø8
11.4 s		96.2 s		42.4 s	

Lanier Tract DRI

8: Dawsonville Highway/GA 53 & McEver Road/McEver

phase two a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	462	31	378	46	21	22	311	572	61	34	1352	942
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			5%			1%			-1%	
Storage Length (ft)	180		0	0		0	310		185	255		0
Storage Lanes	2		1	1		0	2		1	1		1
Taper Length (ft)	50			0			50			50		
Lane Util. Factor	0.97	0.95	0.95	1.00	1.00	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Frt		0.872	0.850		0.924				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3484	1566	1527	1760	1712	0	3484	3487	1575	1814	3628	1623
Flt Permitted	0.950			0.599			0.950			0.950		
Satd. Flow (perm)	3484	1566	1527	1110	1712	0	3484	3487	1575	1814	3628	1623
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		183	207		34				184			541
Link Speed (mph)		45			45			45			45	
Link Distance (ft)		580			331			921			1624	
Travel Time (s)		8.8			5.0			14.0			24.6	
Peak Hour Factor	0.97	0.97	0.97	0.62	0.62	0.62	0.93	0.93	0.93	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	3%	2%	0%	0%	0%
Adj. Flow (vph)	476	32	390	74	34	35	334	615	66	38	1502	1047
Shared Lane Traffic (%)			47%									
Lane Group Flow (vph)	476	215	207	74	69	0	334	615	66	38	1502	1047
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.03	1.03	1.03	1.01	1.01	1.01	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1		1	1	0	1	1	0
Detector Template												
Leading Detector (ft)	40	40	0	40	40		40	336	0	40	336	0
Trailing Detector (ft)	0	0	0	0	0		0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0		0	330	0	0	330	0
Detector 1 Size(ft)	40	40	0	40	40		40	6	0	40	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	NA	Perm	pm+pt	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases			8	4					6			2
Detector Phase	3	8	8	7	4		1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	13.2	50.2	50.2	11.6	48.2		13.4	35.6	35.6	12.9	44.6	44.6

Lanier Tract DRI

8: Dawsonville Highway/GA 53 & McEver Road/McEver

phase two a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	23.0	59.1	59.1	12.1	48.2		19.0	63.0	63.0	15.8	59.8	59.8
Total Split (%)	15.3%	39.4%	39.4%	8.1%	32.1%		12.7%	42.0%	42.0%	10.5%	39.9%	39.9%
Maximum Green (s)	15.7	51.8	51.8	5.6	40.9		11.5	56.4	56.4	8.6	53.2	53.2
Yellow Time (s)	4.3	4.3	4.3	3.5	4.3		4.5	4.4	4.4	4.2	4.4	4.4
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	2.2	2.2	3.0	2.2	2.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.3	7.3	7.3	6.5	7.3		7.5	6.6	6.6	7.2	6.6	6.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)		4.0	4.0		4.0			4.0	4.0		4.0	4.0
Flash Dont Walk (s)		38.0	38.0		36.0			25.0	25.0		34.0	34.0
Pedestrian Calls (#/hr)		0	0		0			0	0		0	0
Act Effect Green (s)	16.1	17.6	17.6	14.0	8.9		11.5	93.2	93.2	8.5	87.4	87.4
Actuated g/C Ratio	0.11	0.12	0.12	0.09	0.06		0.08	0.62	0.62	0.06	0.58	0.58
v/c Ratio	1.28	0.62	0.57	0.58	0.52		1.25	0.28	0.06	0.37	0.71	0.89
Control Delay	194.8	20.5	13.4	70.0	51.0		197.4	17.8	1.4	74.9	24.1	17.6
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	194.8	20.5	13.4	70.0	51.0		197.4	17.8	1.4	74.9	24.1	17.6
LOS	F	C	B	E	D		F	B	A	E	C	B
Approach Delay		111.2			60.9			75.8			22.2	
Approach LOS		F			E			E			C	

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 19 (13%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.28

Intersection Signal Delay: 52.3

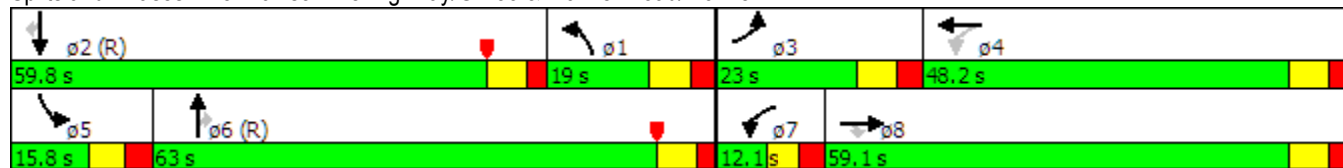
Intersection LOS: D

Intersection Capacity Utilization 89.2%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 8: Dawsonville Highway/GA 53 & McEver Road/McEver



Lanier Tract DRI

9: Dawsonville Highway & Greenhill Circle/Greenhill Circle

phase two a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	74	1	156	7	1	4	149	891	11	13	1610	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		3%			7%			1%			0%	
Storage Length (ft)	0		0	0		0	190		190	185		100
Storage Lanes	0		1	0		1	1		1	1		1
Taper Length (ft)	0			0			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected		0.953			0.957		0.950			0.950		
Satd. Flow (prot)	0	1784	1591	0	1755	1558	1796	3522	1607	1805	3610	1615
Flt Permitted		0.721			0.751		0.072			0.277		
Satd. Flow (perm)	0	1349	1591	0	1377	1558	136	3522	1607	526	3610	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			130			102			57			101
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		288			254			778			921	
Travel Time (s)		7.9			6.9			11.8			14.0	
Peak Hour Factor	0.90	0.90	0.90	0.69	0.69	0.69	0.86	0.86	0.86	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	0%	0%
Adj. Flow (vph)	82	1	173	10	1	6	173	1036	13	14	1750	62
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	83	173	0	11	6	173	1036	13	14	1750	62
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.02	1.02	1.02	1.05	1.05	1.05	1.01	1.01	1.01	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1	0	1	1	0	0	1	0
Detector Template	Left			Left								
Leading Detector (ft)	20	40	0	20	40	0	40	336	0	0	336	0
Trailing Detector (ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Size(ft)	20	40	0	20	40	0	40	6	0	0	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8		8	4		4	6		6	2		2
Detector Phase	8	8	8	4	4	4	1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.0	23.0	23.0	39.9	39.9	39.9	11.0	28.0	28.0	10.0	36.0	36.0

Lanier Tract DRI

9: Dawsonville Highway & Greenhill Circle/Greenhill Circle

phase two a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	39.9	39.9	39.9	39.9	39.9	39.9	21.0	100.1	100.1	10.0	89.1	89.1
Total Split (%)	26.6%	26.6%	26.6%	26.6%	26.6%	26.6%	14.0%	66.7%	66.7%	6.7%	59.4%	59.4%
Maximum Green (s)	34.0	34.0	34.0	34.0	34.0	34.0	15.0	94.1	94.1	5.0	83.1	83.1
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	4.4	4.4	3.5	4.4	4.4
All-Red Time (s)	2.9	2.9	2.9	2.9	2.9	2.9	3.0	1.6	1.6	1.5	1.6	1.6
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.9	5.9		5.9	5.9	6.0	6.0	6.0	5.0	6.0	6.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)				4.0	4.0	4.0		4.0	4.0		4.0	4.0
Flash Dont Walk (s)				30.0	30.0	30.0		18.0	18.0		26.0	26.0
Pedestrian Calls (#/hr)				0	0	0		0	0		0	0
Act Effect Green (s)		14.6	14.6		14.6	14.6	123.5	119.1	119.1	108.7	102.0	102.0
Actuated g/C Ratio		0.10	0.10		0.10	0.10	0.82	0.79	0.79	0.72	0.68	0.68
v/c Ratio		0.64	0.64		0.08	0.02	0.61	0.37	0.01	0.03	0.71	0.05
Control Delay		85.5	29.1		59.9	0.2	33.5	4.7	0.0	4.2	14.8	1.0
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
Total Delay		85.5	29.1		59.9	0.2	33.5	4.7	0.0	4.2	14.9	1.0
LOS		F	C		E	A	C	A	A	A	B	A
Approach Delay		47.4			38.8			8.7			14.4	
Approach LOS		D			D			A			B	

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow

Natural Cycle: 110

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.71

Intersection Signal Delay: 15.0

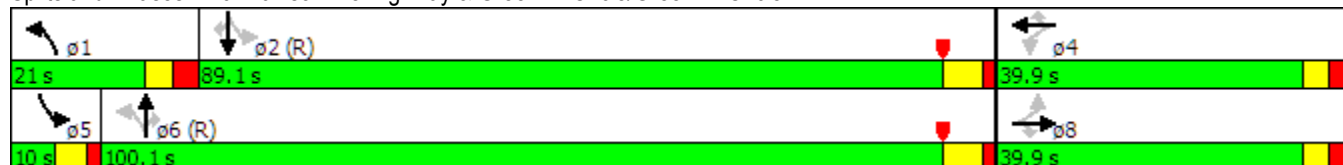
Intersection LOS: B

Intersection Capacity Utilization 78.5%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 9: Dawsonville Highway & Greenhill Circle/Greenhill Circle



Lanier Tract DRI

10: Dawsonville Highway & Shallowford Rd/Best Buy

phase two a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	162	2	9	2	4	3	11	864	14	1	1425	387
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-1%			10%			-4%			-1%	
Storage Length (ft)	350		350	0		0	350		150	265		0
Storage Lanes	1		0	0		1	1		1	1		1
Taper Length (ft)	100			0			100			100		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950	0.953			0.982		0.950			0.950		
Satd. Flow (prot)	1723	1729	1623	0	1773	1534	1841	3646	1647	1814	3592	1623
Flt Permitted	0.950	0.953			0.982		0.115			0.273		
Satd. Flow (perm)	1723	1729	1623	0	1773	1534	223	3646	1647	521	3592	1623
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			113			119			70			219
Link Speed (mph)		45			25			45			45	
Link Distance (ft)		653			178			957			778	
Travel Time (s)		9.9			4.9			14.5			11.8	
Peak Hour Factor	0.84	0.84	0.84	0.56	0.56	0.56	0.83	0.83	0.83	0.93	0.93	0.93
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	1%	0%
Adj. Flow (vph)	193	2	11	4	7	5	13	1041	17	1	1532	416
Shared Lane Traffic (%)	50%											
Lane Group Flow (vph)	96	99	11	0	11	5	13	1041	17	1	1532	416
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes										
Headway Factor	0.99	0.99	0.99	1.07	1.07	1.07	0.97	0.97	0.97	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1	0	1	1	0	0	1	0
Detector Template				Left								
Leading Detector (ft)	40	40	0	20	40	0	40	336	0	0	336	0
Trailing Detector (ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Size(ft)	40	40	0	20	40	0	40	6	0	0	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases	3	3		4	4		1	6			2	
Permitted Phases			3			4	6		6	2		2
Detector Phase	3	3	3	4	4	4	1	6	6	2	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	36.7	36.7	36.7	38.9	38.9	38.9	10.8	28.8	28.8	30.8	30.8	30.8

Lanier Tract DRI

10: Dawsonville Highway & Shallowford Rd/Best Buy

phase two a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	36.7	36.7	36.7	38.9	38.9	38.9	10.8	74.4	74.4	63.6	63.6	63.6
Total Split (%)	24.5%	24.5%	24.5%	25.9%	25.9%	25.9%	7.2%	49.6%	49.6%	42.4%	42.4%	42.4%
Maximum Green (s)	30.0	30.0	30.0	33.0	33.0	33.0	5.0	67.6	67.6	56.8	56.8	56.8
Yellow Time (s)	4.5	4.5	4.5	3.0	3.0	3.0	3.0	4.9	4.9	4.9	4.9	4.9
All-Red Time (s)	2.2	2.2	2.2	2.9	2.9	2.9	2.8	1.9	1.9	1.9	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.7	6.7	6.7		5.9	5.9	5.8	6.8	6.8	6.8	6.8	6.8
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes			Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	C-Min	C-Min	C-Min
Walk Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0
Flash Dont Walk (s)	26.0	26.0	26.0	29.0	29.0	29.0		18.0	18.0	20.0	20.0	20.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0	0	0	0	0
Act Effect Green (s)	13.9	13.9	13.9		6.5	6.5	118.2	117.2	117.2	112.4	112.4	112.4
Actuated g/C Ratio	0.09	0.09	0.09		0.04	0.04	0.79	0.78	0.78	0.75	0.75	0.75
v/c Ratio	0.60	0.62	0.04		0.14	0.03	0.05	0.37	0.01	0.00	0.57	0.33
Control Delay	80.2	81.2	0.3		72.5	0.3	6.1	6.5	0.0	7.0	11.6	4.6
Queue Delay	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0
Total Delay	80.2	81.2	0.3		72.5	0.3	6.1	6.5	0.0	7.0	12.0	4.6
LOS	F	F	A		E	A	A	A	A	A	B	A
Approach Delay		76.4			49.9			6.4			10.4	
Approach LOS		E			D			A			B	

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 45 (30%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.62

Intersection Signal Delay: 13.5

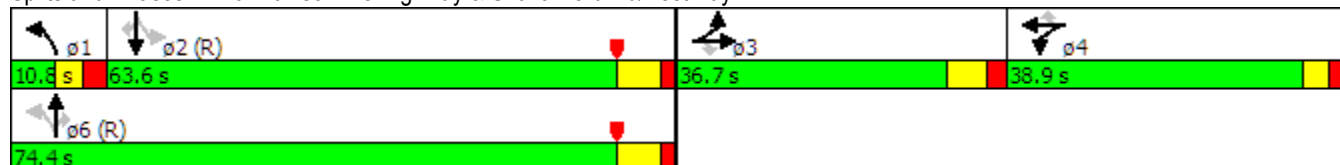
Intersection LOS: B

Intersection Capacity Utilization 63.9%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 10: Dawsonville Highway & Shallowford Rd/Best Buy



Lanier Tract DRI
1: Sportsman Club Road & Strickland Drive

phase two p.m.

Intersection

Int Delay, s/veh 3.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	24	0	32	28	0	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	44	44	86	86	82	82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	55	0	37	33	0	30

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	83	53	0 0 70 0
Stage 1	53	-	- - - -
Stage 2	30	-	- - - -
Critical Hdwy	6.42	6.22	- - 4.12 -
Critical Hdwy Stg 1	5.42	-	- - - -
Critical Hdwy Stg 2	5.42	-	- - - -
Follow-up Hdwy	3.518	3.318	- - 2.218 -
Pot Cap-1 Maneuver	919	1014	- - 1531 -
Stage 1	970	-	- - - -
Stage 2	993	-	- - - -
Platoon blocked, %			- - - -
Mov Cap-1 Maneuver	919	1014	- - 1531 -
Mov Cap-2 Maneuver	919	-	- - - -
Stage 1	970	-	- - - -
Stage 2	993	-	- - - -

Approach	WB	NB	SB
HCM Control Delay, s	9.2	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	- 919	1531	-
HCM Lane V/C Ratio	-	- 0.059	-	-
HCM Control Delay (s)	-	- 9.2	0	-
HCM Lane LOS	-	- A	A	-
HCM 95th %tile Q(veh)	-	- 0.2	0	-

Lanier Tract DRI
2: GA 53 & Sportsman Club Road

phase two p.m.

Intersection												
Int Delay, s/veh		74.3										
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	22	1201	0	26	1914	34	0	0	0	42	0	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	96	96	96	92	92	92	75	75	75
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	23	1264	0	27	1994	35	0	0	0	56	0	20
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	2029	0	0	1264	0	0	2362	3394	632	2744	3377	1015
Stage 1	-	-	-	-	-	-	1311	1311	-	2066	2066	-
Stage 2	-	-	-	-	-	-	1051	2083	-	678	1311	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	276	-	-	546	-	-	19	7	423	~ 9	7	236
Stage 1	-	-	-	-	-	-	168	227	-	56	95	-
Stage 2	-	-	-	-	-	-	243	94	-	408	227	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	276	-	-	546	-	-	16	6	423	~ 8	6	236
Mov Cap-2 Maneuver	-	-	-	-	-	-	16	6	-	~ 8	6	-
Stage 1	-	-	-	-	-	-	154	208	-	~ 51	90	-
Stage 2	-	-	-	-	-	-	211	89	-	374	208	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			0.2			0			\$ 3330.7		
HCM LOS							A			F		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	-	276	-	-	546	-	-	11				
HCM Lane V/C Ratio	-	0.084	-	-	0.05	-	-	6.909				
HCM Control Delay (s)	0	19.2	-	-	11.9	-		\$ 3330.7				
HCM Lane LOS	A	C	-	-	B	-	-	F				
HCM 95th %tile Q(veh)	-	0.3	-	-	0.2	-	-	10.8				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined			*: All major volume in platoon					

Lanier Tract DRI
3: Avonlea Way & GA 53

phase two p.m.

Intersection												
Int Delay, s/veh	4.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	12	0	52	2	0	11	68	1896	17	10	1298	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	0	0	-	0	0	-	-	0	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	76	76	76	80	80	80	95	95	95	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	0	68	2	0	14	72	1996	18	10	1298	15
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2459	3475	649	2817	3466	1007	1298	0	0	2014	0	0
Stage 1	1318	1318	-	2148	2148	-	-	-	-	-	-	-
Stage 2	1141	2157	-	669	1318	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	16	6	412	8	7	239	530	-	-	279	-	-
Stage 1	166	225	-	49	87	-	-	-	-	-	-	-
Stage 2	214	86	-	413	225	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 13	5	412	6	6	239	530	-	-	279	-	-
Mov Cap-2 Maneuver	~ 13	5	-	6	6	-	-	-	-	-	-	-
Stage 1	143	217	-	42	75	-	-	-	-	-	-	-
Stage 2	174	74	-	332	217	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	148			146.1			0.4			0.1		
HCM LOS	F			F								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR		
Capacity (veh/h)	530	-	-	13	412	6	239	279	-	-		
HCM Lane V/C Ratio	0.135	-	-	1.215	0.166	0.417	0.058	0.036	-	-		
HCM Control Delay (s)	12.8	-	-	\$ 722.2	15.5	\$ 833.9	21	18.4	-	-		
HCM Lane LOS	B	-	-	F	C	F	C	C	-	-		
HCM 95th %tile Q(veh)	0.5	-	-	2.6	0.6	0.8	0.2	0.1	-	-		
Notes												
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon												

Lanier Tract DRI
4: Canterbury Road & GA 53

phase two p.m.

Intersection												
Int Delay, s/veh	852.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	8	0	31	116	0	92	123	1860	128	68	1238	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	0	0	-	0	0	-	0	0	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	70	70	70	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	0	39	166	0	131	128	1938	133	71	1290	16
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2656	3625	645	2980	3625	969	1290	0	0	1938	0	0
Stage 1	1431	1431	-	2194	2194	-	-	-	-	-	-	-
Stage 2	1225	2194	-	786	1431	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	11	5	415	~ 6	5	253	533	-	-	299	-	-
Stage 1	141	198	-	~ 46	82	-	-	-	-	-	-	-
Stage 2	190	82	-	351	198	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 4	3	415	~ 4	3	253	533	-	-	299	-	-
Mov Cap-2 Maneuver	~ 4	3	-	~ 4	3	-	-	-	-	-	-	-
Stage 1	107	151	-	~ 35	62	-	-	-	-	-	-	-
Stage 2	69	62	-	243	151	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	\$ 484.2			\$ 11156.3			0.8			1.1		
HCM LOS	F			F								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR		
Capacity (veh/h)	533	-	-	4	415	4	253	299	-	-		
HCM Lane V/C Ratio	0.24	-	-	2.5	0.093	41.429	0.519	0.237	-	-		
HCM Control Delay (s)	13.9	-		\$ 2303.8	14.0	9977.6	33.7	20.7	-	-		
HCM Lane LOS	B	-	-	F	B	F	D	C	-	-		
HCM 95th %tile Q(veh)	0.9	-	-	2.3	0.3	22.9	2.7	0.9	-	-		
Notes												
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon												

Intersection						
Int Delay, s/veh	1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	1	52	95	2401	1711	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	Yield	-	None
Storage Length	0	0	200	-	-	360
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	1	0	-
Peak Hour Factor	71	71	99	99	98	98
Heavy Vehicles, %	0	0	0	0	1	0
Mvmt Flow	1	73	96	2425	1746	10
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	3151	874	1746	0	-	0
Stage 1	1746	-	-	-	-	-
Stage 2	1405	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	9	297	364	-	-	-
Stage 1	128	-	-	-	-	-
Stage 2	196	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	7	297	364	-	-	-
Mov Cap-2 Maneuver	7	-	-	-	-	-
Stage 1	128	-	-	-	-	-
Stage 2	144	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	32.3	0.7		0		
HCM LOS	D					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	364	-	7	297	-	-
HCM Lane V/C Ratio	0.264	-	0.201	0.247	-	-
HCM Control Delay (s)	18.4	-\$	620.4	21	-	-
HCM Lane LOS	C	-	F	C	-	-
HCM 95th %tile Q(veh)	1	-	0.5	1	-	-

Lanier Tract DRI

5: GA 53 & Lanier Valley Dr/Ahaluna Dr

phase two p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	23	1	106	98	8	64	198	2041	114	31	1448	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		2%			-4%			1%			-1%	
Storage Length (ft)	0		0	0		0	100		0	140		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	0			0			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.890			0.949			0.992				
Flt Protected		0.991			0.972		0.950			0.950		
Satd. Flow (prot)	0	1659	0	0	1788	0	1796	3563	0	1814	3592	0
Flt Permitted		0.906			0.612		0.099			0.040		
Satd. Flow (perm)	0	1517	0	0	1126	0	187	3563	0	76	3592	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		119			17			10				
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		340			322			1002			1457	
Travel Time (s)		7.7			7.3			15.2			22.1	
Peak Hour Factor	0.89	0.89	0.89	0.90	0.90	0.90	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
Adj. Flow (vph)	26	1	119	109	9	71	206	2126	119	32	1508	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	146	0	0	189	0	206	2245	0	32	1511	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	0.97	0.97	0.97	1.01	1.01	1.01	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		0	1	
Detector Template	Left			Left								
Leading Detector (ft)	20	40		20	40		40	336		0	336	
Trailing Detector (ft)	0	0		0	0		0	330		0	330	
Detector 1 Position(ft)	0	0		0	0		0	330		0	330	
Detector 1 Size(ft)	20	40		20	40		40	6		0	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		8			4		5	2			6	
Permitted Phases	8			4			2			6		
Detector Phase	8	8		4	4		5	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	23.0	23.0		23.0	23.0		10.6	23.0		23.0	23.0	

Lanier Tract DRI

5: GA 53 & Lanier Valley Dr/Ahaluna Dr

phase two p.m.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	36.0	36.0		36.0	36.0		22.0	124.0		102.0	102.0	
Total Split (%)	22.5%	22.5%		22.5%	22.5%		13.8%	77.5%		63.8%	63.8%	
Maximum Green (s)	29.4	29.4		29.4	29.4		16.4	117.9		95.9	95.9	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	4.5		4.5	4.5	
All-Red Time (s)	2.6	2.6		2.6	2.6		2.6	1.6		1.6	1.6	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.6			6.6		5.6	6.1		6.1	6.1	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		C-Max	C-Max	
Act Effect Green (s)		26.9			26.9		120.9	120.4		101.9	101.9	
Actuated g/C Ratio		0.17			0.17		0.76	0.75		0.64	0.64	
v/c Ratio		0.41			0.93		0.76	0.84		0.67	0.66	
Control Delay		17.7			106.1		36.4	15.3		86.6	20.9	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		17.7			106.1		36.4	15.3		86.6	20.9	
LOS		B			F		D	B		F	C	
Approach Delay		17.7			106.1			17.0			22.3	
Approach LOS		B			F			B			C	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 129 (81%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.93

Intersection Signal Delay: 22.8

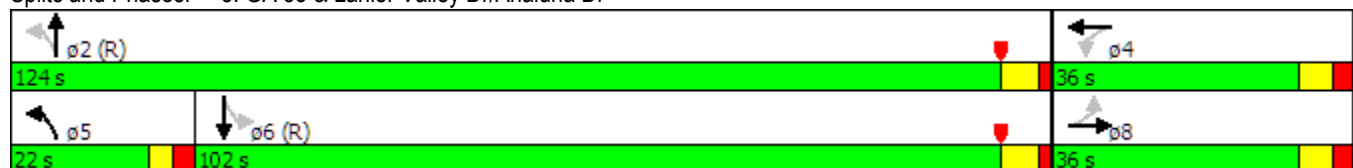
Intersection LOS: C

Intersection Capacity Utilization 96.3%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 5: GA 53 & Lanier Valley Dr/Ahaluna Dr



Lanier Tract DRI

6: 53-Dawsonville Hwy & Academy Sports

phase two p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	14	3	66	130	8	46	96	2142	152	21	1503	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			4%			1%			0%	
Storage Length (ft)	0		0	0		70	200		170	190		360
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	0			0			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1900	1615	1769	1862	1583	1796	3592	1607	1805	3574	1615
Flt Permitted	0.751			0.756			0.106			0.037		
Satd. Flow (perm)	1427	1900	1615	1408	1862	1583	200	3592	1607	70	3574	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			69			63			64			64
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		262			246			1836			685	
Travel Time (s)		7.1			6.7			27.8			10.4	
Peak Hour Factor	0.95	0.95	0.95	0.80	0.80	0.80	0.98	0.98	0.98	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
Adj. Flow (vph)	15	3	69	162	10	58	98	2186	155	22	1549	31
Shared Lane Traffic (%)												
Lane Group Flow (vph)	15	3	69	162	10	58	98	2186	155	22	1549	31
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.03	1.03	1.03	1.01	1.01	1.01	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1	1	1	1	1	1	1	0
Detector Template												
Leading Detector (ft)	40	40	0	40	40	40	40	336	0	40	336	0
Trailing Detector (ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Size(ft)	40	40	0	40	40	40	40	6	0	40	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8		8	4		4	2		2	6		6
Detector Phase	8	8	8	4	4	4	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	42.0	42.0	42.0	42.4	42.4	42.4	11.4	30.3	30.3	11.0	29.3	29.3

Synchro 8 Report

Marc R Acampora, PE, LLC

Lanier Tract DRI

6: 53-Dawsonville Hwy & Academy Sports

phase two p.m.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	42.4	42.4	42.4	42.4	42.4	42.4	16.6	106.6	106.6	11.0	101.0	101.0
Total Split (%)	26.5%	26.5%	26.5%	26.5%	26.5%	26.5%	10.4%	66.6%	66.6%	6.9%	63.1%	63.1%
Maximum Green (s)	36.0	36.0	36.0	36.0	36.0	36.0	10.2	100.4	100.4	5.0	94.8	94.8
Yellow Time (s)	3.4	3.4	3.4	3.4	3.4	3.4	3.4	4.3	4.3	3.0	4.3	4.3
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	1.9	1.9	3.0	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.2	6.2	6.0	6.2	6.2
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0
Flash Dont Walk (s)	23.0	23.0	23.0	32.0	32.0	32.0		20.0	20.0		19.0	19.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0	0		0	0
Act Effect Green (s)	23.7	23.7	23.7	23.7	23.7	23.7	121.5	116.4	116.4	115.5	109.4	109.4
Actuated g/C Ratio	0.15	0.15	0.15	0.15	0.15	0.15	0.76	0.73	0.73	0.72	0.68	0.68
v/c Ratio	0.07	0.01	0.23	0.78	0.04	0.20	0.42	0.84	0.13	0.19	0.63	0.03
Control Delay	55.8	53.3	13.0	89.1	54.6	11.7	14.6	17.5	7.3	10.4	13.2	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
Total Delay	55.8	53.3	13.0	89.1	54.6	11.7	14.6	17.5	7.3	10.4	13.4	0.0
LOS	E	D	B	F	D	B	B	B	A	B	B	A
Approach Delay		21.8			68.1			16.7			13.1	
Approach LOS		C			E			B			B	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 120 (75%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 145

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.84

Intersection Signal Delay: 18.2

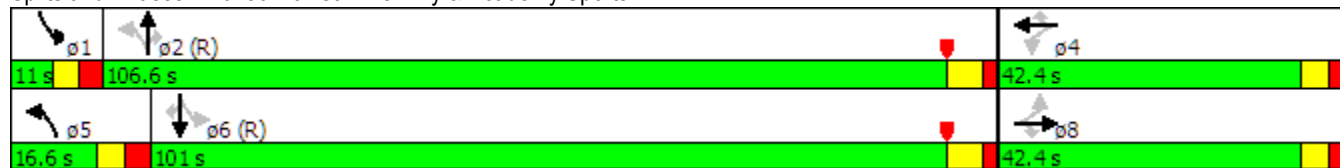
Intersection LOS: B

Intersection Capacity Utilization 92.7%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 6: 53-Dawsonville Hwy & Academy Sports



Lanier Tract DRI

8: Dawsonville Highway/GA 53 & McEver Road/McEver

phase two p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	996	235	426	96	100	93	478	1632	51	71	1249	594
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			5%			1%			-1%	
Storage Length (ft)	180		0	0		0	310		185	255		0
Storage Lanes	2		1	1		0	2		1	1		1
Taper Length (ft)	50			0			50			50		
Lane Util. Factor	0.97	0.95	0.95	1.00	1.00	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Frt		0.951	0.850		0.928				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3484	1708	1527	1760	1719	0	3484	3592	1607	1814	3592	1623
Flt Permitted	0.950			0.432			0.950			0.950		
Satd. Flow (perm)	3484	1708	1527	800	1719	0	3484	3592	1607	1814	3592	1623
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18	302		28				172			323
Link Speed (mph)		45			25			45			45	
Link Distance (ft)		580			331			921			1504	
Travel Time (s)		8.8			9.0			14.0			22.8	
Peak Hour Factor	0.95	0.95	0.95	0.86	0.86	0.86	0.97	0.97	0.97	0.91	0.91	0.91
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
Adj. Flow (vph)	1048	247	448	112	116	108	493	1682	53	78	1373	653
Shared Lane Traffic (%)			27%									
Lane Group Flow (vph)	1048	368	327	112	224	0	493	1682	53	78	1373	653
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.03	1.03	1.03	1.01	1.01	1.01	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1		1	1	0	1	1	0
Detector Template												
Leading Detector (ft)	40	40	0	40	40		40	336	0	40	336	0
Trailing Detector (ft)	0	0	0	0	0		0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0		0	330	0	0	330	0
Detector 1 Size(ft)	40	40	0	40	40		40	6	0	40	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	NA	Perm	pm+pt	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases			8	4					6			2
Detector Phase	3	8	8	7	4		1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	13.2	50.2	50.2	11.6	48.2		13.4	35.6	35.6	12.9	44.6	44.6

Lanier Tract DRI

8: Dawsonville Highway/GA 53 & McEver Road/McEver

phase two p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	34.0	68.2	68.2	14.0	48.2		22.0	64.8	64.8	13.0	55.8	55.8
Total Split (%)	21.3%	42.6%	42.6%	8.8%	30.1%		13.8%	40.5%	40.5%	8.1%	34.9%	34.9%
Maximum Green (s)	26.7	60.9	60.9	7.5	40.9		14.5	58.2	58.2	5.8	49.2	49.2
Yellow Time (s)	4.3	4.3	4.3	3.5	4.3		4.5	4.4	4.4	4.2	4.4	4.4
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	2.2	2.2	3.0	2.2	2.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.3	7.3	7.3	6.5	7.3		7.5	6.6	6.6	7.2	6.6	6.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)		4.0	4.0		4.0			4.0	4.0		4.0	4.0
Flash Dont Walk (s)		38.0	38.0		36.0			25.0	25.0		34.0	34.0
Pedestrian Calls (#/hr)		0	0		0			0	0		0	0
Act Effect Green (s)	26.7	43.9	43.9	32.2	23.9		14.5	65.6	65.6	15.4	66.2	66.2
Actuated g/C Ratio	0.17	0.27	0.27	0.20	0.15		0.09	0.41	0.41	0.10	0.41	0.41
v/c Ratio	1.80	0.77	0.51	0.54	0.80		1.57	1.14	0.07	0.45	0.92	0.76
Control Delay	403.8	61.1	8.7	47.9	77.3		313.6	125.0	0.1	65.4	68.6	41.7
Queue Delay	0.0	58.4	3.3	32.9	0.0		0.0	0.0	0.0	0.0	0.3	0.0
Total Delay	403.8	119.4	12.1	80.8	77.3		313.6	125.0	0.1	65.4	68.8	41.7
LOS	F	F	B	F	E		F	F	A	E	E	D
Approach Delay		270.3			78.5			163.8			60.3	
Approach LOS		F			E			F			E	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 52 (33%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.80

Intersection Signal Delay: 154.3

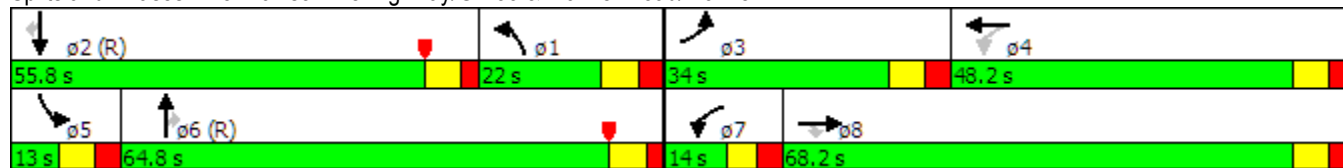
Intersection LOS: F

Intersection Capacity Utilization 112.3%

ICU Level of Service H

Analysis Period (min) 15

Splits and Phases: 8: Dawsonville Highway/GA 53 & McEver Road/McEver



Lanier Tract DRI

9: Dawsonville Highway & Greenhill Circle/Greenhill Circle

phase two p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	146	10	152	66	22	42	274	2059	77	44	1650	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		3%			7%			1%			0%	
Storage Length (ft)	0		0	0		0	190		190	185		100
Storage Lanes	0		1	0		1	1		1	1		1
Taper Length (ft)	0			0			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected		0.955			0.964		0.950			0.950		
Satd. Flow (prot)	0	1787	1591	0	1767	1558	1796	3592	1607	1805	3610	1615
Flt Permitted		0.591			0.482		0.042			0.044		
Satd. Flow (perm)	0	1106	1591	0	884	1558	79	3592	1607	84	3610	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			167			95			54			95
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		288			254			778			921	
Travel Time (s)		7.9			6.9			11.8			14.0	
Peak Hour Factor	0.91	0.91	0.91	0.78	0.78	0.78	0.97	0.97	0.97	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	160	11	167	85	28	54	282	2123	79	46	1737	62
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	171	167	0	113	54	282	2123	79	46	1737	62
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.02	1.02	1.02	1.05	1.05	1.05	1.01	1.01	1.01	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1	0	1	1	0	0	1	0
Detector Template	Left			Left								
Leading Detector (ft)	20	40	0	20	40	0	40	336	0	0	336	0
Trailing Detector (ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Size(ft)	20	40	0	20	40	0	40	6	0	0	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8		8	4		4	6		6	2		2
Detector Phase	8	8	8	4	4	4	1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.0	23.0	23.0	39.9	39.9	39.9	11.0	28.0	28.0	10.0	36.0	36.0

Lanier Tract DRI

9: Dawsonville Highway & Greenhill Circle/Greenhill Circle

phase two p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	39.9	39.9	39.9	39.9	39.9	39.9	31.0	110.1	110.1	10.0	89.1	89.1
Total Split (%)	24.9%	24.9%	24.9%	24.9%	24.9%	24.9%	19.4%	68.8%	68.8%	6.3%	55.7%	55.7%
Maximum Green (s)	34.0	34.0	34.0	34.0	34.0	34.0	25.0	104.1	104.1	5.0	83.1	83.1
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	4.4	4.4	3.5	4.4	4.4
All-Red Time (s)	2.9	2.9	2.9	2.9	2.9	2.9	3.0	1.6	1.6	1.5	1.6	1.6
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.9	5.9		5.9	5.9	6.0	6.0	6.0	5.0	6.0	6.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)				4.0	4.0	4.0		4.0	4.0		4.0	4.0
Flash Dont Walk (s)				30.0	30.0	30.0		18.0	18.0		26.0	26.0
Pedestrian Calls (#/hr)				0	0	0		0	0		0	0
Act Effect Green (s)		28.1	28.1		28.1	28.1	120.0	111.5	111.5	96.9	90.3	90.3
Actuated g/C Ratio		0.18	0.18		0.18	0.18	0.75	0.70	0.70	0.61	0.56	0.56
v/c Ratio		0.88	0.40		0.73	0.15	0.90	0.85	0.07	0.41	0.85	0.07
Control Delay		103.0	9.8		87.7	1.7	58.2	30.6	5.2	23.9	58.8	11.5
Queue Delay		0.0	5.9		87.6	0.0	0.0	46.9	0.0	0.0	3.2	0.0
Total Delay		103.0	15.7		175.3	1.7	58.2	77.5	5.2	23.9	62.0	11.5
LOS		F	B		F	A	E	E	A	C	E	B
Approach Delay		59.8			119.2			73.0			59.3	
Approach LOS		E			F			E			E	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow

Natural Cycle: 130

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.90

Intersection Signal Delay: 68.5

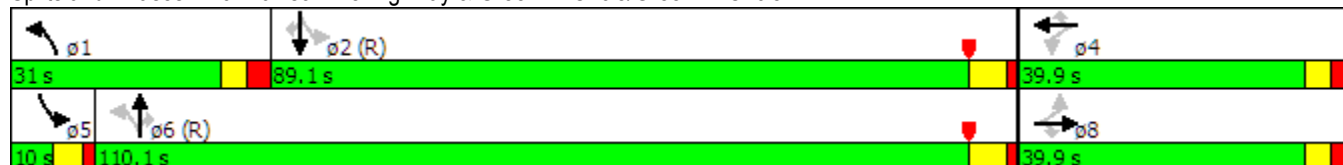
Intersection LOS: E

Intersection Capacity Utilization 91.0%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 9: Dawsonville Highway & Greenhill Circle/Greenhill Circle



Lanier Tract DRI

10: Dawsonville Highway & Shallowford Rd/Best Buy

phase two p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	596	42	29	40	30	8	44	1914	126	8	1375	531
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-1%			10%			-4%			-1%	
Storage Length (ft)	350		350	0		0	350		150	265		0
Storage Lanes	1		0	0		1	1		1	1		1
Taper Length (ft)	100			0			100			100		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950	0.958			0.972		0.950			0.950		
Satd. Flow (prot)	1723	1738	1623	0	1754	1534	1841	3682	1647	1814	3628	1623
Flt Permitted	0.950	0.958			0.972		0.064			0.047		
Satd. Flow (perm)	1723	1738	1623	0	1754	1534	124	3682	1647	90	3628	1623
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			106			111			65			311
Link Speed (mph)		45			25			45			45	
Link Distance (ft)		653			178			1046			778	
Travel Time (s)		9.9			4.9			15.8			11.8	
Peak Hour Factor	0.90	0.90	0.90	0.88	0.88	0.88	0.94	0.94	0.94	0.91	0.91	0.91
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	662	47	32	45	34	9	47	2036	134	9	1511	584
Shared Lane Traffic (%)	47%											
Lane Group Flow (vph)	351	358	32	0	79	9	47	2036	134	9	1511	584
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes										
Headway Factor	0.99	0.99	0.99	1.07	1.07	1.07	0.97	0.97	0.97	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1	0	1	1	0	0	1	0
Detector Template				Left								
Leading Detector (ft)	40	40	0	20	40	0	40	336	0	0	336	0
Trailing Detector (ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Size(ft)	40	40	0	20	40	0	40	6	0	0	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases	3	3		4	4		1	6			2	
Permitted Phases			3			4	6		6	2		2
Detector Phase	3	3	3	4	4	4	1	6	6	2	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	36.7	36.7	36.7	38.9	38.9	38.9	10.8	28.8	28.8	30.8	30.8	30.8

Lanier Tract DRI

10: Dawsonville Highway & Shallowford Rd/Best Buy

phase two p.m.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	37.0	37.0	37.0	38.9	38.9	38.9	10.8	84.1	84.1	73.3	73.3	73.3
Total Split (%)	23.1%	23.1%	23.1%	24.3%	24.3%	24.3%	6.8%	52.6%	52.6%	45.8%	45.8%	45.8%
Maximum Green (s)	30.3	30.3	30.3	33.0	33.0	33.0	5.0	77.3	77.3	66.5	66.5	66.5
Yellow Time (s)	4.5	4.5	4.5	3.0	3.0	3.0	3.0	4.9	4.9	4.9	4.9	4.9
All-Red Time (s)	2.2	2.2	2.2	2.9	2.9	2.9	2.8	1.9	1.9	1.9	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.7	6.7	6.7		5.9	5.9	5.8	6.8	6.8	6.8	6.8	6.8
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes			Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	C-Min	C-Min	C-Min
Walk Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0
Flash Dont Walk (s)	26.0	26.0	26.0	29.0	29.0	29.0		18.0	18.0	20.0	20.0	20.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0	0	0	0	0
Act Effect Green (s)	30.3	30.3	30.3		12.6	12.6	98.7	97.7	97.7	87.1	87.1	87.1
Actuated g/C Ratio	0.19	0.19	0.19		0.08	0.08	0.62	0.61	0.61	0.54	0.54	0.54
v/c Ratio	1.08	1.09	0.08		0.57	0.04	0.31	0.91	0.13	0.19	0.77	0.57
Control Delay	130.7	133.6	0.4		86.5	0.4	18.2	34.6	7.5	55.5	56.2	34.0
Queue Delay	1.2	1.2	0.0		0.0	0.0	0.0	46.4	0.0	0.0	36.0	0.8
Total Delay	131.9	134.9	0.4		86.5	0.4	18.2	81.0	7.5	55.5	92.2	34.9
LOS	F	F	A		F	A	B	F	A	E	F	C
Approach Delay		127.7			77.7			75.2			76.1	
Approach LOS		F			E			E			E	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 91 (57%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.09

Intersection Signal Delay: 83.2

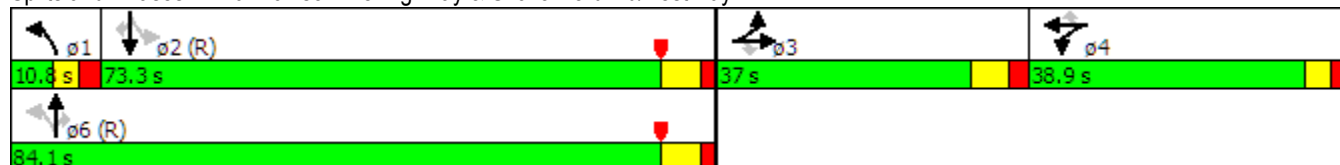
Intersection LOS: F

Intersection Capacity Utilization 90.9%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 10: Dawsonville Highway & Shallowford Rd/Best Buy





Lake Lanier
Active Adult Community
Gainesville, Georgia

Oak Hall Companies, LLC

5256 Peachtree Road, Suite 195

Atlanta, GA 30341

770-662-5995 office

404-234-6669 cell

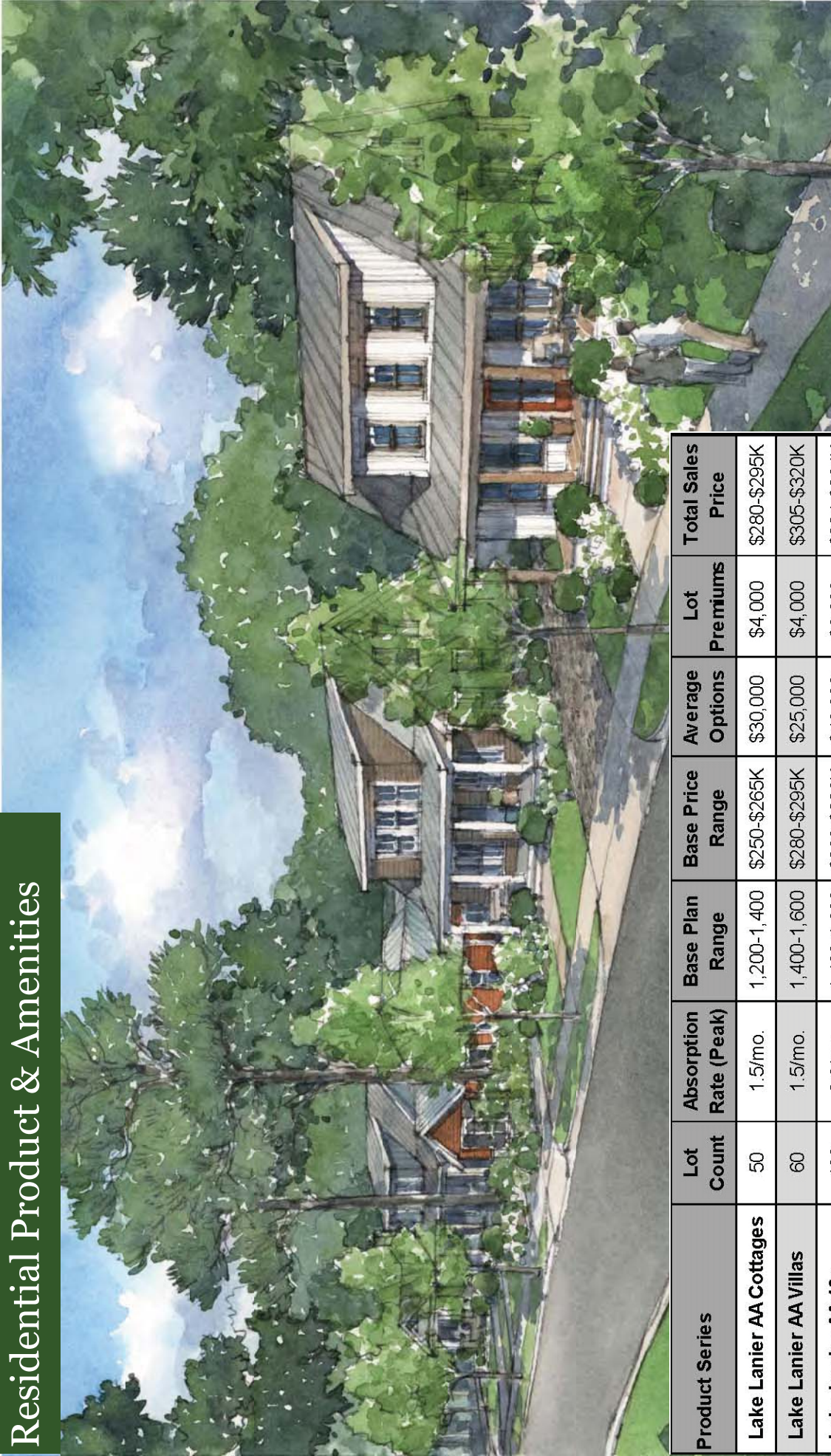
tad@oakhallcompanies.com

www.oakhallcompanies.com



The Product

Residential Product & Amenities



Product Series	Lot Count	Absorption Rate (Peak)	Base Plan Range	Base Price Range	Average Options	Lot Premiums	Total Sales Price
Lake Lanier AA Cottages	50	1.5/mo.	1,200-1,400	\$250-\$265K	\$30,000	\$4,000	\$280-\$295K
Lake Lanier AA Villas	60	1.5/mo.	1,400-1,600	\$280-\$295K	\$25,000	\$4,000	\$305-\$320K
Lake Lanier AA 40s	100	2.0/mo.	1,400-1,800	\$290-\$320K	\$40,000	\$8,000	\$334-\$364K
Lake Lanier AA 50s	150	3.0/mo.	1,800-2,400	\$340-\$385K	\$50,000	\$12,000	\$397-\$442K
Lake Lanier AA 60s	100	2.0/mo.	2,400-3,000	\$400-\$445K	\$60,000	\$15,000	\$469-\$514K
Total/Average	460	10.0/mo.	1,200-3,000	\$250-\$445K	\$25-\$60K	\$4-\$15K	\$280-\$514K

Oak Hall Companies, LLC

4/19/17

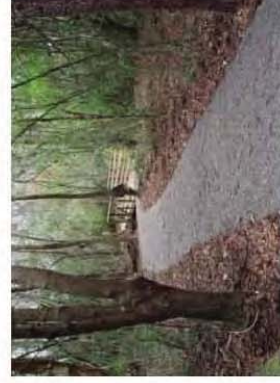
Residential Product & Amenities



Clubhouse Amenities	Recommend for Subject
Clubhouse	Yes
Fitness Center	Yes
Indoor Lap Pool	Yes
Locker Rooms	Yes
Aerobics Room	Yes
Billiards Room	Yes
Cards Room	Yes
Multi-Purpose Room	Yes
Kitchen	Yes
Covered Terrace	Yes
Activities Director	Yes



Outdoor Amenities	Recommend for Subject
Zero Entry Resort Pool	Yes
Shaded/Covered Areas/Cabanas	Yes
Fireplace and Grilling Area	Yes
Walking Trails	Yes
Tennis Courts (4)	Yes
Pickleball Courts (4)	Yes
Multi-Purpose Lawn	Yes
Lakeside Pavillion w. Restrooms	Yes
Neighborhood/Pocket Parks w/ Gazebos	Yes
Dog Parks (2)	Yes
Small Playground	Yes



Assisted Living & Memory Care Facility

Product Series	Unit Count	Absorption Rate	Lease-Up Stabilized	Plan Ranges	Monthly Rents
Assisted Living	75	3.0/mo.	24 months	550-950sqft	\$3,600-\$4,400
Memory Care	50	2.0/mo.	24 months	550-650sqft	\$4,200-\$4,400
Total/Average	125	5.0/mo.	24 months	1,200-3,000	\$250-\$445K

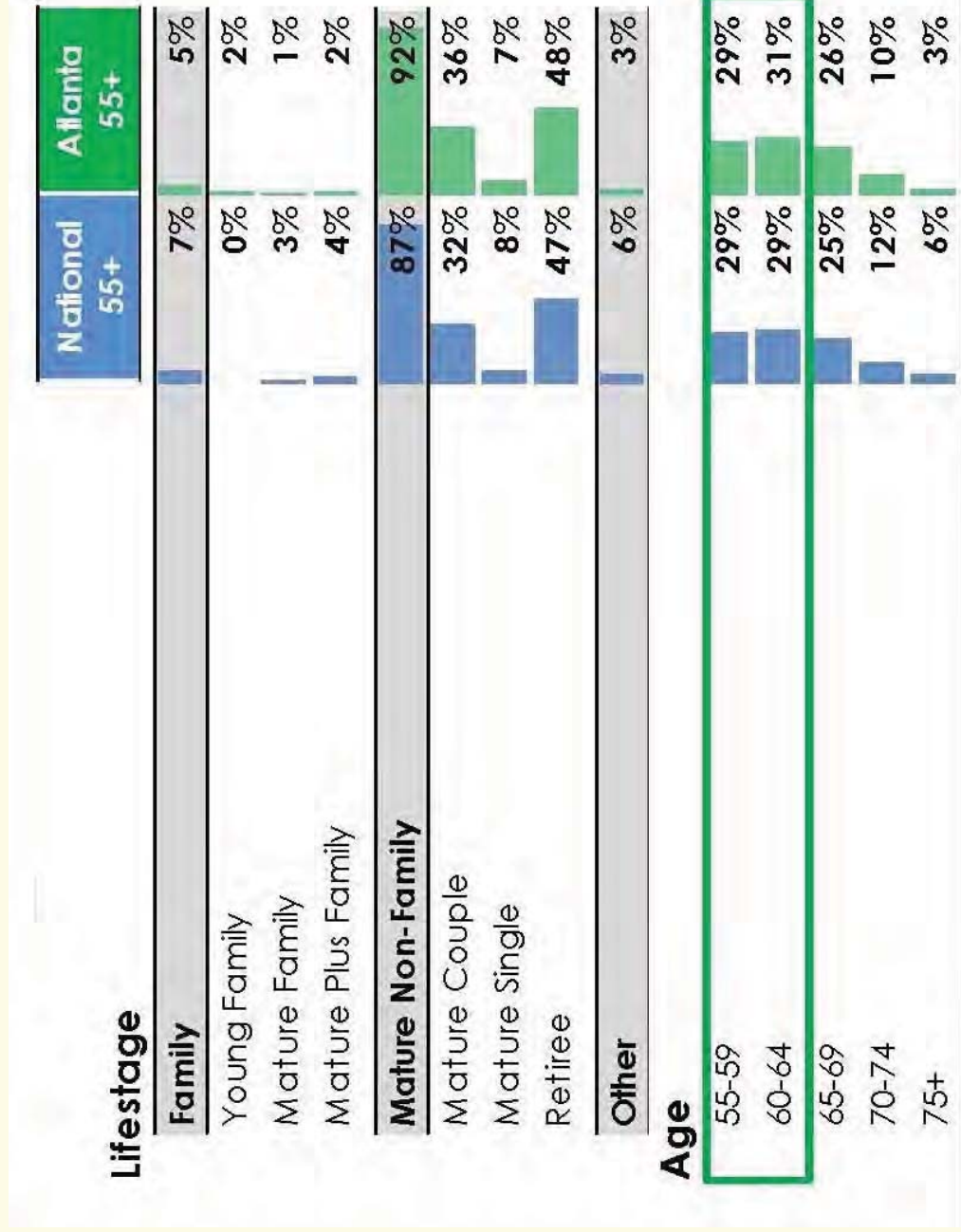




Impact on the Local Economy

Economy & Mature Shoppers

- ◆ Nearly half of mature Atlanta shoppers are still working either full or part-time.
- ◆ Atlanta falls in line with the national average, over 50% are between 55 and 64 years of age.



Positive Economic Impact for Gainesville

Age-Restricted Residences

- ♦ Age-restricted residents will have minimal impact on traffic, as typical residents will be older and not drive during peak traffic times.
- ♦ Age-restricted residents will have minimal impact on area schools, as typical residents will be older without school-age children.
- ♦ The Development will generate equivalent traffic to that if the property is developed as currently zoned.



Positive Economic Impact for Gainesville

Tax revenue

- ♦ Projected Annual Property Taxes to the City of Gainesville at Completion - \$ 1,495,901.72
- ♦ Projected Annual Sales Tax Revenue to the City of Gainesville at Completion - \$ 433,484.28
- ♦ Projected Annual Net Revenue to the City of Gainesville at Completion - \$ 382,020.47
- ♦ Typical Single Family Home Price - \$400,000
- ♦ Residents of Assisted Living and Memory Care will not be exempt from school property taxes (rent paid to landlord includes property taxes)



Positive Economic Impact for Gainesville

Employment

- ♦ The Assisted Living and Memory Care component of the Development will provide employment for workers in the medical field.
- ♦ The retail/office/restaurant component of the Development will provide places of employment and community gathering locations.



Positive Economic Impact for Gainesville

Fire Station

- ◆ Developer will donate land to the City of Gainesville for an approximately 10,650 sf Fire Station, which will improve response time, insurance rates, and fire safety for all nearby residents.
- ◆ Providing an additional fire station will allow City of Gainesville to maintain an ISO Class 1 rating.

Utilities Extension

- ◆ The Project will extend utility services to areas currently unserved by water and sewer.
- ◆ Improved insurance rates for nearby residents.
- ◆ The Project will utilize the existing regional pump station on Dawsonville Hwy. and increase the revenue for the utility department.



Positive Economic Impact for Gainesville

Improved Road Access

- ♦ Project will improve Ahaluna Drive.
- ♦ Project will provide multiple access points onto SR53, relieving congestion at intersection of Ahaluna Drive and SR53.
- ♦ Developer will install acceleration and deceleration lanes on SR53 at points of access, as required by GDOT.





Site Plan



SITE SUMMARY	
SITE INFORMATION	
CURRENT ZONING:	AR-11, R-1-A, R-1, R-1-L, H-B, R-B, PD
PROPOSED ZONING:	PD
MEDICAL OFFICE TRACT:	N/A 4.22 ACRES
FIRE STATION TRACT:	N/A 3.0 ACRES
RESIDENTIAL TRACT:	N/A 171.00 ACRES
TOTAL SITE AREA:	N/A 185.02 ACRES
RESIDENTIAL	
SINGLE FAMILY DETACHED POOL 'A'	
(40' WIDE LOTS)	88 LOTS
(50' WIDE LOTS)	126 LOTS
(60' WIDE LOTS)	56 LOTS
SINGLE FAMILY DETACHED POOL 'B'	
(40' WIDE LOTS)	40 LOTS
(50' WIDE LOTS)	74 LOTS
(60' WIDE LOTS)	24 LOTS
TERRACE HOMES DETACHED	175 UNITS
INDEPENDENT LIVING	150 UNITS
ASSISTED LIVING	50 UNITS
TOTAL	790 UNITS
STORAGE FACILITY	
2 STORY STORAGE BUILDING	40,000 SF
80' PARKING PROVIDED	18 SPACES
CAR PARKING PROVIDED	15 SPACES
OFFICE/RETAIL	
OFFICE / RETAIL	24,000 SF
40,000 SF BUILDINGS	
PARKING REQ'D (50%/2500')	16 SPACES
PARKING PROVIDED	54 SPACES
OTHER	
FIRE STATION	10,850 SF
DENSITY	
DENSITY OVERALL PROJECT:	4.21 UNITS / ACRE
(790 UNITS / 185.02 ACRES)	
OPEN SPACE	
OPEN SPACE PROVIDED:	N/A 60.0 ACRES
SURVEY	36.28

NOTES	
1. THIS PLAN IS TO BE USED FOR PLANNING PURPOSES ONLY AND IS NOT INTENDED TO BE A CONSTRUCTION DOCUMENT. PLAN IS PREPARED FOR USE ONLY BY OAK HALL COMPANIES, LLC.	
COMMERCIAL PARCEL	
COMMERCIAL PARCEL TOTAL ACREAGE	23.71 ACRES
PROPOSED ZONING:	O-B GENERAL BUSINESS DISTRICT
PROPOSED USE:	7 COMMERCIAL PARCELS
RETAIL SPACE	8,000 SF AVERAGE PER PARCEL
ADJACENT HELLON SPRINGS TOWNHOME PROJECT	
SITE AREA:	28.2 ACRES
ATTACHED SENIOR TERRACE HOMES	40 UNITS
DENSITY: 10 UNITS/ 28.2 ACRES	3.44 UNITS PER ACRE

Lanier Tract

Zoning Plan

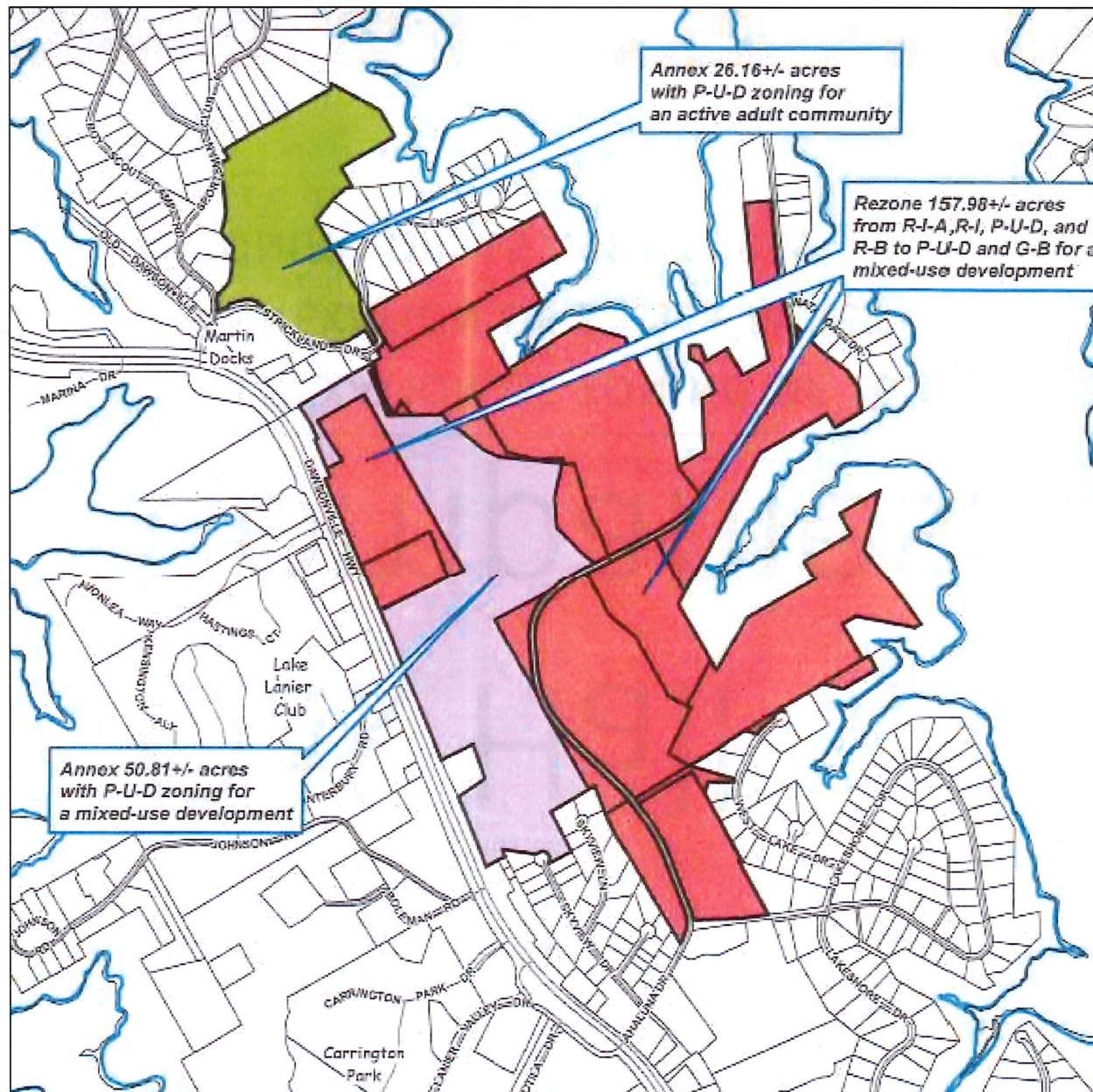
PROJECT LYING IN LAND LOTS 161, 162, 163 & 173 OF THE 9TH DISTRICT, CITY OF GAINESVILLE, HALL COUNTY, GEORGIA

Prepared for
Oak Hall Companies, LLC
5256 Peachtree Road, Suite 195
770-662-5995
Atlanta, GA 30341
DATE: 4/17/2017

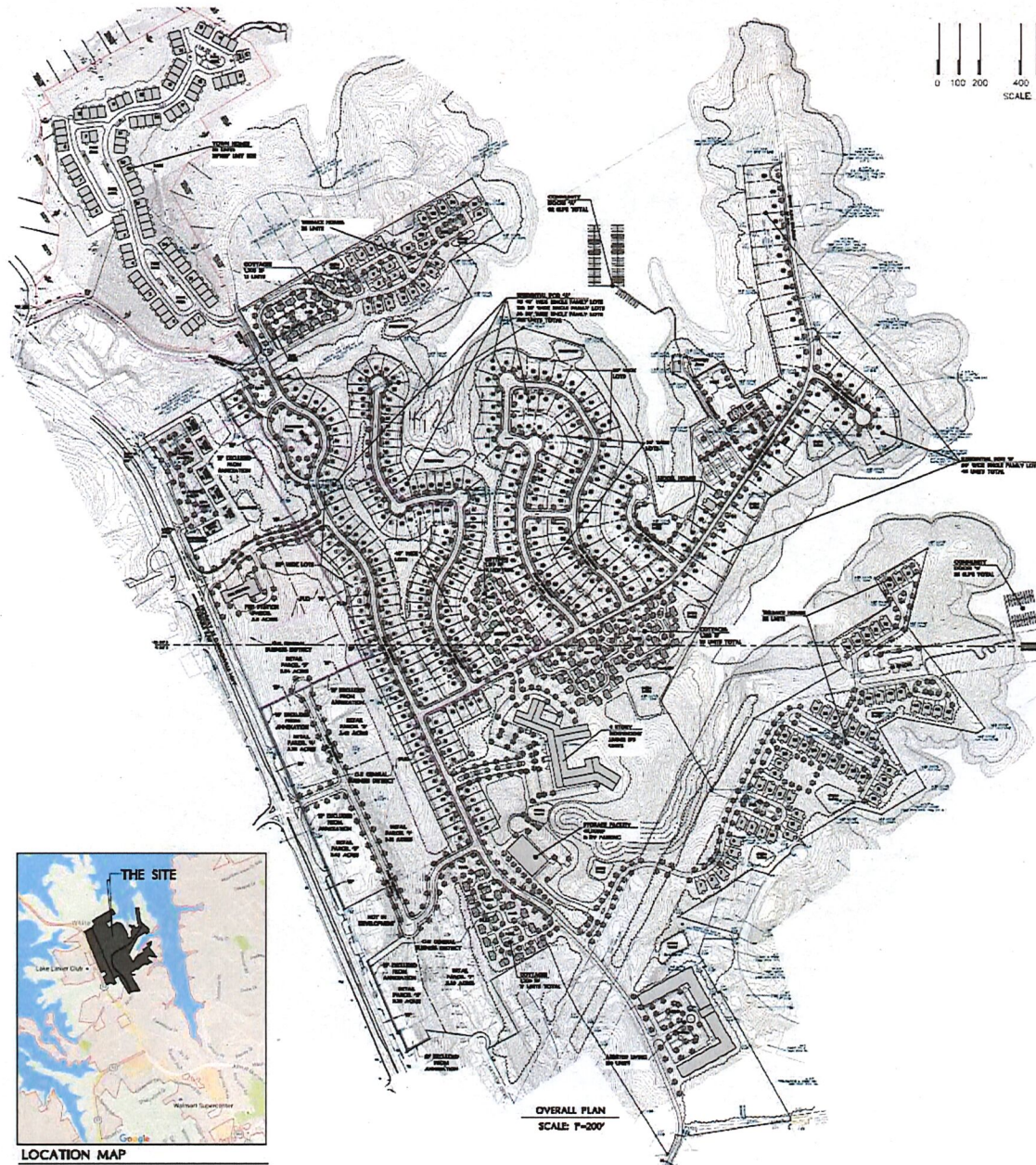


Oak Hall Companies, LLC

- ANNEXATION OF ZONING OF 26.16 ACRES
- ANNEXATION OF 50.81± ACRES
- ZONING OF 157.98± ACRES



- Annex 26.16+/- Acres
- Annex 50.81+/- Acres
- Rezone 157.98+/- Acres



SITE SUMMARY

SITE INFORMATION

CURRENT ZONING:	AR-III, R-I-A, R-I, R-II, H-B, R-B, PUD
PROPOSED ZONING:	PUD
MEDICAL OFFICE TRACT:	+/- 4.22 ACRES
FIRE STATION TRACT:	+/- 3.0 ACRES
RESIDENTIAL TRACT:	+/- 171.801 ACRES
TOTAL SITE AREA:	+/- 185.02 ACRES

RESIDENTIAL

SINGLE FAMILY DETACHED POD 'A'	
(40' WIDE LOTS)	83 LOTS
(50' WIDE LOTS)	126 LOTS
(60' WIDE LOTS)	56 LOTS
SINGLE FAMILY DETACHED POD 'B'	
(80' WIDE LOTS)	40 LOTS
SINGLE FAMILY COTTAGES	74 LOTS
TERRACE HOMES DETACHED	81 LOTS
INDEPENDENT LIVING	175 UNITS
ASSISTED LIVING	150 UNITS
TOTAL	790 UNITS

STORAGE FACILITY

2 STORY STORAGE BUILDING	40,000 SF
RV PARKING PROVIDED	19 SPACE
CAR PARKING PROVIDED	18 SPACE

OFFICE/RETAIL

OFFICE / RETAIL	24,000 SF
4,000 SF BUILDINGS	
PARKING REQ'D (1SP/250SF)	96 SPACES
PARKING PROV'D	154 SPACE

OTHER

FIRE STATION	10,650 SF
--------------	-----------

DENSITY

DENSITY OVERALL PROJECT:	4.27 UNITS / ACRE
(790 UNITS / 185.02 ACRE)	

OPEN SPACE

OPEN SPACE PROVIDED:	+/- 68.0 ACRES
	36.8%

COMMERCIAL PARCEL

COMMERCIAL PARCEL TOTAL ACREAGE	23.77 ACRES
PROPOSED ZONING:	6-B GENERAL BUSINESS DISTRICT
PROPOSED USE:	7 COMMERCIAL PARCELS
RETAIL SPACE	8,000 SF AVERAGE PER PARCEL



G-B 20.01 ACRES

PUD 26.16 ACRES

PUD 188.78 ACRES

Detached Residential	Type	Maximum # of Units
	POD A – Single Family Detached	265
	POD B – Single Family Detached	40



**Zero-Lot Line
Residential**

Type
Single Family Cottages

Maximum # of Units
79 units



**Zero-Lot Line
Residential**

Type
Terrace Homes – Detached

Maximum # of Units
81 units



Attached Residential

Type

Townhouses

Maximum # of Units

90 units



**For-Rent
Residential**

Type	Maximum # of Units
Independent Living	175 units, less MC units
Assisted Living	150 units, less MC units
Memory Care – For Rent (MC)	Up to 30 units, which count toward IL and AL maximums



This use pays School Property Taxes!

Amenities

Type

- Clubhouse
- Pool
- Athletic Courts
- 40,000 sf storage facility,
- Parking spaces for up to 50 Recreational Vehicles
- Up to 50 parking spaces for on-site boat storage
- Community docks
- Lease or purchase one of the approximately 130 boat slips

COMMERCIAL USE



COMMERCIAL USE

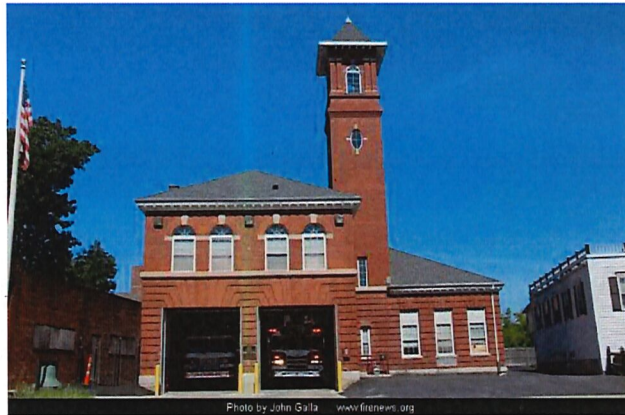
BUILDING MATERIALS

Building exteriors not screened from view from a public right-of-way right of way or any property line shall have an architectural treatment of brick, brick/frame, stone, or stucco, or another architectural treatment approved by the Planning Director.

PROHIBITED USES

- Motels or hotels with rooms accessed from the exterior of the building.
- Adult novelty stores.
- Adult entertainment centers.
- Pawn shops.
- Gas Stations.
- Tire Stores.
- Massage Parlors; provided this will not prohibit the operation of any profession by practitioners licensed by the State of Georgia.
- Vaping stores
- Auto body shops.
- Automobile sales establishments.
- New Marine sales or repair stores.
- Non-automated car wash.

Fire Station



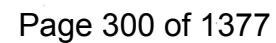
Economic Impact (at full buildout)

Revenues

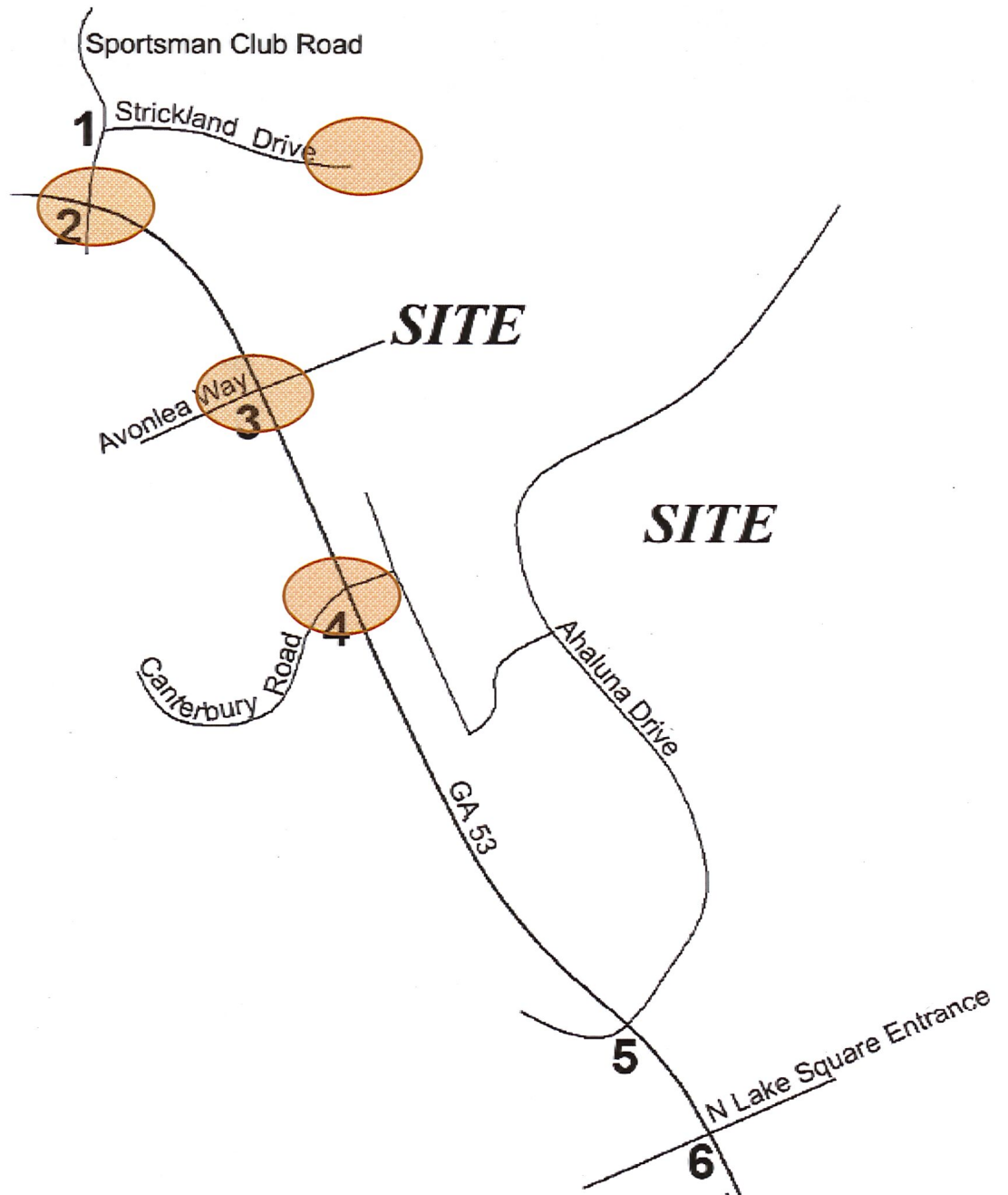
Property Taxes to City	\$1,688,309.72
Sales Taxes to City	\$468,442.69
Total Revenue	\$2,156,752.41

Annual Net Revenue	\$429,578.62
--------------------	--------------

Total Impact Fees	\$1,928,646.06
--------------------------	-----------------------



Recommended Traffic Improvement Areas



Traffic Improvements

☐ **Signal Warrant Studies and Signal (if warranted) at:**

- ☐ Canterbury Road and SR53
- ☐ Avonlea Way and SR53
- ☐ Sportsman Club Road and SR53

☐ **Turn Lane Improvements (if warranted) at:**

- ☐ Canterbury Road and SR53
- ☐ Avonlea Way and SR53
- ☐ Sportsman Club Road and SR53

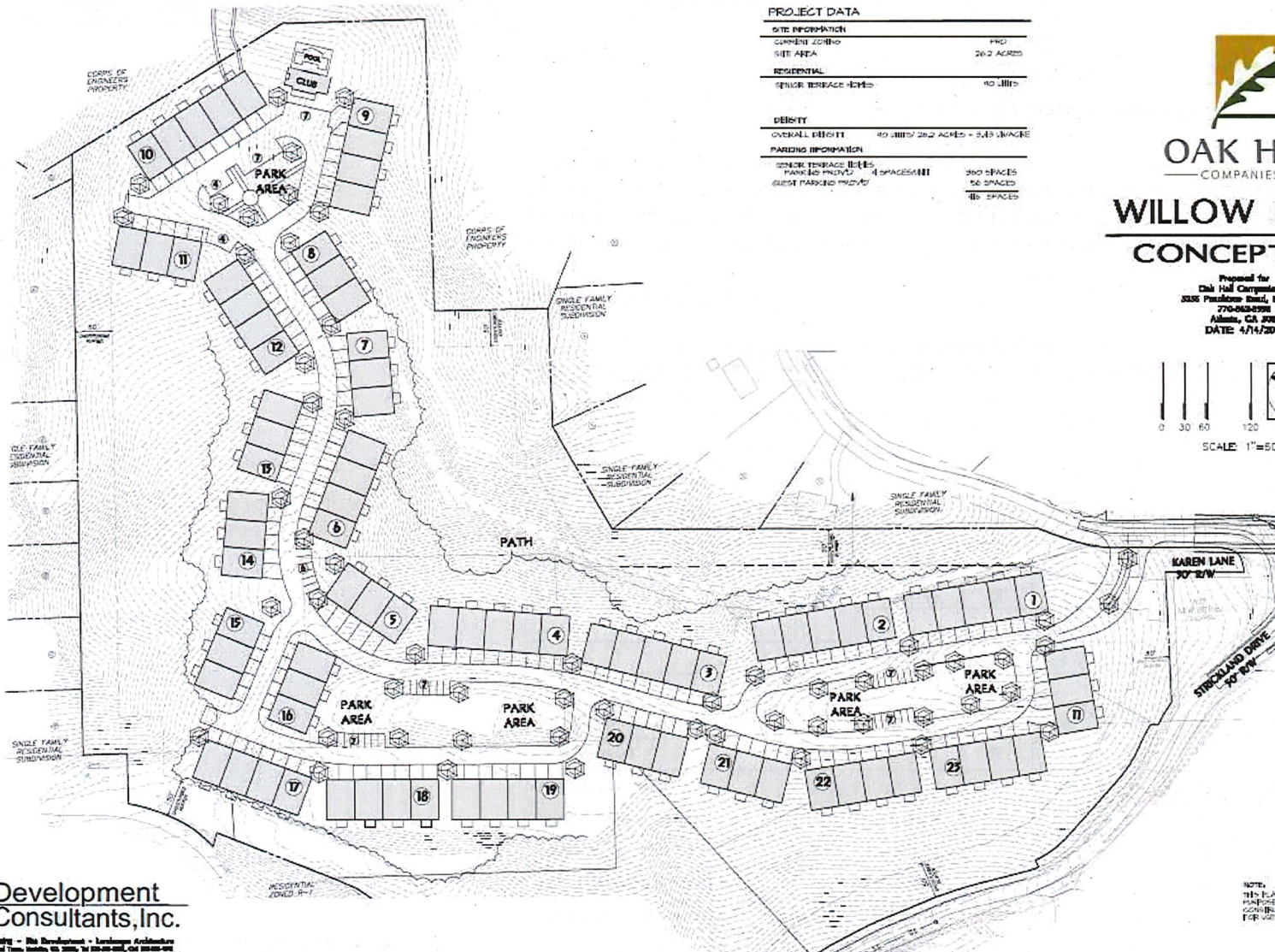
☐ **Road Improvements to :**

- ☐ Ahaluna Drive
- ☐ Strickland Drive

***\$425,000.00 contribution to
making roadway
improvements along
Dawsonville Highway (SR 53)
from McEver Road to Ahaluna
Drive***

Conclusion

- ❖ Property is already zoned for 200 single family houses and general commercial
- ❖ Age-restricted housing has lower impact on community:
 - ❖ Schools are not affected
 - ❖ Peak Drive-Time Traffic
- ❖ Positive Economic Impact
- ❖ Traffic Improvements will be made to SR53 that would not otherwise be funded or implemented
- ❖ Property donated for Fire Station



New Trips Generated

Table 5 – Lanier Tract Trip Generation

Land Use	ITE Code	Size	A.M. Peak Hour			P.M. Peak Hour			24-Hour
			In	Out	Total	In	Out	Total	2-Way
Terrace Homes Detached (at Strickland)	251	26 homes	2	4	6	4	3	7	96
Cottages Detached (at Strickland)	251	15 homes	1	2	3	2	2	4	56
Pod A Single Family Detached	251	265 homes	20	38	58	44	28	72	976
Pod B Single Family Detached	251	40 homes	3	6	9	6	5	11	147
Cottages Detached	251	64 homes	5	9	14	11	6	17	236
Terrace Homes Detached	251	55 homes	4	8	12	9	6	15	202
Independent Living	253	175 units	6	5	11	16	14	30	354
Assisted Living	254	<u>150 beds</u>	<u>14</u>	<u>7</u>	<u>21</u>	<u>15</u>	<u>18</u>	<u>33</u>	<u>356</u>
Total Residential New Trips		790 units	55	79	134	107	82	189	2,423
Storage	151	40,000 ft²	3	3	6	5	5	10	100
Office	750	12,000 ft²	18	3	21	2	16	18	138
Retail Total Trips	820	12,000 ft²	7	5	12	21	24	45	512
-pass-by		15/25/15%	<u>-1</u>	<u>-1</u>	<u>-2</u>	<u>-5</u>	<u>-6</u>	<u>-11</u>	<u>-76</u>
Retail New Trips			<u>6</u>	<u>4</u>	<u>10</u>	<u>16</u>	<u>18</u>	<u>34</u>	<u>436</u>
Total Commercial New Trips			24	7	31	18	34	52	574
Total Project New Trips			82	89	171	130	121	251	3,097

Notes: The detached homes trip calculations employed ITE average rates due to numbers of units generally much smaller than average sizes in the ITE data. The office and retail calculations were based on ITE average rates due to square footages much smaller than average sizes in the ITE data.

Willow Springs Townhomes

A small development of 90 senior-age-restricted townhomes is anticipated to be developed concurrently with the Lanier Tract DRI, along Karen Lane (shown in the site plan in Figure 4 at the northern end of the site, bordered in red). The trips for this development were calculated using ITE Land Use 252 – Senior Adult Housing – Attached. The Willow Springs trips are shown in Table 6.

Table 6 – Willow Springs Townhomes Trip Generation

Land Use	ITE Code	Size	A.M. Peak Hour			P.M. Peak Hour			24-Hour
			In	Out	Total	In	Out	Total	2-Way
Senior Adult Housing - Attached	252	90	6	12	18	12	11	23	290

Cyril Pcolinsky

Gainesville, GA 30501

Date: March 12, 1917

City of Gainesville Development Department
Gainesville Planning and Appeals Board
Post Office Box 2496
Gainesville, GA 30501-2496

Dear Planning and Appeals Board;

We object to a request from Oak Hall Companies, LLC to annex into City of Gainesville and rezone from current PRD Hall County to PUD City of Gainesville a 26.16 acres tract located east of Dawsonville Highway and on the north side of the intersection of Strickland Drive and Sportsman Club Road with road frontage on Karen Lane.

The above mentioned area is currently a part of and effectively lies within the area that is populated exclusively by single family homes, either existing or planned. The simple rule of one single family home/housing unit per one lot is clearly visible in all directions, on all neighboring properties.

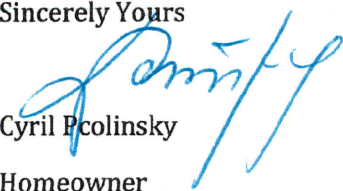
This planned change would in effect create an enclave of high density urban development in the very midst of much more relaxed residential area consisting exclusively of single family homes and as such it would create a sharp and unacceptable contrast with the existing character and development pattern of the existing residential area.

This is not an organic growth of urban development into an area naturally neighboring with the other previously existing high density urban area. This is an arbitrary decision of the developer to maximize the use and benefit from the above mentioned area without any regard to its current character.

The planned development of "Active Adult Community" with its intended multiple-housing unit of condominium style buildings creates unacceptable increase in density, and will no doubt have serious negative impact on both the quality of life as well as market value of all neighboring properties.

We therefore ask Hall County Planning and Zoning department and City of Gainesville Community Development Department and Appeals Board to repeal this request from Oak Hall Companies, LLC.

Sincerely Yours


Cyril Pcolinsky

Homeowner

Cyril Pcolinsky

Gainesville, GA 30501

Date: April 27, 2017

Att.: Mr. Sam Couvillon, Ward 1
Mr. Matt Tate, Planning Manager

City Of Gainesville
Community Development Department
Gainesville Planning and Appeals Board
Post Office Box 2496
Gainesville, GA 30501 - 2496

Dear Council;

Dear Community Development Department;

Subject: Development at 26.16 acres tract located east of Dawsonville Highway and on the north side of the intersection of Strickland Drive and Sportsman Club Road with road frontage on Karen Lane.

We object to the request from Oak Hall Companies, LLC to annex into City of Gainesville and rezone from current PRD Hall County to PUD City of Gainesville a 26.16 acres tract located east of Dawsonville Highway and on the north side of the intersection of Strickland Drive and Sportsman Club Road with road frontage on Karen Lane.

Our biggest concern is that single family homes and properties currently existing at or immediately adjacent to that area (of 26.16 acres) will be very negatively affected by the planned development and construction of the "Terrace Home Units" and "Stacked Flats" proposed by the Oak Hall Companies LLC.

We have also a big concern about how the traffic situation inside that area with narrow, curvy roads in the hilly environment will be impacted for such an increase.

Our additional fear is also the additional impact of that new development of 90 zero-lot line and condominium types of dwellings to the overall traffic jams around McEver Road and Dawsonville Hwy.

The simple rule of one single family home/housing unit per one lot is clearly visible in all directions, on all those 26.16 acres neighboring properties.

This planned development would in effect create an enclave of high density urban subdivision in the very midst of much more relaxed residential area consisting exclusively of single family homes, and as such, it would create a sharp and unacceptable contrast with the existing character and development pattern of the existing residential area around Sportsman Club Road, Strickland Drive and Karen Lane. We oppose such development proposal.

Proposed plan is not an organic growth of urban development into an area naturally neighboring with the other previously existing high density urban area.

This is an arbitrary decision of the developer to maximize the use and benefit from the above mentioned area without any regard to its current character and its residents (including wildlife, dears and does).

The planned development of "Active Adult Community" with its intended multiple-housing unit of condominium style buildings changes dramatically the character and also an undesired increase on traffic feed.

There is no doubt that the approval and execution of such a plan will have a serious negative impact on both the quality of life as well as market value of all neighboring properties.

At least, implement a smoother transition:

- do not build any home units and road on the slope toward the Sportsman Club,
- instead of condominium type homes build single family homes

We therefore ask Hall County Planning and Zoning department and City of Gainesville Community Development Department and Appeals Board to repeal this request from Oak Hall Companies, LLC until proposed changes to preserve the single family home character and /or smoother transition is implemented.

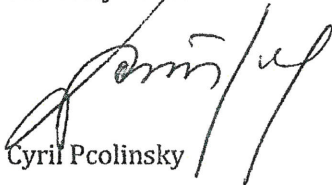
Subject: Dawsonville Highway Gridlock:

In parallel to the above, as a members of the communities living in the area located east of Dawsonville Highway, we have already expressed and voiced our objections to Establish Zoning as Planned Unit Development on 26.16 acres, 50.81 acres, 157.98 acres tracts (as per the Oak Hall Companies LLC) before a clear picture about the traffic situation, jams McEver – Dawsonville Hwy is determined and resolved.

We oppose any additional development feeding into Dawsonville Hwy until a plan is implemented to resolve the current and growing traffic problems.

The new development for over 900 residents plus additional office retail space would add some 6,000 more car trips a day. We are deeply concerned and afraid of it.

Sincerely Yours



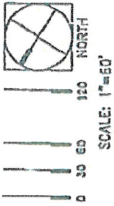
Resident

Gainesville GA 30501



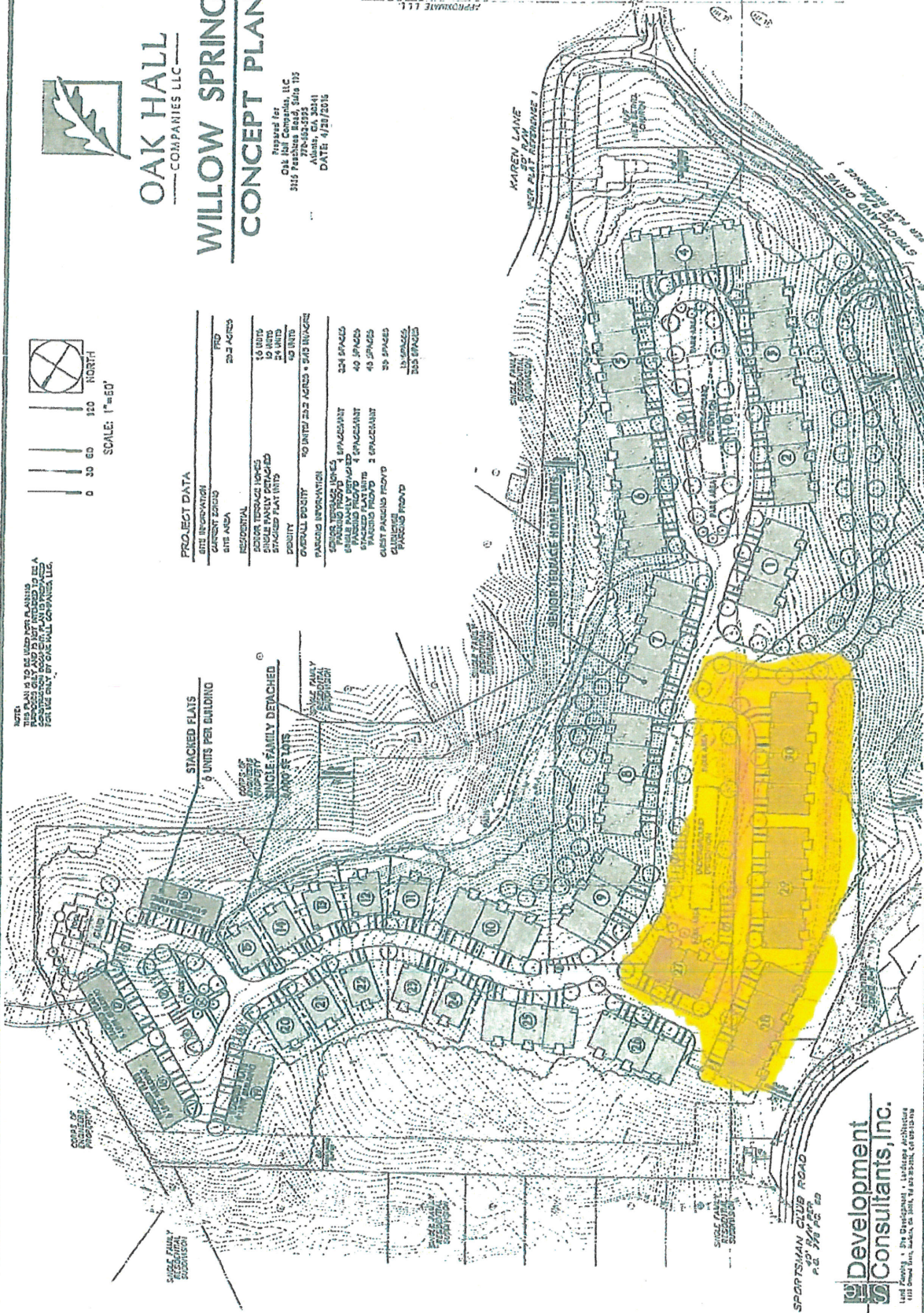
OAK HALL — COMPANIES LLC — WILLOW SPRINGS CONCEPT PLAN

Prepared for
Oak Hall Companies, LLC
3115 Veterans Road, Suite 105
Atlanta, GA 30341
DATE: 4/28/2015



NOTE:
THIS PLAN IS TO BE USED FOR PLANNING
PURPOSES ONLY AND IS NOT INTENDED TO BE
A CONTRACT DOCUMENT. IT IS THE PROPERTY OF
OAK HALL COMPANIES, LLC.

PROJECT DATA	
SITE INFORMATION	PER
CURRENT ZONING	20.2 ACRES
SITE AREA	
RESIDENTIAL	
CONDO TOWERS UNITS	10 UNITS
SINGLE FAMILY DETACHED	24 UNITS
STACKED FLAT UNITS	10 UNITS
DENSITY	
OVERALL DENSITY	40 UNITS 20.2 ACRES = 2.0 UNITS/ACRE
PARKING INFORMATION	
CONDO TOWERS UNITS	124 SPACES
CONDO TOWERS 1 SPACEMANT	40 SPACES
CONDO TOWERS 2 SPACEMANT	40 SPACES
CONDO TOWERS 3 SPACEMANT	25 SPACES
CONDO TOWERS 4 SPACEMANT	25 SPACES
CONDO TOWERS 5 SPACEMANT	25 SPACES
CONDO TOWERS 6 SPACEMANT	25 SPACES
CONDO TOWERS 7 SPACEMANT	25 SPACES
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CONDO TOWERS 100 SPACEMANT	25 SPACES



Development
Consultants, Inc.
101 South Main, Suite 100, Atlanta, GA 30303



Harbour Point Community Association
3313 Harbour Point Parkway
Gainesville, Georgia 30506
April 25, 2017

Subject: Oak Hall Development

Mayor Danny Dunagan
300 Henry Ward Way
Suite 303
P.O. Box 2496
Gainesville, Georgia 30501

Dear Mayor Dunagan:

My name is Gary Lawrence and I currently serve as the President of the Harbour Point Community Association Board. Harbour Point is a Community of 290 households located on Route 53, about 5.5 miles west of the proposed Oak Hall Development on Ahaluna Drive. Our Board recently received a presentation on this Development and has the following concerns.

1 Our residents are currently experiencing significant delays in exiting our Community onto Route 53. These delays occur not only during rush hours but throughout the day, 7 days a week. GDOT has reported a growth of more than 2000 vehicles a day that pass our entrance from 2015 to 2016, due to the widening project and the many new businesses located in the corridor. This traffic is projected to grow regardless of any new development. Many of our residents are avoiding the traffic congestion enroute to Gainesville, by turning west and doing their shopping in Dawsonville.

2 The traffic in this already congested corridor will be exacerbated by the Oak Hall Development. The GPAB had cancelled a March 7 Public Hearing due the lack of current traffic data to assess the impact of traffic from this Development. A traffic study by Arcadis Consulting was commissioned to gather the needed data. The result of the study is currently planned for mid to late May. In their haste to obtain project approval, the GPAB has now scheduled the hearing for May 9, which will not allow adequate time for the appropriate review of the study's findings and the development of traffic remediation efforts needed to approve the development.

3 There appears to be no plan to reprioritize traffic enhancement Tier 2 projects to Tier 1 status to address the immediate need for something to be done in time for the Oak Hall Development. We perceive that the current plan is to approve the project and then to worry about the resultant traffic congestion later. We contend that the City and County should at least have a plan for traffic remediation and controlling signal light sequences, but that will not be enough. We need additional lane capacity and turning lanes, etc. before the project comes on line.

4 Harbour Point certainly understands the value of new development and the need for additional affordable housing for our beautiful City of Gainesville. To approve the project without having a clear understanding of potential traffic problems and a short term plan to address these issues is dangerous for the overall image and livability of Gainesville. We recommend that the Developer, GDOT and all of the other parties develop a traffic remediation plan and locate the monies to make it happen before the project is approved.

As Mayor of our great City, I ask that you have the steps required for the approval of this Development sequenced appropriately, so that we are in front of the problem with new roadway capacity and not scrambling after the congestion is upon us. Thank you for your attention to this important issue.

Sincerely,

Gary Lawrence

cc: Bryan Lackey, City Manager
City Council
GPAB Members

Matt Tate

From: David Simpson
Sent: Tuesday, May 09, 2017 3:54 PM
To: Matt Tate
Cc: Jason Justice
Subject: [SPAM] Concerning Request to annex Dawsonville Hwy Property from Oak Hall Companies

Importance: Low

City Planning

As a resident of Lakeshore Heights (Lakeshore Circle) I have a number of concerns which cause me to oppose the annexation of property along Dawsonville Highway, Ahaluna Drive, etc. by Oak Hall Companies. The proposed docks that would added to the development would prohibit use of a very popular cove for skiers and boaters. There are few places to find a safe cove for such activities, but this Longwood Cove area is one of them. Please do not allow a massive boat dock to be placed into this cove. In addition, the cove at which we live is already filled with silt from run off. Additional buildings will cause more silt to fill the cove behind Lakeshore Circle and may actually limit its use. Traffic concerns have been addressed by many, and I concur that the traffic on Dawsonville Highway would be a bottleneck. It is that now at different times of the day. My greatest concern is the "dead end" road at Lakeshore Circle that is closed to traffic now. (No access to Ahaluna Drive). PLEASE do not open this road. Already the traffic we do have on Lakeshore drive and Lakeshore Circle is too fast for the neighborhood. Increased traffic would be dangerous for all concerned with limited sight driveways all throughout Lakeshore Heights. Please do not allow our neighborhood to become a main thoroughfare to bypass Dawsonville Highway! This massive proposed development would change the serenity of our neighborhood and destroy all wildlife, which is enjoyed by many in our area. To develop this acreage as hiking trails and parks would be ideal, but please limit the development of houses/apartments and boat docks. Thank you for hearing my concerns.

Sincerely,
David Simpson

Gary A. Roth

Athens, GA 30607

Tuesday, May 09, 2017

City of Gainesville
ATTN: Matt Tate, Planning Manager
300 Henry Ward Way, Suite 303
Gainesville, GA 30501

Dear Mr. Tate:

I am writing you today in response to an article I read recently in the *Gainesville Times*. In the article, an 880 home development is coming before the planning board very soon. It is my understanding that Oak Hall Companies is seeking a re-zoning action to allow this development to move forward. As with most items of change, the impact of this development should be thoroughly considered.

This development is a very bad idea. Not only would it destroy beautiful habitat quiet scenery, it would also further congest the already crowded streets of this community. No area of Gainesville can handle the traffic levels now, let alone adding nearly 1,000 more homes. I have been commuting to Gainesville for the last 18 months and have yet to see ANY improvements to the traffic management systems. With limited infrastructure, this development will only makes things worse. It will add more cars, more pollution, more stress and longer commutes. Is that really what you want to do to this town? Do you really want to make it worse? For what? More tax dollars?

Development companies only care about making money. With the inner city in a complete mess and no investments to repurpose the bad areas, they seek to make urban sprawl an even bigger problem. Oak Hall is a company that only cares about its profits and not about the people of Gainesville. The last thing this community needs is more people from Atlanta. The only thing they will do is clog up more of the roads and create more traffic! There has to be a better way to manage the area.

Traffic improvements must be made FIRST. We cannot allow the buildings and traffic to skyrocket before we do something about the congestion. Atlanta and the surrounding area are clearly known as the worst places to drive, so why are we making the problem worse? It's going to take a strong stand by you and your committee to deny this project until the roads and other structures are in place to manage it. Don't be blinded by the money, the community center or the promise of acreage for a fire station. You need to do the right thing.

Just look at what Oak Hall representatives say about the current zoning. They are lying to the residents saying that younger families will be moving in and out and they should be allowed their development. This is what the mass media does by twisting facts to push an agenda. If their development is such a grand idea, they wouldn't need to make arbitrary comments like that. Trust me, they are only concerned with profits.

Let's do the right thing for this wonderful community. Build the infrastructure first, and minimize the burden on the tax paying citizens that have to deal with it everyday!

Sincerely,



Gary Allen Roth

CITY OF GAINESVILLE

WORKSESSIONREQUEST

Date Submitted: 5/22/2017

Presenter: Matt Tate

Item of Business: **Public Hearing Item for the June 6, 2017 Council Meeting**
Request from **Oak Hall Companies, LLC** to annex a 50.81± acres tract located on the east side of Dawsonville Highway (S.R. 53), having road frontage on Dawsonville Highway, Ahaluna Drive, Skyview Drive and Strickland Drive (a/k/a **0 and 1758 Ahaluna Drive; 1508, 1550, 1740, 1746, 1758, 1760, 1934 and 1982 Dawsonville Highway; 300 and 301 Skyview Drive; 0, 2008 and 2016 Strickland Drive**) and to establish zoning as Planned Unit Development (P-U-D) and General Business (G-B). **Ward Number: One.** Tax Parcel Number(s): 00-110-000-005 (part), 028, 032 (part) and 039; 00-110A-004-001 (part), 002A, 004 (part), 005 (part), 007 (part), 007A (part), 007X, 014 (part), 016 (part), 017 (part) and 018. **Request: Mixed-use development.**

Meeting Date: 6/1/2017

Purpose of Request:

The applicant is proposing to annex the subject property with a zoning of Planned Unit Development (P-U-D) and General Business (G-B) and is to be included as part of the overall 208.79± acres proposed mixed-use development. The property is currently zoned Agricultural Residential-III (AR-III), Residential-II (R-II) and Highway Business (H-B) within unincorporated Hall County. The city limits are contiguous to the subject property to the north, south, east and west. The property contains numerous residential, commercial structures, out buildings and a cellular tower. The proposed development includes a total of 790 age restricted units of which most of the units are to be restricted for adults age 55 and up. The mixture of housing proposed includes: 305 single-family detached homes; 79 single-family cottages; 81 detached terrace homes; 175 independent living units and 150 assisted living units which could include up to 30 memory care units. In addition, an amenity area is proposed to include a swimming pool, tennis courts, club house, passive park and two community docks totaling 130 boat slips and a 40,000 square foot storage facility to be utilized by residents of the community. Other uses are to include 24,000 square feet of retail/office/restaurant, seven commercial parcels and land reserved for a future fire station. Access is proposed from Dawsonville Highway, Ahaluna Drive and Strickland Drive.

History/Background:

All three **Oak Hall Companies, LLC** agenda items were tabled at the March 14, 2017 PAB meeting after staff reviewed the requests and determined that the applicant needed to provide additional traffic data prior to staff giving an official recommendation. The PAB tabled the items for a period of 60-days until the May 9, 2017 Planning and Appeals Board meeting.

Facts & Issues for Consideration:

Department Recommendation:

Planning staff recommended approval with 24 conditions.

The Planning and Appeals Board recommended approval with 24 conditions.

See the PAB Recommendation Report for details and excerpts from the PAB meeting minutes.

SAMPLE MOTIONS

Approve Annexation

I move to conditionally approve first reading of an ordinance to annex the 50.81 acres subject property with 24 conditions.

Approve Zoning

I move to conditionally approve first reading of an ordinance to establish zoning as Planned Unit Development and General Business on the 50.81 acres subject property with 24 conditions.

Deny

I move to deny this annexation request.

Department Director:

Rusty Ligon

If funding is involved, are funds approved within the current budget?

N/A

Amount Requested:

Source of Funds:

Finance Comments:

Administrative Comments:

ATTACHMENTS:

Description	Type
☐ Legal Ad	Legal Ad
☐ PAB Recommendation Report	Report
☐ Proposed Annexation Ordinance	Ordinance
☐ Proposed Zoning Ordinance	Ordinance
☐ Location Maps	Backup Material
☐ Narrative	Backup Material
☐ Reservation of Constitutional Rights	Backup Material
☐ Survey	Backup Material
☐ Concept Plan	Backup Material
☐ Overall Concept Plan	Backup Material
☐ Elevations and Floor Plans	Backup Material
☐ Fire Station Examples	Backup Material
☐ Traffic Impact Study	Backup Material
☐ Brochure	Backup Material
☐ Handout from Applicant at PAB Meeting	Backup Material
☐ Letters of Opposition	Backup Material

COMBINED LEGAL AD
Gainesville Planning and Appeals Board
Gainesville City Council

Publish Sunday, April 23, 2017
THE TIMES

NOTICE OF PLANNING AND APPEALS BOARD PUBLIC HEARING

Notice is hereby given that the **Gainesville Planning and Appeals Board** will conduct a public hearing on **Tuesday, May 9, 2017** at **5:30 p.m.** in the **Gainesville Justice Center** (Municipal Courtroom at the Public Safety Complex), 701 Queen City Parkway in midtown Gainesville on the following requests:

- 1) Request from **Oak Hall Companies, LLC** to annex a 26.16 acres tract located east of Dawsonville Highway and on the north side of the intersection of Strickland Drive and Sportsman Club Road, with road frontage on Karen Lane (a/k/a **0 and 2209 Karen Lane; 2106, 2234 and 2242 Sportsman Club Road; and 2049 Strickland Drive**) and to establish zoning as Planned Unit Development (P-U-D).
Ward Number: One
Tax Parcel Number(s): 00-109-003-001, 004, 005; 00-109B-000-001, 002A and 036
Request: Active adult community
- 2) Request from **Oak Hall Companies, LLC** to annex a 50.81± acres tract located on the east side of Dawsonville Highway (S.R. 53), having road frontage on Dawsonville Highway, Ahaluna Drive, Skyview Drive and Strickland Drive (a/k/a **0 and 1758 Ahaluna Drive; 1508, 1550, 1740, 1746, 1758, 1760, 1934 and 1982 Dawsonville Highway; 300 and 301 Skyview Drive; 0, 2008 and 2016 Strickland Drive**) and to establish zoning as Planned Unit Development (P-U-D) and General Business (G-B).
Ward Number: One
Tax Parcel Number(s): 00-110-000-005 (part), 028, 032 (part) and 039; 00-110A-004-001 (part), 002A, 004 (part), 005 (part), 007 (part), 007A (part), 007X, 014 (part), 016 (part), 017 (part) and 018
Request: Mixed-use development
- 3) Request from **Oak Hall Companies, LLC** to rezone a 157.98± acres tract located on the east side of Dawsonville Highway (S.R. 53), having road frontage on Ahaluna Drive, Skyview Drive, Strickland Drive, Lakeshore Circle, West Lake Drive and Karen Lane (a/k/a **0, 1264 and 1817 Ahaluna Drive; 1876 Dawsonville Highway; 2208 Karen Lane; 0 and 2029 Strickland Drive; 0 and 1489 West Lake Drive**) from Residential-I-A (R-I-A), Residential-I (R-I), Planned Unit Development (P-U-D) and Regional Business (R-B) to Planned Unit Development (P-U-D) and General Business (G-B).
Ward Number: One
Tax Parcel Number(s): 00-109B-000-003A; 00-110-000-001, 006, 030, 031, 034, 035, 036, 037 and 038; 01-110-001-006; 01-110A-004-022; 01-114-001-001, 026, 145 and 161
Request: Mixed-use development
- 4) Request from **Brightstone Transitions** to amend the existing Planned Unit Development (P-U-D) zoning on a 0.50± acre tract located at the east side of Green Street, across from its intersection with Forrest Avenue (a/k/a **446 Green Street, NE**).
Ward Number: Four
Tax Parcel Number(s): 01-024-001-005
Request: Group home and office

- 5) Request from **Montecito Development** to rezone a 0.48± acre tract located on the south side of Enota Avenue, west of its intersection with Thompson Bridge Road (a/k/a **149 Enota Avenue, NW**) from Office and Institutional (O-I) to Neighborhood Business (N-B), with a special use.
 Ward Number: Two
 Tax Parcel Number(s): 01-074-004-001
 Request: Convenience store with fuel pumps
- 6) Request from **Montecito Development** for a special use on a 0.80± acre tract located at the southwest side of the intersection of Enota Avenue and Thompson Bridge Road (a/k/a **1281 Thompson Bridge Road, NW**), having a zoning of Neighborhood Business (N-B).
 Ward Number: Two
 Tax Parcel Number(s): 01-074-004-020
 Request: Convenience store with fuel pumps
- 7) Request from **Gainesville Market, LLC** for a special use on a 5.0± acres tract located west of Shallowford Road within the Gainesville Market Shopping Center (a/k/a **600 Shallowford Road**), having a zoning of General Business (G-B).
 Ward Number: Five
 Tax Parcel Number(s): 01-119C-001-029
 Request: Commercial outdoor recreational facility
- 8) Request from **Manor Lake Development, LLC** for a special use on a 9.24± acres tract located on the northwest side of McEver Road, between Browns Bridge Road and Orchard Brook Drive (a/k/a **2900 McEver Road**), having a zoning of Office and Institutional (O-I) and Residential-I (R-I).
 Ward Number: Four
 Tax Parcel Number(s): 08-022-000-005
 Request: Assisted living facility
- 9) Request from **Carriage North, LLC** for a special use on a 0.71± acre tract located on the southwest side of the terminus of Corporate Drive, west of Browns Bridge Road (a/k/a **2425 Corporate Drive**), having a zoning of General Business (G-B).
 Ward Number: Five
 Tax Parcel Number(s): 08-007-001-042
 Request: Helipad

NOTICE OF PUBLIC HEARING ON PROPOSED AMENDMENTS TO THE GAINESVILLE ZONING MAP

Notice is hereby given that the **Gainesville City Council** will conduct a public hearing on **Tuesday, June 6, 2017 at 5:30 p.m.** in the **Gainesville Justice Center** (Municipal Courtroom at the Public Safety Complex), 701 Queen City Parkway in midtown Gainesville on the following requests:

- 1) Request from **Oak Hall Companies, LLC** to annex a 26.16 acres tract located east of Dawsonville Highway and on the north side of the intersection of Strickland Drive and Sportsman Club Road, with road frontage on Karen Lane (a/k/a **0 and 2209 Karen Lane; 2106, 2234 and 2242 Sportsman Club Road; and 2049 Strickland Drive**) and to establish zoning as Planned Unit Development (P-U-D).
 Ward Number: One
 Tax Parcel Number(s): 00-109-003-001, 004, 005; 00-109B-000-001, 002A and 036
 Request: Active adult community

- 2) Request from **Oak Hall Companies, LLC** to annex a 50.81± acres tract located on the east side of Dawsonville Highway (S.R. 53), having road frontage on Dawsonville Highway, Ahaluna Drive, Skyview Drive and Strickland Drive (a/k/a **0 and 1758 Ahaluna Drive; 1508, 1550, 1740, 1746, 1758, 1760, 1934 and 1982 Dawsonville Highway; 300 and 301 Skyview Drive; 0, 2008 and 2016 Strickland Drive**) and to establish zoning as Planned Unit Development (P-U-D) and General Business (G-B).
 Ward Number: One
 Tax Parcel Number(s): 00-110-000-005 (part), 028, 032 (part) and 039; 00-110A-004-001 (part), 002A, 004 (part), 005 (part), 007 (part), 007A (part), 007X, 014 (part), 016 (part), 017 (part) and 018
 Request: Mixed-use development

- 3) Request from **Oak Hall Companies, LLC** to rezone a 157.98± acres tract located on the east side of Dawsonville Highway (S.R. 53), having road frontage on Ahaluna Drive, Skyview Drive, Strickland Drive, Lakeshore Circle, West Lake Drive and Karen Lane (a/k/a **0, 1264 and 1817 Ahaluna Drive; 1876 Dawsonville Highway; 2208 Karen Lane; 0 and 2029 Strickland Drive; 0 and 1489 West Lake Drive**) from Residential-I-A (R-I-A), Residential-I (R-I), Planned Unit Development (P-U-D) and Regional Business (R-B) to Planned Unit Development (P-U-D) and General Business (G-B).
 Ward Number: One
 Tax Parcel Number(s): 00-109B-000-003A; 00-110-000-001, 006, 030, 031, 034, 035, 036, 037 and 038; 01-110-001-006; 01-110A-004-022; 01-114-001-001, 026, 145 and 161
 Request: Mixed-use development

- 4) Request from **Brightstone Transitions** to amend the existing Planned Unit Development (P-U-D) zoning on a 0.50± acre tract located at the east side of Green Street, across from its intersection with Forrest Avenue (a/k/a **446 Green Street, NE**).
 Ward Number: Four
 Tax Parcel Number(s): 01-024-001-005
 Request: Group home and office

- 5) Request from **Montecito Development** to rezone a 0.48± acre tract located on the south side of Enota Avenue, west of its intersection with Thompson Bridge Road (a/k/a **149 Enota Avenue, NW**) from Office and Institutional (O-I) to Neighborhood Business (N-B), with a special use.
 Ward Number: Two
 Tax Parcel Number(s): 01-074-004-001
 Request: Convenience store with fuel pumps

- 6) Request from **Montecito Development** for a special use on a 0.80± acre tract located at the southwest side of the intersection of Enota Avenue and Thompson Bridge Road (a/k/a **1281 Thompson Bridge Road, NW**), having a zoning of Neighborhood Business (N-B).
 Ward Number: Two
 Tax Parcel Number(s): 01-074-004-020
 Request: Convenience store with fuel pumps

- 7) Request from **Gainesville Market, LLC** for a special use on a 5.0± acres tract located west of Shallowford Road within the Gainesville Market Shopping Center (a/k/a **600 Shallowford Road**), having a zoning of General Business (G-B).
 Ward Number: Five
 Tax Parcel Number(s): 01-119C-001-029
 Request: Commercial outdoor recreational facility

- 8) Request from **Manor Lake Development, LLC** for a special use on a 9.24± acres tract located on the northwest side of McEver Road, between Browns Bridge Road and Orchard Brook Drive (a/k/a **2900 McEver Road**), having a zoning of Office and Institutional (O-I) and Residential-I (R-I).

Ward Number: Four

Tax Parcel Number(s): 08-022-000-005

Request: Assisted living facility

- 9) Request from **Carriage North, LLC** for a special use on a 0.71± acre tract located on the southwest side of the terminus of Corporate Drive, west of Browns Bridge Road (a/k/a **2425 Corporate Drive**), having a zoning of General Business (G-B).

Ward Number: Five

Tax Parcel Number(s): 08-007-001-042

Request: Helipad

Additional information is available from the Community Development Department, Planning Division, by calling 770-531-6570.

NOTE: In accordance with Georgia law, anyone who wishes to express opposition to the proposed zoning action, and has made, within two years immediately preceding the filing of the proposed zoning action, campaign contributions aggregating \$250 or more to a local government official who will consider the application, shall file a disclosure of contribution(s) with the Planning Division at least five (5) days prior to the first reading of the proposed zoning action by the City Council. (OCGA § 36-67A-3 3 {c})

**GAINESVILLE PLANNING and APPEALS BOARD
RECOMMENDATION**

Applicant Oak Hall Companies, LLC

Property Owners America's Home Place, Inc.; West Ahaluna, LLC; Barry Conner, LLC; Soque, LLC; Olen Stephens

Location See below

Request Annex 50.81[±] acres with Planned Unit Development (PUD) and General Business (G-B) zoning

Request Rezone 157.98[±] acres from Residential-I-A (R-I-A), Residential-I (R-I), Planned Unit Development (P-U-D) and Regional Business (R-B) to Planned Unit Development (P-U-D) and General Business (G-B)

Total Acres 208.79[±] acres total

Ward One

Proposed Use Mixed-use, age-restricted community

Planning Division Staff Recommendation **Approval, with conditions**

Planning and Appeals Board Recommendation **Approval, with conditions**

Date May 9, 2017

▪ **Location**

50.81[±] acres annexation - 0 and 1758 Ahaluna Drive; 1508, 1550, 1740, 1746, 1758, 1760, 1934 and 1982 Dawsonville Highway; 300 and 301 Skyview Drive; 0, 2008 and 2016 Strickland Drive

157.98[±] acres rezoning - 0, 1264 and 1817 Ahaluna Drive; 1876 Dawsonville Highway; 2208 Karen Lane; 0 and 2029 Strickland Drive; 0 and 1489 West Lake Drive

▪ **Applicant's Proposal and Background Information**

A 110.9[±] acres portion of the subject property was annexed and rezoned in 2014 and 2015 to Planned Unit Development (P-U-D) and Residential-I-A (R-I-A) with conditions for a 199 lot single-family subdivision. The applicant at that time was West Ahaluna, LLC and the property has remained undeveloped.

The current proposal includes the annexation of 50.81[±] acres and the rezoning of 157.98[±] acres for a total of 208.79[±] acres. Of the total acreage, 185.02[±] acres will be zoned Planned Unit Development (P-U-D) and 23.77[±] acres zoned as General Business (G-B). Because the

proposal is a master planned mixed-use development, both the annexation and rezoning requests are being presented together.

The subject 50.81[±] acres portion of property is being considered for annexation with a zoning of Planned Unit Development (P-U-D) and General Business (G-B). The property is currently zoned Agricultural Residential-III (AR-III), Residential-II (R-II) and Highway Business (H-B) within unincorporated Hall County. Of the 50.81[±] acres, approximately 30.80[±] acres will be zoned P-U-D and 20.01[±] acres will be zoned G-B. The city limits are contiguous to the subject property to the north, south, east and west. The property contains numerous residential and commercial structures, out buildings and a cellular tower and has road frontage on Ahaluna Drive, Dawsonville Highway, Strickland Drive and Skyview Drive.

The subject 157.98[±] acres portion of property is being considered for rezoning from Residential-I-A (R-I-A), Residential-I (R-I), Planned Unit Development (P-U-D) and Regional Business (R-B) to Planned Unit Development (P-U-D) and General Business (G-B). This property is currently located within the city limits. Of the 157.98[±] acres, approximately 154.22[±] acres will be zoned P-U-D and 3.76[±] acres will be zoned G-B. The property contains mostly undeveloped land with the exception of four single-family homes and has road frontage on Ahaluna Drive, Dawsonville Highway, Karen Lane, Strickland Drive and West Lake Drive, and is west of the terminus of Lakeshore Circle.

The development proposes a master planned development designed as an “age in place” community. The applicant anticipates the residential portion of the development will be built-out over a period of 6 years from when the first land development permit is issued. The office and commercial component of the development will be constructed upon market conditions. A total of 790 residential units are proposed that will comply with applicable U. S. Department of Housing and Urban Development (HUD) rules for age-restricted communities. The mixture of housing proposed includes: 305 single-family detached homes; 79 single-family cottages; 81 detached terrace homes; 175 independent living units and 150 assisted living units which could include up to 30 memory care units. Therefore, 37% of the overall residential units for the entire development are located within the independent and assisted living facilities. Amenities are to consist of a swimming pool, club house, passive park and two community docks totaling 130 boat slips. A total of 68.0 acres or 37% of the development will be open green space.

Non-residential uses are to include a 40,000 square foot storage facility for residents within the community, 24,000 square feet of retail/office/restaurant space, seven commercial parcels each having approximately 8,000 square feet of building space and a 3.0 acres tract of land reserved for a 10,650[±] square foot fire station. Access is proposed from Dawsonville Highway, Ahaluna Drive and Strickland Drive. Some of the proposed development standards are listed below. A full description is provided with the application.

Residential

- Proposed Density: 4.43 units/acre
- Average home price: Single-family- \$400,000 to \$700,000; Terrace homes- \$300,000; Cottages- High \$200,000; Independent Living- \$2,800 to \$4,000 per month.
- Proposed Minimum House Size: 1,500 square feet of heated floor space for single-family detached homes; 500 square feet of heated floor space for single-family cottages; and 1,100 square feet attached / detached terrace homes.
- Building Materials: No vinyl or aluminum siding allowed. Exterior facade may include brick, stone, hard coat stucco, hardiboard or a combination thereof. Accent material

such as copper roofing, cedar shake, hardiboard or a combination of such materials may be used not to exceed 50% of the facade. Roofing materials may include cedar shake, architectural shingles or metal as appropriate to the architectural style of each home.

- Lot Width: Single-family detached homes - 40 feet (83± lots); 50 feet (126± lots); 60 feet (56± lots); 80 feet (40± lots).
- Unit Width: Cottage homes- Minimum 15 feet, Terrace homes- Minimum 24 feet.
- Maximum Height: Single-family detached- 40-feet; Cottage homes and Terrace homes- 30-feet; Independent Living, Assisted Living and Memory Care- 75-feet.
- Setbacks: Each unit will have a minimum of 18-feet of driveway from the back of the sidewalk to the building face or 20-feet from the back of the curb when there is no sidewalk.
Single-family detached- Front: 15-feet; Side: 3-feet; Rear interior lot: 10-feet; Cottages homes and Terrace homes – Front, Side and Interior Rear will have zero foot (0') lot lines; Minimum of 10-feet of building separation.
Independent Living, Assisted Living and Memory Care- Front: 40-feet; Side: 20-feet; 25-foot interior rear and 50-foot exterior rear.
- Water and Sewer: Provided by the City of Gainesville. When all phases are complete, water will be looped from Ahaluna Drive to Strickland Drive. Sewer will require several pump stations with gravity to Dawsonville Highway which has ample capacity.
- Streets: All interior streets and driveways are proposed to be publically owned and maintained. 50-foot right-of-way widths; 24-foot pavement widths; 4-foot wide sidewalks on at least one side of each residential road. It is intended that the side streets serving the cottages, terrace homes and the Independent / Assisted Living will be private.
- Parking: Each single-family detached home and terrace home will have a 2 car garage; Cottage homes will have surface parking for two vehicles.
- Garbage Pickup: Provided by the City of Gainesville.

Commercial

- Maximum building coverage: 70% of lot
- Maximum building height: 75-feet
- Minimum landscaped open space: 10%
- Minimum front landscape strip: 10-feet; Side and rear landscape strip: 6-feet
- Setbacks: Front: 40-feet from the right-of-way; Side: 10-feet; Interior rear: 25-feet; Adjacent to residential use: 50-feet
- Minimum Parking: City of Gainesville standards for use.
- Building Materials: Building exteriors not screened from view of a public right-of-way or any property line shall have an architectural treatment of brick, brick/frame, stone, stucco, or another architectural treatment approved by the Community Development Director.

▪ **Adjacent Land Use and Zoning**

The subject property is positioned near the northwestern edge of the city limits between Dawsonville Highway (S.R. 53) and Lake Sidney Lanier. The property fronting Dawsonville Highway (SR 53) is located within the Gateway Corridor Overlay Zone. Single-family homes and undeveloped land surround the subject property to its north, south and east, some of which are located off of Ahaluna Drive, Watauga Drive, Sportsman Club Road, Strickland Drive, Karen Lane and within the Lakeshore Heights Subdivision. These properties are zoned Residential-I (R-I) within the City of Gainesville and Agricultural Residential-III (AR-III), Residential-I (R-I) and

Vacation Cottage (V-C) within Hall County. There are also single-family homes to the west located off Skyview Place in the City zoned Residential-I (R-I) as well as Skyview Lane and Skyview Drive zoned Agricultural Residential-III (AR-III) in the County.

Commercial properties can be found to the north, south and west located along Dawsonville Highway. These properties include various retail stores, restaurants, convenience store/gas station, mini warehouses, boat sales, boat dock manufacturing and multi-family apartments. These properties are zoned Highway Business (H-B) within Hall County and General Business (G-B), Regional Business (R-B), Residential-II (R-II) and Planned Unit Development (P-U-D) within Gainesville. Recent significant development includes the Northlake Square shopping center and several outparcel developments located to the south zoned General Business (G-B) within the City of Gainesville.

▪ **Traffic Impact Study Summary**

A Traffic Impact Study was completed for the proposed development on January 24, 2017 and later revised on April 7, 2017 by Marc R. Acampora, PE, LLC Traffic Engineering. Most of the traffic counts were collected on Thursday, November 17, 2016 from 7:00 A.M to 9:00 A.M. and from 4:30 P.M. to 6:30 P.M. The counts at the North Lake Square entrance were collected on Wednesday, March 22, 2017. The magnitude of the side street volumes were found to be very comparable with the counts performed for this current study, and generally slightly higher. However, the volumes on the major streets were consistently notably higher for this current study. Historic Georgia DOT 24-hour traffic counts were also collected in the vicinity from the year 2015. The annual daily traffic volume on SR 53 north of Sportsman Club Road was 25,600 vehicles per day. The entire project is expected to generate 189 new trips in the a.m. peak hour, 274 new trips in the p.m. peak hour, and 3,387 new trips during a 24-hour weekday. The study extended one mile from the limits of the proposed site and included the following ten intersections:

1. Sportsman Club Road at Strickland Drive
2. Dawsonville Highway at Sportsman Club Road
3. Dawsonville Highway at Avonlea Way
4. Dawsonville Highway at Canterbury Road
5. Dawsonville Highway at Ahaluna Drive
6. Dawsonville Highway at North Lake Square Shopping Center Entrance
7. Dawsonville Highway at Beechwood Boulevard
8. Dawsonville Highway at McEver Road
9. Dawsonville Highway at Green Hill Circle
10. Dawsonville Highway at Shallowford Road

A summary of the study revealed that future operations, upon the project being fully constructed and operational, at the below intersections would have extremely heavy traffic flows rated LOS F. LOS "F" is a condition of extremely heavy flow, with frequent stoppage and very slow speeds. Traffic is unstable and often comes to a complete halt. These intersections include:

- 1) A.M. and P.M. peak hour southbound approach at Dawsonville Highway at Sportsman Club Road; 2) A.M. and P.M. peak hour eastbound and westbound left turn at Dawsonville Highway and Avonlea Way; 3) A.M. and P.M. peak hour eastbound and westbound left turn at Dawsonville Highway and Canterbury Road; 4) A.M. and P.M. peak hour westbound approach at Dawsonville Highway and Ahaluna Drive; 5) A.M. and P.M. peak hour eastbound left turn at Dawsonville Highway and Beechwood Boulevard; 6) P.M. peak hour northbound Dawsonville

Highway at McEver Road; 7) A.M. / P.M. peak hour eastbound approach at Dawsonville Highway and McEver Road; 8) P.M. peak hour westbound approach at Dawsonville Highway at Green Hill Circle; and 9) P.M. peak hour eastbound approach at Dawsonville Highway and Shallowford Road.

The summary of findings and recommendations of the study are as follows:

Sportsman Club Road at Strickland Drive

No changes are recommended at this intersection for the existing, no-build, or Future Phase One and Future Phase Two conditions.

Dawsonville Highway at Sportsman Club Road

The side street delays at this intersection are significant now and will increase in the future. 1) While a warrant analysis was not performed as part of this traffic impact study, the low side street volumes make the intersection an unlikely candidate for signalization. The potential for justifying signalization will increase in the future, but side street volumes will continue to remain moderate. 2) This study also identifies the need for a northbound exclusive right turn lane to be added on GA 53 at Sportsman Club Road. Northbound and southbound exclusive left turn lanes are currently provided at this median break.

Dawsonville Highway at Avonlea Way

Side street delays are high at the existing eastbound approach of Avonlea Way, and these delays will increase in the no-build and future conditions. The side street volumes are predominately right turners, with extremely low left turn volumes. 1) The Lanier Tract will introduce a new fourth leg at the Avonlea Way intersection (there is an existing private residential driveway at this median break, which would be replaced by the Lanier Tract access). Northbound and southbound exclusive left turn lanes are currently provided at this median break. The volumes exiting the new Lanier Tract access will be low and many of them will be right turners. Therefore, this intersection is considered unlikely to be a candidate for signalization in the existing, no-build, and Future Phases One and Two, even with the addition of the Lanier Tract trips. 2) The Georgia DOT right turn lane analysis suggests that a northbound exclusive right turn lane should be considered at this access and the site plan includes the addition of this lane. 3) The new site access should be constructed with one entering lane and one exiting lane. 4) The side street approach exiting the site should be controlled by side street stop sign and accompanying stop bar.

Dawsonville Highway at Canterbury Road

Side street delays are high on the existing eastbound approach of Canterbury Road and these delays will increase in the no-build and future conditions. As with Avonlea Way, the side street volumes at this intersection are predominately right turners, with extremely low left turn volumes. For this reason, this intersection is considered an unlikely candidate for signalization in the existing, no-build, and Future Phase One conditions. The outparcel access will align with Canterbury Road and the Lanier Tract will connect through the outparcels to GA 53 at this location. Northbound and southbound exclusive left turn lanes are currently provided at this median break. A short southbound deceleration lane is provided on GA 53 at Canterbury Road, though this lane does not appear to have been constructed to current Georgia DOT design standards. The northbound right turn volume will be low in the Future Phase One condition, and the Georgia DOT right turn lane analysis indicates that no decel lane will be required for Future Phase One. 1) However, with the future development of the retail outparcels, by others, the right turn volumes will be significant, primarily due to the outparcels, and a northbound deceleration lane is recommended for this location. The Future Phase Two side street volumes exiting the

outparcels will be notable and this intersection will likely be a prime candidate for signalization upon development of the outparcels. 2) It is recommended that at such time as the outparcels are planned to be developed, a signal warrant study be performed for this intersection according to the standards set forth in the Federal Highway Administration's *Manual On Uniform Traffic Control Devices* (MUTCD). 3) This new access at the Canterbury Road median break should be constructed with at least one entering lane and an exiting shared left/through lane and an exclusive right turn lane. The two westbound lanes are in anticipation of the development of the outparcels. With only the Lanier Tract volumes, only one entering and one exiting lane would be required. 4) Until signalization is warranted, the side street approach exiting the outparcel tracts should be controlled by side street stop sign and accompanying stop bar.

Dawsonville Highway at Ahaluna Drive

1) The review of Georgia DOT auxiliary lane standards indicates that a northbound right turn lane should be added on GA 53 at Ahaluna Drive in the existing condition. 2) The future volumes exiting Ahaluna Drive would benefit from the addition of a second westbound lane, resulting in a shared left/through lane and an exclusive right turn lane on Ahaluna Drive at GA 53. This second lane would reduce the demand for side street green time on the signal and improve side street levels of service. It was noted that the need for relocation of the signal steel strain pole, a drainage structure, and possibly a large brick monument sign, may reduce the feasibility of adding this second westbound lane. 3) With the addition of Lanier Tract DRI southbound left turns, consideration should be given to adding a protected / permissive southbound left turn phase, which would match the existing protected / permissive phasing for the northbound left turn. The Georgia DOT left turn phase warrants are not satisfied for this southbound left turn based on volume projections alone. However, other factors such as high speeds on GA 53 and the senior residents expected to reside at the Lanier DRI, merit consideration. 4) Field observations suggest that there may be an opportunity to shorten the cycle length, which would reduce time spent by vehicles waiting on the side street.

Dawsonville Highway at North Lake Square Access

This intersection operates acceptably in all analysis conditions. The side street approaches do incur some delays at all times, primarily due to the long cycle length on the signal, which allocates most of the green time, appropriately, to GA 53. The side street delays are incurred by minimal volumes in the a.m., since the retail served by the side streets are generally not operational at that time. Higher volumes incur the side street delays in the p.m., when the retail is operational. However, overall this intersection operates appropriately and no mitigation is recommended for any analysis condition.

Dawsonville Highway at Beechwood Boulevard

At the GA 53 / Beechwood Boulevard intersection, it is noted that a fourth leg is currently stubbed-out across from Beechwood Boulevard and a retail development is under construction on that site. Auxiliary left and right turn lanes are provided on GA 53 serving Beechwood Boulevard and the future fourth leg appears to be designed for right-in / right-out access only, with a northbound deceleration lane provided on GA 53. No other changes are recommended at this intersection based on this study.

Dawsonville Highway at McEver Road

The lane configuration and signal phasing at this intersection are generally appropriate. 1) The existing southbound right turn volume is sufficiently-high (828 a.m., 481 p.m.) to merit consideration of the addition of a second exclusive right turn lane and/or the addition of a protected right turn overlap phase. The justification for adding this phasing and/or second right

turn lane will increase as volumes increase. 2) Finally, there may be an opportunity to reduce the cycle length and fine-tune the signal timing at this intersection.

Dawsonville Highway at Green Hill Circle

This signalized intersection incurs high side street delays, again, due to the allocation of the majority of green time to the Dawsonville Highway approaches. 1) There may be an opportunity to reduce the cycle length and fine-tune the signal timing at this intersection.

Dawsonville Highway at Shallowford Road

The lane configuration and signal phasing are appropriate for this intersection. 1) Reduction of the cycle and optimization of the allocation of green time could reduce delays and queuing at this intersection.

▪ **Other Departmental Comments**

According to the Georgia Department of Transportation, the applicant will need to coordinate with GDOT since this develop will impact the State Route System.

The Gainesville Public Works Department has recommended additional transportation improvements which are stated within the traffic zoning conditions listed below.

The Gainesville Department of Water Resources states that the City currently has adequate water and sanitary capacity for the proposed development. The developer will be required to construct extensions for both water and sanitary sewer to connect the existing City facilities, along with pump stations required for areas of the development unable to utilize gravity sanitary sewer for conveyance.

The Gainesville Police Department's primary concern will be the increased traffic accidents from the additional cars on the Dawsonville Highway corridor.

A Development of Regional Impact Study (DRI #2638) was submitted for this development. Upon review of the proposal, the Georgia Mountains Regional Commission states that the proposal does not present any potential adverse inter-jurisdictional impacts, assuming the project will be in compliance with State and local regulations and the Gainesville-Hall Metropolitan Planning Organization.

▪ **Zoning History**

The following zoning actions have taken place in the immediate area during the last ten years:

2015 – A request by West Ahaluna, LLC to annex a 8.74± acres tract with a zoning of Residential-I-A (R-I-A) located at 0 and 1264 Ahaluna Drive was conditionally approved for no proposed use.

2014 – A request by West Ahaluna, LLC to annex a 70.23± acres tract with a zoning of Planned Unit Development (P-U-D) located at 0 and 1817 Ahaluna Drive; 1982 Dawsonville Highway; 2208 Karen Lane; 2008, 2016 and 2029 Strickland Drive was approved with conditions. In addition, the same applicant requested to rezone a 31.93± acres tract located at 0 Ahaluna Drive NW and 1489 West Lake Drive NW from Residential-I (R-I) to Planned Unit Development (P-U-D) was also approved with conditions for a 199-lot single-family subdivision.

2013 – A request by America's Home Place, Inc. to rezone a 25.11± acres tract located at 0 and 1198 Dawsonville Highway; 1232 Ahaluna Drive and 1162 Lakeshore Circle from Residential-I

(R-I), Residential-II (R-II) and Office and Institutional (O-I) to General Business (G-B) zoning for a commercial shopping center was approved with conditions.

2012 – A request by America's Home Place, Inc. to rezone a 4.711± acres tract located at 0, 1122, 1138, 1162 and 1198 Dawsonville Highway from Residential-II (R-II), Office and Institutional (O-I) and General Business (G-B) to General Business (G-B) zoning for retail, restaurant and vehicle service uses was approved with conditions.

2011 – A request by Kauffman Tire Inc. for a special use within Regional Business (R-B) zoning on a 1.19± acres tract located at 801 & 805 Dawsonville Highway was approved with conditions for an automotive tire and service store.

2010 – A request by Bill Dupree to annex a 7.11± acres tract with General Business (G-B) zoning and rezone a 2.44± acres tract from Residential-II (R-II) to General Business (G-B) located at 0, 1293, 1297 and 1139 Dawsonville Highway was approved with conditions for a business center with retail, office and restaurant uses.

▪ **Staff Analysis**

(1) Is the proposed use suitable in view of the zoning and development of adjacent and nearby property?

The proposed mixed-use development is suitable based on the surrounding uses. The subject property is located adjacent to both residential and commercial uses with zonings of Agricultural Residential-III (AR-III), Residential-I (R-I), Vacation Cottage (V-C), Planned Unit Development (P-U-D), Highway Business (H-B), General Business (G-B) and Regional Business (R-B). Much of the development within the immediate area has included significant commercial growth with some limited new housing.

(2) Will the proposed use adversely affect the existing use or usability of adjacent or nearby property?

The subject property is currently zoned and approved for residential and commercial purposes. The proposed development is master planned and proposes more residential housing.

Given the size of the property, it is expected the proposed mixed-use development will have impacts to traffic movements along Dawsonville Highway which are currently strained during the holiday period and certain peak times. As the proposed development becomes built out over time, additional traffic will slow turning movements at some nearby Dawsonville Highway intersections. Transportation improvements as identified within the traffic study and zoning conditions will be necessary to help reduce negative impacts to Dawsonville Highway and nearby intersections. Of note, with the proposed residents being mostly age restricted, the traffic created is typically less than if proposed as a traditional subdivision.

In addition, due to the proposed developments proximity to Lake Lanier, environmental impacts should be properly mitigated through improved storm water measures. Sedimentation ponds and bioretention areas will be required within the development to help protect the lake. In addition, the Corps of Engineers will require the applicant to install rip rap to protect the shoreline near the proposed two community boat docks due to the additional boat traffic.

(3) Is the proposed use compatible with the purpose and intent of the Comprehensive Plan?

The Gainesville Future Development Map places the subject property within the *Low-Medium Density Residential* land use category and the *Mixed Use General* land use category. The *Low-Medium Density Residential* land use category includes areas containing or planned for single-

family detached or semi-detached housing at densities up to 4.0 dwelling units per acre. The proposal has a density of 4.27 dwelling units per acre for the 185.02± acres portion of property to be zoned Planned Unit Development (P-U-D). The *Mixed Use General* land use category includes areas containing or planned for a mixture of land uses including office, neighborhood retail, and residential.

The subject property is also located within the *Suburban Residential* and *Suburban Commercial* Character Areas. The goal of this character area is to preserve older, stable residential subdivisions and encourage newer projects with smaller lot sizes, pedestrian infrastructure, and buildings patterned after traditional local housing, possibly containing a small neighborhood-serving “village center”. Mixed-use neighborhood design is desired but not required. In areas where natural features or sensitive environments are important, cluster housing or conservation subdivision design may be appropriate. Community access points and shoreline restoration are encouraged as part of future development on greenfield parcels between Dawsonville Highway and Lake Lanier. Land uses allowed within the *Suburban Residential* area include low-density residential, medium density residential, multi-family residential, public / institutional, commercial, and parks / recreation / conservation and mixed use.

The *Suburban Commercial* area will continue to grow as a regional retail center for the City and Hall County, but should diversify over time to include multi-family housing and a higher-density mix of retail, office, services and high-quality employment. In addition, expanding premium retail could offer a variety of shopping options that are currently not available elsewhere in the City. As it grows, the area will become one of the most prominent commercial corridors and gateways into the City, and a thriving economic anchor for the northwest side. When development occurs, adequate buffers should be maintained around development to protect watersheds and sensitive environments. Land uses allowed within the *Suburban Commercial* area include commercial, public / institutional, multi-family residential and mixed use.

(4) Are there substantial reasons why the property cannot or should not be used as currently zoned?

The subject property is currently zoned for single-family and commercial purposes and could be developed as such. It is estimated that a total of 341 residential homes could be constructed within the entire development based on the existing zoning in the City and County. However, water and sewer services are necessary in order to develop the subject property for the desired use and density. Due to the amount of undeveloped land and green space, the subject property should be carefully planned as opposed to developed piecemeal. Master planned communities typically provide for better uniformity and higher development standards such as building quality, connectivity, common space, landscaping, environmental protection and services that would otherwise not be provided to the residents.

(5) Will the proposed use cause an excessive or burdensome use of public facilities or services, including but not limited to streets, schools, water or sewer utilities, and police or fire protection?

The subject property and surrounding development currently utilizes City water and sewer services and there is sufficient capacity to serve the development. Water and sewer extension to the development will be required.

As listed in the above summarized Traffic Impact Study for this project, the entire project will generate 189 new trips in the a.m. peak hour, 274 new trips in the p.m. peak hour, and 3,387 new trips during a 24-hour weekday. The improvements as identified within the study and the proposed zoning conditions are strongly recommended by staff to help mitigate some of the traffic concerns.

Existing public safety services respond to the adjacent and nearby properties. Gainesville Fire Station #1 is located approximately 3.2 miles away from the furthest proposed residential lot. As well, Hall County Fire Station #13 off of Sardis Road is also located approximately 3.4 miles away. Gainesville and Hall County currently have an “automatic aid” agreement for emergency services that was first established in 1997. The agreement allows the agency that is closest to an incident to respond despite municipal boundaries. Regardless, the amount of proposed single-family homes will put additional strain on fire services due to the subject properties proximity to the existing city limits which could impact the City’s ISO rating. However, a 3.0 acres tract of land is planned for a future City fire station which would front Dawsonville Highway.

According to the Gainesville Police Department, increased traffic accidents from the additional cars on the Dawsonville Highway corridor are a primary concern.

No impacts to the school system are expected as the development is an age restricted community. Of note, a portion of the subject property was previously approved for 199 homes which were not age restricted. No comments or concerns were received by the school system regarding this request.

(6) Is the proposed use supported by new or changing conditions not anticipated by the Comprehensive Plan or reflected in the existing zoning on the property or surrounding properties?

It is staff’s opinion that proposed mixed-use is consistent with the Gainesville Comprehensive Plan but the number of units should be reduced to be within density range. The property is located within a residential area between Dawsonville Highway and Lake Lanier, and is near Gainesville’s most active regional commercial corridors. Existing uses along Dawsonville Highway south of the bridge consists of mostly commercial in nature excluding a few large apartment complex developments (Park Creek, Carrington Park and Lake Lanier Club), and some isolated single-family homes within Hall County. Numerous properties fronting this segment of Dawsonville Highway have been developed for non-residential purposes over the past 15 to 20 years. Some examples of this include the Northlake Square shopping center, Carrington Park retail center, Village Shoppes of Gainesville, Home Depot, Best Buy, McEver Corners shopping center, Texas Roadhouse, Olive Garden, Cheddar’s, Buffalo Wild Wings and a child day care facility. A 94-room Holiday Inn Express is currently under construction behind the Cheddars restaurant.

The proposed mixed-use development appears to be of high quality and would serve as an appropriate transitional use for the area between Dawsonville Highway and the residential uses adjacent to Lake Lanier. As well, the proposal will provide for additional shopping opportunities and a mixture of housing needed within Gainesville that will further help sustain the Dawsonville Highway corridor.

(7) Does the proposed use reflect a reasonable balance between the promotion of the public health, safety, morality, or general welfare and the right to unrestricted use of property?

Due to the subject property’s proximity to existing residential and commercial land uses, the proposed mixed-use development, with the recommended conditions of zoning appears to promote a reasonable balance between the interests of the City, the property owner, and neighboring residents and property owners.

▪ **Staff Recommendation**

The Planning Division staff is recommending **conditional approval** of the proposed annexation and rezoning request based on the Comprehensive Plan and the adjacent residential and non-residential land uses.

Conditions

Development Standards

1. The development standards within the applicant's narrative, concept plan and architectural renderings shall be made part of the zoning ordinance, and shall be subject to the Community Development Director approval. Any zoning conditions adopted as part of this zoning ordinance that conflict with the applicant's narrative, concept plan and architectural renderings shall take precedence over the applicant's development standards.
2. Prohibited commercial uses shall include motels or hotels with rooms accessed from the exterior of the building, adult novelty stores, adult entertainment centers, pawn shops, gas stations, tire stores, massage parlors except for practitioners licensed by the State of Georgia, vaping stores, auto body shops, automobile sale establishments, marine sales or repair stores, automated or non-automated car wash, coin-laundry facilities, truck stop, tattoo parlors, psychics, fortune tellers, clairvoyants and the like.
3. The applicant's revised concept plan and narrative proposes a total of 790 senior residential units. The total number of residential units approved for the development shall not exceed 770 senior residential units. The reduction of 20 residential units may occur anywhere within the development. However, a minimum of 10 residential units shall include single-family homes, cottages and terrace homes with frontage along Ahaluna Drive and adjacent to existing single-family properties located off of Karen Lane, Watauga Drive and West Lake Drive.
4. The development shall comply with applicable U. S. Department of Housing and Urban Development (HUD) rules for age-restricted communities. The organization established for the management of the development shall comply with HUD rules for verification of occupancy and shall maintain procedures for routinely determining the occupancy of each unit. Such procedures may be part of a normal leasing or purchasing agreement and must provide for regular updates as required by HUD.
5. All proposed single-family detached homes shall have a minimum front yard setback of 20-feet as measured from the right-of-way line and shall have a minimum distance of 10-feet between houses. Additionally, all cottages with frontage along Ahaluna Drive shall have a minimum front yard setback of 20-feet as measured from the right-of-way line and shall have a minimum distance of 10-feet between houses. The lots that back up to existing residences located off of Karen Lane, Watauga Drive and West Lake Drive shall have minimum 20-feet rear setbacks.
6. The following buffer standards shall be required:
 - a. A minimum 20-foot wide buffer shall be required for all proposed single-family detached homes, cottages and terrace homes where adjacent to existing single-family homes.

- b. A minimum 50-foot wide buffer shall be required for the assisted living facility, independent living facility and commercial uses when adjacent to existing single-family homes.
 - i. The exterior 25-feet of this buffer must be undisturbed, except where disturbance is required for erosion control, storm water management or the installation of utilities.
 - ii. The interior 25 feet of this buffer may be graded and replanted.
 - c. A minimum 25-foot wide buffer shall be required for the assisted living facility, independent living facility and commercial uses when adjacent to proposed single-family homes within the development. The 25-foot buffer may be located at any location between such structures, including without limitation, at a location where the common boundary line between the respective uses is within the 25-foot buffer.
 - d. The proposed storm water facilities shall be buffered from all existing homes and proposed uses. The buffer shall contain a mixture of evergreen and deciduous trees.
 - e. Any additional plantings required will be in accordance with City of Gainesville's Buffer Standards as determined by the Community Development Director.
- 7. The minimum heated floor space for the single-family detached homes shall be no less than 1,800 square feet. The minimum heated floor space for the single-family cottages and terrace homes shall be 1,000 square feet.
 - 8. Covenants shall be put in place by the developer restricting against the parking of boats, trailers, and campers within driveways.
 - 9. The proposed amenity clubhouse and storage facility shall include a minimum 3:12 roof pitch and exterior facade materials shall be similar in architecture to the proposed single-family homes.
 - 10. A Uniform Sign Plan as identified within Section 9-18-7-4 of the Unified Land Development Code shall be required from the developer and is subject to approval by the Gainesville Community Development Director. All signs associated with residential uses shall be limited to indirect lighting. All signs shall be located outside of utility areas and shall not block visibility of vehicular traffic.
 - 11. The proposed erosion control and water quality measures for the development shall at minimum meet the Georgia Storm Water Management Manual requirements. Storm water management for the development must provide water quality treatment for no less than 110% of the State required treatment volume. The City of Gainesville shall approve the final design of all water quality measures.
 - 12. The 3.0 acre parcel labeled as "Fire Station Parcel" on the applicant's concept plan submitted with this application shall be deeded to the City of Gainesville within one year of the effective date of this zoning ordinance for the future construction of a City of Gainesville fire station. All costs associated with deeding the property shall be at the full expense of the developer. Architectural design for the fire station must be approved by both the City of Gainesville and the developer, and shall be substantially similar with residential and commercial standards submitted with the application.
 - 13. No more than 10% of the units within the proposed indoor storage facility may be leased to non-residents of the proposed development.

Transportation / Traffic

14. Prior to the issuance of a land disturbance permit, the developer shall provide a signal warrant analysis be performed per Georgia Department of Transportation (GDOT) standards for each of the following two intersections:

- a. Dawsonville Highway (SR 53) at Avonlea Way and the new access road; and**
- b. Dawsonville Highway (SR 53) at Canterbury Road and the new access road. The design of the signal warrant analysis should account for the probability that GDOT will not approve a signal at this location and should evaluate the intersection for an R-CUT design at the median break. If a traffic signal is approved by GDOT, improvements for a traffic signal at the intersection will require approval of the Gainesville Public Works Director and GDOT Traffic Operations Office.**

All costs associated with the signal warrant analysis study, and if warranted by such study, any costs associated with the installation of a traffic signal and intersection improvements shall be at the full expense of the developer.

15. The developer shall perform the following traffic improvements identified within the Summary of Study Findings and Recommendations as stated within the revised Traffic Impact Study, dated April 7, 2017, for the proposed development:

- a. Dawsonville Highway (SR 53) at Avonlea Way and the new access road to include a northbound exclusive right turn lane to be added on Dawsonville Highway (SR 53) turning into new site driveway and the inclusion of one entering lane and one exiting lane for the new site access to be controlled by side street stop sign and accompanying stop bar; and**
- b. Dawsonville Highway (SR 53) at Canterbury Road and the new access road to include a northbound exclusive right turn lane to be added on Dawsonville Highway (SR 53) turning into new site driveway and the inclusion of one entering lane and one exiting lane for the new site access to be controlled by side street stop sign and accompanying stop bar.**

The developer shall coordinate these improvements with GDOT and the Gainesville Public Works Director prior to permitting. The Gainesville Public Works Director and GDOT shall have the final determination of the time line of these improvements based on the developer's proposed construction schedule. All costs associated with the improvements shall be at the full expense of the developer.

16. Prior to the issuance of a land disturbance permit for the Planned Unit Development (P-U-D), the developer shall evaluate, design and construct the left turn lanes on Dawsonville Highway (SR 53) to meet GDOT storage and design requirements at Avonlea Way and the new site driveway at Canterbury Road. Prior to the issuance of a land disturbance permit for the commercial development zoned General Business (G-B), the developer shall evaluate, design and construct the left turn lanes on Dawsonville Highway (SR 53) to meet GDOT storage and design requirements. If the existing left turn lane at this location meets these requirements, this condition will be deemed satisfied.

17. Developer consents to pay \$425,000.00 to be used solely for the purpose of making roadway improvements along Dawsonville Highway (SR 53) from McEver Road (SR 53) to Ahaluna Drive. In this regard, the developer shall deposit \$100,000.00 upon

issuance of the initial land disturbance permit for the Planned Unit Development (P-U-D), and annually thereafter an additional \$100,000.00 until the full \$425,000.00 is paid in full (provided, the fourth and final payment will be for \$125,000.00). All such payments will be deposited into an escrow account at a financial institution chosen by the City of Gainesville. The City of Gainesville shall choose an escrow agent, who shall be authorized to disburse the funds to the City of Gainesville as said funds are needed to make roadway improvements along Dawsonville Highway (SR 53) from McEver Road (SR 53) to Ahaluna Drive. The amount as stated above is based on the cost estimate previously provided by the City of Gainesville to the developer for roadway improvements in addition to those improvements referenced elsewhere in the zoning conditions affecting the property that is the subject of the zoning application.

18. Prior to the issuance of a land disturbance permit, the intersection of Strickland Drive, Karen Lane and the new access road to the proposed development shall be redesigned to include realignment similar to what is shown on the revised concept plan for better traffic circulation, and to meet current roadway design criteria. The improvements shall be completed prior to permitting direct access from the development onto Karen Lane and Strickland Drive and prior to the construction of the most northern Pod of terrace and cottage homes. All costs associated with the improvements shall be at the full expense of the developer.
19. Prior to the issuance of a land disturbance permit, the developer shall seek verification from Hall County to determine whether or not any improvements will be required to the intersection of Sportsman Club Road and Strickland Drive.
20. All new streets shall meet the standards within the current Gainesville Unified Land Development Code. These same standards shall be required for the segment of Ahaluna Drive starting at the north side of the existing power line easement and adjacent to the entrance of the terrace homes, and shall extend in a northeasterly direction south of Watauga Drive where the city limits terminate. The remaining portions of Ahaluna Drive within the city limits shall meet the City of Gainesville Standards excluding the requirements of curb and gutter. All other residential uses, amenities, office and commercial areas shall provide for pedestrian connectivity throughout the development. All costs associated with the improvements shall be at the full expense of the developer.
21. Prior to the issuance of a land disturbance permit, the developer shall seek approval from the City of Gainesville and the Corps of Engineers to improve the existing Ahaluna Drive cul-de-sac to provide for better turn around for emergency and utility vehicles. If approved, curb and gutter and sidewalks shall be extended to the Ahaluna Drive cul-de-sac. All road and traffic improvements to Ahaluna Drive shall be at the expense of the developer and shall meet the standards within the current Gainesville Unified Land Development Code prior to acceptance. All cul-de-sacs constructed or modified as part of the development will be positioned (subject to Corps of Engineers, and City of Gainesville approval, as needed) on the west side of the road, in approximately the current location of the existing cul-de-sac but positioned in a way that would minimize the impact to the lots on the east side of the road. The final design shall require approval from the City of Gainesville.

22. There shall be no driveways from individual homes allowed onto Ahaluna Drive for lots that have road frontage on any new proposed interior street. There shall be no driveways from individual homes allowed onto Karen Lane or Strickland Drive.
23. There shall be no access allowed onto West Lake Drive and Skyview Drive.
24. The proposed commercial, retail and office outparcels shall provide inter parcel connectivity to one another.

Excerpts from the May 9, 2017 Planning and Appeals Board Meeting Minutes

Applicant Presentation: Ethan Underwood, stated he was an attorney with Miles Hansford & Tallant, LLC located at 202 Tribble Gap Road, Suite 200, in Cumming. He stated they were excited about the project because while it is a big change, people will look back on it in 10 years and say it was the right thing to do. Mr. Underwood used a Power Point Presentation to explain the project. Overall the project is about 235 acres, with part of it being in Hall County which they are requesting to come into the City of Gainesville. He stated they are asking for 20 acres of the development to be zoned as General Business, noting it is already zoned as such in Hall County and could be developed for commercial uses now but they want to come into the City. The 26 acres portion is already approved in the County for 95 units and they are proposing to reduce that to 90 units in the City. The remainder of the acreage is proposed for different housing types which include single-family detached residential, single-family cottages, detached terrace homes, townhouses and for-rent residential units for independent living, assisted living and memory care. The land for the zero-lot line residential units (cottages and terrace homes) will be maintenance free and managed by a homeowners association so they do not have to maintain yards. The 90 units to the north within the 26.16± acres portion are proposed as townhomes.

Mr. Underwood stated they are proposing a total of 880 units, however, 325 of those units would be within the independent living, assisted living, and memory care community. He stated this would be the fourth such community the developer has completed, with others being in Peachtree City, Canton and Cumming. The monthly cost to live in the assisted living/memory care would range from \$3,500 to \$4,000 per month which is all inclusive with meals, rent and utilities, noting some have found it less expensive than paying bills and mortgages. Property taxes and school taxes will be paid on these units since there will be a landlord who is not exempt from those taxes.

Mr. Underwood stated there would be high quality commercial use as they have agreed to certain development standards and certain prohibited uses. The developer has also agreed to donate 3 acres for a new fire station, with the City having the final decision on the architectural design. In regards to economic impact, at full build out, the project is expected to bring almost 1.7 million in property taxes to the City alone. They are also estimating almost another half million in additional sales tax. In their conservative estimation, this would generate over \$400,000 per year in net revenue as they do not anticipate the residents would require as much services as typical residents. One time impact fees are estimated at nearly 2 million.

Mr. Underwood acknowledged the elephant in the room was traffic. He stated the subject property is already zoned for about 200 non age restricted homes which would bring more traffic than an age restricted development, noting the residents would typically be on the road less often and during non-peak drive times. He stated they completed a traffic study and some people had questioned the methodology of the study because they used Georgia Department of

Transportation (GDOT) numbers which are projections and they wanted the requests to be postponed again to do further study. However, they used the methodology as requested by the Georgia Mountains Regional Commission (GMRC), GDOT and the City of Gainesville. He stated that even if they did a real time study, the recommendations that come back would not have different results because there is no plan to make Dawsonville Highway a six lane highway so the only options are to make intersection improvements, traffic light improvements and contributions from the developer to make the necessary improvements. They have agreed to make improvements at Canterbury Road, Avonlea Way, Sportsman Club Road, Strickland Drive and Karen Lane. Mr. Underwood confirmed that Tad Braswell with Oak Hall Companies, LLC has agreed to the conditions as proposed by staff which includes the following traffic improvements: 1) Signal warrant studies at the intersections of Dawsonville Highway with Canterbury Road, Avonlea Way and Sportsman Club Road. If a signal is warranted, the developer will absorb that cost; 2) Turn lane improvements at the intersections of Dawsonville Highway and Canterbury Road, Avonlea Way and Sportsman Club Road. If those improvements are warranted, the developer will absorb that cost; and 3) Road improvements to Ahaluna Drive and Strickland Drive will also be completed and paid for by the developer as they will have to be widened and straightened which will make them much safer roads. The developer has also agreed to make a \$425,000 contribution to make road improvements along Dawsonville Highway from McEver Road to Ahaluna which is located south of the proposed development. However, they are taking responsibility of the traffic because they want to be a good neighbor and we are all in this together because you can't sell houses to angry neighbors because of traffic.

In conclusion, Mr. Underwood stated the property is already zoned for 200 single-family homes and General Business uses along the corridor, so something is coming to the area and the question is, what something do you want there? He felt the age restricted community is the right something because it will be a lower impact development, schools will not be affected even though residents will be paying taxes, and drive time will have a much lower impact than folks with young families. There will be a positive economic impact for the City, traffic improvements made in the area which otherwise would not be completed, and property donated for a new fire station. He asked to reserve time for questions and rebuttal.

FAVOR: **Carl Simmons, Jr.**, 2322 Sportsman Club Road, stated he did not want to be annexed into the City and complained he could not go down Dawsonville Highway on Friday evenings because of the restaurant traffic. He suggested a bypass to avoid the area. He stated he was all for progress and didn't care what they did with the subject property but asked the Board not to hurt others to improve the developer's pockets.

OPPOSE: **Clyde Morris**, 2375 Whippoorwill Lane, in Hall County, stated he was speaking on behalf of a large contingency of residents who live within the Dawsonville Highway corridor and asked them to stand. There were approximately 75-100 people who stood in opposition. He stated their concerns were focused on traffic since they already experience gridlock at times, noting it takes 25 minutes to get from Sportsman Club Road to Home Depot at times which should only take 2 or 3 minutes. They have studied the information available from all traffic studies by GDOT, Oak Hall and the City, and have re-analyzed it to determine what is wrong because it shows far too few vehicle trips. They concluded the data is defective which projects a 2% growth rate in traffic instead of a 9.8% growth rate which is more accurate in his opinion. Traffic has become significantly worse over the past year or year and a half since Northlake Square opened. The Oak Hall traffic study projected an additional 3,387 trips per day and he believed it should be 6,000 trips per day. Also, 3,260 trips per day will be added by the commercial component which is believed to be constructed about the same time. Mr. Morris

believed the entire development, when completed, would generate 9,000 to 10,000 trips per day which would be catastrophic in his opinion. Mr. Morris stated they did not intend to disparage the development or the company and was sure they are reputable and put out a good product. They are asking the Board to consider the impact on traffic and the quality of life for those living in this corridor. He stated as of today, two studies are being planned or underway, one by Arcadis contracted by GDOT, and the other has been commissioned by the City of Gainesville and the Metropolitan Planning Organization (MPO) for funding of improvements at the intersection of McEver Road and Dawsonville Highway. He stated the studies are needed and should be completed and the recommended improvements implemented before any additional development along this corridor is given approval. Therefore, Mr. Morris asked the Board to table the requests until those studies can be completed, infrastructure improvements can be planned and preliminary engineering can be undertaken so that road and traffic control improvements can keep pace with the population growth and the inevitable increases in traffic in an already traffic challenged gateway to Gainesville.

Gary Lawrence, 3537 Water Front Drive, stated he was the President of the Board for the Harbour Pointe Community Association which is a community of 290 households located off S.R. 53 approximately 5.5 miles west of the proposed development. The residents enjoy being a part of greater Gainesville and make abundant use of the restaurants, shops and businesses. They also serve Gainesville by volunteering through many organizations such as Meals on Wheels. Their Board recently received a presentation on the increased traffic from this development and two members participated in a follow up meeting. As representatives of Harbour Point, they have the following three concerns: 1) Residents are currently experiencing significant delays in exiting their community onto S.R. 53 not only during morning and evening rush hour but throughout the day, 7 days a week. He stated GDOT has reported a growth of more than 2,000 vehicles per day which pass the entrance of Harbour Point from 2015 and 2016 due to the widening project and the new businesses along the corridor. The traffic will continue to increase with new development, and as a consequence, some residents are already going to Dawsonville for dining and shopping; 2) The Oak Hall Development will exacerbate the traffic that is already in the congested corridor. The PAB tabled these requests in March to obtain more traffic data and he asked the Board to table the requests again to look at the data which is forthcoming before making any decisions in order to see the impact of this development. The developer forecasted a 1.8% annual traffic growth rate and analysis he reviewed projected between 6% and 9.8%. He asked the Board to allow adequate time for the appropriate review of the consultant's findings on the new traffic studies and develop traffic remediation efforts before approval; and 3) There appears to be no plan to re-prioritize traffic enhancement critical Tier 2 and Tier 3 projects to bring them up to Tier 1 status to address the immediate need for something to be done in time for the added traffic from the Oak Hall development. It is perceived that the current plan is to approve the project then worry about the resulting traffic later. Mr. Lawrence stated the City and County should at least have a plan for traffic remediation and controlling signal light sequences but fears it will not be enough. They are asking for additional actions like additional lane capacity and turning lanes before the project comes online, otherwise during construction, some entrances would be backed up for lengths of time on a regular basis. In conclusion, Mr. Lawrence stated that Harbour Point understood the value of the new development and the need for additional affordable housing in Gainesville, but to approve the project without having a clear plan to remediate potential traffic problems and a short-term plan to address these issues is dangerous for the overall image and livability of Gainesville and Hall County. They recommend the developer, GDOT and all other parties, develop a traffic remediation plan and locate the funds to make it happen before approval.

Jerry Hulsey, 2389 Sportsman Club Road, stated you don't know somebody until you live with them and he has worked and lived within 3 square miles of Dawsonville Highway all his life and felt it is a wonderful place to live. He stated we are talking about quality of life, noting the more you have, the more you have to take care of, the more it costs and the more you spend. He couldn't understand why, even with all the people moving into the area, taxes haven't gone down but continue to rise. He referred to the west by-pass, Pearl Nix Parkway, which never came to its full fruition. He stated City Council said they do not have the money to complete road improvements, but look at the building we are in, noting the City has built two police stations and the Civic Center but no roads. Mr. Hulsey stated Chick-fil-a causes a traffic jam so they extended the left turn lane for customers to get in there and that is just one business. He reiterated it is all about quality of life and he understood something is going to be developed there but no one wants to get stuck in traffic.

Gene Korzeniewski, 1813 Watuga Drive, stated he believed it would be a quality development but was concerned whether the infrastructure, specifically Dawsonville Highway, could handle the increased traffic. If the traffic study is based on a 2% traffic growth rate per year, that would mean traffic has only increased 10% on Dawsonville Highway in the past 5 years and asked the audience to raise their hands if they felt traffic had increased more than 10%. He stated fundamentally, we are relying on an unrealistic growth rate. He stated it was reported that the majority of traffic from the 55 plus community would be during non-peak hours. However, we don't really know when peak hours are since 24-hour traffic counts were not taken at the intersections. Mr. Korzeniewski stated the GDOT practice manual states you should take 24 hour traffic counts in areas with shopping centers, restaurants, and recreational activities to determine the peak hours. Historical data between the hours of 9am and 4pm prove the traffic there is growing year to year. Therefore, what we think is rush hour, the normal work hour, may no longer be the case and the project could be adding traffic during the times we could least absorb it. He was concerned that the stores were closed in the morning hours when intersections were monitored so how do we know they won't be a problem if the data we have was taken at the wrong time. In conclusion, he was concerned about procedures, noting he thought the purpose of the public hearing was for the Board to hear from the public before making any decision or recommendations. He felt the decision and recommendation had already been made and this is the first time the Board was hearing from the public. He stated he was sure the Board had met with the developer multiple times in order to formulate their recommendations, but there hasn't been a single meeting between the Board and the public which is unfair and in some regards, irresponsible. Chairman Carter corrected Mr. Korzeniewski and clarified that none of the Board Members had met with the developers prior to this meeting. Mr. Korzeniewski stated he should clarify that certain members of the Board have met with the developers. Community Development Director Rusty Ligon clarified that he was not on the Board but on staff and meeting with developers was part of his job. Mr. Korzeniewski stated the staff recommendations were made based on meetings with the developer. Chairman Carter stated part of the process was for staff to meet with any applicant.

Bob Abernathy, 3311 Marina View Way, stated he moved into Gwinnett County in 1972 and moved to Hall County in 2003 because of the growth Gwinnett County was and still is experiencing, noting their current population is over 900,000. He stated Gwinnett County is a parking lot and they did not provide for adequate transportation to pace the growth. He stated it is a real problem and he was afraid Hall County would make the same mistake.

Cyril Pcolinsky, 2200 Sportsman Club Road, stated he would not speak of traffic since his neighbor, Jerry Hulsey, spoke in a very clear and comprehensive way. He was concerned with the 26.16± portion of the development because of the proposed terrace units in a small, hilly

area with curvy, narrow roads. His fear was the project would change the character of his neighborhood which consists of single-family detached homes with larger lots. Mr. Pcolinsky believed the city limits would progress beyond Sportsman Club Road in the future and he was concerned about a more densely populated area. He proposed the developer consider single-family homes there instead which would decrease the number of people living there and would be less of a traffic burden. He felt the quality of life would suffer with the proposed density and character of buildings.

REBUTTAL: Ethan Underwood introduced **Tad Braswell** with Oak Hall Companies, LLC. Mr. Braswell stated he grew up in Dekalb County, 3 miles from Perimeter Mall and used to walk to the mall by cow pastures on both sides of the road. He stated things change and people move here and Atlanta and Gainesville were great places to live. We make sure we do smart growth and plan things correctly which is the reason for the GMRC reviewing large projects like this one. He stated there was a lot of thought process going into how this traffic study was completed, noting it was not just the City, Hall County, or GDOT standards but a conglomeration of national standards that were utilized for the study grid network based on the number of houses they are proposing. He stated they did additional study as requested by the City and the standards used in the traffic studies which are proven time and time again, come from actual active adult communities. He confirmed the intersections studied were completed in real time peak hours, noting the stores were open in the evenings. Mr. Braswell stated the traffic study is scientific and has been reviewed with recommendations made by the GMRC, City Transportation, Hall County and GDOT, so he did not see the need for another traffic study. He stated that some people disagreed with the methodology of the way the counts were taken which leads him to question why they would believe another study which would be completed with the exact same standards. He stated there were a lot of good people present who were concerned about traffic, but everywhere you go in Atlanta there is traffic. However, they are bringing a lot of money to the table to improve the traffic situation which would otherwise not happen if the property is used as currently zoned. He wants everyone to be safe to get in and out of the development and wants to have a positive impact on the community.

Ethan Underwood thanked everyone for their comments because they wanted to hear from the residents, so they held two public participation meetings and were enlightened about some issues in which they were unaware until they met with the residents. He agreed with the public comments that the project should not be approved without accommodating traffic improvements which is why Oak Hall is going above and beyond to comply with conditions as proposed by staff. He stated some folks warned the Board not to get caught in a catch 22; however, those road improvements would not occur until a development comes in to pay for them, which is exactly what Oak Hall is proposing. Mr. Underwood stated this project aligns with the Comprehensive Plan as it was anticipated for this site; they have reduced units to meet the Plan; they have a solution for traffic issues; and they have a product which will build the community. Mr. Underwood asked the Board to recommend approval of the requests and they would be happy to answer any questions.

Planning and Appeals Board Comments: Upon inquiry by Vice-Chair Fleming, Tad Braswell clarified the standard traffic study peaks hours were from 7:00am to 9:00am and 4:00pm to 6:00pm. Vice-Chair Fleming stated along that corridor, there is a lot of restaurants and shopping which takes place after those hours and asked if there was another traffic study they could have access to with more extended hours. Mr. Braswell stated no, they completed the traffic study with the standards required by GMRC. He stated the standards are taken into consideration when the study is around a mall or shopping centers.

There was a motion to recommend conditional approval of all three Oak Hall Companies, LLC requests with conditions as follows:

CONDITIONS FOR 50.81± ACRES AND 157.98± ACRES

Development Standards

1. The development standards within the applicant's narrative, concept plan and architectural renderings shall be made part of the zoning ordinance, and shall be subject to the Community Development Director approval. Any zoning conditions adopted as part of this zoning ordinance that conflict with the applicant's narrative, concept plan and architectural renderings shall take precedence over the applicant's development standards.
2. Prohibited commercial uses shall include motels or hotels with rooms accessed from the exterior of the building, adult novelty stores, adult entertainment centers, pawn shops, gas stations, tire stores, massage parlors except for practitioners licensed by the State of Georgia, vaping stores, auto body shops, automobile sale establishments, marine sales or repair stores, automated or non-automated car wash, coin-laundry facilities, truck stop, tattoo parlors, psychics, fortune tellers, clairvoyants and the like.
3. The applicant's revised concept plan and narrative proposes a total of 790 senior residential units. The total number of residential units approved for the development shall not exceed 770 senior residential units. The reduction of 20 residential units may occur anywhere within the development. However, a minimum of 10 residential units shall include single-family homes, cottages and terrace homes with frontage along Ahaluna Drive and adjacent to existing single-family properties located off of Karen Lane, Watauga Drive and West Lake Drive.
4. The development shall comply with applicable U. S. Department of Housing and Urban Development (HUD) rules for age-restricted communities. The organization established for the management of the development shall comply with HUD rules for verification of occupancy and shall maintain procedures for routinely determining the occupancy of each unit. Such procedures may be part of a normal leasing or purchasing agreement and must provide for regular updates as required by HUD.
5. All proposed single-family detached homes shall have a minimum front yard setback of 20-feet as measured from the right-of-way line and shall have a minimum distance of 10-feet between houses. Additionally, all cottages with frontage along Ahaluna Drive shall have a minimum front yard setback of 20-feet as measured from the right-of-way line and shall have a minimum distance of 10-feet between houses. The lots that back up to existing residences located off of Karen Lane, Watauga Drive and West Lake Drive shall have minimum 20-feet rear setbacks.
6. The following buffer standards shall be required:
 - a. A minimum 20-foot wide buffer shall be required for all proposed single-family detached homes, cottages and terrace homes where adjacent to existing single-family homes.
 - b. A minimum 50-foot wide buffer shall be required for the assisted living facility, independent living facility and commercial uses when adjacent to existing single-family homes.

- i. The exterior 25-feet of this buffer must be undisturbed, except where disturbance is required for erosion control, storm water management or the installation of utilities.
 - ii. The interior 25 feet of this buffer may be graded and replanted.
 - c. A minimum 25-foot wide buffer shall be required for the assisted living facility, independent living facility and commercial uses when adjacent to proposed single-family homes within the development. The 25-foot buffer may be located at any location between such structures, including without limitation, at a location where the common boundary line between the respective uses is within the 25-foot buffer.
 - d. The proposed storm water facilities shall be buffered from all existing homes and proposed uses. The buffer shall contain a mixture of evergreen and deciduous trees.
 - e. Any additional plantings required will be in accordance with City of Gainesville's Buffer Standards as determined by the Community Development Director.
7. The minimum heated floor space for the single-family detached homes shall be no less than 1,800 square feet. The minimum heated floor space for the single-family cottages and terrace homes shall be 1,000 square feet.
 8. Covenants shall be put in place by the developer restricting against the parking of boats, trailers, and campers within driveways.
 9. The proposed amenity clubhouse and storage facility shall include a minimum 3:12 roof pitch and exterior facade materials shall be similar in architecture to the proposed single-family homes.
 10. A Uniform Sign Plan as identified within Section 9-18-7-4 of the Unified Land Development Code shall be required from the developer and is subject to approval by the Gainesville Community Development Director. All signs associated with residential uses shall be limited to indirect lighting. All signs shall be located outside of utility areas and shall not block visibility of vehicular traffic.
 11. The proposed erosion control and water quality measures for the development shall at minimum meet the Georgia Storm Water Management Manual requirements. Storm water management for the development must provide water quality treatment for no less than 110% of the State required treatment volume. The City of Gainesville shall approve the final design of all water quality measures.
 12. The 3.0 acre parcel labeled as "Fire Station Parcel" on the applicant's concept plan submitted with this application shall be deeded to the City of Gainesville within one year of the effective date of this zoning ordinance for the future construction of a City of Gainesville fire station. All costs associated with deeding the property shall be at the full expense of the developer. Architectural design for the fire station must be approved by both the City of Gainesville and the developer, and shall be substantially similar with residential and commercial standards submitted with the application.
 13. No more than 10% of the units within the proposed indoor storage facility may be leased to non-residents of the proposed development.

Transportation / Traffic

14. Prior to the issuance of a land disturbance permit, the developer shall provide a signal warrant analysis be performed per Georgia Department of Transportation (GDOT) standards for each of the following two intersections:

- a. Dawsonville Highway (SR 53) at Avonlea Way and the new access road; and**
- b. Dawsonville Highway (SR 53) at Canterbury Road and the new access road. The design of the signal warrant analysis should account for the probability that GDOT will not approve a signal at this location and should evaluate the intersection for an R-CUT design at the median break. If a traffic signal is approved by GDOT, improvements for a traffic signal at the intersection will require approval of the Gainesville Public Works Director and GDOT Traffic Operations Office.**

All costs associated with the signal warrant analysis study, and if warranted by such study, any costs associated with the installation of a traffic signal and intersection improvements shall be at the full expense of the developer.

15. The developer shall perform the following traffic improvements identified within the Summary of Study Findings and Recommendations as stated within the revised Traffic Impact Study, dated April 7, 2017, for the proposed development:

- a. Dawsonville Highway (SR 53) at Avonlea Way and the new access road to include a northbound exclusive right turn lane to be added on Dawsonville Highway (SR 53) turning into new site driveway and the inclusion of one entering lane and one exiting lane for the new site access to be controlled by side street stop sign and accompanying stop bar; and**
- b. Dawsonville Highway (SR 53) at Canterbury Road and the new access road to include a northbound exclusive right turn lane to be added on Dawsonville Highway (SR 53) turning into new site driveway and the inclusion of one entering lane and one exiting lane for the new site access to be controlled by side street stop sign and accompanying stop bar.**

The developer shall coordinate these improvements with GDOT and the Gainesville Public Works Director prior to permitting. The Gainesville Public Works Director and GDOT shall have the final determination of the time line of these improvements based on the developer's proposed construction schedule. All costs associated with the improvements shall be at the full expense of the developer.

16. Prior to the issuance of a land disturbance permit for the Planned Unit Development (P-U-D), the developer shall evaluate, design and construct the left turn lanes on Dawsonville Highway (SR 53) to meet GDOT storage and design requirements at Avonlea Way and the new site driveway at Canterbury Road. Prior to the issuance of a land disturbance permit for the commercial development zoned General Business (G-B), the developer shall evaluate, design and construct the left turn lanes on Dawsonville Highway (SR 53) to meet GDOT storage and design requirements. If the existing left turn lane at this location meets these requirements, this condition will be deemed satisfied.

17. Developer consents to pay \$425,000.00 to be used solely for the purpose of making roadway improvements along Dawsonville Highway (SR 53) from McEver Road (SR 53) to Ahaluna Drive. In this regard, the developer shall deposit \$100,000.00 upon

issuance of the initial land disturbance permit for the Planned Unit Development (P-U-D), and annually thereafter an additional \$100,000.00 until the full \$425,000.00 is paid in full (provided, the fourth and final payment will be for \$125,000.00). All such payments will be deposited into an escrow account at a financial institution chosen by the City of Gainesville. The City of Gainesville shall choose an escrow agent, who shall be authorized to disburse the funds to the City of Gainesville as said funds are needed to make roadway improvements along Dawsonville Highway (SR 53) from McEver Road (SR 53) to Ahaluna Drive. The amount as stated above is based on the cost estimate previously provided by the City of Gainesville to the developer for roadway improvements in addition to those improvements referenced elsewhere in the zoning conditions affecting the property that is the subject of the zoning application.

18. Prior to the issuance of a land disturbance permit, the intersection of Strickland Drive, Karen Lane and the new access road to the proposed development shall be redesigned to include realignment similar to what is shown on the revised concept plan for better traffic circulation, and to meet current roadway design criteria. The improvements shall be completed prior to permitting direct access from the development onto Karen Lane and Strickland Drive and prior to the construction of the most northern Pod of terrace and cottage homes. All costs associated with the improvements shall be at the full expense of the developer.
19. Prior to the issuance of a land disturbance permit, the developer shall seek verification from Hall County to determine whether or not any improvements will be required to the intersection of Sportsman Club Road and Strickland Drive.
20. All new streets shall meet the standards within the current Gainesville Unified Land Development Code. These same standards shall be required for the segment of Ahaluna Drive starting at the north side of the existing power line easement and adjacent to the entrance of the terrace homes, and shall extend in a northeasterly direction south of Watauga Drive where the city limits terminate. The remaining portions of Ahaluna Drive within the city limits shall meet the City of Gainesville Standards excluding the requirements of curb and gutter. All other residential uses, amenities, office and commercial areas shall provide for pedestrian connectivity throughout the development. All costs associated with the improvements shall be at the full expense of the developer.
21. Prior to the issuance of a land disturbance permit, the developer shall seek approval from the City of Gainesville and the Corps of Engineers to improve the existing Ahaluna Drive cul-de-sac to provide for better turn around for emergency and utility vehicles. If approved, curb and gutter and sidewalks shall be extended to the Ahaluna Drive cul-de-sac. All road and traffic improvements to Ahaluna Drive shall be at the expense of the developer and shall meet the standards within the current Gainesville Unified Land Development Code prior to acceptance. All cul-de-sacs constructed or modified as part of the development will be positioned (subject to Corps of Engineers, and City of Gainesville approval, as needed) on the west side of the road, in approximately the current location of the existing cul-de-sac but positioned in a way that would minimize the impact to the lots on the east side of the road. The final design shall require approval from the City of Gainesville.

22. There shall be no driveways from individual homes allowed onto Ahaluna Drive for lots that have road frontage on any new proposed interior street. There shall be no driveways from individual homes allowed onto Karen Lane or Strickland Drive.
23. There shall be no access allowed onto West Lake Drive and Skyview Drive.
24. The proposed commercial, retail and office outparcels shall provide inter parcel connectivity to one another.

Motion made by Board Member White

Motion seconded by Board Member Thompson

Vote – 5 favor, 2 opposed (Fleming, Delgado)

First Reading: _____
Passed: _____

AN ORDINANCE

No. 2017-

AN ORDINANCE ANNEXING A 50.81± ACRES TRACT LOCATED ON THE EAST SIDE OF DAWSONVILLE HIGHWAY (S.R. 53), HAVING ROAD FRONTAGE ON DAWSONVILLE HIGHWAY, AHALUNA DRIVE, SKYVIEW DRIVE AND STRICKLAND DRIVE (A/K/A 0 AND 1758 AHALUNA DRIVE; 1508, 1550, 1740, 1746, 1758, 1760, 1934 AND 1982 DAWSONVILLE HIGHWAY; 300 AND 301 SKYVIEW DRIVE; AND 0, 2008 AND 2016 STRICKLAND DRIVE); ADJACENT TO BUT NOT NOW WITHIN THE CORPORATE LIMITS OF THE CITY OF GAINESVILLE, GEORGIA; REPEALING CONFLICTING ORDINANCES; TO PROVIDE FOR SEVERABILITY; TO PROVIDE FOR AN EFFECTIVE DATE; AND FOR OTHER PURPOSES.

(Amendment to City Limit Boundary)

WHEREAS, a 50.81± acres tract located on the east side of Dawsonville Highway (S.R. 53), having road frontage on Dawsonville Highway, Ahaluna Drive, Skyview Drive and Strickland Drive (a/k/a **0 and 1758 Ahaluna Drive; 1508, 1550, 1740, 1746, 1758, 1760, 1934 and 1982 Dawsonville Highway; 300 and 301 Skyview Drive; and 0, 2008 and 2016 Strickland Drive**), lies within the unincorporated lands of Hall County and adjoins the existing corporate limits of the City of Gainesville; and

WHEREAS, the hereinafter described lands be incorporated and annexed into the City of Gainesville.

NOW, THEREFORE, BE IT HEREBY ORDAINED BY THE GOVERNING BODY OF THE CITY OF GAINESVILLE, GEORGIA, AS FOLLOWS:

SECTION I.

That from and after the passage of this Ordinance the following described lands are and shall be annexed into the existing corporate limits of the City of Gainesville, Georgia, so that said lands shall constitute a part of the land within the corporate limits of the City of Gainesville, Georgia, as fully and completely as if the limits had been so defined by the General Assembly of Georgia.

Legal Description

Parcel 1:

All that tract or parcel of land lying and being in Land Lots 162, 172 & 173 9th Land District Hall County, Georgia as shown on a Special Annexation Exhibit prepared by Patton Land Surveying, LLC for Americas Home Place dated September 29, 2016, last revised January 18th, 2017 and being more particularly described as follows:

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Commencing at a 5/8" rebar pin found at the common corner of land lots 161, 162, 173 & 174, 9th Land District; Thence North 59 degrees 14 minutes 35 seconds East for a distance of 10.00 feet to a point, said point being the TRUE POINT OF BEGINNING. Thence North 59 degrees 14 minutes 35 seconds East for a distance of 116.12 feet to a point; Thence South 20 degrees 18 minutes 25 seconds East for a distance of 34.75 feet to a point; Thence South 58 degrees 28 minutes 29 seconds West for a distance of 17.69 feet to a point; Thence South 23 degrees 48 minutes 27 seconds East for a distance of 311.94 feet to a point; Thence North 88 degrees 57 minutes 53 seconds East for a distance of 357.75 feet to a point; Thence South 43 degrees 57 minutes 37 seconds East for a distance of 45.83 feet to a point; Thence South 50 degrees 56 minutes 50 seconds East for a distance of 308.26 feet to a point; Thence South 65 degrees 05 minutes 56 seconds East for a distance of 105.15 feet to a point; Thence South 84 degrees 24 minutes 26 seconds East for a distance of 418.86 feet to a point; Thence South 12 degrees 22 minutes 53 seconds West for a distance of 225.83 feet to a point; Thence South 05 degrees 31 minutes 44 seconds East for a distance of 191.92 feet to a point; Thence South 43 degrees 52 minutes 31 seconds East for a distance of 222.27 feet to a point; Thence South 50 degrees 02 minutes 51 seconds East for a distance of 109.55 feet to a point located on the right-of-way of Ahaluna Drive (having a 40' wide right-of-way);

Thence continuing along said right-of-way the following courses;

Thence South 61 degrees 55 minutes 50 seconds West for a distance of 111.52 feet to a point; Thence along a curve to the left having a radius of 1038.39 feet and an arc length of 137.05 feet, being subtended by a chord of South 58 degrees 16 minutes 56 seconds West for a distance of 136.95 feet to a point; Thence along a curve to the left having a radius of 615.08 feet and an arc length of 135.53 feet, being subtended by a chord of South 48 degrees 03 minutes 33 seconds West for a distance of 135.26 feet to a point;

Thence leaving said right-of-way the following courses;

Thence South 62 degrees 01 minutes 06 seconds West for a distance of 375.10 feet to a point; Thence South 30 degrees 15 minutes 39 seconds East for a distance of 652.12 feet to a point located on the right-of-way of said Ahaluna Drive;

Thence continuing along said right-of-way the following course;

Thence along a curve to the left having a radius of 641.36 feet and an arc length of 74.59 feet, being subtended by a chord of South 30 degrees 57 minutes 50 seconds East for a distance of 74.55 feet to a point;

Thence leaving said right-of-way the following courses;

Thence South 30 degrees 14 minutes 39 seconds East for a distance of 543.48 feet to a 1" crimp top pin found; Thence South 59 degrees 23 minutes 33 seconds West for a distance of 132.69 feet to a 3/4" solid pin found; Thence South 59 degrees 18 minutes 15 seconds West for a distance of 166.06 feet to a 3/8" rebar pin found; Thence North 20 degrees 16 minutes 01 seconds West for a distance of 359.56 feet to a point; Thence North 66 degrees 45 minutes 01 seconds East for a distance of 14.70 feet to a 3/8" rebar pin found; Thence North 23 degrees 21 minutes 11 seconds West for a distance of 150.09 feet to a 3/8" rebar pin found; Thence South 66 degrees 39 minutes 09 seconds West for a distance of 55.80 feet to a point; Thence North 22 degrees 48 minutes 39 seconds West for a distance of 1157.48 feet to a point; Thence North 63 degrees 59 minutes 25 seconds East for a distance of 118.58 feet to a point; Thence North 30 degrees 12 minutes 33 seconds West for a distance of 880.62 feet to a point;

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Thence North 30 degrees 21 minutes 26 seconds West for a distance of 359.20 feet to a point;
Thence North 31 degrees 03 minutes 35 seconds West for a distance of 90.12 feet to a point;
Thence North 29 degrees 37 minutes 11 seconds West for a distance of 34.18 feet to a point;
Thence North 29 degrees 37 minutes 11 seconds West for a distance of 115.20 feet to a point
and said point being the POINT OF BEGINNING.

Said property contains 28.82 acres more or less.

Parcel 2:

All that tract or parcel of land lying and being in Land Lot 173 9th Land District Hall County, Georgia as shown on a Special Annexation Exhibit for Americas Home Place dated September 29, 2016, last revised January 18th, 2017 and being more particularly described as follows:

Beginning at a 5/8" rebar pin found at the common corner of land lots 161, 162, 173 & 174, 9th Land District; Thence South 29 degrees 37 minutes 11 seconds East for a distance of 115.00 feet to a point; Thence South 29 degrees 37 minutes 11 seconds East for a distance of 34.30 feet to a 5/8" rebar pin found; Thence South 59 degrees 04 minutes 29 seconds West for a distance of 363.95 feet to a 1/2" rebar pin found; Thence South 33 degrees 07 minutes 49 seconds East for a distance of 297.18 feet to a 1/2" rebar pin found; Thence South 65 degrees 28 minutes 22 seconds West for a distance of 111.73 feet to a point on the Easterly right-of-way line of Georgia Highway No. 53 (Dawsonville Highway)(having a varying width right-of-way);

Thence following along said Dawsonville Highway the following courses:

Thence North 22 degrees 51 minutes 23 seconds West for a distance of 166.33 feet to a point;
Thence North 23 degrees 26 minutes 17 seconds West for a distance of 28.78 feet to a point;
Thence North 64 degrees 49 minutes 41 seconds East for a distance of 20.00 feet to a point;
Thence North 24 degrees 53 minutes 27 seconds West for a distance of 34.27 feet to a point;
Thence North 27 degrees 57 minutes 31 seconds West for a distance of 50.00 feet to a point;
Thence North 29 degrees 14 minutes 43 seconds West for a distance of 13.17 feet to a 3/8" rebar pin found; Thence along a curve to the left having a radius of 1493.28 feet and an arc length of 150.56 feet, being subtended by a chord of North 33 degrees 51 minutes 28 seconds West for a distance of 150.49 feet to a 3/8" rebar pin found;

Thence leaving said Dawsonville Highway the following course:

Thence North 59 degrees 44 minutes 35 seconds East for a distance of 421.11 feet to a point
and said point being the POINT OF BEGINNING.

Said property contains 1.98 acres more or less.

Parcel 3:

All that tract or parcel of land lying and being in Land Lots 172 & 173 9th Land District Hall County, Georgia as shown on a Special Annexation Exhibit prepared by Patton Land Surveying, LLC for Americas Home Place dated September 29, 2016, last revised January 18th, 2017 and being more particularly described as follows:

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Commencing at a 5/8" rebar pin found at the common corner of land lots 161, 162, 173 & 174, 9th Land District; Thence North 59 degrees 14 minutes 35 seconds East for a distance of 10.00 feet to a point; Thence South 29 degrees 37 minutes 11 seconds East for a distance of 115.20 feet to a point; Thence South 29 degrees 37 minutes 11 seconds East for a distance of 34.18 feet to a point; Thence South 31 degrees 03 minutes 35 seconds East for a distance of 90.12 feet to a point; Thence South 30 degrees 21 minutes 26 seconds East for a distance of 359.20 feet to a point; Thence South 30 degrees 12 minutes 33 seconds East for a distance of 880.62 feet to a point; Thence South 63 degrees 59 minutes 25 seconds West for a distance of 118.58 feet to a point, said point being the TRUE POINT OF BEGINNING. Thence South 22 degrees 48 minutes 39 seconds East for a distance of 1157.48 feet to a point; Thence North 66 degrees 39 minutes 09 seconds East for a distance of 55.80 feet to a 3/8" rebar pin found; Thence South 23 degrees 21 minutes 11 seconds East for a distance of 150.09 feet to a 3/8" rebar pin found; Thence South 66 degrees 45 minutes 01 seconds West for a distance of 14.70 feet to a point; Thence South 20 degrees 16 minutes 01 seconds East for a distance of 359.56 feet to a 3/8" rebar pin found; Thence South 27 degrees 57 minutes 56 seconds East for a distance of 286.04 feet to a 1/2" solid pin found; Thence South 61 degrees 13 minutes 22 seconds West for a distance of 169.65 feet to a 1/2" solid pin found on the right-of-way of Skyview Drive;

Thence along said right-of-way of Skyview Drive the following course;

Thence along a curve to the left having a radius of 49.95 feet and an arc length of 157.01 feet, being subtended by a chord of North 49 degrees 57 minutes 57 seconds West for a distance of 99.90 feet to a 3/4" rebar pin found;

Thence leaving said right-of-way of Skyview Drive the following courses;

Thence North 83 degrees 08 minutes 53 seconds West for a distance of 226.14 feet to a 1/2" rebar pin set; Thence South 29 degrees 00 minutes 34 seconds East for a distance of 37.02 feet to a point; Thence South 60 degrees 53 minutes 01 seconds West for a distance of 116.55 feet to a point on a line 10 feet Easterly of and parallel with the Easterly right-of-way line of Georgia Highway No. 53 (Dawsonville Highway)(having a varying width right-of-way);

Thence following along said parallel line the following courses:

Thence North 22 degrees 51 minutes 20 seconds West for a distance of 100.25 feet to a point; Thence South 61 degrees 33 minutes 23 seconds West for a distance of 10.25 feet to a point; Thence North 22 degrees 43 minutes 05 seconds West for a distance of 239.30 feet to a point; Thence North 22 degrees 42 minutes 33 seconds West for a distance of 132.29 feet to a point;

Thence leaving said parallel line the following courses:

Thence North 54 degrees 27 minutes 54 seconds East for a distance of 207.47 feet to a 1/2" crimp top pin found; Thence North 20 degrees 49 minutes 23 seconds West for a distance of 245.49 feet to a 1/2" rebar pin found; Thence South 61 degrees 12 minutes 54 seconds West for a distance of 14.05 feet to a 1/2" crimp top pin found; Thence South 62 degrees 19 minutes 40 seconds West for a distance of 205.78 feet to a point on a line 10 feet Easterly of and parallel with the Easterly right-of-way line of said Dawsonville Highway;

Thence following along said parallel line the following courses:

Thence North 22 degrees 50 minutes 44 seconds West for a distance of 399.10 feet to a point; Thence North 22 degrees 51 minutes 22 seconds West for a distance of 250.19 feet to a point;

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Thence North 22 degrees 51 minutes 50 seconds West for a distance of 174.65 feet to a point;
Thence North 22 degrees 54 minutes 51 seconds West for a distance of 223.42 feet to a point;

Thence leaving said parallel line the following courses:

Thence North 63 degrees 59 minutes 25 seconds East for a distance of 489.97 feet to a point,
and said point being the POINT OF BEGINNING.

Said property contains 20.01 acres more or less.

SECTION II.

The Secretary to the City Council of the City of Gainesville is directed to make and file with the Department of Community Affairs of the State of Georgia a certified copy of this Ordinance together with a plat describing lands annexed to the City of Gainesville by this Ordinance.

SECTION III.

All Ordinances and parts of Ordinances in conflict herewith are hereby repealed.

SECTION IV.

If any portion of this Ordinance shall be held to be invalid or unconstitutional, such invalidity or unconstitutionality shall not affect or impair the remaining portions unless it clearly appears that such other parts are wholly and necessarily dependent upon the part held to be invalid or unconstitutional.

SECTION V.

The effective date of this Ordinance shall be upon approval by the governing authority of the City of Gainesville, Georgia.

C. Danny Dunagan, Jr., Mayor

This is to certify that I am City Clerk of the City of Gainesville. As such, I keep its official records, including its minutes. In that capacity, my signature below certifies this resolution was adopted as stated and will be recorded in the official minutes.

ATTEST:

Denise O. Jordan, City Clerk

First Reading: _____
Passed: _____

AN ORDINANCE

No. 2017-

AN ORDINANCE AMENDING THE ZONING MAP OF THE CITY OF GAINESVILLE, GEORGIA BY ESTABLISHING THE ZONING ON A 50.81± ACRES TRACT LOCATED ON THE EAST SIDE OF DAWSONVILLE HIGHWAY (S.R. 53), HAVING ROAD FRONTAGE ON DAWSONVILLE HIGHWAY, AHALUNA DRIVE, SKYVIEW DRIVE AND STRICKLAND DRIVE (A/K/A 0 AND 1758 AHALUNA DRIVE; 1508, 1550, 1740, 1746, 1758, 1760, 1934 AND 1982 DAWSONVILLE HIGHWAY; 300 AND 301 SKYVIEW DRIVE; AND 0, 2008 AND 2016 STRICKLAND DRIVE) AT THE TIME OF ANNEXATION AS PLANNED UNIT DEVELOPMENT, WITH CONDITIONS (P-U-D-c) AND GENERAL BUSINESS, WITH CONDITIONS (G-B-c); REPEALING CONFLICTING ORDINANCES; TO PROVIDE FOR SEVERABILITY; TO PROVIDE FOR AN EFFECTIVE DATE; AND FOR OTHER PURPOSES.

(Amendment to Zoning Map)

BE IT HEREBY ORDAINED BY THE GOVERNING BODY OF THE CITY OF GAINESVILLE, GEORGIA, AS FOLLOWS:

SECTION I.

That from and after the passage of this Ordinance the following described lands shall be zoned and so designated on the Zoning Map of the City of Gainesville as **Planned Unit Development, with conditions (P-U-D-c) and General Business, with conditions (G-B-c)**:

Conditions

Development Standards

1. The development standards within the applicant's narrative, concept plan and architectural renderings shall be made part of the zoning ordinance, and shall be subject to the Community Development Director approval. Any zoning conditions adopted as part of this zoning ordinance that conflict with the applicant's narrative, concept plan and architectural renderings shall take precedence over the applicant's development standards.
2. Prohibited commercial uses shall include motels or hotels with rooms accessed from the exterior of the building, adult novelty stores, adult entertainment centers, pawn shops, gas stations, tire stores, massage parlors except for practitioners licensed by the State of Georgia, vaping stores, auto body shops, automobile sale establishments, marine sales or repair stores, automated or non-automated car wash, coin-laundry facilities, truck stop, tattoo parlors, psychics, fortune tellers, clairvoyants and the like.
3. The applicant's revised concept plan and narrative proposes a total of 790 senior residential units. The total number of residential units approved for the development

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shall not exceed 770 senior residential units. The reduction of 20 residential units may occur anywhere within the development. However, a minimum of 10 residential units shall include single-family homes, cottages and terrace homes with frontage along Ahaluna Drive and adjacent to existing single-family properties located off of Karen Lane, Watauga Drive and West Lake Drive.

4. The development shall comply with applicable U. S. Department of Housing and Urban Development (HUD) rules for age-restricted communities. The organization established for the management of the development shall comply with HUD rules for verification of occupancy and shall maintain procedures for routinely determining the occupancy of each unit. Such procedures may be part of a normal leasing or purchasing agreement and must provide for regular updates as required by HUD.
5. All proposed single-family detached homes shall have a minimum front yard setback of 20-feet as measured from the right-of-way line and shall have a minimum distance of 10-feet between houses. Additionally, all cottages with frontage along Ahaluna Drive shall have a minimum front yard setback of 20-feet as measured from the right-of-way line and shall have a minimum distance of 10-feet between houses. The lots that back up to existing residences located off of Karen Lane, Watauga Drive and West Lake Drive shall have minimum 20-feet rear setbacks.
6. The following buffer standards shall be required:
 - a. A minimum 20-foot wide buffer shall be required for all proposed single-family detached homes, cottages and terrace homes where adjacent to existing single-family homes.
 - b. A minimum 50-foot wide buffer shall be required for the assisted living facility, independent living facility and commercial uses when adjacent to existing single-family homes.
 - i. The exterior 25-feet of this buffer must be undisturbed, except where disturbance is required for erosion control, storm water management or the installation of utilities.
 - ii. The interior 25 feet of this buffer may be graded and replanted.
 - c. A minimum 25-foot wide buffer shall be required for the assisted living facility, independent living facility and commercial uses when adjacent to proposed single-family homes within the development. The 25-foot buffer may be located at any location between such structures, including without limitation, at a location where the common boundary line between the respective uses is within the 25-foot buffer.
 - d. The proposed storm water facilities shall be buffered from all existing homes and proposed uses. The buffer shall contain a mixture of evergreen and deciduous trees.
 - e. Any additional plantings required will be in accordance with City of Gainesville's Buffer Standards as determined by the Community Development Director.
7. The minimum heated floor space for the single-family detached homes shall be no less than 1,800 square feet. The minimum heated floor space for the single-family cottages and terrace homes shall be 1,000 square feet.

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- 8. Covenants shall be put in place by the developer restricting against the parking of boats, trailers, and campers within driveways.**
- 9. The proposed amenity clubhouse and storage facility shall include a minimum 3:12 roof pitch and exterior facade materials shall be similar in architecture to the proposed single-family homes.**
- 10. A Uniform Sign Plan as identified within Section 9-18-7-4 of the Unified Land Development Code shall be required from the developer and is subject to approval by the Gainesville Community Development Director. All signs associated with residential uses shall be limited to indirect lighting. All signs shall be located outside of utility areas and shall not block visibility of vehicular traffic.**
- 11. The proposed erosion control and water quality measures for the development shall at minimum meet the Georgia Storm Water Management Manual requirements. Storm water management for the development must provide water quality treatment for no less than 110% of the State required treatment volume. The City of Gainesville shall approve the final design of all water quality measures.**
- 12. The 3.0 acre parcel labeled as "Fire Station Parcel" on the applicant's concept plan submitted with this application shall be deeded to the City of Gainesville within one year of the effective date of this zoning ordinance for the future construction of a City of Gainesville fire station. All costs associated with deeding the property shall be at the full expense of the developer. Architectural design for the fire station must be approved by both the City of Gainesville and the developer, and shall be substantially similar with residential and commercial standards submitted with the application.**
- 13. No more than 10% of the units within the proposed indoor storage facility may be leased to non-residents of the proposed development.**

Transportation / Traffic

- 14. Prior to the issuance of a land disturbance permit, the developer shall provide a signal warrant analysis be performed per Georgia Department of Transportation (GDOT) standards for each of the following two intersections:**
 - a. Dawsonville Highway (SR 53) at Avonlea Way and the new access road; and**
 - b. Dawsonville Highway (SR 53) at Canterbury Road and the new access road. The design of the signal warrant analysis should account for the probability that GDOT will not approve a signal at this location and should evaluate the intersection for an R-CUT design at the median break. If a traffic signal is approved by GDOT, improvements for a traffic signal at the intersection will require approval of the Gainesville Public Works Director and GDOT Traffic Operations Office.**

All costs associated with the signal warrant analysis study, and if warranted by such study, any costs associated with the installation of a traffic signal and intersection improvements shall be at the full expense of the developer.

- 15. The developer shall perform the following traffic improvements identified within the Summary of Study Findings and Recommendations as stated within the revised Traffic Impact Study, dated April 7, 2017, for the proposed development:**
 - a. Dawsonville Highway (SR 53) at Avonlea Way and the new access road to include a northbound exclusive right turn lane to be added on Dawsonville Highway**

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(SR 53) turning into new site driveway and the inclusion of one entering lane and one exiting lane for the new site access to be controlled by side street stop sign and accompanying stop bar; and

- b. Dawsonville Highway (SR 53) at Canterbury Road and the new access road to include a northbound exclusive right turn lane to be added on Dawsonville Highway (SR 53) turning into new site driveway and the inclusion of one entering lane and one exiting lane for the new site access to be controlled by side street stop sign and accompanying stop bar.

The developer shall coordinate these improvements with GDOT and the Gainesville Public Works Director prior to permitting. The Gainesville Public Works Director and GDOT shall have the final determination of the time line of these improvements based on the developer's proposed construction schedule. All costs associated with the improvements shall be at the full expense of the developer.

- 16. Prior to the issuance of a land disturbance permit for the Planned Unit Development (P-U-D), the developer shall evaluate, design and construct the left turn lanes on Dawsonville Highway (SR 53) to meet GDOT storage and design requirements at Avonlea Way and the new site driveway at Canterbury Road. Prior to the issuance of a land disturbance permit for the commercial development zoned General Business (G-B), the developer shall evaluate, design and construct the left turn lanes on Dawsonville Highway (SR 53) to meet GDOT storage and design requirements. If the existing left turn lane at this location meets these requirements, this condition will be deemed satisfied.
- 17. Developer consents to pay \$425,000.00 to be used solely for the purpose of making roadway improvements along Dawsonville Highway (SR 53) from McEver Road (SR 53) to Ahaluna Drive. In this regard, the developer shall deposit \$100,000.00 upon issuance of the initial land disturbance permit for the Planned Unit Development (P-U-D), and annually thereafter an additional \$100,000.00 until the full \$425,000.00 is paid in full (provided, the fourth and final payment will be for \$125,000.00). All such payments will be deposited into an escrow account at a financial institution chosen by the City of Gainesville. The City of Gainesville shall choose an escrow agent, who shall be authorized to disburse the funds to the City of Gainesville as said funds are needed to make roadway improvements along Dawsonville Highway (SR 53) from McEver Road (SR 53) to Ahaluna Drive. The amount as stated above is based on the cost estimate previously provided by the City of Gainesville to the developer for roadway improvements in addition to those improvements referenced elsewhere in the zoning conditions affecting the property that is the subject of the zoning application.
- 18. Prior to the issuance of a land disturbance permit, the intersection of Strickland Drive, Karen Lane and the new access road to the proposed development shall be redesigned to include realignment similar to what is shown on the revised concept plan for better traffic circulation, and to meet current roadway design criteria. The improvements shall be completed prior to permitting direct access from the development onto Karen Lane and Strickland Drive and prior to the construction of the most northern Pod of terrace and cottage homes. All costs associated with the improvements shall be at the full expense of the developer.
- 19. Prior to the issuance of a land disturbance permit, the developer shall seek verification from Hall County to determine whether or not any improvements will be required to the intersection of Sportsman Club Road and Strickland Drive.

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- 20. All new streets shall meet the standards within the current Gainesville Unified Land Development Code. These same standards shall be required for the segment of Ahaluna Drive starting at the north side of the existing power line easement and adjacent to the entrance of the terrace homes, and shall extend in a northeasterly direction south of Watauga Drive where the city limits terminate. The remaining portions of Ahaluna Drive within the city limits shall meet the City of Gainesville Standards excluding the requirements of curb and gutter. All other residential uses, amenities, office and commercial areas shall provide for pedestrian connectivity throughout the development. All costs associated with the improvements shall be at the full expense of the developer.**
- 21. Prior to the issuance of a land disturbance permit, the developer shall seek approval from the City of Gainesville and the Corps of Engineers to improve the existing Ahaluna Drive cul-de-sac to provide for better turn around for emergency and utility vehicles. If approved, curb and gutter and sidewalks shall be extended to the Ahaluna Drive cul-de-sac. All road and traffic improvements to Ahaluna Drive shall be at the expense of the developer and shall meet the standards within the current Gainesville Unified Land Development Code prior to acceptance. All cul-de-sacs constructed or modified as part of the development will be positioned (subject to Corps of Engineers, and City of Gainesville approval, as needed) on the west side of the road, in approximately the current location of the existing cul-de-sac but positioned in a way that would minimize the impact to the lots on the east side of the road. The final design shall require approval from the City of Gainesville.**
- 22. There shall be no driveways from individual homes allowed onto Ahaluna Drive for lots that have road frontage on any new proposed interior street. There shall be no driveways from individual homes allowed onto Karen Lane or Strickland Drive.**
- 23. There shall be no access allowed onto West Lake Drive and Skyview Drive.**
- 24. The proposed commercial, retail and office outparcels shall provide inter parcel connectivity to one another.**

Legal Description

Parcel 1 (Zoned P-U-D):

All that tract or parcel of land lying and being in Land Lots 162, 172 & 173 9th Land District Hall County, Georgia as shown on a Special Annexation Exhibit prepared by Patton Land Surveying, LLC for Americas Home Place dated September 29, 2016, last revised January 18th, 2017 and being more particularly described as follows:

Commencing at a 5/8" rebar pin found at the common corner of land lots 161, 162, 173 & 174, 9th Land District; Thence North 59 degrees 14 minutes 35 seconds East for a distance of 10.00 feet to a point, said point being the TRUE POINT OF BEGINNING. Thence North 59 degrees 14 minutes 35 seconds East for a distance of 116.12 feet to a point; Thence South 20 degrees 18 minutes 25 seconds East for a distance of 34.75 feet to a point; Thence South 58 degrees 28 minutes 29 seconds West for a distance of 17.69 feet to a point; Thence South 23 degrees 48 minutes 27 seconds East for a distance of 311.94 feet to a point; Thence North 88 degrees 57 minutes 53 seconds East for a distance of 357.75 feet to a point; Thence South 43 degrees 57 minutes 37 seconds East for a distance of 45.83 feet to a point; Thence South 50 degrees

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56 minutes 50 seconds East for a distance of 308.26 feet to a point; Thence South 65 degrees 05 minutes 56 seconds East for a distance of 105.15 feet to a point; Thence South 84 degrees 24 minutes 26 seconds East for a distance of 418.86 feet to a point; Thence South 12 degrees 22 minutes 53 seconds West for a distance of 225.83 feet to a point; Thence South 05 degrees 31 minutes 44 seconds East for a distance of 191.92 feet to a point; Thence South 43 degrees 52 minutes 31 seconds East for a distance of 222.27 feet to a point; Thence South 50 degrees 02 minutes 51 seconds East for a distance of 109.55 feet to a point located on the right-of-way of Ahaluna Drive (having a 40' wide right-of-way);

Thence continuing along said right-of-way the following courses;

Thence South 61 degrees 55 minutes 50 seconds West for a distance of 111.52 feet to a point; Thence along a curve to the left having a radius of 1038.39 feet and an arc length of 137.05 feet, being subtended by a chord of South 58 degrees 16 minutes 56 seconds West for a distance of 136.95 feet to a point; Thence along a curve to the left having a radius of 615.08 feet and an arc length of 135.53 feet, being subtended by a chord of South 48 degrees 03 minutes 33 seconds West for a distance of 135.26 feet to a point;

Thence leaving said right-of-way the following courses;

Thence South 62 degrees 01 minutes 06 seconds West for a distance of 375.10 feet to a point; Thence South 30 degrees 15 minutes 39 seconds East for a distance of 652.12 feet to a point located on the right-of-way of said Ahaluna Drive;

Thence continuing along said right-of-way the following course;

Thence along a curve to the left having a radius of 641.36 feet and an arc length of 74.59 feet, being subtended by a chord of South 30 degrees 57 minutes 50 seconds East for a distance of 74.55 feet to a point;

Thence leaving said right-of-way the following courses;

Thence South 30 degrees 14 minutes 39 seconds East for a distance of 543.48 feet to a 1" crimp top pin found; Thence South 59 degrees 23 minutes 33 seconds West for a distance of 132.69 feet to a 3/4" solid pin found; Thence South 59 degrees 18 minutes 15 seconds West for a distance of 166.06 feet to a 3/8" rebar pin found; Thence North 20 degrees 16 minutes 01 seconds West for a distance of 359.56 feet to a point; Thence North 66 degrees 45 minutes 01 seconds East for a distance of 14.70 feet to a 3/8" rebar pin found; Thence North 23 degrees 21 minutes 11 seconds West for a distance of 150.09 feet to a 3/8" rebar pin found; Thence South 66 degrees 39 minutes 09 seconds West for a distance of 55.80 feet to a point; Thence North 22 degrees 48 minutes 39 seconds West for a distance of 1157.48 feet to a point; Thence North 63 degrees 59 minutes 25 seconds East for a distance of 118.58 feet to a point; Thence North 30 degrees 12 minutes 33 seconds West for a distance of 880.62 feet to a point; Thence North 30 degrees 21 minutes 26 seconds West for a distance of 359.20 feet to a point; Thence North 31 degrees 03 minutes 35 seconds West for a distance of 90.12 feet to a point; Thence North 29 degrees 37 minutes 11 seconds West for a distance of 34.18 feet to a point; Thence North 29 degrees 37 minutes 11 seconds West for a distance of 115.20 feet to a point and said point being the POINT OF BEGINNING.

Said property contains 28.82 acres more or less.

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Parcel 2 (Zoned P-U-D):

All that tract or parcel of land lying and being in Land Lot 173 9th Land District Hall County, Georgia as shown on a Special Annexation Exhibit for Americas Home Place dated September 29, 2016, last revised January 18th, 2017 and being more particularly described as follows:

Beginning at a 5/8" rebar pin found at the common corner of land lots 161, 162, 173 & 174, 9th Land District; Thence South 29 degrees 37 minutes 11 seconds East for a distance of 115.00 feet to a point; Thence South 29 degrees 37 minutes 11 seconds East for a distance of 34.30 feet to a 5/8" rebar pin found; Thence South 59 degrees 04 minutes 29 seconds West for a distance of 363.95 feet to a 1/2" rebar pin found; Thence South 33 degrees 07 minutes 49 seconds East for a distance of 297.18 feet to a 1/2" rebar pin found; Thence South 65 degrees 28 minutes 22 seconds West for a distance of 111.73 feet to a point on the Easterly right-of-way line of Georgia Highway No. 53 (Dawsonville Highway)(having a varying width right-of-way);

Thence following along said Dawsonville Highway the following courses:

Thence North 22 degrees 51 minutes 23 seconds West for a distance of 166.33 feet to a point; Thence North 23 degrees 26 minutes 17 seconds West for a distance of 28.78 feet to a point; Thence North 64 degrees 49 minutes 41 seconds East for a distance of 20.00 feet to a point; Thence North 24 degrees 53 minutes 27 seconds West for a distance of 34.27 feet to a point; Thence North 27 degrees 57 minutes 31 seconds West for a distance of 50.00 feet to a point; Thence North 29 degrees 14 minutes 43 seconds West for a distance of 13.17 feet to a 3/8" rebar pin found; Thence along a curve to the left having a radius of 1493.28 feet and an arc length of 150.56 feet, being subtended by a chord of North 33 degrees 51 minutes 28 seconds West for a distance of 150.49 feet to a 3/8" rebar pin found;

Thence leaving said Dawsonville Highway the following course:

Thence North 59 degrees 44 minutes 35 seconds East for a distance of 421.11 feet to a point and said point being the POINT OF BEGINNING.

Said property contains 1.98 acres more or less.

Parcel 3 (Zoned G-B):

All that tract or parcel of land lying and being in Land Lots 172 & 173 9th Land District Hall County, Georgia as shown on a Special Annexation Exhibit prepared by Patton Land Surveying, LLC for Americas Home Place dated September 29, 2016, last revised January 18th, 2017 and being more particularly described as follows:

Commencing at a 5/8" rebar pin found at the common corner of land lots 161, 162, 173 & 174, 9th Land District; Thence North 59 degrees 14 minutes 35 seconds East for a distance of 10.00 feet to a point; Thence South 29 degrees 37 minutes 11 seconds East for a distance of 115.20 feet to a point; Thence South 29 degrees 37 minutes 11 seconds East for a distance of 34.18 feet to a point; Thence South 31 degrees 03 minutes 35 seconds East for a distance of 90.12 feet to a point; Thence South 30 degrees 21 minutes 26 seconds East for a distance of 359.20 feet to a point; Thence South 30 degrees 12 minutes 33 seconds East for a distance of 880.62 feet to a point; Thence South 63 degrees 59 minutes 25 seconds West for a distance of 118.58 feet to a point, said point being the TRUE POINT OF BEGINNING. Thence South 22 degrees 48 minutes 39 seconds East for a distance of 1157.48 feet to a point; Thence North 66 degrees

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39 minutes 09 seconds East for a distance of 55.80 feet to a 3/8" rebar pin found; Thence South 23 degrees 21 minutes 11 seconds East for a distance of 150.09 feet to a 3/8" rebar pin found; Thence South 66 degrees 45 minutes 01 seconds West for a distance of 14.70 feet to a point; Thence South 20 degrees 16 minutes 01 seconds East for a distance of 359.56 feet to a 3/8" rebar pin found; Thence South 27 degrees 57 minutes 56 seconds East for a distance of 286.04 feet to a 1/2" solid pin found; Thence South 61 degrees 13 minutes 22 seconds West for a distance of 169.65 feet to a 1/2" solid pin found on the right-of-way of Skyview Drive;

Thence along said right-of-way of Skyview Drive the following course;

Thence along a curve to the left having a radius of 49.95 feet and an arc length of 157.01 feet, being subtended by a chord of North 49 degrees 57 minutes 57 seconds West for a distance of 99.90 feet to a 3/4" rebar pin found;

Thence leaving said right-of-way of Skyview Drive the following courses;

Thence North 83 degrees 08 minutes 53 seconds West for a distance of 226.14 feet to a 1/2" rebar pin set; Thence South 29 degrees 00 minutes 34 seconds East for a distance of 37.02 feet to a point; Thence South 60 degrees 53 minutes 01 seconds West for a distance of 116.55 feet to a point on a line 10 feet Easterly of and parallel with the Easterly right-of-way line of Georgia Highway No. 53 (Dawsonville Highway)(having a varying width right-of-way);

Thence following along said parallel line the following courses:

Thence North 22 degrees 51 minutes 20 seconds West for a distance of 100.25 feet to a point; Thence South 61 degrees 33 minutes 23 seconds West for a distance of 10.25 feet to a point; Thence North 22 degrees 43 minutes 05 seconds West for a distance of 239.30 feet to a point; Thence North 22 degrees 42 minutes 33 seconds West for a distance of 132.29 feet to a point;

Thence leaving said parallel line the following courses:

Thence North 54 degrees 27 minutes 54 seconds East for a distance of 207.47 feet to a 1/2" crimp top pin found; Thence North 20 degrees 49 minutes 23 seconds West for a distance of 245.49 feet to a 1/2" rebar pin found; Thence South 61 degrees 12 minutes 54 seconds West for a distance of 14.05 feet to a 1/2" crimp top pin found; Thence South 62 degrees 19 minutes 40 seconds West for a distance of 205.78 feet to a point on a line 10 feet Easterly of and parallel with the Easterly right-of-way line of said Dawsonville Highway;

Thence following along said parallel line the following courses:

Thence North 22 degrees 50 minutes 44 seconds West for a distance of 399.10 feet to a point; Thence North 22 degrees 51 minutes 22 seconds West for a distance of 250.19 feet to a point; Thence North 22 degrees 51 minutes 50 seconds West for a distance of 174.65 feet to a point; Thence North 22 degrees 54 minutes 51 seconds West for a distance of 223.42 feet to a point;

Thence leaving said parallel line the following courses:

Thence North 63 degrees 59 minutes 25 seconds East for a distance of 489.97 feet to a point, and said point being the POINT OF BEGINNING.

Said property contains 20.01 acres more or less.

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SECTION II.

All Ordinances and parts of Ordinances in conflict herewith are hereby repealed.

SECTION III.

If any portion of this Ordinance shall be held to be invalid or unconstitutional, such invalidity or unconstitutionality shall not affect or impair the remaining portions unless it clearly appears that such other parts are wholly and necessarily dependent upon the part held to be invalid or unconstitutional.

SECTION IV.

This Ordinance is enacted as an amendment to the Code of the City of Gainesville, Georgia, and is to be codified as a part of Section 9-1-1-5.

SECTION V.

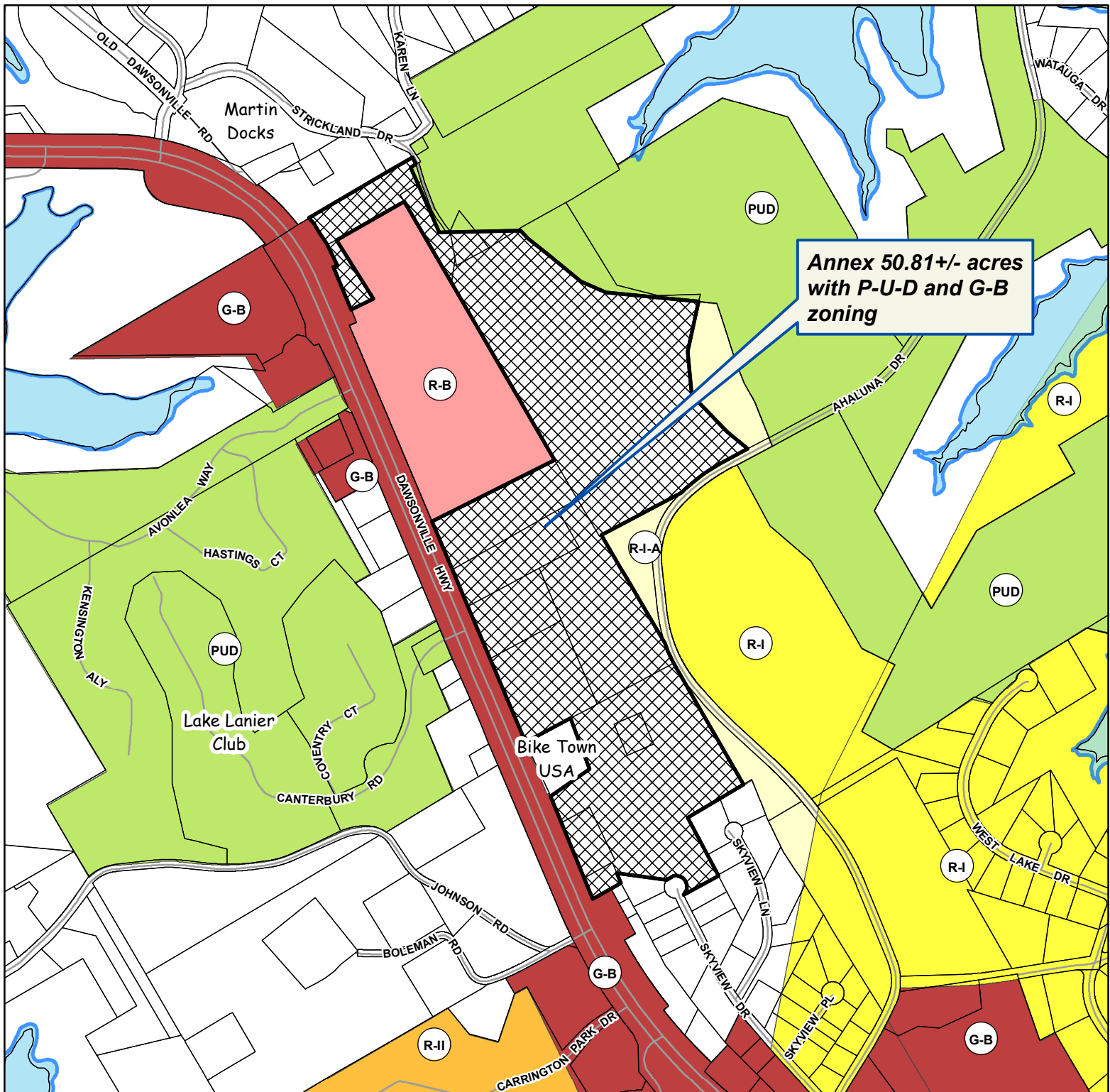
The effective date of this Ordinance shall be upon approval by the governing authority of the City of Gainesville, Georgia.

C. Danny Dunagan, Jr., Mayor

This is to certify that I am City Clerk of the City of Gainesville. As such, I keep its official records, including its minutes. In that capacity, my signature below certifies this resolution was adopted as stated and will be recorded in the official minutes.

ATTEST:

Denise O. Jordan, City Clerk



Applicant:

ANNEXATION REQUEST

OAK HALL COMPANIES, LLC



Request:
Annex 50.81+/- acres with Planned Unit Development (P-U-D) and General Business (G-B) zoning for a mixed-use active adult community

Subject Area Address: 0 and 1758 Ahaluna Dr.; 1508, 1550, 1740, 1746, 1758, 1760, 1934 & 1982 Dawsonville Hwy; 300 and 301 Skyview Drive; 0, 2008 and 2016 Strickland Drive

Meeting: 5/9/2017

Prepared: 3/14/2017

Gainesville Community Development Department

 Subject Property



0 360 720 1,080 1,440 Feet

1" = 600'

Tax Parcel: 00-110-000-005 (part), 028, 032 (part) and 039; 00-110A-004-001 (part), 002A, 004 (part), 005 (part) 007 (part), 007A (part), 007X, 014 (part), 016 (part), 017 (part) and 018



Applicant:

ANNEXATION REQUEST

OAK HALL COMPANIES, LLC



Request:
Annex 50.81+/- acres with Planned Unit Development (P-U-D) and General Business (G-B) zoning for a mixed-use active adult community

Subject Area Address: 0 and 1758 Ahaluna Dr.; 1508, 1550, 1740, 1746, 1758, 1760, 1934 & 1982 Dawsonville Hwy; 300 and 301 Skyview Drive; 0, 2008 and 2016 Strickland Drive

Meeting: 5/9/20107

Prepared: 3/14/2017

Gainesville Community Development Department

 Subject Property

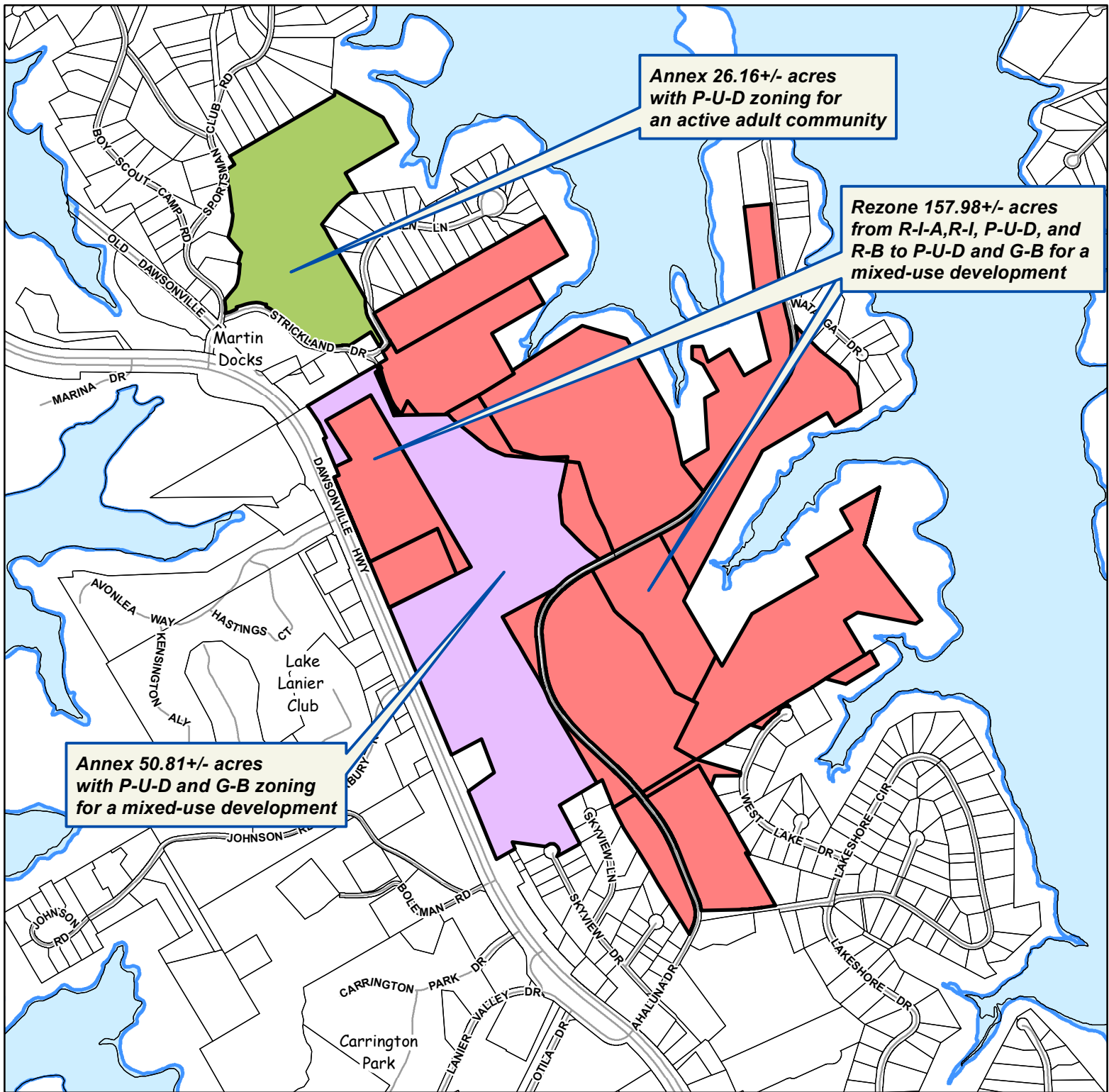
Aerial from 2015

0 360 720 1,080 1,440 Feet



1" = 600'

Tax Parcel: 00-110-000-005 (part), 028, 032 (part) and 039; 00-110A-004-001 (part), 002A, 004 (part), 005 (part) 007 (part), 007A (part), 007X, 014 (part), 016 (part), Page 359 of 1377



Applicant:

ANNEXATION AND REZONING REQUEST

OAK HALL COMPANIES, LLC



Request:

Rezoned 157.98+/- acres from R-I-A, R-I, P-U-D, and R-B to P-U-D and G-B and annex 76.97+/- acres with P-U-D zoning for a mixed-use development/active adult community

Subject Area Address:

See attached list

Meeting: 5/9/2017

Prepared: 2/16/2017

Gainesville Community Development Department

- Annex 26.16+/- Acres
- Annex 50.81+/- Acres
- Rezoned 157.98+/- Acres



0 540 1,080 1,620 2,160 Feet

1" = 900'

Tax Parcel: See attached list

J. Ethan Underwood
eunderwood@mhtlegal.com

REVISED 2017-04-24

**NARRATIVE REPORT, LAND USES AND DEVELOPMENT SUMMARY, IMPROVEMENT REQUIREMENTS
COMPARISON, AND COMMUNITY BENEFIT STATEMENT FOR ANNEXATION APPLICATION**

Applicant:	Oak Hall Companies, LLC
Annexation Property:	50.81 Acres Designated as Hall County Tax Parcel(s): See Attached
Current Zoning:	AR-III, H-B, & R-II
Proposed Zoning:	PUD & G-B
Proposed Use:	Mixed-Use development, consisting of: ▪ 790 age-restricted, independent living, assisted living, and memory care residences ▪ Approximately 24,000 sf of restaurant, retail, office ▪ Approximately 40,000 sf of storage ▪ Approximately 10,650 sf public/semi-public use (Fire Station) ▪ 7 commercial outparcels with approximately 8,000 sf average per parcel of Office/Retail/Restaurant
ROW Access:	Dawsonville Hwy (SR53), Ahaluna Drive, & Strickland Drive

This statement is intended to comply with the application procedures established by The City of Gainesville, GA for submittal of applications for annexation as required by the City of Gainesville Unified Land Development Code (the "ULDC"), City of Gainesville Public Hearing Application Requirements, and other City of Gainesville Ordinances and Standards and is intended to serve as the Narrative Report required by the ULDC. As part of this Narrative Report, the Applicant asserts the statements contained in the Application for Annexation package, submitted herewith incorporated herein by reference, and as may be amended (the "Application"), describing justification for the requested zoning and for any request of variances, in any, as if such were fully stated herein.

The Applicant proposes to zone a total of 208.79 acres, consisting of 157.98 acres currently located within the City of Gainesville, together with the 50.81 acre-Annexation Property located in unincorporated Hall County. The Applicant requests to annex into the City of Gainesville the Annexation Property's 50.81 acres. The proposed annexation would not create an unincorporated island in violation of O.C.G.A. § 36-36-4. In the event the annexation is approved, there will be contiguity between any remaining unincorporated lands.

The Applicant has submitted a concurrent zoning application for the 157.98 acres located within the City of Gainesville, and incorporates all statements therein into this Application for Annexation, to satisfy the requirements of Chapter 9-22-3 of the ULDC.

Approval of the annexation and the concurrent zoning application would yield 185.02 acres zoned PUD, and an additional 23.77 acres zoned G-B, all located within the City.

I. Land Uses and Development Summary

The Applicant proposes to develop the Proposed Use on the Annexation Property. The Annexation Property is adjoined by residential dwellings along Lake Lanier to the north, east, southeast, west and southwest (zoned R-B, AR-III, PUD, V-C, and R-I-A), and by commercially-zoned properties to the southwest, along SR53 (zoned H-B and G-B).

The Proposed Use is consistent with the intent of the Comprehensive Plan and the Future Development Map. The Annexation Property is depicted on the Gainesville 2030 Comprehensive Plan, as Mixed-Use General and Low Density Residential (1 to 4 Dwelling Units per Acre). To accomplish this, the Applicant proposes to utilize the PUD and G-B zoning categories.

A. Zoning and Land Use

i. 20.01 acres to be zoned G-B (General Business District)

If the annexation is approved as submitted, 20.01 acres of the Annexation Property would be zoned G-B (General Business District), identified as Parcel 3 on the Special Annexation Exhibit for America's Home Place, dated September 29, 2016, last revised January 18, 2017 (the "**Annexation Survey**"), submitted concurrently with this Application and incorporated by reference. This 20.01 acres of the Annexation Property is sometimes hereafter referred to as the "G-B Annexation Property."

The G-B Annexation Property would be governed by the general provisions of the UDLC for that zoning category. In this regard, the Applicant proposes to subject the G-B Annexation Property to the land uses and performance standards depicted on the Zoning Plan, dated March 31, 2017, prepared for Oak Hall Companies, LLC by Site Development Consultants, Inc. (the "**Concept Plan**"), submitted concurrently with this Application and incorporated by reference.

ii. 30.80 acres to be zoned PUD (Planned Unit Development)

If the annexation is approved as submitted, 30.80 acres of the Annexation Property would be zoned PUD (Planned Unit Development), identified as Parcels 1 & 2 on the Annexation Survey. This 30.80 acres of the Annexation Property is sometimes hereafter referred to as the "PUD Annexation Property."

The Applicant proposes to subject the PUD Annexation Property to the land uses and performance standards depicted on the Concept Plan. In addition, the Applicant also proposes to subject the PUD

Annexation Property to the **PUD Performance Standards**, attached to and incorporated with this Narrative Report for Annexation.

B. Traffic Impact Analysis

The Applicant also submits with this Narrative Report, and incorporates herein, a Trip Generation Report and Traffic Study Network Determination.

Permanent access to the development will be from the ROW Access. All of the development's interior streets and driveways will be publicly-owned and maintained.

Traffic generated from the development will be minimal and the entrance will be at a location where sight distance is sufficient. All curb cuts shall be coordinated and approved by the City of Gainesville and GDOT and acceleration and deceleration lanes will be installed as required. All streets within the development will be constructed to conform to standard requirements. Parking will be provided onsite as required by the ULDC.

C. School System

As the Annexation Property will be age-restricted use, impact on schools will be minimal.

D. Utilities

With regard to public utilities, water, sanitary sewer, electricity and cable are available to the site. The development's water and sewer needs will be served by the City of Gainesville. The Applicant will install underground utility lines within the development to serve the project on an as-needed basis.

E. Economic Impact

The Applicant submits and incorporates herein the attached **Economic Impact Statement**. The calculations therein (a) analyze the impact of the entire 208.79 acre Mixed-Use development and (b) assume the owners of the residential units will have no children and be exempt from School Property Taxes. The number of residents with children will be nominal, and any such persons would likely be required to pay School Property Taxes.

F. Environmental Impact

The project should also have a minimal impact on the environment. There should be no impact on air quality. Drainage, soil erosion, and sedimentation controls will be extensively utilized on the site after obtaining all required approvals from the Soil Conservation Service and the City of Gainesville. Best management practices will be utilized to protect natural resources. The Applicant will submit plans detailing the development for approval by all applicable and appropriate governmental agencies, based on conformity with subdivision and zoning requirements, as well as other applicable ordinances, statutes and regulations.

II. Improvement Requirements Comparison

	<u>City Standards</u>	<u>Proposed Standards</u>
ROW Widths	50 feet	50 feet
Pavement Widths	24 feet	24 feet
Sidewalk Width	4 feet	4 feet
Sidewalk Location	At least 1 side of each residential road, with connector sidewalks to commercial areas.	At least 1 side of each residential road.

III. Community Benefit Statement

The community will benefit from the Proposed Use, which will provide high quality housing for seniors, improved fire service, and commercial and recreational benefits to the community. The Proposed Use will have little impact on school attendance, as most age-restricted units will not house school-aged children. Residents of age-restricted housing also tend to drive less and, when they do, they drive during off-peak hours, thereby lessening the impact on community traffic.

The Proposed Use will provide quality architectural designs, and extend utility services to areas currently unserved by water and sewer. The Proposed Use will also improve road access on Ahaluna Drive.

CONCLUSION

Approval of the Application will be in the best interest of the City. The Applicant respectfully requests that the Application, as requested by the Applicant, be approved. The Applicant also reserves the right to amend this statement and the Application by supplementing further responses and documents.

Sincerely,



Ethan Underwood,
Attorney for the Applicant

PUD Performance Standards

I. Residential Performance Standards

RESIDENTIAL USE

Maximum 790 Age-Restricted, Independent Living, Assisted Living, and Memory Care Dwellings on 185.02 acres zoned PUD with a gross density of approximately 4.43 residential units per acre.

AGE RESTRICTION

No less than 80% of the residential units must be inhabited by at least one person 55 years of age or older.

BUILDING MATERIALS

Exteriors of all homes and residential structures constructed on the subject property must be of brick, stone, hard coat stucco, or a cement-based material such as hardi-board. Accent materials such as, but not limited to, copper roofing, cedar shake, a cement-based material such as hardi-board, or a combination of such materials, may be used with such accent material not to exceed fifty percent (50%) of the facade. There shall be no vinyl or aluminum siding.

The roofing material used on all detached homes must be cedar shake, architectural/dimensional style asphalt shingles or metal as appropriate to the architectural style of each home.

PROPERTY OWNER ASSOCIATIONS

The development shall have covenants that require maintenance of the landscaped entrance area, open space, and amenity areas by a homeowners association. Membership in the homeowners association is mandatory for owners of properties. Zero-Lot Residential Units and Stacked Flat Units may have separate sub-associations to manage their respective properties

AMENITIES

An amenity area, including a swimming pool and club house, will be provided for use of residents and will be the responsibility of the homeowners association to maintain. On-street parking will be allowed for the amenity area.

An approximately 40,000 sf storage facility, with parking spaces initially for up to 19 , with a total of 50 at full build-out, Recreational Vehicles as well as up to 50 parking spaces for on-site boat storage will be available on the premises for lease *solely* to residents of the development.

Residents will also have the ability to utilize community docks and lease or purchase one of the approximately 130 boat slips for the development.

UNIT TYPE

Residential units are designed to allow residents to “age in place.” Independent living products will include single-family detached homes, single-family attached homes, attached condominiums, and rental units. Rental units will also offer assisted living services, and memory care units.

I. Detached Residential

Type	Maximum # of Units
• POD A – Single Family Detached	265 units
• POD B – Single Family Detached	40 units

PERFORMANCE STANDARDS – DETACHED RESIDENTIAL

- Minimum lot width – 40 feet
- Minimum Heated Floor Area (1,500 sf)
- Maximum building height – 40 feet
- Each unit will have a minimum 2 car enclosed garage
- Each unit will have a minimum of 18 feet of driveway from the back of sidewalk to the building face or 20 feet from the back of the curb to the building when there is no sidewalk
- Setbacks, excluding steps, roof overhangs, chimneys, bay windows, and patios:
 - 15' front
 - 3' side
 - 10' building separation (foundation to foundation)
 - 10' interior rear



II. Zero-Lot Line Residential

Type	Maximum # of Units
• Single Family Cottages	79 units
• Terrace Homes – Detached	81 units

The building footprint for each unit will comprise the boundaries of the individual lots; all other improved areas will be maintained by a mandatory homeowner association as “common area” and all undeveloped area will be maintained as “open space.”

A. Single Family Cottages.

PERFORMANCE STANDARDS – ZERO-LOT LINE RESIDENTIAL

- Minimum unit width – 15 feet
- Minimum Heated Floor Area (500 sf)
- Maximum building height – 30 feet
- Each unit will have a minimum of 18 feet of driveway from the back of sidewalk to the building face or 20 feet from the back of the curb to the building when there is no sidewalk
- Setbacks, excluding steps, roof overhangs, chimneys, bay windows, and patios:
 - 0’ front
 - 0’ side
 - 0’ interior rear
 - 10’ building separation (foundation to foundation)



B. Terrace Homes – Detached.

PERFORMANCE STANDARDS – ZERO-LOT LINE RESIDENTIAL

- Minimum unit width – 24 feet
- Minimum Heated Floor Area (1,100 sf)
- Maximum building height – 30 feet
- Each unit will have a minimum 2 car enclosed garage
- Each unit will have a minimum of 18 feet of driveway from the back of sidewalk to the building face or 20 feet from the back of the curb to the building when there is no sidewalk
- Setbacks, excluding steps, roof overhangs, chimneys, bay windows, and patios:
 - 0' front
 - 0' side
 - 0' interior rear
 - 10' building separation (foundation to foundation)



III. For-Rent Residential

For-Rent Residential units are multi-story apartment, with buildings operated by a professional management company. In all areas designated for For-Rent Residential use, all buildings and grounds will be maintained by a management company and all undeveloped areas will be maintained as “open space.”

Type	Maximum # of Units
• Independent Living – For Rent (IL)	175 units, less MC units
• Assisted Living – For Rent (AL)	150 units, less MC units
• Memory Care – For Rent (MC)	Up to 30 units, which count toward IL and AL maximums

PERFORMANCE STANDARDS – FOR-RENT RESIDENTIAL

- Minimum Heated Floor Area – 700,000 sf
- Maximum building height – 75 feet
- Setbacks, excluding steps, roof overhangs, chimneys, bay windows, and patios:
 - 40’ front
 - 20’ side
 - 25’ interior rear
 - 50’ exterior rear
- Minimum Parking Requirements - 1 space per 1.5 residential unit, plus one space per employee



II. Commercial Performance Standards

COMMERCIAL USE

Commercial Uses within the Planned Unit Development are generally expected to be Retail/Office/Restaurant. In addition, an approximately 40,000 sf storage facility may be constructed within the PUD.

The following uses are not allowed within the commercial portion of the PUD:

- (a) Motels or hotels with rooms accessed from the exterior of the building.
- (b) Adult novelty stores.
- (c) Adult entertainment centers.
- (d) Pawn shops.
- (e) Gas Stations.
- (f) Tire Stores.
- (g) Massage Parlors; provided this will not prohibit the operation of any profession by practitioners licensed by the State of Georgia.
- (h) Vaping stores
- (i) Auto body shops.
- (j) Automobile sales establishments.
- (k) Marine sales or repair stores.
- (l) Non-automated car wash.

BUILDING MATERIALS

Building exteriors not screened from view from a public right-of-way right of way or any property line shall have an architectural treatment of brick, brick/frame, stone, or stucco, or another architectural treatment approved by the Planning Director.

MECHANICAL EQUIPMENT

Ground and building-mounted mechanical equipment, such as coolers, HVAC equipment, meters, utility banks, trash receptacles, and electrical or telephone utility cabinets must be placed within the interior side and rear yards; provided, such mechanical equipment may be located in the front or corner side yards if screened from any right-of-way or any property line with landscape materials.

PERFORMANCE STANDARDS - COMMERCIAL

- Maximum Building Coverage – 70% of lot
- Maximum building height – 75 feet
- Minimum landscaped open space – 10% of lot
- Minimum front landscape strip paralleling right-of-way – 10 feet
- Minimum side and rear landscape strip – 6 feet
- Setbacks, excluding steps, roof overhangs, chimneys, bay windows, and patios:
 - 40' from right-of-way
 - 10' side
 - 25' interior rear
 - 50' adjacent to residential use
- Minimum Parking Requirements - See Gainesville Unified Land Development Code



City Economic Impact Statement: Oak Hall Companies, LLC

Population	36,306		Millage Rate	0.00298		Total M&O	\$ 9,657,458.00
Households	12,967					Expenditures Per Child (40%)	\$ 3,401.41
			School Millage Rate	0.00685		Police Expenditures	\$ 8,471,549.00
Impact Fees per Unit	\$ 1,589.81		Sales Tax Revenue	\$ 5,036,730.00		Fire Expenditures	\$ 6,542,453.00

Table 1: Projected Residential Population

<u>Year</u>	<u>New Houses</u>	<u>Total Houses</u>	<u>Population</u>
1	77	77	216
2	77	154	431
3	77	231	647
4	78	309	865
5	78	387	1084
6	78	465	1302
<u>Year</u>	<u>AL & IL Units</u>	<u>Total AL & IL Units</u>	<u>Population</u>
1		0	0
2		0	0
3	109	109	114
4	217	217	228
5	325	325	341
6	0	325	341

Table 2: Projected Annual General Property Tax Revenue from Residential

<u>Average Home Price</u>	<u>Year</u>	<u>Revenue</u>
\$400,000.00	1	\$91,325.08
	2	\$182,650.16
	3	\$273,975.24
<u>Tax per House</u>		
\$1,186	4	\$366,486.36
	5	\$458,997.48

Table 3: Projected Annual Sales Tax Revenue from Residential

<u>Year</u>	<u>Revenue</u>
1	\$29,908.86
2	\$59,817.72
3	\$89,726.59
4	\$120,023.87
5	\$150,321.16
6	\$180,618.45

Table 4: Projected Annual School Property Tax Revenue from Residential (Assume 40% Exempt from School Tax)

<u>Average Home Price</u>	<u>Year</u>	<u>Revenue</u>
\$400,000.00	1	\$126,588.00
	2	\$253,176.00
	3	\$379,764.00
<u>Avg. Prop Tax per House</u>		
\$2,740	4	\$507,996.00
	5	\$636,228.00
	6	\$764,460.00

Table 5: Projected Residential Impact Fees: One Time Fee per Annum

<u>Year</u>	<u>Total</u>
1	\$ 122,415.37
2	\$ 122,415.37
3	\$ 122,415.37
4	\$ 124,005.18
5	\$ 124,005.18
6	\$ 124,005.18

Table 6: Projected Annual Sales Tax Revenue from IL & AL	
Year	Revenue
1	
2	
3	\$42,338.52
4	\$126,627.13
5	\$252,865.83
6	\$252,865.83

Table 7: Projected Property Tax Revenue from IL & AL		
Year	Assessment Value	Revenue
1	\$ 900,000.00	\$8,847.00
2	\$ 2,500,000.00	\$24,575.00
3	\$ 15,000,000.00	\$147,450.00
4	\$ 15,000,000.00	\$147,450.00
5	\$ 15,000,000.00	\$147,450.00
6	\$ 15,000,000.00	\$147,450.00

Table 8: Projected IL & AL Impact Fees: One Time Fee per Annum	
Year	Total
1	\$ -
2	\$ 173,289.29
3	\$ 344,988.77
4	\$ 516,688.25
5	\$ -
6	\$ -

Table 9: Projected Property Tax Revenue from Commercial		
Average Value per SF	Year	Revenue
\$120.00	1	\$23,592.00
	2	\$46,004.40
Total SF	3	\$67,296.18
120,000.00	4	\$87,523.37
	5	\$106,739.20
Depreciation	6	\$124,994.24
5%		

Table 10: Projected Commercial Impact Fees: One Time Fee per Annum		
Average Fee per 1000 SF	Year	Revenue
\$94.46	1	\$1,889.20
	2	\$1,889.20
Total SF	3	\$1,889.20
120,000.00	4	\$1,889.20
	5	\$1,889.20
	6	\$1,889.20

Table 11: Cost of Law Enforcement Services		
Year	Total Households	Annual Law Enforcement Expenditures
1	77	\$50,305.33
2	154	\$100,610.67
3	340	\$222,127.45
4	526	\$343,644.23
5	712	\$465,161.02
6	790	\$516,119.67

Table 12: Cost of Fire Protection Services		
Year	Total Households	Annual Fire Expenditures
1	77	\$38,850.07
2	154	\$77,700.14
3	340	\$171,545.77
4	526	\$265,391.40
5	712	\$359,237.03
6	790	\$398,591.65

Table 13: M&O Expenditures		
Year	Total Households	Annual M&O Expenditures
1	77	\$57,347.44
2	154	\$114,694.88
3	340	\$253,222.47
4	526	\$391,750.05
5	712	\$530,277.64
6	790	\$588,369.85

Table 14: Summary of Annual Impact at Completion		
Impact Summary	Column1	Totals
Revenues		
Property Taxes to		\$1,495,901.72
Sales Taxes to City		\$433,484.28
Total Revenue		\$1,929,386.00
Expenditures		
Police		\$516,119.67
Fire		\$398,591.65
M&O		\$588,369.85
School Expenditures (1% of Homes have a school-age child)		\$44,284.37
Total Expenditures		\$1,547,365.53
Annual Net Revenue		\$382,020.47
Total Impact Fees		\$1,785,563.16

Ethan Underwood
eunderwood@mhtlegal.com

REVISED 2017-01-27

RESERVATION OF CONSTITUTIONAL AND LEGAL RIGHTS - ANNEXATION

Applicant:	Oak Hall Companies, LLC
Annexation Property:	50.81 Acres Designated as Hall County Tax Parcel(s): See Attached
Current Zoning:	AR-III, H-B, & R-II
Proposed Zoning:	PUD & G-B
Proposed Use:	Mixed-Use development, consisting of: ▪ 820 age-restricted, independent living, assisted living, and memory care residences ▪ Approximately 24,000 sf of restaurant, retail, office ▪ Approximately 40,000 sf of storage ▪ Approximately 10,650 sf public/semi-public use (Fire Station) ▪ 7 commercial outparcels with approximately 8,000 sf average per parcel of Office/Retail/Restaurant
ROW Access:	Dawsonville Hwy (SR53)

This Reservation of Constitutional and Other Legal Rights ("the Reservation") is intended to supplement and form a part of the annexation and rezoning application (including any request for zoning, conditional use permit and variances)(the "Application") of the Applicant and the owners of the Subject Property and to put the City of Gainesville on notice of the Applicant's assertion of its constitutional and legal rights.

The Applicant has filed a timely application, has provided all required information and has submitted the appropriate application fees. The application meets all judicial and statutory requirements for approval.

A refusal by the City of Gainesville to approve the Application, as requested by the Applicant, will impose a disproportionate hardship on the Applicant and owners of the Subject Property without benefiting any surrounding property owners. There is no reasonable use of the Subject Property under any other zoning classification and no resulting benefit to the public from designation to any other classification.

A refusal by the City of Gainesville to approve the Application, as requested by the Applicant, will prohibit the only viable economic use of the Subject Property, will constitute an illegal taking of the Applicant's and owners' properties, and will be unconstitutional and will discriminate in an arbitrary, capricious and unreasonable manner between the Applicant and owner and the owners of similarly

Page 2 of 2
January 27, 2017

situated properties in violation of the Georgia Constitution of 1983, as amended and the Constitution of the United States.

Furthermore, this Reservation also constitutes an Ante Litem Notice pursuant to O.C.G.A. § 36-11-1, which places the City of Gainesville and all other agents of the City on notice of the Applicant's and owners' intent to seek monetary damages and attorney's fees against the City of Gainesville for any rezoning action, zoning condition, illegal impact fee and any other unlawful restrictions and exactions that are imposed on the Subject Property, the Applicant and the owners.

Finally, this Reservation also constitutes an Ante Litem Notice pursuant to O.C.G.A. § 36-11-1, which places Hall County and any third parties on notice of the Applicant's and owners' intent to defend any action intended to thwart the annexation of the Subject Property into the City of Gainesville.

By filing this Reservation, the Applicant reserves all rights and remedies available to it under the United States Constitution, the Georgia Constitution, all applicable federal, state, and local laws and ordinances, and in equity, against all persons and entities.

The Applicant and owners respectfully request that this Application be approved as requested by the Applicant and in the manner shown on the Application, which is incorporated herein by reference. This Reservation forms an integral part of the Application, and we ask that the City of Gainesville include this Reservation with the Applicant's other application documents. The Applicant and owners reserve the right to amend and supplement this Reservation at any time.

Sincerely,



Ethan Underwood,
Attorney for the Applicant

SURVEYOR'S NOTES:

1. THIS EXHIBIT WAS PREPARED ON THE GEORGIA STATE PLANE COORDINATE SYSTEM, TRANSVERSE MERCATOR PROJECTION, WEST ZONE, NORTH AMERICAN DATUM OF 1983/2007 ADJUSTMENT. THE COMBINED SCALE FACTOR FOR THIS SITE IS 0.99999987. (GRID DISTANCE/SCALE FACTOR=GROUND DISTANCE). ALL COORDINATES SHOWN HEREON ARE GRID COORDINATES UNLESS OTHERWISE STATED.

2. CONVENTIONAL EQUIPMENT USED FOR MEASUREMENT WAS A TOPCON PS 103. GPS EQUIPMENT USED FOR MEASUREMENT WAS A CHAMPION TWO GNSS RECEIVER USING REAL-TIME KINEMATIC OBSERVATIONS PROCESSED THROUGH THE EPCS NETWORK.

4. THIS EXHIBIT HAS BEEN CALCULATED FOR CLOSURE AND WAS FOUND TO BE ACCURATE, AS FOLLOWS:

PARCEL 1 - WITHIN ONE FOOT IN 258,097 FEET.
PARCEL 2 - WITHIN ONE FOOT IN 235,097 FEET.
PARCEL 3 - WITHIN ONE FOOT IN 950,224 FEET.

3. THIS EXHIBIT IS FOR THE EXCLUSIVE USE OF THE PARTIES LISTED UNDER THE CAPTION "EXHIBIT FOR" ANY THIRD PARTY USE TO BE AT RISK. Order 0000

6. THE FIELD SURVEY WAS CONDUCTED FEBRUARY 9TH AND 10TH, 2013.

REFERENCES:

1. DEED BOOK 7359, PAGE 508
2. DEED BOOK 839, PAGE 81
3. DEED BOOK 3403, PAGE 158
4. DEED BOOK 3714, PAGE 478
5. DEED BOOK 4835, PAGE 172
6. DEED BOOK 5077, PAGE 288
7. DEED BOOK 6004, PAGE 665
8. DEED BOOK 5184, PAGE 608
9. DEED BOOK 5030, PAGE 289
10. DEED BOOK 5077, PAGE 286
11. PLAT BOOK 117, PAGE 37
12. PLAT BOOK 79, PAGE 34



THIS EXHIBIT WAS PREPARED IN CONFORMITY WITH THE TECHNICAL STANDARDS FOR PROPERTY SURVEYS IN GEORGIA AS SET FORTH IN CHAPTER 180-7 OF THE RULES OF THE GEORGIA BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS AND LAND SURVEYORS AS SET FORTH IN THE GEORGIA PLAT ACT O.C.G.A. 15-6-87.

**REGISTERED PROFESSIONAL
LAND SURVEYORS**

P.O. BOX 256
GAINESVILLE, GA. 30503
PHONE: (770) 532-6492
FAX: (770) 532-1995
www.editionsurveying.com



AMERICA'S HOME PLACE

[illegible]

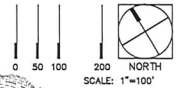
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1 of 1
SCALE: NOT TO SCALE
SURVEY DATE: 02/12/15
PLAT DATE: 09/29/16
12-037-ANNOXATION.org
JN. 12-037

OAK HALL
—COMPANIES LLC—

Zoning Plan

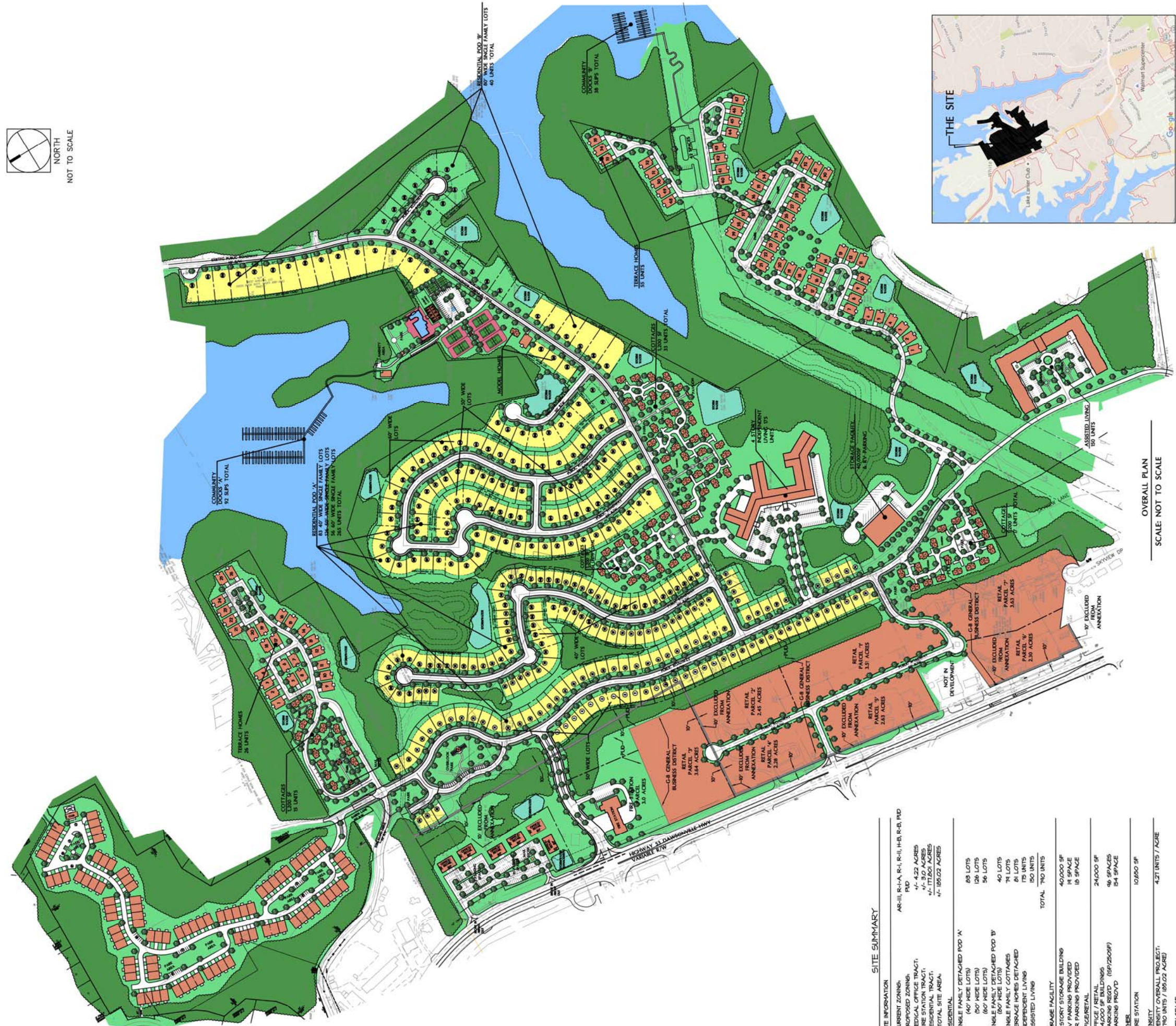
PROJECT LYING IN LAND LOTS 161, 162, 163 & 173 OF THE
9TH DISTRICT, CITY OF GAINESVILLE, HALL COUNTY, GEORGIA

Prepared for
Oak Hall Companies, LLC
5256 Peachtree Road, Suite 195
770-662-5995
Atlanta, GA 30341
DATE: 4/17/2017



U.S. GOVERNMENT
BUTFORD RESERVOIR
LAKE SENECA LAMICH
(SEGMENT 7)





OVERALL PLAN
SCALE: NOT TO SCALE

LOCATION MAP
NTS

Lanier Tract

Zoning Plan

PROJECT LYING IN LAND LOTS 161, 162, 163 & 173 OF THE 9TH DISTRICT, CITY OF GAINESVILLE, HALL COUNTY, GEORGIA

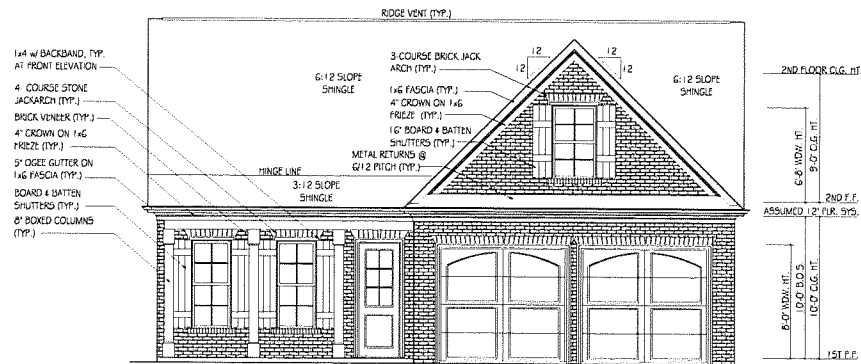
Prepared for
Oak Hall Companies, LLC
5256 Peachtree Road, Suite 195
Atlanta, GA 30341
DATE: 4/17/2017



Development Consultants, Inc.
Lead Planning • Site Development • Landscape Architecture
4432 Grand View, Morris, GA 30866, Tel: 678-285-2885, Cell: 678-523-4888

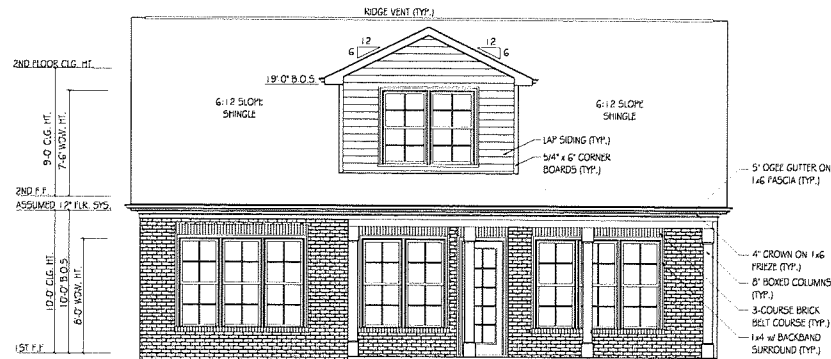
SITE SUMMARY

SITE INFORMATION	
CURRENT ZONING:	AR-III, R-1A, R-1, H-B, R-B, PUD
PROPOSED ZONING:	PUD
MEDICAL OFFICE TRACT:	1/- 4.32 ACRES
FIRE STATION TRACT:	1/- 3.0 ACRES
RESIDENTIAL TRACT:	1/- 171.801 ACRES
TOTAL SITE AREA:	1/- 180.02 ACRES
RESIDENTIAL	
SINGLE FAMILY DETACHED POD 'A'	
63 LOTS	170 UNITS
126 LOTS	
56 LOTS	
60' WIDE LOTS	
SINGLE FAMILY DETACHED POD 'B'	
40 LOTS	
80' WIDE LOTS	
74 LOTS	
175 UNITS	
150 UNITS	
ASSISTED LIVING	
TOTAL	
2 STORY STORAGE BUILDING	40,000 SF
RV PARKING PROVIDED	18 SPACE
CAR PARKING PROVIDED	10 SPACE
OFFICE/RETAIL	
OFFICE/RETAIL	24,000 SF
PARKING REQ'D (159/250SF)	46 SPACES
PARKING PROVIDED	154 SPACE
OTHER	
FIRE STATION	10,650 SF
DENSITY	4.21 UNITS / ACRE
DENSITY OVERALL (REQ'D):	170 UNITS / 180.02 ACRES
OPEN SPACE	1/- 69.0 ACRES
OPEN SPACE PROVIDED:	56.6%
NOTES	
1. THIS PLAN IS TO BE USED FOR PLANNING PURPOSES ONLY AND IS NOT INTENDED TO BE A CONSTRUCTION DOCUMENT. PLAN IS PREPARED FOR USE ONLY BY OAK HALL COMPANIES, LLC.	
COMMERCIAL PARCEL	
COMMERCIAL PARCEL TOTAL ACRES	23.11 ACRES
6-B GENERAL BUSINESS DISTRICT	1 COMMERCIAL PARCELS
PROPOSED ZONING:	6,000 SF AVERAGE PER PARCEL
RETAIL SPACE	
ADJACENT: MELLON SPRINGS TOWNHOME PROJECT	
SITE AREA:	26.2 ACRES
ATTACHED SENIOR TERRACE HOMES	3.44 UNITS PER ACRE
DENSITY: 40 UNITS/ 26.2 ACRES	



FRONT ELEVATION

1/4" = 1'-0"
B.O.S. = BOTTOM OF SOFFIT

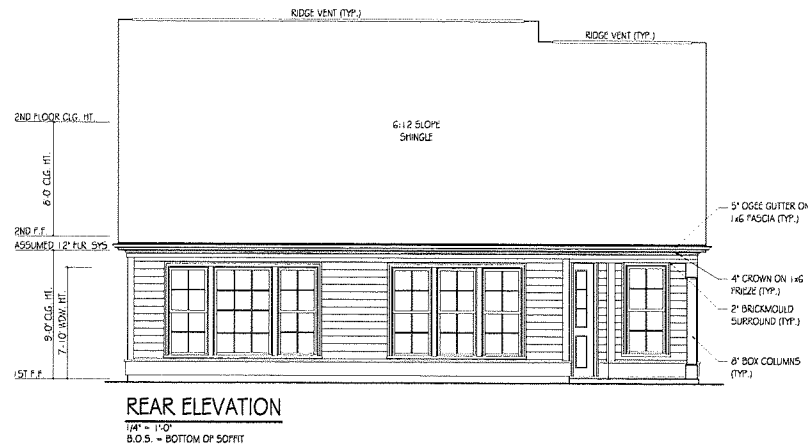
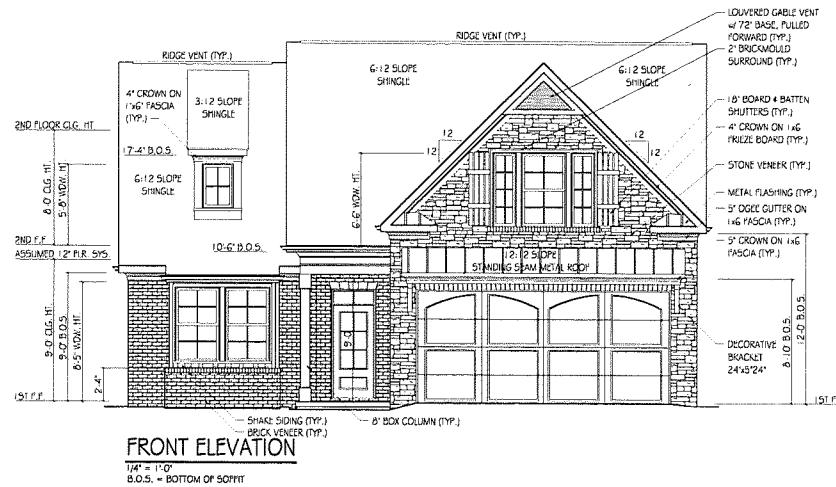


REAR ELEVATION

1/4" = 1'-0"
B.O.S. = BOTTOM OF SOFFIT

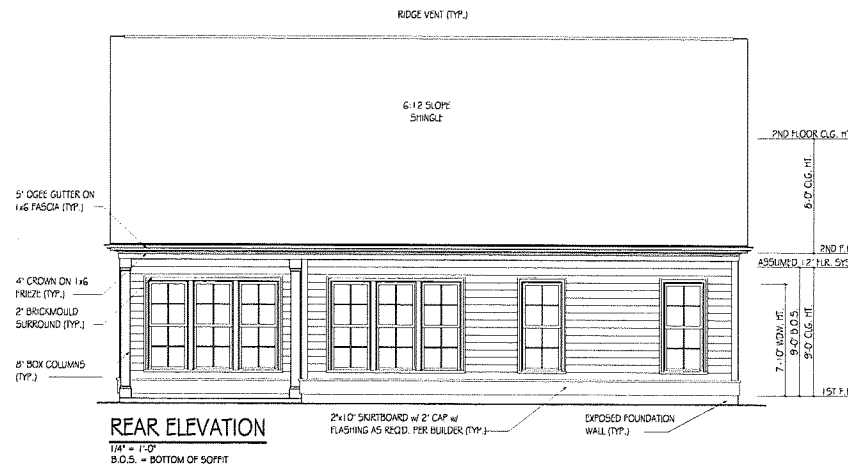
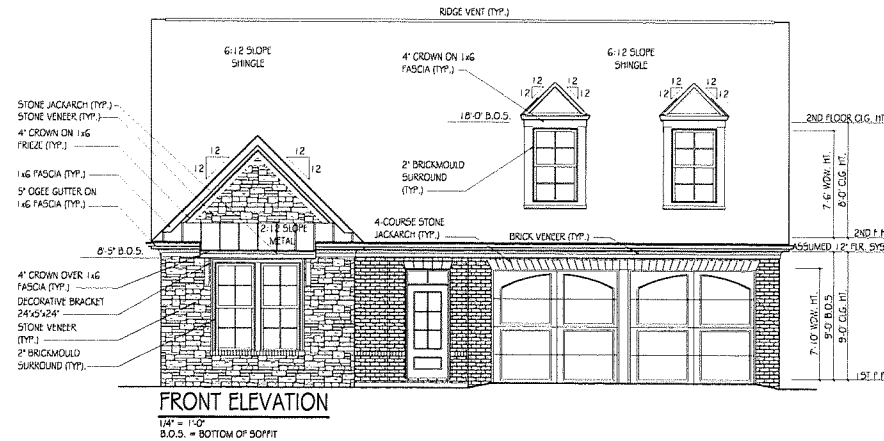
GENERAL NOTE:
ALL DIMENSIONS SHOWN MAY VARY FOR ACTUAL SITE CONDITIONS IN THE FIELD. THE NUMBER OF EXTERIOR TREADS AND RISERS AT GARAGE, TERRACES, PORCHES, DECKS, ETC., ARE TO BE DETERMINED BY THE BUILDER / CONTRACTOR ACCORDING TO ACTUAL GRADES.

TUBE	JOB #
1203	15143
DATE	REVISED
08/19/16	
SQUARE FOOTAGE	
2303 SF	
LOT #	SUBDIVISION
	THE OVERLOOK AT OLD ATLANTA
PROJECT	
CUSTOM HOME FOR JIM CHAPMAN COMMUNITIES	
THE NEWBURY -A	
CLASSICAL CONCEPTS ATLANTA	
P.O. BOX 732 FLOWERY BRANCH, GA. 30542	
404-226-6964 (DAVID)	404-401-7298 (MARY)
CCADORAN@YAHOO.COM MFITZDORAN@AOL.COM	
This plan is the property of CLASSICAL CONCEPTS and may not be used reproduced without their permission.	
Please Note: CLASSICAL CONCEPTS is not a contractor and does not construct homes. It is a design firm. It is the responsibility of the contractor to obtain all necessary permits, licenses, and insurance. It is the responsibility of the contractor to obtain all necessary permits, licenses, and insurance. It is the responsibility of the contractor to obtain all necessary permits, licenses, and insurance.	
DRAWN	SHEET #
BCLLC	D1 of 6



GENERAL NOTE:
 ALL GRADES SHOWN MAY VARY PER ACTUAL SITE CONDITIONS & TO FIELD THE NUMBER OF EXTERIOR TILES AND RISERS AT GARAGE, TERRACES, PORCHES, DECKS, ETC., ARE TO BE DETERMINED BY THE SUBSEDER CONTRACTOR ACCORDING TO ACTUAL DRAWS

TUBE	JOB #
1283	16178
DATE	REVISED
09/10/16	
SQUARE FOOTAGE	
2229 SF	
LOT #	SUBDIVISION
	NESTLE DOWN FARMS
PROJECT	
CUSTOM HOME FOR JIM CHAPMAN COMMUNITIES	
THE DALTON -A	
CLASSICAL CONCEPTS ATLANTA	
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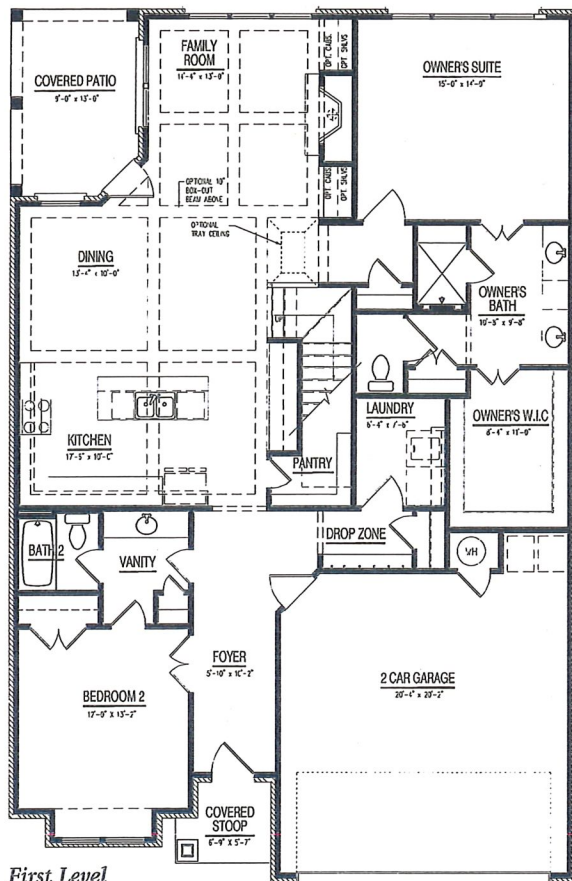
TUBE	JOB #
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DATE	REVISED
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PROJECT	
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THE OVERLOOK

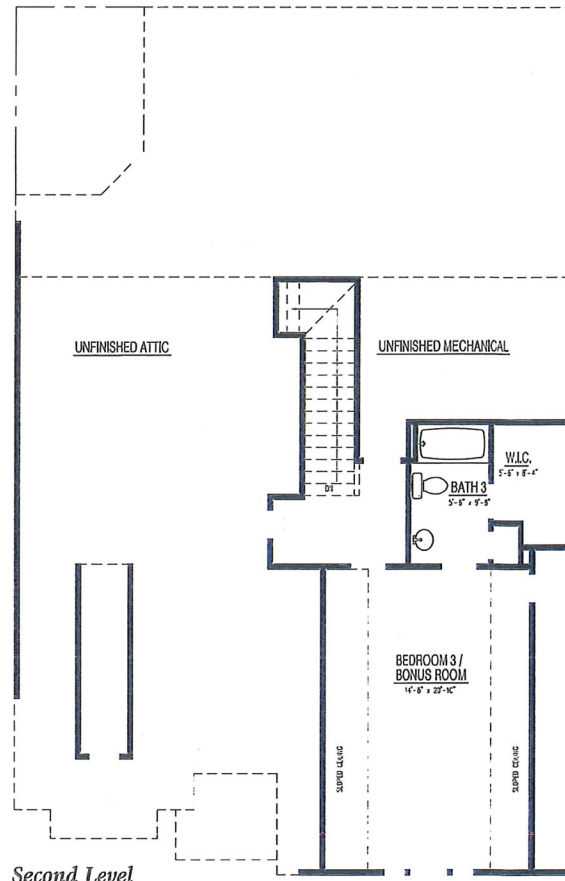
AT OLD ATLANTA

Attached Villas

Dalton Plan
2,270 Square Feet



First Level



Second Level

Due to the evolutionary nature of our design improvement process, there may be actual versus design variations in room dimensions, door swings and window and door locations. These floor plans and any dimensions and square footages shown herein are only approximations. Any homeowner who is concerned about any representations regarding the floor plans should do his or her own investigation as to the dimensions, measurements and square footage of his/her home. We reserve the right to substitute materials of comparable quality. These plans are the sole and absolute property of Jim Chapman Communities, Inc. Use or copying of these plans, without the express written consent of Jim Chapman Communities, Inc., is illegal. Revised 3/31/2016



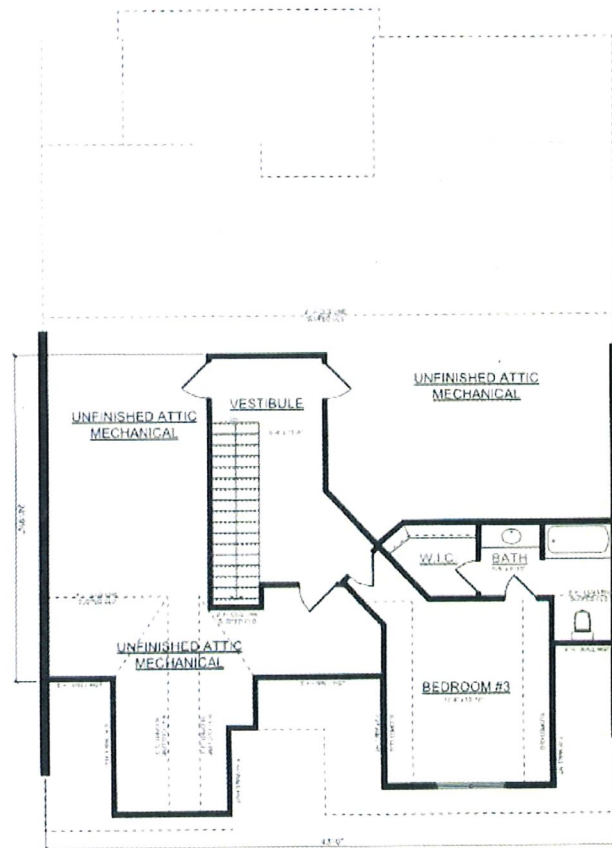
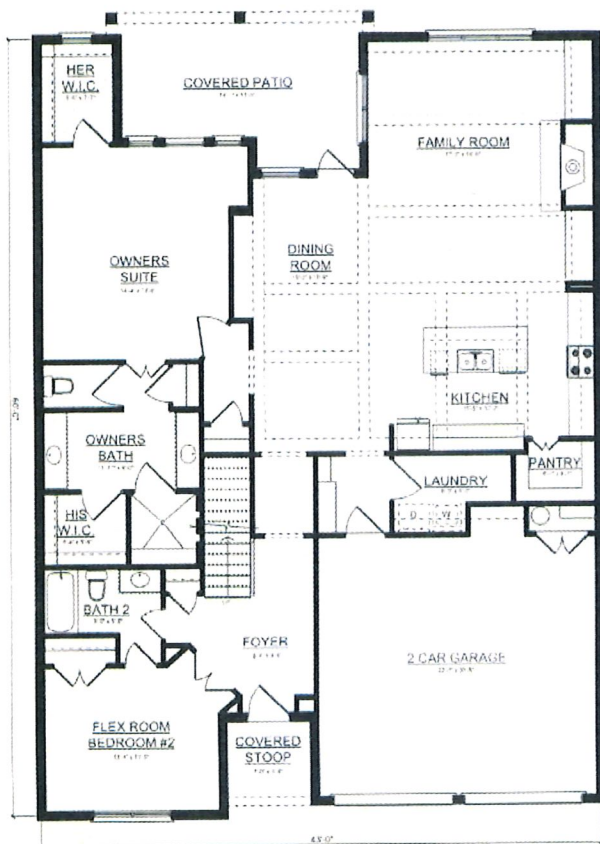
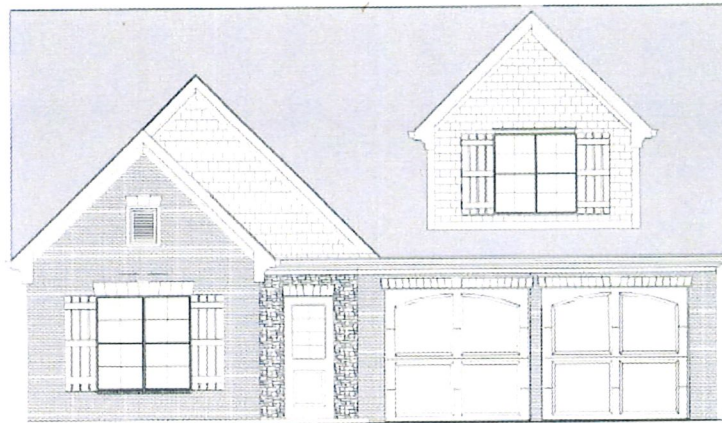
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THE OVERLOOK AT OLD ATLANTA

Attached Villas

Avery Plan
2,305 Square Feet



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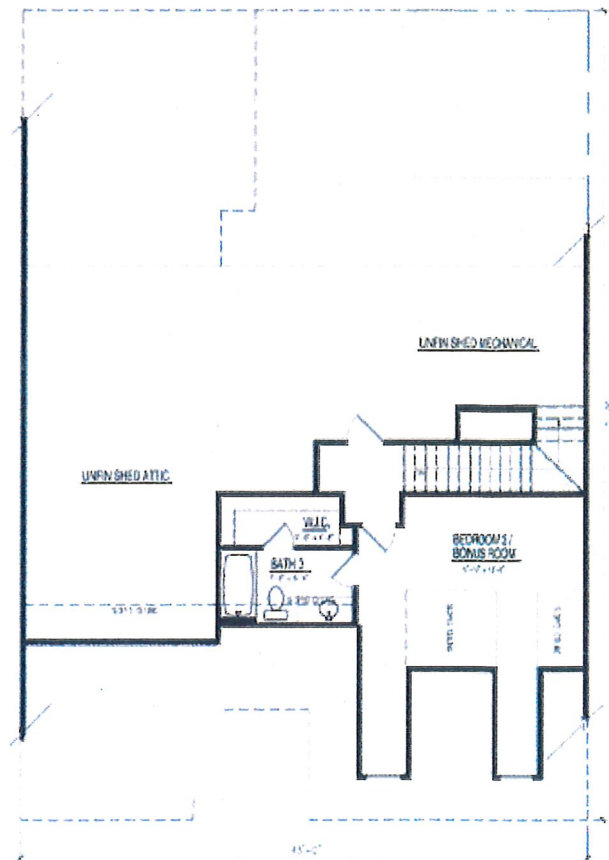
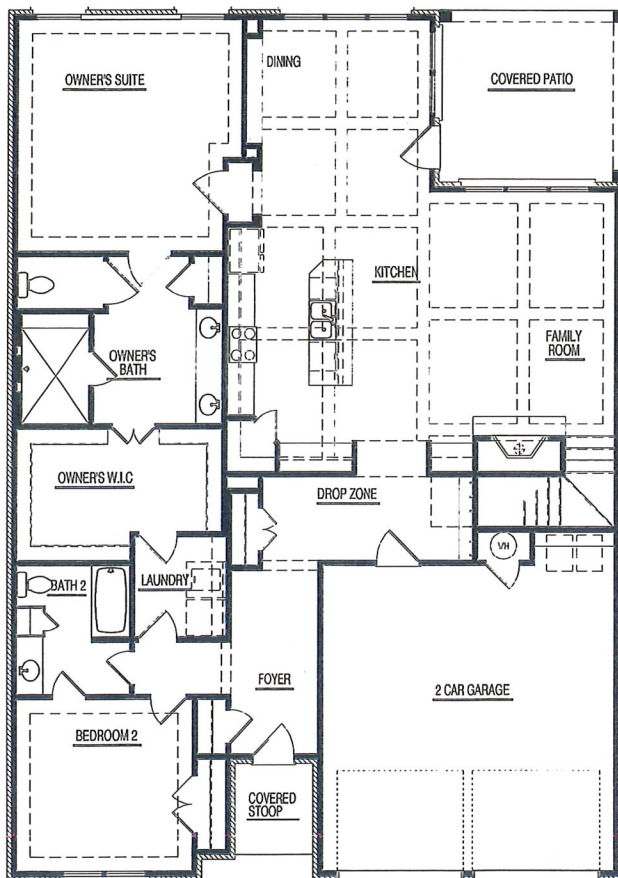
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THE OVERLOOK

AT OLD ATLANTA

Attached Villas

Hanover A Plan
2,339 Square Feet



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Exhibit A - Page 3





Photo by John Galla www.firenews.org

Traffic Impact Study

Proposed Lanier Tract Multi-Use Development City of Gainesville, Georgia

revised April 7, 2017
for 3/31/2017 site plan

MARC R. ACAMPORA, PE, LLC
TRAFFIC ENGINEERING



Traffic Impact Study
Proposed Lanier Tract Multi-Use Development
City of Gainesville, Georgia

study prepared for:

Oak Hall Companies, LLC
5256 Peachtree Road, Suite 195
Atlanta, Georgia 30341

revised April 7, 2017
for 3/31/2017 site plan



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Summary

The Lanier Tract DRI is a primarily senior-age-restricted residential community that will be developed along Ahaluna Drive and Strickland Drive. There will be an office/retail node along GA 53, north of Avonlea Way. A fire station of 10,650 square feet is also proposed to be constructed along GA 53. Vehicular access will be provided at several locations, primarily along Ahaluna Drive, with connections to GA 53 via Strickland Drive, at the median opening at Avonlea Way, and through adjacent outparcels, aligning with Canterbury Road. The office/retail node will have a two right-in / right-out accesses directly on GA 53, with no anticipated internal connection to the balance of the development.

The project will generate 171 new trips in the a.m. peak hour, 251 new trips in the p.m. peak hour, and 3,097 new trips during a 24-hour weekday.

The following recommendations are made at each study intersection:

1. **Sportsman Club Road at Strickland Drive** – No changes are recommended at this intersection for the Existing, No-Build, or Future Phase One and Future Phase Two conditions.
2. **Dawsonville Highway at Sportsman Club Road** – The side street delays at this intersection are significant but the low side street volumes make the intersection a weak candidate for signalization. A northbound exclusive right turn lane should be added on GA 53 at Sportsman Club Road.
3. **Dawsonville Highway at Avonlea Way** – Side street delays are high at the existing eastbound approach of Avonlea Way. The volumes exiting the new Lanier Tract access will be low and many of them will be right turners. Therefore, this intersection is a weak candidate for signalization. A northbound right turn lane on GA 53 should be considered at this access and the site plan includes this lane. The new site access should be constructed with one entering lane and one exiting lane. The side street approach exiting the site should be controlled by side street stop sign and accompanying stop bar.
4. **Dawsonville Highway at Canterbury Road** – Side street delays are high on the existing eastbound approach of Canterbury Road. This intersection is a weak candidates for signalization in the existing, no-build, and Future Phase One conditions. No decel lane will be required for Future Phase One. With the future development of the retail outparcels, by others, a northbound deceleration lane on GA 53 is recommended. This intersection will be a prime candidate for signalization upon development of the outparcels. A signal warrant study should be performed for this intersection according to the standards set forth in the Federal Highway Administration's *Manual On Uniform Traffic Control Devices* (MUTCD). This new access at the Canterbury Road median break should be constructed with at least one entering lane and an exiting shared left/through lane and an exclusive right turn lane. The two westbound lanes are in anticipation of the development of the outparcels. With only the Lanier Tract volumes, only one entering and one exiting lane would be required. Until signalization is warranted, the side street approach exiting the outparcel tracts should be controlled by side street stop sign and accompanying stop bar.

5. **Dawsonville Highway at Ahaluna Drive** – A northbound right turn lane should be added on GA 53 at Ahaluna Drive in the existing condition. The future volumes exiting Ahaluna Drive would benefit from the addition of a second westbound lane, resulting in a shared left/through lane and an exclusive right turn lane on Ahaluna Drive at GA 53. There may be an opportunity to shorten the cycle length, which would reduce time spent by vehicles waiting on the side street.
6. **Dawsonville Highway at North Lake Square Access** – This intersection operates acceptably in all analysis conditions. No mitigation is recommended for any analysis condition.
7. **Dawsonville Highway at Beachwood Boulevard** – No changes are recommended at this intersection based on this study.
8. **Dawsonville Highway at McEver Road** – The existing southbound right turn volume is sufficiently-high (828 a.m., 481 p.m.) to merit consideration of the addition of a second exclusive right turn lane and/or the addition of a protected right turn overlap phase. There may be an opportunity to reduce the cycle length and fine-tune the signal timing at this intersection.
9. **Dawsonville Highway at Green Hill Circle** – This signalized intersection incurs high sides street delays, again, due to the allocation of the majority of greentime to the Dawsonville Highway approaches. There may be an opportunity to reduce the cycle length and fine-tune the signal timing at this intersection.
10. **Dawsonville Highway at Shallowford Road** – The lane configuration and signal phasing are appropriate for this intersection. Reduction of the cycle length and optimization of the allocation of greentime could reduce delays and queuing at this intersection.

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Introduction

This study assesses the traffic impact of a proposed multi-use Development of Regional Impact (DRI) in the City of Gainesville, Georgia. The site is located along the east side of Dawsonville Highway (Georgia State Route 53), and the east and west sides of Ahaluna Drive, as shown in the location map in Figure 1. The project will include a mix of senior living facilities, including senior-age-restricted single family homes, cottages, terrace homes, independent living apartments, and assisted living. In addition, the project will include a retail and office tract. This impact study includes the adjacent Willow Springs townhome development, to the north, and seven retail outparcels to be developed by others, located along the east side of GA 53.

The purpose of this traffic impact study is to determine existing traffic operating conditions in the vicinity of the proposed development, project future “no-build” and “build” traffic volumes, assess the impact of the subject development, then develop conclusions and recommendations to mitigate the project traffic impact and ensure safe and efficient existing and future traffic conditions in the vicinity of the project.

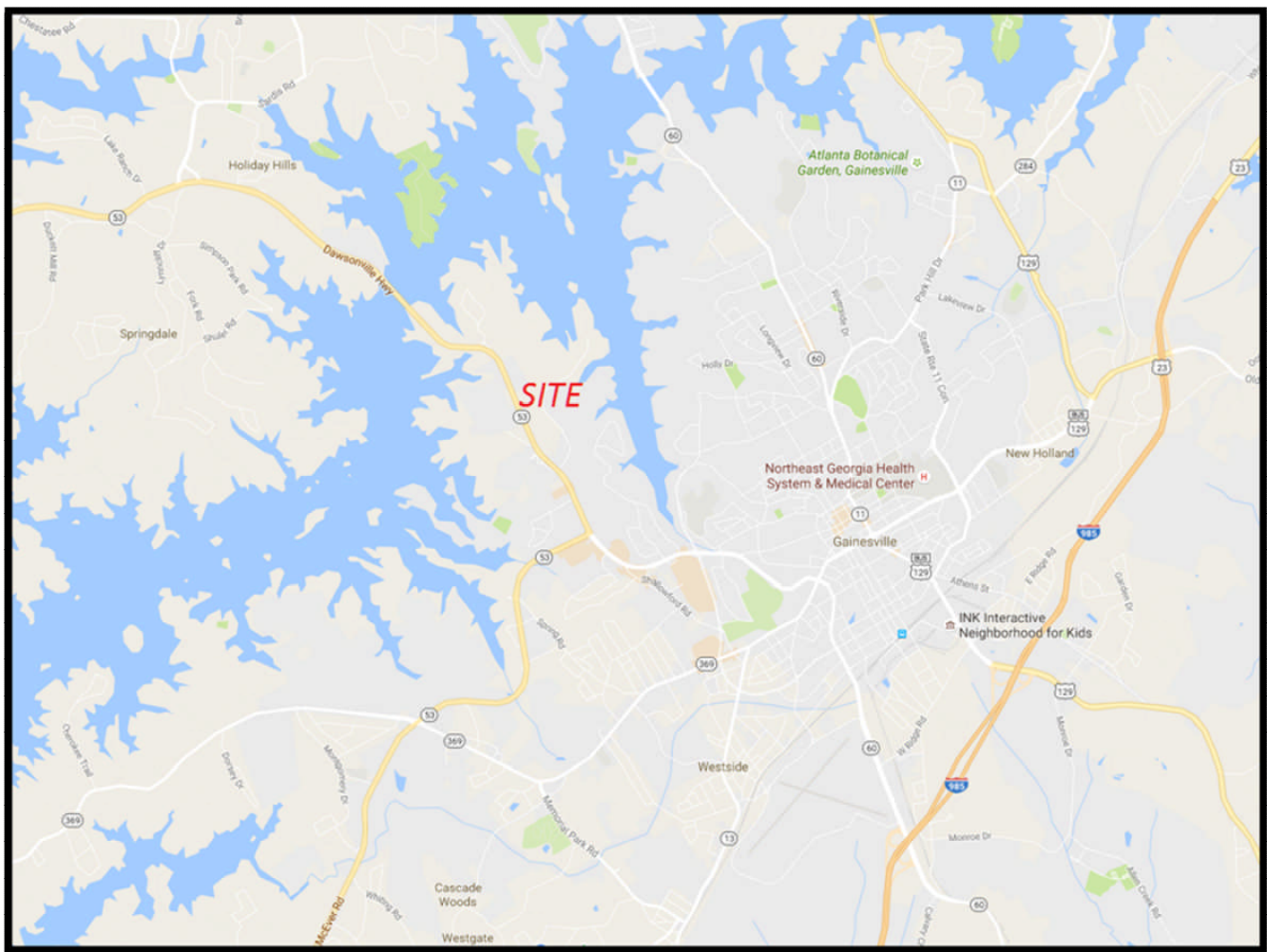


Figure 1 – Lanier Tract Location Map

Existing Traffic Conditions

Existing traffic operating conditions in the vicinity of the proposed Lanier Tract development were assessed. The following is a description of existing facilities, volumes, and intersection operations.

Description of Roadway Facilities

Georgia State Route 53 (Dawsonville Highway adjacent to the site) is a northwest to southeast principal arterial that extends from northwest Georgia, crosses US 19 and Lake Lanier, then passes the subject site and continues to the southeast. The State Route 53 designation turns to the southwest and continues along McEver Road to Mundy Mill Road, then follows Mundy Mill Road through its interchange with Interstate 985, and continues to the southeast. Adjacent to the subject development, GA 53 has two through travel lanes in each direction, is divided with a grassed median, and has exclusive turn lanes at major intersections. The terrain along this section of GA 53 is gently rolling and the posted speed limit is 45 mph.

Ahaluna Drive is a two lane rural local roadway that begins at a signalized intersection at GA 53 and winds through undeveloped land and low density residential development, to its terminus near the shore of Lake Lanier. The road is gently winding with rolling terrain. The proposed Lanier Tract development will develop some of the land on both sides of Ahaluna Drive, and the signal at GA 53 will provide one of the primary access points for this development to the roadway system.

Strickland Drive and Sportsman Club Road are two-lane residential streets that will provide access for the northern part of the proposed Lanier Tract DRI to GA 53. Strickland Drive is side street stop sign controlled at Sportsman Club Road and Sportsman Club Road is side street stop sign controlled at a median break on GA 53. Both roads are gently winding with gently rolling terrain and Strickland Drive becomes unpaved at its eastern terminus. The intersection of Sportsman Club Road at Strickland Drive is located in very close proximity to the intersection of Sportsman Club Road and Old Dawsonville Highway. However, lines of sight between the two intersections are clear and the volumes at these two locations are very low.

The following are photographs of intersections and roadways in the study area.



Photograph 1 – Sportsman Club Road Facing Strickland Drive From Old Dawsonville Highway



Photograph 2 – View From Sportsman Club Road Facing North Along GA 53



Photograph 3 – View From Avonlea Way Facing North Along GA 53



Photograph 4 – GA 53 Facing North at Ahaluna Drive



Photograph 5 – Ahaluna Drive Facing West with Retail Access to Left, SR 53 Ahead



Photograph 6 – Typical Section Along Ahaluna Drive



Photograph 7 – View From Beechwood Drive Facing Under-Construction Retail Across GA 53



Photograph 8 – Eastbound McEver Road at Dawsonville Highway



Photograph 9 – Northbound Dawsonville Highway at Shallowford Road

Existing Traffic Volumes

The City of Gainesville's Unified Land Development Code (ULDC) specifies that the study area to be included in a traffic impact study will be determined by calculating the peak hour and daily trips that the project will generate, then applying the table provided in the code, shown as Table 1, below, to determine the distance from the project that must be included in the study area.

Table 1 – ULDC Study Area Size Requirements

Peak Hour Trips Generated	Daily Trips Generated	Distance from Perimeter of Proposed Development Along Roads
100 - 150	1,000 – 1,500	½ mile
151 - 500	1,501 – 5,000	1 mile
501 – 1,000	5,001 – 10,000	2 miles
1001 or more	10,001 or more	3 miles

from the City of Gainesville ULDC

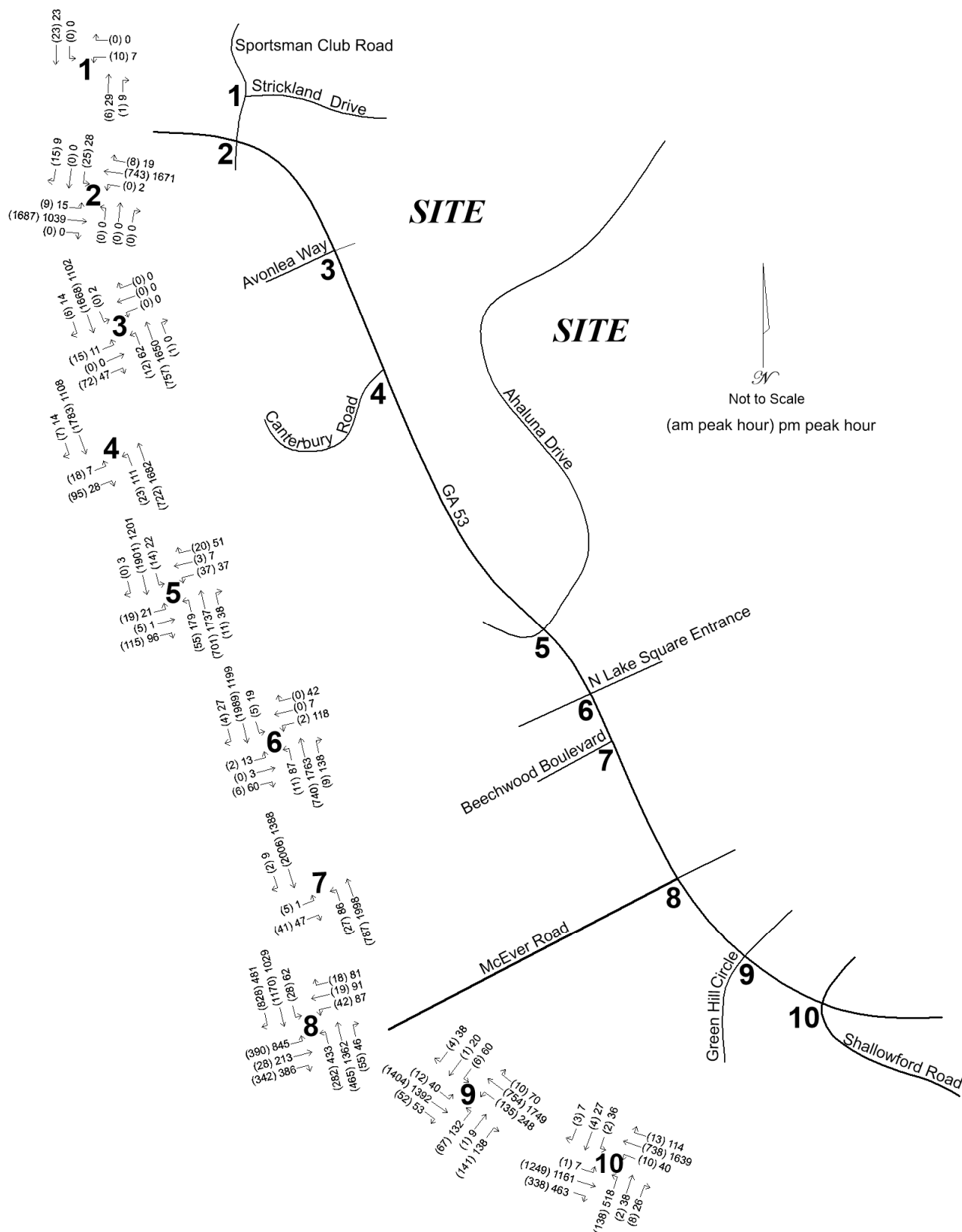
The trip generation for the proposed development is presented later in this report, summarized in Table 6. The peak hour trip generation for the project was calculated at 251 trips and the 24-hour volume is 3,097 trips. Based on these numbers, applied to the ULDC standard presented above, the study network was determined to

extend for one mile from the limits of the proposed site. The one mile limits were presented to the City and, based on that information, the intersections to be included in this study were agreed upon with the City as follows:

1. Sportsman Club Road at Strickland Drive
2. Dawsonville Highway at Sportsman Club Road
3. Dawsonville Highway at Avonlea Way
4. Dawsonville Highway at Canterbury Road
5. Dawsonville Highway at Ahaluna Drive
6. Dawsonville Highway at North Lake Square Shopping Center Entrance
7. Dawsonville Highway at Beachwood Boulevard
8. Dawsonville Highway at McEver Road
9. Dawsonville Highway at Green Hill Circle
10. Dawsonville Highway at Shallowford Road

Existing full turning movement traffic volume counts were collected at each of these intersections. The counts at most intersections were collected on Thursday, November 17, 2016, from 7:00 a.m. to 9:00 a.m. and from 4:30 p.m. to 6:30 p.m. The counts at the North Lake Square entrance were collected on Wednesday, March 22, 2017. Area schools were in standard session on the dates of the traffic counts. From the count data, the highest four consecutive 15-minute interval volumes at each intersection, during each time period, were determined. These volumes make up the typical weekday a.m. and p.m. peak hour traffic volumes at that intersection. The existing a.m. and p.m. peak hour turning movement volumes are shown in Figure 2. The intersection raw count data is found in Appendix A. It is noted that these existing volumes were compared with the volumes in the Preliminary Timing Report, SR 53 Connector – SR 60, Hall County, Georgia, dated April 2016, as provided by the City of Gainesville's traffic consultant. The magnitude of the side street volumes were found to be very comparable with the counts performed for this current study, and generally slightly higher. However, the volumes on the major streets were consistently notably higher for this current study.

Historic Georgia DOT 24-hour traffic counts were also collected in the vicinity. These counts are summarized in Table 3 in the No-Build Conditions section of this report. The 2015 (the latest year for which Georgia DOT data is available) Georgia DOT Average Annual Daily Traffic (AADT) volume on SR 53 north of Sportsman Club Road was 25,600 vehicles per day (vpd).



Existing Intersection Operations

Existing traffic operations were analyzed at the counted intersections using Synchro software, version 8, in accordance with the methodology presented in the Transportation Research Board's 2010 *Highway Capacity Manual (HCM 2010)*. The *HCM 2010* methodology is presented in Appendix B. The results of the analysis are shown in Table 2. Computer printouts containing detailed results of the analysis are located in Appendix C.

Table 2 – Existing Intersection Operations

Intersection / Approach	A.M. Peak Hour		P.M. Peak Hour	
	LOS	Delay s/veh	LOS	Delay s/veh
1. Sportsman Club Road at Strickland Drive	A	2.6	A	1.6
southbound left turn	A	0.0	A	0.0
westbound approach	A	8.8	A	8.9
2. Dawsonville Highway at Sportsman Club Road	A	5.3	C	17.3
northbound approach (turn lane)	A	0.0	A	0.0
southbound approach (Sportsman Club Road)	F	224.6	F	901.3
eastbound left turn (GA 53)	A	9.7	C	15.7
westbound left turn (GA 53)	A	0.0	B	10.7
3. Dawsonville Highway at Avonlea Way	A	2.5	A	1.2
northbound left turn (GA 53)	C	17.6	B	11.4
eastbound left turn	F	275.4	F	144.1
eastbound right turn	D	26.4	B	13.7
4. Dawsonville Highway at Canterbury Road	A	3.8	A	1.2
northbound left turn (GA 53)	C	18.5	B	12.4
eastbound left turn	F	363.9	F	183.8
eastbound right turn	D	30.1	B	13.5
5. Dawsonville Highway at Ahaluna Drive	B	16.5	B	12.7
northbound approach (GA 53)	A	4.6	A	8.6
southbound approach (GA 53)	B	15.9	B	10.4
eastbound approach	D	43.6	C	26.1
westbound approach	F	127.8	F	97.4
6. Dawsonville Highway at North Lake Square	A	1.7	B	14.8
northbound approach (GA 53)	A	0.8	B	12.9
southbound approach (GA 53)	A	1.8	A	8.7
eastbound approach	E	69.5	C	22.9
westbound approach	E	70.0	E	68.3
7. Dawsonville Highway at Beachwood Boulevard	A	1.4	A	0.7
northbound left turn (GA 53)	C	23.0	B	14.0
eastbound left turn	F	393.1	F	235.1
eastbound right turn	D	28.6	C	16.4
8. Dawsonville Highway at McEver Road	D	37.1	F	98.0
northbound approach (GA 53)	E	57.3	F	105.0
southbound approach (GA 53)	B	17.1	D	54.2

eastbound approach	E	68.5	F	145.0
westbound approach	E	60.1	E	67.2
9. Dawsonville Highway at Green Hill Circle	B	11.6	D	40.7
northbound approach (GA 53)	A	6.2	C	31.6
southbound approach (GA 53)	B	10.9	D	48.1
eastbound approach	D	39.5	E	56.2
westbound approach	D	38.1	E	61.3
10. Dawsonville Highway at Shallowford Road	B	10.6	D	48.6
northbound approach (GA 53)	A	5.5	C	32.7
southbound approach (GA 53)	A	6.2	D	50.7
eastbound approach	E	75.9	F	86.2
westbound approach	D	49.9	E	78.0

The analysis of the existing conditions reveals generally acceptable traffic operations at the study intersections. However, Dawsonville Highway, McEver Road, and Shallowford Road carry significant through traffic. At unsignalized intersections, the heavy major roadway volumes contribute to high side street delays. At signalized intersections, the side street delays are also high, even at locations with moderate side street volumes, due to the heavy greentime demands placed on the signals by the major street volumes. The existing conditions at each intersection are discussed briefly as follows:

1. **Sportsman Club Road at Strickland Drive** – Operations at this intersection are excellent due to extremely low volumes. This intersection is located very close to the stop sign controlled intersection of Sportsman Club Road at Old Dawsonville Highway. However, the volumes at that intersection are extremely low, also, and the lines of sight between the two intersections are clear. Therefore, no changes are recommended at this intersection for the existing condition.
2. **Dawsonville Highway at Sportsman Club Road** – The overall operations at this intersection are good, but the Sportsman Club Road southbound approach operates with high delays. This is not unusual for side street stop sign controlled approaches at major thoroughfares such as GA 53, and the volumes incurring the high delays are low. The only way to achieve side street delays better than LOS F is to signalize this intersection. However, signalization would introduce new delays to GA 53 and could also increase the potential for rear-end collisions on GA 53. Signalization would require satisfaction of applicable warrants, as proscribed in the Federal Highway Administration's *Manual On Uniform Traffic Control Devices* (MUTCD). While a warrant analysis was not performed as part of this traffic impact study, the low side street volumes make this intersection a weak candidate for signalization in the existing condition. A review of Georgia DOT auxiliary lane standards is provided later in this report, which concludes that a northwest-bound exclusive right turn lane is likely to be justified, based on existing volumes, on GA 53 at Sportsman Club Road.
3. **Dawsonville Highway at Avonlea Way, 4. Dawsonville Highway at Canterbury Road, and 7. Dawsonville Highway at Beachwood Boulevard** – The operations at these three unsignalized intersections are comparable with one another, with the GA 53 approaches operating well, moderate delays for the side

street right turn movements, and high delays for the side street left turn movements. These side street left turn delays are high for the same explanation just provided for Sportsman Club Road. As with that intersection, signalization would be required at these three intersections, in order to reduce the side street left turn delays to better than LOS F. At all three of these intersections, the side street approach volumes are predominately right turners, with extremely low left turn volumes. For this reason, these three intersections are considered unlikely candidates for signalization in the existing condition. No signal warrant analyses were performed at these intersections as part of this traffic study.

5. **Dawsonville Highway at Ahaluna Drive** – While this intersection is signalized, the greentime on the signal heavily favors the GA 53 approaches. This is appropriate given the volume disparity between the GA 53 approaches and the significantly-lower-volume side street approaches. This results in high side street delays, particularly on the westbound approach exiting Ahaluna Drive. A second westbound lane, striped as an exclusive right turn lane, would allow the signal to process more side street traffic with its limited greentime allocation. In addition, this second lane would allow for more right-turns-on-red which are currently trapped behind left and through trips. The addition of this right turn lane would require relocation of the steel strain pole for the signal, a drainage structure, and possibly a large brick monument sign, which could reduce the feasibility of adding this lane. Field observations suggest that there may be an opportunity to shorten the cycle length, which would reduce time spent by vehicles waiting for the side street green signal. A review of Georgia DOT auxiliary lane standards is provided later in this report, which concludes that a northbound exclusive right turn lane should be constructed on GA 53 at Ahaluna Drive in the existing condition. The addition of the second westbound lane on Ahaluna Drive and the northbound exclusive right turn lane on GA 53 will improve operations, but the Ahaluna Drive approach will still operate at LOS F in the a.m. peak hour due to the long cycle length with the greentime heavily favoring GA 53.
6. **Dawsonville Highway at North Lake Square Access** – This intersection operates well in both peak time periods. In the a.m., the side street approach volumes are extremely low, attributed to most or all of the retail on the side street approaches being closed for business at that time. The side street volumes increase notably in the p.m. Side street approach delays are fairly high, though still within acceptable limits. This is attributed to the allocation of the majority of greentime on the signal to the Dawsonville Highway approaches, resulting in long waits on the side streets, even when volumes are low.
8. **Dawsonville Highway at McEver Road** – This is the major intersection in the area, where the route of GA 53 turns from Dawsonville Highway to McEver Road. The lane configuration and signal phasing at this intersection are generally appropriate. The southbound right turn volume is sufficiently-high (828 a.m., 481 p.m.) to merit consideration of the addition of a second exclusive right turn lane and/or the addition of a protected right turn overlap phase. The overlap phase would provide a protected right turn arrow that would operate concurrently with the westbound left turn protected phase on the McEver Road approach. This would replace the red ball indication for that movement which would increase capacity by not requiring each right turner to stop. However, even with these improvements, the intersection will still operate at LOS F in the p.m. peak hour. Finally, there may be an opportunity to reduce the cycle length and fine-tune the signal timing at this intersection.

9. **Dawsonville Highway at Green Hill Circle** – This signalized intersection generally operates acceptably, but does incur some side-street delays, again, due to the allocation of the majority of greentime to the Dawsonville Highway approaches. There may be an opportunity to reduce the cycle length and fine-tune the signal timing at this intersection.
10. **Dawsonville Highway at Shallowford Road** – The lane configuration and signal phasing are appropriate for this intersection. Reduction of the cycle length and optimization of the allocation of greentime could reduce delays and queuing at this intersection.

Future No-Build Traffic Conditions

A future no-build condition was developed. This represents the traffic conditions that will exist in the future at the date of the full build-out of the proposed Lanier DRI, but not including the Lanier DRI trips. The purpose of the no-build analysis is to isolate the traffic impacts of the proposed development from other growth and development that is expected to occur in the area while the Lanier DRI is under construction.

The no-build condition consists of the counted traffic volumes, increased by a general background growth factor. In order to develop the background growth factor, historic Georgia DOT 24-hour traffic counts were collected in the vicinity of the Lanier DRI. These counts were performed from 2011 through 2015 (the latest year for which Georgia DOT data is available) and, according to the Georgia DOT, the counts were adjusted for a variety of factors, including season, in order to arrive at the Average Annual Daily Traffic (AADT) volume. The Georgia DOT AADT counts are summarized in Table 3.

Table 3 – Georgia DOT Daily Traffic Volume Counts

Year	SR 53 N of Sportsman	Annual Growth	McEver W of SR 53	Annual Growth	Dawsonville S of Shallowford	Annual Growth	Shallowford S of Dawsonville	Annual Growth
Station ID	1390269		1390274		1390258		1390647	
2011	23,830	na	21,520	na	25,950	na	8,280	na
2012	23,520	-1.3%	21,150	-1.7%	25,610	-1.3%	8,140	-1.7%
2013	22,730	-3.4%	20,890	-1.2%	25,520	-0.4%	8,090	-0.6%
2014	22,700	-0.1%	20,900	0.0%	25,500	-0.1%	13,300	64.4%
2015	25,600	12.8%	21,600	3.3%	26,300	3.1%	13,700	3.0%
Annual Average		1.8%		0.1%		0.3%		13.4%

The annual growth trend has fluctuated from year to year, with generally negative growth during the first few count years, then strong growth in the most recent years. The average annual growth on GA 53 closest to the site has been 1.8%. A modest 2% annual growth factor was applied to the counted volumes when projecting the future no-build volumes. The growth was applied for five years, for a total of 10.4% growth, that will occur while the Lanier Tract DRI is under construction.

The existing, counted traffic volumes were increased by the 10.4% growth factor. The results are the no-build condition traffic volumes that will be on the roadway network in the future when the Lanier Tract DRI is completed, but excluding the Lanier Tract DRI trips. These no-build volumes are shown in Figure 3.

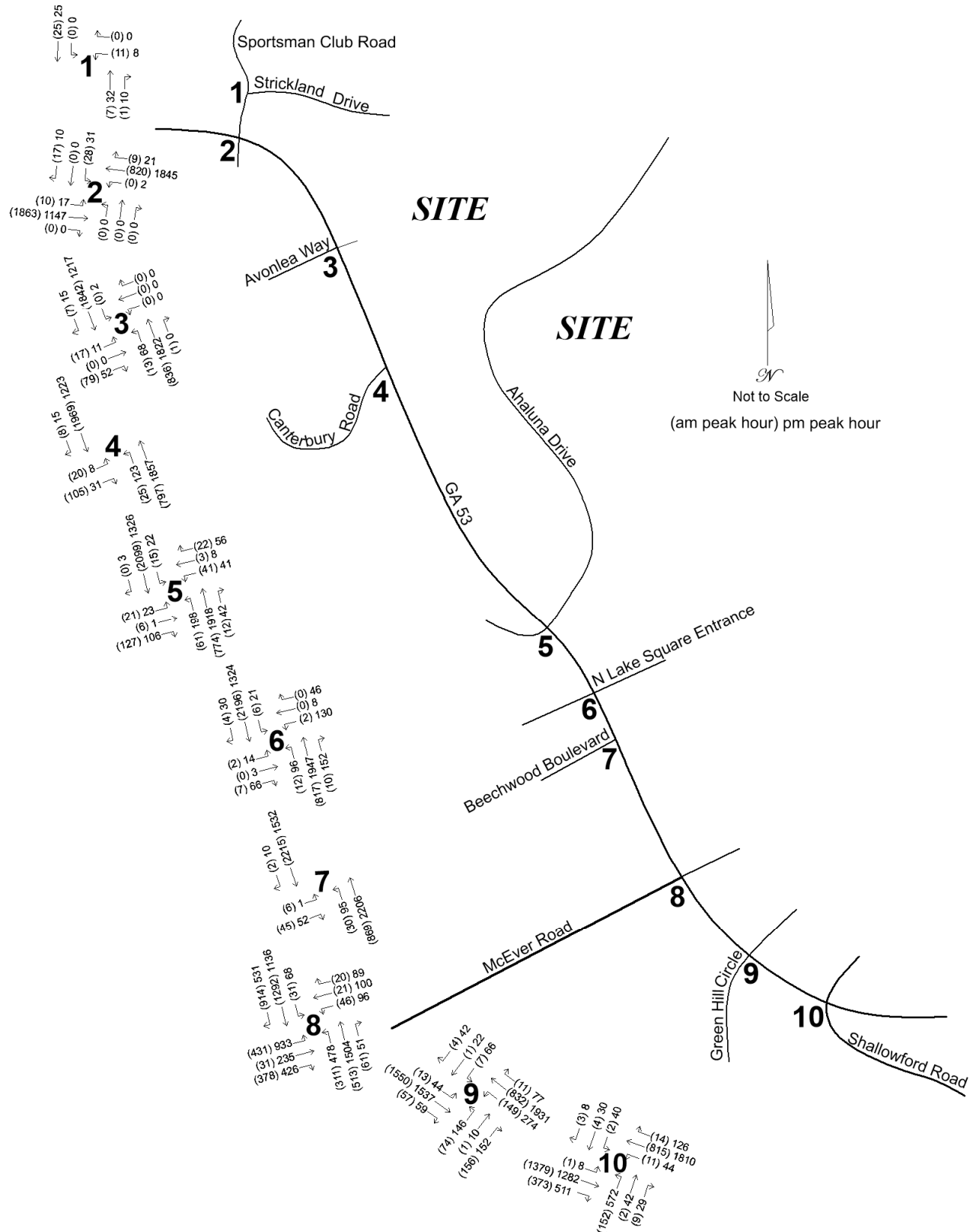


Figure 3 – Future No-Build Traffic Volumes

Future No-Build Intersection Operations

No-build traffic operations were analyzed at the counted intersections using Synchro software, version 8, in accordance with the methodology presented in the Transportation Research Board's 2010 *Highway Capacity Manual (HCM 2010)*. The *HCM 2010* methodology is presented in Appendix B. The results of the analysis are shown in Table 4. Computer printouts containing detailed results of the analysis are located in Appendix D.

Table 4 – Future No-Build Intersection Operations

Intersection / Approach	A.M. Peak Hour		P.M. Peak Hour	
	LOS	Delay s/veh	LOS	Delay s/veh
1. Sportsman Club Road at Strickland Drive	A	2.6	A	1.7
southbound left turn	A	0.0	A	0.0
westbound approach	A	8.9	A	8.9
2. Dawsonville Highway at Sportsman Club Road	B	11.8	D	34.3
northbound approach (turn lane)	A	0.0	A	0.0
southbound approach (Sportsman Club Road)	F	496.6	F	1,780.7
eastbound left turn (GA 53)	B	10.3	C	17.9
westbound left turn (GA 53)	A	0.0	B	11.3
3. Dawsonville Highway at Avonlea Way	A	4.5	A	1.5
northbound left turn (GA 53)	C	20.4	B	12.2
eastbound left turn	F	552.3	F	229.1
eastbound right turn	D	33.7	B	14.7
4. Dawsonville Highway at Canterbury Road	A	6.7	A	1.7
northbound left turn (GA 53)	C	21.7	B	13.7
eastbound left turn	F	715.5	F	349.9
eastbound right turn	E	41.5	B	14.4
5. Dawsonville Highway at Ahaluna Drive	C	22.3	B	15.5
northbound approach (GA 53)	A	5.6	B	11.5
southbound approach (GA 53)	C	22.7	B	14.0
eastbound approach	E	58.3	C	23.8
westbound approach	F	139.1	F	96.6
6. Dawsonville Highway at North Lake Square	A	3.2	B	16.6
northbound approach (GA 53)	A	1.0	B	14.8
southbound approach (GA 53)	A	3.9	B	10.7
eastbound approach	E	69.5	C	21.8
westbound approach	E	70.0	E	68.1
7. Dawsonville Highway at Beachwood Boulevard	A	2.6	A	0.9
northbound left turn (GA 53)	D	28.6	C	15.8
eastbound left turn	F	866.6	F	375.6
eastbound right turn	E	36.2	C	18.4
8. Dawsonville Highway at McEver Road	D	45.7	F	127.3
northbound approach (GA 53)	E	67.7	F	135.0

southbound approach (GA 53)	C	20.0	E	57.9
eastbound approach	F	92.6	F	208.0
westbound approach	E	61.8	E	70.6
9. Dawsonville Highway at Green Hill Circle	B	14.2	E	65.1
northbound approach (GA 53)	A	8.2	E	70.6
southbound approach (GA 53)	B	13.5	D	54.3
eastbound approach	D	44.0	E	58.1
westbound approach	D	38.8	F	112.9
10. Dawsonville Highway at Shallowford Road	B	12.5	E	73.1
northbound approach (GA 53)	A	6.0	E	72.0
southbound approach (GA 53)	A	9.1	E	57.5
eastbound approach	E	76.3	F	119.5
westbound approach	D	49.9	E	77.7

The analysis of the no-build condition reveals increases in delays at each of the study intersections, as would be expected. The no-build analysis did not include any of the potential mitigation discussed in the existing analysis. The no-build condition at each intersection is discussed briefly as follows:

- 1. Sportsman Club Road at Strickland Drive** – Operations at this intersection will continue to be excellent in the no-build condition. Therefore, no changes are recommended at this intersection for the no-build condition.
- 2. Dawsonville Highway at Sportsman Club Road** – The side street delays will become very high in the no-build condition. However, the volumes incurring these delays will remain modest and it is considered unlikely that this intersection would be a good candidate for signalization.
- 3. Dawsonville Highway at Avonlea Way, 4. Dawsonville Highway at Canterbury Road, and 7. Dawsonville Highway at Beachwood Boulevard** – The no-build operations at these three unsignalized intersections will be comparable to the existing condition, with the GA 53 approaches operating well, moderate delays for the side street right turn movements, and high delays for the side street left turn movements. As with the existing condition, at all three of these intersections, the side street volumes are predominately right turners, with extremely low left turn volumes. For this reason, these three intersections are expected to be unlikely candidates for signalization in the no-build condition.
- 5. Dawsonville Highway at Ahaluna Drive** – The Ahaluna Drive approach will continue to operate at LOS F and the delays will increase. The mitigation discussed in the existing condition is still applicable.
- 6. Dawsonville Highway at North Lake Square Access** – This intersection will operate comparably in the no-build condition, as in the existing condition. No mitigation is identified for this intersection in the no-build condition.
- 8. Dawsonville Highway at McEver Road** – Operations will continue to be congested at this intersection. The mitigation discussed in the existing condition is still applicable.

9. **Dawsonville Highway at Green Hill Circle** – Delays will increase from the existing to no-build conditions. A.M. peak operations will continue to be acceptable, while the p.m. peak will teeter between LOS E and LOS F. No new mitigation is identified for the no-build condition.
10. **Dawsonville Highway at Shallowford Road** – As with the other intersections, no new mitigation is identified for the no-build condition. Delays will increase from the existing condition, but will generally remain acceptable in the a.m. and at the LOS E to LOS F threshold in the p.m.

Lanier Tract Traffic Characteristics

This section describes the anticipated traffic characteristics of the proposed Lanier Tract development, including a site description, how much traffic the project will generate, and where that traffic will travel.

Project Description

The Lanier Tract DRI is a primarily senior-age-restricted residential community that will be developed generally along Ahaluna Drive and Strickland Drive. There will be an office/retail node along GA 53, north of Avonlea Way. A fire station of 10,650 square feet is also proposed to be constructed along GA 53 in conjunction with this development. Vehicular access will be provided at several locations, primarily along Ahaluna Drive, with connections to GA 53 via Strickland Drive, at the median opening at Avonlea Way, and through adjacent outparcels (which will be discussed in the Future Phase Two section of this report), aligning with Canterbury Road. The office/retail node will have a two right-in / right-out accesses directly on GA 53, with no anticipated internal connection to the balance of the development. The site plan is presented in Figure 4.

Trip Generation

The volume of traffic that will be generated by the proposed Lanier Tract DRI was calculated using the equations and rates in the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, 9th Edition. The trip generation for all of the detached homes was calculated using ITE Land Use 251 – Senior Adult Housing – Detached. The trips for the independent living units were calculated using ITE Land Use 253 – Congregate Care Facility. The trips for the assisted living facility were determined using ITE Land Use – 254 – Assisted Living. The storage facility trips were calculated using ITE Land Use 151 – Mini-Warehouse. The office / retail trip generation was calculated by dividing the total square footage of that commercial node in half and applying ITE Land Use 820 – Shopping Center to half of the square footage and ITE Land Use 750 – Office Park to the other half.

No multi-use adjustment was applied to the raw trip generation to account for the mixed-use nature of the project, because the office/retail node is not connected internally with the balance of the project. The retail trip generation was adjusted to account for pass-by trips. Pass-by trips are trips to the retail that are currently driving on GA 53 and which will turn into the site for shopping purposes then continue on the trip they are already making. The ITE *Trip Generation Manual* provides an average p.m. peak hour pass-by percentage of 38% for the shopping center land use. However, the plan for this development, with the retail mixed with office, suggests that this retail may be highly destination-oriented. To be conservative, a 25% pass-by adjustment was made for the p.m. peak hour trips, while a 15% adjustment was applied to the a.m. peak hour and 24-hour volumes.

The fire station will be located on the GA 53 adjacent to the project and will serve not just this project, but also the surrounding community. The trips that will be generated by the fire station are expected to be very low. Therefore, the trip generation of the fire station was excluded from this calculation.

The trip generation calculations are shown in Table 5.

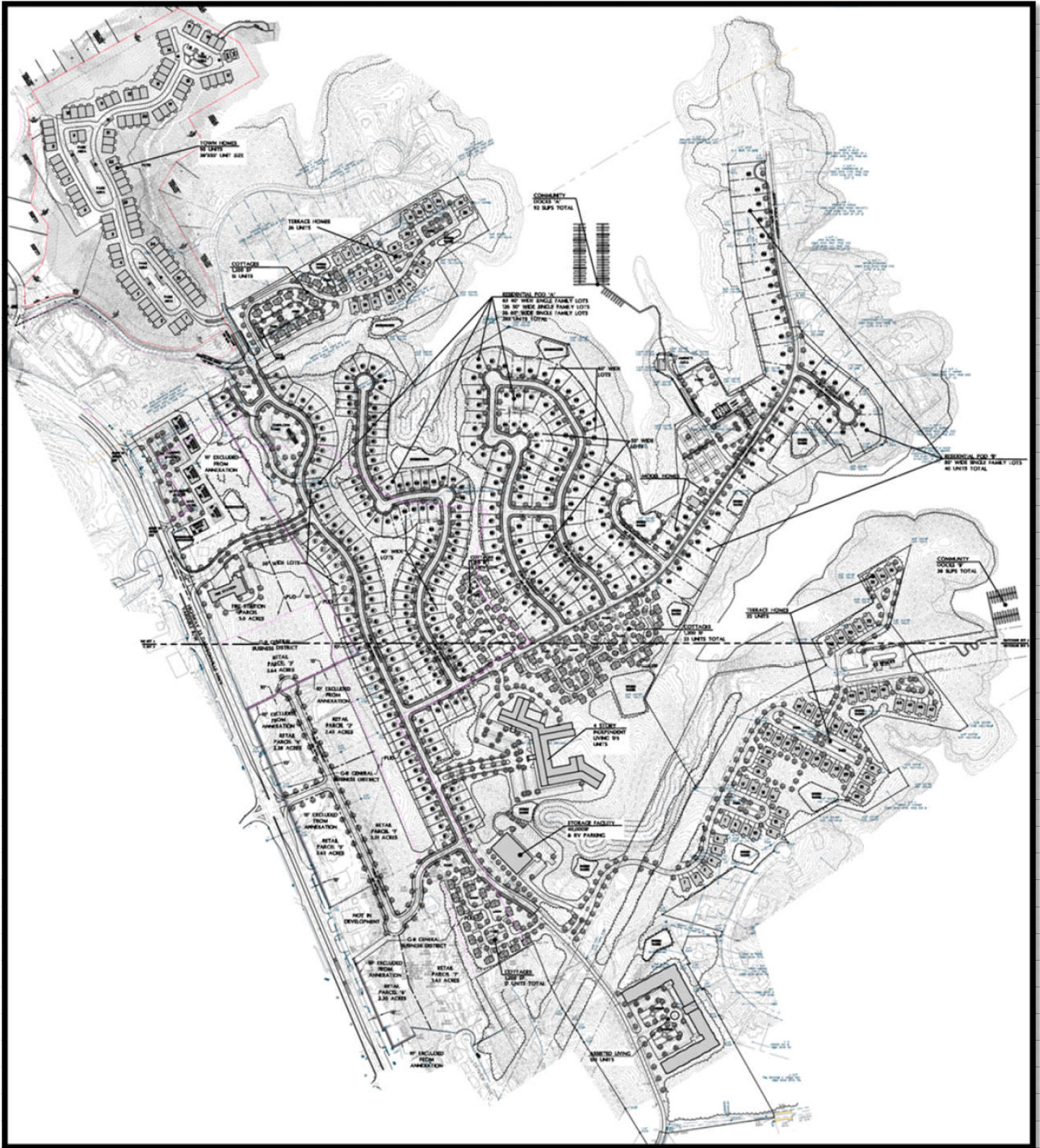


Figure 4 – Lanier Tract Site Plan

Table 5 – Lanier Tract Trip Generation

Land Use	ITE Code	Size	A.M. Peak Hour			P.M. Peak Hour			24-Hour
			In	Out	Total	In	Out	Total	2-Way
Terrace Homes Detached (at Strickland)	251	26 homes	2	4	6	4	3	7	96
Cottages Detached (at Strickland)	251	15 homes	1	2	3	2	2	4	56
Pod A Single Family Detached	251	265 homes	20	38	58	44	28	72	976
Pod B Single Family Detached	251	40 homes	3	6	9	6	5	11	147
Cottages Detached	251	64 homes	5	9	14	11	6	17	236
Terrace Homes Detached	251	55 homes	4	8	12	9	6	15	202
Independent Living	253	175 units	6	5	11	16	14	30	354
Assisted Living	254	<u>150 beds</u>	<u>14</u>	<u>7</u>	<u>21</u>	<u>15</u>	<u>18</u>	<u>33</u>	<u>356</u>
Total Residential New Trips		790 units	55	79	134	107	82	189	2,423
Storage	151	40,000 ft ²	3	3	6	5	5	10	100
Office	750	12,000 ft ²	18	3	21	2	16	18	138
Retail Total Trips	820	12,000 ft ²	7	5	12	21	24	45	512
-pass-by		15/25/15%	<u>-1</u>	<u>-1</u>	<u>-2</u>	<u>-5</u>	<u>-6</u>	<u>-11</u>	<u>-76</u>
Retail New Trips			<u>6</u>	<u>4</u>	<u>10</u>	<u>16</u>	<u>18</u>	<u>34</u>	<u>436</u>
Total Commercial New Trips			24	7	31	18	34	52	574
Total Project New Trips			82	89	171	130	121	251	3,097

Notes: The detached homes trip calculations employed ITE average rates due to numbers of units generally much smaller than average sizes in the ITE data. The office and retail calculations were based on ITE average rates due to square footages much smaller than average sizes in the ITE data.

Willow Springs Townhomes

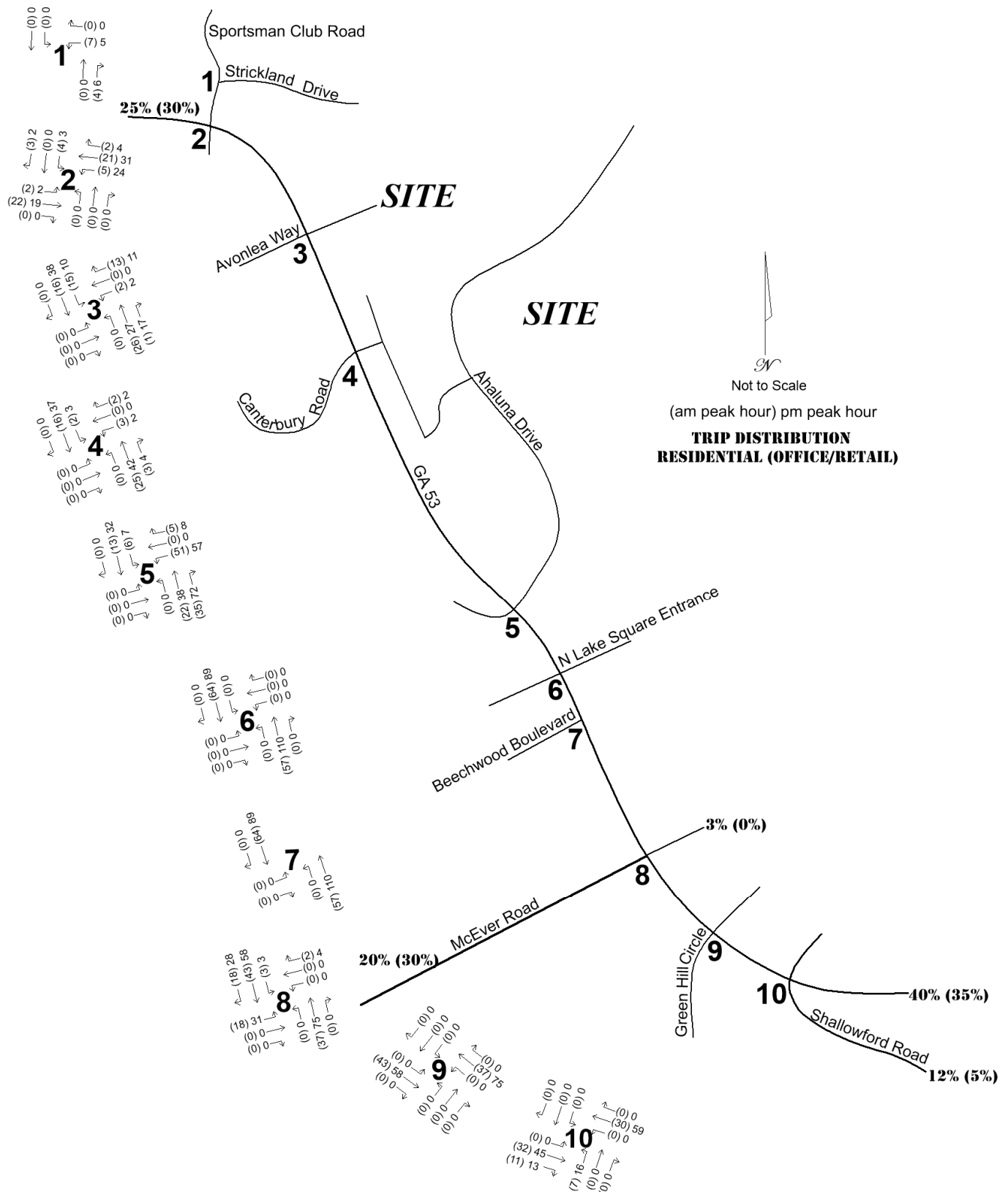
A small development of 90 senior-age-restricted townhomes is anticipated to be developed concurrently with the Lanier Tract DRI, along Karen Lane (shown in the site plan in Figure 4 at the northern end of the site, bordered in red). The trips for this development were calculated using ITE Land Use 252 – Senior Adult Housing – Attached. The Willow Springs trips are shown in Table 6.

Table 6 – Willow Springs Townhomes Trip Generation

Land Use	ITE Code	Size	A.M. Peak Hour			P.M. Peak Hour			24-Hour
			In	Out	Total	In	Out	Total	2-Way
Senior Adult Housing - Attached	252	90	6	12	18	12	11	23	290

Trip Distribution and Assignment

The trip distribution percentages indicate what proportion of the project's trips will travel to and from various directions. The new trips were distributed based on the locations and proximity of likely trip origins and destinations for each land use. The residential trips, including the Willow Springs Townhomes, were distributed based on the locations of urban centers and retail nodes, while the office and retail trips were distributed based on population densities. The new project trips, shown in Table 5, were assigned to the roadway network based on these distribution percentages. Pass-by trips were assigned, where appropriate, based on existing traffic flows passing the site. The new trip distribution percentages for each land use, and the total peak hour trips expected to be generated by the site, are shown in Figure 5. The Willow Springs trips, shown in Table 6, were distributed to the study intersections using the same distribution as the Lanier Tract residential trips. These trips are not included in the site generated trips shown in Figure 5, but they are included in the future analysis. Appendix A contains intersection volume worksheets that show the specific Willow Springs trips (as well as all other Lanier Tract residential, office, and retail trips) for each movement at each intersection.



Future Phase One Traffic Conditions

This section describes the anticipated future traffic conditions after the Lanier Tract DRI is fully constructed and operational.

Future Phase One Traffic Volumes

The trips from the Lanier Tract DRI (and Willow Springs) were added to the future no-build volumes (comprised of the counted volumes increased by 10.4%, as described previously). The resulting volumes are the traffic volumes that will be at each intersection when the Lanier Tract is fully operational. A strip of land between the Lanier Tract and the east side of GA 53 is anticipated to be developed by others with retail outparcels at some future date. The impact of this outparcel development is evaluated in the Future Phase Two analysis, discussed later in this report. However, as part of the Lanier Tract development, a roadway will be constructed through that strip of land, to connect the Lanier Tract to GA 53 at the existing median break at Canterbury Road. The Future Phase One volumes and analysis include this connection. The Future Phase One traffic volume projections are shown in Figure 6. These volumes are also shown in the intersection volume worksheets in Appendix A.

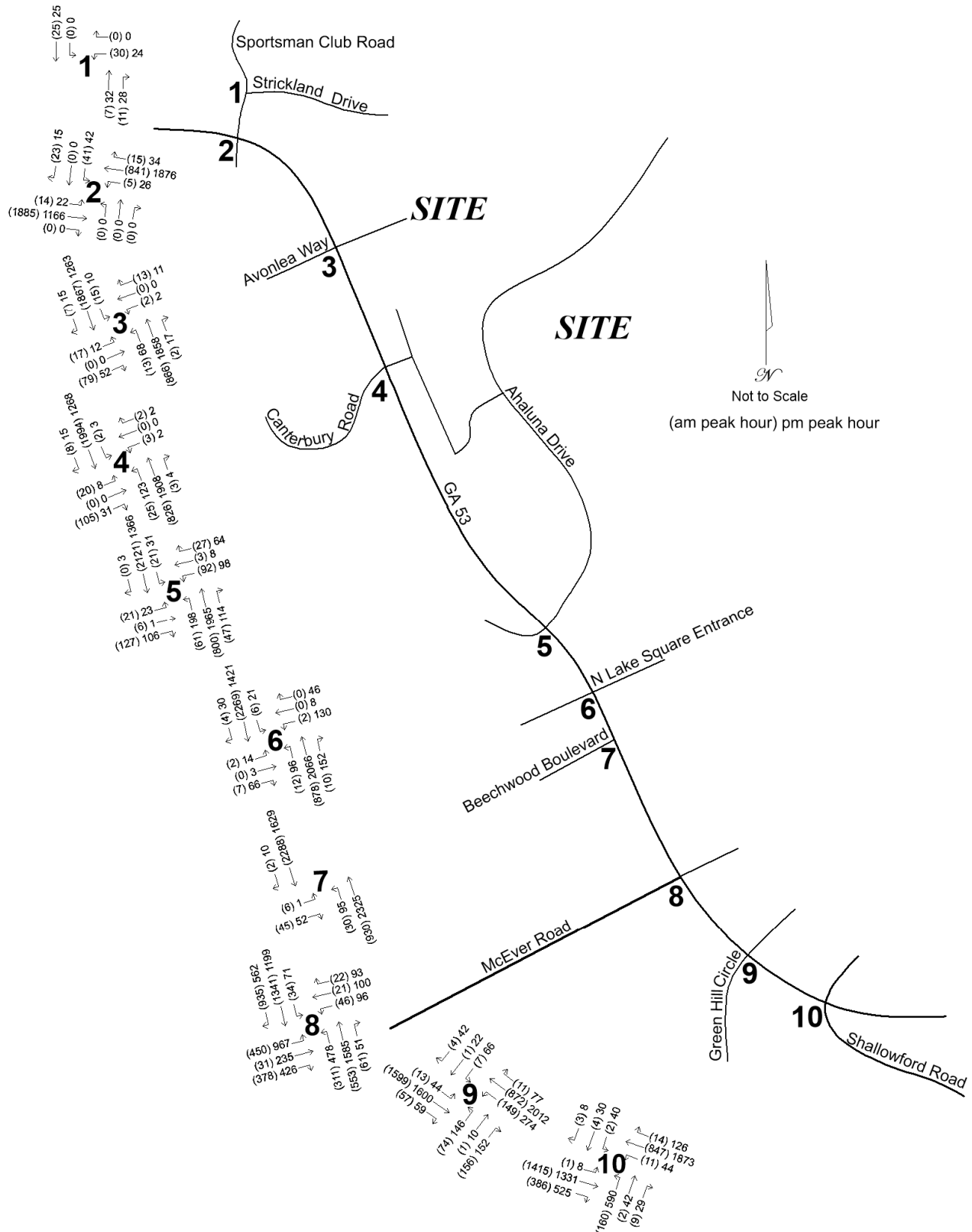


Figure 6 – Future Phase One Peak Hour Traffic Volume Projections

Future Phase One Intersection Operations

An operational analysis was performed for the Future Phase One conditions. Table 7 presents the results of this analysis. Computer printouts containing detailed results of the analysis are located in Appendix E.

Table 7 – Future Phase One Intersection Operations

Intersection / Approach	A.M. Peak Hour		P.M. Peak Hour	
	LOS	Delay s/veh	LOS	Delay s/veh
1. Sportsman Club Road at Strickland Drive	A	4.2	A	3.2
southbound left turn	A	0.0	A	0.0
westbound approach	A	9.1	A	9.2
2. Dawsonville Highway at Sportsman Club Road	C	23.0	F	74.4
northbound approach (turn lane)	A	0.0	A	0.0
southbound approach (Sportsman Club Road)	F	834.4	F	2,872.3
eastbound left turn (GA 53)	B	10.4	C	18.7
westbound left turn (GA 53)	C	20.5	B	11.7
3. Dawsonville Highway at Avonlea Way	A	9.8	A	4.2
northbound left turn (GA 53)	C	20.8	B	12.6
southbound left turn	B	10.3	C	17.9
eastbound left turn	F	1,381.4	F	653.3
eastbound right turn	D	34.9	C	15.1
westbound left turn	F	288.1	F	696.5
westbound right turn	B	12.1	C	20.5
4. Dawsonville Highway at Canterbury Road	B	12.4	A	3.8
northbound left turn (GA 53)	C	22.2	B	14.2
southbound left turn	B	10.1	C	17.8
eastbound left turn	F	1,504.7	F	767.5
eastbound right turn	E	43.3	B	14.8
westbound left turn	F	436.1	F	1,069.5
westbound right turn	B	11.8	C	20.0
5. Dawsonville Highway at Ahaluna Drive	C	31.7	C	21.4
northbound approach (GA 53)	A	6.8	B	15.7
southbound approach (GA 53)	D	35.3	C	20.4
eastbound approach	D	46.8	B	17.5
westbound approach	F	134.1	F	104.1
6. Dawsonville Highway at North Lake Square	A	3.9	B	17.4
northbound approach (GA 53)	A	1.1	B	15.9
southbound approach (GA 53)	A	4.9	B	11.8
eastbound approach	E	69.5	C	21.8
westbound approach	E	70.0	E	68.1
7. Dawsonville Highway at Beachwood Boulevard	A	3.3	A	0.9
northbound left turn (GA 53)	D	30.7	C	17.1
eastbound left turn	F	1,230.3	F	534.2

eastbound right turn	E	39.4	C	19.8
8. Dawsonville Highway at McEver Road	D	50.9	F	142.6
northbound approach (GA 53)	E	77.0	F	161.1
southbound approach (GA 53)	C	21.9	E	59.3
eastbound approach	F	104.0	F	230.3
westbound approach	E	60.9	E	74.4
9. Dawsonville Highway at Green Hill Circle	B	14.9	E	67.3
northbound approach (GA 53)	A	8.6	E	72.6
southbound approach (GA 53)	B	14.3	E	56.9
eastbound approach	D	47.1	E	59.7
westbound approach	D	38.8	F	119.2
10. Dawsonville Highway at Shallowford Road	B	13.3	E	78.6
northbound approach (GA 53)	A	6.2	E	73.6
southbound approach (GA 53)	B	10.1	E	66.1
eastbound approach	E	76.5	F	128.7
westbound approach	D	49.9	E	77.7

A note is made here about the high delays accompanying some of the LOS F. As delays increase, the model's average delay per vehicle projections exceed model capabilities and the results become unrealistic. For example, it is highly improbable that the eastbound left turn from Canterbury Road will incur an average delay of 1,504.7 seconds, or 25 minutes, per vehicle. These high delay numbers are reported to provide an indication of the severity of the LOS F, and were reviewed with engineering judgment when developing conclusions and recommendations.

The operational analysis of Future Phase One conditions reveals some increases in delays from the no-build condition. The most notable changes are increases in the side street delays at both unsignalized and signalized intersections. The Lanier Tract DRI generally contributes a small proportion to the increases in volumes between the existing condition and the Future Phase One, while the background growth contributes a significant proportion of the increases. At most intersections, aside from the site access points along GA 53, the Lanier Tract DRI will contribute primarily to the major roadway through movements. The project's most significant impact will occur at four locations – Sportsman Club Road at GA 53, Avonlea Way at GA 53, Canterbury Road at GA 53, and Ahaluna Drive at GA 53, with the greatest impact being at Ahaluna Drive. The Future Phase One condition at each intersection is discussed briefly as follows:

1. **Sportsman Club Road at Strickland Drive** – Operations at this intersection are will continue to be excellent in the no-build condition. Therefore, no changes are recommended at this intersection for the Future Phase One condition.
2. **Dawsonville Highway at Sportsman Club Road** – The side street delays will continue to be very high in the future. However, the volumes incurring these delays will remain modest and it is considered unlikely that this intersection would be a good candidate for signalization, even in the Future Phase One condition.

3. **Dawsonville Highway at Avonlea Way** – The Lanier Tract DRI will replace the existing private driveway at this location, with a main access to the project. The alignment with the median break will allow full movement operations at this site access. However, it is anticipated that volumes using this access will be modest for a few reasons. First, most of the site trips will be oriented to and from the south on GA 53. Therefore, the propensity of most trips will be to travel along Ahaluna Drive to the signal at GA 53, rather than to turn in and out of the unsignalized access across from Avonlea Way. Some trips traveling to and from the north will use this access and some will use the connection through the site to Strickland Drive. For these reasons, the volumes exiting the site at this location will be low, and will include more right turners than left turners. On the existing eastbound approach of Avonlea Way, the right turn volumes are also notably higher than the left turners. This is an indication that this intersection is unlikely to meet warrants for signalization in the future. No signal warrant analysis was performed at this intersection as part of this study. A right turn lane analysis (presented later) was performed for the northbound direction of GA 53 at the site access at Avonlea Way. The analysis indicates that it is likely that a right turn lane will be justified at this location in the Future Phase One condition and the site plan includes this lane.
4. **Dawsonville Highway at Canterbury Road** – As with the Avonlea intersection, the volumes entering and exiting the Lanier Tract at Canterbury will be very low. The circuitous road configuration through the adjacent future retail tracts will further discourage use of this access. Therefore, for Future Phase One, this intersection is considered unlikely to meet signal warrants. No signal warrant analysis was performed at this intersection as part of this study. A right turn lane analysis (presented later) was performed for the northbound direction of GA 53 at the site access at Canterbury Road. The analysis indicates that it is *not* likely that a right turn lane will be justified at this location in the Future Phase One condition.
5. **Dawsonville Highway at Ahaluna Drive** – The Ahaluna Drive approach will continue to operate at LOS F and the delays will increase. The mitigation discussed in the existing condition is still applicable, including the addition of a northbound right turn lane on GA 53 and a second westbound lane on Ahaluna Drive.
6. **Dawsonville Highway at North Lake Square Access** – This intersection will operate comparably in the future as in the existing and no-build conditions. No mitigation is identified for this intersection in the Future Phase One condition.
7. **Dawsonville Highway at Beachwood Boulevard** – The operations at this unsignalized intersections will continue comparable to the existing and no-build conditions, with the GA 53 approaches operating well, moderate delays for the side street right turn movement, and high delays for the side street left turn movement. The side street volumes will continue to be predominately right turners, with extremely low left turn volumes. For this reason, this intersection is considered unlikely to meet warrants for signalization in the future.
8. **Dawsonville Highway at McEver Road** – Operations will continue to be congested at this intersection, with the overall intersection operating at LOS F in the p.m., and several approaches operating at LOS F in the a.m. and/or p.m. The mitigation discussed in the existing condition is still applicable. This intersection is built-out and the mitigation discussed in the existing analysis includes the addition of a second

southbound right turn lane. Short of widening GA 53 with additional through lanes, or reducing volumes at this intersection, there are not many additional options to mitigate the high delays.

9. **Dawsonville Highway at Green Hill Circle** – Delays will increase from the no-build condition to the future. A.M. peak operations will continue to be acceptable, while the p.m. peak will teeter between LOS E and LOS F. No new mitigation is identified for the Future Phase One condition.
10. **Dawsonville Highway at Shallowford Road** – Delays will increase from the no-build condition, but will generally remain acceptable in the a.m. and at the LOS E to LOS F threshold in the p.m. No new mitigation is identified for the Future Phase One condition.

Future Phase Two Traffic Conditions

A strip of land along the east side of GA 53, west of the Lanier Tract, is anticipated to be developed by others at some future date. A Future Phase Two condition was developed to assess the traffic operations after this land is developed.

The land is anticipated to be developed as seven outparcels, with 8,000 square feet of retail shopping on each, for a total of 56,000 square feet of retail shopping. The trip generation of the outparcels is presented in Table 8.

Table 8 – Outparcel Trip Generation

Land Use	ITE Code	Size	A.M. Peak Hour			P.M. Peak Hour			24-Hour
			In	Out	Total	In	Out	Total	2-Way
Outparcel Total Trips	820	56,000 ft ²	68	41	109	195	211	406	4,658
-pass-by		30/40/30%	<u>-20</u>	<u>-12</u>	<u>-32</u>	<u>-78</u>	<u>-84</u>	<u>-162</u>	<u>-1,398</u>
Outparcel New Trips			48	29	77	117	127	244	3,260

The outparcels will be served by a full movement access that will align with the existing median break on GA 53 at Canterbury Road. A connecting roadway will run through the outparcel property and connect to the main roadway through the western portion of the Lanier Tract (connecting Strickland Drive to Ahaluna Drive). The connecting roadway through the outparcel property was assumed to be constructed during the development of the Lanier Tract, and was included in the Future Phase One analysis, as discussed previously. This will allow trips from the proposed Lanier Tract to access GA 53.

The trips that will be generated by the outparcels were distributed to the study intersections using the same trip distribution percentages developed for the retail portion of the Lanier Tract DRI (with one minor difference – five percent of the outparcel trips were distributed back into the Lanier Tract, in anticipation of the trips that will travel between the outparcels and the Lanier Tract DRI. This five percent was subtracted from the south, to and from McEver Road). The Lanier Tract distribution percentages were shown previously in this report, in Figure 5.

Future Phase Two Traffic Volumes

The trips from the outparcels were added to the Future Phase One volumes (comprised of the counted volumes increased by 10.4%, plus the Lanier Tract and Willow Springs trips, as described previously). The resulting volumes are the traffic volumes that will be at each intersection when the outparcels are developed and operational. The Future Phase Two traffic volume projections are shown in Figure 7. These volumes are also shown in the intersection volume worksheets in Appendix A.

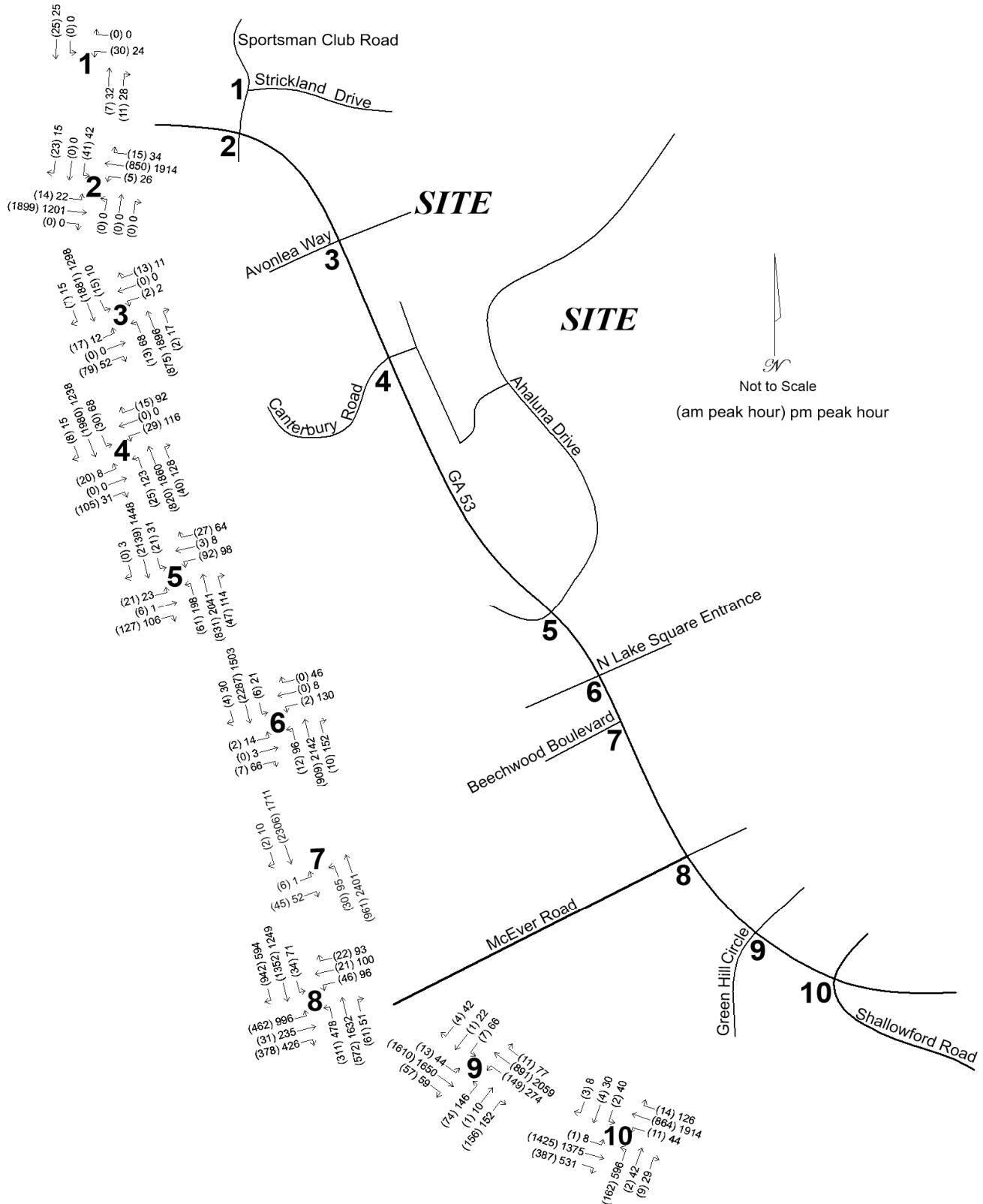


Figure 7 – Future Phase Two Peak Hour Traffic Volume Projections

Future Phase Two Intersection Operations

An operational analysis was performed for the Future Phase Two conditions. Table 9 presents the results of this analysis. Computer printouts containing detailed results of the analysis are located in Appendix E.

Table 9 – Future Phase Two Intersection Operations

Intersection / Approach	A.M. Peak Hour		P.M. Peak Hour	
	LOS	Delay s/veh	LOS	Delay s/veh
1. Sportsman Club Road at Strickland Drive	A	4.2	A	3.2
southbound left turn	A	0.0	A	0.0
westbound approach	A	9.1	A	9.2
2. Dawsonville Highway at Sportsman Club Road	C	23.7	F	74.3
northbound approach (turn lane)	A	0.0	A	0.0
southbound approach (Sportsman Club Road)	F	866.3	F	3,330.7
eastbound left turn (GA 53)	B	10.5	C	19.2
westbound left turn (GA 53)	C	20.8	B	11.9
3. Dawsonville Highway at Avonlea Way	B	11.1	A	4.5
northbound left turn (GA 53)	C	21.1	B	12.8
southbound left turn	B	10.4	C	18.4
eastbound left turn	F	1,593.4	F	722.2
eastbound right turn	E	35.6	C	15.5
westbound left turn	F	311.5	F	833.9
westbound right turn	B	12.2	C	21.0
4. Dawsonville Highway at Canterbury Road	D	29.0	F	852.3
northbound left turn (GA 53)	C	22.0	B	13.9
southbound left turn	B	10.5	C	20.7
eastbound left turn	F	1,733.4	F	2,303.8
eastbound right turn	E	42.2	B	14.6
westbound left turn	F	1712.5	F	19,977.6
westbound right turn	B	12.2	D	33.7
5. Dawsonville Highway at Ahaluna Drive	C	32.6	C	22.8
northbound approach (GA 53)	A	6.8	B	17.0
southbound approach (GA 53)	D	37.1	C	22.3
eastbound approach	D	46.8	B	17.7
westbound approach	F	134.1	F	106.1
6. Dawsonville Highway at North Lake Square	A	4.0	B	18.2
northbound approach (GA 53)	A	1.2	B	16.7
southbound approach (GA 53)	A	5.1	B	13.1
eastbound approach	E	69.5	C	21.8
westbound approach	E	70.0	E	68.1
7. Dawsonville Highway at Beachwood Boulevard	A	3.3	A	1.0
northbound left turn (GA 53)	D	31.5	C	18.4
eastbound left turn	F	1,230.3	F	620.4

eastbound right turn	E	40.4	C	21.0
8. Dawsonville Highway at McEver Road	D	52.3	F	154.3
northbound approach (GA 53)	E	75.8	F	163.8
southbound approach (GA 53)	C	22.2	E	60.3
eastbound approach	F	111.2	F	270.3
westbound approach	E	60.9	E	78.5
9. Dawsonville Highway at Green Hill Circle	B	15.0	E	68.5
northbound approach (GA 53)	A	8.7	E	73.0
southbound approach (GA 53)	B	14.4	E	59.3
eastbound approach	D	47.4	E	59.8
westbound approach	D	38.8	F	119.2
10. Dawsonville Highway at Shallowford Road	B	13.5	F	83.2
northbound approach (GA 53)	A	6.4	E	75.2
southbound approach (GA 53)	B	10.4	E	76.1
eastbound approach	E	76.4	F	127.7
westbound approach	D	49.9	E	77.7

The outparcels' trips will generally be added to the major through movements at each study intersection, and will increase overall intersection delays at each location. The most significant impact of the outparcels will be incurred at the Canterbury intersection, which will serve as the primary access point to GA 53 for all of the outparcels. The operational analysis at this intersection shows that the overall intersection will deteriorate to LOS F in the p.m. and the side street left turns will experience extremely high delays. Because many of the new side street trips exiting the outparcels will be left turners, this intersection becomes a more likely candidate for signalization in the Future Phase Two condition. It is recommended that a signal warrant analysis be performed for this location in the future when the outparcels are planned to be developed. The Georgia DOT right turn lane analysis provided in the next section of this report indicates that a northbound right turn lane on GA 53 at this site access will be necessary in the Future Phase Two condition, when the outparcels are developed and operational.

Georgia DOT Auxiliary Turn Lane Standards

The four primary site connection points to GA 53 will occur at Sportsman Club Road, across from Avonlea Way, across from Canterbury Road, and via Ahaluna Drive. All four locations are served by existing median breaks and southbound exclusive left turn lanes are already provided, which will serve the site entering left turn traffic, at each location. However, there are no northbound exclusive right turn lanes, which would serve site entering right turn traffic, at any of these locations. The standards proscribed in the Georgia DOT's *Regulations for Driveway and Encroachment Control* (Driveway Manual), revision 4.0, dated 3/15/2016, were reviewed for the requirements for right turn lanes. Table 10, below, is Table 4-6 from the Driveway Manual, and proscribes the right turn volume thresholds at which exclusive right turn lanes must be provided.

Table 10 – Georgia DOT Minimum Volume Requirements for Right Turn Lanes

Posted Speed	2 Lane Routes		More than 2 Lanes on Main Road	
	AADT		AADT	
	< 6000	>=6000	<10000	>=10000
35 MPH or Less	200 RTV a day	100 RTV a day	200 RTV a day	100 RTV a day
40 to 50 MPH	150 RTV a day	75 RTV a day	150 RTV a day	75 RTV a day
55 to 60 MPH	100 RTV a day	50 RTV a day	100 RTV a day	50 RTV a day
>= 65 MPH	Always	Always	Always	Always

Table 4-6 Minimum Volumes Requiring Right Turn Lanes

The AADT on GA 53 near Sportsman Club Road was identified previously in Table 2 in this report as 25,600 vpd in 2015, and the posted speed limit is 45 mph. For main roads with these conditions, a right turn lane must be provided when the right turn volume exceeds 75 right turn vehicles (RTV) per day. This study calculated a.m. and p.m. peak hour right turn volumes. As a general rule of thumb, p.m. peak hour volumes are typically about 10% of 24-hour volumes. However, field observations suggest that the off-peak activity turning into and out of these intersections currently is very low, so it is uncertain if the 10% rule of thumb is applicable. Using the a.m. and p.m. volume projections, and the 10% rule of thumb to estimate 24-hour RTVs, the existing, no-build, Future Phase One, and Future Phase Two volumes were tested against the Georgia DOT right turn lane standard at the four primary site access locations on GA 53. This analysis is summarized in Table 11.

Table 11 – Georgia DOT Right Turn Lane Standards for Northbound GA 53

Intersection GA 53 at:	24-Hour RTV Threshold	Existing			No-Build			Future Phase One			Future Phase Two		
		a.m.	p.m.	24-hr	a.m.	p.m.	24-hr	a.m.	p.m.	24-hr	a.m.	p.m.	24-hr
Sportsman	75	8	19	190	9	21	210	15	34	340	15	34	340
Avonlea	75	0	0	0	0	0	0	2	17	170	2	17	170
Canterbury	75	0	0	0	0	0	0	3	4	40	40	128	1,280
Ahaluna	75	11	38	380	12	42	420	47	114	1,140	47	114	1,140

The results in Table 11 indicate that a northbound right turn lane is possibly justified in the existing condition on GA 53 at Sportsman Club Road and almost certainly justified on GA 53 at Ahaluna Drive. The increase in volumes to the no-build condition will increase the justification for these right turn lanes. The Lanier Tract will add trips to each intersection and create the fourth approaches at the median breaks at Avonlea Way and Canterbury Road. Table 10 suggests that a northbound right turn lane is likely to be justified at the Avonlea Way access but not at the Canterbury access with the development of the Lanier Tract. With the development of the retail outparcels in Future Phase Two, a northbound right turn lane is also expected to be justified at the Canterbury access.

Table 12, below, is Table 4-8 from the Driveway Manual, and presents the Georgia DOT right turn lane design standards. Based on the posted 45 mph speed limit, each northbound right turn lane on GA 53 should include 175 feet of full-width storage and a 100 foot taper.

Table 12 – Georgia DOT Design Standards for Right Turn Lanes

Speed, mph	Full Width Storage, ft.	Taper, ft.
25		50
30	75	50
35	100	50
40	150	50
45	175	100
50	225	100
55	250	100
60	300	100
65	350	100

Table 4-8 Minimum Right Turn Deceleration Lengths

The site plan also anticipates providing two right-in / right-out RIRO accesses to the office / retail tract and the plan anticipates providing deceleration lanes on GA 53 at both of these accesses. It is recommended that these anticipated deceleration lanes also be constructed to satisfy the Driveway Manual standards.

The project site engineer is referred to the Georgia DOT Driveway Manual for other driveway design standards including driveway width, island design, and curb return radii.

Summary of Study Findings and Recommendations

The following is a summary of the findings and the recommendations of this traffic impact study at each intersection:

1. **Sportsman Club Road at Strickland Drive** – No changes are recommended at this intersection for the existing, no-build, or Future Phase One and Future Phase Two conditions.
2. **Dawsonville Highway at Sportsman Club Road** – The side street delays at this intersection are significant now and will increase in the future. While a warrant analysis was not performed as part of this traffic impact study, the low side street volumes make the intersection an unlikely candidate for signalization. The potential for justifying signalization will increase in the future, but side street volumes will continue to remain moderate. This study also identifies the need for a northbound exclusive right turn lane to be added on GA 53 at Sportsman Club Road. Northbound and southbound exclusive left turn lanes are currently provided at this median break.
3. **Dawsonville Highway at Avonlea Way** – Side street delays are high at the existing eastbound approach of Avonlea Way, and these delays will increase in the no-build and future conditions. The side street volumes are predominately right turners, with extremely low left turn volumes. The Lanier Tract will introduce a new fourth leg at the Avonlea Way intersection (there is an existing private residential driveway at this median break, which would be replaced by the Lanier Tract access). Northbound and southbound exclusive left turn lanes are currently provided at this median break. The volumes exiting the new Lanier Tract access will be low and many of them will be right turners. Therefore, this intersection is considered unlikely to be a candidate for signalization in the existing, no-build, and Future Phases One and Two, even with the addition of the Lanier Tract trips. The Georgia DOT right turn lane analysis suggests that a northbound exclusive right turn lane should be considered at this access and the site plan includes the addition of this lane. The new site access should be constructed with one entering lane and one exiting lane. The side street approach exiting the site should be controlled by side street stop sign and accompanying stop bar.
4. **Dawsonville Highway at Canterbury Road** – Side street delays are high on the existing eastbound approach of Canterbury Road and these delays will increase in the no-build and future conditions. As with Avonlea Way, the side street volumes at this intersection are predominately right turners, with extremely low left turn volumes. For this reason, this intersection is considered an unlikely candidate for signalization in the existing, no-build, and Future Phase One conditions. The outparcel access will align with Canterbury Road and the Lanier Tract will connect through the outparcels to GA 53 at this location. Northbound and southbound exclusive left turn lanes are currently provided at this median break. A short southbound deceleration lane is provided on GA 53 at Canterbury Road, though this lane does not appear to have been constructed to current Georgia DOT design standards. The northbound right turn volume will be low in the Future Phase One condition, and the Georgia DOT right turn lane analysis indicates that no decel lane will be required for Future Phase One. However, with the future development of the retail outparcels, by others, the right turn volumes will be significant, primarily due to the outparcels, and a northbound deceleration lane is recommended for this location. The Future Phase Two side street volumes exiting the outparcels will

be notable and this intersection will likely be a prime candidate for signalization upon development of the outparcels. It is recommended that at such time as the outparcels are planned to be developed, a signal warrant study be performed for this intersection according to the standards set forth in the Federal Highway Administration's *Manual On Uniform Traffic Control Devices* (MUTCD). This new access at the Canterbury Road median break should be constructed with at least one entering lane and an exiting shared left/through lane and an exclusive right turn lane. The two westbound lanes are in anticipation of the development of the outparcels. With only the Lanier Tract volumes, only one entering and one exiting lane would be required. Until signalization is warranted, the side street approach exiting the outparcel tracts should be controlled by side street stop sign and accompanying stop bar.

5. **Dawsonville Highway at Ahaluna Drive** – The review of Georgia DOT auxiliary lane standards indicates that a northbound right turn lane should be added on GA 53 at Ahaluna Drive in the existing condition. The future volumes exiting Ahaluna Drive would benefit from the addition of a second westbound lane, resulting in a shared left/through lane and an exclusive right turn lane on Ahaluna Drive at GA 53. This second lane would reduce the demand for side street greentime on the signal and improve side street levels of service. It was noted that the need for relocation of the signal steel strain pole, a drainage structure, and possibly a large brick monument sign, may reduce the feasibility of adding this second westbound lane. With the addition of Lanier Tract southbound left turns from GA 53, consideration should be given to adding a protected / permissive southbound left turn phase, which would match the existing protected / permissive phasing for the northbound left turn. The Georgia DOT left turn phase warrants are not satisfied for this southbound left turn based on volume projections alone. However, other factors such as high speeds on GA 53 and the senior residents expected to reside at the Lanier Tract, merit consideration. Field observations suggest that there may be an opportunity to shorten the cycle length, which would reduce time spent by vehicles waiting on the side street.
6. **Dawsonville Highway at North Lake Square Access** – This intersection operates acceptably in all analysis conditions. The side street approaches do incur some delays at all times, primarily due to the long cycle length on the signal, which allocates most of the greentime, appropriately, to GA 53. The side street delays are incurred by minimal volumes in the a.m., since the retail served by the side streets are generally not operational at that time. Higher volumes incur the side street delays in the p.m., when the retail is operational. However, overall this intersection operates appropriately and no mitigation is recommended for any analysis condition.
7. **Dawsonville Highway at Beachwood Boulevard** At the GA 53 / Beechwood Boulevard intersection, it is noted that a fourth leg is currently stubbed-out across from Beechwood Boulevard and a retail development is under construction on that site. Auxiliary left and right turn lanes are provided on GA 53 serving Beechwood Boulevard and the future fourth leg appears to be designed for right-in / right-out access only, with a northbound deceleration lane provided on GA 53. No changes are recommended at this intersection based on this study.
8. **Dawsonville Highway at McEver Road** – The lane configuration and signal phasing at this intersection are generally appropriate. The existing southbound right turn volume is sufficiently-high (828 a.m., 481 p.m.) to

merit consideration of the addition of a second exclusive right turn lane and/or the addition of a protected right turn overlap phase. The justification for adding this phasing and/or second right turn lane will increase as volumes increase. Finally, there may be an opportunity to reduce the cycle length and fine-tune the signal timing at this intersection.

9. **Dawsonville Highway at Green Hill Circle** – This signalized intersection incurs high sides street delays, again, due to the allocation of the majority of greentime to the Dawsonville Highway approaches. There may be an opportunity to reduce the cycle length and fine-tune the signal timing at this intersection.
10. **Dawsonville Highway at Shallowford Road** – The lane configuration and signal phasing are appropriate for this intersection. Reduction of the cycle length and optimization of the allocation of greentime could reduce delays and queuing at this intersection.

Appendix A

Traffic Count Data and Volume Worksheets

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Intersection 1: Sportsman Club Road at Strickland Drive

Weekday A.M. Peak Hour	Northbound Sportsman Club Road			Southbound Sportsman Club Road				Westbound Strickland Drive		
	T	R	Tot	L	T	Tot		L	R	Tot
Counted Volumes (Thursday, November 17, 2016)	6	1	7	0	23	23		10	0	10
Annual Background Growth	10.4%	10.4%		10.4%	10.4%			10.4%	10.4%	
No-Build Volumes	7	1	8	0	25	25		11	0	11
Willow Springs Townhomes	0	6	6	0	0	0		12	0	12
Lanier Tract Senior Living Residential New Trips	0	4	4	0	0	0		7	0	7
Lanier Tract Office/Retail New Trips	0	0	0	0	0	0		0	0	0
Total Lanier Tract Site Trips	0	4	4	0	0	0		7	0	7
Phase 1 Future Volumes	7	11	18	0	25	25		30	0	30
Retail Outparcels	0	0	0	0	0	0		0	0	0
Phase 2 Future Volumes	7	11	18	0	25	25		30	0	30

Weekday P.M. Peak Hour	Northbound Sportsman Club Road			Southbound Sportsman Club Road				Westbound Strickland Drive		
	T	R	Tot	L	T	Tot		L	R	Tot
Counted Volumes (Thursday, September 17, 2015)	29	9	38	0	23	23		7	0	7
Annual Background Growth	10.4%	10.4%		10.4%	10.4%			10.4%	10.4%	
No-Build Volumes	32	10	42	0	25	25		8	0	8
Willow Springs Townhomes	0	12	12	0	0	0		11	0	11
Lanier Tract Senior Living Residential New Trips	0	6	6	0	0	0		5	0	5
Lanier Tract Office/Retail New Trips	0	0	0	0	0	0		0	0	0
Total Lanier Tract Site Trips	0	6	6	0	0	0		5	0	5
Phase 1 Future Volumes	32	28	60	0	25	25		24	0	24
Retail Outparcels	0	0	0	0	0	0		0	0	0
Phase 2 Future Volumes	32	28	60	0	25	25		24	0	24

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Intersection 2: Georgia State Route 53 at Sportsman Club Road

Weekday A.M. Peak Hour		Northbound GA 53				Southbound GA 53				Eastbound turn lane				Westbound Sportsman Club Road			
		L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Thursday, November 17, 2016)		0	743	8	751	9	1687	0	1696	0	0	0	0	25	0	15	40
Annual Background Growth		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%	
No-Build Volumes		0	820	9	829	10	1863	0	1873	0	0	0	0	28	0	17	44
Willow Springs Townhomes		0	0	4	4	2	0	0	2	0	0	0	0	9	0	3	12
Lanier Tract Senior Living Residential New Trips		0	19	2	21	2	15	0	17	0	0	0	0	4	0	3	7
Lanier Tract Office/Retail New Trips		5	2	0	7	0	7	0	7	0	0	0	0	0	0	0	0
Total Lanier Tract Site Trips		5	21	2	28	2	22	0	24	0	0	0	0	4	0	3	7
Phase 1 Future Volumes		5	841	15	861	14	1885	0	1899	0	0	0	0	41	0	23	63
Retail Outparcels		0	9	0	9	0	14	0	14	0	0	0	0	0	0	0	0
Phase 2 Future Volumes		5	850	15	870	14	1899	0	1913	0	0	0	0	41	0	23	63

Weekday P.M. Peak Hour		Northbound GA 53				Southbound GA 53				Eastbound turn lane				Westbound Sportsman Club Road			
		L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Thursday, September 17, 2015)		2	1671	19	1692	15	1039	0	1054	0	0	0	0	28	0	9	37
Annual Background Growth		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%	
No-Build Volumes		2	1845	21	1868	17	1147	0	1164	0	0	0	0	31	0	10	41
Willow Springs Townhomes		0	0	9	9	3	0	0	3	0	0	0	0	8	0	3	11
Lanier Tract Senior Living Residential New Trips		0	21	4	25	2	14	0	16	0	0	0	0	3	0	2	5
Lanier Tract Office/Retail New Trips		24	10	0	34	0	5	0	5	0	0	0	0	0	0	0	0
Total Lanier Tract Site Trips		24	31	4	59	2	19	0	21	0	0	0	0	3	0	2	5
Phase 1 Future Volumes		26	1876	34	1936	22	1166	0	1188	0	0	0	0	42	0	15	57
Retail Outparcels		0	38	0	38	0	35	0	35	0	0	0	0	0	0	0	0
Phase 2 Future Volumes		26	1914	34	1974	22	1201	0	1223	0	0	0	0	42	0	15	57

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Intersection 3: Georgia State Route 53 at Avonlea Way

Weekday A.M. Peak Hour	Northbound GA 53				Southbound GA 53				Eastbound Avonlea Way				Westbound Lanier Tract Access			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Thursday, November 17, 2016)	12	757	1	770	0	1668	6	1674	15	0	72	87	0	0	0	0
Annual Background Growth	10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%	
No-Build Volumes	13	836	1	850	0	1842	7	1848	17	0	79	96	0	0	0	0
Willow Springs Townhomes	0	4	0	4	0	9	0	9	0	0	0	0	0	0	0	0
Lanier Tract Senior Living Residential New Trips	0	9	1	10	8	11	0	19	0	0	0	0	2	0	13	15
Lanier Tract Office/Retail New Trips	0	17	0	17	7	5	0	12	0	0	0	0	0	0	0	0
Total Lanier Tract Site Trips	0	26	1	27	15	16	0	31	0	0	0	0	2	0	13	15
Phase 1 Future Volumes	13	866	2	881	15	1867	7	1888	17	0	79	96	2	0	13	15
Retail Outparcels	0	9	0	9	0	14	0	14	0	0	0	0	0	0	0	0
Phase 2 Future Volumes	13	875	2	890	15	1881	7	1902	17	0	79	96	2	0	13	15

Weekday P.M. Peak Hour	Northbound GA 53				Southbound GA 53				Eastbound Avonlea Way				Westbound Lanier Tract Access			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Thursday, September 17, 2015)	62	1650	0	1712	2	1102	14	1118	11	0	47	58	0	0	0	0
Annual Background Growth	10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%	
No-Build Volumes	68	1822	0	1890	2	1217	15	1234	12	0	52	64	0	0	0	0
Willow Springs Townhomes	0	9	0	9	0	8	0	8	0	0	0	0	0	0	0	0
Lanier Tract Senior Living Residential New Trips	0	14	17	31	3	14	0	17	0	0	0	0	2	0	11	13
Lanier Tract Office/Retail New Trips	0	13	0	13	5	24	0	29	0	0	0	0	0	0	0	0
Total Lanier Tract Site Trips	0	27	17	44	8	38	0	46	0	0	0	0	2	0	11	13
Phase 1 Future Volumes	68	1858	17	1943	10	1263	15	1288	12	0	52	64	2	0	11	13
Retail Outparcels	0	38	0	38	0	35	0	35	0	0	0	0	0	0	0	0
Phase 2 Future Volumes	68	1896	17	1981	10	1298	15	1323	12	0	52	64	2	0	11	13

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Intersection 4: Georgia State Route 53 at Canterbury Road

Weekday A.M. Peak Hour

	Northbound GA 53				Southbound GA 53				Eastbound Canterbury Road				Westbound Lanier Tract Access			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Thursday, November 17, 2016)	23	722		745		1783	7	1790	18		95	113				
Annual Background Growth	10.4%	10.4%				10.4%	10.4%		10.4%		10.4%					
No-Build Volumes	25	797		823		1969	8	1976	20		105	125				
Willow Springs Townhomes	0	4	0	4	0	9	0	9	0	0	0	0	0	0	0	0
Lanier Tract Senior Living Residential New Trips	0	8	3	11	2	11	0	13	0	0	0	0	3	0	2	5
Lanier Tract Office/Retail New Trips	0	17	0	17	0	5	0	5	0	0	0	0	0	0	0	0
Total Lanier Tract Site Trips	0	25	3	28	2	16	0	18	0	0	0	0	3	0	2	5
Phase 1 Future Volumes	25	826	3	855	2	1994	8	2003	20	0	105	125	3	0	2	5
Retail Outparcels	0	0	31	31	14	0	0	0	0	0	0	0	18	0	9	9
Retail Outparcels Pass-by	0	-6	6	0	14	-14	0	-14	0	0	0	0	8	0	4	4
Phase 2 Future Volumes	25	820	40	886	30	1980	8	2017	20	0	105	125	29	0	15	44

Weekday P.M. Peak Hour

	Northbound GA 53				Southbound GA 53				Eastbound Canterbury Road				Westbound Lanier Tract Access			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Thursday, September 17, 2015)	111	1682		1793		1108	14	1122	7		28	35				
Annual Background Growth	10.4%	10.4%				10.4%	10.4%		10.4%		10.4%					
No-Build Volumes	123	1857		1980		1223	15	1239	8		31	39				
Willow Springs Townhomes	0	9	0	9	0	8	0	8	0	0	0	0	0	0	0	0
Lanier Tract Senior Living Residential New Trips	0	29	4	33	3	13	0	16	0	0	0	0	2	0	2	4
Lanier Tract Office/Retail New Trips	0	13	0	13	0	24	0	24	0	0	0	0	0	0	0	0
Total Lanier Tract Site Trips	0	42	4	46	3	37	0	40	0	0	0	0	2	0	2	4
Phase 1 Future Volumes	123	1908	4	2035	3	1268	15	1287	8	0	31	39	2	0	2	4
Retail Outparcels	0	0	76	76	35	0	0	0	0	0	0	0	82	0	38	38
Retail Outparcels Pass-by	0	-48	48	0	30	-30	0	-30	0	0	0	0	32	0	52	52
Phase 2 Future Volumes	123	1860	128	2111	68	1238	15	1322	8	0	31	39	116	0	92	208

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Intersection 5: Georgia State Route 53 at Lanier Valley Drive / Ahaluna Drive

Weekday A.M. Peak Hour	Northbound GA 53				Southbound GA 53				Eastbound Lanier Valley Drive				Westbound Ahaluna Drive			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Thursday, November 17, 2016)	55	701	11	767	14	1901	0	1915	19	5	115	139	37	3	20	60
Annual Background Growth	10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%	
No-Build Volumes	61	774	12	847	15	2099	0	2114	21	6	127	153	41	3	22	66
Willow Springs Townhomes	0	4	0	4	0	9	0	9	0	0	0	0	0	0	0	0
Lanier Tract Senior Living Residential New Trips	0	5	35	40	6	8	0	14	0	0	0	0	51	0	5	56
Lanier Tract Office/Retail New Trips	0	17	0	17	0	5	0	5	0	0	0	0	0	0	0	0
Total Lanier Tract Site Trips	0	22	35	57	6	13	0	19	0	0	0	0	51	0	5	56
Phase 1 Future Volumes	61	800	47	908	21	2121	0	2142	21	6	127	153	92	3	27	122
Retail Outparcels	0	31	0	31	0	18	0	18	0	0	0	0	0	0	0	0
Phase 2 Future Volumes	61	831	47	939	21	2139	0	2160	21	6	127	153	92	3	27	122

Weekday P.M. Peak Hour	Northbound GA 53				Southbound GA 53				Eastbound Lanier Valley Drive				Westbound Ahaluna Drive			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Thursday, September 17, 2015)	179	1737	38	1954	22	1201	3	1226	21	1	96	118	37	7	51	95
Annual Background Growth	10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%	
No-Build Volumes	198	1918	42	2157	24	1326	3	1354	23	1	106	130	41	8	56	105
Willow Springs Townhomes	0	9	0	9	0	8	0	8	0	0	0	0	0	0	0	0
Lanier Tract Senior Living Residential New Trips	0	25	72	97	7	8	0	15	0	0	0	0	57	0	8	65
Lanier Tract Office/Retail New Trips	0	13	0	13	0	24	0	24	0	0	0	0	0	0	0	0
Total Lanier Tract Site Trips	0	38	72	110	7	32	0	39	0	0	0	0	57	0	8	65
Phase 1 Future Volumes	198	1965	114	2276	31	1366	3	1401	23	1	106	130	98	8	64	170
Retail Outparcels	0	76	0	76	0	82	0	82	0	0	0	0	0	0	0	0
Phase 2 Future Volumes	198	2041	114	2352	31	1448	3	1483	23	1	106	130	98	8	64	170

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Intersection 6: Georgia State Route 53 at North Lake Square / Olive Garden Access

Weekday A.M. Peak Hour	Northbound GA 53				Southbound GA 53				Eastbound Olive Garden Access				Westbound North Lake Square			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Wednesday, March 22, 2017)	11	740	9	760	5	1989	4	1998	2	0	6	8	2	0	0	2
Annual Background Growth	10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%	
No-Build Volumes	12	817	10	839	6	2196	4	2206	2	0	7	9	2	0	0	2
Willow Springs Townhomes	0	4	0	4	0	9	0	9	0	0	0	0	0	0	0	0
Lanier Tract Senior Living Residential New Trips	0	40	0	40	0	59	0	59	0	0	0	0	0	0	0	0
Lanier Tract Office/Retail New Trips	0	17	0	17	0	5	0	5	0	0	0	0	0	0	0	0
Total Lanier Tract Site Trips	0	57	0	57	0	64	0	64	0	0	0	0	0	0	0	0
Phase 1 Future Volumes	12	878	10	900	6	2269	4	2279	2	0	7	9	2	0	0	2
Retail Outparcels	0	31	0	31	0	18	0	18	0	0	0	0	0	0	0	0
Phase 2 Future Volumes	12	909	10	931	6	2287	4	2297	2	0	7	9	2	0	0	2

Weekday P.M. Peak Hour	Northbound GA 53				Southbound GA 53				Eastbound Olive Garden Access				Westbound North Lake Square			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Wednesday, March 22, 2017)	87	1763	138	1988	19	1199	27	1245	13	3	60	76	118	7	42	167
Annual Background Growth	10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%	
No-Build Volumes	96	1947	152	2195	21	1324	30	1375	14	3	66	84	130	8	46	184
Willow Springs Townhomes	0	9	0	9	0	8	0	8	0	0	0	0	0	0	0	0
Lanier Tract Senior Living Residential New Trips	0	97	0	97	0	65	0	65	0	0	0	0	0	0	0	0
Lanier Tract Office/Retail New Trips	0	13	0	13	0	24	0	24	0	0	0	0	0	0	0	0
Total Lanier Tract Site Trips	0	110	0	110	0	89	0	89	0	0	0	0	0	0	0	0
Phase 1 Future Volumes	96	2066	152	2314	21	1421	30	1472	14	3	66	84	130	8	46	184
Retail Outparcels	0	76	0	76	0	82	0	82	0	0	0	0	0	0	0	0
Phase 2 Future Volumes	96	2142	152	2390	21	1503	30	1554	14	3	66	84	130	8	46	184

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Intersection 7: Georgia State Route 53 at Beechwood Boulevard

Weekday A.M. Peak Hour	Northbound GA 53			Southbound GA 53			Eastbound Beechwood Boulevard			
	L	T	Tot	T	R	Tot	L	R	Tot	
Counted Volumes (Thursday, November 17, 2016)	27	787	814	2006	2	2008	5	41	46	
Annual Background Growth	10.4%	10.4%		10.4%	10.4%		10.4%	10.4%		
No-Build Volumes	30	869	899	2215	2	2217	6	45	51	
Willow Springs Townhomes	0	4	4	9	0	9	0	0	0	
Lanier Tract Senior Living Residential New Trips	0	40	40	59	0	59	0	0	0	
Lanier Tract Office/Retail New Trips	0	17	17	5	0	5	0	0	0	
Total Lanier Tract Site Trips	0	57	57	64	0	64	0	0	0	
Phase 1 Future Volumes	30	930	960	2288	2	2290	6	45	51	
Retail Outparcels	0	31	31	18	0	18	0	0	0	
Phase 2 Future Volumes	30	961	991	2306	2	2308	6	45	51	

Weekday P.M. Peak Hour	Northbound GA 53			Southbound GA 53			Eastbound Beechwood Boulevard			
	L	T	Tot	T	R	Tot	L	R	Tot	
Counted Volumes (Thursday, September 17, 2015)	86	1998	2084	1388	9	1397	1	47	48	
Annual Background Growth	10.4%	10.4%		10.4%	10.4%		10.4%	10.4%		
No-Build Volumes	95	2206	2301	1532	10	1542	1	52	53	
Willow Springs Townhomes	0	9	9	8	0	8	0	0	0	
Lanier Tract Senior Living Residential New Trips	0	97	97	65	0	65	0	0	0	
Lanier Tract Office/Retail New Trips	0	13	13	24	0	24	0	0	0	
Total Lanier Tract Site Trips	0	110	110	89	0	89	0	0	0	
Phase 1 Future Volumes	95	2325	2420	1629	10	1639	1	52	53	
Retail Outparcels	0	76	76	82	0	82	0	0	0	
Phase 2 Future Volumes	95	2401	2496	1711	10	1721	1	52	53	

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Intersection 8: Georgia State Route 53 - Dawsonville Highway at McEver Road / Commercial Access

Weekday A.M. Peak Hour	Northbound Dawsonville Highway				Southbound Dawsonville Highway				Eastbound McEver Road				Westbound Commercial Access			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Thursday, November 17, 2016)	282	465	55	802	28	1170	828	2026	390	28	342	760	42	19	18	79
Annual Background Growth	10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%	
No-Build Volumes	311	513	61	885	31	1292	914	2237	431	31	378	839	46	21	20	87
Willow Springs Townhomes	0	3	0	3	0	6	3	9	1	0	0	1	0	0	0	0
Lanier Tract Senior Living Residential New Trips	0	27	0	27	3	40	16	59	11	0	0	11	0	0	2	2
Lanier Tract Office/Retail New Trips	0	10	0	10	0	3	2	5	7	0	0	7	0	0	0	0
Total Lanier Tract Site Trips	0	37	0	37	3	43	18	64	18	0	0	18	0	0	2	2
Phase 1 Future Volumes	311	553	61	925	34	1341	935	2310	450	31	378	858	46	21	22	89
Retail Outparcels	0	19	0	19	0	11	7	18	12	0	0	0	0	0	0	0
Phase 2 Future Volumes	311	572	61	944	34	1352	942	2328	462	31	378	870	46	21	22	89

Weekday P.M. Peak Hour	Northbound Dawsonville Highway				Southbound Dawsonville Highway				Eastbound McEver Road				Westbound Commercial Access			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Thursday, September 17, 2015)	433	1362	46	1841	62	1029	481	1572	845	213	386	1444	87	91	81	259
Annual Background Growth	10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%	
No-Build Volumes	478	1504	51	2033	68	1136	531	1736	933	235	426	1594	96	100	89	286
Willow Springs Townhomes	0	6	0	6	0	5	3	8	3	0	0	3	0	0	0	0
Lanier Tract Senior Living Residential New Trips	0	67	0	67	3	44	18	65	26	0	0	26	0	0	4	4
Lanier Tract Office/Retail New Trips	0	8	0	8	0	14	10	24	5	0	0	5	0	0	0	0
Total Lanier Tract Site Trips	0	75	0	75	3	58	28	89	31	0	0	31	0	0	4	4
Phase 1 Future Volumes	478	1585	51	2114	71	1199	562	1833	967	235	426	1628	96	100	93	290
Retail Outparcels	0	47	0	47	0	50	32	82	29	0	0	0	0	0	0	0
Phase 2 Future Volumes	478	1632	51	2161	71	1249	594	1915	996	235	426	1657	96	100	93	290

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Intersection 9: Dawsonville Highway at Green Hill Circle / Commercial Access

Weekday A.M. Peak Hour	Northbound Dawsonville Highway				Southbound Dawsonville Highway				Eastbound Green Hill Circle				Westbound Commercial Access			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Thursday, November 17, 2016)	135	754	10	899	12	1404	52	1468	67	1	141	209	6	1	4	11
Annual Background Growth	10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%	
No-Build Volumes	149	832	11	993	13	1550	57	1621	74	1	156	231	7	1	4	12
Willow Springs Townhomes	0	3	0	3	0	6	0	6	0	0	0	0	0	0	0	0
Lanier Tract Senior Living Residential New Trips	0	27	0	27	0	40	0	40	0	0	0	0	0	0	0	0
Lanier Tract Office/Retail New Trips	0	10	0	10	0	3	0	3	0	0	0	0	0	0	0	0
Total Lanier Tract Site Trips	0	37	0	37	0	43	0	43	0	0	0	0	0	0	0	0
Phase 1 Future Volumes	149	872	11	1033	13	1599	57	1670	74	1	156	231	7	1	4	12
Retail Outparcels	0	19	0	19	0	11	0	11	0	0	0	0	0	0	0	0
Phase 2 Future Volumes	149	891	11	1052	13	1610	57	1681	74	1	156	231	7	1	4	12

Weekday P.M. Peak Hour	Northbound Dawsonville Highway				Southbound Dawsonville Highway				Eastbound Green Hill Circle				Westbound Commercial Access			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Thursday, September 17, 2015)	248	1749	70	2067	40	1392	53	1485	132	9	138	279	60	20	38	118
Annual Background Growth	10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%	
No-Build Volumes	274	1931	77	2282	44	1537	59	1640	146	10	152	308	66	22	42	130
Willow Springs Townhomes	0	6	0	6	0	5	0	5	0	0	0	0	0	0	0	0
Lanier Tract Senior Living Residential New Trips	0	67	0	67	0	44	0	44	0	0	0	0	0	0	0	0
Lanier Tract Office/Retail New Trips	0	8	0	8	0	14	0	14	0	0	0	0	0	0	0	0
Total Lanier Tract Site Trips	0	75	0	75	0	58	0	58	0	0	0	0	0	0	0	0
Phase 1 Future Volumes	274	2012	77	2363	44	1600	59	1703	146	10	152	308	66	22	42	130
Retail Outparcels	0	47	0	47	0	50	0	50	0	0	0	0	0	0	0	0
Phase 2 Future Volumes	274	2059	77	2410	44	1650	59	1753	146	10	152	308	66	22	42	130

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Intersection 10: Dawsonville Highway at Shallowford Road / Commercial Access

Weekday A.M. Peak Hour	Northbound Dawsonville Highway				Southbound Dawsonville Highway				Eastbound Shallowford Road				Westbound Commercial Access			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Thursday, November 17, 2016)	10	738	13	761	1	1249	338	1588	138	2	8	148	2	4	3	9
Annual Background Growth	10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%	
No-Build Volumes	11	815	14	840	1	1379	373	1753	152	2	9	163	2	4	3	10
Willow Springs Townhomes	0	2	0	2	0	4	2	6	1	0	0	1	0	0	0	0
Lanier Tract Senior Living Residential New Trips	0	21	0	21	0	30	10	40	6	0	0	6	0	0	0	0
Lanier Tract Office/Retail New Trips	0	9	0	9	0	2	1	3	1	0	0	1	0	0	0	0
Total Lanier Tract Site Trips	0	30	0	30	0	32	11	43	7	0	0	7	0	0	0	0
Phase 1 Future Volumes	11	847	14	872	1	1415	386	1802	160	2	9	171	2	4	3	10
Retail Outparcels	0	17	0	17	0	10	1	11	2	0	0	0	0	0	0	0
Phase 2 Future Volumes	11	864	14	889	1	1425	387	1813	162	2	9	173	2	4	3	10

Weekday P.M. Peak Hour	Northbound Dawsonville Highway				Southbound Dawsonville Highway				Eastbound Shallowford Road				Westbound Commercial Access			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Thursday, September 17, 2015)	40	1639	114	1793	7	1161	463	1631	518	38	26	582	36	27	7	70
Annual Background Growth	10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%	
No-Build Volumes	44	1810	126	1980	8	1282	511	1801	572	42	29	643	40	30	8	77
Willow Springs Townhomes	0	4	0	4	0	4	1	5	2	0	0	2	0	0	0	0
Lanier Tract Senior Living Residential New Trips	0	52	0	52	0	33	11	44	15	0	0	15	0	0	0	0
Lanier Tract Office/Retail New Trips	0	7	0	7	0	12	2	14	1	0	0	1	0	0	0	0
Total Lanier Tract Site Trips	0	59	0	59	0	45	13	58	16	0	0	16	0	0	0	0
Phase 1 Future Volumes	44	1873	126	2043	8	1331	525	1864	590	42	29	661	40	30	8	77
Retail Outparcels	0	41	0	41	0	44	6	50	6	0	0	0	0	0	0	0
Phase 2 Future Volumes	44	1914	126	2084	8	1375	531	1914	596	42	29	667	40	30	8	77

MARC R. ACAMPORA, PE, LLC

Reliable Traffic Data Services, LLC

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TMC Data
Sportsman Club Rd @ Strickland Dr
Gainesville, GA
7-9am I 4.30-6.30pm

File Name : 39520001
Site Code : 39520001
Start Date : 11/17/2016
Page No : 1

Groups Printed- Cars, Buses, Trucks

	Sportsman Club Rd Northbound					Sportsman Club Rd Southbound					Eastbound					Strickland Dr Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	0	4	0	0	4	0	7	0	0	7	0	0	0	0	0	0	0	0	0	0	11
07:15 AM	0	1	0	0	1	0	4	0	0	4	0	0	0	0	0	1	0	0	0	1	6
07:30 AM	0	3	0	0	3	0	6	0	0	6	0	0	0	0	0	2	0	0	0	2	11
07:45 AM	0	2	0	0	2	0	3	0	0	3	0	0	0	0	0	2	0	0	0	2	7
Total	0	10	0	0	10	0	20	0	0	20	0	0	0	0	0	5	0	0	0	5	35
08:00 AM	0	0	1	0	1	0	9	0	0	9	0	0	0	0	0	5	0	0	0	5	15
08:15 AM	0	1	0	0	1	0	5	0	0	5	0	0	0	0	0	1	0	0	0	1	7
08:30 AM	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
08:45 AM	0	2	3	0	5	0	4	0	0	4	0	0	0	0	0	1	0	0	0	1	10
Total	0	3	6	0	9	0	18	0	0	18	0	0	0	0	0	7	0	0	0	7	34
*** BREAK ***																					
04:30 PM	0	4	0	0	4	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	8
04:45 PM	0	3	1	0	4	0	8	0	0	8	0	0	0	0	0	0	0	0	0	0	12
Total	0	7	1	0	8	0	12	0	0	12	0	0	0	0	0	0	0	0	0	0	20
05:00 PM	0	6	1	0	7	0	4	0	0	4	0	0	0	0	0	1	0	0	0	1	12
05:15 PM	0	4	5	0	9	0	7	0	0	7	0	0	0	0	0	4	0	0	0	4	20
05:30 PM	0	10	1	0	11	0	4	0	0	4	0	0	0	0	0	3	0	0	0	3	18
05:45 PM	0	6	1	0	7	0	7	0	0	7	0	0	0	0	0	0	0	0	0	0	14
Total	0	26	8	0	34	0	22	0	0	22	0	0	0	0	0	8	0	0	0	8	64
06:00 PM	0	9	2	0	11	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	16
06:15 PM	0	5	1	0	6	0	6	0	0	6	0	0	0	0	0	2	0	0	0	2	14
Grand Total	0	60	18	0	78	0	83	0	0	83	0	0	0	0	0	22	0	0	0	22	183
Apprch %	0	76.9	23.1	0		0	100	0	0		0	0	0	0		100	0	0	0		
Total %	0	32.8	9.8	0	42.6	0	45.4	0	0	45.4	0	0	0	0	0	12	0	0	0	12	

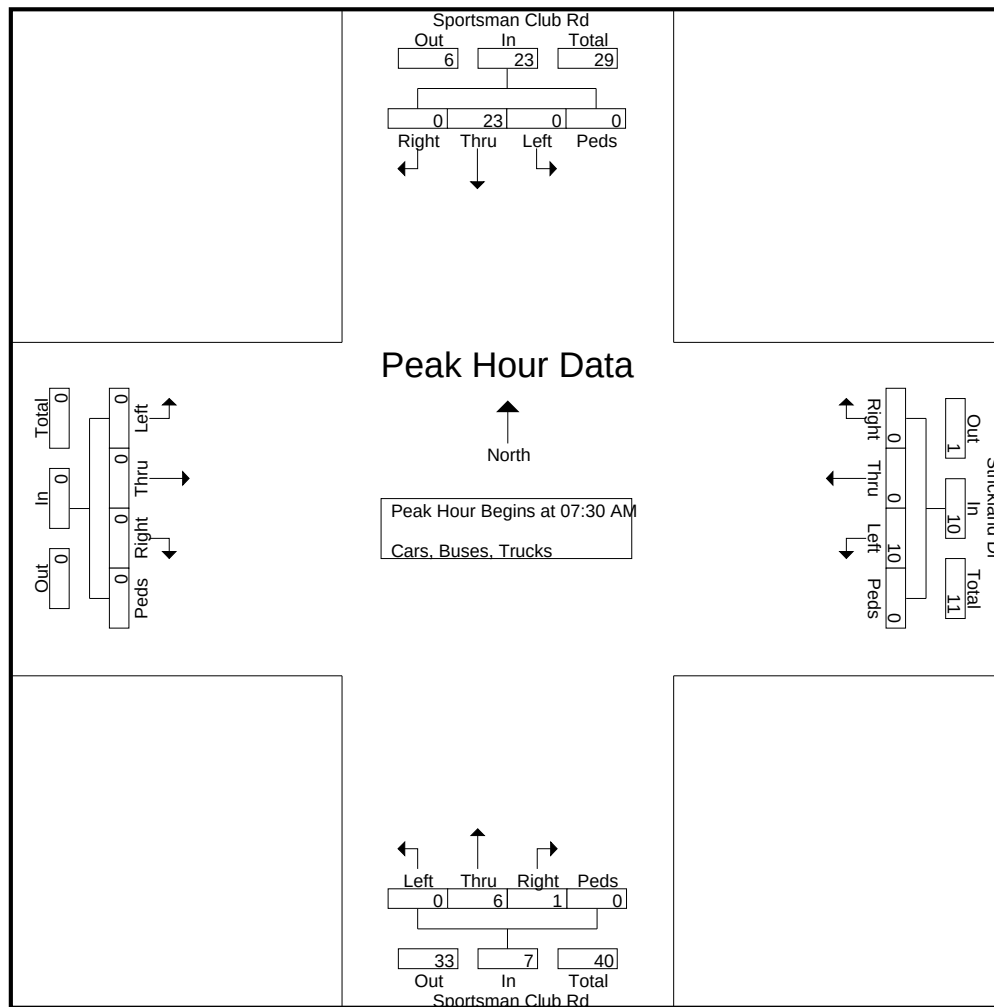
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TMC Data
Sportsman Club Rd @ Strickland Dr
Gainesville, GA
7-9am | 4.30-6.30pm

File Name : 39520001
Site Code : 39520001
Start Date : 11/17/2016
Page No : 2

	Sportsman Club Rd Northbound					Sportsman Club Rd Southbound					Eastbound					Strickland Dr Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	0	3	0	0	3	0	6	0	0	6	0	0	0	0	0	2	0	0	0	2	11
07:45 AM	0	2	0	0	2	0	3	0	0	3	0	0	0	0	0	2	0	0	0	2	7
08:00 AM	0	0	1	0	1	0	9	0	0	9	0	0	0	0	0	5	0	0	0	5	15
08:15 AM	0	1	0	0	1	0	5	0	0	5	0	0	0	0	0	1	0	0	0	1	7
Total Volume	0	6	1	0	7	0	23	0	0	23	0	0	0	0	0	10	0	0	0	10	40
% App. Total	0	85.7	14.3	0		0	100	0	0		0	0	0	0		100	0	0	0		
PHF	.000	.500	.250	.000	.583	.000	.639	.000	.000	.639	.000	.000	.000	.000	.000	.500	.000	.000	.000	.500	.667



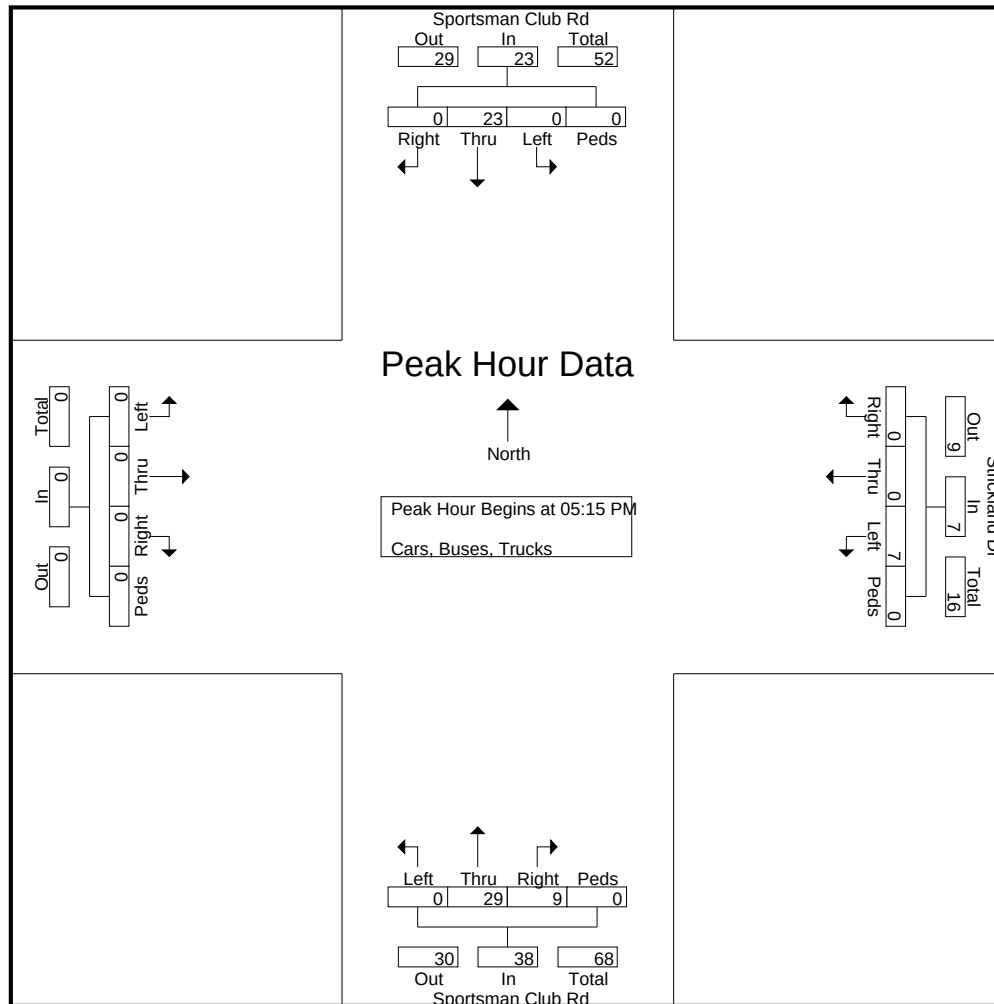
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TMC Data
Sportsman Club Rd @ Strickland Dr
Gainesville, GA
7-9am | 4.30-6.30pm

File Name : 39520001
Site Code : 39520001
Start Date : 11/17/2016
Page No : 3

	Sportsman Club Rd Northbound					Sportsman Club Rd Southbound					Eastbound					Strickland Dr Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:15 PM																					
05:15 PM	0	4	5	0	9	0	7	0	0	7	0	0	0	0	0	4	0	0	0	4	20
05:30 PM	0	10	1	0	11	0	4	0	0	4	0	0	0	0	0	3	0	0	0	3	18
05:45 PM	0	6	1	0	7	0	7	0	0	7	0	0	0	0	0	0	0	0	0	0	14
06:00 PM	0	9	2	0	11	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	16
Total Volume	0	29	9	0	38	0	23	0	0	23	0	0	0	0	0	7	0	0	0	7	68
% App. Total	0	76.3	23.7	0		0	100	0	0		0	0	0	0		100	0	0	0		
PHF	.000	.725	.450	.000	.864	.000	.821	.000	.000	.821	.000	.000	.000	.000	.000	.438	.000	.000	.000	.438	.850



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TMC Data
Dawsonville Hwy (SR53) @
Sportsman Club Rd, Gainesville, GA
7-9am I 4.30-6.30pm

File Name : 39520002
Site Code : 39520002
Start Date : 11/17/2016
Page No : 1

Groups Printed- Cars, Buses, Trucks

	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					Truck Turn Around Eastbound					Sportsman Club Rd Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	0	156	4	0	160	1	326	0	0	327	0	0	0	0	0	5	0	4	0	9	496
07:15 AM	0	165	2	0	167	4	391	0	0	395	0	0	0	0	0	3	0	6	0	9	571
07:30 AM	0	168	2	0	170	4	492	0	0	496	0	0	0	0	0	6	0	2	0	8	674
07:45 AM	0	189	1	0	190	1	448	0	0	449	0	0	0	0	0	4	0	2	0	6	645
Total	0	678	9	0	687	10	1657	0	0	1667	0	0	0	0	0	18	0	14	0	32	2386
08:00 AM	0	221	3	0	224	0	356	0	0	356	0	0	0	0	0	12	0	5	0	17	597
08:15 AM	0	175	3	0	178	1	364	0	0	365	0	0	0	0	0	4	0	1	0	5	548
08:30 AM	2	192	3	0	197	1	320	2	0	323	0	0	0	0	0	1	0	1	0	2	522
08:45 AM	1	164	4	0	169	3	267	0	0	270	0	0	0	0	0	8	0	0	0	8	447
Total	3	752	13	0	768	5	1307	2	0	1314	0	0	0	0	0	25	0	7	0	32	2114
*** BREAK ***																					
04:30 PM	0	344	9	0	353	1	258	0	0	259	0	0	0	0	0	4	0	1	0	5	617
04:45 PM	0	411	3	0	414	1	239	0	0	240	0	0	0	0	0	8	0	2	0	10	664
Total	0	755	12	0	767	2	497	0	0	499	0	0	0	0	0	12	0	3	0	15	1281
05:00 PM	2	410	3	0	415	6	271	0	0	277	0	0	0	0	0	4	0	2	0	6	698
05:15 PM	0	437	6	0	443	4	267	0	0	271	0	0	0	0	0	10	0	4	0	14	728
05:30 PM	0	413	7	0	420	4	262	0	0	266	0	0	0	0	0	6	0	1	0	7	693
05:45 PM	0	374	5	0	379	3	267	0	0	270	0	0	0	0	0	6	0	3	0	9	658
Total	2	1634	21	0	1657	17	1067	0	0	1084	0	0	0	0	0	26	0	10	0	36	2777
06:00 PM	1	421	12	0	434	0	250	0	0	250	0	0	0	0	0	6	0	1	0	7	691
06:15 PM	0	318	7	0	325	3	252	0	0	255	0	0	0	0	0	7	0	3	0	10	590
Grand Total	6	4558	74	0	4638	37	5030	2	0	5069	0	0	0	0	0	94	0	38	0	132	9839
Apprch %	0.1	98.3	1.6	0		0.7	99.2	0	0		0	0	0	0		71.2	0	28.8	0		
Total %	0.1	46.3	0.8	0	47.1	0.4	51.1	0	0	51.5	0	0	0	0		1	0	0.4	0	1.3	

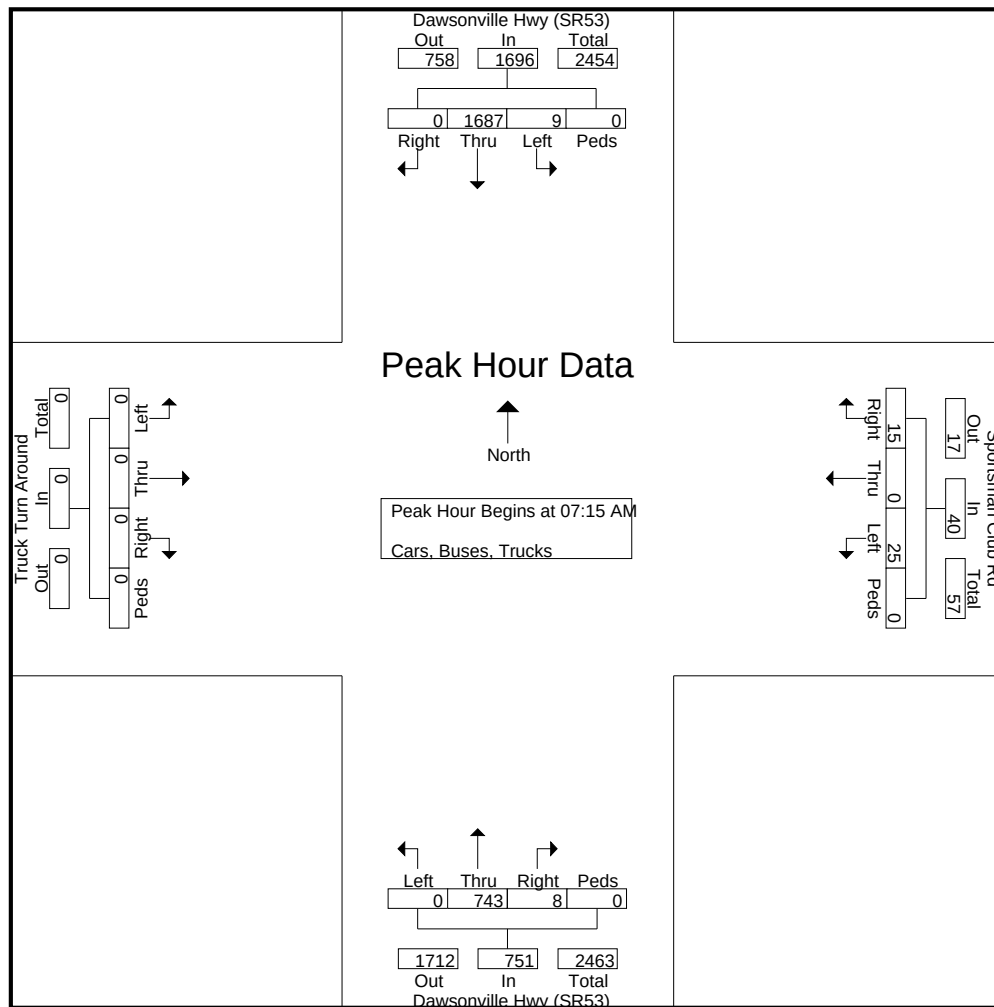
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TMC Data
Dawsonville Hwy (SR53) @
Sportsman Club Rd, Gainesville, GA
7-9am | 4.30-6.30pm

File Name : 39520002
Site Code : 39520002
Start Date : 11/17/2016
Page No : 2

	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					Truck Turn Around Eastbound					Sportsman Club Rd Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	0	165	2	0	167	4	391	0	0	395	0	0	0	0	0	3	0	6	0	9	571
07:30 AM	0	168	2	0	170	4	492	0	0	496	0	0	0	0	0	6	0	2	0	8	674
07:45 AM	0	189	1	0	190	1	448	0	0	449	0	0	0	0	0	4	0	2	0	6	645
08:00 AM	0	221	3	0	224	0	356	0	0	356	0	0	0	0	0	12	0	5	0	17	597
Total Volume	0	743	8	0	751	9	1687	0	0	1696	0	0	0	0	0	25	0	15	0	40	2487
% App. Total	0	98.9	1.1	0		0.5	99.5	0	0		0	0	0	0		62.5	0	37.5	0		
PHF	.000	.840	.667	.000	.838	.563	.857	.000	.000	.855	.000	.000	.000	.000	.000	.521	.000	.625	.000	.588	.922



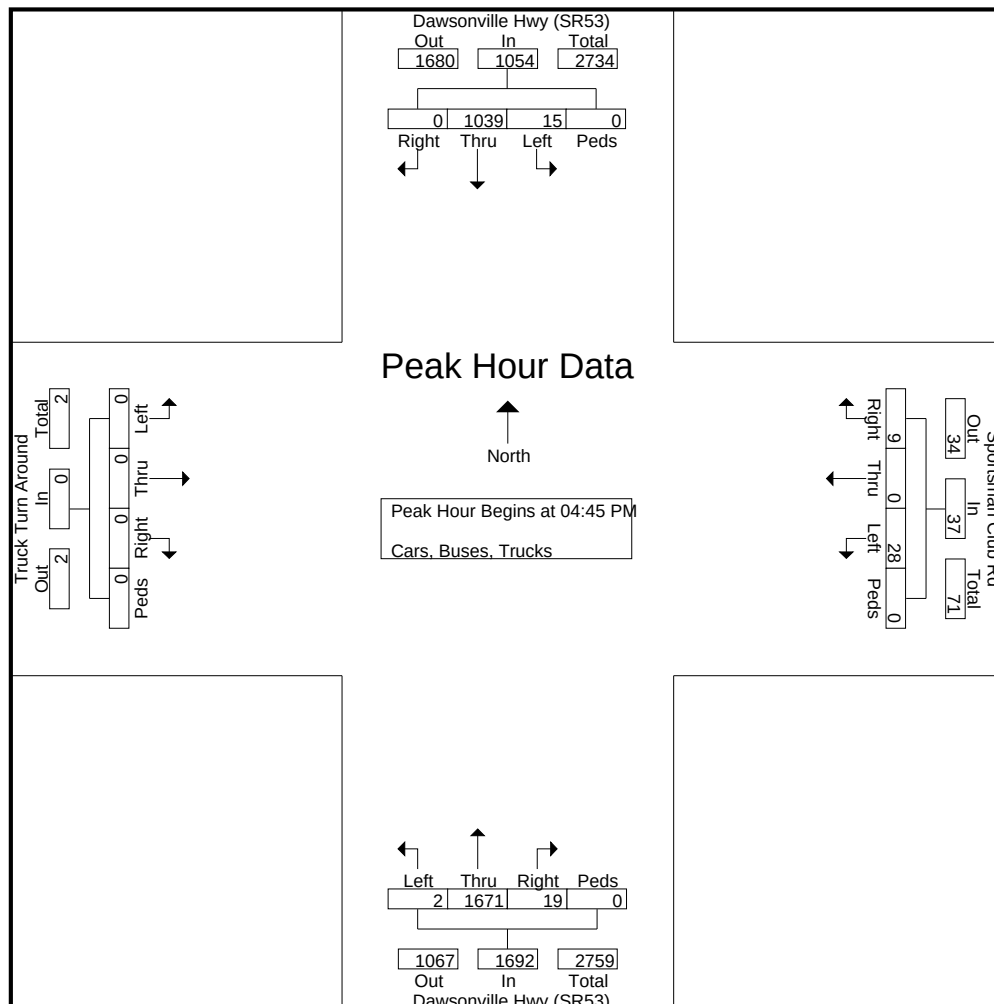
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TMC Data
Dawsonville Hwy (SR53) @
Sportsman Club Rd, Gainesville, GA
7-9am I 4.30-6.30pm

File Name : 39520002
Site Code : 39520002
Start Date : 11/17/2016
Page No : 3

	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					Truck Turn Around Eastbound					Sportsman Club Rd Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	0	411	3	0	414	1	239	0	0	240	0	0	0	0	0	8	0	2	0	10	664
05:00 PM	2	410	3	0	415	6	271	0	0	277	0	0	0	0	0	4	0	2	0	6	698
05:15 PM	0	437	6	0	443	4	267	0	0	271	0	0	0	0	0	10	0	4	0	14	728
05:30 PM	0	413	7	0	420	4	262	0	0	266	0	0	0	0	0	6	0	1	0	7	693
Total Volume	2	1671	19	0	1692	15	1039	0	0	1054	0	0	0	0	0	28	0	9	0	37	2783
% App. Total	0.1	98.8	1.1	0		1.4	98.6	0	0		0	0	0	0		75.7	0	24.3	0		
PHF	.250	.956	.679	.000	.955	.625	.958	.000	.000	.951	.000	.000	.000	.000	.000	.700	.000	.563	.000	.661	.956



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TMC Data
Dawsonville Hwy (SR53) @ Avonlea Way
Gainesville, GA
7-9am I 4.30-6.30pm

File Name : 39520003
Site Code : 39520003
Start Date : 11/17/2016
Page No : 1

Groups Printed- Cars, Buses, Trucks

	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					Avonlea Way Eastbound					Residential Drwy Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	3	160	0	0	163	0	324	0	0	324	6	0	18	0	24	0	0	0	0	0	511
07:15 AM	2	162	1	0	165	0	381	0	0	381	6	0	25	0	31	1	0	0	0	1	578
07:30 AM	6	164	1	0	171	0	485	2	0	487	2	0	22	0	24	0	0	0	0	0	682
07:45 AM	2	193	0	0	195	0	442	1	0	443	7	0	19	0	26	0	0	0	0	0	664
Total	13	679	2	0	694	0	1632	3	0	1635	21	0	84	0	105	1	0	0	0	1	2435
08:00 AM	2	216	0	0	218	0	367	1	0	368	4	0	15	0	19	0	0	0	0	0	605
08:15 AM	2	184	0	0	186	0	374	2	0	376	2	0	16	0	18	0	0	0	0	0	580
08:30 AM	4	198	0	0	202	0	326	3	0	329	3	0	21	0	24	0	0	0	0	0	555
08:45 AM	3	167	0	0	170	0	278	2	0	280	2	0	14	0	16	0	0	0	0	0	466
Total	11	765	0	0	776	0	1345	8	0	1353	11	0	66	0	77	0	0	0	0	0	2206
*** BREAK ***																					
04:30 PM	14	351	0	0	365	0	267	3	0	270	0	0	9	0	9	0	0	0	0	0	644
04:45 PM	10	412	0	0	422	0	248	6	0	254	1	0	6	0	7	0	0	0	0	0	683
Total	24	763	0	0	787	0	515	9	0	524	1	0	15	0	16	0	0	0	0	0	1327
05:00 PM	21	416	0	0	437	0	273	4	0	277	7	0	9	0	16	0	0	0	0	0	730
05:15 PM	10	442	0	0	452	0	279	2	0	281	1	0	18	0	19	0	0	0	0	0	752
05:30 PM	13	418	0	0	431	1	272	6	0	279	0	0	9	0	9	0	0	0	0	0	719
05:45 PM	18	374	0	0	392	1	278	2	0	281	3	0	11	0	14	0	0	0	0	0	687
Total	62	1650	0	0	1712	2	1102	14	0	1118	11	0	47	0	58	0	0	0	0	0	2888
06:00 PM	21	420	0	0	441	1	256	4	0	261	3	0	12	0	15	0	0	0	0	0	717
06:15 PM	13	328	0	0	341	0	247	3	0	250	1	0	10	0	11	0	0	0	0	0	602
Grand Total	144	4605	2	0	4751	3	5097	41	0	5141	48	0	234	0	282	1	0	0	0	1	10175
Apprch %	3	96.9	0	0		0.1	99.1	0.8	0		17	0	83	0		100	0	0	0		
Total %	1.4	45.3	0	0	46.7	0	50.1	0.4	0	50.5	0.5	0	2.3	0	2.8	0	0	0	0	0	

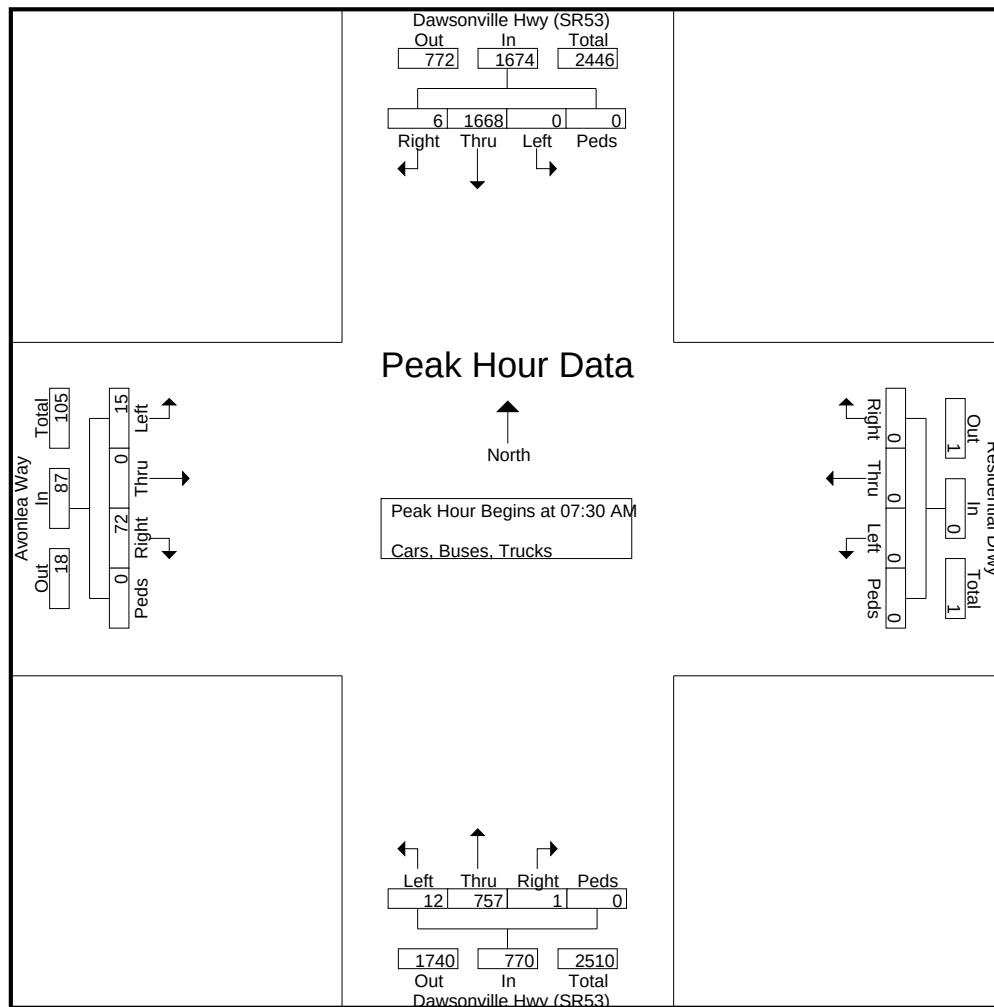
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TMC Data
Dawsonville Hwy (SR53) @ Avonlea Way
Gainesville, GA
7-9am | 4.30-6.30pm

File Name : 39520003
Site Code : 39520003
Start Date : 11/17/2016
Page No : 2

	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					Avonlea Way Eastbound					Residential Drwy Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	6	164	1	0	171	0	485	2	0	487	2	0	22	0	24	0	0	0	0	0	682
07:45 AM	2	193	0	0	195	0	442	1	0	443	7	0	19	0	26	0	0	0	0	0	664
08:00 AM	2	216	0	0	218	0	367	1	0	368	4	0	15	0	19	0	0	0	0	0	605
08:15 AM	2	184	0	0	186	0	374	2	0	376	2	0	16	0	18	0	0	0	0	0	580
Total Volume	12	757	1	0	770	0	1668	6	0	1674	15	0	72	0	87	0	0	0	0	0	2531
% App. Total	1.6	98.3	0.1	0		0	99.6	0.4	0		17.2	0	82.8	0		0	0	0	0		
PHF	.500	.876	.250	.000	.883	.000	.860	.750	.000	.859	.536	.000	.818	.000	.837	.000	.000	.000	.000	.000	.928



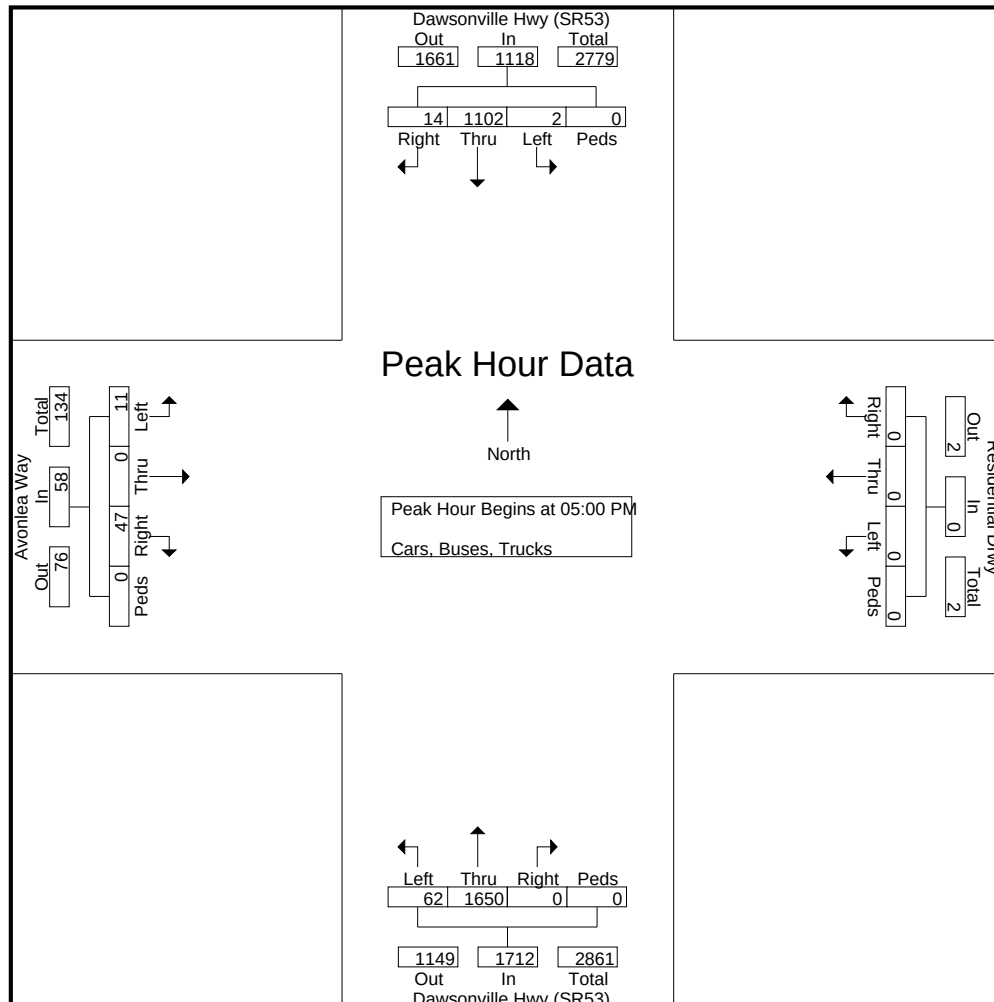
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TMC Data
Dawsonville Hwy (SR53) @ Avonlea Way
Gainesville, GA
7-9am | 4.30-6.30pm

File Name : 39520003
Site Code : 39520003
Start Date : 11/17/2016
Page No : 3

	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					Avonlea Way Eastbound					Residential Drwy Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	21	416	0	0	437	0	273	4	0	277	7	0	9	0	16	0	0	0	0	0	730
05:15 PM	10	442	0	0	452	0	279	2	0	281	1	0	18	0	19	0	0	0	0	0	752
05:30 PM	13	418	0	0	431	1	272	6	0	279	0	0	9	0	9	0	0	0	0	0	719
05:45 PM	18	374	0	0	392	1	278	2	0	281	3	0	11	0	14	0	0	0	0	0	687
Total Volume	62	1650	0	0	1712	2	1102	14	0	1118	11	0	47	0	58	0	0	0	0	0	2888
% App. Total	3.6	96.4	0	0		0.2	98.6	1.3	0		19	0	81	0		0	0	0	0		
PHF	.738	.933	.000	.000	.947	.500	.987	.583	.000	.995	.393	.000	.653	.000	.763	.000	.000	.000	.000	.000	.960



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TMC Data
Dawsonville Hwy (SR53) @ Canterbury Rd
Gainesville, GA
7-9am | 4.30-6.30pm

File Name : 39520004
Site Code : 39520004
Start Date : 11/17/2016
Page No : 1

Groups Printed- Cars, Buses, Trucks

	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					Canterbury Rd Eastbound					Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	U-Turns	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	4	151	0	0	155	0	342	2	0	344	5	0	22	0	27	0	0	0	0	0	526
07:15 AM	7	160	0	0	167	0	456	1	0	457	3	0	29	0	32	0	0	0	0	0	656
07:30 AM	6	168	0	0	174	0	487	4	0	491	5	0	23	0	28	0	0	0	0	0	693
07:45 AM	7	180	0	0	187	0	436	1	1	438	4	0	27	0	31	0	0	0	0	0	656
Total	24	659	0	0	683	0	1721	8	1	1730	17	0	101	0	118	0	0	0	0	0	2531
08:00 AM	3	214	0	0	217	0	403	1	0	404	6	0	16	0	22	0	0	0	0	0	643
08:15 AM	8	178	0	0	186	0	392	3	0	395	3	0	18	0	21	0	0	0	0	0	602
08:30 AM	3	180	0	0	183	0	326	2	2	330	3	0	11	0	14	0	0	0	0	0	527
08:45 AM	7	164	0	0	171	0	297	0	0	297	2	0	8	0	10	0	0	0	0	0	478
Total	21	736	0	0	757	0	1418	6	2	1426	14	0	53	0	67	0	0	0	0	0	2250
*** BREAK ***																					
04:30 PM	22	367	0	0	389	0	263	4	1	268	2	0	13	0	15	0	0	0	0	0	672
04:45 PM	25	398	0	0	423	0	267	1	1	269	1	0	16	0	17	0	0	0	0	0	709
Total	47	765	0	0	812	0	530	5	2	537	3	0	29	0	32	0	0	0	0	0	1381
05:00 PM	21	426	0	0	447	0	271	1	1	273	3	0	8	0	11	0	0	0	0	0	731
05:15 PM	33	432	0	0	465	0	278	3	0	281	2	0	4	0	6	0	0	0	0	0	752
05:30 PM	26	418	0	0	444	0	272	5	0	277	1	0	7	0	8	0	0	0	0	0	729
05:45 PM	31	406	0	0	437	0	284	5	2	291	1	0	9	0	10	0	0	0	0	0	738
Total	111	1682	0	0	1793	0	1105	14	3	1122	7	0	28	0	35	0	0	0	0	0	2950
06:00 PM	26	387	0	0	413	0	278	7	0	285	1	0	16	0	17	0	0	0	0	0	715
06:15 PM	23	364	0	0	387	0	267	5	0	272	2	0	11	0	13	0	0	0	0	0	672
Grand Total	252	4593	0	0	4845	0	5319	45	8	5372	44	0	238	0	282	0	0	0	0	0	10499
Apprch %	5.2	94.8	0	0		0	99	0.8	0.1		15.6	0	84.4	0		0	0	0	0		
Total %	2.4	43.7	0	0	46.1	0	50.7	0.4	0.1	51.2	0.4	0	2.3	0	2.7	0	0	0	0	0	

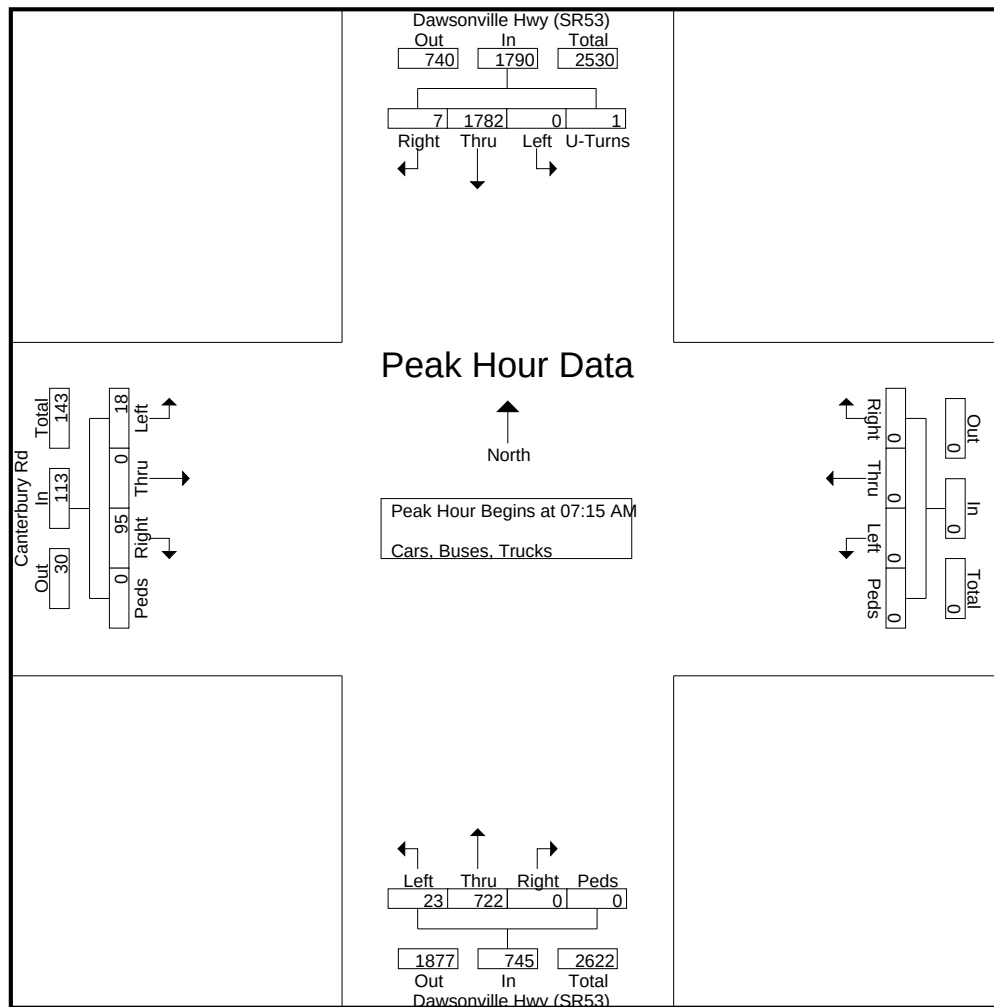
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TMC Data
Dawsonville Hwy (SR53) @ Canterbury Rd
Gainesville, GA
7-9am I 4.30-6.30pm

File Name : 39520004
Site Code : 39520004
Start Date : 11/17/2016
Page No : 2

	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					Canterbury Rd Eastbound					Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	U-Turns	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	7	160	0	0	167	0	456	1	0	457	3	0	29	0	32	0	0	0	0	0	656
07:30 AM	6	168	0	0	174	0	487	4	0	491	5	0	23	0	28	0	0	0	0	0	693
07:45 AM	7	180	0	0	187	0	436	1	1	438	4	0	27	0	31	0	0	0	0	0	656
08:00 AM	3	214	0	0	217	0	403	1	0	404	6	0	16	0	22	0	0	0	0	0	643
Total Volume	23	722	0	0	745	0	1782	7	1	1790	18	0	95	0	113	0	0	0	0	0	2648
% App. Total	3.1	96.9	0	0		0	99.6	0.4	0.1		15.9	0	84.1	0		0	0	0	0		
PHF	.821	.843	.000	.000	.858	.000	.915	.438	.250	.911	.750	.000	.819	.000	.883	.000	.000	.000	.000	.000	.955



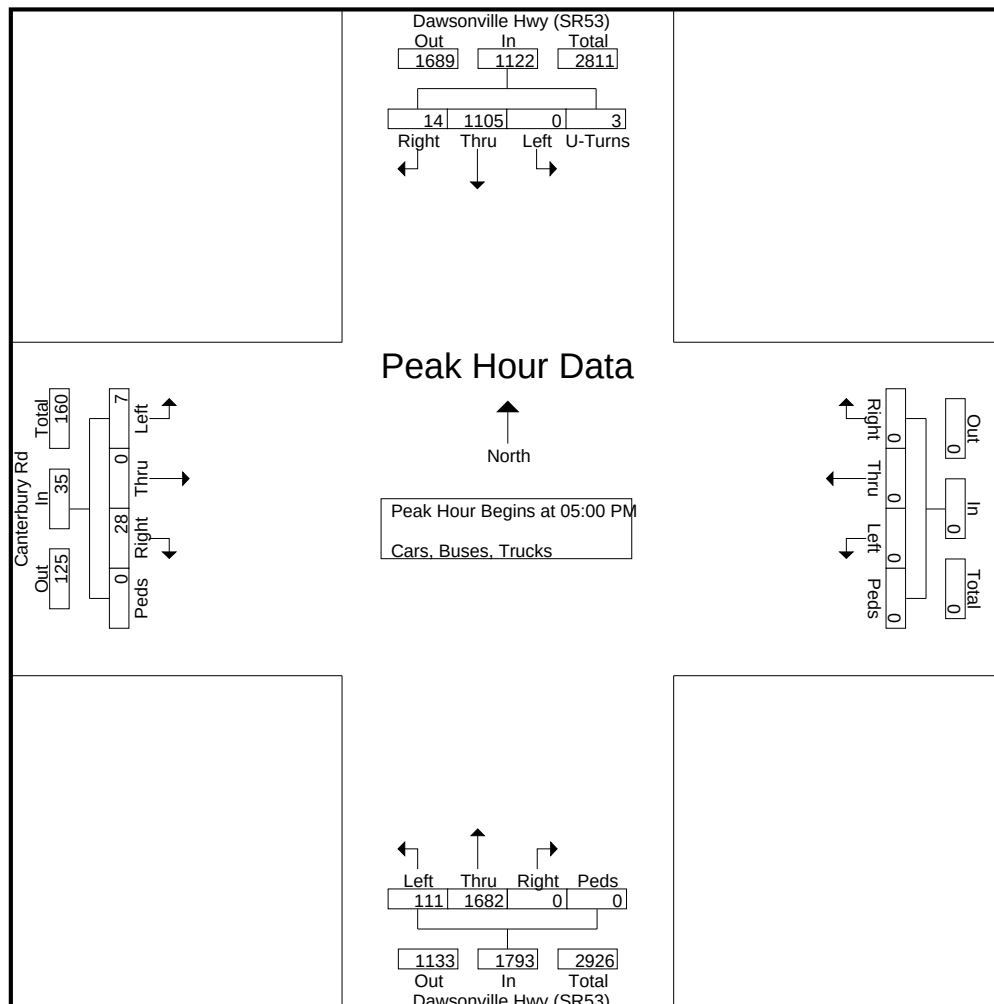
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TMC Data
Dawsonville Hwy (SR53) @ Canterbury Rd
Gainesville, GA
7-9am | 4.30-6.30pm

File Name : 39520004
Site Code : 39520004
Start Date : 11/17/2016
Page No : 3

	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					Canterbury Rd Eastbound					Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	U-Turns	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	21	426	0	0	447	0	271	1	1	273	3	0	8	0	11	0	0	0	0	0	731
05:15 PM	33	432	0	0	465	0	278	3	0	281	2	0	4	0	6	0	0	0	0	0	752
05:30 PM	26	418	0	0	444	0	272	5	0	277	1	0	7	0	8	0	0	0	0	0	729
05:45 PM	31	406	0	0	437	0	284	5	2	291	1	0	9	0	10	0	0	0	0	0	738
Total Volume	111	1682	0	0	1793	0	1105	14	3	1122	7	0	28	0	35	0	0	0	0	0	2950
% App. Total	6.2	93.8	0	0		0	98.5	1.2	0.3		20	0	80	0		0	0	0	0		
PHF	.841	.973	.000	.000	.964	.000	.973	.700	.375	.964	.583	.000	.778	.000	.795	.000	.000	.000	.000	.000	.981



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TMC Data
Dawsonville Hwy (SR53) @ Ahaluna Dr/
Lanier Valley Dr, Gainesville, GA
7-9am I 4.30-6.30pm

File Name : 39520005
Site Code : 39520005
Start Date : 11/17/2016
Page No : 1

Groups Printed- Cars, Buses, Trucks

	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					Lanier Valley Dr Eastbound					Ahaluna Dr Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	8	146	2	0	156	4	335	0	0	339	2	0	18	0	20	10	2	4	0	16	531
07:15 AM	8	158	3	0	169	4	461	0	0	465	4	0	31	0	35	10	1	6	0	17	686
07:30 AM	16	159	5	0	180	7	542	0	0	549	5	1	32	0	38	13	0	5	0	18	785
07:45 AM	17	173	2	0	192	1	506	0	0	507	5	2	29	0	36	5	2	4	0	11	746
Total	49	636	12	0	697	16	1844	0	0	1860	16	3	110	0	129	38	5	19	0	62	2748
08:00 AM	14	211	1	0	226	2	392	0	0	394	5	2	23	0	30	9	0	5	0	14	664
08:15 AM	13	161	4	0	178	5	424	0	0	429	3	0	17	0	20	5	4	3	0	12	639
08:30 AM	13	176	2	0	191	3	348	1	0	352	6	0	17	0	23	3	1	8	0	12	578
08:45 AM	7	175	1	0	183	3	312	1	0	316	5	1	29	0	35	4	1	5	0	10	544
Total	47	723	8	0	778	13	1476	2	0	1491	19	3	86	0	108	21	6	21	0	48	2425
*** BREAK ***																					
04:30 PM	23	377	7	0	407	9	270	1	0	280	9	2	22	0	33	10	3	12	0	25	745
04:45 PM	27	435	6	0	468	4	293	0	0	297	5	0	24	0	29	8	1	16	0	25	819
Total	50	812	13	0	875	13	563	1	0	577	14	2	46	0	62	18	4	28	0	50	1564
05:00 PM	40	423	7	0	470	4	270	1	0	275	8	0	21	0	29	7	0	10	0	17	791
05:15 PM	48	436	10	0	494	8	306	0	0	314	5	0	23	0	28	8	3	14	0	25	861
05:30 PM	39	432	12	0	483	4	316	0	0	320	3	0	25	0	28	14	2	12	0	28	859
05:45 PM	52	446	9	0	507	6	309	2	0	317	5	1	27	0	33	8	2	15	0	25	882
Total	179	1737	38	0	1954	22	1201	3	0	1226	21	1	96	0	118	37	7	51	0	95	3393
06:00 PM	38	392	6	0	436	6	247	2	0	255	2	0	17	0	19	8	1	17	0	26	736
06:15 PM	40	386	8	0	434	9	278	2	0	289	3	0	17	0	20	9	1	9	0	19	762
Grand Total	403	4686	85	0	5174	79	5609	10	0	5698	75	9	372	0	456	131	24	145	0	300	11628
Apprch %	7.8	90.6	1.6	0		1.4	98.4	0.2	0		16.4	2	81.6	0		43.7	8	48.3	0		
Total %	3.5	40.3	0.7	0	44.5	0.7	48.2	0.1	0	49	0.6	0.1	3.2	0	3.9	1.1	0.2	1.2	0	2.6	

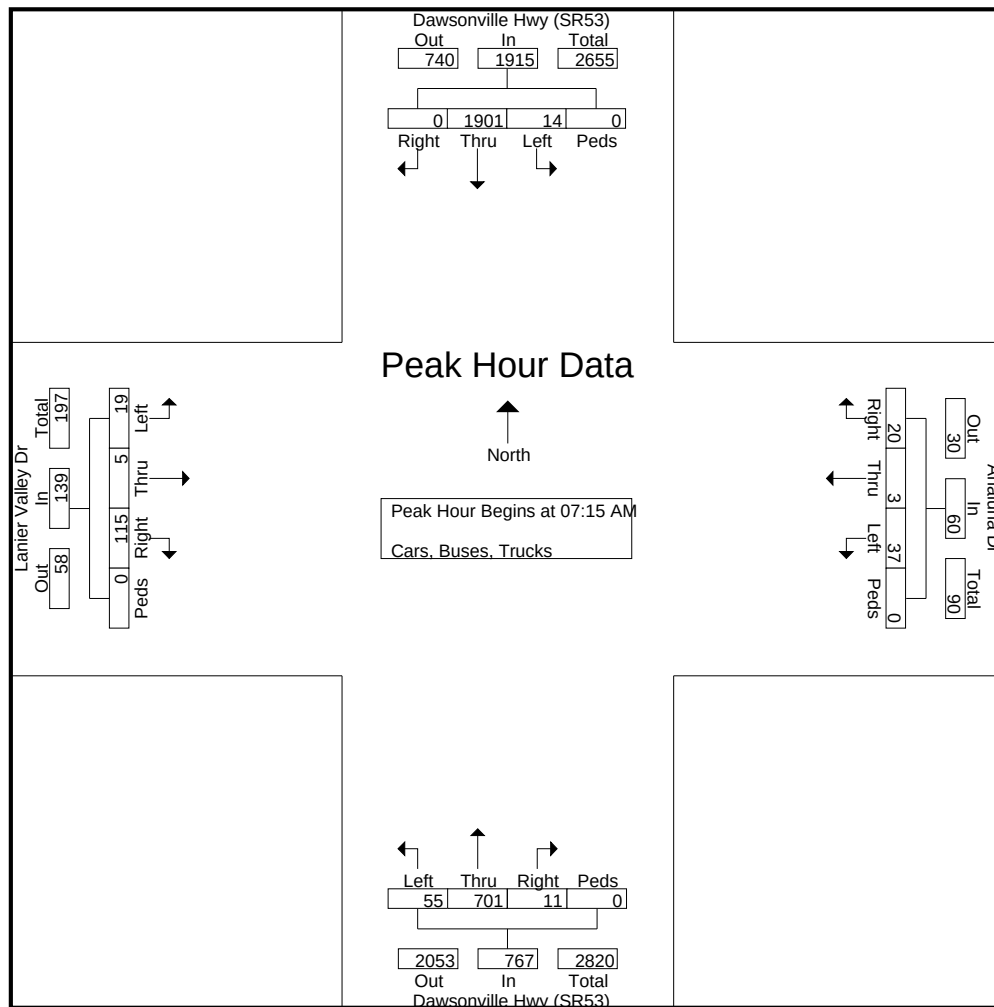
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TMC Data
Dawsonville Hwy (SR53) @ Ahaluna Dr/
Lanier Valley Dr, Gainesville, GA
7-9am | 4.30-6.30pm

File Name : 39520005
Site Code : 39520005
Start Date : 11/17/2016
Page No : 2

	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					Lanier Valley Dr Eastbound					Ahaluna Dr Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	8	158	3	0	169	4	461	0	0	465	4	0	31	0	35	10	1	6	0	17	686
07:30 AM	16	159	5	0	180	7	542	0	0	549	5	1	32	0	38	13	0	5	0	18	785
07:45 AM	17	173	2	0	192	1	506	0	0	507	5	2	29	0	36	5	2	4	0	11	746
08:00 AM	14	211	1	0	226	2	392	0	0	394	5	2	23	0	30	9	0	5	0	14	664
Total Volume	55	701	11	0	767	14	1901	0	0	1915	19	5	115	0	139	37	3	20	0	60	2881
% App. Total	7.2	91.4	1.4	0		0.7	99.3	0	0		13.7	3.6	82.7	0		61.7	5	33.3	0		
PHF	.809	.831	.550	.000	.848	.500	.877	.000	.000	.872	.950	.625	.898	.000	.914	.712	.375	.833	.000	.833	.918



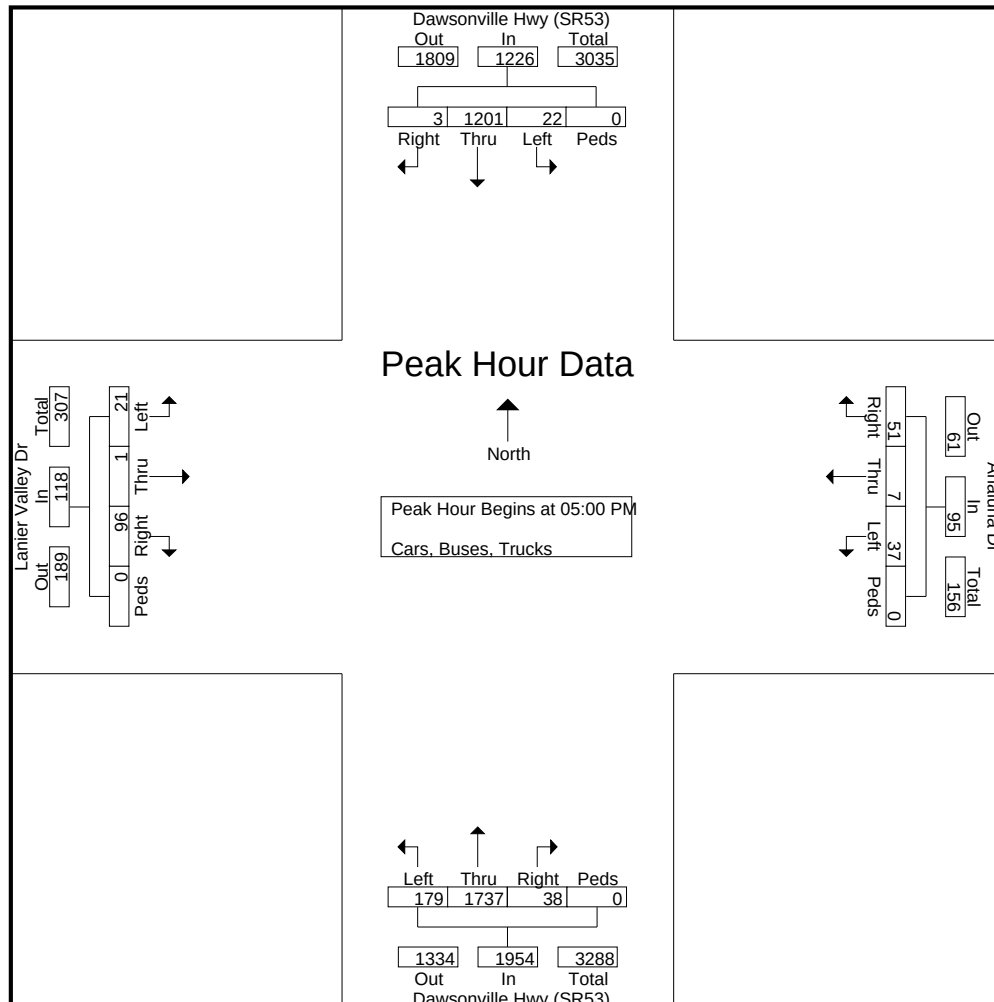
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TMC Data
Dawsonville Hwy (SR53) @ Ahaluna Dr/
Lanier Valley Dr, Gainesville, GA
7-9am | 4.30-6.30pm

File Name : 39520005
Site Code : 39520005
Start Date : 11/17/2016
Page No : 3

	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					Lanier Valley Dr Eastbound					Ahaluna Dr Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	40	423	7	0	470	4	270	1	0	275	8	0	21	0	29	7	0	10	0	17	791
05:15 PM	48	436	10	0	494	8	306	0	0	314	5	0	23	0	28	8	3	14	0	25	861
05:30 PM	39	432	12	0	483	4	316	0	0	320	3	0	25	0	28	14	2	12	0	28	859
05:45 PM	52	446	9	0	507	6	309	2	0	317	5	1	27	0	33	8	2	15	0	25	882
Total Volume	179	1737	38	0	1954	22	1201	3	0	1226	21	1	96	0	118	37	7	51	0	95	3393
% App. Total	9.2	88.9	1.9	0		1.8	98	0.2	0		17.8	0.8	81.4	0		38.9	7.4	53.7	0		
PHF	.861	.974	.792	.000	.964	.688	.950	.375	.000	.958	.656	.250	.889	.000	.894	.661	.583	.850	.000	.848	.962



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TMC Data
Dawsonville Hwy (SR53) @ North Lake
Square Shopp Ctr Drwy, Gainesville, GA
7-9am I 4-6pm

File Name : 40160001
Site Code : 40160001
Start Date : 3/22/2017
Page No : 1

Groups Printed- Cars, Buses, Trucks

	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					Olive Garden/others Drwy Eastbound					North Lake Square Shopp Ctr Drwy Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	1	155	4	0	160	1	367	0	0	368	1	0	1	0	2	0	0	0	0	0	530
07:15 AM	1	163	1	0	165	0	489	0	0	489	1	0	1	0	2	0	0	0	0	0	656
07:30 AM	4	174	1	0	179	1	552	0	0	553	1	0	2	0	3	0	0	0	0	0	735
07:45 AM	2	189	3	0	194	1	536	3	0	540	0	0	1	0	1	1	0	0	0	1	736
Total	8	681	9	0	698	3	1944	3	0	1950	3	0	5	0	8	1	0	0	0	1	2657
08:00 AM	4	214	4	0	222	3	412	1	0	416	0	0	2	0	2	1	0	0	0	1	641
08:15 AM	2	206	2	0	210	1	429	3	0	433	1	0	1	0	2	0	0	0	0	0	645
08:30 AM	0	197	7	0	204	1	358	0	0	359	0	0	0	0	0	3	0	1	0	4	567
08:45 AM	3	185	8	0	196	1	337	1	0	339	0	0	3	0	3	3	0	2	0	5	543
Total	9	802	21	0	832	6	1536	5	0	1547	1	0	6	0	7	7	0	3	0	10	2396
*** BREAK ***																					
04:00 PM	12	376	29	0	417	7	274	2	0	283	1	1	12	0	14	28	0	9	0	37	751
04:15 PM	11	382	30	0	423	11	277	4	0	292	2	0	15	0	17	48	0	8	0	56	788
04:30 PM	19	396	38	0	453	8	285	5	0	298	2	2	6	0	10	30	0	11	0	41	802
04:45 PM	22	435	32	0	489	6	287	5	0	298	7	0	16	0	23	32	2	10	0	44	854
Total	64	1589	129	0	1782	32	1123	16	0	1171	12	3	49	0	64	138	2	38	0	178	3195
05:00 PM	28	433	39	0	500	1	287	5	0	293	4	1	14	0	19	25	1	5	0	31	843
05:15 PM	18	439	24	0	481	6	296	7	0	309	3	2	12	0	17	31	2	11	0	44	851
05:30 PM	16	447	37	0	500	4	312	6	0	322	1	0	19	0	20	35	3	14	0	52	894
05:45 PM	25	444	38	0	507	8	304	9	0	321	5	0	15	0	20	27	1	12	0	40	888
Total	87	1763	138	0	1988	19	1199	27	0	1245	13	3	60	0	76	118	7	42	0	167	3476
Grand Total	168	4835	297	0	5300	60	5802	51	0	5913	29	6	120	0	155	264	9	83	0	356	11724
Apprch %	3.2	91.2	5.6	0		1	98.1	0.9	0		18.7	3.9	77.4	0		74.2	2.5	23.3	0		
Total %	1.4	41.2	2.5	0	45.2	0.5	49.5	0.4	0	50.4	0.2	0.1	1	0	1.3	2.3	0.1	0.7	0	3	

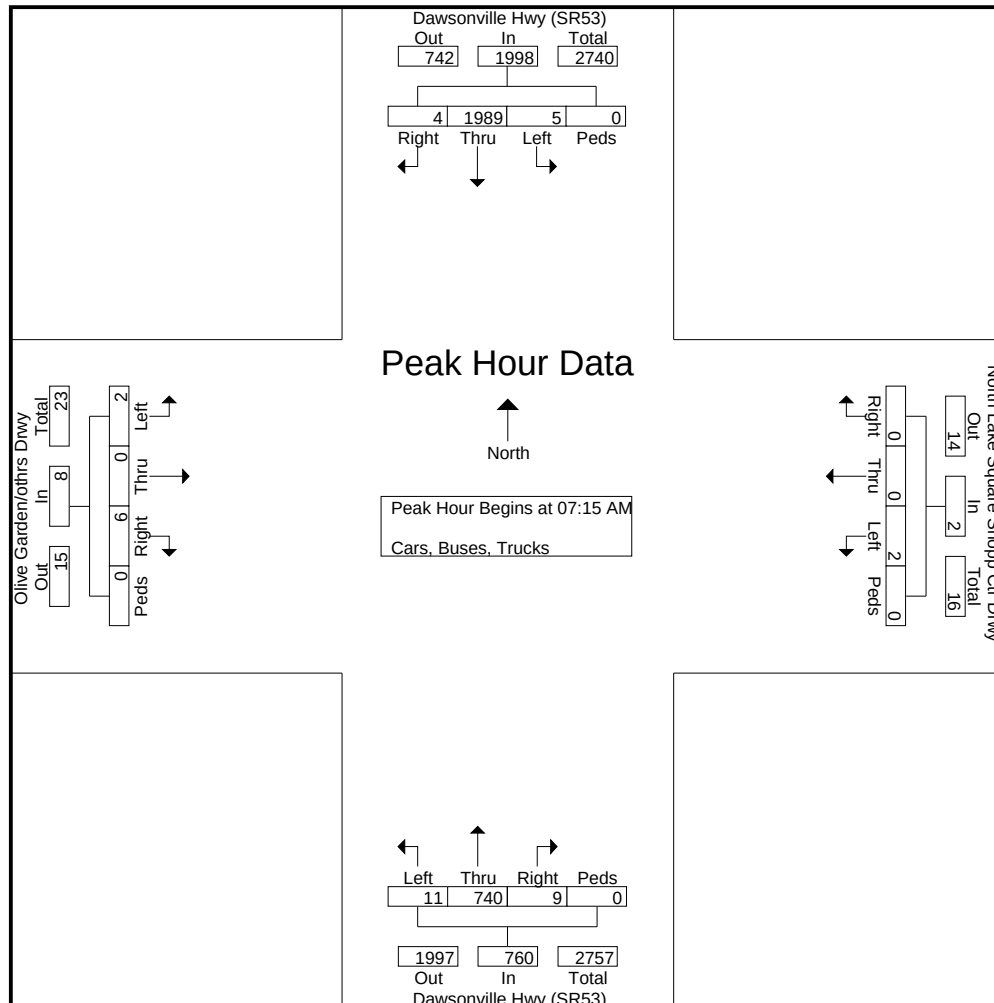
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TMC Data
Dawsonville Hwy (SR53) @ North Lake
Square Shopp Ctr Drwy, Gainesville, GA
7-9am I 4-6pm

File Name : 40160001
Site Code : 40160001
Start Date : 3/22/2017
Page No : 2

	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					Olive Garden/others Drwy Eastbound					North Lake Square Shopp Ctr Drwy Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	1	163	1	0	165	0	489	0	0	489	1	0	1	0	2	0	0	0	0	0	656
07:30 AM	4	174	1	0	179	1	552	0	0	553	1	0	2	0	3	0	0	0	0	0	735
07:45 AM	2	189	3	0	194	1	536	3	0	540	0	0	1	0	1	1	0	0	0	1	736
08:00 AM	4	214	4	0	222	3	412	1	0	416	0	0	2	0	2	1	0	0	0	1	641
Total Volume	11	740	9	0	760	5	1989	4	0	1998	2	0	6	0	8	2	0	0	0	2	2768
% App. Total	1.4	97.4	1.2	0		0.3	99.5	0.2	0		25	0	75	0		100	0	0	0		
PHF	.688	.864	.563	.000	.856	.417	.901	.333	.000	.903	.500	.000	.750	.000	.667	.500	.000	.000	.000	.500	.940



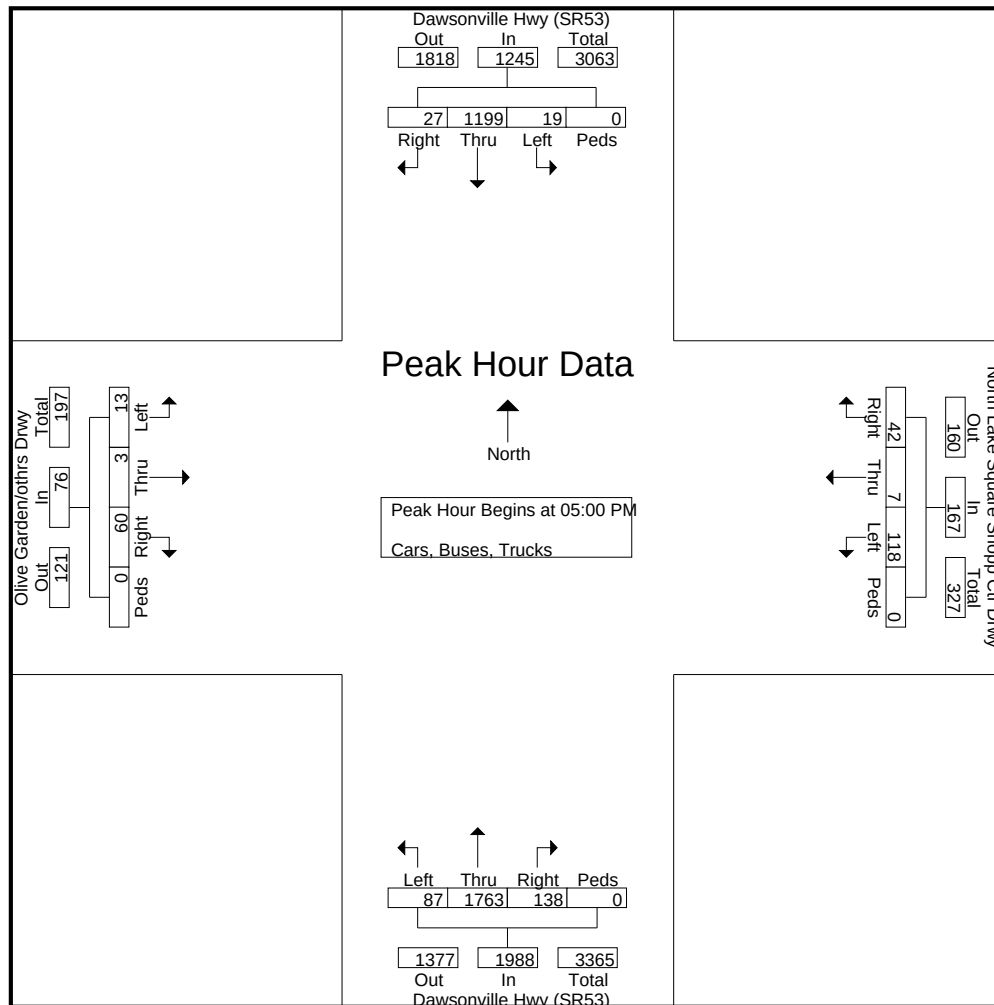
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TMC Data
Dawsonville Hwy (SR53) @ North Lake
Square Shopp Ctr Drwy, Gainesville, GA
7-9am I 4-6pm

File Name : 40160001
Site Code : 40160001
Start Date : 3/22/2017
Page No : 3

	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					Olive Garden/others Drwy Eastbound					North Lake Square Shopp Ctr Drwy Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	28	433	39	0	500	1	287	5	0	293	4	1	14	0	19	25	1	5	0	31	843
05:15 PM	18	439	24	0	481	6	296	7	0	309	3	2	12	0	17	31	2	11	0	44	851
05:30 PM	16	447	37	0	500	4	312	6	0	322	1	0	19	0	20	35	3	14	0	52	894
05:45 PM	25	444	38	0	507	8	304	9	0	321	5	0	15	0	20	27	1	12	0	40	888
Total Volume	87	1763	138	0	1988	19	1199	27	0	1245	13	3	60	0	76	118	7	42	0	167	3476
% App. Total	4.4	88.7	6.9	0		1.5	96.3	2.2	0		17.1	3.9	78.9	0		70.7	4.2	25.1	0		
PHF	.777	.986	.885	.000	.980	.594	.961	.750	.000	.967	.650	.375	.789	.000	.950	.843	.583	.750	.000	.803	.972



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TMC Data
Dawsonville Hwy (SR53) @ Beechwood Blvd
Gainesville, GA
7-9am I 4.30-6.30pm

File Name : 39520006
Site Code : 39520006
Start Date : 11/17/2016
Page No : 1

Groups Printed- Cars, Buses, Trucks

	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					Beechwood Blvd Eastbound					Commercial Drwy (Closed) Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	2	167	0	0	169	0	367	2	0	369	1	0	10	0	11	0	0	0	0	0	549
07:15 AM	6	172	0	0	178	0	492	1	0	493	1	0	9	0	10	0	0	0	0	0	681
07:30 AM	8	187	0	0	195	0	564	0	0	564	0	0	12	0	12	0	0	0	0	0	771
07:45 AM	5	203	0	0	208	0	535	1	0	536	3	0	11	0	14	0	0	0	0	0	758
Total	21	729	0	0	750	0	1958	4	0	1962	5	0	42	0	47	0	0	0	0	0	2759
08:00 AM	8	225	0	0	233	0	415	0	0	415	1	0	9	0	10	0	0	0	0	0	658
08:15 AM	5	203	0	0	208	0	441	0	0	441	0	0	3	0	3	0	0	0	0	0	652
08:30 AM	3	198	0	0	201	0	365	2	0	367	0	0	11	0	11	0	0	0	0	0	579
08:45 AM	3	192	0	0	195	0	341	1	0	342	1	0	3	0	4	0	0	0	0	0	541
Total	19	818	0	0	837	0	1562	3	0	1565	2	0	26	0	28	0	0	0	0	0	2430
*** BREAK ***																					
04:30 PM	16	443	0	0	459	0	312	1	0	313	0	0	14	0	14	0	0	0	0	0	786
04:45 PM	15	497	0	0	512	0	327	0	0	327	0	0	9	0	9	0	0	0	0	0	848
Total	31	940	0	0	971	0	639	1	0	640	0	0	23	0	23	0	0	0	0	0	1634
05:00 PM	18	488	0	0	506	0	347	0	0	347	0	0	5	0	5	0	0	0	0	0	858
05:15 PM	20	506	0	0	526	0	354	3	0	357	0	0	17	0	17	0	0	0	0	0	900
05:30 PM	31	494	0	0	525	0	346	0	0	346	0	0	10	0	10	0	0	0	0	0	881
05:45 PM	17	510	0	0	527	0	341	6	0	347	1	0	15	0	16	0	0	0	0	0	890
Total	86	1998	0	0	2084	0	1388	9	0	1397	1	0	47	0	48	0	0	0	0	0	3529
06:00 PM	23	484	0	0	507	0	338	1	0	339	1	0	9	0	10	0	0	0	0	0	856
06:15 PM	19	468	0	0	487	0	323	2	0	325	1	0	14	0	15	0	0	0	0	0	827
Grand Total	199	5437	0	0	5636	0	6208	20	0	6228	10	0	161	0	171	0	0	0	0	0	12035
Apprch %	3.5	96.5	0	0		0	99.7	0.3	0		5.8	0	94.2	0		0	0	0	0	0	
Total %	1.7	45.2	0	0	46.8	0	51.6	0.2	0	51.7	0.1	0	1.3	0	1.4	0	0	0	0	0	

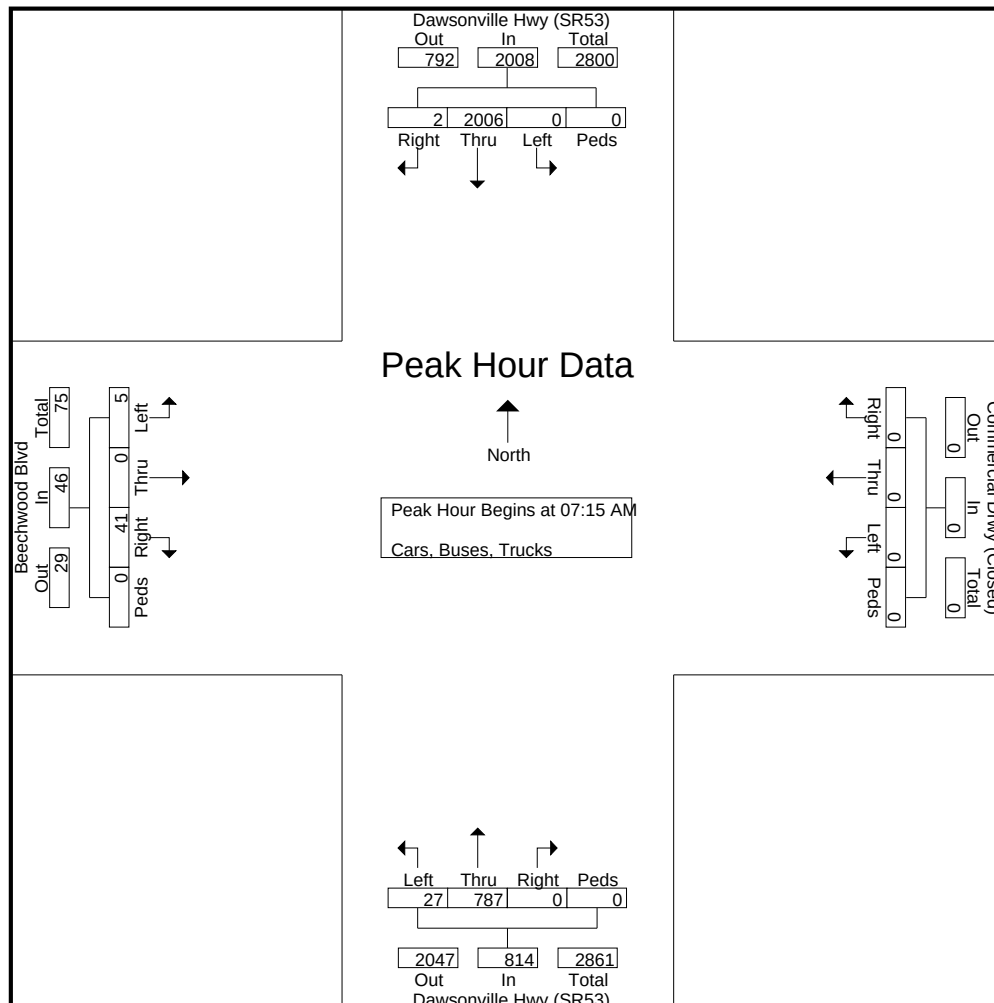
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TMC Data
Dawsonville Hwy (SR53) @ Beechwood Blvd
Gainesville, GA
7-9am | 4.30-6.30pm

File Name : 39520006
Site Code : 39520006
Start Date : 11/17/2016
Page No : 2

	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					Beechwood Blvd Eastbound					Commercial Drwy (Closed) Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	6	172	0	0	178	0	492	1	0	493	1	0	9	0	10	0	0	0	0	0	681
07:30 AM	8	187	0	0	195	0	564	0	0	564	0	0	12	0	12	0	0	0	0	0	771
07:45 AM	5	203	0	0	208	0	535	1	0	536	3	0	11	0	14	0	0	0	0	0	758
08:00 AM	8	225	0	0	233	0	415	0	0	415	1	0	9	0	10	0	0	0	0	0	658
Total Volume	27	787	0	0	814	0	2006	2	0	2008	5	0	41	0	46	0	0	0	0	0	2868
% App. Total	3.3	96.7	0	0		0	99.9	0.1	0		10.9	0	89.1	0		0	0	0	0		
PHF	.844	.874	.000	.000	.873	.000	.889	.500	.000	.890	.417	.000	.854	.000	.821	.000	.000	.000	.000	.000	.930



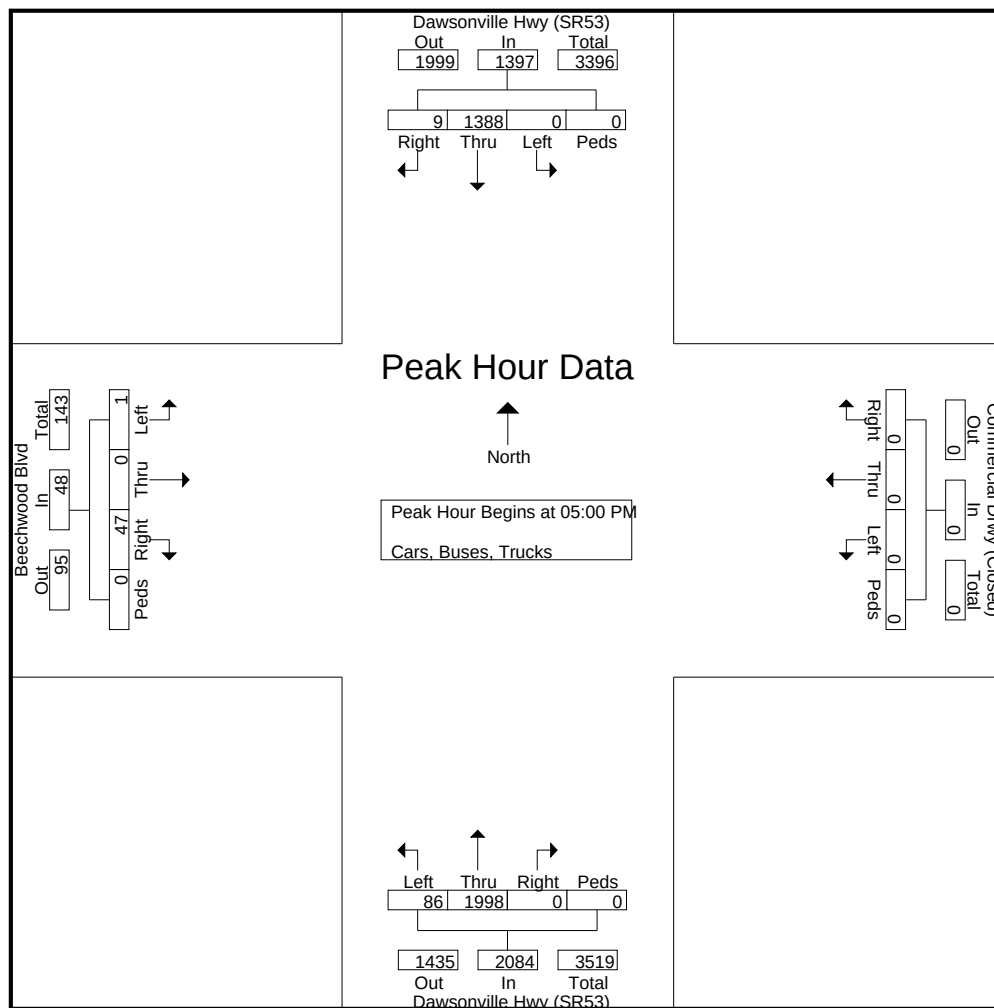
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TMC Data
Dawsonville Hwy (SR53) @ Beechwood Blvd
Gainesville, GA
7-9am | 4.30-6.30pm

File Name : 39520006
Site Code : 39520006
Start Date : 11/17/2016
Page No : 3

	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					Beechwood Blvd Eastbound					Commercial Drwy (Closed) Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	18	488	0	0	506	0	347	0	0	347	0	0	5	0	5	0	0	0	0	0	858
05:15 PM	20	506	0	0	526	0	354	3	0	357	0	0	17	0	17	0	0	0	0	0	900
05:30 PM	31	494	0	0	525	0	346	0	0	346	0	0	10	0	10	0	0	0	0	0	881
05:45 PM	17	510	0	0	527	0	341	6	0	347	1	0	15	0	16	0	0	0	0	0	890
Total Volume	86	1998	0	0	2084	0	1388	9	0	1397	1	0	47	0	48	0	0	0	0	0	3529
% App. Total	4.1	95.9	0	0		0	99.4	0.6	0		2.1	0	97.9	0		0	0	0	0		
PHF	.694	.979	.000	.000	.989	.000	.980	.375	.000	.978	.250	.000	.691	.000	.706	.000	.000	.000	.000	.000	.980



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TMC Data
Dawsonville Hwy (SR53) @ McEver Rd
Gainesville, GA
7-9am I 4.30-6.30pm

File Name : 39520007
Site Code : 39520007
Start Date : 11/17/2016
Page No : 1

Groups Printed- Cars, Buses, Trucks

	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					McEver Rd Eastbound					Home Depot Drwy Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	58	98	3	0	159	2	206	164	0	372	67	4	48	0	119	4	2	4	0	10	660
07:15 AM	67	104	7	0	178	5	276	187	0	468	93	4	88	0	185	8	1	2	0	11	842
07:30 AM	72	110	15	0	197	6	317	236	0	559	99	7	82	0	188	7	4	3	0	14	958
07:45 AM	78	115	18	0	211	10	325	226	0	561	96	6	93	0	195	15	4	3	0	22	989
Total	275	427	43	0	745	23	1124	813	0	1960	355	21	311	0	687	34	11	12	0	57	3449
08:00 AM	65	136	15	0	216	7	252	179	0	438	102	11	79	0	192	12	10	10	0	32	878
08:15 AM	66	121	20	0	207	14	264	153	0	431	83	14	67	0	164	14	6	10	0	30	832
08:30 AM	51	118	21	0	190	20	233	146	0	399	85	16	72	0	173	20	8	6	0	34	796
08:45 AM	57	106	29	0	192	15	221	108	0	344	102	14	81	0	197	18	5	10	0	33	766
Total	239	481	85	0	805	56	970	586	0	1612	372	55	299	0	726	64	29	36	0	129	3272
*** BREAK ***																					
04:30 PM	94	286	16	0	396	11	242	90	0	343	178	35	78	0	291	30	33	19	0	82	1112
04:45 PM	109	312	12	0	433	9	213	112	0	334	215	37	93	0	345	31	27	21	0	79	1191
Total	203	598	28	0	829	20	455	202	0	677	393	72	171	0	636	61	60	40	0	161	2303
05:00 PM	108	352	17	0	477	15	257	115	0	387	178	42	122	0	342	27	19	17	0	63	1269
05:15 PM	101	335	11	0	447	12	259	137	0	408	224	63	74	0	361	10	33	19	0	62	1278
05:30 PM	114	327	10	0	451	17	216	110	0	343	227	59	95	0	381	22	21	16	0	59	1234
05:45 PM	110	348	8	0	466	18	297	119	0	434	216	49	95	0	360	28	18	29	0	75	1335
Total	433	1362	46	0	1841	62	1029	481	0	1572	845	213	386	0	1444	87	91	81	0	259	5116
06:00 PM	106	292	15	0	413	22	236	102	0	360	230	24	88	0	342	32	18	28	0	78	1193
06:15 PM	98	290	12	0	400	11	238	86	0	335	191	16	92	0	299	29	14	12	0	55	1089
Grand Total	1354	3450	229	0	5033	194	4052	2270	0	6516	2386	401	1347	0	4134	307	223	209	0	739	16422
Apprch %	26.9	68.5	4.5	0		3	62.2	34.8	0		57.7	9.7	32.6	0		41.5	30.2	28.3	0		
Total %	8.2	21	1.4	0	30.6	1.2	24.7	13.8	0	39.7	14.5	2.4	8.2	0	25.2	1.9	1.4	1.3	0	4.5	

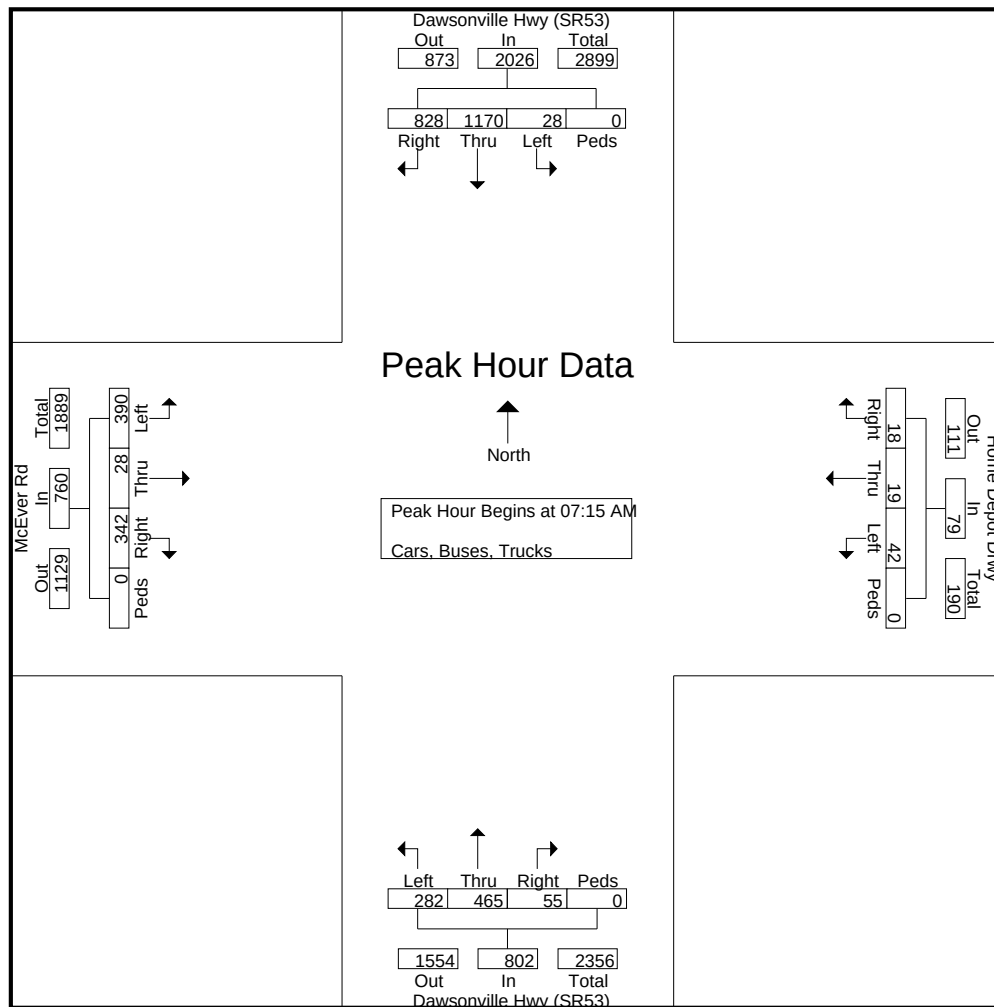
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TMC Data
Dawsonville Hwy (SR53) @ McEver Rd
Gainesville, GA
7-9am | 4.30-6.30pm

File Name : 39520007
Site Code : 39520007
Start Date : 11/17/2016
Page No : 2

	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					McEver Rd Eastbound					Home Depot Drwy Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	67	104	7	0	178	5	276	187	0	468	93	4	88	0	185	8	1	2	0	11	842
07:30 AM	72	110	15	0	197	6	317	236	0	559	99	7	82	0	188	7	4	3	0	14	958
07:45 AM	78	115	18	0	211	10	325	226	0	561	96	6	93	0	195	15	4	3	0	22	989
08:00 AM	65	136	15	0	216	7	252	179	0	438	102	11	79	0	192	12	10	10	0	32	878
Total Volume	282	465	55	0	802	28	1170	828	0	2026	390	28	342	0	760	42	19	18	0	79	3667
% App. Total	35.2	58	6.9	0		1.4	57.7	40.9	0		51.3	3.7	45	0		53.2	24.1	22.8	0		
PHF	.904	.855	.764	.000	.928	.700	.900	.877	.000	.903	.956	.636	.919	.000	.974	.700	.475	.450	.000	.617	.927



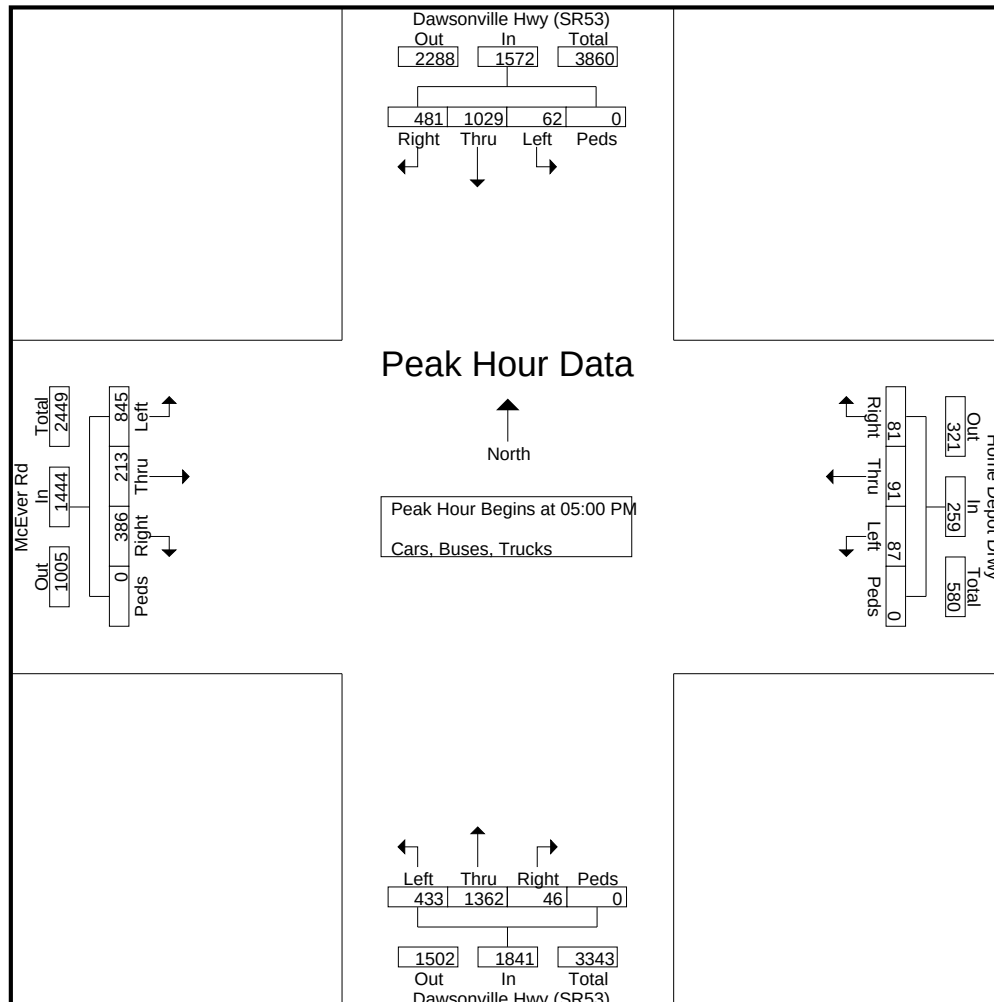
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TMC Data
Dawsonville Hwy (SR53) @ McEver Rd
Gainesville, GA
7-9am I 4.30-6.30pm

File Name : 39520007
Site Code : 39520007
Start Date : 11/17/2016
Page No : 3

	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					McEver Rd Eastbound					Home Depot Drwy Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	108	352	17	0	477	15	257	115	0	387	178	42	122	0	342	27	19	17	0	63	1269
05:15 PM	101	335	11	0	447	12	259	137	0	408	224	63	74	0	361	10	33	19	0	62	1278
05:30 PM	114	327	10	0	451	17	216	110	0	343	227	59	95	0	381	22	21	16	0	59	1234
05:45 PM	110	348	8	0	466	18	297	119	0	434	216	49	95	0	360	28	18	29	0	75	1335
Total Volume	433	1362	46	0	1841	62	1029	481	0	1572	845	213	386	0	1444	87	91	81	0	259	5116
% App. Total	23.5	74	2.5	0		3.9	65.5	30.6	0		58.5	14.8	26.7	0		33.6	35.1	31.3	0		
PHF	.950	.967	.676	.000	.965	.861	.866	.878	.000	.906	.931	.845	.791	.000	.948	.777	.689	.698	.000	.863	.958



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TMC Data
Dawsonville Hwy (SR53) @ Green Hill Cir
Gainesville, GA
7-9am I 4.30-6.30pm

File Name : 39520008
Site Code : 39520008
Start Date : 11/17/2016
Page No : 1

Groups Printed- Cars, Buses, Trucks

	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					Green Hill Circle Eastbound					Commercial Drwy Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	13	123	0	0	136	1	236	7	0	244	10	0	22	0	32	1	0	0	0	1	413
07:15 AM	33	134	2	0	169	3	372	12	0	387	14	1	25	0	40	2	0	1	0	3	599
07:30 AM	28	167	1	0	196	2	387	10	0	399	17	0	34	0	51	2	0	2	0	4	650
07:45 AM	39	174	1	0	214	2	379	14	0	395	21	1	36	0	58	2	1	0	0	3	670
Total	113	598	4	0	715	8	1374	43	0	1425	62	2	117	0	181	7	1	3	0	11	2332
08:00 AM	33	189	5	0	227	4	320	11	0	335	16	0	39	0	55	2	0	2	0	4	621
08:15 AM	35	224	3	0	262	4	318	17	0	339	13	0	32	0	45	0	0	0	0	0	646
08:30 AM	34	197	7	0	238	3	322	15	0	340	10	1	28	0	39	1	4	0	0	5	622
08:45 AM	29	205	7	0	241	5	324	10	0	339	15	2	30	0	47	3	2	1	0	6	633
Total	131	815	22	0	968	16	1284	53	0	1353	54	3	129	0	186	6	6	3	0	15	2522
*** BREAK ***																					
04:30 PM	51	374	12	0	437	11	352	11	0	374	23	1	30	0	54	20	0	9	0	29	894
04:45 PM	57	408	18	0	483	8	361	10	0	379	30	0	28	0	58	17	5	9	0	31	951
Total	108	782	30	0	920	19	713	21	0	753	53	1	58	0	112	37	5	18	0	60	1845
05:00 PM	60	436	20	0	516	7	348	13	0	368	21	1	45	0	67	16	8	4	0	28	979
05:15 PM	62	453	19	0	534	12	362	17	0	391	39	2	36	0	77	19	5	14	0	38	1040
05:30 PM	57	442	12	0	511	12	337	11	0	360	36	6	33	0	75	16	5	9	0	30	976
05:45 PM	69	418	19	0	506	9	345	12	0	366	36	0	24	0	60	9	2	11	0	22	954
Total	248	1749	70	0	2067	40	1392	53	0	1485	132	9	138	0	279	60	20	38	0	118	3949
06:00 PM	62	389	22	0	473	4	369	17	0	390	40	1	25	0	66	9	6	16	0	31	960
06:15 PM	78	374	7	0	459	11	361	22	0	394	29	1	19	0	49	16	6	17	0	39	941
Grand Total	740	4707	155	0	5602	98	5493	209	0	5800	370	17	486	0	873	135	44	95	0	274	12549
Apprch %	13.2	84	2.8	0		1.7	94.7	3.6	0		42.4	1.9	55.7	0		49.3	16.1	34.7	0		
Total %	5.9	37.5	1.2	0	44.6	0.8	43.8	1.7	0	46.2	2.9	0.1	3.9	0	7	1.1	0.4	0.8	0	2.2	

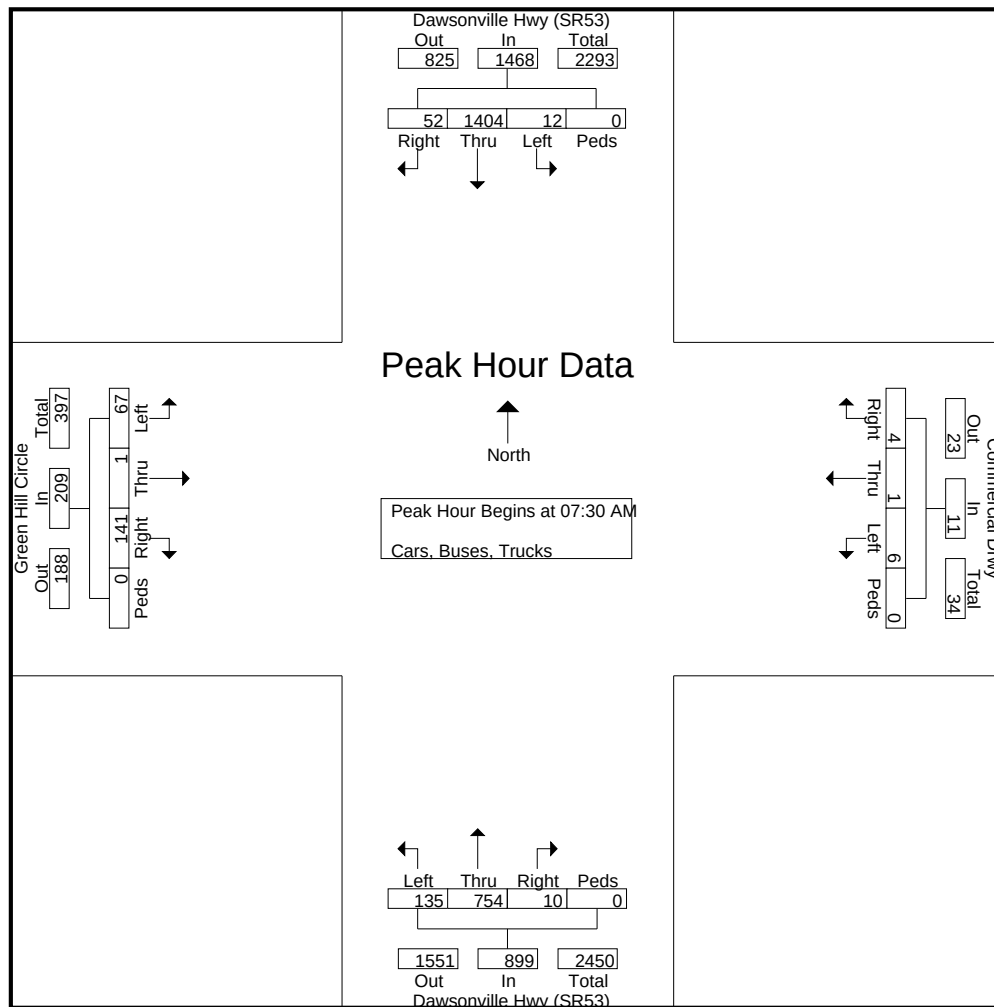
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TMC Data
Dawsonville Hwy (SR53) @ Green Hill Cir
Gainesville, GA
7-9am | 4.30-6.30pm

File Name : 39520008
Site Code : 39520008
Start Date : 11/17/2016
Page No : 2

	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					Green Hill Circle Eastbound					Commercial Drwy Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	28	167	1	0	196	2	387	10	0	399	17	0	34	0	51	2	0	2	0	4	650
07:45 AM	39	174	1	0	214	2	379	14	0	395	21	1	36	0	58	2	1	0	0	3	670
08:00 AM	33	189	5	0	227	4	320	11	0	335	16	0	39	0	55	2	0	2	0	4	621
08:15 AM	35	224	3	0	262	4	318	17	0	339	13	0	32	0	45	0	0	0	0	0	646
Total Volume	135	754	10	0	899	12	1404	52	0	1468	67	1	141	0	209	6	1	4	0	11	2587
% App. Total	15	83.9	1.1	0		0.8	95.6	3.5	0		32.1	0.5	67.5	0		54.5	9.1	36.4	0		
PHF	.865	.842	.500	.000	.858	.750	.907	.765	.000	.920	.798	.250	.904	.000	.901	.750	.250	.500	.000	.688	.965



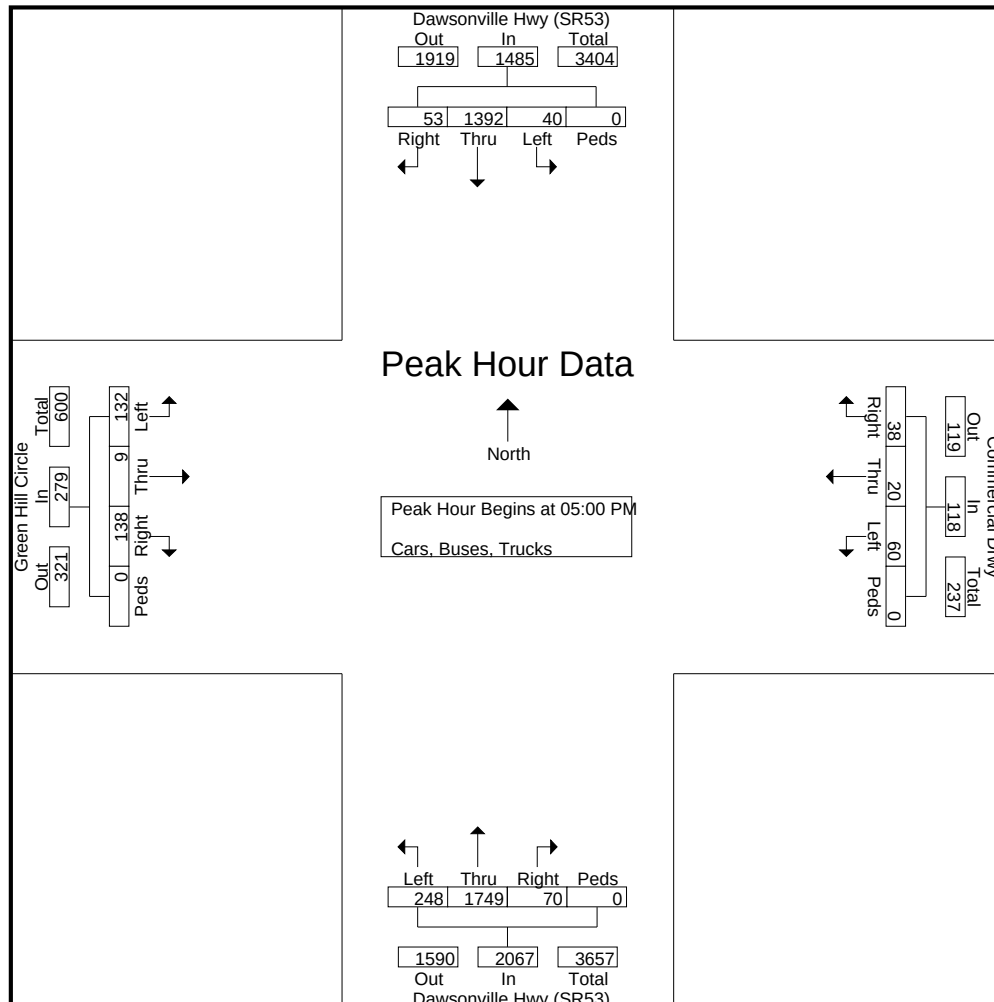
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TMC Data
Dawsonville Hwy (SR53) @ Green Hill Cir
Gainesville, GA
7-9am | 4.30-6.30pm

File Name : 39520008
Site Code : 39520008
Start Date : 11/17/2016
Page No : 3

	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					Green Hill Circle Eastbound					Commercial Drwy Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	60	436	20	0	516	7	348	13	0	368	21	1	45	0	67	16	8	4	0	28	979
05:15 PM	62	453	19	0	534	12	362	17	0	391	39	2	36	0	77	19	5	14	0	38	1040
05:30 PM	57	442	12	0	511	12	337	11	0	360	36	6	33	0	75	16	5	9	0	30	976
05:45 PM	69	418	19	0	506	9	345	12	0	366	36	0	24	0	60	9	2	11	0	22	954
Total Volume	248	1749	70	0	2067	40	1392	53	0	1485	132	9	138	0	279	60	20	38	0	118	3949
% App. Total	12	84.6	3.4	0		2.7	93.7	3.6	0		47.3	3.2	49.5	0		50.8	16.9	32.2	0		
PHF	.899	.965	.875	.000	.968	.833	.961	.779	.000	.949	.846	.375	.767	.000	.906	.789	.625	.679	.000	.776	.949



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TMC Data
Dawsonville Hwy (SR53) @
Shallowford Rd, Gainesville, GA
7-9am | 4.30-6.30pm

File Name : 39520009
Site Code : 39520009
Start Date : 11/17/2016
Page No : 1

Groups Printed- Cars, Buses, Trucks

	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					Shallowford Rd Eastbound					Commercial Drwy Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	1	123	1	0	125	3	226	58	0	287	15	0	1	0	16	1	0	0	0	1	429
07:15 AM	4	136	2	0	142	3	254	74	0	331	18	0	2	0	20	0	0	0	0	0	493
07:30 AM	3	146	1	0	150	0	334	82	0	416	28	0	4	0	32	0	1	2	0	3	601
07:45 AM	3	178	6	0	187	0	342	85	0	427	35	0	2	0	37	0	0	0	0	0	651
Total	11	583	10	0	604	6	1156	299	0	1461	96	0	9	0	105	1	1	2	0	4	2174
08:00 AM	3	188	3	0	194	0	307	87	0	394	34	1	0	0	35	0	1	1	0	2	625
08:15 AM	1	226	3	0	230	1	266	84	0	351	41	1	2	0	44	2	2	0	0	4	629
08:30 AM	7	186	8	0	201	0	268	82	0	350	45	0	3	0	48	0	1	0	0	1	600
08:45 AM	3	190	7	0	200	0	282	72	0	354	44	2	5	0	51	0	1	1	0	2	607
Total	14	790	21	0	825	1	1123	325	0	1449	164	4	10	0	178	2	5	2	0	9	2461
*** BREAK ***																					
04:30 PM	9	322	23	0	354	2	302	102	0	406	109	5	6	0	120	7	6	5	0	18	898
04:45 PM	9	379	24	0	412	1	297	107	0	405	107	2	6	0	115	17	3	1	0	21	953
Total	18	701	47	0	766	3	599	209	0	811	216	7	12	0	235	24	9	6	0	39	1851
05:00 PM	12	393	15	0	420	2	304	113	0	419	142	9	10	0	161	8	6	2	0	16	1016
05:15 PM	5	441	32	0	478	1	318	128	0	447	102	5	2	0	109	9	8	1	0	18	1052
05:30 PM	12	388	30	0	430	3	267	113	0	383	136	13	8	0	157	7	5	4	0	16	986
05:45 PM	11	417	37	0	465	1	272	109	0	382	138	11	6	0	155	12	8	0	0	20	1022
Total	40	1639	114	0	1793	7	1161	463	0	1631	518	38	26	0	582	36	27	7	0	70	4076
06:00 PM	12	356	17	0	385	4	284	150	0	438	108	2	11	0	121	16	5	1	0	22	966
06:15 PM	10	334	18	0	362	5	269	120	0	394	126	4	0	0	130	17	6	1	0	24	910
Grand Total	105	4403	227	0	4735	26	4592	1566	0	6184	1228	55	68	0	1351	96	53	19	0	168	12438
Apprch %	2.2	93	4.8	0		0.4	74.3	25.3	0		90.9	4.1	5	0		57.1	31.5	11.3	0		
Total %	0.8	35.4	1.8	0	38.1	0.2	36.9	12.6	0	49.7	9.9	0.4	0.5	0	10.9	0.8	0.4	0.2	0	1.4	

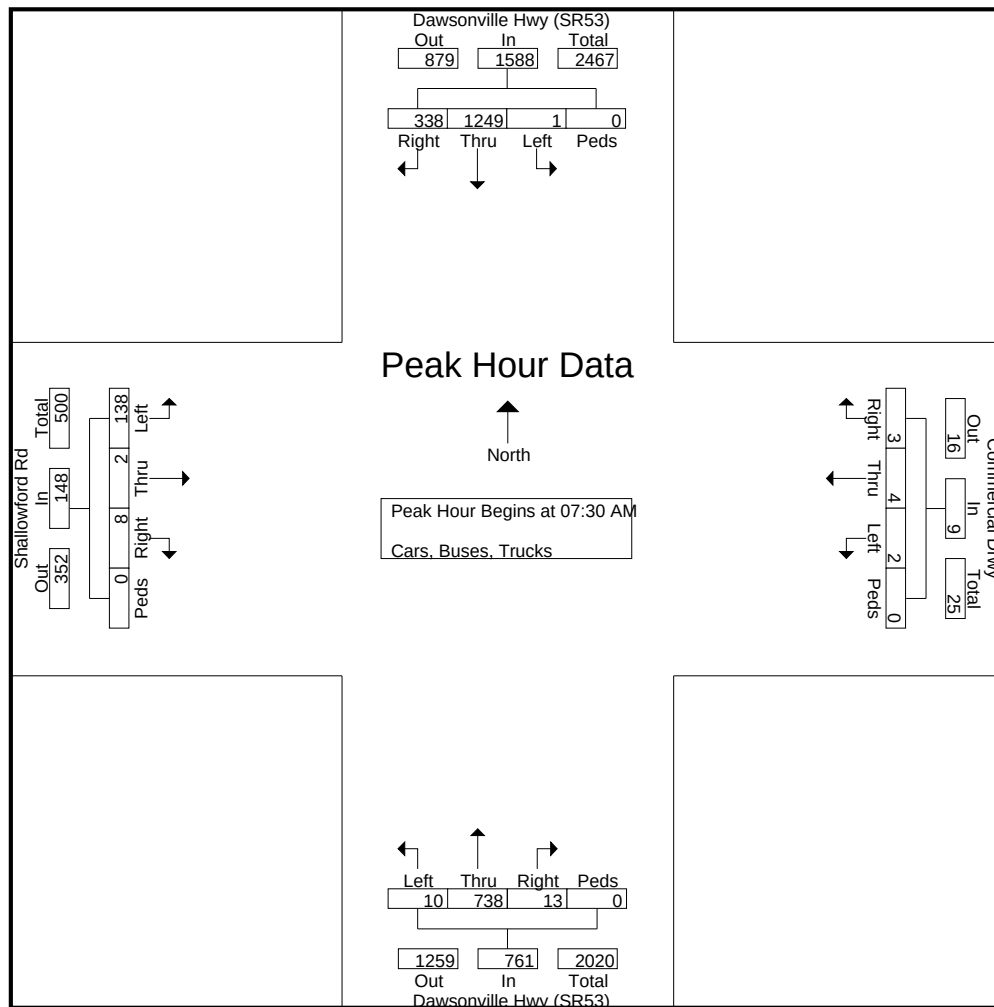
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TMC Data
Dawsonville Hwy (SR53) @
Shallowford Rd, Gainesville, GA
7-9am | 4.30-6.30pm

File Name : 39520009
Site Code : 39520009
Start Date : 11/17/2016
Page No : 2

	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					Shallowford Rd Eastbound					Commercial Drwy Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	3	146	1	0	150	0	334	82	0	416	28	0	4	0	32	0	1	2	0	3	601
07:45 AM	3	178	6	0	187	0	342	85	0	427	35	0	2	0	37	0	0	0	0	0	651
08:00 AM	3	188	3	0	194	0	307	87	0	394	34	1	0	0	35	0	1	1	0	2	625
08:15 AM	1	226	3	0	230	1	266	84	0	351	41	1	2	0	44	2	2	0	0	4	629
Total Volume	10	738	13	0	761	1	1249	338	0	1588	138	2	8	0	148	2	4	3	0	9	2506
% App. Total	1.3	97	1.7	0		0.1	78.7	21.3	0		93.2	1.4	5.4	0		22.2	44.4	33.3	0		
PHF	.833	.816	.542	.000	.827	.250	.913	.971	.000	.930	.841	.500	.500	.000	.841	.250	.500	.375	.000	.563	.962



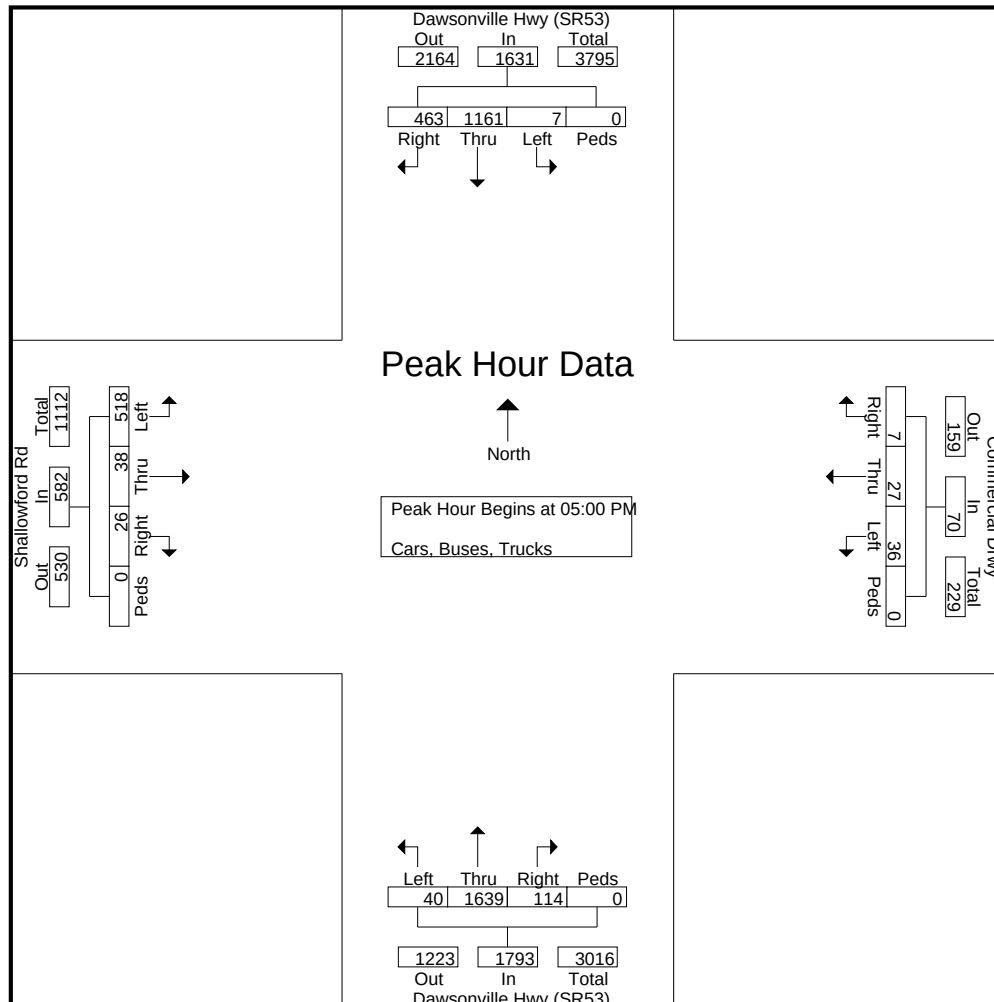
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TMC Data
Dawsonville Hwy (SR53) @
Shallowford Rd, Gainesville, GA
7-9am I 4.30-6.30pm

File Name : 39520009
Site Code : 39520009
Start Date : 11/17/2016
Page No : 3

	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					Shallowford Rd Eastbound					Commercial Drwy Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	12	393	15	0	420	2	304	113	0	419	142	9	10	0	161	8	6	2	0	16	1016
05:15 PM	5	441	32	0	478	1	318	128	0	447	102	5	2	0	109	9	8	1	0	18	1052
05:30 PM	12	388	30	0	430	3	267	113	0	383	136	13	8	0	157	7	5	4	0	16	986
05:45 PM	11	417	37	0	465	1	272	109	0	382	138	11	6	0	155	12	8	0	0	20	1022
Total Volume	40	1639	114	0	1793	7	1161	463	0	1631	518	38	26	0	582	36	27	7	0	70	4076
% App. Total	2.2	91.4	6.4	0		0.4	71.2	28.4	0		89	6.5	4.5	0		51.4	38.6	10	0		
PHF	.833	.929	.770	.000	.938	.583	.913	.904	.000	.912	.912	.731	.650	.000	.904	.750	.844	.438	.000	.875	.969



Appendix B

Intersection Analysis Methodology

Intersection Analysis Methodology

The methodology used for evaluating traffic operations at intersections is presented in the Transportation Research Board’s *Highway Capacity Manual*, 2010 edition (HCM 2010). Synchro 8 software, which emulates the HCM 2010 methodology, was used for all analyses. The following is an overview of the methodology employed for the analysis of signalized intersections and stop-sign controlled (unsignalized) intersections.

Signalized Intersections

The criteria for evaluating signalized intersections are capacity and level of service. The capacity analysis of an intersection compares the volume of traffic using the various lane groups at the intersection to the capacity of those lane groups. This produces a volume-to-capacity (v/c) ratio for each lane group. A v/c ratio greater than 1.0 indicates that the volume of traffic has exceeded the capacity available and indicates a temporary excess of demand. The HCM 2010 methodology computes a critical v/c ratio for an intersection based on the critical lane groups or approaches. This critical v/c ratio is an indication of overall intersection sufficiency.

Level of service for a signalized intersection is defined in terms of control delay per vehicle. For signalized intersections, a composite intersection level of service is determined. The thresholds for each level of service are higher for signalized intersections than for unsignalized intersections. This is attributable to a variety of factors including expectation and acceptance of higher delays at signals, and the fact that drivers can relax when waiting at a signal as opposed to having to remain attentive as they proceed through the unsignalized intersection. The level of service criteria for signalized intersections are shown in Table A.

Table A – Level of Service Criteria for Signalized Intersections

Control Delay (s/veh)	Level of Service by Volume-to-Capacity Ratio	
	≤1.0	>1.0
≤ 10	A	F
> 10 and ≤ 20	B	F
> 20 and ≤ 35	C	F
> 35 and ≤ 55	D	F
> 55 and ≤ 80	E	F
> 80	F	F

Source: *Highway Capacity Manual 2010*

Unsignalized Intersections

The operations at an unsignalized intersection are defined in terms of levels of service. Level of service (LOS) is a measure of driver discomfort, frustration, fuel consumption, and lost travel time. Level of service for an unsignalized intersection is defined in terms of control delay per vehicle. Control delay is that portion of delay attributable to the control device and includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. The delays at unsignalized intersections are based on gap acceptance theory,

factoring in availability of gaps, usefulness of the gaps, and the priority of right-of-way given to each traffic stream.

Levels of service are assigned letters A through F. LOS A indicates operations with very low control delay while LOS F describes operations with high control delay. LOS F is considered to be unacceptable by most drivers, while LOS E is typically considered to be the limit of acceptable delay. The level of service criteria for unsignalized intersections are presented in Table B.

Table B – Level of Service Criteria for Unsignalized Intersections

Control Delay (s/veh)	Level of Service by Volume-to-Capacity Ratio	
	≤1.0	>1.0
0 – 10	A	F
> 10 and ≤ 15	B	F
> 15 and ≤ 25	C	F
> 25 and ≤ 35	D	F
> 35 and ≤ 50	E	F
> 50	F	F

Source: Highway Capacity Manual 2010

Appendix C

Existing Intersection Analysis

Lanier Tract DRI
1: Sportsman Club Road & Strickland Drive

existing a.m.

Intersection						
Int Delay, s/veh	2.6					
Movement	WBL	WBR		NBT	NBR	SBL SBT
Vol, veh/h	10	0		6	1	0 23
Conflicting Peds, #/hr	0	0		0	0	0 0
Sign Control	Stop	Stop		Free	Free	Free Free
RT Channelized	-	None		-	None	- None
Storage Length	0	-		-	-	- -
Veh in Median Storage, #	0	-		0	-	- 0
Grade, %	0	-		0	-	- 0
Peak Hour Factor	50	50		58	58	64 64
Heavy Vehicles, %	2	2		2	2	2 2
Mvmt Flow	20	0		10	2	0 36
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	47	11		0	0	12 0
Stage 1	11	-		-	-	- -
Stage 2	36	-		-	-	- -
Critical Hdwy	6.42	6.22		-	-	4.12 -
Critical Hdwy Stg 1	5.42	-		-	-	- -
Critical Hdwy Stg 2	5.42	-		-	-	- -
Follow-up Hdwy	3.518	3.318		-	-	2.218 -
Pot Cap-1 Maneuver	963	1070		-	-	1607 -
Stage 1	1012	-		-	-	- -
Stage 2	986	-		-	-	- -
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	963	1070		-	-	1607 -
Mov Cap-2 Maneuver	963	-		-	-	- -
Stage 1	1012	-		-	-	- -
Stage 2	986	-		-	-	- -
Approach	WB		NB		SB	
HCM Control Delay, s	8.8		0		0	
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	963	1607	-	
HCM Lane V/C Ratio	-	-	0.021	-	-	
HCM Control Delay (s)	-	-	8.8	0	-	
HCM Lane LOS	-	-	A	A	-	
HCM 95th %tile Q(veh)	-	-	0.1	0	-	

Lanier Tract DRI
2: GA 53 & Sportsman Club Road

existing a.m.

Intersection												
Int Delay, s/veh		5.3										
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	9	1687	0	0	743	8	0	0	0	25	0	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	84	84	84	92	92	92	59	59	59
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	1962	0	0	885	10	0	0	0	42	0	25
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	894	0	0	1962	0	0	2425	2877	981	1891	2872	447
Stage 1	-	-	-	-	-	-	1983	1983	-	889	889	-
Stage 2	-	-	-	-	-	-	442	894	-	1002	1983	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	755	-	-	293	-	-	17	16	249	43	16	559
Stage 1	-	-	-	-	-	-	63	105	-	304	360	-
Stage 2	-	-	-	-	-	-	564	358	-	260	105	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	755	-	-	293	-	-	16	16	249	43	16	559
Mov Cap-2 Maneuver	-	-	-	-	-	-	16	16	-	43	16	-
Stage 1	-	-	-	-	-	-	62	104	-	300	360	-
Stage 2	-	-	-	-	-	-	538	358	-	257	104	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0			0			224.6		
HCM LOS							A			F		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	-	755	-	-	293	-	-	66				
HCM Lane V/C Ratio	-	0.014	-	-	-	-	-	1.027				
HCM Control Delay (s)	0	9.8	-	-	0	-	-	224.6				
HCM Lane LOS	A	A	-	-	A	-	-	F				
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	5.2				

Lanier Tract DRI
3: GA 53 & Avonlea Way

existing a.m.

Intersection						
Int Delay, s/veh	2.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	15	72	12	758	1668	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	88	88	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	18	86	14	861	1940	7
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	2398	970	1940	0	-	0
Stage 1	1940	-	-	-	-	-
Stage 2	458	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	28	253	299	-	-	-
Stage 1	98	-	-	-	-	-
Stage 2	604	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	27	253	299	-	-	-
Mov Cap-2 Maneuver	27	-	-	-	-	-
Stage 1	98	-	-	-	-	-
Stage 2	576	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	69.3	0.3		0		
HCM LOS	F					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	299	-	27	253	-	-
HCM Lane V/C Ratio	0.046	-	0.661	0.339	-	-
HCM Control Delay (s)	17.6	-	275.4	26.4	-	-
HCM Lane LOS	C	-	F	D	-	-
HCM 95th %tile Q(veh)	0.1	-	2.1	1.4	-	-

Lanier Tract DRI
4: GA 53 & Canterbury Road

existing a.m.

Intersection						
Int Delay, s/veh	3.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	18	95	23	722	1782	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	86	86	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	20	108	27	840	1958	8
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	2431	979	1958	0	-	0
Stage 1	1958	-	-	-	-	-
Stage 2	473	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	26	249	294	-	-	-
Stage 1	96	-	-	-	-	-
Stage 2	593	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	24	249	294	-	-	-
Mov Cap-2 Maneuver	24	-	-	-	-	-
Stage 1	96	-	-	-	-	-
Stage 2	539	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	83.3	0.6		0		
HCM LOS	F					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	294	-	24	249	-	-
HCM Lane V/C Ratio	0.091	-	0.852	0.434	-	-
HCM Control Delay (s)	18.5	-	363.9	30.1	-	-
HCM Lane LOS	C	-	F	D	-	-
HCM 95th %tile Q(veh)	0.3	-	2.6	2.1	-	-

Lanier Tract DRI
7: GA 53 & Beechwood Boulevard

existing a.m.

Intersection

Int Delay, s/veh 1.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	5	41	27	787	2006	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	Yield	-	None
Storage Length	0	0	200	-	-	360
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	1	0	-
Peak Hour Factor	82	82	87	87	89	89
Heavy Vehicles, %	0	0	0	1	0	0
Mvmt Flow	6	50	31	905	2254	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2768	1127	2254	0	-	0
Stage 1	2254	-	-	-	-	-
Stage 2	514	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	16	202	231	-	-	-
Stage 1	67	-	-	-	-	-
Stage 2	571	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	14	202	231	-	-	-
Mov Cap-2 Maneuver	14	-	-	-	-	-
Stage 1	67	-	-	-	-	-
Stage 2	494	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	68.2	0.8	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	231	-	14	202	-	-
HCM Lane V/C Ratio	0.134	-	0.436	0.248	-	-
HCM Control Delay (s)	23	-	393.1	28.6	-	-
HCM Lane LOS	C	-	F	D	-	-
HCM 95th %tile Q(veh)	0.5	-	1.1	0.9	-	-

Lanier Tract DRI

5: GA 53 & Lanier Valley Dr/Ahaluna Dr

existing a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	19	5	115	37	3	20	55	701	11	14	1901	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		2%			-4%			1%			-1%	
Storage Length (ft)	0		0	0		0	100		0	140		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	0			0			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.888			0.956			0.998				
Flt Protected		0.993			0.970		0.950			0.950		
Satd. Flow (prot)	0	1659	0	0	1797	0	1796	3516	0	1814	3628	0
Flt Permitted		0.941			0.405		0.037			0.337		
Satd. Flow (perm)	0	1572	0	0	750	0	70	3516	0	644	3628	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		86			13			4				
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		340			322			888			1417	
Travel Time (s)		7.7			7.3			13.5			21.5	
Peak Hour Factor	0.91	0.91	0.91	0.83	0.83	0.83	0.85	0.85	0.85	0.87	0.87	0.87
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	0%	0%
Adj. Flow (vph)	21	5	126	45	4	24	65	825	13	16	2185	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	152	0	0	73	0	65	838	0	16	2185	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	0.97	0.97	0.97	1.01	1.01	1.01	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		0	1	
Detector Template	Left			Left								
Leading Detector (ft)	20	40		20	40		40	336		0	336	
Trailing Detector (ft)	0	0		0	0		0	330		0	330	
Detector 1 Position(ft)	0	0		0	0		0	330		0	330	
Detector 1 Size(ft)	20	40		20	40		40	6		0	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		8			4		5	2			6	
Permitted Phases	8			4			2			6		
Detector Phase	8	8		4	4		5	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	23.0	23.0		23.0	23.0		10.6	23.0		23.0	23.0	

Lanier Tract DRI

5: GA 53 & Lanier Valley Dr/Ahaluna Dr

existing a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	25.0	25.0		25.0	25.0		13.0	125.0		112.0	112.0	
Total Split (%)	16.7%	16.7%		16.7%	16.7%		8.7%	83.3%		74.7%	74.7%	
Maximum Green (s)	18.4	18.4		18.4	18.4		7.4	118.9		105.9	105.9	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	4.5		4.5	4.5	
All-Red Time (s)	2.6	2.6		2.6	2.6		2.6	1.6		1.6	1.6	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.6			6.6		5.6	6.1		6.1	6.1	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		C-Max	C-Max	
Act Effect Green (s)		14.0			14.0		123.8	123.3		113.3	113.3	
Actuated g/C Ratio		0.09			0.09		0.83	0.82		0.76	0.76	
v/c Ratio		0.68			0.90		0.49	0.29		0.03	0.80	
Control Delay		43.6			127.8		44.3	1.5		6.6	15.9	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		43.6			127.8		44.3	1.5		6.6	15.9	
LOS		D			F		D	A		A	B	
Approach Delay		43.6			127.8			4.6			15.9	
Approach LOS		D			F			A			B	

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 26 (17%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.90

Intersection Signal Delay: 16.5

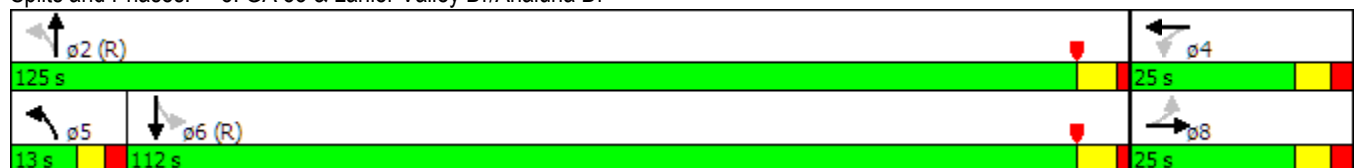
Intersection LOS: B

Intersection Capacity Utilization 73.2%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 5: GA 53 & Lanier Valley Dr/Ahaluna Dr



Lanier Tract DRI

6: 53-Dawsonville Hwy & Academy Sports

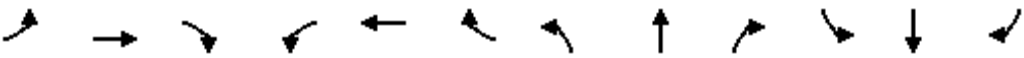
existing a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	2	0	6	2	0	0	11	740	9	5	1989	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			4%			1%			0%	
Storage Length (ft)	0		0	0		70	200		170	190		360
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	0			0			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850						0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1900	1615	1769	1862	1862	1796	3556	1607	1805	3610	1615
Flt Permitted							0.058			0.329		
Satd. Flow (perm)	1900	1900	1615	1862	1862	1862	110	3556	1607	625	3610	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			67						68			68
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		262			246			1836			685	
Travel Time (s)		7.1			6.7			27.8			10.4	
Peak Hour Factor	0.67	0.67	0.67	0.50	0.50	0.50	0.86	0.86	0.86	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%
Adj. Flow (vph)	3	0	9	4	0	0	13	860	10	6	2210	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	3	0	9	4	0	0	13	860	10	6	2210	4
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.03	1.03	1.03	1.01	1.01	1.01	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1	1	1	1	1	1	1	0
Detector Template												
Leading Detector (ft)	40	40	0	40	40	40	40	336	0	40	336	0
Trailing Detector (ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Size(ft)	40	40	0	40	40	40	40	6	0	40	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm		Perm	Perm		Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8		8	4		4	2		2	6		6
Detector Phase	8	8	8	4	4	4	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	42.0	42.0	42.0	42.4	42.4	42.4	11.4	30.3	30.3	11.0	29.3	29.3

Lanier Tract DRI

6: 53-Dawsonville Hwy & Academy Sports

existing a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	42.4	42.4	42.4	42.4	42.4	42.4	11.4	96.6	96.6	11.0	96.2	96.2
Total Split (%)	28.3%	28.3%	28.3%	28.3%	28.3%	28.3%	7.6%	64.4%	64.4%	7.3%	64.1%	64.1%
Maximum Green (s)	36.0	36.0	36.0	36.0	36.0	36.0	5.0	90.4	90.4	5.0	90.0	90.0
Yellow Time (s)	3.4	3.4	3.4	3.4	3.4	3.4	3.4	4.3	4.3	3.0	4.3	4.3
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	1.9	1.9	3.0	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.2	6.2	6.0	6.2	6.2
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0
Flash Dont Walk (s)	23.0	23.0	23.0	32.0	32.0	32.0		20.0	20.0		19.0	19.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0	0		0	0
Act Effect Green (s)	6.1		6.1	6.1			137.2	139.9	139.9	136.1	137.4	137.4
Actuated g/C Ratio	0.04		0.04	0.04			0.91	0.93	0.93	0.91	0.92	0.92
v/c Ratio	0.04		0.07	0.05			0.08	0.26	0.01	0.01	0.67	0.00
Control Delay	69.5		1.0	70.0			1.5	0.8	0.0	1.0	1.8	0.0
Queue Delay	0.0		0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.5		1.0	70.0			1.5	0.8	0.0	1.0	1.9	0.0
LOS	E		A	E			A	A	A	A	A	A
Approach Delay								0.8			1.8	
Approach LOS								A			A	

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 27 (18%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 145

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.67

Intersection Signal Delay: 1.7

Intersection LOS: A

Intersection Capacity Utilization 79.1%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 6: 53-Dawsonville Hwy & Academy Sports

 p1	 p2 (R)		 p4
11 s	96.6 s		42.4 s
 p5	 p6 (R)		 p8
11.4 s	96.2 s		42.4 s

Lanier Tract DRI

8: Dawsonville Highway/GA 53 & McEver Road/McEver

existing a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	390	28	342	42	19	18	282	465	55	28	1170	828
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			5%			1%			-1%	
Storage Length (ft)	180		0	0		0	310		185	255		0
Storage Lanes	2		1	1		0	2		1	1		1
Taper Length (ft)	50			0			50			50		
Lane Util. Factor	0.97	0.95	0.95	1.00	1.00	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Frt		0.872	0.850		0.927				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3484	1566	1527	1760	1717	0	3484	3487	1575	1814	3628	1623
Flt Permitted	0.950			0.629			0.950			0.950		
Satd. Flow (perm)	3484	1566	1527	1165	1717	0	3484	3487	1575	1814	3628	1623
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		166	187		29				184			538
Link Speed (mph)		45			45			45			45	
Link Distance (ft)		580			331			921			1624	
Travel Time (s)		8.8			5.0			14.0			24.6	
Peak Hour Factor	0.97	0.97	0.97	0.62	0.62	0.62	0.93	0.93	0.93	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	3%	2%	0%	0%	0%
Adj. Flow (vph)	402	29	353	68	31	29	303	500	59	31	1300	920
Shared Lane Traffic (%)			47%									
Lane Group Flow (vph)	402	195	187	68	60	0	303	500	59	31	1300	920
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.03	1.03	1.03	1.01	1.01	1.01	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1		1	1	0	1	1	0
Detector Template												
Leading Detector (ft)	40	40	0	40	40		40	336	0	40	336	0
Trailing Detector (ft)	0	0	0	0	0		0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0		0	330	0	0	330	0
Detector 1 Size(ft)	40	40	0	40	40		40	6	0	40	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	NA	Perm	pm+pt	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases			8	4					6			2
Detector Phase	3	8	8	7	4		1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	13.2	50.2	50.2	11.6	48.2		13.4	35.6	35.6	12.9	44.6	44.6

Lanier Tract DRI

8: Dawsonville Highway/GA 53 & McEver Road/McEver

existing a.m.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	24.0	60.4	60.4	11.8	48.2		20.2	63.9	63.9	13.9	57.6	57.6
Total Split (%)	16.0%	40.3%	40.3%	7.9%	32.1%		13.5%	42.6%	42.6%	9.3%	38.4%	38.4%
Maximum Green (s)	16.7	53.1	53.1	5.3	40.9		12.7	57.3	57.3	6.7	51.0	51.0
Yellow Time (s)	4.3	4.3	4.3	3.5	4.3		4.5	4.4	4.4	4.2	4.4	4.4
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	2.2	2.2	3.0	2.2	2.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.3	7.3	7.3	6.5	7.3		7.5	6.6	6.6	7.2	6.6	6.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)		4.0	4.0		4.0			4.0	4.0		4.0	4.0
Flash Dont Walk (s)		38.0	38.0		36.0			25.0	25.0		34.0	34.0
Pedestrian Calls (#/hr)		0	0		0			0	0		0	0
Act Effect Green (s)	16.7	20.5	20.5	13.3	8.5		12.7	96.3	96.3	8.0	86.0	86.0
Actuated g/C Ratio	0.11	0.14	0.14	0.09	0.06		0.08	0.64	0.64	0.05	0.57	0.57
v/c Ratio	1.04	0.55	0.51	0.55	0.48		1.03	0.22	0.05	0.32	0.63	0.79
Control Delay	119.1	18.3	12.1	67.7	51.5		133.7	17.6	1.2	85.8	19.6	11.3
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	119.1	18.3	12.1	67.7	51.5		133.7	17.6	1.2	85.8	19.6	11.3
LOS	F	B	B	E	D		F	B	A	F	B	B
Approach Delay		68.5			60.1			57.3			17.1	
Approach LOS		E			E			E			B	

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 19 (13%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.04

Intersection Signal Delay: 37.1

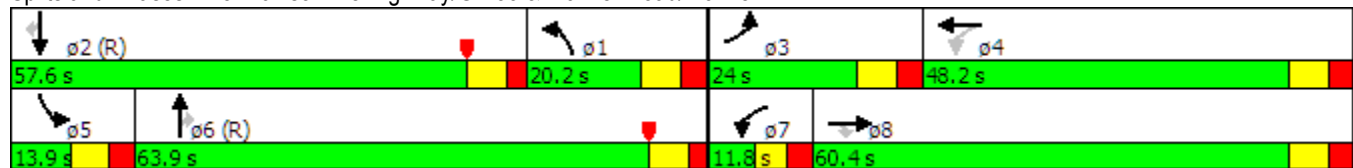
Intersection LOS: D

Intersection Capacity Utilization 81.3%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 8: Dawsonville Highway/GA 53 & McEver Road/McEver



Lanier Tract DRI

9: Dawsonville Highway & Greenhill Circle/Greenhill Circle

existing a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	67	1	141	6	1	4	135	754	10	12	1404	52
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		3%			7%			1%			0%	
Storage Length (ft)	0		0	0		0	190		190	185		100
Storage Lanes	0		1	0		1	1		1	1		1
Taper Length (ft)	0			0			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected		0.953			0.957		0.950			0.950		
Satd. Flow (prot)	0	1784	1591	0	1755	1558	1796	3522	1607	1805	3610	1615
Flt Permitted		0.722			0.755		0.116			0.324		
Satd. Flow (perm)	0	1351	1591	0	1384	1558	219	3522	1607	616	3610	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			151			102			57			101
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		288			254			778			921	
Travel Time (s)		7.9			6.9			11.8			14.0	
Peak Hour Factor	0.90	0.90	0.90	0.69	0.69	0.69	0.86	0.86	0.86	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	0%	0%
Adj. Flow (vph)	74	1	157	9	1	6	157	877	12	13	1526	57
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	75	157	0	10	6	157	877	12	13	1526	57
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.02	1.02	1.02	1.05	1.05	1.05	1.01	1.01	1.01	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1	0	1	1	0	0	1	0
Detector Template	Left			Left								
Leading Detector (ft)	20	40	0	20	40	0	40	336	0	0	336	0
Trailing Detector (ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Size(ft)	20	40	0	20	40	0	40	6	0	0	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8		8	4		4	6		6	2		2
Detector Phase	8	8	8	4	4	4	1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.0	23.0	23.0	39.9	39.9	39.9	11.0	28.0	28.0	10.0	36.0	36.0

Lanier Tract DRI

9: Dawsonville Highway & Greenhill Circle/Greenhill Circle

existing a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	39.9	39.9	39.9	39.9	39.9	39.9	22.0	100.1	100.1	10.0	88.1	88.1
Total Split (%)	26.6%	26.6%	26.6%	26.6%	26.6%	26.6%	14.7%	66.7%	66.7%	6.7%	58.7%	58.7%
Maximum Green (s)	34.0	34.0	34.0	34.0	34.0	34.0	16.0	94.1	94.1	5.0	82.1	82.1
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	4.4	4.4	3.5	4.4	4.4
All-Red Time (s)	2.9	2.9	2.9	2.9	2.9	2.9	3.0	1.6	1.6	1.5	1.6	1.6
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.9	5.9		5.9	5.9	6.0	6.0	6.0	5.0	6.0	6.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)				4.0	4.0	4.0		4.0	4.0		4.0	4.0
Flash Dont Walk (s)				30.0	30.0	30.0		18.0	18.0		26.0	26.0
Pedestrian Calls (#/hr)				0	0	0		0	0		0	0
Act Effect Green (s)		13.7	13.7		13.7	13.7	124.4	120.0	120.0	113.0	106.3	106.3
Actuated g/C Ratio		0.09	0.09		0.09	0.09	0.83	0.80	0.80	0.75	0.71	0.71
v/c Ratio		0.61	0.56		0.08	0.03	0.51	0.31	0.01	0.03	0.60	0.05
Control Delay		85.1	17.7		60.9	0.2	17.8	4.2	0.0	3.6	11.3	0.4
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		85.1	17.7		60.9	0.2	17.8	4.2	0.0	3.6	11.4	0.4
LOS		F	B		E	A	B	A	A	A	B	A
Approach Delay		39.5			38.1			6.2			10.9	
Approach LOS		D			D			A			B	

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.61

Intersection Signal Delay: 11.6

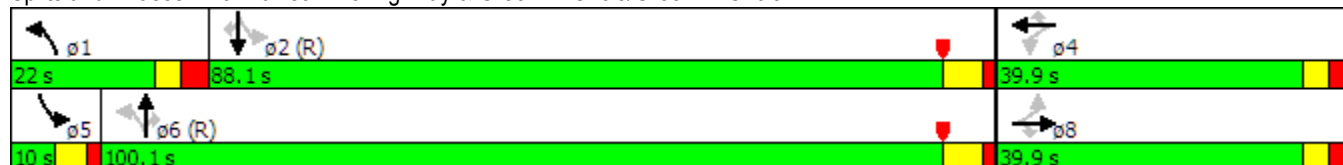
Intersection LOS: B

Intersection Capacity Utilization 71.6%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 9: Dawsonville Highway & Greenhill Circle/Greenhill Circle



Lanier Tract DRI

10: Dawsonville Highway & Shallowford Rd/Best Buy

existing a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	138	2	8	2	4	3	10	738	13	1	1249	338
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-1%			10%			-4%			-1%	
Storage Length (ft)	350		350	0		0	350		150	265		0
Storage Lanes	1		0	0		1	1		1	1		1
Taper Length (ft)	100			0			100			100		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950	0.953			0.982		0.950			0.950		
Satd. Flow (prot)	1723	1729	1623	0	1773	1534	1841	3646	1647	1814	3592	1623
Flt Permitted	0.950	0.953			0.982		0.154			0.320		
Satd. Flow (perm)	1723	1729	1623	0	1773	1534	298	3646	1647	611	3592	1623
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			113			119			70			218
Link Speed (mph)		45			25			45			45	
Link Distance (ft)		653			178			957			778	
Travel Time (s)		9.9			4.9			14.5			11.8	
Peak Hour Factor	0.84	0.84	0.84	0.56	0.56	0.56	0.83	0.83	0.83	0.93	0.93	0.93
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	1%	0%
Adj. Flow (vph)	164	2	10	4	7	5	12	889	16	1	1343	363
Shared Lane Traffic (%)	49%											
Lane Group Flow (vph)	84	82	10	0	11	5	12	889	16	1	1343	363
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes										
Headway Factor	0.99	0.99	0.99	1.07	1.07	1.07	0.97	0.97	0.97	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1	0	1	1	0	0	1	0
Detector Template				Left								
Leading Detector (ft)	40	40	0	20	40	0	40	336	0	0	336	0
Trailing Detector (ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Size(ft)	40	40	0	20	40	0	40	6	0	0	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases	3	3		4	4		1	6			2	
Permitted Phases			3			4	6		6	2		2
Detector Phase	3	3	3	4	4	4	1	6	6	2	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	36.7	36.7	36.7	38.9	38.9	38.9	10.8	28.8	28.8	30.8	30.8	30.8

Lanier Tract DRI

10: Dawsonville Highway & Shallowford Rd/Best Buy

existing a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	36.7	36.7	36.7	38.9	38.9	38.9	10.8	74.4	74.4	63.6	63.6	63.6
Total Split (%)	24.5%	24.5%	24.5%	25.9%	25.9%	25.9%	7.2%	49.6%	49.6%	42.4%	42.4%	42.4%
Maximum Green (s)	30.0	30.0	30.0	33.0	33.0	33.0	5.0	67.6	67.6	56.8	56.8	56.8
Yellow Time (s)	4.5	4.5	4.5	3.0	3.0	3.0	3.0	4.9	4.9	4.9	4.9	4.9
All-Red Time (s)	2.2	2.2	2.2	2.9	2.9	2.9	2.8	1.9	1.9	1.9	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.7	6.7	6.7		5.9	5.9	5.8	6.8	6.8	6.8	6.8	6.8
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes			Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	C-Min	C-Min	C-Min
Walk Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0
Flash Dont Walk (s)	26.0	26.0	26.0	29.0	29.0	29.0		18.0	18.0	20.0	20.0	20.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0	0	0	0	0
Act Effect Green (s)	12.7	12.7	12.7		6.5	6.5	119.4	118.4	118.4	113.7	113.7	113.7
Actuated g/C Ratio	0.08	0.08	0.08		0.04	0.04	0.80	0.79	0.79	0.76	0.76	0.76
v/c Ratio	0.58	0.56	0.04		0.14	0.03	0.04	0.31	0.01	0.00	0.49	0.28
Control Delay	81.0	79.9	0.4		72.5	0.3	5.5	5.6	0.0	7.0	6.7	3.5
Queue Delay	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0
Total Delay	81.0	79.9	0.4		72.5	0.3	5.5	5.6	0.0	7.0	6.9	3.5
LOS	F	E	A		E	A	A	A	A	A	A	A
Approach Delay		75.9			49.9			5.5			6.2	
Approach LOS		E			D			A			A	

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 45 (30%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.58

Intersection Signal Delay: 10.6

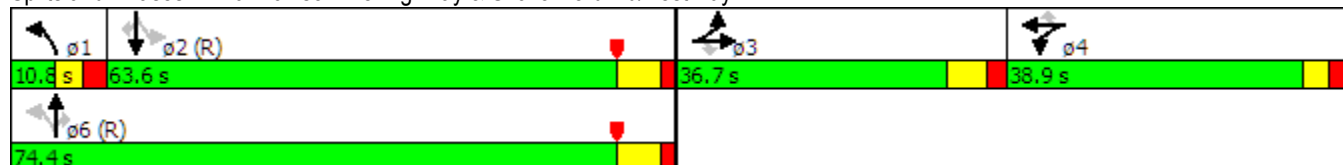
Intersection LOS: B

Intersection Capacity Utilization 59.0%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 10: Dawsonville Highway & Shallowford Rd/Best Buy



Lanier Tract DRI
1: Sportsman Club Road & Strickland Drive

existing p.m.

Intersection						
Int Delay, s/veh	1.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	7	0	29	9	0	23
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	44	44	86	86	82	82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	0	34	10	0	28
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	67	39	0	0	44	0
Stage 1	39	-	-	-	-	-
Stage 2	28	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	938	1033	-	-	1564	-
Stage 1	983	-	-	-	-	-
Stage 2	995	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	938	1033	-	-	1564	-
Mov Cap-2 Maneuver	938	-	-	-	-	-
Stage 1	983	-	-	-	-	-
Stage 2	995	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	8.9	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	- 938	1564	-		
HCM Lane V/C Ratio	-	- 0.017	-	-		
HCM Control Delay (s)	-	- 8.9	0	-		
HCM Lane LOS	-	- A	A	-		
HCM 95th %tile Q(veh)	-	- 0.1	0	-		

Lanier Tract DRI
2: GA 53 & Sportsman Club Road

existing p.m.

Intersection												
Int Delay, s/veh	17.3											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	15	1039	0	2	1671	19	0	0	0	28	0	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	96	96	96	92	92	92	66	66	66
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	1094	0	2	1741	20	0	0	0	42	0	14

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1760	0	0	1094	0	0	1999	2890	547	2333	2880	880
Stage 1	-	-	-	-	-	-	1125	1125	-	1755	1755	-
Stage 2	-	-	-	-	-	-	874	1765	-	578	1125	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	351	-	-	634	-	-	35	16	481	~ 20	16	290
Stage 1	-	-	-	-	-	-	218	278	-	88	137	-
Stage 2	-	-	-	-	-	-	311	136	-	468	278	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	351	-	-	634	-	-	32	15	481	~ 19	15	290
Mov Cap-2 Maneuver	-	-	-	-	-	-	32	15	-	~ 19	15	-
Stage 1	-	-	-	-	-	-	208	265	-	84	137	-
Stage 2	-	-	-	-	-	-	295	136	-	447	265	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0	0	\$ 901.3
HCM LOS			A	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	351	-	-	634	-	-	25
HCM Lane V/C Ratio	-	0.045	-	-	0.003	-	-	2.242
HCM Control Delay (s)	0	15.7	-	-	10.7	-	-	\$ 901.3
HCM Lane LOS	A	C	-	-	B	-	-	F
HCM 95th %tile Q(veh)	-	0.1	-	-	0	-	-	6.9

Notes			
~: Volume exceeds capacity	\$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection						
Int Delay, s/veh	1.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	11	47	62	1650	1104	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	76	76	95	95	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	14	62	65	1737	1104	14
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	2103	552	1104	0	-	0
Stage 1	1104	-	-	-	-	-
Stage 2	999	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	44	477	628	-	-	-
Stage 1	279	-	-	-	-	-
Stage 2	317	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	39	477	628	-	-	-
Mov Cap-2 Maneuver	39	-	-	-	-	-
Stage 1	279	-	-	-	-	-
Stage 2	284	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	38.4	0.4		0		
HCM LOS	E					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	628	-	39	477	-	-
HCM Lane V/C Ratio	0.104	-	0.371	0.13	-	-
HCM Control Delay (s)	11.4	-	144.1	13.7	-	-
HCM Lane LOS	B	-	F	B	-	-
HCM 95th %tile Q(veh)	0.3	-	1.3	0.4	-	-

Lanier Tract DRI
4: Canterbury Road & GA 53

existing p.m.

Intersection						
Int Delay, s/veh	1.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	7	28	111	1682	1105	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	35	116	1752	1151	15
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	2258	576	1151	0	-	0
Stage 1	1151	-	-	-	-	-
Stage 2	1107	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	35	460	603	-	-	-
Stage 1	263	-	-	-	-	-
Stage 2	278	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	28	460	603	-	-	-
Mov Cap-2 Maneuver	28	-	-	-	-	-
Stage 1	263	-	-	-	-	-
Stage 2	225	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	47.6	0.8		0		
HCM LOS	E					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	603	-	28	460	-	-
HCM Lane V/C Ratio	0.192	-	0.313	0.076	-	-
HCM Control Delay (s)	12.4	-	183.8	13.5	-	-
HCM Lane LOS	B	-	F	B	-	-
HCM 95th %tile Q(veh)	0.7	-	1	0.2	-	-

Lanier Tract DRI
7: GA 53 & Beechwood Boulevard

existing p.m.

Intersection						
Int Delay, s/veh	0.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	1	47	86	1998	1388	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	Yield	-	None
Storage Length	0	0	200	-	-	360
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	1	0	-
Peak Hour Factor	71	71	99	99	98	98
Heavy Vehicles, %	0	0	0	0	1	0
Mvmt Flow	1	66	87	2018	1416	9
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	2599	709	1416	0	-	0
Stage 1	1416	-	-	-	-	-
Stage 2	1183	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	21	381	487	-	-	-
Stage 1	193	-	-	-	-	-
Stage 2	257	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	17	381	487	-	-	-
Mov Cap-2 Maneuver	17	-	-	-	-	-
Stage 1	193	-	-	-	-	-
Stage 2	211	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	21	0.6		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	487	-	17	381	-	-
HCM Lane V/C Ratio	0.178	-	0.083	0.174	-	-
HCM Control Delay (s)	14	-	235.1	16.4	-	-
HCM Lane LOS	B	-	F	C	-	-
HCM 95th %tile Q(veh)	0.6	-	0.2	0.6	-	-

Lanier Tract DRI

5: GA 53 & Lanier Valley Dr/Ahaluna Dr

existing p.m.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	33.0	33.0		33.0	33.0		28.0	127.0		99.0	99.0	
Total Split (%)	20.6%	20.6%		20.6%	20.6%		17.5%	79.4%		61.9%	61.9%	
Maximum Green (s)	26.4	26.4		26.4	26.4		22.4	120.9		92.9	92.9	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	4.5		4.5	4.5	
All-Red Time (s)	2.6	2.6		2.6	2.6		2.6	1.6		1.6	1.6	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.6			6.6		5.6	6.1		6.1	6.1	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		C-Max	C-Max	
Act Effect Green (s)		15.5			15.5		132.3	131.8		117.1	117.1	
Actuated g/C Ratio		0.10			0.10		0.83	0.82		0.73	0.73	
v/c Ratio		0.56			0.85		0.52	0.63		0.15	0.48	
Control Delay		26.1			97.4		9.9	8.5		11.5	10.4	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		26.1			97.4		9.9	8.5		11.5	10.4	
LOS		C			F		A	A		B	B	
Approach Delay		26.1			97.4			8.6			10.4	
Approach LOS		C			F			A			B	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 129 (81%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 65

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.85

Intersection Signal Delay: 12.7

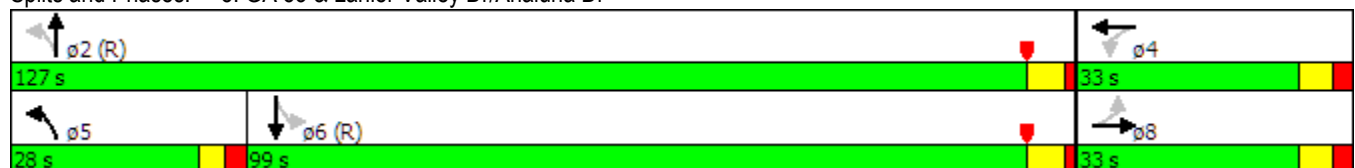
Intersection LOS: B

Intersection Capacity Utilization 79.8%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 5: GA 53 & Lanier Valley Dr/Ahaluna Dr



Lanier Tract DRI

6: 53-Dawsonville Hwy & Academy Sports

existing p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	13	3	60	118	7	42	87	1763	138	19	1199	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			4%			1%			0%	
Storage Length (ft)	0		0	0		70	200		170	190		360
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	0			0			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1900	1615	1769	1862	1583	1796	3592	1607	1805	3574	1615
Flt Permitted	0.752			0.756			0.177			0.083		
Satd. Flow (perm)	1429	1900	1615	1408	1862	1583	335	3592	1607	158	3574	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			63			63			69			64
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		262			246			1836			685	
Travel Time (s)		7.1			6.7			27.8			10.4	
Peak Hour Factor	0.95	0.95	0.95	0.80	0.80	0.80	0.98	0.98	0.98	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
Adj. Flow (vph)	14	3	63	148	9	52	89	1799	141	20	1236	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	14	3	63	148	9	52	89	1799	141	20	1236	28
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.03	1.03	1.03	1.01	1.01	1.01	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1	1	1	1	1	1	1	0
Detector Template												
Leading Detector (ft)	40	40	0	40	40	40	40	336	0	40	336	0
Trailing Detector (ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Size(ft)	40	40	0	40	40	40	40	6	0	40	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8		8	4		4	2		2	6		6
Detector Phase	8	8	8	4	4	4	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	42.0	42.0	42.0	42.4	42.4	42.4	11.4	30.3	30.3	11.0	29.3	29.3

Synchro 8 Report

Marc R Acampora, PE, LLC

Lanier Tract DRI

6: 53-Dawsonville Hwy & Academy Sports

existing p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	43.0	43.0	43.0	43.0	43.0	43.0	13.6	106.0	106.0	11.0	103.4	103.4
Total Split (%)	26.9%	26.9%	26.9%	26.9%	26.9%	26.9%	8.5%	66.3%	66.3%	6.9%	64.6%	64.6%
Maximum Green (s)	36.6	36.6	36.6	36.6	36.6	36.6	7.2	99.8	99.8	5.0	97.2	97.2
Yellow Time (s)	3.4	3.4	3.4	3.4	3.4	3.4	3.4	4.3	4.3	3.0	4.3	4.3
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	1.9	1.9	3.0	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.2	6.2	6.0	6.2	6.2
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0
Flash Dont Walk (s)	23.0	23.0	23.0	32.0	32.0	32.0		20.0	20.0		19.0	19.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0	0		0	0
Act Effect Green (s)	22.1	22.1	22.1	22.1	22.1	22.1	122.7	118.0	118.0	117.5	111.4	111.4
Actuated g/C Ratio	0.14	0.14	0.14	0.14	0.14	0.14	0.77	0.74	0.74	0.73	0.70	0.70
v/c Ratio	0.07	0.01	0.23	0.76	0.04	0.19	0.27	0.68	0.12	0.11	0.50	0.02
Control Delay	57.2	55.0	13.8	89.5	56.0	9.9	7.8	13.6	6.8	5.5	8.9	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
Total Delay	57.2	55.0	13.8	89.5	56.0	9.9	7.8	13.6	6.8	5.5	9.0	0.0
LOS	E	D	B	F	E	A	A	B	A	A	A	A
Approach Delay		22.9			68.3			12.9			8.7	
Approach LOS		C			E			B			A	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 120 (75%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 115

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.76

Intersection Signal Delay: 14.8

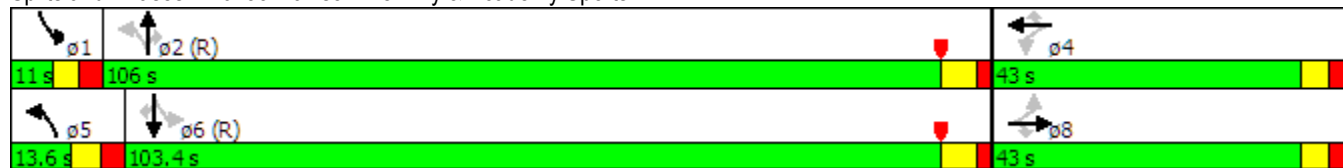
Intersection LOS: B

Intersection Capacity Utilization 81.6%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 6: 53-Dawsonville Hwy & Academy Sports



Lanier Tract DRI

8: Dawsonville Highway/GA 53 & McEver Road/McEver

existing p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	845	213	386	87	91	81	433	1362	46	62	1029	481
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			5%			1%			-1%	
Storage Length (ft)	180		0	0		0	310		185	255		0
Storage Lanes	2		1	1		0	2		1	1		1
Taper Length (ft)	50			0			50			50		
Lane Util. Factor	0.97	0.95	0.95	1.00	1.00	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Frt		0.951	0.850		0.929				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3484	1708	1527	1760	1721	0	3484	3592	1607	1814	3592	1623
Flt Permitted	0.950			0.550			0.950			0.950		
Satd. Flow (perm)	3484	1708	1527	1019	1721	0	3484	3592	1607	1814	3592	1623
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		19	296		27				172			307
Link Speed (mph)		45			25			45			45	
Link Distance (ft)		580			331			921			1504	
Travel Time (s)		8.8			9.0			14.0			22.8	
Peak Hour Factor	0.95	0.95	0.95	0.86	0.86	0.86	0.97	0.97	0.97	0.91	0.91	0.91
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
Adj. Flow (vph)	889	224	406	101	106	94	446	1404	47	68	1131	529
Shared Lane Traffic (%)			27%									
Lane Group Flow (vph)	889	334	296	101	200	0	446	1404	47	68	1131	529
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.03	1.03	1.03	1.01	1.01	1.01	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1		1	1	0	1	1	0
Detector Template												
Leading Detector (ft)	40	40	0	40	40		40	336	0	40	336	0
Trailing Detector (ft)	0	0	0	0	0		0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0		0	330	0	0	330	0
Detector 1 Size(ft)	40	40	0	40	40		40	6	0	40	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	NA	Perm	pm+pt	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases			8	4					6			2
Detector Phase	3	8	8	7	4		1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	13.2	50.2	50.2	11.6	48.2		13.4	35.6	35.6	12.9	44.6	44.6

Lanier Tract DRI

8: Dawsonville Highway/GA 53 & McEver Road/McEver

existing p.m.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	37.0	72.1	72.1	13.1	48.2		23.0	61.8	61.8	13.0	51.8	51.8
Total Split (%)	23.1%	45.1%	45.1%	8.2%	30.1%		14.4%	38.6%	38.6%	8.1%	32.4%	32.4%
Maximum Green (s)	29.7	64.8	64.8	6.6	40.9		15.5	55.2	55.2	5.8	45.2	45.2
Yellow Time (s)	4.3	4.3	4.3	3.5	4.3		4.5	4.4	4.4	4.2	4.4	4.4
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	2.2	2.2	3.0	2.2	2.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.3	7.3	7.3	6.5	7.3		7.5	6.6	6.6	7.2	6.6	6.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)		4.0	4.0		4.0			4.0	4.0		4.0	4.0
Flash Dont Walk (s)		38.0	38.0		36.0			25.0	25.0		34.0	34.0
Pedestrian Calls (#/hr)		0	0		0			0	0		0	0
Act Effect Green (s)	29.7	45.6	45.6	29.1	21.7		15.5	66.4	66.4	13.8	64.4	64.4
Actuated g/C Ratio	0.19	0.28	0.28	0.18	0.14		0.10	0.42	0.42	0.09	0.40	0.40
v/c Ratio	1.38	0.67	0.46	0.47	0.78		1.32	0.94	0.06	0.44	0.78	0.63
Control Delay	225.2	53.9	6.2	45.5	77.5		221.7	71.5	0.1	73.5	62.2	34.7
Queue Delay	0.0	0.4	0.1	1.2	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	225.2	54.3	6.4	46.7	77.5		221.7	71.5	0.1	73.5	62.2	34.7
LOS	F	D	A	D	E		F	E	A	E	E	C
Approach Delay		145.0			67.2			105.0			54.2	
Approach LOS		F			E			F			D	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 52 (33%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.38

Intersection Signal Delay: 98.0

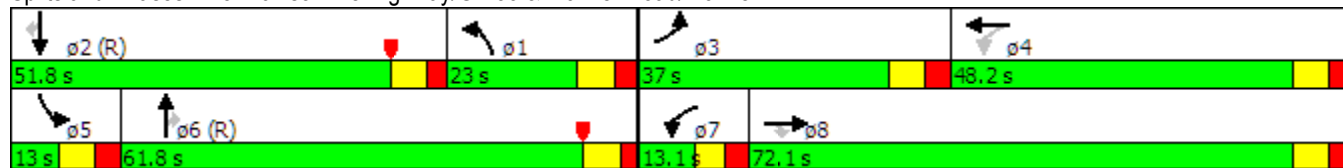
Intersection LOS: F

Intersection Capacity Utilization 99.3%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 8: Dawsonville Highway/GA 53 & McEver Road/McEver



Lanier Tract DRI

9: Dawsonville Highway & Greenhill Circle/Greenhill Circle

existing p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	132	9	138	60	20	38	248	1749	70	40	1392	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		3%			7%			1%			0%	
Storage Length (ft)	0		0	0		0	190		190	185		100
Storage Lanes	0		1	0		1	1		1	1		1
Taper Length (ft)	0			0			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected		0.955			0.964		0.950			0.950		
Satd. Flow (prot)	0	1787	1591	0	1767	1558	1796	3592	1607	1805	3610	1615
Flt Permitted		0.608			0.504		0.091			0.088		
Satd. Flow (perm)	0	1138	1591	0	924	1558	172	3592	1607	167	3610	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			152			95			54			95
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		288			254			778			921	
Travel Time (s)		7.9			6.9			11.8			14.0	
Peak Hour Factor	0.91	0.91	0.91	0.78	0.78	0.78	0.97	0.97	0.97	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	145	10	152	77	26	49	256	1803	72	42	1465	56
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	155	152	0	103	49	256	1803	72	42	1465	56
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.02	1.02	1.02	1.05	1.05	1.05	1.01	1.01	1.01	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1	0	1	1	0	0	1	0
Detector Template	Left			Left								
Leading Detector (ft)	20	40	0	20	40	0	40	336	0	0	336	0
Trailing Detector (ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Size(ft)	20	40	0	20	40	0	40	6	0	0	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8		8	4		4	6		6	2		2
Detector Phase	8	8	8	4	4	4	1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.0	23.0	23.0	39.9	39.9	39.9	11.0	28.0	28.0	10.0	36.0	36.0

Lanier Tract DRI

9: Dawsonville Highway & Greenhill Circle/Greenhill Circle

existing p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	40.0	40.0	40.0	40.0	40.0	40.0	35.0	109.0	109.0	11.0	85.0	85.0
Total Split (%)	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	21.9%	68.1%	68.1%	6.9%	53.1%	53.1%
Maximum Green (s)	34.1	34.1	34.1	34.1	34.1	34.1	29.0	103.0	103.0	6.0	79.0	79.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	4.4	4.4	3.5	4.4	4.4
All-Red Time (s)	2.9	2.9	2.9	2.9	2.9	2.9	3.0	1.6	1.6	1.5	1.6	1.6
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.9	5.9		5.9	5.9	6.0	6.0	6.0	5.0	6.0	6.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)				4.0	4.0	4.0		4.0	4.0		4.0	4.0
Flash Dont Walk (s)				30.0	30.0	30.0		18.0	18.0		26.0	26.0
Pedestrian Calls (#/hr)				0	0	0		0	0		0	0
Act Effect Green (s)		25.7	25.7		25.7	25.7	122.4	113.4	113.4	101.3	94.2	94.2
Actuated g/C Ratio		0.16	0.16		0.16	0.16	0.76	0.71	0.71	0.63	0.59	0.59
v/c Ratio		0.85	0.40		0.70	0.15	0.72	0.71	0.06	0.25	0.69	0.06
Control Delay		100.8	10.4		86.0	0.9	25.8	25.6	6.1	16.4	50.1	11.5
Queue Delay		0.0	0.4		3.9	0.0	0.0	7.9	0.0	0.0	0.4	0.0
Total Delay		100.8	10.8		90.0	0.9	25.8	33.5	6.1	16.4	50.4	11.5
LOS		F	B		F	A	C	C	A	B	D	B
Approach Delay		56.2			61.3			31.6			48.1	
Approach LOS		E			E			C			D	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow

Natural Cycle: 110

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.85

Intersection Signal Delay: 40.7

Intersection LOS: D

Intersection Capacity Utilization 81.6%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 9: Dawsonville Highway & Greenhill Circle/Greenhill Circle



Lanier Tract DRI

10: Dawsonville Highway & Shallowford Rd/Best Buy

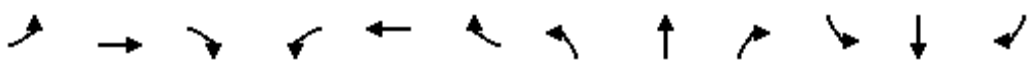
existing p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	518	38	26	36	27	7	40	1639	114	7	1161	463
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-1%			10%			-4%			-1%	
Storage Length (ft)	350		350	0		0	350		150	265		0
Storage Lanes	1		0	0		1	1		1	1		1
Taper Length (ft)	100			0			100			100		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950	0.959			0.972		0.950			0.950		
Satd. Flow (prot)	1723	1740	1623	0	1754	1534	1841	3682	1647	1814	3628	1623
Flt Permitted	0.950	0.959			0.972		0.113			0.060		
Satd. Flow (perm)	1723	1740	1623	0	1754	1534	219	3682	1647	115	3628	1623
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			106			111			65			321
Link Speed (mph)		45			25			45			45	
Link Distance (ft)		653			178			1046			778	
Travel Time (s)		9.9			4.9			15.8			11.8	
Peak Hour Factor	0.90	0.90	0.90	0.88	0.88	0.88	0.94	0.94	0.94	0.91	0.91	0.91
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	576	42	29	41	31	8	43	1744	121	8	1276	509
Shared Lane Traffic (%)	47%											
Lane Group Flow (vph)	305	313	29	0	72	8	43	1744	121	8	1276	509
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes										
Headway Factor	0.99	0.99	0.99	1.07	1.07	1.07	0.97	0.97	0.97	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1	0	1	1	0	0	1	0
Detector Template				Left								
Leading Detector (ft)	40	40	0	20	40	0	40	336	0	0	336	0
Trailing Detector (ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Size(ft)	40	40	0	20	40	0	40	6	0	0	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases	3	3		4	4		1	6			2	
Permitted Phases			3			4	6		6	2		2
Detector Phase	3	3	3	4	4	4	1	6	6	2	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	36.7	36.7	36.7	38.9	38.9	38.9	10.8	28.8	28.8	30.8	30.8	30.8

Lanier Tract DRI

10: Dawsonville Highway & Shallowford Rd/Best Buy

existing p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	37.0	37.0	37.0	38.9	38.9	38.9	10.8	84.1	84.1	73.3	73.3	73.3
Total Split (%)	23.1%	23.1%	23.1%	24.3%	24.3%	24.3%	6.8%	52.6%	52.6%	45.8%	45.8%	45.8%
Maximum Green (s)	30.3	30.3	30.3	33.0	33.0	33.0	5.0	77.3	77.3	66.5	66.5	66.5
Yellow Time (s)	4.5	4.5	4.5	3.0	3.0	3.0	3.0	4.9	4.9	4.9	4.9	4.9
All-Red Time (s)	2.2	2.2	2.2	2.9	2.9	2.9	2.8	1.9	1.9	1.9	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.7	6.7	6.7		5.9	5.9	5.8	6.8	6.8	6.8	6.8	6.8
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes			Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	C-Min	C-Min	C-Min
Walk Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0
Flash Dont Walk (s)	26.0	26.0	26.0	29.0	29.0	29.0		18.0	18.0	20.0	20.0	20.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0	0	0	0	0
Act Effect Green (s)	32.0	32.0	32.0		11.9	11.9	97.7	96.7	96.7	86.2	86.2	86.2
Actuated g/C Ratio	0.20	0.20	0.20		0.07	0.07	0.61	0.60	0.60	0.54	0.54	0.54
v/c Ratio	0.88	0.90	0.07		0.55	0.04	0.21	0.78	0.12	0.13	0.65	0.50
Control Delay	88.1	90.1	0.3		86.7	0.3	15.7	27.6	7.1	51.9	55.6	32.8
Queue Delay	1.0	1.2	0.0		0.0	0.0	0.0	7.4	0.0	0.0	2.0	0.4
Total Delay	89.1	91.3	0.3		86.7	0.3	15.7	34.9	7.1	51.9	57.6	33.2
LOS	F	F	A		F	A	B	C	A	D	E	C
Approach Delay		86.2			78.0			32.7			50.7	
Approach LOS		F			E			C			D	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 91 (57%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.90

Intersection Signal Delay: 48.6

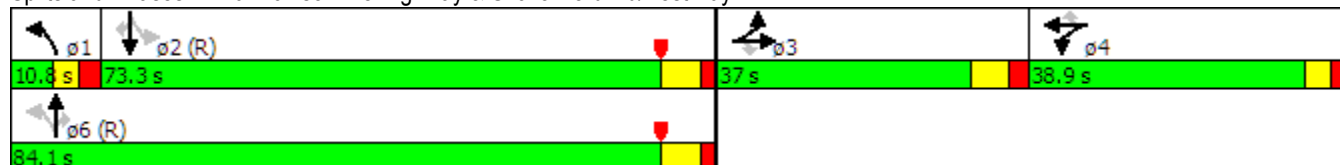
Intersection LOS: D

Intersection Capacity Utilization 81.0%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 10: Dawsonville Highway & Shallowford Rd/Best Buy



Appendix D

No-Build Intersection Analysis

Lanier Tract DRI
1: Sportsman Club Road & Strickland Drive

no build a.m.

Intersection						
Int Delay, s/veh	2.6					
Movement	WBL	WBR		NBT	NBR	SBL SBT
Vol, veh/h	11	0		7	1	0 25
Conflicting Peds, #/hr	0	0		0	0	0 0
Sign Control	Stop	Stop		Free	Free	Free Free
RT Channelized	-	None		-	None	- None
Storage Length	0	-		-	-	- -
Veh in Median Storage, #	0	-		0	-	- 0
Grade, %	0	-		0	-	- 0
Peak Hour Factor	50	50		58	58	64 64
Heavy Vehicles, %	2	2		2	2	2 2
Mvmt Flow	22	0		12	2	0 39
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	52	13		0	0	14 0
Stage 1	13	-		-	-	- -
Stage 2	39	-		-	-	- -
Critical Hdwy	6.42	6.22		-	-	4.12 -
Critical Hdwy Stg 1	5.42	-		-	-	- -
Critical Hdwy Stg 2	5.42	-		-	-	- -
Follow-up Hdwy	3.518	3.318		-	-	2.218 -
Pot Cap-1 Maneuver	957	1067		-	-	1604 -
Stage 1	1010	-		-	-	- -
Stage 2	983	-		-	-	- -
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	957	1067		-	-	1604 -
Mov Cap-2 Maneuver	957	-		-	-	- -
Stage 1	1010	-		-	-	- -
Stage 2	983	-		-	-	- -
Approach	WB		NB		SB	
HCM Control Delay, s	8.9		0		0	
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	957	1604	-	
HCM Lane V/C Ratio	-	-	0.023	-	-	
HCM Control Delay (s)	-	-	8.9	0	-	
HCM Lane LOS	-	-	A	A	-	
HCM 95th %tile Q(veh)	-	-	0.1	0	-	

Lanier Tract DRI
2: GA 53 & Sportsman Club Road

no build a.m.

Intersection												
Int Delay, s/veh	11.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	10	1863	0	0	820	9	0	0	0	28	0	17
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	84	84	84	92	92	92	59	59	59
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	2166	0	0	976	11	0	0	0	47	0	29
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	987	0	0	2166	0	0	2678	3177	1083	2088	3172	493
Stage 1	-	-	-	-	-	-	2190	2190	-	982	982	-
Stage 2	-	-	-	-	-	-	488	987	-	1106	2190	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	696	-	-	243	-	-	11	10	213	~ 30	10	522
Stage 1	-	-	-	-	-	-	46	82	-	267	325	-
Stage 2	-	-	-	-	-	-	530	324	-	224	82	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	696	-	-	243	-	-	10	10	213	~ 30	10	522
Mov Cap-2 Maneuver	-	-	-	-	-	-	10	10	-	~ 30	10	-
Stage 1	-	-	-	-	-	-	45	81	-	262	325	-
Stage 2	-	-	-	-	-	-	501	324	-	220	81	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0			0			\$ 496.6		
HCM LOS							A			F		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	-	696	-	-	243	-	-	47				
HCM Lane V/C Ratio	-	0.017	-	-	-	-	-	1.623				
HCM Control Delay (s)	0	10.3	-	-	0	-	-	\$ 496.6				
HCM Lane LOS	A	B	-	-	A	-	-	F				
HCM 95th %tile Q(veh)	-	0.1	-	-	0	-	-	7.5				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined			*: All major volume in platoon					

Lanier Tract DRI
3: GA 53 & Avonlea Way

no build a.m.

Intersection						
Int Delay, s/veh	4.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	17	79	13	836	1842	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	88	88	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	20	94	15	950	2142	8
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	2647	1071	2142	0	-	0
Stage 1	2142	-	-	-	-	-
Stage 2	505	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	~ 19	217	249	-	-	-
Stage 1	76	-	-	-	-	-
Stage 2	571	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 18	217	249	-	-	-
Mov Cap-2 Maneuver	~ 18	-	-	-	-	-
Stage 1	76	-	-	-	-	-
Stage 2	537	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	125.5	0.3		0		
HCM LOS	F					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	249	-	18	217	-	-
HCM Lane V/C Ratio	0.059	-	1.124	0.433	-	-
HCM Control Delay (s)	20.4	-	552.3	33.7	-	-
HCM Lane LOS	C	-	F	D	-	-
HCM 95th %tile Q(veh)	0.2	-	2.9	2	-	-
Notes						
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon						

Lanier Tract DRI
4: GA 53 & Canterbury Road

no build a.m.

Intersection						
Int Delay, s/veh	6.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	20	105	25	797	1969	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	86	86	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	23	119	29	927	2164	9
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	2686	1082	2164	0	-	0
Stage 1	2164	-	-	-	-	-
Stage 2	522	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	~ 18	213	244	-	-	-
Stage 1	74	-	-	-	-	-
Stage 2	560	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 16	213	244	-	-	-
Mov Cap-2 Maneuver	~ 16	-	-	-	-	-
Stage 1	74	-	-	-	-	-
Stage 2	493	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	149.3	0.7		0		
HCM LOS	F					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	244	-	16	213	-	-
HCM Lane V/C Ratio	0.119	-	1.42	0.56	-	-
HCM Control Delay (s)	21.7	-	715.5	41.5	-	-
HCM Lane LOS	C	-	F	E	-	-
HCM 95th %tile Q(veh)	0.4	-	3.4	3	-	-
Notes						
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon						

Lanier Tract DRI
7: GA 53 & Beechwood Boulevard

no build a.m.

Intersection						
Int Delay, s/veh	2.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	6	45	30	869	2215	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	Yield	-	None
Storage Length	0	0	200	-	-	360
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	1	0	-
Peak Hour Factor	82	82	87	87	89	89
Heavy Vehicles, %	0	0	0	1	0	0
Mvmt Flow	7	55	34	999	2489	2
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	3057	1244	2489	0	-	0
Stage 1	2489	-	-	-	-	-
Stage 2	568	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	10	169	187	-	-	-
Stage 1	50	-	-	-	-	-
Stage 2	536	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	8	169	187	-	-	-
Mov Cap-2 Maneuver	8	-	-	-	-	-
Stage 1	50	-	-	-	-	-
Stage 2	439	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	133.9	1		0		
HCM LOS	F					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	187	-	8	169	-	-
HCM Lane V/C Ratio	0.184	-	0.915	0.325	-	-
HCM Control Delay (s)	28.6	-	866.6	36.2	-	-
HCM Lane LOS	D	-	F	E	-	-
HCM 95th %tile Q(veh)	0.7	-	1.6	1.3	-	-

Lanier Tract DRI

5: GA 53 & Lanier Valley Dr/Ahaluna Dr

no build a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	21	6	127	41	3	22	61	774	12	15	2099	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		2%			-4%			1%			-1%	
Storage Length (ft)	0		0	0		0	100		0	140		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	0			0			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.889			0.954			0.998				
Flt Protected		0.993			0.970		0.950			0.950		
Satd. Flow (prot)	0	1661	0	0	1793	0	1796	3516	0	1814	3628	0
Flt Permitted		0.940			0.380		0.035			0.309		
Satd. Flow (perm)	0	1572	0	0	703	0	66	3516	0	590	3628	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		71			14			4				
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		340			322			888			1417	
Travel Time (s)		7.7			7.3			13.5			21.5	
Peak Hour Factor	0.91	0.91	0.91	0.83	0.83	0.83	0.85	0.85	0.85	0.87	0.87	0.87
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	0%	0%
Adj. Flow (vph)	23	7	140	49	4	27	72	911	14	17	2413	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	170	0	0	80	0	72	925	0	17	2413	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	0.97	0.97	0.97	1.01	1.01	1.01	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		0	1	
Detector Template	Left			Left								
Leading Detector (ft)	20	40		20	40		40	336		0	336	
Trailing Detector (ft)	0	0		0	0		0	330		0	330	
Detector 1 Position(ft)	0	0		0	0		0	330		0	330	
Detector 1 Size(ft)	20	40		20	40		40	6		0	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		8			4		5	2			6	
Permitted Phases	8			4			2			6		
Detector Phase	8	8		4	4		5	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	23.0	23.0		23.0	23.0		10.6	23.0		23.0	23.0	

Lanier Tract DRI

5: GA 53 & Lanier Valley Dr/Ahaluna Dr

no build a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	24.0	24.0		24.0	24.0		12.0	126.0		114.0	114.0	
Total Split (%)	16.0%	16.0%		16.0%	16.0%		8.0%	84.0%		76.0%	76.0%	
Maximum Green (s)	17.4	17.4		17.4	17.4		6.4	119.9		107.9	107.9	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	4.5		4.5	4.5	
All-Red Time (s)	2.6	2.6		2.6	2.6		2.6	1.6		1.6	1.6	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.6			6.6		5.6	6.1		6.1	6.1	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		C-Max	C-Max	
Act Effect Green (s)		15.4			15.4		122.4	121.9		110.1	110.1	
Actuated g/C Ratio		0.10			0.10		0.82	0.81		0.73	0.73	
v/c Ratio		0.76			0.95		0.58	0.32		0.04	0.91	
Control Delay		58.3			139.1		52.0	2.0		6.3	22.8	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		58.3			139.1		52.0	2.0		6.3	22.8	
LOS		E			F		D	A		A	C	
Approach Delay		58.3			139.1			5.6			22.7	
Approach LOS		E			F			A			C	

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 26 (17%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 110

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.95

Intersection Signal Delay: 22.3

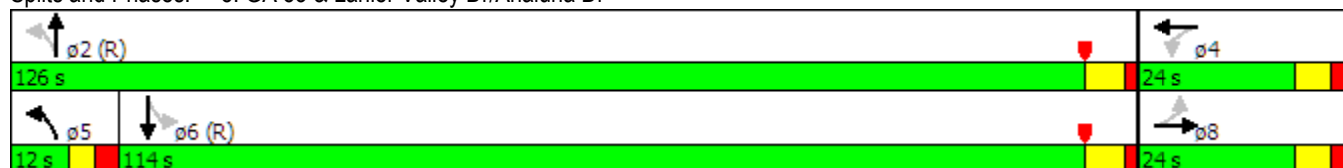
Intersection LOS: C

Intersection Capacity Utilization 80.9%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 5: GA 53 & Lanier Valley Dr/Ahaluna Dr



Lanier Tract DRI

6: 53-Dawsonville Hwy & Academy Sports

no build a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	2	0	7	2	0	0	12	817	10	6	2196	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			4%			1%			0%	
Storage Length (ft)	0		0	0		70	200		170	190		360
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	0			0			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850						0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1900	1615	1769	1862	1862	1796	3556	1607	1805	3610	1615
Flt Permitted							0.037			0.299		
Satd. Flow (perm)	1900	1900	1615	1862	1862	1862	70	3556	1607	568	3610	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			67						68			68
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		262			246			1836			685	
Travel Time (s)		7.1			6.7			27.8			10.4	
Peak Hour Factor	0.67	0.67	0.67	0.50	0.50	0.50	0.86	0.86	0.86	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%
Adj. Flow (vph)	3	0	10	4	0	0	14	950	12	7	2440	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	3	0	10	4	0	0	14	950	12	7	2440	4
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.03	1.03	1.03	1.01	1.01	1.01	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1	1	1	1	1	1	1	0
Detector Template												
Leading Detector (ft)	40	40	0	40	40	40	40	336	0	40	336	0
Trailing Detector (ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Size(ft)	40	40	0	40	40	40	40	6	0	40	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm		Perm	Perm		Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8		8	4		4	2		2	6		6
Detector Phase	8	8	8	4	4	4	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	42.0	42.0	42.0	42.4	42.4	42.4	11.4	30.3	30.3	11.0	29.3	29.3

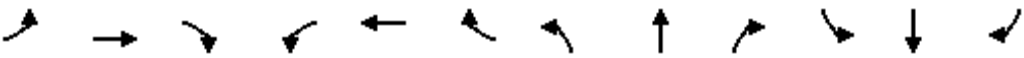
Synchro 8 Report

Marc R Acampora, PE, LLC

Lanier Tract DRI

6: 53-Dawsonville Hwy & Academy Sports

no build a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	42.4	42.4	42.4	42.4	42.4	42.4	11.4	96.6	96.6	11.0	96.2	96.2
Total Split (%)	28.3%	28.3%	28.3%	28.3%	28.3%	28.3%	7.6%	64.4%	64.4%	7.3%	64.1%	64.1%
Maximum Green (s)	36.0	36.0	36.0	36.0	36.0	36.0	5.0	90.4	90.4	5.0	90.0	90.0
Yellow Time (s)	3.4	3.4	3.4	3.4	3.4	3.4	3.4	4.3	4.3	3.0	4.3	4.3
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	1.9	1.9	3.0	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.2	6.2	6.0	6.2	6.2
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0
Flash Dont Walk (s)	23.0	23.0	23.0	32.0	32.0	32.0		20.0	20.0		19.0	19.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0	0		0	0
Act Effect Green (s)	6.1		6.1	6.1			137.2	139.9	139.9	136.1	137.4	137.4
Actuated g/C Ratio	0.04		0.04	0.04			0.91	0.93	0.93	0.91	0.92	0.92
v/c Ratio	0.04		0.08	0.05			0.11	0.29	0.01	0.01	0.74	0.00
Control Delay	69.5		1.1	70.0			4.4	0.9	0.0	0.8	3.9	0.0
Queue Delay	0.0		0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.5		1.1	70.0			4.4	0.9	0.0	0.8	3.9	0.0
LOS	E		A	E			A	A	A	A	A	A
Approach Delay								1.0			3.9	
Approach LOS								A			A	

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 27 (18%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 145

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.74

Intersection Signal Delay: 3.2

Intersection LOS: A

Intersection Capacity Utilization 84.9%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 6: 53-Dawsonville Hwy & Academy Sports

 p1	 p2 (R)		 p4
11 s	96.6 s		42.4 s
 p5	 p6 (R)		 p8
11.4 s	96.2 s		42.4 s

Lanier Tract DRI

8: Dawsonville Highway/GA 53 & McEver Road/McEver

no build a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	431	31	378	46	21	20	311	513	61	31	1292	914
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			5%			1%			-1%	
Storage Length (ft)	180		0	0		0	310		185	255		0
Storage Lanes	2		1	1		0	2		1	1		1
Taper Length (ft)	50			0			50			50		
Lane Util. Factor	0.97	0.95	0.95	1.00	1.00	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Frt		0.872	0.850		0.927				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3484	1566	1527	1760	1717	0	3484	3487	1575	1814	3628	1623
Flt Permitted	0.950			0.598			0.950			0.950		
Satd. Flow (perm)	3484	1566	1527	1108	1717	0	3484	3487	1575	1814	3628	1623
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		183	207		31				184			544
Link Speed (mph)		45			45			45			45	
Link Distance (ft)		580			331			921			1624	
Travel Time (s)		8.8			5.0			14.0			24.6	
Peak Hour Factor	0.97	0.97	0.97	0.62	0.62	0.62	0.93	0.93	0.93	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	3%	2%	0%	0%	0%
Adj. Flow (vph)	444	32	390	74	34	32	334	552	66	34	1436	1016
Shared Lane Traffic (%)			47%									
Lane Group Flow (vph)	444	215	207	74	66	0	334	552	66	34	1436	1016
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.03	1.03	1.03	1.01	1.01	1.01	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1		1	1	0	1	1	0
Detector Template												
Leading Detector (ft)	40	40	0	40	40		40	336	0	40	336	0
Trailing Detector (ft)	0	0	0	0	0		0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0		0	330	0	0	330	0
Detector 1 Size(ft)	40	40	0	40	40		40	6	0	40	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	NA	Perm	pm+pt	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases			8	4					6			2
Detector Phase	3	8	8	7	4		1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	13.2	50.2	50.2	11.6	48.2		13.4	35.6	35.6	12.9	44.6	44.6

Lanier Tract DRI

8: Dawsonville Highway/GA 53 & McEver Road/McEver

no build a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	23.0	59.1	59.1	12.1	48.2		20.0	64.6	64.6	14.2	58.8	58.8
Total Split (%)	15.3%	39.4%	39.4%	8.1%	32.1%		13.3%	43.1%	43.1%	9.5%	39.2%	39.2%
Maximum Green (s)	15.7	51.8	51.8	5.6	40.9		12.5	58.0	58.0	7.0	52.2	52.2
Yellow Time (s)	4.3	4.3	4.3	3.5	4.3		4.5	4.4	4.4	4.2	4.4	4.4
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	2.2	2.2	3.0	2.2	2.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.3	7.3	7.3	6.5	7.3		7.5	6.6	6.6	7.2	6.6	6.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)		4.0	4.0		4.0			4.0	4.0		4.0	4.0
Flash Dont Walk (s)		38.0	38.0		36.0			25.0	25.0		34.0	34.0
Pedestrian Calls (#/hr)		0	0		0			0	0		0	0
Act Effect Green (s)	16.1	17.5	17.5	14.0	8.8		12.5	93.5	93.5	8.3	86.5	86.5
Actuated g/C Ratio	0.11	0.12	0.12	0.09	0.06		0.08	0.62	0.62	0.06	0.58	0.58
v/c Ratio	1.19	0.62	0.57	0.58	0.51		1.15	0.25	0.06	0.34	0.69	0.87
Control Delay	164.3	20.5	13.5	70.3	52.3		163.5	17.6	1.5	81.4	21.9	15.3
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	164.3	20.5	13.5	70.3	52.3		163.5	17.6	1.5	81.4	21.9	15.3
LOS	F	C	B	E	D		F	B	A	F	C	B
Approach Delay		92.6			61.8			67.7			20.0	
Approach LOS		F			E			E			C	

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 19 (13%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.19

Intersection Signal Delay: 45.7

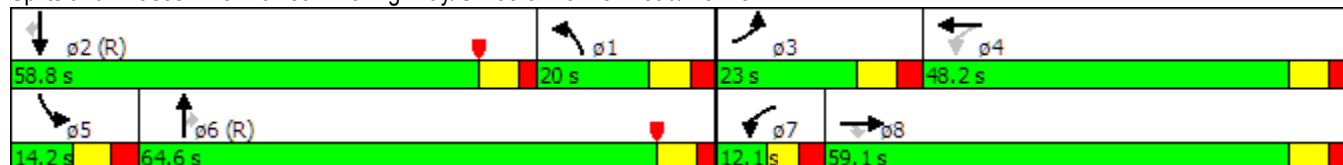
Intersection LOS: D

Intersection Capacity Utilization 87.5%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 8: Dawsonville Highway/GA 53 & McEver Road/McEver



Lanier Tract DRI

9: Dawsonville Highway & Greenhill Circle/Greenhill Circle

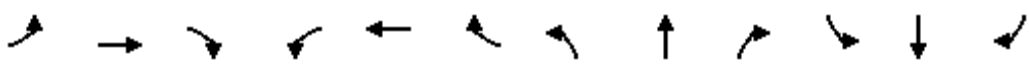
no build a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	74	1	156	7	1	4	149	832	11	13	1550	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		3%			7%			1%			0%	
Storage Length (ft)	0		0	0		0	190		190	185		100
Storage Lanes	0		1	0		1	1		1	1		1
Taper Length (ft)	0			0			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected		0.953			0.957		0.950			0.950		
Satd. Flow (prot)	0	1784	1591	0	1755	1558	1796	3522	1607	1805	3610	1615
Flt Permitted		0.721			0.751		0.082			0.296		
Satd. Flow (perm)	0	1349	1591	0	1377	1558	155	3522	1607	562	3610	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			143			102			57			101
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		288			254			778			921	
Travel Time (s)		7.9			6.9			11.8			14.0	
Peak Hour Factor	0.90	0.90	0.90	0.69	0.69	0.69	0.86	0.86	0.86	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	0%	0%
Adj. Flow (vph)	82	1	173	10	1	6	173	967	13	14	1685	62
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	83	173	0	11	6	173	967	13	14	1685	62
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.02	1.02	1.02	1.05	1.05	1.05	1.01	1.01	1.01	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1	0	1	1	0	0	1	0
Detector Template	Left			Left								
Leading Detector (ft)	20	40	0	20	40	0	40	336	0	0	336	0
Trailing Detector (ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Size(ft)	20	40	0	20	40	0	40	6	0	0	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8		8	4		4	6		6	2		2
Detector Phase	8	8	8	4	4	4	1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.0	23.0	23.0	39.9	39.9	39.9	11.0	28.0	28.0	10.0	36.0	36.0

Lanier Tract DRI

9: Dawsonville Highway & Greenhill Circle/Greenhill Circle

no build a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	39.9	39.9	39.9	39.9	39.9	39.9	22.0	100.1	100.1	10.0	88.1	88.1
Total Split (%)	26.6%	26.6%	26.6%	26.6%	26.6%	26.6%	14.7%	66.7%	66.7%	6.7%	58.7%	58.7%
Maximum Green (s)	34.0	34.0	34.0	34.0	34.0	34.0	16.0	94.1	94.1	5.0	82.1	82.1
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	4.4	4.4	3.5	4.4	4.4
All-Red Time (s)	2.9	2.9	2.9	2.9	2.9	2.9	3.0	1.6	1.6	1.5	1.6	1.6
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.9	5.9		5.9	5.9	6.0	6.0	6.0	5.0	6.0	6.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)				4.0	4.0	4.0		4.0	4.0		4.0	4.0
Flash Dont Walk (s)				30.0	30.0	30.0		18.0	18.0		26.0	26.0
Pedestrian Calls (#/hr)				0	0	0		0	0		0	0
Act Effect Green (s)		14.6	14.6		14.6	14.6	123.5	119.1	119.1	108.8	102.1	102.1
Actuated g/C Ratio		0.10	0.10		0.10	0.10	0.82	0.79	0.79	0.73	0.68	0.68
v/c Ratio		0.64	0.61		0.08	0.02	0.58	0.35	0.01	0.03	0.69	0.05
Control Delay		85.5	24.1		59.9	0.2	29.1	4.6	0.0	4.0	14.0	0.8
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
Total Delay		85.5	24.1		59.9	0.2	29.1	4.6	0.0	4.0	14.1	0.8
LOS		F	C		E	A	C	A	A	A	B	A
Approach Delay		44.0			38.8			8.2			13.5	
Approach LOS		D			D			A			B	

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.69

Intersection Signal Delay: 14.2

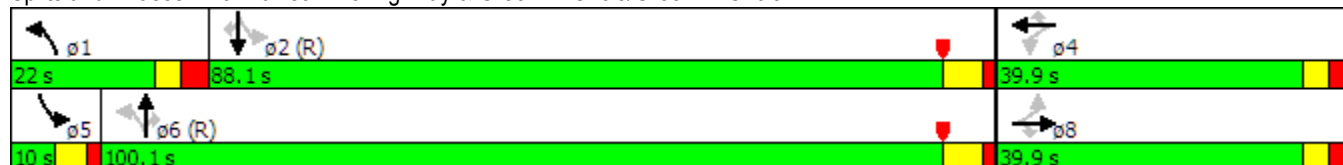
Intersection LOS: B

Intersection Capacity Utilization 76.8%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 9: Dawsonville Highway & Greenhill Circle/Greenhill Circle



Lanier Tract DRI

10: Dawsonville Highway & Shallowford Rd/Best Buy

no build a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	152	2	9	2	4	3	11	815	14	1	1379	373
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-1%			10%			-4%			-1%	
Storage Length (ft)	350		350	0		0	350		150	265		0
Storage Lanes	1		0	0		1	1		1	1		1
Taper Length (ft)	100			0			100			100		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950	0.953			0.982		0.950			0.950		
Satd. Flow (prot)	1723	1729	1623	0	1773	1534	1841	3646	1647	1814	3592	1623
Flt Permitted	0.950	0.953			0.982		0.125			0.292		
Satd. Flow (perm)	1723	1729	1623	0	1773	1534	242	3646	1647	558	3592	1623
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			113			119			70			218
Link Speed (mph)		45			25			45			45	
Link Distance (ft)		653			178			957			778	
Travel Time (s)		9.9			4.9			14.5			11.8	
Peak Hour Factor	0.84	0.84	0.84	0.56	0.56	0.56	0.83	0.83	0.83	0.93	0.93	0.93
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	1%	0%
Adj. Flow (vph)	181	2	11	4	7	5	13	982	17	1	1483	401
Shared Lane Traffic (%)	49%											
Lane Group Flow (vph)	92	91	11	0	11	5	13	982	17	1	1483	401
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes										
Headway Factor	0.99	0.99	0.99	1.07	1.07	1.07	0.97	0.97	0.97	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1	0	1	1	0	0	1	0
Detector Template				Left								
Leading Detector (ft)	40	40	0	20	40	0	40	336	0	0	336	0
Trailing Detector (ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Size(ft)	40	40	0	20	40	0	40	6	0	0	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases	3	3		4	4		1	6			2	
Permitted Phases			3			4	6		6	2		2
Detector Phase	3	3	3	4	4	4	1	6	6	2	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	36.7	36.7	36.7	38.9	38.9	38.9	10.8	28.8	28.8	30.8	30.8	30.8

Lanier Tract DRI

10: Dawsonville Highway & Shallowford Rd/Best Buy

no build a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	36.7	36.7	36.7	38.9	38.9	38.9	10.8	74.4	74.4	63.6	63.6	63.6
Total Split (%)	24.5%	24.5%	24.5%	25.9%	25.9%	25.9%	7.2%	49.6%	49.6%	42.4%	42.4%	42.4%
Maximum Green (s)	30.0	30.0	30.0	33.0	33.0	33.0	5.0	67.6	67.6	56.8	56.8	56.8
Yellow Time (s)	4.5	4.5	4.5	3.0	3.0	3.0	3.0	4.9	4.9	4.9	4.9	4.9
All-Red Time (s)	2.2	2.2	2.2	2.9	2.9	2.9	2.8	1.9	1.9	1.9	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.7	6.7	6.7		5.9	5.9	5.8	6.8	6.8	6.8	6.8	6.8
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes			Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	C-Min	C-Min	C-Min
Walk Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0
Flash Dont Walk (s)	26.0	26.0	26.0	29.0	29.0	29.0		18.0	18.0	20.0	20.0	20.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0	0	0	0	0
Act Effect Green (s)	13.4	13.4	13.4		6.5	6.5	118.7	117.7	117.7	113.0	113.0	113.0
Actuated g/C Ratio	0.09	0.09	0.09		0.04	0.04	0.79	0.78	0.78	0.75	0.75	0.75
v/c Ratio	0.60	0.59	0.04		0.14	0.03	0.05	0.34	0.01	0.00	0.55	0.31
Control Delay	81.2	80.6	0.3		72.5	0.3	5.8	6.1	0.0	7.0	10.2	4.2
Queue Delay	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0
Total Delay	81.2	80.6	0.3		72.5	0.3	5.8	6.1	0.0	7.0	10.5	4.2
LOS	F	F	A		E	A	A	A	A	A	B	A
Approach Delay		76.3			49.9			6.0			9.1	
Approach LOS		E			D			A			A	

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 45 (30%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.60

Intersection Signal Delay: 12.5

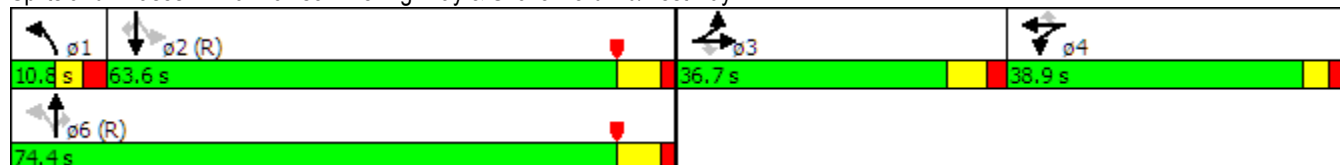
Intersection LOS: B

Intersection Capacity Utilization 62.6%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 10: Dawsonville Highway & Shallowford Rd/Best Buy



Lanier Tract DRI
1: Sportsman Club Road & Strickland Drive

no build p.m.

Intersection

Int Delay, s/veh 1.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	8	0	32	10	0	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	44	44	86	86	82	82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	18	0	37	12	0	30

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	73	43	0 0 49 0
Stage 1	43	-	- - - -
Stage 2	30	-	- - - -
Critical Hdwy	6.42	6.22	- - 4.12 -
Critical Hdwy Stg 1	5.42	-	- - - -
Critical Hdwy Stg 2	5.42	-	- - - -
Follow-up Hdwy	3.518	3.318	- - 2.218 -
Pot Cap-1 Maneuver	931	1027	- - 1558 -
Stage 1	979	-	- - - -
Stage 2	993	-	- - - -
Platoon blocked, %			- - - -
Mov Cap-1 Maneuver	931	1027	- - 1558 -
Mov Cap-2 Maneuver	931	-	- - - -
Stage 1	979	-	- - - -
Stage 2	993	-	- - - -

Approach	WB	NB	SB
HCM Control Delay, s	8.9	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	- 931	1558	-
HCM Lane V/C Ratio	-	- 0.02	-	-
HCM Control Delay (s)	-	- 8.9	0	-
HCM Lane LOS	-	- A	A	-
HCM 95th %tile Q(veh)	-	- 0.1	0	-

Lanier Tract DRI
2: GA 53 & Sportsman Club Road

no build p.m.

Intersection												
Int Delay, s/veh		34.3										
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	17	1147	0	2	1845	21	0	0	0	31	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	96	96	96	92	92	92	66	66	66
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	18	1207	0	2	1922	22	0	0	0	47	0	15
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1944	0	0	1207	0	0	2208	3191	604	2576	3180	972
Stage 1	-	-	-	-	-	-	1243	1243	-	1937	1937	-
Stage 2	-	-	-	-	-	-	965	1948	-	639	1243	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	298	-	-	574	-	-	24	10	441	~ 13	10	252
Stage 1	-	-	-	-	-	-	185	245	-	68	111	-
Stage 2	-	-	-	-	-	-	274	110	-	431	245	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	298	-	-	574	-	-	21	9	441	~ 12	9	252
Mov Cap-2 Maneuver	-	-	-	-	-	-	21	9	-	~ 12	9	-
Stage 1	-	-	-	-	-	-	174	230	-	64	111	-
Stage 2	-	-	-	-	-	-	257	110	-	405	230	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			0			0			\$ 1780.7		
HCM LOS							A			F		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	-	298	-	-	574	-	-	16				
HCM Lane V/C Ratio	-	0.06	-	-	0.004	-	-	3.883				
HCM Control Delay (s)	0	17.9	-	-	11.3	-		\$ 1780.7				
HCM Lane LOS	A	C	-	-	B	-	-	F				
HCM 95th %tile Q(veh)	-	0.2	-	-	0	-	-	8.5				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined			*: All major volume in platoon					

Intersection						
Int Delay, s/veh	1.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	11	52	68	1822	1217	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	76	76	95	95	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	14	68	72	1918	1217	15
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	2319	609	1217	0	-	0
Stage 1	1217	-	-	-	-	-
Stage 2	1102	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	32	438	569	-	-	-
Stage 1	243	-	-	-	-	-
Stage 2	280	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	28	438	569	-	-	-
Mov Cap-2 Maneuver	28	-	-	-	-	-
Stage 1	243	-	-	-	-	-
Stage 2	245	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	52.1	0.4		0		
HCM LOS	F					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	569	-	28	438	-	-
HCM Lane V/C Ratio	0.126	-	0.517	0.156	-	-
HCM Control Delay (s)	12.2	-	229.1	14.7	-	-
HCM Lane LOS	B	-	F	B	-	-
HCM 95th %tile Q(veh)	0.4	-	1.6	0.5	-	-

Lanier Tract DRI
4: Canterbury Road & GA 53

no build p.m.

Intersection						
Int Delay, s/veh	1.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	8	31	123	1857	1223	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	10	39	128	1934	1274	16
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	2497	637	1274	0	-	0
Stage 1	1274	-	-	-	-	-
Stage 2	1223	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	24	420	541	-	-	-
Stage 1	226	-	-	-	-	-
Stage 2	241	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	18	420	541	-	-	-
Mov Cap-2 Maneuver	18	-	-	-	-	-
Stage 1	226	-	-	-	-	-
Stage 2	184	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	83.2	0.9		0		
HCM LOS	F					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	541	-	18	420	-	-
HCM Lane V/C Ratio	0.237	-	0.556	0.092	-	-
HCM Control Delay (s)	13.7	-	349.9	14.4	-	-
HCM Lane LOS	B	-	F	B	-	-
HCM 95th %tile Q(veh)	0.9	-	1.5	0.3	-	-

Lanier Tract DRI
7: GA 53 & Beechwood Boulevard

no build p.m.

Intersection						
Int Delay, s/veh	0.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	1	52	95	2206	1532	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	Yield	-	None
Storage Length	0	0	200	-	-	360
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	1	0	-
Peak Hour Factor	71	71	99	99	98	98
Heavy Vehicles, %	0	0	0	0	1	0
Mvmt Flow	1	73	96	2228	1563	10
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	2869	783	1563	0	-	0
Stage 1	1563	-	-	-	-	-
Stage 2	1306	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	14	341	428	-	-	-
Stage 1	161	-	-	-	-	-
Stage 2	221	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	11	341	428	-	-	-
Mov Cap-2 Maneuver	11	-	-	-	-	-
Stage 1	161	-	-	-	-	-
Stage 2	171	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	25.1	0.7		0		
HCM LOS	D					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	428	-	11	341	-	-
HCM Lane V/C Ratio	0.224	-	0.128	0.215	-	-
HCM Control Delay (s)	15.8	-	375.6	18.4	-	-
HCM Lane LOS	C	-	F	C	-	-
HCM 95th %tile Q(veh)	0.8	-	0.3	0.8	-	-

Lanier Tract DRI

5: GA 53 & Lanier Valley Dr/Ahaluna Dr

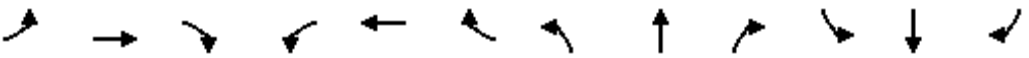
no build p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	23	1	106	41	8	56	198	1918	42	22	1326	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		2%			-4%			1%			-1%	
Storage Length (ft)	0		0	0		0	100		0	140		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	0			0			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.890			0.928			0.997				
Flt Protected		0.991			0.981		0.950			0.950		
Satd. Flow (prot)	0	1659	0	0	1764	0	1796	3581	0	1814	3592	0
Flt Permitted		0.860			0.589		0.143			0.080		
Satd. Flow (perm)	0	1440	0	0	1059	0	270	3581	0	153	3592	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		119			31			4				
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		340			322			1002			1457	
Travel Time (s)		7.7			7.3			15.2			22.1	
Peak Hour Factor	0.89	0.89	0.89	0.85	0.85	0.85	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
Adj. Flow (vph)	26	1	119	48	9	66	206	1998	44	23	1381	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	146	0	0	123	0	206	2042	0	23	1384	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	0.97	0.97	0.97	1.01	1.01	1.01	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		0	1	
Detector Template	Left			Left								
Leading Detector (ft)	20	40		20	40		40	336		0	336	
Trailing Detector (ft)	0	0		0	0		0	330		0	330	
Detector 1 Position(ft)	0	0		0	0		0	330		0	330	
Detector 1 Size(ft)	20	40		20	40		40	6		0	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		8			4		5	2			6	
Permitted Phases	8			4			2			6		
Detector Phase	8	8		4	4		5	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	23.0	23.0		23.0	23.0		10.6	23.0		23.0	23.0	

Lanier Tract DRI

5: GA 53 & Lanier Valley Dr/Ahaluna Dr

no build p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	33.0	33.0		33.0	33.0		28.0	127.0		99.0	99.0	
Total Split (%)	20.6%	20.6%		20.6%	20.6%		17.5%	79.4%		61.9%	61.9%	
Maximum Green (s)	26.4	26.4		26.4	26.4		22.4	120.9		92.9	92.9	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	4.5		4.5	4.5	
All-Red Time (s)	2.6	2.6		2.6	2.6		2.6	1.6		1.6	1.6	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.6			6.6		5.6	6.1		6.1	6.1	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		C-Max	C-Max	
Act Effect Green (s)		17.5			17.5		130.3	129.8		112.6	112.6	
Actuated g/C Ratio		0.11			0.11		0.81	0.81		0.70	0.70	
v/c Ratio		0.56			0.86		0.62	0.70		0.21	0.55	
Control Delay		23.8			96.6		18.7	10.7		18.1	13.9	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		23.8			96.6		18.7	10.7		18.1	13.9	
LOS		C			F		B	B		B	B	
Approach Delay		23.8			96.6			11.5			14.0	
Approach LOS		C			F			B			B	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 129 (81%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 75

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.86

Intersection Signal Delay: 15.5

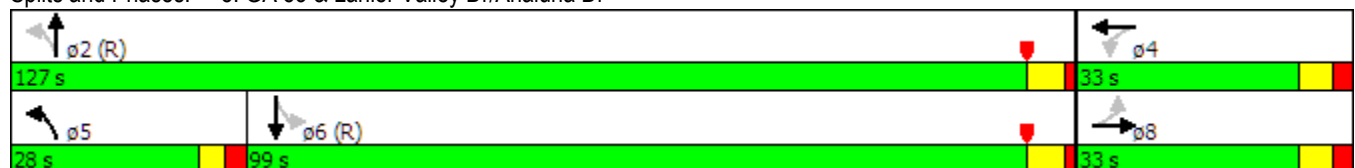
Intersection LOS: B

Intersection Capacity Utilization 86.1%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 5: GA 53 & Lanier Valley Dr/Ahaluna Dr



Lanier Tract DRI

6: 53-Dawsonville Hwy & Academy Sports

no build p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	14	3	66	130	8	46	96	1947	152	21	1324	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			4%			1%			0%	
Storage Length (ft)	0		0	0		70	200		170	190		360
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	0			0			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1900	1615	1769	1862	1583	1796	3592	1607	1805	3574	1615
Flt Permitted	0.751			0.756			0.144			0.054		
Satd. Flow (perm)	1427	1900	1615	1408	1862	1583	272	3592	1607	103	3574	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			69			63			70			64
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		262			246			1836			685	
Travel Time (s)		7.1			6.7			27.8			10.4	
Peak Hour Factor	0.95	0.95	0.95	0.80	0.80	0.80	0.98	0.98	0.98	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
Adj. Flow (vph)	15	3	69	162	10	58	98	1987	155	22	1365	31
Shared Lane Traffic (%)												
Lane Group Flow (vph)	15	3	69	162	10	58	98	1987	155	22	1365	31
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.03	1.03	1.03	1.01	1.01	1.01	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1	1	1	1	1	1	1	0
Detector Template												
Leading Detector (ft)	40	40	0	40	40	40	40	336	0	40	336	0
Trailing Detector (ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Size(ft)	40	40	0	40	40	40	40	6	0	40	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8		8	4		4	2		2	6		6
Detector Phase	8	8	8	4	4	4	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	42.0	42.0	42.0	42.4	42.4	42.4	11.4	30.3	30.3	11.0	29.3	29.3

Synchro 8 Report

Marc R Acampora, PE, LLC

Lanier Tract DRI

6: 53-Dawsonville Hwy & Academy Sports

no build p.m.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	42.4	42.4	42.4	42.4	42.4	42.4	15.6	106.6	106.6	11.0	102.0	102.0
Total Split (%)	26.5%	26.5%	26.5%	26.5%	26.5%	26.5%	9.8%	66.6%	66.6%	6.9%	63.8%	63.8%
Maximum Green (s)	36.0	36.0	36.0	36.0	36.0	36.0	9.2	100.4	100.4	5.0	95.8	95.8
Yellow Time (s)	3.4	3.4	3.4	3.4	3.4	3.4	3.4	4.3	4.3	3.0	4.3	4.3
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	1.9	1.9	3.0	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.2	6.2	6.0	6.2	6.2
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0
Flash Dont Walk (s)	23.0	23.0	23.0	32.0	32.0	32.0		20.0	20.0		19.0	19.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0	0		0	0
Act Effect Green (s)	23.7	23.7	23.7	23.7	23.7	23.7	121.3	116.4	116.4	115.8	109.6	109.6
Actuated g/C Ratio	0.15	0.15	0.15	0.15	0.15	0.15	0.76	0.73	0.73	0.72	0.68	0.68
v/c Ratio	0.07	0.01	0.23	0.78	0.04	0.20	0.35	0.76	0.13	0.16	0.56	0.03
Control Delay	55.8	53.3	13.0	89.1	54.6	11.7	9.3	15.7	7.2	7.5	10.9	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
Total Delay	55.8	53.3	13.0	89.1	54.6	11.7	9.3	15.7	7.2	7.5	11.0	0.0
LOS	E	D	B	F	D	B	A	B	A	A	B	A
Approach Delay		21.8			68.1			14.8			10.7	
Approach LOS		C			E			B			B	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 120 (75%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 135

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.78

Intersection Signal Delay: 16.6

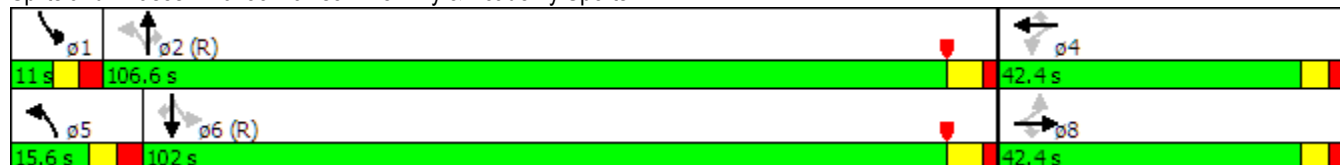
Intersection LOS: B

Intersection Capacity Utilization 87.4%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 6: 53-Dawsonville Hwy & Academy Sports



Lanier Tract DRI

8: Dawsonville Highway/GA 53 & McEver Road/McEver

no build p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	933	235	426	96	100	89	478	1504	51	68	1136	531
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			5%			1%			-1%	
Storage Length (ft)	180		0	0		0	310		185	255		0
Storage Lanes	2		1	1		0	2		1	1		1
Taper Length (ft)	50			0			50			50		
Lane Util. Factor	0.97	0.95	0.95	1.00	1.00	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Frt		0.951	0.850		0.929				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3484	1708	1527	1760	1721	0	3484	3592	1607	1814	3592	1623
Flt Permitted	0.950			0.465			0.950			0.950		
Satd. Flow (perm)	3484	1708	1527	861	1721	0	3484	3592	1607	1814	3592	1623
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18	326		27				172			312
Link Speed (mph)		45			25			45			45	
Link Distance (ft)		580			331			921			1504	
Travel Time (s)		8.8			9.0			14.0			22.8	
Peak Hour Factor	0.95	0.95	0.95	0.86	0.86	0.86	0.97	0.97	0.97	0.91	0.91	0.91
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
Adj. Flow (vph)	982	247	448	112	116	103	493	1551	53	75	1248	584
Shared Lane Traffic (%)			27%									
Lane Group Flow (vph)	982	368	327	112	219	0	493	1551	53	75	1248	584
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.03	1.03	1.03	1.01	1.01	1.01	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1		1	1	0	1	1	0
Detector Template												
Leading Detector (ft)	40	40	0	40	40		40	336	0	40	336	0
Trailing Detector (ft)	0	0	0	0	0		0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0		0	330	0	0	330	0
Detector 1 Size(ft)	40	40	0	40	40		40	6	0	40	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	NA	Perm	pm+pt	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases			8	4					6			2
Detector Phase	3	8	8	7	4		1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	13.2	50.2	50.2	11.6	48.2		13.4	35.6	35.6	12.9	44.6	44.6

Lanier Tract DRI

8: Dawsonville Highway/GA 53 & McEver Road/McEver

no build p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	35.0	69.5	69.5	13.7	48.2		23.0	63.8	63.8	13.0	53.8	53.8
Total Split (%)	21.9%	43.4%	43.4%	8.6%	30.1%		14.4%	39.9%	39.9%	8.1%	33.6%	33.6%
Maximum Green (s)	27.7	62.2	62.2	7.2	40.9		15.5	57.2	57.2	5.8	47.2	47.2
Yellow Time (s)	4.3	4.3	4.3	3.5	4.3		4.5	4.4	4.4	4.2	4.4	4.4
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	2.2	2.2	3.0	2.2	2.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.3	7.3	7.3	6.5	7.3		7.5	6.6	6.6	7.2	6.6	6.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)		4.0	4.0		4.0			4.0	4.0		4.0	4.0
Flash Dont Walk (s)		38.0	38.0		36.0			25.0	25.0		34.0	34.0
Pedestrian Calls (#/hr)		0	0		0			0	0		0	0
Act Effect Green (s)	27.7	44.8	44.8	31.5	23.5		15.5	65.4	65.4	15.0	64.6	64.6
Actuated g/C Ratio	0.17	0.28	0.28	0.20	0.15		0.10	0.41	0.41	0.09	0.40	0.40
v/c Ratio	1.63	0.75	0.49	0.54	0.80		1.46	1.06	0.07	0.44	0.86	0.69
Control Delay	329.5	59.4	6.5	47.6	77.6		273.4	95.6	0.1	69.6	66.1	38.9
Queue Delay	0.0	2.9	0.6	9.2	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	329.5	62.2	7.0	56.8	77.6		273.4	95.6	0.1	69.6	66.1	38.9
LOS	F	E	A	E	E		F	F	A	E	E	D
Approach Delay		208.0			70.6			135.0			57.9	
Approach LOS		F			E			F			E	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 52 (33%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.63

Intersection Signal Delay: 127.3

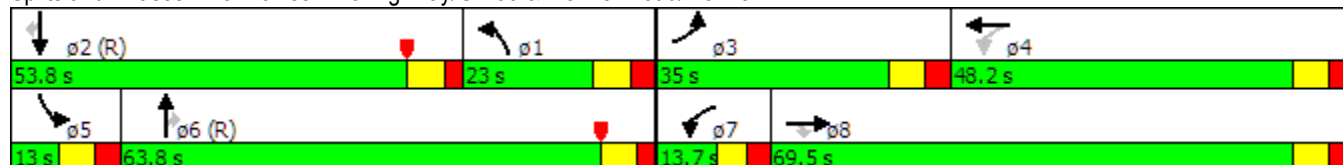
Intersection LOS: F

Intersection Capacity Utilization 106.7%

ICU Level of Service G

Analysis Period (min) 15

Splits and Phases: 8: Dawsonville Highway/GA 53 & McEver Road/McEver



Lanier Tract DRI

9: Dawsonville Highway & Greenhill Circle/Greenhill Circle

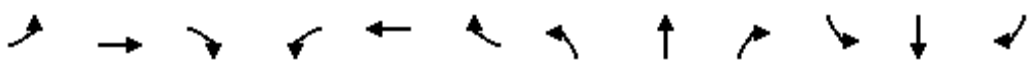
no build p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	146	10	152	66	22	42	274	1931	77	44	1537	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		3%			7%			1%			0%	
Storage Length (ft)	0		0	0		0	190		190	185		100
Storage Lanes	0		1	0		1	1		1	1		1
Taper Length (ft)	0			0			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected		0.955			0.964		0.950			0.950		
Satd. Flow (prot)	0	1787	1591	0	1767	1558	1796	3592	1607	1805	3610	1615
Flt Permitted		0.591			0.482		0.054			0.055		
Satd. Flow (perm)	0	1106	1591	0	884	1558	102	3592	1607	104	3610	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			167			95			54			95
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		288			254			778			921	
Travel Time (s)		7.9			6.9			11.8			14.0	
Peak Hour Factor	0.91	0.91	0.91	0.78	0.78	0.78	0.97	0.97	0.97	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	160	11	167	85	28	54	282	1991	79	46	1618	62
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	171	167	0	113	54	282	1991	79	46	1618	62
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.02	1.02	1.02	1.05	1.05	1.05	1.01	1.01	1.01	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1	0	1	1	0	0	1	0
Detector Template	Left			Left								
Leading Detector (ft)	20	40	0	20	40	0	40	336	0	0	336	0
Trailing Detector (ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Size(ft)	20	40	0	20	40	0	40	6	0	0	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8		8	4		4	6		6	2		2
Detector Phase	8	8	8	4	4	4	1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.0	23.0	23.0	39.9	39.9	39.9	11.0	28.0	28.0	10.0	36.0	36.0

Lanier Tract DRI

9: Dawsonville Highway & Greenhill Circle/Greenhill Circle

no build p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	39.9	39.9	39.9	39.9	39.9	39.9	32.0	110.1	110.1	10.0	88.1	88.1
Total Split (%)	24.9%	24.9%	24.9%	24.9%	24.9%	24.9%	20.0%	68.8%	68.8%	6.3%	55.1%	55.1%
Maximum Green (s)	34.0	34.0	34.0	34.0	34.0	34.0	26.0	104.1	104.1	5.0	82.1	82.1
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	4.4	4.4	3.5	4.4	4.4
All-Red Time (s)	2.9	2.9	2.9	2.9	2.9	2.9	3.0	1.6	1.6	1.5	1.6	1.6
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.9	5.9		5.9	5.9	6.0	6.0	6.0	5.0	6.0	6.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)				4.0	4.0	4.0		4.0	4.0		4.0	4.0
Flash Dont Walk (s)				30.0	30.0	30.0		18.0	18.0		26.0	26.0
Pedestrian Calls (#/hr)				0	0	0		0	0		0	0
Act Effect Green (s)		28.1	28.1		28.1	28.1	120.0	111.5	111.5	96.9	90.2	90.2
Actuated g/C Ratio		0.18	0.18		0.18	0.18	0.75	0.70	0.70	0.61	0.56	0.56
v/c Ratio		0.88	0.40		0.73	0.15	0.86	0.80	0.07	0.38	0.80	0.07
Control Delay		103.0	9.8		87.7	1.7	49.2	28.9	5.5	21.7	55.9	11.8
Queue Delay		0.0	2.3		78.3	0.0	0.0	47.3	0.0	0.0	1.0	0.0
Total Delay		103.0	12.1		166.0	1.7	49.2	76.2	5.5	21.7	56.9	11.8
LOS		F	B		F	A	D	E	A	C	E	B
Approach Delay		58.1			112.9			70.6			54.3	
Approach LOS		E			F			E			D	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow

Natural Cycle: 120

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.88

Intersection Signal Delay: 65.1

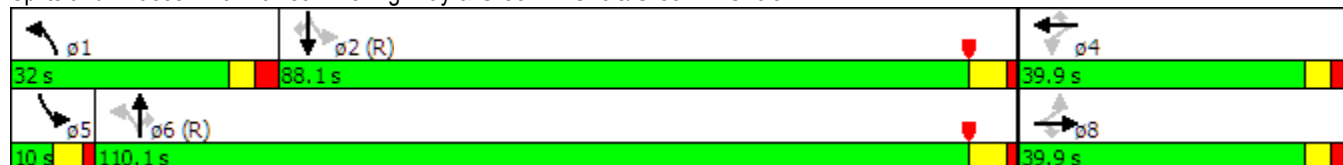
Intersection LOS: E

Intersection Capacity Utilization 87.9%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 9: Dawsonville Highway & Greenhill Circle/Greenhill Circle



Lanier Tract DRI

10: Dawsonville Highway & Shallowford Rd/Best Buy

no build p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	572	42	29	40	30	8	44	1810	126	8	1282	511
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-1%			10%			-4%			-1%	
Storage Length (ft)	350		350	0		0	350		150	265		0
Storage Lanes	1		0	0		1	1		1	1		1
Taper Length (ft)	100			0			100			100		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950	0.959			0.972		0.950			0.950		
Satd. Flow (prot)	1723	1740	1623	0	1754	1534	1841	3682	1647	1814	3628	1623
Flt Permitted	0.950	0.959			0.972		0.085			0.046		
Satd. Flow (perm)	1723	1740	1623	0	1754	1534	165	3682	1647	88	3628	1623
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			106			111			65			321
Link Speed (mph)		45			25			45			45	
Link Distance (ft)		653			178			1046			778	
Travel Time (s)		9.9			4.9			15.8			11.8	
Peak Hour Factor	0.90	0.90	0.90	0.88	0.88	0.88	0.94	0.94	0.94	0.91	0.91	0.91
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	636	47	32	45	34	9	47	1926	134	9	1409	562
Shared Lane Traffic (%)	46%											
Lane Group Flow (vph)	343	340	32	0	79	9	47	1926	134	9	1409	562
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes										
Headway Factor	0.99	0.99	0.99	1.07	1.07	1.07	0.97	0.97	0.97	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1	0	1	1	0	0	1	0
Detector Template				Left								
Leading Detector (ft)	40	40	0	20	40	0	40	336	0	0	336	0
Trailing Detector (ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Size(ft)	40	40	0	20	40	0	40	6	0	0	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases	3	3		4	4		1	6			2	
Permitted Phases			3			4	6		6	2		2
Detector Phase	3	3	3	4	4	4	1	6	6	2	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	36.7	36.7	36.7	38.9	38.9	38.9	10.8	28.8	28.8	30.8	30.8	30.8

Lanier Tract DRI

10: Dawsonville Highway & Shallowford Rd/Best Buy

no build p.m.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	36.8	36.8	36.8	38.9	38.9	38.9	10.8	84.3	84.3	73.5	73.5	73.5
Total Split (%)	23.0%	23.0%	23.0%	24.3%	24.3%	24.3%	6.8%	52.7%	52.7%	45.9%	45.9%	45.9%
Maximum Green (s)	30.1	30.1	30.1	33.0	33.0	33.0	5.0	77.5	77.5	66.7	66.7	66.7
Yellow Time (s)	4.5	4.5	4.5	3.0	3.0	3.0	3.0	4.9	4.9	4.9	4.9	4.9
All-Red Time (s)	2.2	2.2	2.2	2.9	2.9	2.9	2.8	1.9	1.9	1.9	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.7	6.7	6.7		5.9	5.9	5.8	6.8	6.8	6.8	6.8	6.8
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes			Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	C-Min	C-Min	C-Min
Walk Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0
Flash Dont Walk (s)	26.0	26.0	26.0	29.0	29.0	29.0		18.0	18.0	20.0	20.0	20.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0	0	0	0	0
Act Effect Green (s)	30.1	30.1	30.1		12.6	12.6	98.9	97.9	97.9	87.3	87.3	87.3
Actuated g/C Ratio	0.19	0.19	0.19		0.08	0.08	0.62	0.61	0.61	0.55	0.55	0.55
v/c Ratio	1.06	1.04	0.08		0.57	0.04	0.27	0.86	0.13	0.19	0.71	0.55
Control Delay	126.3	121.6	0.4		86.5	0.4	16.6	30.7	7.4	58.2	54.5	33.0
Queue Delay	1.1	1.0	0.0		0.0	0.0	0.0	47.1	0.0	0.0	12.5	0.7
Total Delay	127.5	122.6	0.4		86.5	0.4	16.6	77.8	7.4	58.2	66.9	33.7
LOS	F	F	A		F	A	B	E	A	E	E	C
Approach Delay		119.5			77.7			72.0			57.5	
Approach LOS		F			E			E			E	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 91 (57%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.06

Intersection Signal Delay: 73.1

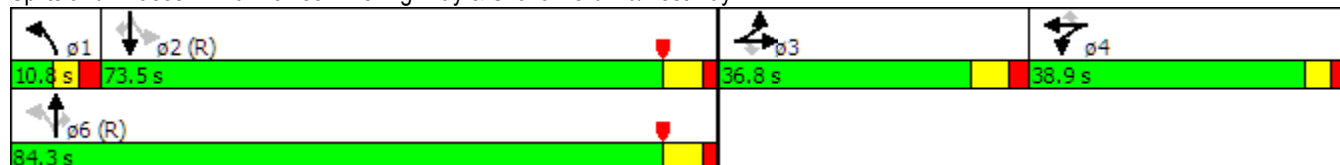
Intersection LOS: E

Intersection Capacity Utilization 87.3%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 10: Dawsonville Highway & Shallowford Rd/Best Buy



Appendix E

Future Phase One Intersection Analysis

Lanier Tract DRI
1: Sportsman Club Road & Strickland Drive

phase one a.m.

Intersection						
Int Delay, s/veh	4.2					
Movement	WBL	WBR		NBT	NBR	SBL SBT
Vol, veh/h	30	0		7	11	0 25
Conflicting Peds, #/hr	0	0		0	0	0 0
Sign Control	Stop	Stop		Free	Free	Free Free
RT Channelized	-	None		-	None	- None
Storage Length	0	-		-	-	- -
Veh in Median Storage, #	0	-		0	-	- 0
Grade, %	0	-		0	-	- 0
Peak Hour Factor	50	50		58	58	64 64
Heavy Vehicles, %	2	2		2	2	2 2
Mvmt Flow	60	0		12	19	0 39
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	61	22	0	0	31	0
Stage 1	22	-	-	-	-	-
Stage 2	39	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	945	1055	-	-	1582	-
Stage 1	1001	-	-	-	-	-
Stage 2	983	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	945	1055	-	-	1582	-
Mov Cap-2 Maneuver	945	-	-	-	-	-
Stage 1	1001	-	-	-	-	-
Stage 2	983	-	-	-	-	-
Approach	WB		NB		SB	
HCM Control Delay, s	9.1		0		0	
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	945	1582	-	
HCM Lane V/C Ratio	-	-	0.063	-	-	
HCM Control Delay (s)	-	-	9.1	0	-	
HCM Lane LOS	-	-	A	A	-	
HCM 95th %tile Q(veh)	-	-	0.2	0	-	

Lanier Tract DRI
2: GA 53 & Sportsman Club Road

phase one a.m.

Intersection												
Int Delay, s/veh	23											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	14	1885	0	5	841	15	0	0	0	41	0	23
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	84	84	84	92	92	92	70	70	70
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	2192	0	6	1001	18	0	0	0	59	0	33

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1019	0	0	2192	0	0	2737	3255	1096	2150	3246	510
Stage 1	-	-	-	-	-	-	2224	2224	-	1022	1022	-
Stage 2	-	-	-	-	-	-	513	1031	-	1128	2224	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	677	-	-	238	-	-	10	9	208	~ 27	9	509
Stage 1	-	-	-	-	-	-	44	79	-	253	312	-
Stage 2	-	-	-	-	-	-	512	309	-	218	79	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	677	-	-	238	-	-	9	9	208	~ 26	9	509
Mov Cap-2 Maneuver	-	-	-	-	-	-	9	9	-	~ 26	9	-
Stage 1	-	-	-	-	-	-	43	77	-	247	304	-
Stage 2	-	-	-	-	-	-	467	301	-	213	77	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.1	0	\$ 834.4
HCM LOS			A	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	677	-	-	238	-	-	39
HCM Lane V/C Ratio	-	0.024	-	-	0.025	-	-	2.344
HCM Control Delay (s)	0	10.4	-	-	20.5	-	-	\$ 834.4
HCM Lane LOS	A	B	-	-	C	-	-	F
HCM 95th %tile Q(veh)	-	0.1	-	-	0.1	-	-	10

Notes												
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon												

Lanier Tract DRI
3: GA 53 & Avonlea Way

phase one a.m.

Intersection												
Int Delay, s/veh	9.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	17	0	79	2	0	13	13	866	2	15	1867	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	0	0	-	0	0	-	-	0	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	80	80	80	88	88	88	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	20	0	94	2	0	16	15	984	2	17	2171	8
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2728	3222	1085	2135	3221	493	2171	0	0	986	0	0
Stage 1	2206	2206	-	1015	1015	-	-	-	-	-	-	-
Stage 2	522	1016	-	1120	2206	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	~ 10	10	212	28	10	522	242	-	-	696	-	-
Stage 1	45	81	-	255	314	-	-	-	-	-	-	-
Stage 2	506	314	-	220	81	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 9	9	212	15	9	522	242	-	-	696	-	-
Mov Cap-2 Maneuver	~ 9	9	-	15	9	-	-	-	-	-	-	-
Stage 1	42	79	-	239	295	-	-	-	-	-	-	-
Stage 2	460	295	-	119	79	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	273.3			48.9			0.3			0.1		
HCM LOS	F			E								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR		
Capacity (veh/h)	242	-	-	9	212	15	522	696	-	-		
HCM Lane V/C Ratio	0.061	-	-	2.249	0.444	0.167	0.031	0.025	-	-		
HCM Control Delay (s)	20.8	-	\$	1381.4	34.9	288.1	12.1	10.3	-	-		
HCM Lane LOS	C	-	-	F	D	F	B	B	-	-		
HCM 95th %tile Q(veh)	0.2	-	-	3.5	2.1	0.5	0.1	0.1	-	-		
Notes												
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon												

Lanier Tract DRI
4: GA 53 & Canterbury Road

phase one a.m.

Intersection												
Int Delay, s/veh	12.4											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	20	0	105	3	0	2	25	826	3	2	1994	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	0	0	-	0	0	-	-	0	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	92	88	92	92	92	86	86	92	92	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	23	0	119	3	0	2	29	960	3	2	2191	9

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2734	3218	1096	2120	3216	482	2191	0	0	964	0	0
Stage 1	2196	2196	-	1020	1020	-	-	-	-	-	-	-
Stage 2	538	1022	-	1100	2196	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	~ 10	10	208	29	10	530	238	-	-	710	-	-
Stage 1	46	82	-	253	312	-	-	-	-	-	-	-
Stage 2	495	312	-	226	82	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 9	9	208	11	9	530	238	-	-	710	-	-
Mov Cap-2 Maneuver	~ 9	9	-	11	9	-	-	-	-	-	-	-
Stage 1	40	82	-	222	274	-	-	-	-	-	-	-
Stage 2	433	274	-	96	82	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	277.1	266.4	0.7	0
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	238	-	-	9	208	11	530	710	-	-
HCM Lane V/C Ratio	0.122	-	-	2.525	0.574	0.296	0.004	0.003	-	-
HCM Control Delay (s)	22.2	-	-	\$ 1504.7	43.3	\$ 436.1	11.8	10.1	-	-
HCM Lane LOS	C	-	-	F	E	F	B	B	-	-
HCM 95th %tile Q(veh)	0.4	-	-	3.9	3.1	0.7	0	0	-	-

Notes										
~: Volume exceeds capacity	\$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon							

Intersection						
Int Delay, s/veh	3.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	6	45	30	930	2288	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	Yield	-	None
Storage Length	0	0	200	-	-	360
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	1	0	-
Peak Hour Factor	82	82	87	87	89	89
Heavy Vehicles, %	0	0	0	1	0	0
Mvmt Flow	7	55	34	1069	2571	2
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	3174	1285	2571	0	-	0
Stage 1	2571	-	-	-	-	-
Stage 2	603	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	8	158	174	-	-	-
Stage 1	45	-	-	-	-	-
Stage 2	515	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 6	158	174	-	-	-
Mov Cap-2 Maneuver	~ 6	-	-	-	-	-
Stage 1	45	-	-	-	-	-
Stage 2	414	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	179.5	1		0		
HCM LOS	F					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	174	-	6	158	-	-
HCM Lane V/C Ratio	0.198	-	1.22	0.347	-	-
HCM Control Delay (s)	30.7	\$	1230.3	39.4	-	-
HCM Lane LOS	D	-	F	E	-	-
HCM 95th %tile Q(veh)	0.7	-	1.7	1.4	-	-
Notes						
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon						

Lanier Tract DRI

5: GA 53 & Lanier Valley Dr/Ahaluna Dr

phase one a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	21	6	127	92	3	27	61	800	47	21	2121	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		2%			-4%			1%			-1%	
Storage Length (ft)	0		0	0		0	100		0	140		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	0			0			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.889			0.970			0.992				
Flt Protected		0.993			0.964		0.950			0.950		
Satd. Flow (prot)	0	1661	0	0	1812	0	1796	3497	0	1814	3628	0
Flt Permitted		0.945			0.481		0.037			0.288		
Satd. Flow (perm)	0	1580	0	0	904	0	70	3497	0	550	3628	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		58			8			12				
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		340			322			888			1417	
Travel Time (s)		7.7			7.3			13.5			21.5	
Peak Hour Factor	0.91	0.91	0.91	0.83	0.83	0.83	0.85	0.85	0.85	0.87	0.87	0.87
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	0%	0%
Adj. Flow (vph)	23	7	140	111	4	33	72	941	55	24	2438	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	170	0	0	148	0	72	996	0	24	2438	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	0.97	0.97	0.97	1.01	1.01	1.01	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		0	1	
Detector Template	Left			Left								
Leading Detector (ft)	20	40		20	40		40	336		0	336	
Trailing Detector (ft)	0	0		0	0		0	330		0	330	
Detector 1 Position(ft)	0	0		0	0		0	330		0	330	
Detector 1 Size(ft)	20	40		20	40		40	6		0	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		8			4		5	2			6	
Permitted Phases	8			4			2			6		
Detector Phase	8	8		4	4		5	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	23.0	23.0		23.0	23.0		10.6	23.0		23.0	23.0	

Lanier Tract DRI

5: GA 53 & Lanier Valley Dr/Ahaluna Dr

phase one a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	30.0	30.0		30.0	30.0		10.6	120.0		109.4	109.4	
Total Split (%)	20.0%	20.0%		20.0%	20.0%		7.1%	80.0%		72.9%	72.9%	
Maximum Green (s)	23.4	23.4		23.4	23.4		5.0	113.9		103.3	103.3	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	4.5		4.5	4.5	
All-Red Time (s)	2.6	2.6		2.6	2.6		2.6	1.6		1.6	1.6	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.6			6.6		5.6	6.1		6.1	6.1	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		C-Max	C-Max	
Act Effect Green (s)		23.4			23.4		114.4	113.9		103.3	103.3	
Actuated g/C Ratio		0.16			0.16		0.76	0.76		0.69	0.69	
v/c Ratio		0.58			1.01		0.65	0.37		0.06	0.98	
Control Delay		46.8			134.1		57.6	3.1		8.1	35.6	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		46.8			134.1		57.6	3.1		8.1	35.6	
LOS		D			F		E	A		A	D	
Approach Delay		46.8			134.1			6.8			35.3	
Approach LOS		D			F			A			D	

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 26 (17%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 130

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.01

Intersection Signal Delay: 31.7

Intersection LOS: C

Intersection Capacity Utilization 90.9%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 5: GA 53 & Lanier Valley Dr/Ahaluna Dr

								
120 s			30 s			30 s		
								
10.6 s			109.4 s			30 s		

Lanier Tract DRI

6: 53-Dawsonville Hwy & Academy Sports

phase one a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	2	0	7	2	0	0	12	878	10	6	2269	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			4%			1%			0%	
Storage Length (ft)	0		0	0		70	200		170	190		360
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	0			0			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850						0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1900	1615	1769	1862	1862	1796	3556	1607	1805	3610	1615
Flt Permitted							0.031			0.277		
Satd. Flow (perm)	1900	1900	1615	1862	1862	1862	59	3556	1607	526	3610	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			67						68			68
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		262			246			1836			685	
Travel Time (s)		7.1			6.7			27.8			10.4	
Peak Hour Factor	0.67	0.67	0.67	0.50	0.50	0.50	0.86	0.86	0.86	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%
Adj. Flow (vph)	3	0	10	4	0	0	14	1021	12	7	2521	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	3	0	10	4	0	0	14	1021	12	7	2521	4
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.03	1.03	1.03	1.01	1.01	1.01	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1	1	1	1	1	1	1	0
Detector Template												
Leading Detector (ft)	40	40	0	40	40	40	40	336	0	40	336	0
Trailing Detector (ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Size(ft)	40	40	0	40	40	40	40	6	0	40	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm		Perm	Perm		Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8		8	4		4	2		2	6		6
Detector Phase	8	8	8	4	4	4	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	42.0	42.0	42.0	42.4	42.4	42.4	11.4	30.3	30.3	11.0	29.3	29.3

Synchro 8 Report

Marc R Acampora, PE, LLC

Lanier Tract DRI

6: 53-Dawsonville Hwy & Academy Sports

phase one a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	42.4	42.4	42.4	42.4	42.4	42.4	11.4	96.6	96.6	11.0	96.2	96.2
Total Split (%)	28.3%	28.3%	28.3%	28.3%	28.3%	28.3%	7.6%	64.4%	64.4%	7.3%	64.1%	64.1%
Maximum Green (s)	36.0	36.0	36.0	36.0	36.0	36.0	5.0	90.4	90.4	5.0	90.0	90.0
Yellow Time (s)	3.4	3.4	3.4	3.4	3.4	3.4	3.4	4.3	4.3	3.0	4.3	4.3
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	1.9	1.9	3.0	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.2	6.2	6.0	6.2	6.2
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0
Flash Dont Walk (s)	23.0	23.0	23.0	32.0	32.0	32.0		20.0	20.0		19.0	19.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0	0		0	0
Act Effect Green (s)	6.1		6.1	6.1			137.2	139.9	139.9	136.1	137.4	137.4
Actuated g/C Ratio	0.04		0.04	0.04			0.91	0.93	0.93	0.91	0.92	0.92
v/c Ratio	0.04		0.08	0.05			0.12	0.31	0.01	0.01	0.76	0.00
Control Delay	69.5		1.1	70.0			6.2	1.0	0.0	0.8	4.9	0.0
Queue Delay	0.0		0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.5		1.1	70.0			6.2	1.0	0.0	0.8	4.9	0.0
LOS	E		A	E			A	A	A	A	A	A
Approach Delay								1.1			4.9	
Approach LOS								A			A	

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 27 (18%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 145

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.76

Intersection Signal Delay: 3.9

Intersection LOS: A

Intersection Capacity Utilization 86.9%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 6: 53-Dawsonville Hwy & Academy Sports

 p1	 p2 (R)		 p4
11 s	96.6 s		42.4 s
 p5	 p6 (R)		 p8
11.4 s	96.2 s		42.4 s

Lanier Tract DRI

8: Dawsonville Highway/GA 53 & McEver Road/McEver

phase one a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	450	31	378	46	21	22	311	553	61	34	1341	935
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			5%			1%			-1%	
Storage Length (ft)	180		0	0		0	310		185	255		0
Storage Lanes	2		1	1		0	2		1	1		1
Taper Length (ft)	50			0			50			50		
Lane Util. Factor	0.97	0.95	0.95	1.00	1.00	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Frt		0.872	0.850		0.924				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3484	1566	1527	1760	1712	0	3484	3487	1575	1814	3628	1623
Flt Permitted	0.950			0.599			0.950			0.950		
Satd. Flow (perm)	3484	1566	1527	1110	1712	0	3484	3487	1575	1814	3628	1623
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		183	207		34				184			542
Link Speed (mph)		45			45			45			45	
Link Distance (ft)		580			331			921			1624	
Travel Time (s)		8.8			5.0			14.0			24.6	
Peak Hour Factor	0.97	0.97	0.97	0.62	0.62	0.62	0.93	0.93	0.93	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	3%	2%	0%	0%	0%
Adj. Flow (vph)	464	32	390	74	34	35	334	595	66	38	1490	1039
Shared Lane Traffic (%)			47%									
Lane Group Flow (vph)	464	215	207	74	69	0	334	595	66	38	1490	1039
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.03	1.03	1.03	1.01	1.01	1.01	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1		1	1	0	1	1	0
Detector Template												
Leading Detector (ft)	40	40	0	40	40		40	336	0	40	336	0
Trailing Detector (ft)	0	0	0	0	0		0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0		0	330	0	0	330	0
Detector 1 Size(ft)	40	40	0	40	40		40	6	0	40	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	NA	Perm	pm+pt	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases			8	4					6			2
Detector Phase	3	8	8	7	4		1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	13.2	50.2	50.2	11.6	48.2		13.4	35.6	35.6	12.9	44.6	44.6

Lanier Tract DRI

8: Dawsonville Highway/GA 53 & McEver Road/McEver

phase one a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	23.0	59.1	59.1	12.1	48.2		19.0	63.0	63.0	15.8	59.8	59.8
Total Split (%)	15.3%	39.4%	39.4%	8.1%	32.1%		12.7%	42.0%	42.0%	10.5%	39.9%	39.9%
Maximum Green (s)	15.7	51.8	51.8	5.6	40.9		11.5	56.4	56.4	8.6	53.2	53.2
Yellow Time (s)	4.3	4.3	4.3	3.5	4.3		4.5	4.4	4.4	4.2	4.4	4.4
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	2.2	2.2	3.0	2.2	2.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.3	7.3	7.3	6.5	7.3		7.5	6.6	6.6	7.2	6.6	6.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)		4.0	4.0		4.0			4.0	4.0		4.0	4.0
Flash Dont Walk (s)		38.0	38.0		36.0			25.0	25.0		34.0	34.0
Pedestrian Calls (#/hr)		0	0		0			0	0		0	0
Act Effect Green (s)	16.1	17.6	17.6	14.0	8.9		11.5	93.2	93.2	8.5	87.4	87.4
Actuated g/C Ratio	0.11	0.12	0.12	0.09	0.06		0.08	0.62	0.62	0.06	0.58	0.58
v/c Ratio	1.24	0.62	0.57	0.58	0.52		1.25	0.27	0.06	0.37	0.70	0.89
Control Delay	183.1	20.5	13.4	70.0	51.0		197.4	17.7	1.4	74.8	23.9	17.1
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	183.1	20.5	13.4	70.0	51.0		197.4	17.7	1.4	74.8	23.9	17.1
LOS	F	C	B	E	D		F	B	A	E	C	B
Approach Delay		104.0			60.9			77.0			21.9	
Approach LOS		F			E			E			C	

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 19 (13%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.25

Intersection Signal Delay: 50.9

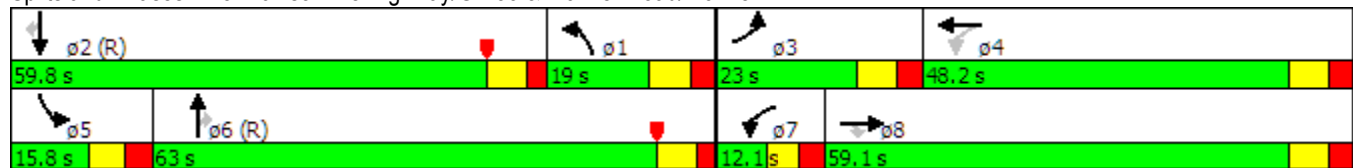
Intersection LOS: D

Intersection Capacity Utilization 88.8%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 8: Dawsonville Highway/GA 53 & McEver Road/McEver



Lanier Tract DRI

9: Dawsonville Highway & Greenhill Circle/Greenhill Circle

phase one a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	74	1	156	7	1	4	149	872	11	13	1599	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		3%			7%			1%			0%	
Storage Length (ft)	0		0	0		0	190		190	185		100
Storage Lanes	0		1	0		1	1		1	1		1
Taper Length (ft)	0			0			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected		0.953			0.957		0.950			0.950		
Satd. Flow (prot)	0	1784	1591	0	1755	1558	1796	3522	1607	1805	3610	1615
Flt Permitted		0.721			0.751		0.074			0.283		
Satd. Flow (perm)	0	1349	1591	0	1377	1558	140	3522	1607	538	3610	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			131			102			57			101
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		288			254			778			921	
Travel Time (s)		7.9			6.9			11.8			14.0	
Peak Hour Factor	0.90	0.90	0.90	0.69	0.69	0.69	0.86	0.86	0.86	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	0%	0%
Adj. Flow (vph)	82	1	173	10	1	6	173	1014	13	14	1738	62
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	83	173	0	11	6	173	1014	13	14	1738	62
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.02	1.02	1.02	1.05	1.05	1.05	1.01	1.01	1.01	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1	0	1	1	0	0	1	0
Detector Template	Left			Left								
Leading Detector (ft)	20	40	0	20	40	0	40	336	0	0	336	0
Trailing Detector (ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Size(ft)	20	40	0	20	40	0	40	6	0	0	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8		8	4		4	6		6	2		2
Detector Phase	8	8	8	4	4	4	1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.0	23.0	23.0	39.9	39.9	39.9	11.0	28.0	28.0	10.0	36.0	36.0

Lanier Tract DRI

9: Dawsonville Highway & Greenhill Circle/Greenhill Circle

phase one a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	39.9	39.9	39.9	39.9	39.9	39.9	21.0	100.1	100.1	10.0	89.1	89.1
Total Split (%)	26.6%	26.6%	26.6%	26.6%	26.6%	26.6%	14.0%	66.7%	66.7%	6.7%	59.4%	59.4%
Maximum Green (s)	34.0	34.0	34.0	34.0	34.0	34.0	15.0	94.1	94.1	5.0	83.1	83.1
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	4.4	4.4	3.5	4.4	4.4
All-Red Time (s)	2.9	2.9	2.9	2.9	2.9	2.9	3.0	1.6	1.6	1.5	1.6	1.6
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.9	5.9		5.9	5.9	6.0	6.0	6.0	5.0	6.0	6.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)				4.0	4.0	4.0		4.0	4.0		4.0	4.0
Flash Dont Walk (s)				30.0	30.0	30.0		18.0	18.0		26.0	26.0
Pedestrian Calls (#/hr)				0	0	0		0	0		0	0
Act Effect Green (s)		14.6	14.6		14.6	14.6	123.5	119.1	119.1	108.7	102.0	102.0
Actuated g/C Ratio		0.10	0.10		0.10	0.10	0.82	0.79	0.79	0.72	0.68	0.68
v/c Ratio		0.64	0.64		0.08	0.02	0.60	0.36	0.01	0.03	0.71	0.05
Control Delay		85.5	28.7		59.9	0.2	32.6	4.6	0.0	4.2	14.7	0.9
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
Total Delay		85.5	28.7		59.9	0.2	32.6	4.6	0.0	4.2	14.8	0.9
LOS		F	C		E	A	C	A	A	A	B	A
Approach Delay		47.1			38.8			8.6			14.3	
Approach LOS		D			D			A			B	

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow

Natural Cycle: 110

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.71

Intersection Signal Delay: 14.9

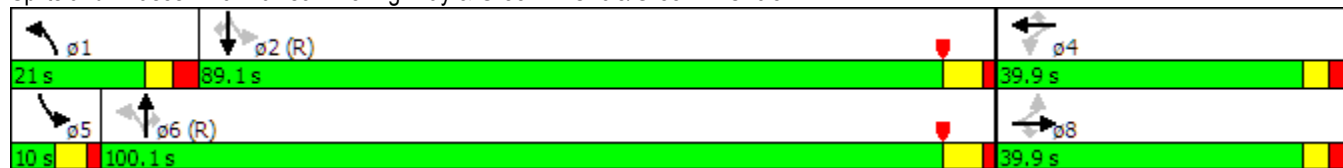
Intersection LOS: B

Intersection Capacity Utilization 78.2%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 9: Dawsonville Highway & Greenhill Circle/Greenhill Circle



Lanier Tract DRI

10: Dawsonville Highway & Shallowford Rd/Best Buy

phase one a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	160	2	9	2	4	3	11	847	14	1	1415	386
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-1%			10%			-4%			-1%	
Storage Length (ft)	350		350	0		0	350		150	265		0
Storage Lanes	1		0	0		1	1		1	1		1
Taper Length (ft)	100			0			100			100		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950	0.953			0.982		0.950			0.950		
Satd. Flow (prot)	1723	1729	1623	0	1773	1534	1841	3646	1647	1814	3592	1623
Flt Permitted	0.950	0.953			0.982		0.117			0.280		
Satd. Flow (perm)	1723	1729	1623	0	1773	1534	227	3646	1647	535	3592	1623
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			113			119			70			220
Link Speed (mph)		45			25			45			45	
Link Distance (ft)		653			178			957			778	
Travel Time (s)		9.9			4.9			14.5			11.8	
Peak Hour Factor	0.84	0.84	0.84	0.56	0.56	0.56	0.83	0.83	0.83	0.93	0.93	0.93
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	1%	0%
Adj. Flow (vph)	190	2	11	4	7	5	13	1020	17	1	1522	415
Shared Lane Traffic (%)	49%											
Lane Group Flow (vph)	97	95	11	0	11	5	13	1020	17	1	1522	415
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes										
Headway Factor	0.99	0.99	0.99	1.07	1.07	1.07	0.97	0.97	0.97	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1	0	1	1	0	0	1	0
Detector Template				Left								
Leading Detector (ft)	40	40	0	20	40	0	40	336	0	0	336	0
Trailing Detector (ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Size(ft)	40	40	0	20	40	0	40	6	0	0	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases	3	3		4	4		1	6			2	
Permitted Phases			3			4	6		6	2		2
Detector Phase	3	3	3	4	4	4	1	6	6	2	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	36.7	36.7	36.7	38.9	38.9	38.9	10.8	28.8	28.8	30.8	30.8	30.8

Synchro 8 Report

Marc R Acampora, PE, LLC

Lanier Tract DRI

10: Dawsonville Highway & Shallowford Rd/Best Buy

phase one a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	36.7	36.7	36.7	38.9	38.9	38.9	10.8	74.4	74.4	63.6	63.6	63.6
Total Split (%)	24.5%	24.5%	24.5%	25.9%	25.9%	25.9%	7.2%	49.6%	49.6%	42.4%	42.4%	42.4%
Maximum Green (s)	30.0	30.0	30.0	33.0	33.0	33.0	5.0	67.6	67.6	56.8	56.8	56.8
Yellow Time (s)	4.5	4.5	4.5	3.0	3.0	3.0	3.0	4.9	4.9	4.9	4.9	4.9
All-Red Time (s)	2.2	2.2	2.2	2.9	2.9	2.9	2.8	1.9	1.9	1.9	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.7	6.7	6.7		5.9	5.9	5.8	6.8	6.8	6.8	6.8	6.8
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes			Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	C-Min	C-Min	C-Min
Walk Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0
Flash Dont Walk (s)	26.0	26.0	26.0	29.0	29.0	29.0		18.0	18.0	20.0	20.0	20.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0	0	0	0	0
Act Effect Green (s)	13.8	13.8	13.8		6.5	6.5	118.3	117.3	117.3	112.5	112.5	112.5
Actuated g/C Ratio	0.09	0.09	0.09		0.04	0.04	0.79	0.78	0.78	0.75	0.75	0.75
v/c Ratio	0.61	0.60	0.04		0.14	0.03	0.05	0.36	0.01	0.00	0.56	0.33
Control Delay	81.4	80.4	0.3		72.5	0.3	6.0	6.3	0.0	7.0	11.2	4.5
Queue Delay	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0
Total Delay	81.4	80.4	0.3		72.5	0.3	6.0	6.3	0.0	7.0	11.7	4.5
LOS	F	F	A		E	A	A	A	A	A	B	A
Approach Delay		76.5			49.9			6.2			10.1	
Approach LOS		E			D			A			B	

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 45 (30%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.61

Intersection Signal Delay: 13.3

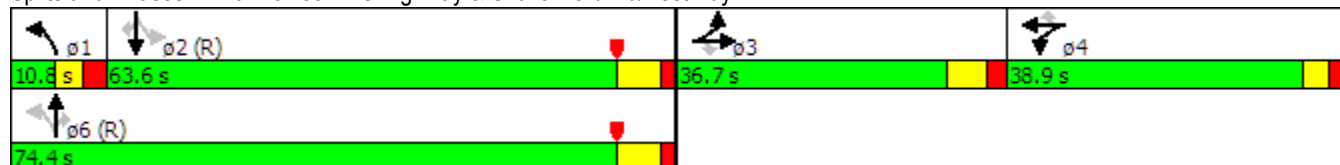
Intersection LOS: B

Intersection Capacity Utilization 63.6%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 10: Dawsonville Highway & Shallowford Rd/Best Buy



Lanier Tract DRI
1: Sportsman Club Road & Strickland Drive

phase one p.m.

Intersection						
Int Delay, s/veh	3.2					
Movement	WBL	WBR		NBT	NBR	SBL SBT
Vol, veh/h	24	0		32	28	0 25
Conflicting Peds, #/hr	0	0		0	0	0 0
Sign Control	Stop	Stop		Free	Free	Free Free
RT Channelized	-	None		-	None	- None
Storage Length	0	-		-	-	- -
Veh in Median Storage, #	0	-		0	-	- 0
Grade, %	0	-		0	-	- 0
Peak Hour Factor	44	44		86	86	82 82
Heavy Vehicles, %	2	2		2	2	2 2
Mvmt Flow	55	0		37	33	0 30
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	83	53		0	0	70 0
Stage 1	53	-		-	-	- -
Stage 2	30	-		-	-	- -
Critical Hdwy	6.42	6.22		-	-	4.12 -
Critical Hdwy Stg 1	5.42	-		-	-	- -
Critical Hdwy Stg 2	5.42	-		-	-	- -
Follow-up Hdwy	3.518	3.318		-	-	2.218 -
Pot Cap-1 Maneuver	919	1014		-	-	1531 -
Stage 1	970	-		-	-	- -
Stage 2	993	-		-	-	- -
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	919	1014		-	-	1531 -
Mov Cap-2 Maneuver	919	-		-	-	- -
Stage 1	970	-		-	-	- -
Stage 2	993	-		-	-	- -
Approach	WB		NB		SB	
HCM Control Delay, s	9.2		0		0	
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	919	1531	-	
HCM Lane V/C Ratio	-	-	0.059	-	-	
HCM Control Delay (s)	-	-	9.2	0	-	
HCM Lane LOS	-	-	A	A	-	
HCM 95th %tile Q(veh)	-	-	0.2	0	-	

Lanier Tract DRI
2: GA 53 & Sportsman Club Road

phase one p.m.

Intersection												
Int Delay, s/veh	74.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	22	1166	0	26	1878	34	0	0	0	42	0	23
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	96	96	96	92	92	92	75	75	75
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	23	1227	0	27	1956	35	0	0	0	56	0	31
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1992	0	0	1227	0	0	2306	3320	614	2688	3302	996
Stage 1	-	-	-	-	-	-	1274	1274	-	2028	2028	-
Stage 2	-	-	-	-	-	-	1032	2046	-	660	1274	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	285	-	-	564	-	-	21	8	435	~ 10	8	243
Stage 1	-	-	-	-	-	-	177	236	-	59	100	-
Stage 2	-	-	-	-	-	-	249	98	-	418	236	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	285	-	-	564	-	-	17	7	435	~ 9	7	243
Mov Cap-2 Maneuver	-	-	-	-	-	-	17	7	-	~ 9	7	-
Stage 1	-	-	-	-	-	-	163	217	-	~ 54	95	-
Stage 2	-	-	-	-	-	-	207	93	-	384	217	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			0.2			0			\$ 2872.3		
HCM LOS							A			F		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	-	285	-	-	564	-	-	14				
HCM Lane V/C Ratio	-	0.081	-	-	0.048	-	-	6.19				
HCM Control Delay (s)	0	18.7	-	-	11.7	-		\$ 2872.3				
HCM Lane LOS	A	C	-	-	B	-	-	F				
HCM 95th %tile Q(veh)	-	0.3	-	-	0.2	-	-	11.8				
Notes												
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon												

Lanier Tract DRI
3: Avonlea Way & GA 53

phase one p.m.

Intersection												
Int Delay, s/veh	4.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	12	0	52	2	0	11	68	1858	17	10	1263	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	0	0	-	0	0	-	-	0	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	76	76	76	80	80	80	95	95	95	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	0	68	2	0	14	72	1956	18	10	1263	15
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2404	3400	632	2760	3391	987	1263	0	0	1974	0	0
Stage 1	1283	1283	-	2108	2108	-	-	-	-	-	-	-
Stage 2	1121	2117	-	652	1283	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	17	7	423	9	7	246	546	-	-	290	-	-
Stage 1	175	234	-	52	91	-	-	-	-	-	-	-
Stage 2	220	90	-	423	234	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 14	6	423	7	6	246	546	-	-	290	-	-
Mov Cap-2 Maneuver	~ 14	6	-	7	6	-	-	-	-	-	-	-
Stage 1	152	226	-	45	79	-	-	-	-	-	-	-
Stage 2	180	78	-	342	226	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	134.8			124.5			0.4			0.1		
HCM LOS	F			F								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR		
Capacity (veh/h)	546	-	-	14	423	7	246	290	-	-		
HCM Lane V/C Ratio	0.131	-	-	1.128	0.162	0.357	0.056	0.034	-	-		
HCM Control Delay (s)	12.6	-	-	\$ 653.3	15.1	\$ 696.5	20.5	17.9	-	-		
HCM Lane LOS	B	-	-	F	C	F	C	C	-	-		
HCM 95th %tile Q(veh)	0.4	-	-	2.5	0.6	0.7	0.2	0.1	-	-		
Notes												
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon												

Lanier Tract DRI
4: Canterbury Road & GA 53

phase one p.m.

Intersection												
Int Delay, s/veh	3.8											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	8	0	31	2	0	2	123	1908	4	3	1268	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	0	0	-	0	0	-	-	0	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	70	70	70	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	0	39	3	0	3	128	1988	4	3	1321	16

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2577	3575	660	2913	3573	996	1321	0	0	1992	0	0
Stage 1	1327	1327	-	2246	2246	-	-	-	-	-	-	-
Stage 2	1250	2248	-	667	1327	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	13	6	406	7	6	243	519	-	-	285	-	-
Stage 1	164	223	-	43	77	-	-	-	-	-	-	-
Stage 2	183	77	-	414	223	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	10	4	406	5	4	243	519	-	-	285	-	-
Mov Cap-2 Maneuver	10	4	-	5	4	-	-	-	-	-	-	-
Stage 1	124	221	-	32	58	-	-	-	-	-	-	-
Stage 2	136	58	-	371	221	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	169.2	\$ 544.8	0.9	0
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	519	-	-	10	406	5	243	285	-	-
HCM Lane V/C Ratio	0.247	-	-	1	0.095	0.571	0.012	0.011	-	-
HCM Control Delay (s)	14.2	-	-	\$ 767.5	14.2	\$ 1069.5	20	17.8	-	-
HCM Lane LOS	B	-	-	F	B	F	C	C	-	-
HCM 95th %tile Q(veh)	1	-	-	1.9	0.3	0.9	0	0	-	-

Notes										
~: Volume exceeds capacity	\$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon							

Intersection						
Int Delay, s/veh	0.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	1	52	95	2325	1629	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	Yield	-	None
Storage Length	0	0	200	-	-	360
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	1	0	-
Peak Hour Factor	71	71	99	99	98	98
Heavy Vehicles, %	0	0	0	0	1	0
Mvmt Flow	1	73	96	2348	1662	10
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	3028	832	1662	0	-	0
Stage 1	1662	-	-	-	-	-
Stage 2	1366	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	10	316	393	-	-	-
Stage 1	143	-	-	-	-	-
Stage 2	206	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	8	316	393	-	-	-
Mov Cap-2 Maneuver	8	-	-	-	-	-
Stage 1	143	-	-	-	-	-
Stage 2	156	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	29.5	0.7		0		
HCM LOS	D					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	393	-	8	316	-	-
HCM Lane V/C Ratio	0.244	-	0.176	0.232	-	-
HCM Control Delay (s)	17.1	-\$	534.2	19.8	-	-
HCM Lane LOS	C	-	F	C	-	-
HCM 95th %tile Q(veh)	0.9	-	0.4	0.9	-	-

Lanier Tract DRI

5: GA 53 & Lanier Valley Dr/Ahaluna Dr

phase one p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	23	1	106	98	8	64	198	1965	114	31	1366	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		2%			-4%			1%			-1%	
Storage Length (ft)	0		0	0		0	100		0	140		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	0			0			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.890			0.949			0.992				
Flt Protected		0.991			0.972		0.950			0.950		
Satd. Flow (prot)	0	1659	0	0	1788	0	1796	3563	0	1814	3592	0
Flt Permitted		0.906			0.613		0.117			0.049		
Satd. Flow (perm)	0	1517	0	0	1127	0	221	3563	0	94	3592	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		119			17			10				
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		340			322			1002			1457	
Travel Time (s)		7.7			7.3			15.2			22.1	
Peak Hour Factor	0.89	0.89	0.89	0.90	0.90	0.90	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
Adj. Flow (vph)	26	1	119	109	9	71	206	2047	119	32	1423	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	146	0	0	189	0	206	2166	0	32	1426	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	0.97	0.97	0.97	1.01	1.01	1.01	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		0	1	
Detector Template	Left			Left								
Leading Detector (ft)	20	40		20	40		40	336		0	336	
Trailing Detector (ft)	0	0		0	0		0	330		0	330	
Detector 1 Position(ft)	0	0		0	0		0	330		0	330	
Detector 1 Size(ft)	20	40		20	40		40	6		0	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		8			4		5	2			6	
Permitted Phases	8			4			2			6		
Detector Phase	8	8		4	4		5	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	23.0	23.0		23.0	23.0		10.6	23.0		23.0	23.0	

Lanier Tract DRI

5: GA 53 & Lanier Valley Dr/Ahaluna Dr

phase one p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	37.0	37.0		37.0	37.0		21.2	123.0		101.8	101.8	
Total Split (%)	23.1%	23.1%		23.1%	23.1%		13.3%	76.9%		63.6%	63.6%	
Maximum Green (s)	30.4	30.4		30.4	30.4		15.6	116.9		95.7	95.7	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	4.5		4.5	4.5	
All-Red Time (s)	2.6	2.6		2.6	2.6		2.6	1.6		1.6	1.6	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.6			6.6		5.6	6.1		6.1	6.1	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		C-Max	C-Max	
Act Effect Green (s)		27.1			27.1		120.7	120.2		102.6	102.6	
Actuated g/C Ratio		0.17			0.17		0.75	0.75		0.64	0.64	
v/c Ratio		0.41			0.92		0.73	0.81		0.53	0.62	
Control Delay		17.5			104.1		30.2	14.3		56.7	19.5	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		17.5			104.1		30.2	14.3		56.7	19.5	
LOS		B			F		C	B		E	B	
Approach Delay		17.5			104.1			15.7			20.4	
Approach LOS		B			F			B			C	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 129 (81%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.92

Intersection Signal Delay: 21.4

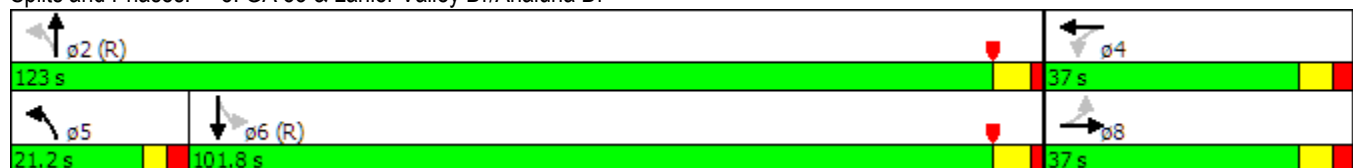
Intersection LOS: C

Intersection Capacity Utilization 94.2%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 5: GA 53 & Lanier Valley Dr/Ahaluna Dr



Lanier Tract DRI

6: 53-Dawsonville Hwy & Academy Sports

phase one p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	14	3	66	130	8	46	96	2066	152	21	1421	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			4%			1%			0%	
Storage Length (ft)	0		0	0		70	200		170	190		360
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	0			0			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1900	1615	1769	1862	1583	1796	3592	1607	1805	3574	1615
Flt Permitted	0.751			0.756			0.123			0.039		
Satd. Flow (perm)	1427	1900	1615	1408	1862	1583	233	3592	1607	74	3574	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			69			63			66			64
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		262			246			1836			685	
Travel Time (s)		7.1			6.7			27.8			10.4	
Peak Hour Factor	0.95	0.95	0.95	0.80	0.80	0.80	0.98	0.98	0.98	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
Adj. Flow (vph)	15	3	69	162	10	58	98	2108	155	22	1465	31
Shared Lane Traffic (%)												
Lane Group Flow (vph)	15	3	69	162	10	58	98	2108	155	22	1465	31
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.03	1.03	1.03	1.01	1.01	1.01	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1	1	1	1	1	1	1	0
Detector Template												
Leading Detector (ft)	40	40	0	40	40	40	40	336	0	40	336	0
Trailing Detector (ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Size(ft)	40	40	0	40	40	40	40	6	0	40	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8		8	4		4	2		2	6		6
Detector Phase	8	8	8	4	4	4	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	42.0	42.0	42.0	42.4	42.4	42.4	11.4	30.3	30.3	11.0	29.3	29.3

Synchro 8 Report

Marc R Acampora, PE, LLC

Lanier Tract DRI

6: 53-Dawsonville Hwy & Academy Sports

phase one p.m.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	42.4	42.4	42.4	42.4	42.4	42.4	16.2	106.6	106.6	11.0	101.4	101.4
Total Split (%)	26.5%	26.5%	26.5%	26.5%	26.5%	26.5%	10.1%	66.6%	66.6%	6.9%	63.4%	63.4%
Maximum Green (s)	36.0	36.0	36.0	36.0	36.0	36.0	9.8	100.4	100.4	5.0	95.2	95.2
Yellow Time (s)	3.4	3.4	3.4	3.4	3.4	3.4	3.4	4.3	4.3	3.0	4.3	4.3
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	1.9	1.9	3.0	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.2	6.2	6.0	6.2	6.2
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0
Flash Dont Walk (s)	23.0	23.0	23.0	32.0	32.0	32.0		20.0	20.0		19.0	19.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0	0		0	0
Act Effect Green (s)	23.7	23.7	23.7	23.7	23.7	23.7	121.3	116.4	116.4	115.8	109.6	109.6
Actuated g/C Ratio	0.15	0.15	0.15	0.15	0.15	0.15	0.76	0.73	0.73	0.72	0.68	0.68
v/c Ratio	0.07	0.01	0.23	0.78	0.04	0.20	0.39	0.81	0.13	0.19	0.60	0.03
Control Delay	55.8	53.3	13.0	89.1	54.6	11.7	11.7	16.7	7.3	10.0	12.0	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
Total Delay	55.8	53.3	13.0	89.1	54.6	11.7	11.7	16.7	7.3	10.0	12.1	0.0
LOS	E	D	B	F	D	B	B	B	A	B	B	A
Approach Delay		21.8			68.1			15.9			11.8	
Approach LOS		C			E			B			B	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 120 (75%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 145

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.81

Intersection Signal Delay: 17.4

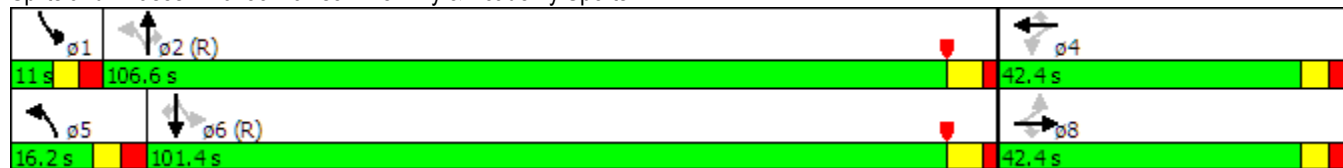
Intersection LOS: B

Intersection Capacity Utilization 90.6%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 6: 53-Dawsonville Hwy & Academy Sports



Lanier Tract DRI

8: Dawsonville Highway/GA 53 & McEver Road/McEver

phase one p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	967	235	426	96	100	93	478	1585	51	71	1199	562
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			5%			1%			-1%	
Storage Length (ft)	180		0	0		0	310		185	255		0
Storage Lanes	2		1	1		0	2		1	1		1
Taper Length (ft)	50			0			50			50		
Lane Util. Factor	0.97	0.95	0.95	1.00	1.00	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Frt		0.951	0.850		0.928				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3484	1708	1527	1760	1719	0	3484	3592	1607	1814	3592	1623
Flt Permitted	0.950			0.468			0.950			0.950		
Satd. Flow (perm)	3484	1708	1527	867	1719	0	3484	3592	1607	1814	3592	1623
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18	308		28				172			315
Link Speed (mph)		45			25			45			45	
Link Distance (ft)		580			331			921			1504	
Travel Time (s)		8.8			9.0			14.0			22.8	
Peak Hour Factor	0.95	0.95	0.95	0.86	0.86	0.86	0.97	0.97	0.97	0.91	0.91	0.91
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
Adj. Flow (vph)	1018	247	448	112	116	108	493	1634	53	78	1318	618
Shared Lane Traffic (%)			27%									
Lane Group Flow (vph)	1018	368	327	112	224	0	493	1634	53	78	1318	618
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.03	1.03	1.03	1.01	1.01	1.01	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1		1	1	0	1	1	0
Detector Template												
Leading Detector (ft)	40	40	0	40	40		40	336	0	40	336	0
Trailing Detector (ft)	0	0	0	0	0		0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0		0	330	0	0	330	0
Detector 1 Size(ft)	40	40	0	40	40		40	6	0	40	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	NA	Perm	pm+pt	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases			8	4					6			2
Detector Phase	3	8	8	7	4		1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	13.2	50.2	50.2	11.6	48.2		13.4	35.6	35.6	12.9	44.6	44.6

Lanier Tract DRI

8: Dawsonville Highway/GA 53 & McEver Road/McEver

phase one p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	35.0	69.5	69.5	13.7	48.2		22.0	63.8	63.8	13.0	54.8	54.8
Total Split (%)	21.9%	43.4%	43.4%	8.6%	30.1%		13.8%	39.9%	39.9%	8.1%	34.3%	34.3%
Maximum Green (s)	27.7	62.2	62.2	7.2	40.9		14.5	57.2	57.2	5.8	48.2	48.2
Yellow Time (s)	4.3	4.3	4.3	3.5	4.3		4.5	4.4	4.4	4.2	4.4	4.4
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	2.2	2.2	3.0	2.2	2.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.3	7.3	7.3	6.5	7.3		7.5	6.6	6.6	7.2	6.6	6.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)		4.0	4.0		4.0			4.0	4.0		4.0	4.0
Flash Dont Walk (s)		38.0	38.0		36.0			25.0	25.0		34.0	34.0
Pedestrian Calls (#/hr)		0	0		0			0	0		0	0
Act Effect Green (s)	27.7	45.2	45.2	31.9	23.9		14.5	64.6	64.6	15.4	65.2	65.2
Actuated g/C Ratio	0.17	0.28	0.28	0.20	0.15		0.09	0.40	0.40	0.10	0.41	0.41
v/c Ratio	1.69	0.74	0.50	0.53	0.80		1.57	1.13	0.07	0.45	0.90	0.73
Control Delay	354.5	58.6	7.9	46.9	77.3		314.1	120.2	0.1	67.2	67.6	40.5
Queue Delay	0.0	24.1	1.7	21.7	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	354.5	82.7	9.6	68.5	77.3		314.1	120.2	0.1	67.2	67.6	40.5
LOS	F	F	A	E	E		F	F	A	E	E	D
Approach Delay		230.3			74.4			161.1			59.3	
Approach LOS		F			E			F			E	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 52 (33%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.69

Intersection Signal Delay: 142.6

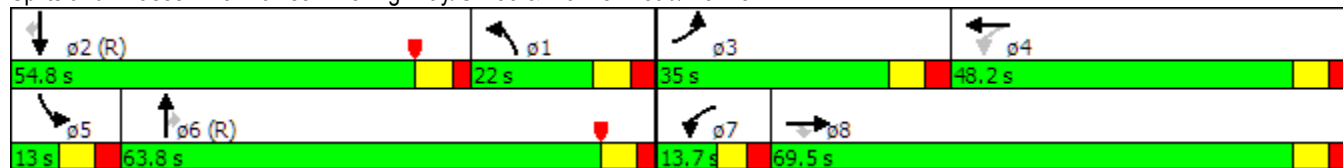
Intersection LOS: F

Intersection Capacity Utilization 110.2%

ICU Level of Service H

Analysis Period (min) 15

Splits and Phases: 8: Dawsonville Highway/GA 53 & McEver Road/McEver



Lanier Tract DRI

9: Dawsonville Highway & Greenhill Circle/Greenhill Circle

phase one p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	146	10	152	66	22	42	274	2012	77	44	1600	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		3%			7%			1%			0%	
Storage Length (ft)	0		0	0		0	190		190	185		100
Storage Lanes	0		1	0		1	1		1	1		1
Taper Length (ft)	0			0			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected		0.955			0.964		0.950			0.950		
Satd. Flow (prot)	0	1787	1591	0	1767	1558	1796	3592	1607	1805	3610	1615
Flt Permitted		0.591			0.482		0.043			0.044		
Satd. Flow (perm)	0	1106	1591	0	884	1558	81	3592	1607	84	3610	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			167			95			54			95
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		288			254			778			921	
Travel Time (s)		7.9			6.9			11.8			14.0	
Peak Hour Factor	0.91	0.91	0.91	0.78	0.78	0.78	0.97	0.97	0.97	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	160	11	167	85	28	54	282	2074	79	46	1684	62
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	171	167	0	113	54	282	2074	79	46	1684	62
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.02	1.02	1.02	1.05	1.05	1.05	1.01	1.01	1.01	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1	0	1	1	0	0	1	0
Detector Template	Left			Left								
Leading Detector (ft)	20	40	0	20	40	0	40	336	0	0	336	0
Trailing Detector (ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Size(ft)	20	40	0	20	40	0	40	6	0	0	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8		8	4		4	6		6	2		2
Detector Phase	8	8	8	4	4	4	1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.0	23.0	23.0	39.9	39.9	39.9	11.0	28.0	28.0	10.0	36.0	36.0

Lanier Tract DRI

9: Dawsonville Highway & Greenhill Circle/Greenhill Circle

phase one p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	39.9	39.9	39.9	39.9	39.9	39.9	31.0	110.1	110.1	10.0	89.1	89.1
Total Split (%)	24.9%	24.9%	24.9%	24.9%	24.9%	24.9%	19.4%	68.8%	68.8%	6.3%	55.7%	55.7%
Maximum Green (s)	34.0	34.0	34.0	34.0	34.0	34.0	25.0	104.1	104.1	5.0	83.1	83.1
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	4.4	4.4	3.5	4.4	4.4
All-Red Time (s)	2.9	2.9	2.9	2.9	2.9	2.9	3.0	1.6	1.6	1.5	1.6	1.6
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.9	5.9		5.9	5.9	6.0	6.0	6.0	5.0	6.0	6.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)				4.0	4.0	4.0		4.0	4.0		4.0	4.0
Flash Dont Walk (s)				30.0	30.0	30.0		18.0	18.0		26.0	26.0
Pedestrian Calls (#/hr)				0	0	0		0	0		0	0
Act Effect Green (s)		28.1	28.1		28.1	28.1	120.0	111.5	111.5	96.9	90.3	90.3
Actuated g/C Ratio		0.18	0.18		0.18	0.18	0.75	0.70	0.70	0.61	0.56	0.56
v/c Ratio		0.88	0.40		0.73	0.15	0.90	0.83	0.07	0.41	0.83	0.07
Control Delay		103.0	9.8		87.7	1.7	57.3	30.1	5.4	24.1	57.7	11.5
Queue Delay		0.0	5.5		87.6	0.0	0.0	47.1	0.0	0.0	1.7	0.0
Total Delay		103.0	15.3		175.3	1.7	57.3	77.2	5.4	24.1	59.4	11.5
LOS		F	B		F	A	E	E	A	C	E	B
Approach Delay		59.7			119.2			72.6			56.9	
Approach LOS		E			F			E			E	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow

Natural Cycle: 130

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.90

Intersection Signal Delay: 67.3

Intersection LOS: E

Intersection Capacity Utilization 89.6%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 9: Dawsonville Highway & Greenhill Circle/Greenhill Circle



Lanier Tract DRI

10: Dawsonville Highway & Shallowford Rd/Best Buy

phase one p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	590	42	29	40	30	8	44	1873	126	8	1331	525
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-1%			10%			-4%			-1%	
Storage Length (ft)	350		350	0		0	350		150	265		0
Storage Lanes	1		0	0		1	1		1	1		1
Taper Length (ft)	100			0			100			100		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950	0.958			0.972		0.950			0.950		
Satd. Flow (prot)	1723	1738	1623	0	1754	1534	1841	3682	1647	1814	3628	1623
Flt Permitted	0.950	0.958			0.972		0.074			0.046		
Satd. Flow (perm)	1723	1738	1623	0	1754	1534	143	3682	1647	88	3628	1623
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			106			111			65			318
Link Speed (mph)		45			25			45			45	
Link Distance (ft)		653			178			1046			778	
Travel Time (s)		9.9			4.9			15.8			11.8	
Peak Hour Factor	0.90	0.90	0.90	0.88	0.88	0.88	0.94	0.94	0.94	0.91	0.91	0.91
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	656	47	32	45	34	9	47	1993	134	9	1463	577
Shared Lane Traffic (%)	47%											
Lane Group Flow (vph)	348	355	32	0	79	9	47	1993	134	9	1463	577
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes										
Headway Factor	0.99	0.99	0.99	1.07	1.07	1.07	0.97	0.97	0.97	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1	0	1	1	0	0	1	0
Detector Template				Left								
Leading Detector (ft)	40	40	0	20	40	0	40	336	0	0	336	0
Trailing Detector (ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Size(ft)	40	40	0	20	40	0	40	6	0	0	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases	3	3		4	4		1	6			2	
Permitted Phases			3			4	6		6	2		2
Detector Phase	3	3	3	4	4	4	1	6	6	2	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	36.7	36.7	36.7	38.9	38.9	38.9	10.8	28.8	28.8	30.8	30.8	30.8

Lanier Tract DRI

10: Dawsonville Highway & Shallowford Rd/Best Buy

phase one p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	36.7	36.7	36.7	38.9	38.9	38.9	10.8	84.4	84.4	73.6	73.6	73.6
Total Split (%)	22.9%	22.9%	22.9%	24.3%	24.3%	24.3%	6.8%	52.8%	52.8%	46.0%	46.0%	46.0%
Maximum Green (s)	30.0	30.0	30.0	33.0	33.0	33.0	5.0	77.6	77.6	66.8	66.8	66.8
Yellow Time (s)	4.5	4.5	4.5	3.0	3.0	3.0	3.0	4.9	4.9	4.9	4.9	4.9
All-Red Time (s)	2.2	2.2	2.2	2.9	2.9	2.9	2.8	1.9	1.9	1.9	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.7	6.7	6.7		5.9	5.9	5.8	6.8	6.8	6.8	6.8	6.8
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes			Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	C-Min	C-Min	C-Min
Walk Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0
Flash Dont Walk (s)	26.0	26.0	26.0	29.0	29.0	29.0		18.0	18.0	20.0	20.0	20.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0	0	0	0	0
Act Effect Green (s)	30.0	30.0	30.0		12.6	12.6	99.0	98.0	98.0	87.4	87.4	87.4
Actuated g/C Ratio	0.19	0.19	0.19		0.08	0.08	0.62	0.61	0.61	0.55	0.55	0.55
v/c Ratio	1.08	1.09	0.08		0.57	0.04	0.29	0.88	0.13	0.19	0.74	0.56
Control Delay	131.3	135.2	0.4		86.5	0.4	17.3	32.6	7.4	56.8	55.1	33.4
Queue Delay	1.2	1.3	0.0		0.0	0.0	0.0	46.8	0.0	0.0	23.5	0.8
Total Delay	132.5	136.5	0.4		86.5	0.4	17.3	79.4	7.4	56.8	78.7	34.2
LOS	F	F	A		F	A	B	E	A	E	E	C
Approach Delay		128.7			77.7			73.6			66.1	
Approach LOS		F			E			E			E	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 91 (57%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.09

Intersection Signal Delay: 78.6

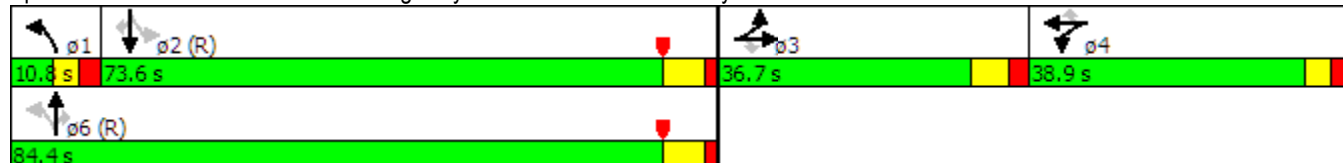
Intersection LOS: E

Intersection Capacity Utilization 89.6%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 10: Dawsonville Highway & Shallowford Rd/Best Buy



Appendix F

Future Phase Two Intersection Analysis

Lanier Tract DRI
1: Sportsman Club Road & Strickland Drive

phase two a.m.

Intersection

Int Delay, s/veh 4.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	30	0	7	11	0	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	50	50	58	58	64	64
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	60	0	12	19	0	39

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	61	22	0 0 31 0
Stage 1	22	-	- - - -
Stage 2	39	-	- - - -
Critical Hdwy	6.42	6.22	- - 4.12 -
Critical Hdwy Stg 1	5.42	-	- - - -
Critical Hdwy Stg 2	5.42	-	- - - -
Follow-up Hdwy	3.518	3.318	- - 2.218 -
Pot Cap-1 Maneuver	945	1055	- - 1582 -
Stage 1	1001	-	- - - -
Stage 2	983	-	- - - -
Platoon blocked, %			- - - -
Mov Cap-1 Maneuver	945	1055	- - 1582 -
Mov Cap-2 Maneuver	945	-	- - - -
Stage 1	1001	-	- - - -
Stage 2	983	-	- - - -

Approach	WB	NB	SB
HCM Control Delay, s	9.1	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	- 945	1582	-
HCM Lane V/C Ratio	-	- 0.063	-	-
HCM Control Delay (s)	-	- 9.1	0	-
HCM Lane LOS	-	- A	A	-
HCM 95th %tile Q(veh)	-	- 0.2	0	-

Lanier Tract DRI
2: GA 53 & Sportsman Club Road

phase two a.m.

Intersection												
Int Delay, s/veh	23.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	14	1899	0	5	850	15	0	0	0	41	0	23
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	84	84	84	92	92	92	70	70	70
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	2208	0	6	1012	18	0	0	0	59	0	33
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1030	0	0	2208	0	0	2759	3283	1104	2170	3274	515
Stage 1	-	-	-	-	-	-	2241	2241	-	1033	1033	-
Stage 2	-	-	-	-	-	-	518	1042	-	1137	2241	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	670	-	-	234	-	-	9	9	206	~ 26	9	505
Stage 1	-	-	-	-	-	-	43	78	-	249	308	-
Stage 2	-	-	-	-	-	-	509	305	-	215	78	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	670	-	-	234	-	-	8	9	206	~ 25	9	505
Mov Cap-2 Maneuver	-	-	-	-	-	-	8	9	-	~ 25	9	-
Stage 1	-	-	-	-	-	-	42	76	-	243	300	-
Stage 2	-	-	-	-	-	-	464	297	-	210	76	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.1			0			\$ 866.3		
HCM LOS							A			F		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	-	670	-	-	234	-	-	38				
HCM Lane V/C Ratio	-	0.024	-	-	0.025	-	-	2.406				
HCM Control Delay (s)	0	10.5	-	-	20.8	-	-	\$ 866.3				
HCM Lane LOS	A	B	-	-	C	-	-	F				
HCM 95th %tile Q(veh)	-	0.1	-	-	0.1	-	-	10.1				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined			*: All major volume in platoon					

Lanier Tract DRI
3: GA 53 & Avonlea Way

phase two a.m.

Intersection

Int Delay, s/veh 11.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	17	0	79	2	0	13	13	875	2	15	1881	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	0	0	-	0	0	-	-	0	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	80	80	80	88	88	88	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	20	0	94	2	0	16	15	994	2	17	2187	8

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2749	3248	1094	2153	3247	498	2187	0	0	997	0	0
Stage 1	2222	2222	-	1025	1025	-	-	-	-	-	-	-
Stage 2	527	1026	-	1128	2222	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	~ 9	9	209	27	9	518	239	-	-	690	-	-
Stage 1	44	79	-	252	311	-	-	-	-	-	-	-
Stage 2	502	310	-	218	79	-	-	-	-	-	-	-
Platoon blocked, %							-	-			-	-
Mov Cap-1 Maneuver	~ 8	8	209	14	8	518	239	-	-	690	-	-
Mov Cap-2 Maneuver	~ 8	8	-	14	8	-	-	-	-	-	-	-
Stage 1	41	77	-	236	291	-	-	-	-	-	-	-
Stage 2	456	291	-	117	77	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	\$ 311.5	52.1	0.3	0.1
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	239	-	-	8	209	14	518	690	-	-
HCM Lane V/C Ratio	0.062	-	-	2.53	0.45	0.179	0.031	0.025	-	-
HCM Control Delay (s)	21.1	-	-	\$ 1593.4	35.6	\$ 311.5	12.2	10.4	-	-
HCM Lane LOS	C	-	-	F	E	F	B	B	-	-
HCM 95th %tile Q(veh)	0.2	-	-	3.6	2.1	0.5	0.1	0.1	-	-

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lanier Tract DRI
4: GA 53 & Canterbury Road

phase two a.m.

Intersection												
Int Delay, s/veh		29										
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	20	0	105	29	0	15	25	820	40	30	1980	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	0	0	-	0	0	-	-	0	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	92	88	92	92	92	86	86	92	92	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	23	0	119	32	0	16	29	953	43	33	2176	9
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2776	3296	1088	2186	3274	498	2176	0	0	997	0	0
Stage 1	2241	2241	-	1033	1033	-	-	-	-	-	-	-
Stage 2	535	1055	-	1153	2241	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	~ 9	8	211	~ 25	9	518	241	-	-	690	-	-
Stage 1	43	78	-	249	308	-	-	-	-	-	-	-
Stage 2	497	301	-	210	78	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 8	7	211	~ 10	8	518	241	-	-	690	-	-
Mov Cap-2 Maneuver	~ 8	7	-	~ 10	8	-	-	-	-	-	-	-
Stage 1	38	74	-	219	271	-	-	-	-	-	-	-
Stage 2	423	265	-	87	74	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	\$ 312.8			\$ 1132.9			0.6			0.2		
HCM LOS	F			F								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR		
Capacity (veh/h)	241	-	-	8	211	10	518	690	-	-		
HCM Lane V/C Ratio	0.121	-	-	2.841	0.565	3.152	0.031	0.047	-	-		
HCM Control Delay (s)	22	-		\$ 1733.4	42.2	\$ 1712.5	12.2	10.5	-	-		
HCM Lane LOS	C	-	-	F	E	F	B	B	-	-		
HCM 95th %tile Q(veh)	0.4	-	-	4	3.1	5	0.1	0.1	-	-		
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined				*: All major volume in platoon				

Lanier Tract DRI
7: GA 53 & Beechwood Boulevard

phase two a.m.

Intersection						
Int Delay, s/veh	3.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	6	45	30	961	2306	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	Yield	-	None
Storage Length	0	0	200	-	-	360
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	1	0	-
Peak Hour Factor	82	82	87	87	89	89
Heavy Vehicles, %	0	0	0	1	0	0
Mvmt Flow	7	55	34	1105	2591	2
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	3212	1296	2591	0	-	0
Stage 1	2591	-	-	-	-	-
Stage 2	621	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	8	155	170	-	-	-
Stage 1	43	-	-	-	-	-
Stage 2	504	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 6	155	170	-	-	-
Mov Cap-2 Maneuver	~ 6	-	-	-	-	-
Stage 1	43	-	-	-	-	-
Stage 2	403	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	180.4	1		0		
HCM LOS	F					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	170	-	6	155	-	-
HCM Lane V/C Ratio	0.203	-	1.22	0.354	-	-
HCM Control Delay (s)	31.5	\$	1230.3	40.4	-	-
HCM Lane LOS	D	-	F	E	-	-
HCM 95th %tile Q(veh)	0.7	-	1.7	1.5	-	-
Notes						
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon						

Lanier Tract DRI

5: GA 53 & Lanier Valley Dr/Ahaluna Dr

phase two a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	21	6	127	92	3	27	61	831	47	21	2139	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		2%			-4%			1%			-1%	
Storage Length (ft)	0		0	0		0	100		0	140		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	0			0			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.889			0.970			0.992				
Flt Protected		0.993			0.964		0.950			0.950		
Satd. Flow (prot)	0	1661	0	0	1812	0	1796	3497	0	1814	3628	0
Flt Permitted		0.945			0.481		0.037			0.277		
Satd. Flow (perm)	0	1580	0	0	904	0	70	3497	0	529	3628	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		58			8			11				
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		340			322			888			1417	
Travel Time (s)		7.7			7.3			13.5			21.5	
Peak Hour Factor	0.91	0.91	0.91	0.83	0.83	0.83	0.85	0.85	0.85	0.87	0.87	0.87
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	0%	0%
Adj. Flow (vph)	23	7	140	111	4	33	72	978	55	24	2459	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	170	0	0	148	0	72	1033	0	24	2459	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	0.97	0.97	0.97	1.01	1.01	1.01	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		0	1	
Detector Template	Left			Left								
Leading Detector (ft)	20	40		20	40		40	336		0	336	
Trailing Detector (ft)	0	0		0	0		0	330		0	330	
Detector 1 Position(ft)	0	0		0	0		0	330		0	330	
Detector 1 Size(ft)	20	40		20	40		40	6		0	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		8			4		5	2			6	
Permitted Phases	8			4			2			6		
Detector Phase	8	8		4	4		5	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	23.0	23.0		23.0	23.0		10.6	23.0		23.0	23.0	

Lanier Tract DRI

5: GA 53 & Lanier Valley Dr/Ahaluna Dr

phase two a.m.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	30.0	30.0		30.0	30.0		10.6	120.0		109.4	109.4	
Total Split (%)	20.0%	20.0%		20.0%	20.0%		7.1%	80.0%		72.9%	72.9%	
Maximum Green (s)	23.4	23.4		23.4	23.4		5.0	113.9		103.3	103.3	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	4.5		4.5	4.5	
All-Red Time (s)	2.6	2.6		2.6	2.6		2.6	1.6		1.6	1.6	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.6			6.6		5.6	6.1		6.1	6.1	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		C-Max	C-Max	
Act Effect Green (s)		23.4			23.4		114.4	113.9		103.3	103.3	
Actuated g/C Ratio		0.16			0.16		0.76	0.76		0.69	0.69	
v/c Ratio		0.58			1.01		0.65	0.39		0.07	0.98	
Control Delay		46.8			134.1		57.0	3.3		8.2	37.4	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		46.8			134.1		57.0	3.3		8.2	37.4	
LOS		D			F		E	A		A	D	
Approach Delay		46.8			134.1			6.8			37.1	
Approach LOS		D			F			A			D	

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 26 (17%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 140

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.01

Intersection Signal Delay: 32.6

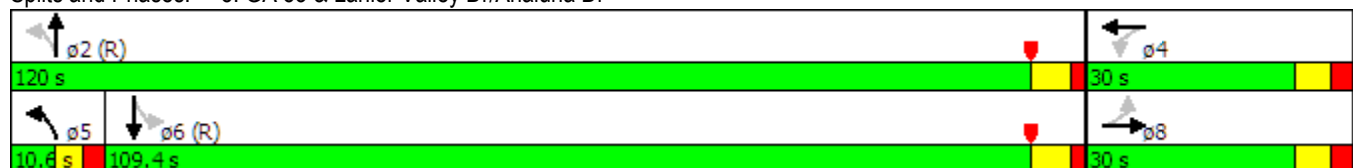
Intersection LOS: C

Intersection Capacity Utilization 91.4%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 5: GA 53 & Lanier Valley Dr/Ahaluna Dr



Lanier Tract DRI

6: 53-Dawsonville Hwy & Academy Sports

phase two a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	2	0	7	2	0	0	12	909	10	6	2287	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			4%			1%			0%	
Storage Length (ft)	0		0	0		70	200		170	190		360
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	0			0			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850						0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1900	1615	1769	1862	1862	1796	3556	1607	1805	3610	1615
Flt Permitted							0.031			0.266		
Satd. Flow (perm)	1900	1900	1615	1862	1862	1862	59	3556	1607	505	3610	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			67						68			68
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		262			246			1836			685	
Travel Time (s)		7.1			6.7			27.8			10.4	
Peak Hour Factor	0.67	0.67	0.67	0.50	0.50	0.50	0.86	0.86	0.86	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%
Adj. Flow (vph)	3	0	10	4	0	0	14	1057	12	7	2541	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	3	0	10	4	0	0	14	1057	12	7	2541	4
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.03	1.03	1.03	1.01	1.01	1.01	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1	1	1	1	1	1	1	0
Detector Template												
Leading Detector (ft)	40	40	0	40	40	40	40	336	0	40	336	0
Trailing Detector (ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Size(ft)	40	40	0	40	40	40	40	6	0	40	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm		Perm	Perm		Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8		8	4		4	2		2	6		6
Detector Phase	8	8	8	4	4	4	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	42.0	42.0	42.0	42.4	42.4	42.4	11.4	30.3	30.3	11.0	29.3	29.3

Synchro 8 Report

Marc R Acampora, PE, LLC

Lanier Tract DRI

6: 53-Dawsonville Hwy & Academy Sports

phase two a.m.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	42.4	42.4	42.4	42.4	42.4	42.4	11.4	96.6	96.6	11.0	96.2	96.2
Total Split (%)	28.3%	28.3%	28.3%	28.3%	28.3%	28.3%	7.6%	64.4%	64.4%	7.3%	64.1%	64.1%
Maximum Green (s)	36.0	36.0	36.0	36.0	36.0	36.0	5.0	90.4	90.4	5.0	90.0	90.0
Yellow Time (s)	3.4	3.4	3.4	3.4	3.4	3.4	3.4	4.3	4.3	3.0	4.3	4.3
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	1.9	1.9	3.0	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.2	6.2	6.0	6.2	6.2
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0
Flash Dont Walk (s)	23.0	23.0	23.0	32.0	32.0	32.0		20.0	20.0		19.0	19.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0	0		0	0
Act Effect Green (s)	6.1		6.1	6.1			137.2	139.9	139.9	136.1	137.4	137.4
Actuated g/C Ratio	0.04		0.04	0.04			0.91	0.93	0.93	0.91	0.92	0.92
v/c Ratio	0.04		0.08	0.05			0.12	0.32	0.01	0.01	0.77	0.00
Control Delay	69.5		1.1	70.0			6.0	1.1	0.0	0.8	5.1	0.0
Queue Delay	0.0		0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.5		1.1	70.0			6.0	1.1	0.0	0.8	5.1	0.0
LOS	E		A	E			A	A	A	A	A	A
Approach Delay								1.2			5.1	
Approach LOS								A			A	

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 27 (18%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 145

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.77

Intersection Signal Delay: 4.0

Intersection LOS: A

Intersection Capacity Utilization 87.4%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 6: 53-Dawsonville Hwy & Academy Sports

	ø1		ø2 (R)		ø4
11 s		96.6 s		42.4 s	
	ø5		ø6 (R)		ø8
11.4 s		96.2 s		42.4 s	

Lanier Tract DRI

8: Dawsonville Highway/GA 53 & McEver Road/McEver

phase two a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	462	31	378	46	21	22	311	572	61	34	1352	942
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			5%			1%			-1%	
Storage Length (ft)	180		0	0		0	310		185	255		0
Storage Lanes	2		1	1		0	2		1	1		1
Taper Length (ft)	50			0			50			50		
Lane Util. Factor	0.97	0.95	0.95	1.00	1.00	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Frt		0.872	0.850		0.924				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3484	1566	1527	1760	1712	0	3484	3487	1575	1814	3628	1623
Flt Permitted	0.950			0.599			0.950			0.950		
Satd. Flow (perm)	3484	1566	1527	1110	1712	0	3484	3487	1575	1814	3628	1623
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		183	207		34				184			541
Link Speed (mph)		45			45			45			45	
Link Distance (ft)		580			331			921			1624	
Travel Time (s)		8.8			5.0			14.0			24.6	
Peak Hour Factor	0.97	0.97	0.97	0.62	0.62	0.62	0.93	0.93	0.93	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	3%	2%	0%	0%	0%
Adj. Flow (vph)	476	32	390	74	34	35	334	615	66	38	1502	1047
Shared Lane Traffic (%)			47%									
Lane Group Flow (vph)	476	215	207	74	69	0	334	615	66	38	1502	1047
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.03	1.03	1.03	1.01	1.01	1.01	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1		1	1	0	1	1	0
Detector Template												
Leading Detector (ft)	40	40	0	40	40		40	336	0	40	336	0
Trailing Detector (ft)	0	0	0	0	0		0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0		0	330	0	0	330	0
Detector 1 Size(ft)	40	40	0	40	40		40	6	0	40	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	NA	Perm	pm+pt	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases			8	4					6			2
Detector Phase	3	8	8	7	4		1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	13.2	50.2	50.2	11.6	48.2		13.4	35.6	35.6	12.9	44.6	44.6

Lanier Tract DRI

8: Dawsonville Highway/GA 53 & McEver Road/McEver

phase two a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	23.0	59.1	59.1	12.1	48.2		19.0	63.0	63.0	15.8	59.8	59.8
Total Split (%)	15.3%	39.4%	39.4%	8.1%	32.1%		12.7%	42.0%	42.0%	10.5%	39.9%	39.9%
Maximum Green (s)	15.7	51.8	51.8	5.6	40.9		11.5	56.4	56.4	8.6	53.2	53.2
Yellow Time (s)	4.3	4.3	4.3	3.5	4.3		4.5	4.4	4.4	4.2	4.4	4.4
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	2.2	2.2	3.0	2.2	2.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.3	7.3	7.3	6.5	7.3		7.5	6.6	6.6	7.2	6.6	6.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)		4.0	4.0		4.0			4.0	4.0		4.0	4.0
Flash Dont Walk (s)		38.0	38.0		36.0			25.0	25.0		34.0	34.0
Pedestrian Calls (#/hr)		0	0		0			0	0		0	0
Act Effect Green (s)	16.1	17.6	17.6	14.0	8.9		11.5	93.2	93.2	8.5	87.4	87.4
Actuated g/C Ratio	0.11	0.12	0.12	0.09	0.06		0.08	0.62	0.62	0.06	0.58	0.58
v/c Ratio	1.28	0.62	0.57	0.58	0.52		1.25	0.28	0.06	0.37	0.71	0.89
Control Delay	194.8	20.5	13.4	70.0	51.0		197.4	17.8	1.4	74.9	24.1	17.6
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	194.8	20.5	13.4	70.0	51.0		197.4	17.8	1.4	74.9	24.1	17.6
LOS	F	C	B	E	D		F	B	A	E	C	B
Approach Delay		111.2			60.9			75.8			22.2	
Approach LOS		F			E			E			C	

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 19 (13%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.28

Intersection Signal Delay: 52.3

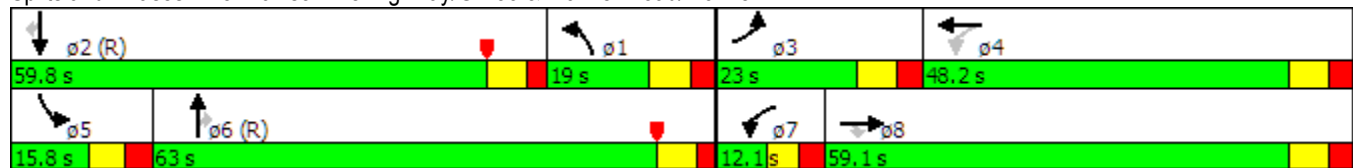
Intersection LOS: D

Intersection Capacity Utilization 89.2%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 8: Dawsonville Highway/GA 53 & McEver Road/McEver



Lanier Tract DRI

9: Dawsonville Highway & Greenhill Circle/Greenhill Circle

phase two a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	74	1	156	7	1	4	149	891	11	13	1610	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		3%			7%			1%			0%	
Storage Length (ft)	0		0	0		0	190		190	185		100
Storage Lanes	0		1	0		1	1		1	1		1
Taper Length (ft)	0			0			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected		0.953			0.957		0.950			0.950		
Satd. Flow (prot)	0	1784	1591	0	1755	1558	1796	3522	1607	1805	3610	1615
Flt Permitted		0.721			0.751		0.072			0.277		
Satd. Flow (perm)	0	1349	1591	0	1377	1558	136	3522	1607	526	3610	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			130			102			57			101
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		288			254			778			921	
Travel Time (s)		7.9			6.9			11.8			14.0	
Peak Hour Factor	0.90	0.90	0.90	0.69	0.69	0.69	0.86	0.86	0.86	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	0%	0%
Adj. Flow (vph)	82	1	173	10	1	6	173	1036	13	14	1750	62
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	83	173	0	11	6	173	1036	13	14	1750	62
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.02	1.02	1.02	1.05	1.05	1.05	1.01	1.01	1.01	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1	0	1	1	0	0	1	0
Detector Template	Left			Left								
Leading Detector (ft)	20	40	0	20	40	0	40	336	0	0	336	0
Trailing Detector (ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Size(ft)	20	40	0	20	40	0	40	6	0	0	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8		8	4		4	6		6	2		2
Detector Phase	8	8	8	4	4	4	1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.0	23.0	23.0	39.9	39.9	39.9	11.0	28.0	28.0	10.0	36.0	36.0

Lanier Tract DRI

9: Dawsonville Highway & Greenhill Circle/Greenhill Circle

phase two a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	39.9	39.9	39.9	39.9	39.9	39.9	21.0	100.1	100.1	10.0	89.1	89.1
Total Split (%)	26.6%	26.6%	26.6%	26.6%	26.6%	26.6%	14.0%	66.7%	66.7%	6.7%	59.4%	59.4%
Maximum Green (s)	34.0	34.0	34.0	34.0	34.0	34.0	15.0	94.1	94.1	5.0	83.1	83.1
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	4.4	4.4	3.5	4.4	4.4
All-Red Time (s)	2.9	2.9	2.9	2.9	2.9	2.9	3.0	1.6	1.6	1.5	1.6	1.6
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.9	5.9		5.9	5.9	6.0	6.0	6.0	5.0	6.0	6.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)				4.0	4.0	4.0		4.0	4.0		4.0	4.0
Flash Dont Walk (s)				30.0	30.0	30.0		18.0	18.0		26.0	26.0
Pedestrian Calls (#/hr)				0	0	0		0	0		0	0
Act Effect Green (s)		14.6	14.6		14.6	14.6	123.5	119.1	119.1	108.7	102.0	102.0
Actuated g/C Ratio		0.10	0.10		0.10	0.10	0.82	0.79	0.79	0.72	0.68	0.68
v/c Ratio		0.64	0.64		0.08	0.02	0.61	0.37	0.01	0.03	0.71	0.05
Control Delay		85.5	29.1		59.9	0.2	33.5	4.7	0.0	4.2	14.8	1.0
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
Total Delay		85.5	29.1		59.9	0.2	33.5	4.7	0.0	4.2	14.9	1.0
LOS		F	C		E	A	C	A	A	A	B	A
Approach Delay		47.4			38.8			8.7			14.4	
Approach LOS		D			D			A			B	

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow

Natural Cycle: 110

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.71

Intersection Signal Delay: 15.0

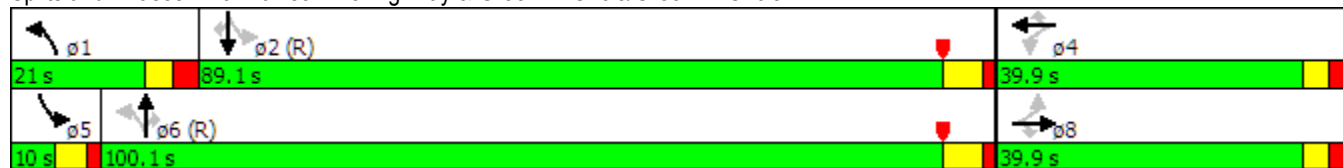
Intersection LOS: B

Intersection Capacity Utilization 78.5%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 9: Dawsonville Highway & Greenhill Circle/Greenhill Circle



Lanier Tract DRI

10: Dawsonville Highway & Shallowford Rd/Best Buy

phase two a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	162	2	9	2	4	3	11	864	14	1	1425	387
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-1%			10%			-4%			-1%	
Storage Length (ft)	350		350	0		0	350		150	265		0
Storage Lanes	1		0	0		1	1		1	1		1
Taper Length (ft)	100			0			100			100		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950	0.953			0.982		0.950			0.950		
Satd. Flow (prot)	1723	1729	1623	0	1773	1534	1841	3646	1647	1814	3592	1623
Flt Permitted	0.950	0.953			0.982		0.115			0.273		
Satd. Flow (perm)	1723	1729	1623	0	1773	1534	223	3646	1647	521	3592	1623
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			113			119			70			219
Link Speed (mph)		45			25			45			45	
Link Distance (ft)		653			178			957			778	
Travel Time (s)		9.9			4.9			14.5			11.8	
Peak Hour Factor	0.84	0.84	0.84	0.56	0.56	0.56	0.83	0.83	0.83	0.93	0.93	0.93
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	1%	0%
Adj. Flow (vph)	193	2	11	4	7	5	13	1041	17	1	1532	416
Shared Lane Traffic (%)	50%											
Lane Group Flow (vph)	96	99	11	0	11	5	13	1041	17	1	1532	416
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes										
Headway Factor	0.99	0.99	0.99	1.07	1.07	1.07	0.97	0.97	0.97	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1	0	1	1	0	0	1	0
Detector Template				Left								
Leading Detector (ft)	40	40	0	20	40	0	40	336	0	0	336	0
Trailing Detector (ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Size(ft)	40	40	0	20	40	0	40	6	0	0	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases	3	3		4	4		1	6			2	
Permitted Phases			3			4	6		6	2		2
Detector Phase	3	3	3	4	4	4	1	6	6	2	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	36.7	36.7	36.7	38.9	38.9	38.9	10.8	28.8	28.8	30.8	30.8	30.8

Lanier Tract DRI

10: Dawsonville Highway & Shallowford Rd/Best Buy

phase two a.m.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	36.7	36.7	36.7	38.9	38.9	38.9	10.8	74.4	74.4	63.6	63.6	63.6
Total Split (%)	24.5%	24.5%	24.5%	25.9%	25.9%	25.9%	7.2%	49.6%	49.6%	42.4%	42.4%	42.4%
Maximum Green (s)	30.0	30.0	30.0	33.0	33.0	33.0	5.0	67.6	67.6	56.8	56.8	56.8
Yellow Time (s)	4.5	4.5	4.5	3.0	3.0	3.0	3.0	4.9	4.9	4.9	4.9	4.9
All-Red Time (s)	2.2	2.2	2.2	2.9	2.9	2.9	2.8	1.9	1.9	1.9	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.7	6.7	6.7		5.9	5.9	5.8	6.8	6.8	6.8	6.8	6.8
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes			Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	C-Min	C-Min	C-Min
Walk Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0
Flash Dont Walk (s)	26.0	26.0	26.0	29.0	29.0	29.0		18.0	18.0	20.0	20.0	20.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0	0	0	0	0
Act Effect Green (s)	13.9	13.9	13.9		6.5	6.5	118.2	117.2	117.2	112.4	112.4	112.4
Actuated g/C Ratio	0.09	0.09	0.09		0.04	0.04	0.79	0.78	0.78	0.75	0.75	0.75
v/c Ratio	0.60	0.62	0.04		0.14	0.03	0.05	0.37	0.01	0.00	0.57	0.33
Control Delay	80.2	81.2	0.3		72.5	0.3	6.1	6.5	0.0	7.0	11.6	4.6
Queue Delay	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0
Total Delay	80.2	81.2	0.3		72.5	0.3	6.1	6.5	0.0	7.0	12.0	4.6
LOS	F	F	A		E	A	A	A	A	A	B	A
Approach Delay		76.4			49.9			6.4			10.4	
Approach LOS		E			D			A			B	

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 45 (30%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.62

Intersection Signal Delay: 13.5

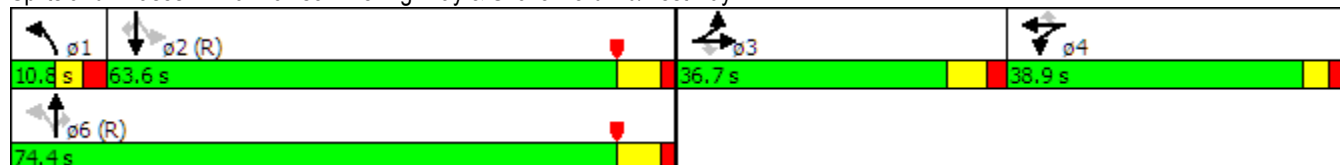
Intersection LOS: B

Intersection Capacity Utilization 63.9%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 10: Dawsonville Highway & Shallowford Rd/Best Buy



Lanier Tract DRI
1: Sportsman Club Road & Strickland Drive

phase two p.m.

Intersection						
Int Delay, s/veh	3.2					
Movement	WBL	WBR		NBT	NBR	SBL SBT
Vol, veh/h	24	0		32	28	0 25
Conflicting Peds, #/hr	0	0		0	0	0 0
Sign Control	Stop	Stop		Free	Free	Free Free
RT Channelized	-	None		-	None	- None
Storage Length	0	-		-	-	- -
Veh in Median Storage, #	0	-		0	-	- 0
Grade, %	0	-		0	-	- 0
Peak Hour Factor	44	44		86	86	82 82
Heavy Vehicles, %	2	2		2	2	2 2
Mvmt Flow	55	0		37	33	0 30
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	83	53		0	0	70 0
Stage 1	53	-		-	-	- -
Stage 2	30	-		-	-	- -
Critical Hdwy	6.42	6.22		-	-	4.12 -
Critical Hdwy Stg 1	5.42	-		-	-	- -
Critical Hdwy Stg 2	5.42	-		-	-	- -
Follow-up Hdwy	3.518	3.318		-	-	2.218 -
Pot Cap-1 Maneuver	919	1014		-	-	1531 -
Stage 1	970	-		-	-	- -
Stage 2	993	-		-	-	- -
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	919	1014		-	-	1531 -
Mov Cap-2 Maneuver	919	-		-	-	- -
Stage 1	970	-		-	-	- -
Stage 2	993	-		-	-	- -
Approach	WB		NB		SB	
HCM Control Delay, s	9.2		0		0	
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	919	1531	-	
HCM Lane V/C Ratio	-	-	0.059	-	-	
HCM Control Delay (s)	-	-	9.2	0	-	
HCM Lane LOS	-	-	A	A	-	
HCM 95th %tile Q(veh)	-	-	0.2	0	-	

Lanier Tract DRI
2: GA 53 & Sportsman Club Road

phase two p.m.

Intersection												
Int Delay, s/veh		74.3										
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	22	1201	0	26	1914	34	0	0	0	42	0	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	96	96	96	92	92	92	75	75	75
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	23	1264	0	27	1994	35	0	0	0	56	0	20
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	2029	0	0	1264	0	0	2362	3394	632	2744	3377	1015
Stage 1	-	-	-	-	-	-	1311	1311	-	2066	2066	-
Stage 2	-	-	-	-	-	-	1051	2083	-	678	1311	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	276	-	-	546	-	-	19	7	423	~ 9	7	236
Stage 1	-	-	-	-	-	-	168	227	-	56	95	-
Stage 2	-	-	-	-	-	-	243	94	-	408	227	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	276	-	-	546	-	-	16	6	423	~ 8	6	236
Mov Cap-2 Maneuver	-	-	-	-	-	-	16	6	-	~ 8	6	-
Stage 1	-	-	-	-	-	-	154	208	-	~ 51	90	-
Stage 2	-	-	-	-	-	-	211	89	-	374	208	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			0.2			0			\$ 3330.7		
HCM LOS							A			F		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	-	276	-	-	546	-	-	11				
HCM Lane V/C Ratio	-	0.084	-	-	0.05	-	-	6.909				
HCM Control Delay (s)	0	19.2	-	-	11.9	-		\$ 3330.7				
HCM Lane LOS	A	C	-	-	B	-	-	F				
HCM 95th %tile Q(veh)	-	0.3	-	-	0.2	-	-	10.8				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined			*: All major volume in platoon					

Lanier Tract DRI
3: Avonlea Way & GA 53

phase two p.m.

Intersection												
Int Delay, s/veh	4.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	12	0	52	2	0	11	68	1896	17	10	1298	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	0	0	-	0	0	-	-	0	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	76	76	76	80	80	80	95	95	95	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	0	68	2	0	14	72	1996	18	10	1298	15
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2459	3475	649	2817	3466	1007	1298	0	0	2014	0	0
Stage 1	1318	1318	-	2148	2148	-	-	-	-	-	-	-
Stage 2	1141	2157	-	669	1318	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	16	6	412	8	7	239	530	-	-	279	-	-
Stage 1	166	225	-	49	87	-	-	-	-	-	-	-
Stage 2	214	86	-	413	225	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 13	5	412	6	6	239	530	-	-	279	-	-
Mov Cap-2 Maneuver	~ 13	5	-	6	6	-	-	-	-	-	-	-
Stage 1	143	217	-	42	75	-	-	-	-	-	-	-
Stage 2	174	74	-	332	217	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	148			146.1			0.4			0.1		
HCM LOS	F			F								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR		
Capacity (veh/h)	530	-	-	13	412	6	239	279	-	-		
HCM Lane V/C Ratio	0.135	-	-	1.215	0.166	0.417	0.058	0.036	-	-		
HCM Control Delay (s)	12.8	-	-	\$ 722.2	15.5	\$ 833.9	21	18.4	-	-		
HCM Lane LOS	B	-	-	F	C	F	C	C	-	-		
HCM 95th %tile Q(veh)	0.5	-	-	2.6	0.6	0.8	0.2	0.1	-	-		
Notes												
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon												

Lanier Tract DRI
4: Canterbury Road & GA 53

phase two p.m.

Intersection												
Int Delay, s/veh	852.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	8	0	31	116	0	92	123	1860	128	68	1238	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	0	0	-	0	0	-	0	0	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	70	70	70	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	0	39	166	0	131	128	1938	133	71	1290	16
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2656	3625	645	2980	3625	969	1290	0	0	1938	0	0
Stage 1	1431	1431	-	2194	2194	-	-	-	-	-	-	-
Stage 2	1225	2194	-	786	1431	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	11	5	415	~ 6	5	253	533	-	-	299	-	-
Stage 1	141	198	-	~ 46	82	-	-	-	-	-	-	-
Stage 2	190	82	-	351	198	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 4	3	415	~ 4	3	253	533	-	-	299	-	-
Mov Cap-2 Maneuver	~ 4	3	-	~ 4	3	-	-	-	-	-	-	-
Stage 1	107	151	-	~ 35	62	-	-	-	-	-	-	-
Stage 2	69	62	-	243	151	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	\$ 484.2			\$ 11156.3			0.8			1.1		
HCM LOS	F			F								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR		
Capacity (veh/h)	533	-	-	4	415	4	253	299	-	-		
HCM Lane V/C Ratio	0.24	-	-	2.5	0.093	41.429	0.519	0.237	-	-		
HCM Control Delay (s)	13.9	-		\$ 2303.8	14.0	9977.6	33.7	20.7	-	-		
HCM Lane LOS	B	-	-	F	B	F	D	C	-	-		
HCM 95th %tile Q(veh)	0.9	-	-	2.3	0.3	22.9	2.7	0.9	-	-		
Notes												
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon												

Intersection						
Int Delay, s/veh	1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	1	52	95	2401	1711	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	Yield	-	None
Storage Length	0	0	200	-	-	360
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	1	0	-
Peak Hour Factor	71	71	99	99	98	98
Heavy Vehicles, %	0	0	0	0	1	0
Mvmt Flow	1	73	96	2425	1746	10
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	3151	874	1746	0	-	0
Stage 1	1746	-	-	-	-	-
Stage 2	1405	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	9	297	364	-	-	-
Stage 1	128	-	-	-	-	-
Stage 2	196	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	7	297	364	-	-	-
Mov Cap-2 Maneuver	7	-	-	-	-	-
Stage 1	128	-	-	-	-	-
Stage 2	144	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	32.3	0.7		0		
HCM LOS	D					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	364	-	7	297	-	-
HCM Lane V/C Ratio	0.264	-	0.201	0.247	-	-
HCM Control Delay (s)	18.4	-\$	620.4	21	-	-
HCM Lane LOS	C	-	F	C	-	-
HCM 95th %tile Q(veh)	1	-	0.5	1	-	-

Lanier Tract DRI

5: GA 53 & Lanier Valley Dr/Ahaluna Dr

phase two p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	23	1	106	98	8	64	198	2041	114	31	1448	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		2%			-4%			1%			-1%	
Storage Length (ft)	0		0	0		0	100		0	140		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	0			0			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.890			0.949			0.992				
Flt Protected		0.991			0.972		0.950			0.950		
Satd. Flow (prot)	0	1659	0	0	1788	0	1796	3563	0	1814	3592	0
Flt Permitted		0.906			0.612		0.099			0.040		
Satd. Flow (perm)	0	1517	0	0	1126	0	187	3563	0	76	3592	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		119			17			10				
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		340			322			1002			1457	
Travel Time (s)		7.7			7.3			15.2			22.1	
Peak Hour Factor	0.89	0.89	0.89	0.90	0.90	0.90	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
Adj. Flow (vph)	26	1	119	109	9	71	206	2126	119	32	1508	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	146	0	0	189	0	206	2245	0	32	1511	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	0.97	0.97	0.97	1.01	1.01	1.01	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		0	1	
Detector Template	Left			Left								
Leading Detector (ft)	20	40		20	40		40	336		0	336	
Trailing Detector (ft)	0	0		0	0		0	330		0	330	
Detector 1 Position(ft)	0	0		0	0		0	330		0	330	
Detector 1 Size(ft)	20	40		20	40		40	6		0	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		8			4		5	2			6	
Permitted Phases	8			4			2			6		
Detector Phase	8	8		4	4		5	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	23.0	23.0		23.0	23.0		10.6	23.0		23.0	23.0	

Lanier Tract DRI

5: GA 53 & Lanier Valley Dr/Ahaluna Dr

phase two p.m.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	36.0	36.0		36.0	36.0		22.0	124.0		102.0	102.0	
Total Split (%)	22.5%	22.5%		22.5%	22.5%		13.8%	77.5%		63.8%	63.8%	
Maximum Green (s)	29.4	29.4		29.4	29.4		16.4	117.9		95.9	95.9	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	4.5		4.5	4.5	
All-Red Time (s)	2.6	2.6		2.6	2.6		2.6	1.6		1.6	1.6	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.6			6.6		5.6	6.1		6.1	6.1	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		C-Max	C-Max	
Act Effect Green (s)		26.9			26.9		120.9	120.4		101.9	101.9	
Actuated g/C Ratio		0.17			0.17		0.76	0.75		0.64	0.64	
v/c Ratio		0.41			0.93		0.76	0.84		0.67	0.66	
Control Delay		17.7			106.1		36.4	15.3		86.6	20.9	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		17.7			106.1		36.4	15.3		86.6	20.9	
LOS		B			F		D	B		F	C	
Approach Delay		17.7			106.1			17.0			22.3	
Approach LOS		B			F			B			C	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 129 (81%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.93

Intersection Signal Delay: 22.8

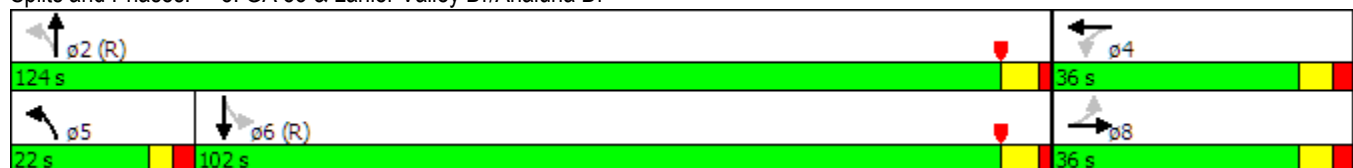
Intersection LOS: C

Intersection Capacity Utilization 96.3%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 5: GA 53 & Lanier Valley Dr/Ahaluna Dr



Lanier Tract DRI

6: 53-Dawsonville Hwy & Academy Sports

phase two p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	14	3	66	130	8	46	96	2142	152	21	1503	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			4%			1%			0%	
Storage Length (ft)	0		0	0		70	200		170	190		360
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	0			0			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1900	1615	1769	1862	1583	1796	3592	1607	1805	3574	1615
Flt Permitted	0.751			0.756			0.106			0.037		
Satd. Flow (perm)	1427	1900	1615	1408	1862	1583	200	3592	1607	70	3574	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			69			63			64			64
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		262			246			1836			685	
Travel Time (s)		7.1			6.7			27.8			10.4	
Peak Hour Factor	0.95	0.95	0.95	0.80	0.80	0.80	0.98	0.98	0.98	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
Adj. Flow (vph)	15	3	69	162	10	58	98	2186	155	22	1549	31
Shared Lane Traffic (%)												
Lane Group Flow (vph)	15	3	69	162	10	58	98	2186	155	22	1549	31
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.03	1.03	1.03	1.01	1.01	1.01	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1	1	1	1	1	1	1	0
Detector Template												
Leading Detector (ft)	40	40	0	40	40	40	40	336	0	40	336	0
Trailing Detector (ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Size(ft)	40	40	0	40	40	40	40	6	0	40	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8		8	4		4	2		2	6		6
Detector Phase	8	8	8	4	4	4	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	42.0	42.0	42.0	42.4	42.4	42.4	11.4	30.3	30.3	11.0	29.3	29.3

Synchro 8 Report

Marc R Acampora, PE, LLC

Lanier Tract DRI

6: 53-Dawsonville Hwy & Academy Sports

phase two p.m.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	42.4	42.4	42.4	42.4	42.4	42.4	16.6	106.6	106.6	11.0	101.0	101.0
Total Split (%)	26.5%	26.5%	26.5%	26.5%	26.5%	26.5%	10.4%	66.6%	66.6%	6.9%	63.1%	63.1%
Maximum Green (s)	36.0	36.0	36.0	36.0	36.0	36.0	10.2	100.4	100.4	5.0	94.8	94.8
Yellow Time (s)	3.4	3.4	3.4	3.4	3.4	3.4	3.4	4.3	4.3	3.0	4.3	4.3
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	1.9	1.9	3.0	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.2	6.2	6.0	6.2	6.2
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0
Flash Dont Walk (s)	23.0	23.0	23.0	32.0	32.0	32.0		20.0	20.0		19.0	19.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0	0		0	0
Act Effect Green (s)	23.7	23.7	23.7	23.7	23.7	23.7	121.5	116.4	116.4	115.5	109.4	109.4
Actuated g/C Ratio	0.15	0.15	0.15	0.15	0.15	0.15	0.76	0.73	0.73	0.72	0.68	0.68
v/c Ratio	0.07	0.01	0.23	0.78	0.04	0.20	0.42	0.84	0.13	0.19	0.63	0.03
Control Delay	55.8	53.3	13.0	89.1	54.6	11.7	14.6	17.5	7.3	10.4	13.2	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
Total Delay	55.8	53.3	13.0	89.1	54.6	11.7	14.6	17.5	7.3	10.4	13.4	0.0
LOS	E	D	B	F	D	B	B	B	A	B	B	A
Approach Delay		21.8			68.1			16.7			13.1	
Approach LOS		C			E			B			B	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 120 (75%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 145

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.84

Intersection Signal Delay: 18.2

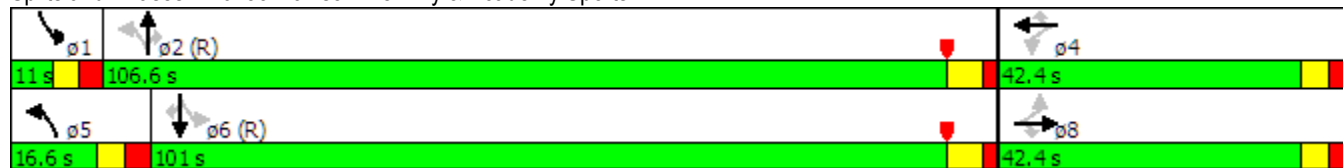
Intersection LOS: B

Intersection Capacity Utilization 92.7%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 6: 53-Dawsonville Hwy & Academy Sports



Lanier Tract DRI

8: Dawsonville Highway/GA 53 & McEver Road/McEver

phase two p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	996	235	426	96	100	93	478	1632	51	71	1249	594
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			5%			1%			-1%	
Storage Length (ft)	180		0	0		0	310		185	255		0
Storage Lanes	2		1	1		0	2		1	1		1
Taper Length (ft)	50			0			50			50		
Lane Util. Factor	0.97	0.95	0.95	1.00	1.00	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Frt		0.951	0.850		0.928				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3484	1708	1527	1760	1719	0	3484	3592	1607	1814	3592	1623
Flt Permitted	0.950			0.432			0.950			0.950		
Satd. Flow (perm)	3484	1708	1527	800	1719	0	3484	3592	1607	1814	3592	1623
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18	302		28				172			323
Link Speed (mph)		45			25			45			45	
Link Distance (ft)		580			331			921			1504	
Travel Time (s)		8.8			9.0			14.0			22.8	
Peak Hour Factor	0.95	0.95	0.95	0.86	0.86	0.86	0.97	0.97	0.97	0.91	0.91	0.91
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
Adj. Flow (vph)	1048	247	448	112	116	108	493	1682	53	78	1373	653
Shared Lane Traffic (%)			27%									
Lane Group Flow (vph)	1048	368	327	112	224	0	493	1682	53	78	1373	653
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.03	1.03	1.03	1.01	1.01	1.01	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1		1	1	0	1	1	0
Detector Template												
Leading Detector (ft)	40	40	0	40	40		40	336	0	40	336	0
Trailing Detector (ft)	0	0	0	0	0		0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0		0	330	0	0	330	0
Detector 1 Size(ft)	40	40	0	40	40		40	6	0	40	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	NA	Perm	pm+pt	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases			8	4					6			2
Detector Phase	3	8	8	7	4		1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	13.2	50.2	50.2	11.6	48.2		13.4	35.6	35.6	12.9	44.6	44.6

Lanier Tract DRI

8: Dawsonville Highway/GA 53 & McEver Road/McEver

phase two p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	34.0	68.2	68.2	14.0	48.2		22.0	64.8	64.8	13.0	55.8	55.8
Total Split (%)	21.3%	42.6%	42.6%	8.8%	30.1%		13.8%	40.5%	40.5%	8.1%	34.9%	34.9%
Maximum Green (s)	26.7	60.9	60.9	7.5	40.9		14.5	58.2	58.2	5.8	49.2	49.2
Yellow Time (s)	4.3	4.3	4.3	3.5	4.3		4.5	4.4	4.4	4.2	4.4	4.4
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	2.2	2.2	3.0	2.2	2.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.3	7.3	7.3	6.5	7.3		7.5	6.6	6.6	7.2	6.6	6.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)		4.0	4.0		4.0			4.0	4.0		4.0	4.0
Flash Dont Walk (s)		38.0	38.0		36.0			25.0	25.0		34.0	34.0
Pedestrian Calls (#/hr)		0	0		0			0	0		0	0
Act Effect Green (s)	26.7	43.9	43.9	32.2	23.9		14.5	65.6	65.6	15.4	66.2	66.2
Actuated g/C Ratio	0.17	0.27	0.27	0.20	0.15		0.09	0.41	0.41	0.10	0.41	0.41
v/c Ratio	1.80	0.77	0.51	0.54	0.80		1.57	1.14	0.07	0.45	0.92	0.76
Control Delay	403.8	61.1	8.7	47.9	77.3		313.6	125.0	0.1	65.4	68.6	41.7
Queue Delay	0.0	58.4	3.3	32.9	0.0		0.0	0.0	0.0	0.0	0.3	0.0
Total Delay	403.8	119.4	12.1	80.8	77.3		313.6	125.0	0.1	65.4	68.8	41.7
LOS	F	F	B	F	E		F	F	A	E	E	D
Approach Delay		270.3			78.5			163.8			60.3	
Approach LOS		F			E			F			E	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 52 (33%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.80

Intersection Signal Delay: 154.3

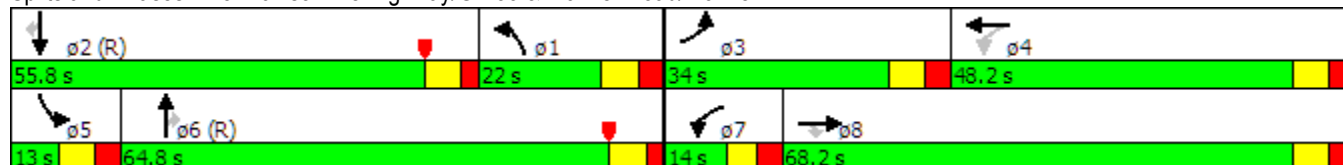
Intersection LOS: F

Intersection Capacity Utilization 112.3%

ICU Level of Service H

Analysis Period (min) 15

Splits and Phases: 8: Dawsonville Highway/GA 53 & McEver Road/McEver



Lanier Tract DRI

9: Dawsonville Highway & Greenhill Circle/Greenhill Circle

phase two p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	146	10	152	66	22	42	274	2059	77	44	1650	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		3%			7%			1%			0%	
Storage Length (ft)	0		0	0		0	190		190	185		100
Storage Lanes	0		1	0		1	1		1	1		1
Taper Length (ft)	0			0			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected		0.955			0.964		0.950			0.950		
Satd. Flow (prot)	0	1787	1591	0	1767	1558	1796	3592	1607	1805	3610	1615
Flt Permitted		0.591			0.482		0.042			0.044		
Satd. Flow (perm)	0	1106	1591	0	884	1558	79	3592	1607	84	3610	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			167			95			54			95
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		288			254			778			921	
Travel Time (s)		7.9			6.9			11.8			14.0	
Peak Hour Factor	0.91	0.91	0.91	0.78	0.78	0.78	0.97	0.97	0.97	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	160	11	167	85	28	54	282	2123	79	46	1737	62
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	171	167	0	113	54	282	2123	79	46	1737	62
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.02	1.02	1.02	1.05	1.05	1.05	1.01	1.01	1.01	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1	0	1	1	0	0	1	0
Detector Template	Left			Left								
Leading Detector (ft)	20	40	0	20	40	0	40	336	0	0	336	0
Trailing Detector (ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Size(ft)	20	40	0	20	40	0	40	6	0	0	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8		8	4		4	6		6	2		2
Detector Phase	8	8	8	4	4	4	1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.0	23.0	23.0	39.9	39.9	39.9	11.0	28.0	28.0	10.0	36.0	36.0

Lanier Tract DRI

9: Dawsonville Highway & Greenhill Circle/Greenhill Circle

phase two p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	39.9	39.9	39.9	39.9	39.9	39.9	31.0	110.1	110.1	10.0	89.1	89.1
Total Split (%)	24.9%	24.9%	24.9%	24.9%	24.9%	24.9%	19.4%	68.8%	68.8%	6.3%	55.7%	55.7%
Maximum Green (s)	34.0	34.0	34.0	34.0	34.0	34.0	25.0	104.1	104.1	5.0	83.1	83.1
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	4.4	4.4	3.5	4.4	4.4
All-Red Time (s)	2.9	2.9	2.9	2.9	2.9	2.9	3.0	1.6	1.6	1.5	1.6	1.6
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.9	5.9		5.9	5.9	6.0	6.0	6.0	5.0	6.0	6.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)				4.0	4.0	4.0		4.0	4.0		4.0	4.0
Flash Dont Walk (s)				30.0	30.0	30.0		18.0	18.0		26.0	26.0
Pedestrian Calls (#/hr)				0	0	0		0	0		0	0
Act Effect Green (s)		28.1	28.1		28.1	28.1	120.0	111.5	111.5	96.9	90.3	90.3
Actuated g/C Ratio		0.18	0.18		0.18	0.18	0.75	0.70	0.70	0.61	0.56	0.56
v/c Ratio		0.88	0.40		0.73	0.15	0.90	0.85	0.07	0.41	0.85	0.07
Control Delay		103.0	9.8		87.7	1.7	58.2	30.6	5.2	23.9	58.8	11.5
Queue Delay		0.0	5.9		87.6	0.0	0.0	46.9	0.0	0.0	3.2	0.0
Total Delay		103.0	15.7		175.3	1.7	58.2	77.5	5.2	23.9	62.0	11.5
LOS		F	B		F	A	E	E	A	C	E	B
Approach Delay		59.8			119.2			73.0			59.3	
Approach LOS		E			F			E			E	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow

Natural Cycle: 130

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.90

Intersection Signal Delay: 68.5

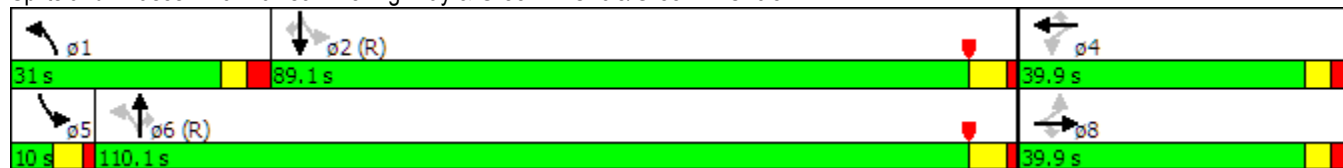
Intersection LOS: E

Intersection Capacity Utilization 91.0%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 9: Dawsonville Highway & Greenhill Circle/Greenhill Circle



Lanier Tract DRI

10: Dawsonville Highway & Shallowford Rd/Best Buy

phase two p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	596	42	29	40	30	8	44	1914	126	8	1375	531
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-1%			10%			-4%			-1%	
Storage Length (ft)	350		350	0		0	350		150	265		0
Storage Lanes	1		0	0		1	1		1	1		1
Taper Length (ft)	100			0			100			100		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950	0.958			0.972		0.950			0.950		
Satd. Flow (prot)	1723	1738	1623	0	1754	1534	1841	3682	1647	1814	3628	1623
Flt Permitted	0.950	0.958			0.972		0.064			0.047		
Satd. Flow (perm)	1723	1738	1623	0	1754	1534	124	3682	1647	90	3628	1623
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			106			111			65			311
Link Speed (mph)		45			25			45			45	
Link Distance (ft)		653			178			1046			778	
Travel Time (s)		9.9			4.9			15.8			11.8	
Peak Hour Factor	0.90	0.90	0.90	0.88	0.88	0.88	0.94	0.94	0.94	0.91	0.91	0.91
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	662	47	32	45	34	9	47	2036	134	9	1511	584
Shared Lane Traffic (%)	47%											
Lane Group Flow (vph)	351	358	32	0	79	9	47	2036	134	9	1511	584
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes										
Headway Factor	0.99	0.99	0.99	1.07	1.07	1.07	0.97	0.97	0.97	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1	0	1	1	0	0	1	0
Detector Template				Left								
Leading Detector (ft)	40	40	0	20	40	0	40	336	0	0	336	0
Trailing Detector (ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Size(ft)	40	40	0	20	40	0	40	6	0	0	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases	3	3		4	4		1	6			2	
Permitted Phases			3			4	6		6	2		2
Detector Phase	3	3	3	4	4	4	1	6	6	2	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	36.7	36.7	36.7	38.9	38.9	38.9	10.8	28.8	28.8	30.8	30.8	30.8

Lanier Tract DRI

10: Dawsonville Highway & Shallowford Rd/Best Buy

phase two p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	37.0	37.0	37.0	38.9	38.9	38.9	10.8	84.1	84.1	73.3	73.3	73.3
Total Split (%)	23.1%	23.1%	23.1%	24.3%	24.3%	24.3%	6.8%	52.6%	52.6%	45.8%	45.8%	45.8%
Maximum Green (s)	30.3	30.3	30.3	33.0	33.0	33.0	5.0	77.3	77.3	66.5	66.5	66.5
Yellow Time (s)	4.5	4.5	4.5	3.0	3.0	3.0	3.0	4.9	4.9	4.9	4.9	4.9
All-Red Time (s)	2.2	2.2	2.2	2.9	2.9	2.9	2.8	1.9	1.9	1.9	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.7	6.7	6.7		5.9	5.9	5.8	6.8	6.8	6.8	6.8	6.8
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes			Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	C-Min	C-Min	C-Min
Walk Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0
Flash Dont Walk (s)	26.0	26.0	26.0	29.0	29.0	29.0		18.0	18.0	20.0	20.0	20.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0	0	0	0	0
Act Effect Green (s)	30.3	30.3	30.3		12.6	12.6	98.7	97.7	97.7	87.1	87.1	87.1
Actuated g/C Ratio	0.19	0.19	0.19		0.08	0.08	0.62	0.61	0.61	0.54	0.54	0.54
v/c Ratio	1.08	1.09	0.08		0.57	0.04	0.31	0.91	0.13	0.19	0.77	0.57
Control Delay	130.7	133.6	0.4		86.5	0.4	18.2	34.6	7.5	55.5	56.2	34.0
Queue Delay	1.2	1.2	0.0		0.0	0.0	0.0	46.4	0.0	0.0	36.0	0.8
Total Delay	131.9	134.9	0.4		86.5	0.4	18.2	81.0	7.5	55.5	92.2	34.9
LOS	F	F	A		F	A	B	F	A	E	F	C
Approach Delay		127.7			77.7			75.2			76.1	
Approach LOS		F			E			E			E	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 91 (57%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.09

Intersection Signal Delay: 83.2

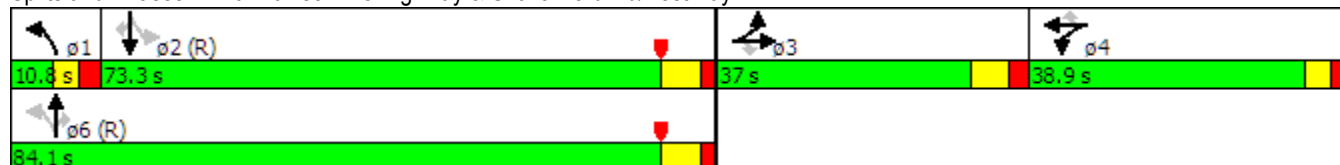
Intersection LOS: F

Intersection Capacity Utilization 90.9%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 10: Dawsonville Highway & Shallowford Rd/Best Buy





Lake Lanier
Active Adult Community
Gainesville, Georgia

Oak Hall Companies, LLC

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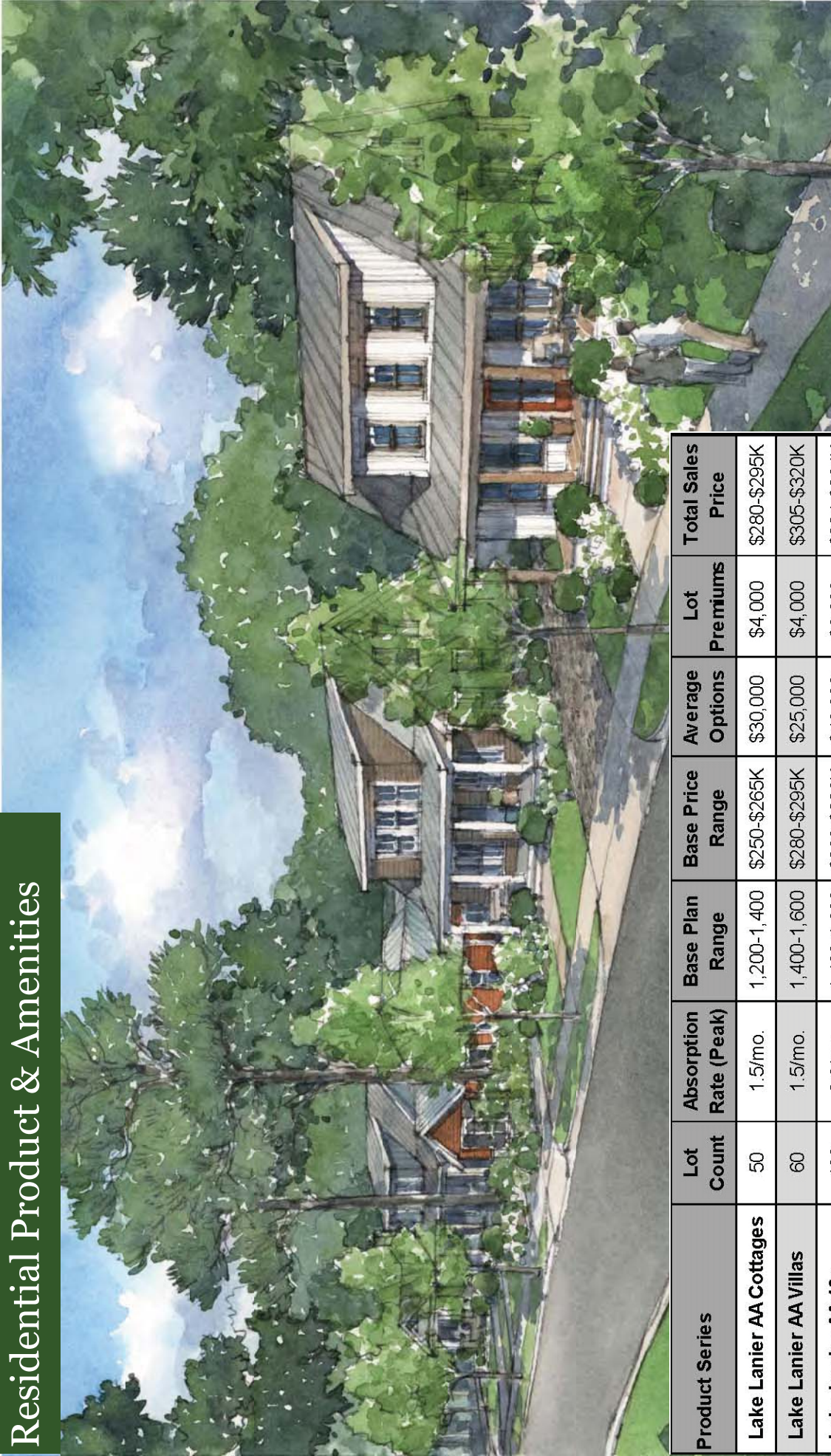
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www.oakhallcompanies.com



The Product

Residential Product & Amenities



Product Series	Lot Count	Absorption Rate (Peak)	Base Plan Range	Base Price Range	Average Options	Lot Premiums	Total Sales Price
Lake Lanier AA Cottages	50	1.5/mo.	1,200-1,400	\$250-\$265K	\$30,000	\$4,000	\$280-\$295K
Lake Lanier AA Villas	60	1.5/mo.	1,400-1,600	\$280-\$295K	\$25,000	\$4,000	\$305-\$320K
Lake Lanier AA 40s	100	2.0/mo.	1,400-1,800	\$290-\$320K	\$40,000	\$8,000	\$334-\$364K
Lake Lanier AA 50s	150	3.0/mo.	1,800-2,400	\$340-\$385K	\$50,000	\$12,000	\$397-\$442K
Lake Lanier AA 60s	100	2.0/mo.	2,400-3,000	\$400-\$445K	\$60,000	\$15,000	\$469-\$514K
Total/Average	460	10.0/mo.	1,200-3,000	\$250-\$445K	\$25-\$60K	\$4-\$15K	\$280-\$514K

Oak Hall Companies, LLC

4/19/17

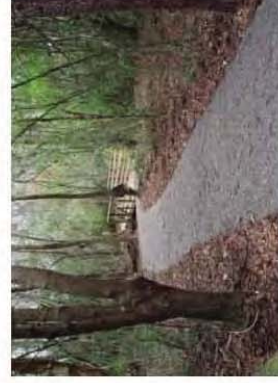
Residential Product & Amenities



Clubhouse Amenities	Recommend for Subject
Clubhouse	Yes
Fitness Center	Yes
Indoor Lap Pool	Yes
Locker Rooms	Yes
Aerobics Room	Yes
Billiards Room	Yes
Cards Room	Yes
Multi-Purpose Room	Yes
Kitchen	Yes
Covered Terrace	Yes
Activities Director	Yes



Outdoor Amenities	Recommend for Subject
Zero Entry Resort Pool	Yes
Shaded/Covered Areas/Cabanas	Yes
Fireplace and Grilling Area	Yes
Walking Trails	Yes
Tennis Courts (4)	Yes
Pickleball Courts (4)	Yes
Multi-Purpose Lawn	Yes
Lakeside Pavillion w. Restrooms	Yes
Neighborhood/Pocket Parks w/ Gazebos	Yes
Dog Parks (2)	Yes
Small Playground	Yes



Assisted Living & Memory Care Facility

Product Series	Unit Count	Absorption Rate	Lease-Up Stabilized	Plan Ranges	Monthly Rents
Assisted Living	75	3.0/mo.	24 months	550-950sqft	\$3,600-\$4,400
Memory Care	50	2.0/mo.	24 months	550-650sqft	\$4,200-\$4,400
Total/Average	125	5.0/mo.	24 months	1,200-3,000	\$250-\$445K

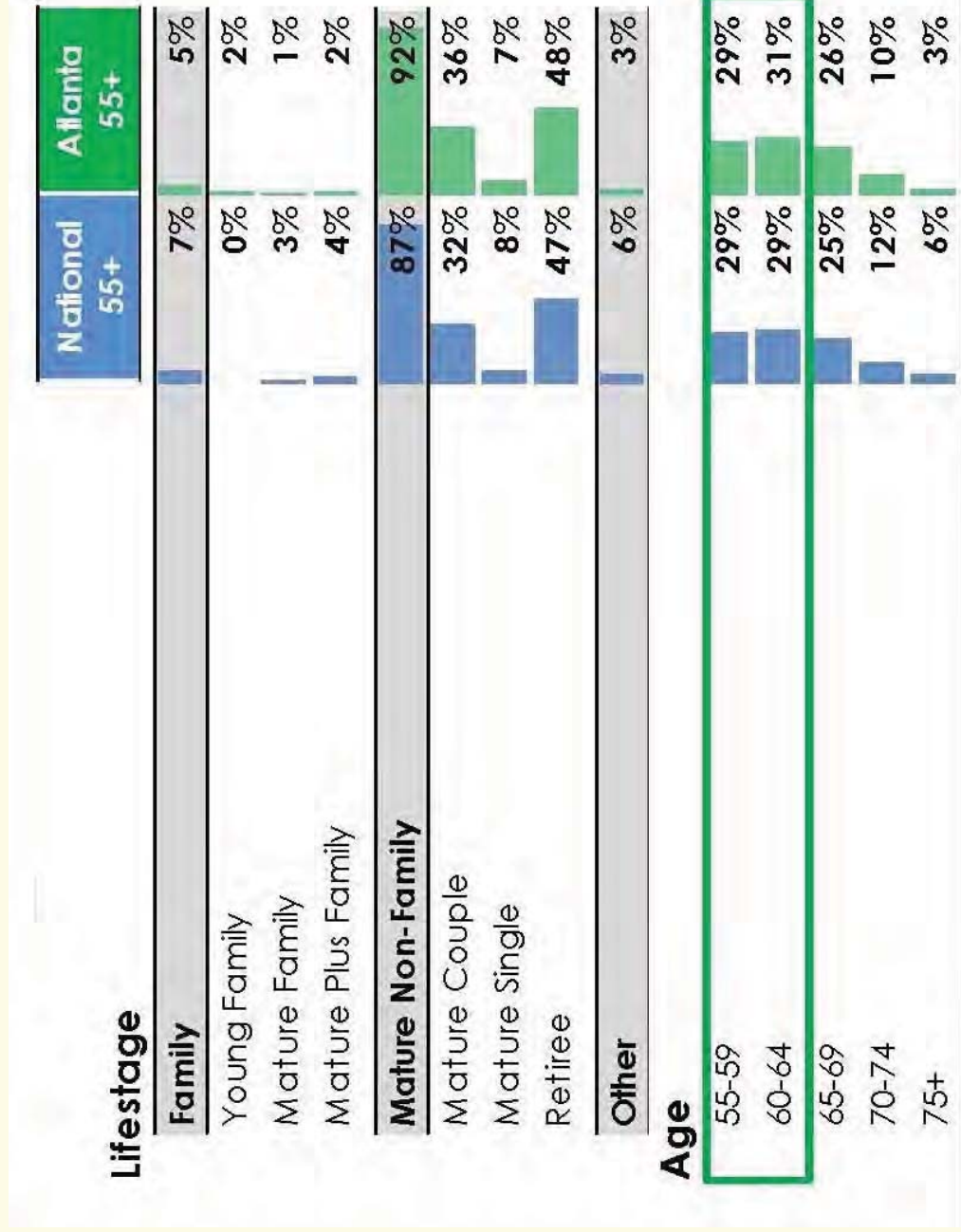




Impact on the Local Economy

Economy & Mature Shoppers

- ◆ Nearly half of mature Atlanta shoppers are still working either full or part-time.
- ◆ Atlanta falls in line with the national average, over 50% are between 55 and 64 years of age.



Positive Economic Impact for Gainesville

Age-Restricted Residences

- ◆ Age-restricted residents will have minimal impact on traffic, as typical residents will be older and not drive during peak traffic times.
- ◆ Age-restricted residents will have minimal impact on area schools, as typical residents will be older without school-age children.
- ◆ The Development will generate equivalent traffic to that if the property is developed as currently zoned.



Positive Economic Impact for Gainesville

Tax revenue

- ♦ Projected Annual Property Taxes to the City of Gainesville at Completion - \$ 1,495,901.72
- ♦ Projected Annual Sales Tax Revenue to the City of Gainesville at Completion - \$ 433,484.28
- ♦ Projected Annual Net Revenue to the City of Gainesville at Completion - \$ 382,020.47
- ♦ Typical Single Family Home Price - \$400,000
- ♦ Residents of Assisted Living and Memory Care will not be exempt from school property taxes (rent paid to landlord includes property taxes)



Positive Economic Impact for Gainesville

Employment

- ♦ The Assisted Living and Memory Care component of the Development will provide employment for workers in the medical field.
- ♦ The retail/office/restaurant component of the Development will provide places of employment and community gathering locations.



Positive Economic Impact for Gainesville

Fire Station

- ◆ Developer will donate land to the City of Gainesville for an approximately 10,650 sf Fire Station, which will improve response time, insurance rates, and fire safety for all nearby residents.
- ◆ Providing an additional fire station will allow City of Gainesville to maintain an ISO Class 1 rating.

Utilities Extension

- ◆ The Project will extend utility services to areas currently unserved by water and sewer.
- ◆ Improved insurance rates for nearby residents.
- ◆ The Project will utilize the existing regional pump station on Dawsonville Hwy. and increase the revenue for the utility department.



Positive Economic Impact for Gainesville

Improved Road Access

- ◆ Project will improve Ahaluna Drive.
- ◆ Project will provide multiple access points onto SR53, relieving congestion at intersection of Ahaluna Drive and SR53.
- ◆ Developer will install acceleration and deceleration lanes on SR53 at points of access, as required by GDOT.





Site Plan



SITE SUMMARY

SITE INFORMATION	
CURRENT ZONING:	AR-II, R-1-A, R-1, R-1.5, R-1.5-B, R-1.5-C, PD
PROPOSED ZONING:	PD
MEDICAL OFFICE TRACT:	1/4- 4.22 ACRES
FIRE STATION TRACT:	1/4- 3.0 ACRES
RESIDENTIAL TRACT:	1/4- 17.00 ACRES
TOTAL SITE AREA:	1/4- 155.02 ACRES
RESIDENTIAL	
SINGLE FAMILY DETACHED POD 'A'	
(40' WIDE LOTS)	88 LOTS
(50' WIDE LOTS)	126 LOTS
(60' WIDE LOTS)	56 LOTS
SINGLE FAMILY DETACHED POD 'B'	
(40' WIDE LOTS)	40 LOTS
(50' WIDE LOTS)	74 LOTS
TERRACE HOMES DETACHED	24 LOTS
INDEPENDENT LIVING	175 UNITS
ASSISTED LIVING	150 UNITS
TOTAL	790 UNITS
STORAGE FACILITY	
2 STORY STORAGE BUILDING	40,000 SF
80' PARKING PROVIDED	18 SPACES
CAR PARKING PROVIDED	15 SPACES
OFFICE/RETAIL	
OFFICE / RETAIL	24,000 SF
4,000 SF BUILDINGS	
PARKING REQ'D (50%/2500)	16 SPACES
PARKING PROVIDED	54 SPACES
OTHER	
FIRE STATION	10,850 SF
DENSITY	
DENSITY OVERALL PROJECT:	4.21 UNITS / ACRE
(790 UNITS / 155.02 ACRES)	
OPEN SPACE	
OPEN SPACE PROVIDED:	1/4- 60.0 ACRES
SURVEY	36.28

NOTES

1. THIS PLAN IS TO BE USED FOR PLANNING PURPOSES ONLY AND IS NOT INTENDED TO BE A CONSTRUCTION DOCUMENT. PLAN IS PREPARED FOR USE ONLY BY OAK HALL COMPANIES, LLC.

COMMERCIAL PARCEL	
COMMERCIAL PARCEL TOTAL ACREAGE	23.71 ACRES
PROPOSED ZONING:	O-B GENERAL BUSINESS DISTRICT
PROPOSED USE:	7 COMMERCIAL PARCELS
RETAIL SPACE	8,000 SF AVERAGE PER PARCEL

ADJACENT HELLON SPRINGS TOWNHOME PROJECT	
SITE AREA:	28.2 ACRES
ATTACHED SENIOR TERRACE HOMES	40 UNITS
DENSITY: 10 UNITS/ 28.2 ACRES	3.44 UNITS PER ACRE

Lanier Tract

Zoning Plan

PROJECT LYING IN LAND LOTS 161, 162, 163 & 173 OF THE 9TH DISTRICT, CITY OF GAINESVILLE, HALL COUNTY, GEORGIA

Prepared for
Oak Hall Companies, LLC
5256 Peachtree Road, Suite 195
770-662-5995
Atlanta, GA 30341
DATE: 4/17/2017



OAK HALL
COMPANIES LLC

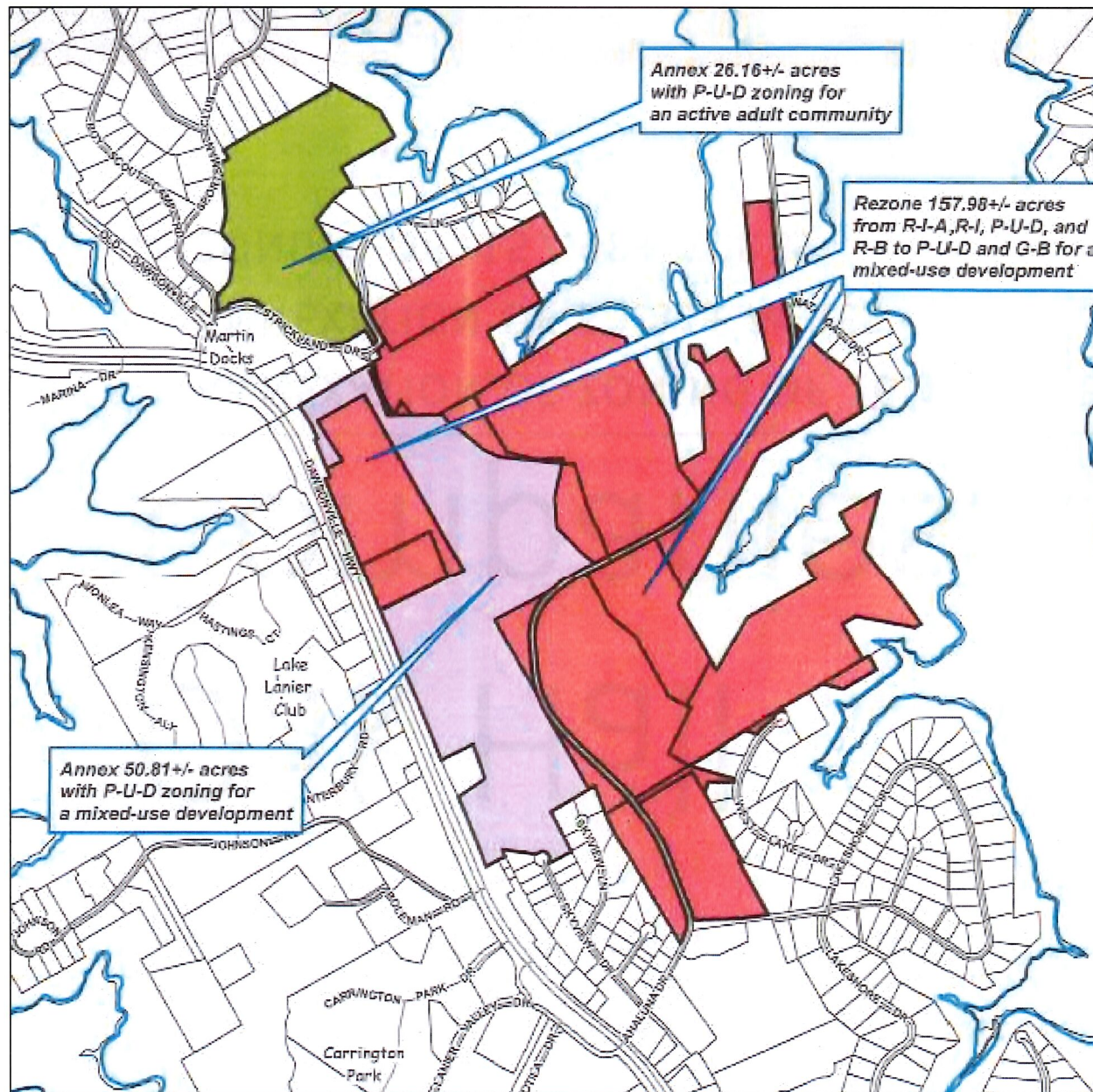


LOCATION MAP
NTS

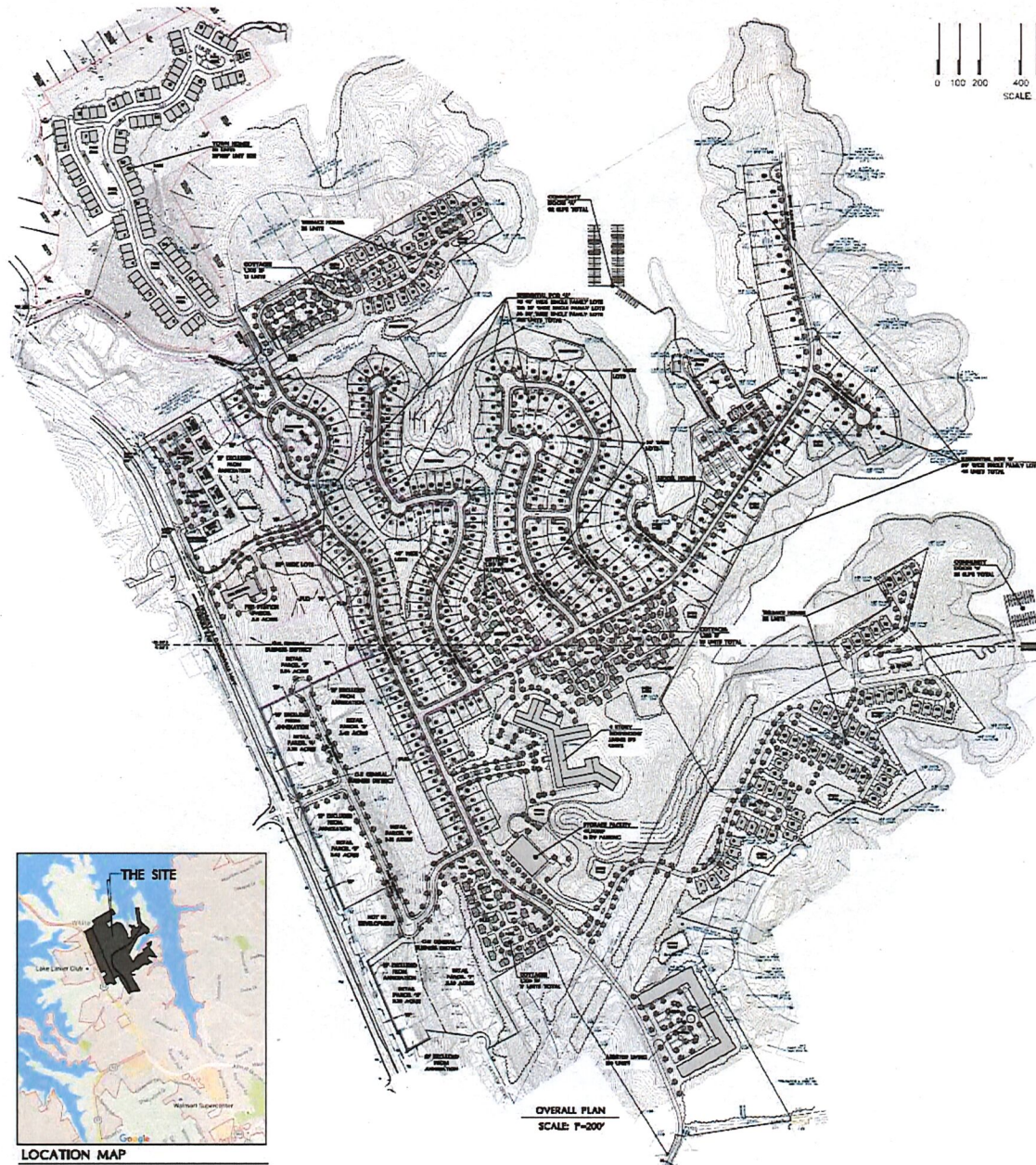
Development
Consultants, Inc.

Oak Hall Companies, LLC

- ANNEXATION OF ZONING OF 26.16 ACRES
- ANNEXATION OF 50.81± ACRES
- ZONING OF 157.98± ACRES



- Annex 26.16+/- Acres
- Annex 50.81+/- Acres
- Rezone 157.98+/- Acres



SITE SUMMARY

SITE INFORMATION

CURRENT ZONING:	AR-III, R-I-A, R-I, R-II, H-B, R-B, PUD
PROPOSED ZONING:	PUD
MEDICAL OFFICE TRACT:	+/- 4.22 ACRES
FIRE STATION TRACT:	+/- 3.0 ACRES
RESIDENTIAL TRACT:	+/- 177.801 ACRES
TOTAL SITE AREA:	+/- 185.02 ACRES

RESIDENTIAL

SINGLE FAMILY DETACHED POD 'A'	
(40' WIDE LOTS)	83 LOTS
(50' WIDE LOTS)	126 LOTS
(60' WIDE LOTS)	56 LOTS
SINGLE FAMILY DETACHED POD 'B'	
(80' WIDE LOTS)	40 LOTS
SINGLE FAMILY COTTAGES	74 LOTS
TERRACE HOMES DETACHED	81 LOTS
INDEPENDENT LIVING	175 UNITS
ASSISTED LIVING	150 UNITS
TOTAL	790 UNITS

STORAGE FACILITY

2 STORY STORAGE BUILDING	40,000 SF
RV PARKING PROVIDED	19 SPACE
CAR PARKING PROVIDED	18 SPACE

OFFICE/RETAIL

OFFICE / RETAIL	24,000 SF
4,000 SF BUILDINGS	
PARKING REQ'D (1SP/250SF)	96 SPACES
PARKING PROV'D	154 SPACE

OTHER

FIRE STATION	10,650 SF
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DENSITY

DENSITY OVERALL PROJECT:	4.27 UNITS / ACRE
(790 UNITS / 185.02 ACRE)	

OPEN SPACE

OPEN SPACE PROVIDED:	+/- 68.0 ACRES
	36.8%

COMMERCIAL PARCEL

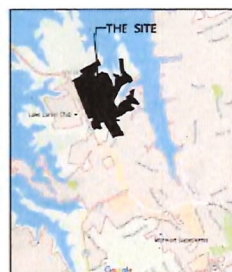
COMMERCIAL PARCEL TOTAL ACREAGE	23.77 ACRES
PROPOSED ZONING:	6-B GENERAL BUSINESS DISTRICT
PROPOSED USE:	7 COMMERCIAL PARCELS
RETAIL SPACE	8,000 SF AVERAGE PER PARCEL



G-B 20.01 ACRES

PUD 26.16 ACRES

PUD 188.78 ACRES



Detached Residential

Type

Maximum # of Units

POD A – Single Family Detached

265

POD B – Single Family Detached

40



**Zero-Lot Line
Residential**

Type
Single Family Cottages

Maximum # of Units
79 units



**Zero-Lot Line
Residential**

Type
Terrace Homes – Detached

Maximum # of Units
81 units



Attached Residential

Type

Townhouses

Maximum # of Units

90 units



**For-Rent
Residential**

Type	Maximum # of Units
Independent Living	175 units, less MC units
Assisted Living	150 units, less MC units
Memory Care – For Rent (MC)	Up to 30 units, which count toward IL and AL maximums



This use pays School Property Taxes!

Amenities

Type

- Clubhouse
- Pool
- Athletic Courts
- 40,000 sf storage facility,
- Parking spaces for up to 50 Recreational Vehicles
- Up to 50 parking spaces for on-site boat storage
- Community docks
- Lease or purchase one of the approximately 130 boat slips

COMMERCIAL USE



COMMERCIAL USE

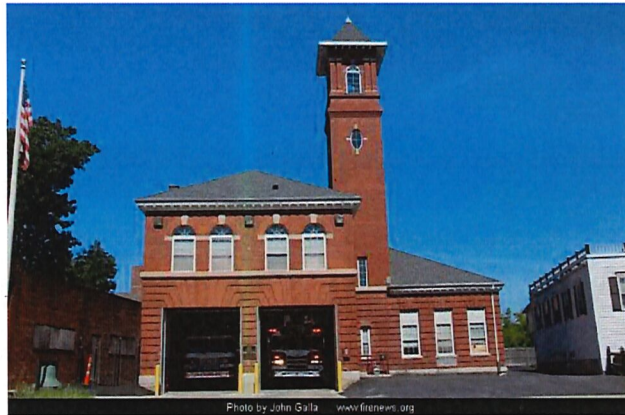
BUILDING MATERIALS

Building exteriors not screened from view from a public right-of-way right of way or any property line shall have an architectural treatment of brick, brick/frame, stone, or stucco, or another architectural treatment approved by the Planning Director.

PROHIBITED USES

- Motels or hotels with rooms accessed from the exterior of the building.
- Adult novelty stores.
- Adult entertainment centers.
- Pawn shops.
- Gas Stations.
- Tire Stores.
- Massage Parlors; provided this will not prohibit the operation of any profession by practitioners licensed by the State of Georgia.
- Vaping stores
- Auto body shops.
- Automobile sales establishments.
- New Marine sales or repair stores.
- Non-automated car wash.

Fire Station



Economic Impact (at full buildout)

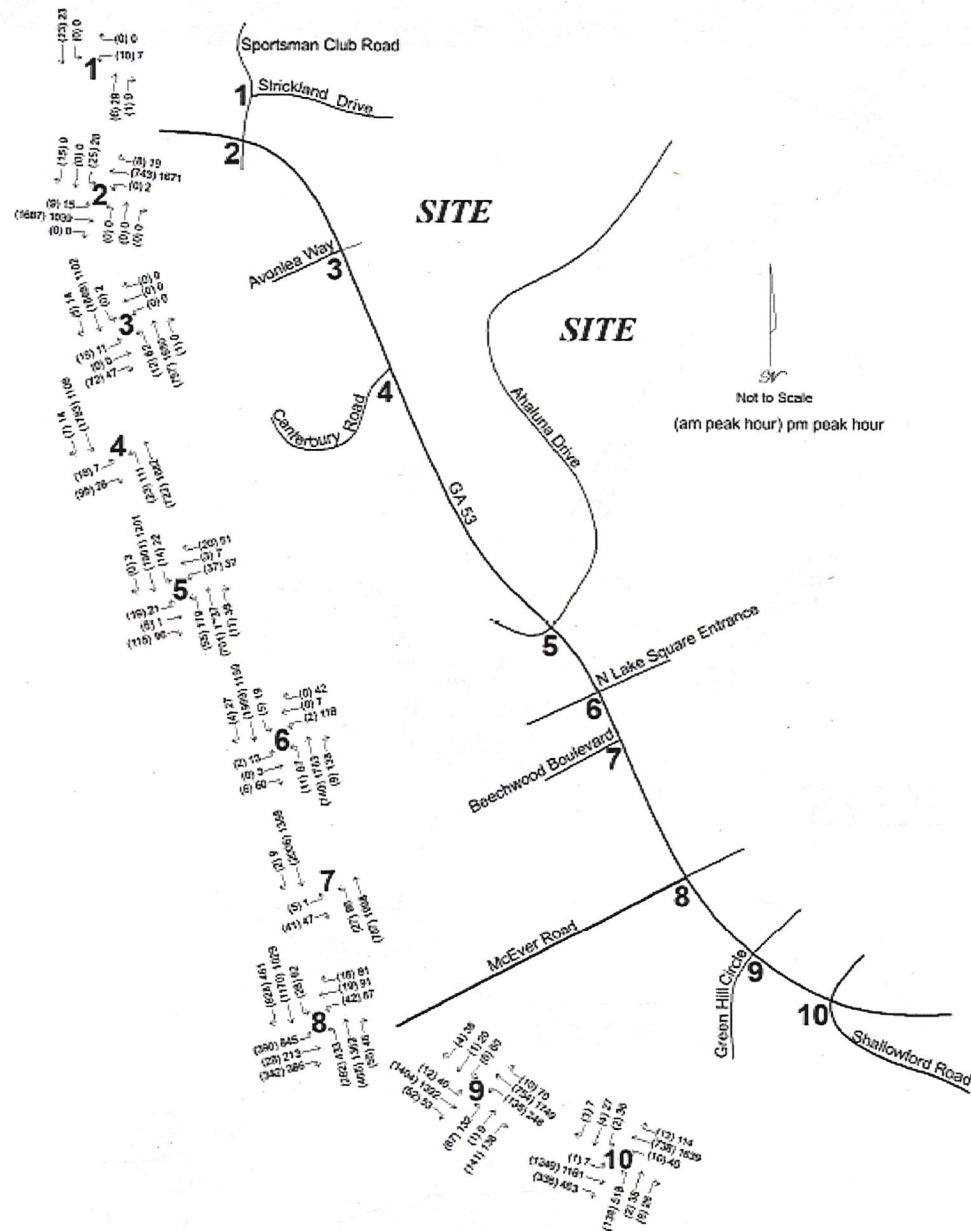
Revenues

Property Taxes to City	\$1,688,309.72
Sales Taxes to City	\$468,442.69
Total Revenue	\$2,156,752.41

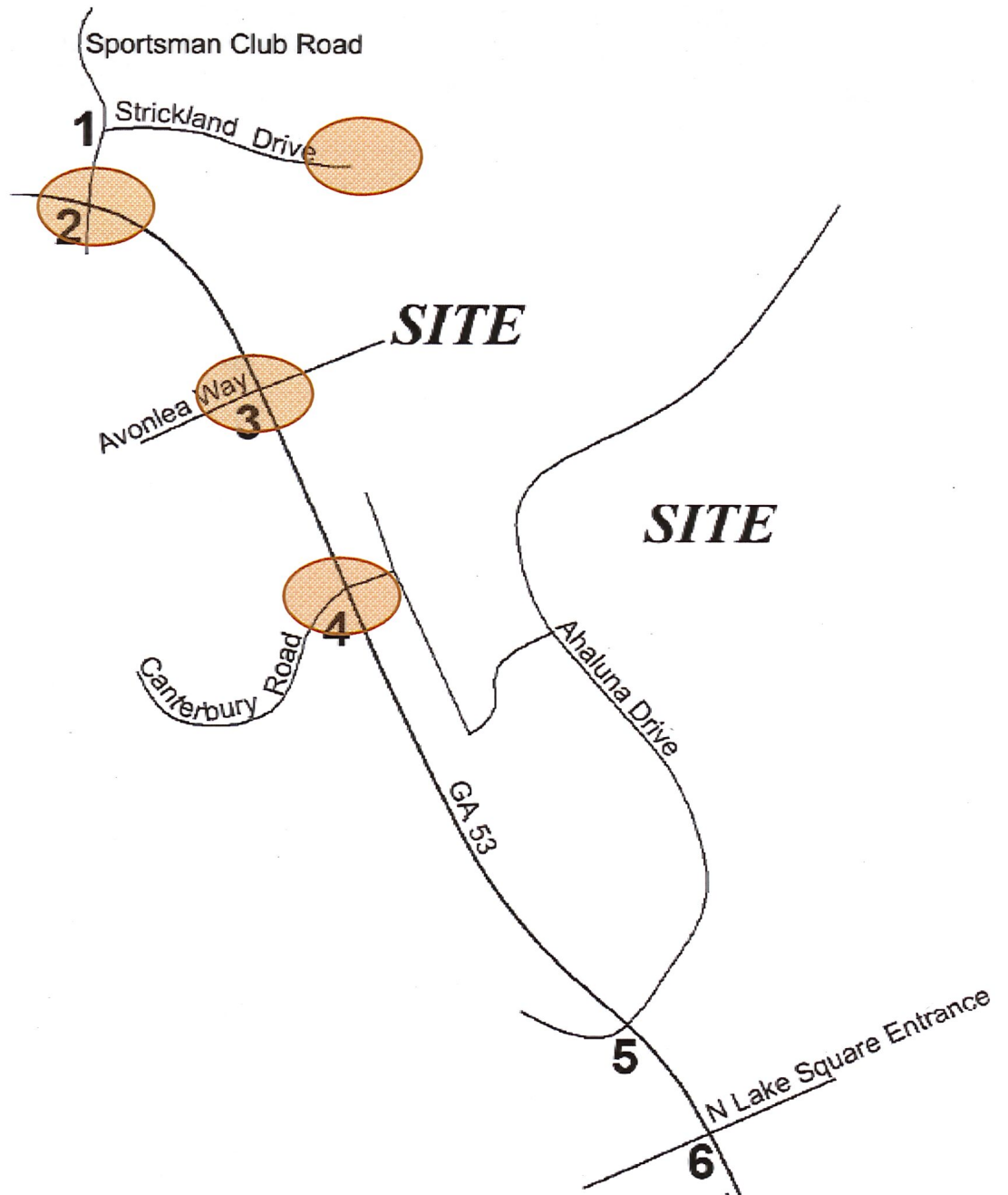
Annual Net Revenue	\$429,578.62
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Total Impact Fees	\$1,928,646.06
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Traffic Study Area



Recommended Traffic Improvement Areas



Traffic Improvements

☐ **Signal Warrant Studies and Signal (if warranted) at:**

- ☐ Canterbury Road and SR53
- ☐ Avonlea Way and SR53
- ☐ Sportsman Club Road and SR53

☐ **Turn Lane Improvements (if warranted) at:**

- ☐ Canterbury Road and SR53
- ☐ Avonlea Way and SR53
- ☐ Sportsman Club Road and SR53

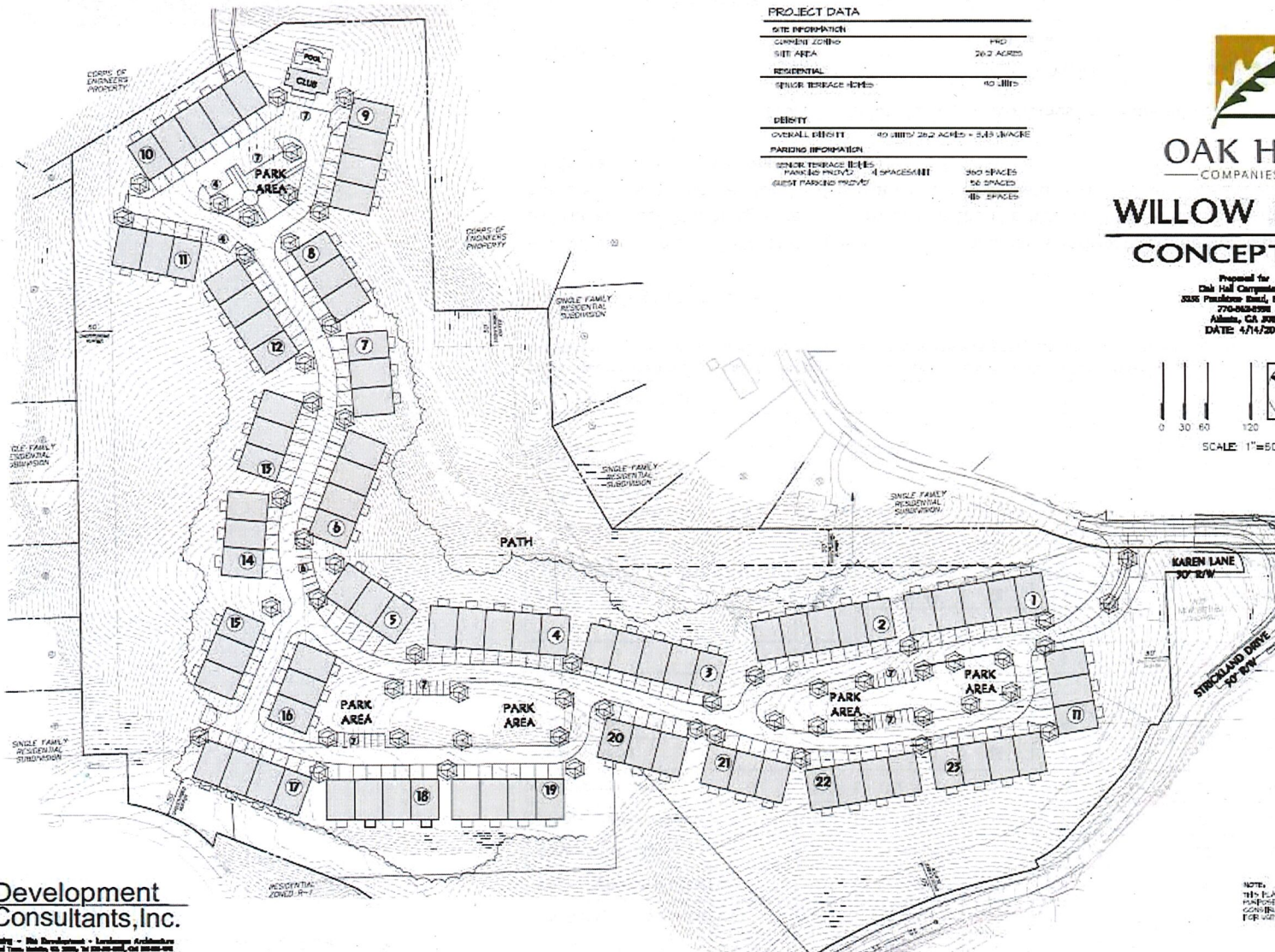
☐ **Road Improvements to :**

- ☐ Ahaluna Drive
- ☐ Strickland Drive

***\$425,000.00 contribution to
making roadway
improvements along
Dawsonville Highway (SR 53)
from McEver Road to Ahaluna
Drive***

Conclusion

- ❖ Property is already zoned for 200 single family houses and general commercial
- ❖ Age-restricted housing has lower impact on community:
 - ❖ Schools are not affected
 - ❖ Peak Drive-Time Traffic
- ❖ Positive Economic Impact
- ❖ Traffic Improvements will be made to SR53 that would not otherwise be funded or implemented
- ❖ Property donated for Fire Station



New Trips Generated

Table 5 – Lanier Tract Trip Generation

Land Use	ITE Code	Size	A.M. Peak Hour			P.M. Peak Hour			24-Hour
			In	Out	Total	In	Out	Total	2-Way
Terrace Homes Detached (at Strickland)	251	26 homes	2	4	6	4	3	7	96
Cottages Detached (at Strickland)	251	15 homes	1	2	3	2	2	4	56
Pod A Single Family Detached	251	265 homes	20	38	58	44	28	72	976
Pod B Single Family Detached	251	40 homes	3	6	9	6	5	11	147
Cottages Detached	251	64 homes	5	9	14	11	6	17	236
Terrace Homes Detached	251	55 homes	4	8	12	9	6	15	202
Independent Living	253	175 units	6	5	11	16	14	30	354
Assisted Living	254	<u>150 beds</u>	<u>14</u>	<u>7</u>	<u>21</u>	<u>15</u>	<u>18</u>	<u>33</u>	<u>356</u>
Total Residential New Trips		790 units	55	79	134	107	82	189	2,423
Storage	151	40,000 ft²	3	3	6	5	5	10	100
Office	750	12,000 ft²	18	3	21	2	16	18	138
Retail Total Trips	820	12,000 ft²	7	5	12	21	24	45	512
-pass-by		15/25/15%	<u>-1</u>	<u>-1</u>	<u>-2</u>	<u>-5</u>	<u>-6</u>	<u>-11</u>	<u>-76</u>
Retail New Trips			<u>6</u>	<u>4</u>	<u>10</u>	<u>16</u>	<u>18</u>	<u>34</u>	<u>436</u>
Total Commercial New Trips			24	7	31	18	34	52	574
Total Project New Trips			82	89	171	130	121	251	3,097

Notes: The detached homes trip calculations employed ITE average rates due to numbers of units generally much smaller than average sizes in the ITE data. The office and retail calculations were based on ITE average rates due to square footages much smaller than average sizes in the ITE data.

Willow Springs Townhomes

A small development of 90 senior-age-restricted townhomes is anticipated to be developed concurrently with the Lanier Tract DRI, along Karen Lane (shown in the site plan in Figure 4 at the northern end of the site, bordered in red). The trips for this development were calculated using ITE Land Use 252 – Senior Adult Housing – Attached. The Willow Springs trips are shown in Table 6.

Table 6 – Willow Springs Townhomes Trip Generation

Land Use	ITE Code	Size	A.M. Peak Hour			P.M. Peak Hour			24-Hour
			In	Out	Total	In	Out	Total	2-Way
Senior Adult Housing - Attached	252	90	6	12	18	12	11	23	290



Harbour Point Community Association
3313 Harbour Point Parkway
Gainesville, Georgia 30506
April 25, 2017

Subject: Oak Hall Development

Mayor Danny Dunagan
300 Henry Ward Way
Suite 303
P.O. Box 2496
Gainesville, Georgia 30501

Dear Mayor Dunagan:

My name is Gary Lawrence and I currently serve as the President of the Harbour Point Community Association Board. Harbour Point is a Community of 290 households located on Route 53, about 5.5 miles west of the proposed Oak Hall Development on Ahaluna Drive. Our Board recently received a presentation on this Development and has the following concerns.

1 Our residents are currently experiencing significant delays in exiting our Community onto Route 53. These delays occur not only during rush hours but throughout the day, 7 days a week. GDOT has reported a growth of more than 2000 vehicles a day that pass our entrance from 2015 to 2016, due to the widening project and the many new businesses located in the corridor. This traffic is projected to grow regardless of any new development. Many of our residents are avoiding the traffic congestion enroute to Gainesville, by turning west and doing their shopping in Dawsonville.

2 The traffic in this already congested corridor will be exacerbated by the Oak Hall Development. The GPAB had cancelled a March 7 Public Hearing due the lack of current traffic data to assess the impact of traffic from this Development. A traffic study by Arcadis Consulting was commissioned to gather the needed data. The result of the study is currently planned for mid to late May. In their haste to obtain project approval, the GPAB has now scheduled the hearing for May 9, which will not allow adequate time for the appropriate review of the study's findings and the development of traffic remediation efforts needed to approve the development.

3 There appears to be no plan to reprioritize traffic enhancement Tier 2 projects to Tier 1 status to address the immediate need for something to be done in time for the Oak Hall Development. We perceive that the current plan is to approve the project and then to worry about the resultant traffic congestion later. We contend that the City and County should at least have a plan for traffic remediation and controlling signal light sequences, but that will not be enough. We need additional lane capacity and turning lanes, etc. before the project comes on line.

4 Harbour Point certainly understands the value of new development and the need for additional affordable housing for our beautiful City of Gainesville. To approve the project without having a clear understanding of potential traffic problems and a short term plan to address these issues is dangerous for the overall image and livability of Gainesville. We recommend that the Developer, GDOT and all of the other parties develop a traffic remediation plan and locate the monies to make it happen before the project is approved.

As Mayor of our great City, I ask that you have the steps required for the approval of this Development sequenced appropriately, so that we are in front of the problem with new roadway capacity and not scrambling after the congestion is upon us. Thank you for your attention to this important issue.

Sincerely,

Gary Lawrence

cc: Bryan Lackey, City Manager
City Council
GPAB Members

Matt Tate

From: David Simpson
Sent: Tuesday, May 09, 2017 3:54 PM
To: Matt Tate
Cc: Jason Justice
Subject: [SPAM] Concerning Request to annex Dawsonville Hwy Property from Oak Hall Companies

Importance: Low

City Planning

As a resident of Lakeshore Heights (Lakeshore Circle) I have a number of concerns which cause me to oppose the annexation of property along Dawsonville Highway, Ahaluna Drive, etc. by Oak Hall Companies. The proposed docks that would added to the development would prohibit use of a very popular cove for skiers and boaters. There are few places to find a safe cove for such activities, but this Longwood Cove area is one of them. Please do not allow a massive boat dock to be placed into this cove. In addition, the cove at which we live is already filled with silt from run off. Additional buildings will cause more silt to fill the cove behind Lakeshore Circle and may actually limit its use. Traffic concerns have been addressed by many, and I concur that the traffic on Dawsonville Highway would be a bottleneck. It is that now at different times of the day. My greatest concern is the "dead end" road at Lakeshore Circle that is closed to traffic now. (No access to Ahaluna Drive). PLEASE do not open this road. Already the traffic we do have on Lakeshore drive and Lakeshore Circle is too fast for the neighborhood. Increased traffic would be dangerous for all concerned with limited sight driveways all throughout Lakeshore Heights. Please do not allow our neighborhood to become a main thoroughfare to bypass Dawsonville Highway! This massive proposed development would change the serenity of our neighborhood and destroy all wildlife, which is enjoyed by many in our area. To develop this acreage as hiking trails and parks would be ideal, but please limit the development of houses/apartments and boat docks. Thank you for hearing my concerns.

Sincerely,
David Simpson

Gary A. Roth

Athens, GA 30607

Tuesday, May 09, 2017

City of Gainesville
ATTN: Matt Tate, Planning Manager
300 Henry Ward Way, Suite 303
Gainesville, GA 30501

Dear Mr. Tate:

I am writing you today in response to an article I read recently in the *Gainesville Times*. In the article, an 880 home development is coming before the planning board very soon. It is my understanding that Oak Hall Companies is seeking a re-zoning action to allow this development to move forward. As with most items of change, the impact of this development should be thoroughly considered.

This development is a very bad idea. Not only would it destroy beautiful habitat quiet scenery, it would also further congest the already crowded streets of this community. No area of Gainesville can handle the traffic levels now, let alone adding nearly 1,000 more homes. I have been commuting to Gainesville for the last 18 months and have yet to see ANY improvements to the traffic management systems. With limited infrastructure, this development will only makes things worse. It will add more cars, more pollution, more stress and longer commutes. Is that really what you want to do to this town? Do you really want to make it worse? For what? More tax dollars?

Development companies only care about making money. With the inner city in a complete mess and no investments to repurpose the bad areas, they seek to make urban sprawl an even bigger problem. Oak Hall is a company that only cares about its profits and not about the people of Gainesville. The last thing this community needs is more people from Atlanta. The only thing they will do is clog up more of the roads and create more traffic! There has to be a better way to manage the area.

Traffic improvements must be made FIRST. We cannot allow the buildings and traffic to skyrocket before we do something about the congestion. Atlanta and the surrounding area are clearly known as the worst places to drive, so why are we making the problem worse? It's going to take a strong stand by you and your committee to deny this project until the roads and other structures are in place to manage it. Don't be blinded by the money, the community center or the promise of acreage for a fire station. You need to do the right thing.

Just look at what Oak Hall representatives say about the current zoning. They are lying to the residents saying that younger families will be moving in and out and they should be allowed their development. This is what the mass media does by twisting facts to push an agenda. If their development is such a grand idea, they wouldn't need to make arbitrary comments like that. Trust me, they are only concerned with profits.

Let's do the right thing for this wonderful community. Build the infrastructure first, and minimize the burden on the tax paying citizens that have to deal with it everyday!

Sincerely,



Gary Allen Roth

CITY OF GAINESVILLE

WORKSESSIONREQUEST

Date Submitted: 5/22/2017

Presenter: Matt Tate

Item of Business: **Public Hearing Item for the June 6, 2017 Council Meeting**
Request from **Oak Hall Companies, LLC** to rezone a 157.98± acres tract located on the east side of Dawsonville Highway (S.R. 53), having road frontage on Ahaluna Drive, Skyview Drive, Strickland Drive, Lakeshore Circle, West Lake Drive and Karen Lane (a/k/a **0, 1264 and 1817 Ahaluna Drive; 1876 Dawsonville Highway; 2208 Karen Lane; 0 and 2029 Strickland Drive; 0 and 1489 West Lake Drive**) from Residential-I-A (R-I-A), Residential-I (R-I), Planned Unit Development (P-U-D) and Regional Business (R-B) to Planned Unit Development (P-U-D) and General Business (G-B). **Ward Number: One.** Tax Parcel Number(s): 00-109B-000-003A; 00-110-000-001, 006, 030, 031, 034, 035, 036, 037 and 038; 01-110-001-006; 01-110A-004-022; 01-114-001-001, 026, 145 and 161. **Request: Mixed-use development.**

Meeting Date: 6/1/2017

Purpose of Request:

The applicant is proposing to rezone the subject property with a zoning of Planned Unit Development (P-U-D) and is to be included as part of the previously described 208.79± acres proposed mixed-use development. The property contains mostly undeveloped land with the exception of four single-family homes.

History/Background:

All three **Oak Hall Companies, LLC** agenda items were tabled at the March 14, 2017 PAB meeting after staff reviewed the requests and determined that the applicant needed to provide additional traffic data prior to staff giving an official recommendation. The PAB tabled the items for a period of 60-days until the May 9, 2017 Planning and Appeals Board meeting.

Facts & Issues for Consideration:

Department Recommendation:

Planning staff recommended approval with 24 conditions.

The Planning and Appeals Board recommended approval with 24 conditions.

See the PAB Recommendation Report for details and excerpts from the PAB meeting minutes.

SAMPLE MOTIONS

Approve Rezoning

I move to approve first reading of an ordinance rezoning the 157.98 acres subject property from Residential-I-A, Residential-I, Planned Unit Development and Regional Business to Planned Unit Development and General Business.

Deny

I move to deny this rezoning request.

Department Director:

Rusty Ligon

If funding is involved, are funds approved within the current budget?

N/A

Amount Requested:

Source of Funds:

Finance Comments:

Administrative Comments:

ATTACHMENTS:

Description		Type
☐	Legal Ad	Legal Ad
☐	PAB Recommendation Report	Report
☐	Proposed Rezoning Ordinance	Ordinance
☐	Location Maps	Backup Material
☐	Narrative	Backup Material
☐	Reservation of Constitutional Rights	Backup Material
☐	Survey	Backup Material
☐	Concept Plan	Backup Material
☐	Overall Concept Plan	Backup Material
☐	Elevations and Floor Plans	Backup Material
☐	Traffic Impact Study	Backup Material
☐	Brochure	Backup Material
☐	Fire Station Examples	Backup Material
☐	Letters of Opposition	Backup Material

COMBINED LEGAL AD
Gainesville Planning and Appeals Board
Gainesville City Council

Publish Sunday, April 23, 2017
THE TIMES

NOTICE OF PLANNING AND APPEALS BOARD PUBLIC HEARING

Notice is hereby given that the **Gainesville Planning and Appeals Board** will conduct a public hearing on **Tuesday, May 9, 2017** at **5:30 p.m.** in the **Gainesville Justice Center** (Municipal Courtroom at the Public Safety Complex), 701 Queen City Parkway in midtown Gainesville on the following requests:

- 1) Request from **Oak Hall Companies, LLC** to annex a 26.16 acres tract located east of Dawsonville Highway and on the north side of the intersection of Strickland Drive and Sportsman Club Road, with road frontage on Karen Lane (a/k/a **0 and 2209 Karen Lane; 2106, 2234 and 2242 Sportsman Club Road; and 2049 Strickland Drive**) and to establish zoning as Planned Unit Development (P-U-D).
Ward Number: One
Tax Parcel Number(s): 00-109-003-001, 004, 005; 00-109B-000-001, 002A and 036
Request: Active adult community
- 2) Request from **Oak Hall Companies, LLC** to annex a 50.81± acres tract located on the east side of Dawsonville Highway (S.R. 53), having road frontage on Dawsonville Highway, Ahaluna Drive, Skyview Drive and Strickland Drive (a/k/a **0 and 1758 Ahaluna Drive; 1508, 1550, 1740, 1746, 1758, 1760, 1934 and 1982 Dawsonville Highway; 300 and 301 Skyview Drive; 0, 2008 and 2016 Strickland Drive**) and to establish zoning as Planned Unit Development (P-U-D) and General Business (G-B).
Ward Number: One
Tax Parcel Number(s): 00-110-000-005 (part), 028, 032 (part) and 039; 00-110A-004-001 (part), 002A, 004 (part), 005 (part), 007 (part), 007A (part), 007X, 014 (part), 016 (part), 017 (part) and 018
Request: Mixed-use development
- 3) Request from **Oak Hall Companies, LLC** to rezone a 157.98± acres tract located on the east side of Dawsonville Highway (S.R. 53), having road frontage on Ahaluna Drive, Skyview Drive, Strickland Drive, Lakeshore Circle, West Lake Drive and Karen Lane (a/k/a **0, 1264 and 1817 Ahaluna Drive; 1876 Dawsonville Highway; 2208 Karen Lane; 0 and 2029 Strickland Drive; 0 and 1489 West Lake Drive**) from Residential-I-A (R-I-A), Residential-I (R-I), Planned Unit Development (P-U-D) and Regional Business (R-B) to Planned Unit Development (P-U-D) and General Business (G-B).
Ward Number: One
Tax Parcel Number(s): 00-109B-000-003A; 00-110-000-001, 006, 030, 031, 034, 035, 036, 037 and 038; 01-110-001-006; 01-110A-004-022; 01-114-001-001, 026, 145 and 161
Request: Mixed-use development
- 4) Request from **Brightstone Transitions** to amend the existing Planned Unit Development (P-U-D) zoning on a 0.50± acre tract located at the east side of Green Street, across from its intersection with Forrest Avenue (a/k/a **446 Green Street, NE**).
Ward Number: Four
Tax Parcel Number(s): 01-024-001-005
Request: Group home and office

- 5) Request from **Montecito Development** to rezone a 0.48± acre tract located on the south side of Enota Avenue, west of its intersection with Thompson Bridge Road (a/k/a **149 Enota Avenue, NW**) from Office and Institutional (O-I) to Neighborhood Business (N-B), with a special use.
Ward Number: Two
Tax Parcel Number(s): 01-074-004-001
Request: Convenience store with fuel pumps
- 6) Request from **Montecito Development** for a special use on a 0.80± acre tract located at the southwest side of the intersection of Enota Avenue and Thompson Bridge Road (a/k/a **1281 Thompson Bridge Road, NW**), having a zoning of Neighborhood Business (N-B).
Ward Number: Two
Tax Parcel Number(s): 01-074-004-020
Request: Convenience store with fuel pumps
- 7) Request from **Gainesville Market, LLC** for a special use on a 5.0± acres tract located west of Shallowford Road within the Gainesville Market Shopping Center (a/k/a **600 Shallowford Road**), having a zoning of General Business (G-B).
Ward Number: Five
Tax Parcel Number(s): 01-119C-001-029
Request: Commercial outdoor recreational facility
- 8) Request from **Manor Lake Development, LLC** for a special use on a 9.24± acres tract located on the northwest side of McEver Road, between Browns Bridge Road and Orchard Brook Drive (a/k/a **2900 McEver Road**), having a zoning of Office and Institutional (O-I) and Residential-I (R-I).
Ward Number: Four
Tax Parcel Number(s): 08-022-000-005
Request: Assisted living facility
- 9) Request from **Carriage North, LLC** for a special use on a 0.71± acre tract located on the southwest side of the terminus of Corporate Drive, west of Browns Bridge Road (a/k/a **2425 Corporate Drive**), having a zoning of General Business (G-B).
Ward Number: Five
Tax Parcel Number(s): 08-007-001-042
Request: Helipad

NOTICE OF PUBLIC HEARING ON PROPOSED AMENDMENTS TO THE GAINESVILLE ZONING MAP

Notice is hereby given that the **Gainesville City Council** will conduct a public hearing on **Tuesday, June 6, 2017 at 5:30 p.m.** in the **Gainesville Justice Center** (Municipal Courtroom at the Public Safety Complex), 701 Queen City Parkway in midtown Gainesville on the following requests:

- 1) Request from **Oak Hall Companies, LLC** to annex a 26.16 acres tract located east of Dawsonville Highway and on the north side of the intersection of Strickland Drive and Sportsman Club Road, with road frontage on Karen Lane (a/k/a **0 and 2209 Karen Lane; 2106, 2234 and 2242 Sportsman Club Road; and 2049 Strickland Drive**) and to establish zoning as Planned Unit Development (P-U-D).
Ward Number: One
Tax Parcel Number(s): 00-109-003-001, 004, 005; 00-109B-000-001, 002A and 036
Request: Active adult community

- 2) Request from **Oak Hall Companies, LLC** to annex a 50.81± acres tract located on the east side of Dawsonville Highway (S.R. 53), having road frontage on Dawsonville Highway, Ahaluna Drive, Skyview Drive and Strickland Drive (a/k/a **0 and 1758 Ahaluna Drive; 1508, 1550, 1740, 1746, 1758, 1760, 1934 and 1982 Dawsonville Highway; 300 and 301 Skyview Drive; 0, 2008 and 2016 Strickland Drive**) and to establish zoning as Planned Unit Development (P-U-D) and General Business (G-B).
 Ward Number: One
 Tax Parcel Number(s): 00-110-000-005 (part), 028, 032 (part) and 039; 00-110A-004-001 (part), 002A, 004 (part), 005 (part), 007 (part), 007A (part), 007X, 014 (part), 016 (part), 017 (part) and 018
 Request: Mixed-use development

- 3) Request from **Oak Hall Companies, LLC** to rezone a 157.98± acres tract located on the east side of Dawsonville Highway (S.R. 53), having road frontage on Ahaluna Drive, Skyview Drive, Strickland Drive, Lakeshore Circle, West Lake Drive and Karen Lane (a/k/a **0, 1264 and 1817 Ahaluna Drive; 1876 Dawsonville Highway; 2208 Karen Lane; 0 and 2029 Strickland Drive; 0 and 1489 West Lake Drive**) from Residential-I-A (R-I-A), Residential-I (R-I), Planned Unit Development (P-U-D) and Regional Business (R-B) to Planned Unit Development (P-U-D) and General Business (G-B).
 Ward Number: One
 Tax Parcel Number(s): 00-109B-000-003A; 00-110-000-001, 006, 030, 031, 034, 035, 036, 037 and 038; 01-110-001-006; 01-110A-004-022; 01-114-001-001, 026, 145 and 161
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- 4) Request from **Brightstone Transitions** to amend the existing Planned Unit Development (P-U-D) zoning on a 0.50± acre tract located at the east side of Green Street, across from its intersection with Forrest Avenue (a/k/a **446 Green Street, NE**).
 Ward Number: Four
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 Request: Group home and office

- 5) Request from **Montecito Development** to rezone a 0.48± acre tract located on the south side of Enota Avenue, west of its intersection with Thompson Bridge Road (a/k/a **149 Enota Avenue, NW**) from Office and Institutional (O-I) to Neighborhood Business (N-B), with a special use.
 Ward Number: Two
 Tax Parcel Number(s): 01-074-004-001
 Request: Convenience store with fuel pumps

- 6) Request from **Montecito Development** for a special use on a 0.80± acre tract located at the southwest side of the intersection of Enota Avenue and Thompson Bridge Road (a/k/a **1281 Thompson Bridge Road, NW**), having a zoning of Neighborhood Business (N-B).
 Ward Number: Two
 Tax Parcel Number(s): 01-074-004-020
 Request: Convenience store with fuel pumps

- 7) Request from **Gainesville Market, LLC** for a special use on a 5.0± acres tract located west of Shallowford Road within the Gainesville Market Shopping Center (a/k/a **600 Shallowford Road**), having a zoning of General Business (G-B).
 Ward Number: Five
 Tax Parcel Number(s): 01-119C-001-029
 Request: Commercial outdoor recreational facility

- 8) Request from **Manor Lake Development, LLC** for a special use on a 9.24± acres tract located on the northwest side of McEver Road, between Browns Bridge Road and Orchard Brook Drive (a/k/a **2900 McEver Road**), having a zoning of Office and Institutional (O-I) and Residential-I (R-I).

Ward Number: Four

Tax Parcel Number(s): 08-022-000-005

Request: Assisted living facility

- 9) Request from **Carriage North, LLC** for a special use on a 0.71± acre tract located on the southwest side of the terminus of Corporate Drive, west of Browns Bridge Road (a/k/a **2425 Corporate Drive**), having a zoning of General Business (G-B).

Ward Number: Five

Tax Parcel Number(s): 08-007-001-042

Request: Helipad

Additional information is available from the Community Development Department, Planning Division, by calling 770-531-6570.

NOTE: In accordance with Georgia law, anyone who wishes to express opposition to the proposed zoning action, and has made, within two years immediately preceding the filing of the proposed zoning action, campaign contributions aggregating \$250 or more to a local government official who will consider the application, shall file a disclosure of contribution(s) with the Planning Division at least five (5) days prior to the first reading of the proposed zoning action by the City Council. (OCGA § 36-67A-3 3 {c})

**GAINESVILLE PLANNING and APPEALS BOARD
RECOMMENDATION**

Applicant Oak Hall Companies, LLC

Property Owners America's Home Place, Inc.; West Ahaluna, LLC; Barry Conner, LLC; Soque, LLC; Olen Stephens

Location See below

Request Annex 50.81[±] acres with Planned Unit Development (PUD) and General Business (G-B) zoning

Request Rezone 157.98[±] acres from Residential-I-A (R-I-A), Residential-I (R-I), Planned Unit Development (P-U-D) and Regional Business (R-B) to Planned Unit Development (P-U-D) and General Business (G-B)

Total Acres 208.79[±] acres total

Ward One

Proposed Use Mixed-use, age-restricted community

Planning Division Staff Recommendation **Approval, with conditions**

Planning and Appeals Board Recommendation **Approval, with conditions**

Date May 9, 2017

▪ **Location**

50.81[±] acres annexation - 0 and 1758 Ahaluna Drive; 1508, 1550, 1740, 1746, 1758, 1760, 1934 and 1982 Dawsonville Highway; 300 and 301 Skyview Drive; 0, 2008 and 2016 Strickland Drive

157.98[±] acres rezoning - 0, 1264 and 1817 Ahaluna Drive; 1876 Dawsonville Highway; 2208 Karen Lane; 0 and 2029 Strickland Drive; 0 and 1489 West Lake Drive

▪ **Applicant's Proposal and Background Information**

A 110.9[±] acres portion of the subject property was annexed and rezoned in 2014 and 2015 to Planned Unit Development (P-U-D) and Residential-I-A (R-I-A) with conditions for a 199 lot single-family subdivision. The applicant at that time was West Ahaluna, LLC and the property has remained undeveloped.

The current proposal includes the annexation of 50.81[±] acres and the rezoning of 157.98[±] acres for a total of 208.79[±] acres. Of the total acreage, 185.02[±] acres will be zoned Planned Unit Development (P-U-D) and 23.77[±] acres zoned as General Business (G-B). Because the

proposal is a master planned mixed-use development, both the annexation and rezoning requests are being presented together.

The subject 50.81[±] acres portion of property is being considered for annexation with a zoning of Planned Unit Development (P-U-D) and General Business (G-B). The property is currently zoned Agricultural Residential-III (AR-III), Residential-II (R-II) and Highway Business (H-B) within unincorporated Hall County. Of the 50.81[±] acres, approximately 30.80[±] acres will be zoned P-U-D and 20.01[±] acres will be zoned G-B. The city limits are contiguous to the subject property to the north, south, east and west. The property contains numerous residential and commercial structures, out buildings and a cellular tower and has road frontage on Ahaluna Drive, Dawsonville Highway, Strickland Drive and Skyview Drive.

The subject 157.98[±] acres portion of property is being considered for rezoning from Residential-I-A (R-I-A), Residential-I (R-I), Planned Unit Development (P-U-D) and Regional Business (R-B) to Planned Unit Development (P-U-D) and General Business (G-B). This property is currently located within the city limits. Of the 157.98[±] acres, approximately 154.22[±] acres will be zoned P-U-D and 3.76[±] acres will be zoned G-B. The property contains mostly undeveloped land with the exception of four single-family homes and has road frontage on Ahaluna Drive, Dawsonville Highway, Karen Lane, Strickland Drive and West Lake Drive, and is west of the terminus of Lakeshore Circle.

The development proposes a master planned development designed as an “age in place” community. The applicant anticipates the residential portion of the development will be built-out over a period of 6 years from when the first land development permit is issued. The office and commercial component of the development will be constructed upon market conditions. A total of 790 residential units are proposed that will comply with applicable U. S. Department of Housing and Urban Development (HUD) rules for age-restricted communities. The mixture of housing proposed includes: 305 single-family detached homes; 79 single-family cottages; 81 detached terrace homes; 175 independent living units and 150 assisted living units which could include up to 30 memory care units. Therefore, 37% of the overall residential units for the entire development are located within the independent and assisted living facilities. Amenities are to consist of a swimming pool, club house, passive park and two community docks totaling 130 boat slips. A total of 68.0 acres or 37% of the development will be open green space.

Non-residential uses are to include a 40,000 square foot storage facility for residents within the community, 24,000 square feet of retail/office/restaurant space, seven commercial parcels each having approximately 8,000 square feet of building space and a 3.0 acres tract of land reserved for a 10,650[±] square foot fire station. Access is proposed from Dawsonville Highway, Ahaluna Drive and Strickland Drive. Some of the proposed development standards are listed below. A full description is provided with the application.

Residential

- Proposed Density: 4.43 units/acre
- Average home price: Single-family- \$400,000 to \$700,000; Terrace homes- \$300,000; Cottages- High \$200,000; Independent Living- \$2,800 to \$4,000 per month.
- Proposed Minimum House Size: 1,500 square feet of heated floor space for single-family detached homes; 500 square feet of heated floor space for single-family cottages; and 1,100 square feet attached / detached terrace homes.
- Building Materials: No vinyl or aluminum siding allowed. Exterior facade may include brick, stone, hard coat stucco, hardiboard or a combination thereof. Accent material

such as copper roofing, cedar shake, hardiboard or a combination of such materials may be used not to exceed 50% of the facade. Roofing materials may include cedar shake, architectural shingles or metal as appropriate to the architectural style of each home.

- Lot Width: Single-family detached homes - 40 feet (83± lots); 50 feet (126± lots); 60 feet (56± lots); 80 feet (40± lots).
- Unit Width: Cottage homes- Minimum 15 feet, Terrace homes- Minimum 24 feet.
- Maximum Height: Single-family detached- 40-feet; Cottage homes and Terrace homes- 30-feet; Independent Living, Assisted Living and Memory Care- 75-feet.
- Setbacks: Each unit will have a minimum of 18-feet of driveway from the back of the sidewalk to the building face or 20-feet from the back of the curb when there is no sidewalk.
Single-family detached- Front: 15-feet; Side: 3-feet; Rear interior lot: 10-feet; Cottages homes and Terrace homes – Front, Side and Interior Rear will have zero foot (0') lot lines; Minimum of 10-feet of building separation.
Independent Living, Assisted Living and Memory Care- Front: 40-feet; Side: 20-feet; 25-foot interior rear and 50-foot exterior rear.
- Water and Sewer: Provided by the City of Gainesville. When all phases are complete, water will be looped from Ahaluna Drive to Strickland Drive. Sewer will require several pump stations with gravity to Dawsonville Highway which has ample capacity.
- Streets: All interior streets and driveways are proposed to be publically owned and maintained. 50-foot right-of-way widths; 24-foot pavement widths; 4-foot wide sidewalks on at least one side of each residential road. It is intended that the side streets serving the cottages, terrace homes and the Independent / Assisted Living will be private.
- Parking: Each single-family detached home and terrace home will have a 2 car garage; Cottage homes will have surface parking for two vehicles.
- Garbage Pickup: Provided by the City of Gainesville.

Commercial

- Maximum building coverage: 70% of lot
- Maximum building height: 75-feet
- Minimum landscaped open space: 10%
- Minimum front landscape strip: 10-feet; Side and rear landscape strip: 6-feet
- Setbacks: Front: 40-feet from the right-of-way; Side: 10-feet; Interior rear: 25-feet; Adjacent to residential use: 50-feet
- Minimum Parking: City of Gainesville standards for use.
- Building Materials: Building exteriors not screened from view of a public right-of-way or any property line shall have an architectural treatment of brick, brick/frame, stone, stucco, or another architectural treatment approved by the Community Development Director.

▪ **Adjacent Land Use and Zoning**

The subject property is positioned near the northwestern edge of the city limits between Dawsonville Highway (S.R. 53) and Lake Sidney Lanier. The property fronting Dawsonville Highway (SR 53) is located within the Gateway Corridor Overlay Zone. Single-family homes and undeveloped land surround the subject property to its north, south and east, some of which are located off of Ahaluna Drive, Watauga Drive, Sportsman Club Road, Strickland Drive, Karen Lane and within the Lakeshore Heights Subdivision. These properties are zoned Residential-I (R-I) within the City of Gainesville and Agricultural Residential-III (AR-III), Residential-I (R-I) and

Vacation Cottage (V-C) within Hall County. There are also single-family homes to the west located off Skyview Place in the City zoned Residential-I (R-I) as well as Skyview Lane and Skyview Drive zoned Agricultural Residential-III (AR-III) in the County.

Commercial properties can be found to the north, south and west located along Dawsonville Highway. These properties include various retail stores, restaurants, convenience store/gas station, mini warehouses, boat sales, boat dock manufacturing and multi-family apartments. These properties are zoned Highway Business (H-B) within Hall County and General Business (G-B), Regional Business (R-B), Residential-II (R-II) and Planned Unit Development (P-U-D) within Gainesville. Recent significant development includes the Northlake Square shopping center and several outparcel developments located to the south zoned General Business (G-B) within the City of Gainesville.

▪ **Traffic Impact Study Summary**

A Traffic Impact Study was completed for the proposed development on January 24, 2017 and later revised on April 7, 2017 by Marc R. Acampora, PE, LLC Traffic Engineering. Most of the traffic counts were collected on Thursday, November 17, 2016 from 7:00 A.M to 9:00 A.M. and from 4:30 P.M. to 6:30 P.M. The counts at the North Lake Square entrance were collected on Wednesday, March 22, 2017. The magnitude of the side street volumes were found to be very comparable with the counts performed for this current study, and generally slightly higher. However, the volumes on the major streets were consistently notably higher for this current study. Historic Georgia DOT 24-hour traffic counts were also collected in the vicinity from the year 2015. The annual daily traffic volume on SR 53 north of Sportsman Club Road was 25,600 vehicles per day. The entire project is expected to generate 189 new trips in the a.m. peak hour, 274 new trips in the p.m. peak hour, and 3,387 new trips during a 24-hour weekday. The study extended one mile from the limits of the proposed site and included the following ten intersections:

1. Sportsman Club Road at Strickland Drive
2. Dawsonville Highway at Sportsman Club Road
3. Dawsonville Highway at Avonlea Way
4. Dawsonville Highway at Canterbury Road
5. Dawsonville Highway at Ahaluna Drive
6. Dawsonville Highway at North Lake Square Shopping Center Entrance
7. Dawsonville Highway at Beechwood Boulevard
8. Dawsonville Highway at McEver Road
9. Dawsonville Highway at Green Hill Circle
10. Dawsonville Highway at Shallowford Road

A summary of the study revealed that future operations, upon the project being fully constructed and operational, at the below intersections would have extremely heavy traffic flows rated LOS F. LOS "F" is a condition of extremely heavy flow, with frequent stoppage and very slow speeds. Traffic is unstable and often comes to a complete halt. These intersections include:

1) A.M. and P.M. peak hour southbound approach at Dawsonville Highway at Sportsman Club Road; 2) A.M. and P.M. peak hour eastbound and westbound left turn at Dawsonville Highway and Avonlea Way; 3) A.M. and P.M. peak hour eastbound and westbound left turn at Dawsonville Highway and Canterbury Road; 4) A.M. and P.M. peak hour westbound approach at Dawsonville Highway and Ahaluna Drive; 5) A.M. and P.M. peak hour eastbound left turn at Dawsonville Highway and Beechwood Boulevard; 6) P.M. peak hour northbound Dawsonville

Highway at McEver Road; 7) A.M. / P.M. peak hour eastbound approach at Dawsonville Highway and McEver Road; 8) P.M. peak hour westbound approach at Dawsonville Highway at Green Hill Circle; and 9) P.M. peak hour eastbound approach at Dawsonville Highway and Shallowford Road.

The summary of findings and recommendations of the study are as follows:

Sportsman Club Road at Strickland Drive

No changes are recommended at this intersection for the existing, no-build, or Future Phase One and Future Phase Two conditions.

Dawsonville Highway at Sportsman Club Road

The side street delays at this intersection are significant now and will increase in the future. 1) While a warrant analysis was not performed as part of this traffic impact study, the low side street volumes make the intersection an unlikely candidate for signalization. The potential for justifying signalization will increase in the future, but side street volumes will continue to remain moderate. 2) This study also identifies the need for a northbound exclusive right turn lane to be added on GA 53 at Sportsman Club Road. Northbound and southbound exclusive left turn lanes are currently provided at this median break.

Dawsonville Highway at Avonlea Way

Side street delays are high at the existing eastbound approach of Avonlea Way, and these delays will increase in the no-build and future conditions. The side street volumes are predominately right turners, with extremely low left turn volumes. 1) The Lanier Tract will introduce a new fourth leg at the Avonlea Way intersection (there is an existing private residential driveway at this median break, which would be replaced by the Lanier Tract access). Northbound and southbound exclusive left turn lanes are currently provided at this median break. The volumes exiting the new Lanier Tract access will be low and many of them will be right turners. Therefore, this intersection is considered unlikely to be a candidate for signalization in the existing, no-build, and Future Phases One and Two, even with the addition of the Lanier Tract trips. 2) The Georgia DOT right turn lane analysis suggests that a northbound exclusive right turn lane should be considered at this access and the site plan includes the addition of this lane. 3) The new site access should be constructed with one entering lane and one exiting lane. 4) The side street approach exiting the site should be controlled by side street stop sign and accompanying stop bar.

Dawsonville Highway at Canterbury Road

Side street delays are high on the existing eastbound approach of Canterbury Road and these delays will increase in the no-build and future conditions. As with Avonlea Way, the side street volumes at this intersection are predominately right turners, with extremely low left turn volumes. For this reason, this intersection is considered an unlikely candidate for signalization in the existing, no-build, and Future Phase One conditions. The outparcel access will align with Canterbury Road and the Lanier Tract will connect through the outparcels to GA 53 at this location. Northbound and southbound exclusive left turn lanes are currently provided at this median break. A short southbound deceleration lane is provided on GA 53 at Canterbury Road, though this lane does not appear to have been constructed to current Georgia DOT design standards. The northbound right turn volume will be low in the Future Phase One condition, and the Georgia DOT right turn lane analysis indicates that no decel lane will be required for Future Phase One. 1) However, with the future development of the retail outparcels, by others, the right turn volumes will be significant, primarily due to the outparcels, and a northbound deceleration lane is recommended for this location. The Future Phase Two side street volumes exiting the

outparcels will be notable and this intersection will likely be a prime candidate for signalization upon development of the outparcels. 2) It is recommended that at such time as the outparcels are planned to be developed, a signal warrant study be performed for this intersection according to the standards set forth in the Federal Highway Administration's *Manual On Uniform Traffic Control Devices* (MUTCD). 3) This new access at the Canterbury Road median break should be constructed with at least one entering lane and an exiting shared left/through lane and an exclusive right turn lane. The two westbound lanes are in anticipation of the development of the outparcels. With only the Lanier Tract volumes, only one entering and one exiting lane would be required. 4) Until signalization is warranted, the side street approach exiting the outparcel tracts should be controlled by side street stop sign and accompanying stop bar.

Dawsonville Highway at Ahaluna Drive

1) The review of Georgia DOT auxiliary lane standards indicates that a northbound right turn lane should be added on GA 53 at Ahaluna Drive in the existing condition. 2) The future volumes exiting Ahaluna Drive would benefit from the addition of a second westbound lane, resulting in a shared left/through lane and an exclusive right turn lane on Ahaluna Drive at GA 53. This second lane would reduce the demand for side street green time on the signal and improve side street levels of service. It was noted that the need for relocation of the signal steel strain pole, a drainage structure, and possibly a large brick monument sign, may reduce the feasibility of adding this second westbound lane. 3) With the addition of Lanier Tract DRI southbound left turns, consideration should be given to adding a protected / permissive southbound left turn phase, which would match the existing protected / permissive phasing for the northbound left turn. The Georgia DOT left turn phase warrants are not satisfied for this southbound left turn based on volume projections alone. However, other factors such as high speeds on GA 53 and the senior residents expected to reside at the Lanier DRI, merit consideration. 4) Field observations suggest that there may be an opportunity to shorten the cycle length, which would reduce time spent by vehicles waiting on the side street.

Dawsonville Highway at North Lake Square Access

This intersection operates acceptably in all analysis conditions. The side street approaches do incur some delays at all times, primarily due to the long cycle length on the signal, which allocates most of the green time, appropriately, to GA 53. The side street delays are incurred by minimal volumes in the a.m., since the retail served by the side streets are generally not operational at that time. Higher volumes incur the side street delays in the p.m., when the retail is operational. However, overall this intersection operates appropriately and no mitigation is recommended for any analysis condition.

Dawsonville Highway at Beechwood Boulevard

At the GA 53 / Beechwood Boulevard intersection, it is noted that a fourth leg is currently stubbed-out across from Beechwood Boulevard and a retail development is under construction on that site. Auxiliary left and right turn lanes are provided on GA 53 serving Beechwood Boulevard and the future fourth leg appears to be designed for right-in / right-out access only, with a northbound deceleration lane provided on GA 53. No other changes are recommended at this intersection based on this study.

Dawsonville Highway at McEver Road

The lane configuration and signal phasing at this intersection are generally appropriate. 1) The existing southbound right turn volume is sufficiently-high (828 a.m., 481 p.m.) to merit consideration of the addition of a second exclusive right turn lane and/or the addition of a protected right turn overlap phase. The justification for adding this phasing and/or second right

turn lane will increase as volumes increase. 2) Finally, there may be an opportunity to reduce the cycle length and fine-tune the signal timing at this intersection.

Dawsonville Highway at Green Hill Circle

This signalized intersection incurs high side street delays, again, due to the allocation of the majority of green time to the Dawsonville Highway approaches. 1) There may be an opportunity to reduce the cycle length and fine-tune the signal timing at this intersection.

Dawsonville Highway at Shallowford Road

The lane configuration and signal phasing are appropriate for this intersection. 1) Reduction of the cycle and optimization of the allocation of green time could reduce delays and queuing at this intersection.

▪ **Other Departmental Comments**

According to the Georgia Department of Transportation, the applicant will need to coordinate with GDOT since this develop will impact the State Route System.

The Gainesville Public Works Department has recommended additional transportation improvements which are stated within the traffic zoning conditions listed below.

The Gainesville Department of Water Resources states that the City currently has adequate water and sanitary capacity for the proposed development. The developer will be required to construct extensions for both water and sanitary sewer to connect the existing City facilities, along with pump stations required for areas of the development unable to utilize gravity sanitary sewer for conveyance.

The Gainesville Police Department's primary concern will be the increased traffic accidents from the additional cars on the Dawsonville Highway corridor.

A Development of Regional Impact Study (DRI #2638) was submitted for this development. Upon review of the proposal, the Georgia Mountains Regional Commission states that the proposal does not present any potential adverse inter-jurisdictional impacts, assuming the project will be in compliance with State and local regulations and the Gainesville-Hall Metropolitan Planning Organization.

▪ **Zoning History**

The following zoning actions have taken place in the immediate area during the last ten years:

2015 – A request by West Ahaluna, LLC to annex a 8.74± acres tract with a zoning of Residential-I-A (R-I-A) located at 0 and 1264 Ahaluna Drive was conditionally approved for no proposed use.

2014 – A request by West Ahaluna, LLC to annex a 70.23± acres tract with a zoning of Planned Unit Development (P-U-D) located at 0 and 1817 Ahaluna Drive; 1982 Dawsonville Highway; 2208 Karen Lane; 2008, 2016 and 2029 Strickland Drive was approved with conditions. In addition, the same applicant requested to rezone a 31.93± acres tract located at 0 Ahaluna Drive NW and 1489 West Lake Drive NW from Residential-I (R-I) to Planned Unit Development (P-U-D) was also approved with conditions for a 199-lot single-family subdivision.

2013 – A request by America's Home Place, Inc. to rezone a 25.11± acres tract located at 0 and 1198 Dawsonville Highway; 1232 Ahaluna Drive and 1162 Lakeshore Circle from Residential-I

(R-I), Residential-II (R-II) and Office and Institutional (O-I) to General Business (G-B) zoning for a commercial shopping center was approved with conditions.

2012 – A request by America's Home Place, Inc. to rezone a 4.711± acres tract located at 0, 1122, 1138, 1162 and 1198 Dawsonville Highway from Residential-II (R-II), Office and Institutional (O-I) and General Business (G-B) to General Business (G-B) zoning for retail, restaurant and vehicle service uses was approved with conditions.

2011 – A request by Kauffman Tire Inc. for a special use within Regional Business (R-B) zoning on a 1.19± acres tract located at 801 & 805 Dawsonville Highway was approved with conditions for an automotive tire and service store.

2010 – A request by Bill Dupree to annex a 7.11± acres tract with General Business (G-B) zoning and rezone a 2.44± acres tract from Residential-II (R-II) to General Business (G-B) located at 0, 1293, 1297 and 1139 Dawsonville Highway was approved with conditions for a business center with retail, office and restaurant uses.

▪ **Staff Analysis**

(1) Is the proposed use suitable in view of the zoning and development of adjacent and nearby property?

The proposed mixed-use development is suitable based on the surrounding uses. The subject property is located adjacent to both residential and commercial uses with zonings of Agricultural Residential-III (AR-III), Residential-I (R-I), Vacation Cottage (V-C), Planned Unit Development (P-U-D), Highway Business (H-B), General Business (G-B) and Regional Business (R-B). Much of the development within the immediate area has included significant commercial growth with some limited new housing.

(2) Will the proposed use adversely affect the existing use or usability of adjacent or nearby property?

The subject property is currently zoned and approved for residential and commercial purposes. The proposed development is master planned and proposes more residential housing.

Given the size of the property, it is expected the proposed mixed-use development will have impacts to traffic movements along Dawsonville Highway which are currently strained during the holiday period and certain peak times. As the proposed development becomes built out over time, additional traffic will slow turning movements at some nearby Dawsonville Highway intersections. Transportation improvements as identified within the traffic study and zoning conditions will be necessary to help reduce negative impacts to Dawsonville Highway and nearby intersections. Of note, with the proposed residents being mostly age restricted, the traffic created is typically less than if proposed as a traditional subdivision.

In addition, due to the proposed developments proximity to Lake Lanier, environmental impacts should be properly mitigated through improved storm water measures. Sedimentation ponds and bioretention areas will be required within the development to help protect the lake. In addition, the Corps of Engineers will require the applicant to install rip rap to protect the shoreline near the proposed two community boat docks due to the additional boat traffic.

(3) Is the proposed use compatible with the purpose and intent of the Comprehensive Plan?

The Gainesville Future Development Map places the subject property within the *Low-Medium Density Residential* land use category and the *Mixed Use General* land use category. The *Low-Medium Density Residential* land use category includes areas containing or planned for single-

family detached or semi-detached housing at densities up to 4.0 dwelling units per acre. The proposal has a density of 4.27 dwelling units per acre for the 185.02± acres portion of property to be zoned Planned Unit Development (P-U-D). The *Mixed Use General* land use category includes areas containing or planned for a mixture of land uses including office, neighborhood retail, and residential.

The subject property is also located within the *Suburban Residential* and *Suburban Commercial* Character Areas. The goal of this character area is to preserve older, stable residential subdivisions and encourage newer projects with smaller lot sizes, pedestrian infrastructure, and buildings patterned after traditional local housing, possibly containing a small neighborhood-serving “village center”. Mixed-use neighborhood design is desired but not required. In areas where natural features or sensitive environments are important, cluster housing or conservation subdivision design may be appropriate. Community access points and shoreline restoration are encouraged as part of future development on greenfield parcels between Dawsonville Highway and Lake Lanier. Land uses allowed within the *Suburban Residential* area include low-density residential, medium density residential, multi-family residential, public / institutional, commercial, and parks / recreation / conservation and mixed use.

The *Suburban Commercial* area will continue to grow as a regional retail center for the City and Hall County, but should diversify over time to include multi-family housing and a higher-density mix of retail, office, services and high-quality employment. In addition, expanding premium retail could offer a variety of shopping options that are currently not available elsewhere in the City. As it grows, the area will become one of the most prominent commercial corridors and gateways into the City, and a thriving economic anchor for the northwest side. When development occurs, adequate buffers should be maintained around development to protect watersheds and sensitive environments. Land uses allowed within the *Suburban Commercial* area include commercial, public / institutional, multi-family residential and mixed use.

(4) Are there substantial reasons why the property cannot or should not be used as currently zoned?

The subject property is currently zoned for single-family and commercial purposes and could be developed as such. It is estimated that a total of 341 residential homes could be constructed within the entire development based on the existing zoning in the City and County. However, water and sewer services are necessary in order to develop the subject property for the desired use and density. Due to the amount of undeveloped land and green space, the subject property should be carefully planned as opposed to developed piecemeal. Master planned communities typically provide for better uniformity and higher development standards such as building quality, connectivity, common space, landscaping, environmental protection and services that would otherwise not be provided to the residents.

(5) Will the proposed use cause an excessive or burdensome use of public facilities or services, including but not limited to streets, schools, water or sewer utilities, and police or fire protection?

The subject property and surrounding development currently utilizes City water and sewer services and there is sufficient capacity to serve the development. Water and sewer extension to the development will be required.

As listed in the above summarized Traffic Impact Study for this project, the entire project will generate 189 new trips in the a.m. peak hour, 274 new trips in the p.m. peak hour, and 3,387 new trips during a 24-hour weekday. The improvements as identified within the study and the proposed zoning conditions are strongly recommended by staff to help mitigate some of the traffic concerns.

Existing public safety services respond to the adjacent and nearby properties. Gainesville Fire Station #1 is located approximately 3.2 miles away from the furthest proposed residential lot. As well, Hall County Fire Station #13 off of Sardis Road is also located approximately 3.4 miles away. Gainesville and Hall County currently have an “automatic aid” agreement for emergency services that was first established in 1997. The agreement allows the agency that is closest to an incident to respond despite municipal boundaries. Regardless, the amount of proposed single-family homes will put additional strain on fire services due to the subject properties proximity to the existing city limits which could impact the City’s ISO rating. However, a 3.0 acres tract of land is planned for a future City fire station which would front Dawsonville Highway.

According to the Gainesville Police Department, increased traffic accidents from the additional cars on the Dawsonville Highway corridor are a primary concern.

No impacts to the school system are expected as the development is an age restricted community. Of note, a portion of the subject property was previously approved for 199 homes which were not age restricted. No comments or concerns were received by the school system regarding this request.

(6) Is the proposed use supported by new or changing conditions not anticipated by the Comprehensive Plan or reflected in the existing zoning on the property or surrounding properties?

It is staff’s opinion that proposed mixed-use is consistent with the Gainesville Comprehensive Plan but the number of units should be reduced to be within density range. The property is located within a residential area between Dawsonville Highway and Lake Lanier, and is near Gainesville’s most active regional commercial corridors. Existing uses along Dawsonville Highway south of the bridge consists of mostly commercial in nature excluding a few large apartment complex developments (Park Creek, Carrington Park and Lake Lanier Club), and some isolated single-family homes within Hall County. Numerous properties fronting this segment of Dawsonville Highway have been developed for non-residential purposes over the past 15 to 20 years. Some examples of this include the Northlake Square shopping center, Carrington Park retail center, Village Shoppes of Gainesville, Home Depot, Best Buy, McEver Corners shopping center, Texas Roadhouse, Olive Garden, Cheddar’s, Buffalo Wild Wings and a child day care facility. A 94-room Holiday Inn Express is currently under construction behind the Cheddars restaurant.

The proposed mixed-use development appears to be of high quality and would serve as an appropriate transitional use for the area between Dawsonville Highway and the residential uses adjacent to Lake Lanier. As well, the proposal will provide for additional shopping opportunities and a mixture of housing needed within Gainesville that will further help sustain the Dawsonville Highway corridor.

(7) Does the proposed use reflect a reasonable balance between the promotion of the public health, safety, morality, or general welfare and the right to unrestricted use of property?

Due to the subject property’s proximity to existing residential and commercial land uses, the proposed mixed-use development, with the recommended conditions of zoning appears to promote a reasonable balance between the interests of the City, the property owner, and neighboring residents and property owners.

▪ **Staff Recommendation**

The Planning Division staff is recommending **conditional approval** of the proposed annexation and rezoning request based on the Comprehensive Plan and the adjacent residential and non-residential land uses.

Conditions

Development Standards

1. The development standards within the applicant's narrative, concept plan and architectural renderings shall be made part of the zoning ordinance, and shall be subject to the Community Development Director approval. Any zoning conditions adopted as part of this zoning ordinance that conflict with the applicant's narrative, concept plan and architectural renderings shall take precedence over the applicant's development standards.
2. Prohibited commercial uses shall include motels or hotels with rooms accessed from the exterior of the building, adult novelty stores, adult entertainment centers, pawn shops, gas stations, tire stores, massage parlors except for practitioners licensed by the State of Georgia, vaping stores, auto body shops, automobile sale establishments, marine sales or repair stores, automated or non-automated car wash, coin-laundry facilities, truck stop, tattoo parlors, psychics, fortune tellers, clairvoyants and the like.
3. The applicant's revised concept plan and narrative proposes a total of 790 senior residential units. The total number of residential units approved for the development shall not exceed 770 senior residential units. The reduction of 20 residential units may occur anywhere within the development. However, a minimum of 10 residential units shall include single-family homes, cottages and terrace homes with frontage along Ahaluna Drive and adjacent to existing single-family properties located off of Karen Lane, Watauga Drive and West Lake Drive.
4. The development shall comply with applicable U. S. Department of Housing and Urban Development (HUD) rules for age-restricted communities. The organization established for the management of the development shall comply with HUD rules for verification of occupancy and shall maintain procedures for routinely determining the occupancy of each unit. Such procedures may be part of a normal leasing or purchasing agreement and must provide for regular updates as required by HUD.
5. All proposed single-family detached homes shall have a minimum front yard setback of 20-feet as measured from the right-of-way line and shall have a minimum distance of 10-feet between houses. Additionally, all cottages with frontage along Ahaluna Drive shall have a minimum front yard setback of 20-feet as measured from the right-of-way line and shall have a minimum distance of 10-feet between houses. The lots that back up to existing residences located off of Karen Lane, Watauga Drive and West Lake Drive shall have minimum 20-feet rear setbacks.
6. The following buffer standards shall be required:
 - a. A minimum 20-foot wide buffer shall be required for all proposed single-family detached homes, cottages and terrace homes where adjacent to existing single-family homes.

- b. A minimum 50-foot wide buffer shall be required for the assisted living facility, independent living facility and commercial uses when adjacent to existing single-family homes.
 - i. The exterior 25-feet of this buffer must be undisturbed, except where disturbance is required for erosion control, storm water management or the installation of utilities.
 - ii. The interior 25 feet of this buffer may be graded and replanted.
 - c. A minimum 25-foot wide buffer shall be required for the assisted living facility, independent living facility and commercial uses when adjacent to proposed single-family homes within the development. The 25-foot buffer may be located at any location between such structures, including without limitation, at a location where the common boundary line between the respective uses is within the 25-foot buffer.
 - d. The proposed storm water facilities shall be buffered from all existing homes and proposed uses. The buffer shall contain a mixture of evergreen and deciduous trees.
 - e. Any additional plantings required will be in accordance with City of Gainesville's Buffer Standards as determined by the Community Development Director.
- 7. The minimum heated floor space for the single-family detached homes shall be no less than 1,800 square feet. The minimum heated floor space for the single-family cottages and terrace homes shall be 1,000 square feet.
 - 8. Covenants shall be put in place by the developer restricting against the parking of boats, trailers, and campers within driveways.
 - 9. The proposed amenity clubhouse and storage facility shall include a minimum 3:12 roof pitch and exterior facade materials shall be similar in architecture to the proposed single-family homes.
 - 10. A Uniform Sign Plan as identified within Section 9-18-7-4 of the Unified Land Development Code shall be required from the developer and is subject to approval by the Gainesville Community Development Director. All signs associated with residential uses shall be limited to indirect lighting. All signs shall be located outside of utility areas and shall not block visibility of vehicular traffic.
 - 11. The proposed erosion control and water quality measures for the development shall at minimum meet the Georgia Storm Water Management Manual requirements. Storm water management for the development must provide water quality treatment for no less than 110% of the State required treatment volume. The City of Gainesville shall approve the final design of all water quality measures.
 - 12. The 3.0 acre parcel labeled as "Fire Station Parcel" on the applicant's concept plan submitted with this application shall be deeded to the City of Gainesville within one year of the effective date of this zoning ordinance for the future construction of a City of Gainesville fire station. All costs associated with deeding the property shall be at the full expense of the developer. Architectural design for the fire station must be approved by both the City of Gainesville and the developer, and shall be substantially similar with residential and commercial standards submitted with the application.
 - 13. No more than 10% of the units within the proposed indoor storage facility may be leased to non-residents of the proposed development.

Transportation / Traffic

14. Prior to the issuance of a land disturbance permit, the developer shall provide a signal warrant analysis be performed per Georgia Department of Transportation (GDOT) standards for each of the following two intersections:

- a. Dawsonville Highway (SR 53) at Avonlea Way and the new access road; and**
- b. Dawsonville Highway (SR 53) at Canterbury Road and the new access road. The design of the signal warrant analysis should account for the probability that GDOT will not approve a signal at this location and should evaluate the intersection for an R-CUT design at the median break. If a traffic signal is approved by GDOT, improvements for a traffic signal at the intersection will require approval of the Gainesville Public Works Director and GDOT Traffic Operations Office.**

All costs associated with the signal warrant analysis study, and if warranted by such study, any costs associated with the installation of a traffic signal and intersection improvements shall be at the full expense of the developer.

15. The developer shall perform the following traffic improvements identified within the Summary of Study Findings and Recommendations as stated within the revised Traffic Impact Study, dated April 7, 2017, for the proposed development:

- a. Dawsonville Highway (SR 53) at Avonlea Way and the new access road to include a northbound exclusive right turn lane to be added on Dawsonville Highway (SR 53) turning into new site driveway and the inclusion of one entering lane and one exiting lane for the new site access to be controlled by side street stop sign and accompanying stop bar; and**
- b. Dawsonville Highway (SR 53) at Canterbury Road and the new access road to include a northbound exclusive right turn lane to be added on Dawsonville Highway (SR 53) turning into new site driveway and the inclusion of one entering lane and one exiting lane for the new site access to be controlled by side street stop sign and accompanying stop bar.**

The developer shall coordinate these improvements with GDOT and the Gainesville Public Works Director prior to permitting. The Gainesville Public Works Director and GDOT shall have the final determination of the time line of these improvements based on the developer's proposed construction schedule. All costs associated with the improvements shall be at the full expense of the developer.

16. Prior to the issuance of a land disturbance permit for the Planned Unit Development (P-U-D), the developer shall evaluate, design and construct the left turn lanes on Dawsonville Highway (SR 53) to meet GDOT storage and design requirements at Avonlea Way and the new site driveway at Canterbury Road. Prior to the issuance of a land disturbance permit for the commercial development zoned General Business (G-B), the developer shall evaluate, design and construct the left turn lanes on Dawsonville Highway (SR 53) to meet GDOT storage and design requirements. If the existing left turn lane at this location meets these requirements, this condition will be deemed satisfied.

17. Developer consents to pay \$425,000.00 to be used solely for the purpose of making roadway improvements along Dawsonville Highway (SR 53) from McEver Road (SR 53) to Ahaluna Drive. In this regard, the developer shall deposit \$100,000.00 upon

issuance of the initial land disturbance permit for the Planned Unit Development (P-U-D), and annually thereafter an additional \$100,000.00 until the full \$425,000.00 is paid in full (provided, the fourth and final payment will be for \$125,000.00). All such payments will be deposited into an escrow account at a financial institution chosen by the City of Gainesville. The City of Gainesville shall choose an escrow agent, who shall be authorized to disburse the funds to the City of Gainesville as said funds are needed to make roadway improvements along Dawsonville Highway (SR 53) from McEver Road (SR 53) to Ahaluna Drive. The amount as stated above is based on the cost estimate previously provided by the City of Gainesville to the developer for roadway improvements in addition to those improvements referenced elsewhere in the zoning conditions affecting the property that is the subject of the zoning application.

18. Prior to the issuance of a land disturbance permit, the intersection of Strickland Drive, Karen Lane and the new access road to the proposed development shall be redesigned to include realignment similar to what is shown on the revised concept plan for better traffic circulation, and to meet current roadway design criteria. The improvements shall be completed prior to permitting direct access from the development onto Karen Lane and Strickland Drive and prior to the construction of the most northern Pod of terrace and cottage homes. All costs associated with the improvements shall be at the full expense of the developer.
19. Prior to the issuance of a land disturbance permit, the developer shall seek verification from Hall County to determine whether or not any improvements will be required to the intersection of Sportsman Club Road and Strickland Drive.
20. All new streets shall meet the standards within the current Gainesville Unified Land Development Code. These same standards shall be required for the segment of Ahaluna Drive starting at the north side of the existing power line easement and adjacent to the entrance of the terrace homes, and shall extend in a northeasterly direction south of Watauga Drive where the city limits terminate. The remaining portions of Ahaluna Drive within the city limits shall meet the City of Gainesville Standards excluding the requirements of curb and gutter. All other residential uses, amenities, office and commercial areas shall provide for pedestrian connectivity throughout the development. All costs associated with the improvements shall be at the full expense of the developer.
21. Prior to the issuance of a land disturbance permit, the developer shall seek approval from the City of Gainesville and the Corps of Engineers to improve the existing Ahaluna Drive cul-de-sac to provide for better turn around for emergency and utility vehicles. If approved, curb and gutter and sidewalks shall be extended to the Ahaluna Drive cul-de-sac. All road and traffic improvements to Ahaluna Drive shall be at the expense of the developer and shall meet the standards within the current Gainesville Unified Land Development Code prior to acceptance. All cul-de-sacs constructed or modified as part of the development will be positioned (subject to Corps of Engineers, and City of Gainesville approval, as needed) on the west side of the road, in approximately the current location of the existing cul-de-sac but positioned in a way that would minimize the impact to the lots on the east side of the road. The final design shall require approval from the City of Gainesville.

22. There shall be no driveways from individual homes allowed onto Ahaluna Drive for lots that have road frontage on any new proposed interior street. There shall be no driveways from individual homes allowed onto Karen Lane or Strickland Drive.
23. There shall be no access allowed onto West Lake Drive and Skyview Drive.
24. The proposed commercial, retail and office outparcels shall provide inter parcel connectivity to one another.

Excerpts from the May 9, 2017 Planning and Appeals Board Meeting Minutes

Applicant Presentation: Ethan Underwood, stated he was an attorney with Miles Hansford & Tallant, LLC located at 202 Tribble Gap Road, Suite 200, in Cumming. He stated they were excited about the project because while it is a big change, people will look back on it in 10 years and say it was the right thing to do. Mr. Underwood used a Power Point Presentation to explain the project. Overall the project is about 235 acres, with part of it being in Hall County which they are requesting to come into the City of Gainesville. He stated they are asking for 20 acres of the development to be zoned as General Business, noting it is already zoned as such in Hall County and could be developed for commercial uses now but they want to come into the City. The 26 acres portion is already approved in the County for 95 units and they are proposing to reduce that to 90 units in the City. The remainder of the acreage is proposed for different housing types which include single-family detached residential, single-family cottages, detached terrace homes, townhouses and for-rent residential units for independent living, assisted living and memory care. The land for the zero-lot line residential units (cottages and terrace homes) will be maintenance free and managed by a homeowners association so they do not have to maintain yards. The 90 units to the north within the 26.16± acres portion are proposed as townhomes.

Mr. Underwood stated they are proposing a total of 880 units, however, 325 of those units would be within the independent living, assisted living, and memory care community. He stated this would be the fourth such community the developer has completed, with others being in Peachtree City, Canton and Cumming. The monthly cost to live in the assisted living/memory care would range from \$3,500 to \$4,000 per month which is all inclusive with meals, rent and utilities, noting some have found it less expensive than paying bills and mortgages. Property taxes and school taxes will be paid on these units since there will be a landlord who is not exempt from those taxes.

Mr. Underwood stated there would be high quality commercial use as they have agreed to certain development standards and certain prohibited uses. The developer has also agreed to donate 3 acres for a new fire station, with the City having the final decision on the architectural design. In regards to economic impact, at full build out, the project is expected to bring almost 1.7 million in property taxes to the City alone. They are also estimating almost another half million in additional sales tax. In their conservative estimation, this would generate over \$400,000 per year in net revenue as they do not anticipate the residents would require as much services as typical residents. One time impact fees are estimated at nearly 2 million.

Mr. Underwood acknowledged the elephant in the room was traffic. He stated the subject property is already zoned for about 200 non age restricted homes which would bring more traffic than an age restricted development, noting the residents would typically be on the road less often and during non-peak drive times. He stated they completed a traffic study and some people had questioned the methodology of the study because they used Georgia Department of

Transportation (GDOT) numbers which are projections and they wanted the requests to be postponed again to do further study. However, they used the methodology as requested by the Georgia Mountains Regional Commission (GMRC), GDOT and the City of Gainesville. He stated that even if they did a real time study, the recommendations that come back would not have different results because there is no plan to make Dawsonville Highway a six lane highway so the only options are to make intersection improvements, traffic light improvements and contributions from the developer to make the necessary improvements. They have agreed to make improvements at Canterbury Road, Avonlea Way, Sportsman Club Road, Strickland Drive and Karen Lane. Mr. Underwood confirmed that Tad Braswell with Oak Hall Companies, LLC has agreed to the conditions as proposed by staff which includes the following traffic improvements: 1) Signal warrant studies at the intersections of Dawsonville Highway with Canterbury Road, Avonlea Way and Sportsman Club Road. If a signal is warranted, the developer will absorb that cost; 2) Turn lane improvements at the intersections of Dawsonville Highway and Canterbury Road, Avonlea Way and Sportsman Club Road. If those improvements are warranted, the developer will absorb that cost; and 3) Road improvements to Ahaluna Drive and Strickland Drive will also be completed and paid for by the developer as they will have to be widened and straightened which will make them much safer roads. The developer has also agreed to make a \$425,000 contribution to make road improvements along Dawsonville Highway from McEver Road to Ahaluna which is located south of the proposed development. However, they are taking responsibility of the traffic because they want to be a good neighbor and we are all in this together because you can't sell houses to angry neighbors because of traffic.

In conclusion, Mr. Underwood stated the property is already zoned for 200 single-family homes and General Business uses along the corridor, so something is coming to the area and the question is, what something do you want there? He felt the age restricted community is the right something because it will be a lower impact development, schools will not be affected even though residents will be paying taxes, and drive time will have a much lower impact than folks with young families. There will be a positive economic impact for the City, traffic improvements made in the area which otherwise would not be completed, and property donated for a new fire station. He asked to reserve time for questions and rebuttal.

FAVOR: **Carl Simmons, Jr.**, 2322 Sportsman Club Road, stated he did not want to be annexed into the City and complained he could not go down Dawsonville Highway on Friday evenings because of the restaurant traffic. He suggested a bypass to avoid the area. He stated he was all for progress and didn't care what they did with the subject property but asked the Board not to hurt others to improve the developer's pockets.

OPPOSE: **Clyde Morris**, 2375 Whippoorwill Lane, in Hall County, stated he was speaking on behalf of a large contingency of residents who live within the Dawsonville Highway corridor and asked them to stand. There were approximately 75-100 people who stood in opposition. He stated their concerns were focused on traffic since they already experience gridlock at times, noting it takes 25 minutes to get from Sportsman Club Road to Home Depot at times which should only take 2 or 3 minutes. They have studied the information available from all traffic studies by GDOT, Oak Hall and the City, and have re-analyzed it to determine what is wrong because it shows far too few vehicle trips. They concluded the data is defective which projects a 2% growth rate in traffic instead of a 9.8% growth rate which is more accurate in his opinion. Traffic has become significantly worse over the past year or year and a half since Northlake Square opened. The Oak Hall traffic study projected an additional 3,387 trips per day and he believed it should be 6,000 trips per day. Also, 3,260 trips per day will be added by the commercial component which is believed to be constructed about the same time. Mr. Morris

believed the entire development, when completed, would generate 9,000 to 10,000 trips per day which would be catastrophic in his opinion. Mr. Morris stated they did not intend to disparage the development or the company and was sure they are reputable and put out a good product. They are asking the Board to consider the impact on traffic and the quality of life for those living in this corridor. He stated as of today, two studies are being planned or underway, one by Arcadis contracted by GDOT, and the other has been commissioned by the City of Gainesville and the Metropolitan Planning Organization (MPO) for funding of improvements at the intersection of McEver Road and Dawsonville Highway. He stated the studies are needed and should be completed and the recommended improvements implemented before any additional development along this corridor is given approval. Therefore, Mr. Morris asked the Board to table the requests until those studies can be completed, infrastructure improvements can be planned and preliminary engineering can be undertaken so that road and traffic control improvements can keep pace with the population growth and the inevitable increases in traffic in an already traffic challenged gateway to Gainesville.

Gary Lawrence, 3537 Water Front Drive, stated he was the President of the Board for the Harbour Pointe Community Association which is a community of 290 households located off S.R. 53 approximately 5.5 miles west of the proposed development. The residents enjoy being a part of greater Gainesville and make abundant use of the restaurants, shops and businesses. They also serve Gainesville by volunteering through many organizations such as Meals on Wheels. Their Board recently received a presentation on the increased traffic from this development and two members participated in a follow up meeting. As representatives of Harbour Point, they have the following three concerns: 1) Residents are currently experiencing significant delays in exiting their community onto S.R. 53 not only during morning and evening rush hour but throughout the day, 7 days a week. He stated GDOT has reported a growth of more than 2,000 vehicles per day which pass the entrance of Harbour Point from 2015 and 2016 due to the widening project and the new businesses along the corridor. The traffic will continue to increase with new development, and as a consequence, some residents are already going to Dawsonville for dining and shopping; 2) The Oak Hall Development will exacerbate the traffic that is already in the congested corridor. The PAB tabled these requests in March to obtain more traffic data and he asked the Board to table the requests again to look at the data which is forthcoming before making any decisions in order to see the impact of this development. The developer forecasted a 1.8% annual traffic growth rate and analysis he reviewed projected between 6% and 9.8%. He asked the Board to allow adequate time for the appropriate review of the consultant's findings on the new traffic studies and develop traffic remediation efforts before approval; and 3) There appears to be no plan to re-prioritize traffic enhancement critical Tier 2 and Tier 3 projects to bring them up to Tier 1 status to address the immediate need for something to be done in time for the added traffic from the Oak Hall development. It is perceived that the current plan is to approve the project then worry about the resulting traffic later. Mr. Lawrence stated the City and County should at least have a plan for traffic remediation and controlling signal light sequences but fears it will not be enough. They are asking for additional actions like additional lane capacity and turning lanes before the project comes online, otherwise during construction, some entrances would be backed up for lengths of time on a regular basis. In conclusion, Mr. Lawrence stated that Harbour Point understood the value of the new development and the need for additional affordable housing in Gainesville, but to approve the project without having a clear plan to remediate potential traffic problems and a short-term plan to address these issues is dangerous for the overall image and livability of Gainesville and Hall County. They recommend the developer, GDOT and all other parties, develop a traffic remediation plan and locate the funds to make it happen before approval.

Jerry Hulsey, 2389 Sportsman Club Road, stated you don't know somebody until you live with them and he has worked and lived within 3 square miles of Dawsonville Highway all his life and felt it is a wonderful place to live. He stated we are talking about quality of life, noting the more you have, the more you have to take care of, the more it costs and the more you spend. He couldn't understand why, even with all the people moving into the area, taxes haven't gone down but continue to rise. He referred to the west by-pass, Pearl Nix Parkway, which never came to its full fruition. He stated City Council said they do not have the money to complete road improvements, but look at the building we are in, noting the City has built two police stations and the Civic Center but no roads. Mr. Hulsey stated Chick-fil-a causes a traffic jam so they extended the left turn lane for customers to get in there and that is just one business. He reiterated it is all about quality of life and he understood something is going to be developed there but no one wants to get stuck in traffic.

Gene Korzeniewski, 1813 Watuga Drive, stated he believed it would be a quality development but was concerned whether the infrastructure, specifically Dawsonville Highway, could handle the increased traffic. If the traffic study is based on a 2% traffic growth rate per year, that would mean traffic has only increased 10% on Dawsonville Highway in the past 5 years and asked the audience to raise their hands if they felt traffic had increased more than 10%. He stated fundamentally, we are relying on an unrealistic growth rate. He stated it was reported that the majority of traffic from the 55 plus community would be during non-peak hours. However, we don't really know when peak hours are since 24-hour traffic counts were not taken at the intersections. Mr. Korzeniewski stated the GDOT practice manual states you should take 24 hour traffic counts in areas with shopping centers, restaurants, and recreational activities to determine the peak hours. Historical data between the hours of 9am and 4pm prove the traffic there is growing year to year. Therefore, what we think is rush hour, the normal work hour, may no longer be the case and the project could be adding traffic during the times we could least absorb it. He was concerned that the stores were closed in the morning hours when intersections were monitored so how do we know they won't be a problem if the data we have was taken at the wrong time. In conclusion, he was concerned about procedures, noting he thought the purpose of the public hearing was for the Board to hear from the public before making any decision or recommendations. He felt the decision and recommendation had already been made and this is the first time the Board was hearing from the public. He stated he was sure the Board had met with the developer multiple times in order to formulate their recommendations, but there hasn't been a single meeting between the Board and the public which is unfair and in some regards, irresponsible. Chairman Carter corrected Mr. Korzeniewski and clarified that none of the Board Members had met with the developers prior to this meeting. Mr. Korzeniewski stated he should clarify that certain members of the Board have met with the developers. Community Development Director Rusty Ligon clarified that he was not on the Board but on staff and meeting with developers was part of his job. Mr. Korzeniewski stated the staff recommendations were made based on meetings with the developer. Chairman Carter stated part of the process was for staff to meet with any applicant.

Bob Abernathy, 3311 Marina View Way, stated he moved into Gwinnett County in 1972 and moved to Hall County in 2003 because of the growth Gwinnett County was and still is experiencing, noting their current population is over 900,000. He stated Gwinnett County is a parking lot and they did not provide for adequate transportation to pace the growth. He stated it is a real problem and he was afraid Hall County would make the same mistake.

Cyril Pcolinsky, 2200 Sportsman Club Road, stated he would not speak of traffic since his neighbor, Jerry Hulsey, spoke in a very clear and comprehensive way. He was concerned with the 26.16± portion of the development because of the proposed terrace units in a small, hilly

area with curvy, narrow roads. His fear was the project would change the character of his neighborhood which consists of single-family detached homes with larger lots. Mr. Pcolinsky believed the city limits would progress beyond Sportsman Club Road in the future and he was concerned about a more densely populated area. He proposed the developer consider single-family homes there instead which would decrease the number of people living there and would be less of a traffic burden. He felt the quality of life would suffer with the proposed density and character of buildings.

REBUTTAL: Ethan Underwood introduced **Tad Braswell** with Oak Hall Companies, LLC. Mr. Braswell stated he grew up in Dekalb County, 3 miles from Perimeter Mall and used to walk to the mall by cow pastures on both sides of the road. He stated things change and people move here and Atlanta and Gainesville were great places to live. We make sure we do smart growth and plan things correctly which is the reason for the GMRC reviewing large projects like this one. He stated there was a lot of thought process going into how this traffic study was completed, noting it was not just the City, Hall County, or GDOT standards but a conglomeration of national standards that were utilized for the study grid network based on the number of houses they are proposing. He stated they did additional study as requested by the City and the standards used in the traffic studies which are proven time and time again, come from actual active adult communities. He confirmed the intersections studied were completed in real time peak hours, noting the stores were open in the evenings. Mr. Braswell stated the traffic study is scientific and has been reviewed with recommendations made by the GMRC, City Transportation, Hall County and GDOT, so he did not see the need for another traffic study. He stated that some people disagreed with the methodology of the way the counts were taken which leads him to question why they would believe another study which would be completed with the exact same standards. He stated there were a lot of good people present who were concerned about traffic, but everywhere you go in Atlanta there is traffic. However, they are bringing a lot of money to the table to improve the traffic situation which would otherwise not happen if the property is used as currently zoned. He wants everyone to be safe to get in and out of the development and wants to have a positive impact on the community.

Ethan Underwood thanked everyone for their comments because they wanted to hear from the residents, so they held two public participation meetings and were enlightened about some issues in which they were unaware until they met with the residents. He agreed with the public comments that the project should not be approved without accommodating traffic improvements which is why Oak Hall is going above and beyond to comply with conditions as proposed by staff. He stated some folks warned the Board not to get caught in a catch 22; however, those road improvements would not occur until a development comes in to pay for them, which is exactly what Oak Hall is proposing. Mr. Underwood stated this project aligns with the Comprehensive Plan as it was anticipated for this site; they have reduced units to meet the Plan; they have a solution for traffic issues; and they have a product which will build the community. Mr. Underwood asked the Board to recommend approval of the requests and they would be happy to answer any questions.

Planning and Appeals Board Comments: Upon inquiry by Vice-Chair Fleming, Tad Braswell clarified the standard traffic study peaks hours were from 7:00am to 9:00am and 4:00pm to 6:00pm. Vice-Chair Fleming stated along that corridor, there is a lot of restaurants and shopping which takes place after those hours and asked if there was another traffic study they could have access to with more extended hours. Mr. Braswell stated no, they completed the traffic study with the standards required by GMRC. He stated the standards are taken into consideration when the study is around a mall or shopping centers.

There was a motion to recommend conditional approval of all three Oak Hall Companies, LLC requests with conditions as follows:

CONDITIONS FOR 50.81± ACRES AND 157.98± ACRES

Development Standards

1. The development standards within the applicant's narrative, concept plan and architectural renderings shall be made part of the zoning ordinance, and shall be subject to the Community Development Director approval. Any zoning conditions adopted as part of this zoning ordinance that conflict with the applicant's narrative, concept plan and architectural renderings shall take precedence over the applicant's development standards.
2. Prohibited commercial uses shall include motels or hotels with rooms accessed from the exterior of the building, adult novelty stores, adult entertainment centers, pawn shops, gas stations, tire stores, massage parlors except for practitioners licensed by the State of Georgia, vaping stores, auto body shops, automobile sale establishments, marine sales or repair stores, automated or non-automated car wash, coin-laundry facilities, truck stop, tattoo parlors, psychics, fortune tellers, clairvoyants and the like.
3. The applicant's revised concept plan and narrative proposes a total of 790 senior residential units. The total number of residential units approved for the development shall not exceed 770 senior residential units. The reduction of 20 residential units may occur anywhere within the development. However, a minimum of 10 residential units shall include single-family homes, cottages and terrace homes with frontage along Ahaluna Drive and adjacent to existing single-family properties located off of Karen Lane, Watauga Drive and West Lake Drive.
4. The development shall comply with applicable U. S. Department of Housing and Urban Development (HUD) rules for age-restricted communities. The organization established for the management of the development shall comply with HUD rules for verification of occupancy and shall maintain procedures for routinely determining the occupancy of each unit. Such procedures may be part of a normal leasing or purchasing agreement and must provide for regular updates as required by HUD.
5. All proposed single-family detached homes shall have a minimum front yard setback of 20-feet as measured from the right-of-way line and shall have a minimum distance of 10-feet between houses. Additionally, all cottages with frontage along Ahaluna Drive shall have a minimum front yard setback of 20-feet as measured from the right-of-way line and shall have a minimum distance of 10-feet between houses. The lots that back up to existing residences located off of Karen Lane, Watauga Drive and West Lake Drive shall have minimum 20-feet rear setbacks.
6. The following buffer standards shall be required:
 - a. A minimum 20-foot wide buffer shall be required for all proposed single-family detached homes, cottages and terrace homes where adjacent to existing single-family homes.
 - b. A minimum 50-foot wide buffer shall be required for the assisted living facility, independent living facility and commercial uses when adjacent to existing single-family homes.

- i. The exterior 25-feet of this buffer must be undisturbed, except where disturbance is required for erosion control, storm water management or the installation of utilities.
 - ii. The interior 25 feet of this buffer may be graded and replanted.
- c. A minimum 25-foot wide buffer shall be required for the assisted living facility, independent living facility and commercial uses when adjacent to proposed single-family homes within the development. The 25-foot buffer may be located at any location between such structures, including without limitation, at a location where the common boundary line between the respective uses is within the 25-foot buffer.
- d. The proposed storm water facilities shall be buffered from all existing homes and proposed uses. The buffer shall contain a mixture of evergreen and deciduous trees.
- e. Any additional plantings required will be in accordance with City of Gainesville's Buffer Standards as determined by the Community Development Director.
- 7. The minimum heated floor space for the single-family detached homes shall be no less than 1,800 square feet. The minimum heated floor space for the single-family cottages and terrace homes shall be 1,000 square feet.
- 8. Covenants shall be put in place by the developer restricting against the parking of boats, trailers, and campers within driveways.
- 9. The proposed amenity clubhouse and storage facility shall include a minimum 3:12 roof pitch and exterior facade materials shall be similar in architecture to the proposed single-family homes.
- 10. A Uniform Sign Plan as identified within Section 9-18-7-4 of the Unified Land Development Code shall be required from the developer and is subject to approval by the Gainesville Community Development Director. All signs associated with residential uses shall be limited to indirect lighting. All signs shall be located outside of utility areas and shall not block visibility of vehicular traffic.
- 11. The proposed erosion control and water quality measures for the development shall at minimum meet the Georgia Storm Water Management Manual requirements. Storm water management for the development must provide water quality treatment for no less than 110% of the State required treatment volume. The City of Gainesville shall approve the final design of all water quality measures.
- 12. The 3.0 acre parcel labeled as "Fire Station Parcel" on the applicant's concept plan submitted with this application shall be deeded to the City of Gainesville within one year of the effective date of this zoning ordinance for the future construction of a City of Gainesville fire station. All costs associated with deeding the property shall be at the full expense of the developer. Architectural design for the fire station must be approved by both the City of Gainesville and the developer, and shall be substantially similar with residential and commercial standards submitted with the application.
- 13. No more than 10% of the units within the proposed indoor storage facility may be leased to non-residents of the proposed development.

Transportation / Traffic

14. Prior to the issuance of a land disturbance permit, the developer shall provide a signal warrant analysis be performed per Georgia Department of Transportation (GDOT) standards for each of the following two intersections:

- a. Dawsonville Highway (SR 53) at Avonlea Way and the new access road; and**
- b. Dawsonville Highway (SR 53) at Canterbury Road and the new access road. The design of the signal warrant analysis should account for the probability that GDOT will not approve a signal at this location and should evaluate the intersection for an R-CUT design at the median break. If a traffic signal is approved by GDOT, improvements for a traffic signal at the intersection will require approval of the Gainesville Public Works Director and GDOT Traffic Operations Office.**

All costs associated with the signal warrant analysis study, and if warranted by such study, any costs associated with the installation of a traffic signal and intersection improvements shall be at the full expense of the developer.

15. The developer shall perform the following traffic improvements identified within the Summary of Study Findings and Recommendations as stated within the revised Traffic Impact Study, dated April 7, 2017, for the proposed development:

- a. Dawsonville Highway (SR 53) at Avonlea Way and the new access road to include a northbound exclusive right turn lane to be added on Dawsonville Highway (SR 53) turning into new site driveway and the inclusion of one entering lane and one exiting lane for the new site access to be controlled by side street stop sign and accompanying stop bar; and**
- b. Dawsonville Highway (SR 53) at Canterbury Road and the new access road to include a northbound exclusive right turn lane to be added on Dawsonville Highway (SR 53) turning into new site driveway and the inclusion of one entering lane and one exiting lane for the new site access to be controlled by side street stop sign and accompanying stop bar.**

The developer shall coordinate these improvements with GDOT and the Gainesville Public Works Director prior to permitting. The Gainesville Public Works Director and GDOT shall have the final determination of the time line of these improvements based on the developer's proposed construction schedule. All costs associated with the improvements shall be at the full expense of the developer.

16. Prior to the issuance of a land disturbance permit for the Planned Unit Development (P-U-D), the developer shall evaluate, design and construct the left turn lanes on Dawsonville Highway (SR 53) to meet GDOT storage and design requirements at Avonlea Way and the new site driveway at Canterbury Road. Prior to the issuance of a land disturbance permit for the commercial development zoned General Business (G-B), the developer shall evaluate, design and construct the left turn lanes on Dawsonville Highway (SR 53) to meet GDOT storage and design requirements. If the existing left turn lane at this location meets these requirements, this condition will be deemed satisfied.

17. Developer consents to pay \$425,000.00 to be used solely for the purpose of making roadway improvements along Dawsonville Highway (SR 53) from McEver Road (SR 53) to Ahaluna Drive. In this regard, the developer shall deposit \$100,000.00 upon

issuance of the initial land disturbance permit for the Planned Unit Development (P-U-D), and annually thereafter an additional \$100,000.00 until the full \$425,000.00 is paid in full (provided, the fourth and final payment will be for \$125,000.00). All such payments will be deposited into an escrow account at a financial institution chosen by the City of Gainesville. The City of Gainesville shall choose an escrow agent, who shall be authorized to disburse the funds to the City of Gainesville as said funds are needed to make roadway improvements along Dawsonville Highway (SR 53) from McEver Road (SR 53) to Ahaluna Drive. The amount as stated above is based on the cost estimate previously provided by the City of Gainesville to the developer for roadway improvements in addition to those improvements referenced elsewhere in the zoning conditions affecting the property that is the subject of the zoning application.

18. Prior to the issuance of a land disturbance permit, the intersection of Strickland Drive, Karen Lane and the new access road to the proposed development shall be redesigned to include realignment similar to what is shown on the revised concept plan for better traffic circulation, and to meet current roadway design criteria. The improvements shall be completed prior to permitting direct access from the development onto Karen Lane and Strickland Drive and prior to the construction of the most northern Pod of terrace and cottage homes. All costs associated with the improvements shall be at the full expense of the developer.
19. Prior to the issuance of a land disturbance permit, the developer shall seek verification from Hall County to determine whether or not any improvements will be required to the intersection of Sportsman Club Road and Strickland Drive.
20. All new streets shall meet the standards within the current Gainesville Unified Land Development Code. These same standards shall be required for the segment of Ahaluna Drive starting at the north side of the existing power line easement and adjacent to the entrance of the terrace homes, and shall extend in a northeasterly direction south of Watauga Drive where the city limits terminate. The remaining portions of Ahaluna Drive within the city limits shall meet the City of Gainesville Standards excluding the requirements of curb and gutter. All other residential uses, amenities, office and commercial areas shall provide for pedestrian connectivity throughout the development. All costs associated with the improvements shall be at the full expense of the developer.
21. Prior to the issuance of a land disturbance permit, the developer shall seek approval from the City of Gainesville and the Corps of Engineers to improve the existing Ahaluna Drive cul-de-sac to provide for better turn around for emergency and utility vehicles. If approved, curb and gutter and sidewalks shall be extended to the Ahaluna Drive cul-de-sac. All road and traffic improvements to Ahaluna Drive shall be at the expense of the developer and shall meet the standards within the current Gainesville Unified Land Development Code prior to acceptance. All cul-de-sacs constructed or modified as part of the development will be positioned (subject to Corps of Engineers, and City of Gainesville approval, as needed) on the west side of the road, in approximately the current location of the existing cul-de-sac but positioned in a way that would minimize the impact to the lots on the east side of the road. The final design shall require approval from the City of Gainesville.

22. There shall be no driveways from individual homes allowed onto Ahaluna Drive for lots that have road frontage on any new proposed interior street. There shall be no driveways from individual homes allowed onto Karen Lane or Strickland Drive.
23. There shall be no access allowed onto West Lake Drive and Skyview Drive.
24. The proposed commercial, retail and office outparcels shall provide inter parcel connectivity to one another.

Motion made by Board Member White

Motion seconded by Board Member Thompson

Vote – 5 favor, 2 opposed (Fleming, Delgado)

First Reading: _____
Passed: _____

AN ORDINANCE

No. 2017-

AN ORDINANCE AMENDING THE ZONING MAP OF THE CITY OF GAINESVILLE, GEORGIA, BY CHANGING THE ZONING ON A 157.98± ACRES TRACT LOCATED ON THE EAST SIDE OF DAWSONVILLE HIGHWAY (S.R. 53), HAVING ROAD FRONTAGE ON AHALUNA DRIVE, SKYVIEW DRIVE, STRICKLAND DRIVE, LAKESHORE CIRCLE, WEST LAKE DRIVE AND KAREN LANE (A/K/A 0, 1264 AND 1817 AHALUNA DRIVE; 1876 DAWSONVILLE HIGHWAY; 2208 KAREN LANE; 0 AND 2029 STRICKLAND DRIVE; AND 0 AND 1489 WEST LAKE DRIVE) FROM RESIDENTIAL-I-A (R-I-A), RESIDENTIAL-I (R-I), PLANNED UNIT DEVELOPMENT (P-U-D) AND REGIONAL BUSINESS (R-B) TO PLANNED UNIT DEVELOPMENT, WITH CONDITIONS (P-U-D-c) AND GENERAL BUSINESS, WITH CONDITIONS (G-B-c); REPEALING CONFLICTING ORDINANCES; TO PROVIDE FOR SEVERABILITY; TO PROVIDE FOR AN EFFECTIVE DATE; AND FOR OTHER PURPOSES.

(Amendment to Zoning Map)

BE IT HEREBY ORDAINED BY THE GOVERNING BODY OF THE CITY OF GAINESVILLE, GEORGIA, AS FOLLOWS:

SECTION I.

That from and after the passage of this Ordinance the following described lands shall be zoned and so designated on the Zoning Map of the City of Gainesville as **Planned Unit Development, with conditions (P-U-D-c) and General Business, with conditions (G-B-c)**:

Conditions

Development Standards

1. The development standards within the applicant's narrative, concept plan and architectural renderings shall be made part of the zoning ordinance, and shall be subject to the Community Development Director approval. Any zoning conditions adopted as part of this zoning ordinance that conflict with the applicant's narrative, concept plan and architectural renderings shall take precedence over the applicant's development standards.
2. Prohibited commercial uses shall include motels or hotels with rooms accessed from the exterior of the building, adult novelty stores, adult entertainment centers, pawn shops, gas stations, tire stores, massage parlors except for practitioners licensed by the State of Georgia, vaping stores, auto body shops, automobile sale establishments, marine sales or repair stores, automated or non-automated car wash, coin-laundry facilities, truck stop, tattoo parlors, psychics, fortune tellers, clairvoyants and the like.

3. The applicant's revised concept plan and narrative proposes a total of 790 senior residential units. The total number of residential units approved for the development shall not exceed 770 senior residential units. The reduction of 20 residential units may occur anywhere within the development. However, a minimum of 10 residential units shall include single-family homes, cottages and terrace homes with frontage along Ahaluna Drive and adjacent to existing single-family properties located off of Karen Lane, Watauga Drive and West Lake Drive.
4. The development shall comply with applicable U. S. Department of Housing and Urban Development (HUD) rules for age-restricted communities. The organization established for the management of the development shall comply with HUD rules for verification of occupancy and shall maintain procedures for routinely determining the occupancy of each unit. Such procedures may be part of a normal leasing or purchasing agreement and must provide for regular updates as required by HUD.
5. All proposed single-family detached homes shall have a minimum front yard setback of 20-feet as measured from the right-of-way line and shall have a minimum distance of 10-feet between houses. Additionally, all cottages with frontage along Ahaluna Drive shall have a minimum front yard setback of 20-feet as measured from the right-of-way line and shall have a minimum distance of 10-feet between houses. The lots that back up to existing residences located off of Karen Lane, Watauga Drive and West Lake Drive shall have minimum 20-feet rear setbacks.
6. The following buffer standards shall be required:
 - a. A minimum 20-foot wide buffer shall be required for all proposed single-family detached homes, cottages and terrace homes where adjacent to existing single-family homes.
 - b. A minimum 50-foot wide buffer shall be required for the assisted living facility, independent living facility and commercial uses when adjacent to existing single-family homes.
 - i. The exterior 25-feet of this buffer must be undisturbed, except where disturbance is required for erosion control, storm water management or the installation of utilities.
 - ii. The interior 25 feet of this buffer may be graded and replanted.
 - c. A minimum 25-foot wide buffer shall be required for the assisted living facility, independent living facility and commercial uses when adjacent to proposed single-family homes within the development. The 25-foot buffer may be located at any location between such structures, including without limitation, at a location where the common boundary line between the respective uses is within the 25-foot buffer.
 - d. The proposed storm water facilities shall be buffered from all existing homes and proposed uses. The buffer shall contain a mixture of evergreen and deciduous trees.
 - e. Any additional plantings required will be in accordance with City of Gainesville's Buffer Standards as determined by the Community Development Director.
7. The minimum heated floor space for the single-family detached homes shall be no less than 1,800 square feet. The minimum heated floor space for the single-family cottages and terrace homes shall be 1,000 square feet.

8. Covenants shall be put in place by the developer restricting against the parking of boats, trailers, and campers within driveways.
9. The proposed amenity clubhouse and storage facility shall include a minimum 3:12 roof pitch and exterior facade materials shall be similar in architecture to the proposed single-family homes.
10. A Uniform Sign Plan as identified within Section 9-18-7-4 of the Unified Land Development Code shall be required from the developer and is subject to approval by the Gainesville Community Development Director. All signs associated with residential uses shall be limited to indirect lighting. All signs shall be located outside of utility areas and shall not block visibility of vehicular traffic.
11. The proposed erosion control and water quality measures for the development shall at minimum meet the Georgia Storm Water Management Manual requirements. Storm water management for the development must provide water quality treatment for no less than 110% of the State required treatment volume. The City of Gainesville shall approve the final design of all water quality measures.
12. The 3.0 acre parcel labeled as "Fire Station Parcel" on the applicant's concept plan submitted with this application shall be deeded to the City of Gainesville within one year of the effective date of this zoning ordinance for the future construction of a City of Gainesville fire station. All costs associated with deeding the property shall be at the full expense of the developer. Architectural design for the fire station must be approved by both the City of Gainesville and the developer, and shall be substantially similar with residential and commercial standards submitted with the application.
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Transportation / Traffic

14. Prior to the issuance of a land disturbance permit, the developer shall provide a signal warrant analysis be performed per Georgia Department of Transportation (GDOT) standards for each of the following two intersections:
 - a. Dawsonville Highway (SR 53) at Avonlea Way and the new access road; and
 - b. Dawsonville Highway (SR 53) at Canterbury Road and the new access road. The design of the signal warrant analysis should account for the probability that GDOT will not approve a signal at this location and should evaluate the intersection for an R-CUT design at the median break. If a traffic signal is approved by GDOT, improvements for a traffic signal at the intersection will require approval of the Gainesville Public Works Director and GDOT Traffic Operations Office.

All costs associated with the signal warrant analysis study, and if warranted by such study, any costs associated with the installation of a traffic signal and intersection improvements shall be at the full expense of the developer.

15. The developer shall perform the following traffic improvements identified within the Summary of Study Findings and Recommendations as stated within the revised Traffic Impact Study, dated April 7, 2017, for the proposed development:
 - a. Dawsonville Highway (SR 53) at Avonlea Way and the new access road to include a northbound exclusive right turn lane to be added on Dawsonville Highway

(SR 53) turning into new site driveway and the inclusion of one entering lane and one exiting lane for the new site access to be controlled by side street stop sign and accompanying stop bar; and

- b. Dawsonville Highway (SR 53) at Canterbury Road and the new access road to include a northbound exclusive right turn lane to be added on Dawsonville Highway (SR 53) turning into new site driveway and the inclusion of one entering lane and one exiting lane for the new site access to be controlled by side street stop sign and accompanying stop bar.

The developer shall coordinate these improvements with GDOT and the Gainesville Public Works Director prior to permitting. The Gainesville Public Works Director and GDOT shall have the final determination of the time line of these improvements based on the developer's proposed construction schedule. All costs associated with the improvements shall be at the full expense of the developer.

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- 17. Developer consents to pay \$425,000.00 to be used solely for the purpose of making roadway improvements along Dawsonville Highway (SR 53) from McEver Road (SR 53) to Ahaluna Drive. In this regard, the developer shall deposit \$100,000.00 upon issuance of the initial land disturbance permit for the Planned Unit Development (P-U-D), and annually thereafter an additional \$100,000.00 until the full \$425,000.00 is paid in full (provided, the fourth and final payment will be for \$125,000.00). All such payments will be deposited into an escrow account at a financial institution chosen by the City of Gainesville. The City of Gainesville shall choose an escrow agent, who shall be authorized to disburse the funds to the City of Gainesville as said funds are needed to make roadway improvements along Dawsonville Highway (SR 53) from McEver Road (SR 53) to Ahaluna Drive. The amount as stated above is based on the cost estimate previously provided by the City of Gainesville to the developer for roadway improvements in addition to those improvements referenced elsewhere in the zoning conditions affecting the property that is the subject of the zoning application.
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22. There shall be no driveways from individual homes allowed onto Ahaluna Drive for lots that have road frontage on any new proposed interior street. There shall be no driveways from individual homes allowed onto Karen Lane or Strickland Drive.
23. There shall be no access allowed onto West Lake Drive and Skyview Drive.
24. The proposed commercial, retail and office outparcels shall provide inter parcel connectivity to one another.

Legal Description

Tract 1 (Zoned P-U-D):

All that tract or parcel of land lying and being in Land Lots 161, 162, 163, and 173 9th Land District Hall County, Georgia as shown on a survey and plat prepared by Patton Land Surveying, LLC. For Oak Hall Companies, LLC dated December 30th, 2016 and being more particularly described as follows:

Commencing at a PK nail set at the Centerline Intersection (C/L) of Ahaluna Drive (40' wide right-of-way) and Watauga Drive (40' wide right-of-way) located at Georgia State Plane Coordinate Northing 1570949.25 Easting 2390021.75; THENCE South 21 degrees 11 minutes 40 seconds East for a distance of 157.07 feet to a 1/2" rebar pin set on the Easterly right of way of said Ahaluna Drive, said point being the TRUE POINT OF BEGINNING.

Thence leaving Ahaluna Drive the following courses:

ORDINANCE NO. 2017-___

Thence South 44 degrees 31 minutes 36 seconds East for a distance of 234.95 feet to a 1/2" rebar pin found; Thence South 51 degrees 48 minutes 43 seconds East for a distance of 224.70 feet to a 1/2" rebar pin found; Thence South 35 degrees 35 minutes 35 seconds East for a distance of 117.52 feet to a 1/2" rebar pin found; Thence South 07 degrees 57 minutes 44 seconds East for a distance of 152.92 feet to a 1/2" rebar pin set; Thence South 59 degrees 44 minutes 39 seconds West for a distance of 10.00 feet to a 1/2" rebar pin set; Thence South 07 degrees 57 minutes 44 seconds East for a distance of 10.00 feet to a 1/2" rebar pin set; Thence South 59 degrees 44 minutes 39 seconds West for a distance of 190.22 feet to an angle iron found at Government corner 162-14; Thence North 30 degrees 11 minutes 25 seconds West for a distance of 99.93 feet to an angle iron found at Government corner 162-13; Thence South 59 degrees 45 minutes 59 seconds West for a distance of 498.70 feet to an angle iron found at Government corner 162-12; Thence South 27 degrees 43 minutes 56 seconds West for a distance of 1119.58 feet to an angle iron found at Government corner 162-11; Thence South 30 degrees 17 minutes 50 seconds East for a distance of 498.47 feet to a 1/2" rebar pin set at Government corner 162-10; Thence North 30 degrees 08 minutes 49 seconds East for a distance of 397.86 feet to a 1/2" rebar pin set at Government corner 162-9; Thence North 59 degrees 49 minutes 54 seconds East for a distance of 500.01 feet to a 1/2" rebar pin set at Government corner 162-8; Thence North 29 degrees 22 minutes 55 seconds West for a distance of 141.67 feet to an angle iron found at Government corner 162-7; Thence North 58 degrees 41 minutes 14 seconds East for a distance of 350.02 feet to an angle iron found at Government corner 162-6; Thence North 29 degrees 22 minutes 50 seconds West for a distance of 150.80 feet to an angle iron found at Government corner 162-5; Thence North 59 degrees 50 minutes 03 seconds East for a distance of 297.86 feet to an angle iron found at Government corner 162-4; Thence South 14 degrees 34 minutes 13 seconds West for a distance of 396.80 feet to an angle iron found at Government corner 162-3; Thence South 37 degrees 07 minutes 43 seconds East for a distance of 623.76 feet to an angle iron found at Government corner 162/163-F; Thence South 58 degrees 43 minutes 42 seconds West for a distance of 44.58 feet to an angle iron found at Government corner 162/163-E; Thence North 79 degrees 06 minutes 03 seconds West for a distance of 392.59 feet to an angle iron found at Government corner 162-2; Thence South 58 degrees 40 minutes 31 seconds West for a distance of 100.10 feet to an angle iron found at Government corner 162-1; Thence South 30 degrees 12 minutes 24 seconds East for a distance of 263.75 feet to an angle iron found at Government corner 162/163-D; Thence North 58 degrees 40 minutes 32 seconds East for a distance of 45.70 feet to an angle iron found at Government corner 163/163-C; Thence South 29 degrees 47 minutes 29 seconds East for a distance of 99.99 feet to an angle iron found at Government corner 163-43; Thence South 58 degrees 41 minutes 08 seconds West for a distance of 250.12 feet to an angle iron found at Government corner 163-42; Thence North 75 degrees 26 minutes 03 seconds West for a distance of 139.43 feet to an angle iron found at Government corner 162/163-B; Thence South 58 degrees 38 minutes 12 seconds West for a distance of 100.17 feet to an angle iron found at Government corner 162/163-A; Thence South 59 degrees 20 minutes 26 seconds West for a distance of 199.93 feet to an angle iron found; Thence South 32 degrees 58 minutes 44 seconds East for a distance of 35.83 feet to a 1/2" rebar pin set on the Northerly right-of-way line of West Lake Drive (50' wide right-of-way);

Thence following along said West Lake Drive the following courses:

Thence along a curve to the left having a radius of 50.00 feet and an arc length of 95.69 feet, being subtended by a chord of South 60 degrees 31 minutes 39 seconds West for a distance of 81.74 feet to a point; Thence along a curve to the left having a radius of 478.10 feet and an arc length of 147.14 feet, being subtended by a chord of South 45 degrees 59 minutes 56 seconds West for a distance of 146.56 feet to a point;

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Thence leaving West Lake Drive the following courses:

Thence North 73 degrees 23 minutes 19 seconds West for a distance of 86.98 feet to a 1/2" rebar pin found; Thence South 55 degrees 17 minutes 14 seconds West for a distance of 179.39 feet to a 1/2" rebar pin found; Thence South 58 degrees 20 minutes 28 seconds West for a distance of 243.87 feet to a 3/8" rebar pin found; Thence South 74 degrees 07 minutes 23 seconds East for a distance of 303.53 feet to a 3/8" rebar pin found on the Northerly right-of-way line of said West Lake Drive;

Thence following along said West Lake Drive the following course:

Thence South 14 degrees 14 minutes 32 seconds West for a distance of 23.48 feet to a 3/8" rebar pin found;

Thence leaving West Lake Drive the following courses:

Thence South 89 degrees 36 minutes 58 seconds West for a distance of 162.82 feet to a point; Thence South 19 degrees 34 minutes 51 seconds West for a distance of 74.21 feet to a 3/4" rebar pin found; Thence South 29 degrees 16 minutes 39 seconds East for a distance of 73.03 feet to a 3/8" rebar pin found; Thence South 80 degrees 25 minutes 23 seconds West for a distance of 11.35 feet to a 3/8" rebar pin found; Thence South 29 degrees 33 minutes 57 seconds East for a distance of 143.90 feet to a 3/8" rebar pin found; Thence North 61 degrees 06 minutes 46 seconds East for a distance of 9.93 feet to a 3/8" rebar pin found; Thence South 29 degrees 23 minutes 32 seconds East for a distance of 149.97 feet to a 3/8" rebar pin found; Thence South 28 degrees 53 minutes 03 seconds East for a distance of 152.05 feet to a 3/8" rebar pin found; Thence South 29 degrees 22 minutes 50 seconds East for a distance of 393.18 feet to a 5/8" rebar pin found; Thence South 09 degrees 04 minutes 08 seconds East for a distance of 20.00 feet to a 1/2" rebar pin set; Thence South 81 degrees 30 minutes 52 seconds West for a distance of 524.53 feet to a 1/2" rebar pin found on the easterly right-of-way line of said Ahaluna Drive;

Thence leaving Ahaluna Drive the following course:

Thence North 79 degrees 27 minutes 01 seconds West for a distance of 40.00 feet to a point on the West right-of-way line of said Ahaluna Drive;

Thence following along said Ahaluna Drive the following courses:

Thence along a curve to the right having a radius of 198.85 feet and an arc length of 55.23 feet, being subtended by a chord of South 18 degrees 30 minutes 22 seconds West for a distance of 55.05 feet to a point; Thence South 25 degrees 09 minutes 02 seconds West for a distance of 50.41 feet to a point;

Thence leaving Ahaluna Drive the following courses:

Thence North 31 degrees 44 minutes 01 seconds West for a distance of 109.18 feet to a 1/2" rebar pin found; Thence North 31 degrees 36 minutes 31 seconds West for a distance of 135.99 feet to a 1" open top pin found; Thence North 31 degrees 58 minutes 37 seconds West for a distance of 380.83 feet to a 1/2" rebar pin found; Thence North 30 degrees 40 minutes 54 seconds West for a distance of 28.28 feet to a 1/2" rebar pin found; Thence North 30 degrees 50 minutes 41 seconds West for a distance of 39.28 feet to a 1/2" rebar pin found; Thence North 35 degrees 19 minutes 01 seconds West for a distance of 33.41 feet to a 1/2" rebar pin

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found; Thence North 33 degrees 08 minutes 01 seconds West for a distance of 95.48 feet to a 1/2" rebar pin found; Thence North 26 degrees 29 minutes 05 seconds West for a distance of 151.95 feet to a 1/2" solid iron pin found at the common Land Lot Corner of Land Lots 162, 163, 172 and 173; Thence North 21 degrees 28 minutes 32 seconds West for a distance of 195.73 feet to an axle found; Thence South 59 degrees 15 minutes 45 seconds West for a distance of 30.15 feet to a 1" crimp top pin found; Thence North 30 degrees 14 minutes 44 seconds West for a distance of 543.52 feet to a point on the Westerly right-of-way line of said Ahaluna Drive;

Thence following along said Ahaluna Drive the following course:

Thence along a curve to the right having a radius of 641.36 feet and an arc length of 74.59 feet, being subtended by a chord of North 30 degrees 57 minutes 50 seconds West for a distance of 74.55 feet to a point;

Thence leaving Ahaluna Drive the following courses:

Thence North 30 degrees 15 minutes 39 seconds West for a distance of 652.12 feet to a 1/2" rebar pin set; Thence North 62 degrees 01 minutes 06 seconds East for a distance of 405.96 feet to a 1/2" rebar pin set on the Westerly right-of-way line of said Ahaluna Drive;

Thence following along said Ahaluna Drive the following courses:

Thence along a curve to the right having a radius of 605.08 feet and an arc length of 104.37 feet, being subtended by a chord of North 49 degrees 25 minutes 49 seconds East for a distance of 104.24 feet to a point; Thence along a curve to the right having a radius of 1028.40 feet and an arc length of 135.71 feet, being subtended by a chord of North 58 degrees 16 minutes 58 seconds East for a distance of 135.61 feet to a point; Thence North 61 degrees 55 minutes 50 seconds East for a distance of 115.58 feet to a 1/2" rebar pin set; Thence North 50 degrees 02 minutes 51 seconds West for a distance of 120.33 feet to a 1/2" rebar pin set; Thence North 43 degrees 52 minutes 31 seconds West for a distance of 222.27 feet to a 1/2" rebar pin set; Thence North 05 degrees 31 minutes 44 seconds West for a distance of 191.92 feet to a 1/2" rebar pin set; Thence North 12 degrees 22 minutes 53 seconds East for a distance of 225.83 feet to a 1/2" rebar pin set; Thence North 84 degrees 24 minutes 26 seconds West for a distance of 418.86 feet to a 1/2" rebar pin set; Thence North 65 degrees 05 minutes 56 seconds West for a distance of 105.15 feet to a 1/2" rebar pin set; Thence North 50 degrees 56 minutes 50 seconds West for a distance of 308.26 feet to a 1/2" rebar pin set; Thence North 43 degrees 57 minutes 37 seconds West for a distance of 45.83 feet to a 1/2" rebar pin set; Thence South 88 degrees 57 minutes 53 seconds West for a distance of 357.75 feet to a 1/2" rebar pin set; Thence North 23 degrees 48 minutes 27 seconds West for a distance of 311.94 feet to a 1/2" rebar pin set; Thence North 58 degrees 28 minutes 29 seconds East for a distance of 17.69 feet to a 1/2" rebar pin set on the Southerly right-of-way line of Strickland Drive (varying width right-of-way);

Thence following along the Southerly and Easterly right-of-way line of Strickland Drive the following courses:

Thence North 58 degrees 28 minutes 29 seconds East for a distance of 33.98 feet to a 1/2" rebar pin set; Thence North 34 degrees 19 minutes 21 seconds West for a distance of 85.81 feet to a PK nail set on the Southerly right-of-way line of Karen Lane (40' wide right-of-way);

Thence leaving said Strickland Drive and following along the Southerly and Easterly right-of-way line of said Karen Lane the following courses:

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Thence North 55 degrees 11 minutes 05 seconds East for a distance of 94.12 feet to a 1/2" rebar pin found; Thence North 37 degrees 45 minutes 25 seconds East for a distance of 42.89 feet to a point; Thence North 05 degrees 43 minutes 51 seconds West for a distance of 25.51 feet to a point; Thence North 30 degrees 04 minutes 01 seconds West for a distance of 203.11 feet to an angle iron found;

Thence leaving Karen Lane the following courses:

Thence North 60 degrees 16 minutes 43 seconds East for a distance of 1299.39 feet to a 1/2" rebar pin found; Thence South 30 degrees 05 minutes 16 seconds East for a distance of 298.09 feet to an angle iron found at Government Corner 161/162-D; Thence South 60 degrees 08 minutes 43 seconds West for a distance of 292.15 feet to an angle iron found at Government Corner 161/162-C; Thence South 30 degrees 25 minutes 05 seconds East for a distance of 202.00 feet to an angle iron found at Government Corner 162-43; Thence South 60 degrees 09 minutes 42 seconds West for a distance of 401.33 feet to an angle iron found at Government Corner 162-42; Thence South 29 degrees 53 minutes 22 seconds East for a distance of 280.11 feet to an angle iron found at Government Corner 162-41; Thence North 57 degrees 31 minutes 18 seconds East for a distance of 543.85 feet to a concrete monument found at Government Corner 162-40; Thence South 73 degrees 40 minutes 37 seconds East for a distance of 303.74 feet to a concrete monument found at Government Corner 162-39; Thence South 30 degrees 04 minutes 18 seconds East for a distance of 600.66 feet to a an angle iron found at Government Corner 162-38; Thence South 11 degrees 38 minutes 10 seconds East for a distance of 316.42 feet to a an angle iron found at Government Corner 162-37; Thence North 59 degrees 58 minutes 53 seconds East for a distance of 200.10 feet to a an angle iron found at Government Corner 162-36; Thence North 03 degrees 29 minutes 37 seconds West for a distance of 335.27 feet to a an angle iron found at Government Corner 162-35; Thence North 59 degrees 57 minutes 58 seconds East for a distance of 99.84 feet to a 1/2" rebar pin set; Thence North 29 degrees 34 minutes 15 seconds West for a distance of 198.74 feet to a concrete monument found at Government Corner 162-33; Thence North 61 degrees 29 minutes 26 seconds West for a distance of 83.08 feet to a concrete monument found at Government Corner 162-32D; Thence North 00 degrees 24 minutes 04 seconds West for a distance of 81.11 feet to a concrete monument found at Government Corner 162-32C; Thence South 88 degrees 48 minutes 30 seconds East for a distance of 69.54 feet to a concrete monument found at Government Corner 162-32B; Thence South 20 degrees 25 minutes 05 seconds East for a distance of 106.79 feet to a 1/2" rebar pin set; Thence North 59 degrees 37 minutes 17 seconds East for a distance of 161.81 feet to a an angle iron found at Government Corner 162-32; Thence South 29 degrees 29 minutes 50 seconds East for a distance of 198.83 feet to an angle iron found at Government Corner 162-31; Thence North 60 degrees 21 minutes 45 seconds East for a distance of 199.38 feet to an angle iron found at Government Corner 162-30; Thence North 13 degrees 56 minutes 12 seconds West for a distance of 414.57 feet to an angle iron found at Government Corner 162-29; Thence along a curve to the right having a radius of 2240.71 feet and an arc length of 230.11 feet, being subtended by a chord of North 08 degrees 40 minutes 05 seconds West for a distance of 230.01 feet to a 1/2" rebar pin set; Thence North 06 degrees 37 minutes 44 seconds West for a distance of 60.66 feet to a 1/2" rebar pin set; Thence North 07 degrees 08 minutes 55 seconds West for a distance of 43.89 feet to a 1/2" rebar pin set; Thence along a curve to the right having a radius of 6356.94 feet and an arc length of 253.49 feet, being subtended by a chord of North 05 degrees 25 minutes 14 seconds West for a distance of 253.46 feet to a 1/2" rebar pin set; Thence North 05 degrees 38 minutes 04 seconds West for a distance of 35.19 feet to a point; Thence North 84 degrees 11 minutes 06 seconds East for a distance of 179.98 feet to a 1/2" rebar pin found on the West right-of-way line of said Ahaluna Drive;

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Thence following along Ahaluna Drive the following courses:

Thence South 05 degrees 38 minutes 04 seconds East for a distance of 37.90 feet to a point; Thence along a curve to the left having a radius of 6176.94 feet and an arc length of 247.50 feet, being subtended by a chord of South 05 degrees 24 minutes 23 seconds East for a distance of 247.48 feet to a point; Thence South 07 degrees 08 minutes 55 seconds East for a distance of 43.78 feet to a point; Thence South 06 degrees 37 minutes 44 seconds East for a distance of 62.98 feet to a point; Thence along a curve to the left having a radius of 2010.22 feet and an arc length of 225.47 feet, being subtended by a chord of South 08 degrees 51 minutes 50 seconds East for a distance of 225.36 feet to a point; Thence South 12 degrees 58 minutes 55 seconds East for a distance of 53.69 feet to a point; Thence South 14 degrees 34 minutes 53 seconds East for a distance of 78.81 feet to a point; Thence along a curve to the right having a radius of 921.56 feet and an arc length of 74.93 feet, being subtended by a chord of South 13 degrees 11 minutes 01 seconds East for a distance of 74.91 feet to a point;

Thence leaving Ahaluna Drive the following course:

Thence North 79 degrees 08 minutes 45 seconds East for a distance of 40.00 feet to a point and said point being the POINT OF BEGINNING.

Together with and subject to covenants, easements, and restrictions of record.

Said property contains 143.10 acres more or less.

Tract 2 (Zoned P-U-D):

All that tract or parcel of land lying and being in Land Lot 173 9th Land District Hall County, Georgia as shown on a survey and plat prepared by Patton Land Surveying, LLC. For Oak Hall Companies, LLC dated December 30th, 2016 and being more particularly described as follows:

Commencing at a PK nail set at the Centerline Intersection (C/L) of Ahaluna Drive (40' wide right-of-way) and Watuga Drive (40' wide right-of-way) located at Georgia State Plane Coordinate Northing 1570949.25 Easting 2390021.75; THENCE South 50 degrees 11 minutes 15 seconds West for a distance of 2,720.80 feet to a 1/2" crimp top pin found, said point being the TRUE POINT OF BEGINNING.

Thence South 63 degrees 59 minutes 25 seconds West for a distance of 107.26 feet to a point; Thence North 22 degrees 59 minutes 20 seconds West for a distance of 314.19 feet to a point; Thence South 67 degrees 13 minutes 07 seconds West for a distance of 498.07 feet to a point on the Easterly right-of-way line of State Route No. 53, Dawsonville Highway (varying width right-of-way);

Thence following along said Dawsonville Highway the following courses:

Thence North 22 degrees 46 minutes 53 seconds West for a distance of 588.52 feet to a 1/2" rebar pin set; Thence North 37 degrees 03 minutes 29 seconds East for a distance of 17.54 feet to a 3/8" rebar pin found; Thence North 23 degrees 00 minutes 44 seconds West for a distance of 54.99 feet to a point;

Thence leaving said Dawsonville Highway the following courses:

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Thence North 65 degrees 28 minutes 22 seconds East for a distance of 111.73 feet to a 1/2" solid iron pin found; Thence North 33 degrees 07 minutes 49 seconds West for a distance of 297.18 feet to a 1/2" solid iron pin found; Thence North 59 degrees 04 minutes 29 seconds East for a distance of 363.95 feet to a 5/8" rebar pin found; Thence South 31 degrees 03 minutes 35 seconds East for a distance of 90.18 feet to a 5/8" rebar pin found; Thence South 30 degrees 21 minutes 26 seconds East for a distance of 359.12 feet to a 1/2" open top pin found; Thence South 30 degrees 12 minutes 33 seconds East for a distance of 869.84 feet to a point and said point being the POINT OF BEGINNING.

Together with and subject to covenants, easements, and restrictions of record.

Said property contains 11.12 acres more or less.

Tract 3 (Zoned G-B):

All that tract or parcel of land lying and being in Land Lot 173 9th Land District Hall County, Georgia as shown on a survey and plat prepared by Patton Land Surveying, LLC. For Oak Hall Companies, LLC dated December 30th, 2016 and being more particularly described as follows:

Commencing at a PK nail set at the Centerline Intersection (C/L) of Ahaluna Drive (40' wide right-of-way) and Watuga Drive (40' wide right-of-way) located at Georgia State Plane Coordinate Northing 1570949.25 Easting 2390021.75; THENCE South 50 degrees 42 minutes 24 seconds West for a distance of 2,825.08 feet to a point, said point being the TRUE POINT OF BEGINNING.

Thence South 63 degrees 59 minutes 25 seconds West for a distance of 500.00 feet to a 1/2" rebar pin set on the Easterly right-of-way line of State Route No. 53, Dawsonville Highway (varying width right-of-way);

Thence following along said Dawsonville Highway the following courses:

Thence North 22 degrees 46 minutes 53 seconds West for a distance of 342.34 feet to a point;

Thence leaving said Dawsonville Highway the following courses:

Thence North 67 degrees 13 minutes 07 seconds East for a distance of 498.07 feet to a point; Thence South 22 degrees 59 minutes 20 seconds East for a distance of 314.19 feet to a point and said point being the POINT OF BEGINNING.

Together with and subject to covenants, easements, and restrictions of record.

Said property contains 3.76 acres more or less.

SECTION II.

All Ordinances and parts of Ordinances in conflict herewith are hereby repealed.

SECTION III.

If any portion of this Ordinance shall be held to be invalid or unconstitutional, such invalidity or unconstitutionality shall not affect or impair the remaining portions unless it clearly appears that such other parts are wholly and necessarily dependent upon the part held to be invalid or unconstitutional.

SECTION IV.

This Ordinance is enacted as an amendment to the Code of the City of Gainesville, Georgia, and is to be codified as a part of Section 9-1-1-5.

SECTION V.

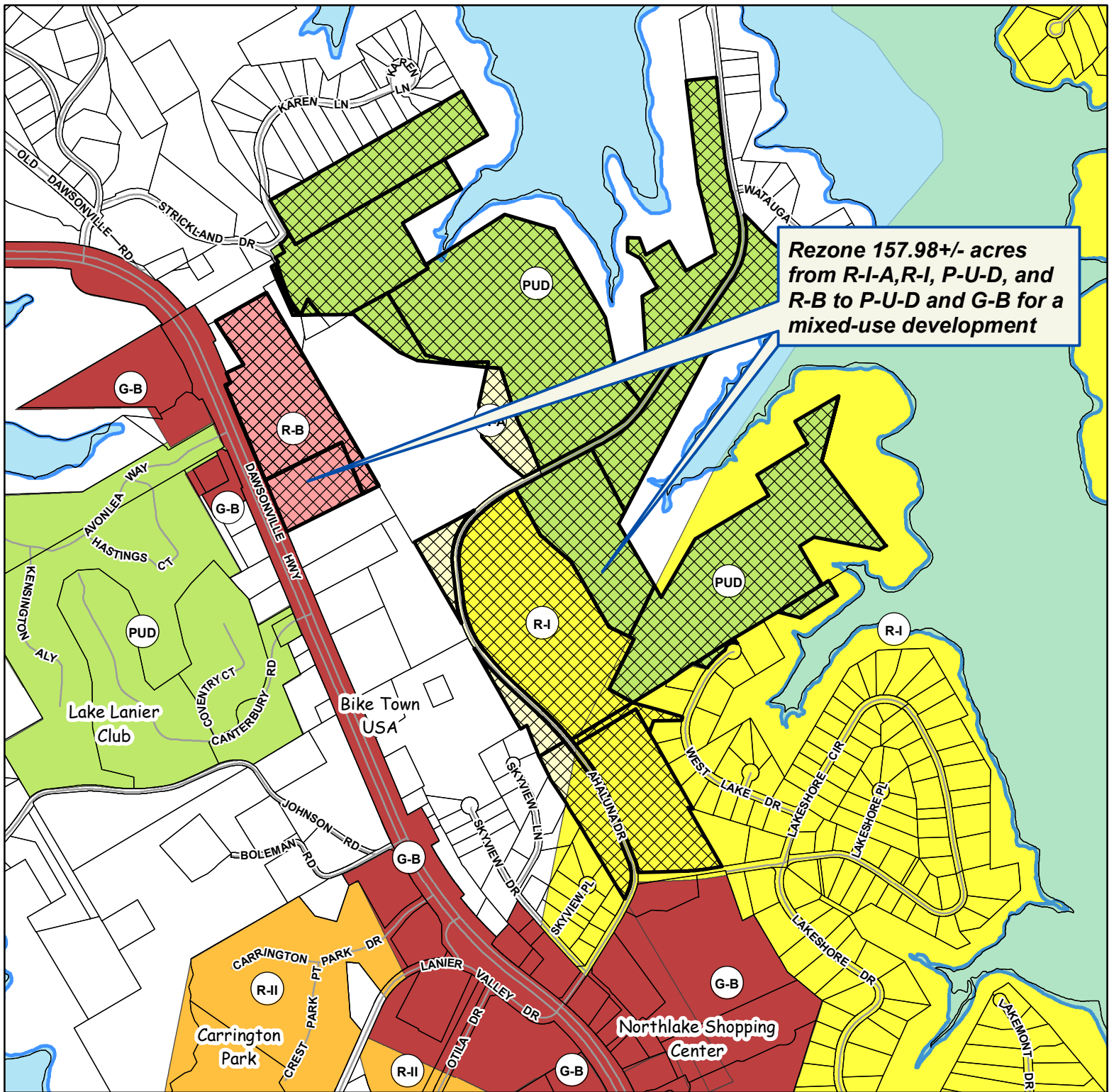
The effective date of this Ordinance shall be upon approval by the governing body of the City of Gainesville, Georgia.

C. Danny Dunagan, Jr., Mayor

This is to certify that I am City Clerk of the City of Gainesville. As such, I keep its official records, including its minutes. In that capacity, my signature below certifies this resolution was adopted as stated and will be recorded in the official minutes.

ATTEST:

Denise O. Jordan, City Clerk



Applicant:

REZONING REQUEST

OAK HALL COMPANIES, LLC



Request:

Rezone 157.98+/- acres from R-I-A, R-I, P-U-D, and R-B to P-U-D and G-B for a mixed-use development

Subject Area Address: 0, 1264 and 1817 Ahaluna Drive; 1876 Dawsonville Hwy; 2208 Karen Ln; 0 and 2029 Strickland Drive; 0 and 1489 West Lake Dr.

Meeting: 5/9/2017

Prepared: 2/16/2017

Gainesville Community Development Department

 Subject Property

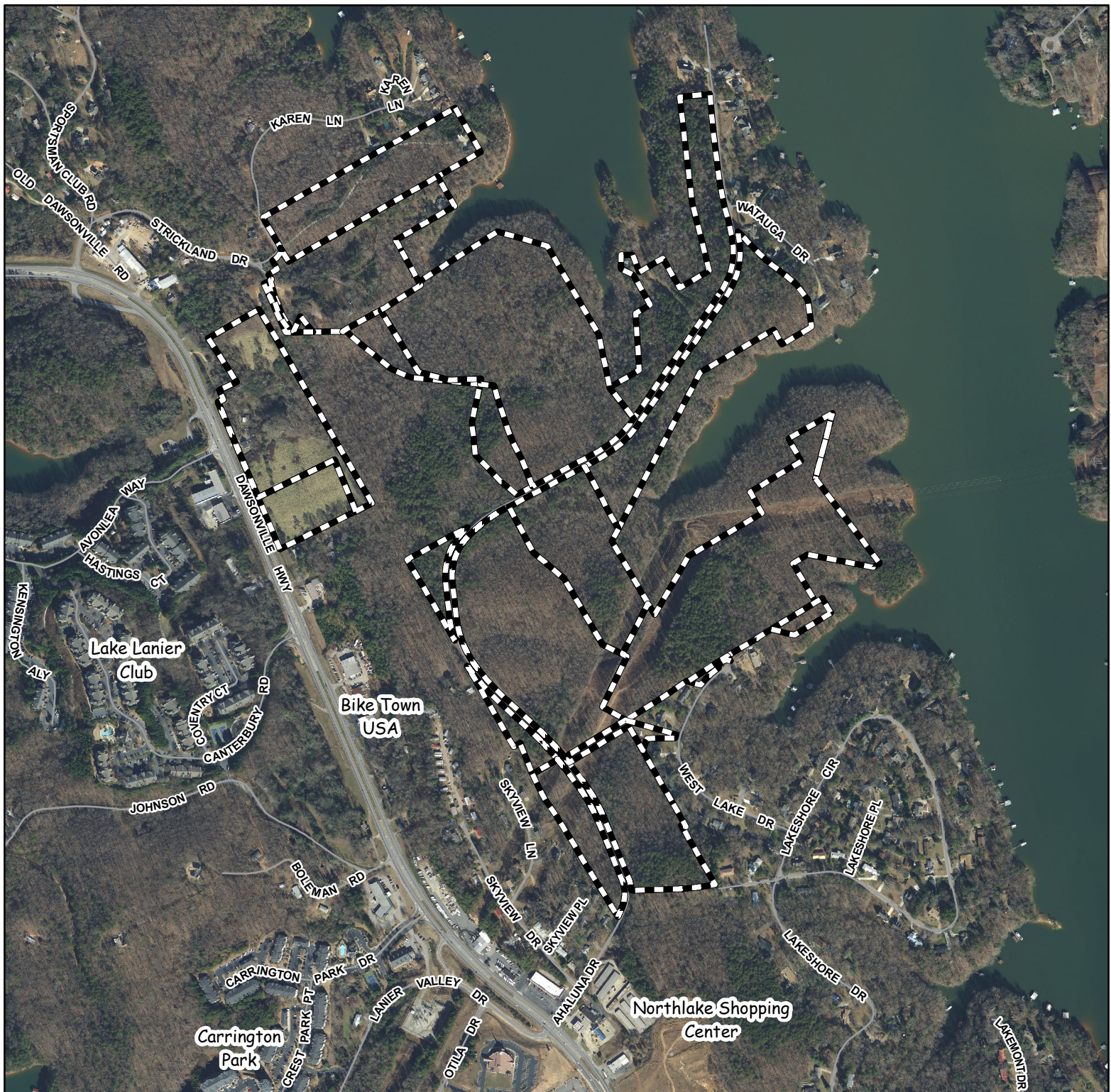


0 480 960 1,440 1,920 Feet

1" = 800'

Tax Parcel: 00-109B-000-003A; 00-110-000-001, 006, 030 031, 034, 035, 036, 037 and 038; 01-110-001-006; 01-110A-004-022; 01-114-001-001, 026, 1489 and 1490

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Applicant:

REZONING REQUEST

OAK HALL COMPANIES, LLC



Request:

Rezone 157.98+/- acres from R-I-A, R-I, P-U-D, and R-B to P-U-D and G-B for a mixed-use development

Subject Area Address: 0, 1264 and 1817 Ahaluna Drive; 1876 Dawsonville Hwy; 2208 Karen Ln; 0 and 2029 Strickland Drive; 0 and 1489 West Lake Dr.

Meeting: 5/9/2017

Prepared: 2/16/2017

Gainesville Community Development Department



Subject Property

Aerial from 2015

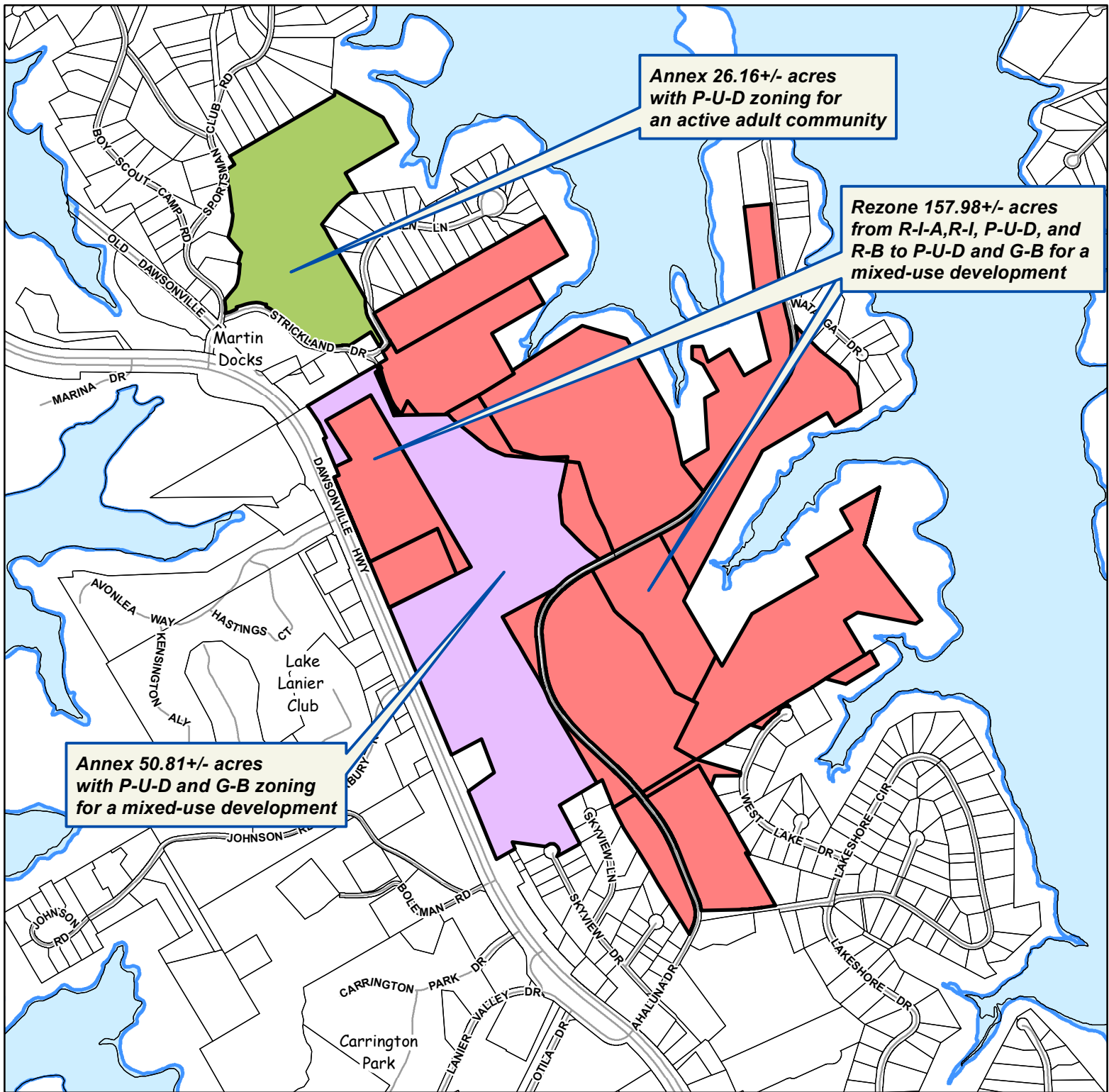
0 480 960 1,440 1,920 Feet



1" = 800'

Tax Parcel: 00-109B-000-003A; 00-110-000-001, 006, 030 031, 034, 035, 036, 037 and 038; 01-110-001-006; 01-110A-004-022; 01-114-001-001, 026, 1489 and 027

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Applicant:

ANNEXATION AND REZONING REQUEST

OAK HALL COMPANIES, LLC



Request:

Rezone 157.98+/- acres from R-I-A, R-I, P-U-D, and R-B to P-U-D and G-B and annex 76.97+/- acres with P-U-D zoning for a mixed-use development/active adult community

Subject Area Address:

See attached list

Meeting: 5/9/2017

Prepared: 2/16/2017

Gainesville Community Development Department

- Annex 26.16+/- Acres
- Annex 50.81+/- Acres
- Rezone 157.98+/- Acres



0 540 1,080 1,620 2,160 Feet

1" = 900'

Tax Parcel: See attached list

REVISED 2017-04-24

**NARRATIVE REPORT, LAND USES AND DEVELOPMENT SUMMARY, IMPROVEMENT REQUIREMENTS
COMPARISON, AND COMMUNITY BENEFIT STATEMENT FOR ZONING APPLICATION**

Applicant:	Oak Hall Companies, LLC
Subject Property:	157.98 Acres Designated as Hall County Tax Parcel(s): See Attached
Current Zoning:	PUD, R-I-A, R-B, & R-I
Proposed Zoning:	PUD & G-B
Proposed Use:	Mixed-Use development, consisting of: ▪ 790 age-restricted, independent living, assisted living, and memory care residences ▪ Approximately 24,000 sf of restaurant, retail, office ▪ Approximately 40,000 sf of storage ▪ Approximately 10,650 sf public/semi-public use (Fire Station) ▪ 7 commercial outparcels with approximately 8,000 sf average per parcel of Office/Retail/Restaurant
ROW Access:	Dawsonville Hwy (SR53), Ahaluna Drive, & Strickland Drive

This statement is intended to comply with the application procedures established by The City of Gainesville, GA for submittal of applications for annexation as required by the City of Gainesville Unified Land Development Code (the "ULDC"), City of Gainesville Public Hearing Application Requirements, and other City of Gainesville Ordinances and Standards and is intended to serve as the Narrative Report required by the ULDC. As part of this Narrative Report, the Applicant asserts the statements contained in the Application for Zoning Actions package, submitted herewith incorporated herein by reference, and as may be amended (the "Application"), describing justification for the requested zoning and for any request of variances, in any, as if such were fully stated herein.

The Applicant proposes to zone a total of 208.79 acres, consisting of the Subject Property's 157.98 acres, which currently located within the City of Gainesville, together with an adjoining 50.81 acre-Annexation Property located in unincorporated Hall County. The Applicant has submitted a concurrent annexation application for the unincorporated 50.81 acres, and incorporates all statements therein into this Application for Zoning Actions.

Approval of the annexation and the concurrent zoning application would yield 185.02 acres zoned PUD, and an additional 23.77 acres zoned G-B, all located within the City.

I. Land Uses and Development Summary

The Applicant proposes to develop the Proposed Use on the Subject Property. The Subject Property is adjoined by residential dwellings along Lake Lanier to the north, east, southeast, west and southwest (zoned R-B, AR-III, PUD, V-C, R-II and R-I-A), and by commercially-zoned properties to the southwest, along SR53 (zoned H-B and G-B).

The Proposed Use is consistent with the intent of the Comprehensive Plan and the Future Development Map. The Subject Property is depicted on the Gainesville 2030 Comprehensive Plan, as Mixed-Use General and Low Density Residential (1 to 4 Dwelling Units per Acre). To accomplish this, the Applicant proposes to utilize the PUD and G-B zoning categories.

A. Zoning and Land Use

i. 3.76 acres to be zoned G-B (General Business District)

If the zoning is approved as submitted, 3.76 acres of the Subject Property would be zoned G-B (General Business District), identified as Tract 3 on the Retracement for Oak Hall Companies, LLC, dated December 30, 2016, last revised March 31, 2017 (the “**Zoning Survey**”), submitted concurrently with this Application and incorporated by reference. This 3.76 acres of the Subject Property is sometimes hereafter referred to as the “G-B Zoning Tract.”

The G-B Zoning Tract would be governed by the general provisions of the UDLC for that zoning category. In this regard, the Applicant proposes to subject the G-B Zoning Tract to the land uses and performance standards depicted on the Zoning Plan, dated March 31, 2017, prepared for Oak Hall Companies, LLC by Site Development Consultants, Inc. (the “**Concept Plan**”), submitted concurrently with this Application and incorporated by reference.

ii. 154.22 acres to be zoned PUD (Planned Unit Development)

If the zoning application is approved as submitted, 154.22 acres of the Subject Property would be zoned PUD (Planned Unit Development), identified as Tract 1 & 2 on the Zoning Survey. This 154.22 acres of the Subject Property is sometimes hereafter referred to as the “PUD Zoning Tract.”

The Applicant proposes to subject the PUD Zoning Tract to the land uses and performance standards depicted on the Concept Plan. In addition, the Applicant also proposes to subject the PUD Annexation Property to the **PUD Performance Standards**, attached to and incorporated with this Narrative Report for Zoning.

B. Traffic Impact Analysis

The Applicant also submits with this Narrative Report, and incorporates herein, a Trip Generation Report and Traffic Study Network Determination.

Permanent access to the development will be from the ROW Access. All of the development's interior streets and driveways will be publicly-owned and maintained.

Traffic generated from the development will be minimal and the entrance will be at a location where sight distance is sufficient. All curb cuts shall be coordinated and approved by the City of Gainesville and GDOT and acceleration and deceleration lanes will be installed as required. All streets within the development will be constructed to conform to standard requirements. Parking will be provided onsite as required by the ULDC.

C. School System

As the Annexation Property will be age-restricted use, impact on schools will be minimal.

D. Utilities

With regard to public utilities, water, sanitary sewer, electricity and cable are available to the site. The development's water and sewer needs will be served by the City of Gainesville. The Applicant will install underground utility lines within the development to serve the project on an as-needed basis.

E. Economic Impact

The Applicant submits and incorporates herein the attached **Economic Impact Statement**. The calculations therein (a) analyze the impact of the entire 208.79 acre Mixed-Use development and (b) assume the owners of the residential units will have no children and be exempt from School Property Taxes. The number of residents with children will be nominal, and any such persons would likely be required to pay School Property Taxes.

F. Environmental Impact

The project should also have a minimal impact on the environment. There should be no impact on air quality. Drainage, soil erosion, and sedimentation controls will be extensively utilized on the site after obtaining all required approvals from the Soil Conservation Service and the City of Gainesville. Best management practices will be utilized to protect natural resources. The Applicant will submit plans detailing the development for approval by all applicable and appropriate governmental agencies, based on conformity with subdivision and zoning requirements, as well as other applicable ordinances, statutes and regulations.

II. Improvement Requirements Comparison

	<u>City Standards</u>	<u>Proposed Standards</u>
ROW Widths	50 feet	50 feet
Pavement Widths	24 feet	24 feet
Sidewalk Width	4 feet	4 feet
Sidewalk Location	At least 1 side of each residential road, with connector sidewalks to commercial areas.	At least 1 side of each residential road.

III. Community Benefit Statement

The community will benefit from the Proposed Use, which will provide high quality housing for seniors, improved fire service, and commercial and recreational benefits to the community. The Proposed Use will have little impact on school attendance, as most age-restricted units will not house school-aged children. Residents of age-restricted housing also tend to drive less and, when they do, they drive during off-peak hours, thereby lessening the impact on community traffic.

The Proposed Use will provide quality architectural designs, and extend utility services to areas currently unserved by water and sewer. The Proposed Use will also improve road access on Ahaluna Drive.

CONCLUSION

Approval of the Application will be in the best interest of the City. The Applicant respectfully requests that the Application, as requested by the Applicant, be approved. The Applicant also reserves the right to amend this statement and the Application by supplementing further responses and documents.

Sincerely,



Ethan Underwood,
Attorney for the Applicant

PUD Performance Standards

I. Residential Performance Standards

RESIDENTIAL USE

Maximum 790 Age-Restricted, Independent Living, Assisted Living, and Memory Care Dwellings on 185.02 acres zoned PUD with a gross density of approximately 4.43 residential units per acre.

AGE RESTRICTION

No less than 80% of the residential units must be inhabited by at least one person 55 years of age or older.

BUILDING MATERIALS

Exteriors of all homes and residential structures constructed on the subject property must be of brick, stone, hard coat stucco, or a cement-based material such as hardi-board. Accent materials such as, but not limited to, copper roofing, cedar shake, a cement-based material such as hardi-board, or a combination of such materials, may be used with such accent material not to exceed fifty percent (50%) of the facade. There shall be no vinyl or aluminum siding.

The roofing material used on all detached homes must be cedar shake, architectural/dimensional style asphalt shingles or metal as appropriate to the architectural style of each home.

PROPERTY OWNER ASSOCIATIONS

The development shall have covenants that require maintenance of the landscaped entrance area, open space, and amenity areas by a homeowners association. Membership in the homeowners association is mandatory for owners of properties. Zero-Lot Residential Units and Stacked Flat Units may have separate sub-associations to manage their respective properties

AMENITIES

An amenity area, including a swimming pool and club house, will be provided for use of residents and will be the responsibility of the homeowners association to maintain. On-street parking will be allowed for the amenity area.

An approximately 40,000 sf storage facility, with parking spaces initially for up to 19 , with a total of 50 at full build-out, Recreational Vehicles as well as up to 50 parking spaces for on-site boat storage will be available on the premises for lease *solely* to residents of the development.

Residents will also have the ability to utilize community docks and lease or purchase one of the approximately 130 boat slips for the development.

UNIT TYPE

Residential units are designed to allow residents to “age in place.” Independent living products will include single-family detached homes, single-family attached homes, attached condominiums, and rental units. Rental units will also offer assisted living services, and memory care units.

I. Detached Residential

Type	Maximum # of Units
• POD A – Single Family Detached	265 units
• POD B – Single Family Detached	40 units

PERFORMANCE STANDARDS – DETACHED RESIDENTIAL

- Minimum lot width – 40 feet
- Minimum Heated Floor Area (1,500 sf)
- Maximum building height – 40 feet
- Each unit will have a minimum 2 car enclosed garage
- Each unit will have a minimum of 18 feet of driveway from the back of sidewalk to the building face or 20 feet from the back of the curb to the building when there is no sidewalk
- Setbacks, excluding steps, roof overhangs, chimneys, bay windows, and patios:
 - 15' front
 - 3' side
 - 10' building separation (foundation to foundation)
 - 10' interior rear



II. Zero-Lot Line Residential

Type	Maximum # of Units
• Single Family Cottages	79 units
• Terrace Homes – Detached	81 units

The building footprint for each unit will comprise the boundaries of the individual lots; all other improved areas will be maintained by a mandatory homeowner association as “common area” and all undeveloped area will be maintained as “open space.”

A. Single Family Cottages.

PERFORMANCE STANDARDS – ZERO-LOT LINE RESIDENTIAL

- Minimum unit width – 15 feet
- Minimum Heated Floor Area (500 sf)
- Maximum building height – 30 feet
- Each unit will have a minimum of 18 feet of driveway from the back of sidewalk to the building face or 20 feet from the back of the curb to the building when there is no sidewalk
- Setbacks, excluding steps, roof overhangs, chimneys, bay windows, and patios:
 - 0’ front
 - 0’ side
 - 0’ interior rear
 - 10’ building separation (foundation to foundation)



B. Terrace Homes – Detached.

PERFORMANCE STANDARDS – ZERO-LOT LINE RESIDENTIAL

- Minimum unit width – 24 feet
- Minimum Heated Floor Area (1,100 sf)
- Maximum building height – 30 feet
- Each unit will have a minimum 2 car enclosed garage
- Each unit will have a minimum of 18 feet of driveway from the back of sidewalk to the building face or 20 feet from the back of the curb to the building when there is no sidewalk
- Setbacks, excluding steps, roof overhangs, chimneys, bay windows, and patios:
 - 0' front
 - 0' side
 - 0' interior rear
 - 10' building separation (foundation to foundation)



III. For-Rent Residential

For-Rent Residential units are multi-story apartment, with buildings operated by a professional management company. In all areas designated for For-Rent Residential use, all buildings and grounds will be maintained by a management company and all undeveloped areas will be maintained as “open space.”

Type	Maximum # of Units
• Independent Living – For Rent (IL)	175 units, less MC units
• Assisted Living – For Rent (AL)	150 units, less MC units
• Memory Care – For Rent (MC)	Up to 30 units, which count toward IL and AL maximums

PERFORMANCE STANDARDS – FOR-RENT RESIDENTIAL

- Minimum Heated Floor Area – 700,000 sf
- Maximum building height – 75 feet
- Setbacks, excluding steps, roof overhangs, chimneys, bay windows, and patios:
 - 40’ front
 - 20’ side
 - 25’ interior rear
 - 50’ exterior rear
- Minimum Parking Requirements - 1 space per 1.5 residential unit, plus one space per employee



II. Commercial Performance Standards

COMMERCIAL USE

Commercial Uses within the Planned Unit Development are generally expected to be Retail/Office/Restaurant. In addition, an approximately 40,000 sf storage facility may be constructed within the PUD.

The following uses are not allowed within the commercial portion of the PUD:

- (a) Motels or hotels with rooms accessed from the exterior of the building.
- (b) Adult novelty stores.
- (c) Adult entertainment centers.
- (d) Pawn shops.
- (e) Gas Stations.
- (f) Tire Stores.
- (g) Massage Parlors; provided this will not prohibit the operation of any profession by practitioners licensed by the State of Georgia.
- (h) Vaping stores
- (i) Auto body shops.
- (j) Automobile sales establishments.
- (k) Marine sales or repair stores.
- (l) Non-automated car wash.

BUILDING MATERIALS

Building exteriors not screened from view from a public right-of-way right of way or any property line shall have an architectural treatment of brick, brick/frame, stone, or stucco, or another architectural treatment approved by the Planning Director.

MECHANICAL EQUIPMENT

Ground and building-mounted mechanical equipment, such as coolers, HVAC equipment, meters, utility banks, trash receptacles, and electrical or telephone utility cabinets must be placed within the interior side and rear yards; provided, such mechanical equipment may be located in the front or corner side yards if screened from any right-of-way or any property line with landscape materials.

PERFORMANCE STANDARDS - COMMERCIAL

- Maximum Building Coverage – 70% of lot
- Maximum building height – 75 feet
- Minimum landscaped open space – 10% of lot
- Minimum front landscape strip paralleling right-of-way – 10 feet
- Minimum side and rear landscape strip – 6 feet
- Setbacks, excluding steps, roof overhangs, chimneys, bay windows, and patios:
 - 40' from right-of-way
 - 10' side
 - 25' interior rear
 - 50' adjacent to residential use
- Minimum Parking Requirements - See Gainesville Unified Land Development Code



City Economic Impact Statement: Oak Hall Companies, LLC

Population	36,306		Millage Rate	0.00298		Total M&O	\$ 9,657,458.00
Households	12,967					Expenditures Per Child (40%)	\$ 3,401.41
			School Millage Rate	0.00685		Police Expenditures	\$ 8,471,549.00
Impact Fees per Unit	\$ 1,589.81		Sales Tax Revenue	\$ 5,036,730.00		Fire Expenditures	\$ 6,542,453.00

Table 1: Projected Residential Population

<u>Year</u>	<u>New Houses</u>	<u>Total Houses</u>	<u>Population</u>
1	77	77	216
2	77	154	431
3	77	231	647
4	78	309	865
5	78	387	1084
6	78	465	1302
<u>Year</u>	<u>AL & IL Units</u>	<u>Total AL & IL Units</u>	<u>Population</u>
1		0	0
2		0	0
3	109	109	114
4	217	217	228
5	325	325	341
6	0	325	341

Table 2: Projected Annual General Property Tax Revenue from Residential

<u>Average Home Price</u>	<u>Year</u>	<u>Revenue</u>
\$400,000.00	1	\$91,325.08
	2	\$182,650.16
	3	\$273,975.24
<u>Tax per House</u>		
\$1,186	4	\$366,486.36
	5	\$458,997.48

Table 3: Projected Annual Sales Tax Revenue from Residential

<u>Year</u>	<u>Revenue</u>
1	\$29,908.86
2	\$59,817.72
3	\$89,726.59
4	\$120,023.87
5	\$150,321.16
6	\$180,618.45

Table 4: Projected Annual School Property Tax Revenue from Residential (Assume 40% Exempt from School Tax)

<u>Average Home Price</u>	<u>Year</u>	<u>Revenue</u>
\$400,000.00	1	\$126,588.00
	2	\$253,176.00
	3	\$379,764.00
<u>Avg. Prop Tax per House</u>		
\$2,740	4	\$507,996.00
	5	\$636,228.00
	6	\$764,460.00

Table 5: Projected Residential Impact Fees: One Time Fee per Annum

<u>Year</u>	<u>Total</u>
1	\$ 122,415.37
2	\$ 122,415.37
3	\$ 122,415.37
4	\$ 124,005.18
5	\$ 124,005.18
6	\$ 124,005.18

Table 6: Projected Annual Sales Tax Revenue from IL & AL	
Year	Revenue
1	
2	
3	\$42,338.52
4	\$126,627.13
5	\$252,865.83
6	\$252,865.83

Table 7: Projected Property Tax Revenue from IL & AL		
Year	Assessment Value	Revenue
1	\$ 900,000.00	\$8,847.00
2	\$ 2,500,000.00	\$24,575.00
3	\$ 15,000,000.00	\$147,450.00
4	\$ 15,000,000.00	\$147,450.00
5	\$ 15,000,000.00	\$147,450.00
6	\$ 15,000,000.00	\$147,450.00

Table 8: Projected IL & AL Impact Fees: One Time Fee per Annum	
Year	Total
1	\$ -
2	\$ 173,289.29
3	\$ 344,988.77
4	\$ 516,688.25
5	\$ -
6	\$ -

Table 9: Projected Property Tax Revenue from Commercial		
Average Value per SF	Year	Revenue
\$120.00	1	\$23,592.00
	2	\$46,004.40
Total SF	3	\$67,296.18
120,000.00	4	\$87,523.37
	5	\$106,739.20
Depreciation	6	\$124,994.24
5%		

Table 10: Projected Commercial Impact Fees: One Time Fee per Annum		
Average Fee per 1000 SF	Year	Revenue
\$94.46	1	\$1,889.20
	2	\$1,889.20
Total SF	3	\$1,889.20
120,000.00	4	\$1,889.20
	5	\$1,889.20
	6	\$1,889.20

Table 11: Cost of Law Enforcement Services		
Year	Total Households	Annual Law Enforcement Expenditures
1	77	\$50,305.33
2	154	\$100,610.67
3	340	\$222,127.45
4	526	\$343,644.23
5	712	\$465,161.02
6	790	\$516,119.67

Table 12: Cost of Fire Protection Services		
Year	Total Households	Annual Fire Expenditures
1	77	\$38,850.07
2	154	\$77,700.14
3	340	\$171,545.77
4	526	\$265,391.40
5	712	\$359,237.03
6	790	\$398,591.65

Table 13: M&O Expenditures		
Year	Total Households	Annual M&O Expenditures
1	77	\$57,347.44
2	154	\$114,694.88
3	340	\$253,222.47
4	526	\$391,750.05
5	712	\$530,277.64
6	790	\$588,369.85

Table 14: Summary of Annual Impact at Completion		
Impact Summary	Column1	Totals
Revenues		
Property Taxes to		\$1,495,901.72
Sales Taxes to City		\$433,484.28
Total Revenue		\$1,929,386.00
Expenditures		
Police		\$516,119.67
Fire		\$398,591.65
M&O		\$588,369.85
School Expenditures (1% of Homes have a school-age child)		\$44,284.37
Total Expenditures		\$1,547,365.53
Annual Net Revenue		\$382,020.47
Total Impact Fees		\$1,785,563.16

J. Ethan Underwood
eunderwood@mhtlegal.com

REVISED 2017-01-27

RESERVATION OF CONSTITUTIONAL AND LEGAL RIGHTS

Applicant:	Oak Hall Companies, LLC
Subject Property:	157.98 Acres Designated as Hall County Tax Parcel(s): See Attached
Current Zoning:	PUD, R-I-A, R-B, & R-I
Proposed Zoning:	PUD & G-B
Proposed Use:	Mixed-Use development, consisting of: ▪ 820 age-restricted, independent living, assisted living, and memory care residences ▪ Approximately 24,000 sf of restaurant, retail, office ▪ Approximately 40,000 sf of storage ▪ Approximately 10,650 sf public/semi-public use (Fire Station) ▪ 7 commercial outparcels with approximately 8,000 sf average per parcel of Office/Retail/Restaurant
ROW Access:	Dawsonville Hwy (SR53)

This Reservation of Constitutional and Other Legal Rights ("the Reservation") is intended to supplement and form a part of the rezoning application (including any request for zoning, conditional use permit and variances)(the "Application") of the Applicant and the owners of the Subject Property and to put the City of Gainesville on notice of the Applicant's assertion of its constitutional and legal rights.

The Applicant has filed a timely application, has provided all required information and has submitted the appropriate application fees. The application meets all judicial and statutory requirements for approval.

The Current Zoning of the Subject Property is unconstitutional in that it affords no reasonable use of the Subject Property and no resulting benefit to the public from designation under this zoning classification. The Applicant and the owners of the Subject Property have filed the Application to remedy this unconstitutionality.

A refusal by the City of Gainesville to approve the Application, as requested by the Applicant, will impose a disproportionate hardship on the Applicant and owners of the Subject Property without benefiting any surrounding property owners. There is no reasonable use of the Subject Property under any other zoning classification and no resulting benefit to the public from designation to any other classification.

Any provisions in the City of Gainesville Unified Land Development Code (the "ULDC") that classify, or may classify, the Subject Property into any non-requested zoning classification or zoning classification that does not permit the Proposed Use as a matter of right, or at a density less than as requested by the Applicant, are, or will be, unconstitutional in that they will constitute a taking of the Applicant's and owners' property rights without first paying fair, adequate, and just compensation for such rights in violation of Article I, Section III, Paragraph I of the

Georgia Constitution of 1983, as amended, and the Fifth and Fourteenth Amendments to the Constitution of the United States.

The Subject Property is suitable for development under the Proposed Zoning district requested by the Applicant and it is not suitable for development under any other zoning classification, including without limitation the Current Zoning category of the Subject Property, or at a density or use less than that requested by the Applicant. A denial of the Application, as requested by the Applicant, will constitute an arbitrary and capricious act by the City of Gainesville without any basis for such, and will constitute an abuse of discretion in violation of Article I, Section I, Paragraph I of the Georgia Constitution of 1983, as amended and the Due Process Clause of the Fifth and Fourteenth Amendments to the Constitution of the United States.

A refusal by the City of Gainesville to approve the Application, as requested by the Applicant, will prohibit the only viable economic use of the Subject Property, will be unconstitutional and will discriminate in an arbitrary, capricious and unreasonable manner between the Applicant and owner and the owners of similarly situated properties in violation of Article I, Section I, Paragraph II of the Georgia Constitution of 1983, as amended and the Equal Protection Clause of the Fourteenth Amendment to the Constitution of the United States.

The City of Gainesville cannot lawfully impose more restrictive standards on the Subject Property's development than are presently set forth in the ULDC. To do so will constitute a taking of the Subject Property as set forth above, and also amount to an unlawful delegation of the Board's authority in response to neighborhood opposition, in violation of Article IX, Section II, Paragraph IV of the Georgia Constitution of 1983, as amended. Any zoning conditions or other restrictions imposed on the Subject Property without the consent of the Applicant and property owners that do not serve to ameliorate the negative impacts of the development are invalid and void. As such, the Applicant and owners reserve the right to challenge any such zoning conditions and other restrictions. The Applicant and owners also reserve the right to challenge any unlawful exactions, whether they are in the form of illegal impact fees or otherwise.

Furthermore, this Reservation also constitutes an Ante Litem Notice pursuant to O.C.G.A. § 36-11-1, which places the City of Gainesville and all other agents of the City on notice of the Applicant's and owners' intent to seek monetary damages and attorney's fees against the City of Gainesville for any rezoning action, zoning condition, illegal impact fee and any other unlawful restrictions and exactions that are imposed on the Subject Property, the Applicant and the owners.

Finally, the Applicant and owners assert that the ULDC, Future Development Map and Comprehensive Plan were not adopted in compliance with the laws or constitutions of the State of Georgia or of the United States, and a denial of the Applicant's request based upon provisions illegally adopted will deprive the Applicant and owners of due process under the law.

By filing this Reservation, the Applicant reserves all rights and remedies available to it under the United States Constitution, the Georgia Constitution, all applicable federal, state, and local laws and ordinances, and in equity.

The Applicant and owners respectfully request that this Application be approved as requested by the Applicant and in the manner shown on the Application, which is incorporated herein by reference. This Reservation forms an integral part of the Application, and we ask that the City of Gainesville include this Reservation with the Applicant's other application documents. The Applicant and owners reserve the right to amend and supplement this Reservation at any time.

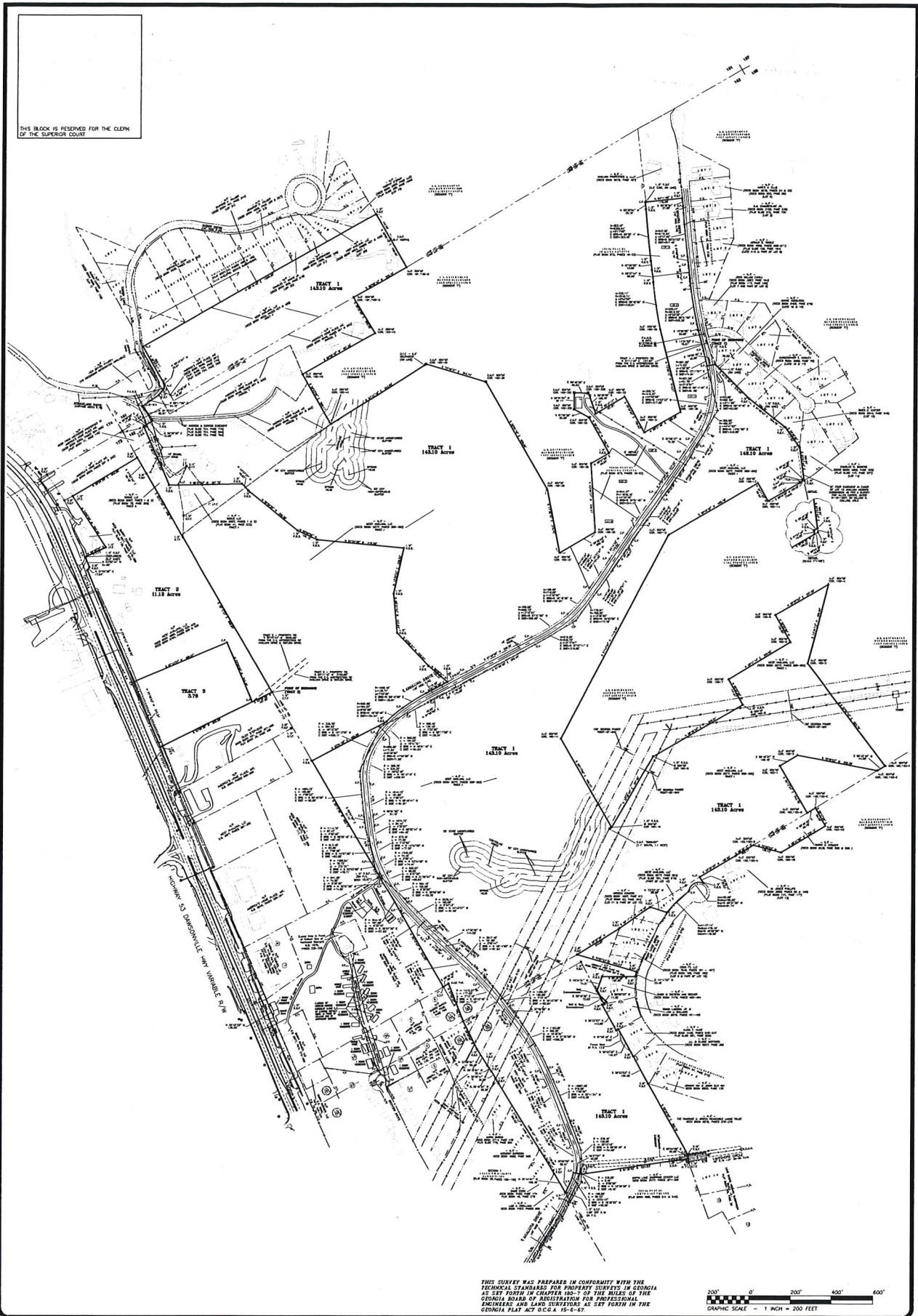
Page 3 of 3
January 27, 2017

Sincerely,



Ethan Underwood,
Attorney for the Applicant

THIS BLOCK IS RESERVED FOR THE CLERK
OF THE SUPERIOR COURT



THIS SURVEY WAS PREPARED IN CONFORMITY WITH THE
TECHNICAL STANDARDS FOR PROPERTY SURVEYS IN GEORGIA
AS SET FORTH IN CHAPTER 180-1 OF THE RULES OF THE
GEORGIA BOARD OF REGISTRATION FOR PROFESSIONAL
ENGINEERS AND LAND SURVEYORS AS SET FORTH IN THE
GEORGIA PLAT ACT S.C.A. 86-4-87

GRAPHIC SCALE - 1 INCH = 200 FEET

SHEET NUMBER:

3 of 3

SCALE: 1" = 200'

SURVEY DATE: 12/30/2016

PLAT DATE: 12/30/2016

12-037-00013.dwg

JN. 12-037

REVISIONS

No. DATE DESCRIPTION

1 01/03/2017 REVISED PER COMMENTS

2 01/16/2017 SPLIT TRACT 2 INTO TWO TRACTS

REVISIONS

RETRACEMENT SURVEY FOR:
OAK HALL COMPANIES, LLC
(PROPOSED RE-ZONING PARCELS)

- LOCATED IN -

LAND LOTS 161, 162, 163 AND 173
9TH LAND DISTRICT
CITY OF GAINESVILLE
HALL COUNTY, GEORGIA



REGISTERED PROFESSIONAL
LAND SURVEYORS

P.O. BOX 256
GAINESVILLE, GA 30503
PHONE: (770) 532-6492
FAX: (770) 532-1995
www.pattonsurveying.com

OAK HALL
—COMPANIES LLC—

Zoning Plan

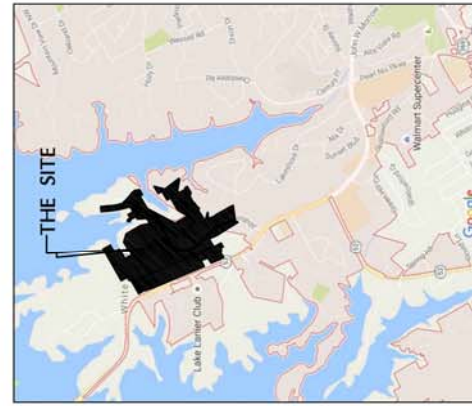
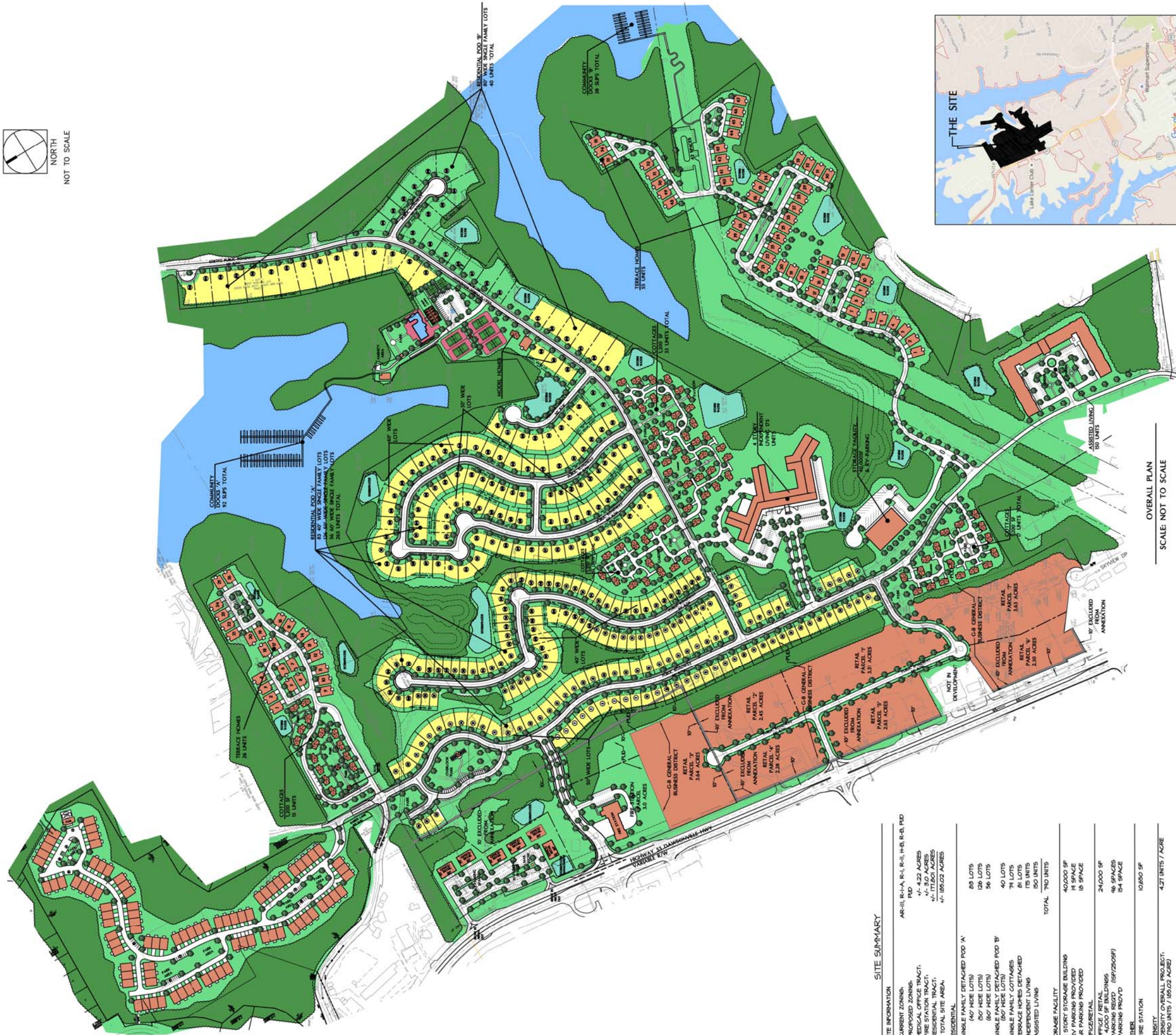
PROJECT LYING IN LAND LOTS 161, 162, 163 & 173 OF THE
9TH DISTRICT, CITY OF GAINESVILLE, HALL COUNTY, GEORGIA

Prepared for
Oak Hill Companies, LLC
5256 Peachtree Road, Suite 195
770-662-5995
Atlanta, GA 30341
DATE: 4/17/2017



U.S. GOVERNMENT
BUDFORD RESERVOIR
LAKE SIONCY LANIER
(SEGMENT 7)





OVERALL PLAN
SCALE: NOT TO SCALE

LOCATION MAP
NTS

Lanier Tract

Zoning Plan

PROJECT LYING IN LAND LOTS 161, 162, 163 & 173 OF THE 9TH DISTRICT, CITY OF GAINESVILLE, HALL COUNTY, GEORGIA

Prepared for
Oak Hall Companies, LLC
5256 Peachtree Road, Suite 195
Atlanta, Georgia 30341
DATE: 4/17/2017



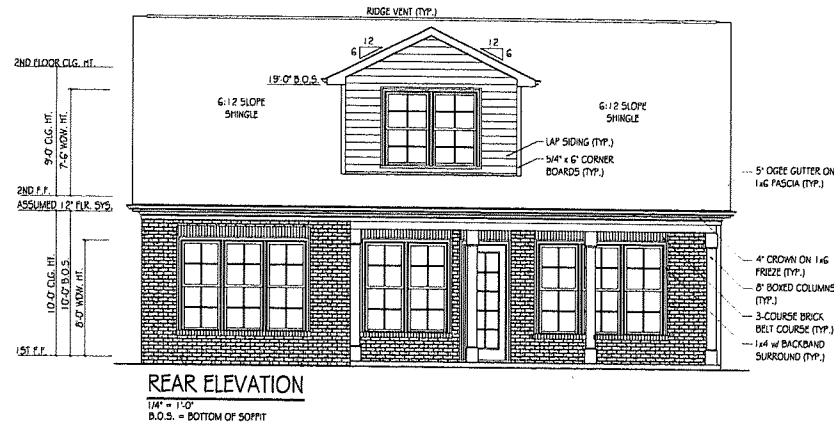
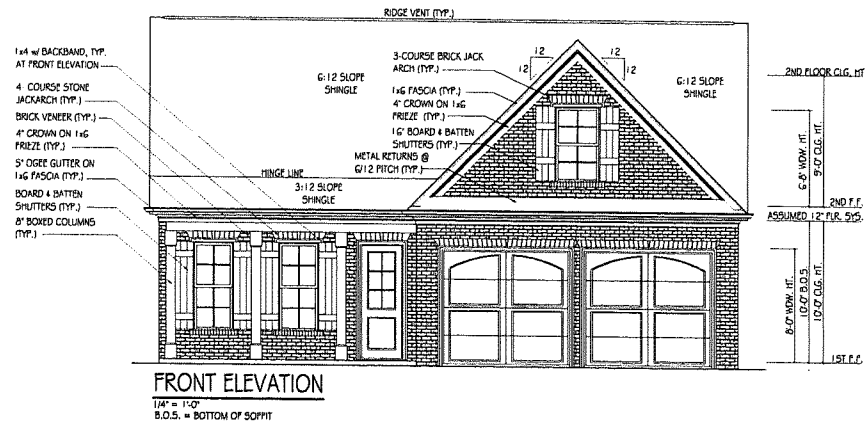
Development Consultants, Inc.
Lead Planning • Site Development • Landscape Architecture
4432 Grand View, Morris, GA 30866, Tel: 678-285-2885, Cell: 678-523-4888

SITE SUMMARY

SITE INFORMATION	
CURRENT ZONING:	AR-III, R-1A, R-1, H-B, R-B, PUD
PROPOSED ZONING:	PUD
MEDICAL OFFICE TRACT:	17- 4.32 ACRES
FIRE STATION TRACT:	17- 3.0 ACRES
RESIDENTIAL TRACT:	17- 171.801 ACRES
TOTAL SITE AREA:	17- 189.02 ACRES
RESIDENTIAL	
SINGLE FAMILY DETACHED POD 'A'	
63 LOTS	
126 WIDE LOTS	
56 LOTS	
60' WIDE LOTS	
40 LOTS	
14 LOTS	
18 LOTS	
15 LOTS	
150 UNITS	
ASSISTED LIVING	700 UNITS
TOTAL	
STORAGE FACILITY	40,000 SF
2 STORY STORAGE BUILDING	
RV PARKING PROVIDED	18 SPACES
CAR PARKING PROVIDED	10 SPACES
OFFICE/RETAIL	
OFFICE/RETAIL	24,000 SF
OFFICE/RETAIL BUILDINGS	
PARKING REQ'D (159/250SF)	96 SPACES
PARKING PROVIDED	154 SPACES
OTHER	
FIRE STATION	10,650 SF
DENSITY	
DENSITY OVERALL (170 UNITS / 189.02 ACRES)	4.21 UNITS / ACRE
OPEN SPACE	
OPEN SPACE PROVIDED	17- 69.0 ACRES
SURVEY	56.6%

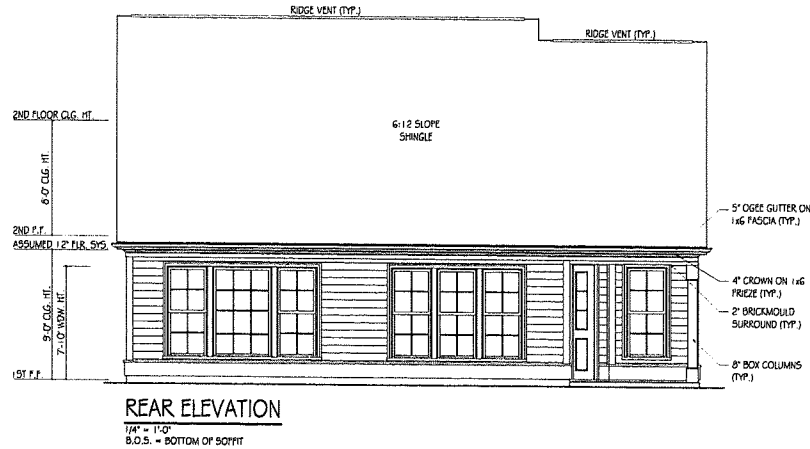
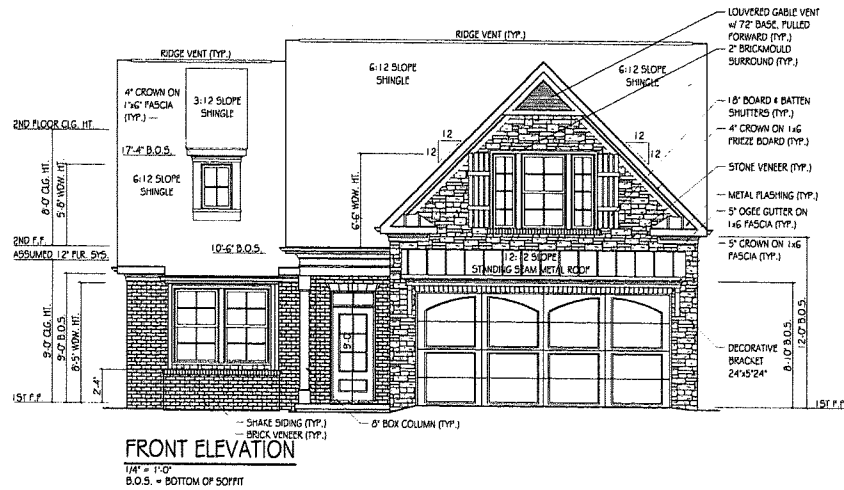
NOTES

- THIS PLAN IS TO BE USED FOR PLANNING PURPOSES ONLY AND IS NOT INTENDED TO BE A CONSTRUCTION DOCUMENT. PLAN IS PREPARED FOR USE ONLY BY OAK HALL COMPANIES, LLC.
- | | |
|---------------------------------|-------------------------------|
| COMMERCIAL PARCEL | 23.11 ACRES |
| COMMERCIAL PARCEL TOTAL ACREAGE | 6-B GENERAL BUSINESS DISTRICT |
| PROPOSED ZONING: | 7 COMMERCIAL PARCELS |
| RETAIL SPACE | 6,000 SF AVERAGE PER PARCEL |
- | | |
|--|---------------------|
| ADJACENT WILLOW SPRINGS TOWNHOME PROJECT | 26.2 ACRES |
| SITE AREA: | |
| ATTACHED SENIOR TERRACE HOMES | 3.44 UNITS PER ACRE |
| DENSITY: 40 UNITS/ 26.2 ACRES | |



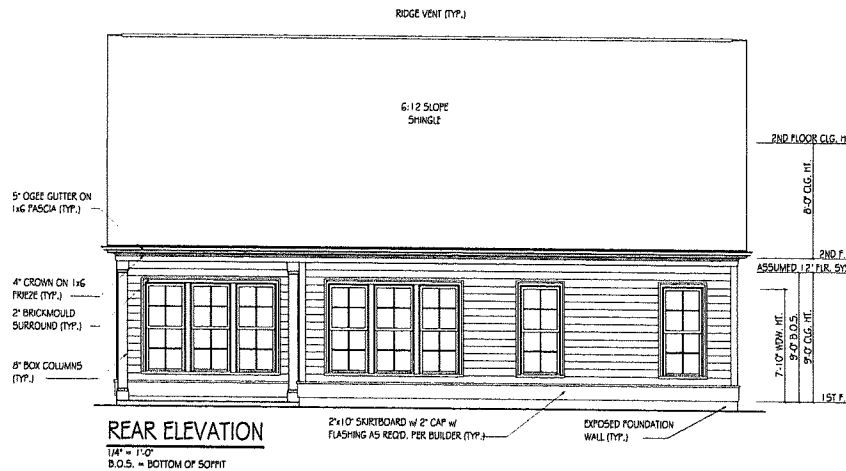
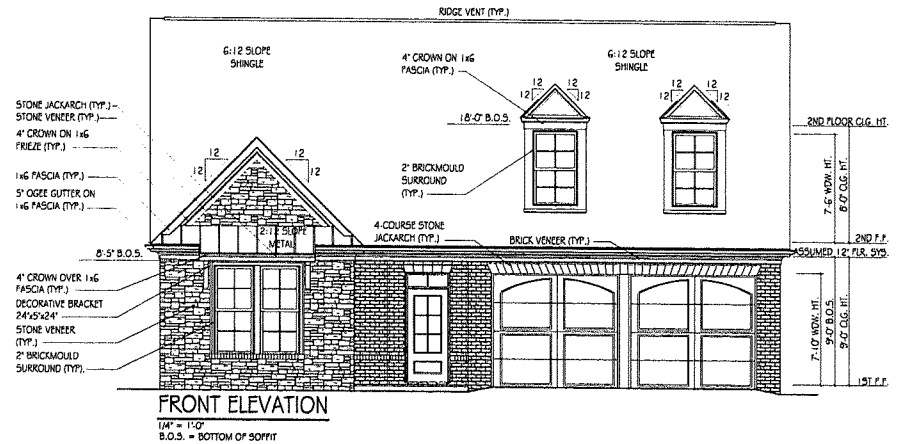
GENERAL NOTE:
 ALL GRADES SHOWN MAY VARY PER ACTUAL SITE CONDITIONS IN THE FIELD. THE NUMBER OF EXTERIOR TRIMMS AND RISERS AT GARAGE, TERRACES, PORCHES, DECKS, ETC., ARE TO BE DETERMINED BY THE SUBSEQUENT CONTRACTOR ACCORDING TO ACTUAL GRADES.

TUBE	JOB #
1203	15143
DATE	REVISED
08/19/16	
SQUARE FOOTAGE	
2303 SF	
LOT #	SUBDIVISION
	THE OVERLOOK AT OLD ATLANTA
PROJECT	
CUSTOM HOME FOR JIM CHAPMAN COMMUNITIES	
THE NEWBURY -A	
CLASSICAL CONCEPTS ATLANTA	
P.O. BOX 732 FLOWERY BRANCH, GA. 30542	
404-226-8864 (DAVID)	404-401-7288 (MARY)
CCADORAN@YAHOO.COM MFITZDORAN@AOL.COM	
This plan is the property of CLASSICAL CONCEPTS and may not be used reproduced without their permission.	
Please Note: CLASSICAL CONCEPTS and its affiliates are not responsible for any errors or omissions in this plan. It is the responsibility of the purchaser of this plan to verify the accuracy of the information contained herein. 1. Builder or owner to read and verify ALL DIMENSIONS prior to purchasing this plan. 2. Owner shall verify all dimensions with all local building codes as the local codes may vary from the plan. 3. The plan is not to be used for any other purpose without the written permission of CLASSICAL CONCEPTS. 4. Owner shall be responsible for obtaining all necessary permits for this plan. This is a general plan and is not intended to be used for any other purpose. Most designs are for the most typical conditions and are not intended to be used for any other purpose.	
DRAWN	SHEET #
BCLLC	D1 of 6



GENERAL NOTE:
 ALL GRADES SHOWN MAY VARY PER ACTUAL SITE CONDITIONS IN THE FIELD. THE NUMBER OF EXTERIOR TILES AND TILES AT GARAGE, TERRACES, PORCHES, DECKS, ETC., ARE TO BE DETERMINED BY THE BUILDER / CONTRACTOR ACCORDING TO ACTUAL GRADES.

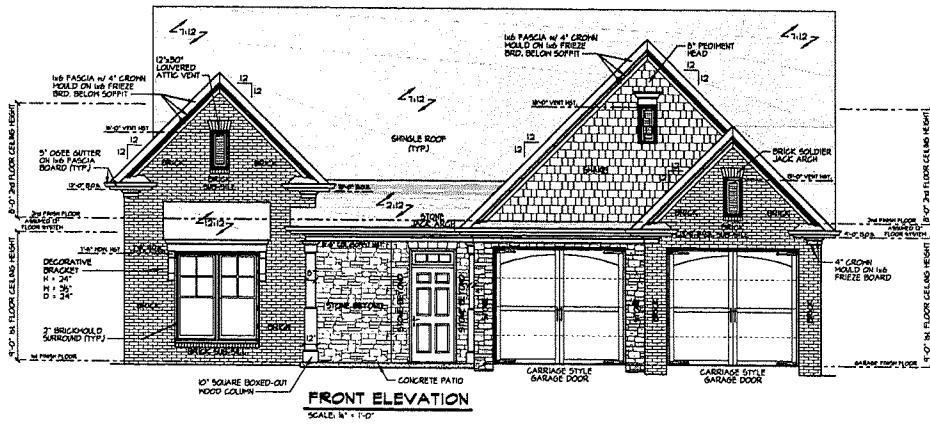
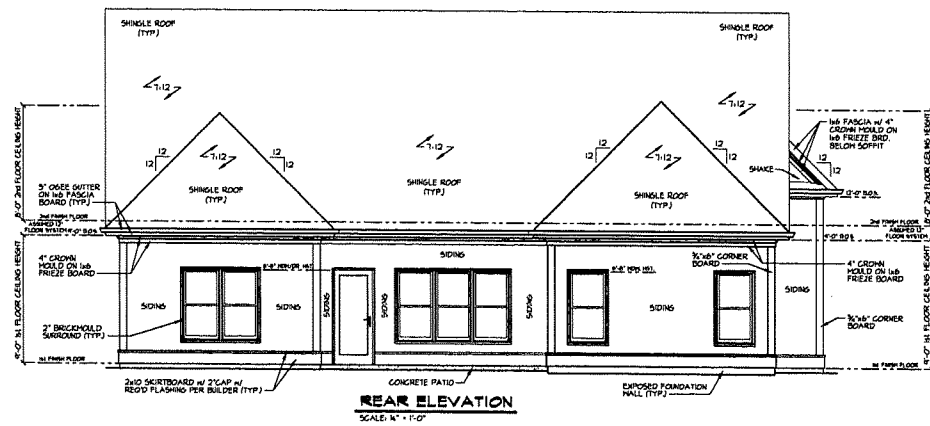
TUBE	JOB #
1283	16178
DATE	REVISED
09/10/16	
SQUARE FOOTAGE	
2229 SF	
LOT #	SUBDIVISION
	NESTLE DOWN FARMS
PROJECT	
CUSTOM HOME FOR JIM CHAPMAN COMMUNITIES	
THE DALTON - A	
CLASSICAL CONCEPTS ATLANTA	
P.O. BOX 732 FLOWERY BRANCH, GA. 30542	
404-226-6964 (DAVID)	404-401-7298 (MARY)
CCADORAN@YAHOO.COM MFTZDORAN@AOL.COM	
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DRAWN	SHEET #
BCLLC	D1 OF 5



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TUBE	JOB #
1284	16179
DATE	REVISED
09/10/16	
SQUARE FOOTAGE	
2375 SF	
LOT #	SUBDIVISION
	NESTLE DOWN FARMS
PROJECT	
CUSTOM HOME FOR JIM CHAPMAN COMMUNITIES	
THE HANOVER - A	
CLASSICAL CONCEPTS ATLANTA	
P.O. BOX 732 FLOWERY BRANCH, GA. 30542	
404-228-6964	404-401-7288
(DAVID)	(MARY)
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DRAWN	SHEET #
BCLLC	D1 OF 5

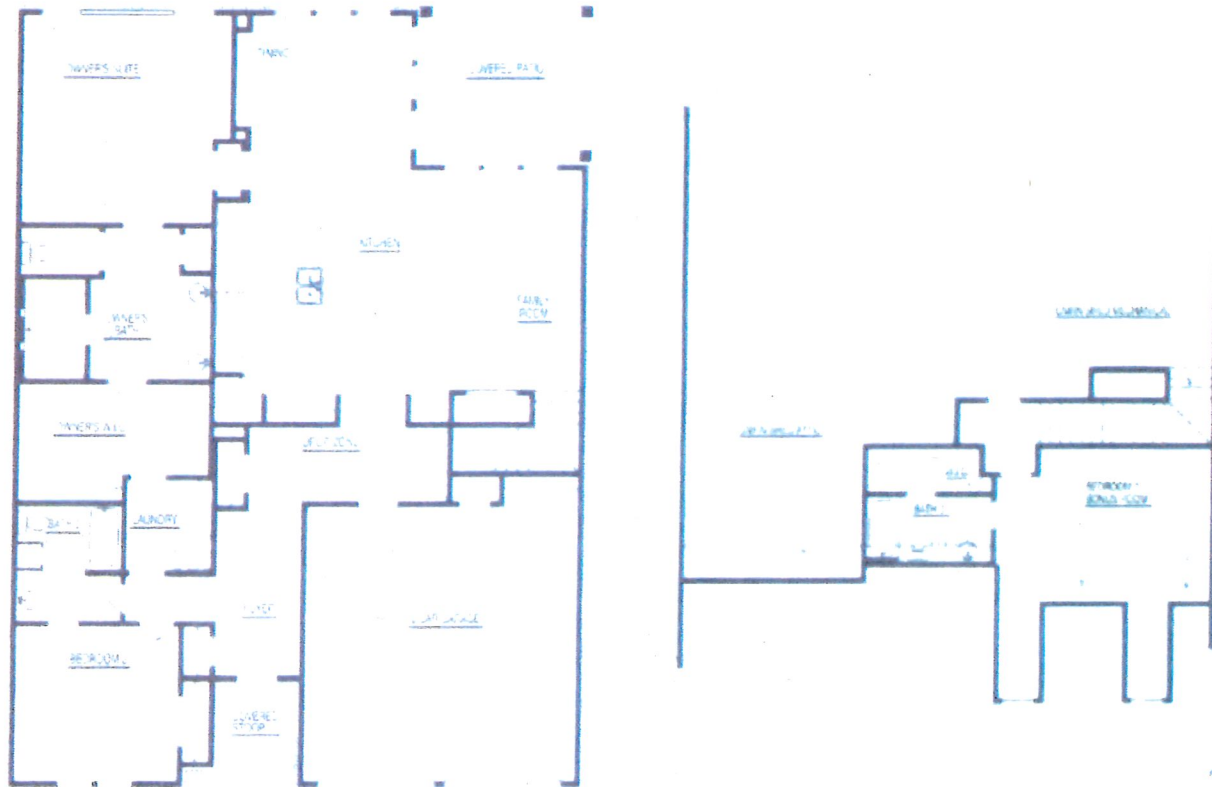
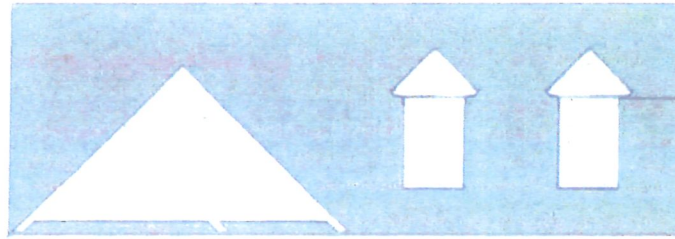


GENERAL NOTE:
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TIME	JOB #
1277	16172
DATE	REVISED
9/12/16	
SQUARE FOOTAGE	
2,576 Square Feet	
LOT #	SUBDIVISION
	Nestle Down Farms
PROJECT	
Custom Home for	
JIM CHAPMAN Communities	
Brighton "A"	
"2-Car Garage"	
CLASSICAL CONCEPTS ATLANTA	
P.O. BOX 492973 LAWRENCEVILLE, GA. 30049	
404-226-6964 (DAVID)	404-401-7298 (MARY)
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DRAWN	SHEET #
MKH	D1 of 6
FRONT & REAR ELEV.'S	

Hanover A Plan

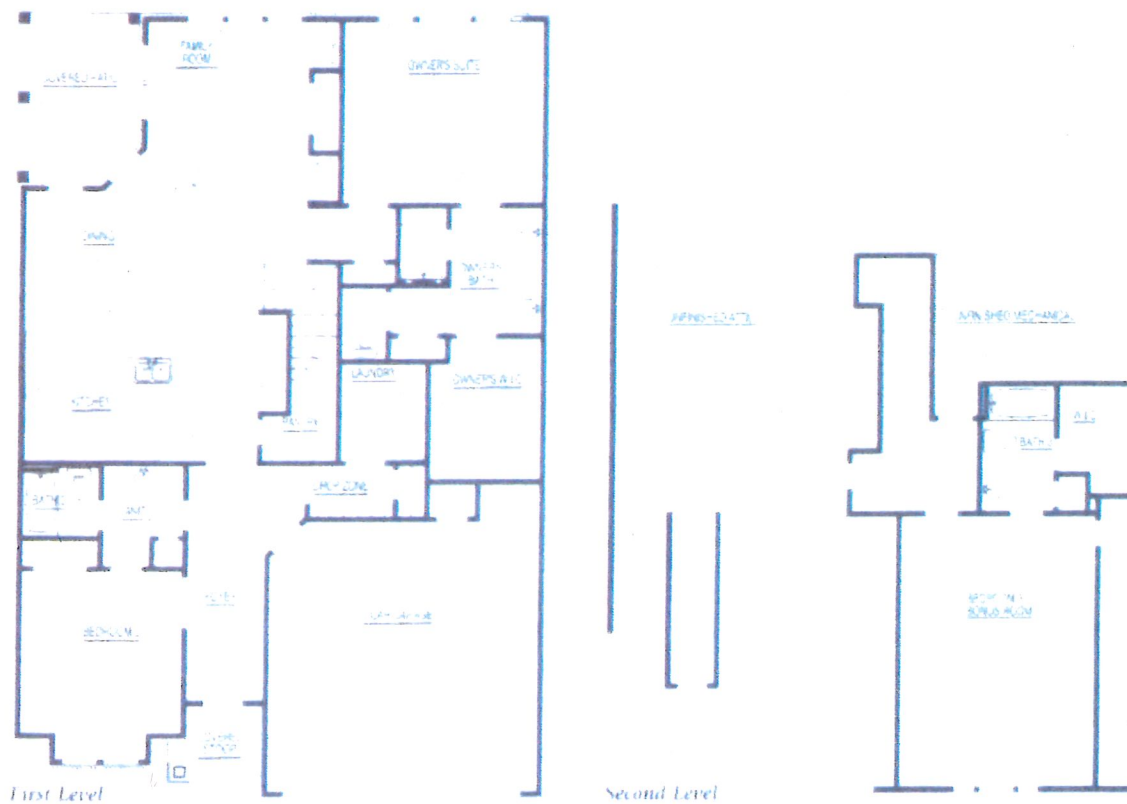
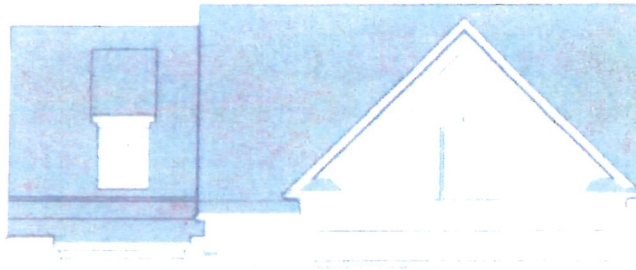
2,339 Square Feet



JIM
CHAPMAN

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Dalton Plan
2,270 Square Feet



**JIM
CHAPMAN**
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Traffic Impact Study

Proposed Lanier Tract Multi-Use Development City of Gainesville, Georgia

revised April 7, 2017
for 3/31/2017 site plan

MARC R. ACAMPORA, PE, LLC
TRAFFIC ENGINEERING



Traffic Impact Study

Proposed Lanier Tract Multi-Use Development
City of Gainesville, Georgia

study prepared for:

Oak Hall Companies, LLC
5256 Peachtree Road, Suite 195
Atlanta, Georgia 30341

revised April 7, 2017
for 3/31/2017 site plan



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Summary

The Lanier Tract DRI is a primarily senior-age-restricted residential community that will be developed along Ahaluna Drive and Strickland Drive. There will be an office/retail node along GA 53, north of Avonlea Way. A fire station of 10,650 square feet is also proposed to be constructed along GA 53. Vehicular access will be provided at several locations, primarily along Ahaluna Drive, with connections to GA 53 via Strickland Drive, at the median opening at Avonlea Way, and through adjacent outparcels, aligning with Canterbury Road. The office/retail node will have a two right-in / right-out accesses directly on GA 53, with no anticipated internal connection to the balance of the development.

The project will generate 171 new trips in the a.m. peak hour, 251 new trips in the p.m. peak hour, and 3,097 new trips during a 24-hour weekday.

The following recommendations are made at each study intersection:

1. **Sportsman Club Road at Strickland Drive** – No changes are recommended at this intersection for the Existing, No-Build, or Future Phase One and Future Phase Two conditions.
2. **Dawsonville Highway at Sportsman Club Road** – The side street delays at this intersection are significant but the low side street volumes make the intersection a weak candidate for signalization. A northbound exclusive right turn lane should be added on GA 53 at Sportsman Club Road.
3. **Dawsonville Highway at Avonlea Way** – Side street delays are high at the existing eastbound approach of Avonlea Way. The volumes exiting the new Lanier Tract access will be low and many of them will be right turners. Therefore, this intersection is a weak candidate for signalization. A northbound right turn lane on GA 53 should be considered at this access and the site plan includes this lane. The new site access should be constructed with one entering lane and one exiting lane. The side street approach exiting the site should be controlled by side street stop sign and accompanying stop bar.
4. **Dawsonville Highway at Canterbury Road** – Side street delays are high on the existing eastbound approach of Canterbury Road. This intersection is a weak candidates for signalization in the existing, no-build, and Future Phase One conditions. No decel lane will be required for Future Phase One. With the future development of the retail outparcels, by others, a northbound deceleration lane on GA 53 is recommended. This intersection will be a prime candidate for signalization upon development of the outparcels. A signal warrant study should be performed for this intersection according to the standards set forth in the Federal Highway Administration's *Manual On Uniform Traffic Control Devices* (MUTCD). This new access at the Canterbury Road median break should be constructed with at least one entering lane and an exiting shared left/through lane and an exclusive right turn lane. The two westbound lanes are in anticipation of the development of the outparcels. With only the Lanier Tract volumes, only one entering and one exiting lane would be required. Until signalization is warranted, the side street approach exiting the outparcel tracts should be controlled by side street stop sign and accompanying stop bar.

5. **Dawsonville Highway at Ahaluna Drive** – A northbound right turn lane should be added on GA 53 at Ahaluna Drive in the existing condition. The future volumes exiting Ahaluna Drive would benefit from the addition of a second westbound lane, resulting in a shared left/through lane and an exclusive right turn lane on Ahaluna Drive at GA 53. There may be an opportunity to shorten the cycle length, which would reduce time spent by vehicles waiting on the side street.
6. **Dawsonville Highway at North Lake Square Access** – This intersection operates acceptably in all analysis conditions. No mitigation is recommended for any analysis condition.
7. **Dawsonville Highway at Beachwood Boulevard** – No changes are recommended at this intersection based on this study.
8. **Dawsonville Highway at McEver Road** – The existing southbound right turn volume is sufficiently-high (828 a.m., 481 p.m.) to merit consideration of the addition of a second exclusive right turn lane and/or the addition of a protected right turn overlap phase. There may be an opportunity to reduce the cycle length and fine-tune the signal timing at this intersection.
9. **Dawsonville Highway at Green Hill Circle** – This signalized intersection incurs high sides street delays, again, due to the allocation of the majority of greentime to the Dawsonville Highway approaches. There may be an opportunity to reduce the cycle length and fine-tune the signal timing at this intersection.
10. **Dawsonville Highway at Shallowford Road** – The lane configuration and signal phasing are appropriate for this intersection. Reduction of the cycle length and optimization of the allocation of greentime could reduce delays and queuing at this intersection.

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Introduction

This study assesses the traffic impact of a proposed multi-use Development of Regional Impact (DRI) in the City of Gainesville, Georgia. The site is located along the east side of Dawsonville Highway (Georgia State Route 53), and the east and west sides of Ahaluna Drive, as shown in the location map in Figure 1. The project will include a mix of senior living facilities, including senior-age-restricted single family homes, cottages, terrace homes, independent living apartments, and assisted living. In addition, the project will include a retail and office tract. This impact study includes the adjacent Willow Springs townhome development, to the north, and seven retail outparcels to be developed by others, located along the east side of GA 53.

The purpose of this traffic impact study is to determine existing traffic operating conditions in the vicinity of the proposed development, project future “no-build” and “build” traffic volumes, assess the impact of the subject development, then develop conclusions and recommendations to mitigate the project traffic impact and ensure safe and efficient existing and future traffic conditions in the vicinity of the project.

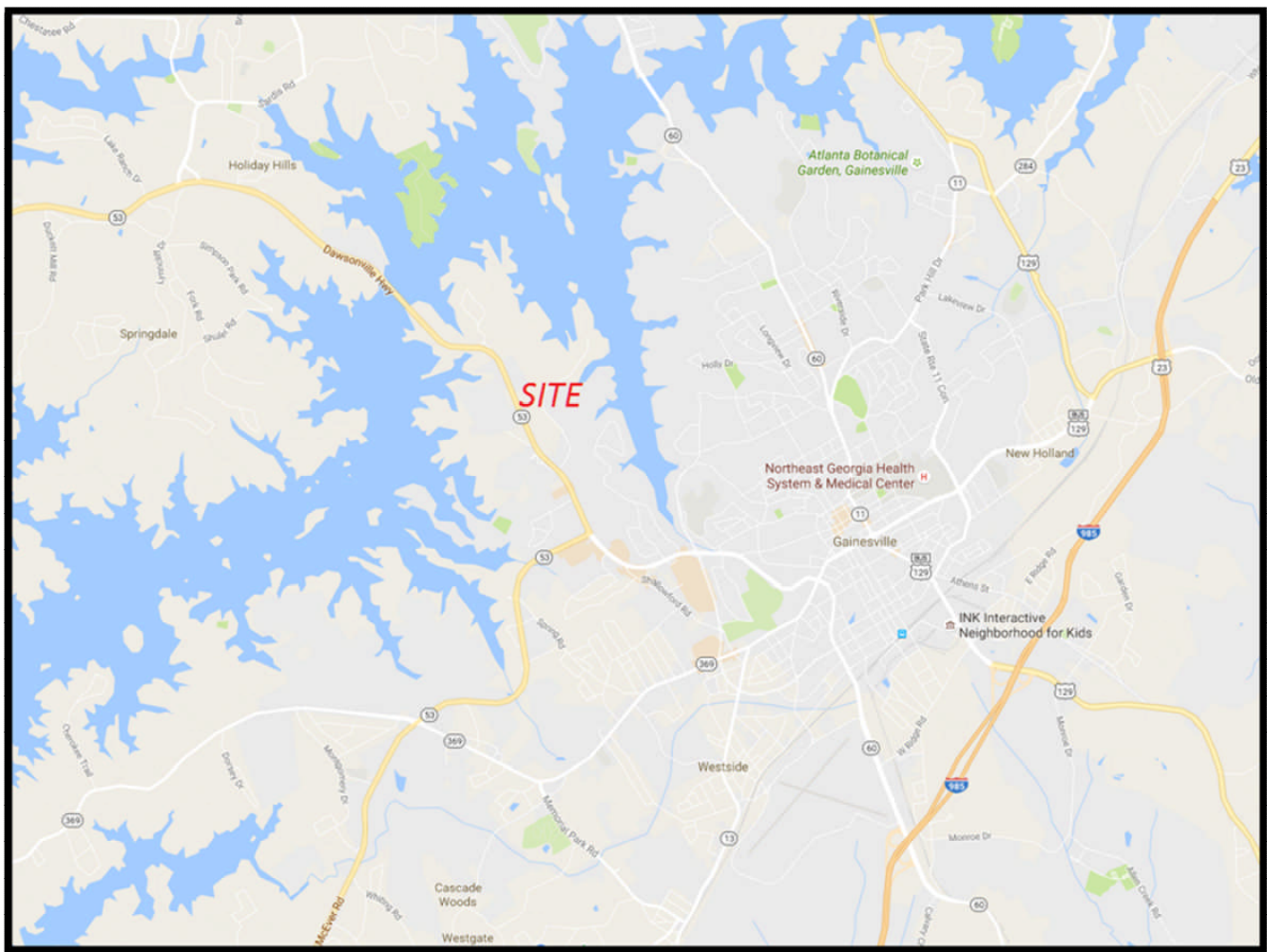


Figure 1 – Lanier Tract Location Map

Existing Traffic Conditions

Existing traffic operating conditions in the vicinity of the proposed Lanier Tract development were assessed. The following is a description of existing facilities, volumes, and intersection operations.

Description of Roadway Facilities

Georgia State Route 53 (Dawsonville Highway adjacent to the site) is a northwest to southeast principal arterial that extends from northwest Georgia, crosses US 19 and Lake Lanier, then passes the subject site and continues to the southeast. The State Route 53 designation turns to the southwest and continues along McEver Road to Mundy Mill Road, then follows Mundy Mill Road through its interchange with Interstate 985, and continues to the southeast. Adjacent to the subject development, GA 53 has two through travel lanes in each direction, is divided with a grassed median, and has exclusive turn lanes at major intersections. The terrain along this section of GA 53 is gently rolling and the posted speed limit is 45 mph.

Ahaluna Drive is a two lane rural local roadway that begins at a signalized intersection at GA 53 and winds through undeveloped land and low density residential development, to its terminus near the shore of Lake Lanier. The road is gently winding with rolling terrain. The proposed Lanier Tract development will develop some of the land on both sides of Ahaluna Drive, and the signal at GA 53 will provide one of the primary access points for this development to the roadway system.

Strickland Drive and Sportsman Club Road are two-lane residential streets that will provide access for the northern part of the proposed Lanier Tract DRI to GA 53. Strickland Drive is side street stop sign controlled at Sportsman Club Road and Sportsman Club Road is side street stop sign controlled at a median break on GA 53. Both roads are gently winding with gently rolling terrain and Strickland Drive becomes unpaved at its eastern terminus. The intersection of Sportsman Club Road at Strickland Drive is located in very close proximity to the intersection of Sportsman Club Road and Old Dawsonville Highway. However, lines of sight between the two intersections are clear and the volumes at these two locations are very low.

The following are photographs of intersections and roadways in the study area.



Photograph 1 – Sportsman Club Road Facing Strickland Drive From Old Dawsonville Highway



Photograph 2 – View From Sportsman Club Road Facing North Along GA 53



Photograph 3 – View From Avonlea Way Facing North Along GA 53



Photograph 4 – GA 53 Facing North at Ahaluna Drive



Photograph 5 – Ahaluna Drive Facing West with Retail Access to Left, SR 53 Ahead



Photograph 6 – Typical Section Along Ahaluna Drive



Photograph 7 – View From Beechwood Drive Facing Under-Construction Retail Across GA 53



Photograph 8 – Eastbound McEver Road at Dawsonville Highway



Photograph 9 – Northbound Dawsonville Highway at Shallowford Road

Existing Traffic Volumes

The City of Gainesville's Unified Land Development Code (ULDC) specifies that the study area to be included in a traffic impact study will be determined by calculating the peak hour and daily trips that the project will generate, then applying the table provided in the code, shown as Table 1, below, to determine the distance from the project that must be included in the study area.

Table 1 – ULDC Study Area Size Requirements

Peak Hour Trips Generated	Daily Trips Generated	Distance from Perimeter of Proposed Development Along Roads
100 - 150	1,000 – 1,500	½ mile
151 - 500	1,501 – 5,000	1 mile
501 – 1,000	5,001 – 10,000	2 miles
1001 or more	10,001 or more	3 miles

from the City of Gainesville ULDC

The trip generation for the proposed development is presented later in this report, summarized in Table 6. The peak hour trip generation for the project was calculated at 251 trips and the 24-hour volume is 3,097 trips. Based on these numbers, applied to the ULDC standard presented above, the study network was determined to

extend for one mile from the limits of the proposed site. The one mile limits were presented to the City and, based on that information, the intersections to be included in this study were agreed upon with the City as follows:

1. Sportsman Club Road at Strickland Drive
2. Dawsonville Highway at Sportsman Club Road
3. Dawsonville Highway at Avonlea Way
4. Dawsonville Highway at Canterbury Road
5. Dawsonville Highway at Ahaluna Drive
6. Dawsonville Highway at North Lake Square Shopping Center Entrance
7. Dawsonville Highway at Beachwood Boulevard
8. Dawsonville Highway at McEver Road
9. Dawsonville Highway at Green Hill Circle
10. Dawsonville Highway at Shallowford Road

Existing full turning movement traffic volume counts were collected at each of these intersections. The counts at most intersections were collected on Thursday, November 17, 2016, from 7:00 a.m. to 9:00 a.m. and from 4:30 p.m. to 6:30 p.m. The counts at the North Lake Square entrance were collected on Wednesday, March 22, 2017. Area schools were in standard session on the dates of the traffic counts. From the count data, the highest four consecutive 15-minute interval volumes at each intersection, during each time period, were determined. These volumes make up the typical weekday a.m. and p.m. peak hour traffic volumes at that intersection. The existing a.m. and p.m. peak hour turning movement volumes are shown in Figure 2. The intersection raw count data is found in Appendix A. It is noted that these existing volumes were compared with the volumes in the Preliminary Timing Report, SR 53 Connector – SR 60, Hall County, Georgia, dated April 2016, as provided by the City of Gainesville's traffic consultant. The magnitude of the side street volumes were found to be very comparable with the counts performed for this current study, and generally slightly higher. However, the volumes on the major streets were consistently notably higher for this current study.

Historic Georgia DOT 24-hour traffic counts were also collected in the vicinity. These counts are summarized in Table 3 in the No-Build Conditions section of this report. The 2015 (the latest year for which Georgia DOT data is available) Georgia DOT Average Annual Daily Traffic (AADT) volume on SR 53 north of Sportsman Club Road was 25,600 vehicles per day (vpd).

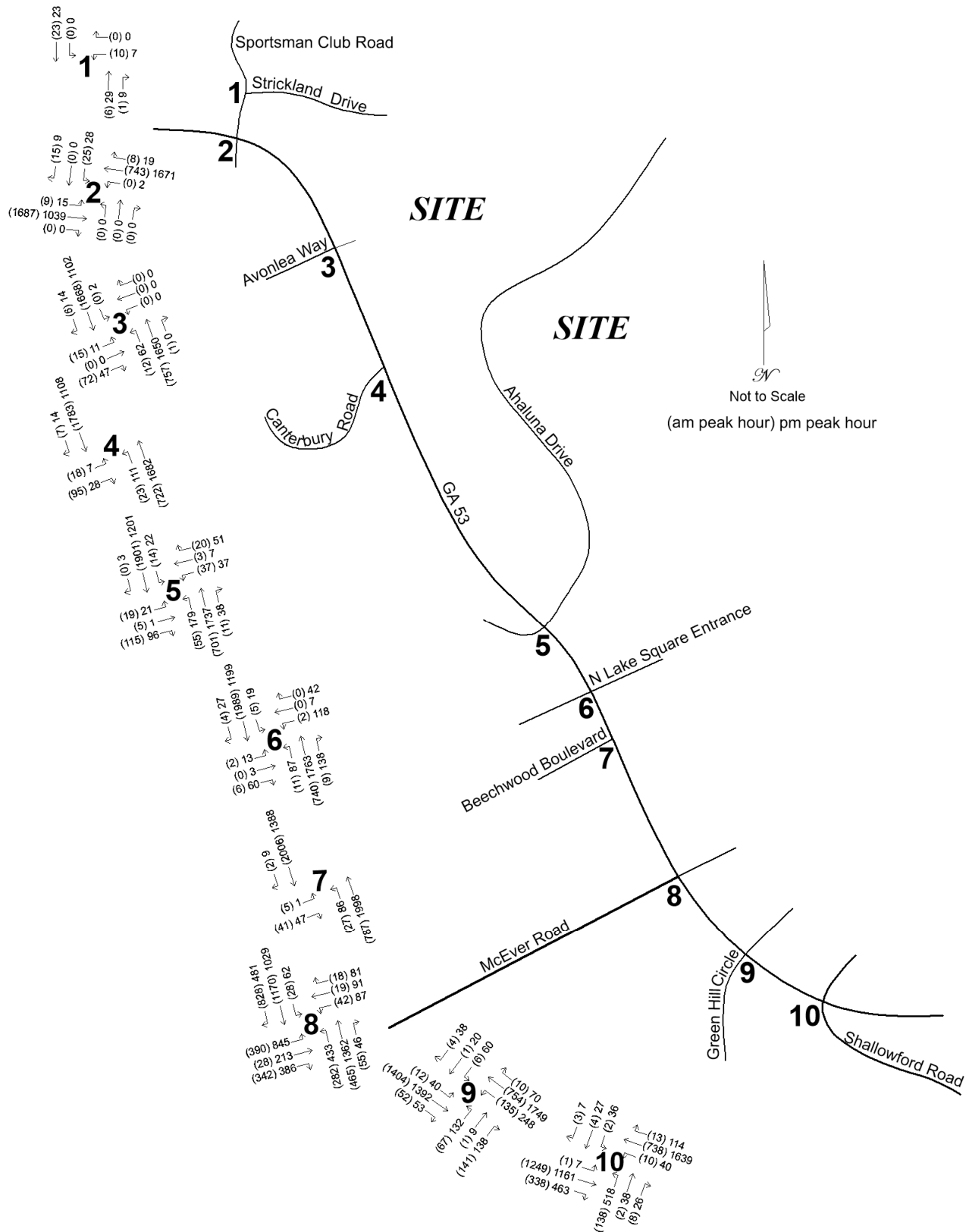


Figure 2 – Existing Traffic Volumes

Existing Intersection Operations

Existing traffic operations were analyzed at the counted intersections using Synchro software, version 8, in accordance with the methodology presented in the Transportation Research Board's 2010 *Highway Capacity Manual (HCM 2010)*. The *HCM 2010* methodology is presented in Appendix B. The results of the analysis are shown in Table 2. Computer printouts containing detailed results of the analysis are located in Appendix C.

Table 2 – Existing Intersection Operations

Intersection / Approach	A.M. Peak Hour		P.M. Peak Hour	
	LOS	Delay s/veh	LOS	Delay s/veh
1. Sportsman Club Road at Strickland Drive	A	2.6	A	1.6
southbound left turn	A	0.0	A	0.0
westbound approach	A	8.8	A	8.9
2. Dawsonville Highway at Sportsman Club Road	A	5.3	C	17.3
northbound approach (turn lane)	A	0.0	A	0.0
southbound approach (Sportsman Club Road)	F	224.6	F	901.3
eastbound left turn (GA 53)	A	9.7	C	15.7
westbound left turn (GA 53)	A	0.0	B	10.7
3. Dawsonville Highway at Avonlea Way	A	2.5	A	1.2
northbound left turn (GA 53)	C	17.6	B	11.4
eastbound left turn	F	275.4	F	144.1
eastbound right turn	D	26.4	B	13.7
4. Dawsonville Highway at Canterbury Road	A	3.8	A	1.2
northbound left turn (GA 53)	C	18.5	B	12.4
eastbound left turn	F	363.9	F	183.8
eastbound right turn	D	30.1	B	13.5
5. Dawsonville Highway at Ahaluna Drive	B	16.5	B	12.7
northbound approach (GA 53)	A	4.6	A	8.6
southbound approach (GA 53)	B	15.9	B	10.4
eastbound approach	D	43.6	C	26.1
westbound approach	F	127.8	F	97.4
6. Dawsonville Highway at North Lake Square	A	1.7	B	14.8
northbound approach (GA 53)	A	0.8	B	12.9
southbound approach (GA 53)	A	1.8	A	8.7
eastbound approach	E	69.5	C	22.9
westbound approach	E	70.0	E	68.3
7. Dawsonville Highway at Beachwood Boulevard	A	1.4	A	0.7
northbound left turn (GA 53)	C	23.0	B	14.0
eastbound left turn	F	393.1	F	235.1
eastbound right turn	D	28.6	C	16.4
8. Dawsonville Highway at McEver Road	D	37.1	F	98.0
northbound approach (GA 53)	E	57.3	F	105.0
southbound approach (GA 53)	B	17.1	D	54.2

eastbound approach	E	68.5	F	145.0
westbound approach	E	60.1	E	67.2
9. Dawsonville Highway at Green Hill Circle	B	11.6	D	40.7
northbound approach (GA 53)	A	6.2	C	31.6
southbound approach (GA 53)	B	10.9	D	48.1
eastbound approach	D	39.5	E	56.2
westbound approach	D	38.1	E	61.3
10. Dawsonville Highway at Shallowford Road	B	10.6	D	48.6
northbound approach (GA 53)	A	5.5	C	32.7
southbound approach (GA 53)	A	6.2	D	50.7
eastbound approach	E	75.9	F	86.2
westbound approach	D	49.9	E	78.0

The analysis of the existing conditions reveals generally acceptable traffic operations at the study intersections. However, Dawsonville Highway, McEver Road, and Shallowford Road carry significant through traffic. At unsignalized intersections, the heavy major roadway volumes contribute to high side street delays. At signalized intersections, the side street delays are also high, even at locations with moderate side street volumes, due to the heavy greentime demands placed on the signals by the major street volumes. The existing conditions at each intersection are discussed briefly as follows:

1. **Sportsman Club Road at Strickland Drive** – Operations at this intersection are excellent due to extremely low volumes. This intersection is located very close to the stop sign controlled intersection of Sportsman Club Road at Old Dawsonville Highway. However, the volumes at that intersection are extremely low, also, and the lines of sight between the two intersections are clear. Therefore, no changes are recommended at this intersection for the existing condition.
2. **Dawsonville Highway at Sportsman Club Road** – The overall operations at this intersection are good, but the Sportsman Club Road southbound approach operates with high delays. This is not unusual for side street stop sign controlled approaches at major thoroughfares such as GA 53, and the volumes incurring the high delays are low. The only way to achieve side street delays better than LOS F is to signalize this intersection. However, signalization would introduce new delays to GA 53 and could also increase the potential for rear-end collisions on GA 53. Signalization would require satisfaction of applicable warrants, as proscribed in the Federal Highway Administration's *Manual On Uniform Traffic Control Devices* (MUTCD). While a warrant analysis was not performed as part of this traffic impact study, the low side street volumes make this intersection a weak candidate for signalization in the existing condition. A review of Georgia DOT auxiliary lane standards is provided later in this report, which concludes that a northwest-bound exclusive right turn lane is likely to be justified, based on existing volumes, on GA 53 at Sportsman Club Road.
3. **Dawsonville Highway at Avonlea Way, 4. Dawsonville Highway at Canterbury Road, and 7. Dawsonville Highway at Beachwood Boulevard** – The operations at these three unsignalized intersections are comparable with one another, with the GA 53 approaches operating well, moderate delays for the side

street right turn movements, and high delays for the side street left turn movements. These side street left turn delays are high for the same explanation just provided for Sportsman Club Road. As with that intersection, signalization would be required at these three intersections, in order to reduce the side street left turn delays to better than LOS F. At all three of these intersections, the side street approach volumes are predominately right turners, with extremely low left turn volumes. For this reason, these three intersections are considered unlikely candidates for signalization in the existing condition. No signal warrant analyses were performed at these intersections as part of this traffic study.

5. **Dawsonville Highway at Ahaluna Drive** – While this intersection is signalized, the greentime on the signal heavily favors the GA 53 approaches. This is appropriate given the volume disparity between the GA 53 approaches and the significantly-lower-volume side street approaches. This results in high side street delays, particularly on the westbound approach exiting Ahaluna Drive. A second westbound lane, striped as an exclusive right turn lane, would allow the signal to process more side street traffic with its limited greentime allocation. In addition, this second lane would allow for more right-turns-on-red which are currently trapped behind left and through trips. The addition of this right turn lane would require relocation of the steel strain pole for the signal, a drainage structure, and possibly a large brick monument sign, which could reduce the feasibility of adding this lane. Field observations suggest that there may be an opportunity to shorten the cycle length, which would reduce time spent by vehicles waiting for the side street green signal. A review of Georgia DOT auxiliary lane standards is provided later in this report, which concludes that a northbound exclusive right turn lane should be constructed on GA 53 at Ahaluna Drive in the existing condition. The addition of the second westbound lane on Ahaluna Drive and the northbound exclusive right turn lane on GA 53 will improve operations, but the Ahaluna Drive approach will still operate at LOS F in the a.m. peak hour due to the long cycle length with the greentime heavily favoring GA 53.
6. **Dawsonville Highway at North Lake Square Access** – This intersection operates well in both peak time periods. In the a.m., the side street approach volumes are extremely low, attributed to most or all of the retail on the side street approaches being closed for business at that time. The side street volumes increase notably in the p.m. Side street approach delays are fairly high, though still within acceptable limits. This is attributed to the allocation of the majority of greentime on the signal to the Dawsonville Highway approaches, resulting in long waits on the side streets, even when volumes are low.
8. **Dawsonville Highway at McEver Road** – This is the major intersection in the area, where the route of GA 53 turns from Dawsonville Highway to McEver Road. The lane configuration and signal phasing at this intersection are generally appropriate. The southbound right turn volume is sufficiently-high (828 a.m., 481 p.m.) to merit consideration of the addition of a second exclusive right turn lane and/or the addition of a protected right turn overlap phase. The overlap phase would provide a protected right turn arrow that would operate concurrently with the westbound left turn protected phase on the McEver Road approach. This would replace the red ball indication for that movement which would increase capacity by not requiring each right turner to stop. However, even with these improvements, the intersection will still operate at LOS F in the p.m. peak hour. Finally, there may be an opportunity to reduce the cycle length and fine-tune the signal timing at this intersection.

9. **Dawsonville Highway at Green Hill Circle** – This signalized intersection generally operates acceptably, but does incur some side-street delays, again, due to the allocation of the majority of greentime to the Dawsonville Highway approaches. There may be an opportunity to reduce the cycle length and fine-tune the signal timing at this intersection.
10. **Dawsonville Highway at Shallowford Road** – The lane configuration and signal phasing are appropriate for this intersection. Reduction of the cycle length and optimization of the allocation of greentime could reduce delays and queuing at this intersection.

Future No-Build Traffic Conditions

A future no-build condition was developed. This represents the traffic conditions that will exist in the future at the date of the full build-out of the proposed Lanier DRI, but not including the Lanier DRI trips. The purpose of the no-build analysis is to isolate the traffic impacts of the proposed development from other growth and development that is expected to occur in the area while the Lanier DRI is under construction.

The no-build condition consists of the counted traffic volumes, increased by a general background growth factor. In order to develop the background growth factor, historic Georgia DOT 24-hour traffic counts were collected in the vicinity of the Lanier DRI. These counts were performed from 2011 through 2015 (the latest year for which Georgia DOT data is available) and, according to the Georgia DOT, the counts were adjusted for a variety of factors, including season, in order to arrive at the Average Annual Daily Traffic (AADT) volume. The Georgia DOT AADT counts are summarized in Table 3.

Table 3 – Georgia DOT Daily Traffic Volume Counts

Year	SR 53 N of Sportsman	Annual Growth	McEver W of SR 53	Annual Growth	Dawsonville S of Shallowford	Annual Growth	Shallowford S of Dawsonville	Annual Growth
Station ID	1390269		1390274		1390258		1390647	
2011	23,830	na	21,520	na	25,950	na	8,280	na
2012	23,520	-1.3%	21,150	-1.7%	25,610	-1.3%	8,140	-1.7%
2013	22,730	-3.4%	20,890	-1.2%	25,520	-0.4%	8,090	-0.6%
2014	22,700	-0.1%	20,900	0.0%	25,500	-0.1%	13,300	64.4%
2015	25,600	12.8%	21,600	3.3%	26,300	3.1%	13,700	3.0%
Annual Average		1.8%		0.1%		0.3%		13.4%

The annual growth trend has fluctuated from year to year, with generally negative growth during the first few count years, then strong growth in the most recent years. The average annual growth on GA 53 closest to the site has been 1.8%. A modest 2% annual growth factor was applied to the counted volumes when projecting the future no-build volumes. The growth was applied for five years, for a total of 10.4% growth, that will occur while the Lanier Tract DRI is under construction.

The existing, counted traffic volumes were increased by the 10.4% growth factor. The results are the no-build condition traffic volumes that will be on the roadway network in the future when the Lanier Tract DRI is completed, but excluding the Lanier Tract DRI trips. These no-build volumes are shown in Figure 3.

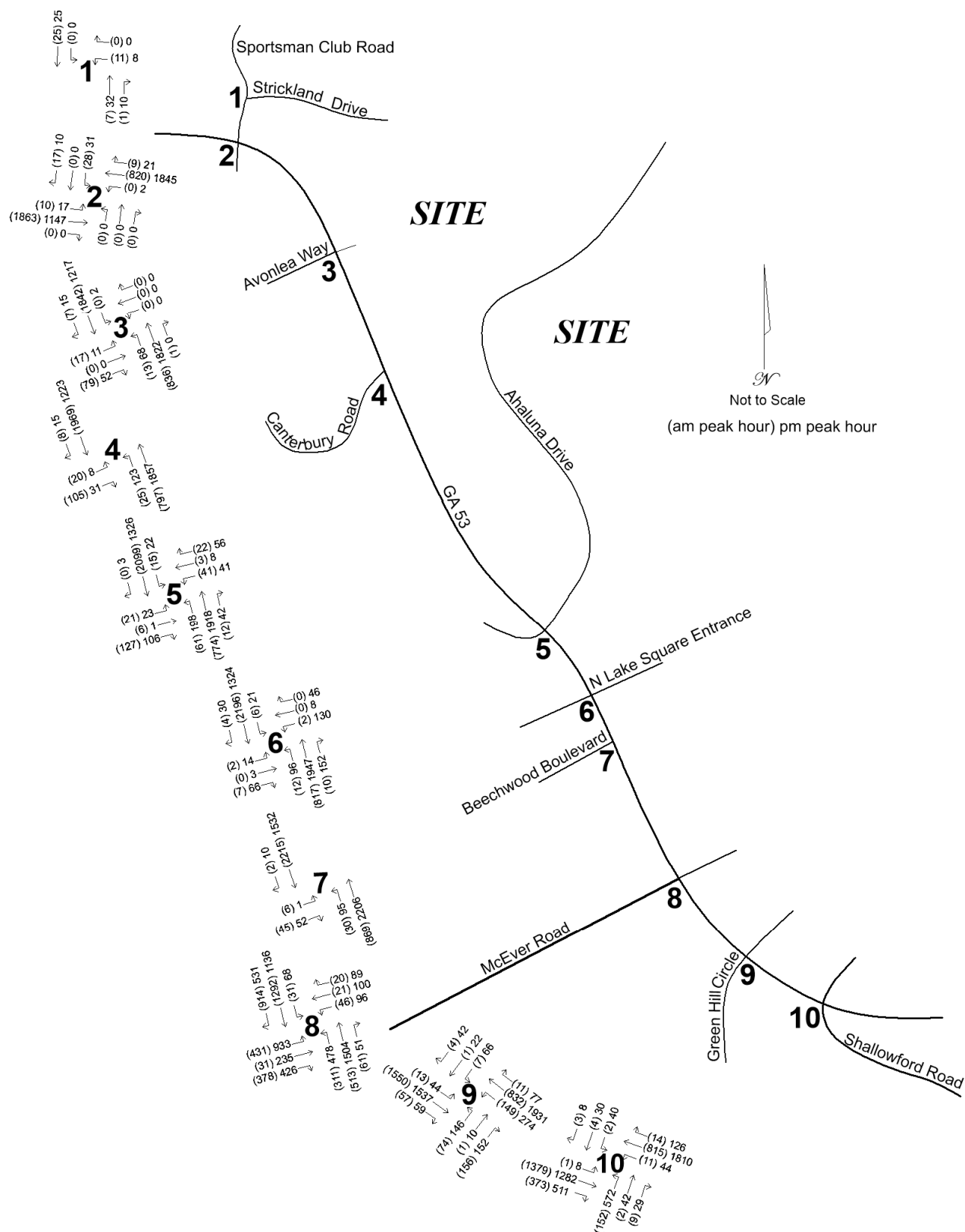


Figure 3 – Future No-Build Traffic Volumes

Future No-Build Intersection Operations

No-build traffic operations were analyzed at the counted intersections using Synchro software, version 8, in accordance with the methodology presented in the Transportation Research Board's 2010 *Highway Capacity Manual (HCM 2010)*. The *HCM 2010* methodology is presented in Appendix B. The results of the analysis are shown in Table 4. Computer printouts containing detailed results of the analysis are located in Appendix D.

Table 4 – Future No-Build Intersection Operations

Intersection / Approach	A.M. Peak Hour		P.M. Peak Hour	
	LOS	Delay s/veh	LOS	Delay s/veh
1. Sportsman Club Road at Strickland Drive	A	2.6	A	1.7
southbound left turn	A	0.0	A	0.0
westbound approach	A	8.9	A	8.9
2. Dawsonville Highway at Sportsman Club Road	B	11.8	D	34.3
northbound approach (turn lane)	A	0.0	A	0.0
southbound approach (Sportsman Club Road)	F	496.6	F	1,780.7
eastbound left turn (GA 53)	B	10.3	C	17.9
westbound left turn (GA 53)	A	0.0	B	11.3
3. Dawsonville Highway at Avonlea Way	A	4.5	A	1.5
northbound left turn (GA 53)	C	20.4	B	12.2
eastbound left turn	F	552.3	F	229.1
eastbound right turn	D	33.7	B	14.7
4. Dawsonville Highway at Canterbury Road	A	6.7	A	1.7
northbound left turn (GA 53)	C	21.7	B	13.7
eastbound left turn	F	715.5	F	349.9
eastbound right turn	E	41.5	B	14.4
5. Dawsonville Highway at Ahaluna Drive	C	22.3	B	15.5
northbound approach (GA 53)	A	5.6	B	11.5
southbound approach (GA 53)	C	22.7	B	14.0
eastbound approach	E	58.3	C	23.8
westbound approach	F	139.1	F	96.6
6. Dawsonville Highway at North Lake Square	A	3.2	B	16.6
northbound approach (GA 53)	A	1.0	B	14.8
southbound approach (GA 53)	A	3.9	B	10.7
eastbound approach	E	69.5	C	21.8
westbound approach	E	70.0	E	68.1
7. Dawsonville Highway at Beachwood Boulevard	A	2.6	A	0.9
northbound left turn (GA 53)	D	28.6	C	15.8
eastbound left turn	F	866.6	F	375.6
eastbound right turn	E	36.2	C	18.4
8. Dawsonville Highway at McEver Road	D	45.7	F	127.3
northbound approach (GA 53)	E	67.7	F	135.0

southbound approach (GA 53)	C	20.0	E	57.9
eastbound approach	F	92.6	F	208.0
westbound approach	E	61.8	E	70.6
9. Dawsonville Highway at Green Hill Circle	B	14.2	E	65.1
northbound approach (GA 53)	A	8.2	E	70.6
southbound approach (GA 53)	B	13.5	D	54.3
eastbound approach	D	44.0	E	58.1
westbound approach	D	38.8	F	112.9
10. Dawsonville Highway at Shallowford Road	B	12.5	E	73.1
northbound approach (GA 53)	A	6.0	E	72.0
southbound approach (GA 53)	A	9.1	E	57.5
eastbound approach	E	76.3	F	119.5
westbound approach	D	49.9	E	77.7

The analysis of the no-build condition reveals increases in delays at each of the study intersections, as would be expected. The no-build analysis did not include any of the potential mitigation discussed in the existing analysis. The no-build condition at each intersection is discussed briefly as follows:

- 1. Sportsman Club Road at Strickland Drive** – Operations at this intersection will continue to be excellent in the no-build condition. Therefore, no changes are recommended at this intersection for the no-build condition.
- 2. Dawsonville Highway at Sportsman Club Road** – The side street delays will become very high in the no-build condition. However, the volumes incurring these delays will remain modest and it is considered unlikely that this intersection would be a good candidate for signalization.
- 3. Dawsonville Highway at Avonlea Way, 4. Dawsonville Highway at Canterbury Road, and 7. Dawsonville Highway at Beachwood Boulevard** – The no-build operations at these three unsignalized intersections will be comparable to the existing condition, with the GA 53 approaches operating well, moderate delays for the side street right turn movements, and high delays for the side street left turn movements. As with the existing condition, at all three of these intersections, the side street volumes are predominately right turners, with extremely low left turn volumes. For this reason, these three intersections are expected to be unlikely candidates for signalization in the no-build condition.
- 5. Dawsonville Highway at Ahaluna Drive** – The Ahaluna Drive approach will continue to operate at LOS F and the delays will increase. The mitigation discussed in the existing condition is still applicable.
- 6. Dawsonville Highway at North Lake Square Access** – This intersection will operate comparably in the no-build condition, as in the existing condition. No mitigation is identified for this intersection in the no-build condition.
- 8. Dawsonville Highway at McEver Road** – Operations will continue to be congested at this intersection. The mitigation discussed in the existing condition is still applicable.

9. **Dawsonville Highway at Green Hill Circle** – Delays will increase from the existing to no-build conditions. A.M. peak operations will continue to be acceptable, while the p.m. peak will teeter between LOS E and LOS F. No new mitigation is identified for the no-build condition.
10. **Dawsonville Highway at Shallowford Road** – As with the other intersections, no new mitigation is identified for the no-build condition. Delays will increase from the existing condition, but will generally remain acceptable in the a.m. and at the LOS E to LOS F threshold in the p.m.

Lanier Tract Traffic Characteristics

This section describes the anticipated traffic characteristics of the proposed Lanier Tract development, including a site description, how much traffic the project will generate, and where that traffic will travel.

Project Description

The Lanier Tract DRI is a primarily senior-age-restricted residential community that will be developed generally along Ahaluna Drive and Strickland Drive. There will be an office/retail node along GA 53, north of Avonlea Way. A fire station of 10,650 square feet is also proposed to be constructed along GA 53 in conjunction with this development. Vehicular access will be provided at several locations, primarily along Ahaluna Drive, with connections to GA 53 via Strickland Drive, at the median opening at Avonlea Way, and through adjacent outparcels (which will be discussed in the Future Phase Two section of this report), aligning with Canterbury Road. The office/retail node will have a two right-in / right-out accesses directly on GA 53, with no anticipated internal connection to the balance of the development. The site plan is presented in Figure 4.

Trip Generation

The volume of traffic that will be generated by the proposed Lanier Tract DRI was calculated using the equations and rates in the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, 9th Edition. The trip generation for all of the detached homes was calculated using ITE Land Use 251 – Senior Adult Housing – Detached. The trips for the independent living units were calculated using ITE Land Use 253 – Congregate Care Facility. The trips for the assisted living facility were determined using ITE Land Use – 254 – Assisted Living. The storage facility trips were calculated using ITE Land Use 151 – Mini-Warehouse. The office / retail trip generation was calculated by dividing the total square footage of that commercial node in half and applying ITE Land Use 820 – Shopping Center to half of the square footage and ITE Land Use 750 – Office Park to the other half.

No multi-use adjustment was applied to the raw trip generation to account for the mixed-use nature of the project, because the office/retail node is not connected internally with the balance of the project. The retail trip generation was adjusted to account for pass-by trips. Pass-by trips are trips to the retail that are currently driving on GA 53 and which will turn into the site for shopping purposes then continue on the trip they are already making. The ITE *Trip Generation Manual* provides an average p.m. peak hour pass-by percentage of 38% for the shopping center land use. However, the plan for this development, with the retail mixed with office, suggests that this retail may be highly destination-oriented. To be conservative, a 25% pass-by adjustment was made for the p.m. peak hour trips, while a 15% adjustment was applied to the a.m. peak hour and 24-hour volumes.

The fire station will be located on the GA 53 adjacent to the project and will serve not just this project, but also the surrounding community. The trips that will be generated by the fire station are expected to be very low. Therefore, the trip generation of the fire station was excluded from this calculation.

The trip generation calculations are shown in Table 5.

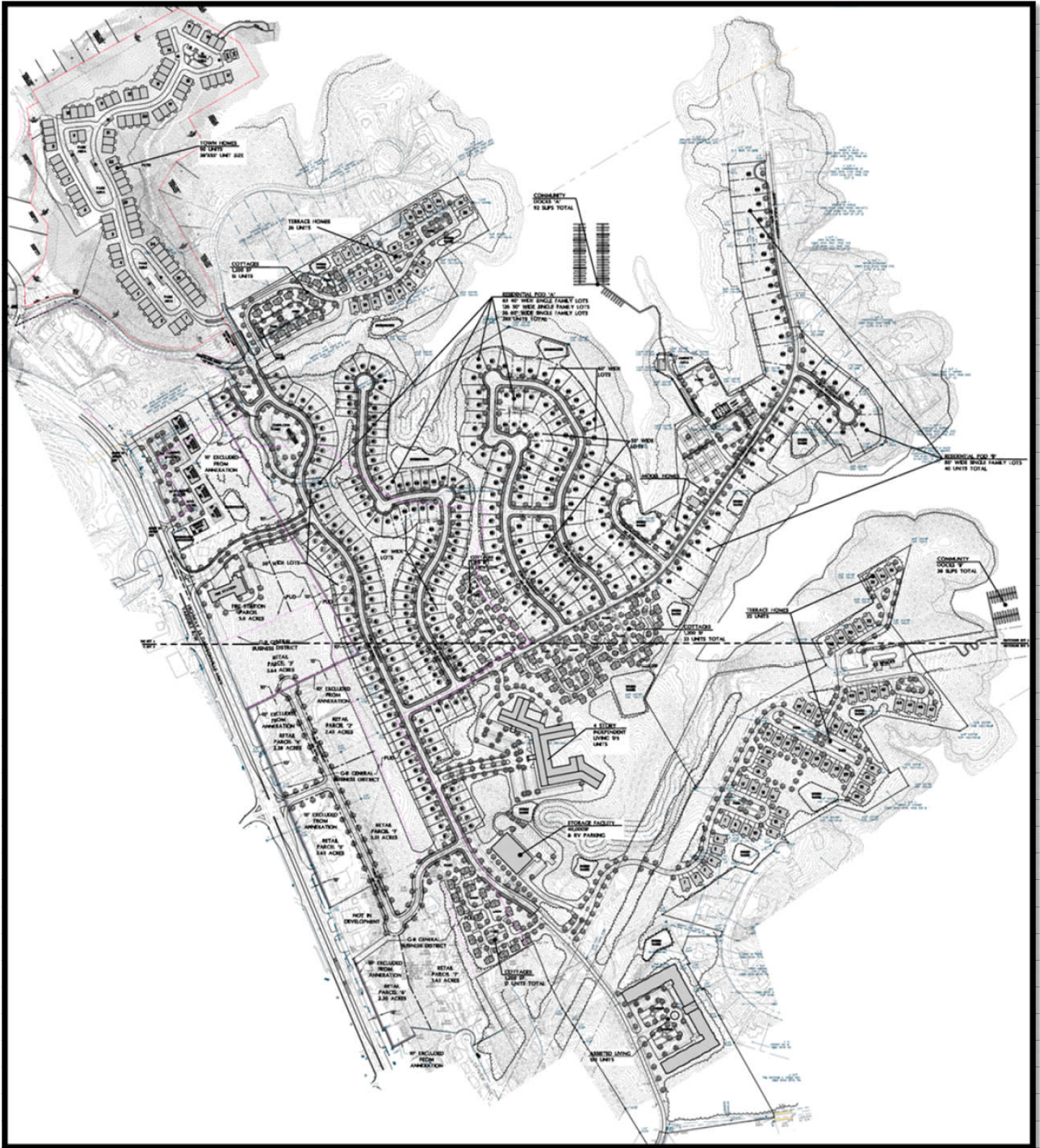


Figure 4 – Lanier Tract Site Plan

Table 5 – Lanier Tract Trip Generation

Land Use	ITE Code	Size	A.M. Peak Hour			P.M. Peak Hour			24-Hour
			In	Out	Total	In	Out	Total	2-Way
Terrace Homes Detached (at Strickland)	251	26 homes	2	4	6	4	3	7	96
Cottages Detached (at Strickland)	251	15 homes	1	2	3	2	2	4	56
Pod A Single Family Detached	251	265 homes	20	38	58	44	28	72	976
Pod B Single Family Detached	251	40 homes	3	6	9	6	5	11	147
Cottages Detached	251	64 homes	5	9	14	11	6	17	236
Terrace Homes Detached	251	55 homes	4	8	12	9	6	15	202
Independent Living	253	175 units	6	5	11	16	14	30	354
Assisted Living	254	<u>150 beds</u>	<u>14</u>	<u>7</u>	<u>21</u>	<u>15</u>	<u>18</u>	<u>33</u>	<u>356</u>
Total Residential New Trips		790 units	55	79	134	107	82	189	2,423
Storage	151	40,000 ft ²	3	3	6	5	5	10	100
Office	750	12,000 ft ²	18	3	21	2	16	18	138
Retail Total Trips	820	12,000 ft ²	7	5	12	21	24	45	512
-pass-by		15/25/15%	<u>-1</u>	<u>-1</u>	<u>-2</u>	<u>-5</u>	<u>-6</u>	<u>-11</u>	<u>-76</u>
Retail New Trips			<u>6</u>	<u>4</u>	<u>10</u>	<u>16</u>	<u>18</u>	<u>34</u>	<u>436</u>
Total Commercial New Trips			24	7	31	18	34	52	574
Total Project New Trips			82	89	171	130	121	251	3,097

Notes: The detached homes trip calculations employed ITE average rates due to numbers of units generally much smaller than average sizes in the ITE data. The office and retail calculations were based on ITE average rates due to square footages much smaller than average sizes in the ITE data.

Willow Springs Townhomes

A small development of 90 senior-age-restricted townhomes is anticipated to be developed concurrently with the Lanier Tract DRI, along Karen Lane (shown in the site plan in Figure 4 at the northern end of the site, bordered in red). The trips for this development were calculated using ITE Land Use 252 – Senior Adult Housing – Attached. The Willow Springs trips are shown in Table 6.

Table 6 – Willow Springs Townhomes Trip Generation

Land Use	ITE Code	Size	A.M. Peak Hour			P.M. Peak Hour			24-Hour
			In	Out	Total	In	Out	Total	2-Way
Senior Adult Housing - Attached	252	90	6	12	18	12	11	23	290

Trip Distribution and Assignment

The trip distribution percentages indicate what proportion of the project's trips will travel to and from various directions. The new trips were distributed based on the locations and proximity of likely trip origins and destinations for each land use. The residential trips, including the Willow Springs Townhomes, were distributed based on the locations of urban centers and retail nodes, while the office and retail trips were distributed based on population densities. The new project trips, shown in Table 5, were assigned to the roadway network based on these distribution percentages. Pass-by trips were assigned, where appropriate, based on existing traffic flows passing the site. The new trip distribution percentages for each land use, and the total peak hour trips expected to be generated by the site, are shown in Figure 5. The Willow Springs trips, shown in Table 6, were distributed to the study intersections using the same distribution as the Lanier Tract residential trips. These trips are not included in the site generated trips shown in Figure 5, but they are included in the future analysis. Appendix A contains intersection volume worksheets that show the specific Willow Springs trips (as well as all other Lanier Tract residential, office, and retail trips) for each movement at each intersection.

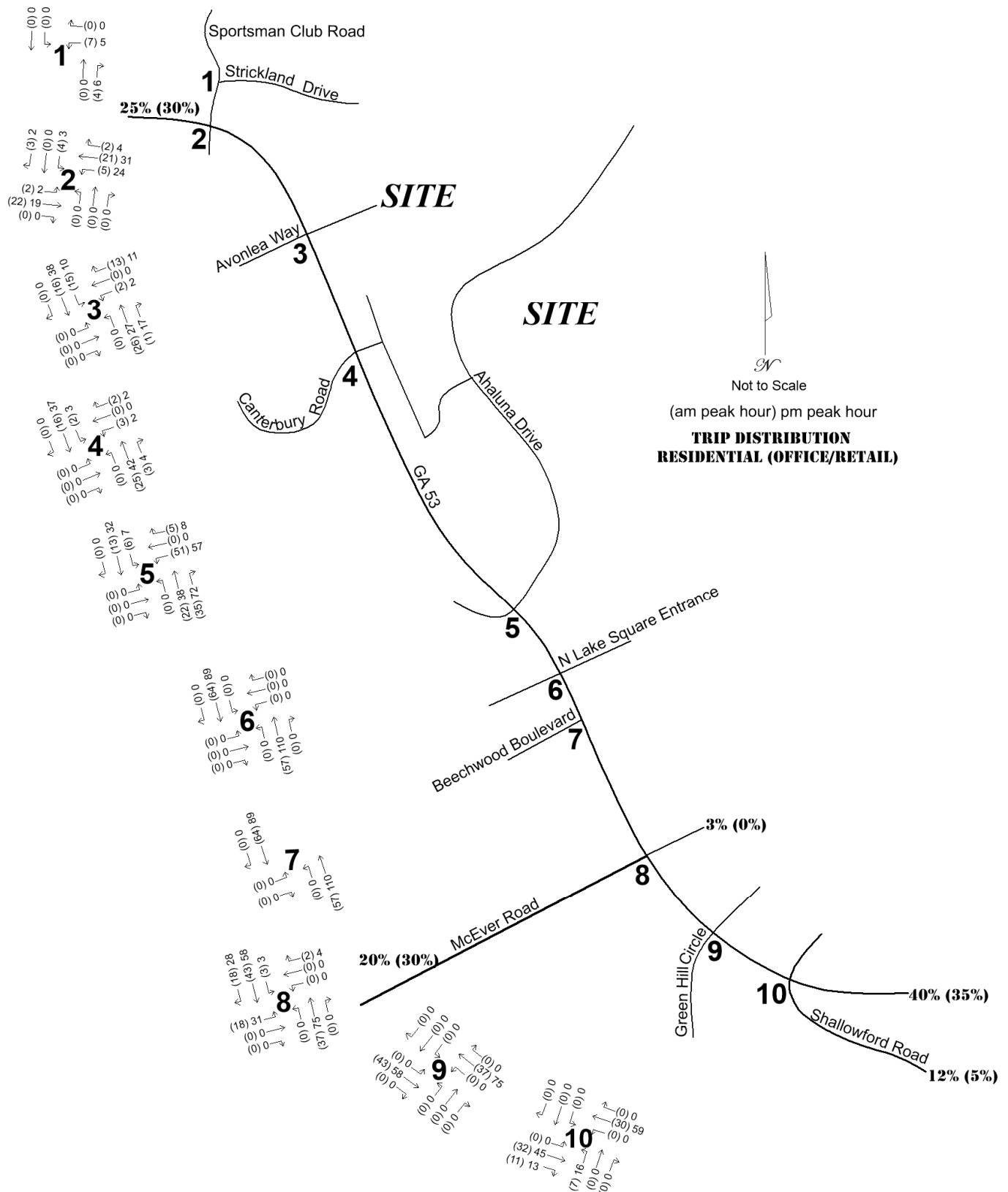


Figure 5 – New Trip Distribution Percentages and Total Lanier Tract Trips

Future Phase One Traffic Conditions

This section describes the anticipated future traffic conditions after the Lanier Tract DRI is fully constructed and operational.

Future Phase One Traffic Volumes

The trips from the Lanier Tract DRI (and Willow Springs) were added to the future no-build volumes (comprised of the counted volumes increased by 10.4%, as described previously). The resulting volumes are the traffic volumes that will be at each intersection when the Lanier Tract is fully operational. A strip of land between the Lanier Tract and the east side of GA 53 is anticipated to be developed by others with retail outparcels at some future date. The impact of this outparcel development is evaluated in the Future Phase Two analysis, discussed later in this report. However, as part of the Lanier Tract development, a roadway will be constructed through that strip of land, to connect the Lanier Tract to GA 53 at the existing median break at Canterbury Road. The Future Phase One volumes and analysis include this connection. The Future Phase One traffic volume projections are shown in Figure 6. These volumes are also shown in the intersection volume worksheets in Appendix A.

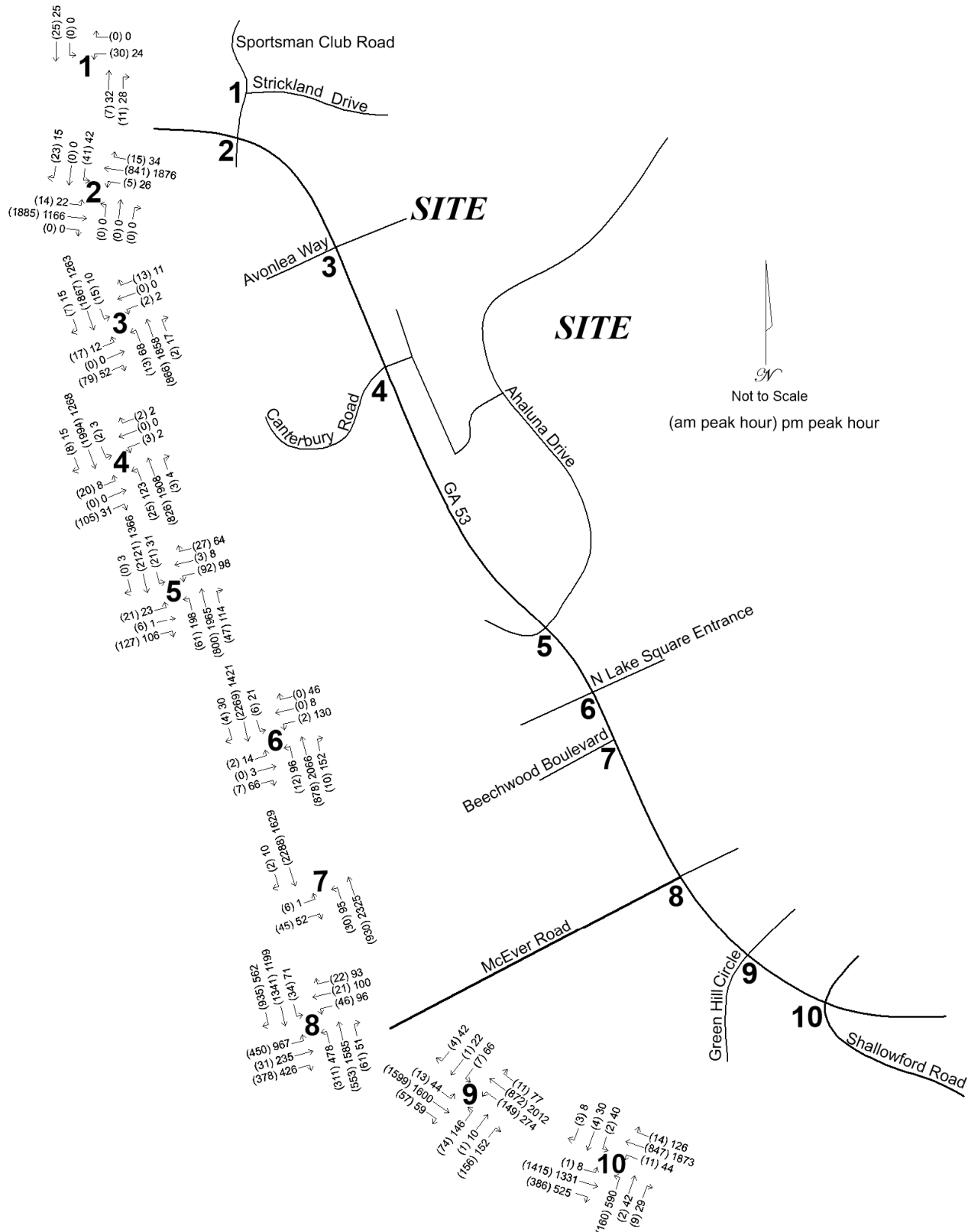


Figure 6 – Future Phase One Peak Hour Traffic Volume Projections

Future Phase One Intersection Operations

An operational analysis was performed for the Future Phase One conditions. Table 7 presents the results of this analysis. Computer printouts containing detailed results of the analysis are located in Appendix E.

Table 7 – Future Phase One Intersection Operations

Intersection / Approach	A.M. Peak Hour		P.M. Peak Hour	
	LOS	Delay s/veh	LOS	Delay s/veh
1. Sportsman Club Road at Strickland Drive	A	4.2	A	3.2
southbound left turn	A	0.0	A	0.0
westbound approach	A	9.1	A	9.2
2. Dawsonville Highway at Sportsman Club Road	C	23.0	F	74.4
northbound approach (turn lane)	A	0.0	A	0.0
southbound approach (Sportsman Club Road)	F	834.4	F	2,872.3
eastbound left turn (GA 53)	B	10.4	C	18.7
westbound left turn (GA 53)	C	20.5	B	11.7
3. Dawsonville Highway at Avonlea Way	A	9.8	A	4.2
northbound left turn (GA 53)	C	20.8	B	12.6
southbound left turn	B	10.3	C	17.9
eastbound left turn	F	1,381.4	F	653.3
eastbound right turn	D	34.9	C	15.1
westbound left turn	F	288.1	F	696.5
westbound right turn	B	12.1	C	20.5
4. Dawsonville Highway at Canterbury Road	B	12.4	A	3.8
northbound left turn (GA 53)	C	22.2	B	14.2
southbound left turn	B	10.1	C	17.8
eastbound left turn	F	1,504.7	F	767.5
eastbound right turn	E	43.3	B	14.8
westbound left turn	F	436.1	F	1,069.5
westbound right turn	B	11.8	C	20.0
5. Dawsonville Highway at Ahaluna Drive	C	31.7	C	21.4
northbound approach (GA 53)	A	6.8	B	15.7
southbound approach (GA 53)	D	35.3	C	20.4
eastbound approach	D	46.8	B	17.5
westbound approach	F	134.1	F	104.1
6. Dawsonville Highway at North Lake Square	A	3.9	B	17.4
northbound approach (GA 53)	A	1.1	B	15.9
southbound approach (GA 53)	A	4.9	B	11.8
eastbound approach	E	69.5	C	21.8
westbound approach	E	70.0	E	68.1
7. Dawsonville Highway at Beachwood Boulevard	A	3.3	A	0.9
northbound left turn (GA 53)	D	30.7	C	17.1
eastbound left turn	F	1,230.3	F	534.2

eastbound right turn	E	39.4	C	19.8
8. Dawsonville Highway at McEver Road	D	50.9	F	142.6
northbound approach (GA 53)	E	77.0	F	161.1
southbound approach (GA 53)	C	21.9	E	59.3
eastbound approach	F	104.0	F	230.3
westbound approach	E	60.9	E	74.4
9. Dawsonville Highway at Green Hill Circle	B	14.9	E	67.3
northbound approach (GA 53)	A	8.6	E	72.6
southbound approach (GA 53)	B	14.3	E	56.9
eastbound approach	D	47.1	E	59.7
westbound approach	D	38.8	F	119.2
10. Dawsonville Highway at Shallowford Road	B	13.3	E	78.6
northbound approach (GA 53)	A	6.2	E	73.6
southbound approach (GA 53)	B	10.1	E	66.1
eastbound approach	E	76.5	F	128.7
westbound approach	D	49.9	E	77.7

A note is made here about the high delays accompanying some of the LOS F. As delays increase, the model's average delay per vehicle projections exceed model capabilities and the results become unrealistic. For example, it is highly improbable that the eastbound left turn from Canterbury Road will incur an average delay of 1,504.7 seconds, or 25 minutes, per vehicle. These high delay numbers are reported to provide an indication of the severity of the LOS F, and were reviewed with engineering judgment when developing conclusions and recommendations.

The operational analysis of Future Phase One conditions reveals some increases in delays from the no-build condition. The most notable changes are increases in the side street delays at both unsignalized and signalized intersections. The Lanier Tract DRI generally contributes a small proportion to the increases in volumes between the existing condition and the Future Phase One, while the background growth contributes a significant proportion of the increases. At most intersections, aside from the site access points along GA 53, the Lanier Tract DRI will contribute primarily to the major roadway through movements. The project's most significant impact will occur at four locations – Sportsman Club Road at GA 53, Avonlea Way at GA 53, Canterbury Road at GA 53, and Ahaluna Drive at GA 53, with the greatest impact being at Ahaluna Drive. The Future Phase One condition at each intersection is discussed briefly as follows:

1. **Sportsman Club Road at Strickland Drive** – Operations at this intersection are will continue to be excellent in the no-build condition. Therefore, no changes are recommended at this intersection for the Future Phase One condition.
2. **Dawsonville Highway at Sportsman Club Road** – The side street delays will continue to be very high in the future. However, the volumes incurring these delays will remain modest and it is considered unlikely that this intersection would be a good candidate for signalization, even in the Future Phase One condition.

3. **Dawsonville Highway at Avonlea Way** – The Lanier Tract DRI will replace the existing private driveway at this location, with a main access to the project. The alignment with the median break will allow full movement operations at this site access. However, it is anticipated that volumes using this access will be modest for a few reasons. First, most of the site trips will be oriented to and from the south on GA 53. Therefore, the propensity of most trips will be to travel along Ahaluna Drive to the signal at GA 53, rather than to turn in and out of the unsignalized access across from Avonlea Way. Some trips traveling to and from the north will use this access and some will use the connection through the site to Strickland Drive. For these reasons, the volumes exiting the site at this location will be low, and will include more right turners than left turners. On the existing eastbound approach of Avonlea Way, the right turn volumes are also notably higher than the left turners. This is an indication that this intersection is unlikely to meet warrants for signalization in the future. No signal warrant analysis was performed at this intersection as part of this study. A right turn lane analysis (presented later) was performed for the northbound direction of GA 53 at the site access at Avonlea Way. The analysis indicates that it is likely that a right turn lane will be justified at this location in the Future Phase One condition and the site plan includes this lane.
4. **Dawsonville Highway at Canterbury Road** – As with the Avonlea intersection, the volumes entering and exiting the Lanier Tract at Canterbury will be very low. The circuitous road configuration through the adjacent future retail tracts will further discourage use of this access. Therefore, for Future Phase One, this intersection is considered unlikely to meet signal warrants. No signal warrant analysis was performed at this intersection as part of this study. A right turn lane analysis (presented later) was performed for the northbound direction of GA 53 at the site access at Canterbury Road. The analysis indicates that it is *not* likely that a right turn lane will be justified at this location in the Future Phase One condition.
5. **Dawsonville Highway at Ahaluna Drive** – The Ahaluna Drive approach will continue to operate at LOS F and the delays will increase. The mitigation discussed in the existing condition is still applicable, including the addition of a northbound right turn lane on GA 53 and a second westbound lane on Ahaluna Drive.
6. **Dawsonville Highway at North Lake Square Access** – This intersection will operate comparably in the future as in the existing and no-build conditions. No mitigation is identified for this intersection in the Future Phase One condition.
7. **Dawsonville Highway at Beachwood Boulevard** – The operations at this unsignalized intersections will continue comparable to the existing and no-build conditions, with the GA 53 approaches operating well, moderate delays for the side street right turn movement, and high delays for the side street left turn movement. The side street volumes will continue to be predominately right turners, with extremely low left turn volumes. For this reason, this intersection is considered unlikely to meet warrants for signalization in the future.
8. **Dawsonville Highway at McEver Road** – Operations will continue to be congested at this intersection, with the overall intersection operating at LOS F in the p.m., and several approaches operating at LOS F in the a.m. and/or p.m. The mitigation discussed in the existing condition is still applicable. This intersection is built-out and the mitigation discussed in the existing analysis includes the addition of a second

southbound right turn lane. Short of widening GA 53 with additional through lanes, or reducing volumes at this intersection, there are not many additional options to mitigate the high delays.

9. **Dawsonville Highway at Green Hill Circle** – Delays will increase from the no-build condition to the future. A.M. peak operations will continue to be acceptable, while the p.m. peak will teeter between LOS E and LOS F. No new mitigation is identified for the Future Phase One condition.
10. **Dawsonville Highway at Shallowford Road** – Delays will increase from the no-build condition, but will generally remain acceptable in the a.m. and at the LOS E to LOS F threshold in the p.m. No new mitigation is identified for the Future Phase One condition.

Future Phase Two Traffic Conditions

A strip of land along the east side of GA 53, west of the Lanier Tract, is anticipated to be developed by others at some future date. A Future Phase Two condition was developed to assess the traffic operations after this land is developed.

The land is anticipated to be developed as seven outparcels, with 8,000 square feet of retail shopping on each, for a total of 56,000 square feet of retail shopping. The trip generation of the outparcels is presented in Table 8.

Table 8 – Outparcel Trip Generation

Land Use	ITE Code	Size	A.M. Peak Hour			P.M. Peak Hour			24-Hour
			In	Out	Total	In	Out	Total	2-Way
Outparcel Total Trips	820	56,000 ft ²	68	41	109	195	211	406	4,658
-pass-by		30/40/30%	<u>-20</u>	<u>-12</u>	<u>-32</u>	<u>-78</u>	<u>-84</u>	<u>-162</u>	<u>-1,398</u>
Outparcel New Trips			48	29	77	117	127	244	3,260

The outparcels will be served by a full movement access that will align with the existing median break on GA 53 at Canterbury Road. A connecting roadway will run through the outparcel property and connect to the main roadway through the western portion of the Lanier Tract (connecting Strickland Drive to Ahaluna Drive). The connecting roadway through the outparcel property was assumed to be constructed during the development of the Lanier Tract, and was included in the Future Phase One analysis, as discussed previously. This will allow trips from the proposed Lanier Tract to access GA 53.

The trips that will be generated by the outparcels were distributed to the study intersections using the same trip distribution percentages developed for the retail portion of the Lanier Tract DRI (with one minor difference – five percent of the outparcel trips were distributed back into the Lanier Tract, in anticipation of the trips that will travel between the outparcels and the Lanier Tract DRI. This five percent was subtracted from the south, to and from McEver Road). The Lanier Tract distribution percentages were shown previously in this report, in Figure 5.

Future Phase Two Traffic Volumes

The trips from the outparcels were added to the Future Phase One volumes (comprised of the counted volumes increased by 10.4%, plus the Lanier Tract and Willow Springs trips, as described previously). The resulting volumes are the traffic volumes that will be at each intersection when the outparcels are developed and operational. The Future Phase Two traffic volume projections are shown in Figure 7. These volumes are also shown in the intersection volume worksheets in Appendix A.

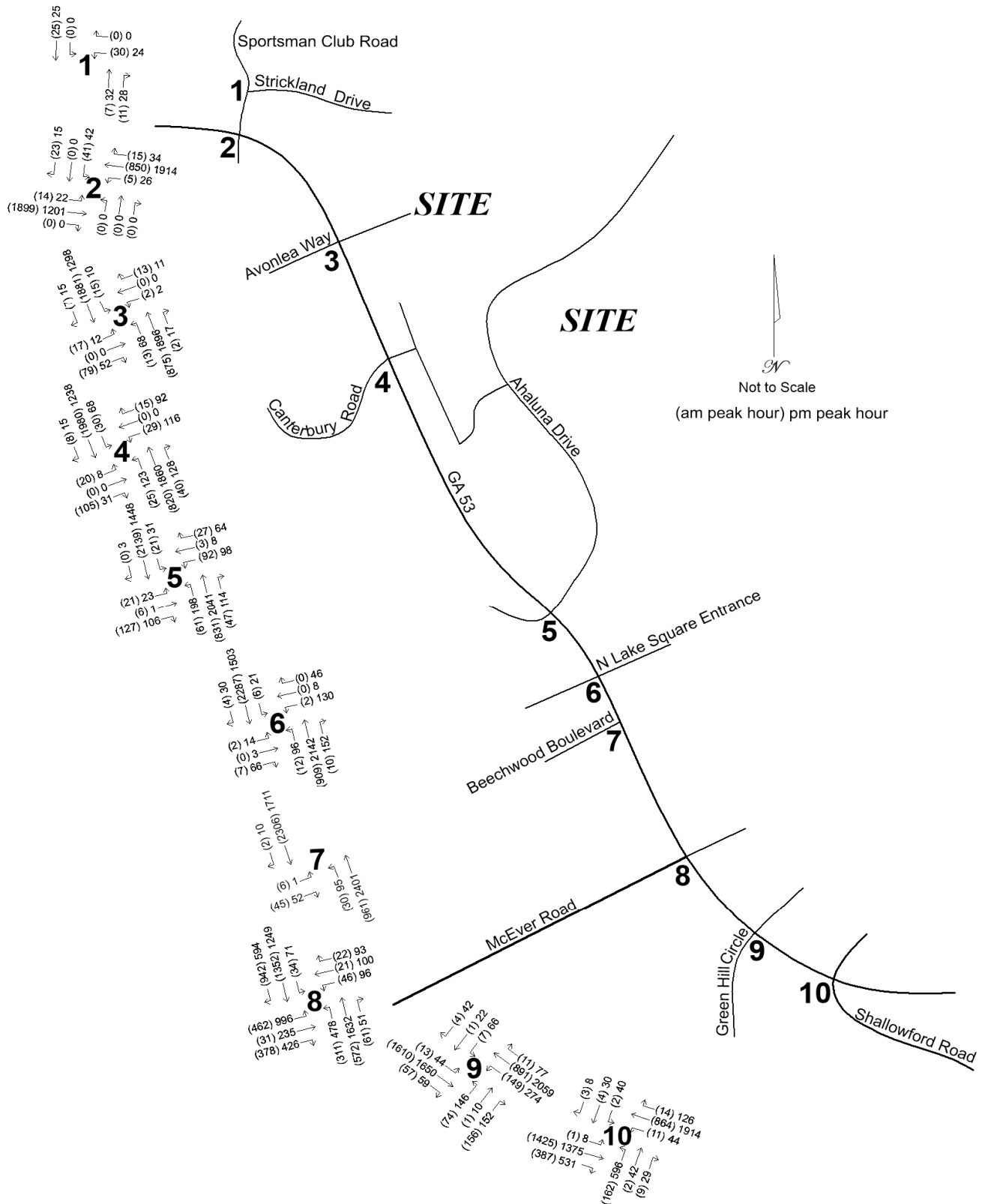


Figure 7 – Future Phase Two Peak Hour Traffic Volume Projections

Future Phase Two Intersection Operations

An operational analysis was performed for the Future Phase Two conditions. Table 9 presents the results of this analysis. Computer printouts containing detailed results of the analysis are located in Appendix E.

Table 9 – Future Phase Two Intersection Operations

Intersection / Approach	A.M. Peak Hour		P.M. Peak Hour	
	LOS	Delay s/veh	LOS	Delay s/veh
1. Sportsman Club Road at Strickland Drive	A	4.2	A	3.2
southbound left turn	A	0.0	A	0.0
westbound approach	A	9.1	A	9.2
2. Dawsonville Highway at Sportsman Club Road	C	23.7	F	74.3
northbound approach (turn lane)	A	0.0	A	0.0
southbound approach (Sportsman Club Road)	F	866.3	F	3,330.7
eastbound left turn (GA 53)	B	10.5	C	19.2
westbound left turn (GA 53)	C	20.8	B	11.9
3. Dawsonville Highway at Avonlea Way	B	11.1	A	4.5
northbound left turn (GA 53)	C	21.1	B	12.8
southbound left turn	B	10.4	C	18.4
eastbound left turn	F	1,593.4	F	722.2
eastbound right turn	E	35.6	C	15.5
westbound left turn	F	311.5	F	833.9
westbound right turn	B	12.2	C	21.0
4. Dawsonville Highway at Canterbury Road	D	29.0	F	852.3
northbound left turn (GA 53)	C	22.0	B	13.9
southbound left turn	B	10.5	C	20.7
eastbound left turn	F	1,733.4	F	2,303.8
eastbound right turn	E	42.2	B	14.6
westbound left turn	F	1712.5	F	19,977.6
westbound right turn	B	12.2	D	33.7
5. Dawsonville Highway at Ahaluna Drive	C	32.6	C	22.8
northbound approach (GA 53)	A	6.8	B	17.0
southbound approach (GA 53)	D	37.1	C	22.3
eastbound approach	D	46.8	B	17.7
westbound approach	F	134.1	F	106.1
6. Dawsonville Highway at North Lake Square	A	4.0	B	18.2
northbound approach (GA 53)	A	1.2	B	16.7
southbound approach (GA 53)	A	5.1	B	13.1
eastbound approach	E	69.5	C	21.8
westbound approach	E	70.0	E	68.1
7. Dawsonville Highway at Beachwood Boulevard	A	3.3	A	1.0
northbound left turn (GA 53)	D	31.5	C	18.4
eastbound left turn	F	1,230.3	F	620.4

eastbound right turn	E	40.4	C	21.0
8. Dawsonville Highway at McEver Road	D	52.3	F	154.3
northbound approach (GA 53)	E	75.8	F	163.8
southbound approach (GA 53)	C	22.2	E	60.3
eastbound approach	F	111.2	F	270.3
westbound approach	E	60.9	E	78.5
9. Dawsonville Highway at Green Hill Circle	B	15.0	E	68.5
northbound approach (GA 53)	A	8.7	E	73.0
southbound approach (GA 53)	B	14.4	E	59.3
eastbound approach	D	47.4	E	59.8
westbound approach	D	38.8	F	119.2
10. Dawsonville Highway at Shallowford Road	B	13.5	F	83.2
northbound approach (GA 53)	A	6.4	E	75.2
southbound approach (GA 53)	B	10.4	E	76.1
eastbound approach	E	76.4	F	127.7
westbound approach	D	49.9	E	77.7

The outparcels' trips will generally be added to the major through movements at each study intersection, and will increase overall intersection delays at each location. The most significant impact of the outparcels will be incurred at the Canterbury intersection, which will serve as the primary access point to GA 53 for all of the outparcels. The operational analysis at this intersection shows that the overall intersection will deteriorate to LOS F in the p.m. and the side street left turns will experience extremely high delays. Because many of the new side street trips exiting the outparcels will be left turners, this intersection becomes a more likely candidate for signalization in the Future Phase Two condition. It is recommended that a signal warrant analysis be performed for this location in the future when the outparcels are planned to be developed. The Georgia DOT right turn lane analysis provided in the next section of this report indicates that a northbound right turn lane on GA 53 at this site access will be necessary in the Future Phase Two condition, when the outparcels are developed and operational.

Georgia DOT Auxiliary Turn Lane Standards

The four primary site connection points to GA 53 will occur at Sportsman Club Road, across from Avonlea Way, across from Canterbury Road, and via Ahaluna Drive. All four locations are served by existing median breaks and southbound exclusive left turn lanes are already provided, which will serve the site entering left turn traffic, at each location. However, there are no northbound exclusive right turn lanes, which would serve site entering right turn traffic, at any of these locations. The standards proscribed in the Georgia DOT's *Regulations for Driveway and Encroachment Control* (Driveway Manual), revision 4.0, dated 3/15/2016, were reviewed for the requirements for right turn lanes. Table 10, below, is Table 4-6 from the Driveway Manual, and proscribes the right turn volume thresholds at which exclusive right turn lanes must be provided.

Table 10 – Georgia DOT Minimum Volume Requirements for Right Turn Lanes

Posted Speed	2 Lane Routes		More than 2 Lanes on Main Road	
	AADT		AADT	
	< 6000	>=6000	<10000	>=10000
35 MPH or Less	200 RTV a day	100 RTV a day	200 RTV a day	100 RTV a day
40 to 50 MPH	150 RTV a day	75 RTV a day	150 RTV a day	75 RTV a day
55 to 60 MPH	100 RTV a day	50 RTV a day	100 RTV a day	50 RTV a day
>= 65 MPH	Always	Always	Always	Always

Table 4-6 Minimum Volumes Requiring Right Turn Lanes

The AADT on GA 53 near Sportsman Club Road was identified previously in Table 2 in this report as 25,600 vpd in 2015, and the posted speed limit is 45 mph. For main roads with these conditions, a right turn lane must be provided when the right turn volume exceeds 75 right turn vehicles (RTV) per day. This study calculated a.m. and p.m. peak hour right turn volumes. As a general rule of thumb, p.m. peak hour volumes are typically about 10% of 24-hour volumes. However, field observations suggest that the off-peak activity turning into and out of these intersections currently is very low, so it is uncertain if the 10% rule of thumb is applicable. Using the a.m. and p.m. volume projections, and the 10% rule of thumb to estimate 24-hour RTVs, the existing, no-build, Future Phase One, and Future Phase Two volumes were tested against the Georgia DOT right turn lane standard at the four primary site access locations on GA 53. This analysis is summarized in Table 11.

Table 11 – Georgia DOT Right Turn Lane Standards for Northbound GA 53

Intersection GA 53 at:	24-Hour RTV Threshold	Existing			No-Build			Future Phase One			Future Phase Two		
		a.m.	p.m.	24-hr	a.m.	p.m.	24-hr	a.m.	p.m.	24-hr	a.m.	p.m.	24-hr
Sportsman	75	8	19	190	9	21	210	15	34	340	15	34	340
Avonlea	75	0	0	0	0	0	0	2	17	170	2	17	170
Canterbury	75	0	0	0	0	0	0	3	4	40	40	128	1,280
Ahaluna	75	11	38	380	12	42	420	47	114	1,140	47	114	1,140

The results in Table 11 indicate that a northbound right turn lane is possibly justified in the existing condition on GA 53 at Sportsman Club Road and almost certainly justified on GA 53 at Ahaluna Drive. The increase in volumes to the no-build condition will increase the justification for these right turn lanes. The Lanier Tract will add trips to each intersection and create the fourth approaches at the median breaks at Avonlea Way and Canterbury Road. Table 10 suggests that a northbound right turn lane is likely to be justified at the Avonlea Way access but not at the Canterbury access with the development of the Lanier Tract. With the development of the retail outparcels in Future Phase Two, a northbound right turn lane is also expected to be justified at the Canterbury access.

Table 12, below, is Table 4-8 from the Driveway Manual, and presents the Georgia DOT right turn lane design standards. Based on the posted 45 mph speed limit, each northbound right turn lane on GA 53 should include 175 feet of full-width storage and a 100 foot taper.

Table 12 – Georgia DOT Design Standards for Right Turn Lanes

Speed, mph	Full Width Storage, ft.	Taper, ft.
25		50
30	75	50
35	100	50
40	150	50
45	175	100
50	225	100
55	250	100
60	300	100
65	350	100

Table 4-8 Minimum Right Turn Deceleration Lengths

The site plan also anticipates providing two right-in / right-out RIRO accesses to the office / retail tract and the plan anticipates providing deceleration lanes on GA 53 at both of these accesses. It is recommended that these anticipated deceleration lanes also be constructed to satisfy the Driveway Manual standards.

The project site engineer is referred to the Georgia DOT Driveway Manual for other driveway design standards including driveway width, island design, and curb return radii.

Summary of Study Findings and Recommendations

The following is a summary of the findings and the recommendations of this traffic impact study at each intersection:

1. **Sportsman Club Road at Strickland Drive** – No changes are recommended at this intersection for the existing, no-build, or Future Phase One and Future Phase Two conditions.
2. **Dawsonville Highway at Sportsman Club Road** – The side street delays at this intersection are significant now and will increase in the future. While a warrant analysis was not performed as part of this traffic impact study, the low side street volumes make the intersection an unlikely candidate for signalization. The potential for justifying signalization will increase in the future, but side street volumes will continue to remain moderate. This study also identifies the need for a northbound exclusive right turn lane to be added on GA 53 at Sportsman Club Road. Northbound and southbound exclusive left turn lanes are currently provided at this median break.
3. **Dawsonville Highway at Avonlea Way** – Side street delays are high at the existing eastbound approach of Avonlea Way, and these delays will increase in the no-build and future conditions. The side street volumes are predominately right turners, with extremely low left turn volumes. The Lanier Tract will introduce a new fourth leg at the Avonlea Way intersection (there is an existing private residential driveway at this median break, which would be replaced by the Lanier Tract access). Northbound and southbound exclusive left turn lanes are currently provided at this median break. The volumes exiting the new Lanier Tract access will be low and many of them will be right turners. Therefore, this intersection is considered unlikely to be a candidate for signalization in the existing, no-build, and Future Phases One and Two, even with the addition of the Lanier Tract trips. The Georgia DOT right turn lane analysis suggests that a northbound exclusive right turn lane should be considered at this access and the site plan includes the addition of this lane. The new site access should be constructed with one entering lane and one exiting lane. The side street approach exiting the site should be controlled by side street stop sign and accompanying stop bar.
4. **Dawsonville Highway at Canterbury Road** – Side street delays are high on the existing eastbound approach of Canterbury Road and these delays will increase in the no-build and future conditions. As with Avonlea Way, the side street volumes at this intersection are predominately right turners, with extremely low left turn volumes. For this reason, this intersection is considered an unlikely candidate for signalization in the existing, no-build, and Future Phase One conditions. The outparcel access will align with Canterbury Road and the Lanier Tract will connect through the outparcels to GA 53 at this location. Northbound and southbound exclusive left turn lanes are currently provided at this median break. A short southbound deceleration lane is provided on GA 53 at Canterbury Road, though this lane does not appear to have been constructed to current Georgia DOT design standards. The northbound right turn volume will be low in the Future Phase One condition, and the Georgia DOT right turn lane analysis indicates that no decel lane will be required for Future Phase One. However, with the future development of the retail outparcels, by others, the right turn volumes will be significant, primarily due to the outparcels, and a northbound deceleration lane is recommended for this location. The Future Phase Two side street volumes exiting the outparcels will

be notable and this intersection will likely be a prime candidate for signalization upon development of the outparcels. It is recommended that at such time as the outparcels are planned to be developed, a signal warrant study be performed for this intersection according to the standards set forth in the Federal Highway Administration's *Manual On Uniform Traffic Control Devices* (MUTCD). This new access at the Canterbury Road median break should be constructed with at least one entering lane and an exiting shared left/through lane and an exclusive right turn lane. The two westbound lanes are in anticipation of the development of the outparcels. With only the Lanier Tract volumes, only one entering and one exiting lane would be required. Until signalization is warranted, the side street approach exiting the outparcel tracts should be controlled by side street stop sign and accompanying stop bar.

5. **Dawsonville Highway at Ahaluna Drive** – The review of Georgia DOT auxiliary lane standards indicates that a northbound right turn lane should be added on GA 53 at Ahaluna Drive in the existing condition. The future volumes exiting Ahaluna Drive would benefit from the addition of a second westbound lane, resulting in a shared left/through lane and an exclusive right turn lane on Ahaluna Drive at GA 53. This second lane would reduce the demand for side street greentime on the signal and improve side street levels of service. It was noted that the need for relocation of the signal steel strain pole, a drainage structure, and possibly a large brick monument sign, may reduce the feasibility of adding this second westbound lane. With the addition of Lanier Tract southbound left turns from GA 53, consideration should be given to adding a protected / permissive southbound left turn phase, which would match the existing protected / permissive phasing for the northbound left turn. The Georgia DOT left turn phase warrants are not satisfied for this southbound left turn based on volume projections alone. However, other factors such as high speeds on GA 53 and the senior residents expected to reside at the Lanier Tract, merit consideration. Field observations suggest that there may be an opportunity to shorten the cycle length, which would reduce time spent by vehicles waiting on the side street.
6. **Dawsonville Highway at North Lake Square Access** – This intersection operates acceptably in all analysis conditions. The side street approaches do incur some delays at all times, primarily due to the long cycle length on the signal, which allocates most of the greentime, appropriately, to GA 53. The side street delays are incurred by minimal volumes in the a.m., since the retail served by the side streets are generally not operational at that time. Higher volumes incur the side street delays in the p.m., when the retail is operational. However, overall this intersection operates appropriately and no mitigation is recommended for any analysis condition.
7. **Dawsonville Highway at Beachwood Boulevard** At the GA 53 / Beechwood Boulevard intersection, it is noted that a fourth leg is currently stubbed-out across from Beechwood Boulevard and a retail development is under construction on that site. Auxiliary left and right turn lanes are provided on GA 53 serving Beechwood Boulevard and the future fourth leg appears to be designed for right-in / right-out access only, with a northbound deceleration lane provided on GA 53. No changes are recommended at this intersection based on this study.
8. **Dawsonville Highway at McEver Road** – The lane configuration and signal phasing at this intersection are generally appropriate. The existing southbound right turn volume is sufficiently-high (828 a.m., 481 p.m.) to

merit consideration of the addition of a second exclusive right turn lane and/or the addition of a protected right turn overlap phase. The justification for adding this phasing and/or second right turn lane will increase as volumes increase. Finally, there may be an opportunity to reduce the cycle length and fine-tune the signal timing at this intersection.

9. **Dawsonville Highway at Green Hill Circle** – This signalized intersection incurs high sides street delays, again, due to the allocation of the majority of greentime to the Dawsonville Highway approaches. There may be an opportunity to reduce the cycle length and fine-tune the signal timing at this intersection.
10. **Dawsonville Highway at Shallowford Road** – The lane configuration and signal phasing are appropriate for this intersection. Reduction of the cycle length and optimization of the allocation of greentime could reduce delays and queuing at this intersection.

Appendix A

Traffic Count Data and Volume Worksheets

Lanier Tract Multi-Use DRI Traffic Impact Study
City of Gainesville, Georgia

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Intersection 1: Sportsman Club Road at Strickland Drive

Weekday A.M. Peak Hour	Northbound Sportsman Club Road			Southbound Sportsman Club Road			Westbound Strickland Drive		
	T	R	Tot	L	T	Tot	L	R	Tot
Counted Volumes (Thursday, November 17, 2016)	6	1	7	0	23	23	10	0	10
Annual Background Growth	10.4%	10.4%		10.4%	10.4%		10.4%	10.4%	
No-Build Volumes	7	1	8	0	25	25	11	0	11
Willow Springs Townhomes	0	6	6	0	0	0	12	0	12
Lanier Tract Senior Living Residential New Trips	0	4	4	0	0	0	7	0	7
Lanier Tract Office/Retail New Trips	0	0	0	0	0	0	0	0	0
Total Lanier Tract Site Trips	0	4	4	0	0	0	7	0	7
Phase 1 Future Volumes	7	11	18	0	25	25	30	0	30
Retail Outparcels	0	0	0	0	0	0	0	0	0
Phase 2 Future Volumes	7	11	18	0	25	25	30	0	30

Weekday P.M. Peak Hour	Northbound Sportsman Club Road			Southbound Sportsman Club Road			Westbound Strickland Drive		
	T	R	Tot	L	T	Tot	L	R	Tot
Counted Volumes (Thursday, September 17, 2015)	29	9	38	0	23	23	7	0	7
Annual Background Growth	10.4%	10.4%		10.4%	10.4%		10.4%	10.4%	
No-Build Volumes	32	10	42	0	25	25	8	0	8
Willow Springs Townhomes	0	12	12	0	0	0	11	0	11
Lanier Tract Senior Living Residential New Trips	0	6	6	0	0	0	5	0	5
Lanier Tract Office/Retail New Trips	0	0	0	0	0	0	0	0	0
Total Lanier Tract Site Trips	0	6	6	0	0	0	5	0	5
Phase 1 Future Volumes	32	28	60	0	25	25	24	0	24
Retail Outparcels	0	0	0	0	0	0	0	0	0
Phase 2 Future Volumes	32	28	60	0	25	25	24	0	24

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Intersection 2: Georgia State Route 53 at Sportsman Club Road

Weekday A.M. Peak Hour																
	Northbound GA 53				Southbound GA 53				Eastbound turn lane				Westbound Sportsman Club Road			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Thursday, November 17, 2016)	0	743	8	751	9	1687	0	1696	0	0	0	0	25	0	15	40
Annual Background Growth	10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%	
No-Build Volumes	0	820	9	829	10	1863	0	1873	0	0	0	0	28	0	17	44
Willow Springs Townhomes	0	0	4	4	2	0	0	2	0	0	0	0	9	0	3	12
Lanier Tract Senior Living Residential New Trips	0	19	2	21	2	15	0	17	0	0	0	0	4	0	3	7
Lanier Tract Office/Retail New Trips	5	2	0	7	0	7	0	7	0	0	0	0	0	0	0	0
Total Lanier Tract Site Trips	5	21	2	28	2	22	0	24	0	0	0	0	4	0	3	7
Phase 1 Future Volumes	5	841	15	861	14	1885	0	1899	0	0	0	0	41	0	23	63
Retail Outparcels	0	9	0	9	0	14	0	14	0	0	0	0	0	0	0	0
Phase 2 Future Volumes	5	850	15	870	14	1899	0	1913	0	0	0	0	41	0	23	63

Weekday P.M. Peak Hour																
	Northbound GA 53				Southbound GA 53				Eastbound turn lane				Westbound Sportsman Club Road			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Thursday, September 17, 2015)	2	1671	19	1692	15	1039	0	1054	0	0	0	0	28	0	9	37
Annual Background Growth	10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%	
No-Build Volumes	2	1845	21	1868	17	1147	0	1164	0	0	0	0	31	0	10	41
Willow Springs Townhomes	0	0	9	9	3	0	0	3	0	0	0	0	8	0	3	11
Lanier Tract Senior Living Residential New Trips	0	21	4	25	2	14	0	16	0	0	0	0	3	0	2	5
Lanier Tract Office/Retail New Trips	24	10	0	34	0	5	0	5	0	0	0	0	0	0	0	0
Total Lanier Tract Site Trips	24	31	4	59	2	19	0	21	0	0	0	0	3	0	2	5
Phase 1 Future Volumes	26	1876	34	1936	22	1166	0	1188	0	0	0	0	42	0	15	57
Retail Outparcels	0	38	0	38	0	35	0	35	0	0	0	0	0	0	0	0
Phase 2 Future Volumes	26	1914	34	1974	22	1201	0	1223	0	0	0	0	42	0	15	57

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Intersection 3: Georgia State Route 53 at Avonlea Way

Weekday A.M. Peak Hour	Northbound GA 53				Southbound GA 53				Eastbound Avonlea Way				Westbound Lanier Tract Access			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Thursday, November 17, 2016)	12	757	1	770	0	1668	6	1674	15	0	72	87	0	0	0	0
Annual Background Growth	10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%	
No-Build Volumes	13	836	1	850	0	1842	7	1848	17	0	79	96	0	0	0	0
Willow Springs Townhomes	0	4	0	4	0	9	0	9	0	0	0	0	0	0	0	0
Lanier Tract Senior Living Residential New Trips	0	9	1	10	8	11	0	19	0	0	0	0	2	0	13	15
Lanier Tract Office/Retail New Trips	0	17	0	17	7	5	0	12	0	0	0	0	0	0	0	0
Total Lanier Tract Site Trips	0	26	1	27	15	16	0	31	0	0	0	0	2	0	13	15
Phase 1 Future Volumes	13	866	2	881	15	1867	7	1888	17	0	79	96	2	0	13	15
Retail Outparcels	0	9	0	9	0	14	0	14	0	0	0	0	0	0	0	0
Phase 2 Future Volumes	13	875	2	890	15	1881	7	1902	17	0	79	96	2	0	13	15

Weekday P.M. Peak Hour	Northbound GA 53				Southbound GA 53				Eastbound Avonlea Way				Westbound Lanier Tract Access			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Thursday, September 17, 2015)	62	1650	0	1712	2	1102	14	1118	11	0	47	58	0	0	0	0
Annual Background Growth	10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%	
No-Build Volumes	68	1822	0	1890	2	1217	15	1234	12	0	52	64	0	0	0	0
Willow Springs Townhomes	0	9	0	9	0	8	0	8	0	0	0	0	0	0	0	0
Lanier Tract Senior Living Residential New Trips	0	14	17	31	3	14	0	17	0	0	0	0	2	0	11	13
Lanier Tract Office/Retail New Trips	0	13	0	13	5	24	0	29	0	0	0	0	0	0	0	0
Total Lanier Tract Site Trips	0	27	17	44	8	38	0	46	0	0	0	0	2	0	11	13
Phase 1 Future Volumes	68	1858	17	1943	10	1263	15	1288	12	0	52	64	2	0	11	13
Retail Outparcels	0	38	0	38	0	35	0	35	0	0	0	0	0	0	0	0
Phase 2 Future Volumes	68	1896	17	1981	10	1298	15	1323	12	0	52	64	2	0	11	13

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Intersection 4: Georgia State Route 53 at Canterbury Road

Weekday A.M. Peak Hour	Northbound GA 53				Southbound GA 53				Eastbound Canterbury Road				Westbound Lanier Tract Access			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Thursday, November 17, 2016)	23	722		745		1783	7	1790	18		95	113				
Annual Background Growth	10.4%	10.4%				10.4%	10.4%		10.4%		10.4%					
No-Build Volumes	25	797		823		1969	8	1976	20		105	125				
Willow Springs Townhomes	0	4	0	4	0	9	0	9	0	0	0	0	0	0	0	0
Lanier Tract Senior Living Residential New Trips	0	8	3	11	2	11	0	13	0	0	0	0	3	0	2	5
Lanier Tract Office/Retail New Trips	0	17	0	17	0	5	0	5	0	0	0	0	0	0	0	0
Total Lanier Tract Site Trips	0	25	3	28	2	16	0	18	0	0	0	0	3	0	2	5
Phase 1 Future Volumes	25	826	3	855	2	1994	8	2003	20	0	105	125	3	0	2	5
Retail Outparcels	0	0	31	31	14	0	0	0	0	0	0	0	18	0	9	9
Retail Outparcels Pass-by	0	-6	6	0	14	-14	0	-14	0	0	0	0	8	0	4	4
Phase 2 Future Volumes	25	820	40	886	30	1980	8	2017	20	0	105	125	29	0	15	44

Weekday P.M. Peak Hour	Northbound GA 53				Southbound GA 53				Eastbound Canterbury Road				Westbound Lanier Tract Access			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Thursday, September 17, 2015)	111	1682		1793		1108	14	1122	7		28	35				
Annual Background Growth	10.4%	10.4%				10.4%	10.4%		10.4%		10.4%					
No-Build Volumes	123	1857		1980		1223	15	1239	8		31	39				
Willow Springs Townhomes	0	9	0	9	0	8	0	8	0	0	0	0	0	0	0	0
Lanier Tract Senior Living Residential New Trips	0	29	4	33	3	13	0	16	0	0	0	0	2	0	2	4
Lanier Tract Office/Retail New Trips	0	13	0	13	0	24	0	24	0	0	0	0	0	0	0	0
Total Lanier Tract Site Trips	0	42	4	46	3	37	0	40	0	0	0	0	2	0	2	4
Phase 1 Future Volumes	123	1908	4	2035	3	1268	15	1287	8	0	31	39	2	0	2	4
Retail Outparcels	0	0	76	76	35	0	0	0	0	0	0	0	82	0	38	38
Retail Outparcels Pass-by	0	-48	48	0	30	-30	0	-30	0	0	0	0	32	0	52	52
Phase 2 Future Volumes	123	1860	128	2111	68	1238	15	1322	8	0	31	39	116	0	92	208

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Intersection 5: Georgia State Route 53 at Lanier Valley Drive / Ahaluna Drive

Weekday A.M. Peak Hour	Northbound GA 53				Southbound GA 53				Eastbound Lanier Valley Drive				Westbound Ahaluna Drive			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Thursday, November 17, 2016)	55	701	11	767	14	1901	0	1915	19	5	115	139	37	3	20	60
Annual Background Growth	10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%	
No-Build Volumes	61	774	12	847	15	2099	0	2114	21	6	127	153	41	3	22	66
Willow Springs Townhomes	0	4	0	4	0	9	0	9	0	0	0	0	0	0	0	0
Lanier Tract Senior Living Residential New Trips	0	5	35	40	6	8	0	14	0	0	0	0	51	0	5	56
Lanier Tract Office/Retail New Trips	0	17	0	17	0	5	0	5	0	0	0	0	0	0	0	0
Total Lanier Tract Site Trips	0	22	35	57	6	13	0	19	0	0	0	0	51	0	5	56
Phase 1 Future Volumes	61	800	47	908	21	2121	0	2142	21	6	127	153	92	3	27	122
Retail Outparcels	0	31	0	31	0	18	0	18	0	0	0	0	0	0	0	0
Phase 2 Future Volumes	61	831	47	939	21	2139	0	2160	21	6	127	153	92	3	27	122

Weekday P.M. Peak Hour	Northbound GA 53				Southbound GA 53				Eastbound Lanier Valley Drive				Westbound Ahaluna Drive			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Thursday, September 17, 2015)	179	1737	38	1954	22	1201	3	1226	21	1	96	118	37	7	51	95
Annual Background Growth	10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%	
No-Build Volumes	198	1918	42	2157	24	1326	3	1354	23	1	106	130	41	8	56	105
Willow Springs Townhomes	0	9	0	9	0	8	0	8	0	0	0	0	0	0	0	0
Lanier Tract Senior Living Residential New Trips	0	25	72	97	7	8	0	15	0	0	0	0	57	0	8	65
Lanier Tract Office/Retail New Trips	0	13	0	13	0	24	0	24	0	0	0	0	0	0	0	0
Total Lanier Tract Site Trips	0	38	72	110	7	32	0	39	0	0	0	0	57	0	8	65
Phase 1 Future Volumes	198	1965	114	2276	31	1366	3	1401	23	1	106	130	98	8	64	170
Retail Outparcels	0	76	0	76	0	82	0	82	0	0	0	0	0	0	0	0
Phase 2 Future Volumes	198	2041	114	2352	31	1448	3	1483	23	1	106	130	98	8	64	170

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Intersection 6: Georgia State Route 53 at North Lake Square / Olive Garden Access

Weekday A.M. Peak Hour	Northbound GA 53				Southbound GA 53				Eastbound Olive Garden Access				Westbound North Lake Square			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Wednesday, March 22, 2017)	11	740	9	760	5	1989	4	1998	2	0	6	8	2	0	0	2
Annual Background Growth	10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%	
No-Build Volumes	12	817	10	839	6	2196	4	2206	2	0	7	9	2	0	0	2
Willow Springs Townhomes	0	4	0	4	0	9	0	9	0	0	0	0	0	0	0	0
Lanier Tract Senior Living Residential New Trips	0	40	0	40	0	59	0	59	0	0	0	0	0	0	0	0
Lanier Tract Office/Retail New Trips	0	17	0	17	0	5	0	5	0	0	0	0	0	0	0	0
Total Lanier Tract Site Trips	0	57	0	57	0	64	0	64	0	0	0	0	0	0	0	0
Phase 1 Future Volumes	12	878	10	900	6	2269	4	2279	2	0	7	9	2	0	0	2
Retail Outparcels	0	31	0	31	0	18	0	18	0	0	0	0	0	0	0	0
Phase 2 Future Volumes	12	909	10	931	6	2287	4	2297	2	0	7	9	2	0	0	2

Weekday P.M. Peak Hour	Northbound GA 53				Southbound GA 53				Eastbound Olive Garden Access				Westbound North Lake Square			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Wednesday, March 22, 2017)	87	1763	138	1988	19	1199	27	1245	13	3	60	76	118	7	42	167
Annual Background Growth	10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%	
No-Build Volumes	96	1947	152	2195	21	1324	30	1375	14	3	66	84	130	8	46	184
Willow Springs Townhomes	0	9	0	9	0	8	0	8	0	0	0	0	0	0	0	0
Lanier Tract Senior Living Residential New Trips	0	97	0	97	0	65	0	65	0	0	0	0	0	0	0	0
Lanier Tract Office/Retail New Trips	0	13	0	13	0	24	0	24	0	0	0	0	0	0	0	0
Total Lanier Tract Site Trips	0	110	0	110	0	89	0	89	0	0	0	0	0	0	0	0
Phase 1 Future Volumes	96	2066	152	2314	21	1421	30	1472	14	3	66	84	130	8	46	184
Retail Outparcels	0	76	0	76	0	82	0	82	0	0	0	0	0	0	0	0
Phase 2 Future Volumes	96	2142	152	2390	21	1503	30	1554	14	3	66	84	130	8	46	184

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Intersection 7: Georgia State Route 53 at Beechwood Boulevard

Weekday A.M. Peak Hour										
	Northbound GA 53			Southbound GA 53			Eastbound Beechwood Boulevard			
	L	T	Tot	T	R	Tot	L	R	Tot	
Counted Volumes (Thursday, November 17, 2016)	27	787	814	2006	2	2008	5	41	46	
Annual Background Growth	10.4%	10.4%		10.4%	10.4%		10.4%	10.4%		
No-Build Volumes	30	869	899	2215	2	2217	6	45	51	
Willow Springs Townhomes	0	4	4	9	0	9	0	0	0	
Lanier Tract Senior Living Residential New Trips	0	40	40	59	0	59	0	0	0	
Lanier Tract Office/Retail New Trips	0	17	17	5	0	5	0	0	0	
Total Lanier Tract Site Trips	0	57	57	64	0	64	0	0	0	
Phase 1 Future Volumes	30	930	960	2288	2	2290	6	45	51	
Retail Outparcels	0	31	31	18	0	18	0	0	0	
Phase 2 Future Volumes	30	961	991	2306	2	2308	6	45	51	

Weekday P.M. Peak Hour										
	Northbound GA 53			Southbound GA 53			Eastbound Beechwood Boulevard			
	L	T	Tot	T	R	Tot	L	R	Tot	
Counted Volumes (Thursday, September 17, 2015)	86	1998	2084	1388	9	1397	1	47	48	
Annual Background Growth	10.4%	10.4%		10.4%	10.4%		10.4%	10.4%		
No-Build Volumes	95	2206	2301	1532	10	1542	1	52	53	
Willow Springs Townhomes	0	9	9	8	0	8	0	0	0	
Lanier Tract Senior Living Residential New Trips	0	97	97	65	0	65	0	0	0	
Lanier Tract Office/Retail New Trips	0	13	13	24	0	24	0	0	0	
Total Lanier Tract Site Trips	0	110	110	89	0	89	0	0	0	
Phase 1 Future Volumes	95	2325	2420	1629	10	1639	1	52	53	
Retail Outparcels	0	76	76	82	0	82	0	0	0	
Phase 2 Future Volumes	95	2401	2496	1711	10	1721	1	52	53	

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Intersection 8: Georgia State Route 53 - Dawsonville Highway at McEver Road / Commercial Access

Weekday A.M. Peak Hour	Northbound Dawsonville Highway				Southbound Dawsonville Highway				Eastbound McEver Road				Westbound Commercial Access			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Thursday, November 17, 2016)	282	465	55	802	28	1170	828	2026	390	28	342	760	42	19	18	79
Annual Background Growth	10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%	
No-Build Volumes	311	513	61	885	31	1292	914	2237	431	31	378	839	46	21	20	87
Willow Springs Townhomes	0	3	0	3	0	6	3	9	1	0	0	1	0	0	0	0
Lanier Tract Senior Living Residential New Trips	0	27	0	27	3	40	16	59	11	0	0	11	0	0	2	2
Lanier Tract Office/Retail New Trips	0	10	0	10	0	3	2	5	7	0	0	7	0	0	0	0
Total Lanier Tract Site Trips	0	37	0	37	3	43	18	64	18	0	0	18	0	0	2	2
Phase 1 Future Volumes	311	553	61	925	34	1341	935	2310	450	31	378	858	46	21	22	89
Retail Outparcels	0	19	0	19	0	11	7	18	12	0	0	0	0	0	0	0
Phase 2 Future Volumes	311	572	61	944	34	1352	942	2328	462	31	378	870	46	21	22	89

Weekday P.M. Peak Hour	Northbound Dawsonville Highway				Southbound Dawsonville Highway				Eastbound McEver Road				Westbound Commercial Access			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Thursday, September 17, 2015)	433	1362	46	1841	62	1029	481	1572	845	213	386	1444	87	91	81	259
Annual Background Growth	10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%	
No-Build Volumes	478	1504	51	2033	68	1136	531	1736	933	235	426	1594	96	100	89	286
Willow Springs Townhomes	0	6	0	6	0	5	3	8	3	0	0	3	0	0	0	0
Lanier Tract Senior Living Residential New Trips	0	67	0	67	3	44	18	65	26	0	0	26	0	0	4	4
Lanier Tract Office/Retail New Trips	0	8	0	8	0	14	10	24	5	0	0	5	0	0	0	0
Total Lanier Tract Site Trips	0	75	0	75	3	58	28	89	31	0	0	31	0	0	4	4
Phase 1 Future Volumes	478	1585	51	2114	71	1199	562	1833	967	235	426	1628	96	100	93	290
Retail Outparcels	0	47	0	47	0	50	32	82	29	0	0	0	0	0	0	0
Phase 2 Future Volumes	478	1632	51	2161	71	1249	594	1915	996	235	426	1657	96	100	93	290

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Intersection 9: Dawsonville Highway at Green Hill Circle / Commercial Access

Weekday A.M. Peak Hour	Northbound Dawsonville Highway				Southbound Dawsonville Highway				Eastbound Green Hill Circle				Westbound Commercial Access			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Thursday, November 17, 2016)	135	754	10	899	12	1404	52	1468	67	1	141	209	6	1	4	11
Annual Background Growth	10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%	
No-Build Volumes	149	832	11	993	13	1550	57	1621	74	1	156	231	7	1	4	12
Willow Springs Townhomes	0	3	0	3	0	6	0	6	0	0	0	0	0	0	0	0
Lanier Tract Senior Living Residential New Trips	0	27	0	27	0	40	0	40	0	0	0	0	0	0	0	0
Lanier Tract Office/Retail New Trips	0	10	0	10	0	3	0	3	0	0	0	0	0	0	0	0
Total Lanier Tract Site Trips	0	37	0	37	0	43	0	43	0	0	0	0	0	0	0	0
Phase 1 Future Volumes	149	872	11	1033	13	1599	57	1670	74	1	156	231	7	1	4	12
Retail Outparcels	0	19	0	19	0	11	0	11	0	0	0	0	0	0	0	0
Phase 2 Future Volumes	149	891	11	1052	13	1610	57	1681	74	1	156	231	7	1	4	12

Weekday P.M. Peak Hour	Northbound Dawsonville Highway				Southbound Dawsonville Highway				Eastbound Green Hill Circle				Westbound Commercial Access			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Thursday, September 17, 2015)	248	1749	70	2067	40	1392	53	1485	132	9	138	279	60	20	38	118
Annual Background Growth	10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%	
No-Build Volumes	274	1931	77	2282	44	1537	59	1640	146	10	152	308	66	22	42	130
Willow Springs Townhomes	0	6	0	6	0	5	0	5	0	0	0	0	0	0	0	0
Lanier Tract Senior Living Residential New Trips	0	67	0	67	0	44	0	44	0	0	0	0	0	0	0	0
Lanier Tract Office/Retail New Trips	0	8	0	8	0	14	0	14	0	0	0	0	0	0	0	0
Total Lanier Tract Site Trips	0	75	0	75	0	58	0	58	0	0	0	0	0	0	0	0
Phase 1 Future Volumes	274	2012	77	2363	44	1600	59	1703	146	10	152	308	66	22	42	130
Retail Outparcels	0	47	0	47	0	50	0	50	0	0	0	0	0	0	0	0
Phase 2 Future Volumes	274	2059	77	2410	44	1650	59	1753	146	10	152	308	66	22	42	130

MARC R. ACAMPORA, PE, LLC

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Intersection 10: Dawsonville Highway at Shallowford Road / Commercial Access

Weekday A.M. Peak Hour	Northbound Dawsonville Highway				Southbound Dawsonville Highway				Eastbound Shallowford Road				Westbound Commercial Access			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Thursday, November 17, 2016)	10	738	13	761	1	1249	338	1588	138	2	8	148	2	4	3	9
Annual Background Growth	10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%	
No-Build Volumes	11	815	14	840	1	1379	373	1753	152	2	9	163	2	4	3	10
Willow Springs Townhomes	0	2	0	2	0	4	2	6	1	0	0	1	0	0	0	0
Lanier Tract Senior Living Residential New Trips	0	21	0	21	0	30	10	40	6	0	0	6	0	0	0	0
Lanier Tract Office/Retail New Trips	0	9	0	9	0	2	1	3	1	0	0	1	0	0	0	0
Total Lanier Tract Site Trips	0	30	0	30	0	32	11	43	7	0	0	7	0	0	0	0
Phase 1 Future Volumes	11	847	14	872	1	1415	386	1802	160	2	9	171	2	4	3	10
Retail Outparcels	0	17	0	17	0	10	1	11	2	0	0	0	0	0	0	0
Phase 2 Future Volumes	11	864	14	889	1	1425	387	1813	162	2	9	173	2	4	3	10

Weekday P.M. Peak Hour	Northbound Dawsonville Highway				Southbound Dawsonville Highway				Eastbound Shallowford Road				Westbound Commercial Access			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Thursday, September 17, 2015)	40	1639	114	1793	7	1161	463	1631	518	38	26	582	36	27	7	70
Annual Background Growth	10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%		10.4%	10.4%	10.4%	
No-Build Volumes	44	1810	126	1980	8	1282	511	1801	572	42	29	643	40	30	8	77
Willow Springs Townhomes	0	4	0	4	0	4	1	5	2	0	0	2	0	0	0	0
Lanier Tract Senior Living Residential New Trips	0	52	0	52	0	33	11	44	15	0	0	15	0	0	0	0
Lanier Tract Office/Retail New Trips	0	7	0	7	0	12	2	14	1	0	0	1	0	0	0	0
Total Lanier Tract Site Trips	0	59	0	59	0	45	13	58	16	0	0	16	0	0	0	0
Phase 1 Future Volumes	44	1873	126	2043	8	1331	525	1864	590	42	29	661	40	30	8	77
Retail Outparcels	0	41	0	41	0	44	6	50	6	0	0	0	0	0	0	0
Phase 2 Future Volumes	44	1914	126	2084	8	1375	531	1914	596	42	29	667	40	30	8	77

MARC R. ACAMPORA, PE, LLC

Reliable Traffic Data Services, LLC

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TMC Data
Sportsman Club Rd @ Strickland Dr
Gainesville, GA
7-9am I 4.30-6.30pm

File Name : 39520001
Site Code : 39520001
Start Date : 11/17/2016
Page No : 1

Groups Printed- Cars, Buses, Trucks

	Sportsman Club Rd Northbound					Sportsman Club Rd Southbound					Eastbound					Strickland Dr Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	0	4	0	0	4	0	7	0	0	7	0	0	0	0	0	0	0	0	0	0	11
07:15 AM	0	1	0	0	1	0	4	0	0	4	0	0	0	0	0	1	0	0	0	1	6
07:30 AM	0	3	0	0	3	0	6	0	0	6	0	0	0	0	0	2	0	0	0	2	11
07:45 AM	0	2	0	0	2	0	3	0	0	3	0	0	0	0	0	2	0	0	0	2	7
Total	0	10	0	0	10	0	20	0	0	20	0	0	0	0	0	5	0	0	0	5	35
08:00 AM	0	0	1	0	1	0	9	0	0	9	0	0	0	0	0	5	0	0	0	5	15
08:15 AM	0	1	0	0	1	0	5	0	0	5	0	0	0	0	0	1	0	0	0	1	7
08:30 AM	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
08:45 AM	0	2	3	0	5	0	4	0	0	4	0	0	0	0	0	1	0	0	0	1	10
Total	0	3	6	0	9	0	18	0	0	18	0	0	0	0	0	7	0	0	0	7	34
*** BREAK ***																					
04:30 PM	0	4	0	0	4	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	8
04:45 PM	0	3	1	0	4	0	8	0	0	8	0	0	0	0	0	0	0	0	0	0	12
Total	0	7	1	0	8	0	12	0	0	12	0	0	0	0	0	0	0	0	0	0	20
05:00 PM	0	6	1	0	7	0	4	0	0	4	0	0	0	0	0	1	0	0	0	1	12
05:15 PM	0	4	5	0	9	0	7	0	0	7	0	0	0	0	0	4	0	0	0	4	20
05:30 PM	0	10	1	0	11	0	4	0	0	4	0	0	0	0	0	3	0	0	0	3	18
05:45 PM	0	6	1	0	7	0	7	0	0	7	0	0	0	0	0	0	0	0	0	0	14
Total	0	26	8	0	34	0	22	0	0	22	0	0	0	0	0	8	0	0	0	8	64
06:00 PM	0	9	2	0	11	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	16
06:15 PM	0	5	1	0	6	0	6	0	0	6	0	0	0	0	0	2	0	0	0	2	14
Grand Total	0	60	18	0	78	0	83	0	0	83	0	0	0	0	0	22	0	0	0	22	183
Apprch %	0	76.9	23.1	0		0	100	0	0		0	0	0	0		100	0	0	0		
Total %	0	32.8	9.8	0	42.6	0	45.4	0	0	45.4	0	0	0	0	0	12	0	0	0	12	

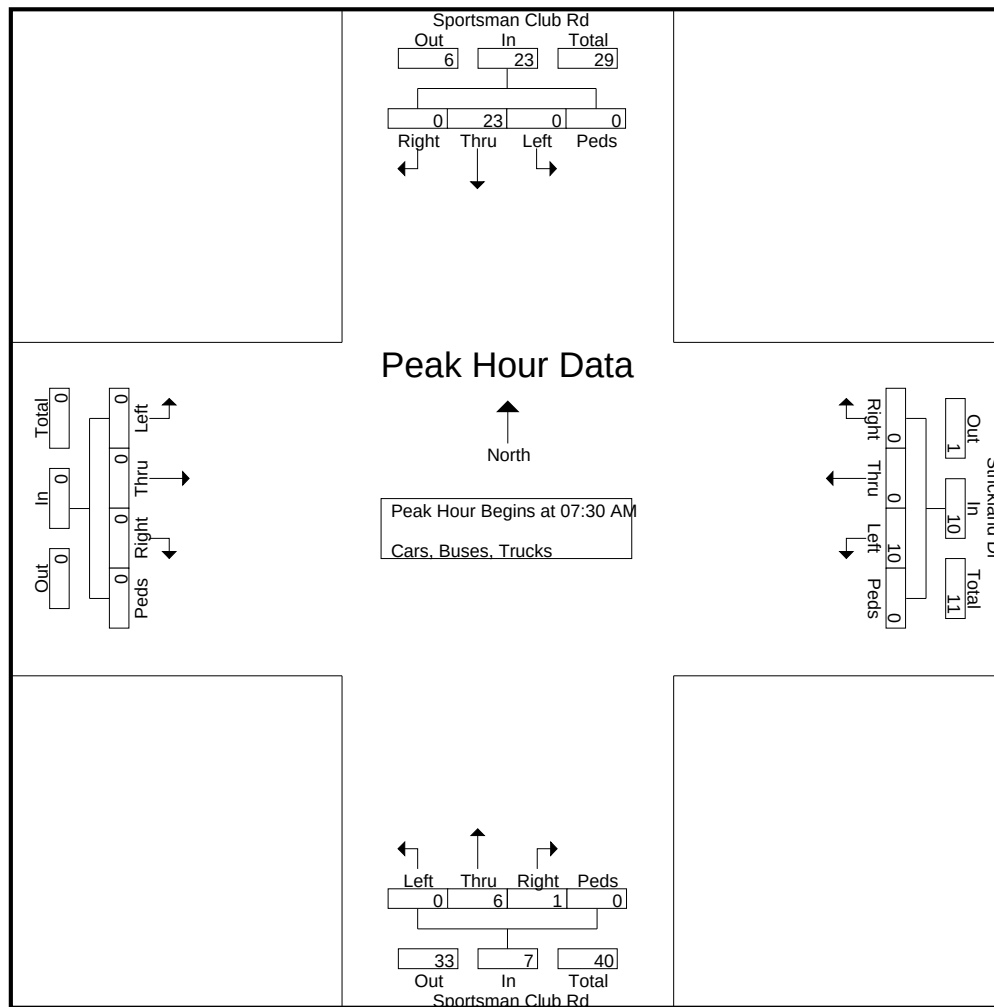
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TMC Data
Sportsman Club Rd @ Strickland Dr
Gainesville, GA
7-9am | 4.30-6.30pm

File Name : 39520001
Site Code : 39520001
Start Date : 11/17/2016
Page No : 2

	Sportsman Club Rd Northbound					Sportsman Club Rd Southbound					Eastbound					Strickland Dr Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	0	3	0	0	3	0	6	0	0	6	0	0	0	0	0	2	0	0	0	2	11
07:45 AM	0	2	0	0	2	0	3	0	0	3	0	0	0	0	0	2	0	0	0	2	7
08:00 AM	0	0	1	0	1	0	9	0	0	9	0	0	0	0	0	5	0	0	0	5	15
08:15 AM	0	1	0	0	1	0	5	0	0	5	0	0	0	0	0	1	0	0	0	1	7
Total Volume	0	6	1	0	7	0	23	0	0	23	0	0	0	0	0	10	0	0	0	10	40
% App. Total	0	85.7	14.3	0		0	100	0	0		0	0	0	0		100	0	0	0		
PHF	.000	.500	.250	.000	.583	.000	.639	.000	.000	.639	.000	.000	.000	.000	.000	.500	.000	.000	.000	.500	.667



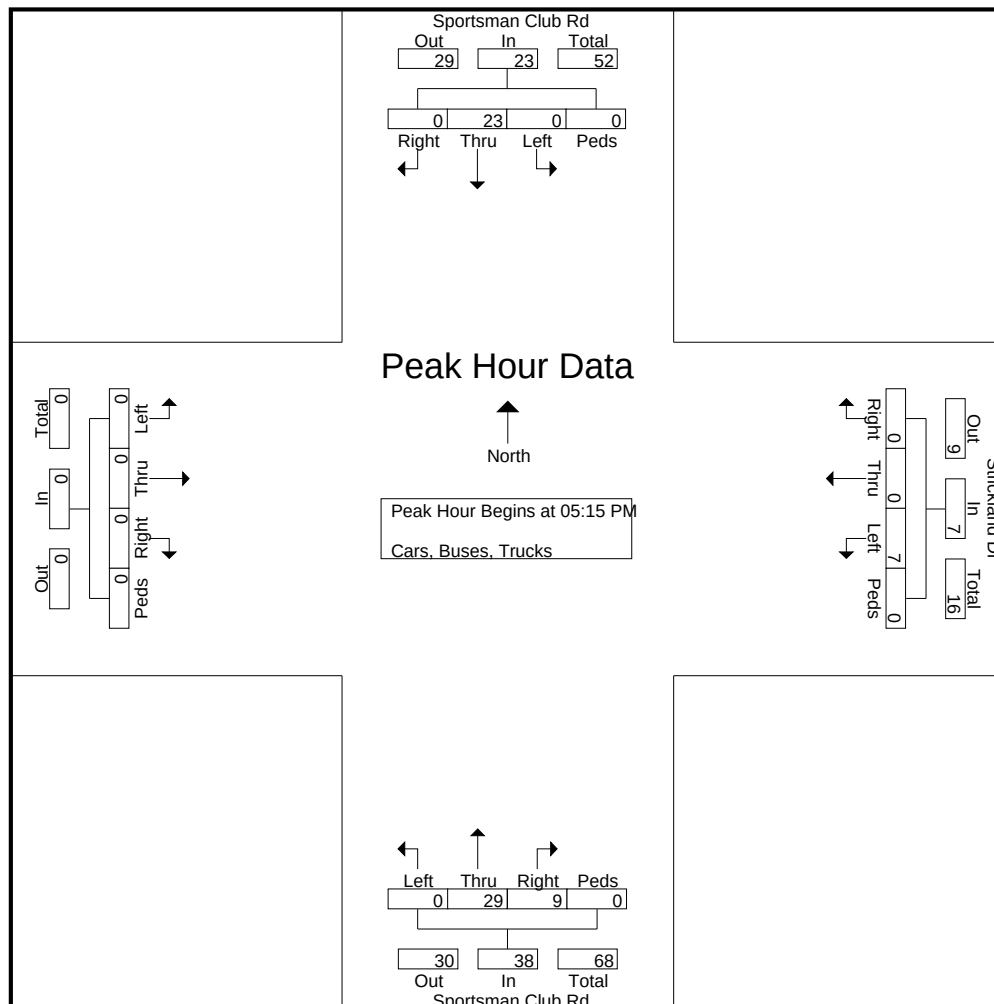
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TMC Data
Sportsman Club Rd @ Strickland Dr
Gainesville, GA
7-9am I 4.30-6.30pm

File Name : 39520001
Site Code : 39520001
Start Date : 11/17/2016
Page No : 3

	Sportsman Club Rd Northbound					Sportsman Club Rd Southbound					Eastbound					Strickland Dr Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:15 PM																					
05:15 PM	0	4	5	0	9	0	7	0	0	7	0	0	0	0	0	4	0	0	0	4	20
05:30 PM	0	10	1	0	11	0	4	0	0	4	0	0	0	0	0	3	0	0	0	3	18
05:45 PM	0	6	1	0	7	0	7	0	0	7	0	0	0	0	0	0	0	0	0	0	14
06:00 PM	0	9	2	0	11	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	16
Total Volume	0	29	9	0	38	0	23	0	0	23	0	0	0	0	0	7	0	0	0	7	68
% App. Total	0	76.3	23.7	0		0	100	0	0		0	0	0	0		100	0	0	0		
PHF	.000	.725	.450	.000	.864	.000	.821	.000	.000	.821	.000	.000	.000	.000	.000	.438	.000	.000	.000	.438	.850



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TMC Data
Dawsonville Hwy (SR53) @
Sportsman Club Rd, Gainesville, GA
7-9am I 4.30-6.30pm

File Name : 39520002
Site Code : 39520002
Start Date : 11/17/2016
Page No : 1

Groups Printed- Cars, Buses, Trucks

	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					Truck Turn Around Eastbound					Sportsman Club Rd Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	0	156	4	0	160	1	326	0	0	327	0	0	0	0	0	5	0	4	0	9	496
07:15 AM	0	165	2	0	167	4	391	0	0	395	0	0	0	0	0	3	0	6	0	9	571
07:30 AM	0	168	2	0	170	4	492	0	0	496	0	0	0	0	0	6	0	2	0	8	674
07:45 AM	0	189	1	0	190	1	448	0	0	449	0	0	0	0	0	4	0	2	0	6	645
Total	0	678	9	0	687	10	1657	0	0	1667	0	0	0	0	0	18	0	14	0	32	2386
08:00 AM	0	221	3	0	224	0	356	0	0	356	0	0	0	0	0	12	0	5	0	17	597
08:15 AM	0	175	3	0	178	1	364	0	0	365	0	0	0	0	0	4	0	1	0	5	548
08:30 AM	2	192	3	0	197	1	320	2	0	323	0	0	0	0	0	1	0	1	0	2	522
08:45 AM	1	164	4	0	169	3	267	0	0	270	0	0	0	0	0	8	0	0	0	8	447
Total	3	752	13	0	768	5	1307	2	0	1314	0	0	0	0	0	25	0	7	0	32	2114
*** BREAK ***																					
04:30 PM	0	344	9	0	353	1	258	0	0	259	0	0	0	0	0	4	0	1	0	5	617
04:45 PM	0	411	3	0	414	1	239	0	0	240	0	0	0	0	0	8	0	2	0	10	664
Total	0	755	12	0	767	2	497	0	0	499	0	0	0	0	0	12	0	3	0	15	1281
05:00 PM	2	410	3	0	415	6	271	0	0	277	0	0	0	0	0	4	0	2	0	6	698
05:15 PM	0	437	6	0	443	4	267	0	0	271	0	0	0	0	0	10	0	4	0	14	728
05:30 PM	0	413	7	0	420	4	262	0	0	266	0	0	0	0	0	6	0	1	0	7	693
05:45 PM	0	374	5	0	379	3	267	0	0	270	0	0	0	0	0	6	0	3	0	9	658
Total	2	1634	21	0	1657	17	1067	0	0	1084	0	0	0	0	0	26	0	10	0	36	2777
06:00 PM	1	421	12	0	434	0	250	0	0	250	0	0	0	0	0	6	0	1	0	7	691
06:15 PM	0	318	7	0	325	3	252	0	0	255	0	0	0	0	0	7	0	3	0	10	590
Grand Total	6	4558	74	0	4638	37	5030	2	0	5069	0	0	0	0	0	94	0	38	0	132	9839
Apprch %	0.1	98.3	1.6	0		0.7	99.2	0	0		0	0	0	0		71.2	0	28.8	0		
Total %	0.1	46.3	0.8	0	47.1	0.4	51.1	0	0	51.5	0	0	0	0		1	0	0.4	0	1.3	

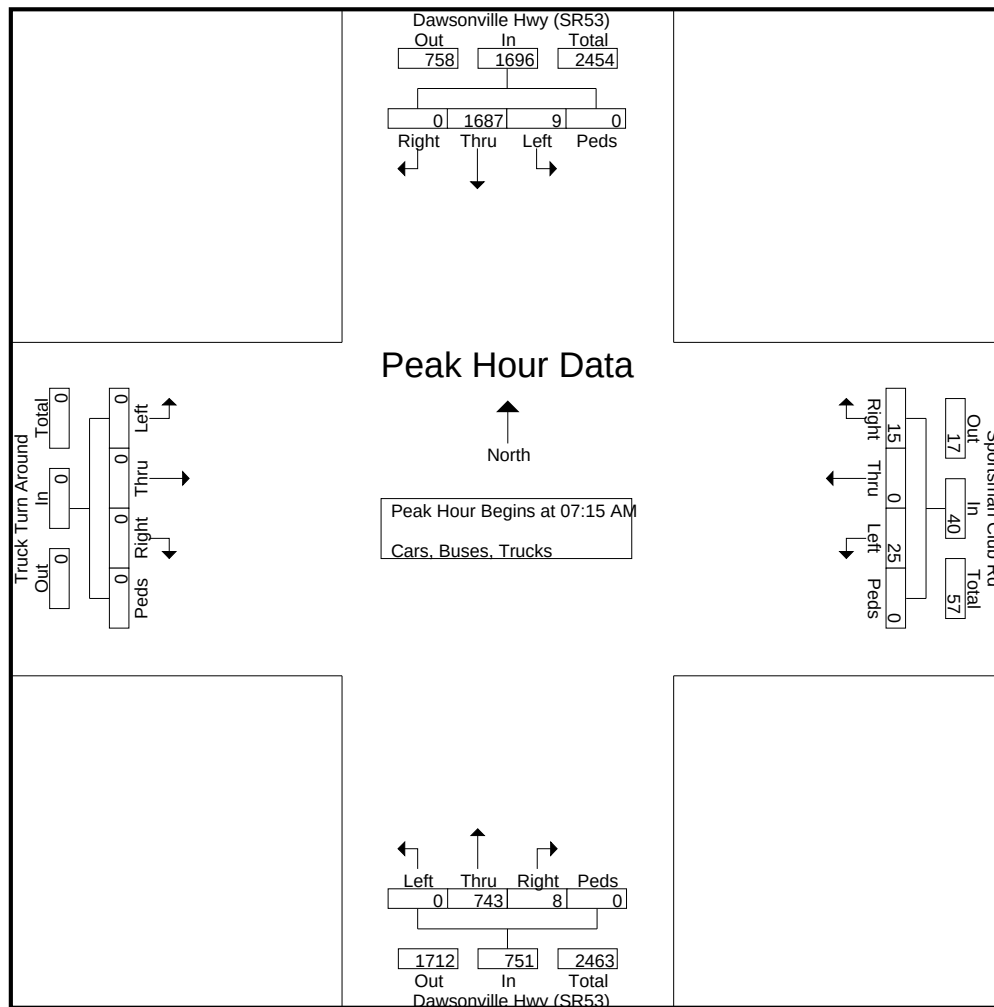
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TMC Data
Dawsonville Hwy (SR53) @
Sportsman Club Rd, Gainesville, GA
7-9am | 4.30-6.30pm

File Name : 39520002
Site Code : 39520002
Start Date : 11/17/2016
Page No : 2

	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					Truck Turn Around Eastbound					Sportsman Club Rd Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	0	165	2	0	167	4	391	0	0	395	0	0	0	0	0	3	0	6	0	9	571
07:30 AM	0	168	2	0	170	4	492	0	0	496	0	0	0	0	0	6	0	2	0	8	674
07:45 AM	0	189	1	0	190	1	448	0	0	449	0	0	0	0	0	4	0	2	0	6	645
08:00 AM	0	221	3	0	224	0	356	0	0	356	0	0	0	0	0	12	0	5	0	17	597
Total Volume	0	743	8	0	751	9	1687	0	0	1696	0	0	0	0	0	25	0	15	0	40	2487
% App. Total	0	98.9	1.1	0		0.5	99.5	0	0		0	0	0	0		62.5	0	37.5	0		
PHF	.000	.840	.667	.000	.838	.563	.857	.000	.000	.855	.000	.000	.000	.000	.000	.521	.000	.625	.000	.588	.922



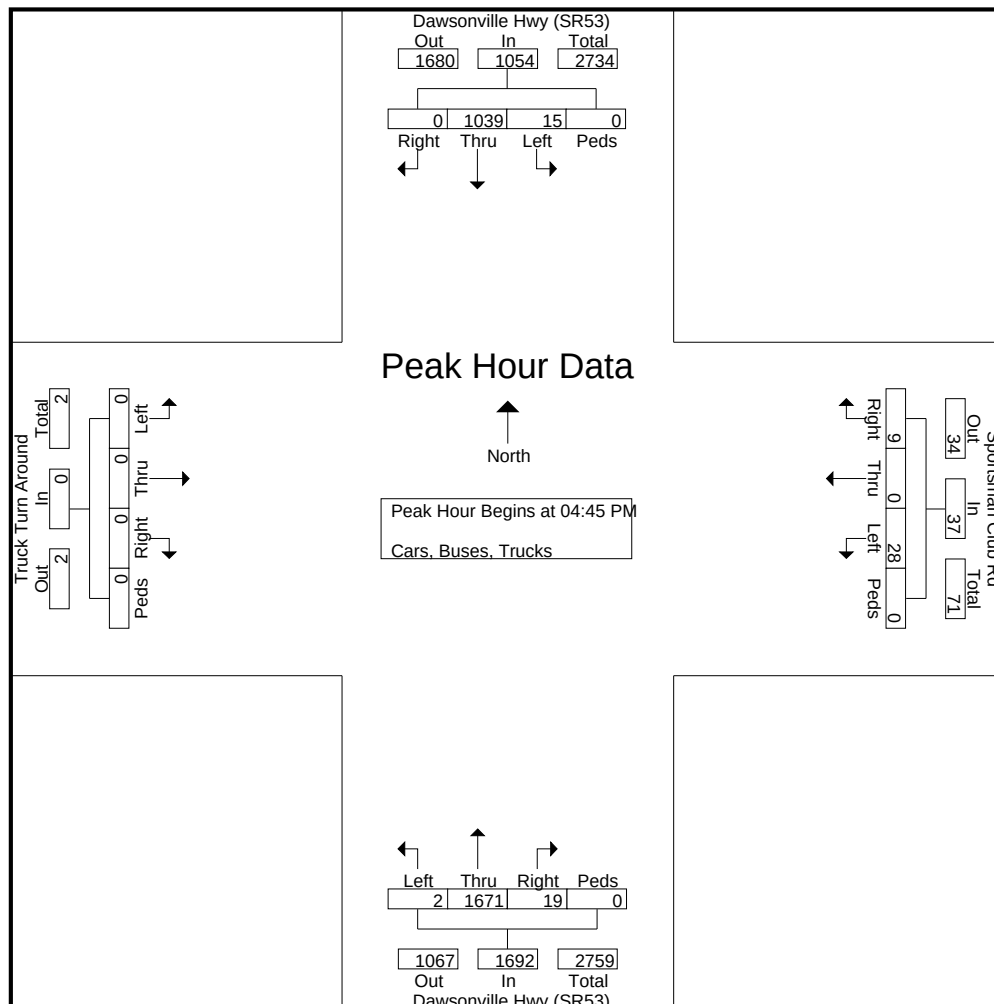
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TMC Data
Dawsonville Hwy (SR53) @
Sportsman Club Rd, Gainesville, GA
7-9am I 4.30-6.30pm

File Name : 39520002
Site Code : 39520002
Start Date : 11/17/2016
Page No : 3

	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					Truck Turn Around Eastbound					Sportsman Club Rd Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	0	411	3	0	414	1	239	0	0	240	0	0	0	0	0	8	0	2	0	10	664
05:00 PM	2	410	3	0	415	6	271	0	0	277	0	0	0	0	0	4	0	2	0	6	698
05:15 PM	0	437	6	0	443	4	267	0	0	271	0	0	0	0	0	10	0	4	0	14	728
05:30 PM	0	413	7	0	420	4	262	0	0	266	0	0	0	0	0	6	0	1	0	7	693
Total Volume	2	1671	19	0	1692	15	1039	0	0	1054	0	0	0	0	0	28	0	9	0	37	2783
% App. Total	0.1	98.8	1.1	0		1.4	98.6	0	0		0	0	0	0		75.7	0	24.3	0		
PHF	.250	.956	.679	.000	.955	.625	.958	.000	.000	.951	.000	.000	.000	.000	.000	.700	.000	.563	.000	.661	.956



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TMC Data
Dawsonville Hwy (SR53) @ Avonlea Way
Gainesville, GA
7-9am I 4.30-6.30pm

File Name : 39520003
Site Code : 39520003
Start Date : 11/17/2016
Page No : 1

Groups Printed- Cars, Buses, Trucks

	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					Avonlea Way Eastbound					Residential Drwy Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	3	160	0	0	163	0	324	0	0	324	6	0	18	0	24	0	0	0	0	0	511
07:15 AM	2	162	1	0	165	0	381	0	0	381	6	0	25	0	31	1	0	0	0	1	578
07:30 AM	6	164	1	0	171	0	485	2	0	487	2	0	22	0	24	0	0	0	0	0	682
07:45 AM	2	193	0	0	195	0	442	1	0	443	7	0	19	0	26	0	0	0	0	0	664
Total	13	679	2	0	694	0	1632	3	0	1635	21	0	84	0	105	1	0	0	0	1	2435
08:00 AM	2	216	0	0	218	0	367	1	0	368	4	0	15	0	19	0	0	0	0	0	605
08:15 AM	2	184	0	0	186	0	374	2	0	376	2	0	16	0	18	0	0	0	0	0	580
08:30 AM	4	198	0	0	202	0	326	3	0	329	3	0	21	0	24	0	0	0	0	0	555
08:45 AM	3	167	0	0	170	0	278	2	0	280	2	0	14	0	16	0	0	0	0	0	466
Total	11	765	0	0	776	0	1345	8	0	1353	11	0	66	0	77	0	0	0	0	0	2206
*** BREAK ***																					
04:30 PM	14	351	0	0	365	0	267	3	0	270	0	0	9	0	9	0	0	0	0	0	644
04:45 PM	10	412	0	0	422	0	248	6	0	254	1	0	6	0	7	0	0	0	0	0	683
Total	24	763	0	0	787	0	515	9	0	524	1	0	15	0	16	0	0	0	0	0	1327
05:00 PM	21	416	0	0	437	0	273	4	0	277	7	0	9	0	16	0	0	0	0	0	730
05:15 PM	10	442	0	0	452	0	279	2	0	281	1	0	18	0	19	0	0	0	0	0	752
05:30 PM	13	418	0	0	431	1	272	6	0	279	0	0	9	0	9	0	0	0	0	0	719
05:45 PM	18	374	0	0	392	1	278	2	0	281	3	0	11	0	14	0	0	0	0	0	687
Total	62	1650	0	0	1712	2	1102	14	0	1118	11	0	47	0	58	0	0	0	0	0	2888
06:00 PM	21	420	0	0	441	1	256	4	0	261	3	0	12	0	15	0	0	0	0	0	717
06:15 PM	13	328	0	0	341	0	247	3	0	250	1	0	10	0	11	0	0	0	0	0	602
Grand Total	144	4605	2	0	4751	3	5097	41	0	5141	48	0	234	0	282	1	0	0	0	1	10175
Apprch %	3	96.9	0	0		0.1	99.1	0.8	0		17	0	83	0		100	0	0	0		
Total %	1.4	45.3	0	0	46.7	0	50.1	0.4	0	50.5	0.5	0	2.3	0	2.8	0	0	0	0	0	

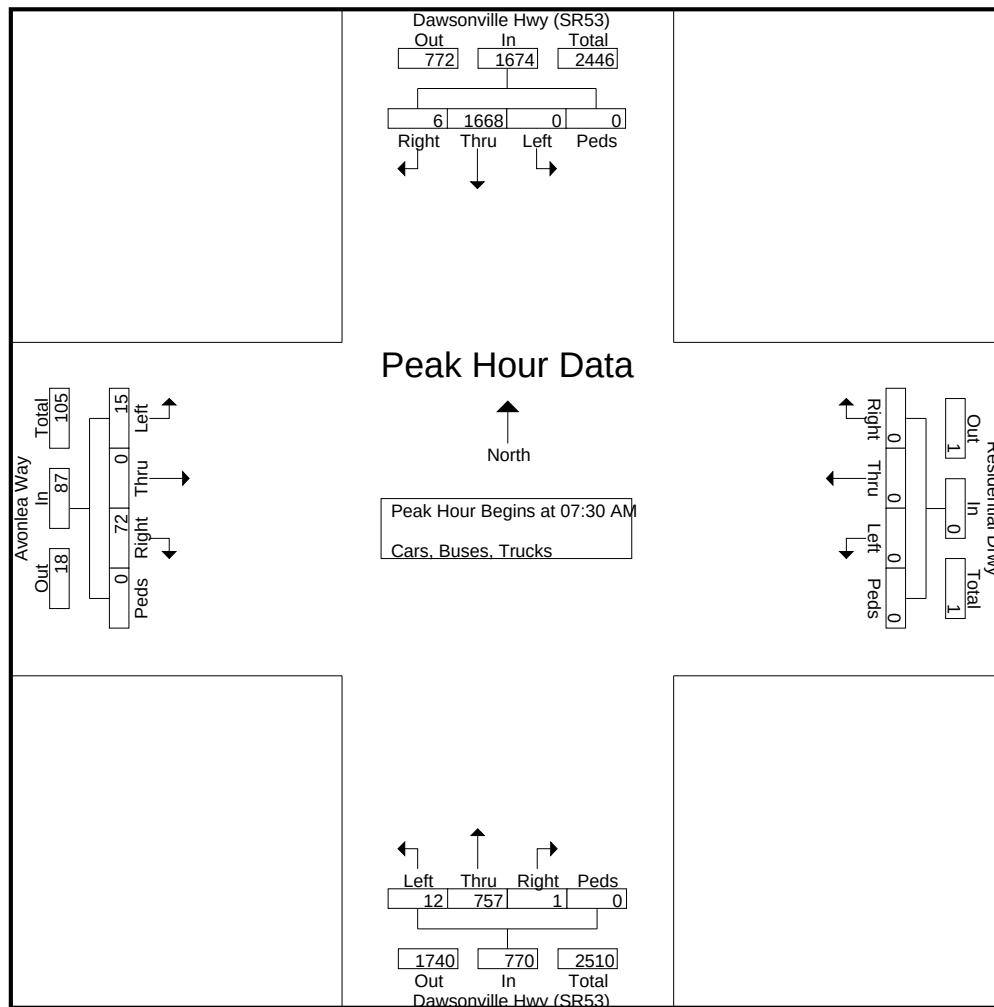
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TMC Data
Dawsonville Hwy (SR53) @ Avonlea Way
Gainesville, GA
7-9am | 4.30-6.30pm

File Name : 39520003
Site Code : 39520003
Start Date : 11/17/2016
Page No : 2

	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					Avonlea Way Eastbound					Residential Drwy Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	6	164	1	0	171	0	485	2	0	487	2	0	22	0	24	0	0	0	0	0	682
07:45 AM	2	193	0	0	195	0	442	1	0	443	7	0	19	0	26	0	0	0	0	0	664
08:00 AM	2	216	0	0	218	0	367	1	0	368	4	0	15	0	19	0	0	0	0	0	605
08:15 AM	2	184	0	0	186	0	374	2	0	376	2	0	16	0	18	0	0	0	0	0	580
Total Volume	12	757	1	0	770	0	1668	6	0	1674	15	0	72	0	87	0	0	0	0	0	2531
% App. Total	1.6	98.3	0.1	0		0	99.6	0.4	0		17.2	0	82.8	0		0	0	0	0		
PHF	.500	.876	.250	.000	.883	.000	.860	.750	.000	.859	.536	.000	.818	.000	.837	.000	.000	.000	.000	.000	.928



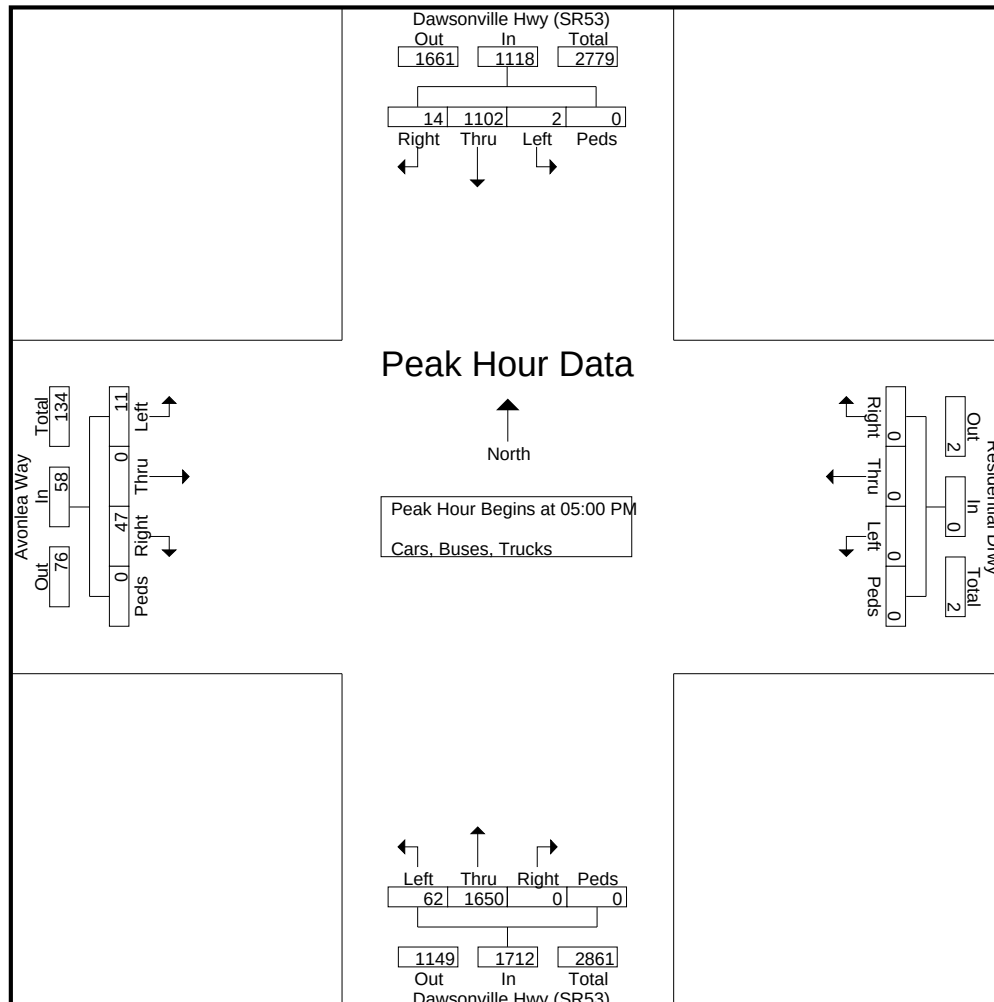
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TMC Data
Dawsonville Hwy (SR53) @ Avonlea Way
Gainesville, GA
7-9am | 4.30-6.30pm

File Name : 39520003
Site Code : 39520003
Start Date : 11/17/2016
Page No : 3

	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					Avonlea Way Eastbound					Residential Drwy Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	21	416	0	0	437	0	273	4	0	277	7	0	9	0	16	0	0	0	0	0	730
05:15 PM	10	442	0	0	452	0	279	2	0	281	1	0	18	0	19	0	0	0	0	0	752
05:30 PM	13	418	0	0	431	1	272	6	0	279	0	0	9	0	9	0	0	0	0	0	719
05:45 PM	18	374	0	0	392	1	278	2	0	281	3	0	11	0	14	0	0	0	0	0	687
Total Volume	62	1650	0	0	1712	2	1102	14	0	1118	11	0	47	0	58	0	0	0	0	0	2888
% App. Total	3.6	96.4	0	0		0.2	98.6	1.3	0		19	0	81	0		0	0	0	0		
PHF	.738	.933	.000	.000	.947	.500	.987	.583	.000	.995	.393	.000	.653	.000	.763	.000	.000	.000	.000	.000	.960



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TMC Data
Dawsonville Hwy (SR53) @ Canterbury Rd
Gainesville, GA
7-9am I 4.30-6.30pm

File Name : 39520004
Site Code : 39520004
Start Date : 11/17/2016
Page No : 1

Groups Printed- Cars, Buses, Trucks

	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					Canterbury Rd Eastbound					Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	U-Turns	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	4	151	0	0	155	0	342	2	0	344	5	0	22	0	27	0	0	0	0	0	526
07:15 AM	7	160	0	0	167	0	456	1	0	457	3	0	29	0	32	0	0	0	0	0	656
07:30 AM	6	168	0	0	174	0	487	4	0	491	5	0	23	0	28	0	0	0	0	0	693
07:45 AM	7	180	0	0	187	0	436	1	1	438	4	0	27	0	31	0	0	0	0	0	656
Total	24	659	0	0	683	0	1721	8	1	1730	17	0	101	0	118	0	0	0	0	0	2531
08:00 AM	3	214	0	0	217	0	403	1	0	404	6	0	16	0	22	0	0	0	0	0	643
08:15 AM	8	178	0	0	186	0	392	3	0	395	3	0	18	0	21	0	0	0	0	0	602
08:30 AM	3	180	0	0	183	0	326	2	2	330	3	0	11	0	14	0	0	0	0	0	527
08:45 AM	7	164	0	0	171	0	297	0	0	297	2	0	8	0	10	0	0	0	0	0	478
Total	21	736	0	0	757	0	1418	6	2	1426	14	0	53	0	67	0	0	0	0	0	2250
*** BREAK ***																					
04:30 PM	22	367	0	0	389	0	263	4	1	268	2	0	13	0	15	0	0	0	0	0	672
04:45 PM	25	398	0	0	423	0	267	1	1	269	1	0	16	0	17	0	0	0	0	0	709
Total	47	765	0	0	812	0	530	5	2	537	3	0	29	0	32	0	0	0	0	0	1381
05:00 PM	21	426	0	0	447	0	271	1	1	273	3	0	8	0	11	0	0	0	0	0	731
05:15 PM	33	432	0	0	465	0	278	3	0	281	2	0	4	0	6	0	0	0	0	0	752
05:30 PM	26	418	0	0	444	0	272	5	0	277	1	0	7	0	8	0	0	0	0	0	729
05:45 PM	31	406	0	0	437	0	284	5	2	291	1	0	9	0	10	0	0	0	0	0	738
Total	111	1682	0	0	1793	0	1105	14	3	1122	7	0	28	0	35	0	0	0	0	0	2950
06:00 PM	26	387	0	0	413	0	278	7	0	285	1	0	16	0	17	0	0	0	0	0	715
06:15 PM	23	364	0	0	387	0	267	5	0	272	2	0	11	0	13	0	0	0	0	0	672
Grand Total	252	4593	0	0	4845	0	5319	45	8	5372	44	0	238	0	282	0	0	0	0	0	10499
Apprch %	5.2	94.8	0	0		0	99	0.8	0.1		15.6	0	84.4	0		0	0	0	0		
Total %	2.4	43.7	0	0	46.1	0	50.7	0.4	0.1	51.2	0.4	0	2.3	0	2.7	0	0	0	0	0	

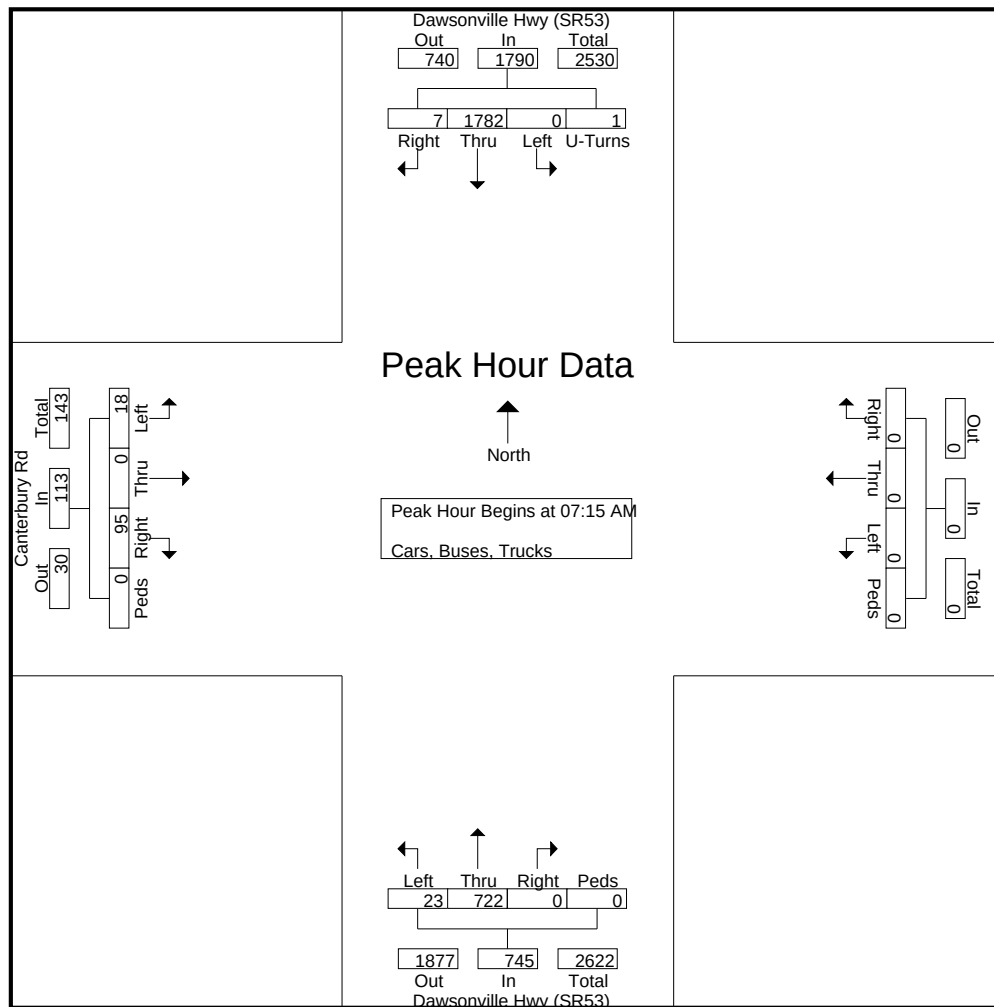
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TMC Data
Dawsonville Hwy (SR53) @ Canterbury Rd
Gainesville, GA
7-9am | 4.30-6.30pm

File Name : 39520004
Site Code : 39520004
Start Date : 11/17/2016
Page No : 2

	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					Canterbury Rd Eastbound					Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	U-Turns	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	7	160	0	0	167	0	456	1	0	457	3	0	29	0	32	0	0	0	0	0	656
07:30 AM	6	168	0	0	174	0	487	4	0	491	5	0	23	0	28	0	0	0	0	0	693
07:45 AM	7	180	0	0	187	0	436	1	1	438	4	0	27	0	31	0	0	0	0	0	656
08:00 AM	3	214	0	0	217	0	403	1	0	404	6	0	16	0	22	0	0	0	0	0	643
Total Volume	23	722	0	0	745	0	1782	7	1	1790	18	0	95	0	113	0	0	0	0	0	2648
% App. Total	3.1	96.9	0	0		0	99.6	0.4	0.1		15.9	0	84.1	0		0	0	0	0		
PHF	.821	.843	.000	.000	.858	.000	.915	.438	.250	.911	.750	.000	.819	.000	.883	.000	.000	.000	.000	.000	.955



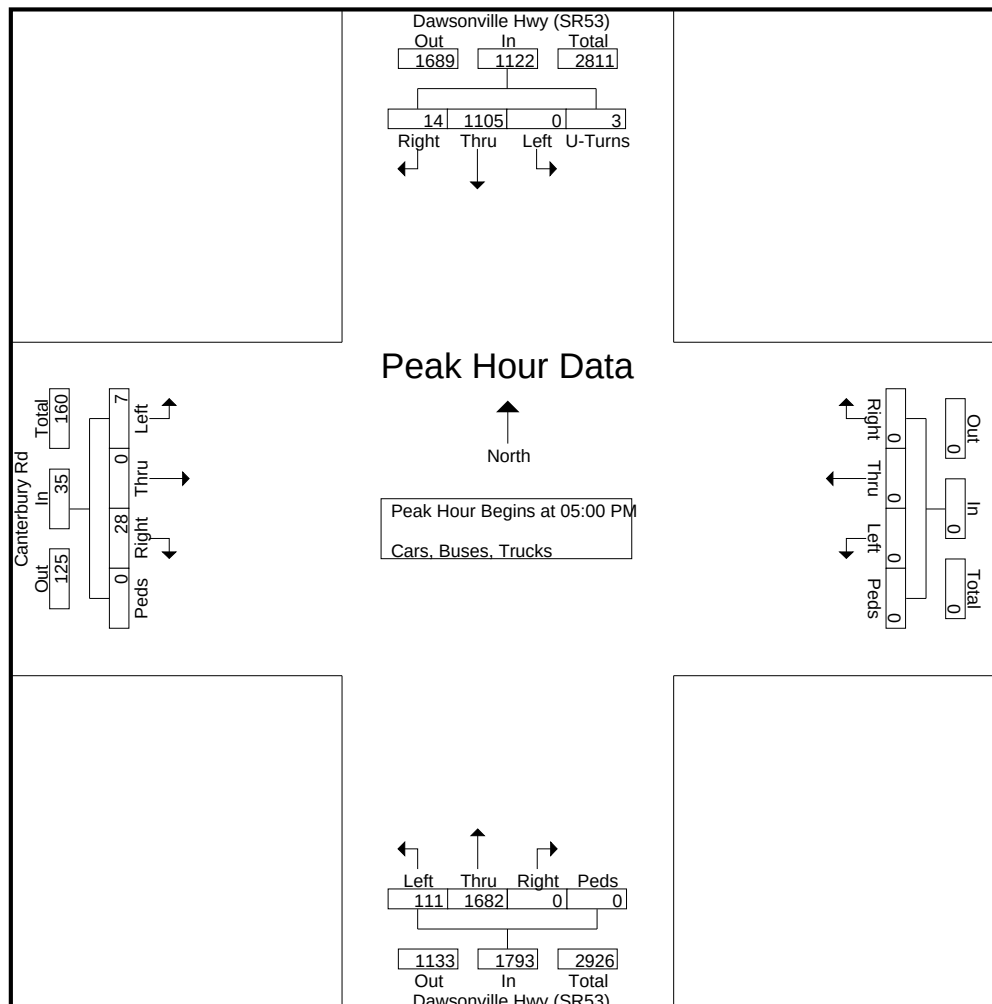
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TMC Data
Dawsonville Hwy (SR53) @ Canterbury Rd
Gainesville, GA
7-9am | 4.30-6.30pm

File Name : 39520004
Site Code : 39520004
Start Date : 11/17/2016
Page No : 3

	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					Canterbury Rd Eastbound					Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	U-Turns	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	21	426	0	0	447	0	271	1	1	273	3	0	8	0	11	0	0	0	0	0	731
05:15 PM	33	432	0	0	465	0	278	3	0	281	2	0	4	0	6	0	0	0	0	0	752
05:30 PM	26	418	0	0	444	0	272	5	0	277	1	0	7	0	8	0	0	0	0	0	729
05:45 PM	31	406	0	0	437	0	284	5	2	291	1	0	9	0	10	0	0	0	0	0	738
Total Volume	111	1682	0	0	1793	0	1105	14	3	1122	7	0	28	0	35	0	0	0	0	0	2950
% App. Total	6.2	93.8	0	0		0	98.5	1.2	0.3		20	0	80	0		0	0	0	0		
PHF	.841	.973	.000	.000	.964	.000	.973	.700	.375	.964	.583	.000	.778	.000	.795	.000	.000	.000	.000	.000	.981



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TMC Data
Dawsonville Hwy (SR53) @ Ahaluna Dr/
Lanier Valley Dr, Gainesville, GA
7-9am I 4.30-6.30pm

File Name : 39520005
Site Code : 39520005
Start Date : 11/17/2016
Page No : 1

Groups Printed- Cars, Buses, Trucks

	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					Lanier Valley Dr Eastbound					Ahaluna Dr Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	8	146	2	0	156	4	335	0	0	339	2	0	18	0	20	10	2	4	0	16	531
07:15 AM	8	158	3	0	169	4	461	0	0	465	4	0	31	0	35	10	1	6	0	17	686
07:30 AM	16	159	5	0	180	7	542	0	0	549	5	1	32	0	38	13	0	5	0	18	785
07:45 AM	17	173	2	0	192	1	506	0	0	507	5	2	29	0	36	5	2	4	0	11	746
Total	49	636	12	0	697	16	1844	0	0	1860	16	3	110	0	129	38	5	19	0	62	2748
08:00 AM	14	211	1	0	226	2	392	0	0	394	5	2	23	0	30	9	0	5	0	14	664
08:15 AM	13	161	4	0	178	5	424	0	0	429	3	0	17	0	20	5	4	3	0	12	639
08:30 AM	13	176	2	0	191	3	348	1	0	352	6	0	17	0	23	3	1	8	0	12	578
08:45 AM	7	175	1	0	183	3	312	1	0	316	5	1	29	0	35	4	1	5	0	10	544
Total	47	723	8	0	778	13	1476	2	0	1491	19	3	86	0	108	21	6	21	0	48	2425
*** BREAK ***																					
04:30 PM	23	377	7	0	407	9	270	1	0	280	9	2	22	0	33	10	3	12	0	25	745
04:45 PM	27	435	6	0	468	4	293	0	0	297	5	0	24	0	29	8	1	16	0	25	819
Total	50	812	13	0	875	13	563	1	0	577	14	2	46	0	62	18	4	28	0	50	1564
05:00 PM	40	423	7	0	470	4	270	1	0	275	8	0	21	0	29	7	0	10	0	17	791
05:15 PM	48	436	10	0	494	8	306	0	0	314	5	0	23	0	28	8	3	14	0	25	861
05:30 PM	39	432	12	0	483	4	316	0	0	320	3	0	25	0	28	14	2	12	0	28	859
05:45 PM	52	446	9	0	507	6	309	2	0	317	5	1	27	0	33	8	2	15	0	25	882
Total	179	1737	38	0	1954	22	1201	3	0	1226	21	1	96	0	118	37	7	51	0	95	3393
06:00 PM	38	392	6	0	436	6	247	2	0	255	2	0	17	0	19	8	1	17	0	26	736
06:15 PM	40	386	8	0	434	9	278	2	0	289	3	0	17	0	20	9	1	9	0	19	762
Grand Total	403	4686	85	0	5174	79	5609	10	0	5698	75	9	372	0	456	131	24	145	0	300	11628
Apprch %	7.8	90.6	1.6	0		1.4	98.4	0.2	0		16.4	2	81.6	0		43.7	8	48.3	0		
Total %	3.5	40.3	0.7	0	44.5	0.7	48.2	0.1	0	49	0.6	0.1	3.2	0	3.9	1.1	0.2	1.2	0	2.6	

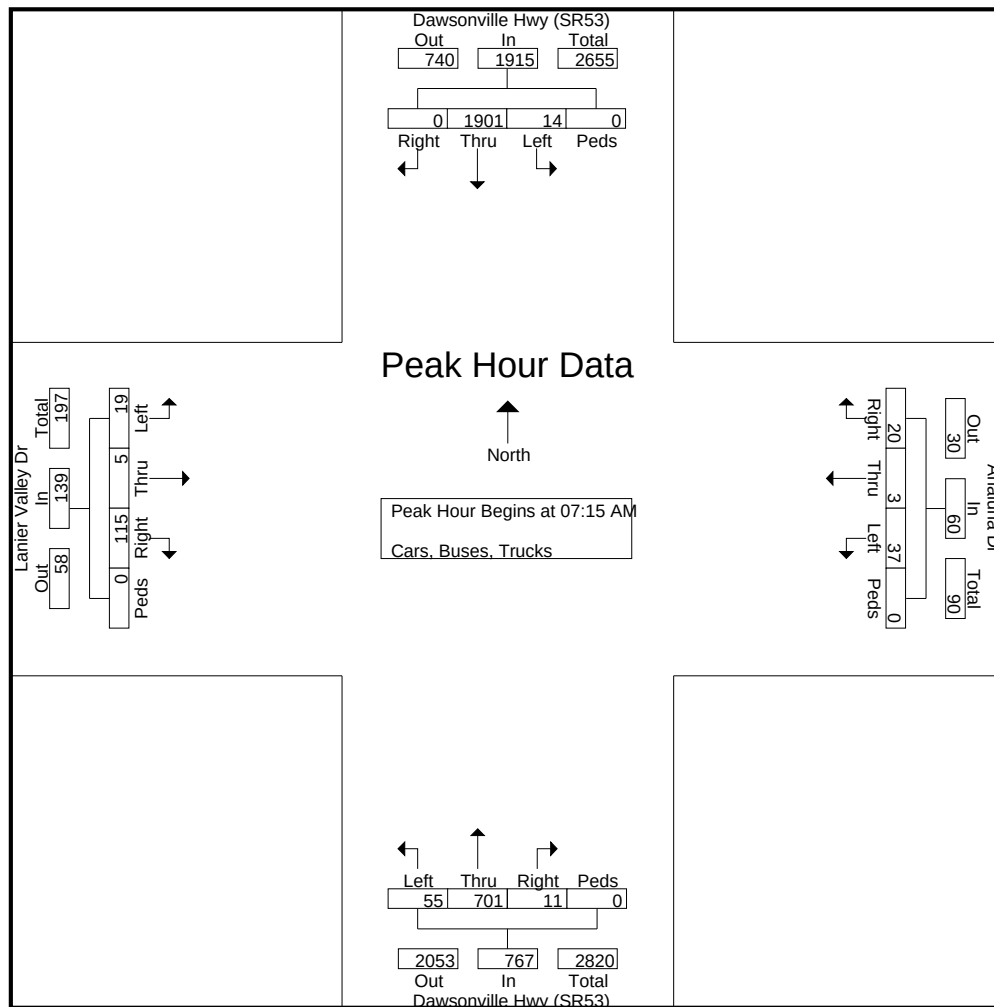
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TMC Data
Dawsonville Hwy (SR53) @ Ahaluna Dr/
Lanier Valley Dr, Gainesville, GA
7-9am | 4.30-6.30pm

File Name : 39520005
Site Code : 39520005
Start Date : 11/17/2016
Page No : 2

	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					Lanier Valley Dr Eastbound					Ahaluna Dr Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	8	158	3	0	169	4	461	0	0	465	4	0	31	0	35	10	1	6	0	17	686
07:30 AM	16	159	5	0	180	7	542	0	0	549	5	1	32	0	38	13	0	5	0	18	785
07:45 AM	17	173	2	0	192	1	506	0	0	507	5	2	29	0	36	5	2	4	0	11	746
08:00 AM	14	211	1	0	226	2	392	0	0	394	5	2	23	0	30	9	0	5	0	14	664
Total Volume	55	701	11	0	767	14	1901	0	0	1915	19	5	115	0	139	37	3	20	0	60	2881
% App. Total	7.2	91.4	1.4	0		0.7	99.3	0	0		13.7	3.6	82.7	0		61.7	5	33.3	0		
PHF	.809	.831	.550	.000	.848	.500	.877	.000	.000	.872	.950	.625	.898	.000	.914	.712	.375	.833	.000	.833	.918



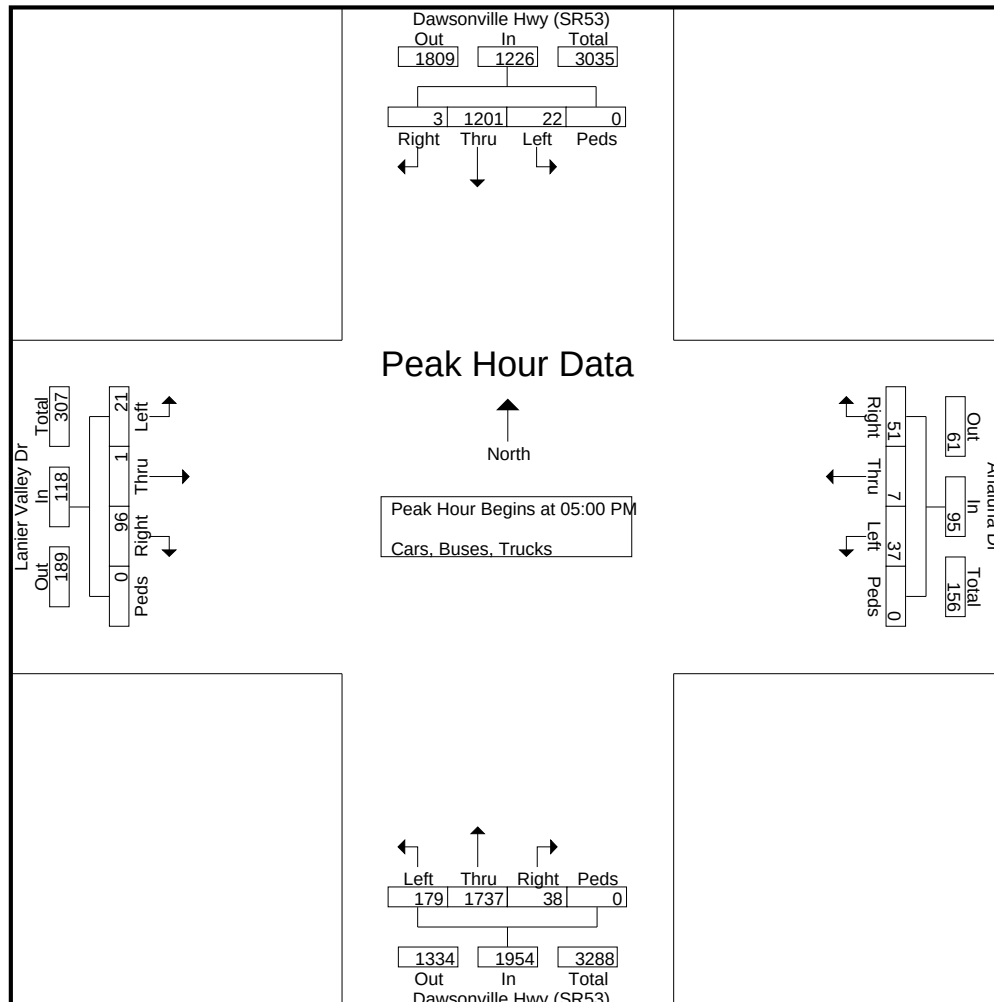
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TMC Data
Dawsonville Hwy (SR53) @ Ahaluna Dr/
Lanier Valley Dr, Gainesville, GA
7-9am | 4.30-6.30pm

File Name : 39520005
Site Code : 39520005
Start Date : 11/17/2016
Page No : 3

	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					Lanier Valley Dr Eastbound					Ahaluna Dr Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	40	423	7	0	470	4	270	1	0	275	8	0	21	0	29	7	0	10	0	17	791
05:15 PM	48	436	10	0	494	8	306	0	0	314	5	0	23	0	28	8	3	14	0	25	861
05:30 PM	39	432	12	0	483	4	316	0	0	320	3	0	25	0	28	14	2	12	0	28	859
05:45 PM	52	446	9	0	507	6	309	2	0	317	5	1	27	0	33	8	2	15	0	25	882
Total Volume	179	1737	38	0	1954	22	1201	3	0	1226	21	1	96	0	118	37	7	51	0	95	3393
% App. Total	9.2	88.9	1.9	0		1.8	98	0.2	0		17.8	0.8	81.4	0		38.9	7.4	53.7	0		
PHF	.861	.974	.792	.000	.964	.688	.950	.375	.000	.958	.656	.250	.889	.000	.894	.661	.583	.850	.000	.848	.962



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TMC Data
Dawsonville Hwy (SR53) @ North Lake
Square Shopp Ctr Drwy, Gainesville, GA
7-9am I 4-6pm

File Name : 40160001
Site Code : 40160001
Start Date : 3/22/2017
Page No : 1

Groups Printed- Cars, Buses, Trucks

	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					Olive Garden/others Drwy Eastbound					North Lake Square Shopp Ctr Drwy Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	1	155	4	0	160	1	367	0	0	368	1	0	1	0	2	0	0	0	0	0	530
07:15 AM	1	163	1	0	165	0	489	0	0	489	1	0	1	0	2	0	0	0	0	0	656
07:30 AM	4	174	1	0	179	1	552	0	0	553	1	0	2	0	3	0	0	0	0	0	735
07:45 AM	2	189	3	0	194	1	536	3	0	540	0	0	1	0	1	1	0	0	0	1	736
Total	8	681	9	0	698	3	1944	3	0	1950	3	0	5	0	8	1	0	0	0	1	2657
08:00 AM	4	214	4	0	222	3	412	1	0	416	0	0	2	0	2	1	0	0	0	1	641
08:15 AM	2	206	2	0	210	1	429	3	0	433	1	0	1	0	2	0	0	0	0	0	645
08:30 AM	0	197	7	0	204	1	358	0	0	359	0	0	0	0	0	3	0	1	0	4	567
08:45 AM	3	185	8	0	196	1	337	1	0	339	0	0	3	0	3	3	0	2	0	5	543
Total	9	802	21	0	832	6	1536	5	0	1547	1	0	6	0	7	7	0	3	0	10	2396
*** BREAK ***																					
04:00 PM	12	376	29	0	417	7	274	2	0	283	1	1	12	0	14	28	0	9	0	37	751
04:15 PM	11	382	30	0	423	11	277	4	0	292	2	0	15	0	17	48	0	8	0	56	788
04:30 PM	19	396	38	0	453	8	285	5	0	298	2	2	6	0	10	30	0	11	0	41	802
04:45 PM	22	435	32	0	489	6	287	5	0	298	7	0	16	0	23	32	2	10	0	44	854
Total	64	1589	129	0	1782	32	1123	16	0	1171	12	3	49	0	64	138	2	38	0	178	3195
05:00 PM	28	433	39	0	500	1	287	5	0	293	4	1	14	0	19	25	1	5	0	31	843
05:15 PM	18	439	24	0	481	6	296	7	0	309	3	2	12	0	17	31	2	11	0	44	851
05:30 PM	16	447	37	0	500	4	312	6	0	322	1	0	19	0	20	35	3	14	0	52	894
05:45 PM	25	444	38	0	507	8	304	9	0	321	5	0	15	0	20	27	1	12	0	40	888
Total	87	1763	138	0	1988	19	1199	27	0	1245	13	3	60	0	76	118	7	42	0	167	3476
Grand Total	168	4835	297	0	5300	60	5802	51	0	5913	29	6	120	0	155	264	9	83	0	356	11724
Apprch %	3.2	91.2	5.6	0		1	98.1	0.9	0		18.7	3.9	77.4	0		74.2	2.5	23.3	0		
Total %	1.4	41.2	2.5	0	45.2	0.5	49.5	0.4	0	50.4	0.2	0.1	1	0	1.3	2.3	0.1	0.7	0	3	

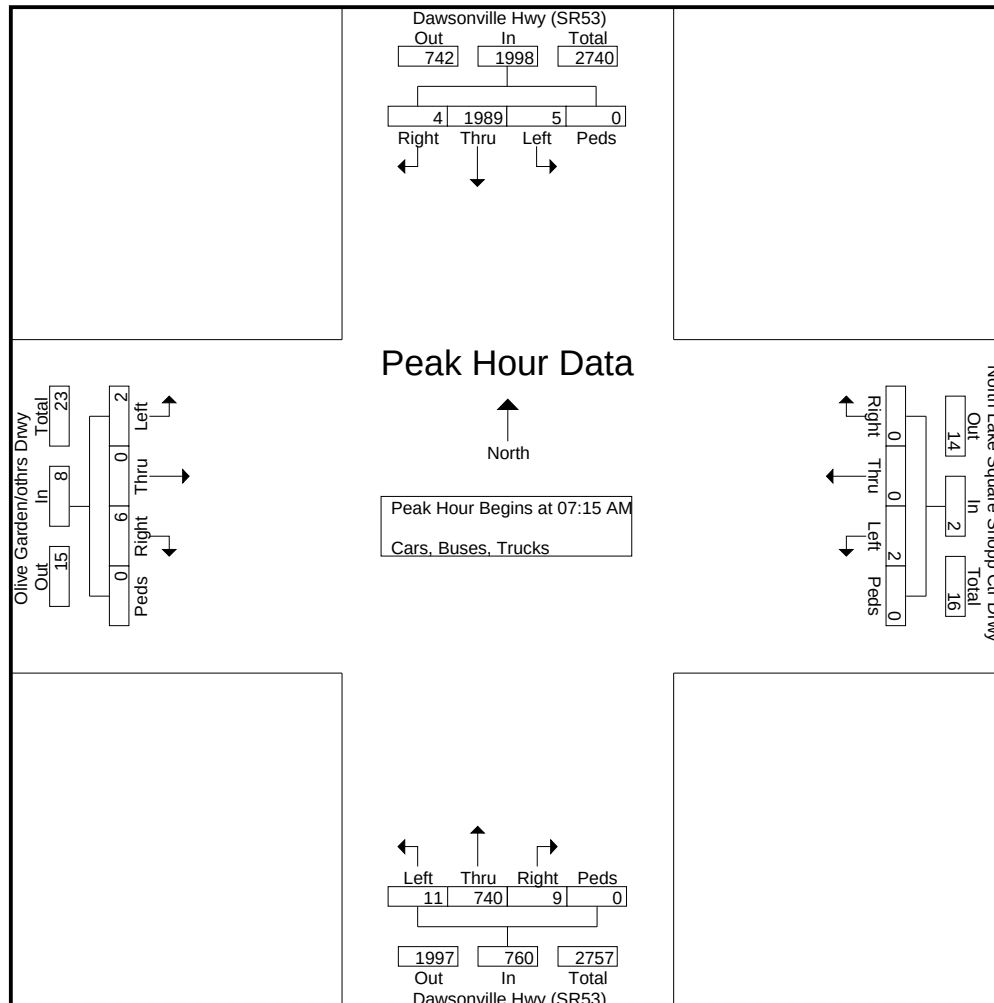
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TMC Data
Dawsonville Hwy (SR53) @ North Lake
Square Shopp Ctr Drwy, Gainesville, GA
7-9am I 4-6pm

File Name : 40160001
Site Code : 40160001
Start Date : 3/22/2017
Page No : 2

	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					Olive Garden/others Drwy Eastbound					North Lake Square Shopp Ctr Drwy Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	1	163	1	0	165	0	489	0	0	489	1	0	1	0	2	0	0	0	0	0	656
07:30 AM	4	174	1	0	179	1	552	0	0	553	1	0	2	0	3	0	0	0	0	0	735
07:45 AM	2	189	3	0	194	1	536	3	0	540	0	0	1	0	1	1	0	0	0	1	736
08:00 AM	4	214	4	0	222	3	412	1	0	416	0	0	2	0	2	1	0	0	0	1	641
Total Volume	11	740	9	0	760	5	1989	4	0	1998	2	0	6	0	8	2	0	0	0	2	2768
% App. Total	1.4	97.4	1.2	0		0.3	99.5	0.2	0		25	0	75	0		100	0	0	0		
PHF	.688	.864	.563	.000	.856	.417	.901	.333	.000	.903	.500	.000	.750	.000	.667	.500	.000	.000	.000	.500	.940



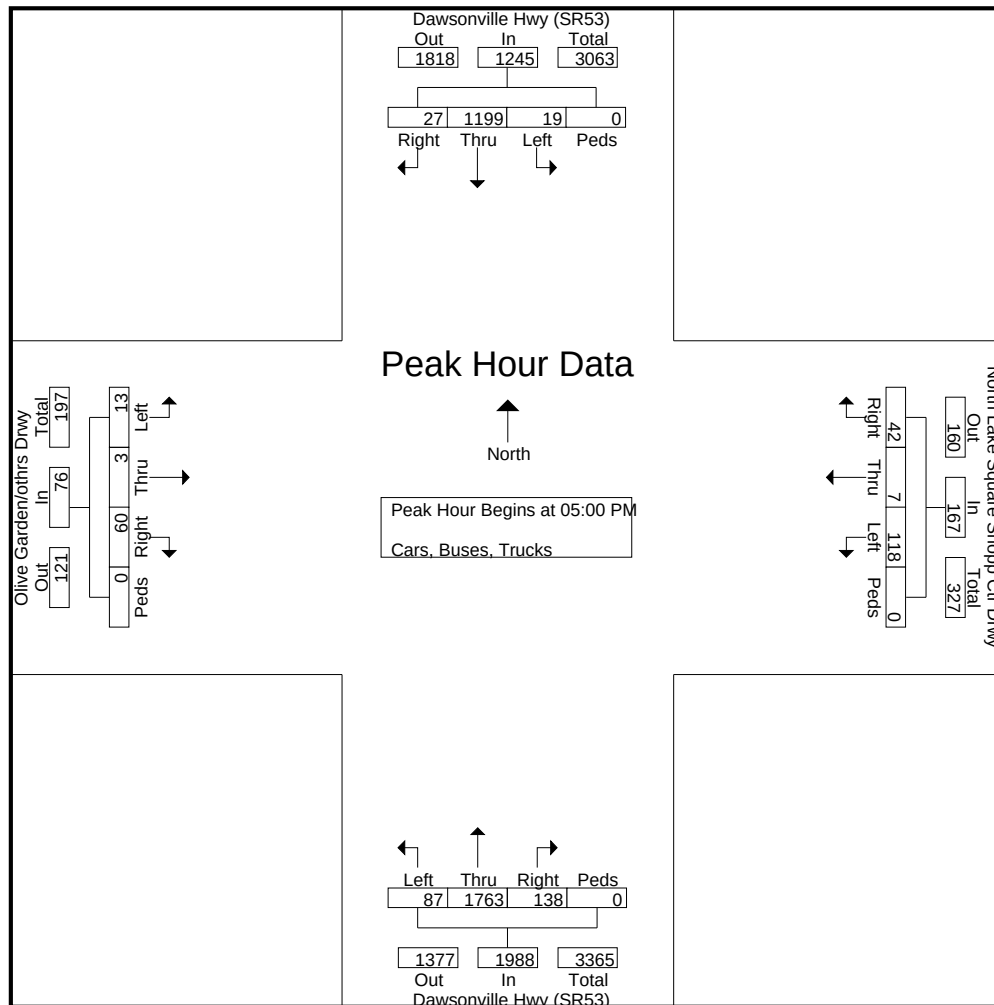
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TMC Data
Dawsonville Hwy (SR53) @ North Lake
Square Shopp Ctr Drwy, Gainesville, GA
7-9am I 4-6pm

File Name : 40160001
Site Code : 40160001
Start Date : 3/22/2017
Page No : 3

	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					Olive Garden/others Drwy Eastbound					North Lake Square Shopp Ctr Drwy Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	28	433	39	0	500	1	287	5	0	293	4	1	14	0	19	25	1	5	0	31	843
05:15 PM	18	439	24	0	481	6	296	7	0	309	3	2	12	0	17	31	2	11	0	44	851
05:30 PM	16	447	37	0	500	4	312	6	0	322	1	0	19	0	20	35	3	14	0	52	894
05:45 PM	25	444	38	0	507	8	304	9	0	321	5	0	15	0	20	27	1	12	0	40	888
Total Volume	87	1763	138	0	1988	19	1199	27	0	1245	13	3	60	0	76	118	7	42	0	167	3476
% App. Total	4.4	88.7	6.9	0		1.5	96.3	2.2	0		17.1	3.9	78.9	0		70.7	4.2	25.1	0		
PHF	.777	.986	.885	.000	.980	.594	.961	.750	.000	.967	.650	.375	.789	.000	.950	.843	.583	.750	.000	.803	.972



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TMC Data
Dawsonville Hwy (SR53) @ Beechwood Blvd
Gainesville, GA
7-9am I 4.30-6.30pm

File Name : 39520006
Site Code : 39520006
Start Date : 11/17/2016
Page No : 1

Groups Printed- Cars, Buses, Trucks

	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					Beechwood Blvd Eastbound					Commercial Drwy (Closed) Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	2	167	0	0	169	0	367	2	0	369	1	0	10	0	11	0	0	0	0	0	549
07:15 AM	6	172	0	0	178	0	492	1	0	493	1	0	9	0	10	0	0	0	0	0	681
07:30 AM	8	187	0	0	195	0	564	0	0	564	0	0	12	0	12	0	0	0	0	0	771
07:45 AM	5	203	0	0	208	0	535	1	0	536	3	0	11	0	14	0	0	0	0	0	758
Total	21	729	0	0	750	0	1958	4	0	1962	5	0	42	0	47	0	0	0	0	0	2759
08:00 AM	8	225	0	0	233	0	415	0	0	415	1	0	9	0	10	0	0	0	0	0	658
08:15 AM	5	203	0	0	208	0	441	0	0	441	0	0	3	0	3	0	0	0	0	0	652
08:30 AM	3	198	0	0	201	0	365	2	0	367	0	0	11	0	11	0	0	0	0	0	579
08:45 AM	3	192	0	0	195	0	341	1	0	342	1	0	3	0	4	0	0	0	0	0	541
Total	19	818	0	0	837	0	1562	3	0	1565	2	0	26	0	28	0	0	0	0	0	2430
*** BREAK ***																					
04:30 PM	16	443	0	0	459	0	312	1	0	313	0	0	14	0	14	0	0	0	0	0	786
04:45 PM	15	497	0	0	512	0	327	0	0	327	0	0	9	0	9	0	0	0	0	0	848
Total	31	940	0	0	971	0	639	1	0	640	0	0	23	0	23	0	0	0	0	0	1634
05:00 PM	18	488	0	0	506	0	347	0	0	347	0	0	5	0	5	0	0	0	0	0	858
05:15 PM	20	506	0	0	526	0	354	3	0	357	0	0	17	0	17	0	0	0	0	0	900
05:30 PM	31	494	0	0	525	0	346	0	0	346	0	0	10	0	10	0	0	0	0	0	881
05:45 PM	17	510	0	0	527	0	341	6	0	347	1	0	15	0	16	0	0	0	0	0	890
Total	86	1998	0	0	2084	0	1388	9	0	1397	1	0	47	0	48	0	0	0	0	0	3529
06:00 PM	23	484	0	0	507	0	338	1	0	339	1	0	9	0	10	0	0	0	0	0	856
06:15 PM	19	468	0	0	487	0	323	2	0	325	1	0	14	0	15	0	0	0	0	0	827
Grand Total	199	5437	0	0	5636	0	6208	20	0	6228	10	0	161	0	171	0	0	0	0	0	12035
Apprch %	3.5	96.5	0	0		0	99.7	0.3	0		5.8	0	94.2	0		0	0	0	0		
Total %	1.7	45.2	0	0	46.8	0	51.6	0.2	0	51.7	0.1	0	1.3	0	1.4	0	0	0	0	0	

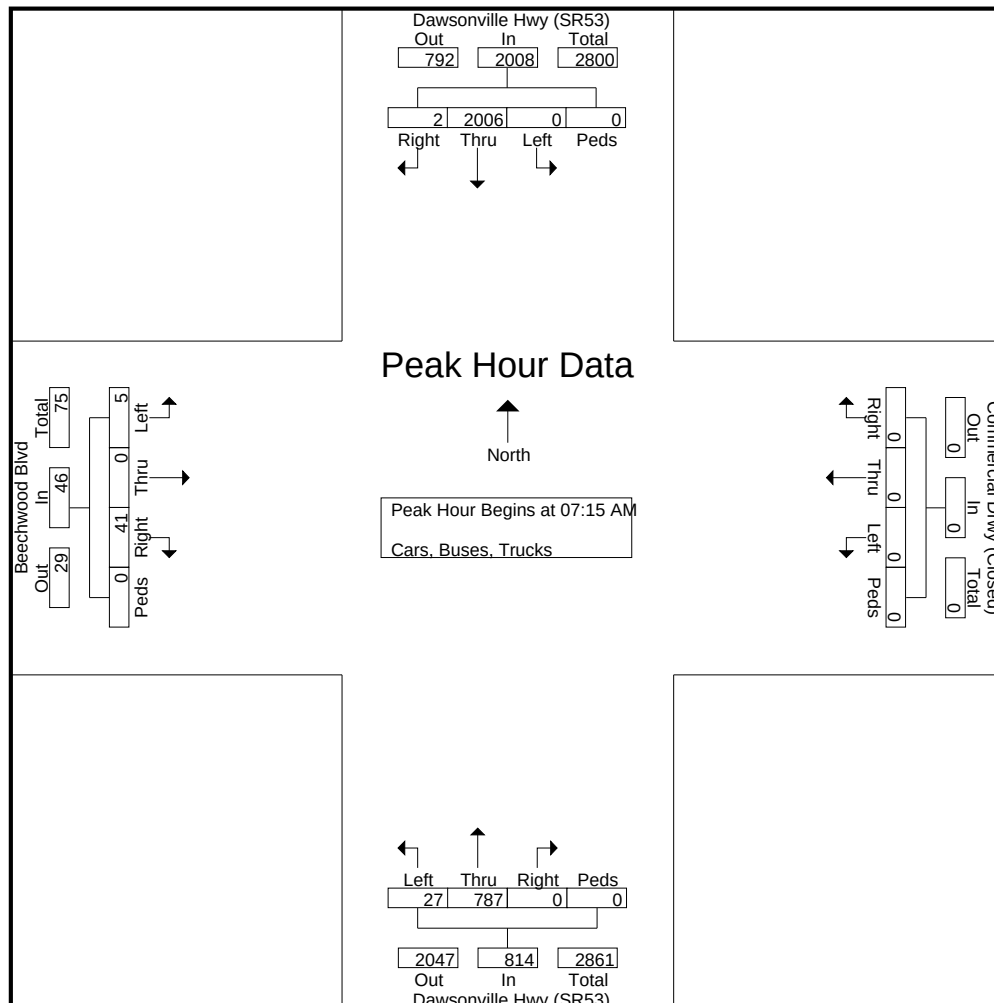
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TMC Data
Dawsonville Hwy (SR53) @ Beechwood Blvd
Gainesville, GA
7-9am | 4.30-6.30pm

File Name : 39520006
Site Code : 39520006
Start Date : 11/17/2016
Page No : 2

	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					Beechwood Blvd Eastbound					Commercial Drwy (Closed) Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	6	172	0	0	178	0	492	1	0	493	1	0	9	0	10	0	0	0	0	0	681
07:30 AM	8	187	0	0	195	0	564	0	0	564	0	0	12	0	12	0	0	0	0	0	771
07:45 AM	5	203	0	0	208	0	535	1	0	536	3	0	11	0	14	0	0	0	0	0	758
08:00 AM	8	225	0	0	233	0	415	0	0	415	1	0	9	0	10	0	0	0	0	0	658
Total Volume	27	787	0	0	814	0	2006	2	0	2008	5	0	41	0	46	0	0	0	0	0	2868
% App. Total	3.3	96.7	0	0		0	99.9	0.1	0		10.9	0	89.1	0		0	0	0	0		
PHF	.844	.874	.000	.000	.873	.000	.889	.500	.000	.890	.417	.000	.854	.000	.821	.000	.000	.000	.000	.000	.930



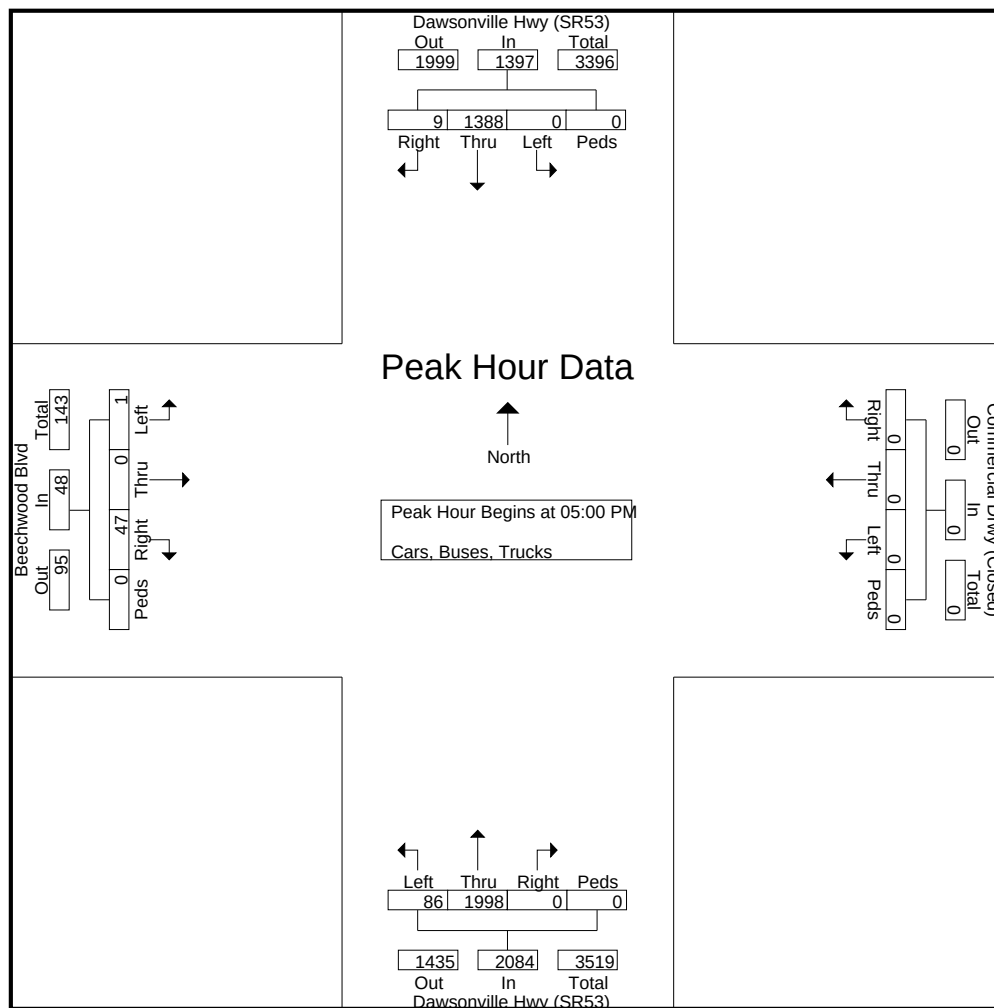
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TMC Data
Dawsonville Hwy (SR53) @ Beechwood Blvd
Gainesville, GA
7-9am | 4.30-6.30pm

File Name : 39520006
Site Code : 39520006
Start Date : 11/17/2016
Page No : 3

	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					Beechwood Blvd Eastbound					Commercial Drwy (Closed) Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	18	488	0	0	506	0	347	0	0	347	0	0	5	0	5	0	0	0	0	0	858
05:15 PM	20	506	0	0	526	0	354	3	0	357	0	0	17	0	17	0	0	0	0	0	900
05:30 PM	31	494	0	0	525	0	346	0	0	346	0	0	10	0	10	0	0	0	0	0	881
05:45 PM	17	510	0	0	527	0	341	6	0	347	1	0	15	0	16	0	0	0	0	0	890
Total Volume	86	1998	0	0	2084	0	1388	9	0	1397	1	0	47	0	48	0	0	0	0	0	3529
% App. Total	4.1	95.9	0	0		0	99.4	0.6	0		2.1	0	97.9	0		0	0	0	0		
PHF	.694	.979	.000	.000	.989	.000	.980	.375	.000	.978	.250	.000	.691	.000	.706	.000	.000	.000	.000	.000	.980



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TMC Data
Dawsonville Hwy (SR53) @ McEver Rd
Gainesville, GA
7-9am I 4.30-6.30pm

File Name : 39520007
Site Code : 39520007
Start Date : 11/17/2016
Page No : 1

Groups Printed- Cars, Buses, Trucks

	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					McEver Rd Eastbound					Home Depot Drwy Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	58	98	3	0	159	2	206	164	0	372	67	4	48	0	119	4	2	4	0	10	660
07:15 AM	67	104	7	0	178	5	276	187	0	468	93	4	88	0	185	8	1	2	0	11	842
07:30 AM	72	110	15	0	197	6	317	236	0	559	99	7	82	0	188	7	4	3	0	14	958
07:45 AM	78	115	18	0	211	10	325	226	0	561	96	6	93	0	195	15	4	3	0	22	989
Total	275	427	43	0	745	23	1124	813	0	1960	355	21	311	0	687	34	11	12	0	57	3449
08:00 AM	65	136	15	0	216	7	252	179	0	438	102	11	79	0	192	12	10	10	0	32	878
08:15 AM	66	121	20	0	207	14	264	153	0	431	83	14	67	0	164	14	6	10	0	30	832
08:30 AM	51	118	21	0	190	20	233	146	0	399	85	16	72	0	173	20	8	6	0	34	796
08:45 AM	57	106	29	0	192	15	221	108	0	344	102	14	81	0	197	18	5	10	0	33	766
Total	239	481	85	0	805	56	970	586	0	1612	372	55	299	0	726	64	29	36	0	129	3272
*** BREAK ***																					
04:30 PM	94	286	16	0	396	11	242	90	0	343	178	35	78	0	291	30	33	19	0	82	1112
04:45 PM	109	312	12	0	433	9	213	112	0	334	215	37	93	0	345	31	27	21	0	79	1191
Total	203	598	28	0	829	20	455	202	0	677	393	72	171	0	636	61	60	40	0	161	2303
05:00 PM	108	352	17	0	477	15	257	115	0	387	178	42	122	0	342	27	19	17	0	63	1269
05:15 PM	101	335	11	0	447	12	259	137	0	408	224	63	74	0	361	10	33	19	0	62	1278
05:30 PM	114	327	10	0	451	17	216	110	0	343	227	59	95	0	381	22	21	16	0	59	1234
05:45 PM	110	348	8	0	466	18	297	119	0	434	216	49	95	0	360	28	18	29	0	75	1335
Total	433	1362	46	0	1841	62	1029	481	0	1572	845	213	386	0	1444	87	91	81	0	259	5116
06:00 PM	106	292	15	0	413	22	236	102	0	360	230	24	88	0	342	32	18	28	0	78	1193
06:15 PM	98	290	12	0	400	11	238	86	0	335	191	16	92	0	299	29	14	12	0	55	1089
Grand Total	1354	3450	229	0	5033	194	4052	2270	0	6516	2386	401	1347	0	4134	307	223	209	0	739	16422
Apprch %	26.9	68.5	4.5	0		3	62.2	34.8	0		57.7	9.7	32.6	0		41.5	30.2	28.3	0		
Total %	8.2	21	1.4	0	30.6	1.2	24.7	13.8	0	39.7	14.5	2.4	8.2	0	25.2	1.9	1.4	1.3	0	4.5	

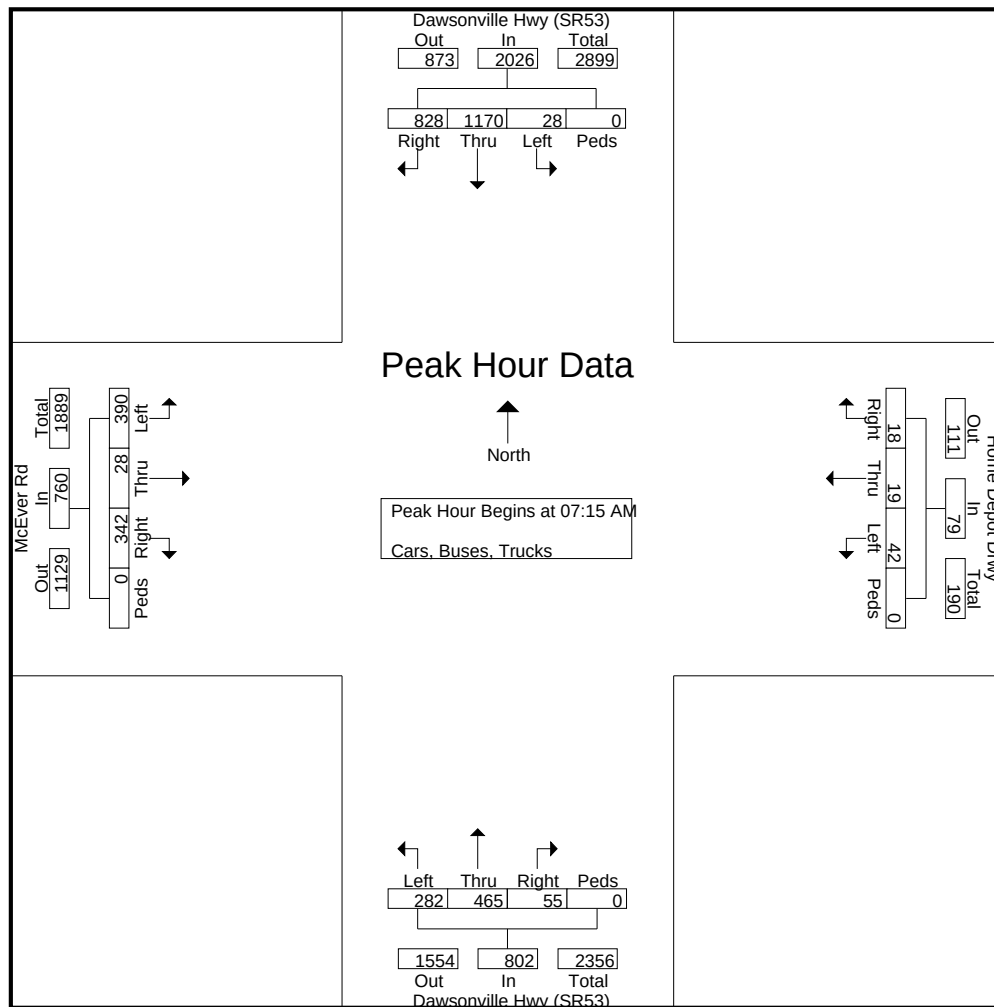
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TMC Data
Dawsonville Hwy (SR53) @ McEver Rd
Gainesville, GA
7-9am | 4.30-6.30pm

File Name : 39520007
Site Code : 39520007
Start Date : 11/17/2016
Page No : 2

	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					McEver Rd Eastbound					Home Depot Drwy Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	67	104	7	0	178	5	276	187	0	468	93	4	88	0	185	8	1	2	0	11	842
07:30 AM	72	110	15	0	197	6	317	236	0	559	99	7	82	0	188	7	4	3	0	14	958
07:45 AM	78	115	18	0	211	10	325	226	0	561	96	6	93	0	195	15	4	3	0	22	989
08:00 AM	65	136	15	0	216	7	252	179	0	438	102	11	79	0	192	12	10	10	0	32	878
Total Volume	282	465	55	0	802	28	1170	828	0	2026	390	28	342	0	760	42	19	18	0	79	3667
% App. Total	35.2	58	6.9	0		1.4	57.7	40.9	0		51.3	3.7	45	0		53.2	24.1	22.8	0		
PHF	.904	.855	.764	.000	.928	.700	.900	.877	.000	.903	.956	.636	.919	.000	.974	.700	.475	.450	.000	.617	.927



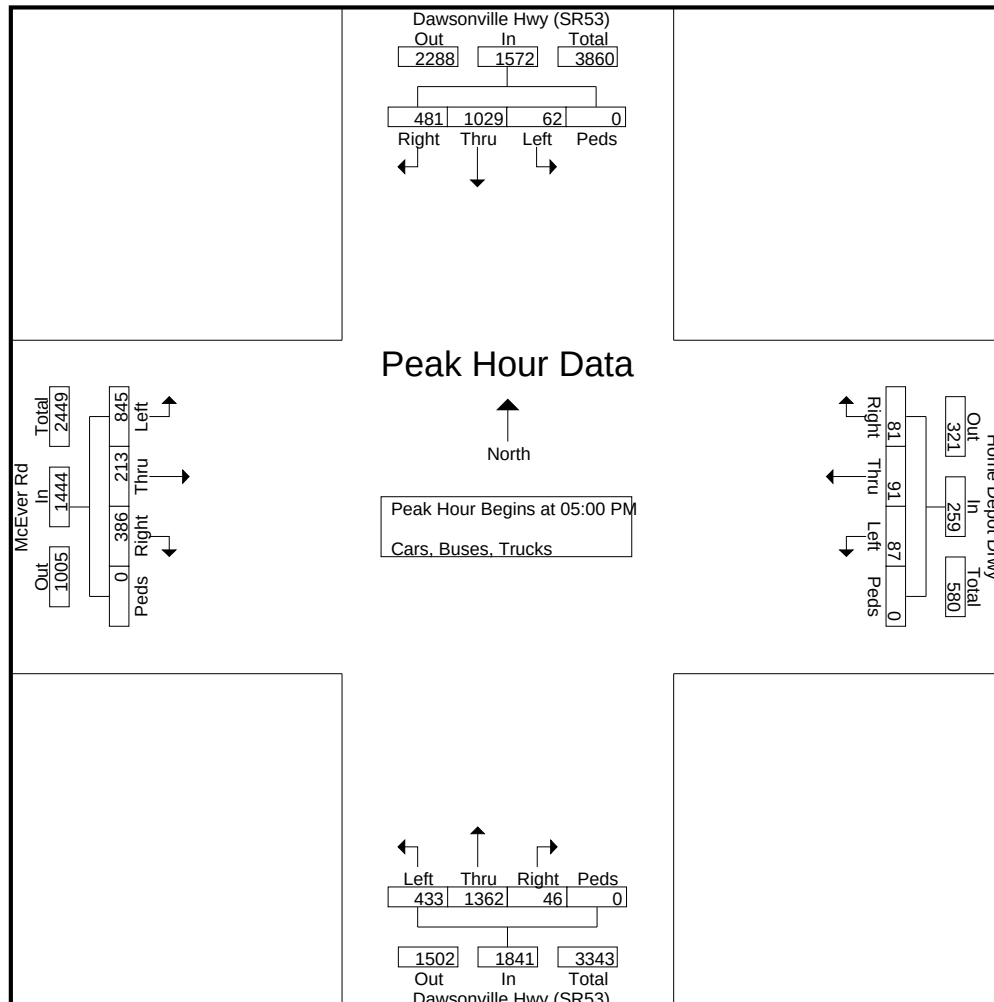
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TMC Data
Dawsonville Hwy (SR53) @ McEver Rd
Gainesville, GA
7-9am | 4.30-6.30pm

File Name : 39520007
Site Code : 39520007
Start Date : 11/17/2016
Page No : 3

	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					McEver Rd Eastbound					Home Depot Drwy Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	108	352	17	0	477	15	257	115	0	387	178	42	122	0	342	27	19	17	0	63	1269
05:15 PM	101	335	11	0	447	12	259	137	0	408	224	63	74	0	361	10	33	19	0	62	1278
05:30 PM	114	327	10	0	451	17	216	110	0	343	227	59	95	0	381	22	21	16	0	59	1234
05:45 PM	110	348	8	0	466	18	297	119	0	434	216	49	95	0	360	28	18	29	0	75	1335
Total Volume	433	1362	46	0	1841	62	1029	481	0	1572	845	213	386	0	1444	87	91	81	0	259	5116
% App. Total	23.5	74	2.5	0		3.9	65.5	30.6	0		58.5	14.8	26.7	0		33.6	35.1	31.3	0		
PHF	.950	.967	.676	.000	.965	.861	.866	.878	.000	.906	.931	.845	.791	.000	.948	.777	.689	.698	.000	.863	.958



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TMC Data
Dawsonville Hwy (SR53) @ Green Hill Cir
Gainesville, GA
7-9am I 4.30-6.30pm

File Name : 39520008
Site Code : 39520008
Start Date : 11/17/2016
Page No : 1

Groups Printed- Cars, Buses, Trucks

	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					Green Hill Circle Eastbound					Commercial Drwy Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	13	123	0	0	136	1	236	7	0	244	10	0	22	0	32	1	0	0	0	1	413
07:15 AM	33	134	2	0	169	3	372	12	0	387	14	1	25	0	40	2	0	1	0	3	599
07:30 AM	28	167	1	0	196	2	387	10	0	399	17	0	34	0	51	2	0	2	0	4	650
07:45 AM	39	174	1	0	214	2	379	14	0	395	21	1	36	0	58	2	1	0	0	3	670
Total	113	598	4	0	715	8	1374	43	0	1425	62	2	117	0	181	7	1	3	0	11	2332
08:00 AM	33	189	5	0	227	4	320	11	0	335	16	0	39	0	55	2	0	2	0	4	621
08:15 AM	35	224	3	0	262	4	318	17	0	339	13	0	32	0	45	0	0	0	0	0	646
08:30 AM	34	197	7	0	238	3	322	15	0	340	10	1	28	0	39	1	4	0	0	5	622
08:45 AM	29	205	7	0	241	5	324	10	0	339	15	2	30	0	47	3	2	1	0	6	633
Total	131	815	22	0	968	16	1284	53	0	1353	54	3	129	0	186	6	6	3	0	15	2522
*** BREAK ***																					
04:30 PM	51	374	12	0	437	11	352	11	0	374	23	1	30	0	54	20	0	9	0	29	894
04:45 PM	57	408	18	0	483	8	361	10	0	379	30	0	28	0	58	17	5	9	0	31	951
Total	108	782	30	0	920	19	713	21	0	753	53	1	58	0	112	37	5	18	0	60	1845
05:00 PM	60	436	20	0	516	7	348	13	0	368	21	1	45	0	67	16	8	4	0	28	979
05:15 PM	62	453	19	0	534	12	362	17	0	391	39	2	36	0	77	19	5	14	0	38	1040
05:30 PM	57	442	12	0	511	12	337	11	0	360	36	6	33	0	75	16	5	9	0	30	976
05:45 PM	69	418	19	0	506	9	345	12	0	366	36	0	24	0	60	9	2	11	0	22	954
Total	248	1749	70	0	2067	40	1392	53	0	1485	132	9	138	0	279	60	20	38	0	118	3949
06:00 PM	62	389	22	0	473	4	369	17	0	390	40	1	25	0	66	9	6	16	0	31	960
06:15 PM	78	374	7	0	459	11	361	22	0	394	29	1	19	0	49	16	6	17	0	39	941
Grand Total	740	4707	155	0	5602	98	5493	209	0	5800	370	17	486	0	873	135	44	95	0	274	12549
Apprch %	13.2	84	2.8	0		1.7	94.7	3.6	0		42.4	1.9	55.7	0		49.3	16.1	34.7	0		
Total %	5.9	37.5	1.2	0	44.6	0.8	43.8	1.7	0	46.2	2.9	0.1	3.9	0	7	1.1	0.4	0.8	0	2.2	

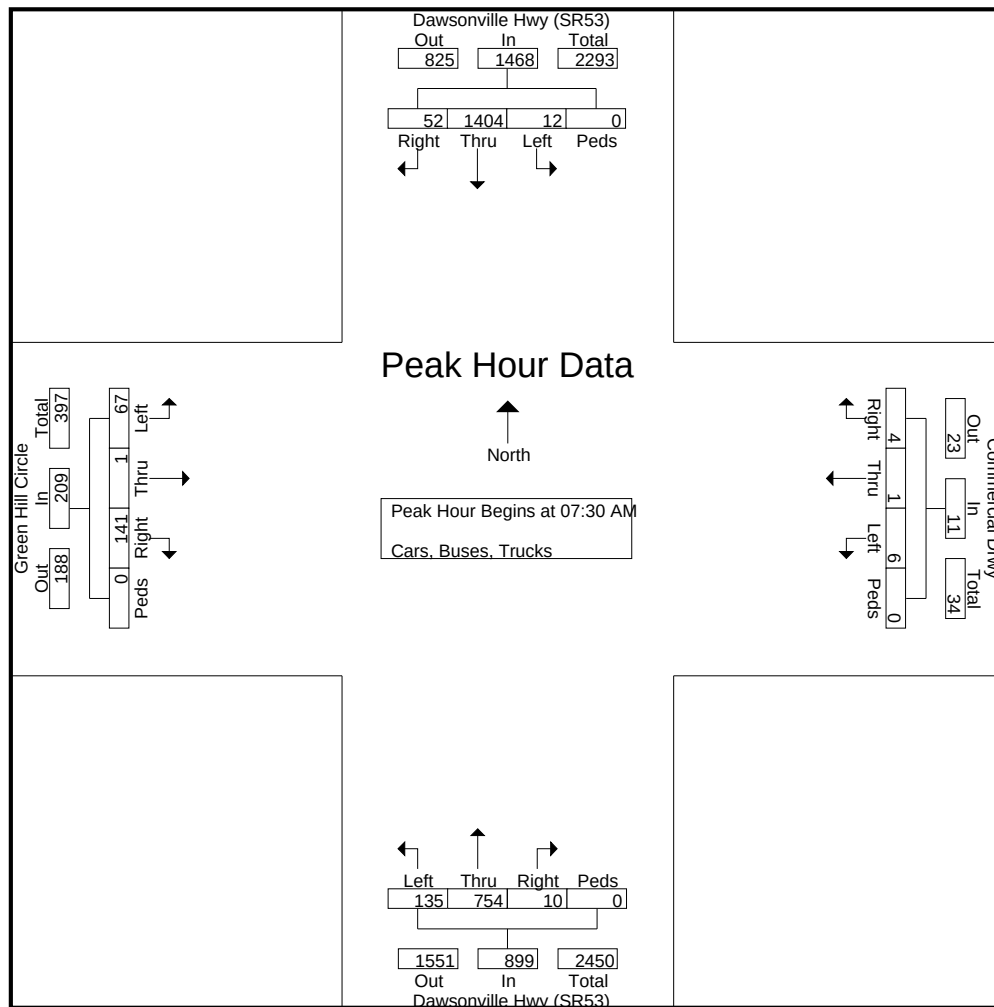
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TMC Data
Dawsonville Hwy (SR53) @ Green Hill Cir
Gainesville, GA
7-9am | 4.30-6.30pm

File Name : 39520008
Site Code : 39520008
Start Date : 11/17/2016
Page No : 2

	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					Green Hill Circle Eastbound					Commercial Drwy Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	28	167	1	0	196	2	387	10	0	399	17	0	34	0	51	2	0	2	0	4	650
07:45 AM	39	174	1	0	214	2	379	14	0	395	21	1	36	0	58	2	1	0	0	3	670
08:00 AM	33	189	5	0	227	4	320	11	0	335	16	0	39	0	55	2	0	2	0	4	621
08:15 AM	35	224	3	0	262	4	318	17	0	339	13	0	32	0	45	0	0	0	0	0	646
Total Volume	135	754	10	0	899	12	1404	52	0	1468	67	1	141	0	209	6	1	4	0	11	2587
% App. Total	15	83.9	1.1	0		0.8	95.6	3.5	0		32.1	0.5	67.5	0		54.5	9.1	36.4	0		
PHF	.865	.842	.500	.000	.858	.750	.907	.765	.000	.920	.798	.250	.904	.000	.901	.750	.250	.500	.000	.688	.965



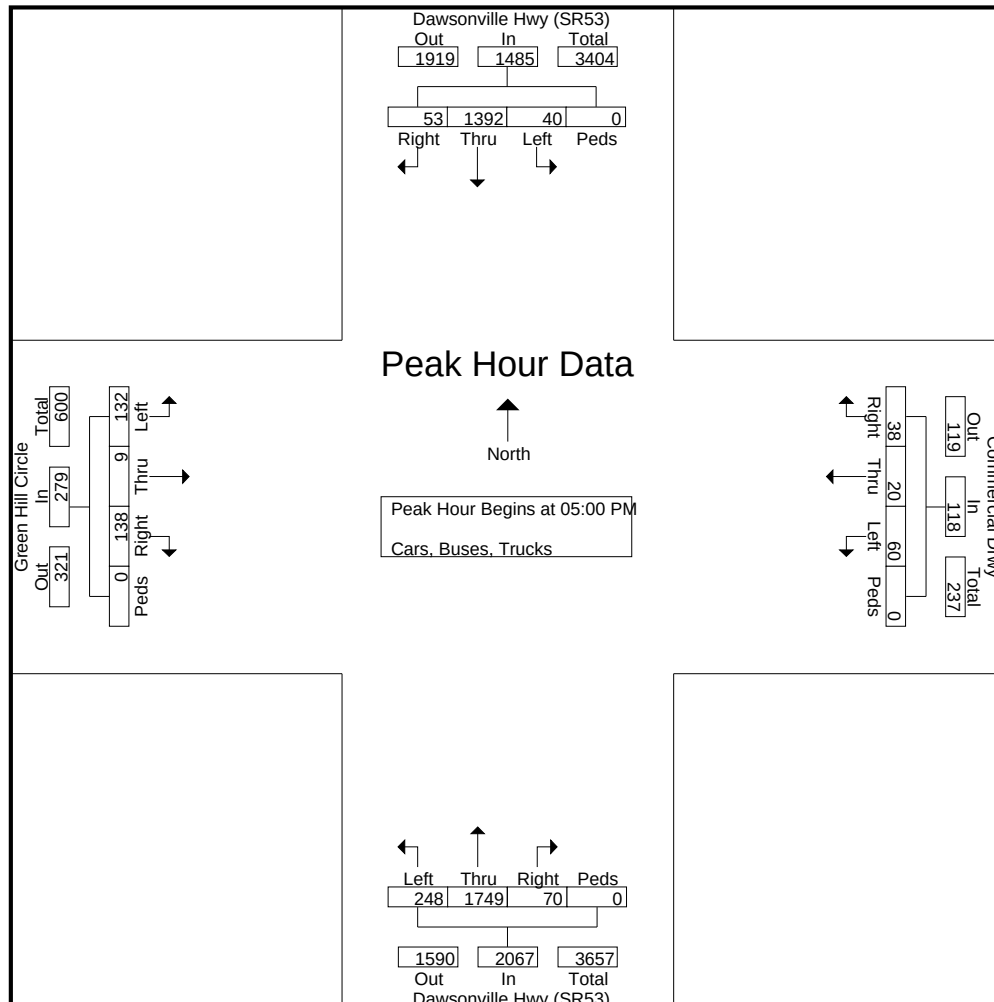
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TMC Data
Dawsonville Hwy (SR53) @ Green Hill Cir
Gainesville, GA
7-9am | 4.30-6.30pm

File Name : 39520008
Site Code : 39520008
Start Date : 11/17/2016
Page No : 3

	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					Green Hill Circle Eastbound					Commercial Drwy Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	60	436	20	0	516	7	348	13	0	368	21	1	45	0	67	16	8	4	0	28	979
05:15 PM	62	453	19	0	534	12	362	17	0	391	39	2	36	0	77	19	5	14	0	38	1040
05:30 PM	57	442	12	0	511	12	337	11	0	360	36	6	33	0	75	16	5	9	0	30	976
05:45 PM	69	418	19	0	506	9	345	12	0	366	36	0	24	0	60	9	2	11	0	22	954
Total Volume	248	1749	70	0	2067	40	1392	53	0	1485	132	9	138	0	279	60	20	38	0	118	3949
% App. Total	12	84.6	3.4	0		2.7	93.7	3.6	0		47.3	3.2	49.5	0		50.8	16.9	32.2	0		
PHF	.899	.965	.875	.000	.968	.833	.961	.779	.000	.949	.846	.375	.767	.000	.906	.789	.625	.679	.000	.776	.949



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TMC Data
Dawsonville Hwy (SR53) @
Shallowford Rd, Gainesville, GA
7-9am | 4.30-6.30pm

File Name : 39520009
Site Code : 39520009
Start Date : 11/17/2016
Page No : 1

Groups Printed- Cars, Buses, Trucks

	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					Shallowford Rd Eastbound					Commercial Drwy Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	1	123	1	0	125	3	226	58	0	287	15	0	1	0	16	1	0	0	0	1	429
07:15 AM	4	136	2	0	142	3	254	74	0	331	18	0	2	0	20	0	0	0	0	0	493
07:30 AM	3	146	1	0	150	0	334	82	0	416	28	0	4	0	32	0	1	2	0	3	601
07:45 AM	3	178	6	0	187	0	342	85	0	427	35	0	2	0	37	0	0	0	0	0	651
Total	11	583	10	0	604	6	1156	299	0	1461	96	0	9	0	105	1	1	2	0	4	2174
08:00 AM	3	188	3	0	194	0	307	87	0	394	34	1	0	0	35	0	1	1	0	2	625
08:15 AM	1	226	3	0	230	1	266	84	0	351	41	1	2	0	44	2	2	0	0	4	629
08:30 AM	7	186	8	0	201	0	268	82	0	350	45	0	3	0	48	0	1	0	0	1	600
08:45 AM	3	190	7	0	200	0	282	72	0	354	44	2	5	0	51	0	1	1	0	2	607
Total	14	790	21	0	825	1	1123	325	0	1449	164	4	10	0	178	2	5	2	0	9	2461
*** BREAK ***																					
04:30 PM	9	322	23	0	354	2	302	102	0	406	109	5	6	0	120	7	6	5	0	18	898
04:45 PM	9	379	24	0	412	1	297	107	0	405	107	2	6	0	115	17	3	1	0	21	953
Total	18	701	47	0	766	3	599	209	0	811	216	7	12	0	235	24	9	6	0	39	1851
05:00 PM	12	393	15	0	420	2	304	113	0	419	142	9	10	0	161	8	6	2	0	16	1016
05:15 PM	5	441	32	0	478	1	318	128	0	447	102	5	2	0	109	9	8	1	0	18	1052
05:30 PM	12	388	30	0	430	3	267	113	0	383	136	13	8	0	157	7	5	4	0	16	986
05:45 PM	11	417	37	0	465	1	272	109	0	382	138	11	6	0	155	12	8	0	0	20	1022
Total	40	1639	114	0	1793	7	1161	463	0	1631	518	38	26	0	582	36	27	7	0	70	4076
06:00 PM	12	356	17	0	385	4	284	150	0	438	108	2	11	0	121	16	5	1	0	22	966
06:15 PM	10	334	18	0	362	5	269	120	0	394	126	4	0	0	130	17	6	1	0	24	910
Grand Total	105	4403	227	0	4735	26	4592	1566	0	6184	1228	55	68	0	1351	96	53	19	0	168	12438
Apprch %	2.2	93	4.8	0		0.4	74.3	25.3	0		90.9	4.1	5	0		57.1	31.5	11.3	0		
Total %	0.8	35.4	1.8	0	38.1	0.2	36.9	12.6	0	49.7	9.9	0.4	0.5	0	10.9	0.8	0.4	0.2	0	1.4	

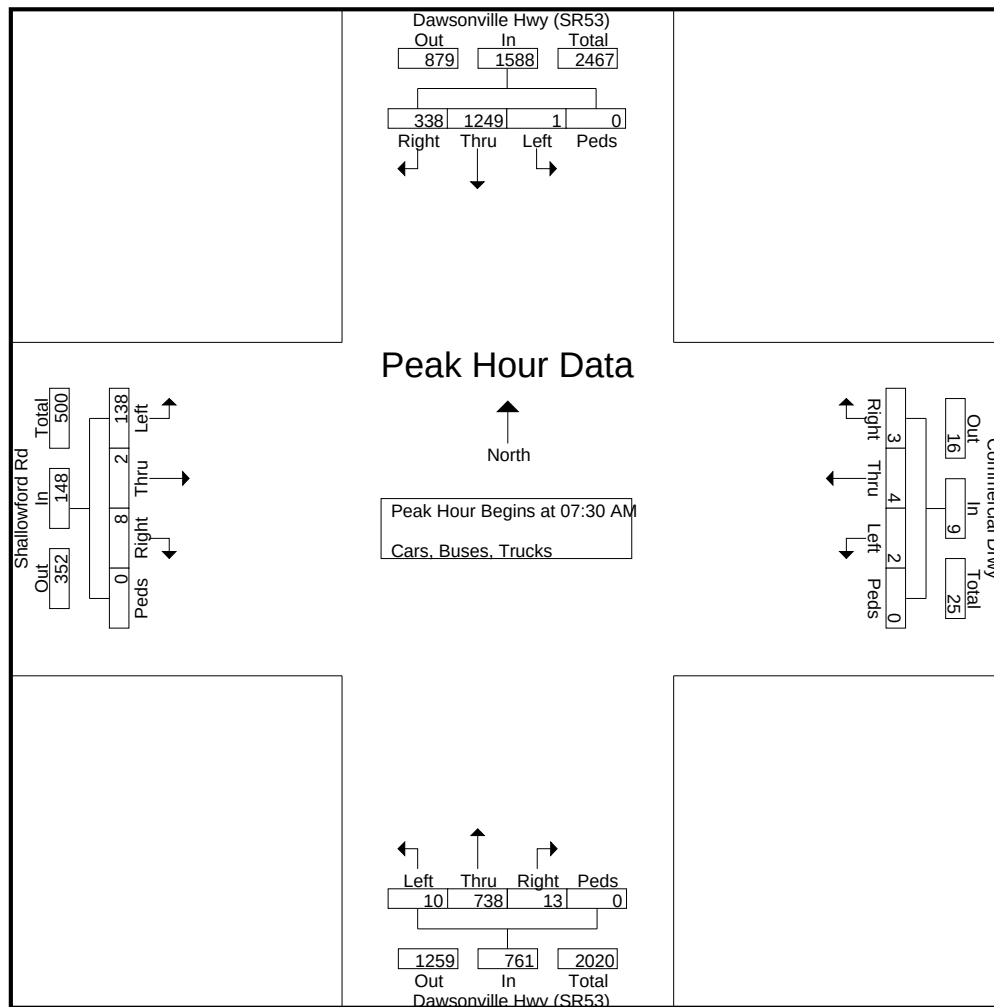
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TMC Data
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	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					Shallowford Rd Eastbound					Commercial Drwy Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	3	146	1	0	150	0	334	82	0	416	28	0	4	0	32	0	1	2	0	3	601
07:45 AM	3	178	6	0	187	0	342	85	0	427	35	0	2	0	37	0	0	0	0	0	651
08:00 AM	3	188	3	0	194	0	307	87	0	394	34	1	0	0	35	0	1	1	0	2	625
08:15 AM	1	226	3	0	230	1	266	84	0	351	41	1	2	0	44	2	2	0	0	4	629
Total Volume	10	738	13	0	761	1	1249	338	0	1588	138	2	8	0	148	2	4	3	0	9	2506
% App. Total	1.3	97	1.7	0		0.1	78.7	21.3	0		93.2	1.4	5.4	0		22.2	44.4	33.3	0		
PHF	.833	.816	.542	.000	.827	.250	.913	.971	.000	.930	.841	.500	.500	.000	.841	.250	.500	.375	.000	.563	.962



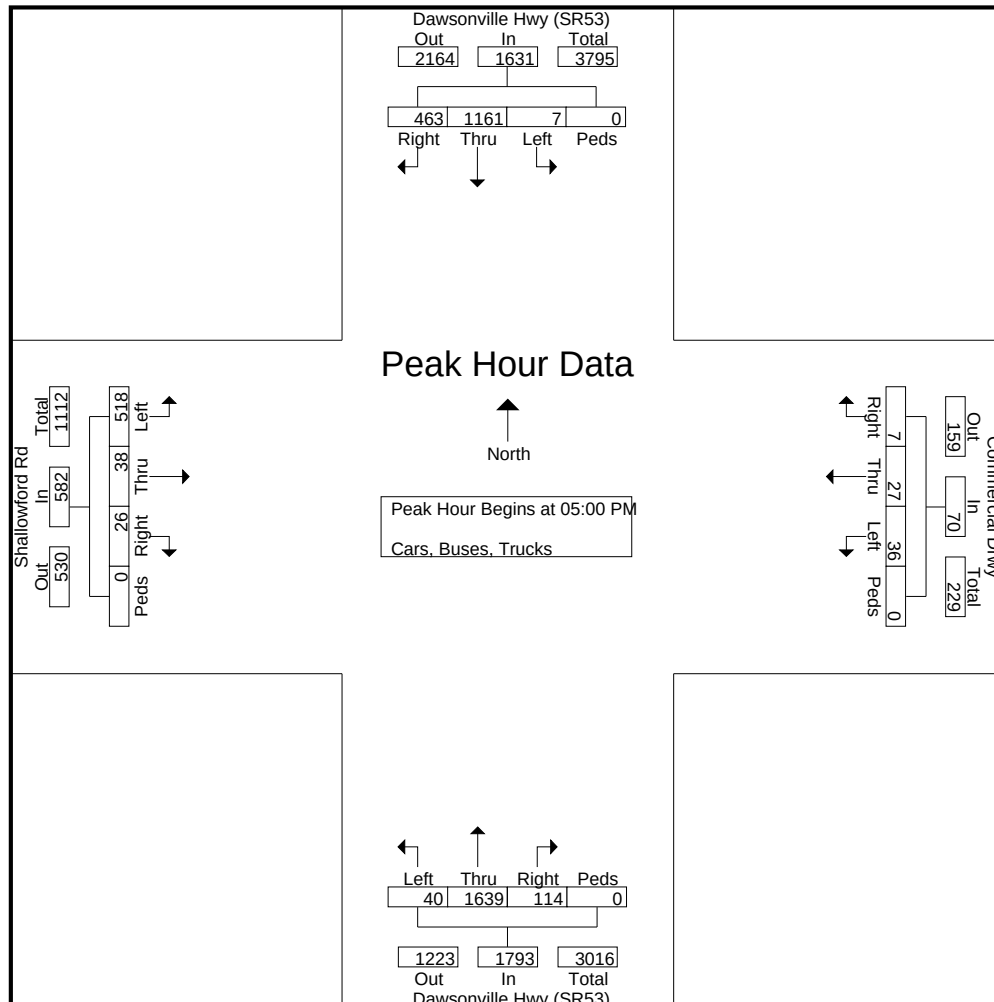
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	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					Shallowford Rd Eastbound					Commercial Drwy Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	12	393	15	0	420	2	304	113	0	419	142	9	10	0	161	8	6	2	0	16	1016
05:15 PM	5	441	32	0	478	1	318	128	0	447	102	5	2	0	109	9	8	1	0	18	1052
05:30 PM	12	388	30	0	430	3	267	113	0	383	136	13	8	0	157	7	5	4	0	16	986
05:45 PM	11	417	37	0	465	1	272	109	0	382	138	11	6	0	155	12	8	0	0	20	1022
Total Volume	40	1639	114	0	1793	7	1161	463	0	1631	518	38	26	0	582	36	27	7	0	70	4076
% App. Total	2.2	91.4	6.4	0		0.4	71.2	28.4	0		89	6.5	4.5	0		51.4	38.6	10	0		
PHF	.833	.929	.770	.000	.938	.583	.913	.904	.000	.912	.912	.731	.650	.000	.904	.750	.844	.438	.000	.875	.969



Appendix B

Intersection Analysis Methodology

Intersection Analysis Methodology

The methodology used for evaluating traffic operations at intersections is presented in the Transportation Research Board’s *Highway Capacity Manual*, 2010 edition (HCM 2010). Synchro 8 software, which emulates the HCM 2010 methodology, was used for all analyses. The following is an overview of the methodology employed for the analysis of signalized intersections and stop-sign controlled (unsignalized) intersections.

Signalized Intersections

The criteria for evaluating signalized intersections are capacity and level of service. The capacity analysis of an intersection compares the volume of traffic using the various lane groups at the intersection to the capacity of those lane groups. This produces a volume-to-capacity (v/c) ratio for each lane group. A v/c ratio greater than 1.0 indicates that the volume of traffic has exceeded the capacity available and indicates a temporary excess of demand. The HCM 2010 methodology computes a critical v/c ratio for an intersection based on the critical lane groups or approaches. This critical v/c ratio is an indication of overall intersection sufficiency.

Level of service for a signalized intersection is defined in terms of control delay per vehicle. For signalized intersections, a composite intersection level of service is determined. The thresholds for each level of service are higher for signalized intersections than for unsignalized intersections. This is attributable to a variety of factors including expectation and acceptance of higher delays at signals, and the fact that drivers can relax when waiting at a signal as opposed to having to remain attentive as they proceed through the unsignalized intersection. The level of service criteria for signalized intersections are shown in Table A.

Table A – Level of Service Criteria for Signalized Intersections

Control Delay (s/veh)	Level of Service by Volume-to-Capacity Ratio	
	≤1.0	>1.0
≤ 10	A	F
> 10 and ≤ 20	B	F
> 20 and ≤ 35	C	F
> 35 and ≤ 55	D	F
> 55 and ≤ 80	E	F
> 80	F	F

Source: *Highway Capacity Manual 2010*

Unsignalized Intersections

The operations at an unsignalized intersection are defined in terms of levels of service. Level of service (LOS) is a measure of driver discomfort, frustration, fuel consumption, and lost travel time. Level of service for an unsignalized intersection is defined in terms of control delay per vehicle. Control delay is that portion of delay attributable to the control device and includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. The delays at unsignalized intersections are based on gap acceptance theory,

factoring in availability of gaps, usefulness of the gaps, and the priority of right-of-way given to each traffic stream.

Levels of service are assigned letters A through F. LOS A indicates operations with very low control delay while LOS F describes operations with high control delay. LOS F is considered to be unacceptable by most drivers, while LOS E is typically considered to be the limit of acceptable delay. The level of service criteria for unsignalized intersections are presented in Table B.

Table B – Level of Service Criteria for Unsignalized Intersections

Control Delay (s/veh)	Level of Service by Volume-to-Capacity Ratio	
	≤1.0	>1.0
0 – 10	A	F
> 10 and ≤ 15	B	F
> 15 and ≤ 25	C	F
> 25 and ≤ 35	D	F
> 35 and ≤ 50	E	F
> 50	F	F

Source: *Highway Capacity Manual 2010*

Appendix C

Existing Intersection Analysis

Lanier Tract DRI
1: Sportsman Club Road & Strickland Drive

existing a.m.

Intersection						
Int Delay, s/veh	2.6					
Movement	WBL	WBR		NBT	NBR	SBL SBT
Vol, veh/h	10	0		6	1	0 23
Conflicting Peds, #/hr	0	0		0	0	0 0
Sign Control	Stop	Stop		Free	Free	Free Free
RT Channelized	-	None		-	None	- None
Storage Length	0	-		-	-	- -
Veh in Median Storage, #	0	-		0	-	- 0
Grade, %	0	-		0	-	- 0
Peak Hour Factor	50	50		58	58	64 64
Heavy Vehicles, %	2	2		2	2	2 2
Mvmt Flow	20	0		10	2	0 36
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	47	11		0	0	12 0
Stage 1	11	-		-	-	- -
Stage 2	36	-		-	-	- -
Critical Hdwy	6.42	6.22		-	-	4.12 -
Critical Hdwy Stg 1	5.42	-		-	-	- -
Critical Hdwy Stg 2	5.42	-		-	-	- -
Follow-up Hdwy	3.518	3.318		-	-	2.218 -
Pot Cap-1 Maneuver	963	1070		-	-	1607 -
Stage 1	1012	-		-	-	- -
Stage 2	986	-		-	-	- -
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	963	1070		-	-	1607 -
Mov Cap-2 Maneuver	963	-		-	-	- -
Stage 1	1012	-		-	-	- -
Stage 2	986	-		-	-	- -
Approach	WB		NB		SB	
HCM Control Delay, s	8.8		0		0	
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	963	1607	-	
HCM Lane V/C Ratio	-	-	0.021	-	-	
HCM Control Delay (s)	-	-	8.8	0	-	
HCM Lane LOS	-	-	A	A	-	
HCM 95th %tile Q(veh)	-	-	0.1	0	-	

Lanier Tract DRI
2: GA 53 & Sportsman Club Road

existing a.m.

Intersection												
Int Delay, s/veh		5.3										
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	9	1687	0	0	743	8	0	0	0	25	0	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	84	84	84	92	92	92	59	59	59
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	1962	0	0	885	10	0	0	0	42	0	25
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	894	0	0	1962	0	0	2425	2877	981	1891	2872	447
Stage 1	-	-	-	-	-	-	1983	1983	-	889	889	-
Stage 2	-	-	-	-	-	-	442	894	-	1002	1983	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	755	-	-	293	-	-	17	16	249	43	16	559
Stage 1	-	-	-	-	-	-	63	105	-	304	360	-
Stage 2	-	-	-	-	-	-	564	358	-	260	105	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	755	-	-	293	-	-	16	16	249	43	16	559
Mov Cap-2 Maneuver	-	-	-	-	-	-	16	16	-	43	16	-
Stage 1	-	-	-	-	-	-	62	104	-	300	360	-
Stage 2	-	-	-	-	-	-	538	358	-	257	104	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0			0			224.6		
HCM LOS							A			F		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	-	755	-	-	293	-	-	66				
HCM Lane V/C Ratio	-	0.014	-	-	-	-	-	1.027				
HCM Control Delay (s)	0	9.8	-	-	0	-	-	224.6				
HCM Lane LOS	A	A	-	-	A	-	-	F				
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	5.2				

Lanier Tract DRI
3: GA 53 & Avonlea Way

existing a.m.

Intersection						
Int Delay, s/veh	2.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	15	72	12	758	1668	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	88	88	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	18	86	14	861	1940	7
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	2398	970	1940	0	-	0
Stage 1	1940	-	-	-	-	-
Stage 2	458	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	28	253	299	-	-	-
Stage 1	98	-	-	-	-	-
Stage 2	604	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	27	253	299	-	-	-
Mov Cap-2 Maneuver	27	-	-	-	-	-
Stage 1	98	-	-	-	-	-
Stage 2	576	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	69.3	0.3		0		
HCM LOS	F					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	299	-	27	253	-	-
HCM Lane V/C Ratio	0.046	-	0.661	0.339	-	-
HCM Control Delay (s)	17.6	-	275.4	26.4	-	-
HCM Lane LOS	C	-	F	D	-	-
HCM 95th %tile Q(veh)	0.1	-	2.1	1.4	-	-

Lanier Tract DRI
4: GA 53 & Canterbury Road

existing a.m.

Intersection						
Int Delay, s/veh	3.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	18	95	23	722	1782	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	86	86	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	20	108	27	840	1958	8
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	2431	979	1958	0	-	0
Stage 1	1958	-	-	-	-	-
Stage 2	473	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	26	249	294	-	-	-
Stage 1	96	-	-	-	-	-
Stage 2	593	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	24	249	294	-	-	-
Mov Cap-2 Maneuver	24	-	-	-	-	-
Stage 1	96	-	-	-	-	-
Stage 2	539	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	83.3	0.6		0		
HCM LOS	F					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	294	-	24	249	-	-
HCM Lane V/C Ratio	0.091	-	0.852	0.434	-	-
HCM Control Delay (s)	18.5	-	363.9	30.1	-	-
HCM Lane LOS	C	-	F	D	-	-
HCM 95th %tile Q(veh)	0.3	-	2.6	2.1	-	-

Lanier Tract DRI
7: GA 53 & Beechwood Boulevard

existing a.m.

Intersection						
Int Delay, s/veh	1.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	5	41	27	787	2006	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	Yield	-	None
Storage Length	0	0	200	-	-	360
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	1	0	-
Peak Hour Factor	82	82	87	87	89	89
Heavy Vehicles, %	0	0	0	1	0	0
Mvmt Flow	6	50	31	905	2254	2
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	2768	1127	2254	0	-	0
Stage 1	2254	-	-	-	-	-
Stage 2	514	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	16	202	231	-	-	-
Stage 1	67	-	-	-	-	-
Stage 2	571	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	14	202	231	-	-	-
Mov Cap-2 Maneuver	14	-	-	-	-	-
Stage 1	67	-	-	-	-	-
Stage 2	494	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	68.2	0.8		0		
HCM LOS	F					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	231	-	14	202	-	-
HCM Lane V/C Ratio	0.134	-	0.436	0.248	-	-
HCM Control Delay (s)	23	-	393.1	28.6	-	-
HCM Lane LOS	C	-	F	D	-	-
HCM 95th %tile Q(veh)	0.5	-	1.1	0.9	-	-

Lanier Tract DRI

5: GA 53 & Lanier Valley Dr/Ahaluna Dr

existing a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	19	5	115	37	3	20	55	701	11	14	1901	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		2%			-4%			1%			-1%	
Storage Length (ft)	0		0	0		0	100		0	140		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	0			0			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.888			0.956			0.998				
Flt Protected		0.993			0.970		0.950			0.950		
Satd. Flow (prot)	0	1659	0	0	1797	0	1796	3516	0	1814	3628	0
Flt Permitted		0.941			0.405		0.037			0.337		
Satd. Flow (perm)	0	1572	0	0	750	0	70	3516	0	644	3628	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		86			13			4				
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		340			322			888			1417	
Travel Time (s)		7.7			7.3			13.5			21.5	
Peak Hour Factor	0.91	0.91	0.91	0.83	0.83	0.83	0.85	0.85	0.85	0.87	0.87	0.87
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	0%	0%
Adj. Flow (vph)	21	5	126	45	4	24	65	825	13	16	2185	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	152	0	0	73	0	65	838	0	16	2185	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	0.97	0.97	0.97	1.01	1.01	1.01	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		0	1	
Detector Template	Left			Left								
Leading Detector (ft)	20	40		20	40		40	336		0	336	
Trailing Detector (ft)	0	0		0	0		0	330		0	330	
Detector 1 Position(ft)	0	0		0	0		0	330		0	330	
Detector 1 Size(ft)	20	40		20	40		40	6		0	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		8			4		5	2			6	
Permitted Phases	8			4			2			6		
Detector Phase	8	8		4	4		5	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	23.0	23.0		23.0	23.0		10.6	23.0		23.0	23.0	

Lanier Tract DRI

5: GA 53 & Lanier Valley Dr/Ahaluna Dr

existing a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	25.0	25.0		25.0	25.0		13.0	125.0		112.0	112.0	
Total Split (%)	16.7%	16.7%		16.7%	16.7%		8.7%	83.3%		74.7%	74.7%	
Maximum Green (s)	18.4	18.4		18.4	18.4		7.4	118.9		105.9	105.9	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	4.5		4.5	4.5	
All-Red Time (s)	2.6	2.6		2.6	2.6		2.6	1.6		1.6	1.6	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.6			6.6		5.6	6.1		6.1	6.1	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		C-Max	C-Max	
Act Effect Green (s)		14.0			14.0		123.8	123.3		113.3	113.3	
Actuated g/C Ratio		0.09			0.09		0.83	0.82		0.76	0.76	
v/c Ratio		0.68			0.90		0.49	0.29		0.03	0.80	
Control Delay		43.6			127.8		44.3	1.5		6.6	15.9	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		43.6			127.8		44.3	1.5		6.6	15.9	
LOS		D			F		D	A		A	B	
Approach Delay		43.6			127.8			4.6			15.9	
Approach LOS		D			F			A			B	

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 26 (17%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.90

Intersection Signal Delay: 16.5

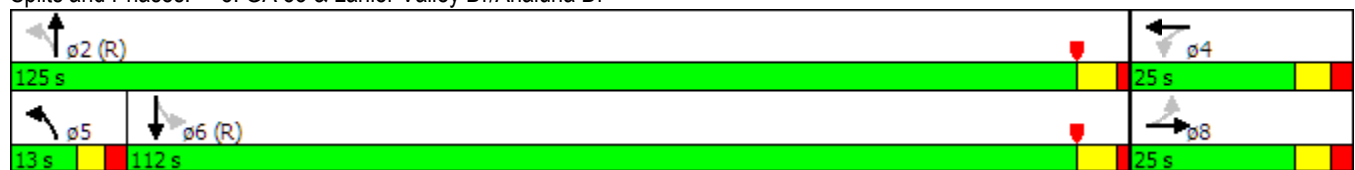
Intersection LOS: B

Intersection Capacity Utilization 73.2%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 5: GA 53 & Lanier Valley Dr/Ahaluna Dr



Lanier Tract DRI

6: 53-Dawsonville Hwy & Academy Sports

existing a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	2	0	6	2	0	0	11	740	9	5	1989	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)	0%			4%			1%			0%		
Storage Length (ft)	0		0	0		70	200		170	190		360
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	0			0			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850						0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1900	1615	1769	1862	1862	1796	3556	1607	1805	3610	1615
Flt Permitted							0.058			0.329		
Satd. Flow (perm)	1900	1900	1615	1862	1862	1862	110	3556	1607	625	3610	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			67						68			68
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		262			246			1836			685	
Travel Time (s)		7.1			6.7			27.8			10.4	
Peak Hour Factor	0.67	0.67	0.67	0.50	0.50	0.50	0.86	0.86	0.86	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%
Adj. Flow (vph)	3	0	9	4	0	0	13	860	10	6	2210	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	3	0	9	4	0	0	13	860	10	6	2210	4
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.03	1.03	1.03	1.01	1.01	1.01	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1	1	1	1	1	1	1	0
Detector Template												
Leading Detector (ft)	40	40	0	40	40	40	40	336	0	40	336	0
Trailing Detector (ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Size(ft)	40	40	0	40	40	40	40	6	0	40	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm		Perm	Perm		Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8		8	4		4	2		2	6		6
Detector Phase	8	8	8	4	4	4	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	42.0	42.0	42.0	42.4	42.4	42.4	11.4	30.3	30.3	11.0	29.3	29.3

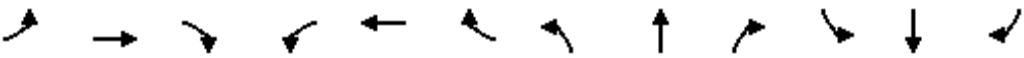
Synchro 8 Report

Marc R Acampora, PE, LLC

Lanier Tract DRI

6: 53-Dawsonville Hwy & Academy Sports

existing a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	42.4	42.4	42.4	42.4	42.4	42.4	11.4	96.6	96.6	11.0	96.2	96.2
Total Split (%)	28.3%	28.3%	28.3%	28.3%	28.3%	28.3%	7.6%	64.4%	64.4%	7.3%	64.1%	64.1%
Maximum Green (s)	36.0	36.0	36.0	36.0	36.0	36.0	5.0	90.4	90.4	5.0	90.0	90.0
Yellow Time (s)	3.4	3.4	3.4	3.4	3.4	3.4	3.4	4.3	4.3	3.0	4.3	4.3
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	1.9	1.9	3.0	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.2	6.2	6.0	6.2	6.2
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0
Flash Dont Walk (s)	23.0	23.0	23.0	32.0	32.0	32.0		20.0	20.0		19.0	19.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0	0		0	0
Act Effect Green (s)	6.1		6.1	6.1			137.2	139.9	139.9	136.1	137.4	137.4
Actuated g/C Ratio	0.04		0.04	0.04			0.91	0.93	0.93	0.91	0.92	0.92
v/c Ratio	0.04		0.07	0.05			0.08	0.26	0.01	0.01	0.67	0.00
Control Delay	69.5		1.0	70.0			1.5	0.8	0.0	1.0	1.8	0.0
Queue Delay	0.0		0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.5		1.0	70.0			1.5	0.8	0.0	1.0	1.9	0.0
LOS	E		A	E			A	A	A	A	A	A
Approach Delay								0.8			1.8	
Approach LOS								A			A	

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 27 (18%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 145

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.67

Intersection Signal Delay: 1.7

Intersection LOS: A

Intersection Capacity Utilization 79.1%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 6: 53-Dawsonville Hwy & Academy Sports

 p1	 p2 (R)	 p4
11 s	96.6 s	42.4 s
 p5	 p6 (R)	 p8
11.4 s	96.2 s	42.4 s

Lanier Tract DRI

8: Dawsonville Highway/GA 53 & McEver Road/McEver

existing a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	390	28	342	42	19	18	282	465	55	28	1170	828
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			5%			1%			-1%	
Storage Length (ft)	180		0	0		0	310		185	255		0
Storage Lanes	2		1	1		0	2		1	1		1
Taper Length (ft)	50			0			50			50		
Lane Util. Factor	0.97	0.95	0.95	1.00	1.00	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Frt		0.872	0.850		0.927				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3484	1566	1527	1760	1717	0	3484	3487	1575	1814	3628	1623
Flt Permitted	0.950			0.629			0.950			0.950		
Satd. Flow (perm)	3484	1566	1527	1165	1717	0	3484	3487	1575	1814	3628	1623
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		166	187		29				184			538
Link Speed (mph)		45			45			45			45	
Link Distance (ft)		580			331			921			1624	
Travel Time (s)		8.8			5.0			14.0			24.6	
Peak Hour Factor	0.97	0.97	0.97	0.62	0.62	0.62	0.93	0.93	0.93	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	3%	2%	0%	0%	0%
Adj. Flow (vph)	402	29	353	68	31	29	303	500	59	31	1300	920
Shared Lane Traffic (%)			47%									
Lane Group Flow (vph)	402	195	187	68	60	0	303	500	59	31	1300	920
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.03	1.03	1.03	1.01	1.01	1.01	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1		1	1	0	1	1	0
Detector Template												
Leading Detector (ft)	40	40	0	40	40		40	336	0	40	336	0
Trailing Detector (ft)	0	0	0	0	0		0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0		0	330	0	0	330	0
Detector 1 Size(ft)	40	40	0	40	40		40	6	0	40	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	NA	Perm	pm+pt	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases			8	4					6			2
Detector Phase	3	8	8	7	4		1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	13.2	50.2	50.2	11.6	48.2		13.4	35.6	35.6	12.9	44.6	44.6

Lanier Tract DRI

8: Dawsonville Highway/GA 53 & McEver Road/McEver

existing a.m.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	24.0	60.4	60.4	11.8	48.2		20.2	63.9	63.9	13.9	57.6	57.6
Total Split (%)	16.0%	40.3%	40.3%	7.9%	32.1%		13.5%	42.6%	42.6%	9.3%	38.4%	38.4%
Maximum Green (s)	16.7	53.1	53.1	5.3	40.9		12.7	57.3	57.3	6.7	51.0	51.0
Yellow Time (s)	4.3	4.3	4.3	3.5	4.3		4.5	4.4	4.4	4.2	4.4	4.4
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	2.2	2.2	3.0	2.2	2.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.3	7.3	7.3	6.5	7.3		7.5	6.6	6.6	7.2	6.6	6.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)		4.0	4.0		4.0			4.0	4.0		4.0	4.0
Flash Dont Walk (s)		38.0	38.0		36.0			25.0	25.0		34.0	34.0
Pedestrian Calls (#/hr)		0	0		0			0	0		0	0
Act Effect Green (s)	16.7	20.5	20.5	13.3	8.5		12.7	96.3	96.3	8.0	86.0	86.0
Actuated g/C Ratio	0.11	0.14	0.14	0.09	0.06		0.08	0.64	0.64	0.05	0.57	0.57
v/c Ratio	1.04	0.55	0.51	0.55	0.48		1.03	0.22	0.05	0.32	0.63	0.79
Control Delay	119.1	18.3	12.1	67.7	51.5		133.7	17.6	1.2	85.8	19.6	11.3
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	119.1	18.3	12.1	67.7	51.5		133.7	17.6	1.2	85.8	19.6	11.3
LOS	F	B	B	E	D		F	B	A	F	B	B
Approach Delay		68.5			60.1			57.3			17.1	
Approach LOS		E			E			E			B	

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 19 (13%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.04

Intersection Signal Delay: 37.1

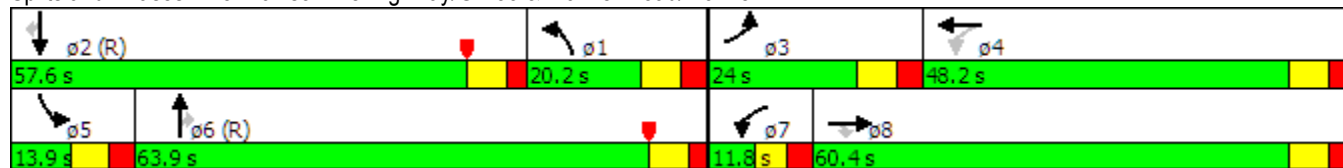
Intersection LOS: D

Intersection Capacity Utilization 81.3%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 8: Dawsonville Highway/GA 53 & McEver Road/McEver



Lanier Tract DRI

9: Dawsonville Highway & Greenhill Circle/Greenhill Circle

existing a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	67	1	141	6	1	4	135	754	10	12	1404	52
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		3%			7%			1%			0%	
Storage Length (ft)	0		0	0		0	190		190	185		100
Storage Lanes	0		1	0		1	1		1	1		1
Taper Length (ft)	0			0			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected		0.953			0.957		0.950			0.950		
Satd. Flow (prot)	0	1784	1591	0	1755	1558	1796	3522	1607	1805	3610	1615
Flt Permitted		0.722			0.755		0.116			0.324		
Satd. Flow (perm)	0	1351	1591	0	1384	1558	219	3522	1607	616	3610	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			151			102			57			101
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		288			254			778			921	
Travel Time (s)		7.9			6.9			11.8			14.0	
Peak Hour Factor	0.90	0.90	0.90	0.69	0.69	0.69	0.86	0.86	0.86	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	0%	0%
Adj. Flow (vph)	74	1	157	9	1	6	157	877	12	13	1526	57
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	75	157	0	10	6	157	877	12	13	1526	57
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.02	1.02	1.02	1.05	1.05	1.05	1.01	1.01	1.01	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1	0	1	1	0	0	1	0
Detector Template	Left			Left								
Leading Detector (ft)	20	40	0	20	40	0	40	336	0	0	336	0
Trailing Detector (ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Size(ft)	20	40	0	20	40	0	40	6	0	0	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8		8	4		4	6		6	2		2
Detector Phase	8	8	8	4	4	4	1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.0	23.0	23.0	39.9	39.9	39.9	11.0	28.0	28.0	10.0	36.0	36.0

Lanier Tract DRI

9: Dawsonville Highway & Greenhill Circle/Greenhill Circle

existing a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	39.9	39.9	39.9	39.9	39.9	39.9	22.0	100.1	100.1	10.0	88.1	88.1
Total Split (%)	26.6%	26.6%	26.6%	26.6%	26.6%	26.6%	14.7%	66.7%	66.7%	6.7%	58.7%	58.7%
Maximum Green (s)	34.0	34.0	34.0	34.0	34.0	34.0	16.0	94.1	94.1	5.0	82.1	82.1
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	4.4	4.4	3.5	4.4	4.4
All-Red Time (s)	2.9	2.9	2.9	2.9	2.9	2.9	3.0	1.6	1.6	1.5	1.6	1.6
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.9	5.9		5.9	5.9	6.0	6.0	6.0	5.0	6.0	6.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)				4.0	4.0	4.0		4.0	4.0		4.0	4.0
Flash Dont Walk (s)				30.0	30.0	30.0		18.0	18.0		26.0	26.0
Pedestrian Calls (#/hr)				0	0	0		0	0		0	0
Act Effect Green (s)		13.7	13.7		13.7	13.7	124.4	120.0	120.0	113.0	106.3	106.3
Actuated g/C Ratio		0.09	0.09		0.09	0.09	0.83	0.80	0.80	0.75	0.71	0.71
v/c Ratio		0.61	0.56		0.08	0.03	0.51	0.31	0.01	0.03	0.60	0.05
Control Delay		85.1	17.7		60.9	0.2	17.8	4.2	0.0	3.6	11.3	0.4
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		85.1	17.7		60.9	0.2	17.8	4.2	0.0	3.6	11.4	0.4
LOS		F	B		E	A	B	A	A	A	B	A
Approach Delay		39.5			38.1			6.2			10.9	
Approach LOS		D			D			A			B	

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.61

Intersection Signal Delay: 11.6

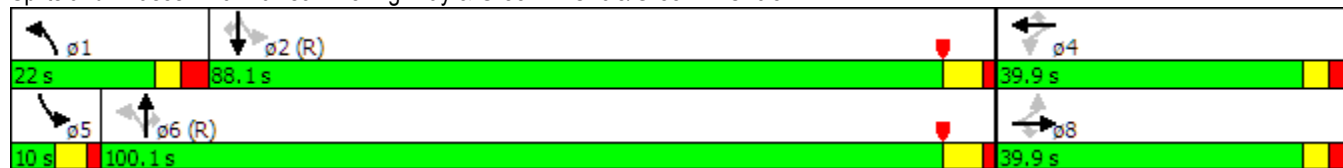
Intersection LOS: B

Intersection Capacity Utilization 71.6%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 9: Dawsonville Highway & Greenhill Circle/Greenhill Circle



Lanier Tract DRI

10: Dawsonville Highway & Shallowford Rd/Best Buy

existing a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	138	2	8	2	4	3	10	738	13	1	1249	338
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-1%			10%			-4%			-1%	
Storage Length (ft)	350		350	0		0	350		150	265		0
Storage Lanes	1		0	0		1	1		1	1		1
Taper Length (ft)	100			0			100			100		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950	0.953			0.982		0.950			0.950		
Satd. Flow (prot)	1723	1729	1623	0	1773	1534	1841	3646	1647	1814	3592	1623
Flt Permitted	0.950	0.953			0.982		0.154			0.320		
Satd. Flow (perm)	1723	1729	1623	0	1773	1534	298	3646	1647	611	3592	1623
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			113			119			70			218
Link Speed (mph)		45			25			45			45	
Link Distance (ft)		653			178			957			778	
Travel Time (s)		9.9			4.9			14.5			11.8	
Peak Hour Factor	0.84	0.84	0.84	0.56	0.56	0.56	0.83	0.83	0.83	0.93	0.93	0.93
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	1%	0%
Adj. Flow (vph)	164	2	10	4	7	5	12	889	16	1	1343	363
Shared Lane Traffic (%)	49%											
Lane Group Flow (vph)	84	82	10	0	11	5	12	889	16	1	1343	363
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes										
Headway Factor	0.99	0.99	0.99	1.07	1.07	1.07	0.97	0.97	0.97	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1	0	1	1	0	0	1	0
Detector Template				Left								
Leading Detector (ft)	40	40	0	20	40	0	40	336	0	0	336	0
Trailing Detector (ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Size(ft)	40	40	0	20	40	0	40	6	0	0	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases	3	3		4	4		1	6			2	
Permitted Phases			3			4	6		6	2		2
Detector Phase	3	3	3	4	4	4	1	6	6	2	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	36.7	36.7	36.7	38.9	38.9	38.9	10.8	28.8	28.8	30.8	30.8	30.8

Lanier Tract DRI

10: Dawsonville Highway & Shallowford Rd/Best Buy

existing a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	36.7	36.7	36.7	38.9	38.9	38.9	10.8	74.4	74.4	63.6	63.6	63.6
Total Split (%)	24.5%	24.5%	24.5%	25.9%	25.9%	25.9%	7.2%	49.6%	49.6%	42.4%	42.4%	42.4%
Maximum Green (s)	30.0	30.0	30.0	33.0	33.0	33.0	5.0	67.6	67.6	56.8	56.8	56.8
Yellow Time (s)	4.5	4.5	4.5	3.0	3.0	3.0	3.0	4.9	4.9	4.9	4.9	4.9
All-Red Time (s)	2.2	2.2	2.2	2.9	2.9	2.9	2.8	1.9	1.9	1.9	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.7	6.7	6.7		5.9	5.9	5.8	6.8	6.8	6.8	6.8	6.8
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes			Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	C-Min	C-Min	C-Min
Walk Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0
Flash Dont Walk (s)	26.0	26.0	26.0	29.0	29.0	29.0		18.0	18.0	20.0	20.0	20.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0	0	0	0	0
Act Effect Green (s)	12.7	12.7	12.7		6.5	6.5	119.4	118.4	118.4	113.7	113.7	113.7
Actuated g/C Ratio	0.08	0.08	0.08		0.04	0.04	0.80	0.79	0.79	0.76	0.76	0.76
v/c Ratio	0.58	0.56	0.04		0.14	0.03	0.04	0.31	0.01	0.00	0.49	0.28
Control Delay	81.0	79.9	0.4		72.5	0.3	5.5	5.6	0.0	7.0	6.7	3.5
Queue Delay	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0
Total Delay	81.0	79.9	0.4		72.5	0.3	5.5	5.6	0.0	7.0	6.9	3.5
LOS	F	E	A		E	A	A	A	A	A	A	A
Approach Delay		75.9			49.9			5.5			6.2	
Approach LOS		E			D			A			A	

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 45 (30%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.58

Intersection Signal Delay: 10.6

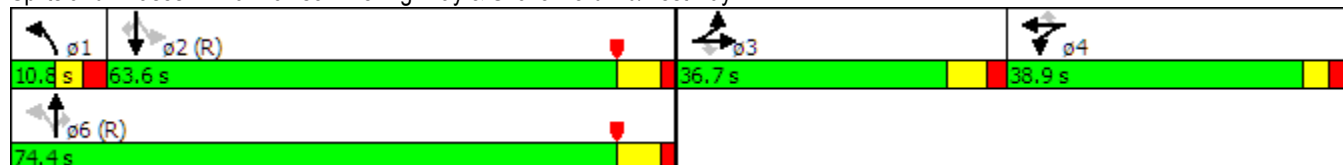
Intersection LOS: B

Intersection Capacity Utilization 59.0%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 10: Dawsonville Highway & Shallowford Rd/Best Buy



Lanier Tract DRI
1: Sportsman Club Road & Strickland Drive

existing p.m.

Intersection						
Int Delay, s/veh	1.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	7	0	29	9	0	23
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	44	44	86	86	82	82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	0	34	10	0	28
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	67	39	0	0	44	0
Stage 1	39	-	-	-	-	-
Stage 2	28	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	938	1033	-	-	1564	-
Stage 1	983	-	-	-	-	-
Stage 2	995	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	938	1033	-	-	1564	-
Mov Cap-2 Maneuver	938	-	-	-	-	-
Stage 1	983	-	-	-	-	-
Stage 2	995	-	-	-	-	-
Approach	WB		NB		SB	
HCM Control Delay, s	8.9		0		0	
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	938	1564	-	
HCM Lane V/C Ratio	-	-	0.017	-	-	
HCM Control Delay (s)	-	-	8.9	0	-	
HCM Lane LOS	-	-	A	A	-	
HCM 95th %tile Q(veh)	-	-	0.1	0	-	

Lanier Tract DRI
2: GA 53 & Sportsman Club Road

existing p.m.

Intersection												
Int Delay, s/veh	17.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	15	1039	0	2	1671	19	0	0	0	28	0	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	96	96	96	92	92	92	66	66	66
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	1094	0	2	1741	20	0	0	0	42	0	14
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1760	0	0	1094	0	0	1999	2890	547	2333	2880	880
Stage 1	-	-	-	-	-	-	1125	1125	-	1755	1755	-
Stage 2	-	-	-	-	-	-	874	1765	-	578	1125	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	351	-	-	634	-	-	35	16	481	~ 20	16	290
Stage 1	-	-	-	-	-	-	218	278	-	88	137	-
Stage 2	-	-	-	-	-	-	311	136	-	468	278	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	351	-	-	634	-	-	32	15	481	~ 19	15	290
Mov Cap-2 Maneuver	-	-	-	-	-	-	32	15	-	~ 19	15	-
Stage 1	-	-	-	-	-	-	208	265	-	84	137	-
Stage 2	-	-	-	-	-	-	295	136	-	447	265	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0			0			\$ 901.3		
HCM LOS							A			F		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	-	351	-	-	634	-	-	25				
HCM Lane V/C Ratio	-	0.045	-	-	0.003	-	-	2.242				
HCM Control Delay (s)	0	15.7	-	-	10.7	-	-	\$ 901.3				
HCM Lane LOS	A	C	-	-	B	-	-	F				
HCM 95th %tile Q(veh)	-	0.1	-	-	0	-	-	6.9				
Notes												
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon												

Intersection						
Int Delay, s/veh	1.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	11	47	62	1650	1104	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	76	76	95	95	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	14	62	65	1737	1104	14
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	2103	552	1104	0	-	0
Stage 1	1104	-	-	-	-	-
Stage 2	999	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	44	477	628	-	-	-
Stage 1	279	-	-	-	-	-
Stage 2	317	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	39	477	628	-	-	-
Mov Cap-2 Maneuver	39	-	-	-	-	-
Stage 1	279	-	-	-	-	-
Stage 2	284	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	38.4	0.4		0		
HCM LOS	E					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	628	-	39	477	-	-
HCM Lane V/C Ratio	0.104	-	0.371	0.13	-	-
HCM Control Delay (s)	11.4	-	144.1	13.7	-	-
HCM Lane LOS	B	-	F	B	-	-
HCM 95th %tile Q(veh)	0.3	-	1.3	0.4	-	-

Lanier Tract DRI
4: Canterbury Road & GA 53

existing p.m.

Intersection						
Int Delay, s/veh	1.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	7	28	111	1682	1105	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	35	116	1752	1151	15
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	2258	576	1151	0	-	0
Stage 1	1151	-	-	-	-	-
Stage 2	1107	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	35	460	603	-	-	-
Stage 1	263	-	-	-	-	-
Stage 2	278	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	28	460	603	-	-	-
Mov Cap-2 Maneuver	28	-	-	-	-	-
Stage 1	263	-	-	-	-	-
Stage 2	225	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	47.6	0.8		0		
HCM LOS	E					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	603	-	28	460	-	-
HCM Lane V/C Ratio	0.192	-	0.313	0.076	-	-
HCM Control Delay (s)	12.4	-	183.8	13.5	-	-
HCM Lane LOS	B	-	F	B	-	-
HCM 95th %tile Q(veh)	0.7	-	1	0.2	-	-

Lanier Tract DRI
7: GA 53 & Beechwood Boulevard

existing p.m.

Intersection						
Int Delay, s/veh	0.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	1	47	86	1998	1388	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	Yield	-	None
Storage Length	0	0	200	-	-	360
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	1	0	-
Peak Hour Factor	71	71	99	99	98	98
Heavy Vehicles, %	0	0	0	0	1	0
Mvmt Flow	1	66	87	2018	1416	9
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	2599	709	1416	0	-	0
Stage 1	1416	-	-	-	-	-
Stage 2	1183	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	21	381	487	-	-	-
Stage 1	193	-	-	-	-	-
Stage 2	257	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	17	381	487	-	-	-
Mov Cap-2 Maneuver	17	-	-	-	-	-
Stage 1	193	-	-	-	-	-
Stage 2	211	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	21	0.6		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	487	-	17	381	-	-
HCM Lane V/C Ratio	0.178	-	0.083	0.174	-	-
HCM Control Delay (s)	14	-	235.1	16.4	-	-
HCM Lane LOS	B	-	F	C	-	-
HCM 95th %tile Q(veh)	0.6	-	0.2	0.6	-	-

Lanier Tract DRI

5: GA 53 & Lanier Valley Dr/Ahaluna Dr

existing p.m.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	33.0	33.0		33.0	33.0		28.0	127.0		99.0	99.0	
Total Split (%)	20.6%	20.6%		20.6%	20.6%		17.5%	79.4%		61.9%	61.9%	
Maximum Green (s)	26.4	26.4		26.4	26.4		22.4	120.9		92.9	92.9	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	4.5		4.5	4.5	
All-Red Time (s)	2.6	2.6		2.6	2.6		2.6	1.6		1.6	1.6	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.6			6.6		5.6	6.1		6.1	6.1	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		C-Max	C-Max	
Act Effect Green (s)		15.5			15.5		132.3	131.8		117.1	117.1	
Actuated g/C Ratio		0.10			0.10		0.83	0.82		0.73	0.73	
v/c Ratio		0.56			0.85		0.52	0.63		0.15	0.48	
Control Delay		26.1			97.4		9.9	8.5		11.5	10.4	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		26.1			97.4		9.9	8.5		11.5	10.4	
LOS		C			F		A	A		B	B	
Approach Delay		26.1			97.4			8.6			10.4	
Approach LOS		C			F			A			B	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 129 (81%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 65

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.85

Intersection Signal Delay: 12.7

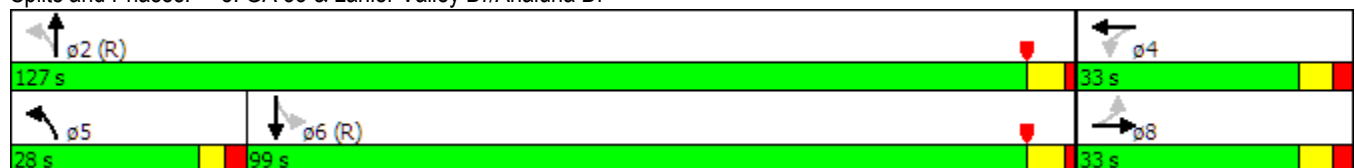
Intersection LOS: B

Intersection Capacity Utilization 79.8%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 5: GA 53 & Lanier Valley Dr/Ahaluna Dr



Lanier Tract DRI

6: 53-Dawsonville Hwy & Academy Sports

existing p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	13	3	60	118	7	42	87	1763	138	19	1199	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			4%			1%			0%	
Storage Length (ft)	0		0	0		70	200		170	190		360
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	0			0			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1900	1615	1769	1862	1583	1796	3592	1607	1805	3574	1615
Flt Permitted	0.752			0.756			0.177			0.083		
Satd. Flow (perm)	1429	1900	1615	1408	1862	1583	335	3592	1607	158	3574	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			63			63			69			64
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		262			246			1836			685	
Travel Time (s)		7.1			6.7			27.8			10.4	
Peak Hour Factor	0.95	0.95	0.95	0.80	0.80	0.80	0.98	0.98	0.98	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
Adj. Flow (vph)	14	3	63	148	9	52	89	1799	141	20	1236	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	14	3	63	148	9	52	89	1799	141	20	1236	28
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.03	1.03	1.03	1.01	1.01	1.01	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1	1	1	1	1	1	1	0
Detector Template												
Leading Detector (ft)	40	40	0	40	40	40	40	336	0	40	336	0
Trailing Detector (ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Size(ft)	40	40	0	40	40	40	40	6	0	40	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8		8	4		4	2		2	6		6
Detector Phase	8	8	8	4	4	4	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	42.0	42.0	42.0	42.4	42.4	42.4	11.4	30.3	30.3	11.0	29.3	29.3

Lanier Tract DRI

6: 53-Dawsonville Hwy & Academy Sports

existing p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	43.0	43.0	43.0	43.0	43.0	43.0	13.6	106.0	106.0	11.0	103.4	103.4
Total Split (%)	26.9%	26.9%	26.9%	26.9%	26.9%	26.9%	8.5%	66.3%	66.3%	6.9%	64.6%	64.6%
Maximum Green (s)	36.6	36.6	36.6	36.6	36.6	36.6	7.2	99.8	99.8	5.0	97.2	97.2
Yellow Time (s)	3.4	3.4	3.4	3.4	3.4	3.4	3.4	4.3	4.3	3.0	4.3	4.3
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	1.9	1.9	3.0	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.2	6.2	6.0	6.2	6.2
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0
Flash Dont Walk (s)	23.0	23.0	23.0	32.0	32.0	32.0		20.0	20.0		19.0	19.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0	0		0	0
Act Effect Green (s)	22.1	22.1	22.1	22.1	22.1	22.1	122.7	118.0	118.0	117.5	111.4	111.4
Actuated g/C Ratio	0.14	0.14	0.14	0.14	0.14	0.14	0.77	0.74	0.74	0.73	0.70	0.70
v/c Ratio	0.07	0.01	0.23	0.76	0.04	0.19	0.27	0.68	0.12	0.11	0.50	0.02
Control Delay	57.2	55.0	13.8	89.5	56.0	9.9	7.8	13.6	6.8	5.5	8.9	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
Total Delay	57.2	55.0	13.8	89.5	56.0	9.9	7.8	13.6	6.8	5.5	9.0	0.0
LOS	E	D	B	F	E	A	A	B	A	A	A	A
Approach Delay		22.9			68.3			12.9			8.7	
Approach LOS		C			E			B			A	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 120 (75%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 115

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.76

Intersection Signal Delay: 14.8

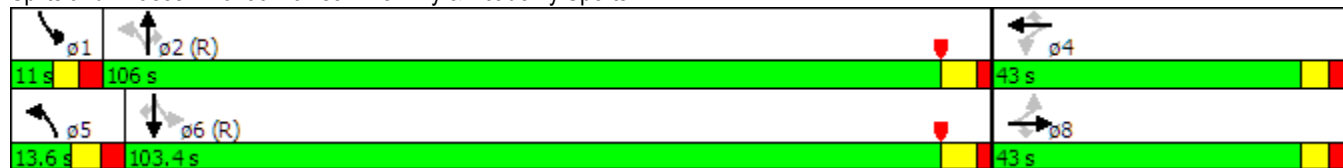
Intersection LOS: B

Intersection Capacity Utilization 81.6%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 6: 53-Dawsonville Hwy & Academy Sports



Lanier Tract DRI

8: Dawsonville Highway/GA 53 & McEver Road/McEver

existing p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	845	213	386	87	91	81	433	1362	46	62	1029	481
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			5%			1%			-1%	
Storage Length (ft)	180		0	0		0	310		185	255		0
Storage Lanes	2		1	1		0	2		1	1		1
Taper Length (ft)	50			0			50			50		
Lane Util. Factor	0.97	0.95	0.95	1.00	1.00	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Frt		0.951	0.850		0.929				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3484	1708	1527	1760	1721	0	3484	3592	1607	1814	3592	1623
Flt Permitted	0.950			0.550			0.950			0.950		
Satd. Flow (perm)	3484	1708	1527	1019	1721	0	3484	3592	1607	1814	3592	1623
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		19	296		27				172			307
Link Speed (mph)		45			25			45			45	
Link Distance (ft)		580			331			921			1504	
Travel Time (s)		8.8			9.0			14.0			22.8	
Peak Hour Factor	0.95	0.95	0.95	0.86	0.86	0.86	0.97	0.97	0.97	0.91	0.91	0.91
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
Adj. Flow (vph)	889	224	406	101	106	94	446	1404	47	68	1131	529
Shared Lane Traffic (%)			27%									
Lane Group Flow (vph)	889	334	296	101	200	0	446	1404	47	68	1131	529
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.03	1.03	1.03	1.01	1.01	1.01	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1		1	1	0	1	1	0
Detector Template												
Leading Detector (ft)	40	40	0	40	40		40	336	0	40	336	0
Trailing Detector (ft)	0	0	0	0	0		0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0		0	330	0	0	330	0
Detector 1 Size(ft)	40	40	0	40	40		40	6	0	40	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	NA	Perm	pm+pt	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases			8	4					6			2
Detector Phase	3	8	8	7	4		1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	13.2	50.2	50.2	11.6	48.2		13.4	35.6	35.6	12.9	44.6	44.6

Lanier Tract DRI

8: Dawsonville Highway/GA 53 & McEver Road/McEver

existing p.m.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	37.0	72.1	72.1	13.1	48.2		23.0	61.8	61.8	13.0	51.8	51.8
Total Split (%)	23.1%	45.1%	45.1%	8.2%	30.1%		14.4%	38.6%	38.6%	8.1%	32.4%	32.4%
Maximum Green (s)	29.7	64.8	64.8	6.6	40.9		15.5	55.2	55.2	5.8	45.2	45.2
Yellow Time (s)	4.3	4.3	4.3	3.5	4.3		4.5	4.4	4.4	4.2	4.4	4.4
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	2.2	2.2	3.0	2.2	2.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.3	7.3	7.3	6.5	7.3		7.5	6.6	6.6	7.2	6.6	6.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)		4.0	4.0		4.0			4.0	4.0		4.0	4.0
Flash Dont Walk (s)		38.0	38.0		36.0			25.0	25.0		34.0	34.0
Pedestrian Calls (#/hr)		0	0		0			0	0		0	0
Act Effect Green (s)	29.7	45.6	45.6	29.1	21.7		15.5	66.4	66.4	13.8	64.4	64.4
Actuated g/C Ratio	0.19	0.28	0.28	0.18	0.14		0.10	0.42	0.42	0.09	0.40	0.40
v/c Ratio	1.38	0.67	0.46	0.47	0.78		1.32	0.94	0.06	0.44	0.78	0.63
Control Delay	225.2	53.9	6.2	45.5	77.5		221.7	71.5	0.1	73.5	62.2	34.7
Queue Delay	0.0	0.4	0.1	1.2	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	225.2	54.3	6.4	46.7	77.5		221.7	71.5	0.1	73.5	62.2	34.7
LOS	F	D	A	D	E		F	E	A	E	E	C
Approach Delay		145.0			67.2			105.0			54.2	
Approach LOS		F			E			F			D	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 52 (33%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.38

Intersection Signal Delay: 98.0

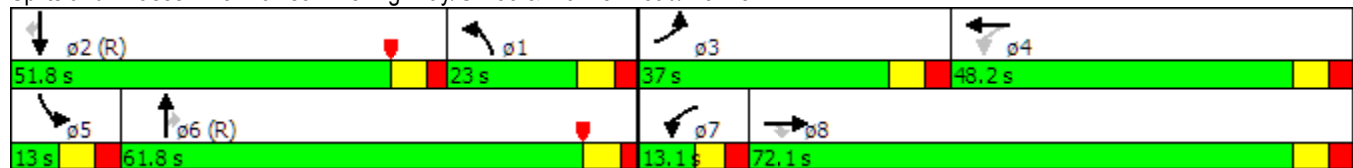
Intersection LOS: F

Intersection Capacity Utilization 99.3%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 8: Dawsonville Highway/GA 53 & McEver Road/McEver



Lanier Tract DRI

9: Dawsonville Highway & Greenhill Circle/Greenhill Circle

existing p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	132	9	138	60	20	38	248	1749	70	40	1392	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		3%			7%			1%			0%	
Storage Length (ft)	0		0	0		0	190		190	185		100
Storage Lanes	0		1	0		1	1		1	1		1
Taper Length (ft)	0			0			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected		0.955			0.964		0.950			0.950		
Satd. Flow (prot)	0	1787	1591	0	1767	1558	1796	3592	1607	1805	3610	1615
Flt Permitted		0.608			0.504		0.091			0.088		
Satd. Flow (perm)	0	1138	1591	0	924	1558	172	3592	1607	167	3610	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			152			95			54			95
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		288			254			778			921	
Travel Time (s)		7.9			6.9			11.8			14.0	
Peak Hour Factor	0.91	0.91	0.91	0.78	0.78	0.78	0.97	0.97	0.97	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	145	10	152	77	26	49	256	1803	72	42	1465	56
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	155	152	0	103	49	256	1803	72	42	1465	56
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.02	1.02	1.02	1.05	1.05	1.05	1.01	1.01	1.01	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1	0	1	1	0	0	1	0
Detector Template	Left			Left								
Leading Detector (ft)	20	40	0	20	40	0	40	336	0	0	336	0
Trailing Detector (ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Size(ft)	20	40	0	20	40	0	40	6	0	0	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8		8	4		4	6		6	2		2
Detector Phase	8	8	8	4	4	4	1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.0	23.0	23.0	39.9	39.9	39.9	11.0	28.0	28.0	10.0	36.0	36.0

Lanier Tract DRI

9: Dawsonville Highway & Greenhill Circle/Greenhill Circle

existing p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	40.0	40.0	40.0	40.0	40.0	40.0	35.0	109.0	109.0	11.0	85.0	85.0
Total Split (%)	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	21.9%	68.1%	68.1%	6.9%	53.1%	53.1%
Maximum Green (s)	34.1	34.1	34.1	34.1	34.1	34.1	29.0	103.0	103.0	6.0	79.0	79.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	4.4	4.4	3.5	4.4	4.4
All-Red Time (s)	2.9	2.9	2.9	2.9	2.9	2.9	3.0	1.6	1.6	1.5	1.6	1.6
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.9	5.9		5.9	5.9	6.0	6.0	6.0	5.0	6.0	6.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)				4.0	4.0	4.0		4.0	4.0		4.0	4.0
Flash Dont Walk (s)				30.0	30.0	30.0		18.0	18.0		26.0	26.0
Pedestrian Calls (#/hr)				0	0	0		0	0		0	0
Act Effect Green (s)		25.7	25.7		25.7	25.7	122.4	113.4	113.4	101.3	94.2	94.2
Actuated g/C Ratio		0.16	0.16		0.16	0.16	0.76	0.71	0.71	0.63	0.59	0.59
v/c Ratio		0.85	0.40		0.70	0.15	0.72	0.71	0.06	0.25	0.69	0.06
Control Delay		100.8	10.4		86.0	0.9	25.8	25.6	6.1	16.4	50.1	11.5
Queue Delay		0.0	0.4		3.9	0.0	0.0	7.9	0.0	0.0	0.4	0.0
Total Delay		100.8	10.8		90.0	0.9	25.8	33.5	6.1	16.4	50.4	11.5
LOS		F	B		F	A	C	C	A	B	D	B
Approach Delay		56.2			61.3			31.6			48.1	
Approach LOS		E			E			C			D	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow

Natural Cycle: 110

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.85

Intersection Signal Delay: 40.7

Intersection LOS: D

Intersection Capacity Utilization 81.6%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 9: Dawsonville Highway & Greenhill Circle/Greenhill Circle



Lanier Tract DRI

10: Dawsonville Highway & Shallowford Rd/Best Buy

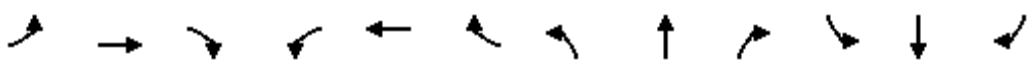
existing p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	518	38	26	36	27	7	40	1639	114	7	1161	463
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-1%			10%			-4%			-1%	
Storage Length (ft)	350		350	0		0	350		150	265		0
Storage Lanes	1		0	0		1	1		1	1		1
Taper Length (ft)	100			0			100			100		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950	0.959			0.972		0.950			0.950		
Satd. Flow (prot)	1723	1740	1623	0	1754	1534	1841	3682	1647	1814	3628	1623
Flt Permitted	0.950	0.959			0.972		0.113			0.060		
Satd. Flow (perm)	1723	1740	1623	0	1754	1534	219	3682	1647	115	3628	1623
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			106			111			65			321
Link Speed (mph)		45			25			45			45	
Link Distance (ft)		653			178			1046			778	
Travel Time (s)		9.9			4.9			15.8			11.8	
Peak Hour Factor	0.90	0.90	0.90	0.88	0.88	0.88	0.94	0.94	0.94	0.91	0.91	0.91
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	576	42	29	41	31	8	43	1744	121	8	1276	509
Shared Lane Traffic (%)	47%											
Lane Group Flow (vph)	305	313	29	0	72	8	43	1744	121	8	1276	509
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes										
Headway Factor	0.99	0.99	0.99	1.07	1.07	1.07	0.97	0.97	0.97	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1	0	1	1	0	0	1	0
Detector Template				Left								
Leading Detector (ft)	40	40	0	20	40	0	40	336	0	0	336	0
Trailing Detector (ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Size(ft)	40	40	0	20	40	0	40	6	0	0	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases	3	3		4	4		1	6			2	
Permitted Phases			3			4	6		6	2		2
Detector Phase	3	3	3	4	4	4	1	6	6	2	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	36.7	36.7	36.7	38.9	38.9	38.9	10.8	28.8	28.8	30.8	30.8	30.8

Lanier Tract DRI

10: Dawsonville Highway & Shallowford Rd/Best Buy

existing p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	37.0	37.0	37.0	38.9	38.9	38.9	10.8	84.1	84.1	73.3	73.3	73.3
Total Split (%)	23.1%	23.1%	23.1%	24.3%	24.3%	24.3%	6.8%	52.6%	52.6%	45.8%	45.8%	45.8%
Maximum Green (s)	30.3	30.3	30.3	33.0	33.0	33.0	5.0	77.3	77.3	66.5	66.5	66.5
Yellow Time (s)	4.5	4.5	4.5	3.0	3.0	3.0	3.0	4.9	4.9	4.9	4.9	4.9
All-Red Time (s)	2.2	2.2	2.2	2.9	2.9	2.9	2.8	1.9	1.9	1.9	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.7	6.7	6.7		5.9	5.9	5.8	6.8	6.8	6.8	6.8	6.8
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes			Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	C-Min	C-Min	C-Min
Walk Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0
Flash Dont Walk (s)	26.0	26.0	26.0	29.0	29.0	29.0		18.0	18.0	20.0	20.0	20.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0	0	0	0	0
Act Effect Green (s)	32.0	32.0	32.0		11.9	11.9	97.7	96.7	96.7	86.2	86.2	86.2
Actuated g/C Ratio	0.20	0.20	0.20		0.07	0.07	0.61	0.60	0.60	0.54	0.54	0.54
v/c Ratio	0.88	0.90	0.07		0.55	0.04	0.21	0.78	0.12	0.13	0.65	0.50
Control Delay	88.1	90.1	0.3		86.7	0.3	15.7	27.6	7.1	51.9	55.6	32.8
Queue Delay	1.0	1.2	0.0		0.0	0.0	0.0	7.4	0.0	0.0	2.0	0.4
Total Delay	89.1	91.3	0.3		86.7	0.3	15.7	34.9	7.1	51.9	57.6	33.2
LOS	F	F	A		F	A	B	C	A	D	E	C
Approach Delay		86.2			78.0			32.7			50.7	
Approach LOS		F			E			C			D	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 91 (57%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.90

Intersection Signal Delay: 48.6

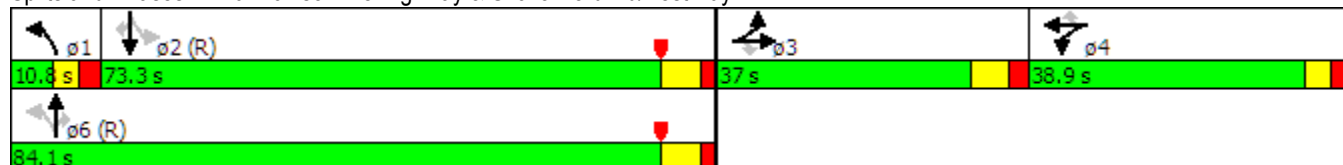
Intersection LOS: D

Intersection Capacity Utilization 81.0%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 10: Dawsonville Highway & Shallowford Rd/Best Buy



Appendix D

No-Build Intersection Analysis

Lanier Tract DRI
1: Sportsman Club Road & Strickland Drive

no build a.m.

Intersection						
Int Delay, s/veh	2.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	11	0	7	1	0	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	50	50	58	58	64	64
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	22	0	12	2	0	39
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	52	13	0	0	14	0
Stage 1	13	-	-	-	-	-
Stage 2	39	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	957	1067	-	-	1604	-
Stage 1	1010	-	-	-	-	-
Stage 2	983	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	957	1067	-	-	1604	-
Mov Cap-2 Maneuver	957	-	-	-	-	-
Stage 1	1010	-	-	-	-	-
Stage 2	983	-	-	-	-	-
Approach	WB		NB		SB	
HCM Control Delay, s	8.9		0		0	
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	- 957	1604	-		
HCM Lane V/C Ratio	-	- 0.023	-	-		
HCM Control Delay (s)	-	- 8.9	0	-		
HCM Lane LOS	-	- A	A	-		
HCM 95th %tile Q(veh)	-	- 0.1	0	-		

Lanier Tract DRI
2: GA 53 & Sportsman Club Road

no build a.m.

Intersection												
Int Delay, s/veh		11.8										
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	10	1863	0	0	820	9	0	0	0	28	0	17
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	84	84	84	92	92	92	59	59	59
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	2166	0	0	976	11	0	0	0	47	0	29
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	987	0	0	2166	0	0	2678	3177	1083	2088	3172	493
Stage 1	-	-	-	-	-	-	2190	2190	-	982	982	-
Stage 2	-	-	-	-	-	-	488	987	-	1106	2190	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	696	-	-	243	-	-	11	10	213	~ 30	10	522
Stage 1	-	-	-	-	-	-	46	82	-	267	325	-
Stage 2	-	-	-	-	-	-	530	324	-	224	82	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	696	-	-	243	-	-	10	10	213	~ 30	10	522
Mov Cap-2 Maneuver	-	-	-	-	-	-	10	10	-	~ 30	10	-
Stage 1	-	-	-	-	-	-	45	81	-	262	325	-
Stage 2	-	-	-	-	-	-	501	324	-	220	81	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0			0			\$ 496.6		
HCM LOS							A			F		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	-	696	-	-	243	-	-	47				
HCM Lane V/C Ratio	-	0.017	-	-	-	-	-	1.623				
HCM Control Delay (s)	0	10.3	-	-	0	-	-	\$ 496.6				
HCM Lane LOS	A	B	-	-	A	-	-	F				
HCM 95th %tile Q(veh)	-	0.1	-	-	0	-	-	7.5				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined			*: All major volume in platoon					

Lanier Tract DRI
3: GA 53 & Avonlea Way

no build a.m.

Intersection						
Int Delay, s/veh	4.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	17	79	13	836	1842	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	88	88	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	20	94	15	950	2142	8
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	2647	1071	2142	0	-	0
Stage 1	2142	-	-	-	-	-
Stage 2	505	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	~ 19	217	249	-	-	-
Stage 1	76	-	-	-	-	-
Stage 2	571	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 18	217	249	-	-	-
Mov Cap-2 Maneuver	~ 18	-	-	-	-	-
Stage 1	76	-	-	-	-	-
Stage 2	537	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	125.5	0.3		0		
HCM LOS	F					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	249	-	18	217	-	-
HCM Lane V/C Ratio	0.059	-	1.124	0.433	-	-
HCM Control Delay (s)	20.4	-	552.3	33.7	-	-
HCM Lane LOS	C	-	F	D	-	-
HCM 95th %tile Q(veh)	0.2	-	2.9	2	-	-
Notes						
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon						

Lanier Tract DRI
4: GA 53 & Canterbury Road

no build a.m.

Intersection						
Int Delay, s/veh	6.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	20	105	25	797	1969	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	86	86	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	23	119	29	927	2164	9
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	2686	1082	2164	0	-	0
Stage 1	2164	-	-	-	-	-
Stage 2	522	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	~ 18	213	244	-	-	-
Stage 1	74	-	-	-	-	-
Stage 2	560	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 16	213	244	-	-	-
Mov Cap-2 Maneuver	~ 16	-	-	-	-	-
Stage 1	74	-	-	-	-	-
Stage 2	493	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	149.3	0.7		0		
HCM LOS	F					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	244	-	16	213	-	-
HCM Lane V/C Ratio	0.119	-	1.42	0.56	-	-
HCM Control Delay (s)	21.7	-	715.5	41.5	-	-
HCM Lane LOS	C	-	F	E	-	-
HCM 95th %tile Q(veh)	0.4	-	3.4	3	-	-
Notes						
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon						

Lanier Tract DRI
7: GA 53 & Beechwood Boulevard

no build a.m.

Intersection						
Int Delay, s/veh	2.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	6	45	30	869	2215	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	Yield	-	None
Storage Length	0	0	200	-	-	360
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	1	0	-
Peak Hour Factor	82	82	87	87	89	89
Heavy Vehicles, %	0	0	0	1	0	0
Mvmt Flow	7	55	34	999	2489	2
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	3057	1244	2489	0	-	0
Stage 1	2489	-	-	-	-	-
Stage 2	568	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	10	169	187	-	-	-
Stage 1	50	-	-	-	-	-
Stage 2	536	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	8	169	187	-	-	-
Mov Cap-2 Maneuver	8	-	-	-	-	-
Stage 1	50	-	-	-	-	-
Stage 2	439	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	133.9	1		0		
HCM LOS	F					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	187	-	8	169	-	-
HCM Lane V/C Ratio	0.184	-	0.915	0.325	-	-
HCM Control Delay (s)	28.6	-	\$ 866.6	36.2	-	-
HCM Lane LOS	D	-	F	E	-	-
HCM 95th %tile Q(veh)	0.7	-	1.6	1.3	-	-

Lanier Tract DRI

5: GA 53 & Lanier Valley Dr/Ahaluna Dr

no build a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	21	6	127	41	3	22	61	774	12	15	2099	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		2%			-4%			1%			-1%	
Storage Length (ft)	0		0	0		0	100		0	140		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	0			0			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.889			0.954			0.998				
Flt Protected		0.993			0.970		0.950			0.950		
Satd. Flow (prot)	0	1661	0	0	1793	0	1796	3516	0	1814	3628	0
Flt Permitted		0.940			0.380		0.035			0.309		
Satd. Flow (perm)	0	1572	0	0	703	0	66	3516	0	590	3628	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		71			14			4				
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		340			322			888			1417	
Travel Time (s)		7.7			7.3			13.5			21.5	
Peak Hour Factor	0.91	0.91	0.91	0.83	0.83	0.83	0.85	0.85	0.85	0.87	0.87	0.87
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	0%	0%
Adj. Flow (vph)	23	7	140	49	4	27	72	911	14	17	2413	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	170	0	0	80	0	72	925	0	17	2413	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	0.97	0.97	0.97	1.01	1.01	1.01	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		0	1	
Detector Template	Left			Left								
Leading Detector (ft)	20	40		20	40		40	336		0	336	
Trailing Detector (ft)	0	0		0	0		0	330		0	330	
Detector 1 Position(ft)	0	0		0	0		0	330		0	330	
Detector 1 Size(ft)	20	40		20	40		40	6		0	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		8			4		5	2			6	
Permitted Phases	8			4			2			6		
Detector Phase	8	8		4	4		5	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	23.0	23.0		23.0	23.0		10.6	23.0		23.0	23.0	

Lanier Tract DRI

5: GA 53 & Lanier Valley Dr/Ahaluna Dr

no build a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	24.0	24.0		24.0	24.0		12.0	126.0		114.0	114.0	
Total Split (%)	16.0%	16.0%		16.0%	16.0%		8.0%	84.0%		76.0%	76.0%	
Maximum Green (s)	17.4	17.4		17.4	17.4		6.4	119.9		107.9	107.9	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	4.5		4.5	4.5	
All-Red Time (s)	2.6	2.6		2.6	2.6		2.6	1.6		1.6	1.6	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.6			6.6		5.6	6.1		6.1	6.1	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		C-Max	C-Max	
Act Effect Green (s)		15.4			15.4		122.4	121.9		110.1	110.1	
Actuated g/C Ratio		0.10			0.10		0.82	0.81		0.73	0.73	
v/c Ratio		0.76			0.95		0.58	0.32		0.04	0.91	
Control Delay		58.3			139.1		52.0	2.0		6.3	22.8	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		58.3			139.1		52.0	2.0		6.3	22.8	
LOS		E			F		D	A		A	C	
Approach Delay		58.3			139.1			5.6			22.7	
Approach LOS		E			F			A			C	

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 26 (17%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 110

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.95

Intersection Signal Delay: 22.3

Intersection LOS: C

Intersection Capacity Utilization 80.9%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 5: GA 53 & Lanier Valley Dr/Ahaluna Dr



Lanier Tract DRI

6: 53-Dawsonville Hwy & Academy Sports

no build a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	2	0	7	2	0	0	12	817	10	6	2196	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			4%			1%			0%	
Storage Length (ft)	0		0	0		70	200		170	190		360
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	0			0			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850						0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1900	1615	1769	1862	1862	1796	3556	1607	1805	3610	1615
Flt Permitted							0.037			0.299		
Satd. Flow (perm)	1900	1900	1615	1862	1862	1862	70	3556	1607	568	3610	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			67						68			68
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		262			246			1836			685	
Travel Time (s)		7.1			6.7			27.8			10.4	
Peak Hour Factor	0.67	0.67	0.67	0.50	0.50	0.50	0.86	0.86	0.86	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%
Adj. Flow (vph)	3	0	10	4	0	0	14	950	12	7	2440	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	3	0	10	4	0	0	14	950	12	7	2440	4
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.03	1.03	1.03	1.01	1.01	1.01	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1	1	1	1	1	1	1	0
Detector Template												
Leading Detector (ft)	40	40	0	40	40	40	40	336	0	40	336	0
Trailing Detector (ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Size(ft)	40	40	0	40	40	40	40	6	0	40	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm		Perm	Perm		Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8		8	4		4	2		2	6		6
Detector Phase	8	8	8	4	4	4	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	42.0	42.0	42.0	42.4	42.4	42.4	11.4	30.3	30.3	11.0	29.3	29.3

Lanier Tract DRI

6: 53-Dawsonville Hwy & Academy Sports

no build a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	42.4	42.4	42.4	42.4	42.4	42.4	11.4	96.6	96.6	11.0	96.2	96.2
Total Split (%)	28.3%	28.3%	28.3%	28.3%	28.3%	28.3%	7.6%	64.4%	64.4%	7.3%	64.1%	64.1%
Maximum Green (s)	36.0	36.0	36.0	36.0	36.0	36.0	5.0	90.4	90.4	5.0	90.0	90.0
Yellow Time (s)	3.4	3.4	3.4	3.4	3.4	3.4	3.4	4.3	4.3	3.0	4.3	4.3
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	1.9	1.9	3.0	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.2	6.2	6.0	6.2	6.2
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0
Flash Dont Walk (s)	23.0	23.0	23.0	32.0	32.0	32.0		20.0	20.0		19.0	19.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0	0		0	0
Act Effect Green (s)	6.1		6.1	6.1			137.2	139.9	139.9	136.1	137.4	137.4
Actuated g/C Ratio	0.04		0.04	0.04			0.91	0.93	0.93	0.91	0.92	0.92
v/c Ratio	0.04		0.08	0.05			0.11	0.29	0.01	0.01	0.74	0.00
Control Delay	69.5		1.1	70.0			4.4	0.9	0.0	0.8	3.9	0.0
Queue Delay	0.0		0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.5		1.1	70.0			4.4	0.9	0.0	0.8	3.9	0.0
LOS	E		A	E			A	A	A	A	A	A
Approach Delay								1.0			3.9	
Approach LOS								A			A	

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 27 (18%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 145

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.74

Intersection Signal Delay: 3.2

Intersection LOS: A

Intersection Capacity Utilization 84.9%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 6: 53-Dawsonville Hwy & Academy Sports

 p1	 p2 (R)	 p4
11 s	96.6 s	42.4 s
 p5	 p6 (R)	 p8
11.4 s	96.2 s	42.4 s

Lanier Tract DRI

8: Dawsonville Highway/GA 53 & McEver Road/McEver

no build a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	431	31	378	46	21	20	311	513	61	31	1292	914
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			5%			1%			-1%	
Storage Length (ft)	180		0	0		0	310		185	255		0
Storage Lanes	2		1	1		0	2		1	1		1
Taper Length (ft)	50			0			50			50		
Lane Util. Factor	0.97	0.95	0.95	1.00	1.00	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Frt		0.872	0.850		0.927				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3484	1566	1527	1760	1717	0	3484	3487	1575	1814	3628	1623
Flt Permitted	0.950			0.598			0.950			0.950		
Satd. Flow (perm)	3484	1566	1527	1108	1717	0	3484	3487	1575	1814	3628	1623
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		183	207		31				184			544
Link Speed (mph)		45			45			45			45	
Link Distance (ft)		580			331			921			1624	
Travel Time (s)		8.8			5.0			14.0			24.6	
Peak Hour Factor	0.97	0.97	0.97	0.62	0.62	0.62	0.93	0.93	0.93	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	3%	2%	0%	0%	0%
Adj. Flow (vph)	444	32	390	74	34	32	334	552	66	34	1436	1016
Shared Lane Traffic (%)			47%									
Lane Group Flow (vph)	444	215	207	74	66	0	334	552	66	34	1436	1016
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.03	1.03	1.03	1.01	1.01	1.01	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1		1	1	0	1	1	0
Detector Template												
Leading Detector (ft)	40	40	0	40	40		40	336	0	40	336	0
Trailing Detector (ft)	0	0	0	0	0		0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0		0	330	0	0	330	0
Detector 1 Size(ft)	40	40	0	40	40		40	6	0	40	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	NA	Perm	pm+pt	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases			8	4					6			2
Detector Phase	3	8	8	7	4		1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	13.2	50.2	50.2	11.6	48.2		13.4	35.6	35.6	12.9	44.6	44.6

Lanier Tract DRI

8: Dawsonville Highway/GA 53 & McEver Road/McEver

no build a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	23.0	59.1	59.1	12.1	48.2		20.0	64.6	64.6	14.2	58.8	58.8
Total Split (%)	15.3%	39.4%	39.4%	8.1%	32.1%		13.3%	43.1%	43.1%	9.5%	39.2%	39.2%
Maximum Green (s)	15.7	51.8	51.8	5.6	40.9		12.5	58.0	58.0	7.0	52.2	52.2
Yellow Time (s)	4.3	4.3	4.3	3.5	4.3		4.5	4.4	4.4	4.2	4.4	4.4
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	2.2	2.2	3.0	2.2	2.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.3	7.3	7.3	6.5	7.3		7.5	6.6	6.6	7.2	6.6	6.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)		4.0	4.0		4.0			4.0	4.0		4.0	4.0
Flash Dont Walk (s)		38.0	38.0		36.0			25.0	25.0		34.0	34.0
Pedestrian Calls (#/hr)		0	0		0			0	0		0	0
Act Effect Green (s)	16.1	17.5	17.5	14.0	8.8		12.5	93.5	93.5	8.3	86.5	86.5
Actuated g/C Ratio	0.11	0.12	0.12	0.09	0.06		0.08	0.62	0.62	0.06	0.58	0.58
v/c Ratio	1.19	0.62	0.57	0.58	0.51		1.15	0.25	0.06	0.34	0.69	0.87
Control Delay	164.3	20.5	13.5	70.3	52.3		163.5	17.6	1.5	81.4	21.9	15.3
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	164.3	20.5	13.5	70.3	52.3		163.5	17.6	1.5	81.4	21.9	15.3
LOS	F	C	B	E	D		F	B	A	F	C	B
Approach Delay		92.6			61.8			67.7			20.0	
Approach LOS		F			E			E			C	

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 19 (13%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.19

Intersection Signal Delay: 45.7

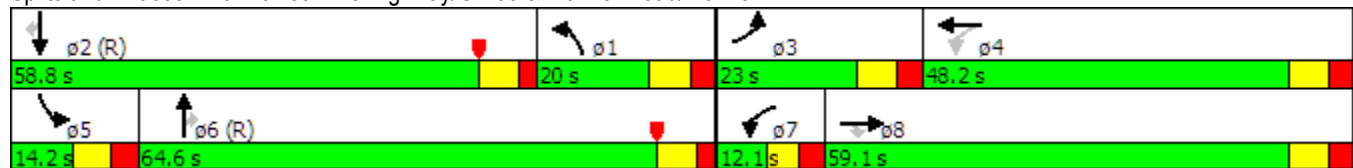
Intersection LOS: D

Intersection Capacity Utilization 87.5%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 8: Dawsonville Highway/GA 53 & McEver Road/McEver



Lanier Tract DRI

9: Dawsonville Highway & Greenhill Circle/Greenhill Circle

no build a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	74	1	156	7	1	4	149	832	11	13	1550	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		3%			7%			1%			0%	
Storage Length (ft)	0		0	0		0	190		190	185		100
Storage Lanes	0		1	0		1	1		1	1		1
Taper Length (ft)	0			0			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected		0.953			0.957		0.950			0.950		
Satd. Flow (prot)	0	1784	1591	0	1755	1558	1796	3522	1607	1805	3610	1615
Flt Permitted		0.721			0.751		0.082			0.296		
Satd. Flow (perm)	0	1349	1591	0	1377	1558	155	3522	1607	562	3610	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			143			102			57			101
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		288			254			778			921	
Travel Time (s)		7.9			6.9			11.8			14.0	
Peak Hour Factor	0.90	0.90	0.90	0.69	0.69	0.69	0.86	0.86	0.86	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	0%	0%
Adj. Flow (vph)	82	1	173	10	1	6	173	967	13	14	1685	62
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	83	173	0	11	6	173	967	13	14	1685	62
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.02	1.02	1.02	1.05	1.05	1.05	1.01	1.01	1.01	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1	0	1	1	0	0	1	0
Detector Template	Left			Left								
Leading Detector (ft)	20	40	0	20	40	0	40	336	0	0	336	0
Trailing Detector (ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Size(ft)	20	40	0	20	40	0	40	6	0	0	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8		8	4		4	6		6	2		2
Detector Phase	8	8	8	4	4	4	1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.0	23.0	23.0	39.9	39.9	39.9	11.0	28.0	28.0	10.0	36.0	36.0

Lanier Tract DRI

9: Dawsonville Highway & Greenhill Circle/Greenhill Circle

no build a.m.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	39.9	39.9	39.9	39.9	39.9	39.9	22.0	100.1	100.1	10.0	88.1	88.1
Total Split (%)	26.6%	26.6%	26.6%	26.6%	26.6%	26.6%	14.7%	66.7%	66.7%	6.7%	58.7%	58.7%
Maximum Green (s)	34.0	34.0	34.0	34.0	34.0	34.0	16.0	94.1	94.1	5.0	82.1	82.1
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	4.4	4.4	3.5	4.4	4.4
All-Red Time (s)	2.9	2.9	2.9	2.9	2.9	2.9	3.0	1.6	1.6	1.5	1.6	1.6
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.9	5.9		5.9	5.9	6.0	6.0	6.0	5.0	6.0	6.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)				4.0	4.0	4.0		4.0	4.0		4.0	4.0
Flash Dont Walk (s)				30.0	30.0	30.0		18.0	18.0		26.0	26.0
Pedestrian Calls (#/hr)				0	0	0		0	0		0	0
Act Effect Green (s)		14.6	14.6		14.6	14.6	123.5	119.1	119.1	108.8	102.1	102.1
Actuated g/C Ratio		0.10	0.10		0.10	0.10	0.82	0.79	0.79	0.73	0.68	0.68
v/c Ratio		0.64	0.61		0.08	0.02	0.58	0.35	0.01	0.03	0.69	0.05
Control Delay		85.5	24.1		59.9	0.2	29.1	4.6	0.0	4.0	14.0	0.8
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
Total Delay		85.5	24.1		59.9	0.2	29.1	4.6	0.0	4.0	14.1	0.8
LOS		F	C		E	A	C	A	A	A	B	A
Approach Delay		44.0			38.8			8.2			13.5	
Approach LOS		D			D			A			B	

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.69

Intersection Signal Delay: 14.2

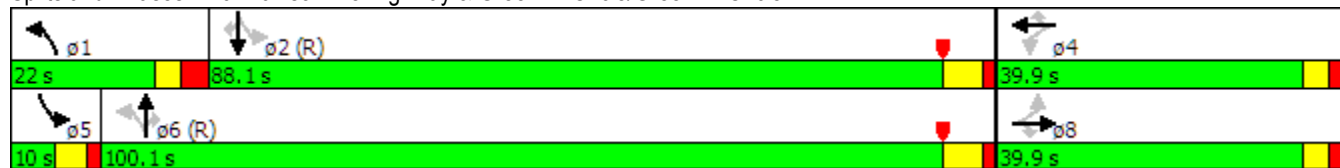
Intersection LOS: B

Intersection Capacity Utilization 76.8%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 9: Dawsonville Highway & Greenhill Circle/Greenhill Circle



Lanier Tract DRI

10: Dawsonville Highway & Shallowford Rd/Best Buy

no build a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	152	2	9	2	4	3	11	815	14	1	1379	373
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-1%			10%			-4%			-1%	
Storage Length (ft)	350		350	0		0	350		150	265		0
Storage Lanes	1		0	0		1	1		1	1		1
Taper Length (ft)	100			0			100			100		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950	0.953			0.982		0.950			0.950		
Satd. Flow (prot)	1723	1729	1623	0	1773	1534	1841	3646	1647	1814	3592	1623
Flt Permitted	0.950	0.953			0.982		0.125			0.292		
Satd. Flow (perm)	1723	1729	1623	0	1773	1534	242	3646	1647	558	3592	1623
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			113			119			70			218
Link Speed (mph)		45			25			45			45	
Link Distance (ft)		653			178			957			778	
Travel Time (s)		9.9			4.9			14.5			11.8	
Peak Hour Factor	0.84	0.84	0.84	0.56	0.56	0.56	0.83	0.83	0.83	0.93	0.93	0.93
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	1%	0%
Adj. Flow (vph)	181	2	11	4	7	5	13	982	17	1	1483	401
Shared Lane Traffic (%)	49%											
Lane Group Flow (vph)	92	91	11	0	11	5	13	982	17	1	1483	401
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes										
Headway Factor	0.99	0.99	0.99	1.07	1.07	1.07	0.97	0.97	0.97	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1	0	1	1	0	0	1	0
Detector Template				Left								
Leading Detector (ft)	40	40	0	20	40	0	40	336	0	0	336	0
Trailing Detector (ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Size(ft)	40	40	0	20	40	0	40	6	0	0	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases	3	3		4	4		1	6			2	
Permitted Phases			3			4	6		6	2		2
Detector Phase	3	3	3	4	4	4	1	6	6	2	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	36.7	36.7	36.7	38.9	38.9	38.9	10.8	28.8	28.8	30.8	30.8	30.8

Lanier Tract DRI

10: Dawsonville Highway & Shallowford Rd/Best Buy

no build a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	36.7	36.7	36.7	38.9	38.9	38.9	10.8	74.4	74.4	63.6	63.6	63.6
Total Split (%)	24.5%	24.5%	24.5%	25.9%	25.9%	25.9%	7.2%	49.6%	49.6%	42.4%	42.4%	42.4%
Maximum Green (s)	30.0	30.0	30.0	33.0	33.0	33.0	5.0	67.6	67.6	56.8	56.8	56.8
Yellow Time (s)	4.5	4.5	4.5	3.0	3.0	3.0	3.0	4.9	4.9	4.9	4.9	4.9
All-Red Time (s)	2.2	2.2	2.2	2.9	2.9	2.9	2.8	1.9	1.9	1.9	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.7	6.7	6.7		5.9	5.9	5.8	6.8	6.8	6.8	6.8	6.8
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes			Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	C-Min	C-Min	C-Min
Walk Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0
Flash Dont Walk (s)	26.0	26.0	26.0	29.0	29.0	29.0		18.0	18.0	20.0	20.0	20.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0	0	0	0	0
Act Effect Green (s)	13.4	13.4	13.4		6.5	6.5	118.7	117.7	117.7	113.0	113.0	113.0
Actuated g/C Ratio	0.09	0.09	0.09		0.04	0.04	0.79	0.78	0.78	0.75	0.75	0.75
v/c Ratio	0.60	0.59	0.04		0.14	0.03	0.05	0.34	0.01	0.00	0.55	0.31
Control Delay	81.2	80.6	0.3		72.5	0.3	5.8	6.1	0.0	7.0	10.2	4.2
Queue Delay	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0
Total Delay	81.2	80.6	0.3		72.5	0.3	5.8	6.1	0.0	7.0	10.5	4.2
LOS	F	F	A		E	A	A	A	A	A	B	A
Approach Delay		76.3			49.9			6.0			9.1	
Approach LOS		E			D			A			A	

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 45 (30%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.60

Intersection Signal Delay: 12.5

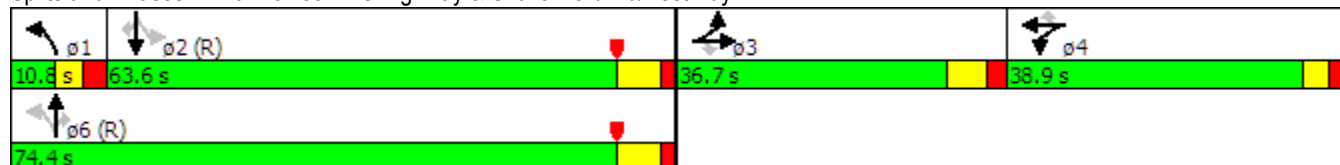
Intersection LOS: B

Intersection Capacity Utilization 62.6%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 10: Dawsonville Highway & Shallowford Rd/Best Buy



Lanier Tract DRI
1: Sportsman Club Road & Strickland Drive

no build p.m.

Intersection

Int Delay, s/veh 1.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	8	0	32	10	0	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	44	44	86	86	82	82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	18	0	37	12	0	30

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	73	43	0 0 49 0
Stage 1	43	-	- - - -
Stage 2	30	-	- - - -
Critical Hdwy	6.42	6.22	- - 4.12 -
Critical Hdwy Stg 1	5.42	-	- - - -
Critical Hdwy Stg 2	5.42	-	- - - -
Follow-up Hdwy	3.518	3.318	- - 2.218 -
Pot Cap-1 Maneuver	931	1027	- - 1558 -
Stage 1	979	-	- - - -
Stage 2	993	-	- - - -
Platoon blocked, %			- - - -
Mov Cap-1 Maneuver	931	1027	- - 1558 -
Mov Cap-2 Maneuver	931	-	- - - -
Stage 1	979	-	- - - -
Stage 2	993	-	- - - -

Approach	WB	NB	SB
HCM Control Delay, s	8.9	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	- 931	1558	-
HCM Lane V/C Ratio	-	- 0.02	-	-
HCM Control Delay (s)	-	- 8.9	0	-
HCM Lane LOS	-	- A	A	-
HCM 95th %tile Q(veh)	-	- 0.1	0	-

Lanier Tract DRI
2: GA 53 & Sportsman Club Road

no build p.m.

Intersection												
Int Delay, s/veh	34.3											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	17	1147	0	2	1845	21	0	0	0	31	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	96	96	96	92	92	92	66	66	66
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	18	1207	0	2	1922	22	0	0	0	47	0	15

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1944	0	0	1207	0	0	2208	3191	604	2576	3180	972
Stage 1	-	-	-	-	-	-	1243	1243	-	1937	1937	-
Stage 2	-	-	-	-	-	-	965	1948	-	639	1243	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	298	-	-	574	-	-	24	10	441	~ 13	10	252
Stage 1	-	-	-	-	-	-	185	245	-	68	111	-
Stage 2	-	-	-	-	-	-	274	110	-	431	245	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	298	-	-	574	-	-	21	9	441	~ 12	9	252
Mov Cap-2 Maneuver	-	-	-	-	-	-	21	9	-	~ 12	9	-
Stage 1	-	-	-	-	-	-	174	230	-	64	111	-
Stage 2	-	-	-	-	-	-	257	110	-	405	230	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0	0	\$ 1780.7
HCM LOS			A	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	298	-	-	574	-	-	16
HCM Lane V/C Ratio	-	0.06	-	-	0.004	-	-	3.883
HCM Control Delay (s)	0	17.9	-	-	11.3	-	-	\$ 1780.7
HCM Lane LOS	A	C	-	-	B	-	-	F
HCM 95th %tile Q(veh)	-	0.2	-	-	0	-	-	8.5

Notes			
~: Volume exceeds capacity	\$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection						
Int Delay, s/veh	1.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	11	52	68	1822	1217	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	76	76	95	95	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	14	68	72	1918	1217	15
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	2319	609	1217	0	-	0
Stage 1	1217	-	-	-	-	-
Stage 2	1102	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	32	438	569	-	-	-
Stage 1	243	-	-	-	-	-
Stage 2	280	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	28	438	569	-	-	-
Mov Cap-2 Maneuver	28	-	-	-	-	-
Stage 1	243	-	-	-	-	-
Stage 2	245	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	52.1	0.4		0		
HCM LOS	F					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	569	-	28	438	-	-
HCM Lane V/C Ratio	0.126	-	0.517	0.156	-	-
HCM Control Delay (s)	12.2	-	229.1	14.7	-	-
HCM Lane LOS	B	-	F	B	-	-
HCM 95th %tile Q(veh)	0.4	-	1.6	0.5	-	-

Lanier Tract DRI
4: Canterbury Road & GA 53

no build p.m.

Intersection						
Int Delay, s/veh	1.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	8	31	123	1857	1223	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	10	39	128	1934	1274	16
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	2497	637	1274	0	-	0
Stage 1	1274	-	-	-	-	-
Stage 2	1223	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	24	420	541	-	-	-
Stage 1	226	-	-	-	-	-
Stage 2	241	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	18	420	541	-	-	-
Mov Cap-2 Maneuver	18	-	-	-	-	-
Stage 1	226	-	-	-	-	-
Stage 2	184	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	83.2	0.9		0		
HCM LOS	F					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	541	-	18	420	-	-
HCM Lane V/C Ratio	0.237	-	0.556	0.092	-	-
HCM Control Delay (s)	13.7	-	\$ 349.9	14.4	-	-
HCM Lane LOS	B	-	F	B	-	-
HCM 95th %tile Q(veh)	0.9	-	1.5	0.3	-	-

Lanier Tract DRI
7: GA 53 & Beechwood Boulevard

no build p.m.

Intersection						
Int Delay, s/veh	0.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	1	52	95	2206	1532	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	Yield	-	None
Storage Length	0	0	200	-	-	360
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	1	0	-
Peak Hour Factor	71	71	99	99	98	98
Heavy Vehicles, %	0	0	0	0	1	0
Mvmt Flow	1	73	96	2228	1563	10
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	2869	783	1563	0	-	0
Stage 1	1563	-	-	-	-	-
Stage 2	1306	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	14	341	428	-	-	-
Stage 1	161	-	-	-	-	-
Stage 2	221	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	11	341	428	-	-	-
Mov Cap-2 Maneuver	11	-	-	-	-	-
Stage 1	161	-	-	-	-	-
Stage 2	171	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	25.1	0.7		0		
HCM LOS	D					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	428	-	11	341	-	-
HCM Lane V/C Ratio	0.224	-	0.128	0.215	-	-
HCM Control Delay (s)	15.8	-	375.6	18.4	-	-
HCM Lane LOS	C	-	F	C	-	-
HCM 95th %tile Q(veh)	0.8	-	0.3	0.8	-	-

Lanier Tract DRI

5: GA 53 & Lanier Valley Dr/Ahaluna Dr

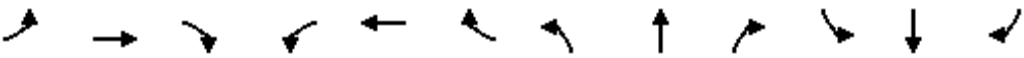
no build p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	23	1	106	41	8	56	198	1918	42	22	1326	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		2%			-4%			1%			-1%	
Storage Length (ft)	0		0	0		0	100		0	140		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	0			0			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.890			0.928			0.997				
Flt Protected		0.991			0.981		0.950			0.950		
Satd. Flow (prot)	0	1659	0	0	1764	0	1796	3581	0	1814	3592	0
Flt Permitted		0.860			0.589		0.143			0.080		
Satd. Flow (perm)	0	1440	0	0	1059	0	270	3581	0	153	3592	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		119			31			4				
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		340			322			1002			1457	
Travel Time (s)		7.7			7.3			15.2			22.1	
Peak Hour Factor	0.89	0.89	0.89	0.85	0.85	0.85	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
Adj. Flow (vph)	26	1	119	48	9	66	206	1998	44	23	1381	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	146	0	0	123	0	206	2042	0	23	1384	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	0.97	0.97	0.97	1.01	1.01	1.01	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		0	1	
Detector Template	Left			Left								
Leading Detector (ft)	20	40		20	40		40	336		0	336	
Trailing Detector (ft)	0	0		0	0		0	330		0	330	
Detector 1 Position(ft)	0	0		0	0		0	330		0	330	
Detector 1 Size(ft)	20	40		20	40		40	6		0	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		8			4		5	2			6	
Permitted Phases	8			4			2			6		
Detector Phase	8	8		4	4		5	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	23.0	23.0		23.0	23.0		10.6	23.0		23.0	23.0	

Lanier Tract DRI

5: GA 53 & Lanier Valley Dr/Ahaluna Dr

no build p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	33.0	33.0		33.0	33.0		28.0	127.0		99.0	99.0	
Total Split (%)	20.6%	20.6%		20.6%	20.6%		17.5%	79.4%		61.9%	61.9%	
Maximum Green (s)	26.4	26.4		26.4	26.4		22.4	120.9		92.9	92.9	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	4.5		4.5	4.5	
All-Red Time (s)	2.6	2.6		2.6	2.6		2.6	1.6		1.6	1.6	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.6			6.6		5.6	6.1		6.1	6.1	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		C-Max	C-Max	
Act Effect Green (s)		17.5			17.5		130.3	129.8		112.6	112.6	
Actuated g/C Ratio		0.11			0.11		0.81	0.81		0.70	0.70	
v/c Ratio		0.56			0.86		0.62	0.70		0.21	0.55	
Control Delay		23.8			96.6		18.7	10.7		18.1	13.9	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		23.8			96.6		18.7	10.7		18.1	13.9	
LOS		C			F		B	B		B	B	
Approach Delay		23.8			96.6			11.5			14.0	
Approach LOS		C			F			B			B	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 129 (81%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 75

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.86

Intersection Signal Delay: 15.5

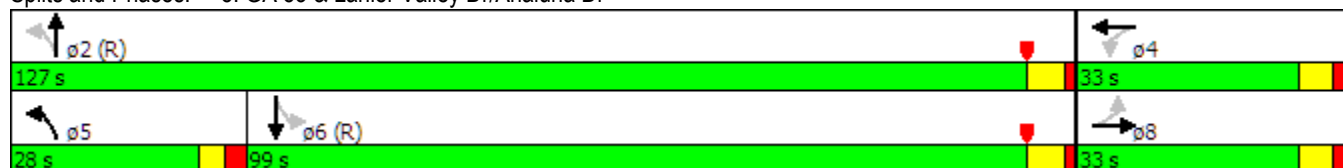
Intersection LOS: B

Intersection Capacity Utilization 86.1%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 5: GA 53 & Lanier Valley Dr/Ahaluna Dr



Lanier Tract DRI

6: 53-Dawsonville Hwy & Academy Sports

no build p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	14	3	66	130	8	46	96	1947	152	21	1324	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			4%			1%			0%	
Storage Length (ft)	0		0	0		70	200		170	190		360
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	0			0			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1900	1615	1769	1862	1583	1796	3592	1607	1805	3574	1615
Flt Permitted	0.751			0.756			0.144			0.054		
Satd. Flow (perm)	1427	1900	1615	1408	1862	1583	272	3592	1607	103	3574	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			69			63			70			64
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		262			246			1836			685	
Travel Time (s)		7.1			6.7			27.8			10.4	
Peak Hour Factor	0.95	0.95	0.95	0.80	0.80	0.80	0.98	0.98	0.98	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
Adj. Flow (vph)	15	3	69	162	10	58	98	1987	155	22	1365	31
Shared Lane Traffic (%)												
Lane Group Flow (vph)	15	3	69	162	10	58	98	1987	155	22	1365	31
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.03	1.03	1.03	1.01	1.01	1.01	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1	1	1	1	1	1	1	0
Detector Template												
Leading Detector (ft)	40	40	0	40	40	40	40	336	0	40	336	0
Trailing Detector (ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Size(ft)	40	40	0	40	40	40	40	6	0	40	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8		8	4		4	2		2	6		6
Detector Phase	8	8	8	4	4	4	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	42.0	42.0	42.0	42.4	42.4	42.4	11.4	30.3	30.3	11.0	29.3	29.3

Lanier Tract DRI

6: 53-Dawsonville Hwy & Academy Sports

no build p.m.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	42.4	42.4	42.4	42.4	42.4	42.4	15.6	106.6	106.6	11.0	102.0	102.0
Total Split (%)	26.5%	26.5%	26.5%	26.5%	26.5%	26.5%	9.8%	66.6%	66.6%	6.9%	63.8%	63.8%
Maximum Green (s)	36.0	36.0	36.0	36.0	36.0	36.0	9.2	100.4	100.4	5.0	95.8	95.8
Yellow Time (s)	3.4	3.4	3.4	3.4	3.4	3.4	3.4	4.3	4.3	3.0	4.3	4.3
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	1.9	1.9	3.0	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.2	6.2	6.0	6.2	6.2
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0
Flash Dont Walk (s)	23.0	23.0	23.0	32.0	32.0	32.0		20.0	20.0		19.0	19.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0	0		0	0
Act Effect Green (s)	23.7	23.7	23.7	23.7	23.7	23.7	121.3	116.4	116.4	115.8	109.6	109.6
Actuated g/C Ratio	0.15	0.15	0.15	0.15	0.15	0.15	0.76	0.73	0.73	0.72	0.68	0.68
v/c Ratio	0.07	0.01	0.23	0.78	0.04	0.20	0.35	0.76	0.13	0.16	0.56	0.03
Control Delay	55.8	53.3	13.0	89.1	54.6	11.7	9.3	15.7	7.2	7.5	10.9	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
Total Delay	55.8	53.3	13.0	89.1	54.6	11.7	9.3	15.7	7.2	7.5	11.0	0.0
LOS	E	D	B	F	D	B	A	B	A	A	B	A
Approach Delay		21.8			68.1			14.8			10.7	
Approach LOS		C			E			B			B	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 120 (75%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 135

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.78

Intersection Signal Delay: 16.6

Intersection LOS: B

Intersection Capacity Utilization 87.4%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 6: 53-Dawsonville Hwy & Academy Sports

11 s	106.6 s		42.4 s
15.6 s	102 s		42.4 s

Lanier Tract DRI

8: Dawsonville Highway/GA 53 & McEver Road/McEver

no build p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	933	235	426	96	100	89	478	1504	51	68	1136	531
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			5%			1%			-1%	
Storage Length (ft)	180		0	0		0	310		185	255		0
Storage Lanes	2		1	1		0	2		1	1		1
Taper Length (ft)	50			0			50			50		
Lane Util. Factor	0.97	0.95	0.95	1.00	1.00	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Frt		0.951	0.850		0.929				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3484	1708	1527	1760	1721	0	3484	3592	1607	1814	3592	1623
Flt Permitted	0.950			0.465			0.950			0.950		
Satd. Flow (perm)	3484	1708	1527	861	1721	0	3484	3592	1607	1814	3592	1623
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18	326		27				172			312
Link Speed (mph)		45			25			45			45	
Link Distance (ft)		580			331			921			1504	
Travel Time (s)		8.8			9.0			14.0			22.8	
Peak Hour Factor	0.95	0.95	0.95	0.86	0.86	0.86	0.97	0.97	0.97	0.91	0.91	0.91
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
Adj. Flow (vph)	982	247	448	112	116	103	493	1551	53	75	1248	584
Shared Lane Traffic (%)			27%									
Lane Group Flow (vph)	982	368	327	112	219	0	493	1551	53	75	1248	584
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.03	1.03	1.03	1.01	1.01	1.01	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1		1	1	0	1	1	0
Detector Template												
Leading Detector (ft)	40	40	0	40	40		40	336	0	40	336	0
Trailing Detector (ft)	0	0	0	0	0		0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0		0	330	0	0	330	0
Detector 1 Size(ft)	40	40	0	40	40		40	6	0	40	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	NA	Perm	pm+pt	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases			8	4					6			2
Detector Phase	3	8	8	7	4		1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	13.2	50.2	50.2	11.6	48.2		13.4	35.6	35.6	12.9	44.6	44.6

Lanier Tract DRI

8: Dawsonville Highway/GA 53 & McEver Road/McEver

no build p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	35.0	69.5	69.5	13.7	48.2		23.0	63.8	63.8	13.0	53.8	53.8
Total Split (%)	21.9%	43.4%	43.4%	8.6%	30.1%		14.4%	39.9%	39.9%	8.1%	33.6%	33.6%
Maximum Green (s)	27.7	62.2	62.2	7.2	40.9		15.5	57.2	57.2	5.8	47.2	47.2
Yellow Time (s)	4.3	4.3	4.3	3.5	4.3		4.5	4.4	4.4	4.2	4.4	4.4
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	2.2	2.2	3.0	2.2	2.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.3	7.3	7.3	6.5	7.3		7.5	6.6	6.6	7.2	6.6	6.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)		4.0	4.0		4.0			4.0	4.0		4.0	4.0
Flash Dont Walk (s)		38.0	38.0		36.0			25.0	25.0		34.0	34.0
Pedestrian Calls (#/hr)		0	0		0			0	0		0	0
Act Effect Green (s)	27.7	44.8	44.8	31.5	23.5		15.5	65.4	65.4	15.0	64.6	64.6
Actuated g/C Ratio	0.17	0.28	0.28	0.20	0.15		0.10	0.41	0.41	0.09	0.40	0.40
v/c Ratio	1.63	0.75	0.49	0.54	0.80		1.46	1.06	0.07	0.44	0.86	0.69
Control Delay	329.5	59.4	6.5	47.6	77.6		273.4	95.6	0.1	69.6	66.1	38.9
Queue Delay	0.0	2.9	0.6	9.2	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	329.5	62.2	7.0	56.8	77.6		273.4	95.6	0.1	69.6	66.1	38.9
LOS	F	E	A	E	E		F	F	A	E	E	D
Approach Delay		208.0			70.6			135.0			57.9	
Approach LOS		F			E			F			E	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 52 (33%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.63

Intersection Signal Delay: 127.3

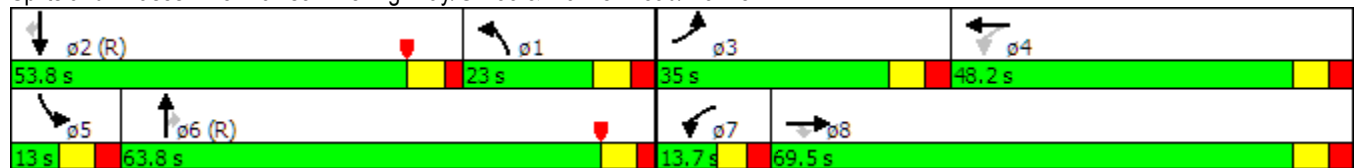
Intersection LOS: F

Intersection Capacity Utilization 106.7%

ICU Level of Service G

Analysis Period (min) 15

Splits and Phases: 8: Dawsonville Highway/GA 53 & McEver Road/McEver



Lanier Tract DRI

9: Dawsonville Highway & Greenhill Circle/Greenhill Circle

no build p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	146	10	152	66	22	42	274	1931	77	44	1537	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		3%			7%			1%			0%	
Storage Length (ft)	0		0	0		0	190		190	185		100
Storage Lanes	0		1	0		1	1		1	1		1
Taper Length (ft)	0			0			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected		0.955			0.964		0.950			0.950		
Satd. Flow (prot)	0	1787	1591	0	1767	1558	1796	3592	1607	1805	3610	1615
Flt Permitted		0.591			0.482		0.054			0.055		
Satd. Flow (perm)	0	1106	1591	0	884	1558	102	3592	1607	104	3610	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			167			95			54			95
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		288			254			778			921	
Travel Time (s)		7.9			6.9			11.8			14.0	
Peak Hour Factor	0.91	0.91	0.91	0.78	0.78	0.78	0.97	0.97	0.97	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	160	11	167	85	28	54	282	1991	79	46	1618	62
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	171	167	0	113	54	282	1991	79	46	1618	62
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.02	1.02	1.02	1.05	1.05	1.05	1.01	1.01	1.01	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1	0	1	1	0	0	1	0
Detector Template	Left			Left								
Leading Detector (ft)	20	40	0	20	40	0	40	336	0	0	336	0
Trailing Detector (ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Size(ft)	20	40	0	20	40	0	40	6	0	0	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8		8	4		4	6		6	2		2
Detector Phase	8	8	8	4	4	4	1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.0	23.0	23.0	39.9	39.9	39.9	11.0	28.0	28.0	10.0	36.0	36.0

Lanier Tract DRI

9: Dawsonville Highway & Greenhill Circle/Greenhill Circle

no build p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	39.9	39.9	39.9	39.9	39.9	39.9	32.0	110.1	110.1	10.0	88.1	88.1
Total Split (%)	24.9%	24.9%	24.9%	24.9%	24.9%	24.9%	20.0%	68.8%	68.8%	6.3%	55.1%	55.1%
Maximum Green (s)	34.0	34.0	34.0	34.0	34.0	34.0	26.0	104.1	104.1	5.0	82.1	82.1
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	4.4	4.4	3.5	4.4	4.4
All-Red Time (s)	2.9	2.9	2.9	2.9	2.9	2.9	3.0	1.6	1.6	1.5	1.6	1.6
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.9	5.9		5.9	5.9	6.0	6.0	6.0	5.0	6.0	6.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)				4.0	4.0	4.0		4.0	4.0		4.0	4.0
Flash Dont Walk (s)				30.0	30.0	30.0		18.0	18.0		26.0	26.0
Pedestrian Calls (#/hr)				0	0	0		0	0		0	0
Act Effect Green (s)		28.1	28.1		28.1	28.1	120.0	111.5	111.5	96.9	90.2	90.2
Actuated g/C Ratio		0.18	0.18		0.18	0.18	0.75	0.70	0.70	0.61	0.56	0.56
v/c Ratio		0.88	0.40		0.73	0.15	0.86	0.80	0.07	0.38	0.80	0.07
Control Delay		103.0	9.8		87.7	1.7	49.2	28.9	5.5	21.7	55.9	11.8
Queue Delay		0.0	2.3		78.3	0.0	0.0	47.3	0.0	0.0	1.0	0.0
Total Delay		103.0	12.1		166.0	1.7	49.2	76.2	5.5	21.7	56.9	11.8
LOS		F	B		F	A	D	E	A	C	E	B
Approach Delay		58.1			112.9			70.6			54.3	
Approach LOS		E			F			E			D	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow

Natural Cycle: 120

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.88

Intersection Signal Delay: 65.1

Intersection LOS: E

Intersection Capacity Utilization 87.9%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 9: Dawsonville Highway & Greenhill Circle/Greenhill Circle



Lanier Tract DRI

10: Dawsonville Highway & Shallowford Rd/Best Buy

no build p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	572	42	29	40	30	8	44	1810	126	8	1282	511
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-1%			10%			-4%			-1%	
Storage Length (ft)	350		350	0		0	350		150	265		0
Storage Lanes	1		0	0		1	1		1	1		1
Taper Length (ft)	100			0			100			100		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950	0.959			0.972		0.950			0.950		
Satd. Flow (prot)	1723	1740	1623	0	1754	1534	1841	3682	1647	1814	3628	1623
Flt Permitted	0.950	0.959			0.972		0.085			0.046		
Satd. Flow (perm)	1723	1740	1623	0	1754	1534	165	3682	1647	88	3628	1623
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			106			111			65			321
Link Speed (mph)		45			25			45			45	
Link Distance (ft)		653			178			1046			778	
Travel Time (s)		9.9			4.9			15.8			11.8	
Peak Hour Factor	0.90	0.90	0.90	0.88	0.88	0.88	0.94	0.94	0.94	0.91	0.91	0.91
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	636	47	32	45	34	9	47	1926	134	9	1409	562
Shared Lane Traffic (%)	46%											
Lane Group Flow (vph)	343	340	32	0	79	9	47	1926	134	9	1409	562
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes										
Headway Factor	0.99	0.99	0.99	1.07	1.07	1.07	0.97	0.97	0.97	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1	0	1	1	0	0	1	0
Detector Template				Left								
Leading Detector (ft)	40	40	0	20	40	0	40	336	0	0	336	0
Trailing Detector (ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Size(ft)	40	40	0	20	40	0	40	6	0	0	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases	3	3		4	4		1	6			2	
Permitted Phases			3			4	6		6	2		2
Detector Phase	3	3	3	4	4	4	1	6	6	2	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	36.7	36.7	36.7	38.9	38.9	38.9	10.8	28.8	28.8	30.8	30.8	30.8

Lanier Tract DRI

10: Dawsonville Highway & Shallowford Rd/Best Buy

no build p.m.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	36.8	36.8	36.8	38.9	38.9	38.9	10.8	84.3	84.3	73.5	73.5	73.5
Total Split (%)	23.0%	23.0%	23.0%	24.3%	24.3%	24.3%	6.8%	52.7%	52.7%	45.9%	45.9%	45.9%
Maximum Green (s)	30.1	30.1	30.1	33.0	33.0	33.0	5.0	77.5	77.5	66.7	66.7	66.7
Yellow Time (s)	4.5	4.5	4.5	3.0	3.0	3.0	3.0	4.9	4.9	4.9	4.9	4.9
All-Red Time (s)	2.2	2.2	2.2	2.9	2.9	2.9	2.8	1.9	1.9	1.9	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.7	6.7	6.7		5.9	5.9	5.8	6.8	6.8	6.8	6.8	6.8
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes			Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	C-Min	C-Min	C-Min
Walk Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0
Flash Dont Walk (s)	26.0	26.0	26.0	29.0	29.0	29.0		18.0	18.0	20.0	20.0	20.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0	0	0	0	0
Act Effect Green (s)	30.1	30.1	30.1		12.6	12.6	98.9	97.9	97.9	87.3	87.3	87.3
Actuated g/C Ratio	0.19	0.19	0.19		0.08	0.08	0.62	0.61	0.61	0.55	0.55	0.55
v/c Ratio	1.06	1.04	0.08		0.57	0.04	0.27	0.86	0.13	0.19	0.71	0.55
Control Delay	126.3	121.6	0.4		86.5	0.4	16.6	30.7	7.4	58.2	54.5	33.0
Queue Delay	1.1	1.0	0.0		0.0	0.0	0.0	47.1	0.0	0.0	12.5	0.7
Total Delay	127.5	122.6	0.4		86.5	0.4	16.6	77.8	7.4	58.2	66.9	33.7
LOS	F	F	A		F	A	B	E	A	E	E	C
Approach Delay		119.5			77.7			72.0			57.5	
Approach LOS		F			E			E			E	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 91 (57%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.06

Intersection Signal Delay: 73.1

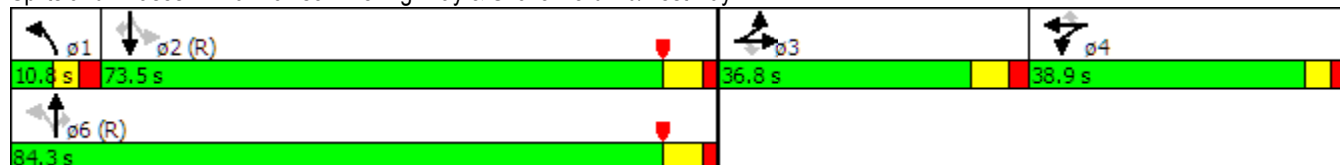
Intersection LOS: E

Intersection Capacity Utilization 87.3%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 10: Dawsonville Highway & Shallowford Rd/Best Buy



Appendix E

Future Phase One Intersection Analysis

Lanier Tract DRI
1: Sportsman Club Road & Strickland Drive

phase one a.m.

Intersection

Int Delay, s/veh 4.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	30	0	7	11	0	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	50	50	58	58	64	64
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	60	0	12	19	0	39

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	61	22	0 0 31 0
Stage 1	22	-	- - - -
Stage 2	39	-	- - - -
Critical Hdwy	6.42	6.22	- - 4.12 -
Critical Hdwy Stg 1	5.42	-	- - - -
Critical Hdwy Stg 2	5.42	-	- - - -
Follow-up Hdwy	3.518	3.318	- - 2.218 -
Pot Cap-1 Maneuver	945	1055	- - 1582 -
Stage 1	1001	-	- - - -
Stage 2	983	-	- - - -
Platoon blocked, %			- - - -
Mov Cap-1 Maneuver	945	1055	- - 1582 -
Mov Cap-2 Maneuver	945	-	- - - -
Stage 1	1001	-	- - - -
Stage 2	983	-	- - - -

Approach	WB	NB	SB
HCM Control Delay, s	9.1	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	- 945	1582	-
HCM Lane V/C Ratio	-	- 0.063	-	-
HCM Control Delay (s)	-	- 9.1	0	-
HCM Lane LOS	-	- A	A	-
HCM 95th %tile Q(veh)	-	- 0.2	0	-

Lanier Tract DRI
2: GA 53 & Sportsman Club Road

phase one a.m.

Intersection												
Int Delay, s/veh	23											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	14	1885	0	5	841	15	0	0	0	41	0	23
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	84	84	84	92	92	92	70	70	70
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	2192	0	6	1001	18	0	0	0	59	0	33

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1019	0	0	2192	0	0	2737	3255	1096	2150	3246	510
Stage 1	-	-	-	-	-	-	2224	2224	-	1022	1022	-
Stage 2	-	-	-	-	-	-	513	1031	-	1128	2224	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	677	-	-	238	-	-	10	9	208	~ 27	9	509
Stage 1	-	-	-	-	-	-	44	79	-	253	312	-
Stage 2	-	-	-	-	-	-	512	309	-	218	79	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	677	-	-	238	-	-	9	9	208	~ 26	9	509
Mov Cap-2 Maneuver	-	-	-	-	-	-	9	9	-	~ 26	9	-
Stage 1	-	-	-	-	-	-	43	77	-	247	304	-
Stage 2	-	-	-	-	-	-	467	301	-	213	77	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.1	0	\$ 834.4
HCM LOS			A	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	677	-	-	238	-	-	39
HCM Lane V/C Ratio	-	0.024	-	-	0.025	-	-	2.344
HCM Control Delay (s)	0	10.4	-	-	20.5	-	-	\$ 834.4
HCM Lane LOS	A	B	-	-	C	-	-	F
HCM 95th %tile Q(veh)	-	0.1	-	-	0.1	-	-	10

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lanier Tract DRI
3: GA 53 & Avonlea Way

phase one a.m.

Intersection												
Int Delay, s/veh	9.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	17	0	79	2	0	13	13	866	2	15	1867	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	0	0	-	0	0	-	-	0	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	80	80	80	88	88	88	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	20	0	94	2	0	16	15	984	2	17	2171	8
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2728	3222	1085	2135	3221	493	2171	0	0	986	0	0
Stage 1	2206	2206	-	1015	1015	-	-	-	-	-	-	-
Stage 2	522	1016	-	1120	2206	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	~ 10	10	212	28	10	522	242	-	-	696	-	-
Stage 1	45	81	-	255	314	-	-	-	-	-	-	-
Stage 2	506	314	-	220	81	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 9	9	212	15	9	522	242	-	-	696	-	-
Mov Cap-2 Maneuver	~ 9	9	-	15	9	-	-	-	-	-	-	-
Stage 1	42	79	-	239	295	-	-	-	-	-	-	-
Stage 2	460	295	-	119	79	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	273.3			48.9			0.3			0.1		
HCM LOS	F			E								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR		
Capacity (veh/h)	242	-	-	9	212	15	522	696	-	-		
HCM Lane V/C Ratio	0.061	-	-	2.249	0.444	0.167	0.031	0.025	-	-		
HCM Control Delay (s)	20.8	-	\$	1381.4	34.9	288.1	12.1	10.3	-	-		
HCM Lane LOS	C	-	-	F	D	F	B	B	-	-		
HCM 95th %tile Q(veh)	0.2	-	-	3.5	2.1	0.5	0.1	0.1	-	-		
Notes												
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon												

Lanier Tract DRI
4: GA 53 & Canterbury Road

phase one a.m.

Intersection												
Int Delay, s/veh	12.4											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	20	0	105	3	0	2	25	826	3	2	1994	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	0	0	-	0	0	-	-	0	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	92	88	92	92	92	86	86	92	92	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	23	0	119	3	0	2	29	960	3	2	2191	9

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2734	3218	1096	2120	3216	482	2191	0	0	964	0	0
Stage 1	2196	2196	-	1020	1020	-	-	-	-	-	-	-
Stage 2	538	1022	-	1100	2196	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	~ 10	10	208	29	10	530	238	-	-	710	-	-
Stage 1	46	82	-	253	312	-	-	-	-	-	-	-
Stage 2	495	312	-	226	82	-	-	-	-	-	-	-
Platoon blocked, %							-	-			-	-
Mov Cap-1 Maneuver	~ 9	9	208	11	9	530	238	-	-	710	-	-
Mov Cap-2 Maneuver	~ 9	9	-	11	9	-	-	-	-	-	-	-
Stage 1	40	82	-	222	274	-	-	-	-	-	-	-
Stage 2	433	274	-	96	82	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	277.1	266.4	0.7	0
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	238	-	-	9	208	11	530	710	-	-
HCM Lane V/C Ratio	0.122	-	-	2.525	0.574	0.296	0.004	0.003	-	-
HCM Control Delay (s)	22.2	-	-	\$ 1504.7	43.3	\$ 436.1	11.8	10.1	-	-
HCM Lane LOS	C	-	-	F	E	F	B	B	-	-
HCM 95th %tile Q(veh)	0.4	-	-	3.9	3.1	0.7	0	0	-	-

Notes										
~: Volume exceeds capacity	\$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon							

Intersection

Int Delay, s/veh 3.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	6	45	30	930	2288	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	Yield	-	None
Storage Length	0	0	200	-	-	360
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	1	0	-
Peak Hour Factor	82	82	87	87	89	89
Heavy Vehicles, %	0	0	0	1	0	0
Mvmt Flow	7	55	34	1069	2571	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	3174	1285	2571	0	-	0
Stage 1	2571	-	-	-	-	-
Stage 2	603	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	8	158	174	-	-	-
Stage 1	45	-	-	-	-	-
Stage 2	515	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 6	158	174	-	-	-
Mov Cap-2 Maneuver	~ 6	-	-	-	-	-
Stage 1	45	-	-	-	-	-
Stage 2	414	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	179.5	1	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	174	-	6	158	-	-
HCM Lane V/C Ratio	0.198	-	1.22	0.347	-	-
HCM Control Delay (s)	30.7	\$	1230.3	39.4	-	-
HCM Lane LOS	D	-	F	E	-	-
HCM 95th %tile Q(veh)	0.7	-	1.7	1.4	-	-

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lanier Tract DRI

5: GA 53 & Lanier Valley Dr/Ahaluna Dr

phase one a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	21	6	127	92	3	27	61	800	47	21	2121	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		2%			-4%			1%			-1%	
Storage Length (ft)	0		0	0		0	100		0	140		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	0			0			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.889			0.970			0.992				
Flt Protected		0.993			0.964		0.950			0.950		
Satd. Flow (prot)	0	1661	0	0	1812	0	1796	3497	0	1814	3628	0
Flt Permitted		0.945			0.481		0.037			0.288		
Satd. Flow (perm)	0	1580	0	0	904	0	70	3497	0	550	3628	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		58			8			12				
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		340			322			888			1417	
Travel Time (s)		7.7			7.3			13.5			21.5	
Peak Hour Factor	0.91	0.91	0.91	0.83	0.83	0.83	0.85	0.85	0.85	0.87	0.87	0.87
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	0%	0%
Adj. Flow (vph)	23	7	140	111	4	33	72	941	55	24	2438	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	170	0	0	148	0	72	996	0	24	2438	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	0.97	0.97	0.97	1.01	1.01	1.01	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		0	1	
Detector Template	Left			Left								
Leading Detector (ft)	20	40		20	40		40	336		0	336	
Trailing Detector (ft)	0	0		0	0		0	330		0	330	
Detector 1 Position(ft)	0	0		0	0		0	330		0	330	
Detector 1 Size(ft)	20	40		20	40		40	6		0	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		8			4		5	2			6	
Permitted Phases	8			4			2			6		
Detector Phase	8	8		4	4		5	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	23.0	23.0		23.0	23.0		10.6	23.0		23.0	23.0	

Lanier Tract DRI

5: GA 53 & Lanier Valley Dr/Ahaluna Dr

phase one a.m.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	30.0	30.0		30.0	30.0		10.6	120.0		109.4	109.4	
Total Split (%)	20.0%	20.0%		20.0%	20.0%		7.1%	80.0%		72.9%	72.9%	
Maximum Green (s)	23.4	23.4		23.4	23.4		5.0	113.9		103.3	103.3	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	4.5		4.5	4.5	
All-Red Time (s)	2.6	2.6		2.6	2.6		2.6	1.6		1.6	1.6	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.6			6.6		5.6	6.1		6.1	6.1	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		C-Max	C-Max	
Act Effect Green (s)		23.4			23.4		114.4	113.9		103.3	103.3	
Actuated g/C Ratio		0.16			0.16		0.76	0.76		0.69	0.69	
v/c Ratio		0.58			1.01		0.65	0.37		0.06	0.98	
Control Delay		46.8			134.1		57.6	3.1		8.1	35.6	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		46.8			134.1		57.6	3.1		8.1	35.6	
LOS		D			F		E	A		A	D	
Approach Delay		46.8			134.1			6.8			35.3	
Approach LOS		D			F			A			D	

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 26 (17%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 130

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.01

Intersection Signal Delay: 31.7

Intersection LOS: C

Intersection Capacity Utilization 90.9%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 5: GA 53 & Lanier Valley Dr/Ahaluna Dr

120 s		30 s	
10.6 s	109.4 s	30 s	

Lanier Tract DRI

6: 53-Dawsonville Hwy & Academy Sports

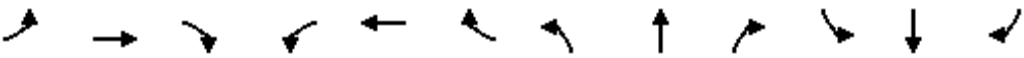
phase one a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	2	0	7	2	0	0	12	878	10	6	2269	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			4%			1%			0%	
Storage Length (ft)	0		0	0		70	200		170	190		360
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	0			0			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850						0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1900	1615	1769	1862	1862	1796	3556	1607	1805	3610	1615
Flt Permitted							0.031			0.277		
Satd. Flow (perm)	1900	1900	1615	1862	1862	1862	59	3556	1607	526	3610	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			67						68			68
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		262			246			1836			685	
Travel Time (s)		7.1			6.7			27.8			10.4	
Peak Hour Factor	0.67	0.67	0.67	0.50	0.50	0.50	0.86	0.86	0.86	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%
Adj. Flow (vph)	3	0	10	4	0	0	14	1021	12	7	2521	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	3	0	10	4	0	0	14	1021	12	7	2521	4
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.03	1.03	1.03	1.01	1.01	1.01	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1	1	1	1	1	1	1	0
Detector Template												
Leading Detector (ft)	40	40	0	40	40	40	40	336	0	40	336	0
Trailing Detector (ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Size(ft)	40	40	0	40	40	40	40	6	0	40	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm		Perm	Perm		Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8		8	4		4	2		2	6		6
Detector Phase	8	8	8	4	4	4	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	42.0	42.0	42.0	42.4	42.4	42.4	11.4	30.3	30.3	11.0	29.3	29.3

Lanier Tract DRI

6: 53-Dawsonville Hwy & Academy Sports

phase one a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	42.4	42.4	42.4	42.4	42.4	42.4	11.4	96.6	96.6	11.0	96.2	96.2
Total Split (%)	28.3%	28.3%	28.3%	28.3%	28.3%	28.3%	7.6%	64.4%	64.4%	7.3%	64.1%	64.1%
Maximum Green (s)	36.0	36.0	36.0	36.0	36.0	36.0	5.0	90.4	90.4	5.0	90.0	90.0
Yellow Time (s)	3.4	3.4	3.4	3.4	3.4	3.4	3.4	4.3	4.3	3.0	4.3	4.3
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	1.9	1.9	3.0	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.2	6.2	6.0	6.2	6.2
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0
Flash Dont Walk (s)	23.0	23.0	23.0	32.0	32.0	32.0		20.0	20.0		19.0	19.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0	0		0	0
Act Effect Green (s)	6.1		6.1	6.1			137.2	139.9	139.9	136.1	137.4	137.4
Actuated g/C Ratio	0.04		0.04	0.04			0.91	0.93	0.93	0.91	0.92	0.92
v/c Ratio	0.04		0.08	0.05			0.12	0.31	0.01	0.01	0.76	0.00
Control Delay	69.5		1.1	70.0			6.2	1.0	0.0	0.8	4.9	0.0
Queue Delay	0.0		0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.5		1.1	70.0			6.2	1.0	0.0	0.8	4.9	0.0
LOS	E		A	E			A	A	A	A	A	A
Approach Delay								1.1			4.9	
Approach LOS								A			A	

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 27 (18%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 145

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.76

Intersection Signal Delay: 3.9

Intersection LOS: A

Intersection Capacity Utilization 86.9%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 6: 53-Dawsonville Hwy & Academy Sports

 p1	 p2 (R)	 p4
11 s	96.6 s	42.4 s
 p5	 p6 (R)	 p8
11.4 s	96.2 s	42.4 s

Lanier Tract DRI

8: Dawsonville Highway/GA 53 & McEver Road/McEver

phase one a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	450	31	378	46	21	22	311	553	61	34	1341	935
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			5%			1%			-1%	
Storage Length (ft)	180		0	0		0	310		185	255		0
Storage Lanes	2		1	1		0	2		1	1		1
Taper Length (ft)	50			0			50			50		
Lane Util. Factor	0.97	0.95	0.95	1.00	1.00	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Frt		0.872	0.850		0.924				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3484	1566	1527	1760	1712	0	3484	3487	1575	1814	3628	1623
Flt Permitted	0.950			0.599			0.950			0.950		
Satd. Flow (perm)	3484	1566	1527	1110	1712	0	3484	3487	1575	1814	3628	1623
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		183	207		34				184			542
Link Speed (mph)		45			45			45			45	
Link Distance (ft)		580			331			921			1624	
Travel Time (s)		8.8			5.0			14.0			24.6	
Peak Hour Factor	0.97	0.97	0.97	0.62	0.62	0.62	0.93	0.93	0.93	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	3%	2%	0%	0%	0%
Adj. Flow (vph)	464	32	390	74	34	35	334	595	66	38	1490	1039
Shared Lane Traffic (%)			47%									
Lane Group Flow (vph)	464	215	207	74	69	0	334	595	66	38	1490	1039
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.03	1.03	1.03	1.01	1.01	1.01	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1		1	1	0	1	1	0
Detector Template												
Leading Detector (ft)	40	40	0	40	40		40	336	0	40	336	0
Trailing Detector (ft)	0	0	0	0	0		0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0		0	330	0	0	330	0
Detector 1 Size(ft)	40	40	0	40	40		40	6	0	40	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	NA	Perm	pm+pt	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases			8	4					6			2
Detector Phase	3	8	8	7	4		1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	13.2	50.2	50.2	11.6	48.2		13.4	35.6	35.6	12.9	44.6	44.6

Lanier Tract DRI

8: Dawsonville Highway/GA 53 & McEver Road/McEver

phase one a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	23.0	59.1	59.1	12.1	48.2		19.0	63.0	63.0	15.8	59.8	59.8
Total Split (%)	15.3%	39.4%	39.4%	8.1%	32.1%		12.7%	42.0%	42.0%	10.5%	39.9%	39.9%
Maximum Green (s)	15.7	51.8	51.8	5.6	40.9		11.5	56.4	56.4	8.6	53.2	53.2
Yellow Time (s)	4.3	4.3	4.3	3.5	4.3		4.5	4.4	4.4	4.2	4.4	4.4
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	2.2	2.2	3.0	2.2	2.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.3	7.3	7.3	6.5	7.3		7.5	6.6	6.6	7.2	6.6	6.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)		4.0	4.0		4.0			4.0	4.0		4.0	4.0
Flash Dont Walk (s)		38.0	38.0		36.0			25.0	25.0		34.0	34.0
Pedestrian Calls (#/hr)		0	0		0			0	0		0	0
Act Effect Green (s)	16.1	17.6	17.6	14.0	8.9		11.5	93.2	93.2	8.5	87.4	87.4
Actuated g/C Ratio	0.11	0.12	0.12	0.09	0.06		0.08	0.62	0.62	0.06	0.58	0.58
v/c Ratio	1.24	0.62	0.57	0.58	0.52		1.25	0.27	0.06	0.37	0.70	0.89
Control Delay	183.1	20.5	13.4	70.0	51.0		197.4	17.7	1.4	74.8	23.9	17.1
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	183.1	20.5	13.4	70.0	51.0		197.4	17.7	1.4	74.8	23.9	17.1
LOS	F	C	B	E	D		F	B	A	E	C	B
Approach Delay		104.0			60.9			77.0			21.9	
Approach LOS		F			E			E			C	

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 19 (13%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.25

Intersection Signal Delay: 50.9

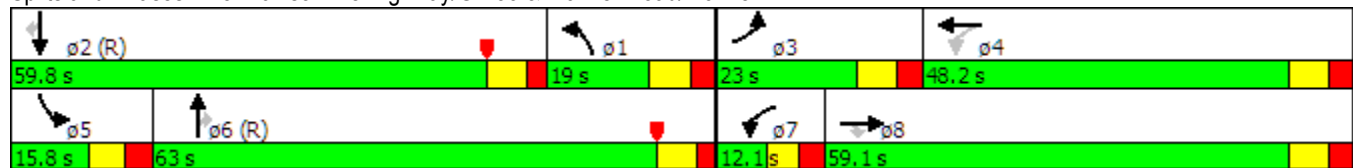
Intersection LOS: D

Intersection Capacity Utilization 88.8%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 8: Dawsonville Highway/GA 53 & McEver Road/McEver



Lanier Tract DRI

9: Dawsonville Highway & Greenhill Circle/Greenhill Circle

phase one a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	74	1	156	7	1	4	149	872	11	13	1599	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		3%			7%			1%			0%	
Storage Length (ft)	0		0	0		0	190		190	185		100
Storage Lanes	0		1	0		1	1		1	1		1
Taper Length (ft)	0			0			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected		0.953			0.957		0.950			0.950		
Satd. Flow (prot)	0	1784	1591	0	1755	1558	1796	3522	1607	1805	3610	1615
Flt Permitted		0.721			0.751		0.074			0.283		
Satd. Flow (perm)	0	1349	1591	0	1377	1558	140	3522	1607	538	3610	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			131			102			57			101
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		288			254			778			921	
Travel Time (s)		7.9			6.9			11.8			14.0	
Peak Hour Factor	0.90	0.90	0.90	0.69	0.69	0.69	0.86	0.86	0.86	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	0%	0%
Adj. Flow (vph)	82	1	173	10	1	6	173	1014	13	14	1738	62
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	83	173	0	11	6	173	1014	13	14	1738	62
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.02	1.02	1.02	1.05	1.05	1.05	1.01	1.01	1.01	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1	0	1	1	0	0	1	0
Detector Template	Left			Left								
Leading Detector (ft)	20	40	0	20	40	0	40	336	0	0	336	0
Trailing Detector (ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Size(ft)	20	40	0	20	40	0	40	6	0	0	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8		8	4		4	6		6	2		2
Detector Phase	8	8	8	4	4	4	1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.0	23.0	23.0	39.9	39.9	39.9	11.0	28.0	28.0	10.0	36.0	36.0

Lanier Tract DRI

9: Dawsonville Highway & Greenhill Circle/Greenhill Circle

phase one a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	39.9	39.9	39.9	39.9	39.9	39.9	21.0	100.1	100.1	10.0	89.1	89.1
Total Split (%)	26.6%	26.6%	26.6%	26.6%	26.6%	26.6%	14.0%	66.7%	66.7%	6.7%	59.4%	59.4%
Maximum Green (s)	34.0	34.0	34.0	34.0	34.0	34.0	15.0	94.1	94.1	5.0	83.1	83.1
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	4.4	4.4	3.5	4.4	4.4
All-Red Time (s)	2.9	2.9	2.9	2.9	2.9	2.9	3.0	1.6	1.6	1.5	1.6	1.6
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.9	5.9		5.9	5.9	6.0	6.0	6.0	5.0	6.0	6.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)				4.0	4.0	4.0		4.0	4.0		4.0	4.0
Flash Dont Walk (s)				30.0	30.0	30.0		18.0	18.0		26.0	26.0
Pedestrian Calls (#/hr)				0	0	0		0	0		0	0
Act Effect Green (s)		14.6	14.6		14.6	14.6	123.5	119.1	119.1	108.7	102.0	102.0
Actuated g/C Ratio		0.10	0.10		0.10	0.10	0.82	0.79	0.79	0.72	0.68	0.68
v/c Ratio		0.64	0.64		0.08	0.02	0.60	0.36	0.01	0.03	0.71	0.05
Control Delay		85.5	28.7		59.9	0.2	32.6	4.6	0.0	4.2	14.7	0.9
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
Total Delay		85.5	28.7		59.9	0.2	32.6	4.6	0.0	4.2	14.8	0.9
LOS		F	C		E	A	C	A	A	A	B	A
Approach Delay		47.1			38.8			8.6			14.3	
Approach LOS		D			D			A			B	

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow

Natural Cycle: 110

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.71

Intersection Signal Delay: 14.9

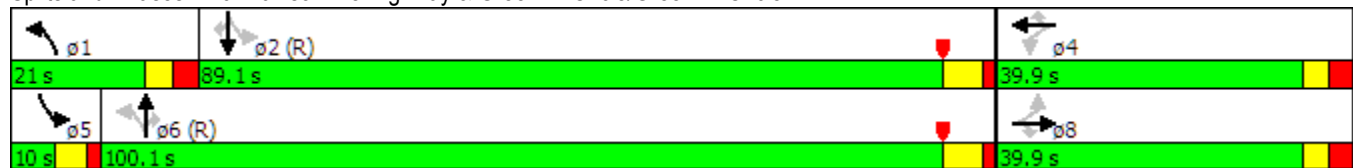
Intersection LOS: B

Intersection Capacity Utilization 78.2%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 9: Dawsonville Highway & Greenhill Circle/Greenhill Circle



Lanier Tract DRI

10: Dawsonville Highway & Shallowford Rd/Best Buy

phase one a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	160	2	9	2	4	3	11	847	14	1	1415	386
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-1%			10%			-4%			-1%	
Storage Length (ft)	350		350	0		0	350		150	265		0
Storage Lanes	1		0	0		1	1		1	1		1
Taper Length (ft)	100			0			100			100		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950	0.953			0.982		0.950			0.950		
Satd. Flow (prot)	1723	1729	1623	0	1773	1534	1841	3646	1647	1814	3592	1623
Flt Permitted	0.950	0.953			0.982		0.117			0.280		
Satd. Flow (perm)	1723	1729	1623	0	1773	1534	227	3646	1647	535	3592	1623
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			113			119			70			220
Link Speed (mph)		45			25			45			45	
Link Distance (ft)		653			178			957			778	
Travel Time (s)		9.9			4.9			14.5			11.8	
Peak Hour Factor	0.84	0.84	0.84	0.56	0.56	0.56	0.83	0.83	0.83	0.93	0.93	0.93
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	1%	0%
Adj. Flow (vph)	190	2	11	4	7	5	13	1020	17	1	1522	415
Shared Lane Traffic (%)	49%											
Lane Group Flow (vph)	97	95	11	0	11	5	13	1020	17	1	1522	415
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes										
Headway Factor	0.99	0.99	0.99	1.07	1.07	1.07	0.97	0.97	0.97	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1	0	1	1	0	0	1	0
Detector Template				Left								
Leading Detector (ft)	40	40	0	20	40	0	40	336	0	0	336	0
Trailing Detector (ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Size(ft)	40	40	0	20	40	0	40	6	0	0	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases	3	3		4	4		1	6			2	
Permitted Phases			3			4	6		6	2		2
Detector Phase	3	3	3	4	4	4	1	6	6	2	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	36.7	36.7	36.7	38.9	38.9	38.9	10.8	28.8	28.8	30.8	30.8	30.8

Lanier Tract DRI

10: Dawsonville Highway & Shallowford Rd/Best Buy

phase one a.m.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	36.7	36.7	36.7	38.9	38.9	38.9	10.8	74.4	74.4	63.6	63.6	63.6
Total Split (%)	24.5%	24.5%	24.5%	25.9%	25.9%	25.9%	7.2%	49.6%	49.6%	42.4%	42.4%	42.4%
Maximum Green (s)	30.0	30.0	30.0	33.0	33.0	33.0	5.0	67.6	67.6	56.8	56.8	56.8
Yellow Time (s)	4.5	4.5	4.5	3.0	3.0	3.0	3.0	4.9	4.9	4.9	4.9	4.9
All-Red Time (s)	2.2	2.2	2.2	2.9	2.9	2.9	2.8	1.9	1.9	1.9	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.7	6.7	6.7		5.9	5.9	5.8	6.8	6.8	6.8	6.8	6.8
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes			Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	C-Min	C-Min	C-Min
Walk Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0
Flash Dont Walk (s)	26.0	26.0	26.0	29.0	29.0	29.0		18.0	18.0	20.0	20.0	20.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0	0	0	0	0
Act Effect Green (s)	13.8	13.8	13.8		6.5	6.5	118.3	117.3	117.3	112.5	112.5	112.5
Actuated g/C Ratio	0.09	0.09	0.09		0.04	0.04	0.79	0.78	0.78	0.75	0.75	0.75
v/c Ratio	0.61	0.60	0.04		0.14	0.03	0.05	0.36	0.01	0.00	0.56	0.33
Control Delay	81.4	80.4	0.3		72.5	0.3	6.0	6.3	0.0	7.0	11.2	4.5
Queue Delay	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0
Total Delay	81.4	80.4	0.3		72.5	0.3	6.0	6.3	0.0	7.0	11.7	4.5
LOS	F	F	A		E	A	A	A	A	A	B	A
Approach Delay		76.5			49.9			6.2			10.1	
Approach LOS		E			D			A			B	

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 45 (30%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.61

Intersection Signal Delay: 13.3

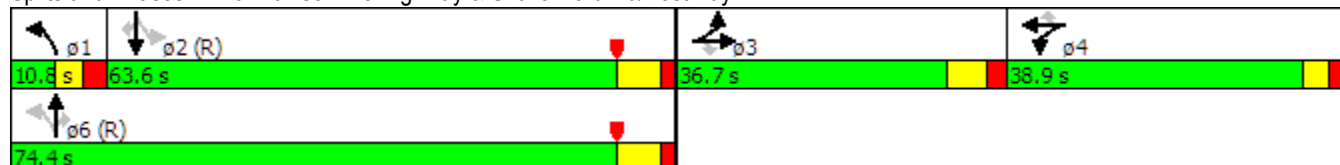
Intersection LOS: B

Intersection Capacity Utilization 63.6%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 10: Dawsonville Highway & Shallowford Rd/Best Buy



Lanier Tract DRI
1: Sportsman Club Road & Strickland Drive

phase one p.m.

Intersection

Int Delay, s/veh 3.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	24	0	32	28	0	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	44	44	86	86	82	82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	55	0	37	33	0	30

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	83	53	0 0 70 0
Stage 1	53	-	- - - -
Stage 2	30	-	- - - -
Critical Hdwy	6.42	6.22	- - 4.12 -
Critical Hdwy Stg 1	5.42	-	- - - -
Critical Hdwy Stg 2	5.42	-	- - - -
Follow-up Hdwy	3.518	3.318	- - 2.218 -
Pot Cap-1 Maneuver	919	1014	- - 1531 -
Stage 1	970	-	- - - -
Stage 2	993	-	- - - -
Platoon blocked, %			- - - -
Mov Cap-1 Maneuver	919	1014	- - 1531 -
Mov Cap-2 Maneuver	919	-	- - - -
Stage 1	970	-	- - - -
Stage 2	993	-	- - - -

Approach	WB	NB	SB
HCM Control Delay, s	9.2	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	- 919	1531	-
HCM Lane V/C Ratio	-	- 0.059	-	-
HCM Control Delay (s)	-	- 9.2	0	-
HCM Lane LOS	-	- A	A	-
HCM 95th %tile Q(veh)	-	- 0.2	0	-

Lanier Tract DRI
2: GA 53 & Sportsman Club Road

phase one p.m.

Intersection												
Int Delay, s/veh	74.4											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	22	1166	0	26	1878	34	0	0	0	42	0	23
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	96	96	96	92	92	92	75	75	75
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	23	1227	0	27	1956	35	0	0	0	56	0	31

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1992	0	0	1227	0	0	2306	3320	614	2688	3302	996
Stage 1	-	-	-	-	-	-	1274	1274	-	2028	2028	-
Stage 2	-	-	-	-	-	-	1032	2046	-	660	1274	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	285	-	-	564	-	-	21	8	435	~ 10	8	243
Stage 1	-	-	-	-	-	-	177	236	-	59	100	-
Stage 2	-	-	-	-	-	-	249	98	-	418	236	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	285	-	-	564	-	-	17	7	435	~ 9	7	243
Mov Cap-2 Maneuver	-	-	-	-	-	-	17	7	-	~ 9	7	-
Stage 1	-	-	-	-	-	-	163	217	-	~ 54	95	-
Stage 2	-	-	-	-	-	-	207	93	-	384	217	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0.2	0	\$ 2872.3
HCM LOS			A	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	285	-	-	564	-	-	14
HCM Lane V/C Ratio	-	0.081	-	-	0.048	-	-	6.19
HCM Control Delay (s)	0	18.7	-	-	11.7	-	-	\$ 2872.3
HCM Lane LOS	A	C	-	-	B	-	-	F
HCM 95th %tile Q(veh)	-	0.3	-	-	0.2	-	-	11.8

Notes												
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon												

Lanier Tract DRI
3: Avonlea Way & GA 53

phase one p.m.

Intersection												
Int Delay, s/veh	4.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	12	0	52	2	0	11	68	1858	17	10	1263	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	0	0	-	0	0	-	-	0	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	76	76	76	80	80	80	95	95	95	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	0	68	2	0	14	72	1956	18	10	1263	15
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2404	3400	632	2760	3391	987	1263	0	0	1974	0	0
Stage 1	1283	1283	-	2108	2108	-	-	-	-	-	-	-
Stage 2	1121	2117	-	652	1283	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	17	7	423	9	7	246	546	-	-	290	-	-
Stage 1	175	234	-	52	91	-	-	-	-	-	-	-
Stage 2	220	90	-	423	234	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 14	6	423	7	6	246	546	-	-	290	-	-
Mov Cap-2 Maneuver	~ 14	6	-	7	6	-	-	-	-	-	-	-
Stage 1	152	226	-	45	79	-	-	-	-	-	-	-
Stage 2	180	78	-	342	226	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	134.8			124.5			0.4			0.1		
HCM LOS	F			F								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR		
Capacity (veh/h)	546	-	-	14	423	7	246	290	-	-		
HCM Lane V/C Ratio	0.131	-	-	1.128	0.162	0.357	0.056	0.034	-	-		
HCM Control Delay (s)	12.6	-	-	\$ 653.3	15.1\$	696.5	20.5	17.9	-	-		
HCM Lane LOS	B	-	-	F	C	F	C	C	-	-		
HCM 95th %tile Q(veh)	0.4	-	-	2.5	0.6	0.7	0.2	0.1	-	-		
Notes												
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon												

Lanier Tract DRI
4: Canterbury Road & GA 53

phase one p.m.

Intersection												
Int Delay, s/veh	3.8											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	8	0	31	2	0	2	123	1908	4	3	1268	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	0	0	-	0	0	-	-	0	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	70	70	70	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	0	39	3	0	3	128	1988	4	3	1321	16

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2577	3575	660	2913	3573	996	1321	0	0	1992	0	0
Stage 1	1327	1327	-	2246	2246	-	-	-	-	-	-	-
Stage 2	1250	2248	-	667	1327	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	13	6	406	7	6	243	519	-	-	285	-	-
Stage 1	164	223	-	43	77	-	-	-	-	-	-	-
Stage 2	183	77	-	414	223	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	10	4	406	5	4	243	519	-	-	285	-	-
Mov Cap-2 Maneuver	10	4	-	5	4	-	-	-	-	-	-	-
Stage 1	124	221	-	32	58	-	-	-	-	-	-	-
Stage 2	136	58	-	371	221	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	169.2	\$ 544.8	0.9	0
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	519	-	-	10	406	5	243	285	-	-
HCM Lane V/C Ratio	0.247	-	-	1	0.095	0.571	0.012	0.011	-	-
HCM Control Delay (s)	14.2	-	-	\$ 767.5	14.2	\$ 1069.5	20	17.8	-	-
HCM Lane LOS	B	-	-	F	B	F	C	C	-	-
HCM 95th %tile Q(veh)	1	-	-	1.9	0.3	0.9	0	0	-	-

Notes										
~: Volume exceeds capacity	\$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon							

Intersection						
Int Delay, s/veh	0.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	1	52	95	2325	1629	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	Yield	-	None
Storage Length	0	0	200	-	-	360
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	1	0	-
Peak Hour Factor	71	71	99	99	98	98
Heavy Vehicles, %	0	0	0	0	1	0
Mvmt Flow	1	73	96	2348	1662	10
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	3028	832	1662	0	-	0
Stage 1	1662	-	-	-	-	-
Stage 2	1366	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	10	316	393	-	-	-
Stage 1	143	-	-	-	-	-
Stage 2	206	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	8	316	393	-	-	-
Mov Cap-2 Maneuver	8	-	-	-	-	-
Stage 1	143	-	-	-	-	-
Stage 2	156	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	29.5	0.7		0		
HCM LOS	D					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	393	-	8	316	-	-
HCM Lane V/C Ratio	0.244	-	0.176	0.232	-	-
HCM Control Delay (s)	17.1	-	534.2	19.8	-	-
HCM Lane LOS	C	-	F	C	-	-
HCM 95th %tile Q(veh)	0.9	-	0.4	0.9	-	-

Lanier Tract DRI

5: GA 53 & Lanier Valley Dr/Ahaluna Dr

phase one p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	23	1	106	98	8	64	198	1965	114	31	1366	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		2%			-4%			1%			-1%	
Storage Length (ft)	0		0	0		0	100		0	140		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	0			0			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.890			0.949			0.992				
Flt Protected		0.991			0.972		0.950			0.950		
Satd. Flow (prot)	0	1659	0	0	1788	0	1796	3563	0	1814	3592	0
Flt Permitted		0.906			0.613		0.117			0.049		
Satd. Flow (perm)	0	1517	0	0	1127	0	221	3563	0	94	3592	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		119			17			10				
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		340			322			1002			1457	
Travel Time (s)		7.7			7.3			15.2			22.1	
Peak Hour Factor	0.89	0.89	0.89	0.90	0.90	0.90	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
Adj. Flow (vph)	26	1	119	109	9	71	206	2047	119	32	1423	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	146	0	0	189	0	206	2166	0	32	1426	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	0.97	0.97	0.97	1.01	1.01	1.01	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		0	1	
Detector Template	Left			Left								
Leading Detector (ft)	20	40		20	40		40	336		0	336	
Trailing Detector (ft)	0	0		0	0		0	330		0	330	
Detector 1 Position(ft)	0	0		0	0		0	330		0	330	
Detector 1 Size(ft)	20	40		20	40		40	6		0	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		8			4		5	2			6	
Permitted Phases	8			4			2			6		
Detector Phase	8	8		4	4		5	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	23.0	23.0		23.0	23.0		10.6	23.0		23.0	23.0	

Lanier Tract DRI

5: GA 53 & Lanier Valley Dr/Ahaluna Dr

phase one p.m.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	37.0	37.0		37.0	37.0		21.2	123.0		101.8	101.8	
Total Split (%)	23.1%	23.1%		23.1%	23.1%		13.3%	76.9%		63.6%	63.6%	
Maximum Green (s)	30.4	30.4		30.4	30.4		15.6	116.9		95.7	95.7	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	4.5		4.5	4.5	
All-Red Time (s)	2.6	2.6		2.6	2.6		2.6	1.6		1.6	1.6	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.6			6.6		5.6	6.1		6.1	6.1	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		C-Max	C-Max	
Act Effect Green (s)		27.1			27.1		120.7	120.2		102.6	102.6	
Actuated g/C Ratio		0.17			0.17		0.75	0.75		0.64	0.64	
v/c Ratio		0.41			0.92		0.73	0.81		0.53	0.62	
Control Delay		17.5			104.1		30.2	14.3		56.7	19.5	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		17.5			104.1		30.2	14.3		56.7	19.5	
LOS		B			F		C	B		E	B	
Approach Delay		17.5			104.1			15.7			20.4	
Approach LOS		B			F			B			C	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 129 (81%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.92

Intersection Signal Delay: 21.4

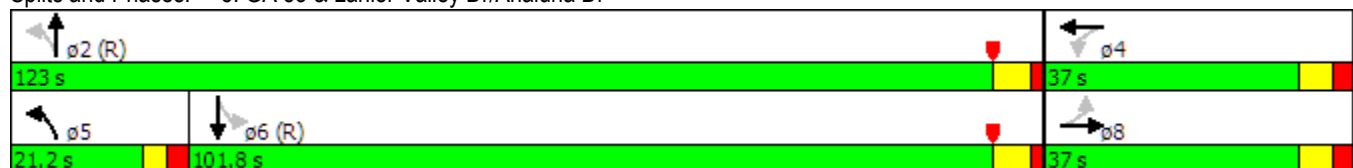
Intersection LOS: C

Intersection Capacity Utilization 94.2%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 5: GA 53 & Lanier Valley Dr/Ahaluna Dr



Lanier Tract DRI

6: 53-Dawsonville Hwy & Academy Sports

phase one p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	14	3	66	130	8	46	96	2066	152	21	1421	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			4%			1%			0%	
Storage Length (ft)	0		0	0		70	200		170	190		360
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	0			0			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1900	1615	1769	1862	1583	1796	3592	1607	1805	3574	1615
Flt Permitted	0.751			0.756			0.123			0.039		
Satd. Flow (perm)	1427	1900	1615	1408	1862	1583	233	3592	1607	74	3574	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			69			63			66			64
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		262			246			1836			685	
Travel Time (s)		7.1			6.7			27.8			10.4	
Peak Hour Factor	0.95	0.95	0.95	0.80	0.80	0.80	0.98	0.98	0.98	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
Adj. Flow (vph)	15	3	69	162	10	58	98	2108	155	22	1465	31
Shared Lane Traffic (%)												
Lane Group Flow (vph)	15	3	69	162	10	58	98	2108	155	22	1465	31
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.03	1.03	1.03	1.01	1.01	1.01	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1	1	1	1	1	1	1	0
Detector Template												
Leading Detector (ft)	40	40	0	40	40	40	40	336	0	40	336	0
Trailing Detector (ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Size(ft)	40	40	0	40	40	40	40	6	0	40	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8		8	4		4	2		2	6		6
Detector Phase	8	8	8	4	4	4	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	42.0	42.0	42.0	42.4	42.4	42.4	11.4	30.3	30.3	11.0	29.3	29.3

Lanier Tract DRI

6: 53-Dawsonville Hwy & Academy Sports

phase one p.m.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	42.4	42.4	42.4	42.4	42.4	42.4	16.2	106.6	106.6	11.0	101.4	101.4
Total Split (%)	26.5%	26.5%	26.5%	26.5%	26.5%	26.5%	10.1%	66.6%	66.6%	6.9%	63.4%	63.4%
Maximum Green (s)	36.0	36.0	36.0	36.0	36.0	36.0	9.8	100.4	100.4	5.0	95.2	95.2
Yellow Time (s)	3.4	3.4	3.4	3.4	3.4	3.4	3.4	4.3	4.3	3.0	4.3	4.3
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	1.9	1.9	3.0	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.2	6.2	6.0	6.2	6.2
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0
Flash Dont Walk (s)	23.0	23.0	23.0	32.0	32.0	32.0		20.0	20.0		19.0	19.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0	0		0	0
Act Effect Green (s)	23.7	23.7	23.7	23.7	23.7	23.7	121.3	116.4	116.4	115.8	109.6	109.6
Actuated g/C Ratio	0.15	0.15	0.15	0.15	0.15	0.15	0.76	0.73	0.73	0.72	0.68	0.68
v/c Ratio	0.07	0.01	0.23	0.78	0.04	0.20	0.39	0.81	0.13	0.19	0.60	0.03
Control Delay	55.8	53.3	13.0	89.1	54.6	11.7	11.7	16.7	7.3	10.0	12.0	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
Total Delay	55.8	53.3	13.0	89.1	54.6	11.7	11.7	16.7	7.3	10.0	12.1	0.0
LOS	E	D	B	F	D	B	B	B	A	B	B	A
Approach Delay		21.8			68.1			15.9			11.8	
Approach LOS		C			E			B			B	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 120 (75%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 145

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.81

Intersection Signal Delay: 17.4

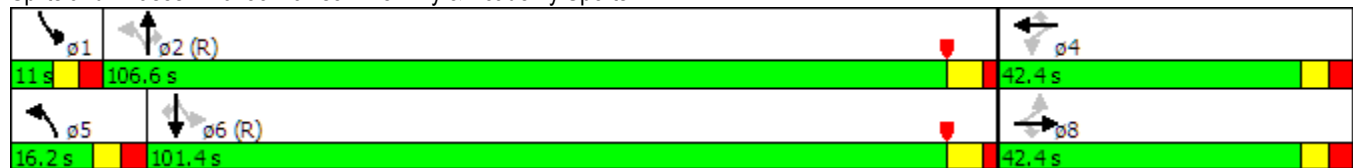
Intersection LOS: B

Intersection Capacity Utilization 90.6%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 6: 53-Dawsonville Hwy & Academy Sports



Lanier Tract DRI

8: Dawsonville Highway/GA 53 & McEver Road/McEver

phase one p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	967	235	426	96	100	93	478	1585	51	71	1199	562
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			5%			1%			-1%	
Storage Length (ft)	180		0	0		0	310		185	255		0
Storage Lanes	2		1	1		0	2		1	1		1
Taper Length (ft)	50			0			50			50		
Lane Util. Factor	0.97	0.95	0.95	1.00	1.00	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Frt		0.951	0.850		0.928				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3484	1708	1527	1760	1719	0	3484	3592	1607	1814	3592	1623
Flt Permitted	0.950			0.468			0.950			0.950		
Satd. Flow (perm)	3484	1708	1527	867	1719	0	3484	3592	1607	1814	3592	1623
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18	308		28				172			315
Link Speed (mph)		45			25			45			45	
Link Distance (ft)		580			331			921			1504	
Travel Time (s)		8.8			9.0			14.0			22.8	
Peak Hour Factor	0.95	0.95	0.95	0.86	0.86	0.86	0.97	0.97	0.97	0.91	0.91	0.91
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
Adj. Flow (vph)	1018	247	448	112	116	108	493	1634	53	78	1318	618
Shared Lane Traffic (%)			27%									
Lane Group Flow (vph)	1018	368	327	112	224	0	493	1634	53	78	1318	618
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.03	1.03	1.03	1.01	1.01	1.01	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1		1	1	0	1	1	0
Detector Template												
Leading Detector (ft)	40	40	0	40	40		40	336	0	40	336	0
Trailing Detector (ft)	0	0	0	0	0		0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0		0	330	0	0	330	0
Detector 1 Size(ft)	40	40	0	40	40		40	6	0	40	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	NA	Perm	pm+pt	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases			8	4					6			2
Detector Phase	3	8	8	7	4		1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	13.2	50.2	50.2	11.6	48.2		13.4	35.6	35.6	12.9	44.6	44.6

Lanier Tract DRI

8: Dawsonville Highway/GA 53 & McEver Road/McEver

phase one p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	35.0	69.5	69.5	13.7	48.2		22.0	63.8	63.8	13.0	54.8	54.8
Total Split (%)	21.9%	43.4%	43.4%	8.6%	30.1%		13.8%	39.9%	39.9%	8.1%	34.3%	34.3%
Maximum Green (s)	27.7	62.2	62.2	7.2	40.9		14.5	57.2	57.2	5.8	48.2	48.2
Yellow Time (s)	4.3	4.3	4.3	3.5	4.3		4.5	4.4	4.4	4.2	4.4	4.4
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	2.2	2.2	3.0	2.2	2.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.3	7.3	7.3	6.5	7.3		7.5	6.6	6.6	7.2	6.6	6.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)		4.0	4.0		4.0			4.0	4.0		4.0	4.0
Flash Dont Walk (s)		38.0	38.0		36.0			25.0	25.0		34.0	34.0
Pedestrian Calls (#/hr)		0	0		0			0	0		0	0
Act Effect Green (s)	27.7	45.2	45.2	31.9	23.9		14.5	64.6	64.6	15.4	65.2	65.2
Actuated g/C Ratio	0.17	0.28	0.28	0.20	0.15		0.09	0.40	0.40	0.10	0.41	0.41
v/c Ratio	1.69	0.74	0.50	0.53	0.80		1.57	1.13	0.07	0.45	0.90	0.73
Control Delay	354.5	58.6	7.9	46.9	77.3		314.1	120.2	0.1	67.2	67.6	40.5
Queue Delay	0.0	24.1	1.7	21.7	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	354.5	82.7	9.6	68.5	77.3		314.1	120.2	0.1	67.2	67.6	40.5
LOS	F	F	A	E	E		F	F	A	E	E	D
Approach Delay		230.3			74.4			161.1			59.3	
Approach LOS		F			E			F			E	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 52 (33%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.69

Intersection Signal Delay: 142.6

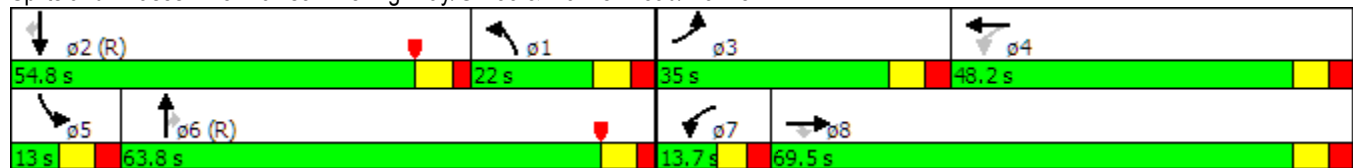
Intersection LOS: F

Intersection Capacity Utilization 110.2%

ICU Level of Service H

Analysis Period (min) 15

Splits and Phases: 8: Dawsonville Highway/GA 53 & McEver Road/McEver



Lanier Tract DRI

9: Dawsonville Highway & Greenhill Circle/Greenhill Circle

phase one p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	146	10	152	66	22	42	274	2012	77	44	1600	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		3%			7%			1%			0%	
Storage Length (ft)	0		0	0		0	190		190	185		100
Storage Lanes	0		1	0		1	1		1	1		1
Taper Length (ft)	0			0			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected		0.955			0.964		0.950			0.950		
Satd. Flow (prot)	0	1787	1591	0	1767	1558	1796	3592	1607	1805	3610	1615
Flt Permitted		0.591			0.482		0.043			0.044		
Satd. Flow (perm)	0	1106	1591	0	884	1558	81	3592	1607	84	3610	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			167			95			54			95
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		288			254			778			921	
Travel Time (s)		7.9			6.9			11.8			14.0	
Peak Hour Factor	0.91	0.91	0.91	0.78	0.78	0.78	0.97	0.97	0.97	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	160	11	167	85	28	54	282	2074	79	46	1684	62
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	171	167	0	113	54	282	2074	79	46	1684	62
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.02	1.02	1.02	1.05	1.05	1.05	1.01	1.01	1.01	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1	0	1	1	0	0	1	0
Detector Template	Left			Left								
Leading Detector (ft)	20	40	0	20	40	0	40	336	0	0	336	0
Trailing Detector (ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Size(ft)	20	40	0	20	40	0	40	6	0	0	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8		8	4		4	6		6	2		2
Detector Phase	8	8	8	4	4	4	1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.0	23.0	23.0	39.9	39.9	39.9	11.0	28.0	28.0	10.0	36.0	36.0

Lanier Tract DRI

9: Dawsonville Highway & Greenhill Circle/Greenhill Circle

phase one p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	39.9	39.9	39.9	39.9	39.9	39.9	31.0	110.1	110.1	10.0	89.1	89.1
Total Split (%)	24.9%	24.9%	24.9%	24.9%	24.9%	24.9%	19.4%	68.8%	68.8%	6.3%	55.7%	55.7%
Maximum Green (s)	34.0	34.0	34.0	34.0	34.0	34.0	25.0	104.1	104.1	5.0	83.1	83.1
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	4.4	4.4	3.5	4.4	4.4
All-Red Time (s)	2.9	2.9	2.9	2.9	2.9	2.9	3.0	1.6	1.6	1.5	1.6	1.6
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.9	5.9		5.9	5.9	6.0	6.0	6.0	5.0	6.0	6.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)				4.0	4.0	4.0		4.0	4.0		4.0	4.0
Flash Dont Walk (s)				30.0	30.0	30.0		18.0	18.0		26.0	26.0
Pedestrian Calls (#/hr)				0	0	0		0	0		0	0
Act Effect Green (s)		28.1	28.1		28.1	28.1	120.0	111.5	111.5	96.9	90.3	90.3
Actuated g/C Ratio		0.18	0.18		0.18	0.18	0.75	0.70	0.70	0.61	0.56	0.56
v/c Ratio		0.88	0.40		0.73	0.15	0.90	0.83	0.07	0.41	0.83	0.07
Control Delay		103.0	9.8		87.7	1.7	57.3	30.1	5.4	24.1	57.7	11.5
Queue Delay		0.0	5.5		87.6	0.0	0.0	47.1	0.0	0.0	1.7	0.0
Total Delay		103.0	15.3		175.3	1.7	57.3	77.2	5.4	24.1	59.4	11.5
LOS		F	B		F	A	E	E	A	C	E	B
Approach Delay		59.7			119.2			72.6			56.9	
Approach LOS		E			F			E			E	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow

Natural Cycle: 130

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.90

Intersection Signal Delay: 67.3

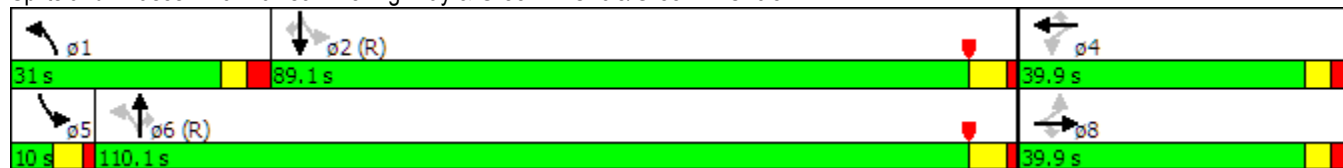
Intersection LOS: E

Intersection Capacity Utilization 89.6%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 9: Dawsonville Highway & Greenhill Circle/Greenhill Circle



Lanier Tract DRI

10: Dawsonville Highway & Shallowford Rd/Best Buy

phase one p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	590	42	29	40	30	8	44	1873	126	8	1331	525
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-1%			10%			-4%			-1%	
Storage Length (ft)	350		350	0		0	350		150	265		0
Storage Lanes	1		0	0		1	1		1	1		1
Taper Length (ft)	100			0			100			100		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950	0.958			0.972		0.950			0.950		
Satd. Flow (prot)	1723	1738	1623	0	1754	1534	1841	3682	1647	1814	3628	1623
Flt Permitted	0.950	0.958			0.972		0.074			0.046		
Satd. Flow (perm)	1723	1738	1623	0	1754	1534	143	3682	1647	88	3628	1623
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			106			111			65			318
Link Speed (mph)		45			25			45			45	
Link Distance (ft)		653			178			1046			778	
Travel Time (s)		9.9			4.9			15.8			11.8	
Peak Hour Factor	0.90	0.90	0.90	0.88	0.88	0.88	0.94	0.94	0.94	0.91	0.91	0.91
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	656	47	32	45	34	9	47	1993	134	9	1463	577
Shared Lane Traffic (%)	47%											
Lane Group Flow (vph)	348	355	32	0	79	9	47	1993	134	9	1463	577
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes										
Headway Factor	0.99	0.99	0.99	1.07	1.07	1.07	0.97	0.97	0.97	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1	0	1	1	0	0	1	0
Detector Template				Left								
Leading Detector (ft)	40	40	0	20	40	0	40	336	0	0	336	0
Trailing Detector (ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Size(ft)	40	40	0	20	40	0	40	6	0	0	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases	3	3		4	4		1	6			2	
Permitted Phases			3			4	6		6	2		2
Detector Phase	3	3	3	4	4	4	1	6	6	2	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	36.7	36.7	36.7	38.9	38.9	38.9	10.8	28.8	28.8	30.8	30.8	30.8

Lanier Tract DRI

10: Dawsonville Highway & Shallowford Rd/Best Buy

phase one p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	36.7	36.7	36.7	38.9	38.9	38.9	10.8	84.4	84.4	73.6	73.6	73.6
Total Split (%)	22.9%	22.9%	22.9%	24.3%	24.3%	24.3%	6.8%	52.8%	52.8%	46.0%	46.0%	46.0%
Maximum Green (s)	30.0	30.0	30.0	33.0	33.0	33.0	5.0	77.6	77.6	66.8	66.8	66.8
Yellow Time (s)	4.5	4.5	4.5	3.0	3.0	3.0	3.0	4.9	4.9	4.9	4.9	4.9
All-Red Time (s)	2.2	2.2	2.2	2.9	2.9	2.9	2.8	1.9	1.9	1.9	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.7	6.7	6.7		5.9	5.9	5.8	6.8	6.8	6.8	6.8	6.8
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes			Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	C-Min	C-Min	C-Min
Walk Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0
Flash Dont Walk (s)	26.0	26.0	26.0	29.0	29.0	29.0		18.0	18.0	20.0	20.0	20.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0	0	0	0	0
Act Effect Green (s)	30.0	30.0	30.0		12.6	12.6	99.0	98.0	98.0	87.4	87.4	87.4
Actuated g/C Ratio	0.19	0.19	0.19		0.08	0.08	0.62	0.61	0.61	0.55	0.55	0.55
v/c Ratio	1.08	1.09	0.08		0.57	0.04	0.29	0.88	0.13	0.19	0.74	0.56
Control Delay	131.3	135.2	0.4		86.5	0.4	17.3	32.6	7.4	56.8	55.1	33.4
Queue Delay	1.2	1.3	0.0		0.0	0.0	0.0	46.8	0.0	0.0	23.5	0.8
Total Delay	132.5	136.5	0.4		86.5	0.4	17.3	79.4	7.4	56.8	78.7	34.2
LOS	F	F	A		F	A	B	E	A	E	E	C
Approach Delay		128.7			77.7			73.6			66.1	
Approach LOS		F			E			E			E	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 91 (57%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.09

Intersection Signal Delay: 78.6

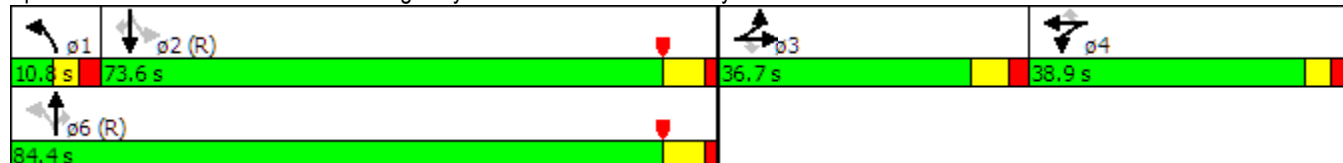
Intersection LOS: E

Intersection Capacity Utilization 89.6%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 10: Dawsonville Highway & Shallowford Rd/Best Buy



Appendix F

Future Phase Two Intersection Analysis

Lanier Tract DRI
1: Sportsman Club Road & Strickland Drive

phase two a.m.

Intersection						
Int Delay, s/veh	4.2					
Movement	WBL	WBR		NBT	NBR	SBL SBT
Vol, veh/h	30	0		7	11	0 25
Conflicting Peds, #/hr	0	0		0	0	0 0
Sign Control	Stop	Stop		Free	Free	Free Free
RT Channelized	-	None		-	None	- None
Storage Length	0	-		-	-	- -
Veh in Median Storage, #	0	-		0	-	- 0
Grade, %	0	-		0	-	- 0
Peak Hour Factor	50	50		58	58	64 64
Heavy Vehicles, %	2	2		2	2	2 2
Mvmt Flow	60	0		12	19	0 39
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	61	22	0	0	31	0
Stage 1	22	-	-	-	-	-
Stage 2	39	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	945	1055	-	-	1582	-
Stage 1	1001	-	-	-	-	-
Stage 2	983	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	945	1055	-	-	1582	-
Mov Cap-2 Maneuver	945	-	-	-	-	-
Stage 1	1001	-	-	-	-	-
Stage 2	983	-	-	-	-	-
Approach	WB		NB		SB	
HCM Control Delay, s	9.1		0		0	
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	945	1582	-	
HCM Lane V/C Ratio	-	-	0.063	-	-	
HCM Control Delay (s)	-	-	9.1	0	-	
HCM Lane LOS	-	-	A	A	-	
HCM 95th %tile Q(veh)	-	-	0.2	0	-	

Lanier Tract DRI
2: GA 53 & Sportsman Club Road

phase two a.m.

Intersection												
Int Delay, s/veh	23.7											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	14	1899	0	5	850	15	0	0	0	41	0	23
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	84	84	84	92	92	92	70	70	70
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	2208	0	6	1012	18	0	0	0	59	0	33

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1030	0	0	2208	0	0	2759	3283	1104	2170	3274	515
Stage 1	-	-	-	-	-	-	2241	2241	-	1033	1033	-
Stage 2	-	-	-	-	-	-	518	1042	-	1137	2241	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	670	-	-	234	-	-	9	9	206	~ 26	9	505
Stage 1	-	-	-	-	-	-	43	78	-	249	308	-
Stage 2	-	-	-	-	-	-	509	305	-	215	78	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	670	-	-	234	-	-	8	9	206	~ 25	9	505
Mov Cap-2 Maneuver	-	-	-	-	-	-	8	9	-	~ 25	9	-
Stage 1	-	-	-	-	-	-	42	76	-	243	300	-
Stage 2	-	-	-	-	-	-	464	297	-	210	76	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.1	0	\$ 866.3
HCM LOS			A	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	670	-	-	234	-	-	38
HCM Lane V/C Ratio	-	0.024	-	-	0.025	-	-	2.406
HCM Control Delay (s)	0	10.5	-	-	20.8	-	-	\$ 866.3
HCM Lane LOS	A	B	-	-	C	-	-	F
HCM 95th %tile Q(veh)	-	0.1	-	-	0.1	-	-	10.1

Notes												
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon												

Lanier Tract DRI
3: GA 53 & Avonlea Way

phase two a.m.

Intersection												
Int Delay, s/veh	11.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	17	0	79	2	0	13	13	875	2	15	1881	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	0	0	-	0	0	-	-	0	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	80	80	80	88	88	88	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	20	0	94	2	0	16	15	994	2	17	2187	8
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2749	3248	1094	2153	3247	498	2187	0	0	997	0	0
Stage 1	2222	2222	-	1025	1025	-	-	-	-	-	-	-
Stage 2	527	1026	-	1128	2222	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	~ 9	9	209	27	9	518	239	-	-	690	-	-
Stage 1	44	79	-	252	311	-	-	-	-	-	-	-
Stage 2	502	310	-	218	79	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 8	8	209	14	8	518	239	-	-	690	-	-
Mov Cap-2 Maneuver	~ 8	8	-	14	8	-	-	-	-	-	-	-
Stage 1	41	77	-	236	291	-	-	-	-	-	-	-
Stage 2	456	291	-	117	77	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	\$ 311.5			52.1			0.3			0.1		
HCM LOS	F			F								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR		
Capacity (veh/h)	239	-	-	8	209	14	518	690	-	-		
HCM Lane V/C Ratio	0.062	-	-	2.53	0.45	0.179	0.031	0.025	-	-		
HCM Control Delay (s)	21.1	-		\$ 1593.4	35.6	\$ 311.5	12.2	10.4	-	-		
HCM Lane LOS	C	-	-	F	E	F	B	B	-	-		
HCM 95th %tile Q(veh)	0.2	-	-	3.6	2.1	0.5	0.1	0.1	-	-		
Notes												
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon												

Lanier Tract DRI
4: GA 53 & Canterbury Road

phase two a.m.

Intersection												
Int Delay, s/veh	29											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	20	0	105	29	0	15	25	820	40	30	1980	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	0	0	-	0	0	-	-	0	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	92	88	92	92	92	86	86	92	92	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	23	0	119	32	0	16	29	953	43	33	2176	9

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2776	3296	1088	2186	3274	498	2176	0	0	997	0	0
Stage 1	2241	2241	-	1033	1033	-	-	-	-	-	-	-
Stage 2	535	1055	-	1153	2241	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	~ 9	8	211	~ 25	9	518	241	-	-	690	-	-
Stage 1	43	78	-	249	308	-	-	-	-	-	-	-
Stage 2	497	301	-	210	78	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 8	7	211	~ 10	8	518	241	-	-	690	-	-
Mov Cap-2 Maneuver	~ 8	7	-	~ 10	8	-	-	-	-	-	-	-
Stage 1	38	74	-	219	271	-	-	-	-	-	-	-
Stage 2	423	265	-	87	74	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	\$ 312.8	\$ 1132.9	0.6	0.2
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	241	-	-	8	211	10	518	690	-	-
HCM Lane V/C Ratio	0.121	-	-	2.841	0.565	3.152	0.031	0.047	-	-
HCM Control Delay (s)	22	-	-	\$ 1733.4	42.2	\$ 1712.5	12.2	10.5	-	-
HCM Lane LOS	C	-	-	F	E	F	B	B	-	-
HCM 95th %tile Q(veh)	0.4	-	-	4	3.1	5	0.1	0.1	-	-

Notes										
~: Volume exceeds capacity	\$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon							

Lanier Tract DRI
7: GA 53 & Beechwood Boulevard

phase two a.m.

Intersection						
Int Delay, s/veh	3.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	6	45	30	961	2306	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	Yield	-	None
Storage Length	0	0	200	-	-	360
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	1	0	-
Peak Hour Factor	82	82	87	87	89	89
Heavy Vehicles, %	0	0	0	1	0	0
Mvmt Flow	7	55	34	1105	2591	2
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	3212	1296	2591	0	-	0
Stage 1	2591	-	-	-	-	-
Stage 2	621	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	8	155	170	-	-	-
Stage 1	43	-	-	-	-	-
Stage 2	504	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 6	155	170	-	-	-
Mov Cap-2 Maneuver	~ 6	-	-	-	-	-
Stage 1	43	-	-	-	-	-
Stage 2	403	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	180.4	1		0		
HCM LOS	F					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	170	-	6	155	-	-
HCM Lane V/C Ratio	0.203	-	1.22	0.354	-	-
HCM Control Delay (s)	31.5	\$	1230.3	40.4	-	-
HCM Lane LOS	D	-	F	E	-	-
HCM 95th %tile Q(veh)	0.7	-	1.7	1.5	-	-
Notes						
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon						

Lanier Tract DRI

5: GA 53 & Lanier Valley Dr/Ahaluna Dr

phase two a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	21	6	127	92	3	27	61	831	47	21	2139	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		2%			-4%			1%			-1%	
Storage Length (ft)	0		0	0		0	100		0	140		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	0			0			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.889			0.970			0.992				
Flt Protected		0.993			0.964		0.950			0.950		
Satd. Flow (prot)	0	1661	0	0	1812	0	1796	3497	0	1814	3628	0
Flt Permitted		0.945			0.481		0.037			0.277		
Satd. Flow (perm)	0	1580	0	0	904	0	70	3497	0	529	3628	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		58			8			11				
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		340			322			888			1417	
Travel Time (s)		7.7			7.3			13.5			21.5	
Peak Hour Factor	0.91	0.91	0.91	0.83	0.83	0.83	0.85	0.85	0.85	0.87	0.87	0.87
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	0%	0%
Adj. Flow (vph)	23	7	140	111	4	33	72	978	55	24	2459	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	170	0	0	148	0	72	1033	0	24	2459	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	0.97	0.97	0.97	1.01	1.01	1.01	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		0	1	
Detector Template	Left			Left								
Leading Detector (ft)	20	40		20	40		40	336		0	336	
Trailing Detector (ft)	0	0		0	0		0	330		0	330	
Detector 1 Position(ft)	0	0		0	0		0	330		0	330	
Detector 1 Size(ft)	20	40		20	40		40	6		0	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		8			4		5	2			6	
Permitted Phases	8			4			2			6		
Detector Phase	8	8		4	4		5	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	23.0	23.0		23.0	23.0		10.6	23.0		23.0	23.0	

Lanier Tract DRI

5: GA 53 & Lanier Valley Dr/Ahaluna Dr

phase two a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	30.0	30.0		30.0	30.0		10.6	120.0		109.4	109.4	
Total Split (%)	20.0%	20.0%		20.0%	20.0%		7.1%	80.0%		72.9%	72.9%	
Maximum Green (s)	23.4	23.4		23.4	23.4		5.0	113.9		103.3	103.3	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	4.5		4.5	4.5	
All-Red Time (s)	2.6	2.6		2.6	2.6		2.6	1.6		1.6	1.6	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.6			6.6		5.6	6.1		6.1	6.1	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		C-Max	C-Max	
Act Effect Green (s)		23.4			23.4		114.4	113.9		103.3	103.3	
Actuated g/C Ratio		0.16			0.16		0.76	0.76		0.69	0.69	
v/c Ratio		0.58			1.01		0.65	0.39		0.07	0.98	
Control Delay		46.8			134.1		57.0	3.3		8.2	37.4	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		46.8			134.1		57.0	3.3		8.2	37.4	
LOS		D			F		E	A		A	D	
Approach Delay		46.8			134.1			6.8			37.1	
Approach LOS		D			F			A			D	

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 26 (17%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 140

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.01

Intersection Signal Delay: 32.6

Intersection LOS: C

Intersection Capacity Utilization 91.4%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 5: GA 53 & Lanier Valley Dr/Ahaluna Dr

								
120 s			30 s			30 s		
								
10.6 s			109.4 s			30 s		

Lanier Tract DRI

6: 53-Dawsonville Hwy & Academy Sports

phase two a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	2	0	7	2	0	0	12	909	10	6	2287	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			4%			1%			0%	
Storage Length (ft)	0		0	0		70	200		170	190		360
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	0			0			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850						0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1900	1615	1769	1862	1862	1796	3556	1607	1805	3610	1615
Flt Permitted							0.031			0.266		
Satd. Flow (perm)	1900	1900	1615	1862	1862	1862	59	3556	1607	505	3610	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			67						68			68
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		262			246			1836			685	
Travel Time (s)		7.1			6.7			27.8			10.4	
Peak Hour Factor	0.67	0.67	0.67	0.50	0.50	0.50	0.86	0.86	0.86	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%
Adj. Flow (vph)	3	0	10	4	0	0	14	1057	12	7	2541	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	3	0	10	4	0	0	14	1057	12	7	2541	4
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.03	1.03	1.03	1.01	1.01	1.01	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1	1	1	1	1	1	1	0
Detector Template												
Leading Detector (ft)	40	40	0	40	40	40	40	336	0	40	336	0
Trailing Detector (ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Size(ft)	40	40	0	40	40	40	40	6	0	40	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm		Perm	Perm		Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8		8	4		4	2		2	6		6
Detector Phase	8	8	8	4	4	4	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	42.0	42.0	42.0	42.4	42.4	42.4	11.4	30.3	30.3	11.0	29.3	29.3

Synchro 8 Report

Marc R Acampora, PE, LLC

Lanier Tract DRI

6: 53-Dawsonville Hwy & Academy Sports

phase two a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	42.4	42.4	42.4	42.4	42.4	42.4	11.4	96.6	96.6	11.0	96.2	96.2
Total Split (%)	28.3%	28.3%	28.3%	28.3%	28.3%	28.3%	7.6%	64.4%	64.4%	7.3%	64.1%	64.1%
Maximum Green (s)	36.0	36.0	36.0	36.0	36.0	36.0	5.0	90.4	90.4	5.0	90.0	90.0
Yellow Time (s)	3.4	3.4	3.4	3.4	3.4	3.4	3.4	4.3	4.3	3.0	4.3	4.3
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	1.9	1.9	3.0	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.2	6.2	6.0	6.2	6.2
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0
Flash Dont Walk (s)	23.0	23.0	23.0	32.0	32.0	32.0		20.0	20.0		19.0	19.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0	0		0	0
Act Effect Green (s)	6.1		6.1	6.1			137.2	139.9	139.9	136.1	137.4	137.4
Actuated g/C Ratio	0.04		0.04	0.04			0.91	0.93	0.93	0.91	0.92	0.92
v/c Ratio	0.04		0.08	0.05			0.12	0.32	0.01	0.01	0.77	0.00
Control Delay	69.5		1.1	70.0			6.0	1.1	0.0	0.8	5.1	0.0
Queue Delay	0.0		0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.5		1.1	70.0			6.0	1.1	0.0	0.8	5.1	0.0
LOS	E		A	E			A	A	A	A	A	A
Approach Delay								1.2			5.1	
Approach LOS								A			A	

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 27 (18%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 145

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.77

Intersection Signal Delay: 4.0

Intersection LOS: A

Intersection Capacity Utilization 87.4%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 6: 53-Dawsonville Hwy & Academy Sports

 p1	 p2 (R)		 p4
11 s	96.6 s		42.4 s
 p5	 p6 (R)		 p8
11.4 s	96.2 s		42.4 s

Lanier Tract DRI

8: Dawsonville Highway/GA 53 & McEver Road/McEver

phase two a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	462	31	378	46	21	22	311	572	61	34	1352	942
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			5%			1%			-1%	
Storage Length (ft)	180		0	0		0	310		185	255		0
Storage Lanes	2		1	1		0	2		1	1		1
Taper Length (ft)	50			0			50			50		
Lane Util. Factor	0.97	0.95	0.95	1.00	1.00	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Frt		0.872	0.850		0.924				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3484	1566	1527	1760	1712	0	3484	3487	1575	1814	3628	1623
Flt Permitted	0.950			0.599			0.950			0.950		
Satd. Flow (perm)	3484	1566	1527	1110	1712	0	3484	3487	1575	1814	3628	1623
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		183	207		34				184			541
Link Speed (mph)		45			45			45			45	
Link Distance (ft)		580			331			921			1624	
Travel Time (s)		8.8			5.0			14.0			24.6	
Peak Hour Factor	0.97	0.97	0.97	0.62	0.62	0.62	0.93	0.93	0.93	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	3%	2%	0%	0%	0%
Adj. Flow (vph)	476	32	390	74	34	35	334	615	66	38	1502	1047
Shared Lane Traffic (%)			47%									
Lane Group Flow (vph)	476	215	207	74	69	0	334	615	66	38	1502	1047
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.03	1.03	1.03	1.01	1.01	1.01	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1		1	1	0	1	1	0
Detector Template												
Leading Detector (ft)	40	40	0	40	40		40	336	0	40	336	0
Trailing Detector (ft)	0	0	0	0	0		0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0		0	330	0	0	330	0
Detector 1 Size(ft)	40	40	0	40	40		40	6	0	40	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	NA	Perm	pm+pt	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases			8	4					6			2
Detector Phase	3	8	8	7	4		1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	13.2	50.2	50.2	11.6	48.2		13.4	35.6	35.6	12.9	44.6	44.6

Lanier Tract DRI

8: Dawsonville Highway/GA 53 & McEver Road/McEver

phase two a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	23.0	59.1	59.1	12.1	48.2		19.0	63.0	63.0	15.8	59.8	59.8
Total Split (%)	15.3%	39.4%	39.4%	8.1%	32.1%		12.7%	42.0%	42.0%	10.5%	39.9%	39.9%
Maximum Green (s)	15.7	51.8	51.8	5.6	40.9		11.5	56.4	56.4	8.6	53.2	53.2
Yellow Time (s)	4.3	4.3	4.3	3.5	4.3		4.5	4.4	4.4	4.2	4.4	4.4
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	2.2	2.2	3.0	2.2	2.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.3	7.3	7.3	6.5	7.3		7.5	6.6	6.6	7.2	6.6	6.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)		4.0	4.0		4.0			4.0	4.0		4.0	4.0
Flash Dont Walk (s)		38.0	38.0		36.0			25.0	25.0		34.0	34.0
Pedestrian Calls (#/hr)		0	0		0			0	0		0	0
Act Effect Green (s)	16.1	17.6	17.6	14.0	8.9		11.5	93.2	93.2	8.5	87.4	87.4
Actuated g/C Ratio	0.11	0.12	0.12	0.09	0.06		0.08	0.62	0.62	0.06	0.58	0.58
v/c Ratio	1.28	0.62	0.57	0.58	0.52		1.25	0.28	0.06	0.37	0.71	0.89
Control Delay	194.8	20.5	13.4	70.0	51.0		197.4	17.8	1.4	74.9	24.1	17.6
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	194.8	20.5	13.4	70.0	51.0		197.4	17.8	1.4	74.9	24.1	17.6
LOS	F	C	B	E	D		F	B	A	E	C	B
Approach Delay		111.2			60.9			75.8			22.2	
Approach LOS		F			E			E			C	

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 19 (13%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.28

Intersection Signal Delay: 52.3

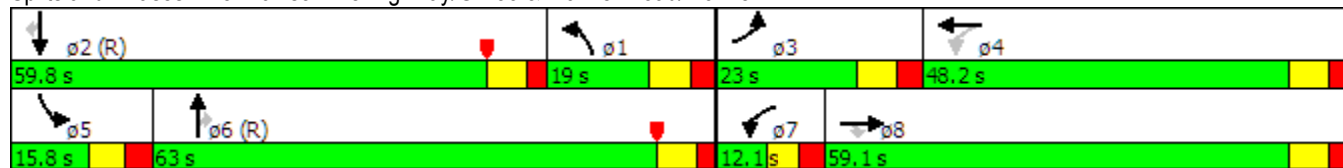
Intersection LOS: D

Intersection Capacity Utilization 89.2%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 8: Dawsonville Highway/GA 53 & McEver Road/McEver



Lanier Tract DRI

9: Dawsonville Highway & Greenhill Circle/Greenhill Circle

phase two a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	74	1	156	7	1	4	149	891	11	13	1610	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		3%			7%			1%			0%	
Storage Length (ft)	0		0	0		0	190		190	185		100
Storage Lanes	0		1	0		1	1		1	1		1
Taper Length (ft)	0			0			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected		0.953			0.957		0.950			0.950		
Satd. Flow (prot)	0	1784	1591	0	1755	1558	1796	3522	1607	1805	3610	1615
Flt Permitted		0.721			0.751		0.072			0.277		
Satd. Flow (perm)	0	1349	1591	0	1377	1558	136	3522	1607	526	3610	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			130			102			57			101
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		288			254			778			921	
Travel Time (s)		7.9			6.9			11.8			14.0	
Peak Hour Factor	0.90	0.90	0.90	0.69	0.69	0.69	0.86	0.86	0.86	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	0%	0%
Adj. Flow (vph)	82	1	173	10	1	6	173	1036	13	14	1750	62
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	83	173	0	11	6	173	1036	13	14	1750	62
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.02	1.02	1.02	1.05	1.05	1.05	1.01	1.01	1.01	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1	0	1	1	0	0	1	0
Detector Template	Left			Left								
Leading Detector (ft)	20	40	0	20	40	0	40	336	0	0	336	0
Trailing Detector (ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Size(ft)	20	40	0	20	40	0	40	6	0	0	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8		8	4		4	6		6	2		2
Detector Phase	8	8	8	4	4	4	1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.0	23.0	23.0	39.9	39.9	39.9	11.0	28.0	28.0	10.0	36.0	36.0

Lanier Tract DRI

9: Dawsonville Highway & Greenhill Circle/Greenhill Circle

phase two a.m.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	39.9	39.9	39.9	39.9	39.9	39.9	21.0	100.1	100.1	10.0	89.1	89.1
Total Split (%)	26.6%	26.6%	26.6%	26.6%	26.6%	26.6%	14.0%	66.7%	66.7%	6.7%	59.4%	59.4%
Maximum Green (s)	34.0	34.0	34.0	34.0	34.0	34.0	15.0	94.1	94.1	5.0	83.1	83.1
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	4.4	4.4	3.5	4.4	4.4
All-Red Time (s)	2.9	2.9	2.9	2.9	2.9	2.9	3.0	1.6	1.6	1.5	1.6	1.6
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.9	5.9		5.9	5.9	6.0	6.0	6.0	5.0	6.0	6.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)				4.0	4.0	4.0		4.0	4.0		4.0	4.0
Flash Dont Walk (s)				30.0	30.0	30.0		18.0	18.0		26.0	26.0
Pedestrian Calls (#/hr)				0	0	0		0	0		0	0
Act Effect Green (s)		14.6	14.6		14.6	14.6	123.5	119.1	119.1	108.7	102.0	102.0
Actuated g/C Ratio		0.10	0.10		0.10	0.10	0.82	0.79	0.79	0.72	0.68	0.68
v/c Ratio		0.64	0.64		0.08	0.02	0.61	0.37	0.01	0.03	0.71	0.05
Control Delay		85.5	29.1		59.9	0.2	33.5	4.7	0.0	4.2	14.8	1.0
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
Total Delay		85.5	29.1		59.9	0.2	33.5	4.7	0.0	4.2	14.9	1.0
LOS		F	C		E	A	C	A	A	A	B	A
Approach Delay		47.4			38.8			8.7			14.4	
Approach LOS		D			D			A			B	

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow

Natural Cycle: 110

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.71

Intersection Signal Delay: 15.0

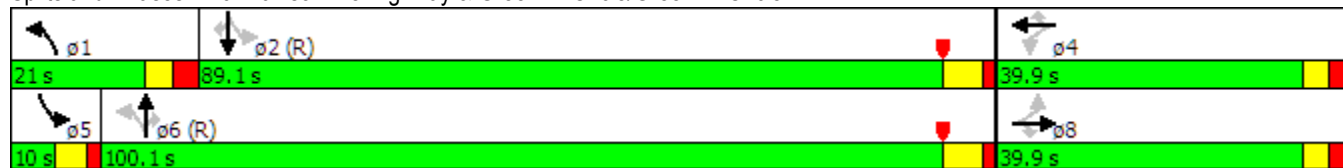
Intersection LOS: B

Intersection Capacity Utilization 78.5%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 9: Dawsonville Highway & Greenhill Circle/Greenhill Circle



Lanier Tract DRI

10: Dawsonville Highway & Shallowford Rd/Best Buy

phase two a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	162	2	9	2	4	3	11	864	14	1	1425	387
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-1%			10%			-4%			-1%	
Storage Length (ft)	350		350	0		0	350		150	265		0
Storage Lanes	1		0	0		1	1		1	1		1
Taper Length (ft)	100			0			100			100		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950	0.953			0.982		0.950			0.950		
Satd. Flow (prot)	1723	1729	1623	0	1773	1534	1841	3646	1647	1814	3592	1623
Flt Permitted	0.950	0.953			0.982		0.115			0.273		
Satd. Flow (perm)	1723	1729	1623	0	1773	1534	223	3646	1647	521	3592	1623
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			113			119			70			219
Link Speed (mph)		45			25			45			45	
Link Distance (ft)		653			178			957			778	
Travel Time (s)		9.9			4.9			14.5			11.8	
Peak Hour Factor	0.84	0.84	0.84	0.56	0.56	0.56	0.83	0.83	0.83	0.93	0.93	0.93
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	1%	0%
Adj. Flow (vph)	193	2	11	4	7	5	13	1041	17	1	1532	416
Shared Lane Traffic (%)	50%											
Lane Group Flow (vph)	96	99	11	0	11	5	13	1041	17	1	1532	416
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes										
Headway Factor	0.99	0.99	0.99	1.07	1.07	1.07	0.97	0.97	0.97	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1	0	1	1	0	0	1	0
Detector Template				Left								
Leading Detector (ft)	40	40	0	20	40	0	40	336	0	0	336	0
Trailing Detector (ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Size(ft)	40	40	0	20	40	0	40	6	0	0	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases	3	3		4	4		1	6			2	
Permitted Phases			3			4	6		6	2		2
Detector Phase	3	3	3	4	4	4	1	6	6	2	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	36.7	36.7	36.7	38.9	38.9	38.9	10.8	28.8	28.8	30.8	30.8	30.8

Lanier Tract DRI

10: Dawsonville Highway & Shallowford Rd/Best Buy

phase two a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	36.7	36.7	36.7	38.9	38.9	38.9	10.8	74.4	74.4	63.6	63.6	63.6
Total Split (%)	24.5%	24.5%	24.5%	25.9%	25.9%	25.9%	7.2%	49.6%	49.6%	42.4%	42.4%	42.4%
Maximum Green (s)	30.0	30.0	30.0	33.0	33.0	33.0	5.0	67.6	67.6	56.8	56.8	56.8
Yellow Time (s)	4.5	4.5	4.5	3.0	3.0	3.0	3.0	4.9	4.9	4.9	4.9	4.9
All-Red Time (s)	2.2	2.2	2.2	2.9	2.9	2.9	2.8	1.9	1.9	1.9	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.7	6.7	6.7		5.9	5.9	5.8	6.8	6.8	6.8	6.8	6.8
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes			Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	C-Min	C-Min	C-Min
Walk Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0
Flash Dont Walk (s)	26.0	26.0	26.0	29.0	29.0	29.0		18.0	18.0	20.0	20.0	20.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0	0	0	0	0
Act Effect Green (s)	13.9	13.9	13.9		6.5	6.5	118.2	117.2	117.2	112.4	112.4	112.4
Actuated g/C Ratio	0.09	0.09	0.09		0.04	0.04	0.79	0.78	0.78	0.75	0.75	0.75
v/c Ratio	0.60	0.62	0.04		0.14	0.03	0.05	0.37	0.01	0.00	0.57	0.33
Control Delay	80.2	81.2	0.3		72.5	0.3	6.1	6.5	0.0	7.0	11.6	4.6
Queue Delay	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0
Total Delay	80.2	81.2	0.3		72.5	0.3	6.1	6.5	0.0	7.0	12.0	4.6
LOS	F	F	A		E	A	A	A	A	A	B	A
Approach Delay		76.4			49.9			6.4			10.4	
Approach LOS		E			D			A			B	

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 45 (30%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.62

Intersection Signal Delay: 13.5

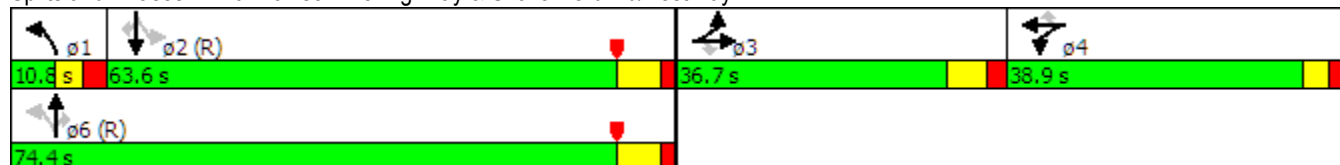
Intersection LOS: B

Intersection Capacity Utilization 63.9%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 10: Dawsonville Highway & Shallowford Rd/Best Buy



Lanier Tract DRI
1: Sportsman Club Road & Strickland Drive

phase two p.m.

Intersection

Int Delay, s/veh 3.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	24	0	32	28	0	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	44	44	86	86	82	82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	55	0	37	33	0	30

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	83	53	0 0 70 0
Stage 1	53	-	- - - -
Stage 2	30	-	- - - -
Critical Hdwy	6.42	6.22	- - 4.12 -
Critical Hdwy Stg 1	5.42	-	- - - -
Critical Hdwy Stg 2	5.42	-	- - - -
Follow-up Hdwy	3.518	3.318	- - 2.218 -
Pot Cap-1 Maneuver	919	1014	- - 1531 -
Stage 1	970	-	- - - -
Stage 2	993	-	- - - -
Platoon blocked, %			- - - -
Mov Cap-1 Maneuver	919	1014	- - 1531 -
Mov Cap-2 Maneuver	919	-	- - - -
Stage 1	970	-	- - - -
Stage 2	993	-	- - - -

Approach	WB	NB	SB
HCM Control Delay, s	9.2	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	- 919	1531	-
HCM Lane V/C Ratio	-	- 0.059	-	-
HCM Control Delay (s)	-	- 9.2	0	-
HCM Lane LOS	-	- A	A	-
HCM 95th %tile Q(veh)	-	- 0.2	0	-

Lanier Tract DRI
2: GA 53 & Sportsman Club Road

phase two p.m.

Intersection												
Int Delay, s/veh		74.3										
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	22	1201	0	26	1914	34	0	0	0	42	0	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	96	96	96	92	92	92	75	75	75
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	23	1264	0	27	1994	35	0	0	0	56	0	20
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	2029	0	0	1264	0	0	2362	3394	632	2744	3377	1015
Stage 1	-	-	-	-	-	-	1311	1311	-	2066	2066	-
Stage 2	-	-	-	-	-	-	1051	2083	-	678	1311	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	276	-	-	546	-	-	19	7	423	~ 9	7	236
Stage 1	-	-	-	-	-	-	168	227	-	56	95	-
Stage 2	-	-	-	-	-	-	243	94	-	408	227	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	276	-	-	546	-	-	16	6	423	~ 8	6	236
Mov Cap-2 Maneuver	-	-	-	-	-	-	16	6	-	~ 8	6	-
Stage 1	-	-	-	-	-	-	154	208	-	~ 51	90	-
Stage 2	-	-	-	-	-	-	211	89	-	374	208	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			0.2			0			\$ 3330.7		
HCM LOS							A			F		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	-	276	-	-	546	-	-	11				
HCM Lane V/C Ratio	-	0.084	-	-	0.05	-	-	6.909				
HCM Control Delay (s)	0	19.2	-	-	11.9	-		\$ 3330.7				
HCM Lane LOS	A	C	-	-	B	-	-	F				
HCM 95th %tile Q(veh)	-	0.3	-	-	0.2	-	-	10.8				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined			*: All major volume in platoon					

Lanier Tract DRI
3: Avonlea Way & GA 53

phase two p.m.

Intersection												
Int Delay, s/veh	4.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	12	0	52	2	0	11	68	1896	17	10	1298	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	0	0	-	0	0	-	-	0	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	76	76	76	80	80	80	95	95	95	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	0	68	2	0	14	72	1996	18	10	1298	15
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2459	3475	649	2817	3466	1007	1298	0	0	2014	0	0
Stage 1	1318	1318	-	2148	2148	-	-	-	-	-	-	-
Stage 2	1141	2157	-	669	1318	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	16	6	412	8	7	239	530	-	-	279	-	-
Stage 1	166	225	-	49	87	-	-	-	-	-	-	-
Stage 2	214	86	-	413	225	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 13	5	412	6	6	239	530	-	-	279	-	-
Mov Cap-2 Maneuver	~ 13	5	-	6	6	-	-	-	-	-	-	-
Stage 1	143	217	-	42	75	-	-	-	-	-	-	-
Stage 2	174	74	-	332	217	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	148			146.1			0.4			0.1		
HCM LOS	F			F								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR		
Capacity (veh/h)	530	-	-	13	412	6	239	279	-	-		
HCM Lane V/C Ratio	0.135	-	-	1.215	0.166	0.417	0.058	0.036	-	-		
HCM Control Delay (s)	12.8	-	-	\$ 722.2	15.5	\$ 833.9	21	18.4	-	-		
HCM Lane LOS	B	-	-	F	C	F	C	C	-	-		
HCM 95th %tile Q(veh)	0.5	-	-	2.6	0.6	0.8	0.2	0.1	-	-		
Notes												
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon												

Lanier Tract DRI
4: Canterbury Road & GA 53

phase two p.m.

Intersection												
Int Delay, s/veh	852.3											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	8	0	31	116	0	92	123	1860	128	68	1238	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	0	0	-	0	0	-	0	0	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	70	70	70	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	0	39	166	0	131	128	1938	133	71	1290	16

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2656	3625	645	2980	3625	969	1290	0	0	1938	0	0
Stage 1	1431	1431	-	2194	2194	-	-	-	-	-	-	-
Stage 2	1225	2194	-	786	1431	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	11	5	415	~ 6	5	253	533	-	-	299	-	-
Stage 1	141	198	-	~ 46	82	-	-	-	-	-	-	-
Stage 2	190	82	-	351	198	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 4	3	415	~ 4	3	253	533	-	-	299	-	-
Mov Cap-2 Maneuver	~ 4	3	-	~ 4	3	-	-	-	-	-	-	-
Stage 1	107	151	-	~ 35	62	-	-	-	-	-	-	-
Stage 2	69	62	-	243	151	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	\$ 484.2	\$ 11156.3	0.8	1.1
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	533	-	-	4	415	4	253	299	-	-
HCM Lane V/C Ratio	0.24	-	-	2.5	0.093	41.429	0.519	0.237	-	-
HCM Control Delay (s)	13.9	-	\$ 2303.8	14.0	9977.6	33.7	20.7	-	-	-
HCM Lane LOS	B	-	F	B	F	D	C	-	-	-
HCM 95th %tile Q(veh)	0.9	-	-	2.3	0.3	22.9	2.7	0.9	-	-

Notes										
~: Volume exceeds capacity	\$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon							

Intersection						
Int Delay, s/veh	1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	1	52	95	2401	1711	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	Yield	-	None
Storage Length	0	0	200	-	-	360
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	1	0	-
Peak Hour Factor	71	71	99	99	98	98
Heavy Vehicles, %	0	0	0	0	1	0
Mvmt Flow	1	73	96	2425	1746	10
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	3151	874	1746	0	-	0
Stage 1	1746	-	-	-	-	-
Stage 2	1405	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	9	297	364	-	-	-
Stage 1	128	-	-	-	-	-
Stage 2	196	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	7	297	364	-	-	-
Mov Cap-2 Maneuver	7	-	-	-	-	-
Stage 1	128	-	-	-	-	-
Stage 2	144	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	32.3	0.7		0		
HCM LOS	D					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	364	-	7	297	-	-
HCM Lane V/C Ratio	0.264	-	0.201	0.247	-	-
HCM Control Delay (s)	18.4	-\$	620.4	21	-	-
HCM Lane LOS	C	-	F	C	-	-
HCM 95th %tile Q(veh)	1	-	0.5	1	-	-

Lanier Tract DRI

5: GA 53 & Lanier Valley Dr/Ahaluna Dr

phase two p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	23	1	106	98	8	64	198	2041	114	31	1448	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		2%			-4%			1%			-1%	
Storage Length (ft)	0		0	0		0	100		0	140		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	0			0			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.890			0.949			0.992				
Flt Protected		0.991			0.972		0.950			0.950		
Satd. Flow (prot)	0	1659	0	0	1788	0	1796	3563	0	1814	3592	0
Flt Permitted		0.906			0.612		0.099			0.040		
Satd. Flow (perm)	0	1517	0	0	1126	0	187	3563	0	76	3592	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		119			17			10				
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		340			322			1002			1457	
Travel Time (s)		7.7			7.3			15.2			22.1	
Peak Hour Factor	0.89	0.89	0.89	0.90	0.90	0.90	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
Adj. Flow (vph)	26	1	119	109	9	71	206	2126	119	32	1508	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	146	0	0	189	0	206	2245	0	32	1511	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	0.97	0.97	0.97	1.01	1.01	1.01	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		0	1	
Detector Template	Left			Left								
Leading Detector (ft)	20	40		20	40		40	336		0	336	
Trailing Detector (ft)	0	0		0	0		0	330		0	330	
Detector 1 Position(ft)	0	0		0	0		0	330		0	330	
Detector 1 Size(ft)	20	40		20	40		40	6		0	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		8			4		5	2			6	
Permitted Phases	8			4			2			6		
Detector Phase	8	8		4	4		5	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	23.0	23.0		23.0	23.0		10.6	23.0		23.0	23.0	

Lanier Tract DRI

5: GA 53 & Lanier Valley Dr/Ahaluna Dr

phase two p.m.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	36.0	36.0		36.0	36.0		22.0	124.0		102.0	102.0	
Total Split (%)	22.5%	22.5%		22.5%	22.5%		13.8%	77.5%		63.8%	63.8%	
Maximum Green (s)	29.4	29.4		29.4	29.4		16.4	117.9		95.9	95.9	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	4.5		4.5	4.5	
All-Red Time (s)	2.6	2.6		2.6	2.6		2.6	1.6		1.6	1.6	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.6			6.6		5.6	6.1		6.1	6.1	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		C-Max	C-Max	
Act Effect Green (s)		26.9			26.9		120.9	120.4		101.9	101.9	
Actuated g/C Ratio		0.17			0.17		0.76	0.75		0.64	0.64	
v/c Ratio		0.41			0.93		0.76	0.84		0.67	0.66	
Control Delay		17.7			106.1		36.4	15.3		86.6	20.9	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		17.7			106.1		36.4	15.3		86.6	20.9	
LOS		B			F		D	B		F	C	
Approach Delay		17.7			106.1			17.0			22.3	
Approach LOS		B			F			B			C	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 129 (81%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.93

Intersection Signal Delay: 22.8

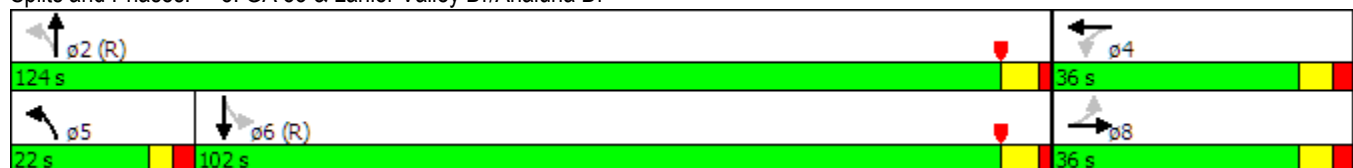
Intersection LOS: C

Intersection Capacity Utilization 96.3%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 5: GA 53 & Lanier Valley Dr/Ahaluna Dr



Lanier Tract DRI

6: 53-Dawsonville Hwy & Academy Sports

phase two p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	14	3	66	130	8	46	96	2142	152	21	1503	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			4%			1%			0%	
Storage Length (ft)	0		0	0		70	200		170	190		360
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	0			0			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1900	1615	1769	1862	1583	1796	3592	1607	1805	3574	1615
Flt Permitted	0.751			0.756			0.106			0.037		
Satd. Flow (perm)	1427	1900	1615	1408	1862	1583	200	3592	1607	70	3574	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			69			63			64			64
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		262			246			1836			685	
Travel Time (s)		7.1			6.7			27.8			10.4	
Peak Hour Factor	0.95	0.95	0.95	0.80	0.80	0.80	0.98	0.98	0.98	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
Adj. Flow (vph)	15	3	69	162	10	58	98	2186	155	22	1549	31
Shared Lane Traffic (%)												
Lane Group Flow (vph)	15	3	69	162	10	58	98	2186	155	22	1549	31
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.03	1.03	1.03	1.01	1.01	1.01	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1	1	1	1	1	1	1	0
Detector Template												
Leading Detector (ft)	40	40	0	40	40	40	40	336	0	40	336	0
Trailing Detector (ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Size(ft)	40	40	0	40	40	40	40	6	0	40	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8		8	4		4	2		2	6		6
Detector Phase	8	8	8	4	4	4	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	42.0	42.0	42.0	42.4	42.4	42.4	11.4	30.3	30.3	11.0	29.3	29.3

Synchro 8 Report

Marc R Acampora, PE, LLC

Lanier Tract DRI

6: 53-Dawsonville Hwy & Academy Sports

phase two p.m.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	42.4	42.4	42.4	42.4	42.4	42.4	16.6	106.6	106.6	11.0	101.0	101.0
Total Split (%)	26.5%	26.5%	26.5%	26.5%	26.5%	26.5%	10.4%	66.6%	66.6%	6.9%	63.1%	63.1%
Maximum Green (s)	36.0	36.0	36.0	36.0	36.0	36.0	10.2	100.4	100.4	5.0	94.8	94.8
Yellow Time (s)	3.4	3.4	3.4	3.4	3.4	3.4	3.4	4.3	4.3	3.0	4.3	4.3
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	1.9	1.9	3.0	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.2	6.2	6.0	6.2	6.2
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0
Flash Dont Walk (s)	23.0	23.0	23.0	32.0	32.0	32.0		20.0	20.0		19.0	19.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0	0		0	0
Act Effect Green (s)	23.7	23.7	23.7	23.7	23.7	23.7	121.5	116.4	116.4	115.5	109.4	109.4
Actuated g/C Ratio	0.15	0.15	0.15	0.15	0.15	0.15	0.76	0.73	0.73	0.72	0.68	0.68
v/c Ratio	0.07	0.01	0.23	0.78	0.04	0.20	0.42	0.84	0.13	0.19	0.63	0.03
Control Delay	55.8	53.3	13.0	89.1	54.6	11.7	14.6	17.5	7.3	10.4	13.2	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
Total Delay	55.8	53.3	13.0	89.1	54.6	11.7	14.6	17.5	7.3	10.4	13.4	0.0
LOS	E	D	B	F	D	B	B	B	A	B	B	A
Approach Delay		21.8			68.1			16.7			13.1	
Approach LOS		C			E			B			B	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 120 (75%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 145

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.84

Intersection Signal Delay: 18.2

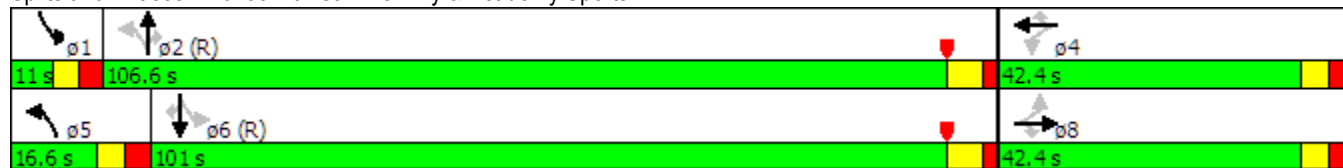
Intersection LOS: B

Intersection Capacity Utilization 92.7%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 6: 53-Dawsonville Hwy & Academy Sports



Lanier Tract DRI

8: Dawsonville Highway/GA 53 & McEver Road/McEver

phase two p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	996	235	426	96	100	93	478	1632	51	71	1249	594
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			5%			1%			-1%	
Storage Length (ft)	180		0	0		0	310		185	255		0
Storage Lanes	2		1	1		0	2		1	1		1
Taper Length (ft)	50			0			50			50		
Lane Util. Factor	0.97	0.95	0.95	1.00	1.00	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Frt		0.951	0.850		0.928				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3484	1708	1527	1760	1719	0	3484	3592	1607	1814	3592	1623
Flt Permitted	0.950			0.432			0.950			0.950		
Satd. Flow (perm)	3484	1708	1527	800	1719	0	3484	3592	1607	1814	3592	1623
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18	302		28				172			323
Link Speed (mph)		45			25			45			45	
Link Distance (ft)		580			331			921			1504	
Travel Time (s)		8.8			9.0			14.0			22.8	
Peak Hour Factor	0.95	0.95	0.95	0.86	0.86	0.86	0.97	0.97	0.97	0.91	0.91	0.91
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
Adj. Flow (vph)	1048	247	448	112	116	108	493	1682	53	78	1373	653
Shared Lane Traffic (%)			27%									
Lane Group Flow (vph)	1048	368	327	112	224	0	493	1682	53	78	1373	653
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.03	1.03	1.03	1.01	1.01	1.01	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1		1	1	0	1	1	0
Detector Template												
Leading Detector (ft)	40	40	0	40	40		40	336	0	40	336	0
Trailing Detector (ft)	0	0	0	0	0		0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0		0	330	0	0	330	0
Detector 1 Size(ft)	40	40	0	40	40		40	6	0	40	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	NA	Perm	pm+pt	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases			8	4					6			2
Detector Phase	3	8	8	7	4		1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	13.2	50.2	50.2	11.6	48.2		13.4	35.6	35.6	12.9	44.6	44.6

Lanier Tract DRI

8: Dawsonville Highway/GA 53 & McEver Road/McEver

phase two p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	34.0	68.2	68.2	14.0	48.2		22.0	64.8	64.8	13.0	55.8	55.8
Total Split (%)	21.3%	42.6%	42.6%	8.8%	30.1%		13.8%	40.5%	40.5%	8.1%	34.9%	34.9%
Maximum Green (s)	26.7	60.9	60.9	7.5	40.9		14.5	58.2	58.2	5.8	49.2	49.2
Yellow Time (s)	4.3	4.3	4.3	3.5	4.3		4.5	4.4	4.4	4.2	4.4	4.4
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	2.2	2.2	3.0	2.2	2.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.3	7.3	7.3	6.5	7.3		7.5	6.6	6.6	7.2	6.6	6.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)		4.0	4.0		4.0			4.0	4.0		4.0	4.0
Flash Dont Walk (s)		38.0	38.0		36.0			25.0	25.0		34.0	34.0
Pedestrian Calls (#/hr)		0	0		0			0	0		0	0
Act Effect Green (s)	26.7	43.9	43.9	32.2	23.9		14.5	65.6	65.6	15.4	66.2	66.2
Actuated g/C Ratio	0.17	0.27	0.27	0.20	0.15		0.09	0.41	0.41	0.10	0.41	0.41
v/c Ratio	1.80	0.77	0.51	0.54	0.80		1.57	1.14	0.07	0.45	0.92	0.76
Control Delay	403.8	61.1	8.7	47.9	77.3		313.6	125.0	0.1	65.4	68.6	41.7
Queue Delay	0.0	58.4	3.3	32.9	0.0		0.0	0.0	0.0	0.0	0.3	0.0
Total Delay	403.8	119.4	12.1	80.8	77.3		313.6	125.0	0.1	65.4	68.8	41.7
LOS	F	F	B	F	E		F	F	A	E	E	D
Approach Delay		270.3			78.5			163.8			60.3	
Approach LOS		F			E			F			E	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 52 (33%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.80

Intersection Signal Delay: 154.3

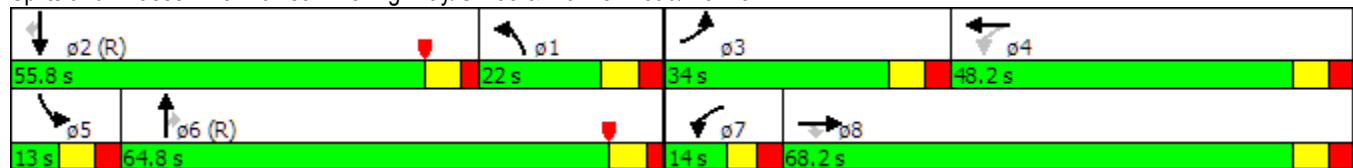
Intersection LOS: F

Intersection Capacity Utilization 112.3%

ICU Level of Service H

Analysis Period (min) 15

Splits and Phases: 8: Dawsonville Highway/GA 53 & McEver Road/McEver



Lanier Tract DRI

9: Dawsonville Highway & Greenhill Circle/Greenhill Circle

phase two p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	146	10	152	66	22	42	274	2059	77	44	1650	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		3%			7%			1%			0%	
Storage Length (ft)	0		0	0		0	190		190	185		100
Storage Lanes	0		1	0		1	1		1	1		1
Taper Length (ft)	0			0			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected		0.955			0.964		0.950			0.950		
Satd. Flow (prot)	0	1787	1591	0	1767	1558	1796	3592	1607	1805	3610	1615
Flt Permitted		0.591			0.482		0.042			0.044		
Satd. Flow (perm)	0	1106	1591	0	884	1558	79	3592	1607	84	3610	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			167			95			54			95
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		288			254			778			921	
Travel Time (s)		7.9			6.9			11.8			14.0	
Peak Hour Factor	0.91	0.91	0.91	0.78	0.78	0.78	0.97	0.97	0.97	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	160	11	167	85	28	54	282	2123	79	46	1737	62
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	171	167	0	113	54	282	2123	79	46	1737	62
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.02	1.02	1.02	1.05	1.05	1.05	1.01	1.01	1.01	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1	0	1	1	0	0	1	0
Detector Template	Left			Left								
Leading Detector (ft)	20	40	0	20	40	0	40	336	0	0	336	0
Trailing Detector (ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Size(ft)	20	40	0	20	40	0	40	6	0	0	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8		8	4		4	6		6	2		2
Detector Phase	8	8	8	4	4	4	1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.0	23.0	23.0	39.9	39.9	39.9	11.0	28.0	28.0	10.0	36.0	36.0

Lanier Tract DRI

9: Dawsonville Highway & Greenhill Circle/Greenhill Circle

phase two p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	39.9	39.9	39.9	39.9	39.9	39.9	31.0	110.1	110.1	10.0	89.1	89.1
Total Split (%)	24.9%	24.9%	24.9%	24.9%	24.9%	24.9%	19.4%	68.8%	68.8%	6.3%	55.7%	55.7%
Maximum Green (s)	34.0	34.0	34.0	34.0	34.0	34.0	25.0	104.1	104.1	5.0	83.1	83.1
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	4.4	4.4	3.5	4.4	4.4
All-Red Time (s)	2.9	2.9	2.9	2.9	2.9	2.9	3.0	1.6	1.6	1.5	1.6	1.6
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.9	5.9		5.9	5.9	6.0	6.0	6.0	5.0	6.0	6.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)				4.0	4.0	4.0		4.0	4.0		4.0	4.0
Flash Dont Walk (s)				30.0	30.0	30.0		18.0	18.0		26.0	26.0
Pedestrian Calls (#/hr)				0	0	0		0	0		0	0
Act Effect Green (s)		28.1	28.1		28.1	28.1	120.0	111.5	111.5	96.9	90.3	90.3
Actuated g/C Ratio		0.18	0.18		0.18	0.18	0.75	0.70	0.70	0.61	0.56	0.56
v/c Ratio		0.88	0.40		0.73	0.15	0.90	0.85	0.07	0.41	0.85	0.07
Control Delay		103.0	9.8		87.7	1.7	58.2	30.6	5.2	23.9	58.8	11.5
Queue Delay		0.0	5.9		87.6	0.0	0.0	46.9	0.0	0.0	3.2	0.0
Total Delay		103.0	15.7		175.3	1.7	58.2	77.5	5.2	23.9	62.0	11.5
LOS		F	B		F	A	E	E	A	C	E	B
Approach Delay		59.8			119.2			73.0			59.3	
Approach LOS		E			F			E			E	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow

Natural Cycle: 130

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.90

Intersection Signal Delay: 68.5

Intersection LOS: E

Intersection Capacity Utilization 91.0%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 9: Dawsonville Highway & Greenhill Circle/Greenhill Circle



Lanier Tract DRI

10: Dawsonville Highway & Shallowford Rd/Best Buy

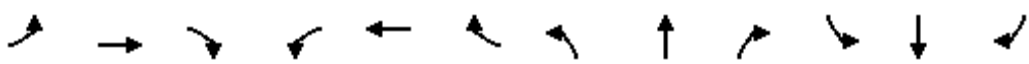
phase two p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	596	42	29	40	30	8	44	1914	126	8	1375	531
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-1%			10%			-4%			-1%	
Storage Length (ft)	350		350	0		0	350		150	265		0
Storage Lanes	1		0	0		1	1		1	1		1
Taper Length (ft)	100			0			100			100		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950	0.958			0.972		0.950			0.950		
Satd. Flow (prot)	1723	1738	1623	0	1754	1534	1841	3682	1647	1814	3628	1623
Flt Permitted	0.950	0.958			0.972		0.064			0.047		
Satd. Flow (perm)	1723	1738	1623	0	1754	1534	124	3682	1647	90	3628	1623
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			106			111			65			311
Link Speed (mph)		45			25			45			45	
Link Distance (ft)		653			178			1046			778	
Travel Time (s)		9.9			4.9			15.8			11.8	
Peak Hour Factor	0.90	0.90	0.90	0.88	0.88	0.88	0.94	0.94	0.94	0.91	0.91	0.91
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	662	47	32	45	34	9	47	2036	134	9	1511	584
Shared Lane Traffic (%)	47%											
Lane Group Flow (vph)	351	358	32	0	79	9	47	2036	134	9	1511	584
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes										
Headway Factor	0.99	0.99	0.99	1.07	1.07	1.07	0.97	0.97	0.97	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1	0	1	1	0	0	1	0
Detector Template				Left								
Leading Detector (ft)	40	40	0	20	40	0	40	336	0	0	336	0
Trailing Detector (ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	330	0	0	330	0
Detector 1 Size(ft)	40	40	0	20	40	0	40	6	0	0	6	0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases	3	3		4	4		1	6			2	
Permitted Phases			3			4	6		6	2		2
Detector Phase	3	3	3	4	4	4	1	6	6	2	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	36.7	36.7	36.7	38.9	38.9	38.9	10.8	28.8	28.8	30.8	30.8	30.8

Lanier Tract DRI

10: Dawsonville Highway & Shallowford Rd/Best Buy

phase two p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	37.0	37.0	37.0	38.9	38.9	38.9	10.8	84.1	84.1	73.3	73.3	73.3
Total Split (%)	23.1%	23.1%	23.1%	24.3%	24.3%	24.3%	6.8%	52.6%	52.6%	45.8%	45.8%	45.8%
Maximum Green (s)	30.3	30.3	30.3	33.0	33.0	33.0	5.0	77.3	77.3	66.5	66.5	66.5
Yellow Time (s)	4.5	4.5	4.5	3.0	3.0	3.0	3.0	4.9	4.9	4.9	4.9	4.9
All-Red Time (s)	2.2	2.2	2.2	2.9	2.9	2.9	2.8	1.9	1.9	1.9	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.7	6.7	6.7		5.9	5.9	5.8	6.8	6.8	6.8	6.8	6.8
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes			Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	C-Min	C-Min	C-Min
Walk Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0
Flash Dont Walk (s)	26.0	26.0	26.0	29.0	29.0	29.0		18.0	18.0	20.0	20.0	20.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0	0	0	0	0
Act Effect Green (s)	30.3	30.3	30.3		12.6	12.6	98.7	97.7	97.7	87.1	87.1	87.1
Actuated g/C Ratio	0.19	0.19	0.19		0.08	0.08	0.62	0.61	0.61	0.54	0.54	0.54
v/c Ratio	1.08	1.09	0.08		0.57	0.04	0.31	0.91	0.13	0.19	0.77	0.57
Control Delay	130.7	133.6	0.4		86.5	0.4	18.2	34.6	7.5	55.5	56.2	34.0
Queue Delay	1.2	1.2	0.0		0.0	0.0	0.0	46.4	0.0	0.0	36.0	0.8
Total Delay	131.9	134.9	0.4		86.5	0.4	18.2	81.0	7.5	55.5	92.2	34.9
LOS	F	F	A		F	A	B	F	A	E	F	C
Approach Delay		127.7			77.7			75.2			76.1	
Approach LOS		F			E			E			E	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 91 (57%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.09

Intersection Signal Delay: 83.2

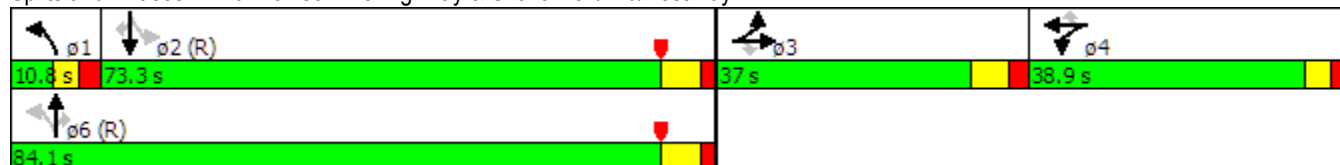
Intersection LOS: F

Intersection Capacity Utilization 90.9%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 10: Dawsonville Highway & Shallowford Rd/Best Buy





Lake Lanier
Active Adult Community
Gainesville, Georgia

Oak Hall Companies, LLC

5256 Peachtree Road, Suite 195

Atlanta, GA 30341

770-662-5995 office

404-234-6669 cell

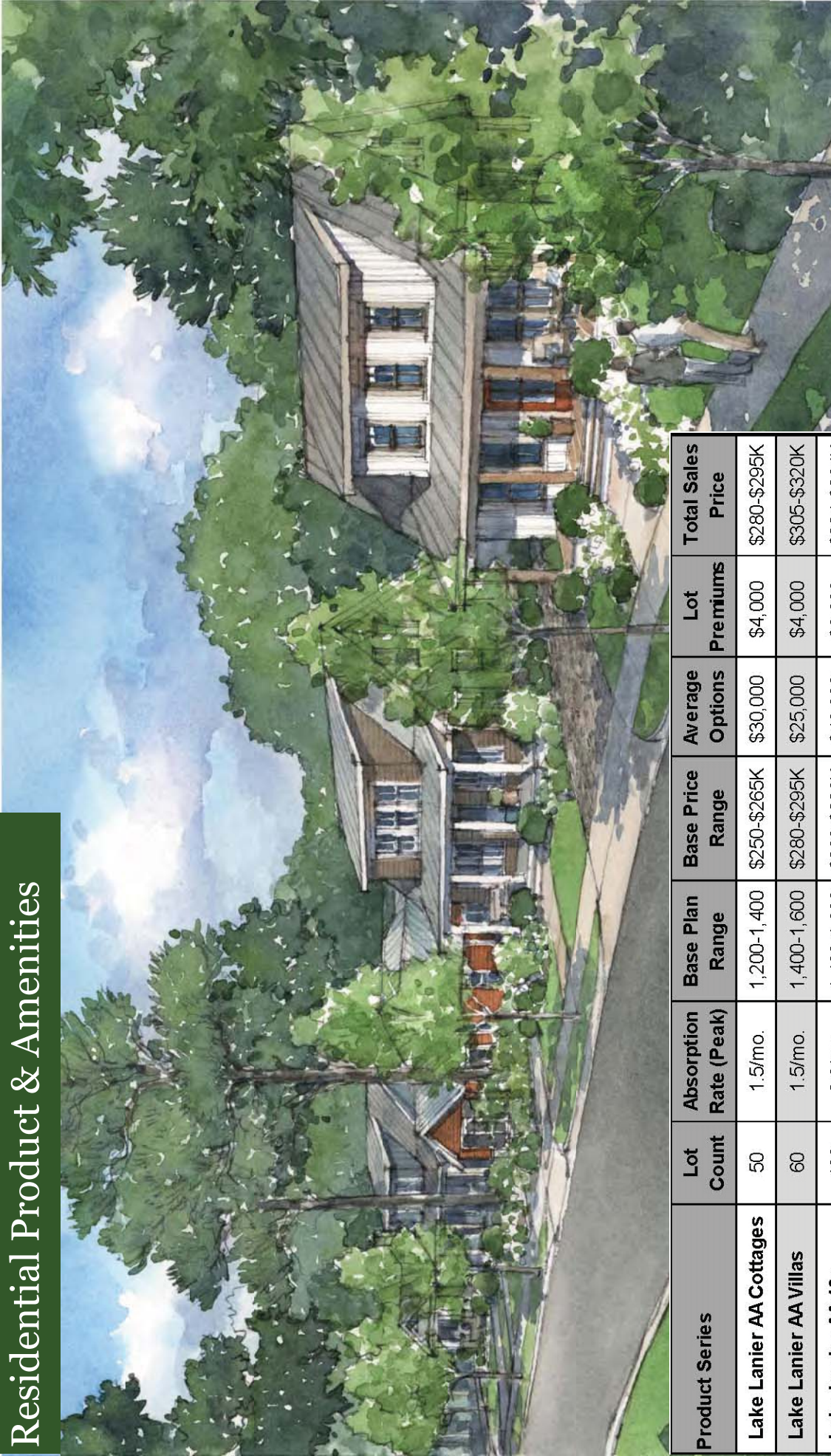
tad@oakhallcompanies.com

www.oakhallcompanies.com



The Product

Residential Product & Amenities



Product Series	Lot Count	Absorption Rate (Peak)	Base Plan Range	Base Price Range	Average Options	Lot Premiums	Total Sales Price
Lake Lanier AA Cottages	50	1.5/mo.	1,200-1,400	\$250-\$265K	\$30,000	\$4,000	\$280-\$295K
Lake Lanier AA Villas	60	1.5/mo.	1,400-1,600	\$280-\$295K	\$25,000	\$4,000	\$305-\$320K
Lake Lanier AA 40s	100	2.0/mo.	1,400-1,800	\$290-\$320K	\$40,000	\$8,000	\$334-\$364K
Lake Lanier AA 50s	150	3.0/mo.	1,800-2,400	\$340-\$385K	\$50,000	\$12,000	\$397-\$442K
Lake Lanier AA 60s	100	2.0/mo.	2,400-3,000	\$400-\$445K	\$60,000	\$15,000	\$469-\$514K
Total/Average	460	10.0/mo.	1,200-3,000	\$250-\$445K	\$25-\$60K	\$4-\$15K	\$280-\$514K

Oak Hall Companies, LLC

4/19/17

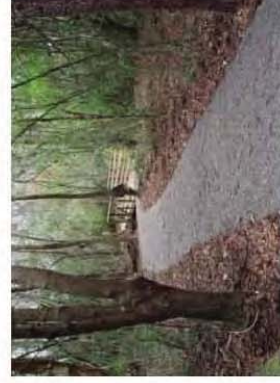
Residential Product & Amenities



Clubhouse Amenities	Recommend for Subject
Clubhouse	Yes
Fitness Center	Yes
Indoor Lap Pool	Yes
Locker Rooms	Yes
Aerobics Room	Yes
Billiards Room	Yes
Cards Room	Yes
Multi-Purpose Room	Yes
Kitchen	Yes
Covered Terrace	Yes
Activities Director	Yes



Outdoor Amenities	Recommend for Subject
Zero Entry Resort Pool	Yes
Shaded/Covered Areas/Cabanas	Yes
Fireplace and Grilling Area	Yes
Walking Trails	Yes
Tennis Courts (4)	Yes
Pickleball Courts (4)	Yes
Multi-Purpose Lawn	Yes
Lakeside Pavillion w. Restrooms	Yes
Neighborhood/Pocket Parks w/ Gazebos	Yes
Dog Parks (2)	Yes
Small Playground	Yes



Assisted Living & Memory Care Facility

Product Series	Unit Count	Absorption Rate	Lease-Up Stabilized	Plan Ranges	Monthly Rents
Assisted Living	75	3.0/mo.	24 months	550-950sqft	\$3,600-\$4,400
Memory Care	50	2.0/mo.	24 months	550-650sqft	\$4,200-\$4,400
Total/Average	125	5.0/mo.	24 months	1,200-3,000	\$250-\$445K

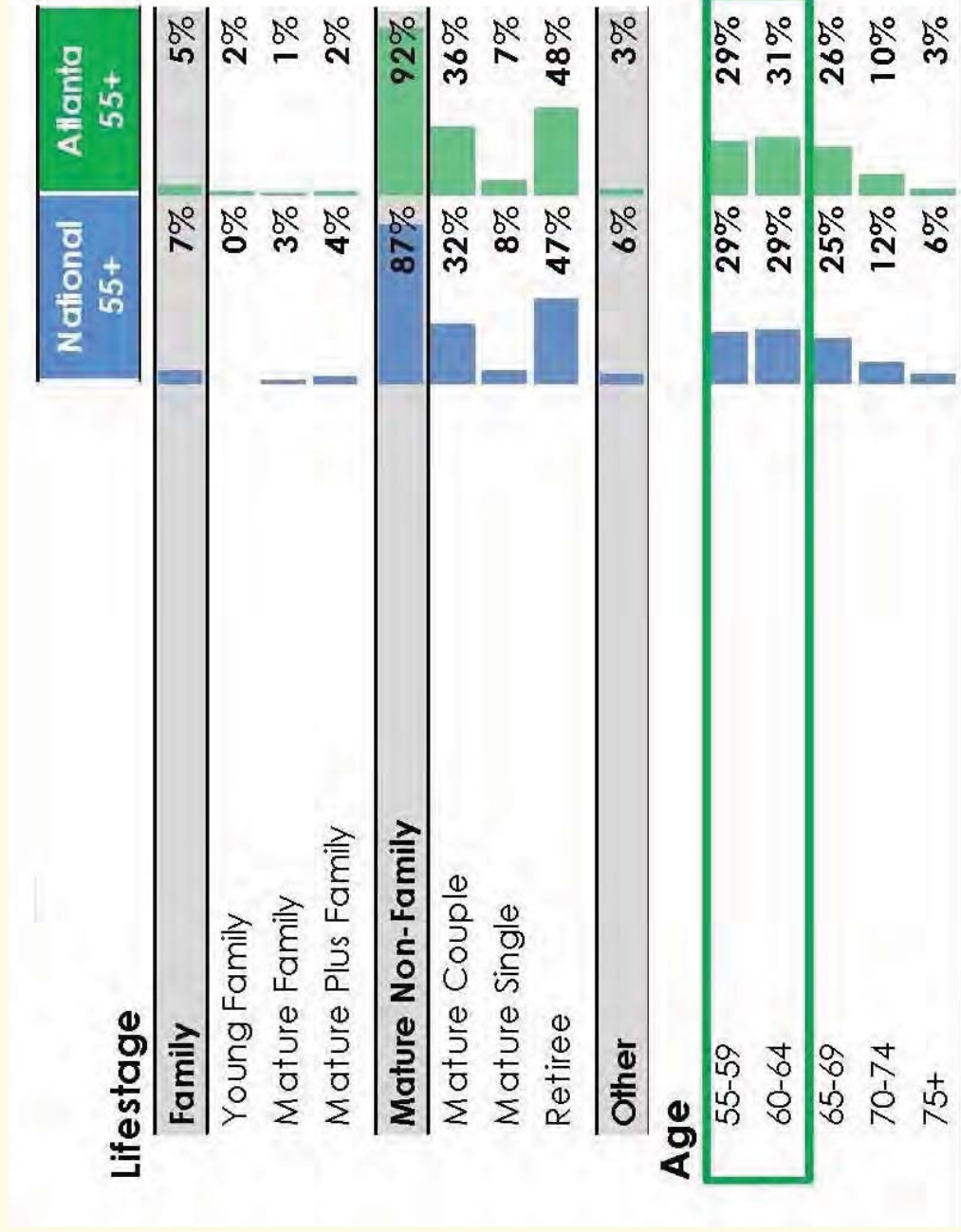




Impact on the Local Economy

Economy & Mature Shoppers

- ◆ Nearly half of mature Atlanta shoppers are still working either full or part-time.
- ◆ Atlanta falls in line with the national average, over 50% are between 55 and 64 years of age.



Positive Economic Impact for Gainesville

Age-Restricted Residences

- ♦ Age-restricted residents will have minimal impact on traffic, as typical residents will be older and not drive during peak traffic times.
- ♦ Age-restricted residents will have minimal impact on area schools, as typical residents will be older without school-age children.
- ♦ The Development will generate equivalent traffic to that if the property is developed as currently zoned.



Positive Economic Impact for Gainesville

Tax revenue

- ♦ Projected Annual Property Taxes to the City of Gainesville at Completion - \$ 1,495,901.72
- ♦ Projected Annual Sales Tax Revenue to the City of Gainesville at Completion - \$ 433,484.28
- ♦ Projected Annual Net Revenue to the City of Gainesville at Completion - \$ 382,020.47
- ♦ Typical Single Family Home Price - \$400,000
- ♦ Residents of Assisted Living and Memory Care will not be exempt from school property taxes (rent paid to landlord includes property taxes)



Positive Economic Impact for Gainesville

Employment

- ♦ The Assisted Living and Memory Care component of the Development will provide employment for workers in the medical field.
- ♦ The retail/office/restaurant component of the Development will provide places of employment and community gathering locations.



Positive Economic Impact for Gainesville

Fire Station

- ◆ Developer will donate land to the City of Gainesville for an approximately 10,650 sf Fire Station, which will improve response time, insurance rates, and fire safety for all nearby residents.
- ◆ Providing an additional fire station will allow City of Gainesville to maintain an ISO Class 1 rating.

Utilities Extension

- ◆ The Project will extend utility services to areas currently unserved by water and sewer.
- ◆ Improved insurance rates for nearby residents.
- ◆ The Project will utilize the existing regional pump station on Dawsonville Hwy. and increase the revenue for the utility department.



Positive Economic Impact for Gainesville

Improved Road Access

- ◆ Project will improve Ahaluna Drive.
- ◆ Project will provide multiple access points onto SR53, relieving congestion at intersection of Ahaluna Drive and SR53.
- ◆ Developer will install acceleration and deceleration lanes on SR53 at points of access, as required by GDOT.





Site Plan



Site Development Consultants, Inc.

Page 940 of 1377

NOTES

1. THIS PLAN IS TO BE USED FOR PLANNING PURPOSES ONLY, AND IS NOT INTENDED TO BE A CONSTRUCTION DOCUMENT. PLAN IS PREPARED FOR USE ONLY BY GAC HALL COMPANIES, LLC.

COMMERCIAL PARCEL

COMMERCIAL PARCEL TOTAL ACREAGE	23.31 ACRES
PROPOSED ZONING	G-B GENERAL BUSINESS DISTRICT
PROPOSED USE	1 COMMERCIAL PARCELS
RETAIL SPACE	8,000 SF AVERAGE PER PARCEL

ADJACENT HILLTOP SPRINGS TOWNHOME PROJECT

SITE AREA:	26.2 ACRES
ATTACHED SENIOR TERRACE HOMES	40 UNITS
DENSITY: 40 UNITS/26.2 ACRES	3.44 UNITS PER ACRE

PROJECT LYING IN LAND LOTS 161, 162, 163 & 173 OF THE
9TH DISTRICT, CITY OF GAINESVILLE, HALL COUNTY, GEORGIA

Prepared for
Oak Hall Companies, LLC
5256 Peachtree Road, Suite 195
770-662-5995
Atlanta, GA 30341
DATE: 4/17/2017

Exhibit A - Page 1





Exhibit A - Page 3





Photo by John Galla www.firenews.org



Harbour Point Community Association
3313 Harbour Point Parkway
Gainesville, Georgia 30506
April 25, 2017

Subject: Oak Hall Development

Mayor Danny Dunagan
300 Henry Ward Way
Suite 303
P.O. Box 2496
Gainesville, Georgia 30501

Dear Mayor Dunagan:

My name is Gary Lawrence and I currently serve as the President of the Harbour Point Community Association Board. Harbour Point is a Community of 290 households located on Route 53, about 5.5 miles west of the proposed Oak Hall Development on Ahaluna Drive. Our Board recently received a presentation on this Development and has the following concerns.

1 Our residents are currently experiencing significant delays in exiting our Community onto Route 53. These delays occur not only during rush hours but throughout the day, 7 days a week. GDOT has reported a growth of more than 2000 vehicles a day that pass our entrance from 2015 to 2016, due to the widening project and the many new businesses located in the corridor. This traffic is projected to grow regardless of any new development. Many of our residents are avoiding the traffic congestion enroute to Gainesville, by turning west and doing their shopping in Dawsonville.

2 The traffic in this already congested corridor will be exacerbated by the Oak Hall Development. The GPAB had cancelled a March 7 Public Hearing due the lack of current traffic data to assess the impact of traffic from this Development. A traffic study by Arcadis Consulting was commissioned to gather the needed data. The result of the study is currently planned for mid to late May. In their haste to obtain project approval, the GPAB has now scheduled the hearing for May 9, which will not allow adequate time for the appropriate review of the study's findings and the development of traffic remediation efforts needed to approve the development.

3 There appears to be no plan to reprioritize traffic enhancement Tier 2 projects to Tier 1 status to address the immediate need for something to be done in time for the Oak Hall Development. We perceive that the current plan is to approve the project and then to worry about the resultant traffic congestion later. We contend that the City and County should at least have a plan for traffic remediation and controlling signal light sequences, but that will not be enough. We need additional lane capacity and turning lanes, etc. before the project comes on line.

4 Harbour Point certainly understands the value of new development and the need for additional affordable housing for our beautiful City of Gainesville. To approve the project without having a clear understanding of potential traffic problems and a short term plan to address these issues is dangerous for the overall image and livability of Gainesville. We recommend that the Developer, GDOT and all of the other parties develop a traffic remediation plan and locate the monies to make it happen before the project is approved.

As Mayor of our great City, I ask that you have the steps required for the approval of this Development sequenced appropriately, so that we are in front of the problem with new roadway capacity and not scrambling after the congestion is upon us. Thank you for your attention to this important issue.

Sincerely,

Gary Lawrence

cc: Bryan Lackey, City Manager
 City Council
 GPAB Members

Matt Tate

From: David Simpson
Sent: Tuesday, May 09, 2017 3:54 PM
To: Matt Tate
Cc: Jason Justice
Subject: [SPAM] Concerning Request to annex Dawsonville Hwy Property from Oak Hall Companies

Importance: Low

City Planning

As a resident of Lakeshore Heights (Lakeshore Circle) I have a number of concerns which cause me to oppose the annexation of property along Dawsonville Highway, Ahaluna Drive, etc. by Oak Hall Companies. The proposed docks that would added to the development would prohibit use of a very popular cove for skiers and boaters. There are few places to find a safe cove for such activities, but this Longwood Cove area is one of them. Please do not allow a massive boat dock to be placed into this cove. In addition, the cove at which we live is already filled with silt from run off. Additional buildings will cause more silt to fill the cove behind Lakeshore Circle and may actually limit its use. Traffic concerns have been addressed by many, and I concur that the traffic on Dawsonville Highway would be a bottleneck. It is that now at different times of the day. My greatest concern is the "dead end" road at Lakeshore Circle that is closed to traffic now. (No access to Ahaluna Drive). PLEASE do not open this road. Already the traffic we do have on Lakeshore drive and Lakeshore Circle is too fast for the neighborhood. Increased traffic would be dangerous for all concerned with limited sight driveways all throughout Lakeshore Heights. Please do not allow our neighborhood to become a main thoroughfare to bypass Dawsonville Highway! This massive proposed development would change the serenity of our neighborhood and destroy all wildlife, which is enjoyed by many in our area. To develop this acreage as hiking trails and parks would be ideal, but please limit the development of houses/apartments and boat docks. Thank you for hearing my concerns.

Sincerely,
David Simpson

Gary A. Roth

Athens, GA 30607

Tuesday, May 09, 2017

City of Gainesville
ATTN: Matt Tate, Planning Manager
300 Henry Ward Way, Suite 303
Gainesville, GA 30501

Dear Mr. Tate:

I am writing you today in response to an article I read recently in the *Gainesville Times*. In the article, an 880 home development is coming before the planning board very soon. It is my understanding that Oak Hall Companies is seeking a re-zoning action to allow this development to move forward. As with most items of change, the impact of this development should be thoroughly considered.

This development is a very bad idea. Not only would it destroy beautiful habitat quiet scenery, it would also further congest the already crowded streets of this community. No area of Gainesville can handle the traffic levels now, let alone adding nearly 1,000 more homes. I have been commuting to Gainesville for the last 18 months and have yet to see ANY improvements to the traffic management systems. With limited infrastructure, this development will only makes things worse. It will add more cars, more pollution, more stress and longer commutes. Is that really what you want to do to this town? Do you really want to make it worse? For what? More tax dollars?

Development companies only care about making money. With the inner city in a complete mess and no investments to repurpose the bad areas, they seek to make urban sprawl an even bigger problem. Oak Hall is a company that only cares about its profits and not about the people of Gainesville. The last thing this community needs is more people from Atlanta. The only thing they will do is clog up more of the roads and create more traffic! There has to be a better way to manage the area.

Traffic improvements must be made FIRST. We cannot allow the buildings and traffic to skyrocket before we do something about the congestion. Atlanta and the surrounding area are clearly known as the worst places to drive, so why are we making the problem worse? It's going to take a strong stand by you and your committee to deny this project until the roads and other structures are in place to manage it. Don't be blinded by the money, the community center or the promise of acreage for a fire station. You need to do the right thing.

Just look at what Oak Hall representatives say about the current zoning. They are lying to the residents saying that younger families will be moving in and out and they should be allowed their development. This is what the mass media does by twisting facts to push an agenda. If their development is such a grand idea, they wouldn't need to make arbitrary comments like that. Trust me, they are only concerned with profits.

Let's do the right thing for this wonderful community. Build the infrastructure first, and minimize the burden on the tax paying citizens that have to deal with it everyday!

Sincerely,



Gary Allen Roth

CITY OF GAINESVILLE

WORKSESSIONREQUEST

Date Submitted: 5/23/2017

Presenter: Matt Tate

Item of Business: **Public Hearing Item for the June 6, 2017 Council Meeting**
Request from **Brightstone Transitions** to amend the existing Planned Unit Development (P-U-D) zoning on a 0.50± acre tract located at the east side of Green Street, across from its intersection with Forrest Avenue (a/k/a **446 Green Street, NE**).
Ward Number: Four. Tax Parcel Number(s): 01-024-001-005. **Request: Group home and office.**

Meeting Date: 6/1/2017

Purpose of Request:

The applicant is proposing to amend an existing property zoned Planned Unit Development (P-U-D) for a group home and office. The property was most recently occupied for professional office purposes and contains a historic residential structure and a detached carriage house which are located within the Green Street Historic District. The applicant states the group home will include a maximum of 6 to 8 males between the age of 18 and 24 years of age that are diagnosed with Asperger's Syndrome which is a social disorder. The students will live on the second floor and the first floor and carriage house will be occupied for office space for the support staff as well as trained residential mentors that are with the students at all times. The adjacent uses include the Norton Agency, Protein Products and other professional offices.

History/Background:

Facts & Issues for Consideration:

Department Recommendation:

Planning staff recommended approval with three conditions.

The Planning and Appeals Board recommended denial (4 to 3 vote).

See the PAB Recommendation Report for details and excerpts from the PAB meeting minutes.

SAMPLE MOTIONS

Approve Zoning Amendment

I move to conditionally approve first reading of an ordinance to amend the existing Planned Unit Development with three conditions.

Deny

I move to deny the zoning amendment request.

Department Director:

Rusty Ligon

If funding is involved, are funds approved within the current budget?

N/A

Amount Requested:

Source of Funds:

Finance Comments:

Administrative Comments:

ATTACHMENTS:

Description		Type
	Legal Ad	Legal Ad
	PAB Recommendation Report	Report
	Proposed Zoning Amendment Ordinance	Ordinance
	Location Maps	Backup Material
	Narrative	Backup Material
	Plat	Backup Material
	Pictures	Backup Material

COMBINED LEGAL AD
Gainesville Planning and Appeals Board
Gainesville City Council

Publish Sunday, April 23, 2017
THE TIMES

NOTICE OF PLANNING AND APPEALS BOARD PUBLIC HEARING

Notice is hereby given that the **Gainesville Planning and Appeals Board** will conduct a public hearing on **Tuesday, May 9, 2017** at **5:30 p.m.** in the **Gainesville Justice Center** (Municipal Courtroom at the Public Safety Complex), 701 Queen City Parkway in midtown Gainesville on the following requests:

- 1) Request from **Oak Hall Companies, LLC** to annex a 26.16 acres tract located east of Dawsonville Highway and on the north side of the intersection of Strickland Drive and Sportsman Club Road, with road frontage on Karen Lane (a/k/a **0 and 2209 Karen Lane; 2106, 2234 and 2242 Sportsman Club Road; and 2049 Strickland Drive**) and to establish zoning as Planned Unit Development (P-U-D).
Ward Number: One
Tax Parcel Number(s): 00-109-003-001, 004, 005; 00-109B-000-001, 002A and 036
Request: Active adult community
- 2) Request from **Oak Hall Companies, LLC** to annex a 50.81± acres tract located on the east side of Dawsonville Highway (S.R. 53), having road frontage on Dawsonville Highway, Ahaluna Drive, Skyview Drive and Strickland Drive (a/k/a **0 and 1758 Ahaluna Drive; 1508, 1550, 1740, 1746, 1758, 1760, 1934 and 1982 Dawsonville Highway; 300 and 301 Skyview Drive; 0, 2008 and 2016 Strickland Drive**) and to establish zoning as Planned Unit Development (P-U-D) and General Business (G-B).
Ward Number: One
Tax Parcel Number(s): 00-110-000-005 (part), 028, 032 (part) and 039; 00-110A-004-001 (part), 002A, 004 (part), 005 (part), 007 (part), 007A (part), 007X, 014 (part), 016 (part), 017 (part) and 018
Request: Mixed-use development
- 3) Request from **Oak Hall Companies, LLC** to rezone a 157.98± acres tract located on the east side of Dawsonville Highway (S.R. 53), having road frontage on Ahaluna Drive, Skyview Drive, Strickland Drive, Lakeshore Circle, West Lake Drive and Karen Lane (a/k/a **0, 1264 and 1817 Ahaluna Drive; 1876 Dawsonville Highway; 2208 Karen Lane; 0 and 2029 Strickland Drive; 0 and 1489 West Lake Drive**) from Residential-I-A (R-I-A), Residential-I (R-I), Planned Unit Development (P-U-D) and Regional Business (R-B) to Planned Unit Development (P-U-D) and General Business (G-B).
Ward Number: One
Tax Parcel Number(s): 00-109B-000-003A; 00-110-000-001, 006, 030, 031, 034, 035, 036, 037 and 038; 01-110-001-006; 01-110A-004-022; 01-114-001-001, 026, 145 and 161
Request: Mixed-use development
- 4) Request from **Brightstone Transitions** to amend the existing Planned Unit Development (P-U-D) zoning on a 0.50± acre tract located at the east side of Green Street, across from its intersection with Forrest Avenue (a/k/a **446 Green Street, NE**).
Ward Number: Four
Tax Parcel Number(s): 01-024-001-005
Request: Group home and office

- 5) Request from **Montecito Development** to rezone a 0.48± acre tract located on the south side of Enota Avenue, west of its intersection with Thompson Bridge Road (a/k/a **149 Enota Avenue, NW**) from Office and Institutional (O-I) to Neighborhood Business (N-B), with a special use.
Ward Number: Two
Tax Parcel Number(s): 01-074-004-001
Request: Convenience store with fuel pumps
- 6) Request from **Montecito Development** for a special use on a 0.80± acre tract located at the southwest side of the intersection of Enota Avenue and Thompson Bridge Road (a/k/a **1281 Thompson Bridge Road, NW**), having a zoning of Neighborhood Business (N-B).
Ward Number: Two
Tax Parcel Number(s): 01-074-004-020
Request: Convenience store with fuel pumps
- 7) Request from **Gainesville Market, LLC** for a special use on a 5.0± acres tract located west of Shallowford Road within the Gainesville Market Shopping Center (a/k/a **600 Shallowford Road**), having a zoning of General Business (G-B).
Ward Number: Five
Tax Parcel Number(s): 01-119C-001-029
Request: Commercial outdoor recreational facility
- 8) Request from **Manor Lake Development, LLC** for a special use on a 9.24± acres tract located on the northwest side of McEver Road, between Browns Bridge Road and Orchard Brook Drive (a/k/a **2900 McEver Road**), having a zoning of Office and Institutional (O-I) and Residential-I (R-I).
Ward Number: Four
Tax Parcel Number(s): 08-022-000-005
Request: Assisted living facility
- 9) Request from **Carriage North, LLC** for a special use on a 0.71± acre tract located on the southwest side of the terminus of Corporate Drive, west of Browns Bridge Road (a/k/a **2425 Corporate Drive**), having a zoning of General Business (G-B).
Ward Number: Five
Tax Parcel Number(s): 08-007-001-042
Request: Helipad

NOTICE OF PUBLIC HEARING ON PROPOSED AMENDMENTS TO THE GAINESVILLE ZONING MAP

Notice is hereby given that the **Gainesville City Council** will conduct a public hearing on **Tuesday, June 6, 2017 at 5:30 p.m.** in the **Gainesville Justice Center** (Municipal Courtroom at the Public Safety Complex), 701 Queen City Parkway in midtown Gainesville on the following requests:

- 1) Request from **Oak Hall Companies, LLC** to annex a 26.16 acres tract located east of Dawsonville Highway and on the north side of the intersection of Strickland Drive and Sportsman Club Road, with road frontage on Karen Lane (a/k/a **0 and 2209 Karen Lane; 2106, 2234 and 2242 Sportsman Club Road; and 2049 Strickland Drive**) and to establish zoning as Planned Unit Development (P-U-D).
Ward Number: One
Tax Parcel Number(s): 00-109-003-001, 004, 005; 00-109B-000-001, 002A and 036
Request: Active adult community

- 2) Request from **Oak Hall Companies, LLC** to annex a 50.81± acres tract located on the east side of Dawsonville Highway (S.R. 53), having road frontage on Dawsonville Highway, Ahaluna Drive, Skyview Drive and Strickland Drive (a/k/a **0 and 1758 Ahaluna Drive; 1508, 1550, 1740, 1746, 1758, 1760, 1934 and 1982 Dawsonville Highway; 300 and 301 Skyview Drive; 0, 2008 and 2016 Strickland Drive**) and to establish zoning as Planned Unit Development (P-U-D) and General Business (G-B).
 Ward Number: One
 Tax Parcel Number(s): 00-110-000-005 (part), 028, 032 (part) and 039; 00-110A-004-001 (part), 002A, 004 (part), 005 (part), 007 (part), 007A (part), 007X, 014 (part), 016 (part), 017 (part) and 018
 Request: Mixed-use development

- 3) Request from **Oak Hall Companies, LLC** to rezone a 157.98± acres tract located on the east side of Dawsonville Highway (S.R. 53), having road frontage on Ahaluna Drive, Skyview Drive, Strickland Drive, Lakeshore Circle, West Lake Drive and Karen Lane (a/k/a **0, 1264 and 1817 Ahaluna Drive; 1876 Dawsonville Highway; 2208 Karen Lane; 0 and 2029 Strickland Drive; 0 and 1489 West Lake Drive**) from Residential-I-A (R-I-A), Residential-I (R-I), Planned Unit Development (P-U-D) and Regional Business (R-B) to Planned Unit Development (P-U-D) and General Business (G-B).
 Ward Number: One
 Tax Parcel Number(s): 00-109B-000-003A; 00-110-000-001, 006, 030, 031, 034, 035, 036, 037 and 038; 01-110-001-006; 01-110A-004-022; 01-114-001-001, 026, 145 and 161
 Request: Mixed-use development

- 4) Request from **Brightstone Transitions** to amend the existing Planned Unit Development (P-U-D) zoning on a 0.50± acre tract located at the east side of Green Street, across from its intersection with Forrest Avenue (a/k/a **446 Green Street, NE**).
 Ward Number: Four
 Tax Parcel Number(s): 01-024-001-005
 Request: Group home and office

- 5) Request from **Montecito Development** to rezone a 0.48± acre tract located on the south side of Enota Avenue, west of its intersection with Thompson Bridge Road (a/k/a **149 Enota Avenue, NW**) from Office and Institutional (O-I) to Neighborhood Business (N-B), with a special use.
 Ward Number: Two
 Tax Parcel Number(s): 01-074-004-001
 Request: Convenience store with fuel pumps

- 6) Request from **Montecito Development** for a special use on a 0.80± acre tract located at the southwest side of the intersection of Enota Avenue and Thompson Bridge Road (a/k/a **1281 Thompson Bridge Road, NW**), having a zoning of Neighborhood Business (N-B).
 Ward Number: Two
 Tax Parcel Number(s): 01-074-004-020
 Request: Convenience store with fuel pumps

- 7) Request from **Gainesville Market, LLC** for a special use on a 5.0± acres tract located west of Shallowford Road within the Gainesville Market Shopping Center (a/k/a **600 Shallowford Road**), having a zoning of General Business (G-B).
 Ward Number: Five
 Tax Parcel Number(s): 01-119C-001-029
 Request: Commercial outdoor recreational facility

- 8) Request from **Manor Lake Development, LLC** for a special use on a 9.24± acres tract located on the northwest side of McEver Road, between Browns Bridge Road and Orchard Brook Drive (a/k/a **2900 McEver Road**), having a zoning of Office and Institutional (O-I) and Residential-I (R-I).

Ward Number: Four

Tax Parcel Number(s): 08-022-000-005

Request: Assisted living facility

- 9) Request from **Carriage North, LLC** for a special use on a 0.71± acre tract located on the southwest side of the terminus of Corporate Drive, west of Browns Bridge Road (a/k/a **2425 Corporate Drive**), having a zoning of General Business (G-B).

Ward Number: Five

Tax Parcel Number(s): 08-007-001-042

Request: Helipad

Additional information is available from the Community Development Department, Planning Division, by calling 770-531-6570.

NOTE: In accordance with Georgia law, anyone who wishes to express opposition to the proposed zoning action, and has made, within two years immediately preceding the filing of the proposed zoning action, campaign contributions aggregating \$250 or more to a local government official who will consider the application, shall file a disclosure of contribution(s) with the Planning Division at least five (5) days prior to the first reading of the proposed zoning action by the City Council. (OCGA § 36-67A-3 3 {c})

GAINESVILLE PLANNING and APPEALS BOARD RECOMMENDATION

Applicant Brightstone Transitions
Property Owner Deborah Mechwart
Location..... 446 Green Street
Request..... Amend P-U-D zoning
Size 0.50± acres
Ward..... Four
Proposed Use..... Group home and office
Planning Division Staff Recommendation **Approval, with conditions**
Planning and Appeals Board Recommendation **Denial**
Date..... May 9, 2017

▪ **Applicant's Proposal and Background Information**

The applicant is proposing to amend an existing property zoned Planned Unit Development (P-U-D) for a group home and office. Over the last 10 years the property has been occupied by numerous professional offices for communications, architect, engineer, and most recently an administrative office for American Medical/Testing. The property contains a 4,892 square foot, two-story main structure and a 1,100 square foot, two-story detached carriage house which are located within the Green Street Historic District. According to a recent site inspection performed for the proposed use, there are no significant changes expected to the exterior of the building that would require approval from the Historic Preservation Commission.

The applicant states the group home will include a maximum of 6 to 8 males between the age of 18 and 24 years of age that are diagnosed with Asperger's Syndrome which is a social disorder. The students will live on the second floor and the first floor and carriage house will be occupied for office space for the support staff as well as trained residential mentors that are with the students at all times. Primary access is from an existing driveway along Green Street. Transportation will be provided by staff vehicles and the Gainesville Connection bus.

▪ **Adjacent Land Use and Zoning**

Location	Use	Zoning
North	Protein Products Office	Residential and Office (R-O) -City
South	Norton Agency	Residential and Office (R-O) -City
East	Professional Office	Planned Unit Development (P-U-D) -City
West	Professional Office	Residential and Office (R-O) -City

▪ **Zoning History**

The following zoning actions have taken place in the immediate area during the last ten years:

2017 – A request by W.L. Norton Agency Inc., to rezone a 0.42[±] acre tract located at 418 Boulevard NE from Residential-II (R-II) to Residential and Office (R-O) was approved by the Planning and Appeals Board and is pending a final vote by City Council.

2015 – A request by Hands on Healing, Inc. for a Special Use for a therapeutic massage and exercise therapy office located at 431 Green Street within Residential and Office (R-O) zoning was approved with one condition.

2014 – A request by Gerald Darby and Bobby Norris for a Special Use for an antique gallery and residence located at 756 Green Street within Residential and Office (R-O) zoning was approved with one condition.

2012 – A request by The Norton Agency Insurance, LLP to rezone a 0.61[±] acre tract located at 424 Boulevard NE from Residential-II (R-II) to Residential and Office (R-O) was approved with conditions for a professional office.

2012 – A request by Dennis & Jill Momper to rezone a 0.51[±] acre tract located at 430 Prior Street NE from Residential-II (R-II) to Residential and Office (R-O) was approved with conditions for a professional office.

2010 – A request by Autumn Leaves Assisted Living Corporation located at 756 Green Street for a Special Use on a 0.61[±] acre tract within a Residential and Office (R-O) zoning district for an assisted living facility was conditionally approved.

2010 – A request by Harold A. Hinchman to rezone a 1.89[±] acres tract located at 1050 Park Street NE from Residential-I (R-I) to Residential-II (R-II) with a special use was denied for a group home for men.

2008 – A request by Brenau University located at 326 and 352 Boulevard NE for a Special Use on a 1.44[±] acres tract within Office and Institutional (O-I) zoning district for dormitories was approved with conditions.

2007 – A request by Parkberry Development, LLC to rezone a 2.49[±] acres tract located at 535, 543 and 557 Mulberry Lane; and 819 and 825 Park Street from Residential-I (R-I) to Planned Unit Development (P-U-D) was denied for residential townhomes.

▪ **Staff Analysis**

(1) Is the proposed use suitable in view of the zoning and development of adjacent and nearby property?

The subject property is located within an area that contains a mixture of residential and non-residential land uses and zoning districts which appears to be supportive of the proposed use. Nearby single-family and multi-family residential uses are located along secondary streets off of Green Street. Other nearby uses includes numerous professional offices, medical offices, US Post Office, Mellow Mushroom restaurant and Hall County Board of Education offices.

(2) Will the proposed use adversely affect the existing use or usability of adjacent or nearby property?

The proposed use should have minimal affects to the surrounding and nearby properties as the property and exterior of the building will remain mostly unchanged. As well, the adjacent and nearby uses include a mixture of residential and non-residential uses which appear to support the proposal. The proposed group home will house 6 to 8 young adult men diagnosed with Autism Spectrum Disorder Level 1 known as Asperger's Syndrome. Traffic generated from the

facility should be minimal as the young adults will use staff vehicles and the Gainesville Connection for transportation.

(3) Is the proposed use compatible with the purpose and intent of the Comprehensive Plan?

It is staff's opinion that the proposed use is consistent with the Comprehensive Plan. The Future Development Map for the City of Gainesville places the subject property within the *Mixed-Use General* land use category which includes areas containing or planned for a mixture of land uses including office, neighborhood retail, and residential. The types of non-residential uses that are desirable in this area would include restaurants, specialty retail, and low-intensity office.

According to the Character Area map for the City of Gainesville, the subject property is located within the *Central Core* Character Area specifically within the *Downtown/Midtown* subarea. The vision for this area includes additional office and housing to provide a more sustainable mix of uses. Historic preservation and sensitive infill are key to maintaining the strong sense of place. There should be a focus on preservation of existing character through an adaptive reuse where feasible. Land uses supported in this area include mixed-use, multi-family residential, commercial, public / institutional, and transportation / communications / utilities.

(4) Are there substantial reasons why the property cannot or should not be used as currently zoned?

The subject property is zoned Planned Unit Development (P-U-D) and is limited to professional office uses. The proposed change in use requires the current zoning to be amended. The proposed group home and office use should have minimal impacts on the adjacent and nearby historic properties based on its scale and how it will function compared to other group homes.

(5) Will the proposed use cause an excessive or burdensome use of public facilities or services, including but not limited to streets, schools, water or sewer utilities, and police or fire protection?

Various City services including police and fire protection and water utilities serve the adjacent properties. Existing water and sewer services are capable of serving the proposal. Gainesville Fire Station #2 is located off of Holly Drive and is approximately 0.5± miles from the subject property.

The proposal would have minimal to no impact on the school system given the age of the occupants.

Impacts to the existing road network and parking are capable of handling the minimal amount of traffic entering and exiting the property. The Georgia Department of Transportation will be required to review and approve any plan changes to Green Street.

(6) Is the proposed use supported by new or changing conditions not anticipated by the Comprehensive Plan or reflected in the existing zoning on the property or surrounding properties?

Most of the properties fronting Green Street have been rezoned to Residential and Office (R-O) and converted from residential to professional offices over the past 40 years. The proposal is consistent with the Comprehensive Plan which expects the use of the property to include a mixture of uses.

(7) Does the proposed use reflect a reasonable balance between the promotion of the public health, safety, morality, or general welfare and the right to unrestricted use of property?

Due to the Comprehensive Land Use Plan and the mixture of surrounding uses, the proposed zoning amendment request appears to reflect a reasonable balance between the promotion of the public health, safety, morality, or general welfare and the right to unrestricted use of property.

▪ **Staff Recommendation**

The Planning Division staff is recommending **conditional approval** of this zoning amendment request based on the Comprehensive Plan and the adjacent mixture of uses.

Conditions

1. The development standards within the narrative, site plan and photographs submitted with the applicant's zoning amendment application shall be made part of the zoning ordinance, and shall be subject to the Community Development Director approval.
2. The approved use for the subject property shall be limited to professional office uses and the proposed group home as described within the applicant's narrative not to exceed 8 adult males. A different group / transitional home use shall not be permitted.
3. The existing monument sign shall not be replaced or structurally modified except for the sign face area depicting the name of the business.

Excerpts from the May 9, 2017 Planning and Appeals Board Meeting Minutes

Applicant Presentation: Jason Cox, 452 Prior Street, stated he was the Director of Business Development for Brightstone Transitions, an organization which works with young adults on the autism spectrum level one. He stated they have amazing kids who are going to school at Lanier Tech or the University of North Georgia who just need a little extra help. Brightstone Transitions is an adult transition program but are classified as a group home within the Unified Land Development Code. He stated the kids stay with them from 18 months to 2 years and they help transition them into the community. Mr. Cox stated they would have a full time staff and the kids would ride the bus or walk so they would have little impact on traffic. He stated he spoke with the surrounding neighbors and they were all in full support of the proposal.

FAVOR: None

OPPOSE: Helen Martin, 1345 Lakeshore Circle, wondered how many Board Members had the privilege of being inside the Smith-Palmer-Estes home, noting it was breathtaking and one of the finest examples of its architectural style anywhere. She shared the following details and history of the home: Double front entry with Eastlake Victorian detail featuring Portofino mahogany doors; built in 1888 by Mr. Smith, a cotton broker from East Point, Georgia, who was related to our own Judge Sidney O. Smith; unique mahogany stairway; and handmade hinges on the doors. She stated it would be a shame for the community not to have access to this cultural valuable possession which has so much history. Ms. Martin stated the home represented a by-gone era when ladies and gentlemen sat on the porches and verandas of

Queen Anne style homes and was an important part of remembering our past and preserving our culture. She stated it had been her dream to see houses on Green Street to be restored and saved from dramatic changes like she had observed since she was a young girl in the 1950s; however, about 23 of them have been razed or dramatically changed. She understood historic preservation limits the features that could be changed on the exterior of the home, but was not sure about the interior. She stated there were four small bedrooms upstairs and it would take a lot of space to care for 6 to 8 men and caretakers. She stated Green Street was like no other and it was our responsibility to respect and protect the cultural integrity of these homes. Ms. Martin stated we cannot live in the past, but we must learn from the past, because once it is gone, it's gone forever. She stated as a former teacher, it saddens her to think of the renovations that must be made to accommodate special needs individuals, noting they need a larger home. She asked the Board to think of the historical and cultural value to our community, noting the rezoning of historical building sites could set an unwelcome change to our cultural future values.

REBUTTAL: Chairman Carter asked Jason Cox to explain what changes they have planned to the interior and exterior of the home. Mr. Cox stated they want to use the property as it was intended, as a home. He stated the only changes they would make are those required by the City to meet building codes, which is mostly to the kitchen, but nothing would be changed structurally. They want to keep the home as is with minimal changes and would protect it because they would like the kids to experience living in a home like that. He stated they want to be a part of the community, adding the kids were excited about it because they went to the Christmas parade last year and remember the home. He stated as long as someone plans with them, he didn't mind showing the home to people because it is a part of Gainesville's history.

Planning and Appeals Board Comments: None

There was a motion to recommend denial of the zoning amendment request.

Motion made by Board Member Martin

Motion seconded by Board Member White

Vote – 4 favor, 3 opposed (Carter, Rucker, Delgado)

First Reading: _____
Passed: _____

AN ORDINANCE

No. 2017-

AN ORDINANCE AMENDING THE ZONING MAP OF THE CITY OF GAINESVILLE, GEORGIA, BY AMENDING THE EXISTING PLANNED UNIT DEVELOPMENT, WITH CONDITIONS (P-U-D-c) ZONING ON A 0.50± ACRE TRACT LOCATED AT THE EAST SIDE OF GREEN STREET, ACROSS FROM ITS INTERSECTION WITH FORREST AVENUE (A/K/A 446 GREEN STREET, NE); REPEALING CONFLICTING ORDINANCES; TO PROVIDE FOR SEVERABILITY; TO PROVIDE FOR AN EFFECTIVE DATE; AND FOR OTHER PURPOSES.

(Amendment to the Zoning Map)

BE IT HEREBY ORDAINED BY THE GOVERNING AUTHORITY OF THE CITY OF GAINESVILLE, GEORGIA AS FOLLOWS:

SECTION I.

That from and after the passage of this Ordinance, the subject property containing 0.50± acre with **Planned Unit Development, with conditions (P-U-D-c)** zoning is hereby amended as follows:

Conditions

- 1. The development standards within the narrative, site plan and photographs submitted with the applicant's zoning amendment application shall be made part of the zoning ordinance, and shall be subject to the Community Development Director approval.**
- 2. The approved use for the subject property shall be limited to professional office uses and the proposed group home as described within the applicant's narrative not to exceed 8 adult males. A different group / transitional home use shall not be permitted.**
- 3. The existing monument sign shall not be replaced or structurally modified except for the sign face area depicting the name of the business.**

Legal Description

All that tract and parcel of land lying and being in the City of Gainesville, Hall County, Georgia and more particularly described as follows:

Beginning at an Iron Pin on the East side of Green Street, said iron pin being South 16 degrees, 24 minutes, 39 seconds East 94.9 feet from center line intersection of Green Street and Forrest Avenue; Thence along the East Right-of-Way of said Green Street North 16 degrees, 24 minutes, 39 seconds West 100.19 feet to an Iron Pin; Thence North

ORDINANCE NO. 2017-

63 degrees, 20 minutes, 21 seconds East 235.41 feet to an Iron Pin Corner; Thence South 24 degrees, 54 minutes, 00 seconds East 98.19 feet to a Nail; Thence South 63.1409 feet West 250.22 feet to the Point of Beginning.

SECTION II.

All Ordinances and parts of Ordinances in conflict herewith are hereby repealed.

SECTION III.

If any portion of this Ordinance shall be held to be invalid or unconstitutional, such invalidity or unconstitutionality shall not affect or impair the remaining portions unless it clearly appears that such other parts are wholly and necessarily dependent upon the part held to be invalid or unconstitutional.

SECTION IV.

This Ordinance is enacted as an amendment to the Code of the City of Gainesville, Georgia, and is to be codified as a part of Section 9-1-1-5 thereof.

SECTION V.

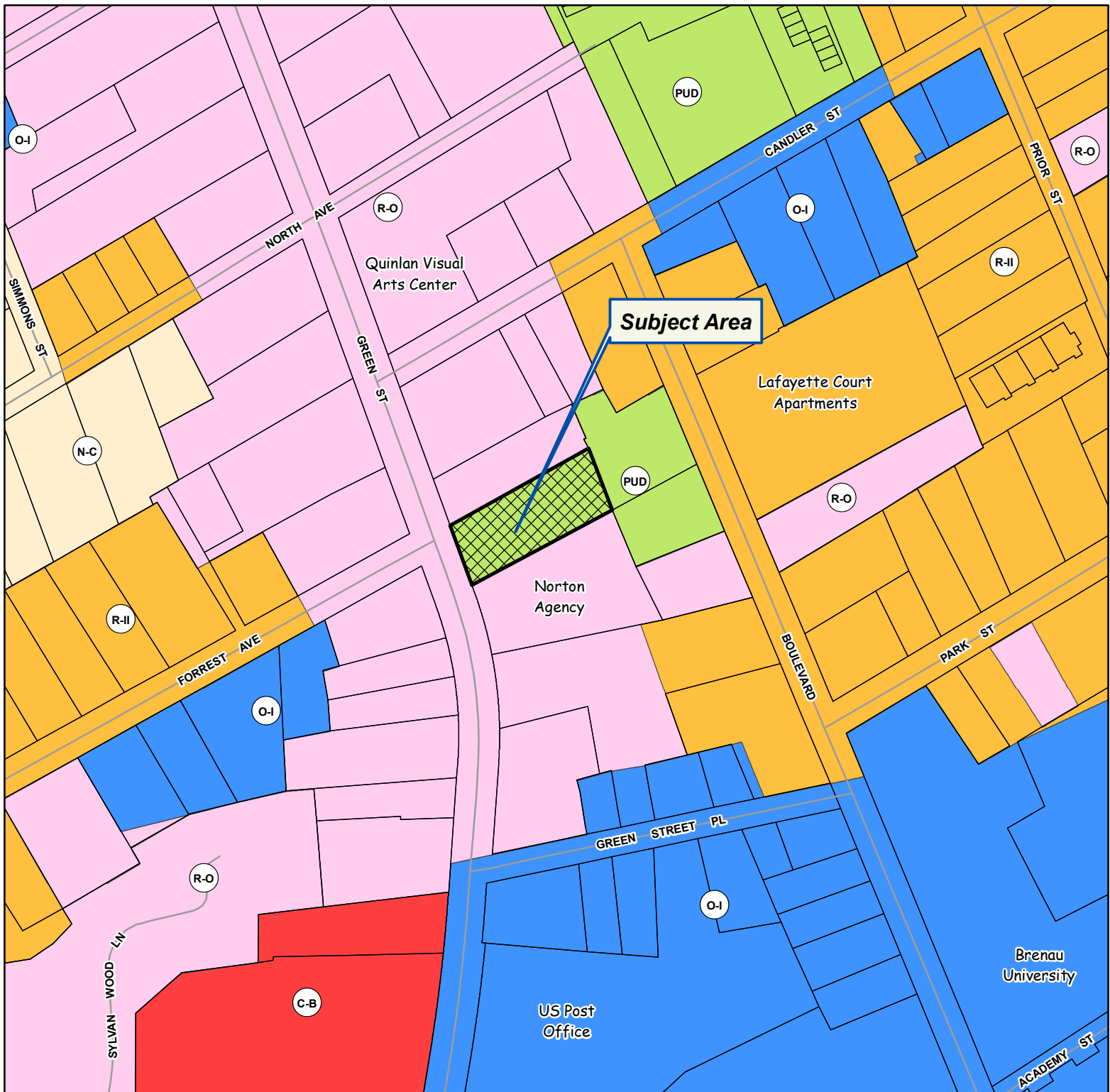
The effective date of this Ordinance shall be upon approval by the governing authority of the City of Gainesville, Georgia.

C. Danny Dunagan, Jr., Mayor

This is to certify that I am City Clerk of the City of Gainesville. As such, I keep its official records, including its minutes. In that capacity, my signature below certifies this resolution was adopted as stated and will be recorded in the official minutes.

ATTEST:

Denise O. Jordan, City Clerk



Applicant:

BRIGHTSTONE TRANSITIONS

ZONING AMENDMENT REQUEST



Request:
Amend an existing 0.50+/- acre tract zoned P-U-D for a group home and office

Subject Area Address:
446 Green Street, NE

Meeting: 5/9/2017
Prepared: 4/20/2017

Gainesville Community Development Department

 Subject Area

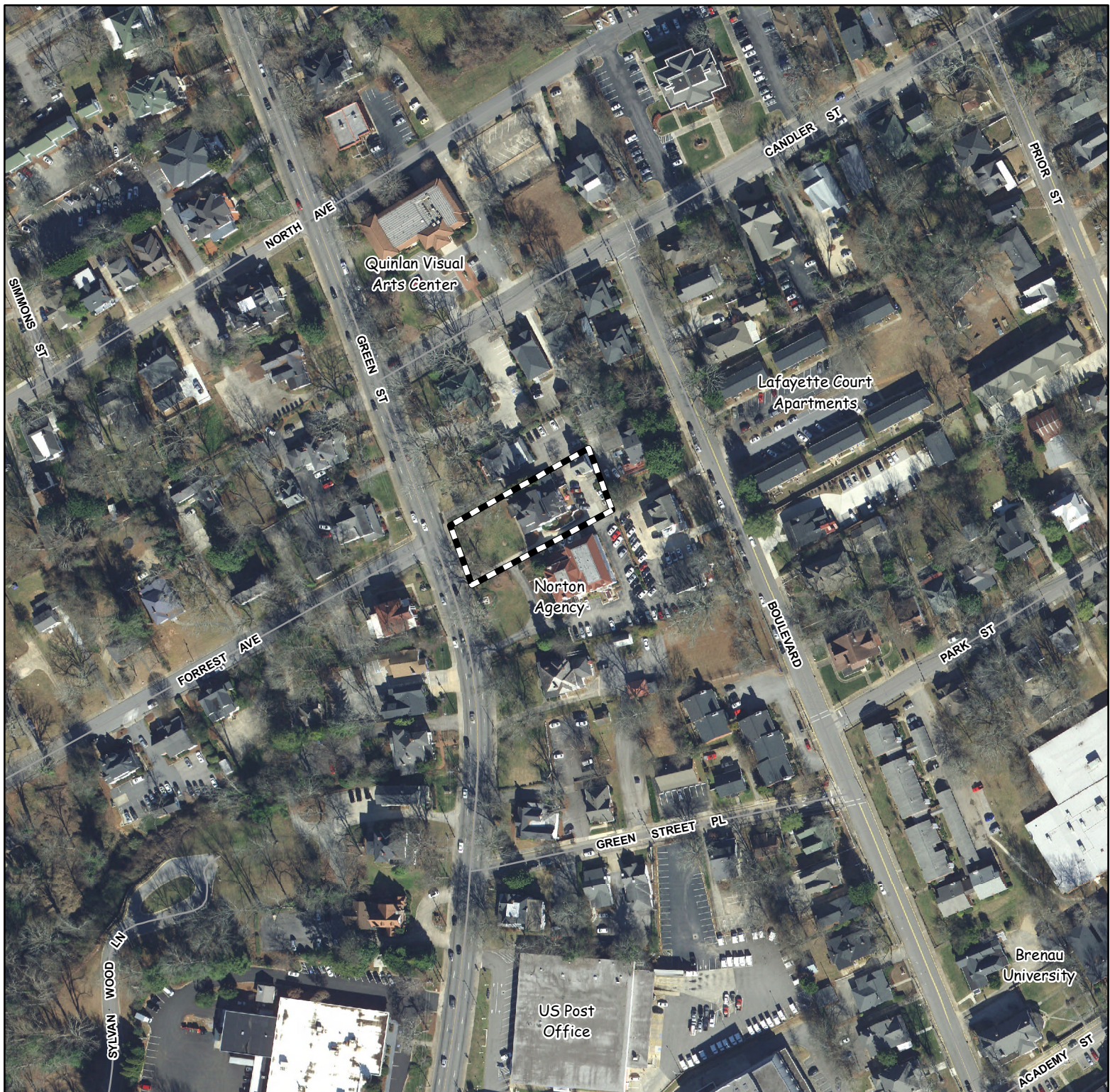
0 120 240 360 480 Feet



1" = 200'

Tax Parcel: 01-024-001-005

Page 962 of 1377



Applicant:

BRIGHTSTONE TRANSITIONS

ZONING AMENDMENT REQUEST



Request:

Amend an existing 0.50+/- acre tract zoned P-U-D for a group home and office

Subject Area Address:

446 Green Street, NE

Meeting: 5/9/2017

Prepared: 4/20/2017

Gainesville Community Development Department



Subject Property

Aerial from 2015

0 120 240 360 480 Feet



1" = 200'

Tax Parcel: 01-024-001-005

Page 963 of 1377



To Whom It May Concern,

Brightstone Transitions would like to amend the Planned Unit Development (PUD) for a Group Home designation from the city of Gainesville. Brightstone Transitions is a young adult transition program. We work with young adults to help them become independent as possible. All of our young adults are diagnosed Autism Spectrum Disorder Level 1, what was better known as Asperger's Syndrome. Brightstone is nationally known as a leader and a innovative program within the therapeutic industry. Brightstone is a member of the National Association of Therapeutic Schools and Programs (NATSAP) and of the Young Adult Transition Association (YATA). Our clients are young men, ranging in age from 18-24. Our typical client is the young adult who struggles socially, hasn't been able to achieve success, and wants their independence.

Although we are asking for a group home amendment we are far from a traditional group home. We would use the bottom floor of the house as office space, where are Director of Clinical Services and Program Director would work. In the house, we would only have 6-8 students at a time living on the top floor. We always have two trained residential mentors with the students at all times. We have two vehicles to help with transport and the staff vehicles, our footprint would be minimal. We expect our clients to learn the local bus system for their transportation.

Brightstone Clients are high-functioning, bright, and typically anxious around new situations. They tend to struggle socially or academically, and haven't learned the life skills necessary to be successful. Our clients are capable of

Brightstone Transitions
PO Box 2971
Cumming, GA 30506

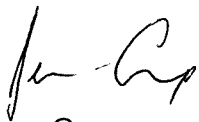
success, but for whatever reason they have been unable to achieve/maintain that success.

The struggles our clients face often are based diagnoses of ASD level 1, which includes social anxiety, we partner with each client's practitioners to help develop a plan that works for that young adult. Many have failed to "launch", and often appear unwilling or unable to achieve the milestones established by their peers.

Brightstone has chosen to try to operate in Gainesville because of the numerous resources that the city has to offer and the support we have gotten from the community. We hope to continue this amazing partnership and help to spotlight our community. We are asking for 446 Green St, Gainesville, GA to be zoned as a group home, but please understand that we are very different from a group home or any drug/alcohol rehab. Our young adults are rule followers and good young men, we are most worried about our clients being taken advantage of from others. Our young adults are not troubled youth or have had trouble with the law. They are smart and anxious young men looking to better their lives.

Please feel free to ask us any questions and we would love for you to meet our clients as well.

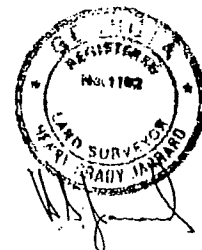
Regards,

A handwritten signature in black ink, appearing to read 'J. Cox'.

Jason Cox

Brightstone Transitions
Director of Business Development

Brightstone Transitions
PO Box 2971
Cumming, GA 30506



PLAT FOR

CAROLYN H. POSTELL

CITY OF GAINESVILLE
HALL COUNTY, GEORGIA

SCALE: 1"=30' JUNE/25/1993

REVISED APR/07/1999



Front of House



Back of House



PARKING on side
of house



ATTACHED BUILDING:
proposed for office
space



Front Foyer:

where offices

and sitting area would be





Client bedroom



Client Bedroom

CITY OF GAINESVILLE

WORKSESSIONREQUEST

Date Submitted: 5/23/2017

Presenter: Matt Tate

Item of Business: **Public Hearing Item for the June 6, 2017 Council Meeting**
Request from **Montecito Development** to rezone a 0.48± acre tract located on the south side of Enota Avenue, west of its intersection with Thompson Bridge Road (a/k/a **149 Enota Avenue, NW**) from Office and Institutional (O-I) to Neighborhood Business (N-B), with a special use. **Ward Number: Two.** Tax Parcel Number(s): 01-074-004-001.
Request: Convenience store with fuel pumps.

Meeting Date: 6/1/2017

Purpose of Request:

The applicant is proposing to rezone the subject property with a special use to construct a 4,200 to 5,200± square foot convenience store with four pump islands. The property contains a parking lot and wooded buffer. According to the applicant's concept plan, the subject property would be combined with the adjacent property fronting Thompson Bridge Road and used for parking area, dumpster pad and buffer area. Access is proposed from Thompson Bridge Road and Enota Avenue. Surrounding uses include a vacant gas station and store, M & R Rentals & Sales, professional office and a single-family home.

History/Background:

Facts & Issues for Consideration:

Department Recommendation:

Planning staff recommended denial of this request. However, if the Board votes to recommend approval of the request, staff has proposed five conditions of zoning.

The Planning and Appeals Board unanimously recommended denial of this request.

See the PAB Recommendation Report for details and excerpts from the PAB meeting minutes.

NOTE: If the rezoning is approved, the special use portion of the request must be voted on at final reading of the rezoning ordinance.

SAMPLE MOTIONS

Approve Rezoning

I move to conditionally approve first reading of an ordinance to rezone the subject property from Office and Institutional to Neighborhood Business with five conditions.

Approve Special Use

I move to conditionally approve a zoning resolution with five conditions to allow a convenience store with fuel pumps on the subject property.

Deny

I move to deny the rezoning with special use request.

Department Director:

Rusty Ligon

If funding is involved, are funds approved within the current budget?

N/A

Amount Requested:

Source of Funds:

Finance Comments:

Administrative Comments:

ATTACHMENTS:

Description		Type
☐	Legal Ad	Legal Ad
☐	PAB Recommendation Report	Report
☐	Proposed Rezoning Ordinance	Ordinance
☐	Proposed Zoning Resolution	Resolution
☐	Location Maps	Backup Material
☐	Narrative	Backup Material
☐	Plat	Backup Material
☐	Site Plan	Backup Material
☐	Architectural Renderings	Backup Material
☐	Traffic Impact Study	Backup Material
☐	Letter of Opposition	Backup Material

COMBINED LEGAL AD
Gainesville Planning and Appeals Board
Gainesville City Council

Publish Sunday, April 23, 2017
THE TIMES

NOTICE OF PLANNING AND APPEALS BOARD PUBLIC HEARING

Notice is hereby given that the **Gainesville Planning and Appeals Board** will conduct a public hearing on **Tuesday, May 9, 2017** at **5:30 p.m.** in the **Gainesville Justice Center** (Municipal Courtroom at the Public Safety Complex), 701 Queen City Parkway in midtown Gainesville on the following requests:

- 1) Request from **Oak Hall Companies, LLC** to annex a 26.16 acres tract located east of Dawsonville Highway and on the north side of the intersection of Strickland Drive and Sportsman Club Road, with road frontage on Karen Lane (a/k/a **0 and 2209 Karen Lane; 2106, 2234 and 2242 Sportsman Club Road; and 2049 Strickland Drive**) and to establish zoning as Planned Unit Development (P-U-D).
Ward Number: One
Tax Parcel Number(s): 00-109-003-001, 004, 005; 00-109B-000-001, 002A and 036
Request: Active adult community
- 2) Request from **Oak Hall Companies, LLC** to annex a 50.81± acres tract located on the east side of Dawsonville Highway (S.R. 53), having road frontage on Dawsonville Highway, Ahaluna Drive, Skyview Drive and Strickland Drive (a/k/a **0 and 1758 Ahaluna Drive; 1508, 1550, 1740, 1746, 1758, 1760, 1934 and 1982 Dawsonville Highway; 300 and 301 Skyview Drive; 0, 2008 and 2016 Strickland Drive**) and to establish zoning as Planned Unit Development (P-U-D) and General Business (G-B).
Ward Number: One
Tax Parcel Number(s): 00-110-000-005 (part), 028, 032 (part) and 039; 00-110A-004-001 (part), 002A, 004 (part), 005 (part), 007 (part), 007A (part), 007X, 014 (part), 016 (part), 017 (part) and 018
Request: Mixed-use development
- 3) Request from **Oak Hall Companies, LLC** to rezone a 157.98± acres tract located on the east side of Dawsonville Highway (S.R. 53), having road frontage on Ahaluna Drive, Skyview Drive, Strickland Drive, Lakeshore Circle, West Lake Drive and Karen Lane (a/k/a **0, 1264 and 1817 Ahaluna Drive; 1876 Dawsonville Highway; 2208 Karen Lane; 0 and 2029 Strickland Drive; 0 and 1489 West Lake Drive**) from Residential-I-A (R-I-A), Residential-I (R-I), Planned Unit Development (P-U-D) and Regional Business (R-B) to Planned Unit Development (P-U-D) and General Business (G-B).
Ward Number: One
Tax Parcel Number(s): 00-109B-000-003A; 00-110-000-001, 006, 030, 031, 034, 035, 036, 037 and 038; 01-110-001-006; 01-110A-004-022; 01-114-001-001, 026, 145 and 161
Request: Mixed-use development
- 4) Request from **Brightstone Transitions** to amend the existing Planned Unit Development (P-U-D) zoning on a 0.50± acre tract located at the east side of Green Street, across from its intersection with Forrest Avenue (a/k/a **446 Green Street, NE**).
Ward Number: Four
Tax Parcel Number(s): 01-024-001-005
Request: Group home and office

- 5) Request from **Montecito Development** to rezone a 0.48± acre tract located on the south side of Enota Avenue, west of its intersection with Thompson Bridge Road (a/k/a **149 Enota Avenue, NW**) from Office and Institutional (O-I) to Neighborhood Business (N-B), with a special use.
 Ward Number: Two
 Tax Parcel Number(s): 01-074-004-001
 Request: Convenience store with fuel pumps
- 6) Request from **Montecito Development** for a special use on a 0.80± acre tract located at the southwest side of the intersection of Enota Avenue and Thompson Bridge Road (a/k/a **1281 Thompson Bridge Road, NW**), having a zoning of Neighborhood Business (N-B).
 Ward Number: Two
 Tax Parcel Number(s): 01-074-004-020
 Request: Convenience store with fuel pumps
- 7) Request from **Gainesville Market, LLC** for a special use on a 5.0± acres tract located west of Shallowford Road within the Gainesville Market Shopping Center (a/k/a **600 Shallowford Road**), having a zoning of General Business (G-B).
 Ward Number: Five
 Tax Parcel Number(s): 01-119C-001-029
 Request: Commercial outdoor recreational facility
- 8) Request from **Manor Lake Development, LLC** for a special use on a 9.24± acres tract located on the northwest side of McEver Road, between Browns Bridge Road and Orchard Brook Drive (a/k/a **2900 McEver Road**), having a zoning of Office and Institutional (O-I) and Residential-I (R-I).
 Ward Number: Four
 Tax Parcel Number(s): 08-022-000-005
 Request: Assisted living facility
- 9) Request from **Carriage North, LLC** for a special use on a 0.71± acre tract located on the southwest side of the terminus of Corporate Drive, west of Browns Bridge Road (a/k/a **2425 Corporate Drive**), having a zoning of General Business (G-B).
 Ward Number: Five
 Tax Parcel Number(s): 08-007-001-042
 Request: Helipad

NOTICE OF PUBLIC HEARING ON PROPOSED AMENDMENTS TO THE GAINESVILLE ZONING MAP

Notice is hereby given that the **Gainesville City Council** will conduct a public hearing on **Tuesday, June 6, 2017 at 5:30 p.m.** in the **Gainesville Justice Center** (Municipal Courtroom at the Public Safety Complex), 701 Queen City Parkway in midtown Gainesville on the following requests:

- 1) Request from **Oak Hall Companies, LLC** to annex a 26.16 acres tract located east of Dawsonville Highway and on the north side of the intersection of Strickland Drive and Sportsman Club Road, with road frontage on Karen Lane (a/k/a **0 and 2209 Karen Lane; 2106, 2234 and 2242 Sportsman Club Road; and 2049 Strickland Drive**) and to establish zoning as Planned Unit Development (P-U-D).
 Ward Number: One
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 Request: Active adult community

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 Ward Number: One
 Tax Parcel Number(s): 00-110-000-005 (part), 028, 032 (part) and 039; 00-110A-004-001 (part), 002A, 004 (part), 005 (part), 007 (part), 007A (part), 007X, 014 (part), 016 (part), 017 (part) and 018
 Request: Mixed-use development

- 3) Request from **Oak Hall Companies, LLC** to rezone a 157.98± acres tract located on the east side of Dawsonville Highway (S.R. 53), having road frontage on Ahaluna Drive, Skyview Drive, Strickland Drive, Lakeshore Circle, West Lake Drive and Karen Lane (a/k/a **0, 1264 and 1817 Ahaluna Drive; 1876 Dawsonville Highway; 2208 Karen Lane; 0 and 2029 Strickland Drive; 0 and 1489 West Lake Drive**) from Residential-I-A (R-I-A), Residential-I (R-I), Planned Unit Development (P-U-D) and Regional Business (R-B) to Planned Unit Development (P-U-D) and General Business (G-B).
 Ward Number: One
 Tax Parcel Number(s): 00-109B-000-003A; 00-110-000-001, 006, 030, 031, 034, 035, 036, 037 and 038; 01-110-001-006; 01-110A-004-022; 01-114-001-001, 026, 145 and 161
 Request: Mixed-use development

- 4) Request from **Brightstone Transitions** to amend the existing Planned Unit Development (P-U-D) zoning on a 0.50± acre tract located at the east side of Green Street, across from its intersection with Forrest Avenue (a/k/a **446 Green Street, NE**).
 Ward Number: Four
 Tax Parcel Number(s): 01-024-001-005
 Request: Group home and office

- 5) Request from **Montecito Development** to rezone a 0.48± acre tract located on the south side of Enota Avenue, west of its intersection with Thompson Bridge Road (a/k/a **149 Enota Avenue, NW**) from Office and Institutional (O-I) to Neighborhood Business (N-B), with a special use.
 Ward Number: Two
 Tax Parcel Number(s): 01-074-004-001
 Request: Convenience store with fuel pumps

- 6) Request from **Montecito Development** for a special use on a 0.80± acre tract located at the southwest side of the intersection of Enota Avenue and Thompson Bridge Road (a/k/a **1281 Thompson Bridge Road, NW**), having a zoning of Neighborhood Business (N-B).
 Ward Number: Two
 Tax Parcel Number(s): 01-074-004-020
 Request: Convenience store with fuel pumps

- 7) Request from **Gainesville Market, LLC** for a special use on a 5.0± acres tract located west of Shallowford Road within the Gainesville Market Shopping Center (a/k/a **600 Shallowford Road**), having a zoning of General Business (G-B).
 Ward Number: Five
 Tax Parcel Number(s): 01-119C-001-029
 Request: Commercial outdoor recreational facility

- 8) Request from **Manor Lake Development, LLC** for a special use on a 9.24± acres tract located on the northwest side of McEver Road, between Browns Bridge Road and Orchard Brook Drive (a/k/a **2900 McEver Road**), having a zoning of Office and Institutional (O-I) and Residential-I (R-I).

Ward Number: Four

Tax Parcel Number(s): 08-022-000-005

Request: Assisted living facility

- 9) Request from **Carriage North, LLC** for a special use on a 0.71± acre tract located on the southwest side of the terminus of Corporate Drive, west of Browns Bridge Road (a/k/a **2425 Corporate Drive**), having a zoning of General Business (G-B).

Ward Number: Five

Tax Parcel Number(s): 08-007-001-042

Request: Helipad

Additional information is available from the Community Development Department, Planning Division, by calling 770-531-6570.

NOTE: In accordance with Georgia law, anyone who wishes to express opposition to the proposed zoning action, and has made, within two years immediately preceding the filing of the proposed zoning action, campaign contributions aggregating \$250 or more to a local government official who will consider the application, shall file a disclosure of contribution(s) with the Planning Division at least five (5) days prior to the first reading of the proposed zoning action by the City Council. (OCGA § 36-67A-3 3 {c})

**GAINESVILLE PLANNING and APPEALS BOARD
RECOMMENDATION**

Applicant Montecito Development
Property Owner James Paul Mallard
Location 149 Enota Avenue; 1281 Thompson Bridge Road NW
Request (0.48± acres parcel) -Rezone from O-I to N-B, with a special use
Request (0.80± acres parcel) -Special use request within N-B zoning
Ward Two
Proposed Use Convenience store with fuel pumps
Planning Division Staff Recommendation **Denial**
Planning and Appeals Board Recommendation **Denial**
Date May 9, 2017

▪ **Applicant's Proposal and Background Information**

The applicant's proposal consists of two applications. The first application proposes to rezone a 0.48± parcel from Office and Institutional (O-I) to Neighborhood Business (N-B) with a special use. The second application proposes a special use for a 0.80± acres parcel zoned Neighborhood Business (N-B).

The purpose of the requests is to combine the two properties to construct a 4,200± to 5,200± square foot convenience store with four pump islands. The proposed store is to include a mixture of brick, stone and stucco materials to meet overlay standards. In addition, the proposed fuel canopy will be improved with a pitched roof and the support poles will be faced with stone material to match the building. According to the applicant's concept plan, a two-way access is proposed from Thompson Bridge Road and from Enota Avenue. The existing driveway on Thompson Bridge Road closest to the intersection will be removed. As well, a portion of the existing vegetation to the rear of the property will be removed to provide for parking. A 25-foot wide buffer is proposed adjacent to the neighboring residential property to the south and a 10-foot buffer is proposed adjacent to the office property to the west.

The property is located within the Gateway Corridor Overlay Zone and the front property contains a parking lot which was previously the location of a Long John Silver's restaurant and a bank teller machine. The rear property contains a parking lot and wooded buffer.

▪ **Adjacent Land Use and Zoning**

Location	Use	Zoning
North	Burger King; M & R Rentals	Neighborhood Business (N-B) -City Office and Institutional (O-I) -City
South	Closed gas station / retail store, single-family home	Neighborhood Business (N-B) -City Residential-I (R-I) -City

Location	Use	Zoning
East	Marco's Pizza, Anderson Physical Therapy Associates, Public Grocery, Wells Fargo Bank	Neighborhood Business (N-B) -City Regional Business (R-B) -City
West	Professional office	Office and Institutional (O-I) -City

▪ **Traffic Impact Study Summary**

A Traffic Impact Study was completed for the proposed development on February 23, 2017 and later revised on April 19, 2017 by Marc R. Acampora, PE, LLC Traffic Engineering, at the Thompson Bridge / Enota intersection on Thursday, February 16, 2017. The counts at Thompson Bridge / Walmart, Enota / Riverside, and GA 11 Bus / South Enota were collected on Thursday, March 30, 2017, and the counts at GA 60 / GA 11 Bus and GA 60 / Ridgewood were obtained from another recent traffic study performed in the area, collected on Wednesday, February 22, 2017. Traffic counts were collected from 7:00 A.M to 9:00 A.M. and from 4:30 P.M. to 6:30 P.M.

The only available historic Georgia DOT 24-hour traffic counts were also collected in the vicinity from the year 2015. The annual daily traffic volume on Thompson Bridge Road adjacent to the subject site was 26,500 in 2015 and the AADT on Enota adjacent to the site was 1,760 in 2015.

The study revealed that the peak hour generation for this project was calculated at 153 unadjusted trips or 52 new trips and the 24-hour volume is 4,340 unadjusted trips or 1,574 new trips. The study included the following six intersections.

1. Thompson Bridge Road at Walmart / Taco Bell Access
2. Thompson Bridge Road / Enota Avenue
3. Enota Avenue at Riverside Drive
4. GA 11 Business at South Enota Avenue
5. GA 60 at GA 11 Business
6. GA 60 at Ridgewood Avenue

A summary of the study revealed that future operations, upon the project being fully constructed and operational, will operate at acceptable levels at the intersection of Thompson Bridge Road and Enota Avenue as well as both the both proposed site access locations. Additionally, the Traffic Engineer states that gas station and convenience store would generate less traffic during peak hours than a fast food restaurant would.

Thompson Bridge Road and Enota Avenue

The analysis of the Thompson Bridge / Enota intersection shows an overall acceptable level of service in both the existing and future conditions. The side street approaches on Enota Avenue operate at LOS E, primarily due to the green time on the signal favoring the Thompson Bridge Road approaches. 1) Shorter cycle lengths would reduce delays and side street queuing. While there are crosswalks and pedestrian signals on all approaches at this signalized intersection, only the northeast corner has an ADA accessible ramp. 2) Consideration should be given to adding ADA ramps on the remaining corners. 3) The crosswalk and stop bar striping is also in poor condition and should be refreshed.

Thompson Bridge Road at Site Access

The site plan calls for the elimination of two of the three existing site accesses on Thompson Bridge Road. This will reduce the number of conflict points. It is likely that most vehicles that

wish to travel either northbound on Thompson Bridge or to the east on Enota will exit the site at the Enota driveway and capitalize on the protection of the adjacent signal. Because of the difficulty in making this left turn from the site driveway, and the low numbers of vehicles expected to do so, 1) consideration should be given to prohibiting exiting left turns from this driveway. 2) The Georgia DOT access standards were reviewed for this intersection (Thompson Bridge is Georgia State Route 60) and indicate that the access justifies a southbound exclusive right turn lane. The spacing of this driveway from Enota Avenue does not meet the minimum Georgia DOT driveway spacing standards. It is recommended that these design factors be discussed with Georgia DOT and the City to determine an acceptable solution. 3) The Thompson Bridge Road site access should be constructed with one entering and one exiting lane and the exiting approach should be controlled by stop sign and accompanying stop bar. The project site engineer is referred to the Georgia DOT Driveway Manual for other driveway design standards including driveway width, island design, and curb return radii.

Enota Avenue at Site Access

The site access on Enota is projected to operate with low volumes and very low delays. Most of the site entering trips will enter at the Thompson Bridge access, so that the entering left turns at the Enota driveway are projected at only 6 vehicles in the a.m. peak hour and 5 in the p.m. peak hour. This should minimally impede westbound through flow on Enota. The eastbound right turns entering the site are also minimal, at 5 for the a.m. peak hour and 8 for the p.m. peak hour. This also should minimally impede flows on Enota. 1) The Enota Avenue site access should be constructed with one entering and one exiting lane and the exiting approach should be controlled by stop sign and accompanying stop bar. 2) The existing grade differential between the site and Enota Avenue at the location of the site access should be corrected when the site is developed.

▪ **Other Departmental Comments**

According to the Georgia Department of Transportation (GDOT), the development will be required to meet the sight distance requirements and will need to coordinate with GDOT for review and approval.

According to the Gainesville Public Works Department, the developer will need to coordinate with the Gainesville Public Works Department and the Georgia Department of Transportation (GDOT) prior to permitting to address the future traffic improvements at the intersection of Thompson Bridge Road and Enota Avenue.

▪ **Zoning History**

The following zoning actions have taken place in the immediate area during the last ten years:

2016 - A request by Jack Bailey to rezone a 0.61[±] acre tract located at 1665 Thompson Bridge Road NW from Residential-I (R-I) to Office and Institutional (O-I) was approved with conditions for an insurance office.

2016 - A request by Teresa Vickers for a special use for a hair salon within the Office and Institutional (O-I) zoning district located at 977 and 983 Enota Avenue was approved with conditions.

2015 - A request by David P. Johnson to rezone a 1.458[±] acres tract located at 1537 and 1551 Thompson Bridge Road; and 135 Virginia Circle from Residential-I (R-I) to Neighborhood Business (N-B) with a special use for restaurant with drive-thru and retail was denied.

2014 – A request by Polestar Development, LLC to rezone a 1.741± acres tract located at 1435 Thompson Bridge Road from Residential-II (R-II) to Regional Business (R-B) for a grocery store and fuel service station was approved with conditions.

2013 - A request by Michael Slate to rezone a 0.67± acre tract located at 971 Lanier Avenue NE from Residential-I (R-I) to Residential and Office (R-O) for a professional office was approved with conditions.

2012 - A request by WAG Properties, Inc. to annex a 0.68± acre tract located at 1868 Thompson Bridge Road for a transportation logistics brokerage was approved with General Business (G-B) zoning.

2011 - A request by Greg Loyd for a special use for a Dunkin Donut restaurant with a drive thru within the Neighborhood Business (N-B) zoning district located at 1151 Thompson Bridge Road was approved with conditions.

2011 - A request by Jamie Collins to rezone a 1.149± acres tract located at 1452, 1464 and 1472 Thompson Bridge Road NE from Residential-I (R-I) and Neighborhood Business (N-B) to General Business (G-B) for a Taco Bell restaurant was approved with conditions.

2011 - A request by One Eleven, LLC for a special use for the Little Yellow Coffee House with a drive-thru within the Neighborhood Business (N-B) zoning district located at 996 Thompson Bridge Road was approved with conditions.

2010 - A request by Pam Abernathy for a special use for a single-family residence within the Office and Institutional (O-I) zoning district located at 1745 Thompson Bridge Road was approved with conditions.

2010 - A request by Yonah Burger for a special use for a restaurant with a drive-thru within the Neighborhood Business (N-B) zoning district located at 1191 and 1195 Thompson Bridge Road was approved with conditions.

2009 - A request by Lakewood Baptist Church to rezone a 39.53± acres tract located at 2235 Thompson Bridge Road from Residential-I (R-I), Residential-II (R-II) and General Business (G-B) to Planned Unit Development (P-U-D) for future expansion of the church was approved with conditions.

2009 - A request by Danny Dunagan to annex a 0.89± acre tract located at 309 Linwood Road for a 46-unit mini-storage facility was approved with General Business (G-B) zoning.

2009 - A request by Frenil R. Adajania to rezone a 0.20± acre tract located at 0 Thompson Bridge Road from Planned Unit Development (P-U-D) to General Business (G-B) for an existing access driveway was approved.

2009 - A request by Frenil Adajania to annex a 0.48± acre tract located at 1878 Thompson Bridge Road for an existing gas station/convenience store was approved with General Business (G-B) zoning.

2008 - A request by Danny Allen to rezone a 0.77± acre tract located at 1770 and 1786 Thompson Bridge Road from Residential-I (R-I) to Residential and Office (R-O) for residential and office uses was approved with conditions.

2007 - A request by Lee Dempsey to rezone a 1.5± acres tract located at 2200 and 2234 Thompson Bridge Road; and 924 and 934 Etta Vista Circle from Residential-I (R-I) and Residential and Office (R-O) to Neighborhood Business (N-B) with a special use for office/commercial mixed-use development was approved with conditions.

2007 - A request by Mike Weaver to rezone a 0.6[±] acre tract located at 1750 Thompson Bridge Road from Residential-I (R-I) to Residential and Office (R-O) for an attorney's office was approved with conditions. This request was approved after two previous attempts to rezone the subject property were denied.

2007 - A request by Ken Selzer to rezone 0.814[±] acre from Residential-I (R-I) to Residential and Office (R-O) for residential and office uses at 1143, 1153, and 1167 Green Street Circle was denied by the Planning and Appeals Board and the request was withdrawn during City Council first reading.

▪ **Staff Analysis**

(1) Is the proposed use suitable in view of the zoning and development of adjacent and nearby property?

The adjacent and nearby uses include single-family residential homes, office, service and commercial uses and are zoned Residential-I (R-I), Residential-II (R-II), Office and Institutional (O-I), Neighborhood Business (N-B) and Regional Business (R-B). The applicants proposed development area extends westerly along Enota Drive toward an established residential district. It appears that the proposed zoning of Neighborhood Business (N-B) may be suitable for neighborhood scale retail uses; however, the addition of fuel pumps is more aggressive.

(2) Will the proposed use adversely affect the existing use or usability of adjacent or nearby property?

It is staffs opinion that the proposal would have less of an impact to the surrounding area if the development were confined to the front 0.80[±] acres parcel and limited to the convenience retail store without fuel sales. However, Neighborhood Business (N-B) zoning could be considered for the rear parcel but should not be combined with the front parcel for the purpose of increasing the developable area to add fuel pumps. The addition of fuel pumps will increase turning movements along Thompson Bridge Road and Enota Avenue at a higher rate compared to a professional office or specialty retail store. The properties most impacted by the proposal appear to be the nearby single-family homes as convenience stores typically have longer business hours create more noise from traffic, fuel/delivery trucks and dumpster usage. The applicant does propose a 25-foot vegetated buffer adjacent to the single-family property.

(3) Is the proposed use compatible with the purpose and intent of the Comprehensive Plan?

The proposed development is located within the *Retail/Commercial* land use category. The *Retail/Commercial* land use category includes commercial service activities such as grocery stores, banks, restaurants, theatres, hotels, and automotive related businesses. Commercial uses may be located as a single use in one building or grouped together in a shopping center.

According to the Character Area map for the City of Gainesville, the rear 0.48[±] acre portion of the subject property is located within the *Traditional Neighborhoods* Character Area, specifically within the *Northern Neighborhoods subarea*. The front 0.80[±] acre portion of the subject property is located within the *City Park Neighborhood Center* Character Area.

The vision for the *Traditional Neighborhood Character Area* anticipates minimal change, and primary issues within this subarea include incompatible infill development and the threat of encroaching urban sprawl. Commercial encroachment should be minimized and should respect and mirror the small scale of the surrounding neighborhoods, while the purity of the landscape and quality of housing should be preserved. The area is not a primary destination for business;

however neighborhood serving business development is encouraged. Land uses allowed include low-density and medium-density residential, and mixed-use / commercial.

The vision for the *City Park Neighborhood Center* Character Area states that Thompson Bridge Road should be transformed into a "Complete Street" with sidewalks, landscaping, bike lanes and transit stops. Preservation of local small businesses should be a priority, and key early commercial buildings targeted for preservation. New commercial development should be compatible with the small scale of the older structures, and parking should be located to the rear with inter-parcel connectivity where possible. The area is not anticipated to see major economic growth, but remain oriented toward addressing existing neighborhood needs. Businesses providing basic goods and services that neighborhood residents depend on in daily life (for example food, household supplies, medicine etc.) should be encouraged. Locally-owned / family-owned businesses should be promoted to encourage small business investment / entrepreneurship. Land uses allowed include mixed-use, commercial and public/Institutional.

(4) Are there substantial reasons why the property cannot or should not be used as currently zoned?

The applicant proposes to rezone a 0.48± parcel from Office and Institutional (O-I) to Neighborhood Business (N-B) with a special use. The second application proposes a special use for a 0.80± acres parcel zoned Neighborhood Business (N-B). The N-B zoning district allows for commercial uses such as a convenience store but does not permit fuel pumps without special use approval. Most of the uses permitted within the Neighborhood Business (N-B) zoning district are not auto-oriented in nature. It appears reasonable that both parcels could be combined or developed separately for those uses currently permitted within the Neighborhood Business (N-B) zoning district.

(5) Will the proposed use cause an excessive or burdensome use of public facilities or services, including but not limited to streets, schools, water or sewer utilities, and police or fire protection?

City water, sewer and public safety services are currently provided to the property. Gainesville Fire Station #2 is located off of Holly Drive and is approximately 0.8± miles from the subject property.

The proposed use would have no impact on the school system given that it is a non-residential use.

The proposal will increase ingress and egress traffic movements along Thompson Bridge Road which typically experiences high southbound traffic volumes in the morning and high northbound traffic volumes in the evening. The subject property is located at the southeast corner of Thompson Bridge Road and Enota Avenue. According to the Transportation Master Plan for this area, there are planned intersection improvements which will include the addition of a dedicated right turn lane.

(6) Is the proposed use supported by new or changing conditions not anticipated by the Comprehensive Plan or reflected in the existing zoning on the property or surrounding properties?

Commercial growth has occurred along this segment of Thompson Bridge Road since the early-mid 1980's consisting of shopping center development, restaurant, retail, bank, personal service establishments and office uses which are consistent with the proposal. It is anticipated that neighborhood scale commercial growth will continue to occur for property fronting Thompson

Bridge Road. There are currently four gas stations within a mile of the subject property, not including the closed gas station adjacent to the subject property.

(7) Does the proposed use reflect a reasonable balance between the promotion of the public health, safety, morality, or general welfare and the right to unrestricted use of property?

Based on the Comprehensive Plan and the adjacent Neighborhood Business (N-B) zoning, the proposed rezoning portion of the request appears to reflect a reasonable balance between the promotion of the public health, safety, morality, or general welfare and the right to unrestricted use of property. However, the proposed special use to allow for fueling station does not reflect a balance.

▪ **Additional Criteria**

(1) The type of street providing access to the subject property is adequate to serve the proposed Special Use.

Thompson Bridge Road (SR 60) is an arterial road and Enota Avenue is a local connector road. Both roads are adequate to serve the proposed use but will require improvements including a dedicated right turn decel lane. The addition of these lanes may require the proposed buildings and parking to shift to account for change.

(2) Access into and out of the property adequately provides for traffic and pedestrian safety, the anticipated volume of traffic flow, and access by emergency vehicles.

The subject property is located at the southwest corner of Thompson Bridge Road and Enota Avenue which currently presents somewhat challenging turning movements into the subject property. Pedestrian crosswalks are present but are not ADA compliant. The applicant's concept plan appears to provide for sufficient access for emergency vehicles with some modifications.

(3) Public facilities such as schools, water or sewer utilities, and police or fire protection are adequate to serve the Special Use.

Existing public facilities are adequate to serve the proposed use.

(4) Refuse, service, parking and loading areas on the property are located and screened to protect other properties in the area from such adverse effects as noise, light, glare or odor.

The proposed concept plan includes a 25-foot wide landscape buffer adjacent to the single-family property and a 10-foot wide landscape buffer adjacent to the existing office use. The proposed dumpster is to be located behind the proposed building adjacent to the residential property.

(5) The hours and manner of operation of the Special Use have no adverse effects on other properties in the area.

The applicant states the proposed hours of operation are for the store to remain open 24 hours a day. An alternative schedule could be from 5 a.m. to 12 a.m. which would reduce the impact somewhat on the adjacent and nearby residential homes. These hours of operation would be in direct conflict with the neighboring residential properties.

- (6) The height, size and location of the buildings or other structures proposed on the property are compatible with the height, size or location of buildings or other structures on neighboring properties.**

The height, size and location of the proposed structures appear consistent with other commercial structures located along Thompson Bridge Road. The adjacent vacant property to the south currently has a fuel island canopy very close to Thompson Bridge Road at a higher elevation. If approved, there will be two fuel island canopies in close proximity to one another.

▪ **Staff Recommendation**

The Planning Division staff is recommending **denial** of this request based on the Comprehensive Plan and the adjacent residential uses. However, if the Planning and Appeals Board were to recommend approval of this request, staff would recommend the following conditions:

Conditions

- 1. The exterior materials and roof pitch of the building and canopy shall adhere to the standards as depicted on the architectural elevation provided with this rezoning application.**
- 2. The hours of operation for the proposed use shall not exceed 5 a.m. to 12 a.m.**
- 3. All access point design along the portion of Thompson Bridge Road and Enota Avenue in front of the property shall require approval by the Georgia Department of Transportation in conjunction with the Gainesville Public Works Director. All required access / traffic / sidewalk improvements associated with the proposed development shall be at the full expense of the developer / property owner.**
- 4. The applicant / owner shall provide for internal parcel vehicular access with the adjacent vacant property located to the south.**
- 5. An updated as-built boundary survey / plat of the subject property, indicating all improvements required for the proposed use, shall be recorded prior to obtaining a Certificate of Occupancy.**

Excerpts from the May 9, 2017 Planning and Appeals Board Meeting Minutes

Applicant Presentation: Melody Glouton, 1960 Satellite Boulevard, Duluth, stated she was an attorney with Anderson Tate Carr who represents Montecito Development. The broker and Circle K representative was also in attendance. She stated the proposal was for a Circle K store which was not a locally owned or family business, but it was also not a massive QuikTrip or RaceTrac. The project would be suitable for the neighborhood and enable hiring from the community, noting it is neighborhood oriented and of high quality including upscale architecture with upgrades to the fuel canopy such as brick, stone, and stucco façade materials. She stated staff recommended a soft denial which included conditions in case the Board voted in favor of the request. Ms. Glouton requested two of those conditions be omitted, #2 and #4. She stated condition #2 limited the hours of operation and they want to be open 24 hours a day, noting that would provide better security and visibility for that intersection as they would have 24 security

cameras in place in which the police would have access. She stated that the project would bring revitalization to the corner since it is currently abandoned except for parking from the business next door. Ms. Glouton stated condition #4 required inter-parcel access which would be cost prohibitive because of the difference of grade between the properties. She stated there was an unknown use for the abandoned gas station next door as well so it was not feasible. She stated the traffic study indicated the proposed project would operate at acceptable levels since it would service existing traffic and would have less traffic than a drive-thru restaurant during peak driving times. She stated that no restaurant has come forward for this site so they are offering revitalization and redevelopment of the area. She stated the project proposes a 25-foot buffer to the south and a 10-foot buffer to the west. The adjacent residential homes are currently owned by investors and may be turned into businesses in the future. She stated it would be an acceptable project for the area and asked for approval with conditions #2 and #4 omitted, noting the applicant was agreeable to the other three conditions. They would not have dumpsters emptied or delivery trucks coming in through the night hours in order to be sensitive to the neighbors in respect to noise.

FAVOR: Janie Justice, 455 Christopher Drive, stated the corner is an eyesore and felt the project would not increase traffic and would make the corner look better, so she did not have any objections. She stated the former Long John Silver's restaurant had a dumpster and she was never bothered with it. Ms. Justice stated the cameras would provide better security as well.

OPPOSE: Connie Propes, 695 Honeysuckle Lane, stated there were already two gas stations within 1,000 feet of each other and this one would be in the middle. She stated it was a residential neighborhood and the homes along Christopher Drive were privately owned or rentals. The intersection does look bad because there used to be a service station there which is now abandoned. Ms. Propes stated GH039, the widening of Enota, is still on the Metropolitan Planning Organization books and might have an effect on this road or the development thereof. She asked the Board to consider her comments.

REBUTTAL: Melody Glouton asked for clarification of the other gas stations Ms. Propes referenced. Ms. Propes stated there was a BP station south of the property and fuel pumps at the Wal-Mart Market north of the property. Ms. Glouton stated she came north on I-985 from Gwinnett County and took Exit 22 to get to the subject property and only passed one gas station before reaching the site in which she believed was a Citgo. She felt it was a proper proposal for the site with the surrounding uses, and reiterated it would be a high end convenience store, but not massive and very family friendly. She felt the convenience store would be well placed and would meet corridor needs. Again she asked for proposed conditions #2 and #4 be omitted.

Planning and Appeals Board Comments: None

There was a motion to recommend denial of both of the requests.

Motion made by Vice-Chair Fleming
Motion seconded by Board Member Martin
Vote – 7 favor

First Reading: _____
Passed: _____

AN ORDINANCE

No. 2017-

AN ORDINANCE AMENDING THE ZONING MAP OF THE CITY OF GAINESVILLE, GEORGIA, BY CHANGING THE ZONING ON A 0.48± ACRE TRACT LOCATED ON THE SOUTH SIDE OF ENOTA AVENUE, WEST OF ITS INTERSECTION WITH THOMPSON BRIDGE ROAD (A/K/A 149 ENOTA AVENUE, NW) FROM OFFICE AND INSTITUTIONAL (O-I) TO NEIGHBORHOOD BUSINESS, WITH CONDITIONS (N-B-c); REPEALING CONFLICTING ORDINANCES; TO PROVIDE FOR SEVERABILITY; TO PROVIDE FOR AN EFFECTIVE DATE; AND FOR OTHER PURPOSES.

(Amendment to Zoning Map)

BE IT HEREBY ORDAINED BY THE GOVERNING BODY OF THE CITY OF GAINESVILLE, GEORGIA, AS FOLLOWS:

SECTION I.

That from and after the passage of this Ordinance the following described lands shall be zoned and so designated on the Zoning Map of the City of Gainesville as **Neighborhood Business, with conditions (N-B-c)**:

Conditions

1. The exterior materials and roof pitch of the building and canopy shall adhere to the standards as depicted on the architectural elevation provided with this rezoning application.
2. The hours of operation for the proposed use shall not exceed 5 a.m. to 12 a.m.
3. All access point design along the portion of Thompson Bridge Road and Enota Avenue in front of the property shall require approval by the Georgia Department of Transportation in conjunction with the Gainesville Public Works Director. All required access / traffic / sidewalk improvements associated with the proposed development shall be at the full expense of the developer / property owner.
4. The applicant / owner shall provide for internal parcel vehicular access with the adjacent vacant property located to the south.
5. An updated as-built boundary survey / plat of the subject property, indicating all improvements required for the proposed use, shall be recorded prior to obtaining a Certificate of Occupancy.

Legal Description

All that tract or parcel of land lying and being in the City of Gainesville, Hall County, Georgia and known as lots 1, 2, and 3 of the Phillips and Kemp Subdivision as shown on plat recorded in Plat Book 4, Page 41, Hall County Records and more particularly described as follows:

ORDINANCE NO. 2017-__

BEGINNING at an iron pin on the southwest corner of Lot 8 of the Phillips and Kemp Subdivision, thence north 26 degrees 30 minutes west 196.4 feet to an iron pin on the south side of Enota Drive; thence north 60 degrees 53 minutes east along the south side of Enota Drive 117.0 feet to a point; thence north 60 degrees 40 minutes east along the south side of Enota Drive 193.6 feet to a point on the south side of Enota Drive at its intersection with the south side of Thompson Bridge Road; thence south 56 degrees 47 minutes east 6.2 feet to a point on the south side of Thompson Bridge Road; thence south 23 degrees 35 minutes east along the side of Thompson Bridge Road 180.1 feet to an iron pin; thence south 59 degrees 03 minutes west 201.2 feet to an iron pin; thence south 58 degrees 44 minutes west 104.9 feet to the point of beginning.

Said property more particularly shown on that certain plat of Farley-Collins Associates, dated July 18, 1972,, and recorded in Plat Book 50, Page 86, Hall County Records.

SECTION II.

All Ordinances and parts of Ordinances in conflict herewith are hereby repealed.

SECTION III.

If any portion of this Ordinance shall be held to be invalid or unconstitutional, such invalidity or unconstitutionality shall not affect or impair the remaining portions unless it clearly appears that such other parts are wholly and necessarily dependent upon the part held to be invalid or unconstitutional.

SECTION IV.

This Ordinance is enacted as an amendment to the Code of the City of Gainesville, Georgia, and is to be codified as a part of Section 9-1-1-5.

SECTION V.

The effective date of this Ordinance shall be upon approval by the governing body of the City of Gainesville, Georgia.

C. Danny Dunagan, Jr., Mayor

This is to certify that I am City Clerk of the City of Gainesville. As such, I keep its official records, including its minutes. In that capacity, my signature below certifies this resolution was adopted as stated and will be recorded in the official minutes.

ATTEST:

Denise O. Jordan, City Clerk

RESOLUTION ZR-2017-____

**APPROVAL OF A REQUEST FOR A SPECIAL USE
SUBJECT TO APPROVAL BY THE CITY COUNCIL**

WHEREAS, under **Chapter 9-6-2 N-B Neighborhood Business District** of the Unified Land Development Code of the City of Gainesville, Georgia; **Section 9-6-2-2 Permitted and Special Uses** allows a *convenience store with fuel pumps* subject to City Council approval after review and recommendation by the Gainesville Planning and Appeals Board; and

WHEREAS, an application has been received from **Montecito Development** to allow a *convenience store with fuel pumps* within a Neighborhood Business (N-B) zoning district identified as follows:

**01-074-004-001
149 Enota Avenue, NW
Ward Two**

WHEREAS, the application has been evaluated under any criteria specified in the aforesaid section; and

WHEREAS, the **Gainesville Planning and Appeals Board** held a public hearing regarding this matter on **May 9, 2017**.

NOW, THEREFORE, BE IT RESOLVED THAT the governing body for the City of Gainesville hereby approves the applicant's request for a special use permit as stated above and subject to all the terms of the Unified Land Development Code with the following conditions:

Conditions

1. The exterior materials and roof pitch of the building and canopy shall adhere to the standards as depicted on the architectural elevation provided with this rezoning application.
2. The hours of operation for the proposed use shall not exceed 5 a.m. to 12 a.m.
3. All access point design along the portion of Thompson Bridge Road and Enota Avenue in front of the property shall require approval by the Georgia Department of Transportation in conjunction with the Gainesville Public Works Director. All required access / traffic / sidewalk improvements associated with the proposed development shall be at the full expense of the developer / property owner.
4. The applicant / owner shall provide for internal parcel vehicular access with the adjacent vacant property located to the south.
5. An updated as-built boundary survey / plat of the subject property, indicating all improvements required for the proposed use, shall be recorded prior to obtaining a Certificate of Occupancy.

RESOLUTION ZR-2017-__

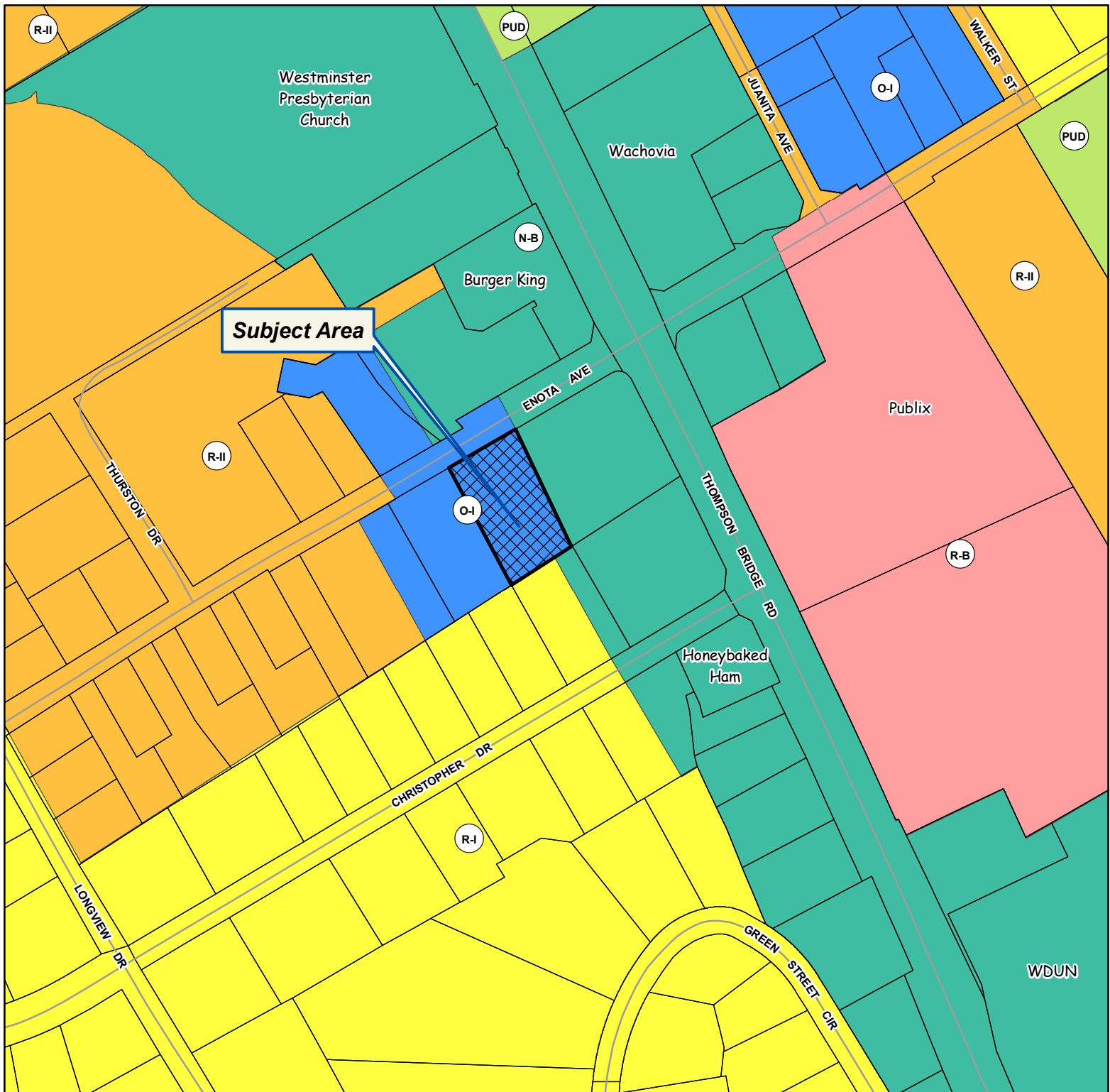
Adopted this _____ day of _____, 2017.

C. Danny Dunagan, Jr., Mayor

This is to certify that I am City Clerk of the City of Gainesville. As such, I keep its official records, including its minutes. In that capacity, my signature below certifies this resolution was adopted as stated and will be recorded in the official minutes.

ATTEST:

Denise O. Jordan, City Clerk



Applicant:

MONTECITO DEVELOPMENT

REZONING REQUEST W/SPECIAL USE



Request:
Rezone 0.48+/- acre tract from
Office and Institutional (O-I) to
Neighborhood Business (N-B) for
a convenience store with fuel pumps

Subject Area Address:
149 Enota Avenue, NW

Meeting: 5/9/2017
Prepared: 4/20/2017

Gainesville Community Development Department

 Subject Area

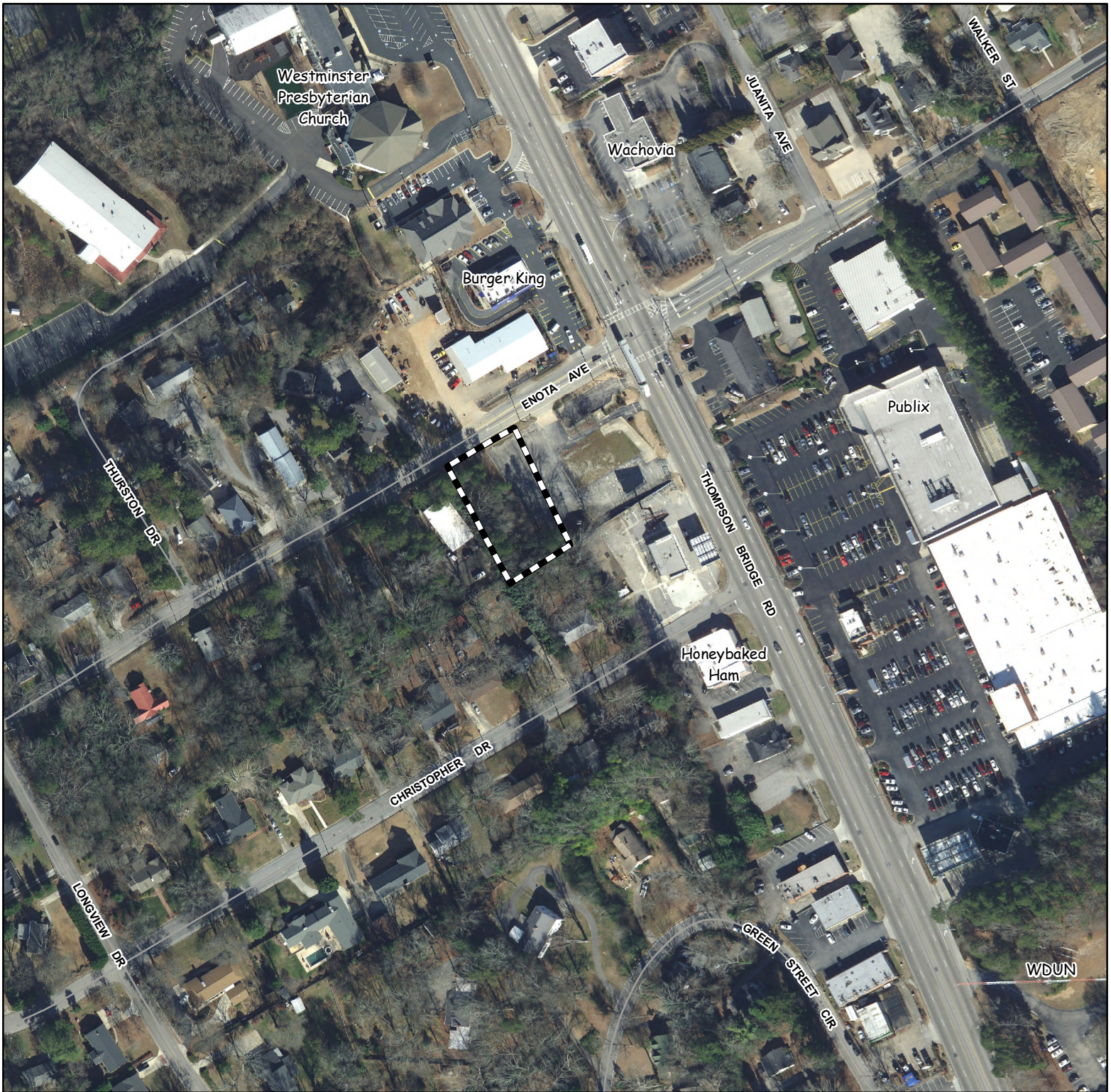


0 120 240 360 480 Feet

1" = 200'

Tax Parcel: 01-074-004-001

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Applicant:

MONTECITO DEVELOPMENT

REZONING REQUEST W/SPECIAL USE



Request:
Rezone 0.48+/- acre tract from
Office and Institutional (O-I) to
Neighborhood Business (N-B) for
a convenience store with fuel pumps

Subject Area Address:

149 Enota Avenue, NW

Meeting: 5/9/2017

Prepared: 4/20/2017

Gainesville Community Development Department



Subject Property

Aerial from 2015

0 120 240 360 480 Feet



1" = 200'

Tax Parcel: 01-074-004-001

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ANDERSEN | TATE | CARR

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February 24, 2017

VIA E-MAIL AND HAND DELIVERY

City of Gainesville, Georgia
Attn: Rusty Ligon, Community Development Director
and Matthew Tate, Planning Manager
300 Henry Ward Way, Suite 303
Gainesville, Georgia 30501
mtate@gainesville.org

RE: REZONING AND ANNEXATION APPLICATIONS AND LETTER OF INTENT FOR MONTECITO DEVELOPMENTS, LLC

Dear Mr. Ligon and Mr. Tate:

This Letter of Intent is written on behalf of the property owner and Applicant, Montecito Developments, LLC (the "Applicant"), in support of the submitted zoning applications and any related variances needed or associated with the proposed zoning site plan (collectively, the "Applications") for the subject property located at 1281 Thompson Bridge Rd., NW and 149 Enota Ave., NW, Gainesville, GA 30501, Hall County Tax Parcel Nos. 01074 004020 and 01074 004001 (the "Property"), totaling approximately 1.5 acres.

The Applicant seeks a rezoning from *O&I and N-B to N-B*, to assemble the two long-vacant parcels to allow for a quality convenience store with gas pumps to serve residents and support the City's commercial tax base. This neighborhood, retail use will have no adverse impacts on surrounding properties. Based on market research, there is a need in this area for a quality, neighborhood convenience store. The Applicant is a developer of the well-received Circle K stores, a "2.0" model that provides modern amenities, design and store layouts to support and provide services to their suburban customer base. The Applicant currently plans to comply with all other buffer and setback requirements as reflected in the current zoning conditions. The proposed store will consist of a convenience store building totaling approximately 5,200 square feet, with 4 pump islands. The convenience store will include food, beverage and coffee options for customers.

The property's vacant status and tax value would be greatly increased with the addition of the proposed commercial development. The requested rezoning for the proposed commercial, convenience store and gas pump uses have a demonstrated history of being entirely suitable and complementary to the other land uses in the area, including the more intense commercial and office uses already permitted as a matter of right. This request is consistent with City's previous decisions and precedent in rezoning this and similarly situated properties in this area, with the current uses permitted under the N-B zoning district, and with the future land use plan for this area, being an existing commercial node.

Letter of Intent
1281 Thompson Bridge Rd.
and 149 Enota Ave.
Montecito Developments, LLC

February 24, 2017
Page 2 of 2

The property has access to a public water supply, public sanitary sewer, and convenient direct access to collector streets, major thoroughfares and state and interstate highways.

Constitutional Objections

The portions of the City of Gainesville Zoning Ordinances which classify or condition the Property into any more or less intensive zoning classification and/or zoning conditions other than as requested by the Applicant and property owner are and would be unconstitutional in that they would take the Applicant's and property owners' property rights without first paying fair, adequate and just compensation for such rights, in violation of Article I, Section I, Paragraph II of the Constitution of the State of Georgia of 1983, the Due Process Clause of the Fourteenth Amendment to the Constitution of the United States.

The Property is presently suitable for development subject only to the approval of the requested rezoning, as requested and amended by the Applicant and property owners, and is not economically suitable for development under its present zoning and development classification, conditions, regulations, and restrictions due to its location, shape, size, surrounding development, and other factors. A denial of the requested applications would constitute an arbitrary and capricious act by the City of Gainesville without any rational basis therefore, constituting an abuse of discretion in violation of Article I, Section I, Paragraphs I and II of the Constitution of the State of Georgia of 1983 and the Due Process Clause of the Fourteenth Amendment to the Constitution of the United States.

A refusal by the City of Gainesville to approve the Applicant's and property owners' requested rezoning, or to apply additional conditions outside of those proposed or agreed to by the Applicant, so as to prohibit reasonable economic use of the Property, would be unconstitutional and discriminate in an arbitrary, capricious and unreasonable manner as to the Applicant and property owners, in violation of Article I, Section I, Paragraph II of the Constitution of the State of Georgia of 1983 and the Equal Protection Clause of the Fourteenth Amendment to the Constitution.

Conclusion

Applicant respectfully requests approval, and submits the Applications and exhibits in further support of their requests. The Applicant and their representatives welcome the opportunity to meet with City officials and staff to answer any questions.

Respectfully submitted,

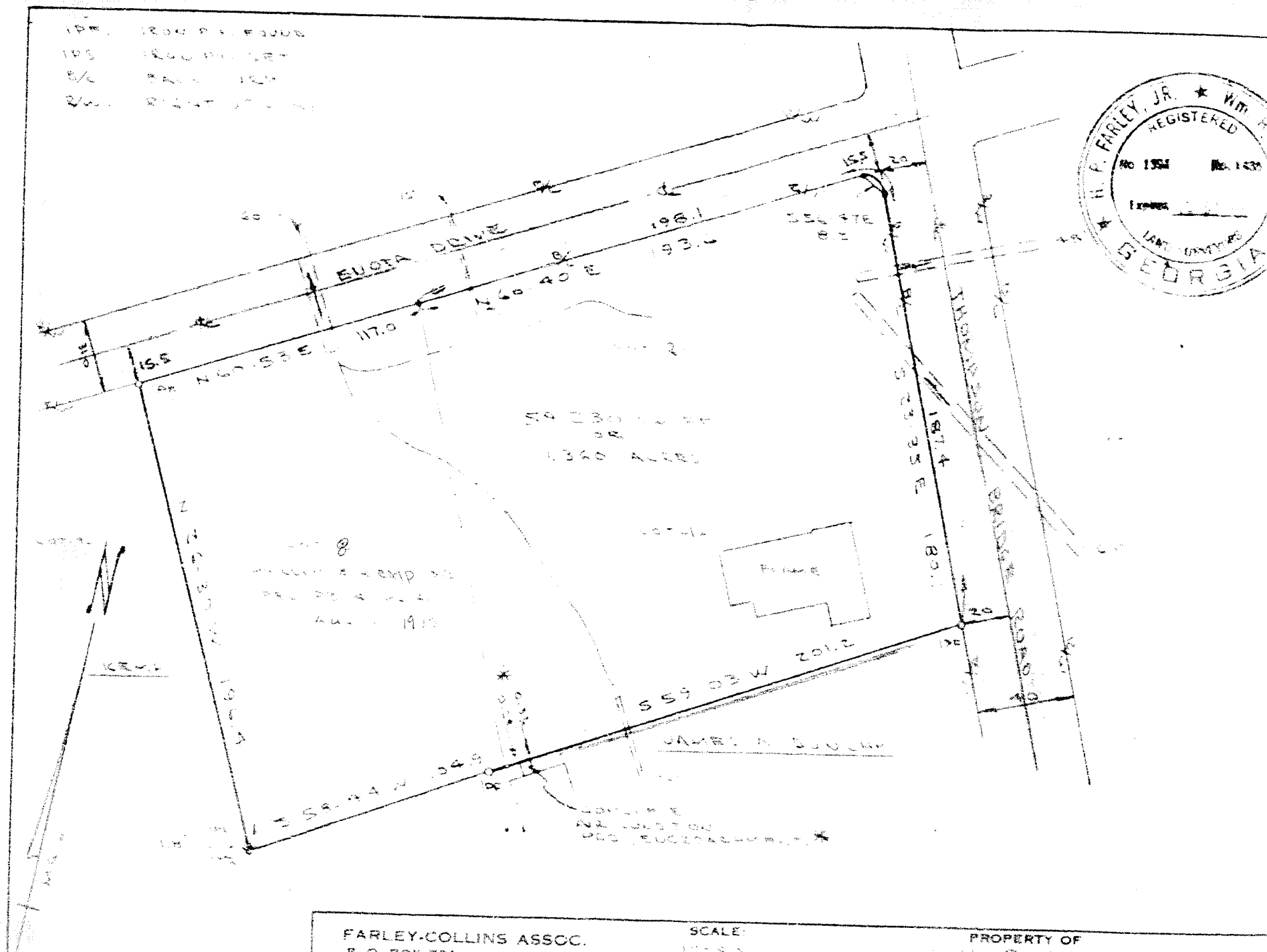
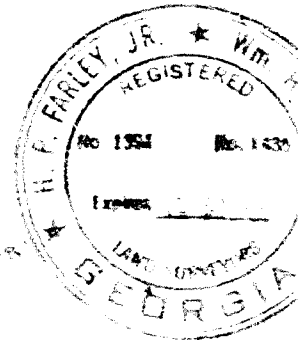
ANDERSEN, TATE & CARR, P.C.



Marian C. Adeimy
Attorneys for Applicant

Enclosures
(Rezoning Application Packets)

1PM 1200 P.M. ROAD
 1PS 1200 P.M. SET
 E/C 2000 100
 RW. RIGHT OF WAY

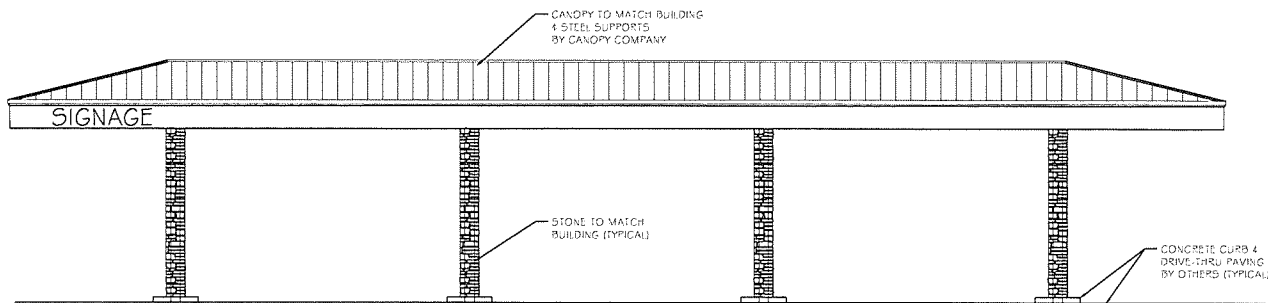


FARLEY-COLLINS ASSOC.

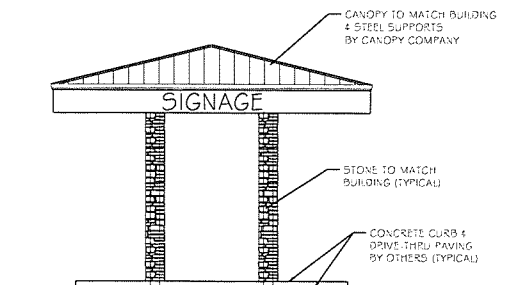
SCALE:

PROPERTY OF





1 GAS PUMP CANOPY ELEVATIONS
CPO1 SCALE: 1/8" = 1'-0"



2 GAS PUMP CANOPY END ELEVATIONS
CPO1 SCALE: 1/8" = 1'-0"

Traffic Impact Study

Proposed Convenience Store with Gasoline Pumps
Thompson Bridge Road (GA 60) at Enota Avenue
City of Gainesville, Georgia

February 23, 2017
Revised April 19, 2017

MARC R. ACAMPORA, PE, LLC
TRAFFIC ENGINEERING



Traffic Impact Study

Proposed Convenience Store with Gasoline Pumps
Thompson Bridge Road (GA 60) and Enota Avenue
City of Gainesville, Georgia

study prepared for:

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2607 Vineville Avenue, Suite 205
PO Box 13
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February 23, 2017
Revised April 19, 2017



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Introduction

This study assesses the traffic impact of a proposed convenience store with gasoline pumps in Gainesville, Georgia. The site is located in the southwest corner of the intersection of Thompson Bridge Road (GA 60) and Enota Avenue, as shown in the location map in Figure 1. The project will include a 4,200 square foot convenience store with four gasoline pumps (eight fueling positions). Vehicular access will be provided at one full-movement driveway on the south side of Enota Avenue and one full-movement driveway on the west side of Thompson Bridge Road.

The purpose of this traffic impact study is to determine existing traffic operating conditions in the vicinity of the proposed development, project future traffic volumes, assess the impact of the subject development, then develop conclusions and recommendations to mitigate the project traffic impact and ensure safe and efficient existing and future traffic conditions in the vicinity of the project.

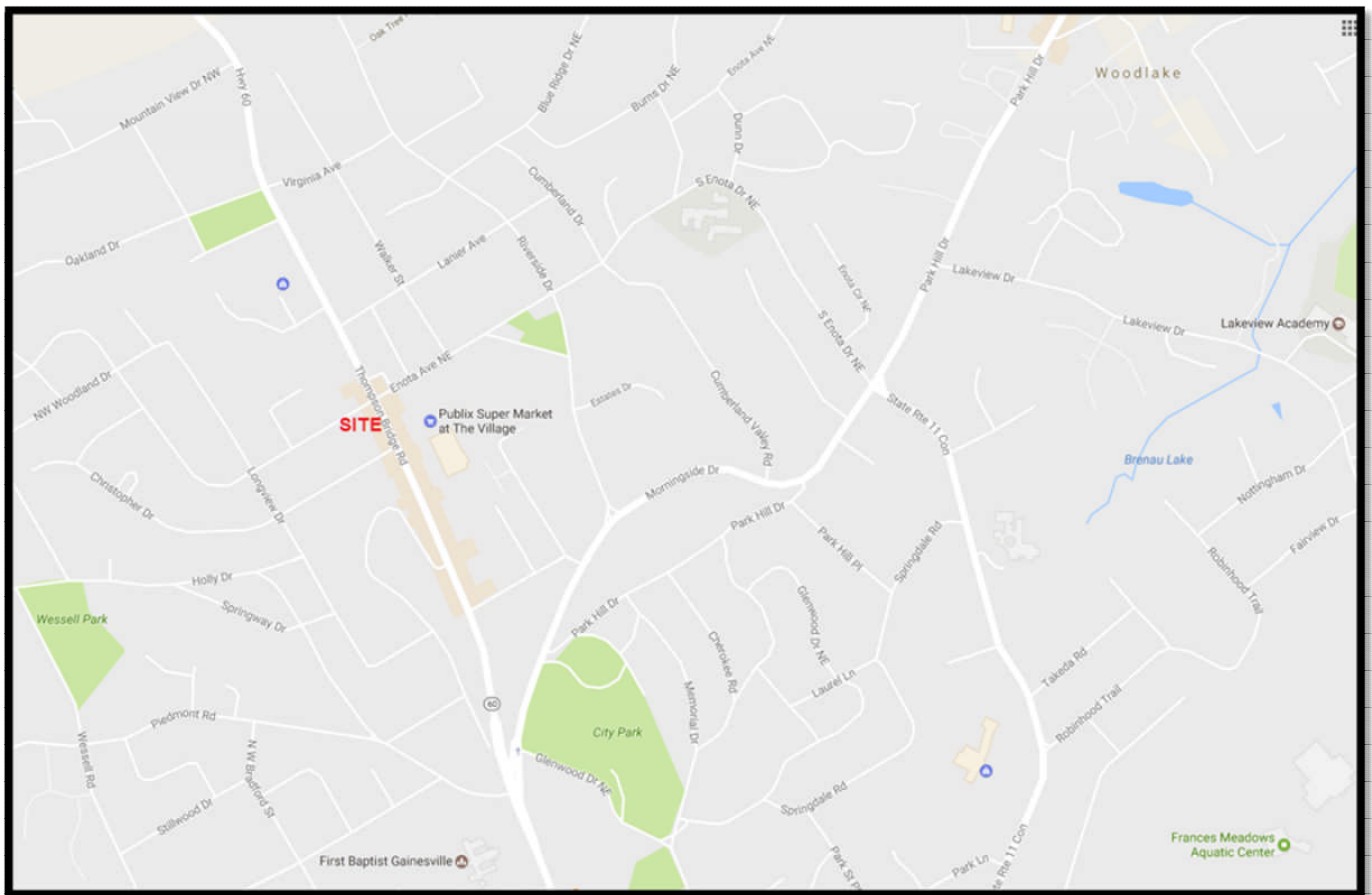


Figure 1 – Convenience Store Site Location Map

Existing Traffic Conditions

Existing traffic operating conditions in the vicinity of the proposed convenience store were assessed. The following is a description of existing transportation facilities, traffic volumes, and intersection operations.

Study Network

The City of Gainesville's Unified Land Development Code (ULDC) specifies that the study area to be included in a traffic impact study will be determined by calculating the peak hour and daily trips that the project will generate, then applying the table provided in the code, shown as Table 1, below, to determine the distance from the project that must be included in the study area.

Table 1 – ULDC Study Area Size Requirements

Peak Hour Trips Generated	Daily Trips Generated	Distance from Perimeter of Proposed Development Along Roads
100 - 150	1,000 – 1,500	½ mile
151 - 500	1,501 – 5,000	1 mile
501 – 1,000	5,001 – 10,000	2 miles
1001 or more	10,001 or more	3 miles

from the City of Gainesville ULDC

The trip generation for the proposed development is presented later in this report, summarized in Table 4. The peak hour trip generation for the project was calculated at 153 unadjusted or 52 new trips and the 24-hour volume is 4,340 unadjusted or 1,574 new trips. Based on these numbers, applied to the ULDC standard presented above, the study network was determined to extend for one mile from the limits of the proposed site. The one mile limits were presented to the City and, based on that information, the intersections to be included in this study were agreed upon with the City as follows:

- 1) Thompson Bridge Road at Walmart / Taco Bell Access
- 2) Thompson Bridge Road / Enota Avenue
- 3) Enota Avenue at Riverside Drive
- 4) GA 11 Business at South Enota Avenue
- 5) GA 60 at GA 11 Business
- 6) GA 60 at Ridgewood Avenue

Description of Existing Roadways

Thompson Bridge Road (Georgia State Route 60) is a principal arterial with a northwest / southeast orientation adjacent to the subject site. The road has two through lanes in each direction, with exclusive left turn lanes in both directions at Enota Avenue. The terrain along the adjacent segment of Thompson Bridge Road is very gently rolling and the posted speed limit is 40 mph in the northbound direction, changing to 45 mph just north

of Enota Avenue. Southbound, the speed limit drops from 45 mph to 40 mph along the frontage of the subject property. There is a traffic signal at the intersection of Thompson Bridge Road and Enota Avenue.

Enota Avenue is a two lane residential street that primarily serves single family subdivisions to the west of Thompson Bridge Road and a mix of single family, multi-family residential, and a school, east of Thompson Bridge Road. The eastbound approach of Enota Avenue has an exclusive left turn lane and a shared through/right at Thompson Bridge Road, while the westbound approach has separate left, through, and right turn lanes. The terrain along Enota Avenue is rolling with a downhill grade on the eastbound approach west of the site access, leveling off at Thompson Bridge Road. The westbound approach has a downhill grade approaching Thompson Bridge Road.

Pedestrian, Bicycle, and Transit Accessibility

There are no striped designated bicycle lanes on any of the roadways in this traffic study. In the vicinity of the site, sidewalk is located in the northeast corner of the Thompson Bridge / Enota intersection, but not on the other corners. Pedestrian crossing signals and crosswalks are provided on all approaches at the Thompson Bridge / Enota intersection, but only the northeast corner is ADA accessible. There is regularly scheduled mass transit (bus) service (Gainesville Connection, Route 20) along the adjacent section of Thompson Bridge Road and Enota Avenue east of Thompson Bridge Road.

Photographs 1 through 8 are taken at each of the intersections evaluated in this study.



Photograph 1 – View of Thompson Bridge Road Facing Walmart from Taco Bell Access



Photograph 2 – Thompson Bridge Road Facing North From Site Access



Photograph 3 – Thompson Bridge Road Facing South From Site Access



Photograph 4 – Enota Avenue Facing East Toward Thompson Bridge Road, Site Access to Right



Photograph 5 – Riverside Drive Facing North at All-Way Stop at Enota Avenue



Photograph 6 – GA 11 Business Facing Southwest Toward South Enota Avenue



Photograph 7 – Green Street Facing North at Fork with Thompson Bridge Road to Left, GA 11 Bus to Right

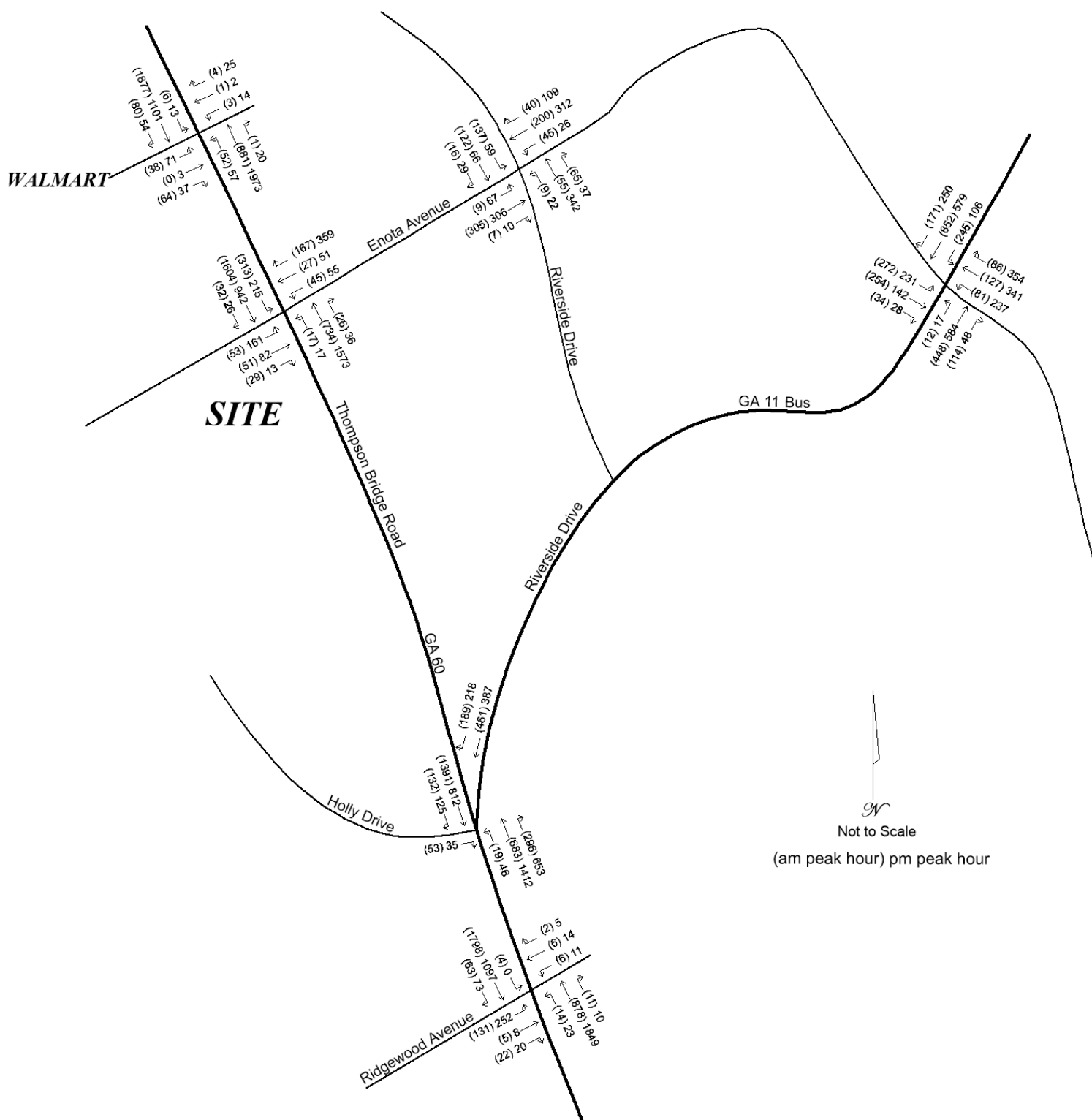


Photograph 8 – GA 60 Facing North at Ridgewood Avenue

Existing Traffic Volumes

Existing full turning movement traffic volume counts were collected at the six intersections previously listed. The counts were collected at the Thompson Bridge / Enota intersection on Thursday, February 16, 2017. The counts at Thompson Bridge / Walmart, Enota / Riverside, and GA 11 Bus / South Enota were collected on Thursday, March 30, 2017, and the counts at GA 60 / GA 11 Bus and GA 60 / Ridgewood were obtained from another recent traffic study performed in the area, collected on Wednesday, February 22, 2017. Observations at the study intersections revealed that the lunchtime/midday peak volumes were visibly lower than the morning and evening peak times. Therefore, this study focused on the busier a.m. and p.m. times, with the logic that these will represent the times of day with the highest delays. The counts were collected at each intersection from 7:00 a.m. to 9:00 a.m. and from 4:00 p.m. to 6:00 p.m. Area schools were in standard session on the days on which the counts were recorded. From the count data, the highest four consecutive 15-minute interval volumes at each intersection, during each time period, were determined. These volumes make up the typical weekday a.m. and p.m. peak hour traffic volumes at that intersection. The existing a.m. and p.m. peak hour turning movement volumes are shown in Figure 2. The raw count data is found in Appendix A.

In addition to the intersection turning movement counts, Georgia Department of Transportation (Georgia DOT) annual average daily traffic (AADT) volume counts were obtained on nearby roadways for the five years from 2011 to 2015 (the latest year for which volumes are available). Table 2 presents the historic Georgia DOT counts and the annual growth rates between the counts.



Thompson Bridge at Enota Avenue Convenience Store Traffic Impact Study

MARC R ACAMPORA, PE, LLC

Table 2 – Historic Georgia DOT Traffic Volume Counts and Annual Growth Rates

Year	GA 60 S of Enota	Annual Growth	GA 60 N of North Pointe Dr	Annual Growth	Enota W of Thompson Bridge	Annual Growth	Enota E of Thompson Bridge	Annual Growth
Station ID	1390314		1390316		1390612		1390609	
2011	21,690		29,390		1,560		7,540	
2012	24,310	12.1%	29,010	-1.3%	1,560	0.0%	7,410	-1.7%
2013	24,220	-0.4%	30,030	3.5%	1,590	1.9%	7,360	-0.7%
2014	25,700	6.1%	30,000	-0.1%	1,700	6.9%	7,360	0.0%
2015	26,500	3.1%	31,000	3.3%	1,760	3.5%	7,660	4.1%
avg annual growth		5.1%		1.3%		3.1%		0.4%

The AADT volume on Thompson Bridge adjacent to the subject site was 26,500 in 2015 and the AADT on Enota adjacent to the site was 1,760 in 2015.

Existing Intersection Operations

Existing traffic operations were analyzed at the counted intersection using Synchro software, version 8, in accordance with the methodology presented in the Transportation Research Board's 2010 *Highway Capacity Manual (HCM 2010)*. The *HCM 2010* methodology is presented in Appendix B. The results of the analysis are shown in Table 3. Computer printouts containing detailed results of the analysis are located in Appendix C. Levels of service and delays are provided for the overall intersection and for each approach or controlled movement.

Table 3 – Existing Intersection Operations

Intersection / Approach	A.M. Peak Hour		P.M. Peak Hour	
	LOS	Delay (s/veh)	LOS	Delay (s/veh)
1. Thompson Bridge Road at Walmart/Taco Bell	A	8.8	B	11.0
northbound approach Thompson Bridge	A	2.8	A	9.3
southbound approach Thompson Bridge	A	8.9	A	5.7
eastbound approach Walmart access	D	52.2	E	69.1
westbound approach Taco Bell access	D	51.3	D	36.5
2. Thompson Bridge Road at Enota Avenue	B	11.8	D	36.8
northbound approach Thompson Bridge	A	8.8	D	36.2
southbound approach Thompson Bridge	A	6.4	C	24.1
eastbound approach Enota	E	61.1	E	56.9
westbound approach Enota	D	38.7	E	58.7
3. Enota Avenue at Riverside Drive	C	22.1	F	58.5
northbound approach Riverside	C	15.5	F	59.3
southbound approach Riverside	C	22.3	C	20.7
eastbound approach Enota	C	22.7	F	59.9
westbound approach Enota	C	25.0	F	71.3
4. GA 11 Business at South Enota Avenue	D	47.4	D	48.6
northbound approach GA 11 Bus	F	80.1	E	79.2
southbound approach GA 11 Bus	E	64.9	D	44.7
eastbound approach South Enota	C	30.2	D	41.2
westbound approach South Enota	C	34.4	D	42.9
5. GA 60 (Green/Thompson Bridge) at GA 11 Business	C	23.1	B	17.7
northbound approach Green	A	5.6	A	6.1
southbound approach Thompson Bridge	B	16.2	B	10.8
eastbound approach Holly	B	19.2	A	0.5
westbound approach GA 11 Bus	E	68.2	E	68.1
6. GA 60 (Green) at Ridgewood Avenue	B	19.6	C	26.4
northbound approach Green	A	6.0	C	24.9
southbound approach Green	B	18.5	B	12.7
eastbound approach Ridgewood	F	92.5	F	93.6
westbound approach driveway	D	49.6	D	40.7

The following is a discussion of the results at each intersection:

- 1. Thompson Bridge Road at Walmart / Taco Bell** – This signalized intersection is the main access for Walmart and Taco Bell. The intersection operates well in the existing a.m. and p.m. Some delays are incurred on the side street approaches primarily due to the signal timing, appropriately, heavily favoring the northbound and southbound approaches on Thompson Bridge Road. The side street left turn lanes are extremely short, especially on the Taco Bell approach, which only provides storage for one automobile. This is generally not problematic due to the relatively low side street approach volumes. The pedestrian signal head in the southeast corner (closest to Taco Bell), for pedestrians crossing the Taco Bell access, is very difficult to see in daylight and it is recommended that this pedestrian signal head be adjusted to improve its visibility. It is also noted that the southbound approach of Thompson Bridge Road does not include an exclusive right turn lane to serve the Walmart access. This is presumably due to topographic constraints in the Walmart property. Based on the southbound right turn volume and the given conditions, a southbound right turn lane would be justified at this location according to Georgia DOT standards.

- 2. Thompson Bridge Road at Enota Avenue** – The analysis of the Thompson Bridge / Enota intersection shows an overall acceptable level of service. The side street approaches on Enota Avenue operate at LOS E, again, primarily due to the greentime on the signal favoring the Thompson Bridge Road approaches. Two changes to the signal operations at this intersection would be beneficial. First, the 160 second cycle length is lengthy and the Synchro analysis suggests that cycle lengths of 80 to 100 seconds are more optimal. Shorter cycle lengths would also reduce side street queuing. It is recognized that the cycle length is dependent on other signals in the corridor and spot changes at individual intersections may not be appropriate. Also, three of the four approaches (all but westbound Enota Avenue) have protected / permissive left turn phasing. There would be a modest operational benefit, and a potential safety improvement, to adding this phasing to the westbound approach. It was also noted in the field that some adjacent intersections have been converted to the flashing permissive left turn arrow, but this intersection has not.

- 3. Enota Avenue at Riverside Drive** – This all-way stop intersection operates well in the a.m., but at LOS F in the p.m. The volumes at this intersection are such that exclusive turn lanes are appropriate for several movements. However, to avoid confusion about right-of-way, it is generally not advisable to add multiple approach lanes at an all-way stop sign-controlled intersection. This intersection may be a candidate for signalization. It is recommended that a signal warrant analysis be performed for this intersection according to the standards proscribed in the Federal Highway Administration's *Manual On Uniform Traffic Control Devices* (MUTCD). Should signalization be justified, consideration could be given to providing turn lanes, as appropriate. With a simple two-phase signal and no additional turn lanes, this intersection would operate at LOS B in the a.m. peak hour and LOS A in the p.m. peak hour. It is noted that Enota Avenue has received traffic calming treatment including highly-visible pedestrian crossings with speed humps. The all-way stop at the Enota / Riverside intersection provides a traffic calming function which may be diminished if this intersection was signalized. A roundabout is an alternative method of control that merits consideration at this intersection. The analysis of a

roundabout at this intersection reveals excellent operations, with LOS A in the a.m. and LOS B in the p.m.

4. **GA 11 Bus at South Enota Avenue** – There are no exclusive right turn lanes on either GA 11 Bus approach at this intersection. The northbound right turn volumes (114 a.m., 48 p.m.) and, even more significantly, the southbound right turn volumes (171 a.m., 250 p.m.) on GA 11 Bus justify the addition of these exclusive right turn lanes. The addition of these lanes will reduce overall intersection delays by about 10 seconds per vehicle in each time period and will eliminate the a.m. northbound LOS F. The signal includes protected/permissive phasing on all but the northbound approach, which has permissive-only phasing. This is acceptable given the low northbound left turn volumes on GA 11 Bus.
5. **GA 60 (Thompson Bridge Road / Green Street) at GA 11 Business** – This large intersection is the fork at which GA 11 Business (Riverside Drive) splits from GA 60 (Thompson Bridge Road). This intersection generally operates acceptably with the existing lanes and control. The southbound right turn volume into Holly Drive operates beyond the signal control. The volume of these right turners are high enough to justify a southbound exclusive right turn lane on GA 60, according to Georgia DOT standards. No other mitigation is recommended at this intersection.
6. **GA 60 (Green Street) at Ridgewood Avenue** – This overall intersection operates acceptably, especially given the tight urban design and lack of exclusive turn lanes. Northbound left turns from GA 60 receive a protected/permissive phasing on the signal and, with the modest northbound left turn volume, this generally provides acceptable operations. However, should a left turner not reach the intersection and complete their left turn movement during the protected portion of the phase, that left turner can significantly impede the through traffic in that lane. Likewise, eastbound Ridgewood Avenue only includes a single lane and, at times, notable queuing was observed on this approach. Ideally, from a traffic operations perspective, this intersection would be widened to include a northbound exclusive left turn lane on GA 60, a second eastbound lane on Ridgewood, and a southbound right turn lane on GA 60. These changes would reduce overall delays and eliminate the LOS F on the Ridgewood approach. However, it is acknowledged that this widening would alter the historic character of this intersection. Therefore, these improvements are suggested for consideration in the context of the overall character and goals of the community.

Project Traffic Characteristics

This section describes the anticipated traffic characteristics of the proposed convenience store, including a site description, how much traffic the project will generate, and where that traffic will travel.

Project Description

The proposed development will consist of a 4,200 square foot convenience store with four gasoline pumps (eight fueling positions). Access to the property will be provided by a full movement driveway on Enota Avenue and a full movement driveway on Thompson Bridge Road. The site plan is presented in Figure 3.

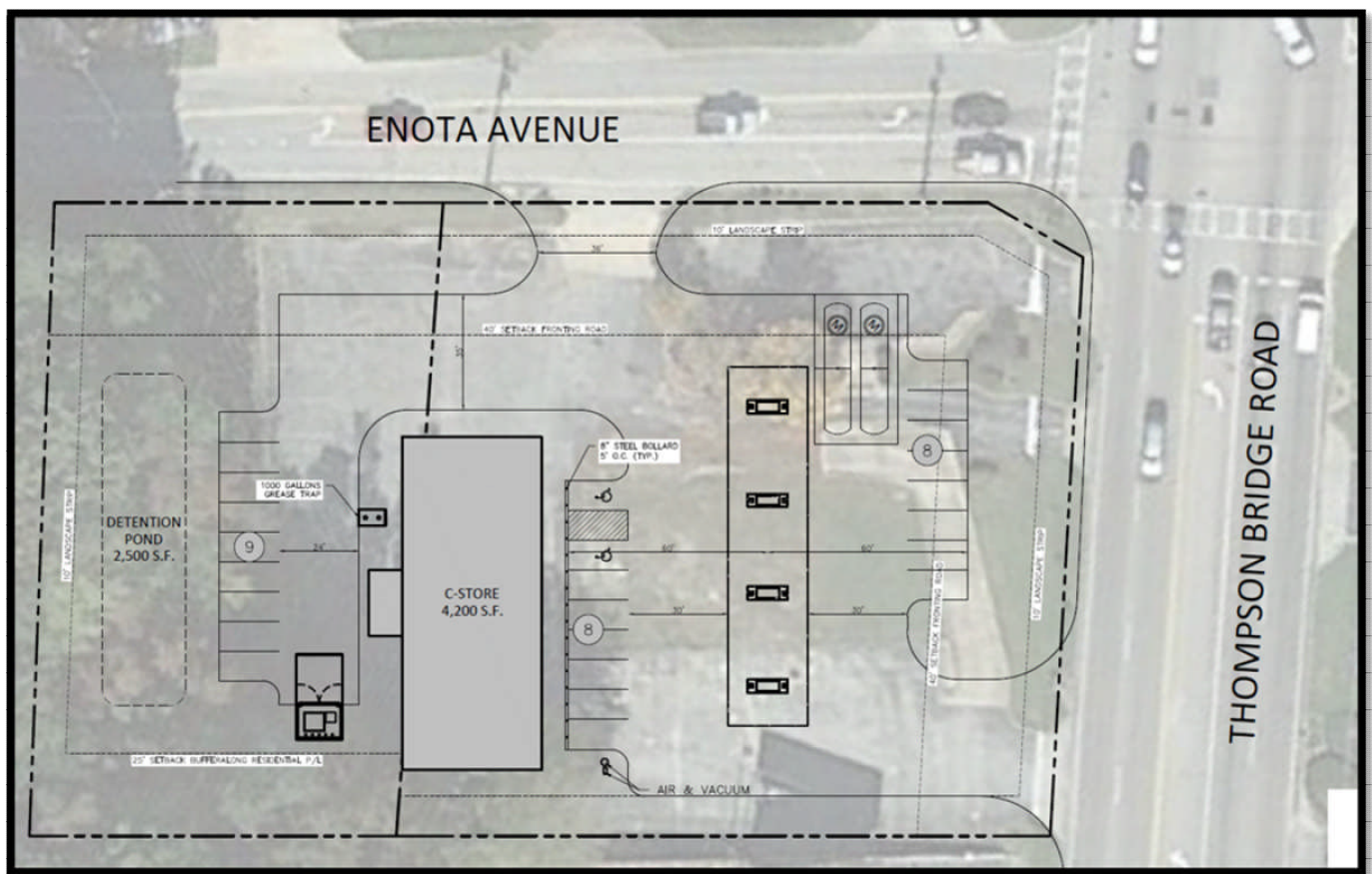


Figure 3 – Site Plan

It is noted that the current site has three accesses on Thompson Bridge Road – an enter-only lane right at the corner, an exit-only lane a few feet to the south, then a full-movement access at the south property line. The proposed convenience store site plan calls for closing the two accesses near the Enota intersection and preserving just the one full-movement access at the south end of the property. The property also has a single, existing full movement access on Enota Avenue, which will be preserved.

Trip Generation

Trip generation is an estimate of the number of entering and exiting vehicular trips that will be generated by the proposed development. The volume of traffic that will be generated by the proposed convenience store was calculated using the rates and equations in the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, 9th Edition. ITE Land Use 853 – Convenience Market with Gasoline Pumps was applied. The trip generation was calculated both by using square footage as the independent variable and also using number of fueling positions as the independent variable. The square footage yielded the higher peak hour trip volumes while the fueling positions yielded the higher 24-hour volumes. The average number of fueling positions in the ITE data was 7 for the a.m. peak hour and 8 for the p.m. peak hour data (this site plan calls for 8). The average square footage in the ITE data was 3,000. Since no equations were available and the average rates were, therefore, employed, it was decided to use the number of fueling positions as the independent variable, since the average size of that variable more-closely mirrored that of the proposed development.

The trip generation was adjusted to account for pass-by trips. Pass-by trips are trips to the proposed convenience store that are currently driving on Thompson Bridge Road and Enota Avenue and which will turn into the site for retail / gasoline purchases, then continue on the trip they are already making. The ITE *Trip Generation Manual* provides data for calculating pass-by percentages. This data showed an average pass-by percentage in the a.m. peak hour of 63% and average in the p.m. peak hour of 66%. These high percentages are logical given the nature of the development. The a.m. percentage of 63% was also applied to the 24-hour volumes. Table 4 summarizes the trip generation calculations for the proposed development. The calculations include the raw trips for the convenience store and the pass-by percentages.

Table 4 – Project Trip Generation

Land Use	ITE Code	Size	A.M. Peak Hour			P.M. Peak Hour			24-Hour
			In	Out	Total	In	Out	Total	2-Way
Convenience Market with Gasoline Pumps	853	8 fueling positions	67	66	133	76	77	153	4,340
-pass-by		63%/66%/63%	<u>-42</u>	<u>-42</u>	<u>-84</u>	<u>-50</u>	<u>-51</u>	<u>-101</u>	<u>-2,766</u>
Total New Trips			25	24	49	26	26	52	1,574

Trip Distribution and Assignment

The trip distribution percentages indicate what proportion of the project's trips will travel to and from various directions. The new trip distribution percentages were developed based on the locations and proximity of likely trip origins and destinations, primarily residential development in the area, and the routes of travel to and from those areas. The pass-by trips were assigned based on the prevailing flows passing the site. The project trips, shown in Table 4, were assigned to the roadway network based on the trip distribution percentages. The project trip distribution percentages and the a.m. and p.m. peak hour trips expected to be generated by the project are shown in Figure 4.

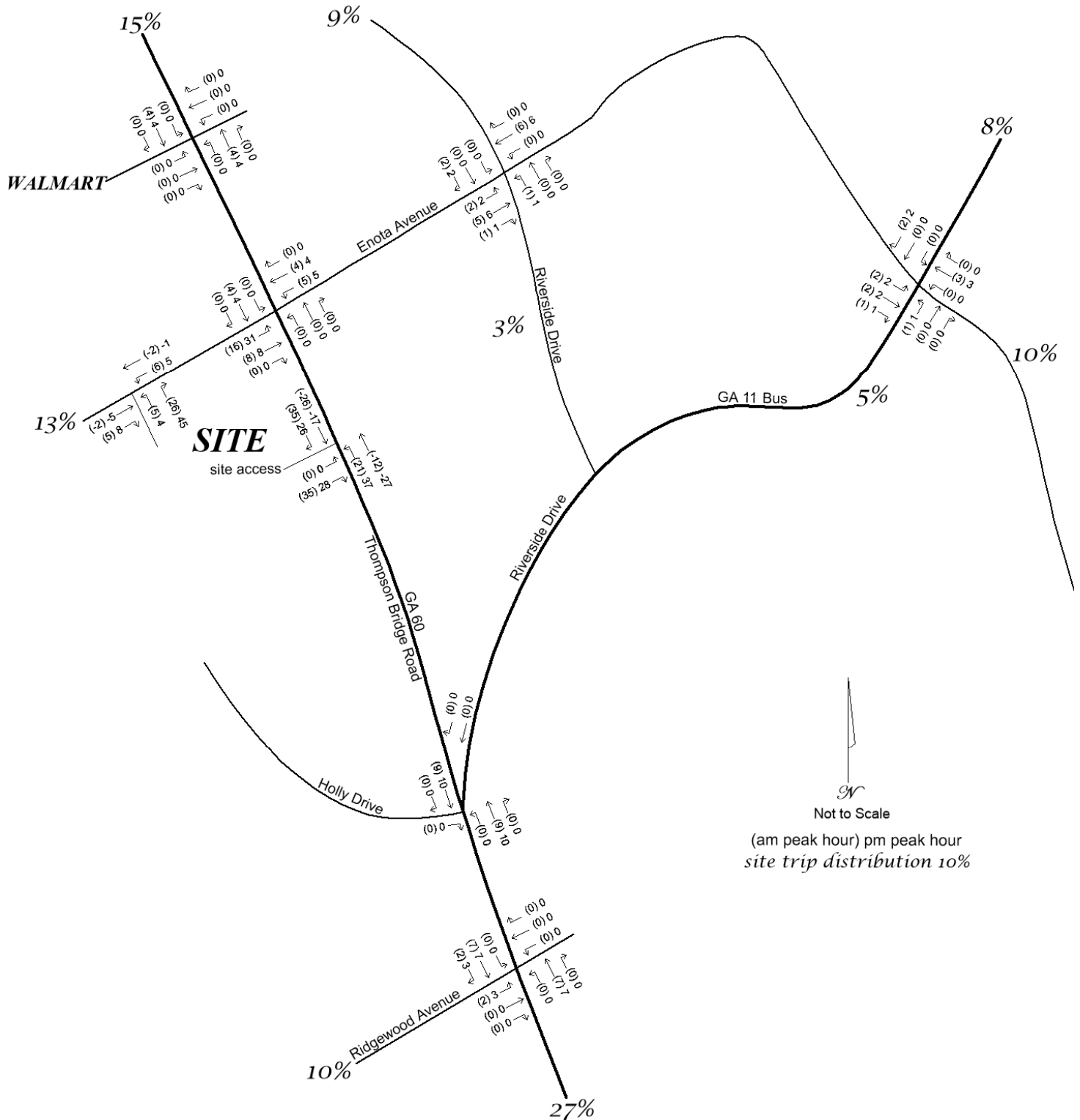


Figure 4 – Project Trip Distribution Percentages and Weekday A.M. and P.M. Peak Hour Site Trips

Future Traffic Conditions

The historic growth trends identified previously in Table 2, were used to develop an annual growth rate in traffic volumes of 3%, or a total of 6.1% for the projected two year project build-out horizon. This growth rate was applied to the counted volumes at the counted study intersections and at the site access locations. Then, the site traffic volumes were added to these volumes. The site volumes, shown in Figure 4, were added to the 2019 background volumes. This produces the future volumes that will be at each study intersection after the convenience store is built and operational. These future volumes are shown in Figure 5.

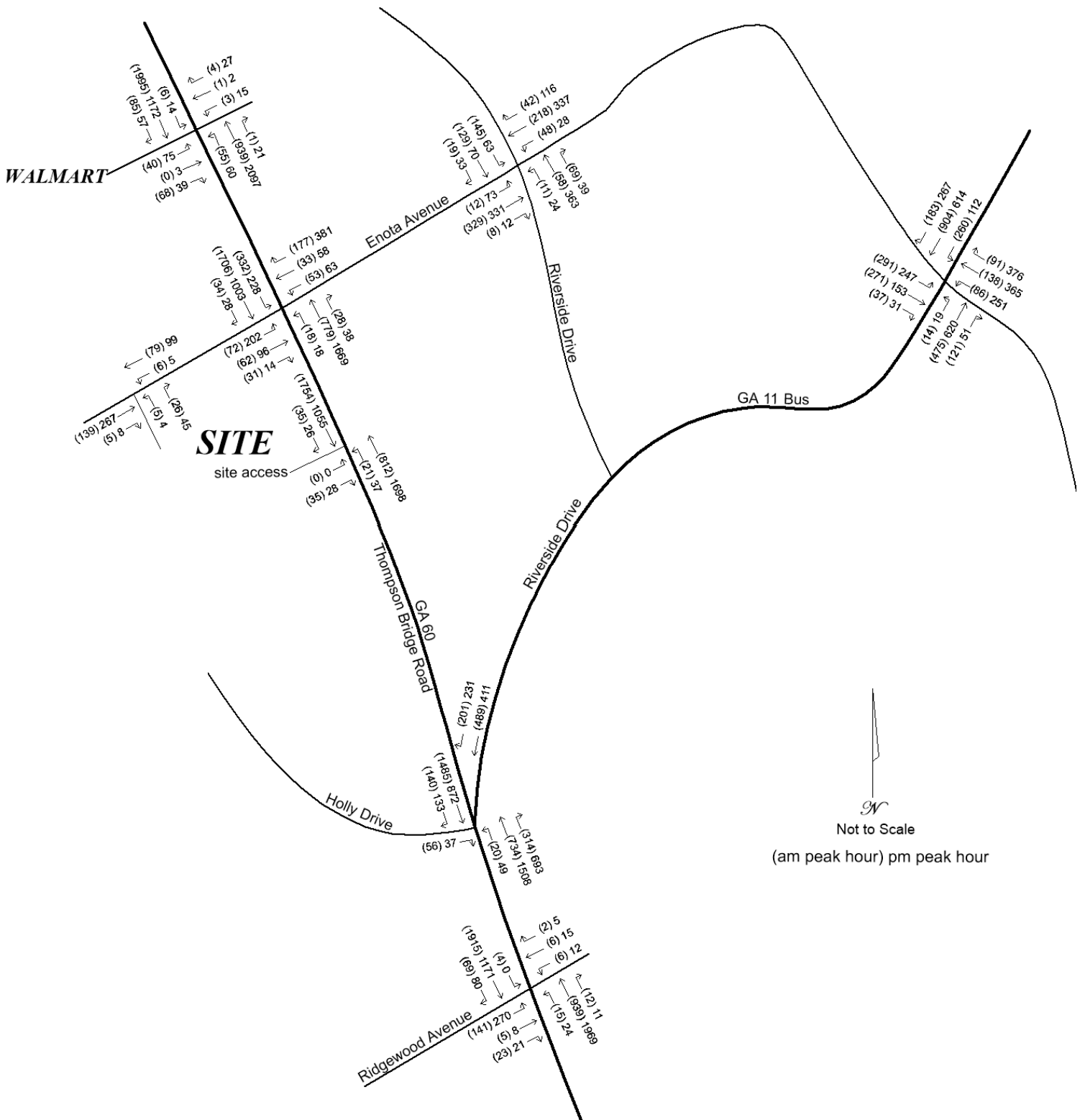


Figure 5 – Future Weekday A.M and P.M. Peak Hour Traffic Volume Projections

Future Intersection Operations

An operational analysis was performed for the anticipated 2019 future project build-out year, at the study intersections and the proposed site accesses. Table 5 presents the results of this analysis. Computer printouts containing detailed results of the analysis are located in Appendix D.

Table 5 – Future Intersection Operations

Intersection / Approach	A.M. Peak Hour		P.M. Peak Hour	
	LOS	Delay (s/veh)	LOS	Delay (s/veh)
1. Thompson Bridge Road at Walmart/Taco Bell	B	10.6	B	11.8
northbound approach Thompson Bridge	A	4.0	B	10.2
southbound approach Thompson Bridge	B	11.1	A	5.9
eastbound approach Walmart access	D	52.9	E	71.2
westbound approach Taco Bell access	D	51.0	D	36.4
2. Thompson Bridge Road at Enota Avenue	B	13.5	D	40.6
northbound approach Thompson Bridge	A	9.1	D	37.9
southbound approach Thompson Bridge	A	8.3	C	26.9
eastbound approach Enota	E	61.3	E	59.4
westbound approach Enota	D	39.6	E	71.0
3. Enota Avenue at Riverside Drive	D	32.1	F	66.5
northbound approach Riverside	C	19.0	F	72.7
southbound approach Riverside	D	30.9	C	23.2
eastbound approach Enota	D	33.7	F	73.0
westbound approach Enota	E	39.0	F	72.3
4. GA 11 Business at South Enota Avenue	E	56.4	E	56.6
northbound approach GA 11 Bus	F	94.5	F	83.7
southbound approach GA 11 Bus	F	80.4	D	46.8
eastbound approach South Enota	C	25.8	D	49.2
westbound approach South Enota	D	43.9	E	58.5
5. GA 60 (Green/Thompson Bridge) at GA 11 Business	C	28.0	C	23.3
northbound approach Green	A	6.2	A	7.8
southbound approach Thompson Bridge	C	26.3	C	29.3
eastbound approach Holly	C	23.9	A	0.5
westbound approach GA 11 Bus	E	67.8	E	66.9
6. GA 60 (Green) at Ridgewood Avenue	B	17.3	C	32.3
northbound approach Green	A	6.3	C	32.4
southbound approach Green	B	14.1	B	14.6

eastbound approach Ridgewood	F	100.1	F	105.1
westbound approach driveway	D	50.4	D	43.0
7. Thompson Bridge Road at Site Access	A	0.5	A	0.3
northbound left turn entering site	C	18.2	B	11.4
eastbound approach exiting site	C	22.5	B	13.5
8. Enota Avenue Site Access	A	1.4	A	1.4
westbound left turn entering site	A	7.5	A	7.9
northbound approach exiting site	A	9.3	B	10.6

The following is a discussion of these results at each intersection:

- 1. Thompson Bridge Road at Walmart / Taco Bell** – This intersection will continue to operate well in the future a.m. and p.m. Some increases in delays will be experienced on the side street approaches, again primarily due to the signal timing, appropriately, heavily favoring the northbound and southbound approaches on Thompson Bridge Road. No other changes, beyond those identified in the existing analysis, are recommended for this intersection.
- 2. Thompson Bridge Road at Enota Avenue** – The Thompson Bridge / Enota intersection will continue to operate acceptably with the addition of the traffic from the proposed convenience store. The addition of an eastbound exclusive right turn lane along the subject site frontage would prevent right turners from becoming trapped behind eastbound through vehicles. The side street approaches would experience a slight improvement in levels of service with this right turn lane, but reductions in delays on the Thompson Bridge approaches and for the overall intersection would be minimal.
- 3. Enota Avenue at Riverside Drive** – The delays will increase at this intersection in the future, though it is noted that the proposed convenience store will add only a modest volume of new trips to this intersection (17 in the a.m. peak hour, total in all directions, and 18 in the p.m. peak hour). Consistent with the existing recommendations, this intersection would benefit from signalization or a roundabout.
- 4. GA 11 Bus at South Enota Avenue** – The delays at this intersection will also increase in the future, and, as with the Enota / Riverside intersection, the proposed development will add only a small volume of new trips here. The discussion of the exclusive right turn lanes in the existing analysis is still applicable for the future condition. No additional changes are recommended.
- 5. GA 60 (Thompson Bridge Road / Green Street) at GA 11 Business** – This intersection will generally continue to operate acceptably in the future. No other mitigation is recommended at this intersection for the future.
- 6. GA 60 (Green Street) at Ridgewood Avenue** – This intersection will operate in the future comparably to existing conditions. The delays on the eastbound Ridgewood approach will increase and be

unacceptable. The existing analysis discussion about widenings at this intersection are still applicable for the future condition, with no additional changes identified.

7. Thompson Bridge Road at Site Access – The assignment of site trips assumed that no left turners would exit the site driveway onto Thompson Bridge Road. Without a specific exiting left turn prohibition, a few vehicles may attempt this movement. However, with the high volumes and number of lanes to cross on Thompson Bridge, it is considered highly probable that most vehicles that wish to travel either northbound on Thompson Bridge or to the east on Enota will exit the site at the Enota driveway and capitalize on the protection of the adjacent signal. Because of the difficulty in making this left turn from the site driveway, and the low numbers of vehicles expected to do so, consideration should be given to prohibiting exiting left turns from this driveway. The Georgia DOT access standards were reviewed for this intersection (Thompson Bridge is Georgia State Route 60) and these are presented below.

8. Enota Avenue at Site Access – The site access on Enota is projected to operate with low volumes and very low delays. Most of the site entering trips will enter at the Thompson Bridge access, so that the entering left turns at the Enota driveway are projected at only 6 vehicles in the a.m. peak hour and 5 in the p.m. peak hour. This should minimally impede westbound through flow on Enota. The eastbound right turns entering the site are also minimal, at 5 for the a.m. peak hour and 8 for the p.m. peak hour. This also should minimally impede flows on Enota.

Site Access Design and Georgia DOT Access Standards

Thompson Bridge Road is Georgia State Route 60, and, therefore, Georgia DOT access standards apply to the Thompson Bridge access. The site is currently served by three access points on Thompson Bridge Road. The two northernmost driveways will be eliminated by the proposed plan, leaving only one access on Thompson Bridge, at the southern end of the property (furthest from Enota Avenue). The standards proscribed in the Georgia DOT's *Regulations for Driveway and Encroachment Control* (Driveway Manual), revision 4.0, dated 3/15/2016, were reviewed for applicable design standards for the site access on GA 60, and are discussed as follows.

There is an existing two way left turn lane on GA 60, which becomes a northbound exclusive left turn lane along the site frontage, serving Enota Avenue. This left turn lane will also serve as the left turn lane for the proposed convenience store. The northbound left turn movement from Thompson Bridge to Enota, at the nearby signal, has a very modest volume (17 existing in each a.m. and p.m. peak hour) and has protected / permissive phasing. This phasing will also provide some protection and gaps for the left turners into the site access. One potential issue is left turners into the site stopping in the left turn lane at the site access, blocking left turners who wish to turn at Enota, but who queue behind the site left turners. This problem is exacerbated by the proximity of the site access to Enota Avenue. Conversely, the potential for this conflict is somewhat mitigated by the modest volumes actually turning left at Enota Avenue.

It is also noted that there is an access to a retail shopping center (Publix) on the east side of GA 60 which is slightly offset to the south from the proposed site access. At this point on the road, the striping indicates a

northbound left turn lane to Enota, and southbound left turners should not be using that lane to turn left into the Publix center. However, there is always the potential for conflict for opposing left turners at the two driveways (Publix and the subject site). Should left turn conflicts present a problem, it may be beneficial to limit the Publix access to right-in / right-out (RIRO) operations. Since the existing northbound left turn lane on GA 60 will serve the site access, no auxiliary lane analysis was performed for the need for this left turn lane.

The Georgia DOT standards for right turn lanes were reviewed for the site access on GA 60. Table 6, below, is Table 4-6 from the Driveway Manual, and proscribes the right turn volume thresholds at which exclusive right turn lanes must be provided.

Table 6 – Georgia DOT Minimum Volume Requirements for Right Turn Lanes

Posted Speed	2 Lane Routes		More than 2 Lanes on Main Road	
	AADT		AADT	
	< 6000	>=6000	<10000	>=10000
35 MPH or Less	200 RTV a day	100 RTV a day	200 RTV a day	100 RTV a day
40 to 50 MPH	150 RTV a day	75 RTV a day	150 RTV a day	75 RTV a day
55 to 60 MPH	100 RTV a day	50 RTV a day	100 RTV a day	50 RTV a day
>= 65 MPH	Always	Always	Always	Always

Table 4-6 Minimum Volumes Requiring Right Turn Lanes

As reported earlier, the 2015 AADT on Thompson Bridge Road is 26,500 vpd. The southbound right turn volume (RTV) per day at the GA 60 access is calculated as 35% of the site entering new trips ($35\% \times 787 = 275$) plus an estimated 50% of the site entering pass-by trips ($50\% \times 1,383 = 692$) for an entering right turn volume of 967 RTV per day. This substantially exceeds the Georgia DOT threshold of 75 RTV per day. Therefore, an exclusive right turn lane is required at the site access on Thompson Bridge Road according to Georgia DOT standards.

Table 7, below, is Table 4-8 from the Driveway Manual and proscribes the right turn lane design standards. As noted previously, the posted speed limit changes along the subject property frontage, dropping from 45 mph to 40 mph, so the right turn lane would be partially in each speed zone. At 40 mph, the standard for right turn lanes is 150 feet of full-width storage and a 50 foot taper. At 45 mph, the standard is 175 feet of full-width storage and a 100 foot taper. Most of the lane would be in the 45 mph zone and this would provide the more conservative design. However, it is also noted that the distance from the south curb on Enota to the north curb of the site access scales to approximately 150 feet. Therefore, insufficient distance is available to provide the required storage plus taper at either speed standard. The Georgia DOT spacing standards are proscribed in Driveway Manual Table 3-1 – Spacing Criteria for Driveways, Public Road, and Side Streets. At 45 mph, the minimum spacing is 230 feet, which is also not satisfied by the proposed design, either between the site access and Enota Avenue or between the site access and the existing driveway to the property to the south. It is recommended that these design factors be discussed with Georgia DOT and the City to determine an acceptable solution. Consideration should be given to the fact that the proposed plan does eliminate two of the three existing accesses along the subject frontage, thus reducing conflict points and providing an improved design over the existing condition.

Table 7 – Georgia DOT Design Standards for Right Turn Lanes

Speed, mph	Full Width Storage, ft.	Taper, ft.
25		50
30	75	50
35	100	50
40	150	50
45	175	100
50	225	100
55	250	100
60	300	100
65	350	100

Table 4-8 Minimum Right Turn Deceleration Lengths

The Thompson Bridge Road site access should be constructed with one entering and one exiting lane and the exiting approach should be controlled by stop sign and accompanying stop bar. As discussed above, consideration should be given to prohibiting exiting left turns at this driveway. The project site engineer is referred to the Georgia DOT Driveway Manual for other driveway design standards including driveway width, island design, and curb return radii.

The site access on Enota Avenue is not located on a Georgia state route and, therefore, Georgia DOT design standards do not apply. This access is located approximately mid-way along the site's Enota frontage. This design is logical since it places the access approximately at the front of the convenience store building. The potential does exist for entering left turners to block the westbound through movement on Enota Avenue. However, due to the low entering left turn volume (6 in the a.m. peak hour, 5 in the p.m. peak hour), this potential is minimal.

The Enota Avenue site access should be constructed with one entering and one exiting lane and the exiting approach should be controlled by stop sign and accompanying stop bar. It is also noted that there is a grade differential between the site and Enota Avenue at the location of the existing access, creating a steep grade and acute crown in the existing apron. This should be addressed by the proposed site plan.

Conclusions and Recommendations

The traffic impact of this proposed convenience store with gasoline pumps will occur primarily at the site driveways. The impact at adjacent intersections will be minimal to negligible. The reason the impact is so minimal is that the majority of trips to and from the site will be pass-by trips. The nature of this type of convenience store and gasoline station is to attract vehicles that are already passing by the site – it is minimally destination-oriented. Of those trips that are driving specifically to this store, most will be generated very locally. It is improbable that more than just a few trips will travel specifically to this store from more than about one to two miles. Therefore, the new trips from this project at most study intersections will be very low, having minimal effect on traffic operations. The following is a summary of the conclusions and recommendations of at each intersection:

- 1. Thompson Bridge Road at Walmart / Taco Bell** – This intersection operates well in the existing a.m. and p.m. and will continue to operate well in the future. The pedestrian signal head in the southeast corner (closest to Taco Bell), for pedestrians crossing the Taco Bell access, is very difficult to see in daylight and it is recommended that this pedestrian signal head be adjusted to improve its visibility. It is also noted that the southbound approach of Thompson Bridge Road does not include an exclusive right turn lane to serve the Walmart access. Based on the southbound right turn volume and the given conditions, a southbound right turn lane would be justified at this location according to Georgia DOT standards.
- 2. Thompson Bridge Road at Enota Avenue** – The analysis of the Thompson Bridge / Enota intersection shows an overall acceptable level of service in both the existing and future conditions. The side street approaches on Enota Avenue operate at LOS E, primarily due to the greentime on the signal favoring the Thompson Bridge Road approaches. Shorter cycle lengths would reduce delays and side street queuing. While there are crosswalks and pedestrian signals on all approaches at this signalized intersection, only the northeast corner has an ADA accessible ramp. Consideration should be given to adding ADA ramps on the remaining corners. The crosswalk and stop bar striping is also in poor condition and should be refreshed.
- 3. Enota Avenue at Riverside Drive** – This all-way stop intersection currently operates well in the a.m., but at LOS F in the p.m. In the future, these delays will increase. It is recommended that a signal warrant analysis be performed for this intersection according to the standards proscribed in the Federal Highway Administration's *Manual On Uniform Traffic Control Devices* (MUTCD). Should signalization be justified, consideration could be given to providing approach turn lanes, as appropriate. A roundabout is an alternative method of control that merits consideration at this intersection.
- 4. GA 11 Bus at South Enota Avenue** – The existing northbound right turn volumes (114 a.m., 48 p.m.) and, even more significantly, the southbound right turn volumes (171 a.m., 250 p.m.) on GA 11 Bus justify the addition of exclusive right turn lanes.
- 5. GA 60 (Thompson Bridge Road / Green Street) at GA 11 Business** – This intersection generally operates acceptably with the existing lanes and control, and will continue to operate acceptably in the future.

The southbound right turn volume into Holly Drive operates beyond the signal control. The volume of these right turners are high enough to justify a southbound exclusive right turn lane on GA 60, according to Georgia DOT standards. No other mitigation is recommended at this intersection.

6. GA 60 (Green Street) at Ridgewood Avenue – This overall intersection operates acceptably, especially given the tight urban design and lack of exclusive turn lanes, but delays are high at times on the eastbound approach of Ridgewood. Ideally, from a traffic operations perspective, this intersection would be widened to include a northbound exclusive left turn lane on GA 60, a second eastbound lane on Ridgewood, and a southbound right turn lane on GA 60. These changes would reduce overall delays and eliminate the LOS F on the Ridgewood approach. However, it is acknowledged that this widening would alter the historic character of this intersection. Therefore, these improvements are suggested for consideration in the context of the overall character and goals of the community.

7. Thompson Bridge Road at Site Access – The site plan calls for the elimination of two of the three existing site accesses on Thompson Bridge Road. This will reduce the number of conflict points. It is likely that most vehicles that wish to travel either northbound on Thompson Bridge or to the east on Enota will exit the site at the Enota driveway and capitalize on the protection of the adjacent signal. Because of the difficulty in making this left turn from the site driveway, and the low numbers of vehicles expected to do so, consideration should be given to prohibiting exiting left turns from this driveway. The Georgia DOT access standards were reviewed for this intersection (Thompson Bridge is Georgia State Route 60) and indicate that the access justifies a southbound exclusive right turn lane. The spacing of this driveway from Enota Avenue does not meet the minimum Georgia DOT driveway spacing standards. It is recommended that these design factors be discussed with Georgia DOT and the City to determine an acceptable solution. The Thompson Bridge Road site access should be constructed with one entering and one exiting lane and the exiting approach should be controlled by stop sign and accompanying stop bar. The project site engineer is referred to the Georgia DOT Driveway Manual for other driveway design standards including driveway width, island design, and curb return radii.

8. Enota Avenue at Site Access – The site access on Enota is projected to operate with low volumes and very low delays. Most of the site entering trips will enter at the Thompson Bridge access, so that the entering left turns at the Enota driveway are projected at only 6 vehicles in the a.m. peak hour and 5 in the p.m. peak hour. This should minimally impede westbound through flow on Enota. The eastbound right turns entering the site are also minimal, at 5 for the a.m. peak hour and 8 for the p.m. peak hour. This also should minimally impede flows on Enota. The Enota Avenue site access should be constructed with one entering and one exiting lane and the exiting approach should be controlled by stop sign and accompanying stop bar. The existing grade differential between the site and Enota Avenue at the location of the site access should be corrected when the site is developed.

Appendix A

Traffic Count Data and Volume Worksheets

Thompson Bridge Road at Enota Avenue Convenience Store Traffic Impact Study

City of Gainesville, Georgia

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Intersection: 1. Thompson Bridge Road at Walmart/Taco Bell

Weekday A.M. Peak Hour	Northbound Thompson Bridge Road				Southbound Thompson Bridge Road				Eastbound Walmart Access				Westbound Taco Bell Access			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Thursday, March 30, 2017)	52	881	1	934	6	1877	80	1963	38	0	64	102	3	1	4	8
Total Annual Background Growth	6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%	
No-Build Volumes	55	935	1	991	6	1991	85	2083	40	0	68	108	3	1	4	8
Proposed Convenience Store New Trips	0	4	0	4	0	4	0	4	0	0	0	0	0	0	0	0
Build Volumes	55	939	1	995	6	1995	85	2087	40	0	68	108	3	1	4	8

Weekday P.M. Peak Hour	Northbound Thompson Bridge Road				Southbound Thompson Bridge Road				Eastbound Walmart Access				Westbound Taco Bell Access			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Thursday, March 30, 2017)	57	1973	20	2050	13	1101	54	1168	71	3	37	111	14	2	25	41
Total Annual Background Growth	6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%	
No-Build Volumes	60	2093	21	2175	14	1168	57	1239	75	3	39	118	15	2	27	44
Proposed Convenience Store New Trips	0	4	0	4	0	4	0	4	0	0	0	0	0	0	0	0
Build Volumes	60	2097	21	2179	14	1172	57	1243	75	3	39	118	15	2	27	44

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Intersection: 2. Thompson Bridge Road at Enota Avenue

Weekday A.M. Peak Hour	Northbound Thompson Bridge Road				Southbound Thompson Bridge Road				Eastbound Enota Avenue				Westbound Enota Avenue			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Thursday, February 16, 2017)	17	734	26	777	313	1604	32	1949	53	51	29	133	45	27	167	239
Total Annual Background Growth	6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%	
No-Build Volumes	18	779	28	824	332	1702	34	2068	56	54	31	141	48	29	177	254
Proposed Convenience Store New Trips	0	0	0	0	0	4	0	4	4	8	0	12	5	4	0	9
Proposed Convenience Store Pass-by Trips	0	0	0	0	0	0	0	0	12	0	0	12	0	0	0	0
Total Convenience Store Trips	0	0	0	0	0	4	0	4	16	8	0	24	5	4	0	9
Build Volumes	18	779	28	824	332	1706	34	2072	72	62	31	165	53	33	177	263

Weekday P.M. Peak Hour	Northbound Thompson Bridge Road				Southbound Thompson Bridge Road				Eastbound Enota Avenue				Westbound Enota Avenue			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Thursday, February 16, 2017)	17	1573	36	1626	215	942	26	1183	161	82	13	256	55	51	359	465
Total Annual Background Growth	6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%	
No-Build Volumes	18	1669	38	1725	228	999	28	1255	171	87	14	272	58	54	381	493
Proposed Convenience Store New Trips	0	0	0	0	0	4	0	4	4	9	0	13	5	4	0	9
Proposed Convenience Store Pass-by Trips	0	0	0	0	0	0	0	0	27	0	0	27	0	0	0	0
Total Convenience Store Trips	0	0	0	0	0	4	0	4	31	9	0	40	5	4	0	9
Build Volumes	18	1669	38	1725	228	1003	28	1259	202	96	14	312	63	58	381	502

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Intersection: 3. Enota Avenue at Riverside Drive

Weekday A.M. Peak Hour	Northbound Riverside Drive				Southbound Riverside Drive				Eastbound Enota Avenue				Westbound Enota Avenue			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Thursday, March 30, 2017)	9	55	65	129	137	122	16	275	9	305	7	321	45	200	40	285
Total Annual Background Growth	6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%	
No-Build Volumes	10	58	69	137	145	129	17	292	10	324	7	341	48	212	42	302
Proposed Convenience Store New Trips	1	0	0	1	0	0	2	2	2	5	1	8	0	6	0	6
Build Volumes	11	58	69	138	145	129	19	294	12	329	8	349	48	218	42	308

Weekday P.M. Peak Hour	Northbound Riverside Drive				Southbound Riverside Drive				Eastbound Enota Avenue				Westbound Enota Avenue			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Thursday, March 30, 2017)	22	342	37	401	59	66	29	154	67	306	10	383	26	312	109	447
Total Annual Background Growth	6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%	
No-Build Volumes	23	363	39	425	63	70	31	163	71	325	11	406	28	331	116	474
Proposed Convenience Store New Trips	1	0	0	1	0	0	2	2	2	6	1	9	0	6	0	6
Build Volumes	24	363	39	426	63	70	33	165	73	331	12	415	28	337	116	480

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Intersection: 4. GA 11 Business at South Enota Avenue

Weekday A.M. Peak Hour	Northbound GA 11 Business				Southbound GA 11 Business				Eastbound South Enota Avenue				Westbound South Enota Avenue			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Thursday, March 30, 2017)	12	448	114	574	245	852	171	1268	272	254	34	560	81	127	86	294
Total Annual Background Growth	6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%	
No-Build Volumes	13	475	121	609	260	904	181	1345	289	269	36	594	86	135	91	312
Proposed Convenience Store New Trips	1	0	0	1	0	0	2	2	2	2	1	5	0	3	0	3
Build Volumes	14	475	121	610	260	904	183	1347	291	271	37	599	86	138	91	315

Weekday P.M. Peak Hour	Northbound GA 11 Business				Southbound GA 11 Business				Eastbound South Enota Avenue				Westbound South Enota Avenue			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Thursday, March 30, 2017)	17	584	48	649	106	579	250	935	231	142	28	401	237	341	354	932
Total Annual Background Growth	6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%	
No-Build Volumes	18	620	51	689	112	614	265	992	245	151	30	425	251	362	376	989
Proposed Convenience Store New Trips	1	0	0	1	0	0	2	2	2	2	1	5	0	3	0	3
Build Volumes	19	620	51	690	112	614	267	994	247	153	31	430	251	365	376	992

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Intersection: 5. GA 60 at GA 11 Business

Weekday A.M. Peak Hour	Northbound GA 60				Southbound GA 60				Eastbound Holly Drive				Westbound GA 11 Business			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Wednesday, February 22, 2017)	19	683	296	998	0	1391	132	1523	0	0	53	53	461	189	0	650
Total Annual Background Growth	6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%	
No-Build Volumes	20	725	314	1059	0	1476	140	1616	0	0	56	56	489	201	0	690
Proposed Convenience Store New Trips	0	9	0	9	0	9	0	9	0	0	0	0	0	0	0	0
Build Volumes	20	734	314	1068	0	1485	140	1625	0	0	56	56	489	201	0	690

Weekday P.M. Peak Hour	Northbound GA 60				Southbound GA 60				Eastbound Holly Drive				Westbound GA 11 Business			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Wednesday, February 22, 2017)	46	1412	653	2111	0	812	125	937	0	0	35	35	387	218	0	605
Total Annual Background Growth	6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%	
No-Build Volumes	49	1498	693	2240	0	862	133	994	0	0	37	37	411	231	0	642
Proposed Convenience Store New Trips	0	10	0	10	0	10	0	10	0	0	0	0	0	0	0	0
Build Volumes	49	1508	693	2250	0	872	133	1004	0	0	37	37	411	231	0	642

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Intersection: 6. GA 60 at Ridgewood Avenue

Weekday A.M. Peak Hour	Northbound GA 60				Southbound GA 60				Eastbound Ridgewood Avenue				Westbound Driveway			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Wednesday, February 22, 2017)	14	878	11	903	4	1798	63	1865	131	5	22	158	6	6	2	14
Total Annual Background Growth	6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%	
No-Build Volumes	15	932	12	958	4	1908	67	1979	139	5	23	168	6	6	2	15
Proposed Convenience Store New Trips	0	7	0	7	0	7	2	9	2	0	0	2	0	0	0	0
Build Volumes	15	939	12	965	4	1915	69	1988	141	5	23	170	6	6	2	15

Weekday P.M. Peak Hour	Northbound GA 60				Southbound GA 60				Eastbound Ridgewood Avenue				Westbound Driveway			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Wednesday, February 22, 2017)	23	1849	10	1882	0	1097	73	1170	252	8	20	280	11	14	5	30
Total Annual Background Growth	6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%	
No-Build Volumes	24	1962	11	1997	0	1164	77	1241	267	8	21	297	12	15	5	32
Proposed Convenience Store New Trips	0	7	0	7	0	7	3	10	3	0	0	3	0	0	0	0
Build Volumes	24	1969	11	2004	0	1171	80	1251	270	8	21	300	12	15	5	32

MARC R. ACAMPORA, PE, LLC

Thompson Bridge Road at Enota Avenue Convenience Store Traffic Impact Study
City of Gainesville, Georgia

April 2017

Intersection: 7. Thompson Bridge Road at Site Access

Weekday A.M. Peak Hour	Northbound Thompson Bridge Road			Southbound Thompson Bridge Road			Eastbound Site Access			
	L	T	Tot	T	R	Tot	L	R	Tot	
Counted Volumes (Thursday, February 16, 2017)		777	777			1678				
Total Annual Background Growth		6.1%				6.1%				
No-Build Volumes		824	824			1780				
Proposed Convenience Store New Trips	9	0	9	0	9	9	0	9	9	
Proposed Convenience Store Pass-by Trips	12	-12	0	-26	26	0	0	26	26	
Total Convenience Store Trips	21	-12	9	-26	35	9	0	35	35	
Build Volumes	21	812	833	1754	35	1789	0	35	35	

Weekday P.M. Peak Hour	Northbound Thompson Bridge Road			Southbound Thompson Bridge Road			Eastbound Site Access			
	L	T	Tot	T	R	Tot	L	R	Tot	
Counted Volumes (Thursday, February 16, 2017)		1626	1626			1010				
Total Annual Background Growth		6.1%				6.1%				
No-Build Volumes		1725	1725			1072				
Proposed Convenience Store New Trips	10	0	10	0	9	9	0	10	10	
Proposed Convenience Store Pass-by Trips	27	-27	0	-17	17	0	0	18	18	
Total Convenience Store Trips	37	-27	10	-17	26	9	0	28	28	
Build Volumes	37	1698	1735	1055	26	1081	0	28	28	

MARC R. ACAMPORA, PE, LLC

Thompson Bridge Road at Enota Avenue Convenience Store Traffic Impact Study
City of Gainesville, Georgia

April 2017

Intersection: 8. Enota Avenue at Site Access

Weekday A.M. Peak Hour	Northbound Site Access				Eastbound Enota Avenue			Westbound Enota Avenue		
	L	R	Tot		T	R	Tot	L	T	Tot
Counted Volumes (Thursday, February 16, 2017)					133		133		76	76
Total Annual Background Growth					6.1%				6.1%	
No-Build Volumes					141		141		81	81
Proposed Convenience Store New Trips	3	12	15		0	3	3	4	0	4
Proposed Convenience Store Pass-by Trips	2	14	16		-2	2	0	2	-2	0
Total Convenience Store Trips	5	26	31		-2	5	3	6	-2	4
Build Volumes	5	26	31		139	5	144	6	79	85

Weekday P.M. Peak Hour	Northbound Site Access				Eastbound Enota Avenue			Westbound Enota Avenue		
	L	R	Tot		T	R	Tot	L	T	Tot
Counted Volumes (Thursday, February 16, 2017)					256		256		94	94
Total Annual Background Growth					6.1%				6.1%	
No-Build Volumes					272		272		100	100
Proposed Convenience Store New Trips	3	13	16		0	3	3	4	0	4
Proposed Convenience Store Pass-by Trips	1	32	33		-5	5	0	1	-1	0
Total Convenience Store Trips	4	45	49		-5	8	3	5	-1	4
Build Volumes	4	45	49		267	8	275	5	99	104

MARC R. ACAMPORA, PE, LLC

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TMC Data
Thompson Bridge Rd @ Walmart Drwy/
Taco Bell Drwy, Gainesville, GA
7-9am I 4-6pm

File Name : 40240001
Site Code : 40240001
Start Date : 3/30/2017
Page No : 1

Groups Printed- Cars, Buses and Trucks

	Thompson Bridge Rd Northbound					Thompson Bridge Rd Southbound					Walmart Drwy Eastbound					Taco Bell Drwy Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	4	150	0	0	154	0	328	12	0	340	4	0	13	0	17	0	0	0	0	0	511
07:15 AM	9	196	0	0	205	0	435	18	0	453	7	0	16	0	23	0	0	0	0	0	681
07:30 AM	9	212	0	0	221	1	493	20	0	514	6	0	14	0	20	0	0	0	0	0	755
07:45 AM	17	232	0	0	249	0	524	21	0	545	11	0	17	0	28	2	1	0	0	3	825
Total	39	790	0	0	829	1	1780	71	0	1852	28	0	60	0	88	2	1	0	0	3	2772
08:00 AM	14	233	1	0	248	2	429	22	0	453	10	0	20	0	30	0	0	2	0	2	733
08:15 AM	12	204	0	0	216	3	431	17	0	451	11	0	13	0	24	1	0	2	0	3	694
08:30 AM	8	216	1	0	225	1	397	14	0	412	9	0	13	0	22	0	1	0	0	1	660
08:45 AM	12	209	0	0	221	0	358	13	0	371	8	0	21	0	29	0	0	3	0	3	624
Total	46	862	2	0	910	6	1615	66	0	1687	38	0	67	0	105	1	1	7	0	9	2711
*** BREAK ***																					
04:00 PM	17	355	2	0	374	2	252	23	0	277	16	0	17	0	33	1	0	2	0	3	687
04:15 PM	17	400	8	0	425	3	264	16	0	283	19	1	16	0	36	6	0	5	0	11	755
04:30 PM	16	438	10	0	464	4	253	16	0	273	11	2	14	0	27	6	2	6	0	14	778
04:45 PM	19	465	5	0	489	3	251	21	0	275	18	2	16	0	36	3	1	5	0	9	809
Total	69	1658	25	0	1752	12	1020	76	0	1108	64	5	63	0	132	16	3	18	0	37	3029
05:00 PM	17	524	9	0	550	3	278	16	0	297	22	0	12	0	34	7	1	12	0	20	901
05:15 PM	10	508	4	0	522	5	290	10	0	305	26	0	8	0	34	4	0	6	0	10	871
05:30 PM	11	476	2	0	489	2	282	7	0	291	5	1	1	0	7	0	0	2	0	2	789
05:45 PM	1	448	2	0	451	0	301	3	0	304	2	0	6	0	8	0	0	2	0	2	765
Total	39	1956	17	0	2012	10	1151	36	0	1197	55	1	27	0	83	11	1	22	0	34	3326
Grand Total	193	5266	44	0	5503	29	5566	249	0	5844	185	6	217	0	408	30	6	47	0	83	11838
Apprch %	3.5	95.7	0.8	0		0.5	95.2	4.3	0		45.3	1.5	53.2	0		36.1	7.2	56.6	0		
Total %	1.6	44.5	0.4	0	46.5	0.2	47	2.1	0	49.4	1.6	0.1	1.8	0	3.4	0.3	0.1	0.4	0	0.7	

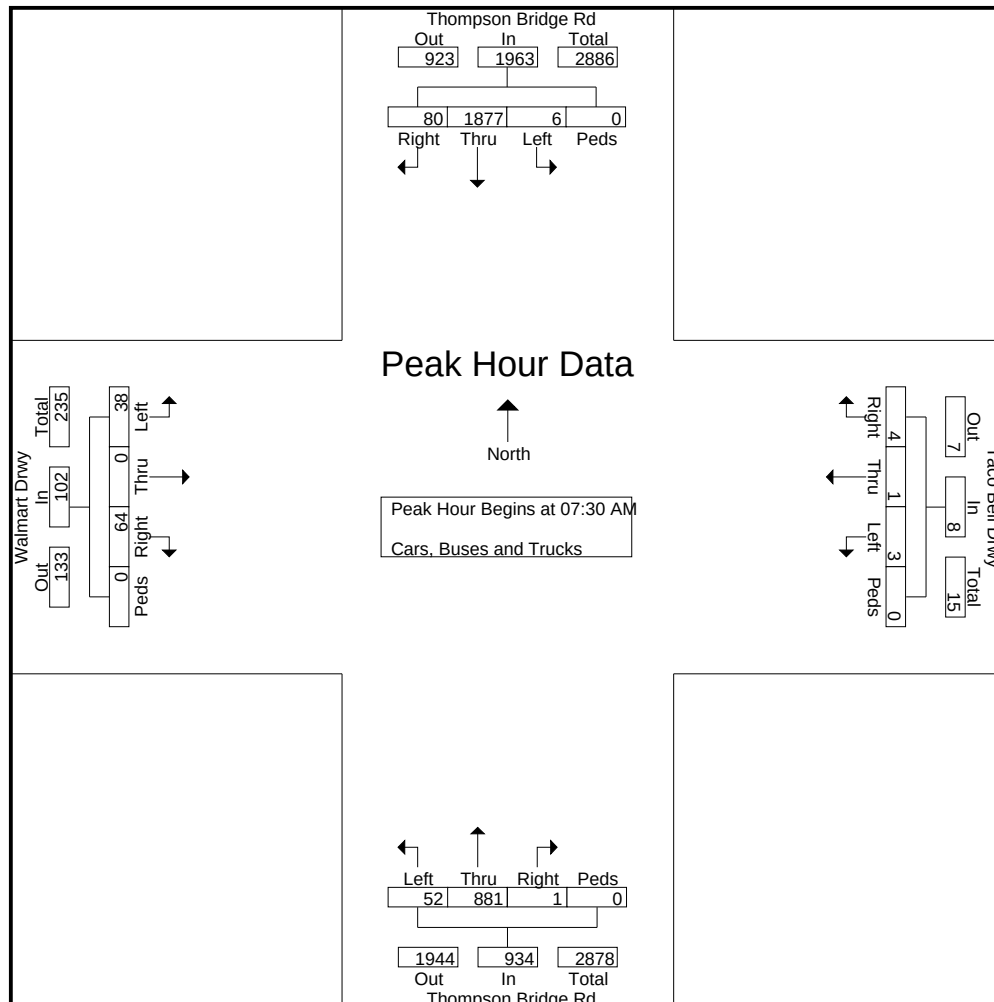
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TMC Data
Thompson Bridge Rd @ Walmart Drwy/
Taco Bell Drwy, Gainesville, GA
7-9am I 4-6pm

File Name : 40240001
Site Code : 40240001
Start Date : 3/30/2017
Page No : 2

	Thompson Bridge Rd Northbound					Thompson Bridge Rd Southbound					Walmart Drwy Eastbound					Taco Bell Drwy Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	9	212	0	0	221	1	493	20	0	514	6	0	14	0	20	0	0	0	0	0	755
07:45 AM	17	232	0	0	249	0	524	21	0	545	11	0	17	0	28	2	1	0	0	3	825
08:00 AM	14	233	1	0	248	2	429	22	0	453	10	0	20	0	30	0	0	2	0	2	733
08:15 AM	12	204	0	0	216	3	431	17	0	451	11	0	13	0	24	1	0	2	0	3	694
Total Volume	52	881	1	0	934	6	1877	80	0	1963	38	0	64	0	102	3	1	4	0	8	3007
% App. Total	5.6	94.3	0.1	0		0.3	95.6	4.1	0		37.3	0	62.7	0		37.5	12.5	50	0		
PHF	.765	.945	.250	.000	.938	.500	.896	.909	.000	.900	.864	.000	.800	.000	.850	.375	.250	.500	.000	.667	.911



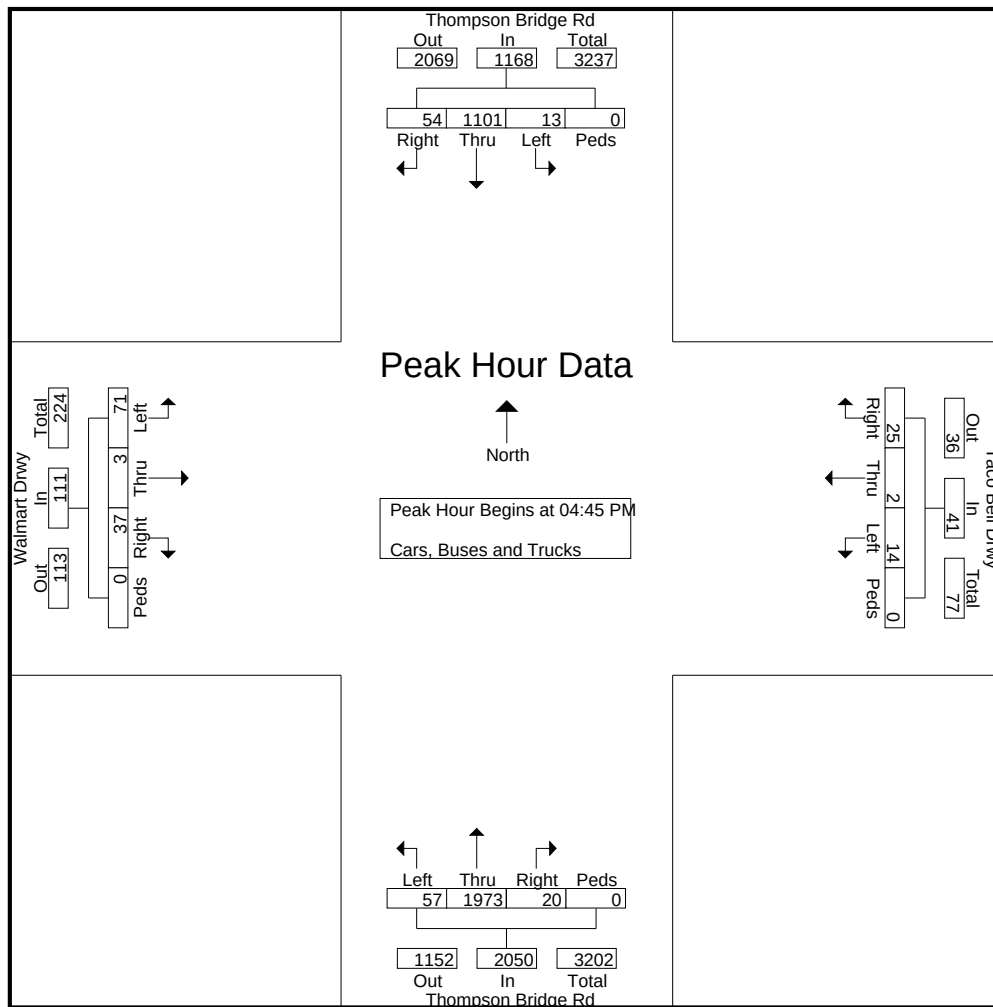
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TMC Data
Thompson Bridge Rd @ Walmart Drwy/
Taco Bell Drwy, Gainesville, GA
7-9am I 4-6pm

File Name : 40240001
Site Code : 40240001
Start Date : 3/30/2017
Page No : 3

	Thompson Bridge Rd Northbound					Thompson Bridge Rd Southbound					Walmart Drwy Eastbound					Taco Bell Drwy Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	19	465	5	0	489	21	0	275			18	2	16	0	36	3	1	5	0	9	809
05:00 PM	17	524	9	0	550	3	278	16	0	297	22	0	12	0	34	7	1	12	0	20	901
05:15 PM	10	508	4	0	522	5	290	10	0	305	26	0	8	0	34	4	0	6	0	10	871
05:30 PM	11	476	2	0	489	2	282	7	0	291	5	1	1	0	7	0	0	2	0	2	789
Total Volume	57	1973	20	0	2050	13	1101	54	0	1168	71	3	37	0	111	14	2	25	0	41	3370
% App. Total	2.8	96.2	1	0		1.1	94.3	4.6	0		64	2.7	33.3	0		34.1	4.9	61	0		
PHF	.750	.941	.556	.000	.932	.650	.949	.643	.000	.957	.683	.375	.578	.000	.771	.500	.500	.521	.000	.513	.935



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TMC Data
Thompson Bridge Rd @ Enota Ave
Gainesville, GA
7-9am I 4-6pm

File Name : 39980001
Site Code : 39980001
Start Date : 2/16/2017
Page No : 1

Groups Printed- Cars, Buses and Trucks

	Thompson Bridge Rd Northbound					Thompson Bridge Rd Southbound					Enota Ave Eastbound					Enota Ave Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	2	125	4	0	131	51	281	2	0	334	6	7	6	0	19	4	0	28	0	32	516
07:15 AM	0	163	7	0	170	71	372	4	0	447	8	17	4	0	29	7	6	33	0	46	692
07:30 AM	6	177	7	0	190	83	414	9	0	506	13	12	6	0	31	18	7	34	0	59	786
07:45 AM	3	193	3	0	199	78	455	8	0	541	16	10	9	0	35	5	3	47	0	55	830
Total	11	658	21	0	690	283	1522	23	0	1828	43	46	25	0	114	34	16	142	0	192	2824
08:00 AM	6	194	7	0	207	72	367	9	0	448	12	17	6	0	35	14	6	38	0	58	748
08:15 AM	2	170	9	0	181	80	368	6	0	454	12	12	8	0	32	8	11	48	0	67	734
08:30 AM	6	189	6	0	201	58	339	3	0	400	12	7	8	0	27	14	6	37	0	57	685
08:45 AM	4	174	3	0	181	56	299	5	0	360	12	10	1	0	23	10	6	29	0	45	609
Total	18	727	25	0	770	266	1373	23	0	1662	48	46	23	0	117	46	29	152	0	227	2776
*** BREAK ***																					
04:00 PM	4	284	8	0	296	58	219	6	0	283	42	18	7	0	67	10	19	75	0	104	750
04:15 PM	5	320	18	0	343	47	241	4	0	292	33	17	5	0	55	14	9	80	0	103	793
04:30 PM	3	350	9	0	362	52	220	8	0	280	17	21	1	0	39	8	10	84	0	102	783
04:45 PM	2	372	9	0	383	45	218	5	0	268	34	24	2	0	60	14	17	92	0	123	834
Total	14	1326	44	0	1384	202	898	23	0	1123	126	80	15	0	221	46	55	331	0	432	3160
05:00 PM	6	419	14	0	439	47	227	9	0	283	38	13	4	0	55	14	10	66	0	90	867
05:15 PM	3	401	3	0	407	65	252	4	0	321	50	23	3	0	76	13	14	102	0	129	933
05:30 PM	6	381	10	0	397	58	245	8	0	311	39	22	4	0	65	14	10	99	0	123	896
05:45 PM	5	339	15	0	359	47	262	7	0	316	32	19	3	0	54	11	13	78	0	102	831
Total	20	1540	42	0	1602	217	986	28	0	1231	159	77	14	0	250	52	47	345	0	444	3527
Grand Total	63	4251	132	0	4446	968	4779	97	0	5844	376	249	77	0	702	178	147	970	0	1295	12287
Apprch %	1.4	95.6	3	0		16.6	81.8	1.7	0		53.6	35.5	11	0		13.7	11.4	74.9	0		
Total %	0.5	34.6	1.1	0	36.2	7.9	38.9	0.8	0	47.6	3.1	2	0.6	0	5.7	1.4	1.2	7.9	0	10.5	

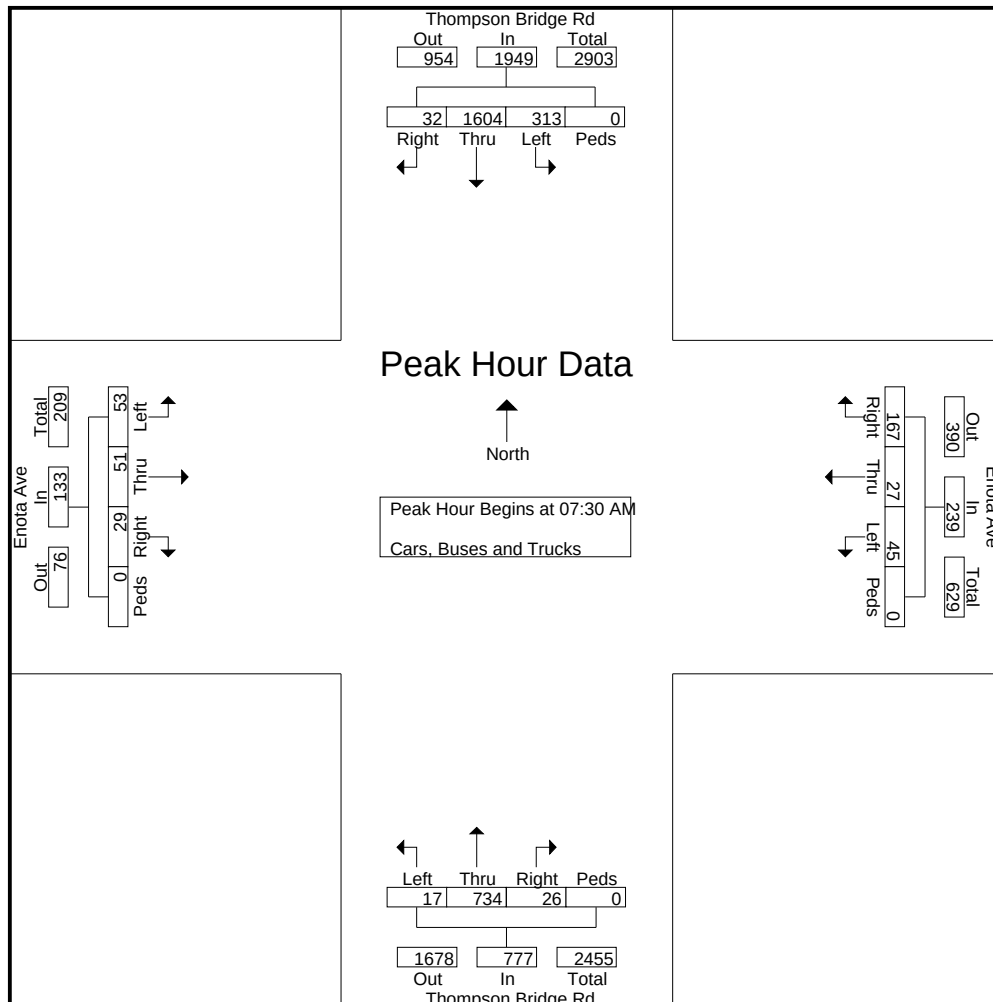
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TMC Data
Thompson Bridge Rd @ Enota Ave
Gainesville, GA
7-9am I 4-6pm

File Name : 39980001
Site Code : 39980001
Start Date : 2/16/2017
Page No : 2

	Thompson Bridge Rd Northbound					Thompson Bridge Rd Southbound					Enota Ave Eastbound					Enota Ave Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	6	177	7	0	190	83	414	9	0	506	13	12	6	0	31	18	7	34	0	59	786
07:45 AM	3	193	3	0	199	78	455	8	0	541	16	10	9	0	35	5	3	47	0	55	830
08:00 AM	6	194	7	0	207	72	367	9	0	448	12	17	6	0	35	14	6	38	0	58	748
08:15 AM	2	170	9	0	181	80	368	6	0	454	12	12	8	0	32	8	11	48	0	67	734
Total Volume	17	734	26	0	777	313	1604	32	0	1949	53	51	29	0	133	45	27	167	0	239	3098
% App. Total	2.2	94.5	3.3	0		16.1	82.3	1.6	0		39.8	38.3	21.8	0		18.8	11.3	69.9	0		
PHF	.708	.946	.722	.000	.938	.943	.881	.889	.000	.901	.828	.750	.806	.000	.950	.625	.614	.870	.000	.892	.933



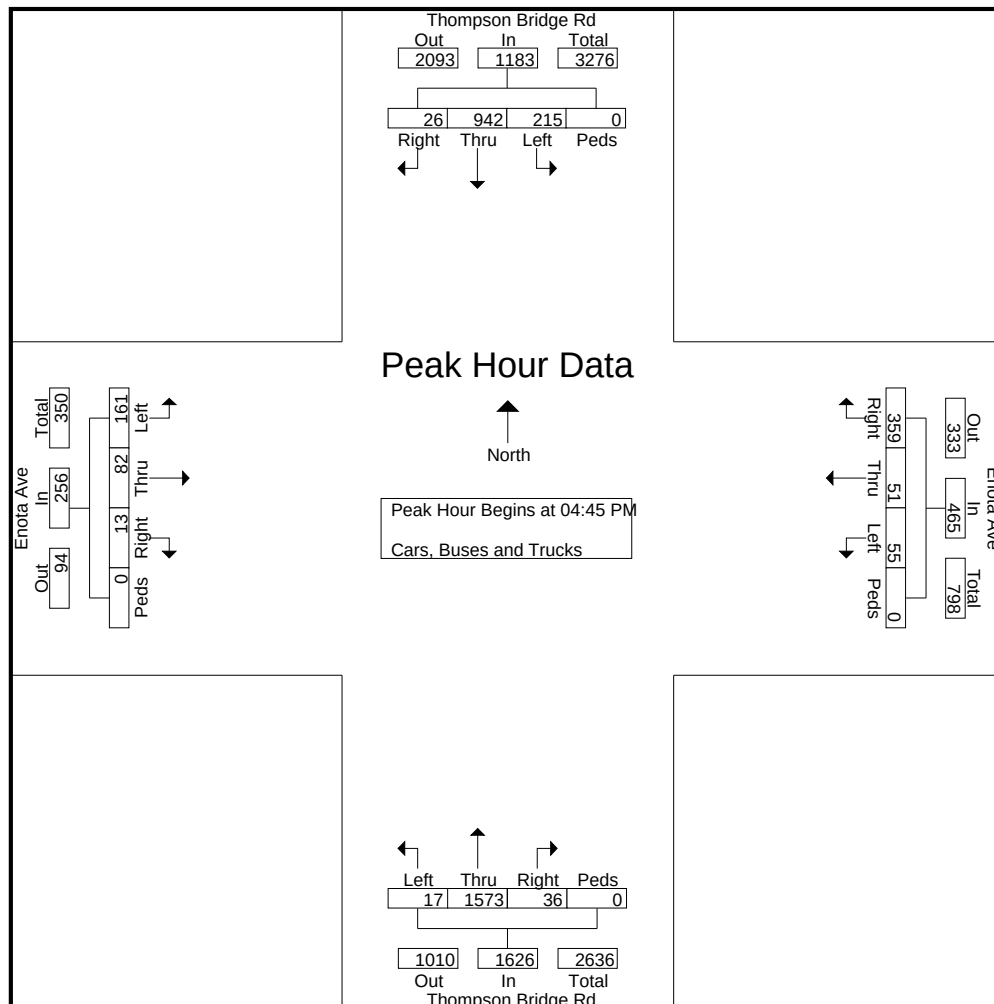
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TMC Data
Thompson Bridge Rd @ Enota Ave
Gainesville, GA
7-9am I 4-6pm

File Name : 39980001
Site Code : 39980001
Start Date : 2/16/2017
Page No : 3

	Thompson Bridge Rd Northbound					Thompson Bridge Rd Southbound					Enota Ave Eastbound					Enota Ave Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	2	372	9	0	383	45	218	5	0	268	34	24	2	0	60	14	17	92	0	123	834
05:00 PM	6	419	14	0	439	47	227	9	0	283	38	13	4	0	55	14	10	66	0	90	867
05:15 PM	3	401	3	0	407	65	252	4	0	321	50	23	3	0	76	13	14	102	0	129	933
05:30 PM	6	381	10	0	397	58	245	8	0	311	39	22	4	0	65	14	10	99	0	123	896
Total Volume	17	1573	36	0	1626	215	942	26	0	1183	161	82	13	0	256	55	51	359	0	465	3530
% App. Total	1	96.7	2.2	0		18.2	79.6	2.2	0		62.9	32	5.1	0		11.8	11	77.2	0		
PHF	.708	.939	.643	.000	.926	.827	.935	.722	.000	.921	.805	.854	.813	.000	.842	.982	.750	.880	.000	.901	.946



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TMC Data
Enota Ave @ Riverside Dr
Gainesville, GA
7-9am I 4-6pm

File Name : 40240002
Site Code : 40240002
Start Date : 3/30/2017
Page No : 1

Groups Printed- Cars, Buses and Trucks

	Riverside Dr Northbound					Riverside Dr Southbound					Enota Ave Eastbound					Enota Ave Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	2	9	14	0	25	18	11	0	0	29	4	62	0	0	66	9	30	6	0	45	165
07:15 AM	3	16	35	0	54	33	25	1	0	59	1	82	0	0	83	6	45	5	0	56	252
07:30 AM	1	21	19	0	41	37	32	7	0	76	1	67	5	0	73	23	62	10	0	95	285
07:45 AM	1	13	7	0	21	39	40	3	0	82	6	81	0	0	87	5	52	11	0	68	258
Total	7	59	75	0	141	127	108	11	0	246	12	292	5	0	309	43	189	32	0	264	960
08:00 AM	4	5	4	0	13	28	25	5	0	58	1	75	2	0	78	11	41	14	0	66	215
08:15 AM	5	9	3	0	17	14	13	3	0	30	2	72	3	0	77	7	55	13	0	75	199
08:30 AM	2	8	1	0	11	12	15	4	0	31	1	68	1	0	70	3	47	7	0	57	169
08:45 AM	1	12	4	0	17	19	14	5	0	38	2	57	3	0	62	9	52	7	0	68	185
Total	12	34	12	0	58	73	67	17	0	157	6	272	9	0	287	30	195	41	0	266	768
*** BREAK ***																					
04:00 PM	7	25	4	0	36	10	20	3	0	33	5	64	3	0	72	6	83	19	0	108	249
04:15 PM	8	42	9	0	59	16	20	4	0	40	14	70	0	0	84	5	80	15	0	100	283
04:30 PM	9	70	11	0	90	20	34	3	0	57	12	62	2	0	76	5	74	25	0	104	327
04:45 PM	8	91	7	0	106	11	16	7	0	34	18	66	2	0	86	3	84	25	0	112	338
Total	32	228	31	0	291	57	90	17	0	164	49	262	7	0	318	19	321	84	0	424	1197
05:00 PM	6	80	8	0	94	16	17	12	0	45	16	82	3	0	101	2	73	31	0	106	346
05:15 PM	5	89	10	0	104	14	13	1	0	28	16	87	2	0	105	3	75	30	0	108	345
05:30 PM	3	82	12	0	97	18	20	9	0	47	17	71	3	0	91	18	80	23	0	121	356
05:45 PM	8	50	16	0	74	10	23	1	0	34	8	69	4	0	81	4	84	20	0	108	297
Total	22	301	46	0	369	58	73	23	0	154	57	309	12	0	378	27	312	104	0	443	1344
Grand Total	73	622	164	0	859	315	338	68	0	721	124	1135	33	0	1292	119	1017	261	0	1397	4269
Apprch %	8.5	72.4	19.1	0		43.7	46.9	9.4	0		9.6	87.8	2.6	0		8.5	72.8	18.7	0		
Total %	1.7	14.6	3.8	0	20.1	7.4	7.9	1.6	0	16.9	2.9	26.6	0.8	0	30.3	2.8	23.8	6.1	0	32.7	

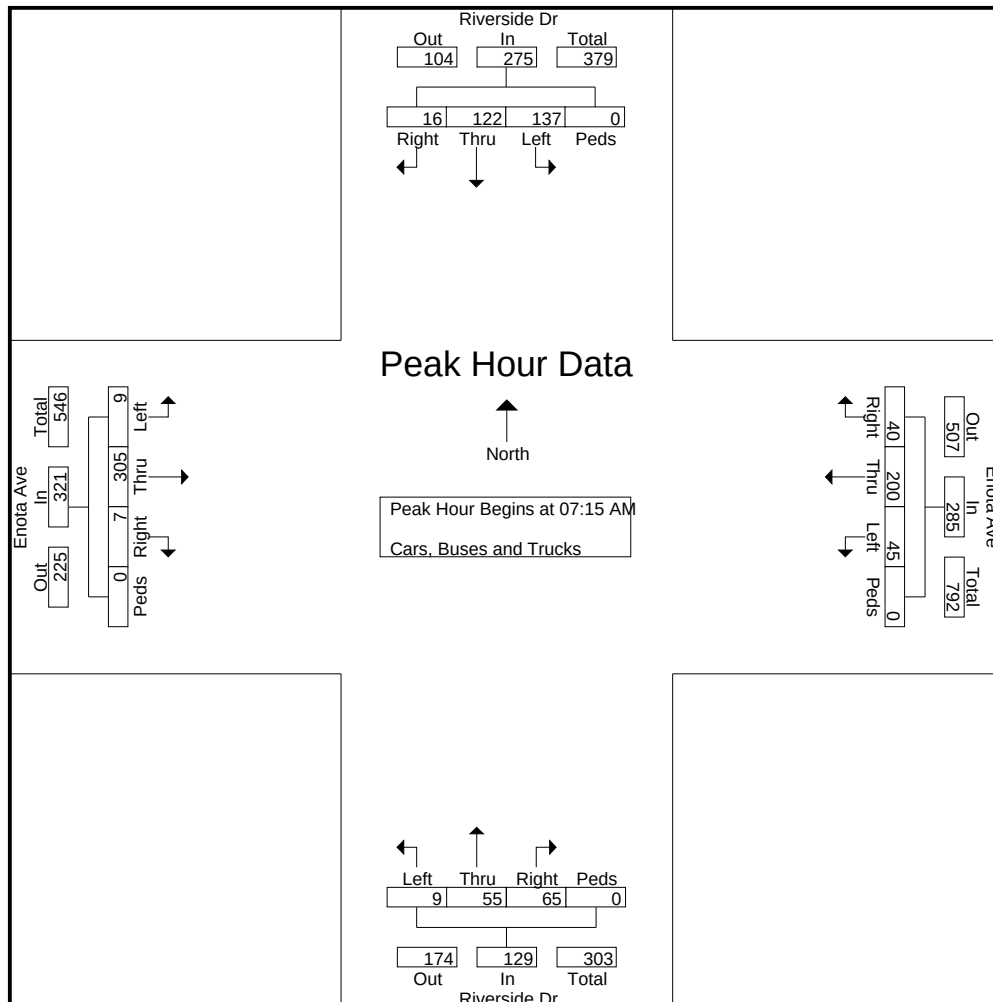
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TMC Data
Enota Ave @ Riverside Dr
Gainesville, GA
7-9am I 4-6pm

File Name : 40240002
Site Code : 40240002
Start Date : 3/30/2017
Page No : 2

	Riverside Dr Northbound					Riverside Dr Southbound					Enota Ave Eastbound					Enota Ave Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	3	16	35	0	54	33	25	1	0	59	1	82	0	0	83	6	45	5	0	56	252
07:30 AM	1	21	19	0	41	37	32	7	0	76	1	67	5	0	73	23	62	10	0	95	285
07:45 AM	1	13	7	0	21	39	40	3	0	82	6	81	0	0	87	5	52	11	0	68	258
08:00 AM	4	5	4	0	13	28	25	5	0	58	1	75	2	0	78	11	41	14	0	66	215
Total Volume	9	55	65	0	129	137	122	16	0	275	9	305	7	0	321	45	200	40	0	285	1010
% App. Total	7	42.6	50.4	0		49.8	44.4	5.8	0		2.8	95	2.2	0		15.8	70.2	14	0		
PHF	.563	.655	.464	.000	.597	.878	.763	.571	.000	.838	.375	.930	.350	.000	.922	.489	.806	.714	.000	.750	.886



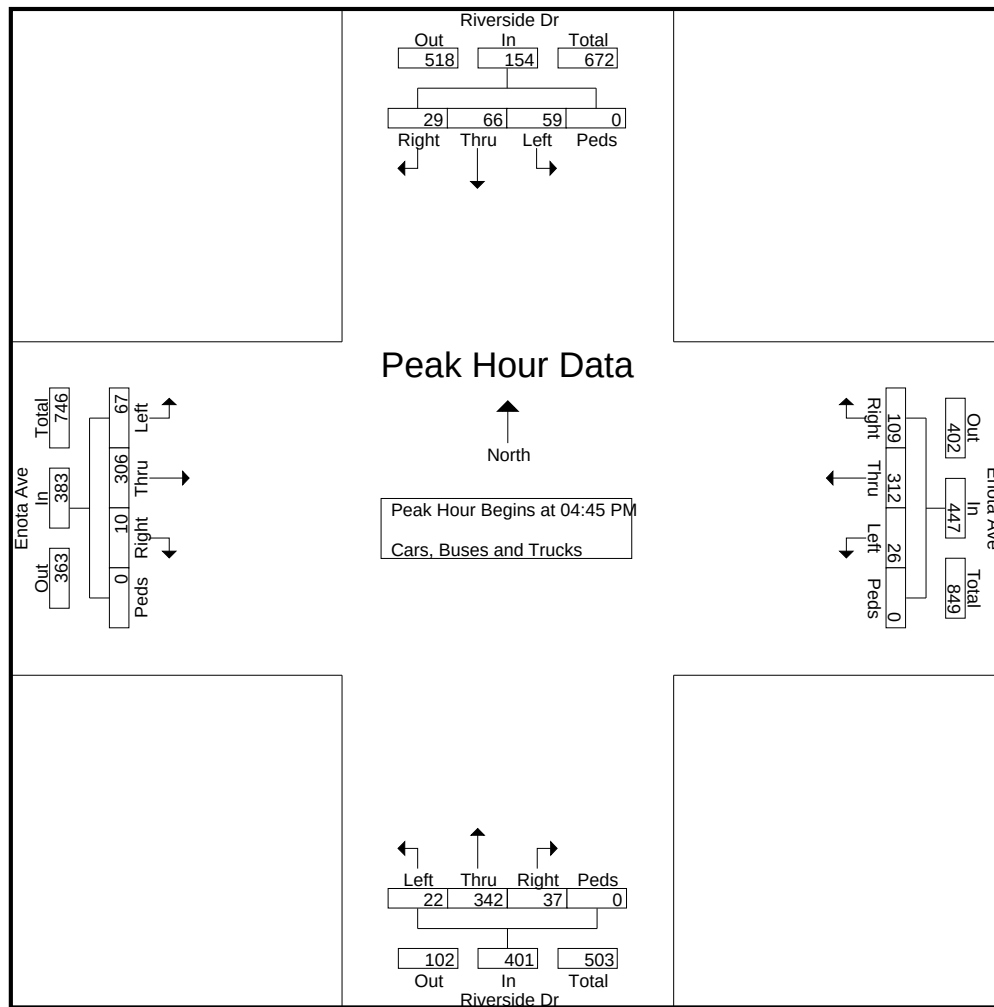
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TMC Data
Enota Ave @ Riverside Dr
Gainesville, GA
7-9am I 4-6pm

File Name : 40240002
Site Code : 40240002
Start Date : 3/30/2017
Page No : 3

	Riverside Dr Northbound					Riverside Dr Southbound					Enota Ave Eastbound					Enota Ave Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	8	91	7	0	106	11	16	7	0	34	18	66	2	0	86	3	84	25	0	112	338
05:00 PM	6	80	8	0	94	16	17	12	0	45	16	82	3	0	101	2	73	31	0	106	346
05:15 PM	5	89	10	0	104	14	13	1	0	28	16	87	2	0	105	3	75	30	0	108	345
05:30 PM	3	82	12	0	97	18	20	9	0	47	17	71	3	0	91	18	80	23	0	121	356
Total Volume	22	342	37	0	401	59	66	29	0	154	67	306	10	0	383	26	312	109	0	447	1385
% App. Total	5.5	85.3	9.2	0		38.3	42.9	18.8	0		17.5	79.9	2.6	0		5.8	69.8	24.4	0		
PHF	.688	.940	.771	.000	.946	.819	.825	.604	.000	.819	.931	.879	.833	.000	.912	.361	.929	.879	.000	.924	.973



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TMC Data
SR11 Bus @ S Enota Dr
Gainesville, GA
7-9am I 4-6pm

File Name : 40240003
Site Code : 40240003
Start Date : 3/30/2017
Page No : 1

Groups Printed- Cars, Buses and Trucks

	SR11 Bus Northbound					SR11 Bus Southbound					S Enota Dr Eastbound					S Enota Dr Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	0	52	16	0	68	39	122	36	0	197	35	40	10	0	85	10	20	7	0	37	387
07:15 AM	8	69	32	0	109	51	180	45	0	276	50	59	16	0	125	16	38	32	0	86	596
07:30 AM	6	90	30	0	126	67	181	49	0	297	80	70	26	0	176	17	44	23	0	84	683
07:45 AM	2	122	32	0	156	62	210	40	0	312	76	75	5	0	156	16	29	23	0	68	692
Total	16	333	110	0	459	219	693	170	0	1082	241	244	57	0	542	59	131	85	0	275	2358
08:00 AM	2	123	29	0	154	52	226	38	0	316	65	54	2	0	121	23	19	20	0	62	653
08:15 AM	2	113	23	0	138	64	235	44	0	343	51	55	1	0	107	25	35	20	0	80	668
08:30 AM	3	91	21	0	115	49	160	34	0	243	36	50	0	0	86	10	22	29	0	61	505
08:45 AM	2	75	21	0	98	42	125	23	0	190	33	41	1	0	75	16	29	11	0	56	419
Total	9	402	94	0	505	207	746	139	0	1092	185	200	4	0	389	74	105	80	0	259	2245
*** BREAK ***																					
04:00 PM	2	147	11	0	160	30	143	54	0	227	55	25	3	0	83	31	50	62	0	143	613
04:15 PM	1	168	15	0	184	24	199	42	0	265	66	28	5	0	99	39	59	75	0	173	721
04:30 PM	3	154	4	0	161	20	148	64	0	232	50	37	4	0	91	47	66	74	0	187	671
04:45 PM	1	142	21	0	164	28	168	68	0	264	51	37	6	0	94	33	70	89	0	192	714
Total	7	611	51	0	669	102	658	228	0	988	222	127	18	0	367	150	245	300	0	695	2719
05:00 PM	8	146	11	0	165	25	126	81	0	232	51	25	4	0	80	71	84	109	0	264	741
05:15 PM	5	132	5	0	142	26	133	50	0	209	58	33	10	0	101	84	92	88	0	264	716
05:30 PM	3	164	11	0	178	27	152	51	0	230	71	47	8	0	126	49	95	68	0	212	746
05:45 PM	15	141	10	0	166	29	162	68	0	259	56	24	8	0	88	27	50	70	0	147	660
Total	31	583	37	0	651	107	573	250	0	930	236	129	30	0	395	231	321	335	0	887	2863
Grand Total	63	1929	292	0	2284	635	2670	787	0	4092	884	700	109	0	1693	514	802	800	0	2116	10185
Apprch %	2.8	84.5	12.8	0		15.5	65.2	19.2	0		52.2	41.3	6.4	0		24.3	37.9	37.8	0		
Total %	0.6	18.9	2.9	0	22.4	6.2	26.2	7.7	0	40.2	8.7	6.9	1.1	0	16.6	5	7.9	7.9	0	20.8	

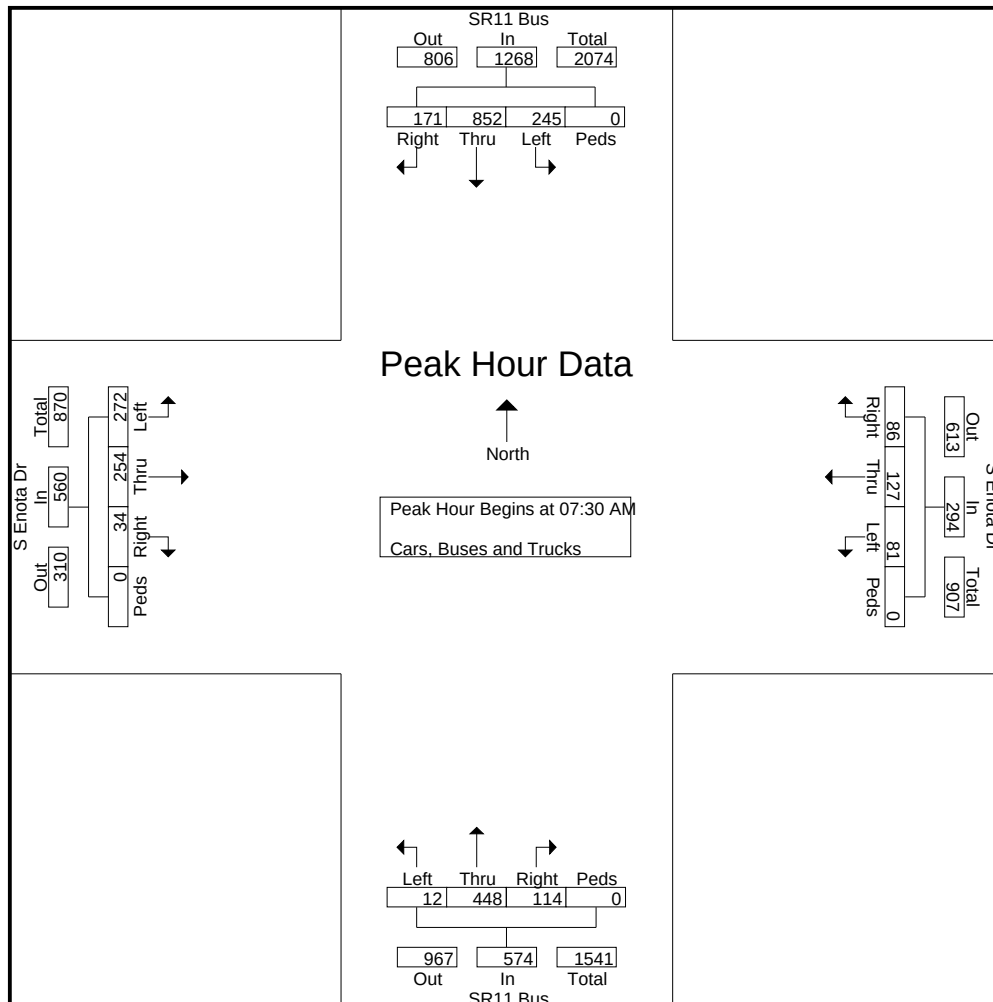
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TMC Data
SR11 Bus @ S Enota Dr
Gainesville, GA
7-9am I 4-6pm

File Name : 40240003
Site Code : 40240003
Start Date : 3/30/2017
Page No : 2

	SR11 Bus Northbound					SR11 Bus Southbound					S Enota Dr Eastbound					S Enota Dr Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	6	90	30	0	126	67	181	49	0	297	80	70	26	0	176	17	44	23	0	84	683
07:45 AM	2	122	32	0	156	62	210	40	0	312	76	75	5	0	156	16	29	23	0	68	692
08:00 AM	2	123	29	0	154	52	226	38	0	316	65	54	2	0	121	23	19	20	0	62	653
08:15 AM	2	113	23	0	138	64	235	44	0	343	51	55	1	0	107	25	35	20	0	80	668
Total Volume	12	448	114	0	574	245	852	171	0	1268	272	254	34	0	560	81	127	86	0	294	2696
% App. Total	2.1	78	19.9	0		19.3	67.2	13.5	0		48.6	45.4	6.1	0		27.6	43.2	29.3	0		
PHF	.500	.911	.891	.000	.920	.914	.906	.872	.000	.924	.850	.847	.327	.000	.795	.810	.722	.935	.000	.875	.974



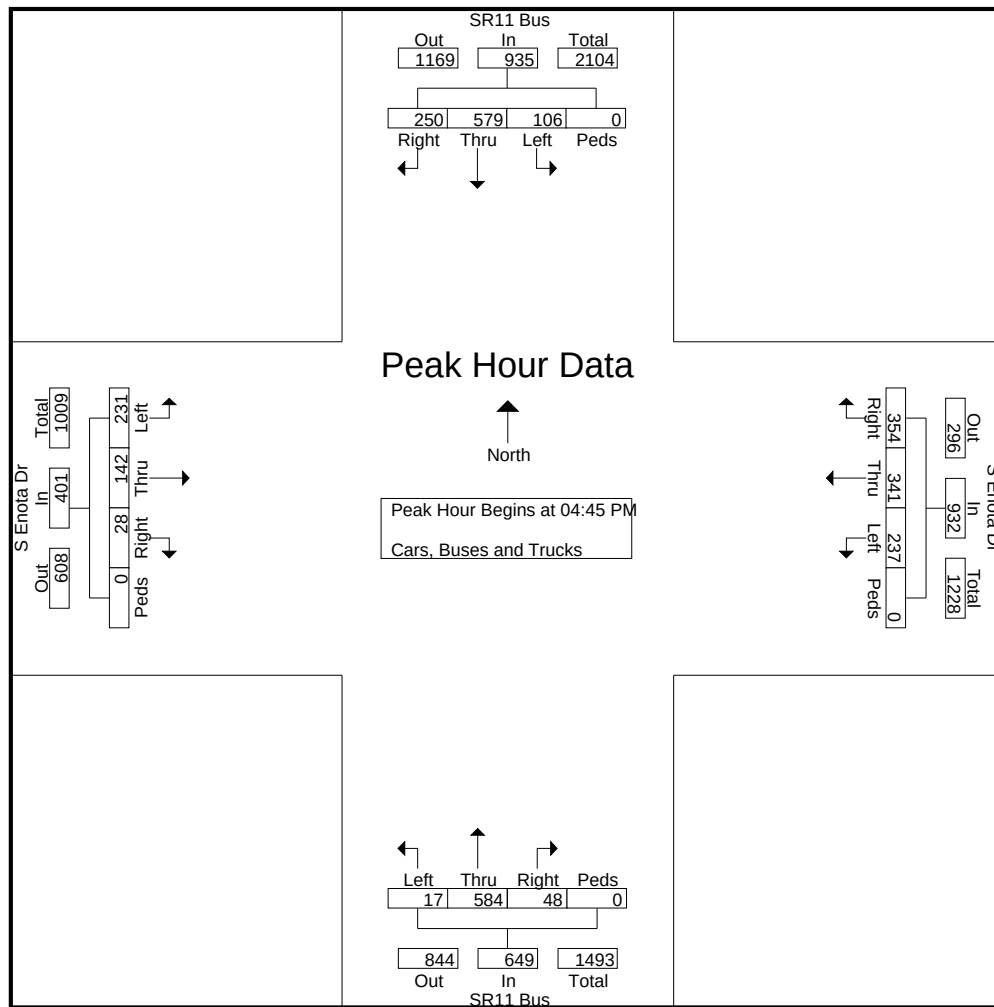
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TMC Data
SR11 Bus @ S Enota Dr
Gainesville, GA
7-9am I 4-6pm

File Name : 40240003
Site Code : 40240003
Start Date : 3/30/2017
Page No : 3

	SR11 Bus Northbound					SR11 Bus Southbound					S Enota Dr Eastbound					S Enota Dr Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	1	142	21	0	164	28	168	68	0	264	51	37	6	0	94	33	70	89	0	192	714
05:00 PM	8	146	11	0	165	25	126	81	0	232	51	25	4	0	80	71	84	109	0	264	741
05:15 PM	5	132	5	0	142	26	133	50	0	209	58	33	10	0	101	84	92	88	0	264	716
05:30 PM	3	164	11	0	178	27	152	51	0	230	71	47	8	0	126	49	95	68	0	212	746
Total Volume	17	584	48	0	649	106	579	250	0	935	231	142	28	0	401	237	341	354	0	932	2917
% App. Total	2.6	90	7.4	0		11.3	61.9	26.7	0		57.6	35.4	7	0		25.4	36.6	38	0		
PHF	.531	.890	.571	.000	.912	.946	.862	.772	.000	.885	.813	.755	.700	.000	.796	.705	.897	.812	.000	.883	.978



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 17-9124-004

Day: Wednesday

City: Gainesville

Date: 2/22/2017

AM													
NS/EW Streets:	Green St NE_Riverside Dr			Green St NE_Riverside Dr			Holly Dr			Holly Dr			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 2	NR 2	SL 0	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 2	WR 0	TOTAL
7:00 AM	2	114	57	0	252	23	0	0	8	80	25	0	561
7:15 AM	3	135	98	0	268	27	0	0	17	111	47	0	706
7:30 AM	8	183	89	0	389	39	0	0	14	124	50	0	896
7:45 AM	3	189	71	0	360	28	0	2	11	125	50	0	839
8:00 AM	4	160	60	0	314	40	0	0	10	119	54	0	761
8:15 AM	4	151	76	0	328	25	0	0	16	93	35	0	728
8:30 AM	4	147	80	0	244	22	1	0	14	91	47	0	650
8:45 AM	5	181	79	0	269	22	0	0	13	105	34	0	708
TOTAL VOLUMES :	NL 33	NT 1260	NR 610	SL 0	ST 2424	SR 226	EL 1	ET 2	ER 103	WL 848	WT 342	WR 0	TOTAL 5849
APPROACH %'s :	1.73%	66.21%	32.05%	0.00%	91.47%	8.53%	0.94%	1.89%	97.17%	71.26%	28.74%	0.00%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	19	683	296	0	1391	132	0	2	51	461	189	0	3224
PEAK HR FACTOR :	0.891			0.890			0.828			0.929			0.900

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 17-9124-004

Day: Wednesday

City: Gainesville

Date: 2/22/2017

PM													
NS/EW Streets:	Green St NE_Riverside Dr			Green St NE_Riverside Dr			Holly Dr			Holly Dr			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 2	NR 2	SL 0	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 2	WR 0	TOTAL
4:00 PM	11	255	138	0	200	33	0	0	9	106	51	0	803
4:15 PM	7	326	114	0	154	25	0	0	13	62	44	0	745
4:30 PM	7	316	144	0	193	25	0	0	12	92	47	0	836
4:45 PM	10	314	174	0	149	20	0	0	9	88	49	0	813
5:00 PM	14	380	174	0	189	34	0	0	1	94	49	0	935
5:15 PM	10	346	172	0	201	36	0	0	13	106	66	0	950
5:30 PM	10	327	164	0	179	29	0	0	6	104	58	0	877
5:45 PM	12	359	143	0	243	26	0	0	15	83	45	0	926
TOTAL VOLUMES :	NL 81	NT 2623	NR 1223	SL 0	ST 1508	SR 228	EL 0	ET 0	ER 78	WL 735	WT 409	WR 0	TOTAL 6885
APPROACH %'s :	2.06%	66.79%	31.14%	0.00%	86.87%	13.13%	0.00%	0.00%	100.00%	64.25%	35.75%	0.00%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	46	1412	653	0	812	125	0	0	35	387	218	0	3688
PEAK HR FACTOR :	0.929			0.871			0.583			0.879			0.971

CONTROL : Signalized

ITM Peak Hour Summary

Prepared by:



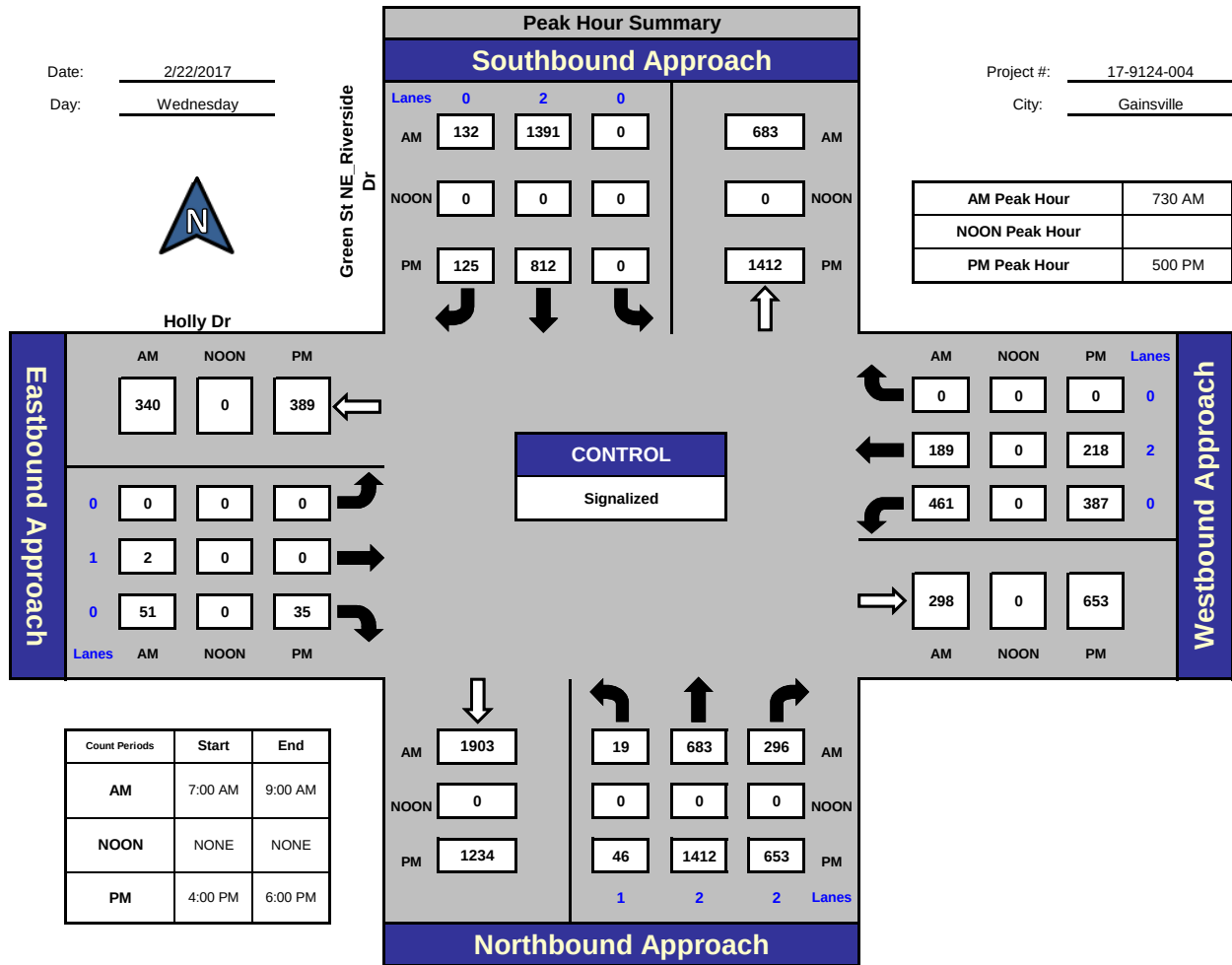
National Data & Surveying Services

Green St NE Riverside Dr and Holly Dr, Gainesville

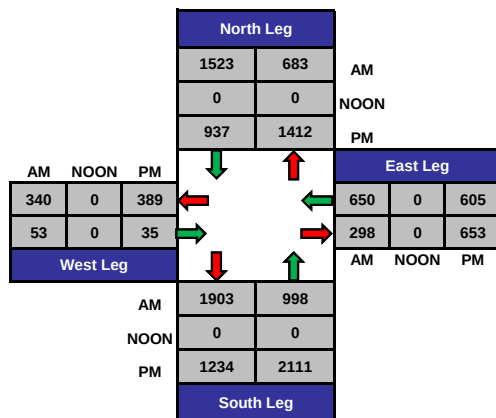
Date: 2/22/2017
Day: Wednesday



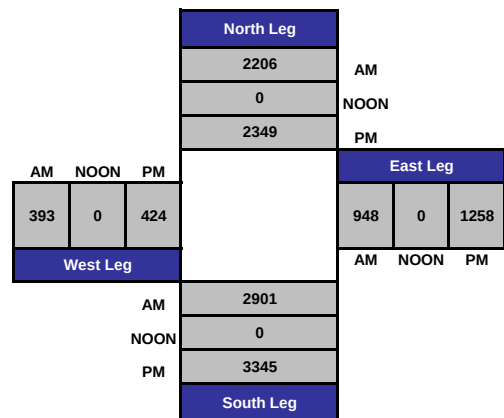
Project #: 17-9124-004
City: Gainesville



Total Ins & Outs



Total Volume Per Leg



PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 17-9124-004
 N/S Street: Green St NE_Riverside Dr
 E/W Street: Holly Dr
 DATE: 2/22/2017
 CITY: Gainesville

DAY: Wednesday

A M

PEDESTRIANS

T I M E	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
7:00 AM	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0
TOTALS	0	0	0	0	0	0	0	0

BIKES

T I M E	NB			SB			EB			WB		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	1	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	1	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
TOTALS	0	0	0	0	0	0	0	0	1	1	0	0

P M

PEDESTRIANS

T I M E	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
4:00 PM	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	1	1
4:30 PM	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	1	0
5:00 PM	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	1	0
TOTALS	0	0	0	0	0	0	3	1

BIKES

T I M E	NB			SB			EB			WB		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
4:00 PM	0	0	1	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
TOTALS	0	0	1	0	0	0	0	0	0	0	0	0

Project ID: 17-9124-004

Location: Green St NE_Riverside Dr & Holly Dr

City: Gainesville

Day: Wednesday

Date: 2/22/2017

Peak Start Times	
AM	7:00 AM
MD	12:00 AM
PM	4:00 PM

Groups Printed - Cars, PU, Vans - Heavy Trucks

	Green St NE_Riverside Dr Northbound					Green St NE_Riverside Dr Southbound					Holly Dr Eastbound					Holly Dr Westbound					
Start Time	Left	Thru	Rgt	Peds	App. Total	Left	Thru	Rgt	Peds	App. Total	Left	Thru	Rgt	Peds	App. Total	Left	Thru	Rgt	Peds	App. Total	Int. Total
7:00 AM	2	114	57	0	173	0	252	23	0	275	0	0	8	0	8	80	25	0	0	105	561
7:15 AM	3	135	98	0	236	0	268	27	0	295	0	0	17	0	17	111	47	0	0	158	706
7:30 AM	8	183	89	0	280	0	389	39	0	428	0	0	14	0	14	124	50	0	0	174	896
7:45 AM	3	189	71	0	263	0	360	28	0	388	0	2	11	0	13	125	50	0	0	175	839
Total	16	621	315	0	952	0	1269	117	0	1386	0	2	50	0	52	440	172	0	0	612	3002
8:00 AM	4	160	60	0	224	0	314	40	0	354	0	0	10	0	10	119	54	0	0	173	761
8:15 AM	4	151	76	0	231	0	328	25	0	353	0	0	16	0	16	93	35	0	0	128	728
8:30 AM	4	147	80	0	231	0	244	22	0	266	1	0	14	0	15	91	47	0	0	138	650
8:45 AM	5	181	79	0	265	0	269	22	0	291	0	0	13	0	13	105	34	0	0	139	708
Total	17	639	295	0	951	0	1155	109	0	1264	1	0	53	0	54	408	170	0	0	578	2847
BREAK																					
4:00 PM	11	255	138	0	404	0	200	33	0	233	0	0	9	0	9	106	51	0	0	157	803
4:15 PM	7	326	114	0	447	0	154	25	0	179	0	0	13	2	13	62	44	0	0	106	745
4:30 PM	7	316	144	0	467	0	193	25	0	218	0	0	12	0	12	92	47	0	0	139	836
4:45 PM	10	314	174	0	498	0	149	20	0	169	0	0	9	1	9	88	49	0	0	137	813
Total	35	1211	570	0	1816	0	696	103	0	799	0	0	43	3	43	348	191	0	0	539	3197
5:00 PM	14	380	174	0	568	0	189	34	0	223	0	0	1	0	1	94	49	0	0	143	935
5:15 PM	10	346	172	0	528	0	201	36	0	237	0	0	13	0	13	106	66	0	0	172	950
5:30 PM	10	327	164	0	501	0	179	29	0	208	0	0	6	0	6	104	58	0	0	162	877
5:45 PM	12	359	143	0	514	0	243	26	0	269	0	0	15	1	15	83	45	0	0	128	926
Total	46	1412	653	0	2111	0	812	125	0	937	0	0	35	1	35	387	218	0	0	605	3688
Grand Total	114	3883	1833	0	5830	0	3932	454	0	4386	1	2	181	4	184	1583	751	0	0	2334	12734
Apprch %	2.0	66.6	31.4	0.0		0.0	89.6	10.4	0.0		0.5	1.1	98.4	2.2		67.8	32.2	0.0	0.0		
Total %	0.9	30.5	14.4	0.0	45.8	0.0	30.9	3.6	0.0	34.4	0.0	0.0	1.4	0.0	1.4	12.4	5.9	0.0	0.0	18.3	
Cars, PU, Vans	114	3826	1828	0	5768	0	3881	454	0	4335	1	2	181	4	184	1575	750	0	0	2325	12612
% Cars, PU, Vans	100.0	98.5	99.7	0.0	98.9	0.0	98.7	100.0	0.0	98.8	100.0	100.0	100.0	100.0	100.0	99.5	99.9	0.0	0.0	99.6	99.0
Heavy Trucks	0	57	5		62	0	51	0		51	0	0	0		0	8	1	0		9	122
%Heavy Trucks	0.0	1.5	0.3	0.0	1.1	0.0	1.3	0.0	0.0	1.2	0.0	0.0	0.0	0.0	0.0	0.5	0.1	0.0	0.0	0.4	1.0

Project ID: 17-9124-004

Location: Green St NE_Riverside Dr &

City: Gainesville

PEAK HOURS

Day: Wednesday

Date: 2/22/2017

AM

	Green St NE_Riverside Dr Northbound				Green St NE_Riverside Dr Southbound				Holly Dr Eastbound				Holly Dr Westbound				
Start Time	Left	Thru	Rgt	App. Total	Left	Thru	Rgt	App. Total	Left	Thru	Rgt	App. Total	Left	Thru	Rgt	App. Total	Int. Total
Peak Hour Analysis from 07:00 AM to 09:00 AM																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
7:30 AM	8	183	89	280	0	389	39	428	0	0	14	14	124	50	0	174	896
7:45 AM	3	189	71	263	0	360	28	388	0	2	11	13	125	50	0	175	839
8:00 AM	4	160	60	224	0	314	40	354	0	0	10	10	119	54	0	173	761
8:15 AM	4	151	76	231	0	328	25	353	0	0	16	16	93	35	0	128	728
Total Volume	19	683	296	998	0	1391	132	1523	0	2	51	53	461	189	0	650	3224
% App. Total	1.9	68.4	29.7	100	0.0	91.3	8.7	100	0.0	3.8	96.2	100	70.9	29.1	0.0	100	
PHF	0.891				0.890				0.828				0.929				
Cars, PU, Vans	19	668	294	981	0	1377	132	1509	0	2	51	53	458	189	0	647	3190
% Cars, PU, Vans	100.0	97.8	99.3	98.3	0.0	99.0	100.0	99.1	0.0	100.0	100.0	100.0	99.3	100.0	0.0	99.5	98.9
Heavy Trucks	0	15	2	17	0	14	0	14	0	0	0	0	3	0	0	3	34
%Heavy Trucks	0.0	2.2	0.7	1.7	0.0	1.0	0.0	0.9	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.5	1.1

PM

	Green St NE_Riverside Dr Northbound				Green St NE_Riverside Dr Southbound				Holly Dr Eastbound				Holly Dr Westbound				
Start Time	Left	Thru	Rgt	App. Total	Left	Thru	Rgt	App. Total	Left	Thru	Rgt	App. Total	Left	Thru	Rgt	App. Total	Int. Total
Peak Hour Analysis from 04:00 PM to 06:00 PM																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
5:00 PM	14	380	174	568	0	189	34	223	0	0	1	1	94	49	0	143	935
5:15 PM	10	346	172	528	0	201	36	237	0	0	13	13	106	66	0	172	950
5:30 PM	10	327	164	501	0	179	29	208	0	0	6	6	104	58	0	162	877
5:45 PM	12	359	143	514	0	243	26	269	0	0	15	15	83	45	0	128	926
Total Volume	46	1412	653	2111	0	812	125	937	0	0	35	35	387	218	0	605	3688
% App. Total	2.2	66.9	30.9	100	0.0	86.7	13.3	100	0.0	0.0	100.0	100	64.0	36.0	0.0	100	
PHF	0.929				0.871				0.583				0.879				
Cars, PU, Vans	46	1401	652	2099	0	805	125	930	0	0	35	35	386	218	0	604	3668
% Cars, PU, Vans	100.0	99.2	99.8	99.4	0.0	99.1	100.0	99.3	0.0	0.0	100.0	100.0	99.7	100.0	0.0	99.8	99.5
Heavy Trucks	0	11	1	12	0	7	0	7	0	0	0	0	1	0	0	1	20
%Heavy Trucks	0.0	0.8	0.2	0.6	0.0	0.9	0.0	0.7	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.2	0.5

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 17-9124-004

Day: Wednesday

City: Gainesville

Date: 2/22/2017

AM													
NS/EW Streets:	Green St NE_Riverside Dr			Green St NE_Riverside Dr			Holly Dr			Holly Dr			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 2	NR 2	SL 0	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 2	WR 0	TOTAL
7:00 AM	0	6	0	0	5	0	0	0	0	0	0	0	11
7:15 AM	0	11	0	0	3	0	0	0	0	1	0	0	15
7:30 AM	0	3	1	0	3	0	0	0	0	2	0	0	9
7:45 AM	0	6	0	0	1	0	0	0	0	0	0	0	7
8:00 AM	0	3	1	0	3	0	0	0	0	1	0	0	8
8:15 AM	0	3	0	0	7	0	0	0	0	0	0	0	10
8:30 AM	0	3	0	0	3	0	0	0	0	0	0	0	6
8:45 AM	0	2	1	0	2	0	0	0	0	1	1	0	7
TOTAL VOLUMES :	0	37	3	0	27	0	0	0	0	5	1	0	73
APPROACH %'s :	0.00%	92.50%	7.50%	0.00%	100.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	83.33%	16.67%	0.00%	
PEAK HR START TIME :	730 AM												
PEAK HR VOL :	0	15	2	0	14	0	0	0	0	3	0	0	34
PEAK HR FACTOR :	0.708			0.500			0.000			0.375			0.850

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 17-9124-004

Day: Wednesday

City: Gainesville

Date: 2/22/2017

PM													
NS/EW Streets:	Green St NE_Riverside Dr			Green St NE_Riverside Dr			Holly Dr			Holly Dr			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 2	NR 2	SL 0	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 2	WR 0	TOTAL
4:00 PM	0	2	1	0	6	0	0	0	0	1	0	0	10
4:15 PM	0	4	0	0	5	0	0	0	0	1	0	0	10
4:30 PM	0	2	0	0	5	0	0	0	0	0	0	0	7
4:45 PM	0	1	0	0	1	0	0	0	0	0	0	0	2
5:00 PM	0	0	0	0	0	0	0	0	0	1	0	0	1
5:15 PM	0	6	1	0	1	0	0	0	0	0	0	0	8
5:30 PM	0	2	0	0	2	0	0	0	0	0	0	0	4
5:45 PM	0	3	0	0	4	0	0	0	0	0	0	0	7
TOTAL VOLUMES :	0	20	2	0	24	0	0	0	0	3	0	0	49
APPROACH %'s :	0.00%	90.91%	9.09%	0.00%	100.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	100.00%	0.00%	0.00%	
PEAK HR START TIME :	500 PM												
PEAK HR VOL :	0	11	1	0	7	0	0	0	0	1	0	0	20
PEAK HR FACTOR :	0.429			0.438			0.000			0.250			0.625

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 17-9124-007

Day: Wednesday

City: Gainesville

Date: 2/22/2017

AM													
NS/EW Streets:	Green St_State Hwy 11			Green St_State Hwy 11			Ridgewood Ave			Ridgewood Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 2	NR 0	SL 0	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
7:00 AM	0	140	1	0	316	3	26	0	4	1	0	0	491
7:15 AM	2	205	0	0	371	5	39	0	5	0	1	0	628
7:30 AM	0	242	0	0	511	12	41	1	6	1	0	1	815
7:45 AM	5	226	1	0	459	15	39	2	9	1	1	1	759
8:00 AM	6	203	3	1	420	16	30	2	5	3	4	0	693
8:15 AM	3	207	7	3	408	20	21	0	2	1	1	0	673
8:30 AM	5	211	2	1	342	14	23	0	4	0	1	0	603
8:45 AM	3	248	5	1	371	11	19	0	4	1	0	0	663
TOTAL VOLUMES :	NL 24	NT 1682	NR 19	SL 6	ST 3198	SR 96	EL 238	ET 5	ER 39	WL 8	WT 8	WR 2	TOTAL 5325
APPROACH %'s :	1.39%	97.51%	1.10%	0.18%	96.91%	2.91%	84.40%	1.77%	13.83%	44.44%	44.44%	11.11%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	14	878	11	4	1798	63	131	5	22	6	6	2	2940
PEAK HR FACTOR :	0.933			0.891			0.790			0.500			0.902

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 17-9124-007

Day: Wednesday

City: Gainesville

Date: 2/22/2017

PM													
NS/EW Streets:	Green St_State Hwy 11			Green St_State Hwy 11			Ridgewood Ave			Ridgewood Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 2	NR 0	SL 0	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
4:00 PM	9	362	1	1	283	18	32	2	6	6	1	2	723
4:15 PM	11	413	4	0	221	18	42	1	6	3	1	1	721
4:30 PM	7	410	1	0	271	16	53	2	3	4	0	3	770
4:45 PM	10	447	2	0	207	9	69	1	3	2	1	1	752
5:00 PM	6	500	3	0	265	20	67	1	4	2	8	1	877
5:15 PM	4	448	1	0	269	19	74	1	2	3	1	1	823
5:30 PM	4	464	4	0	251	19	51	3	10	4	4	3	817
5:45 PM	9	437	2	0	312	15	60	3	4	2	1	0	845
TOTAL VOLUMES :	NL 60	NT 3481	NR 18	SL 1	ST 2079	SR 134	EL 448	ET 14	ER 38	WL 26	WT 17	WR 12	TOTAL 6328
APPROACH %'s :	1.69%	97.81%	0.51%	0.05%	93.90%	6.05%	89.60%	2.80%	7.60%	47.27%	30.91%	21.82%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	23	1849	10	0	1097	73	252	8	20	11	14	5	3362
PEAK HR FACTOR :	0.924			0.894			0.909			0.682			0.958

CONTROL : Signalized

ITM Peak Hour Summary

Prepared by:

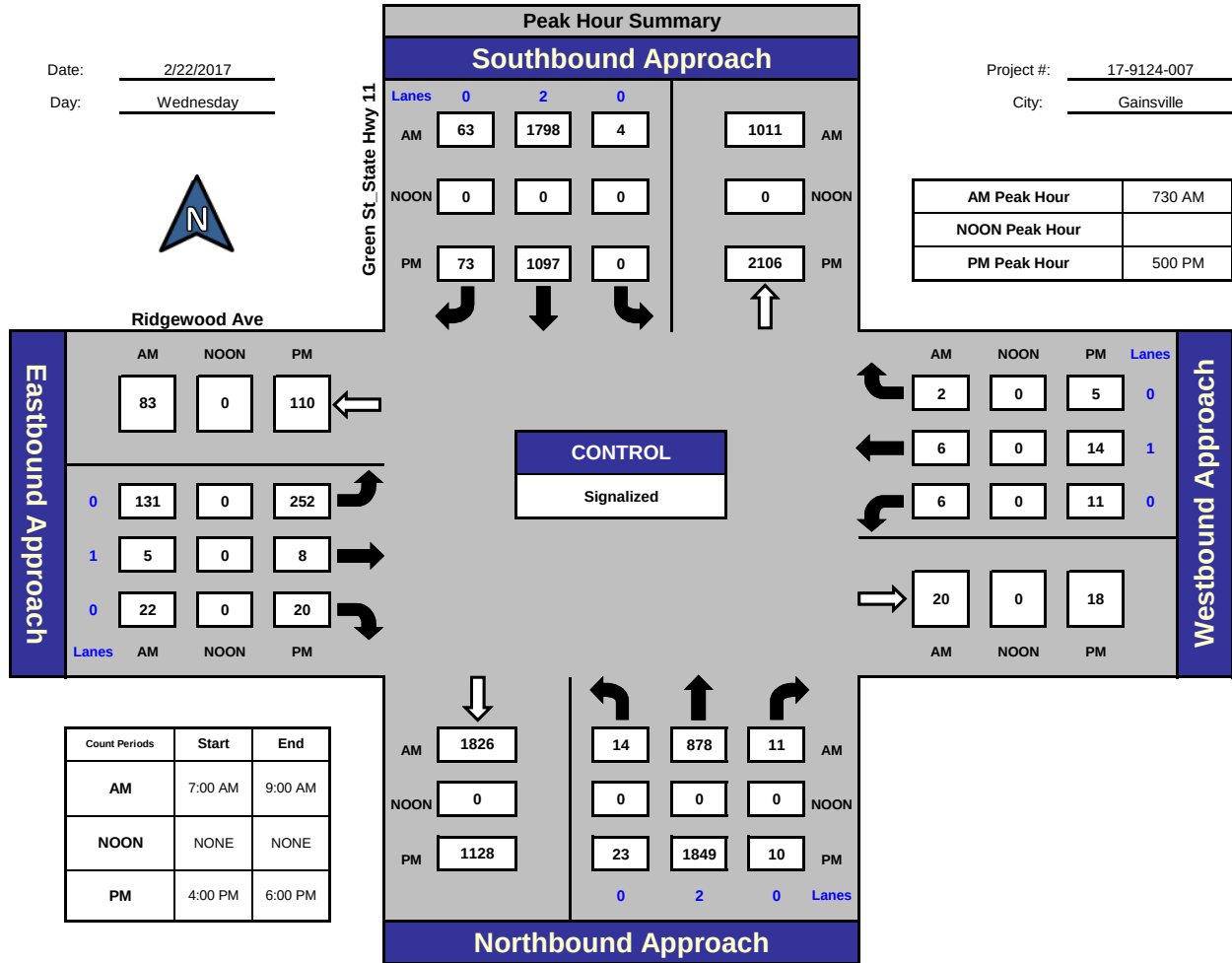


National Data & Surveying Services

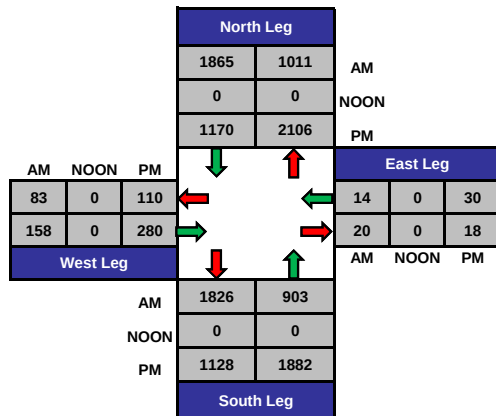
Green St State Hwy 11 and Ridgewood Ave , Gainesville

Date: 2/22/2017
Day: Wednesday

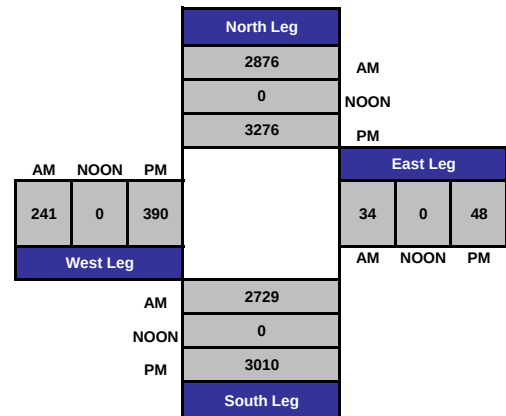
Project #: 17-9124-007
City: Gainesville



Total Ins & Outs



Total Volume Per Leg



PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 17-9124-007
 N/S Street: Green St_State Hwy 11
 E/W Street: Ridgewood Ave
 DATE: 2/22/2017
 CITY: Gainesville

DAY: Wednesday

A M

PEDESTRIANS

T I M E	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
7:00 AM	0	0	1	0	0	0	0	1
7:15 AM	0	0	0	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0
TOTALS	0	0	1	0	0	0	0	2

BIKES

T I M E	NB			SB			EB			WB		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
7:00 AM	0	0	0	0	1	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	1	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	1	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
TOTALS	0	0	0	0	3	0	0	0	0	0	0	0

P M

PEDESTRIANS

T I M E	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
4:00 PM	0	1	0	0	0	0	1	1
4:15 PM	0	0	2	0	2	0	1	0
4:30 PM	1	0	0	0	0	1	0	0
4:45 PM	0	0	0	0	1	0	0	0
5:00 PM	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	2	0	0
5:30 PM	0	0	0	0	0	1	0	0
5:45 PM	0	2	2	0	0	1	0	2
TOTALS	1	3	4	0	3	5	2	4

BIKES

T I M E	NB			SB			EB			WB		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
4:00 PM	0	0	0	0	0	0	1	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	1	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	1	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
TOTALS	0	1	0	0	1	0	1	0	0	0	0	0

Project ID: 17-9124-007

Location: Green St State Hwy 11 & Ridgewood Ave

City: Gainesville

Day: Wednesday

Date: 2/22/2017

Peak Start Times	
AM	7:00 AM
MD	12:00 AM
PM	4:00 PM

Groups Printed - Cars, PU, Vans - Heavy Trucks

	Green St State Hwy 11 Northbound					Green St State Hwy 11 Southbound					Ridgewood Ave Eastbound					Ridgewood Ave Westbound					
Start Time	Left	Thru	Rgt	Peds	App. Total	Left	Thru	Rgt	Peds	App. Total	Left	Thru	Rgt	Peds	App. Total	Left	Thru	Rgt	Peds	App. Total	Int. Total
7:00 AM	0	140	1	1	141	0	316	3	0	319	26	0	4	1	30	1	0	0	0	1	491
7:15 AM	2	205	0	0	207	0	371	5	0	376	39	0	5	1	44	0	1	0	0	1	628
7:30 AM	0	242	0	0	242	0	511	12	0	523	41	1	6	0	48	1	0	1	0	2	815
7:45 AM	5	226	1	0	232	0	459	15	0	474	39	2	9	0	50	1	1	1	0	3	759
Total	7	813	2	1	822	0	1657	35	0	1692	145	3	24	2	172	3	2	2	0	7	2693
8:00 AM	6	203	3	0	212	1	420	16	0	437	30	2	5	0	37	3	4	0	0	7	693
8:15 AM	3	207	7	0	217	3	408	20	0	431	21	0	2	0	23	1	1	0	0	2	673
8:30 AM	5	211	2	0	218	1	342	14	0	357	23	0	4	0	27	0	1	0	0	1	603
8:45 AM	3	248	5	0	256	1	371	11	0	383	19	0	4	0	23	1	0	0	0	1	663
Total	17	869	17	0	903	6	1541	61	0	1608	93	2	15	0	110	5	6	0	0	11	2632
BREAK																					
4:00 PM	9	362	1	0	372	1	283	18	1	302	32	2	6	2	40	6	1	2	0	9	723
4:15 PM	11	413	4	2	428	0	221	18	0	239	42	1	6	1	49	3	1	1	2	5	721
4:30 PM	7	410	1	0	418	0	271	16	1	287	53	2	3	0	58	4	0	3	1	7	770
4:45 PM	10	447	2	0	459	0	207	9	0	216	69	1	3	0	73	2	1	1	1	4	752
Total	37	1632	8	2	1677	1	982	61	2	1044	196	6	18	3	220	15	3	7	4	25	2966
5:00 PM	6	500	3	0	509	0	265	20	0	285	67	1	4	1	72	2	8	1	0	11	877
5:15 PM	4	448	1	0	453	0	269	19	0	288	74	1	2	0	77	3	1	1	2	5	823
5:30 PM	4	464	4	0	472	0	251	19	0	270	51	3	10	0	64	4	4	3	1	11	817
5:45 PM	9	437	2	2	448	0	312	15	2	327	60	3	4	2	67	2	1	0	1	3	845
Total	23	1849	10	2	1882	0	1097	73	2	1170	252	8	20	3	280	11	14	5	4	30	3362
Grand Total	84	5163	37	5	5284	7	5277	230	4	5514	686	19	77	8	782	34	25	14	8	73	11653
Apprch %	1.6	97.7	0.7	0.1		0.1	95.7	4.2	0.1		87.7	2.4	9.8	1.0		46.6	34.2	19.2	11.0		
Total %	0.7	44.3	0.3	0.0	45.3	0.1	45.3	2.0	0.0	47.3	5.9	0.2	0.7	0.1	6.7	0.3	0.2	0.1	0.1	0.6	
Cars, PU, Vans	84	5102	37	5	5223	7	5220	230	4	5457	686	19	77	8	782	33	25	14	8	72	11534
% Cars, PU, Vans	100.0	98.8	100.0	100.0	98.8	100.0	98.9	100.0	100.0	99.0	100.0	100.0	100.0	100.0	100.0	97.1	100.0	100.0	100.0	98.6	99.0
Heavy Trucks	0	61	0		61	0	57	0		57	0	0	0		0	1	0	0		1	119
%Heavy Trucks	0.0	1.2	0.0	0.0	1.2	0.0	1.1	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	2.9	0.0	0.0	0.0	1.4	1.0

Project ID: 17-9124-007

Location: Green St_State Hwy 11 & Ric

City: Gainesville

PEAK HOURS

Day: Wednesday

Date: 2/22/2017

AM

	Green St_State Hwy 11 Northbound				Green St_State Hwy 11 Southbound				Ridgewood Ave Eastbound				Ridgewood Ave Westbound				
Start Time	Left	Thru	Rgt	App. Total	Left	Thru	Rgt	App. Total	Left	Thru	Rgt	App. Total	Left	Thru	Rgt	App. Total	Int. Total
Peak Hour Analysis from 07:00 AM to 09:00 AM																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
7:30 AM	0	242	0	242	0	511	12	523	41	1	6	48	1	0	1	2	815
7:45 AM	5	226	1	232	0	459	15	474	39	2	9	50	1	1	1	3	759
8:00 AM	6	203	3	212	1	420	16	437	30	2	5	37	3	4	0	7	693
8:15 AM	3	207	7	217	3	408	20	431	21	0	2	23	1	1	0	2	673
Total Volume	14	878	11	903	4	1798	63	1865	131	5	22	158	6	6	2	14	2940
% App. Total	1.6	97.2	1.2	100	0.2	96.4	3.4	100	82.9	3.2	13.9	100	42.9	42.9	14.3	100	
PHF	0.933				0.891				0.790				0.500				
Cars, PU, Vans	14	862	11	887	4	1782	63	1849	131	5	22	158	6	6	2	14	2908
% Cars, PU, Vans	100.0	98.2	100.0	98.2	100.0	99.1	100.0	99.1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	98.9
Heavy Trucks	0	16	0	16	0	16	0	16	0	0	0	0	0	0	0	0	32
%Heavy Trucks	0.0	1.8	0.0	1.8	0.0	0.9	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1

PM

	Green St_State Hwy 11 Northbound				Green St_State Hwy 11 Southbound				Ridgewood Ave Eastbound				Ridgewood Ave Westbound				
Start Time	Left	Thru	Rgt	App. Total	Left	Thru	Rgt	App. Total	Left	Thru	Rgt	App. Total	Left	Thru	Rgt	App. Total	Int. Total
Peak Hour Analysis from 04:00 PM to 06:00 PM																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
5:00 PM	6	500	3	509	0	265	20	285	67	1	4	72	2	8	1	11	877
5:15 PM	4	448	1	453	0	269	19	288	74	1	2	77	3	1	1	5	823
5:30 PM	4	464	4	472	0	251	19	270	51	3	10	64	4	4	3	11	817
5:45 PM	9	437	2	448	0	312	15	327	60	3	4	67	2	1	0	3	845
Total Volume	23	1849	10	1882	0	1097	73	1170	252	8	20	280	11	14	5	30	3362
% App. Total	1.2	98.2	0.5	100	0.0	93.8	6.2	100	90.0	2.9	7.1	100	36.7	46.7	16.7	100	
PHF	0.924				0.894				0.909				0.682				
Cars, PU, Vans	23	1837	10	1870	0	1091	73	1164	252	8	20	280	11	14	5	30	3344
% Cars, PU, Vans	100.0	99.4	100.0	99.4	0.0	99.5	100.0	99.5	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.5
Heavy Trucks	0	12	0	12	0	6	0	6	0	0	0	0	0	0	0	0	18
%Heavy Trucks	0.0	0.6	0.0	0.6	0.0	0.5	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 17-9124-007

Day: Wednesday

City: Gainesville

Date: 2/22/2017

AM													
NS/EW Streets:	Green St_State Hwy 11			Green St_State Hwy 11			Ridgewood Ave			Ridgewood Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 2	NR 0	SL 0	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
7:00 AM	0	5	0	0	5	0	0	0	0	1	0	0	11
7:15 AM	0	12	0	0	4	0	0	0	0	0	0	0	16
7:30 AM	0	3	0	0	5	0	0	0	0	0	0	0	8
7:45 AM	0	6	0	0	1	0	0	0	0	0	0	0	7
8:00 AM	0	4	0	0	4	0	0	0	0	0	0	0	8
8:15 AM	0	3	0	0	6	0	0	0	0	0	0	0	9
8:30 AM	0	3	0	0	4	0	0	0	0	0	0	0	7
8:45 AM	0	3	0	0	3	0	0	0	0	0	0	0	6
TOTAL VOLUMES :	0	39	0	0	32	0	0	0	0	1	0	0	72
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	100.00%	0.00%	0.00%	
PEAK HR START TIME :	730 AM												
PEAK HR VOL :	0	16	0	0	16	0	0	0	0	0	0	0	32
PEAK HR FACTOR :	0.667			0.667			0.000			0.000			0.889

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 17-9124-007

Day: Wednesday

City: Gainesville

Date: 2/22/2017

PM													
NS/EW Streets:	Green St_State Hwy 11			Green St_State Hwy 11			Ridgewood Ave			Ridgewood Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 2	NR 0	SL 0	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
4:00 PM	0	3	0	0	6	0	0	0	0	0	0	0	9
4:15 PM	0	4	0	0	7	0	0	0	0	0	0	0	11
4:30 PM	0	2	0	0	4	0	0	0	0	0	0	0	6
4:45 PM	0	1	0	0	2	0	0	0	0	0	0	0	3
5:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
5:15 PM	0	7	0	0	1	0	0	0	0	0	0	0	8
5:30 PM	0	2	0	0	2	0	0	0	0	0	0	0	4
5:45 PM	0	3	0	0	2	0	0	0	0	0	0	0	5
TOTAL VOLUMES :	0	22	0	0	25	0	0	0	0	0	0	0	47
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	0	12	0	0	6	0	0	0	0	0	0	0	18
PEAK HR FACTOR :	0.429			0.750			0.000			0.000			0.563

CONTROL : Signalized

Appendix B

Intersection Analysis Methodology

Intersection Analysis Methodology

The methodology used for evaluating traffic operations at intersections is presented in the Transportation Research Board’s *Highway Capacity Manual*, 2010 edition (HCM 2010). Synchro 8 software, which emulates the HCM 2010 methodology, was used for all analyses. The following is an overview of the methodology employed for the analysis of signalized intersections and stop-sign controlled (unsignalized) intersections.

Signalized Intersections

The criteria for evaluating signalized intersections are capacity and level of service. The capacity analysis of an intersection compares the volume of traffic using the various lane groups at the intersection to the capacity of those lane groups. This produces a volume-to-capacity (v/c) ratio for each lane group. A v/c ratio greater than 1.0 indicates that the volume of traffic has exceeded the capacity available and indicates a temporary excess of demand. The HCM 2010 methodology computes a critical v/c ratio for an intersection based on the critical lane groups or approaches. This critical v/c ratio is an indication of overall intersection sufficiency.

Level of service for a signalized intersection is defined in terms of control delay per vehicle. For signalized intersections, a composite intersection level of service is determined. The thresholds for each level of service are higher for signalized intersections than for unsignalized intersections. This is attributable to a variety of factors including expectation and acceptance of higher delays at signals, and the fact that drivers can relax when waiting at a signal as opposed to having to remain attentive as they proceed through the unsignalized intersection. The level of service criteria for signalized intersections are shown in Table A.

Table A – Level of Service Criteria for Signalized Intersections

Control Delay (s/veh)	Level of Service by Volume-to-Capacity Ratio	
	≤1.0	>1.0
≤ 10	A	F
> 10 and ≤ 20	B	F
> 20 and ≤ 35	C	F
> 35 and ≤ 55	D	F
> 55 and ≤ 80	E	F
> 80	F	F

Source: *Highway Capacity Manual 2010*

Unsignalized Intersections

The operations at an unsignalized intersection are defined in terms of levels of service. Level of service (LOS) is a measure of driver discomfort, frustration, fuel consumption, and lost travel time. Level of service for an unsignalized intersection is defined in terms of control delay per vehicle. Control delay is that portion of delay attributable to the control device and includes initial deceleration delay, queue move-up time, stopped delay,

and final acceleration delay. The delays at unsignalized intersections are based on gap acceptance theory, factoring in availability of gaps, usefulness of the gaps, and the priority of right-of-way given to each traffic stream.

Levels of service are assigned letters A through F. LOS A indicates operations with very low control delay while LOS F describes operations with high control delay. LOS F is considered to be unacceptable by most drivers, while LOS E is typically considered to be the limit of acceptable delay. The level of service criteria for unsignalized intersections are presented in Table B.

Table B – Level of Service Criteria for Unsignalized Intersections

Control Delay (s/veh)	Level of Service by Volume-to-Capacity Ratio	
	≤1.0	>1.0
0 – 10	A	F
> 10 and ≤ 15	B	F
> 15 and ≤ 25	C	F
> 25 and ≤ 35	D	F
> 35 and ≤ 50	E	F
> 50	F	F

Source: Highway Capacity Manual 2010

Appendix C

Existing Intersection Operational Analysis

Thompson Bridge / Enota Convenience
1: Thompson Bridge & Walmart/Taco Bell

existing a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	38	0	64	3	1	4	52	881	1	6	1877	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50		0	50		0	200		100	200		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.850			0.871				0.850		0.994	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	1599	0	1787	1639	0	1787	3539	1599	1787	3519	0
Flt Permitted	0.753			0.538			0.056			0.304		
Satd. Flow (perm)	1417	1599	0	1012	1639	0	105	3539	1599	572	3519	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		62			6				34			8
Link Speed (mph)		30			30			30				30
Link Distance (ft)		300			195			1235				500
Travel Time (s)		6.8			4.4			28.1				11.4
Peak Hour Factor	0.85	0.85	0.85	0.67	0.67	0.67	0.94	0.94	0.94	0.90	0.90	0.90
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	2%	1%	1%	2%	1%
Adj. Flow (vph)	45	0	75	4	1	6	55	937	1	7	2086	89
Shared Lane Traffic (%)												
Lane Group Flow (vph)	45	75	0	4	7	0	55	937	1	7	2175	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94				94
Detector 2 Size(ft)		6			6			6				6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA	Perm	pm+pt		NA
Protected Phases		4			8		5	2		1		6
Permitted Phases	4			8			2		2	6		

Thompson Bridge / Enota Convenience
1: Thompson Bridge & Walmart/Taco Bell

existing a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		8.0	20.0	20.0	8.0	20.0	
Total Split (s)	20.0	20.0		20.0	20.0		12.0	132.0	132.0	8.0	128.0	
Total Split (%)	12.5%	12.5%		12.5%	12.5%		7.5%	82.5%	82.5%	5.0%	80.0%	
Maximum Green (s)	16.0	16.0		16.0	16.0		8.0	128.0	128.0	4.0	124.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max	C-Max	None	C-Max	
Walk Time (s)	5.0	5.0		5.0	5.0			5.0	5.0		5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0	0		0	
Act Effect Green (s)	10.4	10.4		10.4	10.4		141.4	139.8	139.8	137.4	133.1	
Actuated g/C Ratio	0.06	0.06		0.06	0.06		0.88	0.87	0.87	0.86	0.83	
v/c Ratio	0.49	0.46		0.06	0.06		0.35	0.30	0.00	0.01	0.74	
Control Delay	88.6	30.3		69.7	40.8		16.2	2.1	0.0	1.7	8.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	88.6	30.3		69.7	40.8		16.2	2.1	0.0	1.7	8.9	
LOS	F	C		E	D		B	A	A	A	A	
Approach Delay		52.2			51.3			2.8			8.9	
Approach LOS		D			D			A			A	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.74

Intersection Signal Delay: 8.8

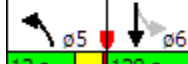
Intersection LOS: A

Intersection Capacity Utilization 69.9%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 1: Thompson Bridge & Walmart/Taco Bell

			
8 s	132 s		20 s
			
12 s	128 s		20 s

Thompson Bridge / Enota Convenience

2: Thompson Bridge & Enota

existing a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	53	51	29	45	27	167	17	734	26	313	1604	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		0	200		200	300		0	300		0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.945				0.850		0.995			0.997	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1796	0	1787	1900	1599	1805	3523	0	1787	3530	0
Flt Permitted	0.548			0.702			0.096			0.307		
Satd. Flow (perm)	1041	1796	0	1321	1900	1599	182	3523	0	578	3530	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		16				188		3			3	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		160			1380			173			1235	
Travel Time (s)		3.6			31.4			3.9			28.1	
Peak Hour Factor	0.95	0.95	0.95	0.89	0.89	0.89	0.94	0.94	0.94	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	1%	0%	1%	0%	2%	1%	1%	2%	0%
Adj. Flow (vph)	56	54	31	51	30	188	18	781	28	348	1782	36
Shared Lane Traffic (%)												
Lane Group Flow (vph)	56	85	0	51	30	188	18	809	0	348	1818	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8		8	2			6		

Thompson Bridge / Enota Convenience

2: Thompson Bridge & Enota

existing a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Minimum Split (s)	8.0	20.0		20.0	20.0	20.0	8.0	20.0		8.0	20.0	
Total Split (s)	9.0	35.0		26.0	26.0	26.0	8.0	84.0		41.0	117.0	
Total Split (%)	5.6%	21.9%		16.3%	16.3%	16.3%	5.0%	52.5%		25.6%	73.1%	
Maximum Green (s)	5.0	31.0		22.0	22.0	22.0	4.0	80.0		37.0	113.0	
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5	0.5	0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lead/Lag	Lead			Lag			Lead		Lag	Lead		Lag
Lead-Lag Optimize?	Yes			Yes			Yes		Yes	Yes		Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	None	C-Max		None	C-Max	
Walk Time (s)		5.0		5.0	5.0	5.0		5.0			5.0	
Flash Dont Walk (s)		11.0		11.0	11.0	11.0		11.0			11.0	
Pedestrian Calls (#/hr)		0		0	0	0		0			0	
Act Effect Green (s)	18.8	18.8		11.6	11.6	11.6	122.6	116.8		133.2	127.2	
Actuated g/C Ratio	0.12	0.12		0.07	0.07	0.07	0.77	0.73		0.83	0.80	
v/c Ratio	0.38	0.38		0.54	0.22	0.65	0.09	0.31		0.61	0.65	
Control Delay	69.5	55.6		90.6	71.9	19.3	4.7	8.9		8.0	6.1	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.1	
Total Delay	69.5	55.6		90.6	71.9	19.3	4.7	8.9		8.0	6.1	
LOS	E	E		F	E	B	A	A		A	A	
Approach Delay		61.1			38.7			8.8			6.4	
Approach LOS		E			D			A			A	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 41 (26%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.65

Intersection Signal Delay: 11.8

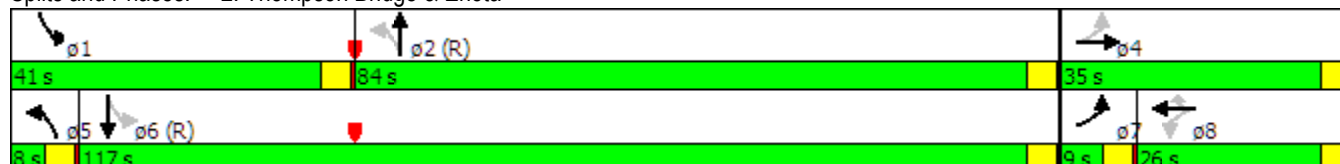
Intersection LOS: B

Intersection Capacity Utilization 68.3%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 2: Thompson Bridge & Enota



Thompson Bridge / Enota Convenience
3: Riverside & Enota

existing a.m.

Intersection												
Intersection Delay, s/veh	22.1											
Intersection LOS	C											
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	9	305	7	0	45	200	40	0	9	55	65
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.75	0.75	0.75	0.92	0.60	0.60	0.60
Heavy Vehicles, %	2	1	1	1	2	1	1	1	2	1	1	1
Mvmt Flow	0	10	332	8	0	60	267	53	0	15	92	108
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	22.7	25	15.5
HCM LOS	C	C	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	7%	3%	16%	50%
Vol Thru, %	43%	95%	70%	44%
Vol Right, %	50%	2%	14%	6%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	129	321	285	275
LT Vol	9	9	45	137
Through Vol	55	305	200	122
RT Vol	65	7	40	16
Lane Flow Rate	215	349	380	327
Geometry Grp	1	1	1	1
Degree of Util (X)	0.427	0.667	0.714	0.646
Departure Headway (Hd)	7.148	6.881	6.761	7.108
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	501	523	532	507
Service Time	5.22	4.94	4.82	5.17
HCM Lane V/C Ratio	0.429	0.667	0.714	0.645
HCM Control Delay	15.5	22.7	25	22.3
HCM Lane LOS	C	C	C	C
HCM 95th-tile Q	2.1	4.9	5.7	4.5

Thompson Bridge / Enota Convenience
3: Riverside & Enota

existing a.m.

Intersection

Intersection Delay, s/veh

Intersection LOS

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	137	122	16
Peak Hour Factor	0.92	0.84	0.84	0.84
Heavy Vehicles, %	2	1	1	1
Mvmt Flow	0	163	145	19
Number of Lanes	0	0	1	0

Approach SB

Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	22.3
HCM LOS	C

Lane

Thompson Bridge / Enota Convenience

4: GA 11 Bus & South Enota

existing a.m.

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	12	448	114	245	852	171	272	254	34	81	127	86
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	200		0	300		0	400		400
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.970			0.975			0.982				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	1810	0	1787	1819	0	1787	1847	0	1787	1881	1599
Flt Permitted	0.064			0.248			0.226			0.366		
Satd. Flow (perm)	120	1810	0	467	1819	0	425	1847	0	689	1881	1599
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11			13			4				116
Link Speed (mph)		30			30			30				30
Link Distance (ft)		494			509			1007				495
Travel Time (s)		11.2			11.6			22.9				11.3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.80	0.80	0.80	0.88	0.88	0.88
Heavy Vehicles (%)	1%	2%	1%	1%	2%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	13	487	124	266	926	186	340	318	42	92	144	98
Shared Lane Traffic (%)												
Lane Group Flow (vph)	13	611	0	266	1112	0	340	360	0	92	144	98
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100		20	100	20
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94				94
Detector 2 Size(ft)		6			6			6				6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Free
Protected Phases		2		1	6		7	4		3	8	
Permitted Phases	2			6			4			8		Free

Thompson Bridge / Enota Convenience

4: GA 11 Bus & South Enota

existing a.m.

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Detector Phase	2	2		1	6		7	4		3	8	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	20.0	20.0		8.0	20.0		8.0	20.0		8.0	20.0	
Total Split (s)	77.0	77.0		31.0	108.0		32.0	42.0		10.0	20.0	
Total Split (%)	48.1%	48.1%		19.4%	67.5%		20.0%	26.3%		6.3%	12.5%	
Maximum Green (s)	73.0	73.0		27.0	104.0		28.0	38.0		6.0	16.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lag	Lag		Lead			Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	C-Max	C-Max		None	C-Max		None	None		None	None	
Walk Time (s)	5.0	5.0			5.0			5.0			5.0	
Flash Dont Walk (s)	11.0	11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0			0			0			0	
Act Effect Green (s)	85.6	85.6		105.1	105.1		46.9	36.9		21.1	15.1	160.0
Actuated g/C Ratio	0.54	0.54		0.66	0.66		0.29	0.23		0.13	0.09	1.00
v/c Ratio	0.20	0.63		0.61	0.93		0.94	0.84		0.70	0.81	0.06
Control Delay	32.0	30.1		17.7	38.4		84.6	75.8		75.5	102.1	0.1
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	32.0	30.1		17.7	38.4		84.6	75.8		75.5	102.1	0.1
LOS	C	C		B	D		F	E		E	F	A
Approach Delay		30.2			34.4			80.1			64.9	
Approach LOS		C			C			F			E	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.94

Intersection Signal Delay: 47.4

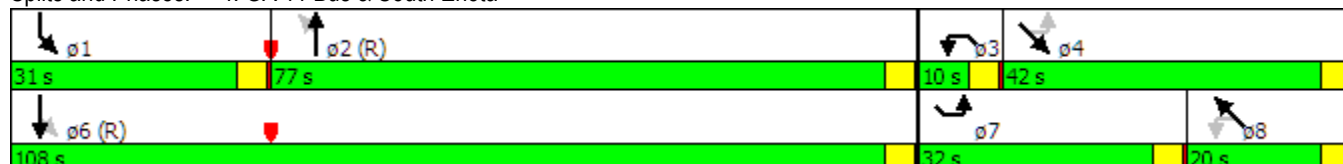
Intersection LOS: D

Intersection Capacity Utilization 93.6%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 4: GA 11 Bus & South Enota



Thompson Bridge / Enota Convenience
5: Green/Thompson Bridge & Holly & GA 11 Bus

existing a.m.

										
Lane Group	EBL	EBR	NBL	NBT	NBR	SBL	SBT	SBR	SWL	SWR
Lane Configurations										
Volume (vph)	0	53	19	683	296	0	1391	132	461	189
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	150		200	0		0	0	0
Storage Lanes	0	1	1		2	0		0	2	0
Taper Length (ft)	25		25			25			25	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.88	1.00	0.95	0.95	0.97	0.95
Frt		0.865			0.850		0.987		0.956	
Flt Protected			0.950						0.966	
Satd. Flow (prot)	0	1644	1805	3539	2814	0	3531	0	3333	0
Flt Permitted			0.086						0.966	
Satd. Flow (perm)	0	1644	163	3539	2814	0	3531	0	3333	0
Right Turn on Red		Yes			Yes			Yes		
Satd. Flow (RTOR)		42			333		12			
Link Speed (mph)	30			30			30		30	
Link Distance (ft)	497			707			3085		595	
Travel Time (s)	11.3			16.1			70.1		13.5	
Peak Hour Factor	0.92	0.83	0.89	0.89	0.89	0.92	0.89	0.89	0.93	0.93
Heavy Vehicles (%)	0%	0%	0%	2%	1%	0%	1%	0%	3%	0%
Adj. Flow (vph)	0	64	21	767	333	0	1563	148	496	203
Shared Lane Traffic (%)										
Lane Group Flow (vph)	0	64	21	767	333	0	1711	0	699	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Right	Left	Left	Right	Left	Right
Median Width(ft)	0			12			12		24	
Link Offset(ft)	0			0			0		0	
Crosswalk Width(ft)	16			16			16		16	
Two way Left Turn Lane										
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15		9	15		9	15	9
Number of Detectors		1	1	2	1		2		1	
Detector Template		Right	Left	Thru	Right		Thru		Left	
Leading Detector (ft)		20	20	100	20		100		20	
Trailing Detector (ft)		0	0	0	0		0		0	
Detector 1 Position(ft)		0	0	0	0		0		0	
Detector 1 Size(ft)		20	20	6	20		6		20	
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	
Detector 1 Channel										
Detector 1 Extend (s)		0.0	0.0	0.0	0.0		0.0		0.0	
Detector 1 Queue (s)		0.0	0.0	0.0	0.0		0.0		0.0	
Detector 1 Delay (s)		0.0	0.0	0.0	0.0		0.0		0.0	
Detector 2 Position(ft)				94			94			
Detector 2 Size(ft)				6			6			
Detector 2 Type				Cl+Ex			Cl+Ex			
Detector 2 Channel										
Detector 2 Extend (s)				0.0			0.0			
Turn Type		Perm	Perm	NA	Perm		NA		Prot	
Protected Phases				2			6		8	
Permitted Phases		4	2		2					

Thompson Bridge / Enota Convenience
5: Green/Thompson Bridge & Holly & GA 11 Bus

existing a.m.



Lane Group	EBL	EBR	NBL	NBT	NBR	SBL	SBT	SBR	SWL	SWR
Detector Phase		4	2	2	2		6		8	
Switch Phase										
Minimum Initial (s)		4.0	4.0	4.0	4.0		4.0		4.0	
Minimum Split (s)		20.0	20.0	20.0	20.0		20.0		20.0	
Total Split (s)		53.0	107.0	107.0	107.0		107.0		53.0	
Total Split (%)		33.1%	66.9%	66.9%	66.9%		66.9%		33.1%	
Maximum Green (s)		49.0	103.0	103.0	103.0		103.0		49.0	
Yellow Time (s)		3.5	3.5	3.5	3.5		3.5		3.5	
All-Red Time (s)		0.5	0.5	0.5	0.5		0.5		0.5	
Lost Time Adjust (s)		0.0	0.0	0.0	0.0		0.0		0.0	
Total Lost Time (s)		4.0	4.0	4.0	4.0		4.0		4.0	
Lead/Lag										
Lead-Lag Optimize?										
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0		3.0	
Recall Mode		None	C-Max	C-Max	C-Max		C-Max		None	
Walk Time (s)		5.0	5.0	5.0	5.0		5.0		5.0	
Flash Dont Walk (s)		11.0	11.0	11.0	11.0		11.0		11.0	
Pedestrian Calls (#/hr)		0	0	0	0		0		0	
Act Effect Green (s)		39.3	112.7	112.7	112.7		112.7		39.3	
Actuated g/C Ratio		0.25	0.70	0.70	0.70		0.70		0.25	
v/c Ratio		0.15	0.18	0.31	0.16		0.69		0.85	
Control Delay		19.2	11.6	7.8	0.3		16.0		68.2	
Queue Delay		0.0	0.0	0.0	0.0		0.2		0.0	
Total Delay		19.2	11.6	7.8	0.3		16.2		68.2	
LOS		B	B	A	A		B		E	
Approach Delay				5.6			16.2		68.2	
Approach LOS				A			B		E	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.85

Intersection Signal Delay: 23.1

Intersection LOS: C

Intersection Capacity Utilization 68.4%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 5: Green/Thompson Bridge & Holly & GA 11 Bus

107 s	53 s
107 s	53 s

Thompson Bridge / Enota Convenience

6: Green & Ridgewood/driveway

existing a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	131	5	22	6	6	2	14	862	11	4	1798	63
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.981			0.981			0.998			0.995	
Flt Protected		0.960			0.979			0.999				
Satd. Flow (prot)	0	1789	0	0	1825	0	0	3531	0	0	3558	0
Flt Permitted		0.775			0.906			0.873			0.954	
Satd. Flow (perm)	0	1445	0	0	1689	0	0	3085	0	0	3394	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			4			2			5	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		511			308			511			707	
Travel Time (s)		11.6			7.0			11.6			16.1	
Peak Hour Factor	0.79	0.79	0.79	0.50	0.50	0.50	0.93	0.93	0.93	0.89	0.89	0.89
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	1%	0%
Adj. Flow (vph)	166	6	28	12	12	4	15	927	12	4	2020	71
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	200	0	0	28	0	0	954	0	0	2095	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	

Thompson Bridge / Enota Convenience

6: Green & Ridgewood/driveway

existing a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	20.0	20.0		20.0	20.0		8.0	20.0		20.0	20.0	
Total Split (s)	34.0	34.0		34.0	34.0		8.0	126.0		118.0	118.0	
Total Split (%)	21.3%	21.3%		21.3%	21.3%		5.0%	78.8%		73.8%	73.8%	
Maximum Green (s)	30.0	30.0		30.0	30.0		4.0	122.0		114.0	114.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		C-Max	C-Max	
Walk Time (s)	5.0	5.0		5.0	5.0			5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0		0	0	
Act Effect Green (s)		25.7			25.7			126.3			126.3	
Actuated g/C Ratio		0.16			0.16			0.79			0.79	
v/c Ratio		0.85			0.10			0.39			0.78	
Control Delay		92.5			49.6			6.0			11.9	
Queue Delay		0.0			0.0			0.0			0.2	
Total Delay		92.5			49.6			6.0			12.0	
LOS		F			D			A			B	
Approach Delay		92.5			49.6			6.0			12.0	
Approach LOS		F			D			A			B	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.85

Intersection Signal Delay: 15.5

Intersection LOS: B

Intersection Capacity Utilization 76.7%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 6: Green & Ridgewood/driveway

								
126 s			34 s			34 s		
								
8 s			118 s			34 s		

Thompson Bridge / Enota Convenience
1: Thompson Bridge & Walmart/Taco Bell

existing p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	71	3	37	14	2	25	57	1973	20	13	1101	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50		0	50		0	200		100	200		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.862			0.861				0.850		0.993	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	1622	0	1787	1620	0	1787	3539	1599	1787	3516	0
Flt Permitted	0.705			0.710			0.205			0.061		
Satd. Flow (perm)	1326	1622	0	1336	1620	0	386	3539	1599	115	3516	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		48			49				34			9
Link Speed (mph)		30			30			30				30
Link Distance (ft)		300			195			1235				500
Travel Time (s)		6.8			4.4			28.1				11.4
Peak Hour Factor	0.77	0.77	0.77	0.51	0.51	0.51	0.93	0.93	0.93	0.96	0.96	0.96
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	2%	1%	1%	2%	1%
Adj. Flow (vph)	92	4	48	27	4	49	61	2122	22	14	1147	56
Shared Lane Traffic (%)												
Lane Group Flow (vph)	92	52	0	27	53	0	61	2122	22	14	1203	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94				94
Detector 2 Size(ft)		6			6			6				6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA	Perm	pm+pt		NA
Protected Phases		4			8		5	2		1		6
Permitted Phases	4			8			2		2	6		

Thompson Bridge / Enota Convenience
1: Thompson Bridge & Walmart/Taco Bell

existing p.m.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		8.0	20.0	20.0	8.0	20.0	
Total Split (s)	25.0	25.0		25.0	25.0		8.0	127.0	127.0	8.0	127.0	
Total Split (%)	15.6%	15.6%		15.6%	15.6%		5.0%	79.4%	79.4%	5.0%	79.4%	
Maximum Green (s)	21.0	21.0		21.0	21.0		4.0	123.0	123.0	4.0	123.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max	C-Max	None	C-Max	
Walk Time (s)	5.0	5.0		5.0	5.0			5.0	5.0		5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0	0		0	
Act Effect Green (s)	15.8	15.8		15.8	15.8		134.6	132.6	132.6	132.7	128.5	
Actuated g/C Ratio	0.10	0.10		0.10	0.10		0.84	0.83	0.83	0.83	0.80	
v/c Ratio	0.70	0.26		0.21	0.26		0.16	0.72	0.02	0.09	0.43	
Control Delay	96.4	20.9		67.9	20.6		3.8	9.5	2.1	3.6	5.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	96.4	20.9		67.9	20.6		3.8	9.5	2.1	3.6	5.7	
LOS	F	C		E	C		A	A	A	A	A	
Approach Delay		69.1			36.5			9.3			5.7	
Approach LOS		E			D			A			A	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.72

Intersection Signal Delay: 11.0

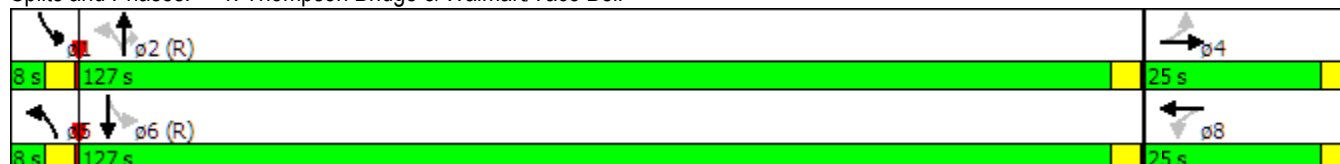
Intersection LOS: B

Intersection Capacity Utilization 71.8%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 1: Thompson Bridge & Walmart/Taco Bell



Thompson Bridge / Enota Convenience

2: Thompson Bridge & Enota

existing p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	161	82	13	55	51	359	17	1573	36	215	942	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		0	200		200	300		0	300		0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.980				0.850		0.997			0.996	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1862	0	1787	1900	1599	1805	3529	0	1787	3527	0
Flt Permitted	0.612			0.684			0.265			0.042		
Satd. Flow (perm)	1163	1862	0	1287	1900	1599	504	3529	0	79	3527	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5				211		2			3	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		160			1380			173			1235	
Travel Time (s)		3.6			31.4			3.9			28.1	
Peak Hour Factor	0.84	0.84	0.84	0.90	0.90	0.90	0.93	0.93	0.93	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	1%	0%	1%	0%	2%	1%	1%	2%	0%
Adj. Flow (vph)	192	98	15	61	57	399	18	1691	39	234	1024	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	192	113	0	61	57	399	18	1730	0	234	1052	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8		8	2			6		

Thompson Bridge / Enota Convenience

2: Thompson Bridge & Enota

existing p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Minimum Split (s)	8.0	20.0		20.0	20.0	20.0	8.0	20.0		8.0	20.0	
Total Split (s)	12.0	47.0		35.0	35.0	35.0	8.0	87.0		26.0	105.0	
Total Split (%)	7.5%	29.4%		21.9%	21.9%	21.9%	5.0%	54.4%		16.3%	65.6%	
Maximum Green (s)	8.0	43.0		31.0	31.0	31.0	4.0	83.0		22.0	101.0	
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5	0.5	0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lead/Lag	Lead			Lag			Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes			Yes			Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	None	C-Max		None	C-Max	
Walk Time (s)		5.0		5.0	5.0	5.0		5.0			5.0	
Flash Dont Walk (s)		11.0		11.0	11.0	11.0		11.0			11.0	
Pedestrian Calls (#/hr)		0		0	0	0		0			0	
Act Effect Green (s)	37.4	37.4		25.4	25.4	25.4	95.9	90.9		114.6	109.4	
Actuated g/C Ratio	0.23	0.23		0.16	0.16	0.16	0.60	0.57		0.72	0.68	
v/c Ratio	0.63	0.26		0.30	0.19	0.93	0.05	0.86		0.88	0.44	
Control Delay	62.4	47.7		61.2	57.5	58.5	9.8	36.5		89.2	9.6	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	62.4	47.7		61.2	57.5	58.5	9.8	36.5		89.2	9.6	
LOS	E	D		E	E	E	A	D		F	A	
Approach Delay		56.9			58.7			36.2			24.1	
Approach LOS		E			E			D			C	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 41 (26%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.93

Intersection Signal Delay: 36.8

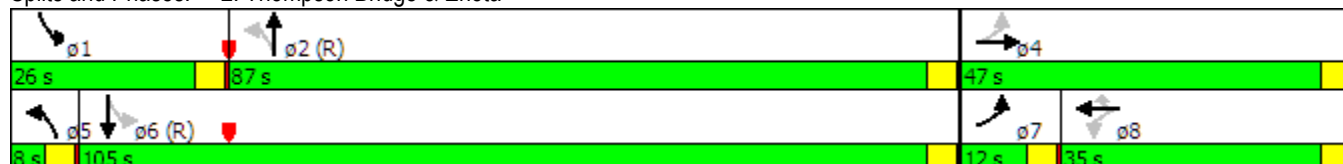
Intersection LOS: D

Intersection Capacity Utilization 85.8%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 2: Thompson Bridge & Enota



Thompson Bridge / Enota Convenience
3: Riverside & Enota

existing p.m.

Intersection												
Intersection Delay, s/veh	58.5											
Intersection LOS	F											
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	67	306	10	0	26	312	109	0	22	342	37
Peak Hour Factor	0.92	0.91	0.91	0.91	0.92	0.92	0.92	0.92	0.92	0.95	0.95	0.95
Heavy Vehicles, %	2	1	1	1	2	1	1	1	2	1	1	1
Mvmt Flow	0	74	336	11	0	28	339	118	0	23	360	39
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	59.9	71.3	59.3
HCM LOS	F	F	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	5%	17%	6%	38%
Vol Thru, %	85%	80%	70%	43%
Vol Right, %	9%	3%	24%	19%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	401	383	447	154
LT Vol	22	67	26	59
Through Vol	342	306	312	66
RT Vol	37	10	109	29
Lane Flow Rate	422	421	486	188
Geometry Grp	1	1	1	1
Degree of Util (X)	0.947	0.949	1	0.482
Departure Headway (Hd)	8.073	8.114	7.969	9.241
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	447	446	452	389
Service Time	6.132	6.172	6.06	7.32
HCM Lane V/C Ratio	0.944	0.944	1.075	0.483
HCM Control Delay	59.3	59.9	71.3	20.7
HCM Lane LOS	F	F	F	C
HCM 95th-tile Q	11.2	11.2	12.9	2.5

Intersection

Intersection Delay, s/veh

Intersection LOS

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	59	66	29
Peak Hour Factor	0.92	0.82	0.82	0.82
Heavy Vehicles, %	2	1	1	1
Mvmt Flow	0	72	80	35
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	20.7
HCM LOS	C

Lane

Thompson Bridge / Enota Convenience

4: GA 11 Bus & South Enota

existing p.m.

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	17	584	48	106	579	250	231	142	28	237	341	354
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	200		0	300		0	400		400
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.989			0.955			0.975				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	1844	0	1787	1784	0	1787	1834	0	1787	1881	1599
Flt Permitted	0.083			0.148			0.105			0.456		
Satd. Flow (perm)	156	1844	0	278	1784	0	198	1834	0	858	1881	1599
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			22			6				396
Link Speed (mph)		30			30			30				30
Link Distance (ft)		494			509			1007				495
Travel Time (s)		11.2			11.6			22.9				11.3
Peak Hour Factor	0.91	0.91	0.91	0.89	0.89	0.89	0.80	0.80	0.80	0.88	0.88	0.88
Heavy Vehicles (%)	1%	2%	1%	1%	2%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	19	642	53	119	651	281	289	178	35	269	388	402
Shared Lane Traffic (%)												
Lane Group Flow (vph)	19	695	0	119	932	0	289	213	0	269	388	402
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100		20	100	20
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94				94
Detector 2 Size(ft)		6			6			6				6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Free
Protected Phases		2		1	6		7	4		3	8	
Permitted Phases	2			6			4			8		Free

Thompson Bridge / Enota Convenience

4: GA 11 Bus & South Enota

existing p.m.

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Detector Phase	2	2		1	6		7	4		3	8	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	20.0	20.0		8.0	20.0		8.0	20.0		8.0	20.0	
Total Split (s)	80.0	80.0		13.0	93.0		26.0	43.0		24.0	41.0	
Total Split (%)	50.0%	50.0%		8.1%	58.1%		16.3%	26.9%		15.0%	25.6%	
Maximum Green (s)	76.0	76.0		9.0	89.0		22.0	39.0		20.0	37.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lag	Lag		Lead			Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	C-Max	C-Max		None	C-Max		None	None		None	None	
Walk Time (s)	5.0	5.0			5.0			5.0			5.0	
Flash Dont Walk (s)	11.0	11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0			0			0			0	
Act Effect Green (s)	77.8	77.8		90.6	90.6		59.9	38.2		54.7	35.4	160.0
Actuated g/C Ratio	0.49	0.49		0.57	0.57		0.37	0.24		0.34	0.22	1.00
v/c Ratio	0.25	0.77		0.50	0.91		0.99	0.48		0.67	0.93	0.25
Control Delay	36.1	41.4		23.9	45.3		97.1	54.9		44.9	90.6	0.4
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	36.1	41.4		23.9	45.3		97.1	54.9		44.9	90.6	0.4
LOS	D	D		C	D		F	D		D	F	A
Approach Delay		41.2			42.9			79.2			44.7	
Approach LOS		D			D			E			D	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.99

Intersection Signal Delay: 48.6

Intersection LOS: D

Intersection Capacity Utilization 93.1%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 4: GA 11 Bus & South Enota

							
13 s	80 s			24 s	43 s		
							
93 s				26 s	41 s		

Thompson Bridge / Enota Convenience
5: Green/Thompson Bridge & Holly & GA 11 Bus

existing p.m.

										
Lane Group	EBL	EBR	NBL	NBT	NBR	SBL	SBT	SBR	SWL	SWR
Lane Configurations										
Volume (vph)	0	35	46	1412	653	0	812	125	387	218
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	150		200	0		0	0	0
Storage Lanes	0	1	1		2	0		0	2	0
Taper Length (ft)	25		25			25			25	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.88	1.00	0.95	0.95	0.97	0.95
Frt		0.865			0.850		0.980		0.946	
Flt Protected			0.950						0.969	
Satd. Flow (prot)	0	1644	1805	3574	2814	0	3507	0	3357	0
Flt Permitted			0.225						0.969	
Satd. Flow (perm)	0	1644	428	3574	2814	0	3507	0	3357	0
Right Turn on Red		Yes			Yes			Yes		
Satd. Flow (RTOR)		156			482		21			
Link Speed (mph)	30			30			30		30	
Link Distance (ft)	497			707			3085		595	
Travel Time (s)	11.3			16.1			70.1		13.5	
Peak Hour Factor	0.92	0.58	0.93	0.93	0.93	0.92	0.87	0.87	0.88	0.88
Heavy Vehicles (%)	0%	0%	0%	1%	1%	0%	1%	0%	1%	0%
Adj. Flow (vph)	0	60	49	1518	702	0	933	144	440	248
Shared Lane Traffic (%)										
Lane Group Flow (vph)	0	60	49	1518	702	0	1077	0	688	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Right	Left	Left	Right	Left	Right
Median Width(ft)	0			12			12		24	
Link Offset(ft)	0			0			0		0	
Crosswalk Width(ft)	16			16			16		16	
Two way Left Turn Lane										
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15		9	15		9	15	9
Number of Detectors		1	1	2	1		2		1	
Detector Template		Right	Left	Thru	Right		Thru		Left	
Leading Detector (ft)		20	20	100	20		100		20	
Trailing Detector (ft)		0	0	0	0		0		0	
Detector 1 Position(ft)		0	0	0	0		0		0	
Detector 1 Size(ft)		20	20	6	20		6		20	
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	
Detector 1 Channel										
Detector 1 Extend (s)		0.0	0.0	0.0	0.0		0.0		0.0	
Detector 1 Queue (s)		0.0	0.0	0.0	0.0		0.0		0.0	
Detector 1 Delay (s)		0.0	0.0	0.0	0.0		0.0		0.0	
Detector 2 Position(ft)				94			94			
Detector 2 Size(ft)				6			6			
Detector 2 Type				Cl+Ex			Cl+Ex			
Detector 2 Channel										
Detector 2 Extend (s)				0.0			0.0			
Turn Type		Perm	Perm	NA	Perm		NA		Prot	
Protected Phases				2			6		8	
Permitted Phases		4	2		2					

Thompson Bridge / Enota Convenience
5: Green/Thompson Bridge & Holly & GA 11 Bus

existing p.m.



Lane Group	EBL	EBR	NBL	NBT	NBR	SBL	SBT	SBR	SWL	SWR
Detector Phase		4	2	2	2		6		8	
Switch Phase										
Minimum Initial (s)		4.0	4.0	4.0	4.0		4.0		4.0	
Minimum Split (s)		20.0	20.0	20.0	20.0		20.0		20.0	
Total Split (s)		55.0	105.0	105.0	105.0		105.0		55.0	
Total Split (%)		34.4%	65.6%	65.6%	65.6%		65.6%		34.4%	
Maximum Green (s)		51.0	101.0	101.0	101.0		101.0		51.0	
Yellow Time (s)		3.5	3.5	3.5	3.5		3.5		3.5	
All-Red Time (s)		0.5	0.5	0.5	0.5		0.5		0.5	
Lost Time Adjust (s)		0.0	0.0	0.0	0.0		0.0		0.0	
Total Lost Time (s)		4.0	4.0	4.0	4.0		4.0		4.0	
Lead/Lag										
Lead-Lag Optimize?										
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0		3.0	
Recall Mode		None	C-Max	C-Max	C-Max		C-Max		None	
Walk Time (s)		5.0	5.0	5.0	5.0		5.0		5.0	
Flash Dont Walk (s)		11.0	11.0	11.0	11.0		11.0		11.0	
Pedestrian Calls (#/hr)		0	0	0	0		0		0	
Act Effect Green (s)		38.7	113.3	113.3	113.3		113.3		38.7	
Actuated g/C Ratio		0.24	0.71	0.71	0.71		0.71		0.24	
v/c Ratio		0.12	0.16	0.60	0.33		0.43		0.85	
Control Delay		0.5	7.4	7.8	1.2		10.8		68.1	
Queue Delay		0.0	0.0	0.6	0.0		0.0		0.0	
Total Delay		0.5	7.4	8.4	1.2		10.8		68.1	
LOS		A	A	A	A		B		E	
Approach Delay				6.1			10.8		68.1	
Approach LOS				A			B		E	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green

Natural Cycle: 55

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.85

Intersection Signal Delay: 17.7

Intersection LOS: B

Intersection Capacity Utilization 63.6%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 5: Green/Thompson Bridge & Holly & GA 11 Bus

ø2 (R)	ø4
105 s	55 s
ø6 (R)	ø8
105 s	55 s

Thompson Bridge / Enota Convenience

6: Green & Ridgewood/driveway

existing p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	252	8	20	11	14	5	23	1849	10	0	1097	73
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.990			0.979			0.999			0.991	
Flt Protected		0.957			0.982			0.999				
Satd. Flow (prot)	0	1800	0	0	1827	0	0	3568	0	0	3544	0
Flt Permitted		0.729			0.894			0.911				
Satd. Flow (perm)	0	1371	0	0	1663	0	0	3253	0	0	3544	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2			6			1			8	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		511			308			511			707	
Travel Time (s)		11.6			7.0			11.6			16.1	
Peak Hour Factor	0.91	0.91	0.91	0.68	0.68	0.68	0.92	0.92	0.92	0.89	0.89	0.89
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	1%	0%
Adj. Flow (vph)	277	9	22	16	21	7	25	2010	11	0	1233	82
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	308	0	0	44	0	0	2046	0	0	1315	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA			NA	
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	

Thompson Bridge / Enota Convenience

6: Green & Ridgewood/driveway

existing p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	20.0	20.0		20.0	20.0		8.0	20.0		20.0	20.0	
Total Split (s)	45.0	45.0		45.0	45.0		8.0	115.0		107.0	107.0	
Total Split (%)	28.1%	28.1%		28.1%	28.1%		5.0%	71.9%		66.9%	66.9%	
Maximum Green (s)	41.0	41.0		41.0	41.0		4.0	111.0		103.0	103.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		C-Max	C-Max	
Walk Time (s)	5.0	5.0		5.0	5.0			5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0		0	0	
Act Effect Green (s)		38.4			38.4			113.6			113.6	
Actuated g/C Ratio		0.24			0.24			0.71			0.71	
v/c Ratio		0.93			0.11			0.89			0.52	
Control Delay		93.6			40.7			24.9			13.1	
Queue Delay		0.0			0.0			0.0			0.2	
Total Delay		93.6			40.7			24.9			13.3	
LOS		F			D			C			B	
Approach Delay		93.6			40.7			24.9			13.3	
Approach LOS		F			D			C			B	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.93

Intersection Signal Delay: 26.7

Intersection LOS: C

Intersection Capacity Utilization 96.6%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 6: Green & Ridgewood/driveway

								
115 s			45 s			45 s		
								
8 s			107 s			45 s		

Appendix D

Future Intersection Operational Analysis

Thompson Bridge / Enota Convenience
1: Thompson Bridge & Walmart/Taco Bell

future a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	40	0	68	3	1	4	55	939	1	6	1995	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50		0	50		0	200		100	200		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.850			0.871				0.850		0.994	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	1599	0	1787	1639	0	1787	3539	1599	1787	3519	0
Flt Permitted	0.753			0.511			0.042			0.285		
Satd. Flow (perm)	1417	1599	0	961	1639	0	79	3539	1599	536	3519	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		63			6				34			8
Link Speed (mph)		30			30			30				30
Link Distance (ft)		300			195			1235				500
Travel Time (s)		6.8			4.4			28.1				11.4
Peak Hour Factor	0.85	0.85	0.85	0.67	0.67	0.67	0.94	0.94	0.94	0.90	0.90	0.90
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	2%	1%	1%	2%	1%
Adj. Flow (vph)	47	0	80	4	1	6	59	999	1	7	2217	94
Shared Lane Traffic (%)												
Lane Group Flow (vph)	47	80	0	4	7	0	59	999	1	7	2311	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94				94
Detector 2 Size(ft)		6			6			6				6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA	Perm	pm+pt		NA
Protected Phases		4			8		5	2		1		6
Permitted Phases	4			8			2		2	6		

Thompson Bridge / Enota Convenience
1: Thompson Bridge & Walmart/Taco Bell

future a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		8.0	20.0	20.0	8.0	20.0	
Total Split (s)	20.0	20.0		20.0	20.0		13.0	132.0	132.0	8.0	127.0	
Total Split (%)	12.5%	12.5%		12.5%	12.5%		8.1%	82.5%	82.5%	5.0%	79.4%	
Maximum Green (s)	16.0	16.0		16.0	16.0		9.0	128.0	128.0	4.0	123.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max	C-Max	None	C-Max	
Walk Time (s)	5.0	5.0		5.0	5.0			5.0	5.0		5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0	0		0	
Act Effect Green (s)	10.7	10.7		10.7	10.7		141.3	139.6	139.6	136.4	132.2	
Actuated g/C Ratio	0.07	0.07		0.07	0.07		0.88	0.87	0.87	0.85	0.83	
v/c Ratio	0.50	0.48		0.06	0.06		0.41	0.32	0.00	0.01	0.79	
Control Delay	88.8	31.8		69.3	40.6		21.7	3.0	0.0	1.7	11.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	88.8	31.8		69.3	40.6		21.7	3.0	0.0	1.7	11.1	
LOS	F	C		E	D		C	A	A	A	B	
Approach Delay		52.9			51.0			4.0			11.1	
Approach LOS		D			D			A			B	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.79

Intersection Signal Delay: 10.6

Intersection LOS: B

Intersection Capacity Utilization 73.4%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 1: Thompson Bridge & Walmart/Taco Bell

														
8 s	132 s	20 s	13 s	127 s	20 s	13 s	127 s	20 s	13 s	127 s	20 s	13 s	127 s	20 s

Thompson Bridge / Enota Convenience

2: Thompson Bridge & Enota

future a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	72	62	31	53	33	177	18	779	28	332	1706	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		0	200		200	300		0	300		0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.949				0.850		0.995			0.997	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1803	0	1787	1900	1599	1805	3523	0	1787	3530	0
Flt Permitted	0.557			0.694			0.076			0.282		
Satd. Flow (perm)	1058	1803	0	1306	1900	1599	144	3523	0	530	3530	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		14				199		3			3	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		160			1380			173			1235	
Travel Time (s)		3.6			31.4			3.9			28.1	
Peak Hour Factor	0.95	0.95	0.95	0.89	0.89	0.89	0.94	0.94	0.94	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	1%	0%	1%	0%	2%	1%	1%	2%	0%
Adj. Flow (vph)	76	65	33	60	37	199	19	829	30	369	1896	38
Shared Lane Traffic (%)												
Lane Group Flow (vph)	76	98	0	60	37	199	19	859	0	369	1934	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8		8	2			6		

Thompson Bridge / Enota Convenience

2: Thompson Bridge & Enota

future a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Minimum Split (s)	8.0	20.0		20.0	20.0	20.0	8.0	20.0		8.0	20.0	
Total Split (s)	10.0	35.0		25.0	25.0	25.0	8.0	84.0		41.0	117.0	
Total Split (%)	6.3%	21.9%		15.6%	15.6%	15.6%	5.0%	52.5%		25.6%	73.1%	
Maximum Green (s)	6.0	31.0		21.0	21.0	21.0	4.0	80.0		37.0	113.0	
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5	0.5	0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lead/Lag	Lead			Lag			Lead		Lag	Lead		Lag
Lead-Lag Optimize?	Yes			Yes			Yes		Yes	Yes		Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	None	C-Max		None	C-Max	
Walk Time (s)		5.0		5.0	5.0	5.0		5.0			5.0	
Flash Dont Walk (s)		11.0		11.0	11.0	11.0		11.0			11.0	
Pedestrian Calls (#/hr)		0		0	0	0		0			0	
Act Effect Green (s)	22.7	22.7		12.7	12.7	12.7	116.3	110.5		129.3	123.3	
Actuated g/C Ratio	0.14	0.14		0.08	0.08	0.08	0.73	0.69		0.81	0.77	
v/c Ratio	0.43	0.37		0.58	0.25	0.64	0.12	0.35		0.68	0.71	
Control Delay	68.1	56.0		91.9	71.2	18.0	5.6	9.2		12.6	7.4	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.1	
Total Delay	68.1	56.0		91.9	71.2	18.0	5.6	9.2		12.6	7.4	
LOS	E	E		F	E	B	A	A		B	A	
Approach Delay		61.3			39.6			9.1			8.3	
Approach LOS		E			D			A			A	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 41 (26%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.71

Intersection Signal Delay: 13.5

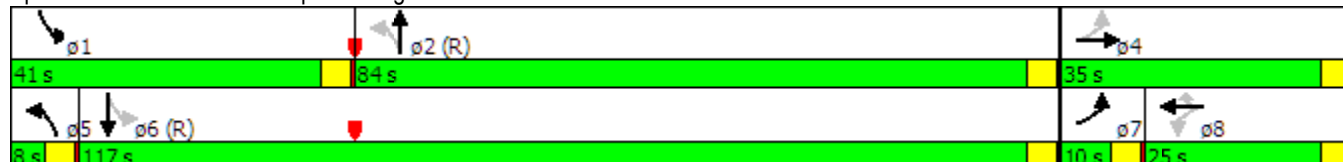
Intersection LOS: B

Intersection Capacity Utilization 72.2%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 2: Thompson Bridge & Enota



Thompson Bridge / Enota Convenience
3: Riverside & Enota

future a.m.

Intersection												
Intersection Delay, s/veh	32.1											
Intersection LOS	D											
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	12	329	8	0	48	218	42	0	11	58	69
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.75	0.75	0.75	0.92	0.60	0.60	0.60
Heavy Vehicles, %	2	1	1	1	2	1	1	1	2	1	1	1
Mvmt Flow	0	13	358	9	0	64	291	56	0	18	97	115
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	33.7	39	19
HCM LOS	D	E	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	8%	3%	16%	49%
Vol Thru, %	42%	94%	71%	44%
Vol Right, %	50%	2%	14%	6%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	138	349	308	293
LT Vol	11	12	48	145
Through Vol	58	329	218	129
RT Vol	69	8	42	19
Lane Flow Rate	230	379	411	349
Geometry Grp	1	1	1	1
Degree of Util (X)	0.507	0.792	0.843	0.752
Departure Headway (Hd)	7.928	7.517	7.386	7.762
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	453	482	489	464
Service Time	6.01	5.588	5.453	5.831
HCM Lane V/C Ratio	0.508	0.786	0.84	0.752
HCM Control Delay	19	33.7	39	30.9
HCM Lane LOS	C	D	E	D
HCM 95th-tile Q	2.8	7.2	8.5	6.3

Intersection

Intersection Delay, s/veh

Intersection LOS

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	145	129	19
Peak Hour Factor	0.92	0.84	0.84	0.84
Heavy Vehicles, %	2	1	1	1
Mvmt Flow	0	173	154	23
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	30.9
HCM LOS	D

Lane

Thompson Bridge / Enota Convenience

4: GA 11 Bus & South Enota

future a.m.

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	14	475	121	160	904	183	291	271	37	86	138	91
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	200		0	300		0	400		400
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.969			0.975			0.982				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	1809	0	1787	1819	0	1787	1847	0	1787	1881	1599
Flt Permitted	0.044			0.251			0.205			0.281		
Satd. Flow (perm)	83	1809	0	472	1819	0	386	1847	0	529	1881	1599
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		13			13			4				116
Link Speed (mph)		30			30			30				30
Link Distance (ft)		494			509			1007				495
Travel Time (s)		11.2			11.6			22.9				11.3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.80	0.80	0.80	0.88	0.88	0.88
Heavy Vehicles (%)	1%	2%	1%	1%	2%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	15	516	132	174	983	199	364	339	46	98	157	103
Shared Lane Traffic (%)												
Lane Group Flow (vph)	15	648	0	174	1182	0	364	385	0	98	157	103
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100		20	100	20
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94				94
Detector 2 Size(ft)		6			6			6				6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Free
Protected Phases		2		1	6		7	4		3	8	
Permitted Phases	2			6			4			8		Free

Thompson Bridge / Enota Convenience

4: GA 11 Bus & South Enota

future a.m.

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Detector Phase	2	2		1	6		7	4		3	8	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	20.0	20.0		8.0	20.0		8.0	20.0		8.0	20.0	
Total Split (s)	95.0	95.0		14.0	109.0		31.0	42.0		9.0	20.0	
Total Split (%)	59.4%	59.4%		8.8%	68.1%		19.4%	26.3%		5.6%	12.5%	
Maximum Green (s)	91.0	91.0		10.0	105.0		27.0	38.0		5.0	16.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lag	Lag		Lead			Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	C-Max	C-Max		None	C-Max		None	None		None	None	
Walk Time (s)	5.0	5.0			5.0			5.0			5.0	
Flash Dont Walk (s)	11.0	11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0			0			0			0	
Act Effect Green (s)	91.8	91.8		105.5	105.5		46.5	37.5		20.5	15.5	160.0
Actuated g/C Ratio	0.57	0.57		0.66	0.66		0.29	0.23		0.13	0.10	1.00
v/c Ratio	0.32	0.62		0.45	0.98		1.05	0.89		0.92	0.86	0.06
Control Delay	40.2	25.5		14.2	48.3		109.2	80.6		119.3	108.8	0.1
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	40.2	25.5		14.2	48.3		109.2	80.6		119.3	108.8	0.1
LOS	D	C		B	D		F	F		F	F	A
Approach Delay		25.8			43.9			94.5			80.4	
Approach LOS		C			D			F			F	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 120

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.05

Intersection Signal Delay: 56.4

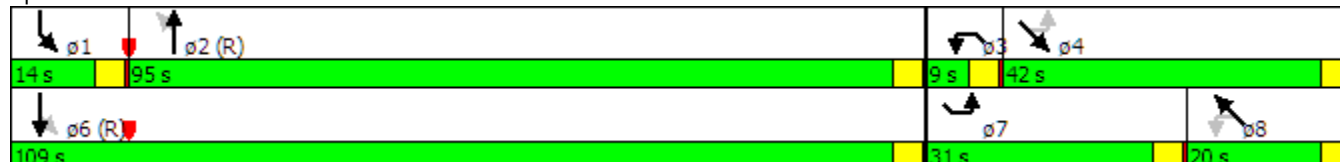
Intersection LOS: E

Intersection Capacity Utilization 98.7%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 4: GA 11 Bus & South Enota



Thompson Bridge / Enota Convenience
5: Green/Thompson Bridge & Holly & GA 11 Bus

future a.m.

										
Lane Group	EBL	EBR	NBL	NBT	NBR	SBL	SBT	SBR	SWL	SWR
Lane Configurations										
Volume (vph)	0	56	20	734	314	0	1485	140	489	201
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	150		200	0		0	0	0
Storage Lanes	0	1	1		2	0		0	2	0
Taper Length (ft)	25		25			25			25	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.88	1.00	0.95	0.95	0.97	0.95
Frt		0.865			0.850		0.987		0.956	
Flt Protected			0.950						0.966	
Satd. Flow (prot)	0	1644	1805	3539	2814	0	3531	0	3333	0
Flt Permitted			0.066						0.966	
Satd. Flow (perm)	0	1644	125	3539	2814	0	3531	0	3333	0
Right Turn on Red		Yes			Yes			Yes		
Satd. Flow (RTOR)		34			353		13			
Link Speed (mph)	30			30			30		30	
Link Distance (ft)	497			707			3085		595	
Travel Time (s)	11.3			16.1			70.1		13.5	
Peak Hour Factor	0.92	0.83	0.89	0.89	0.89	0.92	0.89	0.89	0.93	0.93
Heavy Vehicles (%)	0%	0%	0%	2%	1%	0%	1%	0%	3%	0%
Adj. Flow (vph)	0	67	22	825	353	0	1669	157	526	216
Shared Lane Traffic (%)										
Lane Group Flow (vph)	0	67	22	825	353	0	1826	0	742	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Right	Left	Left	Right	Left	Right
Median Width(ft)	0			12			12		24	
Link Offset(ft)	0			0			0		0	
Crosswalk Width(ft)	16			16			16		16	
Two way Left Turn Lane										
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15		9	15		9	15	9
Number of Detectors		1	1	2	1		2		1	
Detector Template		Right	Left	Thru	Right		Thru		Left	
Leading Detector (ft)		20	20	100	20		100		20	
Trailing Detector (ft)		0	0	0	0		0		0	
Detector 1 Position(ft)		0	0	0	0		0		0	
Detector 1 Size(ft)		20	20	6	20		6		20	
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	
Detector 1 Channel										
Detector 1 Extend (s)		0.0	0.0	0.0	0.0		0.0		0.0	
Detector 1 Queue (s)		0.0	0.0	0.0	0.0		0.0		0.0	
Detector 1 Delay (s)		0.0	0.0	0.0	0.0		0.0		0.0	
Detector 2 Position(ft)				94			94			
Detector 2 Size(ft)				6			6			
Detector 2 Type				Cl+Ex			Cl+Ex			
Detector 2 Channel										
Detector 2 Extend (s)				0.0			0.0			
Turn Type		Perm	Perm	NA	Perm		NA		Prot	
Protected Phases				2			6		8	
Permitted Phases		4	2		2					

Thompson Bridge / Enota Convenience
5: Green/Thompson Bridge & Holly & GA 11 Bus

future a.m.



Lane Group	EBL	EBR	NBL	NBT	NBR	SBL	SBT	SBR	SWL	SWR
Detector Phase		4	2	2	2		6		8	
Switch Phase										
Minimum Initial (s)		4.0	4.0	4.0	4.0		4.0		4.0	
Minimum Split (s)		20.0	20.0	20.0	20.0		20.0		20.0	
Total Split (s)		52.0	108.0	108.0	108.0		108.0		52.0	
Total Split (%)		32.5%	67.5%	67.5%	67.5%		67.5%		32.5%	
Maximum Green (s)		48.0	104.0	104.0	104.0		104.0		48.0	
Yellow Time (s)		3.5	3.5	3.5	3.5		3.5		3.5	
All-Red Time (s)		0.5	0.5	0.5	0.5		0.5		0.5	
Lost Time Adjust (s)		0.0	0.0	0.0	0.0		0.0		0.0	
Total Lost Time (s)		4.0	4.0	4.0	4.0		4.0		4.0	
Lead/Lag										
Lead-Lag Optimize?										
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0		3.0	
Recall Mode		None	C-Max	C-Max	C-Max		C-Max		None	
Walk Time (s)		5.0	5.0	5.0	5.0		5.0		5.0	
Flash Dont Walk (s)		11.0	11.0	11.0	11.0		11.0		11.0	
Pedestrian Calls (#/hr)		0	0	0	0		0		0	
Act Effect Green (s)		41.2	110.8	110.8	110.8		110.8		41.2	
Actuated g/C Ratio		0.26	0.69	0.69	0.69		0.69		0.26	
v/c Ratio		0.15	0.26	0.34	0.17		0.75		0.87	
Control Delay		23.9	17.2	8.5	0.3		25.9		67.8	
Queue Delay		0.0	0.0	0.0	0.0		0.4		0.0	
Total Delay		23.9	17.2	8.5	0.3		26.3		67.8	
LOS		C	B	A	A		C		E	
Approach Delay				6.2			26.3		67.8	
Approach LOS				A			C		E	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.87

Intersection Signal Delay: 28.0

Intersection LOS: C

Intersection Capacity Utilization 72.4%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 5: Green/Thompson Bridge & Holly & GA 11 Bus

 p2 (R)	 p4
108 s	52 s
 p6 (R)	 p8
108 s	52 s

Thompson Bridge / Enota Convenience

6: Green & Ridgewood/driveway

future a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	141	5	23	6	6	2	15	939	12	4	1915	69
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.982			0.981			0.998			0.995	
Flt Protected		0.960			0.979			0.999				
Satd. Flow (prot)	0	1791	0	0	1825	0	0	3531	0	0	3558	0
Flt Permitted		0.774			0.910			0.859			0.953	
Satd. Flow (perm)	0	1444	0	0	1696	0	0	3036	0	0	3390	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			4			2			6	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		511			308			511			707	
Travel Time (s)		11.6			7.0			11.6			16.1	
Peak Hour Factor	0.79	0.79	0.79	0.50	0.50	0.50	0.93	0.93	0.93	0.89	0.89	0.89
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	1%	0%
Adj. Flow (vph)	178	6	29	12	12	4	16	1010	13	4	2152	78
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	213	0	0	28	0	0	1039	0	0	2234	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	

Thompson Bridge / Enota Convenience

6: Green & Ridgewood/driveway

future a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	20.0	20.0		20.0	20.0		8.0	20.0		20.0	20.0	
Total Split (s)	32.0	32.0		32.0	32.0		8.0	128.0		120.0	120.0	
Total Split (%)	20.0%	20.0%		20.0%	20.0%		5.0%	80.0%		75.0%	75.0%	
Maximum Green (s)	28.0	28.0		28.0	28.0		4.0	124.0		116.0	116.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		C-Max	C-Max	
Walk Time (s)	5.0	5.0		5.0	5.0			5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0		0	0	
Act Effect Green (s)		26.0			26.0			126.0			126.0	
Actuated g/C Ratio		0.16			0.16			0.79			0.79	
v/c Ratio		0.89			0.10			0.43			0.84	
Control Delay		100.1			50.4			6.3			13.8	
Queue Delay		0.0			0.0			0.0			0.3	
Total Delay		100.1			50.4			6.3			14.1	
LOS		F			D			A			B	
Approach Delay		100.1			50.4			6.3			14.1	
Approach LOS		F			D			A			B	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.89

Intersection Signal Delay: 17.3

Intersection LOS: B

Intersection Capacity Utilization 80.7%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 6: Green & Ridgewood/driveway

											
128 s			32 s								
8 s			120 s								

Thompson Bridge / Enota Convenience
7: Thompson Bridge

future a.m.

Intersection						
Int Delay, s/veh	0.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	0	35	21	812	1754	35
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	0	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	94	94	90	90
Heavy Vehicles, %	0	0	0	2	2	0
Mvmt Flow	0	41	22	864	1949	39
Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2445	994	1988	0	-	0
Stage 1	1968	-	-	-	-	-
Stage 2	477	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	27	247	294	-	-	-
Stage 1	97	-	-	-	-	-
Stage 2	596	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	25	247	294	-	-	-
Mov Cap-2 Maneuver	25	-	-	-	-	-
Stage 1	97	-	-	-	-	-
Stage 2	551	-	-	-	-	-
Approach	EB		NB		SB	
HCM Control Delay, s	22.5		0.5		0	
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	294	-	247	-	-	
HCM Lane V/C Ratio	0.076	-	0.167	-	-	
HCM Control Delay (s)	18.2	-	22.5	-	-	
HCM Lane LOS	C	-	C	-	-	
HCM 95th %tile Q(veh)	0.2	-	0.6	-	-	

Intersection

Int Delay, s/veh 1.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	139	5	6	79	5	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	89	89	80	80
Heavy Vehicles, %	1	0	0	1	0	0
Mvmt Flow	146	5	7	89	6	32

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	152	0	251	149
Stage 1	-	-	-	-	149	-
Stage 2	-	-	-	-	102	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1441	-	742	903
Stage 1	-	-	-	-	884	-
Stage 2	-	-	-	-	927	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1441	-	738	903
Mov Cap-2 Maneuver	-	-	-	-	738	-
Stage 1	-	-	-	-	884	-
Stage 2	-	-	-	-	922	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	9.3
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	872	-	-	1441	-
HCM Lane V/C Ratio	0.044	-	-	0.005	-
HCM Control Delay (s)	9.3	-	-	7.5	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Thompson Bridge / Enota Convenience
1: Thompson Bridge & Walmart/Taco Bell

future p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	75	3	39	15	2	27	60	2097	21	14	1172	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50		0	50		0	200		100	200		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.861			0.861				0.850		0.993	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	1620	0	1787	1620	0	1787	3539	1599	1787	3516	0
Flt Permitted	0.689			0.697			0.187			0.048		
Satd. Flow (perm)	1296	1620	0	1311	1620	0	352	3539	1599	90	3516	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		51			53				34		10	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		300			195			1235			500	
Travel Time (s)		6.8			4.4			28.1			11.4	
Peak Hour Factor	0.77	0.77	0.77	0.51	0.51	0.51	0.93	0.93	0.93	0.96	0.96	0.96
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	2%	1%	1%	2%	1%
Adj. Flow (vph)	97	4	51	29	4	53	65	2255	23	15	1221	59
Shared Lane Traffic (%)												
Lane Group Flow (vph)	97	55	0	29	57	0	65	2255	23	15	1280	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		

Thompson Bridge / Enota Convenience
1: Thompson Bridge & Walmart/Taco Bell

future p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		8.0	20.0	20.0	8.0	20.0	
Total Split (s)	24.0	24.0		24.0	24.0		8.0	128.0	128.0	8.0	128.0	
Total Split (%)	15.0%	15.0%		15.0%	15.0%		5.0%	80.0%	80.0%	5.0%	80.0%	
Maximum Green (s)	20.0	20.0		20.0	20.0		4.0	124.0	124.0	4.0	124.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max	C-Max	None	C-Max	
Walk Time (s)	5.0	5.0		5.0	5.0			5.0	5.0		5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0	0		0	
Act Effect Green (s)	16.2	16.2		16.2	16.2		134.2	132.6	132.6	132.3	128.5	
Actuated g/C Ratio	0.10	0.10		0.10	0.10		0.84	0.83	0.83	0.83	0.80	
v/c Ratio	0.74	0.26		0.22	0.27		0.19	0.77	0.02	0.12	0.45	
Control Delay	100.1	20.2		68.3	20.1		3.7	10.5	1.9	4.4	5.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.1	0.0	0.0	0.0	
Total Delay	100.1	20.2		68.3	20.1		3.7	10.5	1.9	4.4	5.9	
LOS	F	C		E	C		A	B	A	A	A	
Approach Delay		71.2			36.4			10.2			5.9	
Approach LOS		E			D			B			A	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.77

Intersection Signal Delay: 11.8

Intersection LOS: B

Intersection Capacity Utilization 75.5%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 1: Thompson Bridge & Walmart/Taco Bell

														
8 s	128 s	24 s	8 s	128 s	24 s	8 s	128 s	24 s	8 s	128 s	24 s	8 s	128 s	24 s
														
8 s	128 s	24 s	8 s	128 s	24 s	8 s	128 s	24 s	8 s	128 s	24 s	8 s	128 s	24 s

Thompson Bridge / Enota Convenience

2: Thompson Bridge & Enota

future p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	202	96	14	63	58	381	18	1669	38	228	1003	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		0	200		200	300		0	300		0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.981				0.850		0.997			0.996	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1864	0	1787	1900	1599	1805	3529	0	1787	3527	0
Flt Permitted	0.612			0.673			0.235			0.044		
Satd. Flow (perm)	1163	1864	0	1266	1900	1599	446	3529	0	83	3527	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5				173		2			3	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		160			1380			173			1235	
Travel Time (s)		3.6			31.4			3.9			28.1	
Peak Hour Factor	0.84	0.84	0.84	0.90	0.90	0.90	0.93	0.93	0.93	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	1%	0%	1%	0%	2%	1%	1%	2%	0%
Adj. Flow (vph)	240	114	17	70	64	423	19	1795	41	248	1090	30
Shared Lane Traffic (%)												
Lane Group Flow (vph)	240	131	0	70	64	423	19	1836	0	248	1120	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8		8	2			6		

Thompson Bridge / Enota Convenience

2: Thompson Bridge & Enota

future p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Minimum Split (s)	8.0	20.0		20.0	20.0	20.0	8.0	20.0		8.0	20.0	
Total Split (s)	12.0	46.0		34.0	34.0	34.0	8.0	91.0		23.0	106.0	
Total Split (%)	7.5%	28.8%		21.3%	21.3%	21.3%	5.0%	56.9%		14.4%	66.3%	
Maximum Green (s)	8.0	42.0		30.0	30.0	30.0	4.0	87.0		19.0	102.0	
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5	0.5	0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lead/Lag	Lead			Lag	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	None	C-Max		None	C-Max	
Walk Time (s)		5.0		5.0	5.0	5.0		5.0			5.0	
Flash Dont Walk (s)		11.0		11.0	11.0	11.0		11.0			11.0	
Pedestrian Calls (#/hr)		0		0	0	0		0			0	
Act Effect Green (s)	41.3	41.3		29.3	29.3	29.3	92.1	87.8		110.7	105.9	
Actuated g/C Ratio	0.26	0.26		0.18	0.18	0.18	0.58	0.55		0.69	0.66	
v/c Ratio	0.72	0.27		0.30	0.18	0.98	0.06	0.95		0.96	0.48	
Control Delay	66.1	47.0		60.3	56.5	75.0	10.4	38.2		100.1	10.6	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	66.1	47.0		60.3	56.5	75.0	10.4	38.2		100.1	10.6	
LOS	E	D		E	E	E	B	D		F	B	
Approach Delay		59.4			71.0			37.9			26.9	
Approach LOS		E			E			D			C	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 41 (26%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.98

Intersection Signal Delay: 40.6

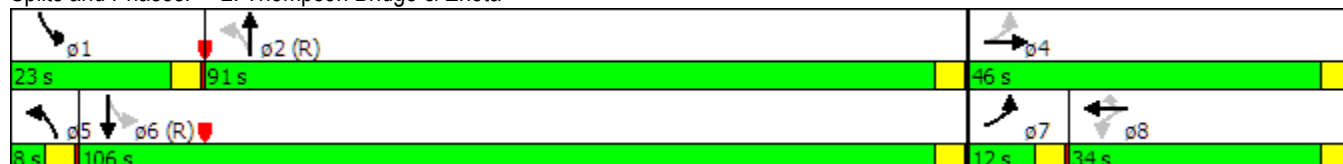
Intersection LOS: D

Intersection Capacity Utilization 92.1%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 2: Thompson Bridge & Enota



Thompson Bridge / Enota Convenience
3: Riverside & Enota

future p.m.

Intersection												
Intersection Delay, s/veh	66.5											
Intersection LOS	F											
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	73	331	12	0	28	337	116	0	24	363	39
Peak Hour Factor	0.92	0.91	0.91	0.91	0.92	0.92	0.92	0.92	0.92	0.95	0.95	0.95
Heavy Vehicles, %	2	1	1	1	2	1	1	1	2	1	1	1
Mvmt Flow	0	80	364	13	0	30	366	126	0	25	382	41
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	73	72.3	72.7
HCM LOS	F	F	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	6%	18%	6%	38%
Vol Thru, %	85%	80%	70%	42%
Vol Right, %	9%	3%	24%	20%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	426	416	481	166
LT Vol	24	73	28	63
Through Vol	363	331	337	70
RT Vol	39	12	116	33
Lane Flow Rate	448	457	523	202
Geometry Grp	1	1	1	1
Degree of Util (X)	1	1	1	0.538
Departure Headway (Hd)	8.305	8.379	8.228	9.569
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	435	434	444	379
Service Time	6.37	6.431	6.28	7.571
HCM Lane V/C Ratio	1.03	1.053	1.178	0.533
HCM Control Delay	72.7	73	72.3	23.2
HCM Lane LOS	F	F	F	C
HCM 95th-tile Q	12.7	12.7	12.8	3.1

Intersection

Intersection Delay, s/veh

Intersection LOS

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	63	70	33
Peak Hour Factor	0.92	0.82	0.82	0.82
Heavy Vehicles, %	2	1	1	1
Mvmt Flow	0	77	85	40
Number of Lanes	0	0	1	0

Approach SB

Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	23.2
HCM LOS	C

Lane

Thompson Bridge / Enota Convenience

4: GA 11 Bus & South Enota

future p.m.

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	19	620	51	112	614	267	247	153	31	251	365	376
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	200		0	300		0	400		400
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.989			0.955			0.975				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	1844	0	1787	1784	0	1787	1834	0	1787	1881	1599
Flt Permitted	0.053			0.097			0.104			0.413		
Satd. Flow (perm)	100	1844	0	182	1784	0	196	1834	0	777	1881	1599
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3			22			6				389
Link Speed (mph)		30			30			30				30
Link Distance (ft)		494			509			1007				495
Travel Time (s)		11.2			11.6			22.9				11.3
Peak Hour Factor	0.91	0.91	0.91	0.89	0.89	0.89	0.80	0.80	0.80	0.88	0.88	0.88
Heavy Vehicles (%)	1%	2%	1%	1%	2%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	21	681	56	126	690	300	309	191	39	285	415	427
Shared Lane Traffic (%)												
Lane Group Flow (vph)	21	737	0	126	990	0	309	230	0	285	415	427
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100		20	100	20
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94				94
Detector 2 Size(ft)		6			6			6				6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Free
Protected Phases		2		1	6		7	4		3	8	
Permitted Phases	2			6			4			8		Free

Thompson Bridge / Enota Convenience

4: GA 11 Bus & South Enota

future p.m.

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Detector Phase	2	2		1	6		7	4		3	8	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	20.0	20.0		8.0	20.0		8.0	20.0		8.0	20.0	
Total Split (s)	78.0	78.0		14.0	92.0		27.0	41.0		27.0	41.0	
Total Split (%)	48.8%	48.8%		8.8%	57.5%		16.9%	25.6%		16.9%	25.6%	
Maximum Green (s)	74.0	74.0		10.0	88.0		23.0	37.0		23.0	37.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lag	Lag		Lead			Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	C-Max	C-Max		None	C-Max		None	None		None	None	
Walk Time (s)	5.0	5.0			5.0			5.0			5.0	
Flash Dont Walk (s)	11.0	11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0			0			0			0	
Act Effect Green (s)	75.0	75.0		88.4	88.4		60.8	38.3		57.8	36.6	160.0
Actuated g/C Ratio	0.47	0.47		0.55	0.55		0.38	0.24		0.36	0.23	1.00
v/c Ratio	0.45	0.85		0.65	0.99		1.02	0.52		0.69	0.97	0.27
Control Delay	65.1	48.8		33.9	61.7		103.8	56.7		44.4	96.2	0.4
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	65.1	48.8		33.9	61.7		103.8	56.7		44.4	96.2	0.4
LOS	E	D		C	E		F	E		D	F	A
Approach Delay		49.2			58.5			83.7			46.8	
Approach LOS		D			E			F			D	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 110

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.02

Intersection Signal Delay: 56.6

Intersection LOS: E

Intersection Capacity Utilization 98.1%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 4: GA 11 Bus & South Enota

 p1	 p2 (R)	 p3	 p4
14 s	78 s	27 s	41 s
 p6 (R)		 p7	 p8
92 s		27 s	41 s

Thompson Bridge / Enota Convenience
5: Green/Thompson Bridge & Holly & GA 11 Bus

future p.m.

										
Lane Group	EBL	EBR	NBL	NBT	NBR	SBL	SBT	SBR	SWL	SWR
Lane Configurations										
Volume (vph)	0	37	49	1508	693	0	872	133	411	231
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	150		200	0		0	0	0
Storage Lanes	0	1	1		2	0		0	2	0
Taper Length (ft)	25		25			25			25	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.88	1.00	0.95	0.95	0.97	0.95
Frt		0.865			0.850		0.980		0.946	
Flt Protected			0.950						0.969	
Satd. Flow (prot)	0	1644	1805	3574	2814	0	3507	0	3357	0
Flt Permitted			0.200						0.969	
Satd. Flow (perm)	0	1644	380	3574	2814	0	3507	0	3357	0
Right Turn on Red		Yes			Yes			Yes		
Satd. Flow (RTOR)		134			479		21			
Link Speed (mph)	30			30			30		30	
Link Distance (ft)	497			707			3085		595	
Travel Time (s)	11.3			16.1			70.1		13.5	
Peak Hour Factor	0.92	0.58	0.93	0.93	0.93	0.92	0.87	0.87	0.88	0.88
Heavy Vehicles (%)	0%	0%	0%	1%	1%	0%	1%	0%	1%	0%
Adj. Flow (vph)	0	64	53	1622	745	0	1002	153	467	262
Shared Lane Traffic (%)										
Lane Group Flow (vph)	0	64	53	1622	745	0	1155	0	729	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Right	Left	Left	Right	Left	Right
Median Width(ft)	0			12			12		24	
Link Offset(ft)	0			0			0		0	
Crosswalk Width(ft)	16			16			16		16	
Two way Left Turn Lane										
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15		9	15		9	15	9
Number of Detectors		1	1	2	1		2		1	
Detector Template		Right	Left	Thru	Right		Thru		Left	
Leading Detector (ft)		20	20	100	20		100		20	
Trailing Detector (ft)		0	0	0	0		0		0	
Detector 1 Position(ft)		0	0	0	0		0		0	
Detector 1 Size(ft)		20	20	6	20		6		20	
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	
Detector 1 Channel										
Detector 1 Extend (s)		0.0	0.0	0.0	0.0		0.0		0.0	
Detector 1 Queue (s)		0.0	0.0	0.0	0.0		0.0		0.0	
Detector 1 Delay (s)		0.0	0.0	0.0	0.0		0.0		0.0	
Detector 2 Position(ft)				94			94			
Detector 2 Size(ft)				6			6			
Detector 2 Type				Cl+Ex			Cl+Ex			
Detector 2 Channel										
Detector 2 Extend (s)				0.0			0.0			
Turn Type		Perm	Perm	NA	Perm		NA		Prot	
Protected Phases				2			6		8	
Permitted Phases		4	2		2					

Thompson Bridge / Enota Convenience
5: Green/Thompson Bridge & Holly & GA 11 Bus

future p.m.



Lane Group	EBL	EBR	NBL	NBT	NBR	SBL	SBT	SBR	SWL	SWR
Detector Phase		4	2	2	2		6		8	
Switch Phase										
Minimum Initial (s)		4.0	4.0	4.0	4.0		4.0		4.0	
Minimum Split (s)		20.0	20.0	20.0	20.0		20.0		20.0	
Total Split (s)		55.0	105.0	105.0	105.0		105.0		55.0	
Total Split (%)		34.4%	65.6%	65.6%	65.6%		65.6%		34.4%	
Maximum Green (s)		51.0	101.0	101.0	101.0		101.0		51.0	
Yellow Time (s)		3.5	3.5	3.5	3.5		3.5		3.5	
All-Red Time (s)		0.5	0.5	0.5	0.5		0.5		0.5	
Lost Time Adjust (s)		0.0	0.0	0.0	0.0		0.0		0.0	
Total Lost Time (s)		4.0	4.0	4.0	4.0		4.0		4.0	
Lead/Lag										
Lead-Lag Optimize?										
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0		3.0	
Recall Mode		None	C-Max	C-Max	C-Max		C-Max		None	
Walk Time (s)		5.0	5.0	5.0	5.0		5.0		5.0	
Flash Dont Walk (s)		11.0	11.0	11.0	11.0		11.0		11.0	
Pedestrian Calls (#/hr)		0	0	0	0		0		0	
Act Effect Green (s)		40.7	111.3	111.3	111.3		111.3		40.7	
Actuated g/C Ratio		0.25	0.70	0.70	0.70		0.70		0.25	
v/c Ratio		0.12	0.20	0.65	0.35		0.47		0.85	
Control Delay		0.5	8.9	9.6	2.0		29.3		66.9	
Queue Delay		0.0	0.0	0.9	0.0		0.0		0.0	
Total Delay		0.5	8.9	10.5	2.0		29.3		66.9	
LOS		A	A	B	A		C		E	
Approach Delay				7.8			29.3		66.9	
Approach LOS				A			C		E	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green

Natural Cycle: 55

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.85

Intersection Signal Delay: 23.3

Intersection LOS: C

Intersection Capacity Utilization 67.4%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 5: Green/Thompson Bridge & Holly & GA 11 Bus

 p2 (R)	 p4
105 s	55 s
 p6 (R)	 p8
105 s	55 s

Thompson Bridge / Enota Convenience

6: Green & Ridgewood/driveway

future p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	270	8	21	12	15	5	24	1969	11	0	1171	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.991			0.980			0.999			0.990	
Flt Protected		0.957			0.981			0.999				
Satd. Flow (prot)	0	1802	0	0	1827	0	0	3568	0	0	3541	0
Flt Permitted		0.723			0.891			0.905				
Satd. Flow (perm)	0	1361	0	0	1659	0	0	3232	0	0	3541	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2			5			1			9	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		511			308			511			707	
Travel Time (s)		11.6			7.0			11.6			16.1	
Peak Hour Factor	0.91	0.91	0.91	0.68	0.68	0.68	0.92	0.92	0.92	0.89	0.89	0.89
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	1%	0%
Adj. Flow (vph)	297	9	23	18	22	7	26	2140	12	0	1316	90
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	329	0	0	47	0	0	2178	0	0	1406	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA			NA	
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	

Thompson Bridge / Enota Convenience

6: Green & Ridgewood/driveway

future p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	20.0	20.0		20.0	20.0		8.0	20.0		20.0	20.0	
Total Split (s)	43.0	43.0		43.0	43.0		8.0	117.0		109.0	109.0	
Total Split (%)	26.9%	26.9%		26.9%	26.9%		5.0%	73.1%		68.1%	68.1%	
Maximum Green (s)	39.0	39.0		39.0	39.0		4.0	113.0		105.0	105.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		C-Max	C-Max	
Walk Time (s)	5.0	5.0		5.0	5.0			5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0		0	0	
Act Effect Green (s)		39.0			39.0			113.0			113.0	
Actuated g/C Ratio		0.24			0.24			0.71			0.71	
v/c Ratio		0.99			0.12			0.95			0.56	
Control Delay		105.1			43.0			32.4			14.5	
Queue Delay		0.0			0.0			0.0			0.2	
Total Delay		105.1			43.0			32.4			14.6	
LOS		F			D			C			B	
Approach Delay		105.1			43.0			32.4			14.6	
Approach LOS		F			D			C			B	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.99

Intersection Signal Delay: 32.3

Intersection LOS: C

Intersection Capacity Utilization 101.7%

ICU Level of Service G

Analysis Period (min) 15

Splits and Phases: 6: Green & Ridgewood/driveway

								
117 s			43 s			43 s		
								
8 s			109 s			43 s		

Thompson Bridge / Enota Convenience
7: Thompson Bridge

future p.m.

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	0	28	37	1698	1055	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	0	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	93	93	92	92
Heavy Vehicles, %	0	0	0	2	2	0
Mvmt Flow	0	35	40	1826	1147	28
Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2153	588	1175	0	-	0
Stage 1	1161	-	-	-	-	-
Stage 2	992	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	42	457	602	-	-	-
Stage 1	264	-	-	-	-	-
Stage 2	324	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	39	457	602	-	-	-
Mov Cap-2 Maneuver	39	-	-	-	-	-
Stage 1	264	-	-	-	-	-
Stage 2	302	-	-	-	-	-
Approach	EB		NB		SB	
HCM Control Delay, s	13.5		0.2		0	
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	602	-	457	-	-	
HCM Lane V/C Ratio	0.066	-	0.077	-	-	
HCM Control Delay (s)	11.4	-	13.5	-	-	
HCM Lane LOS	B	-	B	-	-	
HCM 95th %tile Q(veh)	0.2	-	0.2	-	-	

Intersection

Int Delay, s/veh 1.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	267	8	5	99	4	45
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	90	90	80	80
Heavy Vehicles, %	1	0	0	1	0	0
Mvmt Flow	318	10	6	110	5	56

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	327	0	444	323
Stage 1	-	-	-	-	323	-
Stage 2	-	-	-	-	121	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1244	-	575	723
Stage 1	-	-	-	-	738	-
Stage 2	-	-	-	-	909	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1244	-	572	723
Mov Cap-2 Maneuver	-	-	-	-	572	-
Stage 1	-	-	-	-	738	-
Stage 2	-	-	-	-	904	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	10.6
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	708	-	-	1244	-
HCM Lane V/C Ratio	0.087	-	-	0.004	-
HCM Control Delay (s)	10.6	-	-	7.9	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0	-

Matt Tate

From: Rock Baker
Sent: Tuesday, May 09, 2017 10:10 AM
To: Rusty Ligon; Matt Tate
Subject: Gasoline Station at Enota & Thompson Bridge Rd.

Hello,

I wanted to voice my concerns regarding the request for rezoning for Circle K on the corner of Enota & Thompson Bridge Road.

Starting with the BP at Publix and progressing north on Thompson Bridge Rd for approximately 1.5 miles there are already four gasoline stations.

Do we really need another one in such a small area? I don't know of another example in Gainesville, within such a short mileage area, where there are 4-5 gasoline stations.

Certainly not Dawsonville Hwy, Jesse Jewell, Browns Bridge Rd, etc. It is just not necessary – there are enough petrol choices already.

Also, do we want another tanker truck filled with 9,000 – 10,000 gallons of highly flammable fuel on Thompson Bridge Road?

What we really need are more food choices.

I believe this corner can attract a quality food enterprise is given a little more time.

Thank you for your consideration and please forward this to the members of the Planning and Appeals Board.

Best regards,

Rock Baker

CITY OF GAINESVILLE

WORKSESSIONREQUEST

Date Submitted: 5/23/2017

Presenter: Matt Tate

Item of Business: **Public Hearing Item for the June 6, 2017 Council Meeting**
Request from **Montecito Development** for a special use on a 0.80± acre tract located at the southwest side of the intersection of Enota Avenue and Thompson Bridge Road (a/k/a **1281 Thompson Bridge Road, NW**), having a zoning of Neighborhood Business (N-B). **Ward Number: Two.** Tax Parcel Number(s): 01-074-004-020.
Request: Convenience store with fuel pumps.

Meeting Date: 6/1/2017

Purpose of Request:

The applicant is proposing a special use within Neighborhood Business (N-B) zoning and is part of the previous rezoning request to construct a 4,200 to 5,200± square foot convenience store with four pump islands. The property is located within the Gateway Corridor Overlay Zone and contains a parking lot which was previously the location of a Long John Silver's restaurant and a bank teller machine. According to the applicant's concept plan, the subject property would be combined with the adjacent property to the rear and access is proposed from Thompson Bridge Road and Enota Avenue. Surrounding uses include a vacant gas station and store, M & R Rentals & Sales, Burger King, Marco's Pizza, Anderson Physical Therapy Associates and Wells Fargo Bank branch.

History/Background:

Facts & Issues for Consideration:

Department Recommendation:

Planning staff recommended denial of this request. However, if the Board votes to recommend approval of the request, staff has proposed five conditions of zoning.

The Planning and Appeals Board unanimously recommended denial of this request.

See the PAB Recommendation Report for details and excerpts from the PAB meeting minutes.

NOTE: The subject property for this request is adjacent to and part of the previous Montecito Development rezoning with a special use request and must be voted on at the final reading of the rezoning ordinance if approved.

SAMPLE MOTIONS

Approve Special Use

I move to conditionally approve the zoning resolution with five conditions to allow a convenience store with fuel pumps on the subject property.

Deny

I move to deny the special use request.

Department Director:

Rusty Ligon

If funding is involved, are funds approved within the current budget?

N/A

Amount Requested:

Source of Funds:

Finance Comments:

Administrative Comments:

ATTACHMENTS:

Description		Type
☐	Legal Ad	Legal Ad
☐	PAB Recommendation Report	Report
☐	Proposed Zoning Resolution	Resolution
☐	Location Maps	Backup Material
☐	Narrative	Backup Material
☐	Plat	Backup Material
☐	Site Plan	Backup Material
☐	Architectural Renderings	Backup Material
☐	Traffic Impact Study	Backup Material
☐	Letter of Opposition	Backup Material

COMBINED LEGAL AD
Gainesville Planning and Appeals Board
Gainesville City Council

Publish Sunday, April 23, 2017
THE TIMES

NOTICE OF PLANNING AND APPEALS BOARD PUBLIC HEARING

Notice is hereby given that the **Gainesville Planning and Appeals Board** will conduct a public hearing on **Tuesday, May 9, 2017** at **5:30 p.m.** in the **Gainesville Justice Center** (Municipal Courtroom at the Public Safety Complex), 701 Queen City Parkway in midtown Gainesville on the following requests:

- 1) Request from **Oak Hall Companies, LLC** to annex a 26.16 acres tract located east of Dawsonville Highway and on the north side of the intersection of Strickland Drive and Sportsman Club Road, with road frontage on Karen Lane (a/k/a **0 and 2209 Karen Lane; 2106, 2234 and 2242 Sportsman Club Road; and 2049 Strickland Drive**) and to establish zoning as Planned Unit Development (P-U-D).
Ward Number: One
Tax Parcel Number(s): 00-109-003-001, 004, 005; 00-109B-000-001, 002A and 036
Request: Active adult community
- 2) Request from **Oak Hall Companies, LLC** to annex a 50.81± acres tract located on the east side of Dawsonville Highway (S.R. 53), having road frontage on Dawsonville Highway, Ahaluna Drive, Skyview Drive and Strickland Drive (a/k/a **0 and 1758 Ahaluna Drive; 1508, 1550, 1740, 1746, 1758, 1760, 1934 and 1982 Dawsonville Highway; 300 and 301 Skyview Drive; 0, 2008 and 2016 Strickland Drive**) and to establish zoning as Planned Unit Development (P-U-D) and General Business (G-B).
Ward Number: One
Tax Parcel Number(s): 00-110-000-005 (part), 028, 032 (part) and 039; 00-110A-004-001 (part), 002A, 004 (part), 005 (part), 007 (part), 007A (part), 007X, 014 (part), 016 (part), 017 (part) and 018
Request: Mixed-use development
- 3) Request from **Oak Hall Companies, LLC** to rezone a 157.98± acres tract located on the east side of Dawsonville Highway (S.R. 53), having road frontage on Ahaluna Drive, Skyview Drive, Strickland Drive, Lakeshore Circle, West Lake Drive and Karen Lane (a/k/a **0, 1264 and 1817 Ahaluna Drive; 1876 Dawsonville Highway; 2208 Karen Lane; 0 and 2029 Strickland Drive; 0 and 1489 West Lake Drive**) from Residential-I-A (R-I-A), Residential-I (R-I), Planned Unit Development (P-U-D) and Regional Business (R-B) to Planned Unit Development (P-U-D) and General Business (G-B).
Ward Number: One
Tax Parcel Number(s): 00-109B-000-003A; 00-110-000-001, 006, 030, 031, 034, 035, 036, 037 and 038; 01-110-001-006; 01-110A-004-022; 01-114-001-001, 026, 145 and 161
Request: Mixed-use development
- 4) Request from **Brightstone Transitions** to amend the existing Planned Unit Development (P-U-D) zoning on a 0.50± acre tract located at the east side of Green Street, across from its intersection with Forrest Avenue (a/k/a **446 Green Street, NE**).
Ward Number: Four
Tax Parcel Number(s): 01-024-001-005
Request: Group home and office

- 5) Request from **Montecito Development** to rezone a 0.48± acre tract located on the south side of Enota Avenue, west of its intersection with Thompson Bridge Road (a/k/a **149 Enota Avenue, NW**) from Office and Institutional (O-I) to Neighborhood Business (N-B), with a special use.
 Ward Number: Two
 Tax Parcel Number(s): 01-074-004-001
 Request: Convenience store with fuel pumps
- 6) Request from **Montecito Development** for a special use on a 0.80± acre tract located at the southwest side of the intersection of Enota Avenue and Thompson Bridge Road (a/k/a **1281 Thompson Bridge Road, NW**), having a zoning of Neighborhood Business (N-B).
 Ward Number: Two
 Tax Parcel Number(s): 01-074-004-020
 Request: Convenience store with fuel pumps
- 7) Request from **Gainesville Market, LLC** for a special use on a 5.0± acres tract located west of Shallowford Road within the Gainesville Market Shopping Center (a/k/a **600 Shallowford Road**), having a zoning of General Business (G-B).
 Ward Number: Five
 Tax Parcel Number(s): 01-119C-001-029
 Request: Commercial outdoor recreational facility
- 8) Request from **Manor Lake Development, LLC** for a special use on a 9.24± acres tract located on the northwest side of McEver Road, between Browns Bridge Road and Orchard Brook Drive (a/k/a **2900 McEver Road**), having a zoning of Office and Institutional (O-I) and Residential-I (R-I).
 Ward Number: Four
 Tax Parcel Number(s): 08-022-000-005
 Request: Assisted living facility
- 9) Request from **Carriage North, LLC** for a special use on a 0.71± acre tract located on the southwest side of the terminus of Corporate Drive, west of Browns Bridge Road (a/k/a **2425 Corporate Drive**), having a zoning of General Business (G-B).
 Ward Number: Five
 Tax Parcel Number(s): 08-007-001-042
 Request: Helipad

NOTICE OF PUBLIC HEARING ON PROPOSED AMENDMENTS TO THE GAINESVILLE ZONING MAP

Notice is hereby given that the **Gainesville City Council** will conduct a public hearing on **Tuesday, June 6, 2017 at 5:30 p.m.** in the **Gainesville Justice Center** (Municipal Courtroom at the Public Safety Complex), 701 Queen City Parkway in midtown Gainesville on the following requests:

- 1) Request from **Oak Hall Companies, LLC** to annex a 26.16 acres tract located east of Dawsonville Highway and on the north side of the intersection of Strickland Drive and Sportsman Club Road, with road frontage on Karen Lane (a/k/a **0 and 2209 Karen Lane; 2106, 2234 and 2242 Sportsman Club Road; and 2049 Strickland Drive**) and to establish zoning as Planned Unit Development (P-U-D).
 Ward Number: One
 Tax Parcel Number(s): 00-109-003-001, 004, 005; 00-109B-000-001, 002A and 036
 Request: Active adult community

- 2) Request from **Oak Hall Companies, LLC** to annex a 50.81± acres tract located on the east side of Dawsonville Highway (S.R. 53), having road frontage on Dawsonville Highway, Ahaluna Drive, Skyview Drive and Strickland Drive (a/k/a **0 and 1758 Ahaluna Drive; 1508, 1550, 1740, 1746, 1758, 1760, 1934 and 1982 Dawsonville Highway; 300 and 301 Skyview Drive; 0, 2008 and 2016 Strickland Drive**) and to establish zoning as Planned Unit Development (P-U-D) and General Business (G-B).
 Ward Number: One
 Tax Parcel Number(s): 00-110-000-005 (part), 028, 032 (part) and 039; 00-110A-004-001 (part), 002A, 004 (part), 005 (part), 007 (part), 007A (part), 007X, 014 (part), 016 (part), 017 (part) and 018
 Request: Mixed-use development

- 3) Request from **Oak Hall Companies, LLC** to rezone a 157.98± acres tract located on the east side of Dawsonville Highway (S.R. 53), having road frontage on Ahaluna Drive, Skyview Drive, Strickland Drive, Lakeshore Circle, West Lake Drive and Karen Lane (a/k/a **0, 1264 and 1817 Ahaluna Drive; 1876 Dawsonville Highway; 2208 Karen Lane; 0 and 2029 Strickland Drive; 0 and 1489 West Lake Drive**) from Residential-I-A (R-I-A), Residential-I (R-I), Planned Unit Development (P-U-D) and Regional Business (R-B) to Planned Unit Development (P-U-D) and General Business (G-B).
 Ward Number: One
 Tax Parcel Number(s): 00-109B-000-003A; 00-110-000-001, 006, 030, 031, 034, 035, 036, 037 and 038; 01-110-001-006; 01-110A-004-022; 01-114-001-001, 026, 145 and 161
 Request: Mixed-use development

- 4) Request from **Brightstone Transitions** to amend the existing Planned Unit Development (P-U-D) zoning on a 0.50± acre tract located at the east side of Green Street, across from its intersection with Forrest Avenue (a/k/a **446 Green Street, NE**).
 Ward Number: Four
 Tax Parcel Number(s): 01-024-001-005
 Request: Group home and office

- 5) Request from **Montecito Development** to rezone a 0.48± acre tract located on the south side of Enota Avenue, west of its intersection with Thompson Bridge Road (a/k/a **149 Enota Avenue, NW**) from Office and Institutional (O-I) to Neighborhood Business (N-B), with a special use.
 Ward Number: Two
 Tax Parcel Number(s): 01-074-004-001
 Request: Convenience store with fuel pumps

- 6) Request from **Montecito Development** for a special use on a 0.80± acre tract located at the southwest side of the intersection of Enota Avenue and Thompson Bridge Road (a/k/a **1281 Thompson Bridge Road, NW**), having a zoning of Neighborhood Business (N-B).
 Ward Number: Two
 Tax Parcel Number(s): 01-074-004-020
 Request: Convenience store with fuel pumps

- 7) Request from **Gainesville Market, LLC** for a special use on a 5.0± acres tract located west of Shallowford Road within the Gainesville Market Shopping Center (a/k/a **600 Shallowford Road**), having a zoning of General Business (G-B).
 Ward Number: Five
 Tax Parcel Number(s): 01-119C-001-029
 Request: Commercial outdoor recreational facility

- 8) Request from **Manor Lake Development, LLC** for a special use on a 9.24± acres tract located on the northwest side of McEver Road, between Browns Bridge Road and Orchard Brook Drive (a/k/a **2900 McEver Road**), having a zoning of Office and Institutional (O-I) and Residential-I (R-I).

Ward Number: Four

Tax Parcel Number(s): 08-022-000-005

Request: Assisted living facility

- 9) Request from **Carriage North, LLC** for a special use on a 0.71± acre tract located on the southwest side of the terminus of Corporate Drive, west of Browns Bridge Road (a/k/a **2425 Corporate Drive**), having a zoning of General Business (G-B).

Ward Number: Five

Tax Parcel Number(s): 08-007-001-042

Request: Helipad

Additional information is available from the Community Development Department, Planning Division, by calling 770-531-6570.

NOTE: In accordance with Georgia law, anyone who wishes to express opposition to the proposed zoning action, and has made, within two years immediately preceding the filing of the proposed zoning action, campaign contributions aggregating \$250 or more to a local government official who will consider the application, shall file a disclosure of contribution(s) with the Planning Division at least five (5) days prior to the first reading of the proposed zoning action by the City Council. (OCGA § 36-67A-3 3 {c})

**GAINESVILLE PLANNING and APPEALS BOARD
RECOMMENDATION**

Applicant Montecito Development
Property Owner James Paul Mallard
Location 149 Enota Avenue; 1281 Thompson Bridge Road NW
Request (0.48± acres parcel) -Rezone from O-I to N-B, with a special use
Request (0.80± acres parcel) -Special use request within N-B zoning
Ward Two
Proposed Use Convenience store with fuel pumps
Planning Division Staff Recommendation **Denial**
Planning and Appeals Board Recommendation **Denial**
Date May 9, 2017

▪ **Applicant's Proposal and Background Information**

The applicant's proposal consists of two applications. The first application proposes to rezone a 0.48± parcel from Office and Institutional (O-I) to Neighborhood Business (N-B) with a special use. The second application proposes a special use for a 0.80± acres parcel zoned Neighborhood Business (N-B).

The purpose of the requests is to combine the two properties to construct a 4,200± to 5,200± square foot convenience store with four pump islands. The proposed store is to include a mixture of brick, stone and stucco materials to meet overlay standards. In addition, the proposed fuel canopy will be improved with a pitched roof and the support poles will be faced with stone material to match the building. According to the applicant's concept plan, a two-way access is proposed from Thompson Bridge Road and from Enota Avenue. The existing driveway on Thompson Bridge Road closest to the intersection will be removed. As well, a portion of the existing vegetation to the rear of the property will be removed to provide for parking. A 25-foot wide buffer is proposed adjacent to the neighboring residential property to the south and a 10-foot buffer is proposed adjacent to the office property to the west.

The property is located within the Gateway Corridor Overlay Zone and the front property contains a parking lot which was previously the location of a Long John Silver's restaurant and a bank teller machine. The rear property contains a parking lot and wooded buffer.

▪ **Adjacent Land Use and Zoning**

Location	Use	Zoning
North	Burger King; M & R Rentals	Neighborhood Business (N-B) -City Office and Institutional (O-I) -City
South	Closed gas station / retail store, single-family home	Neighborhood Business (N-B) -City Residential-I (R-I) -City

Location	Use	Zoning
East	Marco's Pizza, Anderson Physical Therapy Associates, Public Grocery, Wells Fargo Bank	Neighborhood Business (N-B) -City Regional Business (R-B) -City
West	Professional office	Office and Institutional (O-I) -City

▪ **Traffic Impact Study Summary**

A Traffic Impact Study was completed for the proposed development on February 23, 2017 and later revised on April 19, 2017 by Marc R. Acampora, PE, LLC Traffic Engineering, at the Thompson Bridge / Enota intersection on Thursday, February 16, 2017. The counts at Thompson Bridge / Walmart, Enota / Riverside, and GA 11 Bus / South Enota were collected on Thursday, March 30, 2017, and the counts at GA 60 / GA 11 Bus and GA 60 / Ridgewood were obtained from another recent traffic study performed in the area, collected on Wednesday, February 22, 2017. Traffic counts were collected from 7:00 A.M to 9:00 A.M. and from 4:30 P.M. to 6:30 P.M.

The only available historic Georgia DOT 24-hour traffic counts were also collected in the vicinity from the year 2015. The annual daily traffic volume on Thompson Bridge Road adjacent to the subject site was 26,500 in 2015 and the AADT on Enota adjacent to the site was 1,760 in 2015.

The study revealed that the peak hour generation for this project was calculated at 153 unadjusted trips or 52 new trips and the 24-hour volume is 4,340 unadjusted trips or 1,574 new trips. The study included the following six intersections.

1. Thompson Bridge Road at Walmart / Taco Bell Access
2. Thompson Bridge Road / Enota Avenue
3. Enota Avenue at Riverside Drive
4. GA 11 Business at South Enota Avenue
5. GA 60 at GA 11 Business
6. GA 60 at Ridgewood Avenue

A summary of the study revealed that future operations, upon the project being fully constructed and operational, will operate at acceptable levels at the intersection of Thompson Bridge Road and Enota Avenue as well as both the both proposed site access locations. Additionally, the Traffic Engineer states that gas station and convenience store would generate less traffic during peak hours than a fast food restaurant would.

Thompson Bridge Road and Enota Avenue

The analysis of the Thompson Bridge / Enota intersection shows an overall acceptable level of service in both the existing and future conditions. The side street approaches on Enota Avenue operate at LOS E, primarily due to the green time on the signal favoring the Thompson Bridge Road approaches. 1) Shorter cycle lengths would reduce delays and side street queuing. While there are crosswalks and pedestrian signals on all approaches at this signalized intersection, only the northeast corner has an ADA accessible ramp. 2) Consideration should be given to adding ADA ramps on the remaining corners. 3) The crosswalk and stop bar striping is also in poor condition and should be refreshed.

Thompson Bridge Road at Site Access

The site plan calls for the elimination of two of the three existing site accesses on Thompson Bridge Road. This will reduce the number of conflict points. It is likely that most vehicles that

wish to travel either northbound on Thompson Bridge or to the east on Enota will exit the site at the Enota driveway and capitalize on the protection of the adjacent signal. Because of the difficulty in making this left turn from the site driveway, and the low numbers of vehicles expected to do so, 1) consideration should be given to prohibiting exiting left turns from this driveway. 2) The Georgia DOT access standards were reviewed for this intersection (Thompson Bridge is Georgia State Route 60) and indicate that the access justifies a southbound exclusive right turn lane. The spacing of this driveway from Enota Avenue does not meet the minimum Georgia DOT driveway spacing standards. It is recommended that these design factors be discussed with Georgia DOT and the City to determine an acceptable solution. 3) The Thompson Bridge Road site access should be constructed with one entering and one exiting lane and the exiting approach should be controlled by stop sign and accompanying stop bar. The project site engineer is referred to the Georgia DOT Driveway Manual for other driveway design standards including driveway width, island design, and curb return radii.

Enota Avenue at Site Access

The site access on Enota is projected to operate with low volumes and very low delays. Most of the site entering trips will enter at the Thompson Bridge access, so that the entering left turns at the Enota driveway are projected at only 6 vehicles in the a.m. peak hour and 5 in the p.m. peak hour. This should minimally impede westbound through flow on Enota. The eastbound right turns entering the site are also minimal, at 5 for the a.m. peak hour and 8 for the p.m. peak hour. This also should minimally impede flows on Enota. 1) The Enota Avenue site access should be constructed with one entering and one exiting lane and the exiting approach should be controlled by stop sign and accompanying stop bar. 2) The existing grade differential between the site and Enota Avenue at the location of the site access should be corrected when the site is developed.

▪ **Other Departmental Comments**

According to the Georgia Department of Transportation (GDOT), the development will be required to meet the sight distance requirements and will need to coordinate with GDOT for review and approval.

According to the Gainesville Public Works Department, the developer will need to coordinate with the Gainesville Public Works Department and the Georgia Department of Transportation (GDOT) prior to permitting to address the future traffic improvements at the intersection of Thompson Bridge Road and Enota Avenue.

▪ **Zoning History**

The following zoning actions have taken place in the immediate area during the last ten years:

2016 - A request by Jack Bailey to rezone a 0.61[±] acre tract located at 1665 Thompson Bridge Road NW from Residential-I (R-I) to Office and Institutional (O-I) was approved with conditions for an insurance office.

2016 - A request by Teresa Vickers for a special use for a hair salon within the Office and Institutional (O-I) zoning district located at 977 and 983 Enota Avenue was approved with conditions.

2015 - A request by David P. Johnson to rezone a 1.458[±] acres tract located at 1537 and 1551 Thompson Bridge Road; and 135 Virginia Circle from Residential-I (R-I) to Neighborhood Business (N-B) with a special use for restaurant with drive-thru and retail was denied.

2014 – A request by Polestar Development, LLC to rezone a 1.741± acres tract located at 1435 Thompson Bridge Road from Residential-II (R-II) to Regional Business (R-B) for a grocery store and fuel service station was approved with conditions.

2013 - A request by Michael Slate to rezone a 0.67± acre tract located at 971 Lanier Avenue NE from Residential-I (R-I) to Residential and Office (R-O) for a professional office was approved with conditions.

2012 - A request by WAG Properties, Inc. to annex a 0.68± acre tract located at 1868 Thompson Bridge Road for a transportation logistics brokerage was approved with General Business (G-B) zoning.

2011 - A request by Greg Loyd for a special use for a Dunkin Donut restaurant with a drive thru within the Neighborhood Business (N-B) zoning district located at 1151 Thompson Bridge Road was approved with conditions.

2011 - A request by Jamie Collins to rezone a 1.149± acres tract located at 1452, 1464 and 1472 Thompson Bridge Road NE from Residential-I (R-I) and Neighborhood Business (N-B) to General Business (G-B) for a Taco Bell restaurant was approved with conditions.

2011 - A request by One Eleven, LLC for a special use for the Little Yellow Coffee House with a drive-thru within the Neighborhood Business (N-B) zoning district located at 996 Thompson Bridge Road was approved with conditions.

2010 - A request by Pam Abernathy for a special use for a single-family residence within the Office and Institutional (O-I) zoning district located at 1745 Thompson Bridge Road was approved with conditions.

2010 - A request by Yonah Burger for a special use for a restaurant with a drive-thru within the Neighborhood Business (N-B) zoning district located at 1191 and 1195 Thompson Bridge Road was approved with conditions.

2009 - A request by Lakewood Baptist Church to rezone a 39.53± acres tract located at 2235 Thompson Bridge Road from Residential-I (R-I), Residential-II (R-II) and General Business (G-B) to Planned Unit Development (P-U-D) for future expansion of the church was approved with conditions.

2009 - A request by Danny Dunagan to annex a 0.89± acre tract located at 309 Linwood Road for a 46-unit mini-storage facility was approved with General Business (G-B) zoning.

2009 - A request by Frenil R. Adajania to rezone a 0.20± acre tract located at 0 Thompson Bridge Road from Planned Unit Development (P-U-D) to General Business (G-B) for an existing access driveway was approved.

2009 - A request by Frenil Adajania to annex a 0.48± acre tract located at 1878 Thompson Bridge Road for an existing gas station/convenience store was approved with General Business (G-B) zoning.

2008 - A request by Danny Allen to rezone a 0.77± acre tract located at 1770 and 1786 Thompson Bridge Road from Residential-I (R-I) to Residential and Office (R-O) for residential and office uses was approved with conditions.

2007 - A request by Lee Dempsey to rezone a 1.5± acres tract located at 2200 and 2234 Thompson Bridge Road; and 924 and 934 Etta Vista Circle from Residential-I (R-I) and Residential and Office (R-O) to Neighborhood Business (N-B) with a special use for office/commercial mixed-use development was approved with conditions.

2007 - A request by Mike Weaver to rezone a 0.6[±] acre tract located at 1750 Thompson Bridge Road from Residential-I (R-I) to Residential and Office (R-O) for an attorney's office was approved with conditions. This request was approved after two previous attempts to rezone the subject property were denied.

2007 - A request by Ken Selzer to rezone 0.814[±] acre from Residential-I (R-I) to Residential and Office (R-O) for residential and office uses at 1143, 1153, and 1167 Green Street Circle was denied by the Planning and Appeals Board and the request was withdrawn during City Council first reading.

▪ **Staff Analysis**

(1) Is the proposed use suitable in view of the zoning and development of adjacent and nearby property?

The adjacent and nearby uses include single-family residential homes, office, service and commercial uses and are zoned Residential-I (R-I), Residential-II (R-II), Office and Institutional (O-I), Neighborhood Business (N-B) and Regional Business (R-B). The applicants proposed development area extends westerly along Enota Drive toward an established residential district. It appears that the proposed zoning of Neighborhood Business (N-B) may be suitable for neighborhood scale retail uses; however, the addition of fuel pumps is more aggressive.

(2) Will the proposed use adversely affect the existing use or usability of adjacent or nearby property?

It is staffs opinion that the proposal would have less of an impact to the surrounding area if the development were confined to the front 0.80[±] acres parcel and limited to the convenience retail store without fuel sales. However, Neighborhood Business (N-B) zoning could be considered for the rear parcel but should not be combined with the front parcel for the purpose of increasing the developable area to add fuel pumps. The addition of fuel pumps will increase turning movements along Thompson Bridge Road and Enota Avenue at a higher rate compared to a professional office or specialty retail store. The properties most impacted by the proposal appear to be the nearby single-family homes as convenience stores typically have longer business hours create more noise from traffic, fuel/delivery trucks and dumpster usage. The applicant does propose a 25-foot vegetated buffer adjacent to the single-family property.

(3) Is the proposed use compatible with the purpose and intent of the Comprehensive Plan?

The proposed development is located within the *Retail/Commercial* land use category. The *Retail/Commercial* land use category includes commercial service activities such as grocery stores, banks, restaurants, theatres, hotels, and automotive related businesses. Commercial uses may be located as a single use in one building or grouped together in a shopping center.

According to the Character Area map for the City of Gainesville, the rear 0.48[±] acre portion of the subject property is located within the *Traditional Neighborhoods* Character Area, specifically within the *Northern Neighborhoods subarea*. The front 0.80[±] acre portion of the subject property is located within the *City Park Neighborhood Center* Character Area.

The vision for the *Traditional Neighborhood Character Area* anticipates minimal change, and primary issues within this subarea include incompatible infill development and the threat of encroaching urban sprawl. Commercial encroachment should be minimized and should respect and mirror the small scale of the surrounding neighborhoods, while the purity of the landscape and quality of housing should be preserved. The area is not a primary destination for business;

however neighborhood serving business development is encouraged. Land uses allowed include low-density and medium-density residential, and mixed-use / commercial.

The vision for the *City Park Neighborhood Center* Character Area states that Thompson Bridge Road should be transformed into a "Complete Street" with sidewalks, landscaping, bike lanes and transit stops. Preservation of local small businesses should be a priority, and key early commercial buildings targeted for preservation. New commercial development should be compatible with the small scale of the older structures, and parking should be located to the rear with inter-parcel connectivity where possible. The area is not anticipated to see major economic growth, but remain oriented toward addressing existing neighborhood needs. Businesses providing basic goods and services that neighborhood residents depend on in daily life (for example food, household supplies, medicine etc.) should be encouraged. Locally-owned / family-owned businesses should be promoted to encourage small business investment / entrepreneurship. Land uses allowed include mixed-use, commercial and public/Institutional.

(4) Are there substantial reasons why the property cannot or should not be used as currently zoned?

The applicant proposes to rezone a 0.48± parcel from Office and Institutional (O-I) to Neighborhood Business (N-B) with a special use. The second application proposes a special use for a 0.80± acres parcel zoned Neighborhood Business (N-B). The N-B zoning district allows for commercial uses such as a convenience store but does not permit fuel pumps without special use approval. Most of the uses permitted within the Neighborhood Business (N-B) zoning district are not auto-oriented in nature. It appears reasonable that both parcels could be combined or developed separately for those uses currently permitted within the Neighborhood Business (N-B) zoning district.

(5) Will the proposed use cause an excessive or burdensome use of public facilities or services, including but not limited to streets, schools, water or sewer utilities, and police or fire protection?

City water, sewer and public safety services are currently provided to the property. Gainesville Fire Station #2 is located off of Holly Drive and is approximately 0.8± miles from the subject property.

The proposed use would have no impact on the school system given that it is a non-residential use.

The proposal will increase ingress and egress traffic movements along Thompson Bridge Road which typically experiences high southbound traffic volumes in the morning and high northbound traffic volumes in the evening. The subject property is located at the southeast corner of Thompson Bridge Road and Enota Avenue. According to the Transportation Master Plan for this area, there are planned intersection improvements which will include the addition of a dedicated right turn lane.

(6) Is the proposed use supported by new or changing conditions not anticipated by the Comprehensive Plan or reflected in the existing zoning on the property or surrounding properties?

Commercial growth has occurred along this segment of Thompson Bridge Road since the early-mid 1980's consisting of shopping center development, restaurant, retail, bank, personal service establishments and office uses which are consistent with the proposal. It is anticipated that neighborhood scale commercial growth will continue to occur for property fronting Thompson

Bridge Road. There are currently four gas stations within a mile of the subject property, not including the closed gas station adjacent to the subject property.

(7) Does the proposed use reflect a reasonable balance between the promotion of the public health, safety, morality, or general welfare and the right to unrestricted use of property?

Based on the Comprehensive Plan and the adjacent Neighborhood Business (N-B) zoning, the proposed rezoning portion of the request appears to reflect a reasonable balance between the promotion of the public health, safety, morality, or general welfare and the right to unrestricted use of property. However, the proposed special use to allow for fueling station does not reflect a balance.

▪ **Additional Criteria**

(1) The type of street providing access to the subject property is adequate to serve the proposed Special Use.

Thompson Bridge Road (SR 60) is an arterial road and Enota Avenue is a local connector road. Both roads are adequate to serve the proposed use but will require improvements including a dedicated right turn decel lane. The addition of these lanes may require the proposed buildings and parking to shift to account for change.

(2) Access into and out of the property adequately provides for traffic and pedestrian safety, the anticipated volume of traffic flow, and access by emergency vehicles.

The subject property is located at the southwest corner of Thompson Bridge Road and Enota Avenue which currently presents somewhat challenging turning movements into the subject property. Pedestrian crosswalks are present but are not ADA compliant. The applicant's concept plan appears to provide for sufficient access for emergency vehicles with some modifications.

(3) Public facilities such as schools, water or sewer utilities, and police or fire protection are adequate to serve the Special Use.

Existing public facilities are adequate to serve the proposed use.

(4) Refuse, service, parking and loading areas on the property are located and screened to protect other properties in the area from such adverse effects as noise, light, glare or odor.

The proposed concept plan includes a 25-foot wide landscape buffer adjacent to the single-family property and a 10-foot wide landscape buffer adjacent to the existing office use. The proposed dumpster is to be located behind the proposed building adjacent to the residential property.

(5) The hours and manner of operation of the Special Use have no adverse effects on other properties in the area.

The applicant states the proposed hours of operation are for the store to remain open 24 hours a day. An alternative schedule could be from 5 a.m. to 12 a.m. which would reduce the impact somewhat on the adjacent and nearby residential homes. These hours of operation would be in direct conflict with the neighboring residential properties.

- (6) The height, size and location of the buildings or other structures proposed on the property are compatible with the height, size or location of buildings or other structures on neighboring properties.**

The height, size and location of the proposed structures appear consistent with other commercial structures located along Thompson Bridge Road. The adjacent vacant property to the south currently has a fuel island canopy very close to Thompson Bridge Road at a higher elevation. If approved, there will be two fuel island canopies in close proximity to one another.

▪ **Staff Recommendation**

The Planning Division staff is recommending **denial** of this request based on the Comprehensive Plan and the adjacent residential uses. However, if the Planning and Appeals Board were to recommend approval of this request, staff would recommend the following conditions:

Conditions

- 1. The exterior materials and roof pitch of the building and canopy shall adhere to the standards as depicted on the architectural elevation provided with this rezoning application.**
- 2. The hours of operation for the proposed use shall not exceed 5 a.m. to 12 a.m.**
- 3. All access point design along the portion of Thompson Bridge Road and Enota Avenue in front of the property shall require approval by the Georgia Department of Transportation in conjunction with the Gainesville Public Works Director. All required access / traffic / sidewalk improvements associated with the proposed development shall be at the full expense of the developer / property owner.**
- 4. The applicant / owner shall provide for internal parcel vehicular access with the adjacent vacant property located to the south.**
- 5. An updated as-built boundary survey / plat of the subject property, indicating all improvements required for the proposed use, shall be recorded prior to obtaining a Certificate of Occupancy.**

Excerpts from the May 9, 2017 Planning and Appeals Board Meeting Minutes

Applicant Presentation: Melody Glouton, 1960 Satellite Boulevard, Duluth, stated she was an attorney with Anderson Tate Carr who represents Montecito Development. The broker and Circle K representative was also in attendance. She stated the proposal was for a Circle K store which was not a locally owned or family business, but it was also not a massive QuikTrip or RaceTrac. The project would be suitable for the neighborhood and enable hiring from the community, noting it is neighborhood oriented and of high quality including upscale architecture with upgrades to the fuel canopy such as brick, stone, and stucco façade materials. She stated staff recommended a soft denial which included conditions in case the Board voted in favor of the request. Ms. Glouton requested two of those conditions be omitted, #2 and #4. She stated condition #2 limited the hours of operation and they want to be open 24 hours a day, noting that would provide better security and visibility for that intersection as they would have 24 security

cameras in place in which the police would have access. She stated that the project would bring revitalization to the corner since it is currently abandoned except for parking from the business next door. Ms. Glouton stated condition #4 required inter-parcel access which would be cost prohibitive because of the difference of grade between the properties. She stated there was an unknown use for the abandoned gas station next door as well so it was not feasible. She stated the traffic study indicated the proposed project would operate at acceptable levels since it would service existing traffic and would have less traffic than a drive-thru restaurant during peak driving times. She stated that no restaurant has come forward for this site so they are offering revitalization and redevelopment of the area. She stated the project proposes a 25-foot buffer to the south and a 10-foot buffer to the west. The adjacent residential homes are currently owned by investors and may be turned into businesses in the future. She stated it would be an acceptable project for the area and asked for approval with conditions #2 and #4 omitted, noting the applicant was agreeable to the other three conditions. They would not have dumpsters emptied or delivery trucks coming in through the night hours in order to be sensitive to the neighbors in respect to noise.

FAVOR: Janie Justice, 455 Christopher Drive, stated the corner is an eyesore and felt the project would not increase traffic and would make the corner look better, so she did not have any objections. She stated the former Long John Silver's restaurant had a dumpster and she was never bothered with it. Ms. Justice stated the cameras would provide better security as well.

OPPOSE: Connie Propes, 695 Honeysuckle Lane, stated there were already two gas stations within 1,000 feet of each other and this one would be in the middle. She stated it was a residential neighborhood and the homes along Christopher Drive were privately owned or rentals. The intersection does look bad because there used to be a service station there which is now abandoned. Ms. Propes stated GH039, the widening of Enota, is still on the Metropolitan Planning Organization books and might have an effect on this road or the development thereof. She asked the Board to consider her comments.

REBUTTAL: Melody Glouton asked for clarification of the other gas stations Ms. Propes referenced. Ms. Propes stated there was a BP station south of the property and fuel pumps at the Wal-Mart Market north of the property. Ms. Glouton stated she came north on I-985 from Gwinnett County and took Exit 22 to get to the subject property and only passed one gas station before reaching the site in which she believed was a Citgo. She felt it was a proper proposal for the site with the surrounding uses, and reiterated it would be a high end convenience store, but not massive and very family friendly. She felt the convenience store would be well placed and would meet corridor needs. Again she asked for proposed conditions #2 and #4 be omitted.

Planning and Appeals Board Comments: None

There was a motion to recommend denial of both of the requests.

Motion made by Vice-Chair Fleming
Motion seconded by Board Member Martin
Vote – 7 favor

RESOLUTION ZR-2017-____

**APPROVAL OF A REQUEST FOR A SPECIAL USE
SUBJECT TO APPROVAL BY THE CITY COUNCIL**

WHEREAS, under **Chapter 9-6-2 N-B Neighborhood Business District** of the Unified Land Development Code of the City of Gainesville, Georgia; **Section 9-6-2-2 Permitted and Special Uses** allows a *convenience store with fuel pumps* subject to City Council approval after review and recommendation by the Gainesville Planning and Appeals Board; and

WHEREAS, an application has been received from **Montecito Development** to allow a *convenience store with fuel pumps* within a Neighborhood Business (N-B) zoning district identified as follows:

01-074-004-020
1281 Thompson Bridge Road, NW
Ward Two

WHEREAS, the application has been evaluated under any criteria specified in the aforesaid section; and

WHEREAS, the **Gainesville Planning and Appeals Board** held a public hearing regarding this matter on **May 9, 2017**.

NOW, THEREFORE, BE IT RESOLVED THAT the governing body for the City of Gainesville hereby approves the applicant's request for a special use permit as stated above and subject to all the terms of the Unified Land Development Code with the following conditions:

Conditions

1. The exterior materials and roof pitch of the building and canopy shall adhere to the standards as depicted on the architectural elevation provided with this rezoning application.
2. The hours of operation for the proposed use shall not exceed 5 a.m. to 12 a.m.
3. All access point design along the portion of Thompson Bridge Road and Enota Avenue in front of the property shall require approval by the Georgia Department of Transportation in conjunction with the Gainesville Public Works Director. All required access / traffic / sidewalk improvements associated with the proposed development shall be at the full expense of the developer / property owner.
4. The applicant / owner shall provide for internal parcel vehicular access with the adjacent vacant property located to the south.
5. An updated as-built boundary survey / plat of the subject property, indicating all improvements required for the proposed use, shall be recorded prior to obtaining a Certificate of Occupancy.

RESOLUTION ZR-2017-__

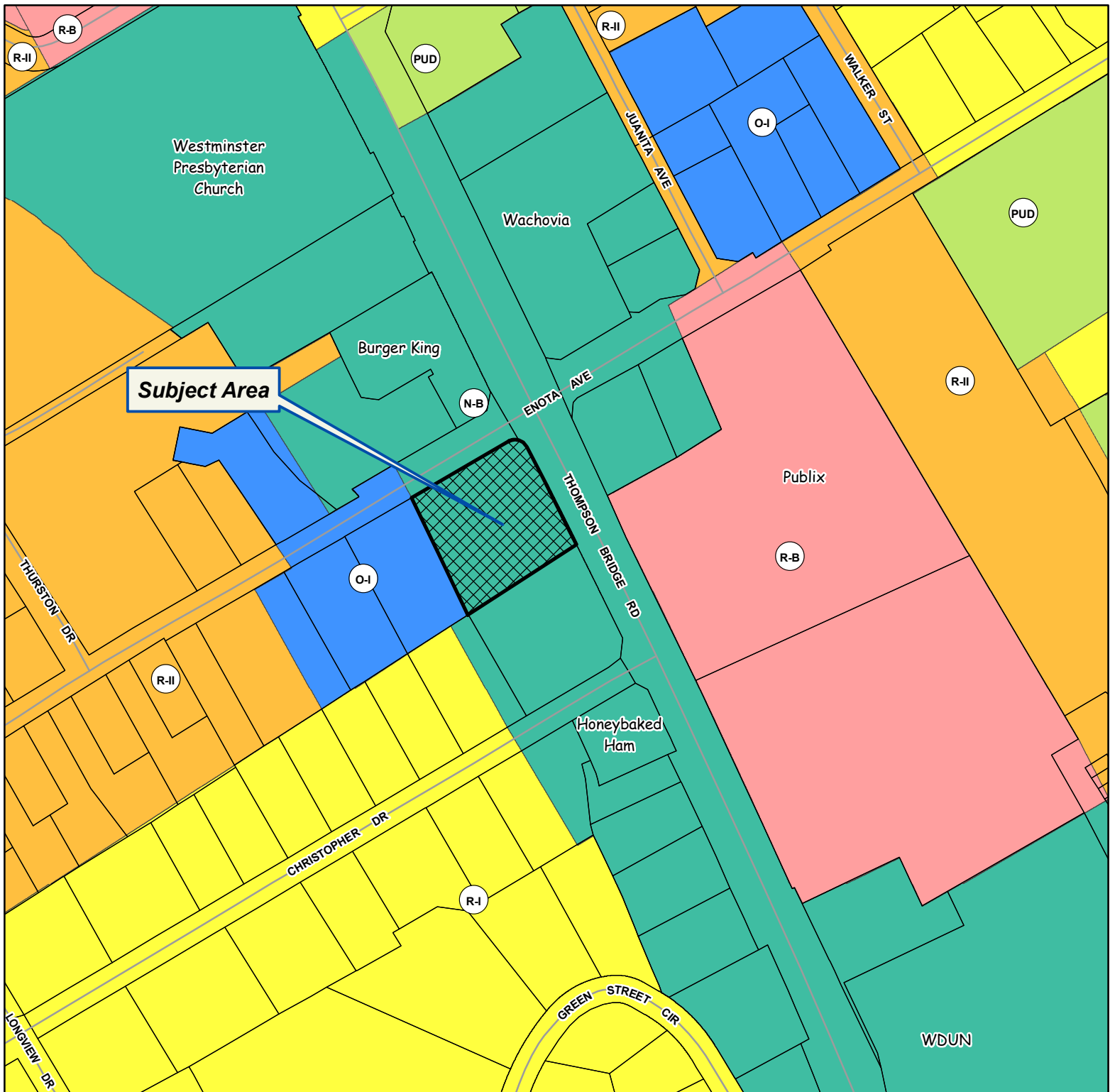
Adopted this _____ day of _____, 2017.

C. Danny Dunagan, Jr., Mayor

This is to certify that I am City Clerk of the City of Gainesville. As such, I keep its official records, including its minutes. In that capacity, my signature below certifies this resolution was adopted as stated and will be recorded in the official minutes.

ATTEST:

Denise O. Jordan, City Clerk



Applicant:

MONTECITO DEVELOPMENT

SPECIAL USE REQUEST



Request:

Special Use within the Neighborhood Business (N-B) zoning district (0.80+/- acre tract), for a convenience store with fuel pumps

Subject Area Address:

1281 Thompson Bridge Road, NW

Meeting: 5/9/2017

Prepared: 4/20/2017

Gainesville Community Development Department



Subject Area

N



0 120 240 360 480 Feet

1" = 200'

Tax Parcel: 01-074-004-020



Applicant:

MONTECITO DEVELOPMENT

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Prepared: 4/20/2017

Gainesville Community Development Department

 Subject Area

Aerial from 2015

0 120 240 360 480 Feet



1" = 200'

Tax Parcel: 01-074-004-020

ANDERSEN | TATE | CARR

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madeimy@atclawfirm.com

February 24, 2017

VIA E-MAIL AND HAND DELIVERY

City of Gainesville, Georgia
Attn: Rusty Ligon, Community Development Director
and Matthew Tate, Planning Manager
300 Henry Ward Way, Suite 303
Gainesville, Georgia 30501
mtate@gainesville.org

RE: REZONING AND ANNEXATION APPLICATIONS AND LETTER OF INTENT FOR MONTECITO DEVELOPMENTS, LLC

Dear Mr. Ligon and Mr. Tate:

This Letter of Intent is written on behalf of the property owner and Applicant, Montecito Developments, LLC (the "Applicant"), in support of the submitted zoning applications and any related variances needed or associated with the proposed zoning site plan (collectively, the "Applications") for the subject property located at 1281 Thompson Bridge Rd., NW and 149 Enota Ave., NW, Gainesville, GA 30501, Hall County Tax Parcel Nos. 01074 004020 and 01074 004001 (the "Property"), totaling approximately 1.5 acres.

The Applicant seeks a rezoning from *O&I and N-B to N-B*, to assemble the two long-vacant parcels to allow for a quality convenience store with gas pumps to serve residents and support the City's commercial tax base. This neighborhood, retail use will have no adverse impacts on surrounding properties. Based on market research, there is a need in this area for a quality, neighborhood convenience store. The Applicant is a developer of the well-received Circle K stores, a "2.0" model that provides modern amenities, design and store layouts to support and provide services to their suburban customer base. The Applicant currently plans to comply with all other buffer and setback requirements as reflected in the current zoning conditions. The proposed store will consist of a convenience store building totaling approximately 5,200 square feet, with 4 pump islands. The convenience store will include food, beverage and coffee options for customers.

The property's vacant status and tax value would be greatly increased with the addition of the proposed commercial development. The requested rezoning for the proposed commercial, convenience store and gas pump uses have a demonstrated history of being entirely suitable and complementary to the other land uses in the area, including the more intense commercial and office uses already permitted as a matter of right. This request is consistent with City's previous decisions and precedent in rezoning this and similarly situated properties in this area, with the current uses permitted under the N-B zoning district, and with the future land use plan for this area, being an existing commercial node.

Letter of Intent
1281 Thompson Bridge Rd.
and 149 Enota Ave.
Montecito Developments, LLC

February 24, 2017
Page 2 of 2

The property has access to a public water supply, public sanitary sewer, and convenient direct access to collector streets, major thoroughfares and state and interstate highways.

Constitutional Objections

The portions of the City of Gainesville Zoning Ordinances which classify or condition the Property into any more or less intensive zoning classification and/or zoning conditions other than as requested by the Applicant and property owner are and would be unconstitutional in that they would take the Applicant's and property owners' property rights without first paying fair, adequate and just compensation for such rights, in violation of Article I, Section I, Paragraph II of the Constitution of the State of Georgia of 1983, the Due Process Clause of the Fourteenth Amendment to the Constitution of the United States.

The Property is presently suitable for development subject only to the approval of the requested rezoning, as requested and amended by the Applicant and property owners, and is not economically suitable for development under its present zoning and development classification, conditions, regulations, and restrictions due to its location, shape, size, surrounding development, and other factors. A denial of the requested applications would constitute an arbitrary and capricious act by the City of Gainesville without any rational basis therefore, constituting an abuse of discretion in violation of Article I, Section I, Paragraphs I and II of the Constitution of the State of Georgia of 1983 and the Due Process Clause of the Fourteenth Amendment to the Constitution of the United States.

A refusal by the City of Gainesville to approve the Applicant's and property owners' requested rezoning, or to apply additional conditions outside of those proposed or agreed to by the Applicant, so as to prohibit reasonable economic use of the Property, would be unconstitutional and discriminate in an arbitrary, capricious and unreasonable manner as to the Applicant and property owners, in violation of Article I, Section I, Paragraph II of the Constitution of the State of Georgia of 1983 and the Equal Protection Clause of the Fourteenth Amendment to the Constitution.

Conclusion

Applicant respectfully requests approval, and submits the Applications and exhibits in further support of their requests. The Applicant and their representatives welcome the opportunity to meet with City officials and staff to answer any questions.

Respectfully submitted,

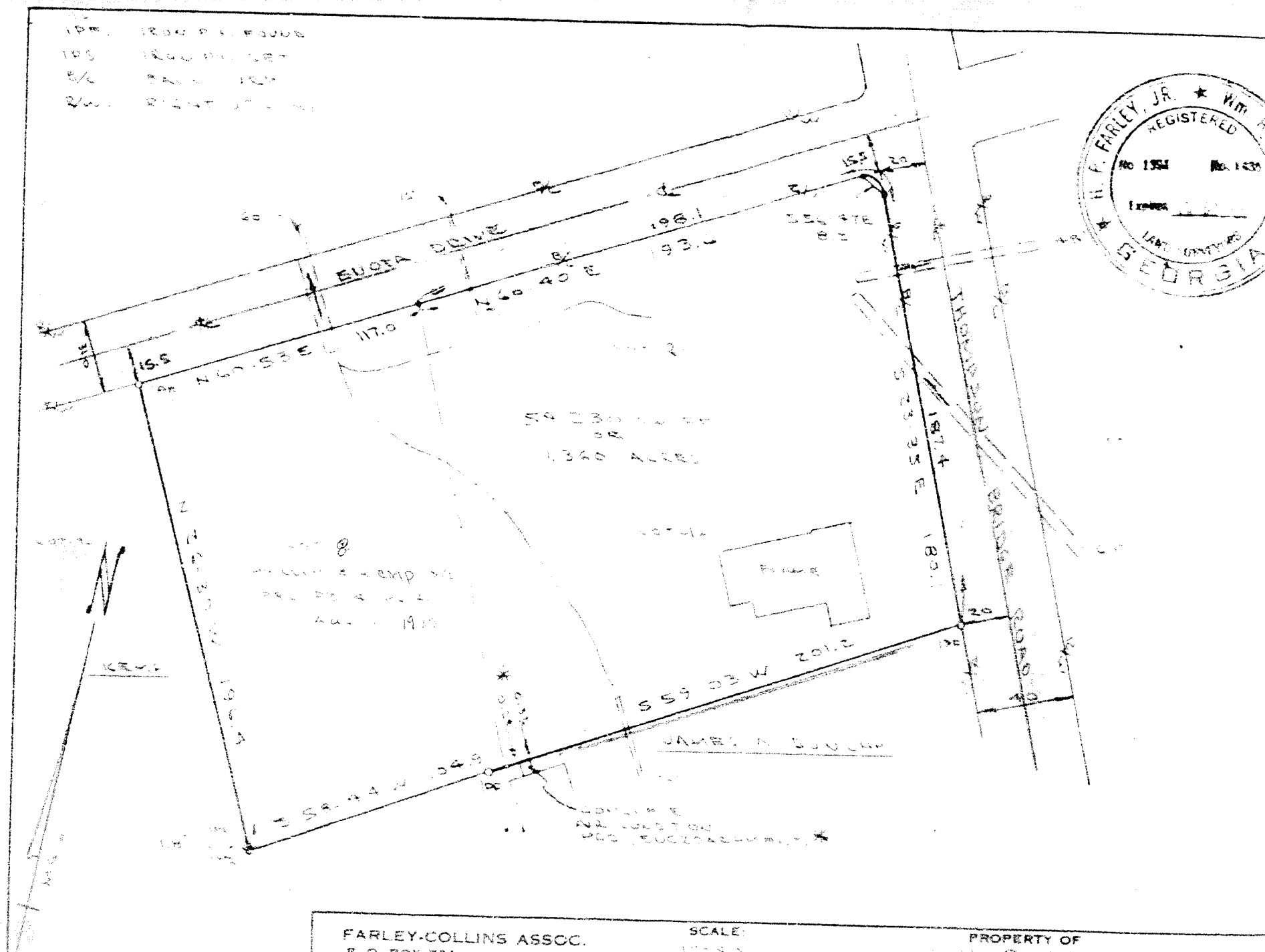
ANDERSEN, TATE & CARR, P.C.



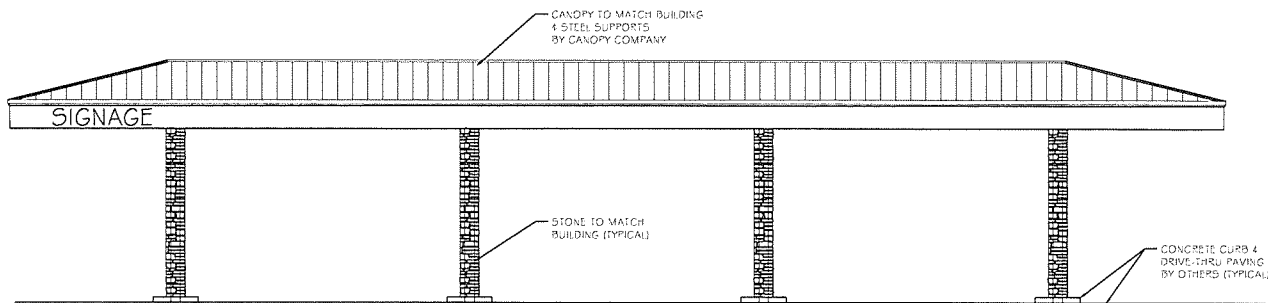
Marian C. Adeimy
Attorneys for Applicant

Enclosures
(Rezoning Application Packets)

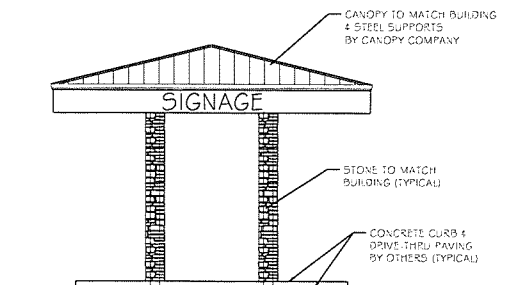
A circular postmark from W.F. Farley, Jr., Registered, No. 1354, No. 1330, Georgia, dated June 1954. The text "W.F. FARLEY, JR. ★ Wm." is at the top, "REGISTERED" is below it, "No. 1354" and "No. 1330" are on the left and right respectively, "JUN 1954" is in the center, and "GEORGIA" is at the bottom. The words "LATE DELIVERY" are faintly visible at the bottom.







1 GAS PUMP CANOPY ELEVATIONS
CPO1 SCALE: 1/8" = 1'-0"



2 GAS PUMP CANOPY END ELEVATIONS
CPO1 SCALE: 1/8" = 1'-0"

Traffic Impact Study

Proposed Convenience Store with Gasoline Pumps
Thompson Bridge Road (GA 60) at Enota Avenue
City of Gainesville, Georgia

February 23, 2017
Revised April 19, 2017

MARC R. ACAMPORA, PE, LLC
TRAFFIC ENGINEERING



Traffic Impact Study

Proposed Convenience Store with Gasoline Pumps
Thompson Bridge Road (GA 60) and Enota Avenue
City of Gainesville, Georgia

study prepared for:

Montecito Developments, LLC
2607 Vineville Avenue, Suite 205
PO Box 13
Macon, Georgia 31204

February 23, 2017
Revised April 19, 2017



MARC R. ACAMPORA, PE, LLC

TRAFFIC ENGINEERING

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Introduction

This study assesses the traffic impact of a proposed convenience store with gasoline pumps in Gainesville, Georgia. The site is located in the southwest corner of the intersection of Thompson Bridge Road (GA 60) and Enota Avenue, as shown in the location map in Figure 1. The project will include a 4,200 square foot convenience store with four gasoline pumps (eight fueling positions). Vehicular access will be provided at one full-movement driveway on the south side of Enota Avenue and one full-movement driveway on the west side of Thompson Bridge Road.

The purpose of this traffic impact study is to determine existing traffic operating conditions in the vicinity of the proposed development, project future traffic volumes, assess the impact of the subject development, then develop conclusions and recommendations to mitigate the project traffic impact and ensure safe and efficient existing and future traffic conditions in the vicinity of the project.

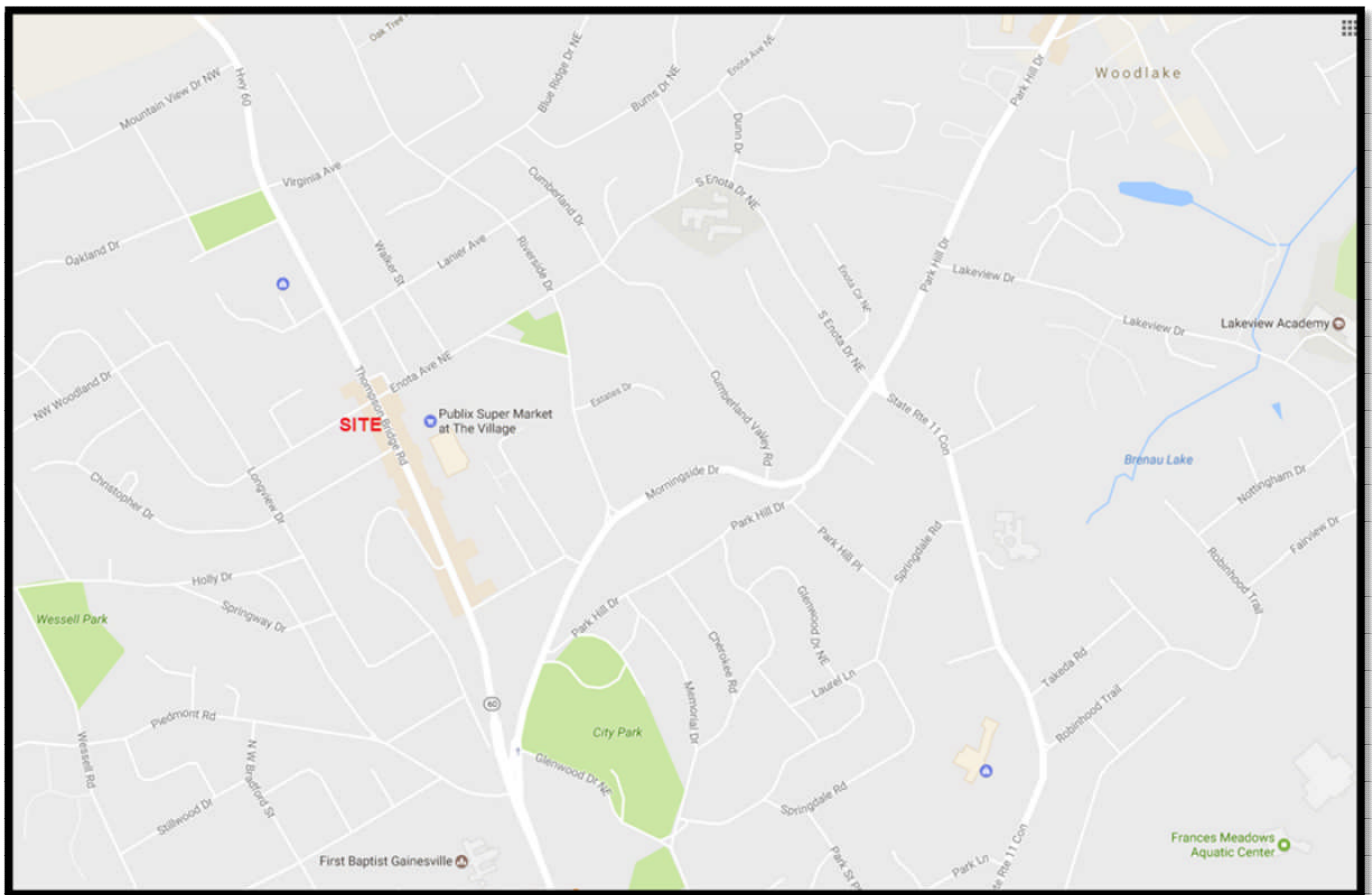


Figure 1 – Convenience Store Site Location Map

Existing Traffic Conditions

Existing traffic operating conditions in the vicinity of the proposed convenience store were assessed. The following is a description of existing transportation facilities, traffic volumes, and intersection operations.

Study Network

The City of Gainesville's Unified Land Development Code (ULDC) specifies that the study area to be included in a traffic impact study will be determined by calculating the peak hour and daily trips that the project will generate, then applying the table provided in the code, shown as Table 1, below, to determine the distance from the project that must be included in the study area.

Table 1 – ULDC Study Area Size Requirements

Peak Hour Trips Generated	Daily Trips Generated	Distance from Perimeter of Proposed Development Along Roads
100 - 150	1,000 – 1,500	½ mile
151 - 500	1,501 – 5,000	1 mile
501 – 1,000	5,001 – 10,000	2 miles
1001 or more	10,001 or more	3 miles

from the City of Gainesville ULDC

The trip generation for the proposed development is presented later in this report, summarized in Table 4. The peak hour trip generation for the project was calculated at 153 unadjusted or 52 new trips and the 24-hour volume is 4,340 unadjusted or 1,574 new trips. Based on these numbers, applied to the ULDC standard presented above, the study network was determined to extend for one mile from the limits of the proposed site. The one mile limits were presented to the City and, based on that information, the intersections to be included in this study were agreed upon with the City as follows:

- 1) Thompson Bridge Road at Walmart / Taco Bell Access
- 2) Thompson Bridge Road / Enota Avenue
- 3) Enota Avenue at Riverside Drive
- 4) GA 11 Business at South Enota Avenue
- 5) GA 60 at GA 11 Business
- 6) GA 60 at Ridgewood Avenue

Description of Existing Roadways

Thompson Bridge Road (Georgia State Route 60) is a principal arterial with a northwest / southeast orientation adjacent to the subject site. The road has two through lanes in each direction, with exclusive left turn lanes in both directions at Enota Avenue. The terrain along the adjacent segment of Thompson Bridge Road is very gently rolling and the posted speed limit is 40 mph in the northbound direction, changing to 45 mph just north

of Enota Avenue. Southbound, the speed limit drops from 45 mph to 40 mph along the frontage of the subject property. There is a traffic signal at the intersection of Thompson Bridge Road and Enota Avenue.

Enota Avenue is a two lane residential street that primarily serves single family subdivisions to the west of Thompson Bridge Road and a mix of single family, multi-family residential, and a school, east of Thompson Bridge Road. The eastbound approach of Enota Avenue has an exclusive left turn lane and a shared through/right at Thompson Bridge Road, while the westbound approach has separate left, through, and right turn lanes. The terrain along Enota Avenue is rolling with a downhill grade on the eastbound approach west of the site access, leveling off at Thompson Bridge Road. The westbound approach has a downhill grade approaching Thompson Bridge Road.

Pedestrian, Bicycle, and Transit Accessibility

There are no striped designated bicycle lanes on any of the roadways in this traffic study. In the vicinity of the site, sidewalk is located in the northeast corner of the Thompson Bridge / Enota intersection, but not on the other corners. Pedestrian crossing signals and crosswalks are provided on all approaches at the Thompson Bridge / Enota intersection, but only the northeast corner is ADA accessible. There is regularly scheduled mass transit (bus) service (Gainesville Connection, Route 20) along the adjacent section of Thompson Bridge Road and Enota Avenue east of Thompson Bridge Road.

Photographs 1 through 8 are taken at each of the intersections evaluated in this study.



Photograph 1 – View of Thompson Bridge Road Facing Walmart from Taco Bell Access



Photograph 2 – Thompson Bridge Road Facing North From Site Access



Photograph 3 – Thompson Bridge Road Facing South From Site Access



Photograph 4 – Enota Avenue Facing East Toward Thompson Bridge Road, Site Access to Right



Photograph 5 – Riverside Drive Facing North at All-Way Stop at Enota Avenue



Photograph 6 – GA 11 Business Facing Southwest Toward South Enota Avenue



Photograph 7 – Green Street Facing North at Fork with Thompson Bridge Road to Left, GA 11 Bus to Right



Photograph 8 – GA 60 Facing North at Ridgewood Avenue

Existing Traffic Volumes

Existing full turning movement traffic volume counts were collected at the six intersections previously listed. The counts were collected at the Thompson Bridge / Enota intersection on Thursday, February 16, 2017. The counts at Thompson Bridge / Walmart, Enota / Riverside, and GA 11 Bus / South Enota were collected on Thursday, March 30, 2017, and the counts at GA 60 / GA 11 Bus and GA 60 / Ridgewood were obtained from another recent traffic study performed in the area, collected on Wednesday, February 22, 2017. Observations at the study intersections revealed that the lunchtime/midday peak volumes were visibly lower than the morning and evening peak times. Therefore, this study focused on the busier a.m. and p.m. times, with the logic that these will represent the times of day with the highest delays. The counts were collected at each intersection from 7:00 a.m. to 9:00 a.m. and from 4:00 p.m. to 6:00 p.m. Area schools were in standard session on the days on which the counts were recorded. From the count data, the highest four consecutive 15-minute interval volumes at each intersection, during each time period, were determined. These volumes make up the typical weekday a.m. and p.m. peak hour traffic volumes at that intersection. The existing a.m. and p.m. peak hour turning movement volumes are shown in Figure 2. The raw count data is found in Appendix A.

In addition to the intersection turning movement counts, Georgia Department of Transportation (Georgia DOT) annual average daily traffic (AADT) volume counts were obtained on nearby roadways for the five years from 2011 to 2015 (the latest year for which volumes are available). Table 2 presents the historic Georgia DOT counts and the annual growth rates between the counts.

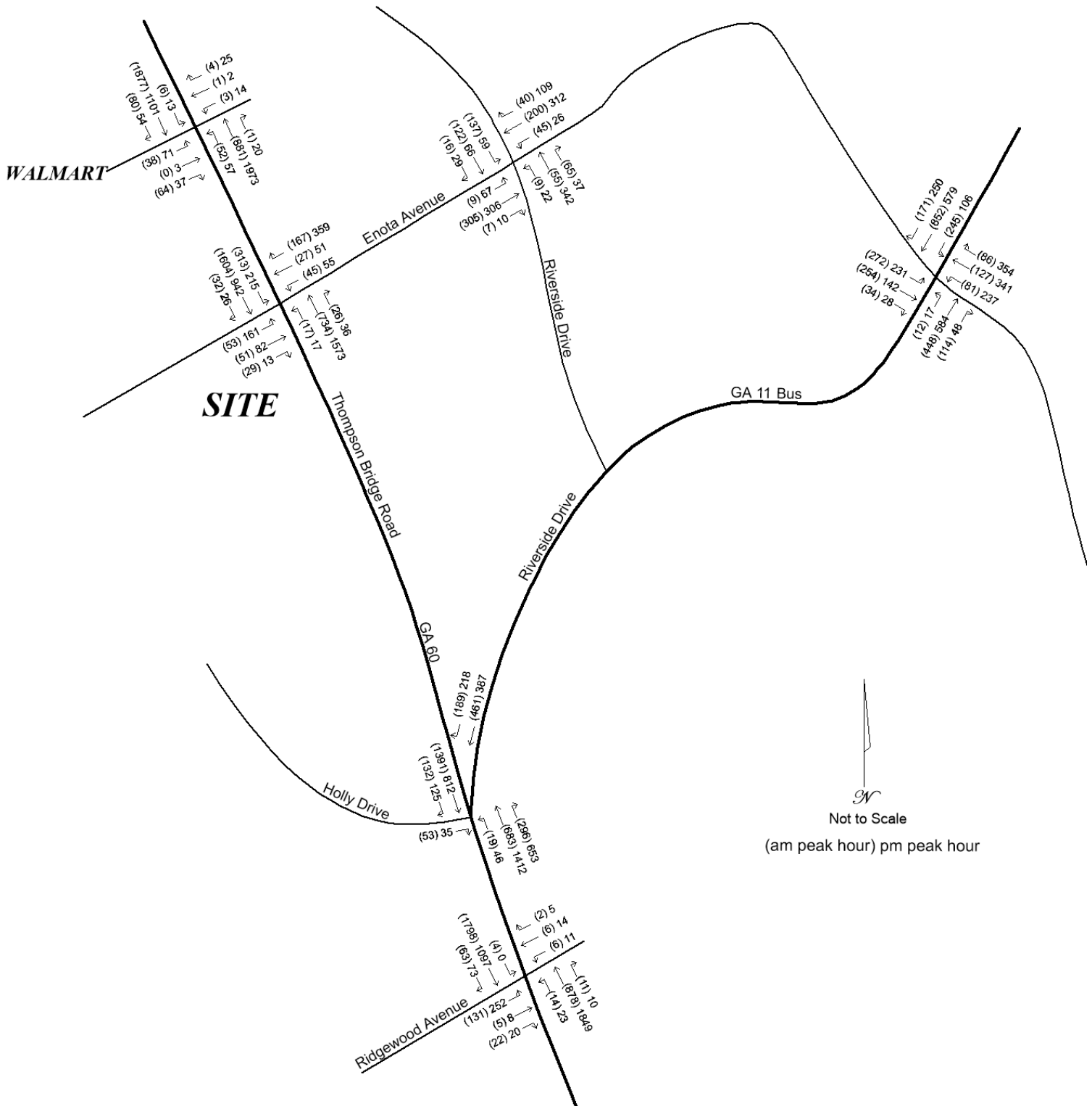


Figure 2 – Existing Weekday A.M. and P.M. Peak Hour Traffic Volumes

Table 2 – Historic Georgia DOT Traffic Volume Counts and Annual Growth Rates

Year	GA 60 S of Enota	Annual Growth	GA 60 N of North Pointe Dr	Annual Growth	Enota W of Thompson Bridge	Annual Growth	Enota E of Thompson Bridge	Annual Growth
Station ID	1390314		1390316		1390612		1390609	
2011	21,690		29,390		1,560		7,540	
2012	24,310	12.1%	29,010	-1.3%	1,560	0.0%	7,410	-1.7%
2013	24,220	-0.4%	30,030	3.5%	1,590	1.9%	7,360	-0.7%
2014	25,700	6.1%	30,000	-0.1%	1,700	6.9%	7,360	0.0%
2015	26,500	3.1%	31,000	3.3%	1,760	3.5%	7,660	4.1%
avg annual growth		5.1%		1.3%		3.1%		0.4%

The AADT volume on Thompson Bridge adjacent to the subject site was 26,500 in 2015 and the AADT on Enota adjacent to the site was 1,760 in 2015.

Existing Intersection Operations

Existing traffic operations were analyzed at the counted intersection using Synchro software, version 8, in accordance with the methodology presented in the Transportation Research Board's 2010 *Highway Capacity Manual (HCM 2010)*. The *HCM 2010* methodology is presented in Appendix B. The results of the analysis are shown in Table 3. Computer printouts containing detailed results of the analysis are located in Appendix C. Levels of service and delays are provided for the overall intersection and for each approach or controlled movement.

Table 3 – Existing Intersection Operations

Intersection / Approach	A.M. Peak Hour		P.M. Peak Hour	
	LOS	Delay (s/veh)	LOS	Delay (s/veh)
1. Thompson Bridge Road at Walmart/Taco Bell	A	8.8	B	11.0
northbound approach Thompson Bridge	A	2.8	A	9.3
southbound approach Thompson Bridge	A	8.9	A	5.7
eastbound approach Walmart access	D	52.2	E	69.1
westbound approach Taco Bell access	D	51.3	D	36.5
2. Thompson Bridge Road at Enota Avenue	B	11.8	D	36.8
northbound approach Thompson Bridge	A	8.8	D	36.2
southbound approach Thompson Bridge	A	6.4	C	24.1
eastbound approach Enota	E	61.1	E	56.9
westbound approach Enota	D	38.7	E	58.7
3. Enota Avenue at Riverside Drive	C	22.1	F	58.5
northbound approach Riverside	C	15.5	F	59.3
southbound approach Riverside	C	22.3	C	20.7
eastbound approach Enota	C	22.7	F	59.9
westbound approach Enota	C	25.0	F	71.3
4. GA 11 Business at South Enota Avenue	D	47.4	D	48.6
northbound approach GA 11 Bus	F	80.1	E	79.2
southbound approach GA 11 Bus	E	64.9	D	44.7
eastbound approach South Enota	C	30.2	D	41.2
westbound approach South Enota	C	34.4	D	42.9
5. GA 60 (Green/Thompson Bridge) at GA 11 Business	C	23.1	B	17.7
northbound approach Green	A	5.6	A	6.1
southbound approach Thompson Bridge	B	16.2	B	10.8
eastbound approach Holly	B	19.2	A	0.5
westbound approach GA 11 Bus	E	68.2	E	68.1
6. GA 60 (Green) at Ridgewood Avenue	B	19.6	C	26.4
northbound approach Green	A	6.0	C	24.9
southbound approach Green	B	18.5	B	12.7
eastbound approach Ridgewood	F	92.5	F	93.6
westbound approach driveway	D	49.6	D	40.7

The following is a discussion of the results at each intersection:

- 1. Thompson Bridge Road at Walmart / Taco Bell** – This signalized intersection is the main access for Walmart and Taco Bell. The intersection operates well in the existing a.m. and p.m. Some delays are incurred on the side street approaches primarily due to the signal timing, appropriately, heavily favoring the northbound and southbound approaches on Thompson Bridge Road. The side street left turn lanes are extremely short, especially on the Taco Bell approach, which only provides storage for one automobile. This is generally not problematic due to the relatively low side street approach volumes. The pedestrian signal head in the southeast corner (closest to Taco Bell), for pedestrians crossing the Taco Bell access, is very difficult to see in daylight and it is recommended that this pedestrian signal head be adjusted to improve its visibility. It is also noted that the southbound approach of Thompson Bridge Road does not include an exclusive right turn lane to serve the Walmart access. This is presumably due to topographic constraints in the Walmart property. Based on the southbound right turn volume and the given conditions, a southbound right turn lane would be justified at this location according to Georgia DOT standards.
- 2. Thompson Bridge Road at Enota Avenue** – The analysis of the Thompson Bridge / Enota intersection shows an overall acceptable level of service. The side street approaches on Enota Avenue operate at LOS E, again, primarily due to the greentime on the signal favoring the Thompson Bridge Road approaches. Two changes to the signal operations at this intersection would be beneficial. First, the 160 second cycle length is lengthy and the Synchro analysis suggests that cycle lengths of 80 to 100 seconds are more optimal. Shorter cycle lengths would also reduce side street queuing. It is recognized that the cycle length is dependent on other signals in the corridor and spot changes at individual intersections may not be appropriate. Also, three of the four approaches (all but westbound Enota Avenue) have protected / permissive left turn phasing. There would be a modest operational benefit, and a potential safety improvement, to adding this phasing to the westbound approach. It was also noted in the field that some adjacent intersections have been converted to the flashing permissive left turn arrow, but this intersection has not.
- 3. Enota Avenue at Riverside Drive** – This all-way stop intersection operates well in the a.m., but at LOS F in the p.m. The volumes at this intersection are such that exclusive turn lanes are appropriate for several movements. However, to avoid confusion about right-of-way, it is generally not advisable to add multiple approach lanes at an all-way stop sign-controlled intersection. This intersection may be a candidate for signalization. It is recommended that a signal warrant analysis be performed for this intersection according to the standards proscribed in the Federal Highway Administration's *Manual On Uniform Traffic Control Devices* (MUTCD). Should signalization be justified, consideration could be given to providing turn lanes, as appropriate. With a simple two-phase signal and no additional turn lanes, this intersection would operate at LOS B in the a.m. peak hour and LOS A in the p.m. peak hour. It is noted that Enota Avenue has received traffic calming treatment including highly-visible pedestrian crossings with speed humps. The all-way stop at the Enota / Riverside intersection provides a traffic calming function which may be diminished if this intersection was signalized. A roundabout is an alternative method of control that merits consideration at this intersection. The analysis of a

roundabout at this intersection reveals excellent operations, with LOS A in the a.m. and LOS B in the p.m.

4. **GA 11 Bus at South Enota Avenue** – There are no exclusive right turn lanes on either GA 11 Bus approach at this intersection. The northbound right turn volumes (114 a.m., 48 p.m.) and, even more significantly, the southbound right turn volumes (171 a.m., 250 p.m.) on GA 11 Bus justify the addition of these exclusive right turn lanes. The addition of these lanes will reduce overall intersection delays by about 10 seconds per vehicle in each time period and will eliminate the a.m. northbound LOS F. The signal includes protected/permissive phasing on all but the northbound approach, which has permissive-only phasing. This is acceptable given the low northbound left turn volumes on GA 11 Bus.
5. **GA 60 (Thompson Bridge Road / Green Street) at GA 11 Business** – This large intersection is the fork at which GA 11 Business (Riverside Drive) splits from GA 60 (Thompson Bridge Road). This intersection generally operates acceptably with the existing lanes and control. The southbound right turn volume into Holly Drive operates beyond the signal control. The volume of these right turners are high enough to justify a southbound exclusive right turn lane on GA 60, according to Georgia DOT standards. No other mitigation is recommended at this intersection.
6. **GA 60 (Green Street) at Ridgewood Avenue** – This overall intersection operates acceptably, especially given the tight urban design and lack of exclusive turn lanes. Northbound left turns from GA 60 receive a protected/permissive phasing on the signal and, with the modest northbound left turn volume, this generally provides acceptable operations. However, should a left turner not reach the intersection and complete their left turn movement during the protected portion of the phase, that left turner can significantly impede the through traffic in that lane. Likewise, eastbound Ridgewood Avenue only includes a single lane and, at times, notable queuing was observed on this approach. Ideally, from a traffic operations perspective, this intersection would be widened to include a northbound exclusive left turn lane on GA 60, a second eastbound lane on Ridgewood, and a southbound right turn lane on GA 60. These changes would reduce overall delays and eliminate the LOS F on the Ridgewood approach. However, it is acknowledged that this widening would alter the historic character of this intersection. Therefore, these improvements are suggested for consideration in the context of the overall character and goals of the community.

Project Traffic Characteristics

This section describes the anticipated traffic characteristics of the proposed convenience store, including a site description, how much traffic the project will generate, and where that traffic will travel.

Project Description

The proposed development will consist of a 4,200 square foot convenience store with four gasoline pumps (eight fueling positions). Access to the property will be provided by a full movement driveway on Enota Avenue and a full movement driveway on Thompson Bridge Road. The site plan is presented in Figure 3.

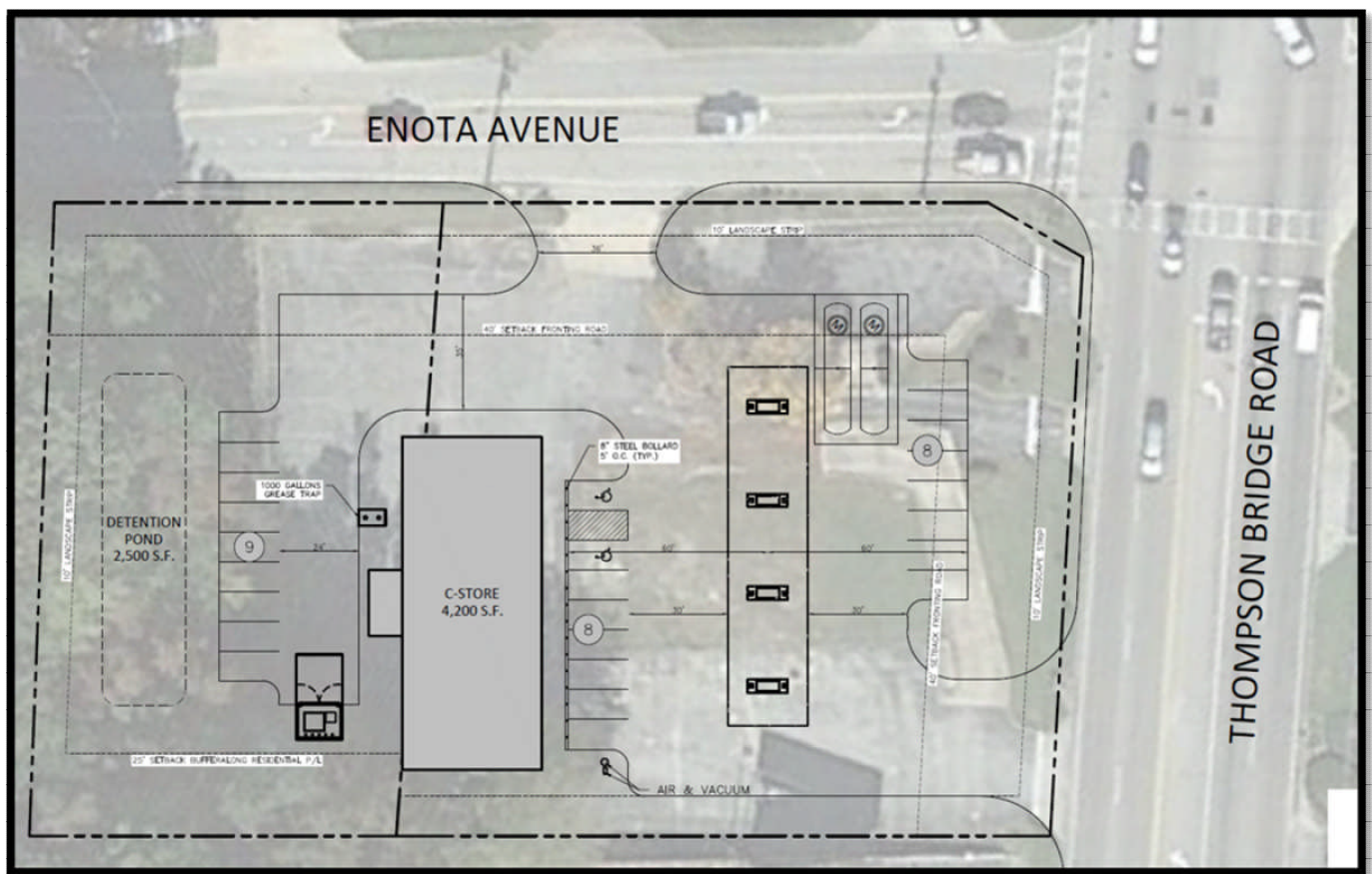


Figure 3 – Site Plan

It is noted that the current site has three accesses on Thompson Bridge Road – an enter-only lane right at the corner, an exit-only lane a few feet to the south, then a full-movement access at the south property line. The proposed convenience store site plan calls for closing the two accesses near the Enota intersection and preserving just the one full-movement access at the south end of the property. The property also has a single, existing full movement access on Enota Avenue, which will be preserved.

Trip Generation

Trip generation is an estimate of the number of entering and exiting vehicular trips that will be generated by the proposed development. The volume of traffic that will be generated by the proposed convenience store was calculated using the rates and equations in the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, 9th Edition. ITE Land Use 853 – Convenience Market with Gasoline Pumps was applied. The trip generation was calculated both by using square footage as the independent variable and also using number of fueling positions as the independent variable. The square footage yielded the higher peak hour trip volumes while the fueling positions yielded the higher 24-hour volumes. The average number of fueling positions in the ITE data was 7 for the a.m. peak hour and 8 for the p.m. peak hour data (this site plan calls for 8). The average square footage in the ITE data was 3,000. Since no equations were available and the average rates were, therefore, employed, it was decided to use the number of fueling positions as the independent variable, since the average size of that variable more-closely mirrored that of the proposed development.

The trip generation was adjusted to account for pass-by trips. Pass-by trips are trips to the proposed convenience store that are currently driving on Thompson Bridge Road and Enota Avenue and which will turn into the site for retail / gasoline purchases, then continue on the trip they are already making. The ITE *Trip Generation Manual* provides data for calculating pass-by percentages. This data showed an average pass-by percentage in the a.m. peak hour of 63% and average in the p.m. peak hour of 66%. These high percentages are logical given the nature of the development. The a.m. percentage of 63% was also applied to the 24-hour volumes. Table 4 summarizes the trip generation calculations for the proposed development. The calculations include the raw trips for the convenience store and the pass-by percentages.

Table 4 – Project Trip Generation

Land Use	ITE Code	Size	A.M. Peak Hour			P.M. Peak Hour			24-Hour
			In	Out	Total	In	Out	Total	2-Way
Convenience Market with Gasoline Pumps	853	8 fueling positions	67	66	133	76	77	153	4,340
-pass-by		63%/66%/63%	<u>-42</u>	<u>-42</u>	<u>-84</u>	<u>-50</u>	<u>-51</u>	<u>-101</u>	<u>-2,766</u>
Total New Trips			25	24	49	26	26	52	1,574

Trip Distribution and Assignment

The trip distribution percentages indicate what proportion of the project's trips will travel to and from various directions. The new trip distribution percentages were developed based on the locations and proximity of likely trip origins and destinations, primarily residential development in the area, and the routes of travel to and from those areas. The pass-by trips were assigned based on the prevailing flows passing the site. The project trips, shown in Table 4, were assigned to the roadway network based on the trip distribution percentages. The project trip distribution percentages and the a.m. and p.m. peak hour trips expected to be generated by the project are shown in Figure 4.

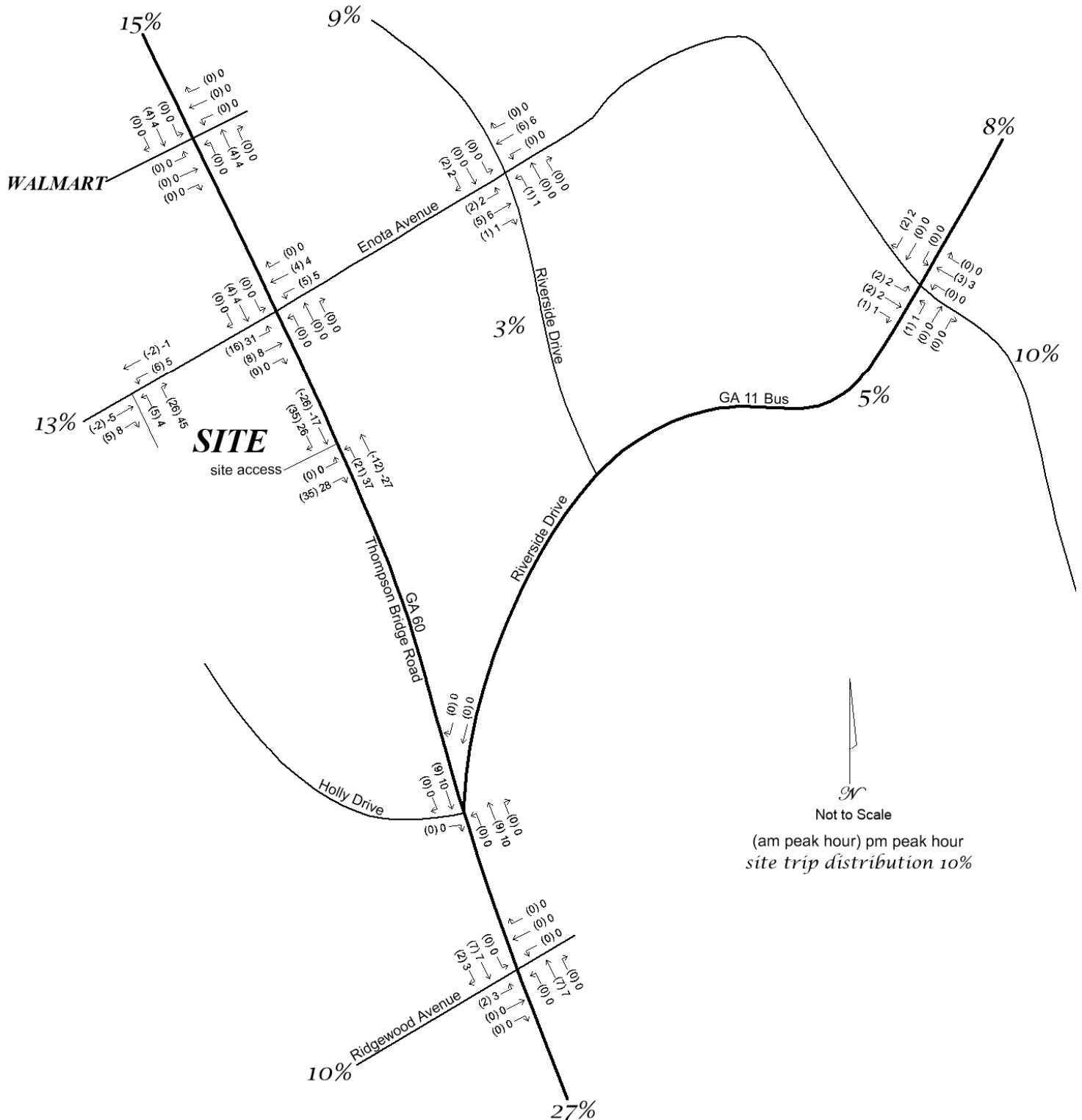


Figure 4 – Project Trip Distribution Percentages and Weekday A.M. and P.M. Peak Hour Site Trips

Future Traffic Conditions

The historic growth trends identified previously in Table 2, were used to develop an annual growth rate in traffic volumes of 3%, or a total of 6.1% for the projected two year project build-out horizon. This growth rate was applied to the counted volumes at the counted study intersections and at the site access locations. Then, the site traffic volumes were added to these volumes. The site volumes, shown in Figure 4, were added to the 2019 background volumes. This produces the future volumes that will be at each study intersection after the convenience store is built and operational. These future volumes are shown in Figure 5.

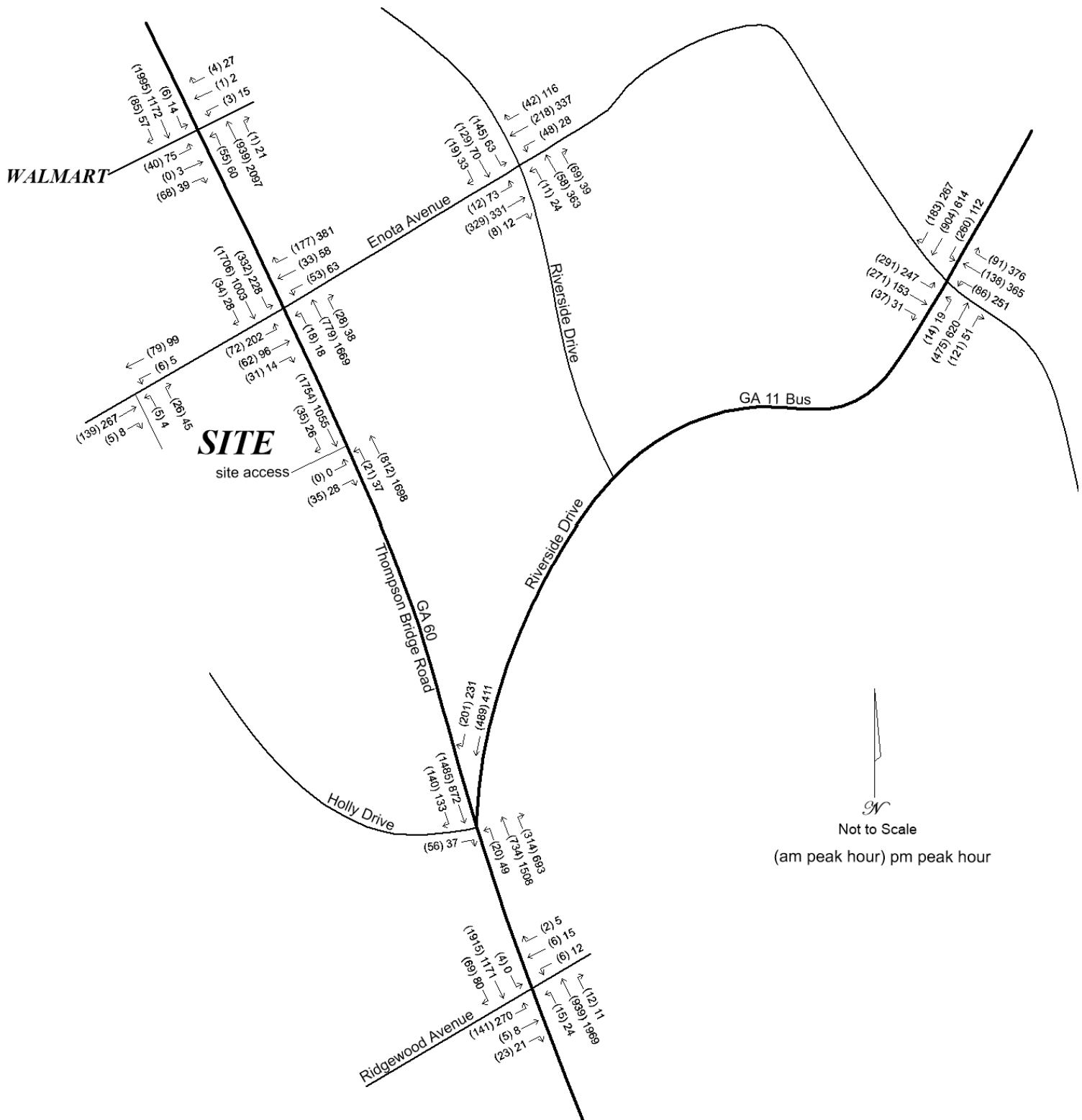


Figure 5 – Future Weekday A.M and P.M. Peak Hour Traffic Volume Projections

Future Intersection Operations

An operational analysis was performed for the anticipated 2019 future project build-out year, at the study intersections and the proposed site accesses. Table 5 presents the results of this analysis. Computer printouts containing detailed results of the analysis are located in Appendix D.

Table 5 – Future Intersection Operations

Intersection / Approach	A.M. Peak Hour		P.M. Peak Hour	
	LOS	Delay (s/veh)	LOS	Delay (s/veh)
1. Thompson Bridge Road at Walmart/Taco Bell	B	10.6	B	11.8
northbound approach Thompson Bridge	A	4.0	B	10.2
southbound approach Thompson Bridge	B	11.1	A	5.9
eastbound approach Walmart access	D	52.9	E	71.2
westbound approach Taco Bell access	D	51.0	D	36.4
2. Thompson Bridge Road at Enota Avenue	B	13.5	D	40.6
northbound approach Thompson Bridge	A	9.1	D	37.9
southbound approach Thompson Bridge	A	8.3	C	26.9
eastbound approach Enota	E	61.3	E	59.4
westbound approach Enota	D	39.6	E	71.0
3. Enota Avenue at Riverside Drive	D	32.1	F	66.5
northbound approach Riverside	C	19.0	F	72.7
southbound approach Riverside	D	30.9	C	23.2
eastbound approach Enota	D	33.7	F	73.0
westbound approach Enota	E	39.0	F	72.3
4. GA 11 Business at South Enota Avenue	E	56.4	E	56.6
northbound approach GA 11 Bus	F	94.5	F	83.7
southbound approach GA 11 Bus	F	80.4	D	46.8
eastbound approach South Enota	C	25.8	D	49.2
westbound approach South Enota	D	43.9	E	58.5
5. GA 60 (Green/Thompson Bridge) at GA 11 Business	C	28.0	C	23.3
northbound approach Green	A	6.2	A	7.8
southbound approach Thompson Bridge	C	26.3	C	29.3
eastbound approach Holly	C	23.9	A	0.5
westbound approach GA 11 Bus	E	67.8	E	66.9
6. GA 60 (Green) at Ridgewood Avenue	B	17.3	C	32.3
northbound approach Green	A	6.3	C	32.4
southbound approach Green	B	14.1	B	14.6

eastbound approach Ridgewood	F	100.1	F	105.1
westbound approach driveway	D	50.4	D	43.0
7. Thompson Bridge Road at Site Access	A	0.5	A	0.3
northbound left turn entering site	C	18.2	B	11.4
eastbound approach exiting site	C	22.5	B	13.5
8. Enota Avenue Site Access	A	1.4	A	1.4
westbound left turn entering site	A	7.5	A	7.9
northbound approach exiting site	A	9.3	B	10.6

The following is a discussion of these results at each intersection:

- 1. Thompson Bridge Road at Walmart / Taco Bell** – This intersection will continue to operate well in the future a.m. and p.m. Some increases in delays will be experienced on the side street approaches, again primarily due to the signal timing, appropriately, heavily favoring the northbound and southbound approaches on Thompson Bridge Road. No other changes, beyond those identified in the existing analysis, are recommended for this intersection.
- 2. Thompson Bridge Road at Enota Avenue** – The Thompson Bridge / Enota intersection will continue to operate acceptably with the addition of the traffic from the proposed convenience store. The addition of an eastbound exclusive right turn lane along the subject site frontage would prevent right turners from becoming trapped behind eastbound through vehicles. The side street approaches would experience a slight improvement in levels of service with this right turn lane, but reductions in delays on the Thompson Bridge approaches and for the overall intersection would be minimal.
- 3. Enota Avenue at Riverside Drive** – The delays will increase at this intersection in the future, though it is noted that the proposed convenience store will add only a modest volume of new trips to this intersection (17 in the a.m. peak hour, total in all directions, and 18 in the p.m. peak hour). Consistent with the existing recommendations, this intersection would benefit from signalization or a roundabout.
- 4. GA 11 Bus at South Enota Avenue** – The delays at this intersection will also increase in the future, and, as with the Enota / Riverside intersection, the proposed development will add only a small volume of new trips here. The discussion of the exclusive right turn lanes in the existing analysis is still applicable for the future condition. No additional changes are recommended.
- 5. GA 60 (Thompson Bridge Road / Green Street) at GA 11 Business** – This intersection will generally continue to operate acceptably in the future. No other mitigation is recommended at this intersection for the future.
- 6. GA 60 (Green Street) at Ridgewood Avenue** – This intersection will operate in the future comparably to existing conditions. The delays on the eastbound Ridgewood approach will increase and be

unacceptable. The existing analysis discussion about widenings at this intersection are still applicable for the future condition, with no additional changes identified.

7. Thompson Bridge Road at Site Access – The assignment of site trips assumed that no left turners would exit the site driveway onto Thompson Bridge Road. Without a specific exiting left turn prohibition, a few vehicles may attempt this movement. However, with the high volumes and number of lanes to cross on Thompson Bridge, it is considered highly probable that most vehicles that wish to travel either northbound on Thompson Bridge or to the east on Enota will exit the site at the Enota driveway and capitalize on the protection of the adjacent signal. Because of the difficulty in making this left turn from the site driveway, and the low numbers of vehicles expected to do so, consideration should be given to prohibiting exiting left turns from this driveway. The Georgia DOT access standards were reviewed for this intersection (Thompson Bridge is Georgia State Route 60) and these are presented below.

8. Enota Avenue at Site Access – The site access on Enota is projected to operate with low volumes and very low delays. Most of the site entering trips will enter at the Thompson Bridge access, so that the entering left turns at the Enota driveway are projected at only 6 vehicles in the a.m. peak hour and 5 in the p.m. peak hour. This should minimally impede westbound through flow on Enota. The eastbound right turns entering the site are also minimal, at 5 for the a.m. peak hour and 8 for the p.m. peak hour. This also should minimally impede flows on Enota.

Site Access Design and Georgia DOT Access Standards

Thompson Bridge Road is Georgia State Route 60, and, therefore, Georgia DOT access standards apply to the Thompson Bridge access. The site is currently served by three access points on Thompson Bridge Road. The two northernmost driveways will be eliminated by the proposed plan, leaving only one access on Thompson Bridge, at the southern end of the property (furthest from Enota Avenue). The standards proscribed in the Georgia DOT's *Regulations for Driveway and Encroachment Control* (Driveway Manual), revision 4.0, dated 3/15/2016, were reviewed for applicable design standards for the site access on GA 60, and are discussed as follows.

There is an existing two way left turn lane on GA 60, which becomes a northbound exclusive left turn lane along the site frontage, serving Enota Avenue. This left turn lane will also serve as the left turn lane for the proposed convenience store. The northbound left turn movement from Thompson Bridge to Enota, at the nearby signal, has a very modest volume (17 existing in each a.m. and p.m. peak hour) and has protected / permissive phasing. This phasing will also provide some protection and gaps for the left turners into the site access. One potential issue is left turners into the site stopping in the left turn lane at the site access, blocking left turners who wish to turn at Enota, but who queue behind the site left turners. This problem is exacerbated by the proximity of the site access to Enota Avenue. Conversely, the potential for this conflict is somewhat mitigated by the modest volumes actually turning left at Enota Avenue.

It is also noted that there is an access to a retail shopping center (Publix) on the east side of GA 60 which is slightly offset to the south from the proposed site access. At this point on the road, the striping indicates a

northbound left turn lane to Enota, and southbound left turners should not be using that lane to turn left into the Publix center. However, there is always the potential for conflict for opposing left turners at the two driveways (Publix and the subject site). Should left turn conflicts present a problem, it may be beneficial to limit the Publix access to right-in / right-out (RIRO) operations. Since the existing northbound left turn lane on GA 60 will serve the site access, no auxiliary lane analysis was performed for the need for this left turn lane.

The Georgia DOT standards for right turn lanes were reviewed for the site access on GA 60. Table 6, below, is Table 4-6 from the Driveway Manual, and proscribes the right turn volume thresholds at which exclusive right turn lanes must be provided.

Table 6 – Georgia DOT Minimum Volume Requirements for Right Turn Lanes

Posted Speed	2 Lane Routes		More than 2 Lanes on Main Road	
	AADT		AADT	
	< 6000	>=6000	<10000	>=10000
35 MPH or Less	200 RTV a day	100 RTV a day	200 RTV a day	100 RTV a day
40 to 50 MPH	150 RTV a day	75 RTV a day	150 RTV a day	75 RTV a day
55 to 60 MPH	100 RTV a day	50 RTV a day	100 RTV a day	50 RTV a day
>= 65 MPH	Always	Always	Always	Always

Table 4-6 Minimum Volumes Requiring Right Turn Lanes

As reported earlier, the 2015 AADT on Thompson Bridge Road is 26,500 vpd. The southbound right turn volume (RTV) per day at the GA 60 access is calculated as 35% of the site entering new trips ($35\% \times 787 = 275$) plus an estimated 50% of the site entering pass-by trips ($50\% \times 1,383 = 692$) for an entering right turn volume of 967 RTV per day. This substantially exceeds the Georgia DOT threshold of 75 RTV per day. Therefore, an exclusive right turn lane is required at the site access on Thompson Bridge Road according to Georgia DOT standards.

Table 7, below, is Table 4-8 from the Driveway Manual and proscribes the right turn lane design standards. As noted previously, the posted speed limit changes along the subject property frontage, dropping from 45 mph to 40 mph, so the right turn lane would be partially in each speed zone. At 40 mph, the standard for right turn lanes is 150 feet of full-width storage and a 50 foot taper. At 45 mph, the standard is 175 feet of full-width storage and a 100 foot taper. Most of the lane would be in the 45 mph zone and this would provide the more conservative design. However, it is also noted that the distance from the south curb on Enota to the north curb of the site access scales to approximately 150 feet. Therefore, insufficient distance is available to provide the required storage plus taper at either speed standard. The Georgia DOT spacing standards are proscribed in Driveway Manual Table 3-1 – Spacing Criteria for Driveways, Public Road, and Side Streets. At 45 mph, the minimum spacing is 230 feet, which is also not satisfied by the proposed design, either between the site access and Enota Avenue or between the site access and the existing driveway to the property to the south. It is recommended that these design factors be discussed with Georgia DOT and the City to determine an acceptable solution. Consideration should be given to the fact that the proposed plan does eliminate two of the three existing accesses along the subject frontage, thus reducing conflict points and providing an improved design over the existing condition.

Table 7 – Georgia DOT Design Standards for Right Turn Lanes

Speed, mph	Full Width Storage, ft.	Taper, ft.
25		50
30	75	50
35	100	50
40	150	50
45	175	100
50	225	100
55	250	100
60	300	100
65	350	100

Table 4-8 Minimum Right Turn Deceleration Lengths

The Thompson Bridge Road site access should be constructed with one entering and one exiting lane and the exiting approach should be controlled by stop sign and accompanying stop bar. As discussed above, consideration should be given to prohibiting exiting left turns at this driveway. The project site engineer is referred to the Georgia DOT Driveway Manual for other driveway design standards including driveway width, island design, and curb return radii.

The site access on Enota Avenue is not located on a Georgia state route and, therefore, Georgia DOT design standards do not apply. This access is located approximately mid-way along the site's Enota frontage. This design is logical since it places the access approximately at the front of the convenience store building. The potential does exist for entering left turners to block the westbound through movement on Enota Avenue. However, due to the low entering left turn volume (6 in the a.m. peak hour, 5 in the p.m. peak hour), this potential is minimal.

The Enota Avenue site access should be constructed with one entering and one exiting lane and the exiting approach should be controlled by stop sign and accompanying stop bar. It is also noted that there is a grade differential between the site and Enota Avenue at the location of the existing access, creating a steep grade and acute crown in the existing apron. This should be addressed by the proposed site plan.

Conclusions and Recommendations

The traffic impact of this proposed convenience store with gasoline pumps will occur primarily at the site driveways. The impact at adjacent intersections will be minimal to negligible. The reason the impact is so minimal is that the majority of trips to and from the site will be pass-by trips. The nature of this type of convenience store and gasoline station is to attract vehicles that are already passing by the site – it is minimally destination-oriented. Of those trips that are driving specifically to this store, most will be generated very locally. It is improbable that more than just a few trips will travel specifically to this store from more than about one to two miles. Therefore, the new trips from this project at most study intersections will be very low, having minimal effect on traffic operations. The following is a summary of the conclusions and recommendations of at each intersection:

- 1. Thompson Bridge Road at Walmart / Taco Bell** – This intersection operates well in the existing a.m. and p.m. and will continue to operate well in the future. The pedestrian signal head in the southeast corner (closest to Taco Bell), for pedestrians crossing the Taco Bell access, is very difficult to see in daylight and it is recommended that this pedestrian signal head be adjusted to improve its visibility. It is also noted that the southbound approach of Thompson Bridge Road does not include an exclusive right turn lane to serve the Walmart access. Based on the southbound right turn volume and the given conditions, a southbound right turn lane would be justified at this location according to Georgia DOT standards.
- 2. Thompson Bridge Road at Enota Avenue** – The analysis of the Thompson Bridge / Enota intersection shows an overall acceptable level of service in both the existing and future conditions. The side street approaches on Enota Avenue operate at LOS E, primarily due to the greentime on the signal favoring the Thompson Bridge Road approaches. Shorter cycle lengths would reduce delays and side street queuing. While there are crosswalks and pedestrian signals on all approaches at this signalized intersection, only the northeast corner has an ADA accessible ramp. Consideration should be given to adding ADA ramps on the remaining corners. The crosswalk and stop bar striping is also in poor condition and should be refreshed.
- 3. Enota Avenue at Riverside Drive** – This all-way stop intersection currently operates well in the a.m., but at LOS F in the p.m. In the future, these delays will increase. It is recommended that a signal warrant analysis be performed for this intersection according to the standards proscribed in the Federal Highway Administration's *Manual On Uniform Traffic Control Devices* (MUTCD). Should signalization be justified, consideration could be given to providing approach turn lanes, as appropriate. A roundabout is an alternative method of control that merits consideration at this intersection.
- 4. GA 11 Bus at South Enota Avenue** – The existing northbound right turn volumes (114 a.m., 48 p.m.) and, even more significantly, the southbound right turn volumes (171 a.m., 250 p.m.) on GA 11 Bus justify the addition of exclusive right turn lanes.
- 5. GA 60 (Thompson Bridge Road / Green Street) at GA 11 Business** – This intersection generally operates acceptably with the existing lanes and control, and will continue to operate acceptably in the future.

The southbound right turn volume into Holly Drive operates beyond the signal control. The volume of these right turners are high enough to justify a southbound exclusive right turn lane on GA 60, according to Georgia DOT standards. No other mitigation is recommended at this intersection.

6. GA 60 (Green Street) at Ridgewood Avenue – This overall intersection operates acceptably, especially given the tight urban design and lack of exclusive turn lanes, but delays are high at times on the eastbound approach of Ridgewood. Ideally, from a traffic operations perspective, this intersection would be widened to include a northbound exclusive left turn lane on GA 60, a second eastbound lane on Ridgewood, and a southbound right turn lane on GA 60. These changes would reduce overall delays and eliminate the LOS F on the Ridgewood approach. However, it is acknowledged that this widening would alter the historic character of this intersection. Therefore, these improvements are suggested for consideration in the context of the overall character and goals of the community.

7. Thompson Bridge Road at Site Access – The site plan calls for the elimination of two of the three existing site accesses on Thompson Bridge Road. This will reduce the number of conflict points. It is likely that most vehicles that wish to travel either northbound on Thompson Bridge or to the east on Enota will exit the site at the Enota driveway and capitalize on the protection of the adjacent signal. Because of the difficulty in making this left turn from the site driveway, and the low numbers of vehicles expected to do so, consideration should be given to prohibiting exiting left turns from this driveway. The Georgia DOT access standards were reviewed for this intersection (Thompson Bridge is Georgia State Route 60) and indicate that the access justifies a southbound exclusive right turn lane. The spacing of this driveway from Enota Avenue does not meet the minimum Georgia DOT driveway spacing standards. It is recommended that these design factors be discussed with Georgia DOT and the City to determine an acceptable solution. The Thompson Bridge Road site access should be constructed with one entering and one exiting lane and the exiting approach should be controlled by stop sign and accompanying stop bar. The project site engineer is referred to the Georgia DOT Driveway Manual for other driveway design standards including driveway width, island design, and curb return radii.

8. Enota Avenue at Site Access – The site access on Enota is projected to operate with low volumes and very low delays. Most of the site entering trips will enter at the Thompson Bridge access, so that the entering left turns at the Enota driveway are projected at only 6 vehicles in the a.m. peak hour and 5 in the p.m. peak hour. This should minimally impede westbound through flow on Enota. The eastbound right turns entering the site are also minimal, at 5 for the a.m. peak hour and 8 for the p.m. peak hour. This also should minimally impede flows on Enota. The Enota Avenue site access should be constructed with one entering and one exiting lane and the exiting approach should be controlled by stop sign and accompanying stop bar. The existing grade differential between the site and Enota Avenue at the location of the site access should be corrected when the site is developed.

Appendix A

Traffic Count Data and Volume Worksheets

Thompson Bridge Road at Enota Avenue Convenience Store Traffic Impact Study

City of Gainesville, Georgia

April 2017

Intersection: 1. Thompson Bridge Road at Walmart/Taco Bell

Weekday A.M. Peak Hour	Northbound Thompson Bridge Road				Southbound Thompson Bridge Road				Eastbound Walmart Access				Westbound Taco Bell Access			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Thursday, March 30, 2017)	52	881	1	934	6	1877	80	1963	38	0	64	102	3	1	4	8
Total Annual Background Growth	6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%	
No-Build Volumes	55	935	1	991	6	1991	85	2083	40	0	68	108	3	1	4	8
Proposed Convenience Store New Trips	0	4	0	4	0	4	0	4	0	0	0	0	0	0	0	0
Build Volumes	55	939	1	995	6	1995	85	2087	40	0	68	108	3	1	4	8

Weekday P.M. Peak Hour	Northbound Thompson Bridge Road				Southbound Thompson Bridge Road				Eastbound Walmart Access				Westbound Taco Bell Access			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Thursday, March 30, 2017)	57	1973	20	2050	13	1101	54	1168	71	3	37	111	14	2	25	41
Total Annual Background Growth	6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%	
No-Build Volumes	60	2093	21	2175	14	1168	57	1239	75	3	39	118	15	2	27	44
Proposed Convenience Store New Trips	0	4	0	4	0	4	0	4	0	0	0	0	0	0	0	0
Build Volumes	60	2097	21	2179	14	1172	57	1243	75	3	39	118	15	2	27	44

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Thompson Bridge Road at Enota Avenue Convenience Store Traffic Impact Study
City of Gainesville, Georgia

April 2017

Intersection: 2. Thompson Bridge Road at Enota Avenue

Weekday A.M. Peak Hour	Northbound Thompson Bridge Road				Southbound Thompson Bridge Road				Eastbound Enota Avenue				Westbound Enota Avenue			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Thursday, February 16, 2017)	17	734	26	777	313	1604	32	1949	53	51	29	133	45	27	167	239
Total Annual Background Growth	6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%	
No-Build Volumes	18	779	28	824	332	1702	34	2068	56	54	31	141	48	29	177	254
Proposed Convenience Store New Trips	0	0	0	0	0	4	0	4	4	8	0	12	5	4	0	9
Proposed Convenience Store Pass-by Trips	0	0	0	0	0	0	0	0	12	0	0	12	0	0	0	0
Total Convenience Store Trips	0	0	0	0	0	4	0	4	16	8	0	24	5	4	0	9
Build Volumes	18	779	28	824	332	1706	34	2072	72	62	31	165	53	33	177	263

Weekday P.M. Peak Hour	Northbound Thompson Bridge Road				Southbound Thompson Bridge Road				Eastbound Enota Avenue				Westbound Enota Avenue			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Thursday, February 16, 2017)	17	1573	36	1626	215	942	26	1183	161	82	13	256	55	51	359	465
Total Annual Background Growth	6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%	
No-Build Volumes	18	1669	38	1725	228	999	28	1255	171	87	14	272	58	54	381	493
Proposed Convenience Store New Trips	0	0	0	0	0	4	0	4	4	9	0	13	5	4	0	9
Proposed Convenience Store Pass-by Trips	0	0	0	0	0	0	0	0	27	0	0	27	0	0	0	0
Total Convenience Store Trips	0	0	0	0	0	4	0	4	31	9	0	40	5	4	0	9
Build Volumes	18	1669	38	1725	228	1003	28	1259	202	96	14	312	63	58	381	502

MARC R. ACAMPORA, PE, LLC

Thompson Bridge Road at Enota Avenue Convenience Store Traffic Impact Study
City of Gainesville, Georgia

April 2017

Intersection: 3. Enota Avenue at Riverside Drive

Weekday A.M. Peak Hour	Northbound Riverside Drive				Southbound Riverside Drive				Eastbound Enota Avenue				Westbound Enota Avenue			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Thursday, March 30, 2017)	9	55	65	129	137	122	16	275	9	305	7	321	45	200	40	285
Total Annual Background Growth	6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%	
No-Build Volumes	10	58	69	137	145	129	17	292	10	324	7	341	48	212	42	302
Proposed Convenience Store New Trips	1	0	0	1	0	0	2	2	2	5	1	8	0	6	0	6
Build Volumes	11	58	69	138	145	129	19	294	12	329	8	349	48	218	42	308

Weekday P.M. Peak Hour	Northbound Riverside Drive				Southbound Riverside Drive				Eastbound Enota Avenue				Westbound Enota Avenue			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Thursday, March 30, 2017)	22	342	37	401	59	66	29	154	67	306	10	383	26	312	109	447
Total Annual Background Growth	6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%	
No-Build Volumes	23	363	39	425	63	70	31	163	71	325	11	406	28	331	116	474
Proposed Convenience Store New Trips	1	0	0	1	0	0	2	2	2	6	1	9	0	6	0	6
Build Volumes	24	363	39	426	63	70	33	165	73	331	12	415	28	337	116	480

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Thompson Bridge Road at Enota Avenue Convenience Store Traffic Impact Study
City of Gainesville, Georgia

April 2017

Intersection: 4. GA 11 Business at South Enota Avenue

Weekday A.M. Peak Hour	Northbound GA 11 Business				Southbound GA 11 Business				Eastbound South Enota Avenue				Westbound South Enota Avenue			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Thursday, March 30, 2017)	12	448	114	574	245	852	171	1268	272	254	34	560	81	127	86	294
Total Annual Background Growth	6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%	
No-Build Volumes	13	475	121	609	260	904	181	1345	289	269	36	594	86	135	91	312
Proposed Convenience Store New Trips	1	0	0	1	0	0	2	2	2	2	1	5	0	3	0	3
Build Volumes	14	475	121	610	260	904	183	1347	291	271	37	599	86	138	91	315

Weekday P.M. Peak Hour	Northbound GA 11 Business				Southbound GA 11 Business				Eastbound South Enota Avenue				Westbound South Enota Avenue			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Thursday, March 30, 2017)	17	584	48	649	106	579	250	935	231	142	28	401	237	341	354	932
Total Annual Background Growth	6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%	
No-Build Volumes	18	620	51	689	112	614	265	992	245	151	30	425	251	362	376	989
Proposed Convenience Store New Trips	1	0	0	1	0	0	2	2	2	2	1	5	0	3	0	3
Build Volumes	19	620	51	690	112	614	267	994	247	153	31	430	251	365	376	992

MARC R. ACAMPORA, PE, LLC

Thompson Bridge Road at Enota Avenue Convenience Store Traffic Impact Study
City of Gainesville, Georgia

April 2017

Intersection: 5. GA 60 at GA 11 Business

Weekday A.M. Peak Hour	Northbound GA 60				Southbound GA 60				Eastbound Holly Drive				Westbound GA 11 Business			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Wednesday, February 22, 2017)	19	683	296	998	0	1391	132	1523	0	0	53	53	461	189	0	650
Total Annual Background Growth	6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%	
No-Build Volumes	20	725	314	1059	0	1476	140	1616	0	0	56	56	489	201	0	690
Proposed Convenience Store New Trips	0	9	0	9	0	9	0	9	0	0	0	0	0	0	0	0
Build Volumes	20	734	314	1068	0	1485	140	1625	0	0	56	56	489	201	0	690

Weekday P.M. Peak Hour	Northbound GA 60				Southbound GA 60				Eastbound Holly Drive				Westbound GA 11 Business			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Wednesday, February 22, 2017)	46	1412	653	2111	0	812	125	937	0	0	35	35	387	218	0	605
Total Annual Background Growth	6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%	
No-Build Volumes	49	1498	693	2240	0	862	133	994	0	0	37	37	411	231	0	642
Proposed Convenience Store New Trips	0	10	0	10	0	10	0	10	0	0	0	0	0	0	0	0
Build Volumes	49	1508	693	2250	0	872	133	1004	0	0	37	37	411	231	0	642

MARC R. ACAMPORA, PE, LLC

Thompson Bridge Road at Enota Avenue Convenience Store Traffic Impact Study
City of Gainesville, Georgia

April 2017

Intersection: 6. GA 60 at Ridgewood Avenue

Weekday A.M. Peak Hour	Northbound GA 60				Southbound GA 60				Eastbound Ridgewood Avenue				Westbound Driveway			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Wednesday, February 22, 2017)	14	878	11	903	4	1798	63	1865	131	5	22	158	6	6	2	14
Total Annual Background Growth	6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%	
No-Build Volumes	15	932	12	958	4	1908	67	1979	139	5	23	168	6	6	2	15
Proposed Convenience Store New Trips	0	7	0	7	0	7	2	9	2	0	0	2	0	0	0	0
Build Volumes	15	939	12	965	4	1915	69	1988	141	5	23	170	6	6	2	15

Weekday P.M. Peak Hour	Northbound GA 60				Southbound GA 60				Eastbound Ridgewood Avenue				Westbound Driveway			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Wednesday, February 22, 2017)	23	1849	10	1882	0	1097	73	1170	252	8	20	280	11	14	5	30
Total Annual Background Growth	6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%	
No-Build Volumes	24	1962	11	1997	0	1164	77	1241	267	8	21	297	12	15	5	32
Proposed Convenience Store New Trips	0	7	0	7	0	7	3	10	3	0	0	3	0	0	0	0
Build Volumes	24	1969	11	2004	0	1171	80	1251	270	8	21	300	12	15	5	32

MARC R. ACAMPORA, PE, LLC

Thompson Bridge Road at Enota Avenue Convenience Store Traffic Impact Study
City of Gainesville, Georgia

April 2017

Intersection: 7. Thompson Bridge Road at Site Access

Weekday A.M. Peak Hour	Northbound Thompson Bridge Road			Southbound Thompson Bridge Road			Eastbound Site Access			
	L	T	Tot	T	R	Tot	L	R	Tot	
Counted Volumes (Thursday, February 16, 2017)		777	777			1678				
Total Annual Background Growth		6.1%				6.1%				
No-Build Volumes		824	824			1780				
Proposed Convenience Store New Trips	9	0	9	0	9	9	0	9	9	
Proposed Convenience Store Pass-by Trips	12	-12	0	-26	26	0	0	26	26	
Total Convenience Store Trips	21	-12	9	-26	35	9	0	35	35	
Build Volumes	21	812	833	1754	35	1789	0	35	35	

Weekday P.M. Peak Hour	Northbound Thompson Bridge Road			Southbound Thompson Bridge Road			Eastbound Site Access			
	L	T	Tot	T	R	Tot	L	R	Tot	
Counted Volumes (Thursday, February 16, 2017)		1626	1626			1010				
Total Annual Background Growth		6.1%				6.1%				
No-Build Volumes		1725	1725			1072				
Proposed Convenience Store New Trips	10	0	10	0	9	9	0	10	10	
Proposed Convenience Store Pass-by Trips	27	-27	0	-17	17	0	0	18	18	
Total Convenience Store Trips	37	-27	10	-17	26	9	0	28	28	
Build Volumes	37	1698	1735	1055	26	1081	0	28	28	

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Thompson Bridge Road at Enota Avenue Convenience Store Traffic Impact Study
City of Gainesville, Georgia

April 2017

Intersection: 8. Enota Avenue at Site Access

Weekday A.M. Peak Hour	Northbound Site Access				Eastbound Enota Avenue			Westbound Enota Avenue		
	L	R	Tot		T	R	Tot	L	T	Tot
Counted Volumes (Thursday, February 16, 2017)					133		133		76	76
Total Annual Background Growth					6.1%				6.1%	
No-Build Volumes					141		141		81	81
Proposed Convenience Store New Trips	3	12	15		0	3	3	4	0	4
Proposed Convenience Store Pass-by Trips	2	14	16		-2	2	0	2	-2	0
Total Convenience Store Trips	5	26	31		-2	5	3	6	-2	4
Build Volumes	5	26	31		139	5	144	6	79	85

Weekday P.M. Peak Hour	Northbound Site Access				Eastbound Enota Avenue			Westbound Enota Avenue		
	L	R	Tot		T	R	Tot	L	T	Tot
Counted Volumes (Thursday, February 16, 2017)					256		256		94	94
Total Annual Background Growth					6.1%				6.1%	
No-Build Volumes					272		272		100	100
Proposed Convenience Store New Trips	3	13	16		0	3	3	4	0	4
Proposed Convenience Store Pass-by Trips	1	32	33		-5	5	0	1	-1	0
Total Convenience Store Trips	4	45	49		-5	8	3	5	-1	4
Build Volumes	4	45	49		267	8	275	5	99	104

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TMC Data
Thompson Bridge Rd @ Walmart Drwy/
Taco Bell Drwy, Gainesville, GA
7-9am I 4-6pm

File Name : 40240001
Site Code : 40240001
Start Date : 3/30/2017
Page No : 1

Groups Printed- Cars, Buses and Trucks

	Thompson Bridge Rd Northbound					Thompson Bridge Rd Southbound					Walmart Drwy Eastbound					Taco Bell Drwy Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	4	150	0	0	154	0	328	12	0	340	4	0	13	0	17	0	0	0	0	0	511
07:15 AM	9	196	0	0	205	0	435	18	0	453	7	0	16	0	23	0	0	0	0	0	681
07:30 AM	9	212	0	0	221	1	493	20	0	514	6	0	14	0	20	0	0	0	0	0	755
07:45 AM	17	232	0	0	249	0	524	21	0	545	11	0	17	0	28	2	1	0	0	3	825
Total	39	790	0	0	829	1	1780	71	0	1852	28	0	60	0	88	2	1	0	0	3	2772
08:00 AM	14	233	1	0	248	2	429	22	0	453	10	0	20	0	30	0	0	2	0	2	733
08:15 AM	12	204	0	0	216	3	431	17	0	451	11	0	13	0	24	1	0	2	0	3	694
08:30 AM	8	216	1	0	225	1	397	14	0	412	9	0	13	0	22	0	1	0	0	1	660
08:45 AM	12	209	0	0	221	0	358	13	0	371	8	0	21	0	29	0	0	3	0	3	624
Total	46	862	2	0	910	6	1615	66	0	1687	38	0	67	0	105	1	1	7	0	9	2711
*** BREAK ***																					
04:00 PM	17	355	2	0	374	2	252	23	0	277	16	0	17	0	33	1	0	2	0	3	687
04:15 PM	17	400	8	0	425	3	264	16	0	283	19	1	16	0	36	6	0	5	0	11	755
04:30 PM	16	438	10	0	464	4	253	16	0	273	11	2	14	0	27	6	2	6	0	14	778
04:45 PM	19	465	5	0	489	3	251	21	0	275	18	2	16	0	36	3	1	5	0	9	809
Total	69	1658	25	0	1752	12	1020	76	0	1108	64	5	63	0	132	16	3	18	0	37	3029
05:00 PM	17	524	9	0	550	3	278	16	0	297	22	0	12	0	34	7	1	12	0	20	901
05:15 PM	10	508	4	0	522	5	290	10	0	305	26	0	8	0	34	4	0	6	0	10	871
05:30 PM	11	476	2	0	489	2	282	7	0	291	5	1	1	0	7	0	0	2	0	2	789
05:45 PM	1	448	2	0	451	0	301	3	0	304	2	0	6	0	8	0	0	2	0	2	765
Total	39	1956	17	0	2012	10	1151	36	0	1197	55	1	27	0	83	11	1	22	0	34	3326
Grand Total	193	5266	44	0	5503	29	5566	249	0	5844	185	6	217	0	408	30	6	47	0	83	11838
Apprch %	3.5	95.7	0.8	0		0.5	95.2	4.3	0		45.3	1.5	53.2	0		36.1	7.2	56.6	0		
Total %	1.6	44.5	0.4	0	46.5	0.2	47	2.1	0	49.4	1.6	0.1	1.8	0	3.4	0.3	0.1	0.4	0	0.7	

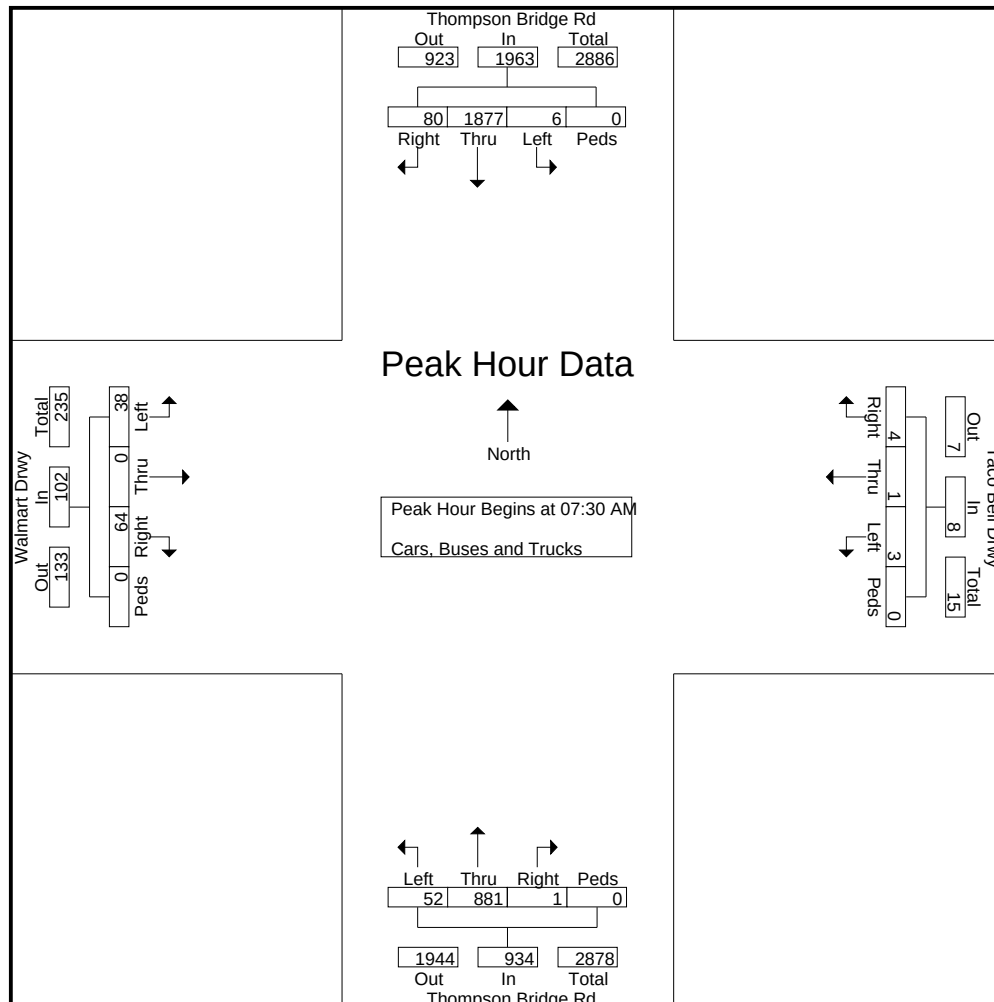
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TMC Data
Thompson Bridge Rd @ Walmart Drwy/
Taco Bell Drwy, Gainesville, GA
7-9am I 4-6pm

File Name : 40240001
Site Code : 40240001
Start Date : 3/30/2017
Page No : 2

	Thompson Bridge Rd Northbound					Thompson Bridge Rd Southbound					Walmart Drwy Eastbound					Taco Bell Drwy Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	9	212	0	0	221	1	493	20	0	514	6	0	14	0	20	0	0	0	0	0	755
07:45 AM	17	232	0	0	249	0	524	21	0	545	11	0	17	0	28	2	1	0	0	3	825
08:00 AM	14	233	1	0	248	2	429	22	0	453	10	0	20	0	30	0	0	2	0	2	733
08:15 AM	12	204	0	0	216	3	431	17	0	451	11	0	13	0	24	1	0	2	0	3	694
Total Volume	52	881	1	0	934	6	1877	80	0	1963	38	0	64	0	102	3	1	4	0	8	3007
% App. Total	5.6	94.3	0.1	0		0.3	95.6	4.1	0		37.3	0	62.7	0		37.5	12.5	50	0		
PHF	.765	.945	.250	.000	.938	.500	.896	.909	.000	.900	.864	.000	.800	.000	.850	.375	.250	.500	.000	.667	.911



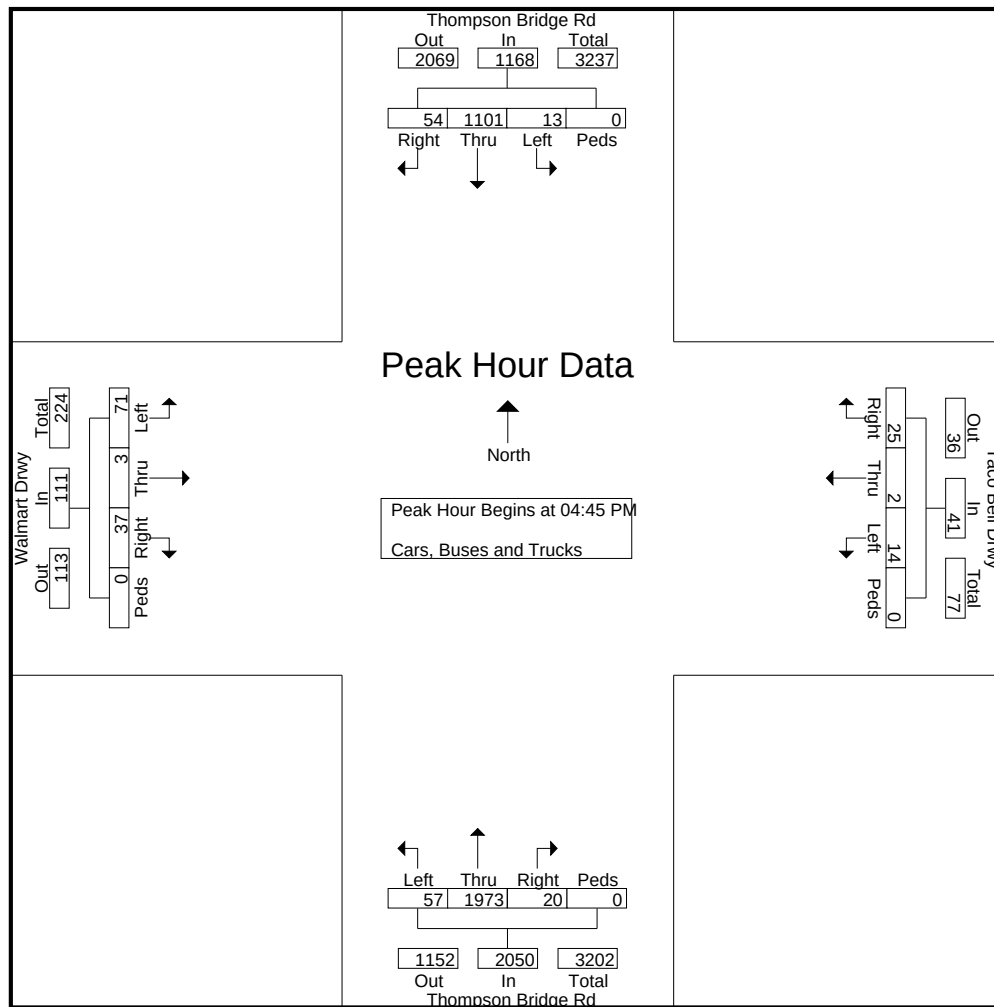
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	Thompson Bridge Rd Northbound					Thompson Bridge Rd Southbound					Walmart Drwy Eastbound					Taco Bell Drwy Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	19	465	5	0	489	21	0	275			18	2	16	0	36	3	1	5	0	9	809
05:00 PM	17	524	9	0	550	3	278	16	0	297	22	0	12	0	34	7	1	12	0	20	901
05:15 PM	10	508	4	0	522	5	290	10	0	305	26	0	8	0	34	4	0	6	0	10	871
05:30 PM	11	476	2	0	489	2	282	7	0	291	5	1	1	0	7	0	0	2	0	2	789
Total Volume	57	1973	20	0	2050	13	1101	54	0	1168	71	3	37	0	111	14	2	25	0	41	3370
% App. Total	2.8	96.2	1	0		1.1	94.3	4.6	0		64	2.7	33.3	0		34.1	4.9	61	0		
PHF	.750	.941	.556	.000	.932	.650	.949	.643	.000	.957	.683	.375	.578	.000	.771	.500	.500	.521	.000	.513	.935



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TMC Data
Thompson Bridge Rd @ Enota Ave
Gainesville, GA
7-9am I 4-6pm

File Name : 39980001
Site Code : 39980001
Start Date : 2/16/2017
Page No : 1

Groups Printed- Cars, Buses and Trucks

	Thompson Bridge Rd Northbound					Thompson Bridge Rd Southbound					Enota Ave Eastbound					Enota Ave Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	2	125	4	0	131	51	281	2	0	334	6	7	6	0	19	4	0	28	0	32	516
07:15 AM	0	163	7	0	170	71	372	4	0	447	8	17	4	0	29	7	6	33	0	46	692
07:30 AM	6	177	7	0	190	83	414	9	0	506	13	12	6	0	31	18	7	34	0	59	786
07:45 AM	3	193	3	0	199	78	455	8	0	541	16	10	9	0	35	5	3	47	0	55	830
Total	11	658	21	0	690	283	1522	23	0	1828	43	46	25	0	114	34	16	142	0	192	2824
08:00 AM	6	194	7	0	207	72	367	9	0	448	12	17	6	0	35	14	6	38	0	58	748
08:15 AM	2	170	9	0	181	80	368	6	0	454	12	12	8	0	32	8	11	48	0	67	734
08:30 AM	6	189	6	0	201	58	339	3	0	400	12	7	8	0	27	14	6	37	0	57	685
08:45 AM	4	174	3	0	181	56	299	5	0	360	12	10	1	0	23	10	6	29	0	45	609
Total	18	727	25	0	770	266	1373	23	0	1662	48	46	23	0	117	46	29	152	0	227	2776
*** BREAK ***																					
04:00 PM	4	284	8	0	296	58	219	6	0	283	42	18	7	0	67	10	19	75	0	104	750
04:15 PM	5	320	18	0	343	47	241	4	0	292	33	17	5	0	55	14	9	80	0	103	793
04:30 PM	3	350	9	0	362	52	220	8	0	280	17	21	1	0	39	8	10	84	0	102	783
04:45 PM	2	372	9	0	383	45	218	5	0	268	34	24	2	0	60	14	17	92	0	123	834
Total	14	1326	44	0	1384	202	898	23	0	1123	126	80	15	0	221	46	55	331	0	432	3160
05:00 PM	6	419	14	0	439	47	227	9	0	283	38	13	4	0	55	14	10	66	0	90	867
05:15 PM	3	401	3	0	407	65	252	4	0	321	50	23	3	0	76	13	14	102	0	129	933
05:30 PM	6	381	10	0	397	58	245	8	0	311	39	22	4	0	65	14	10	99	0	123	896
05:45 PM	5	339	15	0	359	47	262	7	0	316	32	19	3	0	54	11	13	78	0	102	831
Total	20	1540	42	0	1602	217	986	28	0	1231	159	77	14	0	250	52	47	345	0	444	3527
Grand Total	63	4251	132	0	4446	968	4779	97	0	5844	376	249	77	0	702	178	147	970	0	1295	12287
Apprch %	1.4	95.6	3	0		16.6	81.8	1.7	0		53.6	35.5	11	0		13.7	11.4	74.9	0		
Total %	0.5	34.6	1.1	0	36.2	7.9	38.9	0.8	0	47.6	3.1	2	0.6	0	5.7	1.4	1.2	7.9	0	10.5	

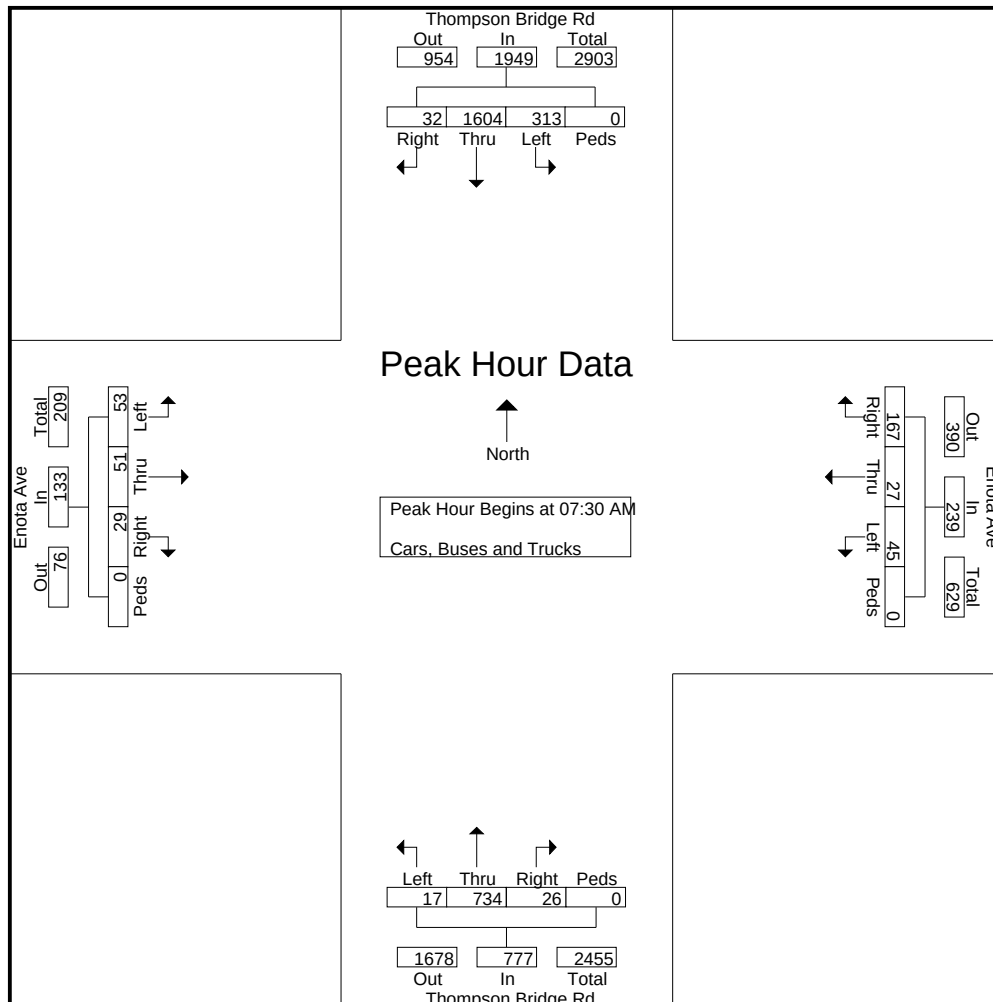
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TMC Data
Thompson Bridge Rd @ Enota Ave
Gainesville, GA
7-9am I 4-6pm

File Name : 39980001
Site Code : 39980001
Start Date : 2/16/2017
Page No : 2

	Thompson Bridge Rd Northbound					Thompson Bridge Rd Southbound					Enota Ave Eastbound					Enota Ave Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	6	177	7	0	190	83	414	9	0	506	13	12	6	0	31	18	7	34	0	59	786
07:45 AM	3	193	3	0	199	78	455	8	0	541	16	10	9	0	35	5	3	47	0	55	830
08:00 AM	6	194	7	0	207	72	367	9	0	448	12	17	6	0	35	14	6	38	0	58	748
08:15 AM	2	170	9	0	181	80	368	6	0	454	12	12	8	0	32	8	11	48	0	67	734
Total Volume	17	734	26	0	777	313	1604	32	0	1949	53	51	29	0	133	45	27	167	0	239	3098
% App. Total	2.2	94.5	3.3	0		16.1	82.3	1.6	0		39.8	38.3	21.8	0		18.8	11.3	69.9	0		
PHF	.708	.946	.722	.000	.938	.943	.881	.889	.000	.901	.828	.750	.806	.000	.950	.625	.614	.870	.000	.892	.933



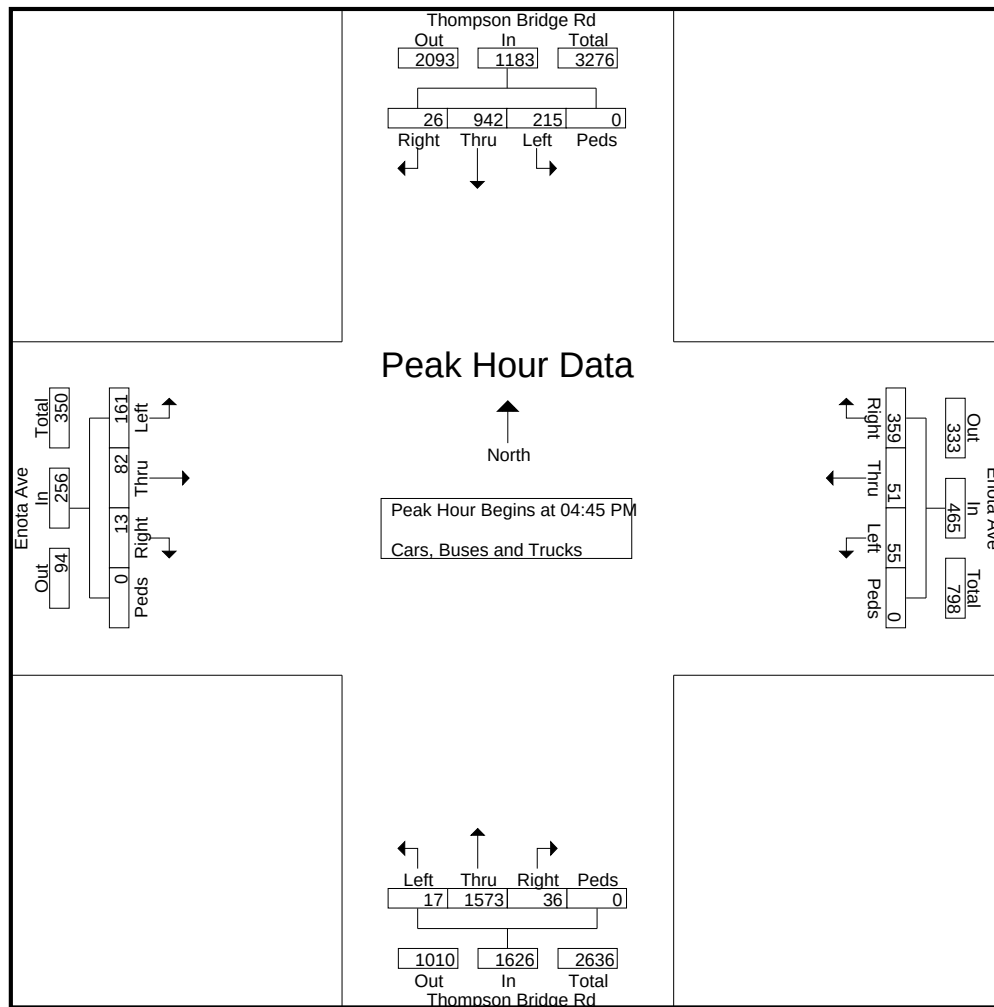
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Thompson Bridge Rd @ Enota Ave
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7-9am I 4-6pm

File Name : 39980001
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Start Date : 2/16/2017
Page No : 3

	Thompson Bridge Rd Northbound					Thompson Bridge Rd Southbound					Enota Ave Eastbound					Enota Ave Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	2	372	9	0	383	45	218	5	0	268	34	24	2	0	60	14	17	92	0	123	834
05:00 PM	6	419	14	0	439	47	227	9	0	283	38	13	4	0	55	14	10	66	0	90	867
05:15 PM	3	401	3	0	407	65	252	4	0	321	50	23	3	0	76	13	14	102	0	129	933
05:30 PM	6	381	10	0	397	58	245	8	0	311	39	22	4	0	65	14	10	99	0	123	896
Total Volume	17	1573	36	0	1626	215	942	26	0	1183	161	82	13	0	256	55	51	359	0	465	3530
% App. Total	1	96.7	2.2	0		18.2	79.6	2.2	0		62.9	32	5.1	0		11.8	11	77.2	0		
PHF	.708	.939	.643	.000	.926	.827	.935	.722	.000	.921	.805	.854	.813	.000	.842	.982	.750	.880	.000	.901	.946



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TMC Data
Enota Ave @ Riverside Dr
Gainesville, GA
7-9am I 4-6pm

File Name : 40240002
Site Code : 40240002
Start Date : 3/30/2017
Page No : 1

Groups Printed- Cars, Buses and Trucks

	Riverside Dr Northbound					Riverside Dr Southbound					Enota Ave Eastbound					Enota Ave Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	2	9	14	0	25	18	11	0	0	29	4	62	0	0	66	9	30	6	0	45	165
07:15 AM	3	16	35	0	54	33	25	1	0	59	1	82	0	0	83	6	45	5	0	56	252
07:30 AM	1	21	19	0	41	37	32	7	0	76	1	67	5	0	73	23	62	10	0	95	285
07:45 AM	1	13	7	0	21	39	40	3	0	82	6	81	0	0	87	5	52	11	0	68	258
Total	7	59	75	0	141	127	108	11	0	246	12	292	5	0	309	43	189	32	0	264	960
08:00 AM	4	5	4	0	13	28	25	5	0	58	1	75	2	0	78	11	41	14	0	66	215
08:15 AM	5	9	3	0	17	14	13	3	0	30	2	72	3	0	77	7	55	13	0	75	199
08:30 AM	2	8	1	0	11	12	15	4	0	31	1	68	1	0	70	3	47	7	0	57	169
08:45 AM	1	12	4	0	17	19	14	5	0	38	2	57	3	0	62	9	52	7	0	68	185
Total	12	34	12	0	58	73	67	17	0	157	6	272	9	0	287	30	195	41	0	266	768
*** BREAK ***																					
04:00 PM	7	25	4	0	36	10	20	3	0	33	5	64	3	0	72	6	83	19	0	108	249
04:15 PM	8	42	9	0	59	16	20	4	0	40	14	70	0	0	84	5	80	15	0	100	283
04:30 PM	9	70	11	0	90	20	34	3	0	57	12	62	2	0	76	5	74	25	0	104	327
04:45 PM	8	91	7	0	106	11	16	7	0	34	18	66	2	0	86	3	84	25	0	112	338
Total	32	228	31	0	291	57	90	17	0	164	49	262	7	0	318	19	321	84	0	424	1197
05:00 PM	6	80	8	0	94	16	17	12	0	45	16	82	3	0	101	2	73	31	0	106	346
05:15 PM	5	89	10	0	104	14	13	1	0	28	16	87	2	0	105	3	75	30	0	108	345
05:30 PM	3	82	12	0	97	18	20	9	0	47	17	71	3	0	91	18	80	23	0	121	356
05:45 PM	8	50	16	0	74	10	23	1	0	34	8	69	4	0	81	4	84	20	0	108	297
Total	22	301	46	0	369	58	73	23	0	154	57	309	12	0	378	27	312	104	0	443	1344
Grand Total	73	622	164	0	859	315	338	68	0	721	124	1135	33	0	1292	119	1017	261	0	1397	4269
Apprch %	8.5	72.4	19.1	0		43.7	46.9	9.4	0		9.6	87.8	2.6	0		8.5	72.8	18.7	0		
Total %	1.7	14.6	3.8	0	20.1	7.4	7.9	1.6	0	16.9	2.9	26.6	0.8	0	30.3	2.8	23.8	6.1	0	32.7	

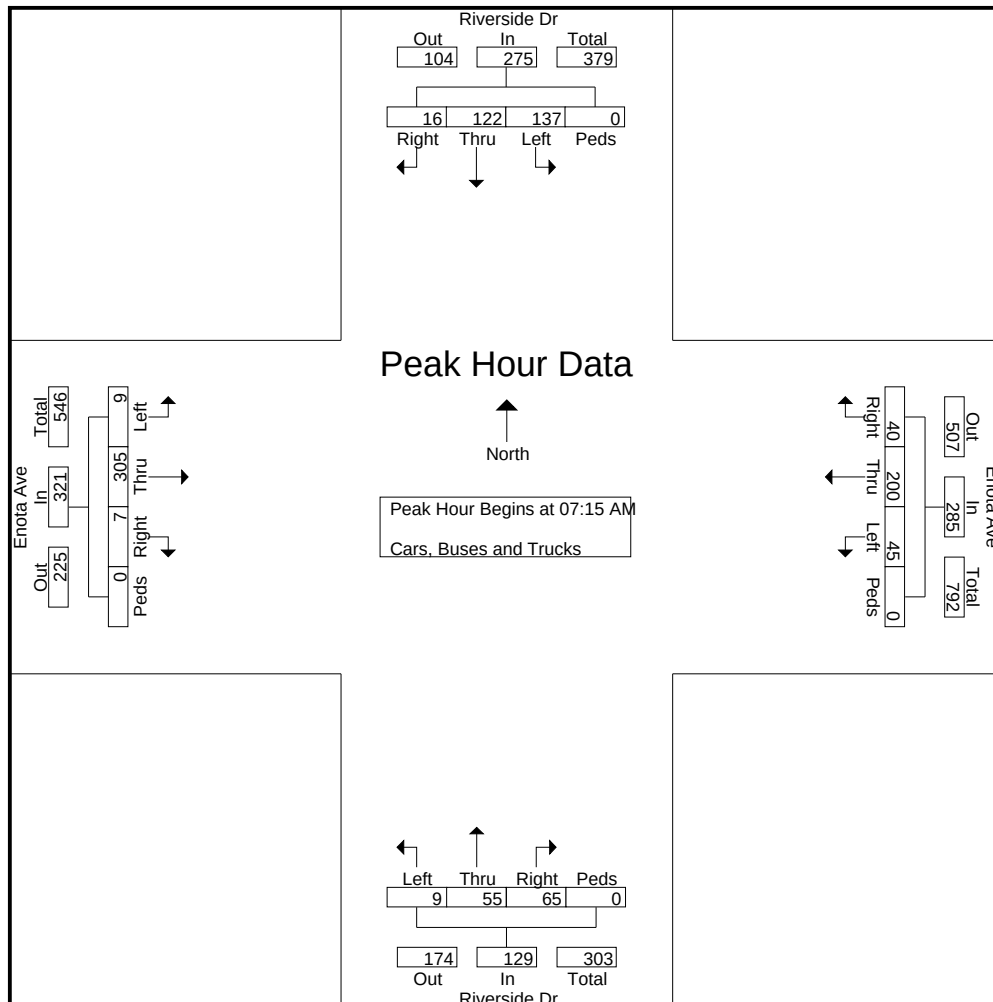
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TMC Data
Enota Ave @ Riverside Dr
Gainesville, GA
7-9am I 4-6pm

File Name : 40240002
Site Code : 40240002
Start Date : 3/30/2017
Page No : 2

	Riverside Dr Northbound					Riverside Dr Southbound					Enota Ave Eastbound					Enota Ave Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	3	16	35	0	54	33	25	1	0	59	1	82	0	0	83	6	45	5	0	56	252
07:30 AM	1	21	19	0	41	37	32	7	0	76	1	67	5	0	73	23	62	10	0	95	285
07:45 AM	1	13	7	0	21	39	40	3	0	82	6	81	0	0	87	5	52	11	0	68	258
08:00 AM	4	5	4	0	13	28	25	5	0	58	1	75	2	0	78	11	41	14	0	66	215
Total Volume	9	55	65	0	129	137	122	16	0	275	9	305	7	0	321	45	200	40	0	285	1010
% App. Total	7	42.6	50.4	0		49.8	44.4	5.8	0		2.8	95	2.2	0		15.8	70.2	14	0		
PHF	.563	.655	.464	.000	.597	.878	.763	.571	.000	.838	.375	.930	.350	.000	.922	.489	.806	.714	.000	.750	.886



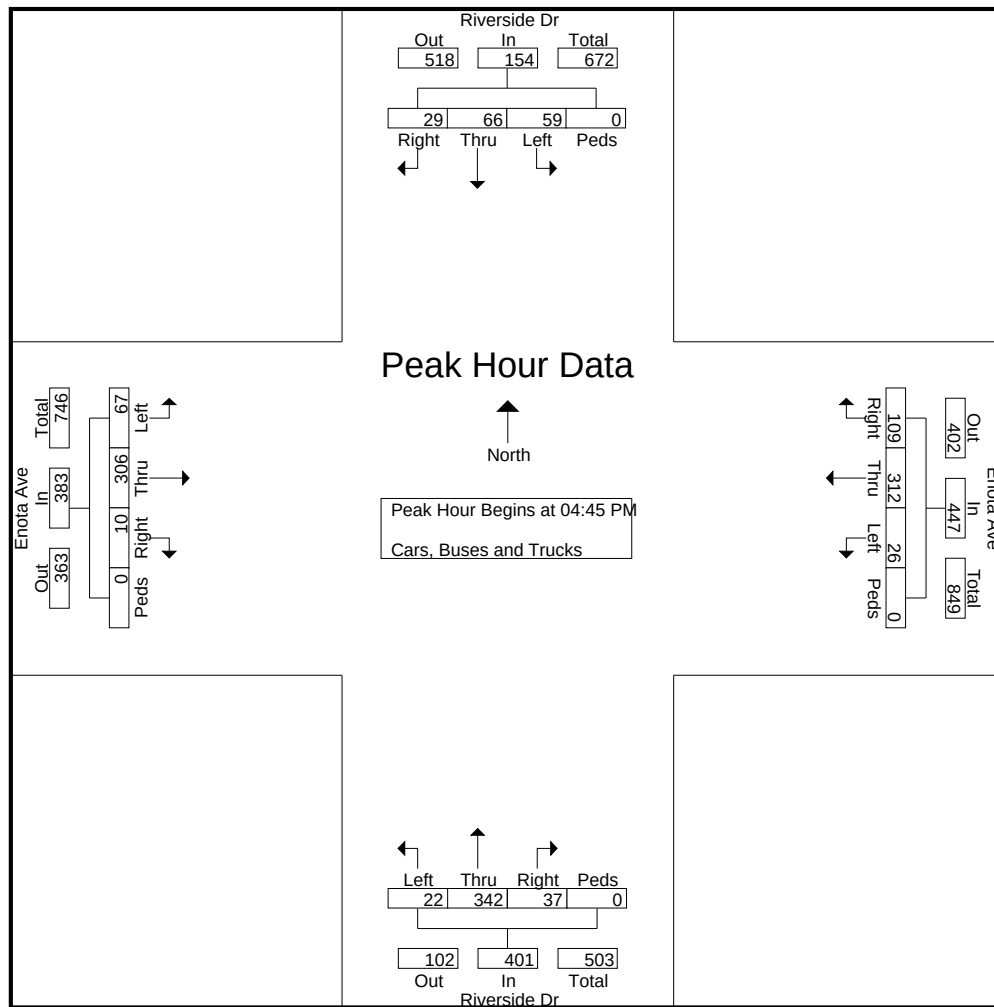
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TMC Data
Enota Ave @ Riverside Dr
Gainesville, GA
7-9am I 4-6pm

File Name : 40240002
Site Code : 40240002
Start Date : 3/30/2017
Page No : 3

	Riverside Dr Northbound					Riverside Dr Southbound					Enota Ave Eastbound					Enota Ave Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	8	91	7	0	106	11	16	7	0	34	18	66	2	0	86	3	84	25	0	112	338
05:00 PM	6	80	8	0	94	16	17	12	0	45	16	82	3	0	101	2	73	31	0	106	346
05:15 PM	5	89	10	0	104	14	13	1	0	28	16	87	2	0	105	3	75	30	0	108	345
05:30 PM	3	82	12	0	97	18	20	9	0	47	17	71	3	0	91	18	80	23	0	121	356
Total Volume	22	342	37	0	401	59	66	29	0	154	67	306	10	0	383	26	312	109	0	447	1385
% App. Total	5.5	85.3	9.2	0		38.3	42.9	18.8	0		17.5	79.9	2.6	0		5.8	69.8	24.4	0		
PHF	.688	.940	.771	.000	.946	.819	.825	.604	.000	.819	.931	.879	.833	.000	.912	.361	.929	.879	.000	.924	.973



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TMC Data
SR11 Bus @ S Enota Dr
Gainesville, GA
7-9am I 4-6pm

File Name : 40240003
Site Code : 40240003
Start Date : 3/30/2017
Page No : 1

Groups Printed- Cars, Buses and Trucks

	SR11 Bus Northbound					SR11 Bus Southbound					S Enota Dr Eastbound					S Enota Dr Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	0	52	16	0	68	39	122	36	0	197	35	40	10	0	85	10	20	7	0	37	387
07:15 AM	8	69	32	0	109	51	180	45	0	276	50	59	16	0	125	16	38	32	0	86	596
07:30 AM	6	90	30	0	126	67	181	49	0	297	80	70	26	0	176	17	44	23	0	84	683
07:45 AM	2	122	32	0	156	62	210	40	0	312	76	75	5	0	156	16	29	23	0	68	692
Total	16	333	110	0	459	219	693	170	0	1082	241	244	57	0	542	59	131	85	0	275	2358
08:00 AM	2	123	29	0	154	52	226	38	0	316	65	54	2	0	121	23	19	20	0	62	653
08:15 AM	2	113	23	0	138	64	235	44	0	343	51	55	1	0	107	25	35	20	0	80	668
08:30 AM	3	91	21	0	115	49	160	34	0	243	36	50	0	0	86	10	22	29	0	61	505
08:45 AM	2	75	21	0	98	42	125	23	0	190	33	41	1	0	75	16	29	11	0	56	419
Total	9	402	94	0	505	207	746	139	0	1092	185	200	4	0	389	74	105	80	0	259	2245
*** BREAK ***																					
04:00 PM	2	147	11	0	160	30	143	54	0	227	55	25	3	0	83	31	50	62	0	143	613
04:15 PM	1	168	15	0	184	24	199	42	0	265	66	28	5	0	99	39	59	75	0	173	721
04:30 PM	3	154	4	0	161	20	148	64	0	232	50	37	4	0	91	47	66	74	0	187	671
04:45 PM	1	142	21	0	164	28	168	68	0	264	51	37	6	0	94	33	70	89	0	192	714
Total	7	611	51	0	669	102	658	228	0	988	222	127	18	0	367	150	245	300	0	695	2719
05:00 PM	8	146	11	0	165	25	126	81	0	232	51	25	4	0	80	71	84	109	0	264	741
05:15 PM	5	132	5	0	142	26	133	50	0	209	58	33	10	0	101	84	92	88	0	264	716
05:30 PM	3	164	11	0	178	27	152	51	0	230	71	47	8	0	126	49	95	68	0	212	746
05:45 PM	15	141	10	0	166	29	162	68	0	259	56	24	8	0	88	27	50	70	0	147	660
Total	31	583	37	0	651	107	573	250	0	930	236	129	30	0	395	231	321	335	0	887	2863
Grand Total	63	1929	292	0	2284	635	2670	787	0	4092	884	700	109	0	1693	514	802	800	0	2116	10185
Apprch %	2.8	84.5	12.8	0		15.5	65.2	19.2	0		52.2	41.3	6.4	0		24.3	37.9	37.8	0		
Total %	0.6	18.9	2.9	0	22.4	6.2	26.2	7.7	0	40.2	8.7	6.9	1.1	0	16.6	5	7.9	7.9	0	20.8	

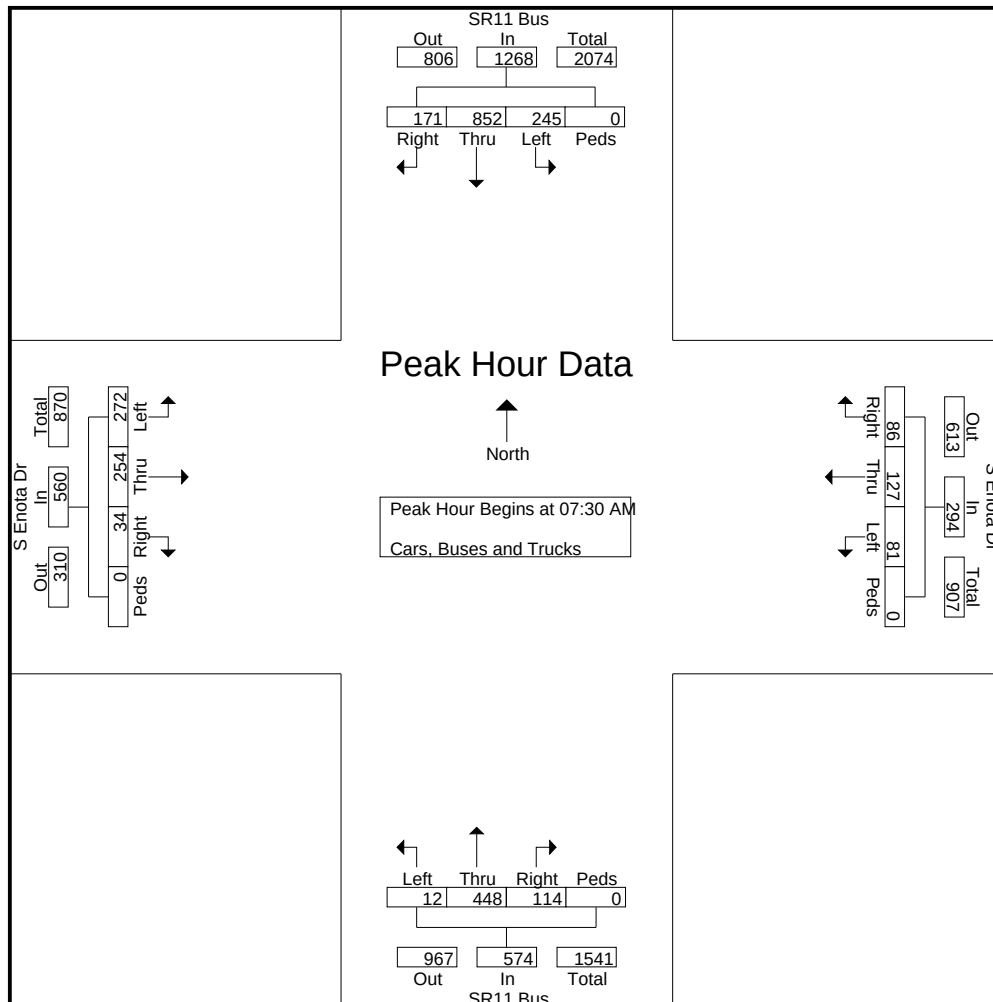
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TMC Data
SR11 Bus @ S Enota Dr
Gainesville, GA
7-9am I 4-6pm

File Name : 40240003
Site Code : 40240003
Start Date : 3/30/2017
Page No : 2

	SR11 Bus Northbound					SR11 Bus Southbound					S Enota Dr Eastbound					S Enota Dr Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	6	90	30	0	126	67	181	49	0	297	80	70	26	0	176	17	44	23	0	84	683
07:45 AM	2	122	32	0	156	62	210	40	0	312	76	75	5	0	156	16	29	23	0	68	692
08:00 AM	2	123	29	0	154	52	226	38	0	316	65	54	2	0	121	23	19	20	0	62	653
08:15 AM	2	113	23	0	138	64	235	44	0	343	51	55	1	0	107	25	35	20	0	80	668
Total Volume	12	448	114	0	574	245	852	171	0	1268	272	254	34	0	560	81	127	86	0	294	2696
% App. Total	2.1	78	19.9	0		19.3	67.2	13.5	0		48.6	45.4	6.1	0		27.6	43.2	29.3	0		
PHF	.500	.911	.891	.000	.920	.914	.906	.872	.000	.924	.850	.847	.327	.000	.795	.810	.722	.935	.000	.875	.974



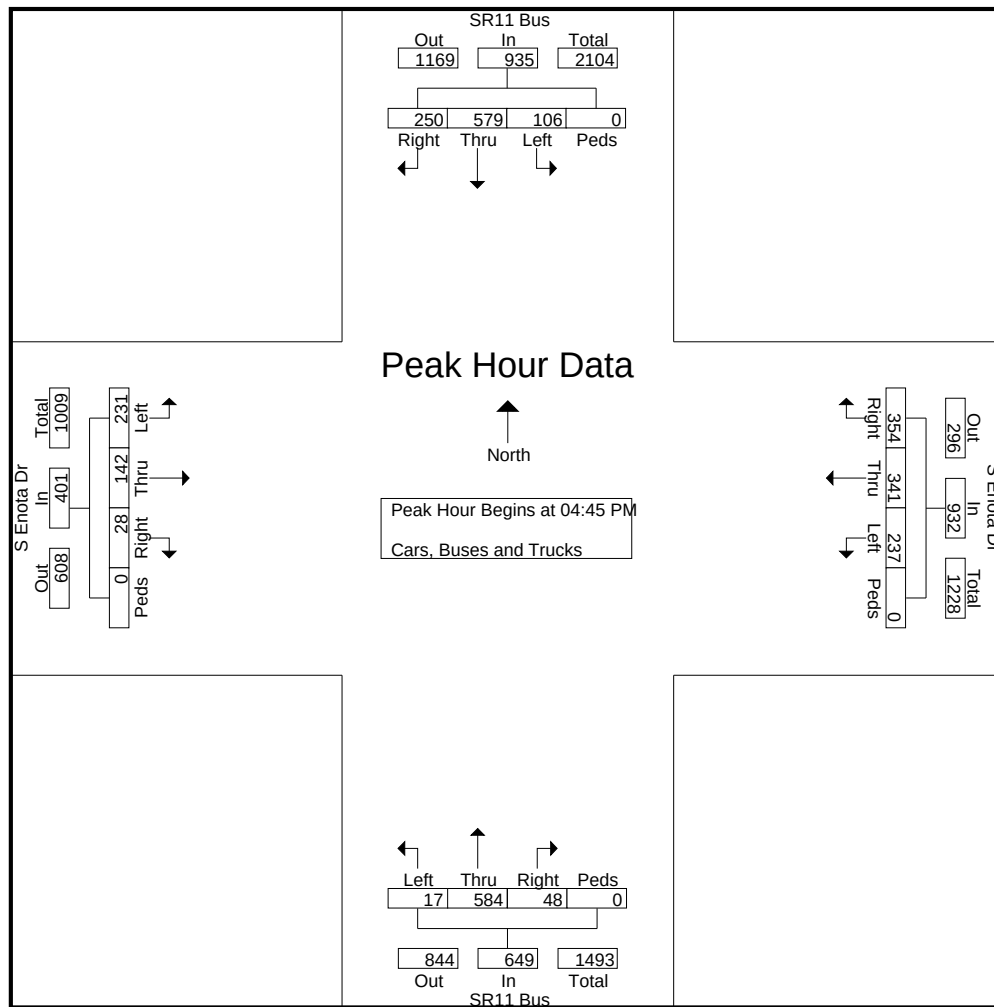
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TMC Data
SR11 Bus @ S Enota Dr
Gainesville, GA
7-9am I 4-6pm

File Name : 40240003
Site Code : 40240003
Start Date : 3/30/2017
Page No : 3

	SR11 Bus Northbound					SR11 Bus Southbound					S Enota Dr Eastbound					S Enota Dr Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	1	142	21	0	164	28	168	68	0	264	51	37	6	0	94	33	70	89	0	192	714
05:00 PM	8	146	11	0	165	25	126	81	0	232	51	25	4	0	80	71	84	109	0	264	741
05:15 PM	5	132	5	0	142	26	133	50	0	209	58	33	10	0	101	84	92	88	0	264	716
05:30 PM	3	164	11	0	178	27	152	51	0	230	71	47	8	0	126	49	95	68	0	212	746
Total Volume	17	584	48	0	649	106	579	250	0	935	231	142	28	0	401	237	341	354	0	932	2917
% App. Total	2.6	90	7.4	0		11.3	61.9	26.7	0		57.6	35.4	7	0		25.4	36.6	38	0		
PHF	.531	.890	.571	.000	.912	.946	.862	.772	.000	.885	.813	.755	.700	.000	.796	.705	.897	.812	.000	.883	.978



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 17-9124-004

Day: Wednesday

City: Gainesville

Date: 2/22/2017

AM													
NS/EW Streets:	Green St NE_Riverside Dr			Green St NE_Riverside Dr			Holly Dr			Holly Dr			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 2	NR 2	SL 0	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 2	WR 0	TOTAL
7:00 AM	2	114	57	0	252	23	0	0	8	80	25	0	561
7:15 AM	3	135	98	0	268	27	0	0	17	111	47	0	706
7:30 AM	8	183	89	0	389	39	0	0	14	124	50	0	896
7:45 AM	3	189	71	0	360	28	0	2	11	125	50	0	839
8:00 AM	4	160	60	0	314	40	0	0	10	119	54	0	761
8:15 AM	4	151	76	0	328	25	0	0	16	93	35	0	728
8:30 AM	4	147	80	0	244	22	1	0	14	91	47	0	650
8:45 AM	5	181	79	0	269	22	0	0	13	105	34	0	708
TOTAL VOLUMES :	33	1260	610	0	2424	226	1	2	103	848	342	0	5849
APPROACH %'s :	1.73%	66.21%	32.05%	0.00%	91.47%	8.53%	0.94%	1.89%	97.17%	71.26%	28.74%	0.00%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	19	683	296	0	1391	132	0	2	51	461	189	0	3224
PEAK HR FACTOR :	0.891			0.890			0.828			0.929			0.900

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 17-9124-004

Day: Wednesday

City: Gainesville

Date: 2/22/2017

PM													
NS/EW Streets:	Green St NE_Riverside Dr			Green St NE_Riverside Dr			Holly Dr			Holly Dr			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 2	NR 2	SL 0	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 2	WR 0	TOTAL
4:00 PM	11	255	138	0	200	33	0	0	9	106	51	0	803
4:15 PM	7	326	114	0	154	25	0	0	13	62	44	0	745
4:30 PM	7	316	144	0	193	25	0	0	12	92	47	0	836
4:45 PM	10	314	174	0	149	20	0	0	9	88	49	0	813
5:00 PM	14	380	174	0	189	34	0	0	1	94	49	0	935
5:15 PM	10	346	172	0	201	36	0	0	13	106	66	0	950
5:30 PM	10	327	164	0	179	29	0	0	6	104	58	0	877
5:45 PM	12	359	143	0	243	26	0	0	15	83	45	0	926
TOTAL VOLUMES :	81	2623	1223	0	1508	228	0	0	78	735	409	0	6885
APPROACH %'s :	2.06%	66.79%	31.14%	0.00%	86.87%	13.13%	0.00%	0.00%	100.00%	64.25%	35.75%	0.00%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	46	1412	653	0	812	125	0	0	35	387	218	0	3688
PEAK HR FACTOR :	0.929			0.871			0.583			0.879			0.971

CONTROL : Signalized

ITM Peak Hour Summary

Prepared by:



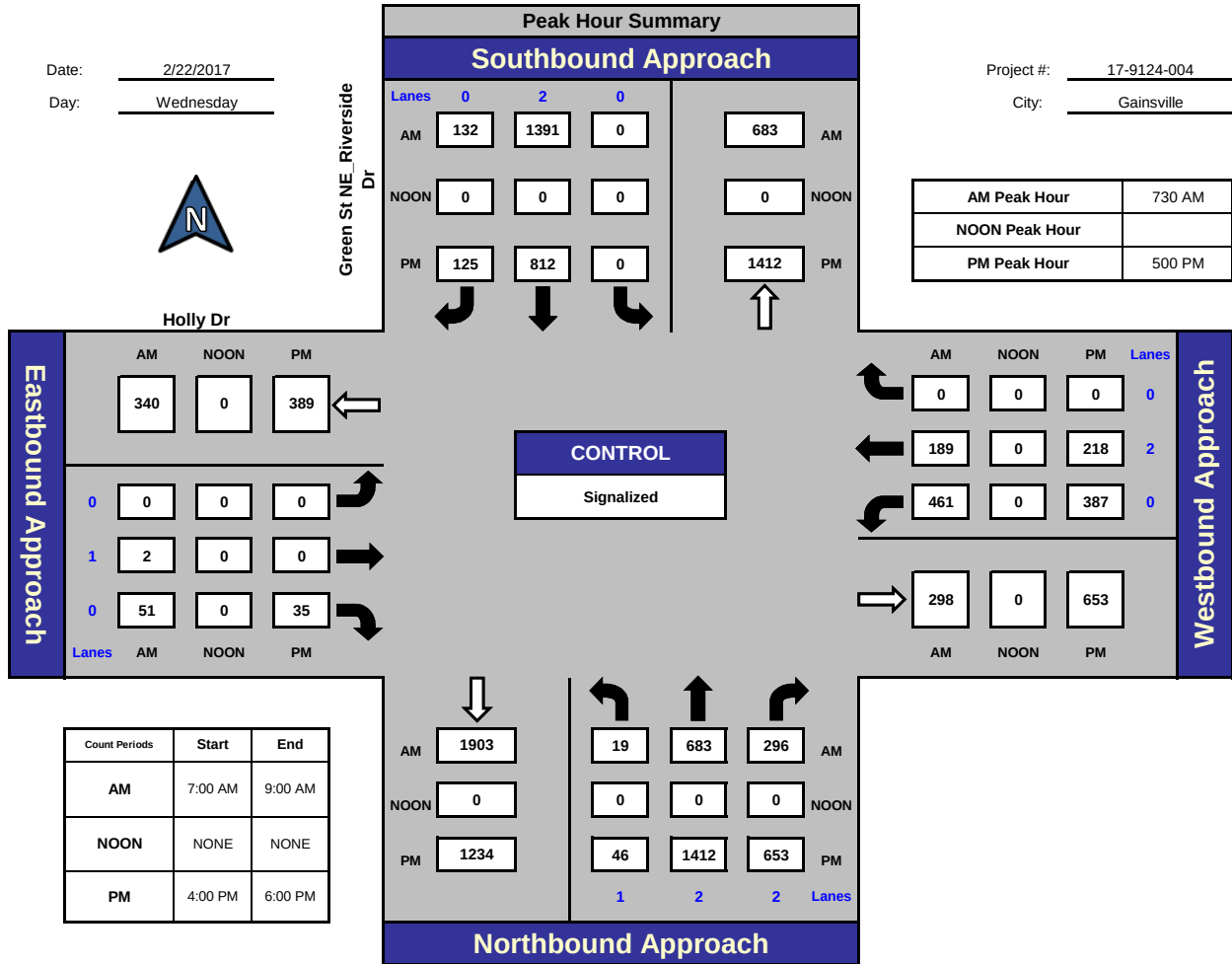
National Data & Surveying Services

Green St NE Riverside Dr and Holly Dr, Gainesville

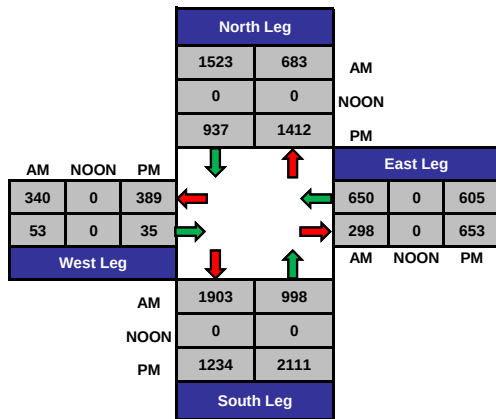
Date: 2/22/2017
Day: Wednesday



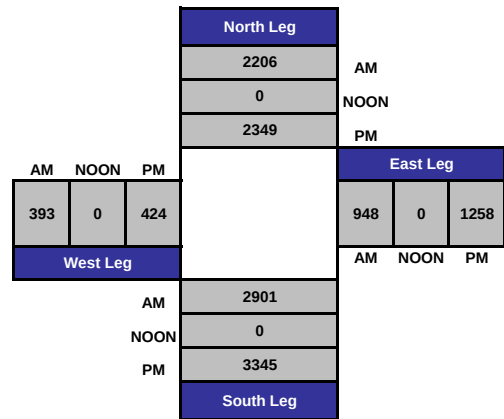
Project #: 17-9124-004
City: Gainesville



Total Ins & Outs



Total Volume Per Leg



PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 17-9124-004
 N/S Street: Green St NE_Riverside Dr
 E/W Street: Holly Dr
 DATE: 2/22/2017
 CITY: Gainesville

DAY: Wednesday

A M

PEDESTRIANS

T I M E	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
7:00 AM	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0
TOTALS	0	0	0	0	0	0	0	0

BIKES

T I M E	NB			SB			EB			WB		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	1	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	1	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
TOTALS	0	0	0	0	0	0	0	0	1	1	0	0

P M

PEDESTRIANS

T I M E	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
4:00 PM	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	1	1
4:30 PM	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	1	0
5:00 PM	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	1	0
TOTALS	0	0	0	0	0	0	3	1

BIKES

T I M E	NB			SB			EB			WB		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
4:00 PM	0	0	1	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
TOTALS	0	0	1	0	0	0	0	0	0	0	0	0

Project ID: 17-9124-004
Location: Green St NE_Riverside Dr & Holly Dr
City: Gainesville

Day: Wednesday
Date: 2/22/2017

Peak Start Times	
AM	7:00 AM
MD	12:00 AM
PM	4:00 PM

Groups Printed - Cars, PU, Vans - Heavy Trucks

Start Time	Green St NE_Riverside Dr Northbound					Green St NE_Riverside Dr Southbound					Holly Dr Eastbound					Holly Dr Westbound					Int. Total
	Left	Thru	Rgt	Peds	App. Total	Left	Thru	Rgt	Peds	App. Total	Left	Thru	Rgt	Peds	App. Total	Left	Thru	Rgt	Peds	App. Total	
7:00 AM	2	114	57	0	173	0	252	23	0	275	0	0	8	0	8	80	25	0	0	105	561
7:15 AM	3	135	98	0	236	0	268	27	0	295	0	0	17	0	17	111	47	0	0	158	706
7:30 AM	8	183	89	0	280	0	389	39	0	428	0	0	14	0	14	124	50	0	0	174	896
7:45 AM	3	189	71	0	263	0	360	28	0	388	0	2	11	0	13	125	50	0	0	175	839
Total	16	621	315	0	952	0	1269	117	0	1386	0	2	50	0	52	440	172	0	0	612	3002
8:00 AM	4	160	60	0	224	0	314	40	0	354	0	0	10	0	10	119	54	0	0	173	761
8:15 AM	4	151	76	0	231	0	328	25	0	353	0	0	16	0	16	93	35	0	0	128	728
8:30 AM	4	147	80	0	231	0	244	22	0	266	1	0	14	0	15	91	47	0	0	138	650
8:45 AM	5	181	79	0	265	0	269	22	0	291	0	0	13	0	13	105	34	0	0	139	708
Total	17	639	295	0	951	0	1155	109	0	1264	1	0	53	0	54	408	170	0	0	578	2847
BREAK																					
4:00 PM	11	255	138	0	404	0	200	33	0	233	0	0	9	0	9	106	51	0	0	157	803
4:15 PM	7	326	114	0	447	0	154	25	0	179	0	0	13	2	13	62	44	0	0	106	745
4:30 PM	7	316	144	0	467	0	193	25	0	218	0	0	12	0	12	92	47	0	0	139	836
4:45 PM	10	314	174	0	498	0	149	20	0	169	0	0	9	1	9	88	49	0	0	137	813
Total	35	1211	570	0	1816	0	696	103	0	799	0	0	43	3	43	348	191	0	0	539	3197
5:00 PM	14	380	174	0	568	0	189	34	0	223	0	0	1	0	1	94	49	0	0	143	935
5:15 PM	10	346	172	0	528	0	201	36	0	237	0	0	13	0	13	106	66	0	0	172	950
5:30 PM	10	327	164	0	501	0	179	29	0	208	0	0	6	0	6	104	58	0	0	162	877
5:45 PM	12	359	143	0	514	0	243	26	0	269	0	0	15	1	15	83	45	0	0	128	926
Total	46	1412	653	0	2111	0	812	125	0	937	0	0	35	1	35	387	218	0	0	605	3688
Grand Total	114	3883	1833	0	5830	0	3932	454	0	4386	1	2	181	4	184	1583	751	0	0	2334	12734
Apprch %	2.0	66.6	31.4	0.0		0.0	89.6	10.4	0.0		0.5	1.1	98.4	2.2		67.8	32.2	0.0	0.0		
Total %	0.9	30.5	14.4	0.0	45.8	0.0	30.9	3.6	0.0	34.4	0.0	0.0	1.4	0.0	1.4	12.4	5.9	0.0	0.0	18.3	
Cars, PU, Vans	114	3826	1828	0	5768	0	3881	454	0	4335	1	2	181	4	184	1575	750	0	0	2325	12612
% Cars, PU, Vans	100.0	98.5	99.7	0.0	98.9	0.0	98.7	100.0	0.0	98.8	100.0	100.0	100.0	100.0	100.0	99.5	99.9	0.0	0.0	99.6	99.0
Heavy Trucks	0	57	5		62	0	51	0		51	0	0	0		0	8	1	0		9	122
%Heavy Trucks	0.0	1.5	0.3	0.0	1.1	0.0	1.3	0.0	0.0	1.2	0.0	0.0	0.0	0.0	0.0	0.5	0.1	0.0	0.0	0.4	1.0

Project ID: 17-9124-004

Location: Green St NE_Riverside Dr &

City: Gainesville

PEAK HOURS

Day: Wednesday

Date: 2/22/2017

AM

	Green St NE_Riverside Dr Northbound				Green St NE_Riverside Dr Southbound				Holly Dr Eastbound				Holly Dr Westbound				
Start Time	Left	Thru	Rgt	App. Total	Left	Thru	Rgt	App. Total	Left	Thru	Rgt	App. Total	Left	Thru	Rgt	App. Total	Int. Total
Peak Hour Analysis from 07:00 AM to 09:00 AM																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
7:30 AM	8	183	89	280	0	389	39	428	0	0	14	14	124	50	0	174	896
7:45 AM	3	189	71	263	0	360	28	388	0	2	11	13	125	50	0	175	839
8:00 AM	4	160	60	224	0	314	40	354	0	0	10	10	119	54	0	173	761
8:15 AM	4	151	76	231	0	328	25	353	0	0	16	16	93	35	0	128	728
Total Volume	19	683	296	998	0	1391	132	1523	0	2	51	53	461	189	0	650	3224
% App. Total	1.9	68.4	29.7	100	0.0	91.3	8.7	100	0.0	3.8	96.2	100	70.9	29.1	0.0	100	
PHF	0.891				0.890				0.828				0.929				
Cars, PU, Vans	19	668	294	981	0	1377	132	1509	0	2	51	53	458	189	0	647	3190
% Cars, PU, Vans	100.0	97.8	99.3	98.3	0.0	99.0	100.0	99.1	0.0	100.0	100.0	100.0	99.3	100.0	0.0	99.5	98.9
Heavy Trucks	0	15	2	17	0	14	0	14	0	0	0	0	3	0	0	3	34
%Heavy Trucks	0.0	2.2	0.7	1.7	0.0	1.0	0.0	0.9	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.5	1.1

PM

	Green St NE_Riverside Dr Northbound				Green St NE_Riverside Dr Southbound				Holly Dr Eastbound				Holly Dr Westbound				
Start Time	Left	Thru	Rgt	App. Total	Left	Thru	Rgt	App. Total	Left	Thru	Rgt	App. Total	Left	Thru	Rgt	App. Total	Int. Total
Peak Hour Analysis from 04:00 PM to 06:00 PM																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
5:00 PM	14	380	174	568	0	189	34	223	0	0	1	1	94	49	0	143	935
5:15 PM	10	346	172	528	0	201	36	237	0	0	13	13	106	66	0	172	950
5:30 PM	10	327	164	501	0	179	29	208	0	0	6	6	104	58	0	162	877
5:45 PM	12	359	143	514	0	243	26	269	0	0	15	15	83	45	0	128	926
Total Volume	46	1412	653	2111	0	812	125	937	0	0	35	35	387	218	0	605	3688
% App. Total	2.2	66.9	30.9	100	0.0	86.7	13.3	100	0.0	0.0	100.0	100	64.0	36.0	0.0	100	
PHF	0.929				0.871				0.583				0.879				
Cars, PU, Vans	46	1401	652	2099	0	805	125	930	0	0	35	35	386	218	0	604	3668
% Cars, PU, Vans	100.0	99.2	99.8	99.4	0.0	99.1	100.0	99.3	0.0	0.0	100.0	100.0	99.7	100.0	0.0	99.8	99.5
Heavy Trucks	0	11	1	12	0	7	0	7	0	0	0	0	1	0	0	1	20
%Heavy Trucks	0.0	0.8	0.2	0.6	0.0	0.9	0.0	0.7	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.2	0.5

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 17-9124-004

Day: Wednesday

City: Gainesville

Date: 2/22/2017

AM													
NS/EW Streets:	Green St NE_Riverside Dr			Green St NE_Riverside Dr			Holly Dr			Holly Dr			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 2	NR 2	SL 0	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 2	WR 0	TOTAL
7:00 AM	0	6	0	0	5	0	0	0	0	0	0	0	11
7:15 AM	0	11	0	0	3	0	0	0	0	1	0	0	15
7:30 AM	0	3	1	0	3	0	0	0	0	2	0	0	9
7:45 AM	0	6	0	0	1	0	0	0	0	0	0	0	7
8:00 AM	0	3	1	0	3	0	0	0	0	1	0	0	8
8:15 AM	0	3	0	0	7	0	0	0	0	0	0	0	10
8:30 AM	0	3	0	0	3	0	0	0	0	0	0	0	6
8:45 AM	0	2	1	0	2	0	0	0	0	1	1	0	7
TOTAL VOLUMES :	0	37	3	0	27	0	0	0	0	5	1	0	73
APPROACH %'s :	0.00%	92.50%	7.50%	0.00%	100.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	83.33%	16.67%	0.00%	
PEAK HR START TIME :	730 AM												
PEAK HR VOL :	0	15	2	0	14	0	0	0	0	3	0	0	34
PEAK HR FACTOR :	0.708			0.500			0.000			0.375			0.850

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 17-9124-004

Day: Wednesday

City: Gainesville

Date: 2/22/2017

PM													
NS/EW Streets:	Green St NE_Riverside Dr			Green St NE_Riverside Dr			Holly Dr			Holly Dr			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 2	NR 2	SL 0	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 2	WR 0	TOTAL
4:00 PM	0	2	1	0	6	0	0	0	0	1	0	0	10
4:15 PM	0	4	0	0	5	0	0	0	0	1	0	0	10
4:30 PM	0	2	0	0	5	0	0	0	0	0	0	0	7
4:45 PM	0	1	0	0	1	0	0	0	0	0	0	0	2
5:00 PM	0	0	0	0	0	0	0	0	0	1	0	0	1
5:15 PM	0	6	1	0	1	0	0	0	0	0	0	0	8
5:30 PM	0	2	0	0	2	0	0	0	0	0	0	0	4
5:45 PM	0	3	0	0	4	0	0	0	0	0	0	0	7
TOTAL VOLUMES :	0	20	2	0	24	0	0	0	0	3	0	0	49
APPROACH %'s :	0.00%	90.91%	9.09%	0.00%	100.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	100.00%	0.00%	0.00%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	0	11	1	0	7	0	0	0	0	1	0	0	20
PEAK HR FACTOR :	0.429			0.438			0.000			0.250			0.625

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 17-9124-007

Day: Wednesday

City: Gainesville

Date: 2/22/2017

AM													
NS/EW Streets:	Green St_State Hwy 11			Green St_State Hwy 11			Ridgewood Ave			Ridgewood Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 2	NR 0	SL 0	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
7:00 AM	0	140	1	0	316	3	26	0	4	1	0	0	491
7:15 AM	2	205	0	0	371	5	39	0	5	0	1	0	628
7:30 AM	0	242	0	0	511	12	41	1	6	1	0	1	815
7:45 AM	5	226	1	0	459	15	39	2	9	1	1	1	759
8:00 AM	6	203	3	1	420	16	30	2	5	3	4	0	693
8:15 AM	3	207	7	3	408	20	21	0	2	1	1	0	673
8:30 AM	5	211	2	1	342	14	23	0	4	0	1	0	603
8:45 AM	3	248	5	1	371	11	19	0	4	1	0	0	663
TOTAL VOLUMES :	NL 24	NT 1682	NR 19	SL 6	ST 3198	SR 96	EL 238	ET 5	ER 39	WL 8	WT 8	WR 2	TOTAL 5325
APPROACH %'s :	1.39%	97.51%	1.10%	0.18%	96.91%	2.91%	84.40%	1.77%	13.83%	44.44%	44.44%	11.11%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	14	878	11	4	1798	63	131	5	22	6	6	2	2940
PEAK HR FACTOR :	0.933			0.891			0.790			0.500			0.902

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 17-9124-007

Day: Wednesday

City: Gainesville

Date: 2/22/2017

PM													
NS/EW Streets:	Green St_State Hwy 11			Green St_State Hwy 11			Ridgewood Ave			Ridgewood Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 2	NR 0	SL 0	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
4:00 PM	9	362	1	1	283	18	32	2	6	6	1	2	723
4:15 PM	11	413	4	0	221	18	42	1	6	3	1	1	721
4:30 PM	7	410	1	0	271	16	53	2	3	4	0	3	770
4:45 PM	10	447	2	0	207	9	69	1	3	2	1	1	752
5:00 PM	6	500	3	0	265	20	67	1	4	2	8	1	877
5:15 PM	4	448	1	0	269	19	74	1	2	3	1	1	823
5:30 PM	4	464	4	0	251	19	51	3	10	4	4	3	817
5:45 PM	9	437	2	0	312	15	60	3	4	2	1	0	845
TOTAL VOLUMES :	NL 60	NT 3481	NR 18	SL 1	ST 2079	SR 134	EL 448	ET 14	ER 38	WL 26	WT 17	WR 12	TOTAL 6328
APPROACH %'s :	1.69%	97.81%	0.51%	0.05%	93.90%	6.05%	89.60%	2.80%	7.60%	47.27%	30.91%	21.82%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	23	1849	10	0	1097	73	252	8	20	11	14	5	3362
PEAK HR FACTOR :	0.924			0.894			0.909			0.682			0.958

CONTROL : Signalized

ITM Peak Hour Summary

Prepared by:

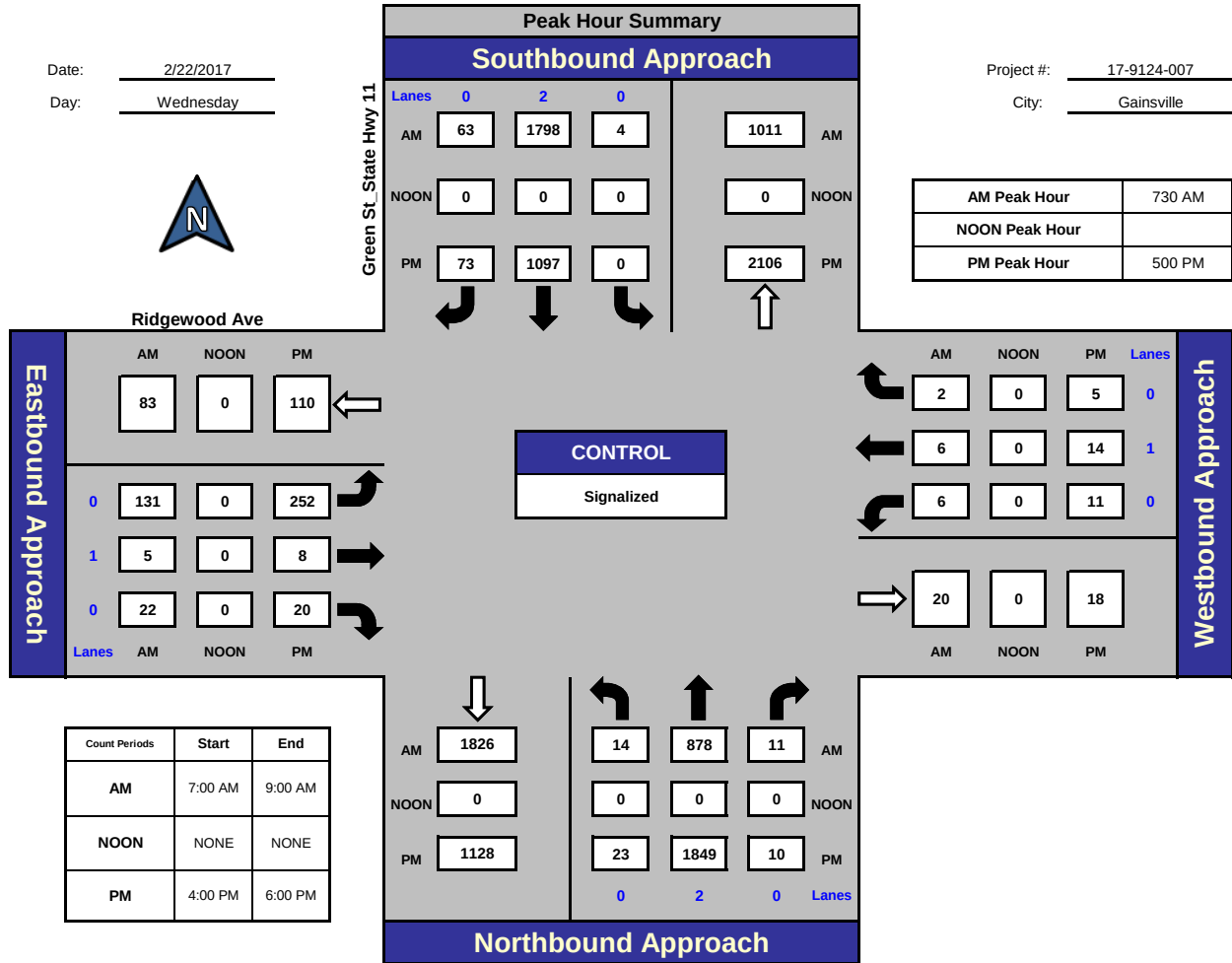


National Data & Surveying Services

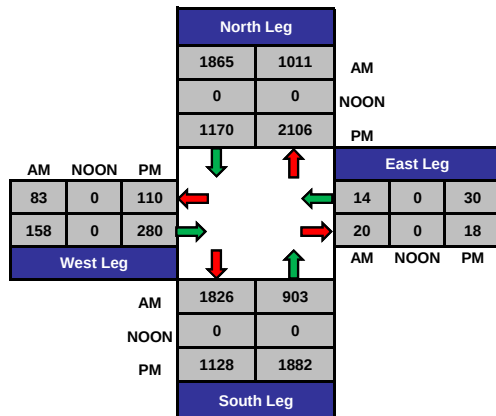
Green St State Hwy 11 and Ridgewood Ave , Gainesville

Date: 2/22/2017
Day: Wednesday

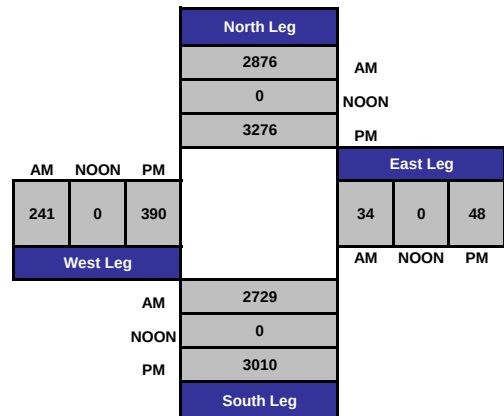
Project #: 17-9124-007
City: Gainesville



Total Ins & Outs



Total Volume Per Leg



PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 17-9124-007
 N/S Street: Green St_State Hwy 11
 E/W Street: Ridgewood Ave
 DATE: 2/22/2017
 CITY: Gainesville

DAY: Wednesday

A M

PEDESTRIANS

T I M E	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
7:00 AM	0	0	1	0	0	0	0	1
7:15 AM	0	0	0	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0
TOTALS	0	0	1	0	0	0	0	2

BIKES

T I M E	NB			SB			EB			WB		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
7:00 AM	0	0	0	0	1	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	1	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	1	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
TOTALS	0	0	0	0	3	0	0	0	0	0	0	0

P M

PEDESTRIANS

T I M E	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
4:00 PM	0	1	0	0	0	0	1	1
4:15 PM	0	0	2	0	2	0	1	0
4:30 PM	1	0	0	0	0	1	0	0
4:45 PM	0	0	0	0	1	0	0	0
5:00 PM	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	2	0	0
5:30 PM	0	0	0	0	0	1	0	0
5:45 PM	0	2	2	0	0	1	0	2
TOTALS	1	3	4	0	3	5	2	4

BIKES

T I M E	NB			SB			EB			WB		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR
4:00 PM	0	0	0	0	0	0	1	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	1	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	1	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
TOTALS	0	1	0	0	1	0	1	0	0	0	0	0

Project ID: 17-9124-007

Location: Green St State Hwy 11 & Ridgewood Ave

City: Gainesville

Day: Wednesday

Date: 2/22/2017

Peak Start Times	
AM	7:00 AM
MD	12:00 AM
PM	4:00 PM

Groups Printed - Cars, PU, Vans - Heavy Trucks

	Green St State Hwy 11 Northbound					Green St State Hwy 11 Southbound					Ridgewood Ave Eastbound					Ridgewood Ave Westbound					
Start Time	Left	Thru	Rgt	Peds	App. Total	Left	Thru	Rgt	Peds	App. Total	Left	Thru	Rgt	Peds	App. Total	Left	Thru	Rgt	Peds	App. Total	Int. Total
7:00 AM	0	140	1	1	141	0	316	3	0	319	26	0	4	1	30	1	0	0	0	1	491
7:15 AM	2	205	0	0	207	0	371	5	0	376	39	0	5	1	44	0	1	0	0	1	628
7:30 AM	0	242	0	0	242	0	511	12	0	523	41	1	6	0	48	1	0	1	0	2	815
7:45 AM	5	226	1	0	232	0	459	15	0	474	39	2	9	0	50	1	1	1	0	3	759
Total	7	813	2	1	822	0	1657	35	0	1692	145	3	24	2	172	3	2	2	0	7	2693
8:00 AM	6	203	3	0	212	1	420	16	0	437	30	2	5	0	37	3	4	0	0	7	693
8:15 AM	3	207	7	0	217	3	408	20	0	431	21	0	2	0	23	1	1	0	0	2	673
8:30 AM	5	211	2	0	218	1	342	14	0	357	23	0	4	0	27	0	1	0	0	1	603
8:45 AM	3	248	5	0	256	1	371	11	0	383	19	0	4	0	23	1	0	0	0	1	663
Total	17	869	17	0	903	6	1541	61	0	1608	93	2	15	0	110	5	6	0	0	11	2632
BREAK																					
4:00 PM	9	362	1	0	372	1	283	18	1	302	32	2	6	2	40	6	1	2	0	9	723
4:15 PM	11	413	4	2	428	0	221	18	0	239	42	1	6	1	49	3	1	1	2	5	721
4:30 PM	7	410	1	0	418	0	271	16	1	287	53	2	3	0	58	4	0	3	1	7	770
4:45 PM	10	447	2	0	459	0	207	9	0	216	69	1	3	0	73	2	1	1	1	4	752
Total	37	1632	8	2	1677	1	982	61	2	1044	196	6	18	3	220	15	3	7	4	25	2966
5:00 PM	6	500	3	0	509	0	265	20	0	285	67	1	4	1	72	2	8	1	0	11	877
5:15 PM	4	448	1	0	453	0	269	19	0	288	74	1	2	0	77	3	1	1	2	5	823
5:30 PM	4	464	4	0	472	0	251	19	0	270	51	3	10	0	64	4	4	3	1	11	817
5:45 PM	9	437	2	2	448	0	312	15	2	327	60	3	4	2	67	2	1	0	1	3	845
Total	23	1849	10	2	1882	0	1097	73	2	1170	252	8	20	3	280	11	14	5	4	30	3362
Grand Total	84	5163	37	5	5284	7	5277	230	4	5514	686	19	77	8	782	34	25	14	8	73	11653
Apprch %	1.6	97.7	0.7	0.1		0.1	95.7	4.2	0.1		87.7	2.4	9.8	1.0		46.6	34.2	19.2	11.0		
Total %	0.7	44.3	0.3	0.0	45.3	0.1	45.3	2.0	0.0	47.3	5.9	0.2	0.7	0.1	6.7	0.3	0.2	0.1	0.1	0.6	
Cars, PU, Vans	84	5102	37	5	5223	7	5220	230	4	5457	686	19	77	8	782	33	25	14	8	72	11534
% Cars, PU, Vans	100.0	98.8	100.0	100.0	98.8	100.0	98.9	100.0	100.0	99.0	100.0	100.0	100.0	100.0	100.0	97.1	100.0	100.0	100.0	98.6	99.0
Heavy Trucks	0	61	0		61	0	57	0		57	0	0	0		0	1	0	0		1	119
%Heavy Trucks	0.0	1.2	0.0	0.0	1.2	0.0	1.1	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	2.9	0.0	0.0	0.0	1.4	1.0

Project ID: 17-9124-007

Location: Green St_State Hwy 11 & Ric

City: Gainesville

PEAK HOURS

Day: Wednesday

Date: 2/22/2017

AM

	Green St_State Hwy 11 Northbound				Green St_State Hwy 11 Southbound				Ridgewood Ave Eastbound				Ridgewood Ave Westbound				
Start Time	Left	Thru	Rgt	App. Total	Left	Thru	Rgt	App. Total	Left	Thru	Rgt	App. Total	Left	Thru	Rgt	App. Total	Int. Total
Peak Hour Analysis from 07:00 AM to 09:00 AM																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
7:30 AM	0	242	0	242	0	511	12	523	41	1	6	48	1	0	1	2	815
7:45 AM	5	226	1	232	0	459	15	474	39	2	9	50	1	1	1	3	759
8:00 AM	6	203	3	212	1	420	16	437	30	2	5	37	3	4	0	7	693
8:15 AM	3	207	7	217	3	408	20	431	21	0	2	23	1	1	0	2	673
Total Volume	14	878	11	903	4	1798	63	1865	131	5	22	158	6	6	2	14	2940
% App. Total	1.6	97.2	1.2	100	0.2	96.4	3.4	100	82.9	3.2	13.9	100	42.9	42.9	14.3	100	
PHF	0.933				0.891				0.790				0.500				
Cars, PU, Vans	14	862	11	887	4	1782	63	1849	131	5	22	158	6	6	2	14	2908
% Cars, PU, Vans	100.0	98.2	100.0	98.2	100.0	99.1	100.0	99.1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	98.9
Heavy Trucks	0	16	0	16	0	16	0	16	0	0	0	0	0	0	0	0	32
%Heavy Trucks	0.0	1.8	0.0	1.8	0.0	0.9	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1

PM

	Green St_State Hwy 11 Northbound				Green St_State Hwy 11 Southbound				Ridgewood Ave Eastbound				Ridgewood Ave Westbound				
Start Time	Left	Thru	Rgt	App. Total	Left	Thru	Rgt	App. Total	Left	Thru	Rgt	App. Total	Left	Thru	Rgt	App. Total	Int. Total
Peak Hour Analysis from 04:00 PM to 06:00 PM																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
5:00 PM	6	500	3	509	0	265	20	285	67	1	4	72	2	8	1	11	877
5:15 PM	4	448	1	453	0	269	19	288	74	1	2	77	3	1	1	5	823
5:30 PM	4	464	4	472	0	251	19	270	51	3	10	64	4	4	3	11	817
5:45 PM	9	437	2	448	0	312	15	327	60	3	4	67	2	1	0	3	845
Total Volume	23	1849	10	1882	0	1097	73	1170	252	8	20	280	11	14	5	30	3362
% App. Total	1.2	98.2	0.5	100	0.0	93.8	6.2	100	90.0	2.9	7.1	100	36.7	46.7	16.7	100	
PHF	0.924				0.894				0.909				0.682				
Cars, PU, Vans	23	1837	10	1870	0	1091	73	1164	252	8	20	280	11	14	5	30	3344
% Cars, PU, Vans	100.0	99.4	100.0	99.4	0.0	99.5	100.0	99.5	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.5
Heavy Trucks	0	12	0	12	0	6	0	6	0	0	0	0	0	0	0	0	18
%Heavy Trucks	0.0	0.6	0.0	0.6	0.0	0.5	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 17-9124-007

Day: Wednesday

City: Gainesville

Date: 2/22/2017

AM													
NS/EW Streets:	Green St_State Hwy 11			Green St_State Hwy 11			Ridgewood Ave			Ridgewood Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	2	0	0	2	0	0	1	0	0	1	0	
7:00 AM	0	5	0	0	5	0	0	0	0	1	0	0	11
7:15 AM	0	12	0	0	4	0	0	0	0	0	0	0	16
7:30 AM	0	3	0	0	5	0	0	0	0	0	0	0	8
7:45 AM	0	6	0	0	1	0	0	0	0	0	0	0	7
8:00 AM	0	4	0	0	4	0	0	0	0	0	0	0	8
8:15 AM	0	3	0	0	6	0	0	0	0	0	0	0	9
8:30 AM	0	3	0	0	4	0	0	0	0	0	0	0	7
8:45 AM	0	3	0	0	3	0	0	0	0	0	0	0	6
TOTAL VOLUMES :	0	39	0	0	32	0	0	0	0	1	0	0	72
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	100.00%	0.00%	0.00%	
PEAK HR START TIME :	730 AM												
PEAK HR VOL :	0	16	0	0	16	0	0	0	0	0	0	0	32
PEAK HR FACTOR :	0.667			0.667			0.000			0.000			0.889

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 17-9124-007

Day: Wednesday

City: Gainesville

Date: 2/22/2017

PM													
NS/EW Streets:	Green St_State Hwy 11			Green St_State Hwy 11			Ridgewood Ave			Ridgewood Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 2	NR 0	SL 0	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
4:00 PM	0	3	0	0	6	0	0	0	0	0	0	0	9
4:15 PM	0	4	0	0	7	0	0	0	0	0	0	0	11
4:30 PM	0	2	0	0	4	0	0	0	0	0	0	0	6
4:45 PM	0	1	0	0	2	0	0	0	0	0	0	0	3
5:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
5:15 PM	0	7	0	0	1	0	0	0	0	0	0	0	8
5:30 PM	0	2	0	0	2	0	0	0	0	0	0	0	4
5:45 PM	0	3	0	0	2	0	0	0	0	0	0	0	5
TOTAL VOLUMES :	0	22	0	0	25	0	0	0	0	0	0	0	47
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	0	12	0	0	6	0	0	0	0	0	0	0	18
PEAK HR FACTOR :	0.429			0.750			0.000			0.000			0.563

CONTROL : Signalized

Appendix B

Intersection Analysis Methodology

Intersection Analysis Methodology

The methodology used for evaluating traffic operations at intersections is presented in the Transportation Research Board’s *Highway Capacity Manual*, 2010 edition (HCM 2010). Synchro 8 software, which emulates the HCM 2010 methodology, was used for all analyses. The following is an overview of the methodology employed for the analysis of signalized intersections and stop-sign controlled (unsignalized) intersections.

Signalized Intersections

The criteria for evaluating signalized intersections are capacity and level of service. The capacity analysis of an intersection compares the volume of traffic using the various lane groups at the intersection to the capacity of those lane groups. This produces a volume-to-capacity (v/c) ratio for each lane group. A v/c ratio greater than 1.0 indicates that the volume of traffic has exceeded the capacity available and indicates a temporary excess of demand. The HCM 2010 methodology computes a critical v/c ratio for an intersection based on the critical lane groups or approaches. This critical v/c ratio is an indication of overall intersection sufficiency.

Level of service for a signalized intersection is defined in terms of control delay per vehicle. For signalized intersections, a composite intersection level of service is determined. The thresholds for each level of service are higher for signalized intersections than for unsignalized intersections. This is attributable to a variety of factors including expectation and acceptance of higher delays at signals, and the fact that drivers can relax when waiting at a signal as opposed to having to remain attentive as they proceed through the unsignalized intersection. The level of service criteria for signalized intersections are shown in Table A.

Table A – Level of Service Criteria for Signalized Intersections

Control Delay (s/veh)	Level of Service by Volume-to-Capacity Ratio	
	≤1.0	>1.0
≤ 10	A	F
> 10 and ≤ 20	B	F
> 20 and ≤ 35	C	F
> 35 and ≤ 55	D	F
> 55 and ≤ 80	E	F
> 80	F	F

Source: *Highway Capacity Manual 2010*

Unsignalized Intersections

The operations at an unsignalized intersection are defined in terms of levels of service. Level of service (LOS) is a measure of driver discomfort, frustration, fuel consumption, and lost travel time. Level of service for an unsignalized intersection is defined in terms of control delay per vehicle. Control delay is that portion of delay attributable to the control device and includes initial deceleration delay, queue move-up time, stopped delay,

and final acceleration delay. The delays at unsignalized intersections are based on gap acceptance theory, factoring in availability of gaps, usefulness of the gaps, and the priority of right-of-way given to each traffic stream.

Levels of service are assigned letters A through F. LOS A indicates operations with very low control delay while LOS F describes operations with high control delay. LOS F is considered to be unacceptable by most drivers, while LOS E is typically considered to be the limit of acceptable delay. The level of service criteria for unsignalized intersections are presented in Table B.

Table B – Level of Service Criteria for Unsignalized Intersections

Control Delay (s/veh)	Level of Service by Volume-to-Capacity Ratio	
	≤1.0	>1.0
0 – 10	A	F
> 10 and ≤ 15	B	F
> 15 and ≤ 25	C	F
> 25 and ≤ 35	D	F
> 35 and ≤ 50	E	F
> 50	F	F

Source: Highway Capacity Manual 2010

Appendix C

Existing Intersection Operational Analysis

Thompson Bridge / Enota Convenience
1: Thompson Bridge & Walmart/Taco Bell

existing a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	38	0	64	3	1	4	52	881	1	6	1877	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50		0	50		0	200		100	200		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.850			0.871				0.850		0.994	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	1599	0	1787	1639	0	1787	3539	1599	1787	3519	0
Flt Permitted	0.753			0.538			0.056			0.304		
Satd. Flow (perm)	1417	1599	0	1012	1639	0	105	3539	1599	572	3519	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		62			6				34			8
Link Speed (mph)		30			30			30				30
Link Distance (ft)		300			195			1235				500
Travel Time (s)		6.8			4.4			28.1				11.4
Peak Hour Factor	0.85	0.85	0.85	0.67	0.67	0.67	0.94	0.94	0.94	0.90	0.90	0.90
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	2%	1%	1%	2%	1%
Adj. Flow (vph)	45	0	75	4	1	6	55	937	1	7	2086	89
Shared Lane Traffic (%)												
Lane Group Flow (vph)	45	75	0	4	7	0	55	937	1	7	2175	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94				94
Detector 2 Size(ft)		6			6			6				6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA	Perm	pm+pt		NA
Protected Phases		4			8		5	2		1		6
Permitted Phases	4			8			2		2	6		

Thompson Bridge / Enota Convenience
1: Thompson Bridge & Walmart/Taco Bell

existing a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		8.0	20.0	20.0	8.0	20.0	
Total Split (s)	20.0	20.0		20.0	20.0		12.0	132.0	132.0	8.0	128.0	
Total Split (%)	12.5%	12.5%		12.5%	12.5%		7.5%	82.5%	82.5%	5.0%	80.0%	
Maximum Green (s)	16.0	16.0		16.0	16.0		8.0	128.0	128.0	4.0	124.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max	C-Max	None	C-Max	
Walk Time (s)	5.0	5.0		5.0	5.0			5.0	5.0		5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0	0		0	
Act Effect Green (s)	10.4	10.4		10.4	10.4		141.4	139.8	139.8	137.4	133.1	
Actuated g/C Ratio	0.06	0.06		0.06	0.06		0.88	0.87	0.87	0.86	0.83	
v/c Ratio	0.49	0.46		0.06	0.06		0.35	0.30	0.00	0.01	0.74	
Control Delay	88.6	30.3		69.7	40.8		16.2	2.1	0.0	1.7	8.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	88.6	30.3		69.7	40.8		16.2	2.1	0.0	1.7	8.9	
LOS	F	C		E	D		B	A	A	A	A	
Approach Delay		52.2			51.3			2.8			8.9	
Approach LOS		D			D			A			A	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.74

Intersection Signal Delay: 8.8

Intersection LOS: A

Intersection Capacity Utilization 69.9%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 1: Thompson Bridge & Walmart/Taco Bell

															
8 s	132 s													20 s	
															
12 s	128 s													20 s	

Thompson Bridge / Enota Convenience

2: Thompson Bridge & Enota

existing a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	53	51	29	45	27	167	17	734	26	313	1604	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		0	200		200	300		0	300		0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.945				0.850		0.995			0.997	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1796	0	1787	1900	1599	1805	3523	0	1787	3530	0
Flt Permitted	0.548			0.702			0.096			0.307		
Satd. Flow (perm)	1041	1796	0	1321	1900	1599	182	3523	0	578	3530	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		16				188		3			3	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		160			1380			173			1235	
Travel Time (s)		3.6			31.4			3.9			28.1	
Peak Hour Factor	0.95	0.95	0.95	0.89	0.89	0.89	0.94	0.94	0.94	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	1%	0%	1%	0%	2%	1%	1%	2%	0%
Adj. Flow (vph)	56	54	31	51	30	188	18	781	28	348	1782	36
Shared Lane Traffic (%)												
Lane Group Flow (vph)	56	85	0	51	30	188	18	809	0	348	1818	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8		8	2			6		

Thompson Bridge / Enota Convenience

2: Thompson Bridge & Enota

existing a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Minimum Split (s)	8.0	20.0		20.0	20.0	20.0	8.0	20.0		8.0	20.0	
Total Split (s)	9.0	35.0		26.0	26.0	26.0	8.0	84.0		41.0	117.0	
Total Split (%)	5.6%	21.9%		16.3%	16.3%	16.3%	5.0%	52.5%		25.6%	73.1%	
Maximum Green (s)	5.0	31.0		22.0	22.0	22.0	4.0	80.0		37.0	113.0	
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5	0.5	0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lead/Lag	Lead			Lag			Lead		Lag	Lead		Lag
Lead-Lag Optimize?	Yes			Yes			Yes		Yes	Yes		Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	None	C-Max		None	C-Max	
Walk Time (s)		5.0		5.0	5.0	5.0		5.0			5.0	
Flash Dont Walk (s)		11.0		11.0	11.0	11.0		11.0			11.0	
Pedestrian Calls (#/hr)		0		0	0	0		0			0	
Act Effect Green (s)	18.8	18.8		11.6	11.6	11.6	122.6	116.8		133.2	127.2	
Actuated g/C Ratio	0.12	0.12		0.07	0.07	0.07	0.77	0.73		0.83	0.80	
v/c Ratio	0.38	0.38		0.54	0.22	0.65	0.09	0.31		0.61	0.65	
Control Delay	69.5	55.6		90.6	71.9	19.3	4.7	8.9		8.0	6.1	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.1	
Total Delay	69.5	55.6		90.6	71.9	19.3	4.7	8.9		8.0	6.1	
LOS	E	E		F	E	B	A	A		A	A	
Approach Delay		61.1			38.7			8.8			6.4	
Approach LOS		E			D			A			A	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 41 (26%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.65

Intersection Signal Delay: 11.8

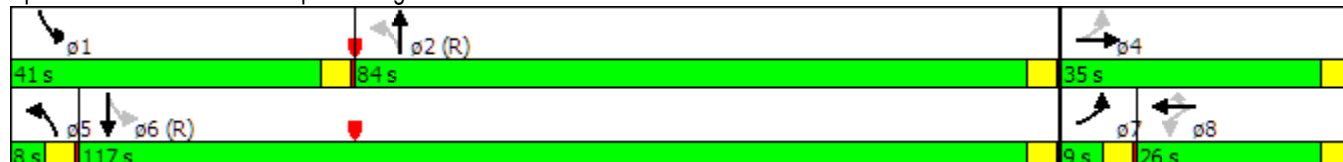
Intersection LOS: B

Intersection Capacity Utilization 68.3%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 2: Thompson Bridge & Enota



Thompson Bridge / Enota Convenience
3: Riverside & Enota

existing a.m.

Intersection												
Intersection Delay, s/veh	22.1											
Intersection LOS	C											
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	9	305	7	0	45	200	40	0	9	55	65
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.75	0.75	0.75	0.92	0.60	0.60	0.60
Heavy Vehicles, %	2	1	1	1	2	1	1	1	2	1	1	1
Mvmt Flow	0	10	332	8	0	60	267	53	0	15	92	108
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	22.7	25	15.5
HCM LOS	C	C	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	7%	3%	16%	50%
Vol Thru, %	43%	95%	70%	44%
Vol Right, %	50%	2%	14%	6%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	129	321	285	275
LT Vol	9	9	45	137
Through Vol	55	305	200	122
RT Vol	65	7	40	16
Lane Flow Rate	215	349	380	327
Geometry Grp	1	1	1	1
Degree of Util (X)	0.427	0.667	0.714	0.646
Departure Headway (Hd)	7.148	6.881	6.761	7.108
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	501	523	532	507
Service Time	5.22	4.94	4.82	5.17
HCM Lane V/C Ratio	0.429	0.667	0.714	0.645
HCM Control Delay	15.5	22.7	25	22.3
HCM Lane LOS	C	C	C	C
HCM 95th-tile Q	2.1	4.9	5.7	4.5

Thompson Bridge / Enota Convenience
3: Riverside & Enota

existing a.m.

Intersection

Intersection Delay, s/veh

Intersection LOS

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	137	122	16
Peak Hour Factor	0.92	0.84	0.84	0.84
Heavy Vehicles, %	2	1	1	1
Mvmt Flow	0	163	145	19
Number of Lanes	0	0	1	0

Approach SB

Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	22.3
HCM LOS	C

Lane

Thompson Bridge / Enota Convenience

4: GA 11 Bus & South Enota

existing a.m.

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	12	448	114	245	852	171	272	254	34	81	127	86
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	200		0	300		0	400		400
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.970			0.975			0.982				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	1810	0	1787	1819	0	1787	1847	0	1787	1881	1599
Flt Permitted	0.064			0.248			0.226			0.366		
Satd. Flow (perm)	120	1810	0	467	1819	0	425	1847	0	689	1881	1599
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11			13			4				116
Link Speed (mph)		30			30			30				30
Link Distance (ft)		494			509			1007				495
Travel Time (s)		11.2			11.6			22.9				11.3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.80	0.80	0.80	0.88	0.88	0.88
Heavy Vehicles (%)	1%	2%	1%	1%	2%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	13	487	124	266	926	186	340	318	42	92	144	98
Shared Lane Traffic (%)												
Lane Group Flow (vph)	13	611	0	266	1112	0	340	360	0	92	144	98
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100		20	100	20
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94				94
Detector 2 Size(ft)		6			6			6				6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Free
Protected Phases		2		1	6		7	4		3	8	
Permitted Phases	2			6			4			8		Free

Thompson Bridge / Enota Convenience

4: GA 11 Bus & South Enota

existing a.m.

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Detector Phase	2	2		1	6		7	4		3	8	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	20.0	20.0		8.0	20.0		8.0	20.0		8.0	20.0	
Total Split (s)	77.0	77.0		31.0	108.0		32.0	42.0		10.0	20.0	
Total Split (%)	48.1%	48.1%		19.4%	67.5%		20.0%	26.3%		6.3%	12.5%	
Maximum Green (s)	73.0	73.0		27.0	104.0		28.0	38.0		6.0	16.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lag	Lag		Lead			Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	C-Max	C-Max		None	C-Max		None	None		None	None	
Walk Time (s)	5.0	5.0			5.0			5.0			5.0	
Flash Dont Walk (s)	11.0	11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0			0			0			0	
Act Effect Green (s)	85.6	85.6		105.1	105.1		46.9	36.9		21.1	15.1	160.0
Actuated g/C Ratio	0.54	0.54		0.66	0.66		0.29	0.23		0.13	0.09	1.00
v/c Ratio	0.20	0.63		0.61	0.93		0.94	0.84		0.70	0.81	0.06
Control Delay	32.0	30.1		17.7	38.4		84.6	75.8		75.5	102.1	0.1
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	32.0	30.1		17.7	38.4		84.6	75.8		75.5	102.1	0.1
LOS	C	C		B	D		F	E		E	F	A
Approach Delay		30.2			34.4			80.1			64.9	
Approach LOS		C			C			F			E	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.94

Intersection Signal Delay: 47.4

Intersection LOS: D

Intersection Capacity Utilization 93.6%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 4: GA 11 Bus & South Enota



Thompson Bridge / Enota Convenience
5: Green/Thompson Bridge & Holly & GA 11 Bus

existing a.m.

										
Lane Group	EBL	EBR	NBL	NBT	NBR	SBL	SBT	SBR	SWL	SWR
Lane Configurations										
Volume (vph)	0	53	19	683	296	0	1391	132	461	189
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	150		200	0		0	0	0
Storage Lanes	0	1	1		2	0		0	2	0
Taper Length (ft)	25		25			25			25	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.88	1.00	0.95	0.95	0.97	0.95
Frt		0.865			0.850		0.987		0.956	
Flt Protected			0.950						0.966	
Satd. Flow (prot)	0	1644	1805	3539	2814	0	3531	0	3333	0
Flt Permitted			0.086						0.966	
Satd. Flow (perm)	0	1644	163	3539	2814	0	3531	0	3333	0
Right Turn on Red		Yes			Yes			Yes		
Satd. Flow (RTOR)		42			333		12			
Link Speed (mph)	30			30			30		30	
Link Distance (ft)	497			707			3085		595	
Travel Time (s)	11.3			16.1			70.1		13.5	
Peak Hour Factor	0.92	0.83	0.89	0.89	0.89	0.92	0.89	0.89	0.93	0.93
Heavy Vehicles (%)	0%	0%	0%	2%	1%	0%	1%	0%	3%	0%
Adj. Flow (vph)	0	64	21	767	333	0	1563	148	496	203
Shared Lane Traffic (%)										
Lane Group Flow (vph)	0	64	21	767	333	0	1711	0	699	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Right	Left	Left	Right	Left	Right
Median Width(ft)	0			12			12		24	
Link Offset(ft)	0			0			0		0	
Crosswalk Width(ft)	16			16			16		16	
Two way Left Turn Lane										
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15		9	15		9	15	9
Number of Detectors		1	1	2	1		2		1	
Detector Template		Right	Left	Thru	Right		Thru		Left	
Leading Detector (ft)		20	20	100	20		100		20	
Trailing Detector (ft)		0	0	0	0		0		0	
Detector 1 Position(ft)		0	0	0	0		0		0	
Detector 1 Size(ft)		20	20	6	20		6		20	
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	
Detector 1 Channel										
Detector 1 Extend (s)		0.0	0.0	0.0	0.0		0.0		0.0	
Detector 1 Queue (s)		0.0	0.0	0.0	0.0		0.0		0.0	
Detector 1 Delay (s)		0.0	0.0	0.0	0.0		0.0		0.0	
Detector 2 Position(ft)				94			94			
Detector 2 Size(ft)				6			6			
Detector 2 Type				Cl+Ex			Cl+Ex			
Detector 2 Channel										
Detector 2 Extend (s)				0.0			0.0			
Turn Type		Perm	Perm	NA	Perm		NA		Prot	
Protected Phases				2			6		8	
Permitted Phases		4	2		2					

Thompson Bridge / Enota Convenience
5: Green/Thompson Bridge & Holly & GA 11 Bus

existing a.m.



Lane Group	EBL	EBR	NBL	NBT	NBR	SBL	SBT	SBR	SWL	SWR
Detector Phase		4	2	2	2		6		8	
Switch Phase										
Minimum Initial (s)		4.0	4.0	4.0	4.0		4.0		4.0	
Minimum Split (s)		20.0	20.0	20.0	20.0		20.0		20.0	
Total Split (s)		53.0	107.0	107.0	107.0		107.0		53.0	
Total Split (%)		33.1%	66.9%	66.9%	66.9%		66.9%		33.1%	
Maximum Green (s)		49.0	103.0	103.0	103.0		103.0		49.0	
Yellow Time (s)		3.5	3.5	3.5	3.5		3.5		3.5	
All-Red Time (s)		0.5	0.5	0.5	0.5		0.5		0.5	
Lost Time Adjust (s)		0.0	0.0	0.0	0.0		0.0		0.0	
Total Lost Time (s)		4.0	4.0	4.0	4.0		4.0		4.0	
Lead/Lag										
Lead-Lag Optimize?										
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0		3.0	
Recall Mode		None	C-Max	C-Max	C-Max		C-Max		None	
Walk Time (s)		5.0	5.0	5.0	5.0		5.0		5.0	
Flash Dont Walk (s)		11.0	11.0	11.0	11.0		11.0		11.0	
Pedestrian Calls (#/hr)		0	0	0	0		0		0	
Act Effect Green (s)		39.3	112.7	112.7	112.7		112.7		39.3	
Actuated g/C Ratio		0.25	0.70	0.70	0.70		0.70		0.25	
v/c Ratio		0.15	0.18	0.31	0.16		0.69		0.85	
Control Delay		19.2	11.6	7.8	0.3		16.0		68.2	
Queue Delay		0.0	0.0	0.0	0.0		0.2		0.0	
Total Delay		19.2	11.6	7.8	0.3		16.2		68.2	
LOS		B	B	A	A		B		E	
Approach Delay				5.6			16.2		68.2	
Approach LOS				A			B		E	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.85

Intersection Signal Delay: 23.1

Intersection LOS: C

Intersection Capacity Utilization 68.4%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 5: Green/Thompson Bridge & Holly & GA 11 Bus

107 s	53 s
107 s	53 s

Thompson Bridge / Enota Convenience

6: Green & Ridgewood/driveway

existing a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	131	5	22	6	6	2	14	862	11	4	1798	63
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.981			0.981			0.998			0.995	
Flt Protected		0.960			0.979			0.999				
Satd. Flow (prot)	0	1789	0	0	1825	0	0	3531	0	0	3558	0
Flt Permitted		0.775			0.906			0.873			0.954	
Satd. Flow (perm)	0	1445	0	0	1689	0	0	3085	0	0	3394	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			4			2			5	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		511			308			511			707	
Travel Time (s)		11.6			7.0			11.6			16.1	
Peak Hour Factor	0.79	0.79	0.79	0.50	0.50	0.50	0.93	0.93	0.93	0.89	0.89	0.89
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	1%	0%
Adj. Flow (vph)	166	6	28	12	12	4	15	927	12	4	2020	71
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	200	0	0	28	0	0	954	0	0	2095	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	

Thompson Bridge / Enota Convenience

6: Green & Ridgewood/driveway

existing a.m.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	20.0	20.0		20.0	20.0		8.0	20.0		20.0	20.0	
Total Split (s)	34.0	34.0		34.0	34.0		8.0	126.0		118.0	118.0	
Total Split (%)	21.3%	21.3%		21.3%	21.3%		5.0%	78.8%		73.8%	73.8%	
Maximum Green (s)	30.0	30.0		30.0	30.0		4.0	122.0		114.0	114.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		C-Max	C-Max	
Walk Time (s)	5.0	5.0		5.0	5.0			5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0		0	0	
Act Effect Green (s)		25.7			25.7			126.3			126.3	
Actuated g/C Ratio		0.16			0.16			0.79			0.79	
v/c Ratio		0.85			0.10			0.39			0.78	
Control Delay		92.5			49.6			6.0			11.9	
Queue Delay		0.0			0.0			0.0			0.2	
Total Delay		92.5			49.6			6.0			12.0	
LOS		F			D			A			B	
Approach Delay		92.5			49.6			6.0			12.0	
Approach LOS		F			D			A			B	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.85

Intersection Signal Delay: 15.5

Intersection LOS: B

Intersection Capacity Utilization 76.7%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 6: Green & Ridgewood/driveway

126 s	34 s
8 s	34 s
118 s	

Thompson Bridge / Enota Convenience
1: Thompson Bridge & Walmart/Taco Bell

existing p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	71	3	37	14	2	25	57	1973	20	13	1101	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50		0	50		0	200		100	200		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.862			0.861				0.850		0.993	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	1622	0	1787	1620	0	1787	3539	1599	1787	3516	0
Flt Permitted	0.705			0.710			0.205			0.061		
Satd. Flow (perm)	1326	1622	0	1336	1620	0	386	3539	1599	115	3516	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		48			49				34			9
Link Speed (mph)		30			30			30				30
Link Distance (ft)		300			195			1235				500
Travel Time (s)		6.8			4.4			28.1				11.4
Peak Hour Factor	0.77	0.77	0.77	0.51	0.51	0.51	0.93	0.93	0.93	0.96	0.96	0.96
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	2%	1%	1%	2%	1%
Adj. Flow (vph)	92	4	48	27	4	49	61	2122	22	14	1147	56
Shared Lane Traffic (%)												
Lane Group Flow (vph)	92	52	0	27	53	0	61	2122	22	14	1203	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94				94
Detector 2 Size(ft)		6			6			6				6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA	Perm	pm+pt		NA
Protected Phases		4			8		5	2		1		6
Permitted Phases	4			8			2		2	6		

Thompson Bridge / Enota Convenience
1: Thompson Bridge & Walmart/Taco Bell

existing p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		8.0	20.0	20.0	8.0	20.0	
Total Split (s)	25.0	25.0		25.0	25.0		8.0	127.0	127.0	8.0	127.0	
Total Split (%)	15.6%	15.6%		15.6%	15.6%		5.0%	79.4%	79.4%	5.0%	79.4%	
Maximum Green (s)	21.0	21.0		21.0	21.0		4.0	123.0	123.0	4.0	123.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max	C-Max	None	C-Max	
Walk Time (s)	5.0	5.0		5.0	5.0			5.0	5.0		5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0	0		0	
Act Effect Green (s)	15.8	15.8		15.8	15.8		134.6	132.6	132.6	132.7	128.5	
Actuated g/C Ratio	0.10	0.10		0.10	0.10		0.84	0.83	0.83	0.83	0.80	
v/c Ratio	0.70	0.26		0.21	0.26		0.16	0.72	0.02	0.09	0.43	
Control Delay	96.4	20.9		67.9	20.6		3.8	9.5	2.1	3.6	5.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	96.4	20.9		67.9	20.6		3.8	9.5	2.1	3.6	5.7	
LOS	F	C		E	C		A	A	A	A	A	
Approach Delay		69.1			36.5			9.3			5.7	
Approach LOS		E			D			A			A	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.72

Intersection Signal Delay: 11.0

Intersection LOS: B

Intersection Capacity Utilization 71.8%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 1: Thompson Bridge & Walmart/Taco Bell

														
8 s	127 s	25 s	8 s	127 s	25 s	8 s	127 s	25 s	8 s	127 s	25 s	8 s	127 s	25 s
														
8 s	127 s	25 s	8 s	127 s	25 s	8 s	127 s	25 s	8 s	127 s	25 s	8 s	127 s	25 s

Thompson Bridge / Enota Convenience

2: Thompson Bridge & Enota

existing p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	161	82	13	55	51	359	17	1573	36	215	942	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		0	200		200	300		0	300		0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.980				0.850		0.997			0.996	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1862	0	1787	1900	1599	1805	3529	0	1787	3527	0
Flt Permitted	0.612			0.684			0.265			0.042		
Satd. Flow (perm)	1163	1862	0	1287	1900	1599	504	3529	0	79	3527	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5				211		2			3	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		160			1380			173			1235	
Travel Time (s)		3.6			31.4			3.9			28.1	
Peak Hour Factor	0.84	0.84	0.84	0.90	0.90	0.90	0.93	0.93	0.93	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	1%	0%	1%	0%	2%	1%	1%	2%	0%
Adj. Flow (vph)	192	98	15	61	57	399	18	1691	39	234	1024	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	192	113	0	61	57	399	18	1730	0	234	1052	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8		8	2			6		

Thompson Bridge / Enota Convenience

2: Thompson Bridge & Enota

existing p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Minimum Split (s)	8.0	20.0		20.0	20.0	20.0	8.0	20.0		8.0	20.0	
Total Split (s)	12.0	47.0		35.0	35.0	35.0	8.0	87.0		26.0	105.0	
Total Split (%)	7.5%	29.4%		21.9%	21.9%	21.9%	5.0%	54.4%		16.3%	65.6%	
Maximum Green (s)	8.0	43.0		31.0	31.0	31.0	4.0	83.0		22.0	101.0	
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5	0.5	0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lead/Lag	Lead			Lag	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	None	C-Max		None	C-Max	
Walk Time (s)		5.0		5.0	5.0	5.0		5.0			5.0	
Flash Dont Walk (s)		11.0		11.0	11.0	11.0		11.0			11.0	
Pedestrian Calls (#/hr)		0		0	0	0		0			0	
Act Effect Green (s)	37.4	37.4		25.4	25.4	25.4	95.9	90.9		114.6	109.4	
Actuated g/C Ratio	0.23	0.23		0.16	0.16	0.16	0.60	0.57		0.72	0.68	
v/c Ratio	0.63	0.26		0.30	0.19	0.93	0.05	0.86		0.88	0.44	
Control Delay	62.4	47.7		61.2	57.5	58.5	9.8	36.5		89.2	9.6	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	62.4	47.7		61.2	57.5	58.5	9.8	36.5		89.2	9.6	
LOS	E	D		E	E	E	A	D		F	A	
Approach Delay		56.9			58.7			36.2			24.1	
Approach LOS		E			E			D			C	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 41 (26%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.93

Intersection Signal Delay: 36.8

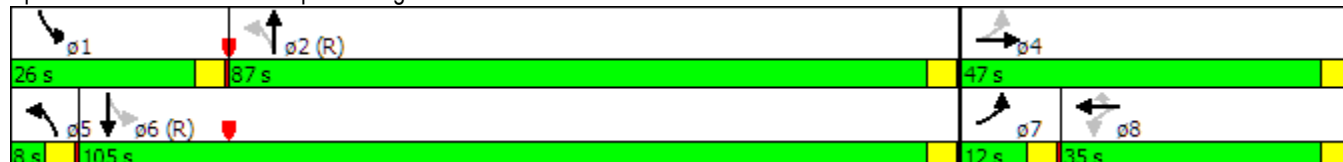
Intersection LOS: D

Intersection Capacity Utilization 85.8%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 2: Thompson Bridge & Enota



Thompson Bridge / Enota Convenience
3: Riverside & Enota

existing p.m.

Intersection												
Intersection Delay, s/veh	58.5											
Intersection LOS	F											
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	67	306	10	0	26	312	109	0	22	342	37
Peak Hour Factor	0.92	0.91	0.91	0.91	0.92	0.92	0.92	0.92	0.92	0.95	0.95	0.95
Heavy Vehicles, %	2	1	1	1	2	1	1	1	2	1	1	1
Mvmt Flow	0	74	336	11	0	28	339	118	0	23	360	39
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	59.9	71.3	59.3
HCM LOS	F	F	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	5%	17%	6%	38%
Vol Thru, %	85%	80%	70%	43%
Vol Right, %	9%	3%	24%	19%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	401	383	447	154
LT Vol	22	67	26	59
Through Vol	342	306	312	66
RT Vol	37	10	109	29
Lane Flow Rate	422	421	486	188
Geometry Grp	1	1	1	1
Degree of Util (X)	0.947	0.949	1	0.482
Departure Headway (Hd)	8.073	8.114	7.969	9.241
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	447	446	452	389
Service Time	6.132	6.172	6.06	7.32
HCM Lane V/C Ratio	0.944	0.944	1.075	0.483
HCM Control Delay	59.3	59.9	71.3	20.7
HCM Lane LOS	F	F	F	C
HCM 95th-tile Q	11.2	11.2	12.9	2.5

Intersection

Intersection Delay, s/veh

Intersection LOS

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	59	66	29
Peak Hour Factor	0.92	0.82	0.82	0.82
Heavy Vehicles, %	2	1	1	1
Mvmt Flow	0	72	80	35
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	20.7
HCM LOS	C

Lane

Thompson Bridge / Enota Convenience

4: GA 11 Bus & South Enota

existing p.m.

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	17	584	48	106	579	250	231	142	28	237	341	354
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	200		0	300		0	400		400
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.989			0.955			0.975				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	1844	0	1787	1784	0	1787	1834	0	1787	1881	1599
Flt Permitted	0.083			0.148			0.105			0.456		
Satd. Flow (perm)	156	1844	0	278	1784	0	198	1834	0	858	1881	1599
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			22			6				396
Link Speed (mph)		30			30			30				30
Link Distance (ft)		494			509			1007				495
Travel Time (s)		11.2			11.6			22.9				11.3
Peak Hour Factor	0.91	0.91	0.91	0.89	0.89	0.89	0.80	0.80	0.80	0.88	0.88	0.88
Heavy Vehicles (%)	1%	2%	1%	1%	2%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	19	642	53	119	651	281	289	178	35	269	388	402
Shared Lane Traffic (%)												
Lane Group Flow (vph)	19	695	0	119	932	0	289	213	0	269	388	402
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100		20	100	20
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94				94
Detector 2 Size(ft)		6			6			6				6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Free
Protected Phases		2		1	6		7	4		3	8	
Permitted Phases	2			6			4			8		Free

Thompson Bridge / Enota Convenience

4: GA 11 Bus & South Enota

existing p.m.

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Detector Phase	2	2		1	6		7	4		3	8	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	20.0	20.0		8.0	20.0		8.0	20.0		8.0	20.0	
Total Split (s)	80.0	80.0		13.0	93.0		26.0	43.0		24.0	41.0	
Total Split (%)	50.0%	50.0%		8.1%	58.1%		16.3%	26.9%		15.0%	25.6%	
Maximum Green (s)	76.0	76.0		9.0	89.0		22.0	39.0		20.0	37.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lag	Lag		Lead			Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	C-Max	C-Max		None	C-Max		None	None		None	None	
Walk Time (s)	5.0	5.0			5.0			5.0			5.0	
Flash Dont Walk (s)	11.0	11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0			0			0			0	
Act Effect Green (s)	77.8	77.8		90.6	90.6		59.9	38.2		54.7	35.4	160.0
Actuated g/C Ratio	0.49	0.49		0.57	0.57		0.37	0.24		0.34	0.22	1.00
v/c Ratio	0.25	0.77		0.50	0.91		0.99	0.48		0.67	0.93	0.25
Control Delay	36.1	41.4		23.9	45.3		97.1	54.9		44.9	90.6	0.4
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	36.1	41.4		23.9	45.3		97.1	54.9		44.9	90.6	0.4
LOS	D	D		C	D		F	D		D	F	A
Approach Delay		41.2			42.9			79.2			44.7	
Approach LOS		D			D			E			D	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.99

Intersection Signal Delay: 48.6

Intersection LOS: D

Intersection Capacity Utilization 93.1%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 4: GA 11 Bus & South Enota

					
ø1	ø2 (R)		ø3	ø4	
13 s	80 s		24 s	43 s	
					
ø6 (F)			ø7	ø8	
93 s			26 s	41 s	

Thompson Bridge / Enota Convenience
5: Green/Thompson Bridge & Holly & GA 11 Bus

existing p.m.

										
Lane Group	EBL	EBR	NBL	NBT	NBR	SBL	SBT	SBR	SWL	SWR
Lane Configurations										
Volume (vph)	0	35	46	1412	653	0	812	125	387	218
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	150		200	0		0	0	0
Storage Lanes	0	1	1		2	0		0	2	0
Taper Length (ft)	25		25			25			25	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.88	1.00	0.95	0.95	0.97	0.95
Frt		0.865			0.850		0.980		0.946	
Flt Protected			0.950						0.969	
Satd. Flow (prot)	0	1644	1805	3574	2814	0	3507	0	3357	0
Flt Permitted			0.225						0.969	
Satd. Flow (perm)	0	1644	428	3574	2814	0	3507	0	3357	0
Right Turn on Red		Yes			Yes			Yes		
Satd. Flow (RTOR)		156			482		21			
Link Speed (mph)	30			30			30		30	
Link Distance (ft)	497			707			3085		595	
Travel Time (s)	11.3			16.1			70.1		13.5	
Peak Hour Factor	0.92	0.58	0.93	0.93	0.93	0.92	0.87	0.87	0.88	0.88
Heavy Vehicles (%)	0%	0%	0%	1%	1%	0%	1%	0%	1%	0%
Adj. Flow (vph)	0	60	49	1518	702	0	933	144	440	248
Shared Lane Traffic (%)										
Lane Group Flow (vph)	0	60	49	1518	702	0	1077	0	688	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Right	Left	Left	Right	Left	Right
Median Width(ft)	0			12			12		24	
Link Offset(ft)	0			0			0		0	
Crosswalk Width(ft)	16			16			16		16	
Two way Left Turn Lane										
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15		9	15		9	15	9
Number of Detectors		1	1	2	1		2		1	
Detector Template		Right	Left	Thru	Right		Thru		Left	
Leading Detector (ft)		20	20	100	20		100		20	
Trailing Detector (ft)		0	0	0	0		0		0	
Detector 1 Position(ft)		0	0	0	0		0		0	
Detector 1 Size(ft)		20	20	6	20		6		20	
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	
Detector 1 Channel										
Detector 1 Extend (s)		0.0	0.0	0.0	0.0		0.0		0.0	
Detector 1 Queue (s)		0.0	0.0	0.0	0.0		0.0		0.0	
Detector 1 Delay (s)		0.0	0.0	0.0	0.0		0.0		0.0	
Detector 2 Position(ft)				94			94			
Detector 2 Size(ft)				6			6			
Detector 2 Type				Cl+Ex			Cl+Ex			
Detector 2 Channel										
Detector 2 Extend (s)				0.0			0.0			
Turn Type		Perm	Perm	NA	Perm		NA		Prot	
Protected Phases				2			6		8	
Permitted Phases		4	2		2					

Thompson Bridge / Enota Convenience
5: Green/Thompson Bridge & Holly & GA 11 Bus

existing p.m.



Lane Group	EBL	EBR	NBL	NBT	NBR	SBL	SBT	SBR	SWL	SWR
Detector Phase		4	2	2	2		6		8	
Switch Phase										
Minimum Initial (s)		4.0	4.0	4.0	4.0		4.0		4.0	
Minimum Split (s)		20.0	20.0	20.0	20.0		20.0		20.0	
Total Split (s)		55.0	105.0	105.0	105.0		105.0		55.0	
Total Split (%)		34.4%	65.6%	65.6%	65.6%		65.6%		34.4%	
Maximum Green (s)		51.0	101.0	101.0	101.0		101.0		51.0	
Yellow Time (s)		3.5	3.5	3.5	3.5		3.5		3.5	
All-Red Time (s)		0.5	0.5	0.5	0.5		0.5		0.5	
Lost Time Adjust (s)		0.0	0.0	0.0	0.0		0.0		0.0	
Total Lost Time (s)		4.0	4.0	4.0	4.0		4.0		4.0	
Lead/Lag										
Lead-Lag Optimize?										
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0		3.0	
Recall Mode		None	C-Max	C-Max	C-Max		C-Max		None	
Walk Time (s)		5.0	5.0	5.0	5.0		5.0		5.0	
Flash Dont Walk (s)		11.0	11.0	11.0	11.0		11.0		11.0	
Pedestrian Calls (#/hr)		0	0	0	0		0		0	
Act Effect Green (s)		38.7	113.3	113.3	113.3		113.3		38.7	
Actuated g/C Ratio		0.24	0.71	0.71	0.71		0.71		0.24	
v/c Ratio		0.12	0.16	0.60	0.33		0.43		0.85	
Control Delay		0.5	7.4	7.8	1.2		10.8		68.1	
Queue Delay		0.0	0.0	0.6	0.0		0.0		0.0	
Total Delay		0.5	7.4	8.4	1.2		10.8		68.1	
LOS		A	A	A	A		B		E	
Approach Delay				6.1			10.8		68.1	
Approach LOS				A			B		E	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green

Natural Cycle: 55

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.85

Intersection Signal Delay: 17.7

Intersection LOS: B

Intersection Capacity Utilization 63.6%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 5: Green/Thompson Bridge & Holly & GA 11 Bus

 p2 (R)	 p4
105 s	55 s
 p6 (R)	 p8
105 s	55 s

Thompson Bridge / Enota Convenience

6: Green & Ridgewood/driveway

existing p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	252	8	20	11	14	5	23	1849	10	0	1097	73
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.990			0.979			0.999			0.991	
Flt Protected		0.957			0.982			0.999				
Satd. Flow (prot)	0	1800	0	0	1827	0	0	3568	0	0	3544	0
Flt Permitted		0.729			0.894			0.911				
Satd. Flow (perm)	0	1371	0	0	1663	0	0	3253	0	0	3544	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2			6			1			8	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		511			308			511			707	
Travel Time (s)		11.6			7.0			11.6			16.1	
Peak Hour Factor	0.91	0.91	0.91	0.68	0.68	0.68	0.92	0.92	0.92	0.89	0.89	0.89
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	1%	0%
Adj. Flow (vph)	277	9	22	16	21	7	25	2010	11	0	1233	82
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	308	0	0	44	0	0	2046	0	0	1315	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA			NA	
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	

Thompson Bridge / Enota Convenience

6: Green & Ridgewood/driveway

existing p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	20.0	20.0		20.0	20.0		8.0	20.0		20.0	20.0	
Total Split (s)	45.0	45.0		45.0	45.0		8.0	115.0		107.0	107.0	
Total Split (%)	28.1%	28.1%		28.1%	28.1%		5.0%	71.9%		66.9%	66.9%	
Maximum Green (s)	41.0	41.0		41.0	41.0		4.0	111.0		103.0	103.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		C-Max	C-Max	
Walk Time (s)	5.0	5.0		5.0	5.0			5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0		0	0	
Act Effect Green (s)		38.4			38.4			113.6			113.6	
Actuated g/C Ratio		0.24			0.24			0.71			0.71	
v/c Ratio		0.93			0.11			0.89			0.52	
Control Delay		93.6			40.7			24.9			13.1	
Queue Delay		0.0			0.0			0.0			0.2	
Total Delay		93.6			40.7			24.9			13.3	
LOS		F			D			C			B	
Approach Delay		93.6			40.7			24.9			13.3	
Approach LOS		F			D			C			B	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.93

Intersection Signal Delay: 26.7

Intersection LOS: C

Intersection Capacity Utilization 96.6%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 6: Green & Ridgewood/driveway

													
115 s	45 s	45 s	45 s	45 s	45 s	45 s	45 s	45 s	45 s	45 s	45 s	45 s	45 s
8 s	107 s	45 s	45 s	45 s	45 s	45 s	45 s	45 s	45 s	45 s	45 s	45 s	45 s

Appendix D

Future Intersection Operational Analysis

Thompson Bridge / Enota Convenience
1: Thompson Bridge & Walmart/Taco Bell

future a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	40	0	68	3	1	4	55	939	1	6	1995	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50		0	50		0	200		100	200		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.850			0.871				0.850		0.994	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	1599	0	1787	1639	0	1787	3539	1599	1787	3519	0
Flt Permitted	0.753			0.511			0.042			0.285		
Satd. Flow (perm)	1417	1599	0	961	1639	0	79	3539	1599	536	3519	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		63			6				34			8
Link Speed (mph)		30			30			30				30
Link Distance (ft)		300			195			1235				500
Travel Time (s)		6.8			4.4			28.1				11.4
Peak Hour Factor	0.85	0.85	0.85	0.67	0.67	0.67	0.94	0.94	0.94	0.90	0.90	0.90
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	2%	1%	1%	2%	1%
Adj. Flow (vph)	47	0	80	4	1	6	59	999	1	7	2217	94
Shared Lane Traffic (%)												
Lane Group Flow (vph)	47	80	0	4	7	0	59	999	1	7	2311	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94				94
Detector 2 Size(ft)		6			6			6				6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA	Perm	pm+pt		NA
Protected Phases		4			8		5	2		1		6
Permitted Phases	4			8			2		2	6		

Thompson Bridge / Enota Convenience
1: Thompson Bridge & Walmart/Taco Bell

future a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		8.0	20.0	20.0	8.0	20.0	
Total Split (s)	20.0	20.0		20.0	20.0		13.0	132.0	132.0	8.0	127.0	
Total Split (%)	12.5%	12.5%		12.5%	12.5%		8.1%	82.5%	82.5%	5.0%	79.4%	
Maximum Green (s)	16.0	16.0		16.0	16.0		9.0	128.0	128.0	4.0	123.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max	C-Max	None	C-Max	
Walk Time (s)	5.0	5.0		5.0	5.0			5.0	5.0		5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0	0		0	
Act Effect Green (s)	10.7	10.7		10.7	10.7		141.3	139.6	139.6	136.4	132.2	
Actuated g/C Ratio	0.07	0.07		0.07	0.07		0.88	0.87	0.87	0.85	0.83	
v/c Ratio	0.50	0.48		0.06	0.06		0.41	0.32	0.00	0.01	0.79	
Control Delay	88.8	31.8		69.3	40.6		21.7	3.0	0.0	1.7	11.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	88.8	31.8		69.3	40.6		21.7	3.0	0.0	1.7	11.1	
LOS	F	C		E	D		C	A	A	A	B	
Approach Delay		52.9			51.0			4.0			11.1	
Approach LOS		D			D			A			B	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.79

Intersection Signal Delay: 10.6

Intersection LOS: B

Intersection Capacity Utilization 73.4%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 1: Thompson Bridge & Walmart/Taco Bell

														
8 s	132 s	20 s	13 s	127 s	20 s	13 s	127 s	20 s	13 s	127 s	20 s	13 s	127 s	20 s

Thompson Bridge / Enota Convenience

2: Thompson Bridge & Enota

future a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	72	62	31	53	33	177	18	779	28	332	1706	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		0	200		200	300		0	300		0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.949				0.850		0.995			0.997	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1803	0	1787	1900	1599	1805	3523	0	1787	3530	0
Flt Permitted	0.557			0.694			0.076			0.282		
Satd. Flow (perm)	1058	1803	0	1306	1900	1599	144	3523	0	530	3530	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		14				199		3			3	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		160			1380			173			1235	
Travel Time (s)		3.6			31.4			3.9			28.1	
Peak Hour Factor	0.95	0.95	0.95	0.89	0.89	0.89	0.94	0.94	0.94	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	1%	0%	1%	0%	2%	1%	1%	2%	0%
Adj. Flow (vph)	76	65	33	60	37	199	19	829	30	369	1896	38
Shared Lane Traffic (%)												
Lane Group Flow (vph)	76	98	0	60	37	199	19	859	0	369	1934	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8		8	2			6		

Thompson Bridge / Enota Convenience

2: Thompson Bridge & Enota

future a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Minimum Split (s)	8.0	20.0		20.0	20.0	20.0	8.0	20.0		8.0	20.0	
Total Split (s)	10.0	35.0		25.0	25.0	25.0	8.0	84.0		41.0	117.0	
Total Split (%)	6.3%	21.9%		15.6%	15.6%	15.6%	5.0%	52.5%		25.6%	73.1%	
Maximum Green (s)	6.0	31.0		21.0	21.0	21.0	4.0	80.0		37.0	113.0	
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5	0.5	0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lead/Lag	Lead			Lag			Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes			Yes			Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	None	C-Max		None	C-Max	
Walk Time (s)		5.0		5.0	5.0	5.0		5.0			5.0	
Flash Dont Walk (s)		11.0		11.0	11.0	11.0		11.0			11.0	
Pedestrian Calls (#/hr)		0		0	0	0		0			0	
Act Effect Green (s)	22.7	22.7		12.7	12.7	12.7	116.3	110.5		129.3	123.3	
Actuated g/C Ratio	0.14	0.14		0.08	0.08	0.08	0.73	0.69		0.81	0.77	
v/c Ratio	0.43	0.37		0.58	0.25	0.64	0.12	0.35		0.68	0.71	
Control Delay	68.1	56.0		91.9	71.2	18.0	5.6	9.2		12.6	7.4	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.1	
Total Delay	68.1	56.0		91.9	71.2	18.0	5.6	9.2		12.6	7.4	
LOS	E	E		F	E	B	A	A		B	A	
Approach Delay		61.3			39.6			9.1			8.3	
Approach LOS		E			D			A			A	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 41 (26%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.71

Intersection Signal Delay: 13.5

Intersection LOS: B

Intersection Capacity Utilization 72.2%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 2: Thompson Bridge & Enota



Thompson Bridge / Enota Convenience
3: Riverside & Enota

future a.m.

Intersection												
Intersection Delay, s/veh	32.1											
Intersection LOS	D											
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	12	329	8	0	48	218	42	0	11	58	69
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.75	0.75	0.75	0.92	0.60	0.60	0.60
Heavy Vehicles, %	2	1	1	1	2	1	1	1	2	1	1	1
Mvmt Flow	0	13	358	9	0	64	291	56	0	18	97	115
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	33.7	39	19
HCM LOS	D	E	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	8%	3%	16%	49%
Vol Thru, %	42%	94%	71%	44%
Vol Right, %	50%	2%	14%	6%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	138	349	308	293
LT Vol	11	12	48	145
Through Vol	58	329	218	129
RT Vol	69	8	42	19
Lane Flow Rate	230	379	411	349
Geometry Grp	1	1	1	1
Degree of Util (X)	0.507	0.792	0.843	0.752
Departure Headway (Hd)	7.928	7.517	7.386	7.762
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	453	482	489	464
Service Time	6.01	5.588	5.453	5.831
HCM Lane V/C Ratio	0.508	0.786	0.84	0.752
HCM Control Delay	19	33.7	39	30.9
HCM Lane LOS	C	D	E	D
HCM 95th-tile Q	2.8	7.2	8.5	6.3

Intersection

Intersection Delay, s/veh

Intersection LOS

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	145	129	19
Peak Hour Factor	0.92	0.84	0.84	0.84
Heavy Vehicles, %	2	1	1	1
Mvmt Flow	0	173	154	23
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	30.9
HCM LOS	D

Lane

Thompson Bridge / Enota Convenience

4: GA 11 Bus & South Enota

future a.m.

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	14	475	121	160	904	183	291	271	37	86	138	91
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	200		0	300		0	400		400
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.969			0.975			0.982				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	1809	0	1787	1819	0	1787	1847	0	1787	1881	1599
Flt Permitted	0.044			0.251			0.205			0.281		
Satd. Flow (perm)	83	1809	0	472	1819	0	386	1847	0	529	1881	1599
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		13			13			4				116
Link Speed (mph)		30			30			30				30
Link Distance (ft)		494			509			1007				495
Travel Time (s)		11.2			11.6			22.9				11.3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.80	0.80	0.80	0.88	0.88	0.88
Heavy Vehicles (%)	1%	2%	1%	1%	2%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	15	516	132	174	983	199	364	339	46	98	157	103
Shared Lane Traffic (%)												
Lane Group Flow (vph)	15	648	0	174	1182	0	364	385	0	98	157	103
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100		20	100	20
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94				94
Detector 2 Size(ft)		6			6			6				6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Free
Protected Phases		2		1	6		7	4		3	8	
Permitted Phases	2			6			4			8		Free

Thompson Bridge / Enota Convenience

4: GA 11 Bus & South Enota

future a.m.

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Detector Phase	2	2		1	6		7	4		3	8	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	20.0	20.0		8.0	20.0		8.0	20.0		8.0	20.0	
Total Split (s)	95.0	95.0		14.0	109.0		31.0	42.0		9.0	20.0	
Total Split (%)	59.4%	59.4%		8.8%	68.1%		19.4%	26.3%		5.6%	12.5%	
Maximum Green (s)	91.0	91.0		10.0	105.0		27.0	38.0		5.0	16.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lag	Lag		Lead			Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	C-Max	C-Max		None	C-Max		None	None		None	None	
Walk Time (s)	5.0	5.0			5.0			5.0			5.0	
Flash Dont Walk (s)	11.0	11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0			0			0			0	
Act Effect Green (s)	91.8	91.8		105.5	105.5		46.5	37.5		20.5	15.5	160.0
Actuated g/C Ratio	0.57	0.57		0.66	0.66		0.29	0.23		0.13	0.10	1.00
v/c Ratio	0.32	0.62		0.45	0.98		1.05	0.89		0.92	0.86	0.06
Control Delay	40.2	25.5		14.2	48.3		109.2	80.6		119.3	108.8	0.1
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	40.2	25.5		14.2	48.3		109.2	80.6		119.3	108.8	0.1
LOS	D	C		B	D		F	F		F	F	A
Approach Delay		25.8			43.9			94.5			80.4	
Approach LOS		C			D			F			F	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 120

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.05

Intersection Signal Delay: 56.4

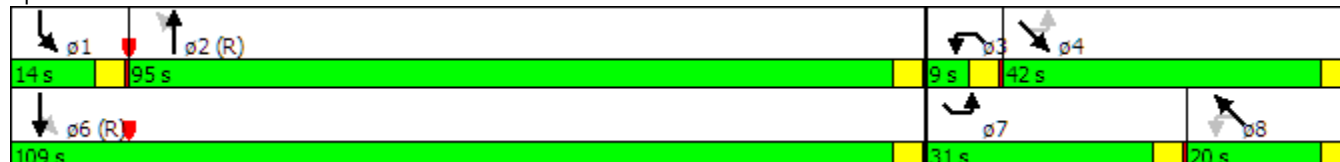
Intersection LOS: E

Intersection Capacity Utilization 98.7%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 4: GA 11 Bus & South Enota



Thompson Bridge / Enota Convenience
5: Green/Thompson Bridge & Holly & GA 11 Bus

future a.m.

										
Lane Group	EBL	EBR	NBL	NBT	NBR	SBL	SBT	SBR	SWL	SWR
Lane Configurations										
Volume (vph)	0	56	20	734	314	0	1485	140	489	201
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	150		200	0		0	0	0
Storage Lanes	0	1	1		2	0		0	2	0
Taper Length (ft)	25		25			25			25	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.88	1.00	0.95	0.95	0.97	0.95
Frt		0.865			0.850		0.987		0.956	
Flt Protected			0.950						0.966	
Satd. Flow (prot)	0	1644	1805	3539	2814	0	3531	0	3333	0
Flt Permitted			0.066						0.966	
Satd. Flow (perm)	0	1644	125	3539	2814	0	3531	0	3333	0
Right Turn on Red		Yes			Yes			Yes		
Satd. Flow (RTOR)		34			353		13			
Link Speed (mph)	30			30			30		30	
Link Distance (ft)	497			707			3085		595	
Travel Time (s)	11.3			16.1			70.1		13.5	
Peak Hour Factor	0.92	0.83	0.89	0.89	0.89	0.92	0.89	0.89	0.93	0.93
Heavy Vehicles (%)	0%	0%	0%	2%	1%	0%	1%	0%	3%	0%
Adj. Flow (vph)	0	67	22	825	353	0	1669	157	526	216
Shared Lane Traffic (%)										
Lane Group Flow (vph)	0	67	22	825	353	0	1826	0	742	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Right	Left	Left	Right	Left	Right
Median Width(ft)	0			12			12		24	
Link Offset(ft)	0			0			0		0	
Crosswalk Width(ft)	16			16			16		16	
Two way Left Turn Lane										
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15		9	15		9	15	9
Number of Detectors		1	1	2	1		2		1	
Detector Template		Right	Left	Thru	Right		Thru		Left	
Leading Detector (ft)		20	20	100	20		100		20	
Trailing Detector (ft)		0	0	0	0		0		0	
Detector 1 Position(ft)		0	0	0	0		0		0	
Detector 1 Size(ft)		20	20	6	20		6		20	
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	
Detector 1 Channel										
Detector 1 Extend (s)		0.0	0.0	0.0	0.0		0.0		0.0	
Detector 1 Queue (s)		0.0	0.0	0.0	0.0		0.0		0.0	
Detector 1 Delay (s)		0.0	0.0	0.0	0.0		0.0		0.0	
Detector 2 Position(ft)				94			94			
Detector 2 Size(ft)				6			6			
Detector 2 Type				Cl+Ex			Cl+Ex			
Detector 2 Channel										
Detector 2 Extend (s)				0.0			0.0			
Turn Type		Perm	Perm	NA	Perm		NA		Prot	
Protected Phases				2			6		8	
Permitted Phases		4	2		2					

Thompson Bridge / Enota Convenience
5: Green/Thompson Bridge & Holly & GA 11 Bus

future a.m.



Lane Group	EBL	EBR	NBL	NBT	NBR	SBL	SBT	SBR	SWL	SWR
Detector Phase		4	2	2	2		6		8	
Switch Phase										
Minimum Initial (s)		4.0	4.0	4.0	4.0		4.0		4.0	
Minimum Split (s)		20.0	20.0	20.0	20.0		20.0		20.0	
Total Split (s)		52.0	108.0	108.0	108.0		108.0		52.0	
Total Split (%)		32.5%	67.5%	67.5%	67.5%		67.5%		32.5%	
Maximum Green (s)		48.0	104.0	104.0	104.0		104.0		48.0	
Yellow Time (s)		3.5	3.5	3.5	3.5		3.5		3.5	
All-Red Time (s)		0.5	0.5	0.5	0.5		0.5		0.5	
Lost Time Adjust (s)		0.0	0.0	0.0	0.0		0.0		0.0	
Total Lost Time (s)		4.0	4.0	4.0	4.0		4.0		4.0	
Lead/Lag										
Lead-Lag Optimize?										
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0		3.0	
Recall Mode		None	C-Max	C-Max	C-Max		C-Max		None	
Walk Time (s)		5.0	5.0	5.0	5.0		5.0		5.0	
Flash Dont Walk (s)		11.0	11.0	11.0	11.0		11.0		11.0	
Pedestrian Calls (#/hr)		0	0	0	0		0		0	
Act Effect Green (s)		41.2	110.8	110.8	110.8		110.8		41.2	
Actuated g/C Ratio		0.26	0.69	0.69	0.69		0.69		0.26	
v/c Ratio		0.15	0.26	0.34	0.17		0.75		0.87	
Control Delay		23.9	17.2	8.5	0.3		25.9		67.8	
Queue Delay		0.0	0.0	0.0	0.0		0.4		0.0	
Total Delay		23.9	17.2	8.5	0.3		26.3		67.8	
LOS		C	B	A	A		C		E	
Approach Delay				6.2			26.3		67.8	
Approach LOS				A			C		E	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.87

Intersection Signal Delay: 28.0

Intersection LOS: C

Intersection Capacity Utilization 72.4%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 5: Green/Thompson Bridge & Holly & GA 11 Bus

108 s	52 s
108 s	52 s

Thompson Bridge / Enota Convenience

6: Green & Ridgewood/driveway

future a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	141	5	23	6	6	2	15	939	12	4	1915	69
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.982			0.981			0.998			0.995	
Flt Protected		0.960			0.979			0.999				
Satd. Flow (prot)	0	1791	0	0	1825	0	0	3531	0	0	3558	0
Flt Permitted		0.774			0.910			0.859			0.953	
Satd. Flow (perm)	0	1444	0	0	1696	0	0	3036	0	0	3390	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			4			2			6	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		511			308			511			707	
Travel Time (s)		11.6			7.0			11.6			16.1	
Peak Hour Factor	0.79	0.79	0.79	0.50	0.50	0.50	0.93	0.93	0.93	0.89	0.89	0.89
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	1%	0%
Adj. Flow (vph)	178	6	29	12	12	4	16	1010	13	4	2152	78
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	213	0	0	28	0	0	1039	0	0	2234	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	

Thompson Bridge / Enota Convenience

6: Green & Ridgewood/driveway

future a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	20.0	20.0		20.0	20.0		8.0	20.0		20.0	20.0	
Total Split (s)	32.0	32.0		32.0	32.0		8.0	128.0		120.0	120.0	
Total Split (%)	20.0%	20.0%		20.0%	20.0%		5.0%	80.0%		75.0%	75.0%	
Maximum Green (s)	28.0	28.0		28.0	28.0		4.0	124.0		116.0	116.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		C-Max	C-Max	
Walk Time (s)	5.0	5.0		5.0	5.0			5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0		0	0	
Act Effect Green (s)		26.0			26.0			126.0			126.0	
Actuated g/C Ratio		0.16			0.16			0.79			0.79	
v/c Ratio		0.89			0.10			0.43			0.84	
Control Delay		100.1			50.4			6.3			13.8	
Queue Delay		0.0			0.0			0.0			0.3	
Total Delay		100.1			50.4			6.3			14.1	
LOS		F			D			A			B	
Approach Delay		100.1			50.4			6.3			14.1	
Approach LOS		F			D			A			B	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.89

Intersection Signal Delay: 17.3

Intersection LOS: B

Intersection Capacity Utilization 80.7%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 6: Green & Ridgewood/driveway

											
128 s			32 s								
8 s			120 s								

Thompson Bridge / Enota Convenience
7: Thompson Bridge

future a.m.

Intersection						
Int Delay, s/veh	0.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	0	35	21	812	1754	35
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	0	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	94	94	90	90
Heavy Vehicles, %	0	0	0	2	2	0
Mvmt Flow	0	41	22	864	1949	39
Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2445	994	1988	0	-	0
Stage 1	1968	-	-	-	-	-
Stage 2	477	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	27	247	294	-	-	-
Stage 1	97	-	-	-	-	-
Stage 2	596	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	25	247	294	-	-	-
Mov Cap-2 Maneuver	25	-	-	-	-	-
Stage 1	97	-	-	-	-	-
Stage 2	551	-	-	-	-	-
Approach	EB		NB		SB	
HCM Control Delay, s	22.5		0.5		0	
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	294	-	247	-	-	
HCM Lane V/C Ratio	0.076	-	0.167	-	-	
HCM Control Delay (s)	18.2	-	22.5	-	-	
HCM Lane LOS	C	-	C	-	-	
HCM 95th %tile Q(veh)	0.2	-	0.6	-	-	

Intersection

Int Delay, s/veh 1.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	139	5	6	79	5	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	89	89	80	80
Heavy Vehicles, %	1	0	0	1	0	0
Mvmt Flow	146	5	7	89	6	32

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	152	0	251	149
Stage 1	-	-	-	-	149	-
Stage 2	-	-	-	-	102	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1441	-	742	903
Stage 1	-	-	-	-	884	-
Stage 2	-	-	-	-	927	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1441	-	738	903
Mov Cap-2 Maneuver	-	-	-	-	738	-
Stage 1	-	-	-	-	884	-
Stage 2	-	-	-	-	922	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	9.3
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	872	-	-	1441	-
HCM Lane V/C Ratio	0.044	-	-	0.005	-
HCM Control Delay (s)	9.3	-	-	7.5	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Thompson Bridge / Enota Convenience
1: Thompson Bridge & Walmart/Taco Bell

future p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	75	3	39	15	2	27	60	2097	21	14	1172	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50		0	50		0	200		100	200		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.861			0.861				0.850		0.993	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	1620	0	1787	1620	0	1787	3539	1599	1787	3516	0
Flt Permitted	0.689			0.697			0.187			0.048		
Satd. Flow (perm)	1296	1620	0	1311	1620	0	352	3539	1599	90	3516	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		51			53				34		10	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		300			195			1235			500	
Travel Time (s)		6.8			4.4			28.1			11.4	
Peak Hour Factor	0.77	0.77	0.77	0.51	0.51	0.51	0.93	0.93	0.93	0.96	0.96	0.96
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	2%	1%	1%	2%	1%
Adj. Flow (vph)	97	4	51	29	4	53	65	2255	23	15	1221	59
Shared Lane Traffic (%)												
Lane Group Flow (vph)	97	55	0	29	57	0	65	2255	23	15	1280	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		

Thompson Bridge / Enota Convenience
1: Thompson Bridge & Walmart/Taco Bell

future p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		8.0	20.0	20.0	8.0	20.0	
Total Split (s)	24.0	24.0		24.0	24.0		8.0	128.0	128.0	8.0	128.0	
Total Split (%)	15.0%	15.0%		15.0%	15.0%		5.0%	80.0%	80.0%	5.0%	80.0%	
Maximum Green (s)	20.0	20.0		20.0	20.0		4.0	124.0	124.0	4.0	124.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max	C-Max	None	C-Max	
Walk Time (s)	5.0	5.0		5.0	5.0			5.0	5.0		5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0	0		0	
Act Effect Green (s)	16.2	16.2		16.2	16.2		134.2	132.6	132.6	132.3	128.5	
Actuated g/C Ratio	0.10	0.10		0.10	0.10		0.84	0.83	0.83	0.83	0.80	
v/c Ratio	0.74	0.26		0.22	0.27		0.19	0.77	0.02	0.12	0.45	
Control Delay	100.1	20.2		68.3	20.1		3.7	10.5	1.9	4.4	5.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.1	0.0	0.0	0.0	
Total Delay	100.1	20.2		68.3	20.1		3.7	10.5	1.9	4.4	5.9	
LOS	F	C		E	C		A	B	A	A	A	
Approach Delay		71.2			36.4			10.2			5.9	
Approach LOS		E			D			B			A	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.77

Intersection Signal Delay: 11.8

Intersection LOS: B

Intersection Capacity Utilization 75.5%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 1: Thompson Bridge & Walmart/Taco Bell

														
8 s	128 s	24 s	8 s	128 s	24 s	8 s	128 s	24 s	8 s	128 s	24 s	8 s	128 s	24 s
														
8 s	128 s	24 s	8 s	128 s	24 s	8 s	128 s	24 s	8 s	128 s	24 s	8 s	128 s	24 s

Thompson Bridge / Enota Convenience

2: Thompson Bridge & Enota

future p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	202	96	14	63	58	381	18	1669	38	228	1003	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		0	200		200	300		0	300		0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.981				0.850		0.997			0.996	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1864	0	1787	1900	1599	1805	3529	0	1787	3527	0
Flt Permitted	0.612			0.673			0.235			0.044		
Satd. Flow (perm)	1163	1864	0	1266	1900	1599	446	3529	0	83	3527	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5				173		2			3	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		160			1380			173			1235	
Travel Time (s)		3.6			31.4			3.9			28.1	
Peak Hour Factor	0.84	0.84	0.84	0.90	0.90	0.90	0.93	0.93	0.93	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	1%	0%	1%	0%	2%	1%	1%	2%	0%
Adj. Flow (vph)	240	114	17	70	64	423	19	1795	41	248	1090	30
Shared Lane Traffic (%)												
Lane Group Flow (vph)	240	131	0	70	64	423	19	1836	0	248	1120	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8		8	2			6		

2: Thompson Bridge & Enota

Intersection Summary

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 41 (26%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.98

Intersection Signal Delay: 40.6

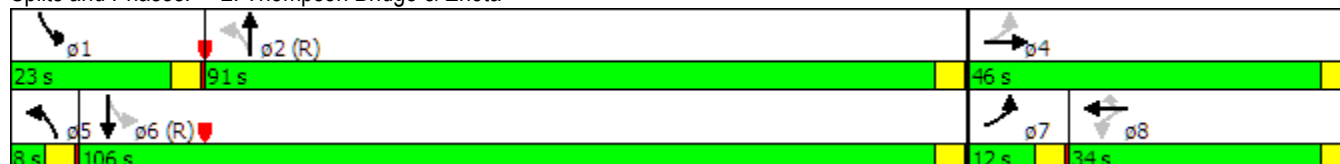
Intersection LOS: D

Intersection Capacity Utilization 92.1%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 2: Thompson Bridge & Enota



Thompson Bridge / Enota Convenience
3: Riverside & Enota

future p.m.

Intersection												
Intersection Delay, s/veh	66.5											
Intersection LOS	F											
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	73	331	12	0	28	337	116	0	24	363	39
Peak Hour Factor	0.92	0.91	0.91	0.91	0.92	0.92	0.92	0.92	0.92	0.95	0.95	0.95
Heavy Vehicles, %	2	1	1	1	2	1	1	1	2	1	1	1
Mvmt Flow	0	80	364	13	0	30	366	126	0	25	382	41
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	73	72.3	72.7
HCM LOS	F	F	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	6%	18%	6%	38%
Vol Thru, %	85%	80%	70%	42%
Vol Right, %	9%	3%	24%	20%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	426	416	481	166
LT Vol	24	73	28	63
Through Vol	363	331	337	70
RT Vol	39	12	116	33
Lane Flow Rate	448	457	523	202
Geometry Grp	1	1	1	1
Degree of Util (X)	1	1	1	0.538
Departure Headway (Hd)	8.305	8.379	8.228	9.569
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	435	434	444	379
Service Time	6.37	6.431	6.28	7.571
HCM Lane V/C Ratio	1.03	1.053	1.178	0.533
HCM Control Delay	72.7	73	72.3	23.2
HCM Lane LOS	F	F	F	C
HCM 95th-tile Q	12.7	12.7	12.8	3.1

Intersection

Intersection Delay, s/veh

Intersection LOS

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	63	70	33
Peak Hour Factor	0.92	0.82	0.82	0.82
Heavy Vehicles, %	2	1	1	1
Mvmt Flow	0	77	85	40
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	23.2
HCM LOS	C

Lane

Thompson Bridge / Enota Convenience

4: GA 11 Bus & South Enota

future p.m.

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	19	620	51	112	614	267	247	153	31	251	365	376
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	200		0	300		0	400		400
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.989			0.955			0.975				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	1844	0	1787	1784	0	1787	1834	0	1787	1881	1599
Flt Permitted	0.053			0.097			0.104			0.413		
Satd. Flow (perm)	100	1844	0	182	1784	0	196	1834	0	777	1881	1599
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3			22			6				389
Link Speed (mph)		30			30			30				30
Link Distance (ft)		494			509			1007				495
Travel Time (s)		11.2			11.6			22.9				11.3
Peak Hour Factor	0.91	0.91	0.91	0.89	0.89	0.89	0.80	0.80	0.80	0.88	0.88	0.88
Heavy Vehicles (%)	1%	2%	1%	1%	2%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	21	681	56	126	690	300	309	191	39	285	415	427
Shared Lane Traffic (%)												
Lane Group Flow (vph)	21	737	0	126	990	0	309	230	0	285	415	427
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100		20	100	20
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94				94
Detector 2 Size(ft)		6			6			6				6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Free
Protected Phases		2		1	6		7	4		3	8	
Permitted Phases	2			6			4			8		Free

Thompson Bridge / Enota Convenience

4: GA 11 Bus & South Enota

future p.m.

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Detector Phase	2	2		1	6		7	4		3	8	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	20.0	20.0		8.0	20.0		8.0	20.0		8.0	20.0	
Total Split (s)	78.0	78.0		14.0	92.0		27.0	41.0		27.0	41.0	
Total Split (%)	48.8%	48.8%		8.8%	57.5%		16.9%	25.6%		16.9%	25.6%	
Maximum Green (s)	74.0	74.0		10.0	88.0		23.0	37.0		23.0	37.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag	Lag	Lag		Lead			Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	C-Max	C-Max		None	C-Max		None	None		None	None	
Walk Time (s)	5.0	5.0			5.0			5.0			5.0	
Flash Dont Walk (s)	11.0	11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0			0			0			0	
Act Effect Green (s)	75.0	75.0		88.4	88.4		60.8	38.3		57.8	36.6	160.0
Actuated g/C Ratio	0.47	0.47		0.55	0.55		0.38	0.24		0.36	0.23	1.00
v/c Ratio	0.45	0.85		0.65	0.99		1.02	0.52		0.69	0.97	0.27
Control Delay	65.1	48.8		33.9	61.7		103.8	56.7		44.4	96.2	0.4
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	65.1	48.8		33.9	61.7		103.8	56.7		44.4	96.2	0.4
LOS	E	D		C	E		F	E		D	F	A
Approach Delay		49.2			58.5			83.7			46.8	
Approach LOS		D			E			F			D	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 110

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.02

Intersection Signal Delay: 56.6

Intersection LOS: E

Intersection Capacity Utilization 98.1%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 4: GA 11 Bus & South Enota

					
ø1	ø2 (R)		ø3	ø4	
14 s	78 s		27 s	41 s	
					
ø6 (R)			ø7	ø8	
92 s			27 s	41 s	

Thompson Bridge / Enota Convenience
5: Green/Thompson Bridge & Holly & GA 11 Bus

future p.m.

										
Lane Group	EBL	EBR	NBL	NBT	NBR	SBL	SBT	SBR	SWL	SWR
Lane Configurations										
Volume (vph)	0	37	49	1508	693	0	872	133	411	231
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	150		200	0		0	0	0
Storage Lanes	0	1	1		2	0		0	2	0
Taper Length (ft)	25		25			25			25	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.88	1.00	0.95	0.95	0.97	0.95
Frt		0.865			0.850		0.980		0.946	
Flt Protected			0.950						0.969	
Satd. Flow (prot)	0	1644	1805	3574	2814	0	3507	0	3357	0
Flt Permitted			0.200						0.969	
Satd. Flow (perm)	0	1644	380	3574	2814	0	3507	0	3357	0
Right Turn on Red		Yes			Yes			Yes		
Satd. Flow (RTOR)		134			479		21			
Link Speed (mph)	30			30			30		30	
Link Distance (ft)	497			707			3085		595	
Travel Time (s)	11.3			16.1			70.1		13.5	
Peak Hour Factor	0.92	0.58	0.93	0.93	0.93	0.92	0.87	0.87	0.88	0.88
Heavy Vehicles (%)	0%	0%	0%	1%	1%	0%	1%	0%	1%	0%
Adj. Flow (vph)	0	64	53	1622	745	0	1002	153	467	262
Shared Lane Traffic (%)										
Lane Group Flow (vph)	0	64	53	1622	745	0	1155	0	729	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Right	Left	Left	Right	Left	Right
Median Width(ft)	0			12			12		24	
Link Offset(ft)	0			0			0		0	
Crosswalk Width(ft)	16			16			16		16	
Two way Left Turn Lane										
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15		9	15		9	15	9
Number of Detectors		1	1	2	1		2		1	
Detector Template		Right	Left	Thru	Right		Thru		Left	
Leading Detector (ft)		20	20	100	20		100		20	
Trailing Detector (ft)		0	0	0	0		0		0	
Detector 1 Position(ft)		0	0	0	0		0		0	
Detector 1 Size(ft)		20	20	6	20		6		20	
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	
Detector 1 Channel										
Detector 1 Extend (s)		0.0	0.0	0.0	0.0		0.0		0.0	
Detector 1 Queue (s)		0.0	0.0	0.0	0.0		0.0		0.0	
Detector 1 Delay (s)		0.0	0.0	0.0	0.0		0.0		0.0	
Detector 2 Position(ft)				94			94			
Detector 2 Size(ft)				6			6			
Detector 2 Type				Cl+Ex			Cl+Ex			
Detector 2 Channel										
Detector 2 Extend (s)				0.0			0.0			
Turn Type		Perm	Perm	NA	Perm		NA		Prot	
Protected Phases				2			6		8	
Permitted Phases		4	2		2					

Thompson Bridge / Enota Convenience
5: Green/Thompson Bridge & Holly & GA 11 Bus

future p.m.



Lane Group	EBL	EBR	NBL	NBT	NBR	SBL	SBT	SBR	SWL	SWR
Detector Phase		4	2	2	2		6		8	
Switch Phase										
Minimum Initial (s)		4.0	4.0	4.0	4.0		4.0		4.0	
Minimum Split (s)		20.0	20.0	20.0	20.0		20.0		20.0	
Total Split (s)		55.0	105.0	105.0	105.0		105.0		55.0	
Total Split (%)		34.4%	65.6%	65.6%	65.6%		65.6%		34.4%	
Maximum Green (s)		51.0	101.0	101.0	101.0		101.0		51.0	
Yellow Time (s)		3.5	3.5	3.5	3.5		3.5		3.5	
All-Red Time (s)		0.5	0.5	0.5	0.5		0.5		0.5	
Lost Time Adjust (s)		0.0	0.0	0.0	0.0		0.0		0.0	
Total Lost Time (s)		4.0	4.0	4.0	4.0		4.0		4.0	
Lead/Lag										
Lead-Lag Optimize?										
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0		3.0	
Recall Mode		None	C-Max	C-Max	C-Max		C-Max		None	
Walk Time (s)		5.0	5.0	5.0	5.0		5.0		5.0	
Flash Dont Walk (s)		11.0	11.0	11.0	11.0		11.0		11.0	
Pedestrian Calls (#/hr)		0	0	0	0		0		0	
Act Effect Green (s)		40.7	111.3	111.3	111.3		111.3		40.7	
Actuated g/C Ratio		0.25	0.70	0.70	0.70		0.70		0.25	
v/c Ratio		0.12	0.20	0.65	0.35		0.47		0.85	
Control Delay		0.5	8.9	9.6	2.0		29.3		66.9	
Queue Delay		0.0	0.0	0.9	0.0		0.0		0.0	
Total Delay		0.5	8.9	10.5	2.0		29.3		66.9	
LOS		A	A	B	A		C		E	
Approach Delay				7.8			29.3		66.9	
Approach LOS				A			C		E	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green

Natural Cycle: 55

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.85

Intersection Signal Delay: 23.3

Intersection LOS: C

Intersection Capacity Utilization 67.4%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 5: Green/Thompson Bridge & Holly & GA 11 Bus

 ø2 (R) 105 s	 ø4 55 s
 ø6 (R) 105 s	 ø8 55 s

Thompson Bridge / Enota Convenience

6: Green & Ridgewood/driveway

future p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	270	8	21	12	15	5	24	1969	11	0	1171	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.991			0.980			0.999			0.990	
Flt Protected		0.957			0.981			0.999				
Satd. Flow (prot)	0	1802	0	0	1827	0	0	3568	0	0	3541	0
Flt Permitted		0.723			0.891			0.905				
Satd. Flow (perm)	0	1361	0	0	1659	0	0	3232	0	0	3541	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2			5			1			9	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		511			308			511			707	
Travel Time (s)		11.6			7.0			11.6			16.1	
Peak Hour Factor	0.91	0.91	0.91	0.68	0.68	0.68	0.92	0.92	0.92	0.89	0.89	0.89
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	1%	0%
Adj. Flow (vph)	297	9	23	18	22	7	26	2140	12	0	1316	90
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	329	0	0	47	0	0	2178	0	0	1406	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA			NA	
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	

Thompson Bridge / Enota Convenience

6: Green & Ridgewood/driveway

future p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	20.0	20.0		20.0	20.0		8.0	20.0		20.0	20.0	
Total Split (s)	43.0	43.0		43.0	43.0		8.0	117.0		109.0	109.0	
Total Split (%)	26.9%	26.9%		26.9%	26.9%		5.0%	73.1%		68.1%	68.1%	
Maximum Green (s)	39.0	39.0		39.0	39.0		4.0	113.0		105.0	105.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		C-Max	C-Max	
Walk Time (s)	5.0	5.0		5.0	5.0			5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0		0	0	
Act Effect Green (s)		39.0			39.0			113.0			113.0	
Actuated g/C Ratio		0.24			0.24			0.71			0.71	
v/c Ratio		0.99			0.12			0.95			0.56	
Control Delay		105.1			43.0			32.4			14.5	
Queue Delay		0.0			0.0			0.0			0.2	
Total Delay		105.1			43.0			32.4			14.6	
LOS		F			D			C			B	
Approach Delay		105.1			43.0			32.4			14.6	
Approach LOS		F			D			C			B	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.99

Intersection Signal Delay: 32.3

Intersection LOS: C

Intersection Capacity Utilization 101.7%

ICU Level of Service G

Analysis Period (min) 15

Splits and Phases: 6: Green & Ridgewood/driveway

								
117 s			43 s			43 s		
								
8 s	109 s					43 s		

Thompson Bridge / Enota Convenience
7: Thompson Bridge

future p.m.

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	0	28	37	1698	1055	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	0	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	93	93	92	92
Heavy Vehicles, %	0	0	0	2	2	0
Mvmt Flow	0	35	40	1826	1147	28
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	2153	588	1175	0	-	0
Stage 1	1161	-	-	-	-	-
Stage 2	992	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	42	457	602	-	-	-
Stage 1	264	-	-	-	-	-
Stage 2	324	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	39	457	602	-	-	-
Mov Cap-2 Maneuver	39	-	-	-	-	-
Stage 1	264	-	-	-	-	-
Stage 2	302	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	13.5	0.2		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	602	-	457	-	-	
HCM Lane V/C Ratio	0.066	-	0.077	-	-	
HCM Control Delay (s)	11.4	-	13.5	-	-	
HCM Lane LOS	B	-	B	-	-	
HCM 95th %tile Q(veh)	0.2	-	0.2	-	-	

Intersection

Int Delay, s/veh 1.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	267	8	5	99	4	45
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	90	90	80	80
Heavy Vehicles, %	1	0	0	1	0	0
Mvmt Flow	318	10	6	110	5	56

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	327	0	444	323
Stage 1	-	-	-	-	323	-
Stage 2	-	-	-	-	121	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1244	-	575	723
Stage 1	-	-	-	-	738	-
Stage 2	-	-	-	-	909	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1244	-	572	723
Mov Cap-2 Maneuver	-	-	-	-	572	-
Stage 1	-	-	-	-	738	-
Stage 2	-	-	-	-	904	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	10.6
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	708	-	-	1244	-
HCM Lane V/C Ratio	0.087	-	-	0.004	-
HCM Control Delay (s)	10.6	-	-	7.9	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0	-

Matt Tate

From: Rock Baker
Sent: Tuesday, May 09, 2017 10:10 AM
To: Rusty Ligon; Matt Tate
Subject: Gasoline Station at Enota & Thompson Bridge Rd.

Hello,

I wanted to voice my concerns regarding the request for rezoning for Circle K on the corner of Enota & Thompson Bridge Road.

Starting with the BP at Publix and progressing north on Thompson Bridge Rd for approximately 1.5 miles there are already four gasoline stations.

Do we really need another one in such a small area? I don't know of another example in Gainesville, within such a short mileage area, where there are 4-5 gasoline stations.

Certainly not Dawsonville Hwy, Jesse Jewell, Browns Bridge Rd, etc. It is just not necessary – there are enough petrol choices already.

Also, do we want another tanker truck filled with 9,000 – 10,000 gallons of highly flammable fuel on Thompson Bridge Road?

What we really need are more food choices.

I believe this corner can attract a quality food enterprise is given a little more time.

Thank you for your consideration and please forward this to the members of the Planning and Appeals Board.

Best regards,

Rock Baker

CITY OF GAINESVILLE

WORKSESSIONREQUEST

Date Submitted: 5/23/2017

Presenter: Matt Tate

Item of Business: **Public Hearing Item for the June 6, 2017 Council Meeting**
Request from **Gainesville Market, LLC** for a special use on a 5.0± acres tract located west of Shallowford Road within the Gainesville Market Shopping Center (a/k/a **600 Shallowford Road**), having a zoning of General Business (G-B). **Ward Number: Five.** Tax Parcel Number(s): 01-119C-001-029. **Request: Commercial outdoor recreational facility.**

Meeting Date: 6/1/2017

Purpose of Request:

The applicant is proposing a special use within General Business (G-B) zoning to allow for a commercial outdoor recreational facility to include four soccer fields (three dirt fields and one lighted concrete field). The property is located behind the Gainesville Market Shopping Center within an area that was used as a fairground and for cattle auctions many years ago. The applicant states the hours of operation are Monday thru Thursday from 4:30 P.M. to 9:30 P.M. consisting of 26 to 30 participants and 40 to 50 spectators. Saturday and Sunday hours are from 9:00 A.M. to 10:00 P.M. consisting of 60 to 70 participants and 60 to 80 spectators. Approximately 30 to 40 parking spaces are provided on site and additional parking is located within the adjacent shopping center. Bathrooms are located within the shopping center. Food items are sold during soccer events which are pre-packaged. The adjacent uses include the Army Reserve facility, Target, Gainesville Market Shopping Center, Crowder Signs, wholesale flooring business, real estate office and a single-family home.

History/Background:

Facts & Issues for Consideration:

Department Recommendation:

Planning staff recommended approval with five conditions.

The Planning and Appeals Board unanimously recommended approval with five conditions.

See the PAB Recommendation Report for details and excerpts from the PAB meeting minutes.

SAMPLE MOTIONS

Approve Special Use

I move to conditionally approve a zoning resolution with five conditions to allow a commercial outdoor recreational facility on the subject property.

Deny

I move to deny the special use request.

Department Director:

Rusty Ligon

If funding is involved, are funds approved within the current budget?

N/A

Amount Requested:

Source of Funds:

Finance Comments:

Administrative Comments:

ATTACHMENTS:

Description		Type
	Legal Ad	Legal Ad
	PAB Recommendation Report	Report
	Proposed Zoning Resolution	Resolution
	Location Maps	Backup Material
	Narrative	Backup Material
	Plat	Backup Material
	Site Plan	Backup Material
	Pictures	Backup Material

COMBINED LEGAL AD
Gainesville Planning and Appeals Board
Gainesville City Council

Publish Sunday, April 23, 2017
THE TIMES

NOTICE OF PLANNING AND APPEALS BOARD PUBLIC HEARING

Notice is hereby given that the **Gainesville Planning and Appeals Board** will conduct a public hearing on **Tuesday, May 9, 2017** at **5:30 p.m.** in the **Gainesville Justice Center** (Municipal Courtroom at the Public Safety Complex), 701 Queen City Parkway in midtown Gainesville on the following requests:

- 1) Request from **Oak Hall Companies, LLC** to annex a 26.16 acres tract located east of Dawsonville Highway and on the north side of the intersection of Strickland Drive and Sportsman Club Road, with road frontage on Karen Lane (a/k/a **0 and 2209 Karen Lane; 2106, 2234 and 2242 Sportsman Club Road; and 2049 Strickland Drive**) and to establish zoning as Planned Unit Development (P-U-D).
Ward Number: One
Tax Parcel Number(s): 00-109-003-001, 004, 005; 00-109B-000-001, 002A and 036
Request: Active adult community
- 2) Request from **Oak Hall Companies, LLC** to annex a 50.81± acres tract located on the east side of Dawsonville Highway (S.R. 53), having road frontage on Dawsonville Highway, Ahaluna Drive, Skyview Drive and Strickland Drive (a/k/a **0 and 1758 Ahaluna Drive; 1508, 1550, 1740, 1746, 1758, 1760, 1934 and 1982 Dawsonville Highway; 300 and 301 Skyview Drive; 0, 2008 and 2016 Strickland Drive**) and to establish zoning as Planned Unit Development (P-U-D) and General Business (G-B).
Ward Number: One
Tax Parcel Number(s): 00-110-000-005 (part), 028, 032 (part) and 039; 00-110A-004-001 (part), 002A, 004 (part), 005 (part), 007 (part), 007A (part), 007X, 014 (part), 016 (part), 017 (part) and 018
Request: Mixed-use development
- 3) Request from **Oak Hall Companies, LLC** to rezone a 157.98± acres tract located on the east side of Dawsonville Highway (S.R. 53), having road frontage on Ahaluna Drive, Skyview Drive, Strickland Drive, Lakeshore Circle, West Lake Drive and Karen Lane (a/k/a **0, 1264 and 1817 Ahaluna Drive; 1876 Dawsonville Highway; 2208 Karen Lane; 0 and 2029 Strickland Drive; 0 and 1489 West Lake Drive**) from Residential-I-A (R-I-A), Residential-I (R-I), Planned Unit Development (P-U-D) and Regional Business (R-B) to Planned Unit Development (P-U-D) and General Business (G-B).
Ward Number: One
Tax Parcel Number(s): 00-109B-000-003A; 00-110-000-001, 006, 030, 031, 034, 035, 036, 037 and 038; 01-110-001-006; 01-110A-004-022; 01-114-001-001, 026, 145 and 161
Request: Mixed-use development
- 4) Request from **Brightstone Transitions** to amend the existing Planned Unit Development (P-U-D) zoning on a 0.50± acre tract located at the east side of Green Street, across from its intersection with Forrest Avenue (a/k/a **446 Green Street, NE**).
Ward Number: Four
Tax Parcel Number(s): 01-024-001-005
Request: Group home and office

- 5) Request from **Montecito Development** to rezone a 0.48± acre tract located on the south side of Enota Avenue, west of its intersection with Thompson Bridge Road (a/k/a **149 Enota Avenue, NW**) from Office and Institutional (O-I) to Neighborhood Business (N-B), with a special use.
 Ward Number: Two
 Tax Parcel Number(s): 01-074-004-001
 Request: Convenience store with fuel pumps
- 6) Request from **Montecito Development** for a special use on a 0.80± acre tract located at the southwest side of the intersection of Enota Avenue and Thompson Bridge Road (a/k/a **1281 Thompson Bridge Road, NW**), having a zoning of Neighborhood Business (N-B).
 Ward Number: Two
 Tax Parcel Number(s): 01-074-004-020
 Request: Convenience store with fuel pumps
- 7) Request from **Gainesville Market, LLC** for a special use on a 5.0± acres tract located west of Shallowford Road within the Gainesville Market Shopping Center (a/k/a **600 Shallowford Road**), having a zoning of General Business (G-B).
 Ward Number: Five
 Tax Parcel Number(s): 01-119C-001-029
 Request: Commercial outdoor recreational facility
- 8) Request from **Manor Lake Development, LLC** for a special use on a 9.24± acres tract located on the northwest side of McEver Road, between Browns Bridge Road and Orchard Brook Drive (a/k/a **2900 McEver Road**), having a zoning of Office and Institutional (O-I) and Residential-I (R-I).
 Ward Number: Four
 Tax Parcel Number(s): 08-022-000-005
 Request: Assisted living facility
- 9) Request from **Carriage North, LLC** for a special use on a 0.71± acre tract located on the southwest side of the terminus of Corporate Drive, west of Browns Bridge Road (a/k/a **2425 Corporate Drive**), having a zoning of General Business (G-B).
 Ward Number: Five
 Tax Parcel Number(s): 08-007-001-042
 Request: Helipad

NOTICE OF PUBLIC HEARING ON PROPOSED AMENDMENTS TO THE GAINESVILLE ZONING MAP

Notice is hereby given that the **Gainesville City Council** will conduct a public hearing on **Tuesday, June 6, 2017 at 5:30 p.m.** in the **Gainesville Justice Center** (Municipal Courtroom at the Public Safety Complex), 701 Queen City Parkway in midtown Gainesville on the following requests:

- 1) Request from **Oak Hall Companies, LLC** to annex a 26.16 acres tract located east of Dawsonville Highway and on the north side of the intersection of Strickland Drive and Sportsman Club Road, with road frontage on Karen Lane (a/k/a **0 and 2209 Karen Lane; 2106, 2234 and 2242 Sportsman Club Road; and 2049 Strickland Drive**) and to establish zoning as Planned Unit Development (P-U-D).
 Ward Number: One
 Tax Parcel Number(s): 00-109-003-001, 004, 005; 00-109B-000-001, 002A and 036
 Request: Active adult community

- 2) Request from **Oak Hall Companies, LLC** to annex a 50.81± acres tract located on the east side of Dawsonville Highway (S.R. 53), having road frontage on Dawsonville Highway, Ahaluna Drive, Skyview Drive and Strickland Drive (a/k/a **0 and 1758 Ahaluna Drive; 1508, 1550, 1740, 1746, 1758, 1760, 1934 and 1982 Dawsonville Highway; 300 and 301 Skyview Drive; 0, 2008 and 2016 Strickland Drive**) and to establish zoning as Planned Unit Development (P-U-D) and General Business (G-B).
 Ward Number: One
 Tax Parcel Number(s): 00-110-000-005 (part), 028, 032 (part) and 039; 00-110A-004-001 (part), 002A, 004 (part), 005 (part), 007 (part), 007A (part), 007X, 014 (part), 016 (part), 017 (part) and 018
 Request: Mixed-use development

- 3) Request from **Oak Hall Companies, LLC** to rezone a 157.98± acres tract located on the east side of Dawsonville Highway (S.R. 53), having road frontage on Ahaluna Drive, Skyview Drive, Strickland Drive, Lakeshore Circle, West Lake Drive and Karen Lane (a/k/a **0, 1264 and 1817 Ahaluna Drive; 1876 Dawsonville Highway; 2208 Karen Lane; 0 and 2029 Strickland Drive; 0 and 1489 West Lake Drive**) from Residential-I-A (R-I-A), Residential-I (R-I), Planned Unit Development (P-U-D) and Regional Business (R-B) to Planned Unit Development (P-U-D) and General Business (G-B).
 Ward Number: One
 Tax Parcel Number(s): 00-109B-000-003A; 00-110-000-001, 006, 030, 031, 034, 035, 036, 037 and 038; 01-110-001-006; 01-110A-004-022; 01-114-001-001, 026, 145 and 161
 Request: Mixed-use development

- 4) Request from **Brightstone Transitions** to amend the existing Planned Unit Development (P-U-D) zoning on a 0.50± acre tract located at the east side of Green Street, across from its intersection with Forrest Avenue (a/k/a **446 Green Street, NE**).
 Ward Number: Four
 Tax Parcel Number(s): 01-024-001-005
 Request: Group home and office

- 5) Request from **Montecito Development** to rezone a 0.48± acre tract located on the south side of Enota Avenue, west of its intersection with Thompson Bridge Road (a/k/a **149 Enota Avenue, NW**) from Office and Institutional (O-I) to Neighborhood Business (N-B), with a special use.
 Ward Number: Two
 Tax Parcel Number(s): 01-074-004-001
 Request: Convenience store with fuel pumps

- 6) Request from **Montecito Development** for a special use on a 0.80± acre tract located at the southwest side of the intersection of Enota Avenue and Thompson Bridge Road (a/k/a **1281 Thompson Bridge Road, NW**), having a zoning of Neighborhood Business (N-B).
 Ward Number: Two
 Tax Parcel Number(s): 01-074-004-020
 Request: Convenience store with fuel pumps

- 7) Request from **Gainesville Market, LLC** for a special use on a 5.0± acres tract located west of Shallowford Road within the Gainesville Market Shopping Center (a/k/a **600 Shallowford Road**), having a zoning of General Business (G-B).
 Ward Number: Five
 Tax Parcel Number(s): 01-119C-001-029
 Request: Commercial outdoor recreational facility

- 8) Request from **Manor Lake Development, LLC** for a special use on a 9.24± acres tract located on the northwest side of McEver Road, between Browns Bridge Road and Orchard Brook Drive (a/k/a **2900 McEver Road**), having a zoning of Office and Institutional (O-I) and Residential-I (R-I).

Ward Number: Four

Tax Parcel Number(s): 08-022-000-005

Request: Assisted living facility

- 9) Request from **Carriage North, LLC** for a special use on a 0.71± acre tract located on the southwest side of the terminus of Corporate Drive, west of Browns Bridge Road (a/k/a **2425 Corporate Drive**), having a zoning of General Business (G-B).

Ward Number: Five

Tax Parcel Number(s): 08-007-001-042

Request: Helipad

Additional information is available from the Community Development Department, Planning Division, by calling 770-531-6570.

NOTE: In accordance with Georgia law, anyone who wishes to express opposition to the proposed zoning action, and has made, within two years immediately preceding the filing of the proposed zoning action, campaign contributions aggregating \$250 or more to a local government official who will consider the application, shall file a disclosure of contribution(s) with the Planning Division at least five (5) days prior to the first reading of the proposed zoning action by the City Council. (OCGA § 36-67A-3 3 {c})

**GAINESVILLE PLANNING and APPEALS BOARD
RECOMMENDATION**

Applicant and Property Owner..... Gainesville Market, LLC
Location..... 600 Shallowford Road
Request..... Special use within G-B zoning
Size 5.0± acres
Ward..... Five
Proposed Use..... Commercial outdoor recreational facility
Planning Division Staff Recommendation **Approval, with conditions**
Planning and Appeals Board Recommendation **Approval, with conditions**
Date..... May 9, 2017

▪ **Applicant's Proposal and Background Information**

The applicant is proposing a special use within General Business (G-B) zoning to allow for a commercial outdoor recreational facility to include four soccer fields (three dirt/grass fields and one lighted concrete field). The property has been used for soccer fields and the applicant was unaware that a special use was required.

The property is located behind the Gainesville Market Shopping Center within a fenced area that was used as a fairground and for cattle auctions many years ago. The applicant states the proposed hours of operation are Monday thru Thursday from 4:30 P.M. to 9:30 P.M. consisting of 26 to 30 participants and 40 to 50 spectators. Saturday and Sunday hours are from 9:00 A.M. to 10:00 P.M. consisting of 60 to 70 participants and 60 to 80 spectators. Approximately 30 to 40 parking spaces are provided on site and additional parking is located within the adjacent shopping center. Bathrooms are located within the shopping center and two portable toilets. Prepackaged food items are sold during soccer events from an onsite mobile vending trailer.

▪ **Adjacent Land Use and Zoning**

Location	Use	Zoning
North	Target; Real estate office	General Business (G-B) -City
South	Gainesville Market Shopping Center	General Business (G-B) -City
East	Army Reserve facility	Highway Business (H-B) -County
West	Single-family homes; Crowder Signs, Wholesale flooring business	Residential-I (R-I), Suburban Shopping (S-S) and Highway Business (H-B) -County

▪ **Zoning History**

The following zoning actions have taken place in the immediate area during the last ten years:

2017 – A request by Masy Seng to annex a 0.19[±] acre tract located at 593 and 597 Shallowford Road for a donut shop was conditionally approved with General Business (G-B) zoning.

2006 – A request by Green Street Capital Corporation to annex a 1.053[±] acre tract located at 333 Shallowford Road for a retail center was approved with General Business (G-B) zoning.

▪ **Staff Analysis**

(1) Is the proposed use suitable in view of the zoning and development of adjacent and nearby property?

The subject property is located within an established commercial area surrounded by a mixture of mostly non-residential uses. The subject property is unique given its history as an outdoor venue as a fairground and cattle auction. It appears the proposed soccer fields are reasonable given the buffer that surrounds the subject property and its access to the existing shopping center.

(2) Will the proposed use adversely affect the existing use or usability of adjacent or nearby property?

For a commercial outdoor recreational facility of this nature, the applicable code standards require a minimum lot area of two acres, vehicular access from a collector or arterial street, 100-foot building setback, 50-foot wide perimeter buffer and an exterior photometric (lighting) plan to enable the evaluation of impacts from illumination. The proposal appears to address these standards except for a photometric plan. The applicant states that Georgia Power has provided two lights for the concrete field and there have been no complaints from adjacent property owners. In addition, the existing parking provided for the use appears to be sufficient between the parking provided on site and the parking available within the adjacent Gainesville Market Shopping Center. It is important that parking for the facility not interfere with the occupants of the adjacent shopping center which include a church, hobby store and a thrift store.

(3) Is the proposed use compatible with the purpose and intent of the Comprehensive Plan?

The proposed development appears to be compatible with the Future Development Map of the Comprehensive Plan as the subject property is located within the *Retail/Commercial* land use category. The *Retail/Commercial* land use category includes commercial service activities such as grocery stores, banks, restaurants, theatres, hotels, and automotive related businesses. Commercial uses may be located as a single use in one building or grouped together in a shopping center.

According to the Character Area map for the City of Gainesville, the subject property is located within the *Browns Bridge Corridor* character area. The vision for this area encourages long term activity center nodes at the Memorial Park Drive and Pearl Nix Parkway intersections. Future public space improvements could include better pedestrian facilities and connections. Targeted redevelopment of outdated strip commercial is encouraged. Land uses allowed in the Browns Bridge Corridor are medium-density residential, multi-family residential, mixed-use, commercial, light industrial, and parks / recreation / conservation.

(4) Are there substantial reasons why the property cannot or should not be used as currently zoned?

The property is zoned General Business (G-B) which is intended for a mixture of commercial uses. A commercial outdoor recreational center requires special use approval within this zoning district due to potential impacts of additional noise, light and traffic. The subject property appears to be underutilized given its size and proximity to other commercial properties and is prime for redevelopment with the adjacent aging shopping center.

(5) Will the proposed use cause an excessive or burdensome use of public facilities or services, including but not limited to streets, schools, water or sewer utilities, and police or fire protection?

It is staff's opinion the proposed outdoor soccer fields should not be burdensome to the existing public facilities or services provided by the City of Gainesville. Numerous public facilities such as water and sewer are readily available. Access to the subject property is from Shallowford Road which is capable of supporting additional traffic from the proposed use.

The subject property is easily accessible from the shopping center for emergency services. The closest fire station is Gainesville Fire Station #1 which is approximately 2.1 miles from the subject property. The Gainesville Police currently patrol the subject property.

Given the non-residential nature of the request there will be no impacts to the school system.

(6) Is the proposed use supported by new or changing conditions not anticipated by the Comprehensive Plan or reflected in the existing zoning on the property or surrounding properties?

The Comprehensive Plan expects this property to remain as commercial. It is the opinion of staff that the long term use of the property most likely will not include the commercial outdoor recreational facility, but could include pedestrian green space incorporated as part of a future redevelopment project. The entire shopping center property appears to be suitable for redevelopment as reinvestment has occurred within the immediate area including the Lakeshore Mall property and other commercial properties along Pearl Nix Parkway, Shallowford Road and Browns Bridge Road.

(7) Does the proposed use reflect a reasonable balance between the promotion of the public health, safety, morality, or general welfare and the right to unrestricted use of property?

Due to the Comprehensive Land Use Plan and surrounding commercial development, the proposed special use request appears to reflect a reasonable balance between the promotion of the public health, safety, morality, or general welfare and the right to unrestricted use of property.

▪ **Additional Analysis**

When considering the Special Use application, the criteria below shall be considered giving due weight or priority to those factors that are appropriate to the circumstances of the proposal:

- (1) **The type of street providing access to the subject property is adequate to serve the proposed Special Use.**

Shallowford Road is adequate to serve the proposed use.

- (2) **Access into and out of the property adequately provides for traffic and pedestrian safety, the anticipated volume of traffic flow, and access by emergency vehicles.**

The subject property is accessible through the adjacent shopping center and access design for vehicular and pedestrian safety appears adequate to handle the anticipated traffic and emergency access.

- (3) **Public facilities such as schools, water or sewer utilities, and police or fire protection are adequate to serve the Special Use.**

There is sufficient capacity for water and sewer to serve the proposed use. Bathrooms will be accessible from the shopping center and from portable facilities if needed. Police and fire are capable of providing services to the property and currently serve adjacent properties. Given the non-residential nature of the request there will be no impacts to the school system.

- (4) **Refuse, service, parking and loading areas on the property are located and screened to protect other properties in the area from such adverse effects as noise, light, glare or odor.**

The neighboring properties appear to be sufficiently buffered from the proposed use to protect against any adverse effects such as noise, light, glare or odor. However, the level of noise could fluctuate depending on the number of pedestrians attending the facility.

- (5) **The hours and manner of operation of the Special Use have no adverse effects on other properties in the area.**

The proposed hours of operation are Monday thru Thursday from 4:30 P.M. to 9:30 P.M. and Saturday / Sunday from 9:00 A.M. to 10:00 P.M. The outdoor soccer fields are well hidden behind the existing shopping center and are not visible from Shallowford Road, Pearl Nix Parkway, Skelton Road or Browns Bridge Road.

- (6) **The height, size and location of the buildings or other structures proposed on the property are compatible with the height, size or location of buildings or other structures on neighboring properties.**

There are no buildings proposed for the facility. The location of any portable structure will be required to be sufficiently buffered from all properties excluding the existing shopping center.

▪ **Staff Recommendation**

The Planning Division staff is recommending **conditional approval** of this special use request based on the Comprehensive Plan and the adjacent non-residential uses.

Conditions

1. The development standards within the narrative, site plan and photographs submitted with the applicant's special use application shall be made part of the special use resolution, and shall be subject to the Community Development Director approval.
2. The commercial outdoor recreational facility shall be limited to no more than four soccer fields. The facility hours of operation shall not exceed Monday thru Thursday from 4:30 P.M. to 9:30 P.M. and Saturday / Sunday from 9:00 A.M. to 10:00 P.M.
3. The property owner shall maintain a minimum 50-foot wide evergreen vegetated buffer against all adjacent properties excluding the adjacent shopping center to the south. Additional evergreen buffer trees shall be planted within the perimeter buffer area where needed. The spacing, size and type of trees planted shall be subject to Community Development Department Director approval.
4. The property owner shall provide a photometric plan to evaluate the impacts of the illumination. The outdoor lighting shall meet the standards of Section 9-9-3-14 of the Unified Land Development Code.
5. All parking areas used for the proposed commercial outdoor recreational facility shall be properly maintained. Parking within grass or dirt areas is not permitted. The use of pervious materials within the parking area is subject to review and approval by the Department of Water Resources.

Excerpts from the May 9, 2017 Planning and Appeals Board Meeting Minutes

Applicant Presentation: Keith Brown, 2144 Hilton Drive, stated the soccer field use is allowed within General Business (G-B) zoning, but a special use is required. Therefore, they are asking for the special use in order to be in compliance. Mr. Brown stated they were in agreement with the proposed conditions.

FAVOR: None

OPPOSE: None

Planning and Appeals Board Comments: None

There was a motion to recommend conditional approval of the special use request as presented with the following conditions:

Conditions

1. The development standards within the narrative, site plan and photographs submitted with the applicant's special use application shall be made part of the special use resolution, and shall be subject to the Community Development Director approval.
2. The commercial outdoor recreational facility shall be limited to no more than four soccer fields. The facility hours of operation shall not exceed Monday thru Thursday from 4:30 P.M. to 9:30 P.M. and Saturday / Sunday from 9:00 A.M. to 10:00 P.M.
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4. The property owner shall provide a photometric plan to evaluate the impacts of the illumination. The outdoor lighting shall meet the standards of Section 9-9-3-14 of the Unified Land Development Code.
5. All parking areas used for the proposed commercial outdoor recreational facility shall be properly maintained. Parking within grass or dirt areas is not permitted. The use of pervious materials within the parking area is subject to review and approval by the Department of Water Resources.

Motion made by Board Member Martin

Motion seconded by Board Member Delgado

Vote – 7 favor

RESOLUTION ZR-2017-____

**APPROVAL OF A REQUEST FOR A SPECIAL USE
SUBJECT TO APPROVAL BY THE CITY COUNCIL**

WHEREAS, under **Chapter 9-6-5 G-B General Business District** of the Unified Land Development Code of the City of Gainesville, Georgia; **Section 9-6-5-2 Permitted and Special Uses** allows a *commercial outdoor recreational facility* subject to City Council approval after review and recommendation by the Gainesville Planning and Appeals Board; and

WHEREAS, an application has been received from **Gainesville Market, LLC** to allow a *commercial outdoor recreational facility* within a General Business (G-B) zoning district identified as follows:

**01-119C-001-029
600 Shallowford Road
Ward Five**

WHEREAS, the application has been evaluated under any criteria specified in the aforesaid section; and

WHEREAS, the **Gainesville Planning and Appeals Board**, during its public hearing held on **May 9, 2017**, reviewed the application and recommended **conditional approval** of said request with the following conditions:

Conditions

1. The development standards within the narrative, site plan and photographs submitted with the applicant's special use application shall be made part of the special use resolution, and shall be subject to the Community Development Director approval.
2. The commercial outdoor recreational facility shall be limited to no more than four soccer fields. The facility hours of operation shall not exceed Monday thru Thursday from 4:30 P.M. to 9:30 P.M. and Saturday / Sunday from 9:00 A.M. to 10:00 P.M.
3. The property owner shall maintain a minimum 50-foot wide evergreen vegetated buffer against all adjacent properties excluding the adjacent shopping center to the south. Additional evergreen buffer trees shall be planted within the perimeter buffer area where needed. The spacing, size and type of trees planted shall be subject to Community Development Department Director approval.
4. The property owner shall provide a photometric plan to evaluate the impacts of the illumination. The outdoor lighting shall meet the standards of Section 9-9-3-14 of the Unified Land Development Code.
5. All parking areas used for the proposed commercial outdoor recreational facility shall be properly maintained. Parking within grass or dirt areas is not permitted. The use of pervious materials within the parking area is subject to review and approval by the Department of Water Resources.

RESOLUTION ZR-2017-__

NOW, THEREFORE, BE IT RESOLVED THAT the governing body for the City of Gainesville hereby approves the applicant's request for a special use permit as stated above and subject to all the terms of the Unified Land Development Code.

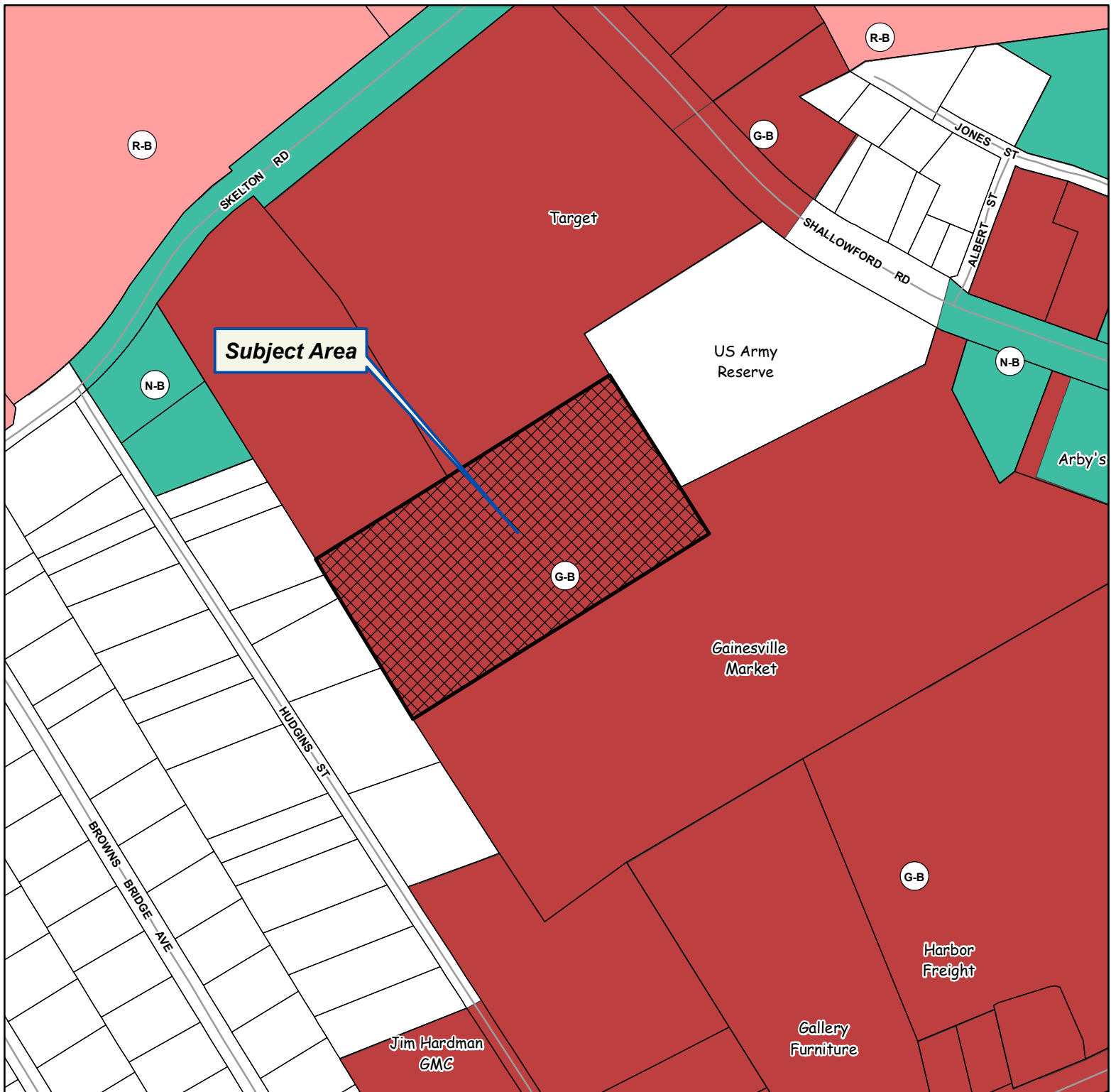
Adopted this _____ **day of** _____, **2017.**

C. Danny Dunagan, Jr., Mayor

This is to certify that I am City Clerk of the City of Gainesville. As such, I keep its official records, including its minutes. In that capacity, my signature below certifies this resolution was adopted as stated and will be recorded in the official minutes.

ATTEST:

Denise O. Jordan, City Clerk



Applicant:

GAINESVILLE MARKET, LLC

SPECIAL USE REQUEST



Request:
Special Use within the General Business (G-B) zoning district for a commercial outdoor recreational facility

Subject Area Address:
600 Shallowford Road

Meeting: 5/9/2017

Prepared: 4/20/2017

Gainesville Community Development Department

 Subject Area

0 150 300 450 600 Feet



1" = 250'

Tax Parcel: 01-119C-001-029

Page 1283 of 1377



Applicant:

GAINESVILLE MARKET, LLC

Gainesville Community Development Department

SPECIAL USE REQUEST



Subject Area

Aerial from 2015



0 150 300 450 600 Feet

1" = 250'



Request:

Special Use within the General Business (G-B) zoning district for a commercial outdoor recreational facility

Subject Area Address:

600 Shallowford Road

Meeting: 5/9/2017

Prepared: 4/20/2017

Tax Parcel: 01-119C-001-029

Gainesville Market, LLC
Soccer Fields

Date: March 23, 2017
RE: 600 Shallowford Rd.

Soccer Fields at 600 Shallowford Road operate on 5 acres of land attached, owned and operated by the shopping center at 622 Shallowford Road. This land has been vacate and unused for many years. The last known use was a cattle auction and fairgrounds.

Our intent is to provide 4 soccer fields for the community. Three grass fields and one concrete field using existing concrete on site. This is providing a great service to our community having positive youth and adult recreational activities within the City of Gainesville.

Hours of operations are currently Monday-Thursday 4:30pm-9:30pm and Saturday and Sunday 9:00am-10:00pm. Monday-Thursday participants are about 26-30 and spectators range from 40-50. On Saturdays participants range from about 60-70 and spectators range from 60-80.

A buffer of 50' around this activity has not been a problem to the adjacent property owners thus far. We would ask for an exception on the 50' buffer between Gainesville Market Shopping Center and the Soccer Field since this is all owned by Gainesville Market, LLC. The other exception we would ask for is between the soccer fields and Army Reserve Facility since this is a similar use.

Restrooms are provided at the Gainesville Market shopping area. We have 2 handicap approved restrooms dedicated for the soccer fields. We also will provide additional portable facilities as needed or required by the City of Gainesville. Outdoor lighting is only provided on the concrete field. GA Power has provided two lights for this field with no complaints from any adjacent owners.

Traffic flow comes off of Shallowford Road and through Gainesville Market Shopping center. Parking area is provided on site with 30-40 spaces available.

Any food items sold on the property during soccer events will be approved by the Hall County Environmental Health Department. The only food and drink items sold will be pre-packaged.

Thank you for your consideration with this opportunity to provide positive activities for our youth and adults within the City of Gainesville.





















CITY OF GAINESVILLE

WORKSESSIONREQUEST

Date Submitted: 5/23/2017

Presenter: Matt Tate

Item of Business: **Public Hearing Item for the June 6, 2017 Council Meeting**
Request from **Manor Lake Development, LLC** for a special use on a 9.24± acres tract located on the northwest side of McEver Road, between Browns Bridge Road and Orchard Brook Drive (a/k/a **2900 McEver Road**), having a zoning of Office and Institutional (O-I) and Residential-I (R-I). **Ward Number: Four.** Tax Parcel Number(s): 08-022-000-005. **Request: Assisted living facility.**

Meeting Date: 6/1/2017

Purpose of Request:

The applicant is proposing a special use within Office and Institutional (O-I) zoning to establish an 82-unit / 86-bed assisted living and memory care facility. The subject property is located within the Gateway Corridor Overlay Zone, is heavily wooded and contains a creek. The proposed building will be one-story and approximately 60,000 square feet in size. It is anticipated there will be a total of 50 full/part time employees. The proposed facility will access an existing common drive shared with the neighboring "The Fields" apartment complex. The applicant states the proposed location was chosen due to its proximity to Free Chapel Worship Center and Cresswind at Lake Lanier. Adjacent uses include single-family homes, multi-family apartments, Rite Aid, Free Chapel and the Hall County Government Center.

History/Background:

Facts & Issues for Consideration:

Department Recommendation:

Planning staff recommended approval with five conditions.

The Planning and Appeals Board unanimously recommended approval with five conditions.

See the PAB Recommendation Report for details and excerpts from the PAB meeting minutes.

SAMPLE MOTIONS

Approve Special Use

I move to conditionally approve a zoning resolution with five conditions to allow an assisted living facility on the subject property.

Deny

I move to deny the special use request.

Department Director:

Rusty Ligon

If funding is involved, are funds approved within the current budget?

N/A

Amount Requested:

Source of Funds:

Finance Comments:

Administrative Comments:

ATTACHMENTS:

Description		Type
	Legal Ad	Legal Ad
	PAB Recommendation Report	Report
	Proposed Zoning Resolution	Resolution
	Location Maps	Backup Material
	Narrative	Backup Material
	Plat	Backup Material
	Pictures	Backup Material

COMBINED LEGAL AD
Gainesville Planning and Appeals Board
Gainesville City Council

Publish Sunday, April 23, 2017
THE TIMES

NOTICE OF PLANNING AND APPEALS BOARD PUBLIC HEARING

Notice is hereby given that the **Gainesville Planning and Appeals Board** will conduct a public hearing on **Tuesday, May 9, 2017** at **5:30 p.m.** in the **Gainesville Justice Center** (Municipal Courtroom at the Public Safety Complex), 701 Queen City Parkway in midtown Gainesville on the following requests:

- 1) Request from **Oak Hall Companies, LLC** to annex a 26.16 acres tract located east of Dawsonville Highway and on the north side of the intersection of Strickland Drive and Sportsman Club Road, with road frontage on Karen Lane (a/k/a **0 and 2209 Karen Lane; 2106, 2234 and 2242 Sportsman Club Road; and 2049 Strickland Drive**) and to establish zoning as Planned Unit Development (P-U-D).
Ward Number: One
Tax Parcel Number(s): 00-109-003-001, 004, 005; 00-109B-000-001, 002A and 036
Request: Active adult community
- 2) Request from **Oak Hall Companies, LLC** to annex a 50.81± acres tract located on the east side of Dawsonville Highway (S.R. 53), having road frontage on Dawsonville Highway, Ahaluna Drive, Skyview Drive and Strickland Drive (a/k/a **0 and 1758 Ahaluna Drive; 1508, 1550, 1740, 1746, 1758, 1760, 1934 and 1982 Dawsonville Highway; 300 and 301 Skyview Drive; 0, 2008 and 2016 Strickland Drive**) and to establish zoning as Planned Unit Development (P-U-D) and General Business (G-B).
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Request: Mixed-use development
- 3) Request from **Oak Hall Companies, LLC** to rezone a 157.98± acres tract located on the east side of Dawsonville Highway (S.R. 53), having road frontage on Ahaluna Drive, Skyview Drive, Strickland Drive, Lakeshore Circle, West Lake Drive and Karen Lane (a/k/a **0, 1264 and 1817 Ahaluna Drive; 1876 Dawsonville Highway; 2208 Karen Lane; 0 and 2029 Strickland Drive; 0 and 1489 West Lake Drive**) from Residential-I-A (R-I-A), Residential-I (R-I), Planned Unit Development (P-U-D) and Regional Business (R-B) to Planned Unit Development (P-U-D) and General Business (G-B).
Ward Number: One
Tax Parcel Number(s): 00-109B-000-003A; 00-110-000-001, 006, 030, 031, 034, 035, 036, 037 and 038; 01-110-001-006; 01-110A-004-022; 01-114-001-001, 026, 145 and 161
Request: Mixed-use development
- 4) Request from **Brightstone Transitions** to amend the existing Planned Unit Development (P-U-D) zoning on a 0.50± acre tract located at the east side of Green Street, across from its intersection with Forrest Avenue (a/k/a **446 Green Street, NE**).
Ward Number: Four
Tax Parcel Number(s): 01-024-001-005
Request: Group home and office

- 5) Request from **Montecito Development** to rezone a 0.48± acre tract located on the south side of Enota Avenue, west of its intersection with Thompson Bridge Road (a/k/a **149 Enota Avenue, NW**) from Office and Institutional (O-I) to Neighborhood Business (N-B), with a special use.
 Ward Number: Two
 Tax Parcel Number(s): 01-074-004-001
 Request: Convenience store with fuel pumps
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- 7) Request from **Gainesville Market, LLC** for a special use on a 5.0± acres tract located west of Shallowford Road within the Gainesville Market Shopping Center (a/k/a **600 Shallowford Road**), having a zoning of General Business (G-B).
 Ward Number: Five
 Tax Parcel Number(s): 01-119C-001-029
 Request: Commercial outdoor recreational facility
- 8) Request from **Manor Lake Development, LLC** for a special use on a 9.24± acres tract located on the northwest side of McEver Road, between Browns Bridge Road and Orchard Brook Drive (a/k/a **2900 McEver Road**), having a zoning of Office and Institutional (O-I) and Residential-I (R-I).
 Ward Number: Four
 Tax Parcel Number(s): 08-022-000-005
 Request: Assisted living facility
- 9) Request from **Carriage North, LLC** for a special use on a 0.71± acre tract located on the southwest side of the terminus of Corporate Drive, west of Browns Bridge Road (a/k/a **2425 Corporate Drive**), having a zoning of General Business (G-B).
 Ward Number: Five
 Tax Parcel Number(s): 08-007-001-042
 Request: Helipad

NOTICE OF PUBLIC HEARING ON PROPOSED AMENDMENTS TO THE GAINESVILLE ZONING MAP

Notice is hereby given that the **Gainesville City Council** will conduct a public hearing on **Tuesday, June 6, 2017 at 5:30 p.m.** in the **Gainesville Justice Center** (Municipal Courtroom at the Public Safety Complex), 701 Queen City Parkway in midtown Gainesville on the following requests:

- 1) Request from **Oak Hall Companies, LLC** to annex a 26.16 acres tract located east of Dawsonville Highway and on the north side of the intersection of Strickland Drive and Sportsman Club Road, with road frontage on Karen Lane (a/k/a **0 and 2209 Karen Lane; 2106, 2234 and 2242 Sportsman Club Road; and 2049 Strickland Drive**) and to establish zoning as Planned Unit Development (P-U-D).
 Ward Number: One
 Tax Parcel Number(s): 00-109-003-001, 004, 005; 00-109B-000-001, 002A and 036
 Request: Active adult community

- 2) Request from **Oak Hall Companies, LLC** to annex a 50.81± acres tract located on the east side of Dawsonville Highway (S.R. 53), having road frontage on Dawsonville Highway, Ahaluna Drive, Skyview Drive and Strickland Drive (a/k/a **0 and 1758 Ahaluna Drive; 1508, 1550, 1740, 1746, 1758, 1760, 1934 and 1982 Dawsonville Highway; 300 and 301 Skyview Drive; 0, 2008 and 2016 Strickland Drive**) and to establish zoning as Planned Unit Development (P-U-D) and General Business (G-B).
 Ward Number: One
 Tax Parcel Number(s): 00-110-000-005 (part), 028, 032 (part) and 039; 00-110A-004-001 (part), 002A, 004 (part), 005 (part), 007 (part), 007A (part), 007X, 014 (part), 016 (part), 017 (part) and 018
 Request: Mixed-use development

- 3) Request from **Oak Hall Companies, LLC** to rezone a 157.98± acres tract located on the east side of Dawsonville Highway (S.R. 53), having road frontage on Ahaluna Drive, Skyview Drive, Strickland Drive, Lakeshore Circle, West Lake Drive and Karen Lane (a/k/a **0, 1264 and 1817 Ahaluna Drive; 1876 Dawsonville Highway; 2208 Karen Lane; 0 and 2029 Strickland Drive; 0 and 1489 West Lake Drive**) from Residential-I-A (R-I-A), Residential-I (R-I), Planned Unit Development (P-U-D) and Regional Business (R-B) to Planned Unit Development (P-U-D) and General Business (G-B).
 Ward Number: One
 Tax Parcel Number(s): 00-109B-000-003A; 00-110-000-001, 006, 030, 031, 034, 035, 036, 037 and 038; 01-110-001-006; 01-110A-004-022; 01-114-001-001, 026, 145 and 161
 Request: Mixed-use development

- 4) Request from **Brightstone Transitions** to amend the existing Planned Unit Development (P-U-D) zoning on a 0.50± acre tract located at the east side of Green Street, across from its intersection with Forrest Avenue (a/k/a **446 Green Street, NE**).
 Ward Number: Four
 Tax Parcel Number(s): 01-024-001-005
 Request: Group home and office

- 5) Request from **Montecito Development** to rezone a 0.48± acre tract located on the south side of Enota Avenue, west of its intersection with Thompson Bridge Road (a/k/a **149 Enota Avenue, NW**) from Office and Institutional (O-I) to Neighborhood Business (N-B), with a special use.
 Ward Number: Two
 Tax Parcel Number(s): 01-074-004-001
 Request: Convenience store with fuel pumps

- 6) Request from **Montecito Development** for a special use on a 0.80± acre tract located at the southwest side of the intersection of Enota Avenue and Thompson Bridge Road (a/k/a **1281 Thompson Bridge Road, NW**), having a zoning of Neighborhood Business (N-B).
 Ward Number: Two
 Tax Parcel Number(s): 01-074-004-020
 Request: Convenience store with fuel pumps

- 7) Request from **Gainesville Market, LLC** for a special use on a 5.0± acres tract located west of Shallowford Road within the Gainesville Market Shopping Center (a/k/a **600 Shallowford Road**), having a zoning of General Business (G-B).
 Ward Number: Five
 Tax Parcel Number(s): 01-119C-001-029
 Request: Commercial outdoor recreational facility

- 8) Request from **Manor Lake Development, LLC** for a special use on a 9.24± acres tract located on the northwest side of McEver Road, between Browns Bridge Road and Orchard Brook Drive (a/k/a **2900 McEver Road**), having a zoning of Office and Institutional (O-I) and Residential-I (R-I).

Ward Number: Four

Tax Parcel Number(s): 08-022-000-005

Request: Assisted living facility

- 9) Request from **Carriage North, LLC** for a special use on a 0.71± acre tract located on the southwest side of the terminus of Corporate Drive, west of Browns Bridge Road (a/k/a **2425 Corporate Drive**), having a zoning of General Business (G-B).

Ward Number: Five

Tax Parcel Number(s): 08-007-001-042

Request: Helipad

Additional information is available from the Community Development Department, Planning Division, by calling 770-531-6570.

NOTE: In accordance with Georgia law, anyone who wishes to express opposition to the proposed zoning action, and has made, within two years immediately preceding the filing of the proposed zoning action, campaign contributions aggregating \$250 or more to a local government official who will consider the application, shall file a disclosure of contribution(s) with the Planning Division at least five (5) days prior to the first reading of the proposed zoning action by the City Council. (OCGA § 36-67A-3 3 {c})

**GAINESVILLE PLANNING and APPEALS BOARD
RECOMMENDATION**

Applicant Manor Lake Development, LLC
Property Owner Reynolds, Hemmer Properties
Location 2900 McEver Road
Request Special use within O-I zoning
Size 9.24± acres
Ward Four
Proposed Use Assisted living facility
Planning Division Staff Recommendation **Approval, with conditions**
Planning and Appeals Board Recommendation **Approval, with conditions**
Date May 9, 2017

▪ **Applicant's Proposal and Background Information**

The applicant is proposing a special use within Office and Institutional (O-I) zoning to establish an 82-unit / 86-bed assisted living and memory care facility. The subject property has a split zoning of Office and Institutional (O-I) consisting of 7.84± acres and a zoning of Residential-I (R-I) consisting of 1.4± acres. The proposed assisted living facility is to be located entirely within the O-I zoned portion of property.

The subject property is located within the Gateway Corridor Overlay Zone, is heavily wooded and contains a creek. The proposed building is one-story and approximately 60,000 square feet in size. It is anticipated there will be a total of 50 full/part time employees. The facility will offer three full meals a day plus healthy snacks, physical therapy, memory therapy, group activities, hair salon, movie room, private dining and other activities. A shuttle will be provided so that residents can go shopping, attend church and visit doctors. The proposed facility will access an existing common drive shared with the neighboring "The Fields" apartment complex. The applicant states the proposed location was chosen due to its proximity to Free Chapel Worship Center and Cresswind at Lake Lanier.

▪ **Adjacent Land Use and Zoning**

Location	Use	Zoning
North	Single-family homes; Rite Aid Pharmacy	Residential-I (R-I) -County Planned Unit Development (P-U-D) -City
South	Multi-family apartments	Residential-II (R-II) and Office and Institutional (O-I) –City
East	Free Chapel Worship Center; Hall County Government Center	Neighborhood Business (N-B) -City Office and Institutional (O-I) -City
West	Single-family homes	Residential-I (R-I) -County

▪ **Other Departmental Comments**

According to the Georgia Department of Transportation (GDOT), the development will be required to meet the sight distance requirements and will need to coordinate with GDOT for review and approval.

▪ **Zoning History**

The following zoning actions have taken place in the immediate area during the last ten years:

2016 - A request by Spring Road Group, LLC to annex a 10.06± acre tract located at 2360, 2370, 2374, 2376, 2380, 2400 and 2410 Spring Road was approved with conditional Residential-II (R-II) zoning for a 110-unit active adult community.

2015 - A request by Ken Chupp to annex a 0.821± acre tract located at 2305, 2313 & 2317 Pine Circle Drive and 2280, 2282 & 2284 Spring Road was approved with Residential-II (R-II) zoning for sewer for three existing duplex homes.

2015 - A request by Fernando Martinez to annex a 0.24± acre tract located at 2321 Pine Circle Drive for sewer was approved with Residential-I (R-I) zoning.

2013 - A request by Donald E. Hammond to rezone a 2.59± acres tract located at 3030 McEver Road from Office and Institutional (O-I) to Neighborhood Business (N-B) for office uses was conditionally approved.

2013 - A request by OK Lake Lanier, LLLP to annex a 76.05± acres tract with Planned Unit Development (P-U-D) zoning located at 3121 Browns Bridge Road and 3110 Montgomery Drive was approved with conditions for a mixed-use planned community for active adults.

2010 - A request by Rochester & Associates, Inc. to amend a 378.3± acres tract zoned Planned Unit Development (P-U-D) located at 3050 Browns Bridge Road; 3004 Ivey Road and 3113 Scarlet Oak Lane to increase the number of lots within the Cresswind subdivision from 750 to 799 lots and to amend some of the development standards was approved with conditions.

2010 - A request by Cook's Properties, LLC to rezone 2.91± acres located at 3020 McEver Road from Office and Institutional (O-I) to Neighborhood Business (N-B) for a pest control business was approved with conditions.

2010 - A request by RaceTrac Petroleum, Inc. to amend a 2.24± acres tract zoned Planned Unit Development (P-U-D) located at 1450 McEver Road to allow internally illuminated free-standing, building and canopy signs for a RaceTrac gas station/convenience store, was approved with conditions.

2009 - A request by Gainesville Church of God to annex a 3.0± acres tract with Residential-I (R-I) zoning located at 2920 Browns Bridge Road was approved with conditions for an existing church.

2009 - A request by Raul Castruita to annex a 0.34± acre tract located at 2283 Spring Road for sewer was approved with Residential-I (R-I) zoning.

2008 - A request by Easlan Capital of Atlanta, Inc. to amend a 10.07± acres tract zoned Planned Unit Development (P-U-D) located at 3050 Browns Bridge Road, 3005 Ivey Road and 3115 Scarlet Oak Lane for commercial/retail space and gas station/convenience store was approved with conditions.

2007 - A request by Levitt and Sons to amend a 421.126± acres tract zoned Planned Unit Development (P-U-D) located at 3050 and 3245 Browns Bridge Road to reduce the minimum square footage of fifty of the proposed homes was approved with conditions.

2007 - A request by Sentinel Properties, Inc. to annex a 4.67[±] acres tract located at 2475 and 2503 Pemmican Run for 56 townhome/condominium units was approved with conditional Planned Unit Development (P-U-D) zoning.

▪ **Staff Analysis**

(1) Is the proposed use suitable in view of the zoning and development of adjacent and nearby property?

The proposed 84-unit / 86-bed assisted living facility appears to be suitable based on the adjacent and nearby residential and non-residential development. The surrounding uses consist of a mixture of uses including single-family homes, multi-family apartments, pharmacy and a church.

(2) Will the proposed use adversely affect the existing use or usability of adjacent or nearby property?

The proposed use should not adversely affect the existing use or usability of adjacent or nearby property given its location along McEver Road. Assisted living facilities are generally considered low impact uses in regards to any adverse effects such as traffic, noise, light, glare or odor. The adjacent and nearby uses should continue to function at their current levels with limited impacts.

(3) Is the proposed use compatible with the purpose and intent of the Comprehensive Plan?

The proposal is consistent with the Comprehensive Plan. The subject property is adjacent to single-family and non-residential uses but appears to be less desirable for single-family development due to its proximity along Thompson Bridge Road.

The Gainesville 2030 Future Development Map for the City of Gainesville places the subject property within the *Mixed Use General* land use category. This category includes areas containing or planned for a mixture of land uses including office, neighborhood retail, and residential.

According to the Character Area map for the City of Gainesville, the subject property is located within the *Suburban Residential* character area. Land uses allowed within this area include low-density residential, medium density residential, multi-family residential, public / institutional, commercial, and parks / recreation / conservation and mixed use. The goal of this character area is to preserve older, stable residential subdivisions and encourage newer projects with smaller lot sizes, pedestrian infrastructure, and buildings patterned after traditional local housing, possibly containing a small neighborhood-serving “village center.” Mixed-use neighborhood design is desired but not required. In areas where natural features or sensitive environments are important, cluster housing or conservation subdivision design may be appropriate.

(4) Are there substantial reasons why the property cannot or should not be used as currently zoned?

The property is zoned Office and Institutional (O-I) which permits a small assisted living facility serving 18 persons or less, but requires special use approval for a larger facility. The size of the property appears to be suitable for the proposed 84-unit / 86-bed assisted living facility.

(5) Will the proposed use cause an excessive or burdensome use of public facilities or services, including but not limited to streets, schools, water or sewer utilities, and police or fire protection?

Various city services including police and fire protection and water utilities serve the adjacent properties. Existing water and sewer services are capable of serving the development. Police and fire protection are currently provided to adjacent properties. The proposed use may generate a higher ratio of emergency calls simply due to the age of the residents. Gainesville Fire Station #4 is located off of Memorial Park Drive and is approximately 2.3± miles from the subject property. Hall County Fire Station # 4 is located only 0.19 miles from the property off of McEver Road.

The proposal would have no impact on the school system given the nature of the use.

The subject property is located along an arterial road which is capable of handling additional traffic. A dedicated southbound right turn lane and a dedicated northbound left turn lane at the median break are currently in place at the entrance to the shared entrance serving the apartment complex. According to the "Trip Generation Manual" as published by the Institute of Transportation Engineers, a 110-unit the assisted living facility could generate an average of 181± new trips per weekday, 13 A.M. peak hour trips and 18 P.M. peak hour trips at full occupancy.

(6) Is the proposed use supported by new or changing conditions not anticipated by the Comprehensive Plan or reflected in the existing zoning on the property or surrounding properties?

Much of the surrounding development has occurred over the last 15 years. This is in part due to the fact that McEver Road serves as a main corridor connecting Gainesville, Oakwood and Flowery Branch. Significant development located nearby includes the Free Chapel campus, Hall County Government Center and Cresswind at Lake Lanier active adult community. According to the Comprehensive Plan, properties fronting McEver Road will continue to develop with a mixture of residential, office, institutional and light retail uses.

(7) Does the proposed use reflect a reasonable balance between the promotion of the public health, safety, morality, or general welfare and the right to unrestricted use of property?

Due to the Comprehensive Land Use Plan and the compatible surrounding uses, the proposed special use request appears to reflect a reasonable balance between the promotion of the public health, safety, morality, or general welfare and the right to unrestricted use of property.

▪ **Additional Analysis**

When considering the Special Use application, the criteria below shall be considered giving due weight or priority to those factors that are appropriate to the circumstances of the proposal:

- (1) **The type of street providing access to the subject property is adequate to serve the proposed Special Use.**

The proposed use will utilize an existing driveway easement shared by the adjacent apartment complex which is adequate to serve the proposed use.

- (2) **Access into and out of the property adequately provides for traffic and pedestrian safety, the anticipated volume of traffic flow, and access by emergency vehicles.**

The proposed access design for vehicular and pedestrian safety appears adequate to handle the anticipated traffic and emergency access.

- (3) **Public facilities such as schools, water or sewer utilities, and police or fire protection are adequate to serve the Special Use.**

There is sufficient capacity for water and sewer to serve the proposed use. Gainesville police and fire are capable of providing services to the property and currently serve adjacent properties. The proposal would have no impact on the school system given the nature of the use.

- (4) **Refuse, service, parking and loading areas on the property are located and screened to protect other properties in the area from such adverse effects as noise, light, glare or odor.**

The type of use proposed generally does not create adverse effects to neighboring properties. The development code requires standards to guard against such adverse effects.

- (5) **The hours and manner of operation of the Special Use have no adverse effects on other properties in the area.**

The proposed use will be open 24-hours a day / 7 days a week similar to other assisted living facilities. The proposed location of the assisted living facility should have limited impacts to surrounding properties.

- (6) **The height, size and location of the buildings or other structures proposed on the property are compatible with the height, size or location of buildings or other structures on neighboring properties.**

The proposed building will be one story which is comparable to surrounding single-family structures. There are adjacent and nearby structures that are taller and larger than the proposed structure such as the adjacent apartment complex and the Free Chapel Worship Center.

▪ **Staff Recommendation**

The Planning Division staff is recommending **conditional approval** of this special use request based on the Comprehensive Plan and the adjacent non-residential uses.

Conditions

1. The development standards within the narrative, site plan and photographs submitted with the applicant's special use application shall be made part of the special use resolution, and shall be subject to the Community Development Director approval.
2. The subject property shall be limited to the proposed 86-bed assisted living facility and those uses permitted within the Office and Institutional (O-I) zoning district only.
3. The developer shall provide a minimum 25-foot wide evergreen vegetated buffer along the property lines adjacent to the single-family properties. Additional evergreen buffer trees shall be planted within the perimeter buffer area where needed. The intent of the buffer is to supplement the existing vegetation with buffer trees to provide for an effective buffer. The spacing, size and type of trees planted shall be subject to Community Development Department Director approval.
4. All access point design must be reviewed and approved by the Gainesville Public Works Director. Any required traffic improvements associated with the proposed development shall be at the full expense of the developer/property owner.
5. An updated as-built survey/plat of the subject property, indicating existing conditions and all improvements shall be recorded prior to obtaining a Certificate of Occupancy for the future use.

Excerpts from the May 9, 2017 Planning and Appeals Board Meeting Minutes

Applicant Presentation: William Creekmore, 316 Hillside Drive, Waleska, President of Manor Lake Development, LLC, stated the 82-room facility is one-story, mostly rock with HardiPlank and architectural shingles. Amenities are included such as a putting green for the residents who range in age from the 70s to 90s. He stated except for the rare exception, the residents typically do not drive. Beacon Communities would be the operator and is a wonderful company which would employ about 50 full/part time employees. He stated he met with residents at Cresswind and they were excited about it being nearby so they can visit their loved ones without going across town. Mr. Creekmore stated he met with Free Chapel as well who has a senior outreach program and their parents or grandparents could be residents there. He stated it was a wonderful location and he couldn't think of a better use for the property and asked for approval from the Board.

FAVOR: None

OPPOSE: None

Planning and Appeals Board Comments: None

There was a motion to recommend conditional approval of the special use request as presented with the following conditions:

Conditions

1. The development standards within the narrative, site plan and photographs submitted with the applicant's special use application shall be made part of the special use resolution, and shall be subject to the Community Development Director approval.

2. The subject property shall be limited to the proposed 86-bed assisted living facility and those uses permitted within the Office and Institutional (O-I) zoning district only.
3. The developer shall provide a minimum 25-foot wide evergreen vegetated buffer along the property lines adjacent to the single-family properties. Additional evergreen buffer trees shall be planted within the perimeter buffer area where needed. The intent of the buffer is to supplement the existing vegetation with buffer trees to provide for an effective buffer. The spacing, size and type of trees planted shall be subject to Community Development Department Director approval.
4. All access point design must be reviewed and approved by the Gainesville Public Works Director. Any required traffic improvements associated with the proposed development shall be at the full expense of the developer/property owner.
5. An updated as-built survey/plat of the subject property, indicating existing conditions and all improvements shall be recorded prior to obtaining a Certificate of Occupancy for the future use.

Motion made by Board Member Thompson

Motion seconded by Board Member White

Vote – 7 favor

RESOLUTION ZR-2017-____

APPROVAL OF A REQUEST FOR A SPECIAL USE
SUBJECT TO APPROVAL BY THE CITY COUNCIL

WHEREAS, under **Chapter 9-6-1 O-I Office and Institutional District** of the Unified Land Development Code of the City of Gainesville, Georgia; **Section 9-6-1-2 Permitted and Special Uses** allows *institutionalized residential living and care facilities, serving more than eighteen (18) persons* subject to City Council approval after review and recommendation by the Gainesville Planning and Appeals Board; and

WHEREAS, an application has been received from **Manor Lake Development, LLC** to allow an *assisted living facility* within an Office and Institutional (O-I) zoning district identified as follows:

08-022-000-005
2900 McEver Road
Ward Four

WHEREAS, the application has been evaluated under any criteria specified in the aforesaid section; and

WHEREAS, the **Gainesville Planning and Appeals Board**, during its public hearing held on **May 9, 2017**, reviewed the application and recommended **conditional approval** of said request with the following conditions:

Conditions

1. The development standards within the narrative, site plan and photographs submitted with the applicant's special use application shall be made part of the special use resolution, and shall be subject to the Community Development Director approval.
2. The subject property shall be limited to the proposed 86-bed assisted living facility and those uses permitted within the Office and Institutional (O-I) zoning district only.
3. The developer shall provide a minimum 25-foot wide evergreen vegetated buffer along the property lines adjacent to the single-family properties. Additional evergreen buffer trees shall be planted within the perimeter buffer area where needed. The intent of the buffer is to supplement the existing vegetation with buffer trees to provide for an effective buffer. The spacing, size and type of trees planted shall be subject to Community Development Department Director approval.
4. All access point design must be reviewed and approved by the Gainesville Public Works Director. Any required traffic improvements associated with the proposed development shall be at the full expense of the developer/property owner.
5. An updated as-built survey/plat of the subject property, indicating existing conditions and all improvements shall be recorded prior to obtaining a Certificate of Occupancy for the future use.

RESOLUTION ZR-2017-__

NOW, THEREFORE, BE IT RESOLVED THAT the governing body for the City of Gainesville hereby approves the applicant's request for a special use permit as stated above and subject to all the terms of the Unified Land Development Code.

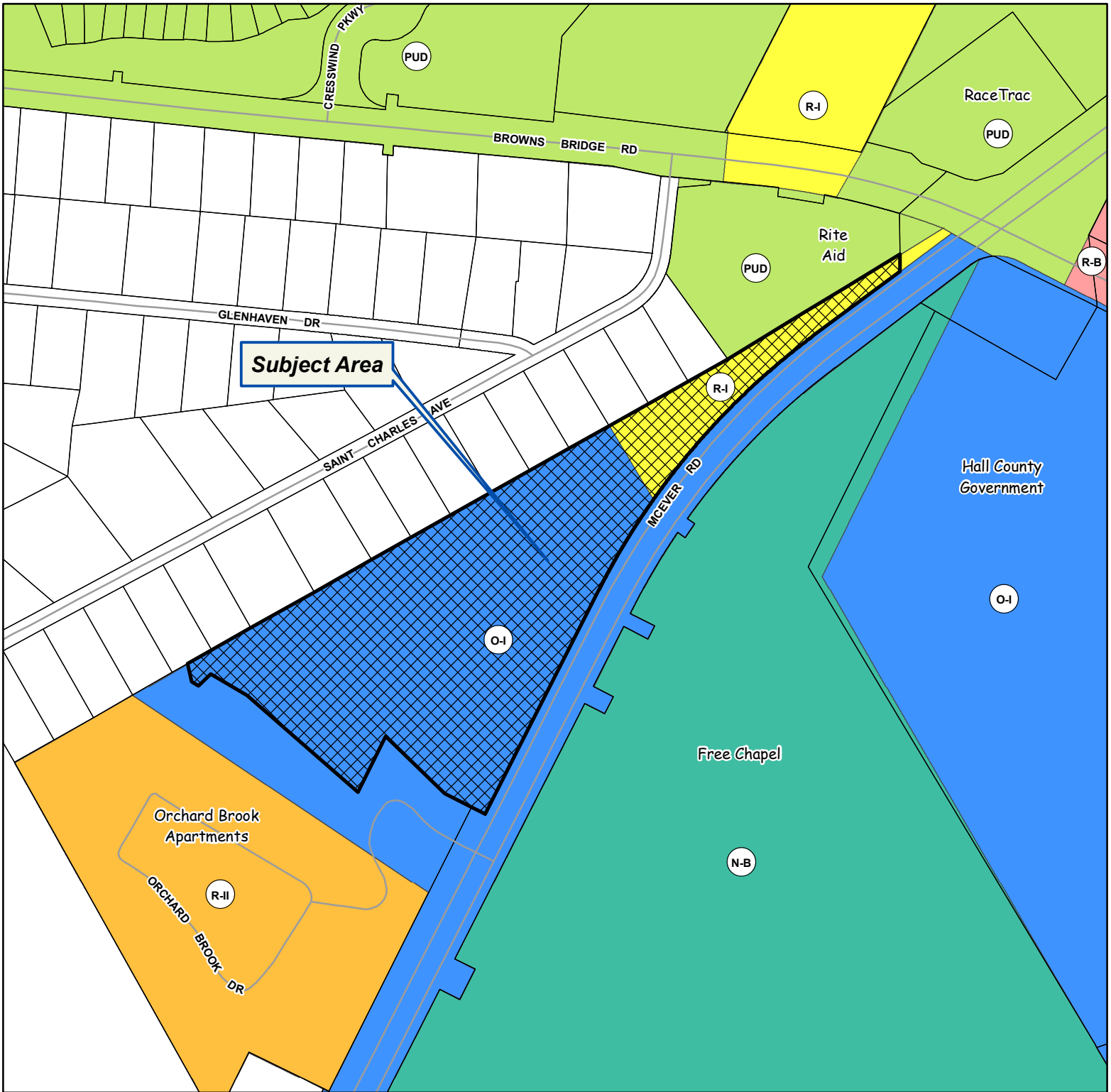
Adopted this _____ **day of** _____, **2017.**

C. Danny Dunagan, Jr., Mayor

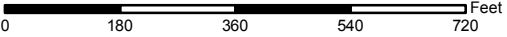
This is to certify that I am City Clerk of the City of Gainesville. As such, I keep its official records, including its minutes. In that capacity, my signature below certifies this resolution was adopted as stated and will be recorded in the official minutes.

ATTEST:

Denise O. Jordan, City Clerk



Applicant:	
MANOR LAKE DEVELOPMENT, LLC	
SPECIAL USE REQUEST	
	Request: Special Use within the Office and Institutional (O-I) and Residential-I (R-I) zoning districts for an assisted living facility
	Subject Area Address: 2900 McEver Road
	Meeting: 5/9/2017
	Prepared: 4/20/2017

Gainesville Community Development Department	
 Subject Area	 1" = 300'
	
Tax Parcel: 08-022-000-005	



Applicant:

MANOR LAKE DEVELOPMENT, LLC

SPECIAL USE REQUEST



Request:
Special Use within the Office and Institutional (O-I) and Residential-I (R-I) zoning districts for an assisted living facility

Subject Area Address:
2900 McEver Road

Meeting: 5/9/2017
Prepared: 4/20/2017

Gainesville Community Development Department

 Subject Area

Aerial from 2015

0 180 360 540 720 Feet



1" = 300'

Tax Parcel: 08-022-000-005

Manor Lake Development, LLC

Senior Communities

Manor Lake Development, LLC, a Georgia real estate development company, proposes to build an approximately 82 unit, 86-bed Assisted Living and Memory Care facility in Gainesville, GA. The legal address for the site in interest is 2900 McEver Rd and consists of 9.24 acres. We are requesting a special use within the Office and Industrial (O-I) for the proposed use. The main purpose of this community is to provide world-class living and care for senior residents in the area. Most, if not all, of these residents will pull from many surrounding locations. One-quarter mile north is the 1,000-home Cresswind at Lake Lanier, a 55+ senior development. Many current independent residents in this mega development will one day need assisted care, or at the very least their spouse. Our site is primed to be an excellent next step for those who want to stay close to their former home or admitted loved one. Directly across the street from us is Free Chapel, one of the largest churches in Georgia. There will be many parents and grandparents who will need extended care, but who will also enjoy the convenience of living so close to the congregation they are imbedded in. Lastly, there are a number of affluent neighborhoods in the area and on Lake Lanier that support a wealthier median income to afford Assisted Living/Memory Care boarding.

Our facility will have 50 full time/part time employees with 24-hour services for our residents. We will offer 3 full meals a day plus healthy snacks, physical therapy, memory therapy, group activities, hair salon, movie room, private dining, and many other amenities. A shuttle will be provided for residents so that they can go shopping at local stores, attend church, and visit doctors. The facility will be a one-story structure at roughly 60,000 sq/ft, thus giving ease in not forcing residents to navigate elevators to get to their dining and activities. The façade will be roughly 50% stone and brick, giving a lodge type feel. Inside will be a double-sided stone fireplace that can be seen from both the lobby and the large dining room.

This proposed facility already has a dedicated entrance that is shared with Oak Brook Apartments at Oak Brook Drive off of McEver Rd. Due to the fact that the facility is open 24 hours with employees in shifts, and residents will not have vehicles, there will be a low impact on the current traffic on McEver Rd. Utilities are already on-site, and this type of development will have little to no impact on city and county services, and no impact on schools. We will be charging market rate rents, which will provide a boost to the tax base for the city and county. Given demographic studies in the area, there is a great need for a quality, well-positioned Assisted Living/Memory Care operation in Gainesville, GA and we believe this site is best suited for it.

LINEAR ERROR OF CLOSURE AS
COMPUTED FROM FIELD DATA IS
1 FOOT IN 25000 FEET.

ANGULAR ERROR OF CLOSURE IS
.04" PER ANGLE POINT
BEFORE ADJUSTMENT.

THIS PLAT HAS BEEN CALCULATED FOR
CLOSURE AND IS FOUND TO BE ACCURATE
TO WITHIN 1 FOOT IN 10000 FEET.

EQUIPMENT USED:
NIKON DTM-420/EDM

COURSE	BEARING	DISTANCE
L-1	N 60°36'57"E	59.93'
L-2	N 60°48'30"E	100.63'
L-3	N 60°23'38"E	99.79'
L-4	N 60°36'31"E	199.75'
L-5	N 60°39'28"E	99.80'
L-6	N 60°37'17"E	100.16'
L-7	N 55°52'04"W	70.00'
L-8	S 33°39'37"W	32.39'
L-9	S 58°48'41"E	70.00'
L-10	N 62°57'14"W	65.44'
L-11	S 27°02'46"W	136.75'
L-12	N 59°29'04"W	92.83'
L-13	S 47°12'56"W	36.87'
L-14	N 59°57'09"W	17.53'
L-15	N 11°27'43"W	41.09'

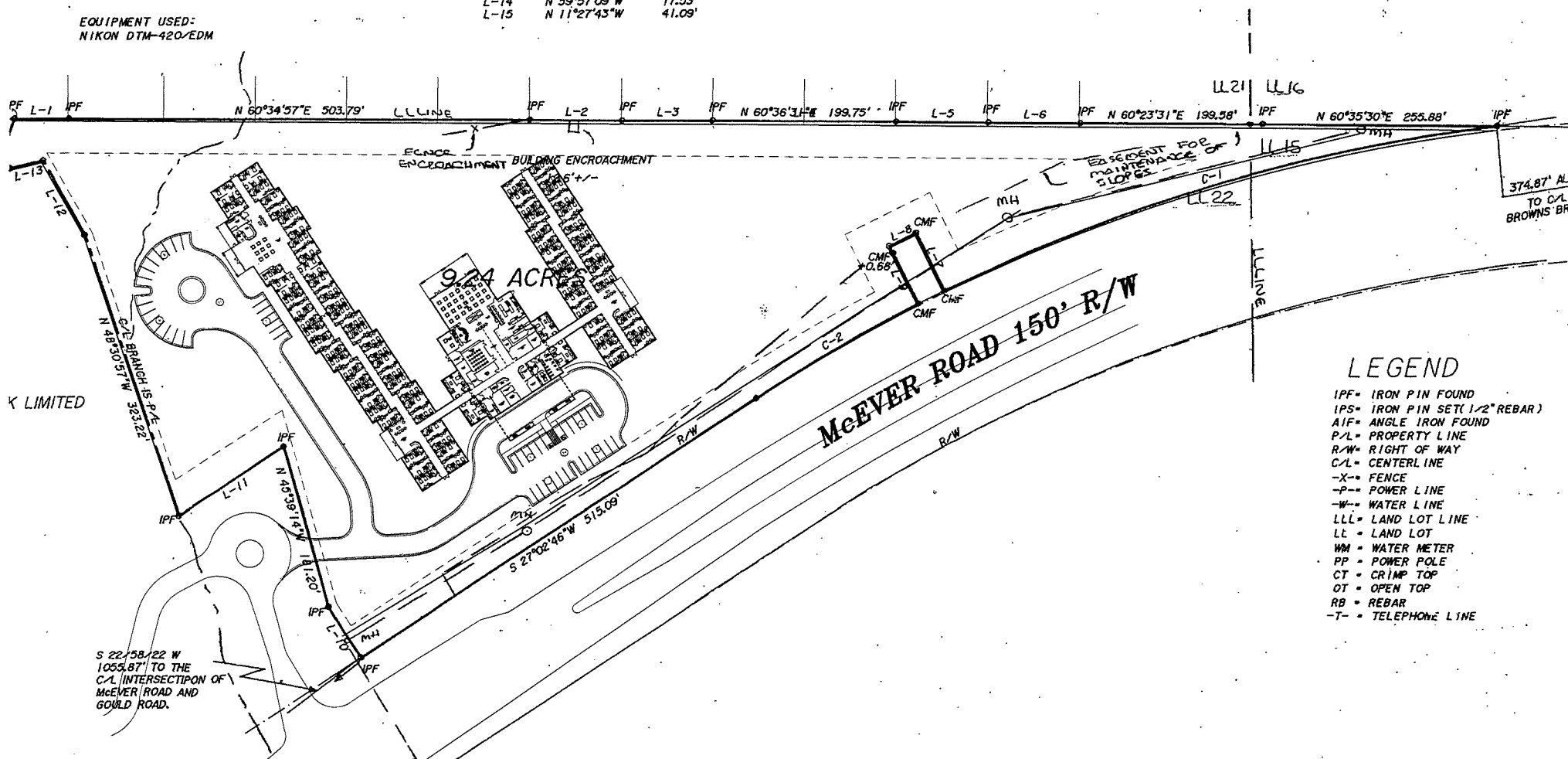
TO WHOM IT MAY CONCERN:
THIS PROPERTY IS NOT LOCATED
IN A FLOOD HAZARD AREA.

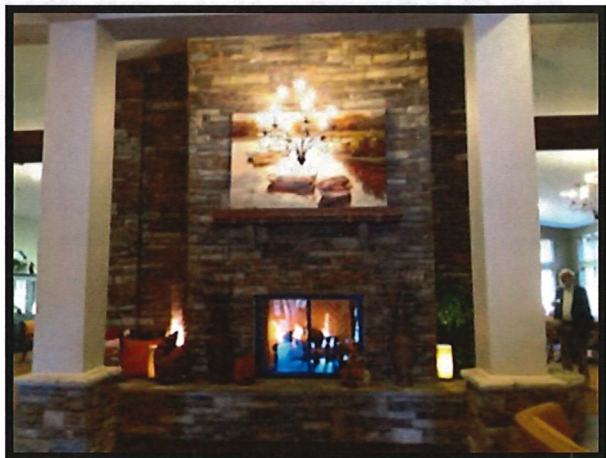
THIS PLAT WAS PREPARED
WITHOUT THE BENEFIT OF
A TITLE SEARCH AND IS
SUBJECT TO ANY AND ALL
DISCLOSURES THAT A TITLE
SEARCH MAY PRODUCE.

THIS SURVEY IS SUBJECT TO ANY AND ALL
EASEMENTS, R/W S, ETC., OF RECORD AND
NOT OF RECORD, ABOVE OR BELOW GROUND:

CURVE	RADIUS	LENGTH	CHORD	CH. BEARING
C-1	1896.39'	631.89'	628.97'	S 43°40'40"W
C-2	1896.39'	203.30'	203.20'	S 30°07'02"W

PINE VALLEY SUBDIVISION BLOCK D





CITY OF GAINESVILLE

WORKSESSIONREQUEST

Date Submitted: 5/23/2017

Presenter: Matt Tate

Item of Business: **Public Hearing Item for the June 6, 2017 Council Meeting**
Request from **Carriage North, LLC** for a special use on a 0.71± acre tract located on the southwest side of the terminus of Corporate Drive, west of Browns Bridge Road (a/k/a **2425 Corporate Drive**), having a zoning of General Business (G-B). **Ward Number: Five.** Tax Parcel Number(s): 08-007-001-042. **Request: Helipad.**

Meeting Date: 6/1/2017

Purpose of Request:

The applicant is proposing a special use within General Business (G-B) zoning to permit a helipad. The location of the helipad is within an overflow parking area adjacent to Carriage Nissan, at the end of Corporate Drive and is periodically used for this purpose. The helipad is required to be secured by a chain link fence and locking gate. According to the applicant, there will be less than ten helicopter takeoffs and landings each month during normal business hours of 9:00 A.M. and 6:00 P.M. The helicopter is used by the owner of Carriage Auto (David Basha), and will be piloted by Blue Ridge helicopters, Inc. Adjacent uses include a church, various auto sale and service uses and undeveloped land. Nearby residential uses include "The Pines of Lanier" apartment complex located approximately 600-feet to the east of the subject property.

History/Background:

Facts & Issues for Consideration:

Department Recommendation:

Planning staff recommended approval with six conditions.

The Planning and Appeals Board unanimously recommended denial of this request.

See the PAB Recommendation Report for details and excerpts from the PAB meeting minutes.

SAMPLE MOTIONS

Approve Special Use

I move to conditionally approve a zoning resolution with six conditions to allow a helipad on the subject property.

Deny

I move to deny the special use request.

Department Director:

Rusty Ligon

If funding is involved, are funds approved within the current budget?

N/A

Amount Requested:

Source of Funds:

Finance Comments:

Administrative Comments:

ATTACHMENTS:

Description		Type
	Legal Ad	Legal Ad
	PAB Recommendation Report	Report
	Proposed Zoning Resolution	Resolution
	Location Maps	Backup Material
	Narrative	Backup Material
	Concept Plan	Backup Material
	Aerial Map	Backup Material
	Certificate of Aircraft Insurance	Backup Material
	Pictures	Backup Material
	Withdrawal	Backup Material

COMBINED LEGAL AD
Gainesville Planning and Appeals Board
Gainesville City Council

Publish Sunday, April 23, 2017
THE TIMES

NOTICE OF PLANNING AND APPEALS BOARD PUBLIC HEARING

Notice is hereby given that the **Gainesville Planning and Appeals Board** will conduct a public hearing on **Tuesday, May 9, 2017** at **5:30 p.m.** in the **Gainesville Justice Center** (Municipal Courtroom at the Public Safety Complex), 701 Queen City Parkway in midtown Gainesville on the following requests:

- 1) Request from **Oak Hall Companies, LLC** to annex a 26.16 acres tract located east of Dawsonville Highway and on the north side of the intersection of Strickland Drive and Sportsman Club Road, with road frontage on Karen Lane (a/k/a **0 and 2209 Karen Lane; 2106, 2234 and 2242 Sportsman Club Road; and 2049 Strickland Drive**) and to establish zoning as Planned Unit Development (P-U-D).
Ward Number: One
Tax Parcel Number(s): 00-109-003-001, 004, 005; 00-109B-000-001, 002A and 036
Request: Active adult community
- 2) Request from **Oak Hall Companies, LLC** to annex a 50.81± acres tract located on the east side of Dawsonville Highway (S.R. 53), having road frontage on Dawsonville Highway, Ahaluna Drive, Skyview Drive and Strickland Drive (a/k/a **0 and 1758 Ahaluna Drive; 1508, 1550, 1740, 1746, 1758, 1760, 1934 and 1982 Dawsonville Highway; 300 and 301 Skyview Drive; 0, 2008 and 2016 Strickland Drive**) and to establish zoning as Planned Unit Development (P-U-D) and General Business (G-B).
Ward Number: One
Tax Parcel Number(s): 00-110-000-005 (part), 028, 032 (part) and 039; 00-110A-004-001 (part), 002A, 004 (part), 005 (part), 007 (part), 007A (part), 007X, 014 (part), 016 (part), 017 (part) and 018
Request: Mixed-use development
- 3) Request from **Oak Hall Companies, LLC** to rezone a 157.98± acres tract located on the east side of Dawsonville Highway (S.R. 53), having road frontage on Ahaluna Drive, Skyview Drive, Strickland Drive, Lakeshore Circle, West Lake Drive and Karen Lane (a/k/a **0, 1264 and 1817 Ahaluna Drive; 1876 Dawsonville Highway; 2208 Karen Lane; 0 and 2029 Strickland Drive; 0 and 1489 West Lake Drive**) from Residential-I-A (R-I-A), Residential-I (R-I), Planned Unit Development (P-U-D) and Regional Business (R-B) to Planned Unit Development (P-U-D) and General Business (G-B).
Ward Number: One
Tax Parcel Number(s): 00-109B-000-003A; 00-110-000-001, 006, 030, 031, 034, 035, 036, 037 and 038; 01-110-001-006; 01-110A-004-022; 01-114-001-001, 026, 145 and 161
Request: Mixed-use development
- 4) Request from **Brightstone Transitions** to amend the existing Planned Unit Development (P-U-D) zoning on a 0.50± acre tract located at the east side of Green Street, across from its intersection with Forrest Avenue (a/k/a **446 Green Street, NE**).
Ward Number: Four
Tax Parcel Number(s): 01-024-001-005
Request: Group home and office

- 5) Request from **Montecito Development** to rezone a 0.48± acre tract located on the south side of Enota Avenue, west of its intersection with Thompson Bridge Road (a/k/a **149 Enota Avenue, NW**) from Office and Institutional (O-I) to Neighborhood Business (N-B), with a special use.
 Ward Number: Two
 Tax Parcel Number(s): 01-074-004-001
 Request: Convenience store with fuel pumps
- 6) Request from **Montecito Development** for a special use on a 0.80± acre tract located at the southwest side of the intersection of Enota Avenue and Thompson Bridge Road (a/k/a **1281 Thompson Bridge Road, NW**), having a zoning of Neighborhood Business (N-B).
 Ward Number: Two
 Tax Parcel Number(s): 01-074-004-020
 Request: Convenience store with fuel pumps
- 7) Request from **Gainesville Market, LLC** for a special use on a 5.0± acres tract located west of Shallowford Road within the Gainesville Market Shopping Center (a/k/a **600 Shallowford Road**), having a zoning of General Business (G-B).
 Ward Number: Five
 Tax Parcel Number(s): 01-119C-001-029
 Request: Commercial outdoor recreational facility
- 8) Request from **Manor Lake Development, LLC** for a special use on a 9.24± acres tract located on the northwest side of McEver Road, between Browns Bridge Road and Orchard Brook Drive (a/k/a **2900 McEver Road**), having a zoning of Office and Institutional (O-I) and Residential-I (R-I).
 Ward Number: Four
 Tax Parcel Number(s): 08-022-000-005
 Request: Assisted living facility
- 9) Request from **Carriage North, LLC** for a special use on a 0.71± acre tract located on the southwest side of the terminus of Corporate Drive, west of Browns Bridge Road (a/k/a **2425 Corporate Drive**), having a zoning of General Business (G-B).
 Ward Number: Five
 Tax Parcel Number(s): 08-007-001-042
 Request: Helipad

NOTICE OF PUBLIC HEARING ON PROPOSED AMENDMENTS TO THE GAINESVILLE ZONING MAP

Notice is hereby given that the **Gainesville City Council** will conduct a public hearing on **Tuesday, June 6, 2017 at 5:30 p.m.** in the **Gainesville Justice Center** (Municipal Courtroom at the Public Safety Complex), 701 Queen City Parkway in midtown Gainesville on the following requests:

- 1) Request from **Oak Hall Companies, LLC** to annex a 26.16 acres tract located east of Dawsonville Highway and on the north side of the intersection of Strickland Drive and Sportsman Club Road, with road frontage on Karen Lane (a/k/a **0 and 2209 Karen Lane; 2106, 2234 and 2242 Sportsman Club Road; and 2049 Strickland Drive**) and to establish zoning as Planned Unit Development (P-U-D).
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 Ward Number: One
 Tax Parcel Number(s): 00-110-000-005 (part), 028, 032 (part) and 039; 00-110A-004-001 (part), 002A, 004 (part), 005 (part), 007 (part), 007A (part), 007X, 014 (part), 016 (part), 017 (part) and 018
 Request: Mixed-use development

- 3) Request from **Oak Hall Companies, LLC** to rezone a 157.98± acres tract located on the east side of Dawsonville Highway (S.R. 53), having road frontage on Ahaluna Drive, Skyview Drive, Strickland Drive, Lakeshore Circle, West Lake Drive and Karen Lane (a/k/a **0, 1264 and 1817 Ahaluna Drive; 1876 Dawsonville Highway; 2208 Karen Lane; 0 and 2029 Strickland Drive; 0 and 1489 West Lake Drive**) from Residential-I-A (R-I-A), Residential-I (R-I), Planned Unit Development (P-U-D) and Regional Business (R-B) to Planned Unit Development (P-U-D) and General Business (G-B).
 Ward Number: One
 Tax Parcel Number(s): 00-109B-000-003A; 00-110-000-001, 006, 030, 031, 034, 035, 036, 037 and 038; 01-110-001-006; 01-110A-004-022; 01-114-001-001, 026, 145 and 161
 Request: Mixed-use development

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 Ward Number: Four
 Tax Parcel Number(s): 01-024-001-005
 Request: Group home and office

- 5) Request from **Montecito Development** to rezone a 0.48± acre tract located on the south side of Enota Avenue, west of its intersection with Thompson Bridge Road (a/k/a **149 Enota Avenue, NW**) from Office and Institutional (O-I) to Neighborhood Business (N-B), with a special use.
 Ward Number: Two
 Tax Parcel Number(s): 01-074-004-001
 Request: Convenience store with fuel pumps

- 6) Request from **Montecito Development** for a special use on a 0.80± acre tract located at the southwest side of the intersection of Enota Avenue and Thompson Bridge Road (a/k/a **1281 Thompson Bridge Road, NW**), having a zoning of Neighborhood Business (N-B).
 Ward Number: Two
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 Request: Convenience store with fuel pumps

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 Ward Number: Five
 Tax Parcel Number(s): 01-119C-001-029
 Request: Commercial outdoor recreational facility

- 8) Request from **Manor Lake Development, LLC** for a special use on a 9.24± acres tract located on the northwest side of McEver Road, between Browns Bridge Road and Orchard Brook Drive (a/k/a **2900 McEver Road**), having a zoning of Office and Institutional (O-I) and Residential-I (R-I).

Ward Number: Four

Tax Parcel Number(s): 08-022-000-005

Request: Assisted living facility

- 9) Request from **Carriage North, LLC** for a special use on a 0.71± acre tract located on the southwest side of the terminus of Corporate Drive, west of Browns Bridge Road (a/k/a **2425 Corporate Drive**), having a zoning of General Business (G-B).

Ward Number: Five

Tax Parcel Number(s): 08-007-001-042

Request: Helipad

Additional information is available from the Community Development Department, Planning Division, by calling 770-531-6570.

NOTE: In accordance with Georgia law, anyone who wishes to express opposition to the proposed zoning action, and has made, within two years immediately preceding the filing of the proposed zoning action, campaign contributions aggregating \$250 or more to a local government official who will consider the application, shall file a disclosure of contribution(s) with the Planning Division at least five (5) days prior to the first reading of the proposed zoning action by the City Council. (OCGA § 36-67A-3 3 {c})

**GAINESVILLE PLANNING and APPEALS BOARD
RECOMMENDATION**

Applicant and Property Owner..... Carriage North, LLC
Location..... 2425 Corporate Drive
Request..... Special use within G-B zoning
Size 0.71± acre
Ward..... Five
Proposed Use..... Helipad
Planning Division Staff Recommendation **Approval, with conditions**
Planning and Appeals Board Recommendation **Denial**
Date..... May 9, 2017

▪ **Applicant's Proposal and Background Information**

The applicant is proposing a special use within General Business (G-B) zoning to allow for a helipad which is considered an aircraft landing area by the Unified Land Development Code. The location of the helipad is within an overflow parking area adjacent to Carriage Nissan, at the end of Corporate Drive and is periodically used for this purpose. The helipad is required to be secured by a chain link fence and locking gate. According to the applicant, there will be less than ten helicopter takeoffs and landings each month during normal business hours of 9:00 A.M. and 6:00 P.M. The helicopter is used by the owner of Carriage Auto (David Basha), and will be piloted by Blue Ridge Helicopters, Inc.

According to the Unified Land Development Code the below six requirements should be met when considering the use of a private heliport. The proposal appears to meet the following requirements excluding items (d) and (f). The subject property is not fully enclosed by a minimum 3-foot tall fence, wall or hedge. As well, the property is located within 600 feet of a residentially zoned district but is approximately 650 feet from the nearest residential use.

- (a) No person shall use or authorize the use of an aircraft landing area on any property owned, leased, or controlled by such person until such person has obtained liability insurance coverage on the operation and use of such area. Such coverage shall be obtained from an insurer authorized or licensed to transact insurance business in Georgia and shall provide a minimum liability coverage of at least \$500,000 per claim.
- (b) The proposed aircraft landing area shall be of sufficient size to meet the Federal Aviation Administration requirements for the class of airport or aircraft landing proposed, and it must be approved by the Federal Aviation Administration or other agency of the federal government with jurisdiction. There shall be sufficient distance between the end of each landing strip and the property boundary to satisfy the requirements of the Federal Aviation Administration.

- (c) There shall be no existing or proposed flight obstructions such as towers, chimneys or natural obstructions outside the proposed aircraft landing area which would be in the approach zone to any of the proposed runways, landing strips, or landing areas. In cases where air rights or easements have been acquired from the owners of abutting properties to protect approach zones, satisfactory evidence thereof shall be submitted with the application.
- (d) The owner of the aircraft landing area shall erect a safety barrier around the peripheral area surrounding the takeoff and landing area. The safety barrier shall be a fence, wall or hedge no less than three (3) feet in height and fully enclosed with a self-locking gate.
- (e) An environmental impact report shall be submitted, addressing whether the facility is consistent with the comprehensive plan; whether the use will have an adverse impact on the surrounding area; and whether the noise level will impact the surrounding area. Additionally, the applicant shall submit a plan with any mitigation techniques that may be required. The Community Development Director shall review the environmental impact report, evaluate proposed mitigating techniques, and determine the sufficiency thereof, require any additional information relevant to the application, and make a recommendation to the Governing Body regarding approval or denial of the special use application.
- (f) In approving an aircraft landing area, the Governing Body may provide that the approval is conditioned on measures or restrictions designed to mitigate any negative impacts of the use. The proposed location of an aircraft landing area within six-hundred (600) feet of a residential zoning district or existing residential use may form the basis for denial of the application.

▪ **Adjacent Land Use and Zoning**

Adjacent uses include a church, various auto sale and service uses and undeveloped land. Nearby residential uses include “The Pines of Lanier” apartment complex located approximately 650±-feet to the east of the subject property.

Location	Use	Zoning
North	Undeveloped Land	Residential-I-A (R-I-A) -City
South	Vacant Land; Church	Agricultural Residential-III (AR-III) -County
East	Auto Repair; Auto Storage Lot	General Business (G-B) -City
West	Undeveloped Land	Residential-I-A (R-I-A) -City

▪ **Zoning History**

The following zoning actions have taken place in the immediate area during the last ten years:

2015 – A request by the Roman Catholic Archdiocese of Atlanta to amend a 14.233± acres tract located at 2436 S Smith Road zoned Planned Unit Development (P-U-D) was conditionally approved for a church.

2015 – A request by the Roman Catholic Archdiocese of Atlanta to amend and rezone a 4.899± acres tract located at 0 S Smith Road from Residential-I (R-I) to Planned Unit Development (P-U-D) was conditionally approved for a church.

2013 – A request by Foote & Miller Properties, LLC to annex a 2.72± acres tract located at 2420 Browns Bridge Road was approved with General Business (G-B) zoning for sewer for an existing auto dealership.

2012 – A request by Rescate 2000, Inc. for a special use on a 8.19± acres tract located at 2920 Florence Drive was approved with conditional Office and Institutional (O-I) zoning for a daycare center.

2010 – A request by Jose Delagarza to annex a 0.33± acre tract located at 3 Cherry Circle was approved with conditional Residential-I (R-I) zoning for sewer for an existing single-family residence.

2009 – A request by Car Store of Gainesville to annex a 0.45± acre tract located at 2650 Browns Bridge Road was approved with conditional General Business (G-B) zoning for an auto sales facility.

2009 – A request by Gainesville Church of God to annex a 3.0± acres tract located at 2920 Browns Bridge Road was approved with Residential-I (R-I) zoning for an existing church.

2008 – A request by Wayne Clark and Associates to annex and rezone a 2.48± acres tract located at 2484 S Smith Road from Agricultural Residential-III (AR-III) to General Business (G-B) for a retail center was approved with conditions.

2008 – A request by Trinity Presbyterian Church to rezone a 2.185± acres tract located at 2023 Memorial Park Drive from Residential-I (R-I) to General Business (G-B) was approved with conditions for an existing church and a new larger monument sign.

2007 – A request by Kwang Jung to annex a 2.12± acres tract located at 2800 Browns Bridge Road was approved with conditions with General Business (G-B) zoning for an auto repair / office.

▪ **Staff Analysis**

(1) Is the proposed use suitable in view of the zoning and development of adjacent and nearby property?

The subject property is located within a heavy commercial area off of Browns Bridge Road. Multi-family apartments are located to the northeast off of Pine Cove Circle and single-family residential homes are located to the southwest off of Browns Bridge Road. While there are residentially zoned properties adjacent to the subject property, the closest residential structure is located approximately 650± feet to the east within the Pines of Lanier apartment complex which is zoned Light Industrial (L-I).

The proposed use is unique in that there are no zoning districts within the city limits that inherently allow for a helipad without special use approval. Presently, there are two known helipads within the city limits located at Lee Gilmer Airport and Northeast Georgia Medical Center.

(2) Will the proposed use adversely affect the existing use or usability of adjacent or nearby property?

The primary impact created by the proposed use will be noise created and debris disturbed by the helicopter upon landing and taking off from the helipad. The applicant has stated that flight paths will avoid the nearby apartment complex to reduce noise impacts. According to the applicant there will be less than 10 helicopter landings and takeoffs each month during normal business hours.

(3) Is the proposed use compatible with the purpose and intent of the Comprehensive Plan?

The subject property is located within the *Retail/Commercial* land use category which includes commercial service activities such as grocery stores, banks, restaurants, theatres, hotels, and automotive related businesses. Commercial uses may be located as a single use in one building or grouped together in a shopping center.

According to the Character Area map for the City of Gainesville, the subject property is located within the *Browns Bridge Corridor* character area. The vision for this area encourages long term activity center nodes at the Memorial Park Drive and Pearl Nix Parkway intersections. Future public space improvements could include better pedestrian facilities and connections. Targeted redevelopment of outdated strip commercial is encouraged. Land uses allowed in the Browns Bridge Corridor are medium-density residential, multi-family residential, mixed-use, commercial, light industrial, and parks / recreation / conservation. The use of a helipad is not specifically mentioned within the Comprehensive Plan.

(4) Are there substantial reasons why the property cannot or should not be used as currently zoned?

The property is zoned General Business (G-B) which is intended for a mixture of commercial uses. The proposed helipad will be secondary to the primary use of the property which is a parking lot used to store vehicles for sale for Carriage Auto. If the request were denied, the existing parking lot could continue to be used for the parking of vehicles. The applicant states the parking lot is seldom full and sufficient free space is generally available for a helicopter landing.

(5) Will the proposed use cause an excessive or burdensome use of public facilities or services, including but not limited to streets, schools, water or sewer utilities, and police or fire protection?

The proposed use should have no impacts on streets, schools, water or sewer utilities, and police or fire protection. The subject property is easily accessible from Corporate Drive for emergency services. The closest fire station is Gainesville Fire Station #4 which is approximately 1.4 miles from the subject property off of Memorial Park Drive. The Gainesville Police currently patrol the subject property.

(6) Is the proposed use supported by new or changing conditions not anticipated by the Comprehensive Plan or reflected in the existing zoning on the property or surrounding properties?

The Comprehensive Plan expects this property to remain as commercial including much of the property located along Browns Bridge Road. Property to the north between Browns Bridge Road and McEver Road is seen as *Mixed-Use General* and *Medium-High Residential*.

(7) Does the proposed use reflect a reasonable balance between the promotion of the public health, safety, morality, or general welfare and the right to unrestricted use of property?

Due to the adjacent and nearby commercial development and the property's distance from existing residential uses, the proposed special use request appears to reflect a reasonable balance between the promotion of the public health, safety, morality, or general welfare and the right to unrestricted use of property.

▪ **Additional Analysis**

When considering the Special Use application, the criteria below shall be considered giving due weight or priority to those factors that are appropriate to the circumstances of the proposal:

(1) The type of street providing access to the subject property is adequate to serve the proposed Special Use.

The proposed use is located off of Corporate Drive which is adequate to serve the proposed use.

(2) Access into and out of the property adequately provides for traffic and pedestrian safety, the anticipated volume of traffic flow, and access by emergency vehicles.

The proposed use will not impact the vehicular traffic volumes within the immediate area. The helipad is required to be fenced with locking gate which will protect any unauthorized pedestrians from entering the landing area. The helipad location is accessible from Corporate Drive for emergency vehicles.

(3) Public facilities such as schools, water or sewer utilities, and police or fire protection are adequate to serve the Special Use.

There will be little to no impacts to public facilities given the nature of the request. Police and fire are capable of providing services to the property and currently serve adjacent properties.

(4) Refuse, service, parking and loading areas on the property are located and screened to protect other properties in the area from such adverse effects as noise, light, glare or odor.

The neighboring properties located off of Corporate Drive are auto sales/repair businesses which are owned by the applicant and the neighboring Milton Martin Honda. The proposed location of the helipad appears to be reasonable given its location at the end of Corporate Drive. However, the adjacent uses will still be impacted by the noise created and possible debris disturbed from the helicopter.

(5) The hours and manner of operation of the Special Use have no adverse effects on other properties in the area.

According to the applicant there will be no more than 10 takeoffs and landings a month between the hours of 9:00 A.M. and 6:00 P.M. In addition, the applicant states the flight pattern will be over wooded areas so as to minimize impacts of noise on the nearby apartment complex.

- (6) The height, size and location of the buildings or other structures proposed on the property are compatible with the height, size or location of buildings or other structures on neighboring properties.

There are no buildings proposed for the use.

▪ **Staff Recommendation**

The Planning Division staff is recommending **conditional approval** of this special use request based on the adjacent and nearby commercial development and the property's distance from existing residential uses.

Conditions

1. The Special Use Permit contained in this application shall be valid for no more than a two year period at which time the Special Use Permit must be reapplied for and approved by the Governing Body to continue the use.
2. The applicant shall provide to the City of Gainesville Community Development Department proof of annual liability insurance coverage on the operation and use of the proposed helipad. Such coverage shall be obtained from an insurer authorized or licensed to transact insurance business in Georgia and shall provide a minimum liability coverage of at least \$500,000 per claim. The proof of liability shall be provided January 1st of every year.
3. The applicant shall provide to the City of Gainesville documentation that the proposed helipad meets Federal Aviation Administration requirements.
4. The use of the proposed helipad shall be limited to the hours of 9:00 A.M. to 6:00 P.M.
5. The proposed helipad shall be fully enclosed to include a minimum 3-foot tall safety barrier fence with a locking gate.
6. The flight pattern of any helicopter using the proposed helipad shall avoid crossing over the airspace directly above the nearby "Pines of Lanier" apartment complex or any future adjacent residential use.

Excerpts from the May 9, 2017 Planning and Appeals Board Meeting Minutes

Applicant Presentation: John Kennedy, 2350 Browns Bridge Road, stated he was the CFO for Carriage North, LLC and stated the helipad would only be used 8 or 10 times per month and they had no problem with the proposed conditions, noting they had already made application with the Federal Aviation Administration (FAA). Mr. Kennedy stated they have over a million dollars of coverage on the helicopter already which is used by the owner, David Basha, to travel back and forth from a new dealership he opened in Woodstock.

FAVOR: None

OPPOSE: Attorney Jim Walters, 311 Green Street, stated he represented H & T, LLC, whose principle is Mark Hurst. He stated that if the special use request was approved, Mr. Hurst's property, which is zoned residential and within approximately 150-feet from the proposed helipad, would be automatically devalued. Mr. Walters also shared the following concerns: It would be difficult for him to sell his property; The uses for his property would be drastically

diminished; Safety issues; and Many people would not even consider buying a property with a helicopter flying overhead and within 150-feet from a helipad. He stated no one had issues with the helicopters used by the hospital or the police because they serve a purpose and saves lives, even though they are very loud, intrusive, and cause noise pollution. However, Mr. Walters stated the applicant is requesting Mr. Hurst to give up the value for his property for the inconvenience of a 10 minute drive to/from the airport. If the special use is approved, the FAA will get involved and can limit the height of buildings in the area and have all types of regulations. He stated the subject property was too small for a helipad and felt it was a slippery slope because others may want to do the same. Mr. Walters respectfully asked the Board to deny the request.

Rustin Smith, 200 Main Street, Stewart Melvin & Frost attorney, stated he represented Smith Motors Realty Corporation which owns the Cadillac of Lake Lanier dealership across Browns Bridge Road from the subject property. He stated Mr. Walters had covered a lot of his points, but felt his client was representative of other dealerships in the area. He stated the helicopter has been causing problems for his client as the applicant has been using the subject property as a helipad for years, ever since his client owned his business. He stated the helicopter hovers over his client's dealership causing the walls and glass to rattle and forcing his client to contact the Police who gave a citation to either the pilot or the owner but had continued at least once since then. Mr. Smith stated some of the concerns were as follows: Flammable materials were a safety concern; Applicant was showboating and causing a distraction for customers at the dealerships; Causes wind gusts; Noisy; and It goes against the grain of what the City is trying to do along the Browns Bridge Road corridor with signage requirements and trying to make it look less commercial and industrial. He stated his client has expensive inventory if something happened and asked why the proposed helipad was needed. The request comes down to the benefit of one owner for his personal use. He stated the pilot told the Police they were giving rides to children at the dealership, but it appears that was not the case since the helicopter is only for the owner's personal use according to Mr. Kennedy. Mr. Smith respectfully asked the Board to deny the request.

Martin Pecora, 2355 Browns Bridge Road, Cadillac of Lake Lanier, stated the helicopter is landing and taking off more than 10 times a month. He stated he has lived through helicopter crashes and knows what it could do to someone, noting if it were to crash on one of the car lines or in the middle of Browns Bridge Road, you can't stop the detonation and it would spread to both sides of the road. Mr. Pecora stated he did not want to be responsible for the damage that could be done to families and employees if something were to happen. He stated there was a reason helipads are located at airports and it is too congested in the Browns Bridge Road corridor to have one. He stated no matter how good a pilot was the helicopter could crash and Gainesville or no one else is equipped to handle such a detonation.

REBUTTAL: **John Kennedy** stated that as far as he knew, they had never hovered over the Cadillac dealership because the approach area does not even cross over their property. He stated he did not know there was opposition to the request since there are currently no homes in the immediate area. Mr. Kennedy stated the helicopter was small and only stays on the ground for 15 to 20 minutes and only 8 to 10 times per month and should not create a lot of problems for anyone. He stated there was no one living in the area to the rear of the subject property where the trees are and did not think there would be anything back there for at least two years. Mr. Kennedy stated he was sorry the Cadillac dealership was having problems but the helicopter simply was not large enough to rattle walls and windows of businesses.

Planning and Appeals Board Comments: None

There was a motion to recommend denial the special use request.

Motion made by Vice-Chair Fleming

Motion seconded by Board Member Martin

Vote – 7 favor

RESOLUTION ZR-2017-____

**APPROVAL OF A REQUEST FOR A SPECIAL USE
SUBJECT TO APPROVAL BY THE CITY COUNCIL**

WHEREAS, under **Chapter 9-6-5 G-B General Business District** of the Unified Land Development Code of the City of Gainesville, Georgia; **Section 9-6-5-2 Permitted and Special Uses** allows an *aircraft landing area* subject to City Council approval after review and recommendation by the Gainesville Planning and Appeals Board; and

WHEREAS, an application has been received from **Carriage North, LLC** to allow a *helipad* within a General Business (G-B) zoning district identified as follows:

**08-007-001-042
2425 Corporate Drive
Ward Five**

WHEREAS, the application has been evaluated under any criteria specified in the aforesaid section; and

WHEREAS, the **Gainesville Planning and Appeals Board** held a public hearing regarding this matter on **May 9, 2017**.

NOW, THEREFORE, BE IT RESOLVED THAT the governing body for the City of Gainesville hereby approves the applicant's request for a special use permit as stated above and subject to all the terms of the Unified Land Development Code with the following conditions:

Conditions

- 1. The Special Use Permit contained in this application shall be valid for no more than a two year period at which time the Special Use Permit must be reapplied for and approved by the Governing Body to continue the use.**
- 2. The applicant shall provide to the City of Gainesville Community Development Department proof of annual liability insurance coverage on the operation and use of the proposed helipad. Such coverage shall be obtained from an insurer authorized or licensed to transact insurance business in Georgia and shall provide a minimum liability coverage of at least \$500,000 per claim. The proof of liability shall be provided January 1st of every year.**
- 3. The applicant shall provide to the City of Gainesville documentation that the proposed helipad meets Federal Aviation Administration requirements.**
- 4. The use of the proposed helipad shall be limited to the hours of 9:00 A.M. to 6:00 P.M.**
- 5. The proposed helipad shall be fully enclosed to include a minimum 3-foot tall safety barrier fence with a locking gate.**
- 6. The flight pattern of any helicopter using the proposed helipad shall avoid crossing over the airspace directly above the nearby Pines of Lanier apartment complex or any future adjacent residential use.**

RESOLUTION ZR-2017-__

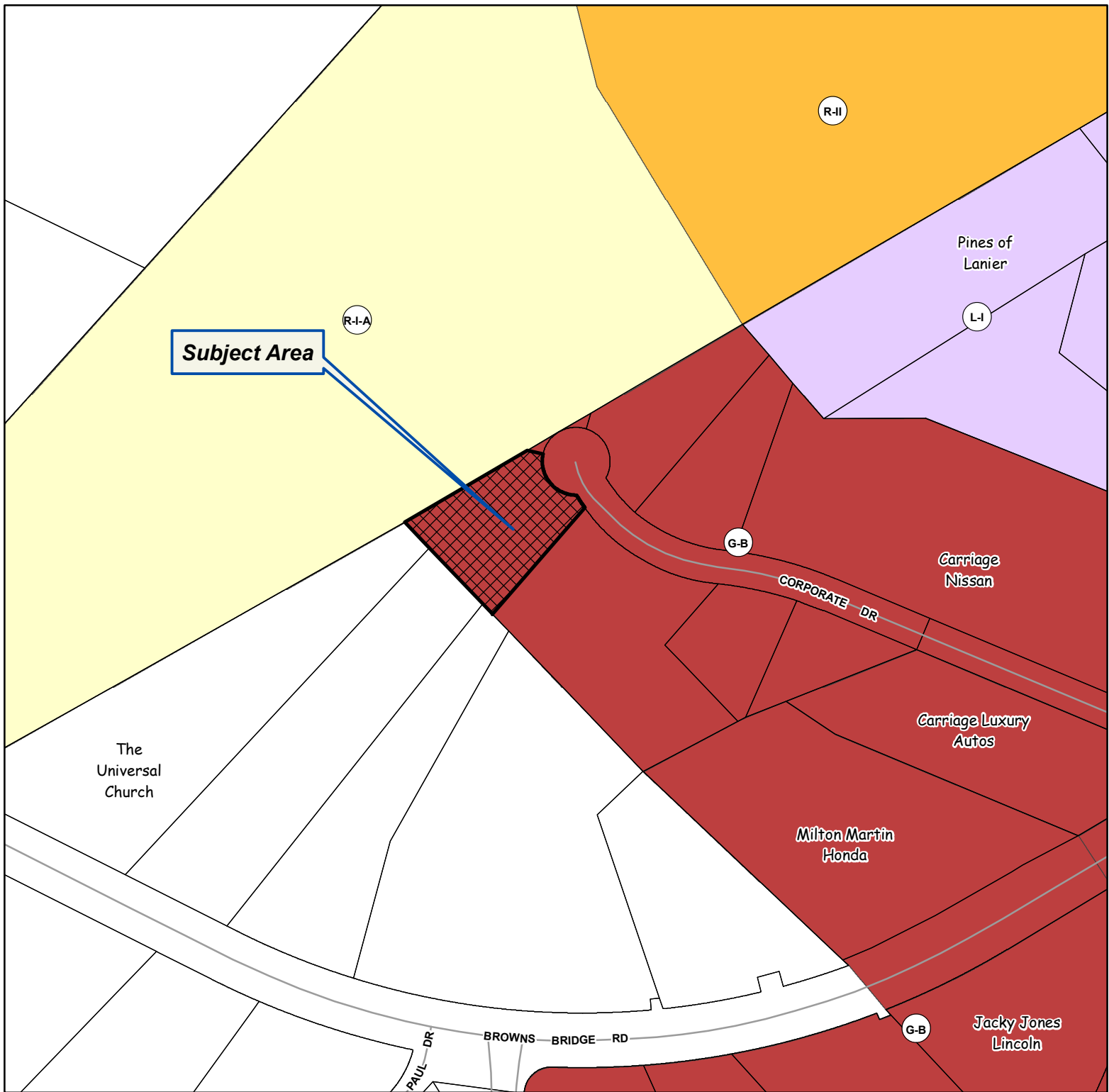
Adopted this _____ day of _____, 2017.

C. Danny Dunagan, Jr., Mayor

This is to certify that I am City Clerk of the City of Gainesville. As such, I keep its official records, including its minutes. In that capacity, my signature below certifies this resolution was adopted as stated and will be recorded in the official minutes.

ATTEST:

Denise O. Jordan, City Clerk



Applicant:

CARRIAGE NORTH, LLC

SPECIAL USE REQUEST



Request:

Special Use within the General Business (G-B) zoning district (0.71+/- acre tract), for a helipad

Subject Area Address:

2425 Corporate Drive

Meeting: 5/9/2017

Prepared: 4/20/2017

Gainesville Community Development Department



Subject Area



0 120 240 360 480 Feet

1" = 200'

Tax Parcel: 08-007-001-042



Applicant:

CARRIAGE NORTH, LLC

SPECIAL USE REQUEST



Request:

Special Use within the General Business (G-B) zoning district (0.71+/- acre tract), for a helipad

Subject Area Address:

2425 Corporate Drive

Meeting: 5/9/2017

Prepared: 4/20/2017

Gainesville Community Development Department



Subject Area

Aerial from 2015

0 120 240 360 480 Feet



1" = 200'

Tax Parcel: 08-007-001-042

Page 1335 of 1377

**NARRATIVE REPORT IN SUPPORT OF APPLICATION FOR SPECIAL
USE PERMIT FOR HELISTOP**

Carriage North, LLC proposes to use a secured parking lot which it owns, located at 2425 Corporate Drive, Gainesville, Georgia 30504 (“the Property”), as a helicopter take-off and landing area for a single helicopter that will transport the principal of Carriage North, David Basha. Mr. Basha wishes to use the Property for efficient personal transportation via helicopter between multiple business properties which he and his affiliated companies operate.

A survey plat showing the boundaries of the Property is enclosed herewith. A separate copy of that survey is also enclosed with markings showing the proposed takeoff and landing area. This marked-up copy of the survey is submitted as this applicant’s concept plan.

The helicopter to be used by Mr. Basha is a 2013 Robinson R44 helicopter (the “Helicopter”), which will be piloted by Ron Carroll of Blue Ridge Helicopters, Inc. Blue Ridge Helicopters, Inc. has insured the Helicopter against liability with limits of \$5,000,000. A copy of the Certificate of Insurance providing said coverage is enclosed herewith. It is not expected that any other aircraft will use the Property for takeoff or landing purposes.

At present, the Property is used as overflow parking for the Carriage Nissan automobile dealership located at 2400 Browns Bridge Road, Gainesville, GA 30504. The parking lot is seldom full, and sufficient free space is generally available for a helicopter landing. The Property is securely fenced with chain link fencing which has a lock to secure the area against unauthorized access.

It is expected that the Property will be used for less than ten helicopter takeoffs and landings each month. All takeoffs and landings are expected to occur during or in close proximity to normal business hours, between 9:00AM and 6:00PM.

An aerial photograph of the Property with arrows marking the proposed flight paths of the helicopter during takeoffs and landings directions is enclosed. The flight paths are over wooded areas near the Property and avoid developed or populated areas,

Applicant believes that the Property is not within 600 feet of any property zoned as residential real estate, as indicated in City Ordinance 9-10-10-1. There is an apartment complex, known as Pines of Lanier, which is located near the Property. Applicant has been informed that the apartment complex is not zoned as residential real estate. Out of respect for the residents of said apartment complex, the proposed flight paths avoid crossing over the airspace directly above or adjacent to the apartment complex. The significant wooded area between the Property and the apartment complex is expected to dampen any noise resulting from the proposed use of the Property.

This application does not propose any new construction or physical alteration of existing improvements on the Property. This application is solely for the purpose of obtaining a permit to use the existing parking lot as a helicopter takeoff and landing area. It is expected that any environmental impact will be negligible, because this application does not propose any physical alteration to the Property. As such, this application is submitted without an environmental impact report.

CONCEPT PLAN

SURVEYOR'S NOTES:

1. THIS PROPERTY IS NOT LOCATED WITHIN A FLOOD HAZARD AREA AS PER FIRM FLOOD INSURANCE RATE MAP CITY OF GAINESVILLE, FL, COMMUNITY PANEL NO. 130253 D188 F, EFFECTIVE DATE: 05/25/2006. THIS OPINION IS NOT A CERTIFICATION OF FLOOD HAZARD STATUS, BUT IS AN INTERPRETATION OF THE REFERENCED MAP AND PUBLIC DATA. IF THE EXACT LOCATION OR ELEVATIONS OF THE FLOOD HAZARD BOUNDARIES ARE NECESSARY, A MORE DETAILED STUDY MAY BE NEEDED. THIS FIRM ASSUMES NO RESPONSIBILITY OR LIABILITY FOR THE ACCURACY OF THE REFERENCED MAP OR PUBLIC DATA.
2. THIS SURVEY WAS PREPARED ON THE GEORGIA STATE PLANE COORDINATE SYSTEM, TRANSVERSE MERCATOR PROJECTION, WEST ZONE, NORTH AMERICAN DATUM OF 1983/2007 ADJUSTMENT. THE COMBINED SCALE FACTOR FOR THIS SITE IS: 0.99999957. (GRID DISTANCE/SCALE FACTOR=GROUND DISTANCE). ALL COORDINATES SHOWN HEREON ARE GRID COORDINATES UNLESS OTHERWISE STATED.
3. CONVENTIONAL EQUIPMENT USED FOR MEASUREMENT WAS EITHER A TOPCON C.I.S. 925A OR TOPCON PS 103. GPS EQUIPMENT USED FOR MEASUREMENT WAS A CHAMPION TWO GNSS RECEIVER USING REALTIME KINEMATIC OBSERVATIONS PROCESSED THROUGH THE CGPS NETWORK.
4. THE FIELD DATA UPON WHICH THIS PLAN IS BASED HAS A CLOSURE PRECISION OF ONE FOOT IN 45,741 FEET AND AN ANGULAR CLOSURE OF 00' 00" PER ANGLE POINT, AND WAS ADJUSTED USING LEAST SQUARES RULE. FIELD PARTY J.J. & H.R.
5. THIS PLAN HAS BEEN CALCULATED FOR CLOSURE AND WAS FOUND TO BE ACCURATE WITHIN ONE FOOT IN +27,069 FEET.
6. THE SURVEY WAS PREPARED WITHOUT THE BENEFIT OF TITLE REVIEW AND IS SUBJECT TO ANY RESERVATIONS, RESTRICTIONS, RIGHTS-OF-WAY AND EASEMENTS OF RECORD.
7. THIS PLAN OF SURVEY IS FOR THE EXCLUSIVE USE OF THE PARTIES LISTED UNDER THE CAPTION "SURVEY FOR" ANY THIRD PARTY USE TO BE AT THEIR OWN RISK.
8. THE FIELD SURVEY WAS CONDUCTED ON 12/04/2014.

REFERENCES:

1. DEED BOOK 3473, PAGES 403-404
2. PLAT BOOK 120, PAGES 254-255

STATE WATERS BUFFER:

AN UNDISTURBED VEGETATIVE BUFFER MEETING CITY AND STATE REGULATIONS WILL BE PRESERVED ADJACENT TO ALL STREAMS AND LAKES. BUFFER IS TO BE MEASURED HORIZONTALLY FROM POINT WHERE VEGETATION HAS BEEN WRESTED BY NORMAL STREAM FLOW OR WAVE ACTION.

LOT 4 = AREA: 0.70 ACRES
 LOT 5 = AREA: 0.71 ACRES
 AREA 1 = 0.007 ACRES (318.93 SQ. FT.)
 AREA 2 = 0.007 ACRES (319.20 SQ. FT.)

Red circle shows approximate proposed landing and take-off zone for helicopter

SURVEYOR'S CERTIFICATE

It is hereby certified that this plan is true and correct and was prepared from an actual survey of the property by me or under my supervision; that all monuments shown thereon actually exist. The field data upon which this plan is based has a closure precision of one foot in 45,741 feet, and an angular error of 00'00" per angle point, and was adjusted using Crandall rule. This plan has been calculated for closure and is found to be accurate within one foot in 45,741 feet.

Chris M. Patton
 By: CHRIS M. PATTON
 Registered Georgia Land Surveyor No. 2647

Patton Land Surveying
 P.O. Box 256
 Gainesville, GA 30503
 Phone: (770) 532-6492
 Fax: (770) 532-1895
 E-Mail: cpatt@pattonlandsurveying.com
 Date: DECEMBER 5, 2014

OWNER'S CERTIFICATE

State of Georgia
 City of Gainesville, County of Hall

The undersigned certifies that he or she is the owner and subdivider of the land shown on this plan and that the plan and the public and private improvements contained therein or associated therewith meet all applicable requirements and standards of the Gainesville Unified Land Development Code. The owner further acknowledges this plan and its contents to be his free act and deed, and dedicates to the Public forever all areas shown or indicated on this plan as public streets, easements or other public use areas, and all water system, sewerage and other public improvements (hereinafter "facilities"). However, the City of Gainesville will not take ownership and maintenance of these facilities until such time as the undersigned petitions for and the Governing Body of the City of Gainesville accepts the dedication and acceptance of the facilities as provided in section 9-13-14-12 of the Gainesville Unified Land Development Code and provides a maintenance bond as required in sections 9-13-15-9 and 10.

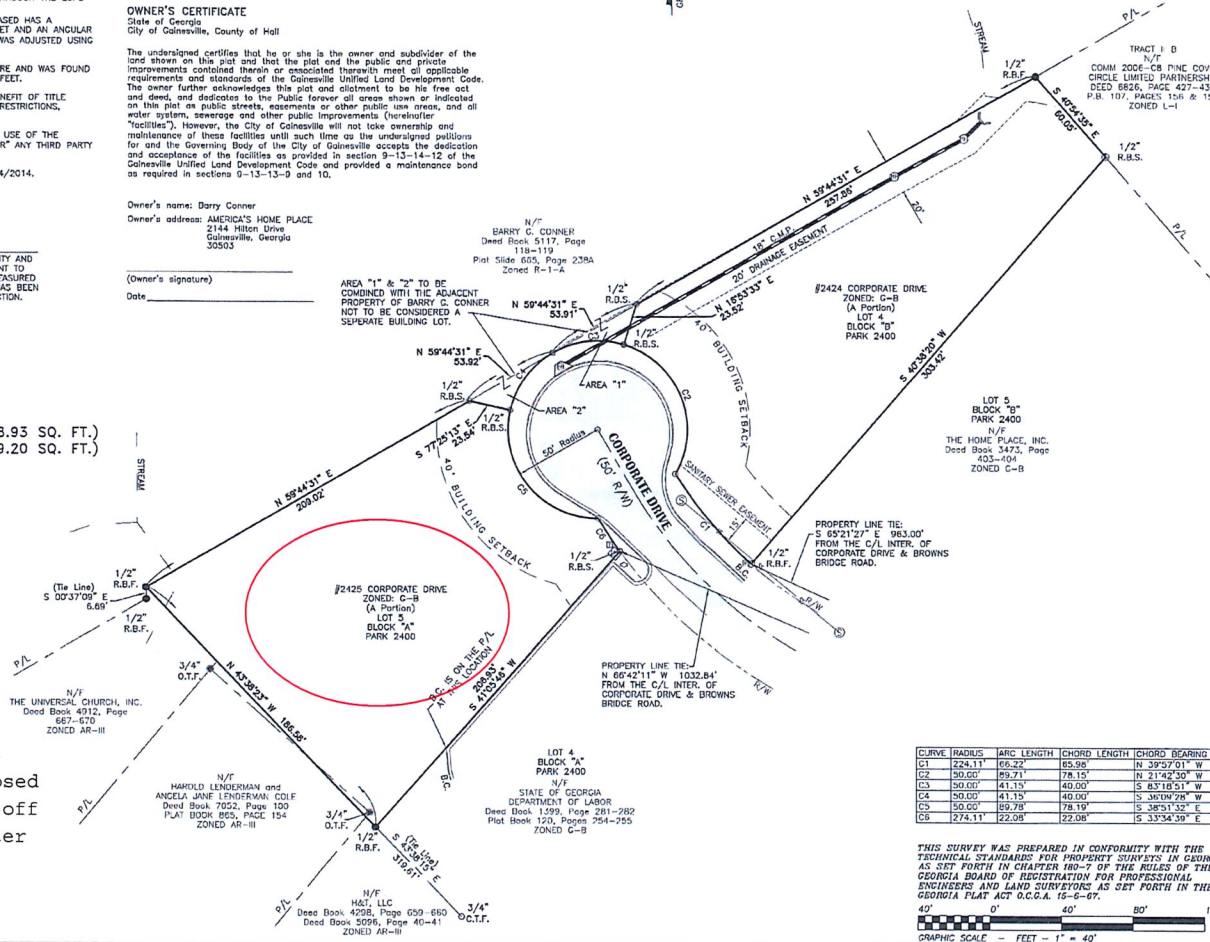
Owner's name: Darryl Conner
 Owner's address: AMERICA'S HOME PLACE
 2144 Hitten Drive
 Gainesville, Georgia 30503

(Owner's signature)

Date:

LEGEND:

- C.M.F. - CONCRETE MONUMENT FOUND
- C.T.F. - CRIMP TOP PIN FOUND
- R.B.F. - REBAR FOUND (SEE DRAWING FOR SIZE)
- O.T.F. - OPEN TOP FOUND (SEE DRAWING FOR SIZE)
- I.P.F. - IRON PIN FOUND
- J.B. - JUNCTION BOX
- C.P. - CALCULATED POINT
- C.R. - CABLE RISER
- T.R. - TELEPHONE RISER
- P.B. - POWER TRANSFORMER BOX
- W.M. - WATER METER
- W.V. - WATER VALVE
- F.H. - FIRE HYDRANT
- S.C.M.H. - SANITARY CENTER MANHOLE
- C.V. - SANITARY GATE VALVE
- E.P. - EDGE OF PAVEMENT
- B.C. - BACK OF CURB
- C.M.P. - CORRUGATED METAL PIPE
- D.S.L. - DURED SEWER LINE
- P/L - PROPERTY LINE
- R/W - RIGHT-OF-WAY
- N/F - NOW OR FORMERLY
- S/B - SETBACK
- Z - CONTINUOUS OWNERSHIP



CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING
C1	224.11'	89.22'	65.98'	N 39°27'01" W
C2	50.00'	89.71'	78.15'	N 21°42'50" W
C3	50.00'	41.15'	40.00'	S 83°16'51" W
C4	50.00'	41.15'	40.00'	S 38°57'28" W
C5	50.00'	89.78'	78.19'	S 38°51'52" E
C6	274.11'	22.09'	22.08'	S 33°54'39" E

THIS SURVEY WAS PREPARED IN CONFORMITY WITH THE TECHNICAL STANDARDS FOR PROPERTY SURVEYS IN GEORGIA AS SET FORTH IN CHAPTER 180-7 OF THE RULES OF THE GEORGIA BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS AND LAND SURVEYORS AS SET FORTH IN THE GEORGIA PLAT ACT O.C.G.A. 16-6-87.

GRAPHIC SCALE - FEET - 1" = 40'

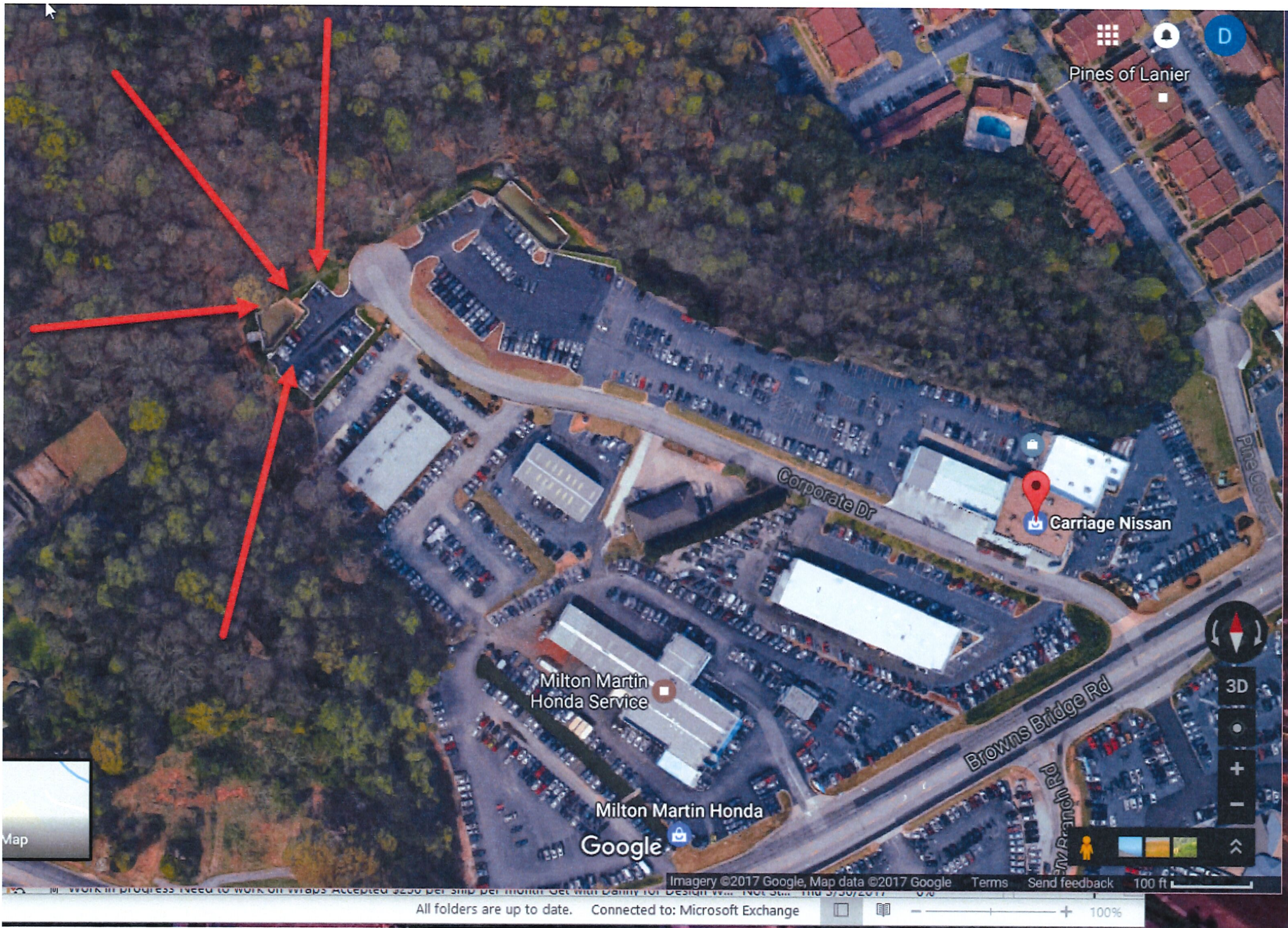
REGISTERED PROFESSIONAL LAND SURVEYORS
 P.O. BOX 256
 GAINESVILLE, GA 30503
 PHONE: (770) 532-6492
 FAX: (770) 532-1895
 www.pattonlandsurveying.com
 SURVEYED BY: J.J. & H.R.
 COMPUTATIONS BY: C.M.P.
 CHECKED BY: R.C.H.

GEORGIA REGISTERED PROFESSIONAL LAND SURVEYOR
 No. 2647
 Chris M. Patton

RETRACEMENT / SUBDIVISION SURVEY FOR:
 THE HOME PLACE, INC.
 BEING LOT 4 - BLOCK "B" AND LOT 5 BLOCK "A" PARK 2400 LOCATED IN
 LAND LOT 7
 8TH LAND DISTRICT
 CITY OF GAINESVILLE
 HALL COUNTY, GEORGIA

REVISIONS:
 DATE:

SHEET NUMBER:
 1 of 1
 SCALE: 1" = 40'
 SURVEY DATE: 12/04/2014
 PLAT DATE: 12/05/2014
 16-1118A-A
 JN. 14-111





CERTIFICATE OF AIRCRAFT INSURANCE

DATE (MM/DD/YYYY)

02/10/2017

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER
Southwest Aviation Ins Group of AZ Inc.
14415 N. 73rd Street, Ste 115
Scottsdale, AZ, 85260

CONTACT
NAME:PHONE
(A/C, No, Ext):FAX
(A/C, No):

E-MAIL ADDRESS:

PRODUCER CUSTOMER ID No.

INSURED
Blue Ridge Helicopters, Inc.

c/o Ron Carroll, 850 Airport Rd.
Lawrenceville, GA, 30046

INSURER(S) AFFORDING COVERAGE

%

NAIC No.

INSURER A: U.S. SPECIALTY INSURANCE COMPANY

100%

INSURER B:

INSURER C:

INSURER D:

INSURER E:

INSURER F:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

POLICY INFORMATION**CERTIFICATE NUMBER:****REVISION NUMBER:**

POLICY TYPE				LINE OF BUSINESS SUBCODE			
☐ INDUSTRIAL AID	☐ PLEASURE & BUS	☒ COMMERCIAL	☐ AIRPLANE	☒ HELICOPTER	☐ MIXED FLEET	☐ EXCESS	☐ QUOTA SHARE
☐ NON-OWNED			☐ LIABILITY ONLY	☒ HULL & LIABILITY	☐ HULL ONLY		

AIRCRAFT INFORMATION**ACORD 333, Aircraft Schedule attached**

YEAR 2013	MAKE ROBINSON	MODEL R44	SERIAL NUMBER	REGISTRATION NUMBER N1958C
TERRITORY:				

AIRCRAFT COVERAGES

INSURER LETTER	POLICY NUMBER	EFFECTIVE DATE	EXPIRATION DATE	ADDITIONAL INSURED? (Y/N)	SUBROGATION WAIVED? (Y/N)
	AC3001524-02	10/28/2016	10/28/2017	Y	N
COVERAGE	OPTIONS	LIMIT	APPLIES TO	LIMIT	APPLIES TO
AIRCRAFT HULL	☒ ALL RISK GROUND AND FLIGHT	\$ 400,000	AGREED VALUE	\$ 1,000	Ded. - Not in motion
	☐ ALL RISK GROUND ONLY			\$ 20,000	Ded. - In motion
AIRCRAFT LIABILITY	☒ LIABILITY	\$ 5,000,000	EA OCC	\$	EA PER
		\$ 100,000	EA PASS	\$	AGGR
MEDICAL PAYMENTS	☒ INCLUDING CREW	\$ 5,000	EA PER	\$ 20,000	EA OCC
	☐ EXCLUDING CREW				
COVERAGE	OPTIONS	LIMIT	APPLIES TO	LIMIT	APPLIES TO
CODE	DESCRIPTION				

DESCRIPTION OF OPERATIONS / REMARKS (Attach ACORD 101, Additional Remarks Schedule, if more space is required)

Certificate Holder is included as an Additional Insured.

CERTIFICATE HOLDER**CANCELLATION**

Galleria Common Area Associates, LLC; Childress Klein Properties, Inc.; CK Galleria Associates, LLC; Piedmont 200 Galleria Owner, LLC; Piedmont 300 Galleria, LLC; CK Galleria 300 Associates, LLC; OTR; Galleria 400, LLC; Galleria 600, LLC; CK Galleria 600 Associates, LLC; Galleria Management Services Limited Partnership; Galleria Management Services, Inc.; Galleria Management, LLC; Galleria Retention Area Associates, Inc.; Institute of Nuclear Power Operations, Inc. and each of their affiliates, shareholders, directors, officers, employees, agents and representatives.
300 Galleria Parkway SE Ste. 200, Atlanta, GA 30339

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

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ACORD 21 (2009/12)

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Zoning Action Request



CITY OF GAINESVILLE APPLICATION FOR ZONING ACTIONS

FOR APPLICATION REQUIREMENTS, REFER TO CHAPTER 9-22-2
OF THE UNIFIED LAND DEVELOPMENT CODE

Date Application Made 3/31/2017 Tentative City Council Meeting Date(s)
First Reading 6/10/2017
Planning & Appeals Board Meeting Date 5/9/2017 Second Reading 6/10/2017

Applicant Information

Name	Carriage North, LLC
Address	2350 Browns Bridge Rd.
City/State/Zip	Gainesville, GA 30504
Phone	contact: DAVID L. TURNER
Cell	404.168.6303
Email	d.turner@swtdlaw.com

Property Owner Information

Name	Carriage North, LLC
Address	2350 Browns Bridge Rd.
City/State/Zip	Gainesville, GA 30504
Phone	
Cell	
Email	

Status of Applicant

☒	Current Property Owner
☐	Option to Purchase
☐	Area Resident
☐	Other (Explain)

Zoning Request

Existing Zoning	G-B		
Rezone To			
☐	Zoning Amendment	☐	Text Amendment
☐	Site Plan Review	☐	Road Action Request
☐	Special Use Permit	☐	Other (Explain)

Parcel Information

Tax Parcel Number(s)	08007001042	Ward No.	5
Location (Street Address)	2425 Corporate Drive, Gainesville, GA	Acres	0.71
Existing Structure(s)	PARKING LOT		
Description of Proposed Use	Helipad / Helipad		

Fee Information

Rezoning Request, or	\$ 500.00
Zoning Amendment Request, or	\$ 500.00
Site Plan Review	\$ 500.00
Special Use Permit	\$ 400.00
Text Amendment	\$ 400.00
Road Action Request	\$ 250.00
Amount Due (Include all fees required)	\$ 400.00

Method of Payment

☒	Paid by Check	Check No.	17531
☐	Paid Cash	Receipt No.	1821618

Supporting Documents Required

☒	Concept Plan Prepared by a Professional Engineer, Registered Land Surveyor, Architect, or Landscape Architect
☒	One full scale, One reduced to 8.5 x 11 & a PDF, TIFF or JPEG format
☒	Plat
☒	One full scale, One reduced to 8.5 x 11 & a PDF, TIFF or JPEG format
☒	Legal Description of Property
☒	Word DOC or DOCX format
☒	Narrative Report As required by code - PDF format
☒	Architectural Rendering
☒	One full scale, One reduced to 8.5 x 11 & a PDF, TIFF or JPEG format
☒	Traffic Impact Study As required by code - PDF format
☒	DRI Review Large scale projects only - PDF format
☐	Other Explain

Applicant's Certification: I hereby certify the above information, and all attached information, is true and correct; and that I have read, understand, and have received a copy of the Public Notice Requirements.

Signature of Applicant [Signature]

Date 3-31-17

Application Taken By [Signature]

Date 3.31.17

Application **WITHDRAWAL** Notification: I hereby withdraw the above application.

Signature of Applicant [Signature]

Date 5/30/17

CITY OF GAINESVILLE

WORKSESSIONREQUEST

Date Submitted: 5/3/2017
Presenter: Angela Sheppard
Item of Business: Resolution: Lease Agreement for Installation of Public Art
Meeting Date: 6/1/2017

Purpose of Request:

The Vision 2030 Public Art Committee would like to install a tile mosaic design on a wall fronting Pearl Nix Parkway near the intersection of Queen City Parkway. The tile mosaic will be installed in phases, as funding allows. The initial phase will be along an approximately 10 foot section of the wall.

The resolution also requests \$5,000 of funding from Council Contingency. The \$5,000 will match private donations and allow an additional phase of the tile mosaic to be completed.

History/Background:

The wall is owned by the City of Gainesville. The City would lease a panel of the wall to the Greater Hall Chamber of Commerce - Vision 2030 Public Art Committee. Maintenance and Insurance for the art and leased segment of the wall would be provided through an existing endowment with the Community Foundation Vision 2030 Public Art Committee.

Facts & Issues for Consideration:

The City has previously entered into a Lease of External Wall Space with the GHCC Vision 2030 Public Art Committee for the installation of Free Range Art.

The City will maintain the portion of the wall not leased to GHCC.

Department Recommendation:

Approve the Resolution

Department Director:

Bryan Lackey

If funding is involved, are funds approved within the current budget?

No

Amount Requested:

5,000

Source of Funds:

Council Contingency

Finance Comments:

Administrative Comments:

ATTACHMENTS:

Description	Type
☐ Lease Agreement for Installation of Public Art	Resolution
☐ Public Art Lease Agreement	Contract/Agreement/MOU
☐ Art Image - Draft	Backup Material
☐ Pearl Nix Parkway Wall Image	Contract/Agreement/MOU

RESOLUTION BR-2017 - ____

LEASE AGREEMENT FOR INSTALLATION OF PUBLIC ART

WHEREAS, the Vision 2030 Public Art Committee of the Greater Hall Chamber of Commerce (the "Public Art Committee") developed a "Free Range Art" project to install public art on exterior facades within the City; and

WHEREAS, as part of the "Free Range Art" project the Public Art Committee has requested a Lease Agreement for external wall space for an art Installation; and

WHEREAS, the art is to be installed in phases on an external wall owned by the City located adjacent to Pearl Nix Parkway, bounded on the northeast by Queen City Parkway, extending southwest toward Dorsey Street; and

WHEREAS, the City of Gainesville recognizes that public art contributes to a sense of place and plays a significant role in helping create a vibrant and well-rounded community; and

WHEREAS, the City is supportive of the Public Art Committee and its initiatives that further enrich Gainesville; and

WHEREAS, the City desires to enter into the Lease Agreement for external wall space for the installation of public art, which is attached hereto as Exhibit A; and

WHEREAS, the City also desires to contribute \$5,000 for an additional phase of the art installation on the wall.

NOW, THEREFORE, BE IT RESOLVED THAT the governing body for the City of Gainesville hereby authorizes the Mayor and/or City Manager to execute the attached Lease Agreement between the City of Gainesville and the Greater Hall Chamber of Commerce; and

BE IT FURTHER RESOLVED THAT the governing body also authorizes the payment of \$5,000 to the Greater Hall Chamber of Commerce Public Art Committee from the Council Contingency of the FY17 General Fund.

Adopted this ____ day of _____, 2017.

C. Danny Dunagan, Jr., Mayor

This is to certify that I am City Clerk of the City of Gainesville. As such, I keep its official records, including its minutes. In that capacity, my signature below certifies this resolution was adopted as stated and will be recorded in the official minutes.

ATTEST:

Denise O. Jordan, City Clerk

LEASE OF EXTERNAL WALL SPACE

This Lease of External Wall Space executed as of the _____ day of _____, 2017, is entered into between the City of Gainesville, Georgia as “Lessor” and Greater Hall Chamber of Commerce, Inc. as “Lessee” for the use of certain space on an external wall, as described below (the “Agreement”).

Lessee, through its *Vision 2030 Public Art Committee’s “Free Range Art Project,”* desires to promote the display of public art throughout Hall County, Georgia, including in part on buildings or structures that are visible to the public, and Lessor recognizes the intrinsic benefits associated with Public Art and desires to support Lessee’s *Vision 2030 Public Art Committee’s “Free Range Art Project.”*

THEREFORE, for \$10.00 and other good and valuable consideration, the receipt and sufficiency of which the parties hereby acknowledge, the parties agree as follows:

1. Lease of Wall Space. Lessor will lease space on an external wall owned by the Lessor located near the intersection of Queen City Parkway and Pearl Nix Parkway (the “Wall”) for the installation of an image, graphic or other form of art (the “Art”). The Wall is 14 feet high and adjacent to Pearl Nix Parkway, bounded on the northeast by Queen City Pkwy, extending southwest toward Dorsey Street. Lessor will lease one panel of the Wall and, upon request from Lessee, Lessor may lease up to 12 additional panels of the Wall when additional Art is completed and ready for installation.

2. Term of Agreement. This Agreement is in effect for a period of five (5) years beginning on the _____ day of _____, 2017 and ending on the _____ day of _____, 2022 (the “Term”). At the end of the Term, in the event that the Art is not removed from the Wall, this Agreement shall continue on a month-to-month basis upon the same terms as contained in this Agreement until terminated as provided in this Agreement.

3. Prior Approval Required. Prior to displaying the Art upon the Wall, Lessee shall obtain Lessor’s written consent as to the Art to be displayed. Lessee may not change the Art being displayed upon the Wall at any time without prior written consent of the Lessor. Lessee contemplates the initial installation of Art on approximately the 8th panel of the Wall from Queen City Parkway. The final location of the panel to be leased will be requested by Lessee and approved by Lessor prior to installation of the Art.

4. Installation and Repair. Lessee may install at Lessee’s sole expense a board and other fixtures as needed to display and secure the Art upon the Wall. Lessee will install the Art no lower than 7 feet from the ground. Maintenance of the Art and the panel(s) of the Wall upon which Art is installed will be the responsibility of the Lessee. Lessee agrees to maintain Art and panel(s) of the Wall in a good condition in a manner acceptable to Lessor. In the event that Lessor determines, in Lessor’s sole discretion, that the Art and panel(s) of the Wall is not being maintained in good condition, Lessor may give Lessee written notice of any such maintenance issues. In the event that Lessee does not cure any problems raised by Lessor as to maintenance within ten (10) days of the provision of written notice by Lessor to Lessee, Lessor may terminate

the Agreement and remove the Art, with the expense to be borne by Lessee. At the end of the Term, Lessee will restore the Space to substantially the same condition it was in prior to the time Lessee first displayed the Art.

5. **Termination.** This Agreement may be terminated by either party at any time, with or without cause, upon sixty (60) days prior written notice.

6. **Indemnity.** Lessee will indemnify and hold harmless Lessor for any and all claims, actions, suits, liabilities, losses, and expenses that any other third party asserts against Lessor arising in connection with Lessee's use of the Wall.

7. **Assignment, Mortgage, or Sublease.** Neither Lessee nor its successors or assigns shall assign, mortgage, pledge, or encumber the Agreement or sublet the Wall, in whole or in part, or permit the Wall to be used or occupied by others, nor shall the Agreement be assigned or transferred by operation of law without the prior, express, and written consent in writing of Lessor in each instance.

8. **Surrender of Possession.** Lessee shall, on the last day of the term or on earlier termination of the Agreement, peaceably and quietly surrender and deliver the Wall to Lessor in good condition and repair; provided, however, that all improvements and changes to the Wall shall be removed by Lessee. Anything remaining upon the Wall after the Term shall become the property of Lessor.

9. **General Provisions.**

a. **Remedies.** The remedies contained herein for the breach of the Agreement are not exclusive, but shall be cumulative and the pursuit of one remedy shall not be deemed to exclude any and all other remedies which may be pursued at law or in equity.

b. **Notices.** Any notice, demand, or request required or permitted to be given under the provisions of the Agreement shall be in writing and shall be deemed to have been duly delivered (i) on the date of personal delivery, or (ii) on the date of receipt if mailed by registered or certified mail, postage prepaid and return receipt requested, or by overnight courier, to the following addresses, or to such other address as any party may request by notice to all of the other parties to the Agreement:

If to the City:

Bryan Lackey
City Manager
PO Box 2496
Gainesville, GA 30503

If to Greater Hall Chamber of Commerce, Inc.:

Kathryn L. Dunlap, CEO
PO Box 374

Gainesville, GA 30503

- c. Survival. Any provisions of the Agreement, which, by their nature, would be expected to be performed following termination or expiration of the Agreement, shall survive termination or expiration of the Agreement.
- d. No Implied Waivers. The waiver or failure of either party to exercise in any respect any right provided for herein shall not be deemed a waiver of any further right herein.
- e. Severability. If any provision of the Agreement shall be held to be invalid, illegal, or unenforceable under any applicable statute or rule of law, the validity, legality, and enforceability of the remaining provisions shall in no way be affected or impaired thereby.
- f. Entire Agreement. The Agreement, including the schedules or exhibits which are attached hereto and incorporated herein by reference, constitutes the entire and integrated agreement among the parties with regard to the subject matter of the Agreement, and supersedes all prior agreements, understandings, negotiations, representations, inducements, or conditions, express or implied, oral or written, relating to the subject matter of the Agreement.
- g. Amendment. The Agreement cannot be amended, supplemented, or modified except by an agreement in writing which is signed by both parties.
- h. Binding Effect. The Agreement shall bind and inure to the benefit of the respective heirs, personal representatives, successors, and assigns of the parties.
- i. Time of the Essence. It is specifically declared that time is of the essence in all provisions of the Agreement.
- j. Counterparts. The Agreement may be executed in any number of counterparts, each of which shall be deemed an original, but all of which taken together shall constitute one single agreement between the parties hereto.

k. Captions. The captions of sections of the Agreement are for convenience only and shall not control or affect the meaning or construction of any of the provisions of the Agreement.

Therefore, the parties hereby execute the Agreement as follows:

LESSOR:

APPROVED AS TO FORM

CITY OF GAINESVILLE

Abbott S. Hayes, Jr.
Hulsey, Oliver & Mahar, LLP
City Attorney

By: _____
C. Danny Dunagan, Jr.
Mayor

Attest: _____
Denise O. Jordan, City Clerk

CITY SEAL

LESSEE:

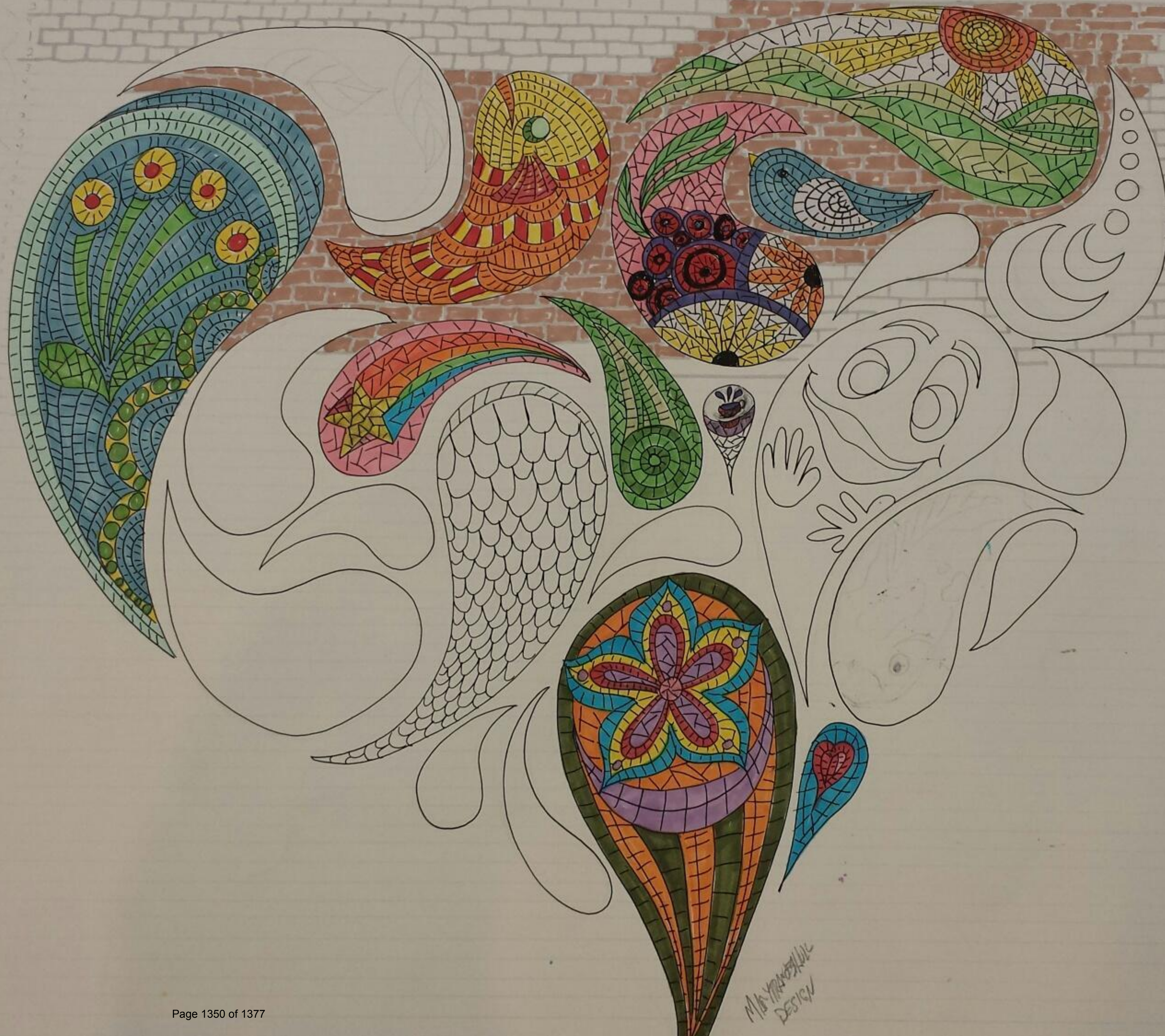
GREATER HALL CHAMBER OF COMMERCE, INC.

By: _____
Kathryn L. Dunlap, CEO

Attest: _____

CORPORATE SEAL

Ash/w182761



stained glass tesserae
broken china
mirror
other collected + donated glass & china

(1) Angel wing of broken local plates
from historic families or (sold piecewise)
to raise money for future 2030 public
works.



CITY OF GAINESVILLE

WORKSESSIONREQUEST

Date Submitted: 5/24/2017
Presenter: Jeremy Perry
Item of Business: Resolution: Fiscal Year 2018 Budget
Meeting Date: 6/1/2017

Purpose of Request:

Presentation of the FY2018 Budget Resolution for public hearing. Public hearings to occur on 6/1/17, 6/6/17 and 6/20/17.

History/Background:

Adoption of the Budget must be presented as a resolution and open for public hearing.

Facts & Issues for Consideration:

Department Recommendation:

Presentation of information for Public Hearing only.

Department Director:

Jeremy Perry

If funding is involved, are funds approved within the current budget?

Amount Requested: **Source of Funds:**

Finance Comments:

Administrative Comments:

ATTACHMENTS:

Description		Type
☐	FY2018 Budget	Resolution
☐	Budget Resolution Attachment A	Attachments/Exhibits
☐	Budget Resolution Attachment B	Attachments/Exhibits

RESOLUTION AR-2017 - ____

FISCAL YEAR 2018 BUDGET

WHEREAS, the City Manager has presented a proposed fiscal year 2018 Budget to the governing body on each of the various funds of the City; and

WHEREAS, the budget lists proposed expenditures/expenses for the fiscal year 2018; and

WHEREAS, each of these budgets is a balanced budget, so that anticipated revenues for each fund equal proposed expenditures/expenses.

NOW, THEREFORE, BE IT RESOLVED THAT the "Attachment A" & "Attachment B" attached hereto and by reference made part of this resolution, shall be the City of Gainesville's budget for the fiscal year 2018; and

BE IT FURTHER RESOLVED THAT the governing body for the City of Gainesville hereby approves this budget, and the several items of revenues shown in the budget for each fund in the amounts shown anticipated are adopted, and that the several amounts shown in the budget for each fund as proposed expenditures/expense are hereby appropriated to the departments named in the fund; and

BE IT FURTHER RESOLVED THAT the expenditures/expenses shall not exceed the appropriations authorized by this budget or amendments thereto provided; however, that expenditures/expenses for the fiscal year shall not exceed actual funding available; and

BE IT FURTHER RESOLVED THAT this budget contains appropriations for Intergovernmental and Agency agreements, and that the governing body for the City of Gainesville hereby authorizes the Mayor and/or City Manager to execute such agreements.

Adopted this ____ day of _____, 2017.

C. Danny Dunagan, Jr., Mayor

This is to certify that I am City Clerk of the City of Gainesville. As such, I keep its official records, including its minutes. In that capacity, my signature below certifies this resolution was adopted as stated and will be recorded in the official minutes.

ATTEST:

Denise O. Jordan, City Clerk

**FISCAL YEAR 2018 APPROPRIATIONS RESOLUTION
ATTACHMENT A**

GENERAL FUND

REVENUES AND OTHER SOURCES

Ad Valorem Taxes @ 1.545 Mills	\$ 6,467,046
Railroad Equipment Tax	6,250
Intangible Tax	92,000
Real Estate Transfer Tax	34,000
Insurance Premium Tax	2,000,000
Local Option Sales Tax	5,200,000
Title Ad Valorem Tax	910,000
Local Option Energy Tax	77,000
Payment in Lieu of Taxes	81,000
Occupational Tax	1,352,300
Alcoholic Beverage Tax	1,072,500
Franchise Fees	4,217,056
Fines, Fees, and Forfeitures	1,441,500
Permits and Zoning Fees	495,000
Other Fees and Licenses	384,000
Interest on investments	49,309
Intergovernmental	486,197
Cemetery Lot Sales	110,000
Miscellaneous - Rent	212,600
Miscellaneous	35,000
Charges for Services - Indirect Charges	2,071,499
Transfers In	3,358,857
Sales of General Fixed Assets	40,000
Budgeted Fund Balance	3,839,746

TOTAL REVENUES AND OTHER SOURCES	\$ 34,032,860
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EXPENDITURES AND OTHER USES

City Council	\$ 418,554
City Manager's Office	828,050
Financial Services	1,228,049
Municipal Court	556,615
Information Technology	781,305
Human Resources & Risk Management	800,063
Community Development	1,290,500
Police	9,251,588
Fire	7,842,904
Public Lands and Buildings	650,063
Engineering Services	986,831
Traffic Services	1,268,050
Street Maintenance and Construction	1,832,022
Storm Water	405,394
Cemetery	601,278
Agency Allocations - Other	44,437
Contingency	709,774
Transfers Out	4,537,383

TOTAL EXPENDITURES AND OTHER USES	\$ 34,032,860
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**FISCAL YEAR 2018 APPROPRIATIONS RESOLUTION
ATTACHMENT A**

COMMUNITY SERVICE CENTER FUND

REVENUES AND OTHER SOURCES

Intergovernmental - Federal/State/Other	\$ 1,519,243
Intergovernmental - County	587,318
Transfer from General Fund	665,631
Other: (Fees, Donations, Fares, Misc.)	602,480
Budgeted Fund Balance	-

TOTAL REVENUES AND OTHER SOURCES

\$ 3,374,672

EXPENDITURES AND OTHER USES

Senior Adult Services	\$ 1,250,471
Hall Area Transit System - F.R.	1,107,486
Hall Area Transit System - D.A.R	931,735
Building Operations	84,980

TOTAL EXPENDITURES AND OTHER USES

\$ 3,374,672

CEMETERY TRUST FUND

REVENUES AND OTHER SOURCES

Interest on Investments	\$ 250
Sales & Services	30,000
Budgeted Fund Balance	19,750

TOTAL REVENUES AND OTHER SOURCES

\$ 50,000

EXPENDITURES AND OTHER USES

Transfer to Capital Projects Fund	\$ 50,000
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TOTAL EXPENDITURES AND OTHER USES

\$ 50,000

CONFISCATED ASSETS

REVENUES AND OTHER SOURCES

Cash Confiscations - State	\$ 5,000
Cash Confiscations - Local	30,000
Cash Confiscations - Federal	65,000
Budget Fund Balance	44,850

TOTAL REVENUES AND OTHER SOURCES

\$ 144,850

EXPENDITURES AND OTHER USES

Professional & Other Services	\$ 49,525
Supplies & Operating Charges	95,325

TOTAL EXPENDITURES AND OTHER USES

\$ 144,850

**FISCAL YEAR 2018 APPROPRIATIONS RESOLUTION
ATTACHMENT A**

ECONOMIC DEVELOPMENT FUND

REVENUES AND OTHER SOURCES

Interest on Investments	\$	1,200
Budgeted Fund Balance		110,848

TOTAL REVENUES AND OTHER SOURCES	\$	112,048
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EXPENDITURES AND OTHER USES

Professional & Other Services	\$	70,000
Repairs and Maintenance		12,048
Transfers out		30,000

TOTAL EXPENDITURES AND OTHER USES	\$	112,048
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CABLE TV CHANNEL FUND

REVENUES AND OTHER SOURCES

Intergovernmental - Hall County	\$	125,778
Transfer from General Fund		125,778

TOTAL REVENUES AND OTHER SOURCES	\$	251,556
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EXPENDITURES AND OTHER USES

Personal Services	\$	175,928
Professional & Other Services		22,280
Supplies & Operating Charges		10,870
Repairs & Maintenance		7,712
Indirect Cost Allocation		29,106
Transfers out		5,660

TOTAL EXPENDITURES AND OTHER USES	\$	251,556
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TAX ALLOCATION DISTRICT FUND

REVENUES AND OTHER SOURCES

Property Tax - Current	\$	46,500
Intergovernmental		160,000
Interest on Investments		800
Budgeted Fund Balance		134,795

TOTAL REVENUES AND OTHER SOURCES	\$	342,095
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EXPENDITURES AND OTHER USES

Available for Capital Projects	\$	342,095
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TOTAL EXPENDITURES AND OTHER USES	\$	342,095
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**FISCAL YEAR 2018 APPROPRIATIONS RESOLUTION
ATTACHMENT A**

HOTEL/MOTEL TAX FUND

REVENUES AND OTHER SOURCES

Hotel/Motel Taxes (5%)	\$ 711,333
Hotel/Motel Taxes (1%)	142,267
Interest on Investments	200
TOTAL REVENUES AND OTHER SOURCES	\$ 853,800

EXPENDITURES AND OTHER USES

Gainesville Convention and Visitors Bureau	\$ 461,533
Transfer to Capital Projects	250,000
Transfer to Debt Service	142,267
TOTAL EXPENDITURES AND OTHER USES	\$ 853,800

IMPACT FEES FUND

REVENUES AND OTHER SOURCES

Impact Fees - Police	\$ 47,000
Impact Fees - Fire	81,400
Impact Fees - Parks	550,000
Administrative Fees	20,350
Interest on Investments	1,250
TOTAL REVENUES AND OTHER SOURCES	\$ 700,000

EXPENDITURES AND OTHER USES

Transfer to General Fund	\$ 20,350
Transfer to Capital Projects Fund	230,000
Available for Capital Projects	449,650
TOTAL EXPENDITURES AND OTHER USES	\$ 700,000

INFORMATION TECHNOLOGY FUND

REVENUES AND OTHER SOURCES

Technology fees	\$ 55,000
Interest on Investments	250
Budgeted Fund Balance	141,500
TOTAL REVENUES AND OTHER SOURCES	\$ 196,750

EXPENDITURES AND OTHER USES

Transfer to General Gov't Capital Projects Fund	\$ 181,500
Supplies and Operating Charges	4,200
Available for Capital Projects	11,050
TOTAL EXPENDITURES AND OTHER USES	\$ 196,750

**FISCAL YEAR 2018 APPROPRIATIONS RESOLUTION
ATTACHMENT A**

PARKS AND RECREATION FUND

REVENUES AND OTHER SOURCES

Ad Valorem Taxes @ .750 Mills	\$ 3,160,848
Charges for Services	1,777,690
Interest on Investments	3,650
Other	2,000
Budgeted Fund Balance	410,334

TOTAL REVENUES AND OTHER SOURCES	\$ 5,354,522
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EXPENDITURES AND OTHER USES

Personal Services	\$ 2,885,368
Professional & Other Services	607,599
Supplies & Operating Charges	1,003,662
Repairs & Maintenance	213,893
Indirect Cost Allocation	50,000
Agency Allocation	150,000
Capital Outlay	19,000
Transfer to Parks and Recreation Capital Projects Fund	425,000

TOTAL EXPENDITURES AND OTHER USES	\$ 5,354,522
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GAINESVILLE CONVENTION AND VISITORS BUREAU

REVENUES AND OTHER SOURCES

Intergovernmental - COG Hotel/Motel Tax	\$ 461,533
Main Street - Merchandise	2,500
Main Street - Other revenue	11,000
Budgeted Fund Balance	118,105

TOTAL REVENUES AND OTHER SOURCES	\$ 593,138
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EXPENDITURES AND OTHER USES

Personal Services	\$ 326,360
Professional & Other Services	117,269
Supplies & Operating Charges	141,143
Repairs & Maintenance	2,706
Capital Outlay	5,660

TOTAL EXPENDITURES AND OTHER USES	\$ 593,138
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**FISCAL YEAR 2018 APPROPRIATIONS RESOLUTION
ATTACHMENT A**

CAPITAL PROJECTS FUND

REVENUES AND OTHER SOURCES

SPLOST VII	\$ 3,115,000
Georgia Department of Transportation	250,000
Federal Grants	737,500
Solid Waste Fund	235,000
Golf Course Fund	60,000
Transfer from Community Service Center	28,300
Transfer from Economic Development Fund	30,000
Transfer from General Fund	3,300,662
Transfer from Hotel/Motel Tax Fund	250,000
Transfer from Information Tech Fund	181,500
Transfer from Department of Water Resources	558,480
Transfer from Impact Fee Fund	230,000
Transfer from TV-18 Fund	5,660
Transfer from Cemetery Trust Fund	50,000
Transfer from Solid Waste Fund	5,660
Transfer from Airport	125,000
Transfer from Gainesville CVB	5,660
Transfer from Vehicle Services	42,000
Transfer from Parks & Recreation Fund	425,000
Budgeted Fund Balance - Various capital projects funds	10,966,000

TOTAL REVENUES AND OTHER SOURCES

\$ 20,601,422

EXPENDITURES AND OTHER USES

City Manager's Office

Land Bank Authority	\$ 100,000
Municipal Code Update	20,000

Information Technologies

Network Security	40,000
Network Upgrade	200,000
Automated Email Archive	56,000
Intrusion Prevention/Detection System	70,000
Expansion of Disk Storage	200,000

Community Development Department

Dilapidated Property Demolition	100,000
Green Street Station Renovation	25,000
Downtown Wireless Hot Zone	60,000
Midtown Greenway - Phase III	33,400
10 Year Update - Capital Improvement Element (CIE)	30,000

Police Department

Police Department Fleet replacement	405,000
License Plate Recognition	40,000
Portable Radios	93,522

**FISCAL YEAR 2018 APPROPRIATIONS RESOLUTION
ATTACHMENT A**

Fire Department	
Replacement Radios	110,000
New Station Planning	50,000
Preemption Lights System	70,000
Fleet replacement - Truck (Replace 4214)	38,000
Public Lands & Buildings	
GAB Generator Replacement	175,000
Administrative Building Renovation	500,000
Cleaning and Sealing City Hall	100,000
Parking Deck Public Restroom	150,000
Public Works - Engineering Services	
Transportation Plan Implementation	900,000
Street Resurfacing (Major Projects)	500,000
In-House Paving Program	660,000
Interchange Beautification	80,000
Streetscaping - Washinton & Bradford	1,200,000
Roadway Beautification	65,000
Roadway Patching Program	125,000
Sidewalk Program	75,000
Traffic Calming/Road Safety Devices	40,000
Green Street Study Implementation	250,000
Bridge Maintenance Program	25,000
Asphalt Preservation	25,000
Fleet Replacement	30,000
Public Works - Traffic Engineering	
Intelligent Transportation Systems (ITS)	200,000
Thermoplastic Restriping	25,000
Crew Cab Service Truck	50,000
New Traffic Engineering Shop (Planning)	50,000
Public Works - Street Maintenance	
Backhoe Loader	100,000
Fleet Replacement - Crew Truck	40,000
Fleet Replacement - Light Duty Truck	40,000
Fleet Replacement - Service Truck	140,000
Asphalt Paver	80,000
Asphalt Zipper	50,000
Asphalt Roller	40,000
Stormwater	
Stormwater Rehabilitation Program	1,000,000
Public Works - Cemetery	
Freeground Memorial	50,000
Community Service Center	
Buses (Dial-A-Ride)	150,000
Hall Area Transit Equipment	132,500
Hall Area Transit Property	50,000

**FISCAL YEAR 2018 APPROPRIATIONS RESOLUTION
ATTACHMENT A**

Department of Water Resources

Annual Meter Infrastructure (AMI)	150,000
Athens Highway Sanitary Sewer Extension	500,000
Environmental Services Building Imp/Upgrade	210,000
Flat Creek Water Reclamation Facility - Digester Upgrade	1,000,000
Flat Creek WRF - Comprehensive Master Plan	250,000
Flat Creek WRF - Upgrades	1,250,000
Lakeside Drive Variable Frequency Drive on Existing Pump	300,000
Laboratory Information Management System	150,000
Linwood WRF Membrane Replacement	2,150,000
Meter Replacement Program	500,000
Pressure Monitors	100,000
Riverside Drive Water Treatment Plant - Concrete Rehab	620,000
Riverside WTP - #4 Raw Water Pump Existing VFD Upgrade	116,000
Riverside Drive WTP - Solids Handling Upgrades	1,300,000
Tanks Maintenance Program	700,000
Utility Service Truck	120,000
Vactor Truck	400,000
Water Distribution System Hydraulic & Quality Monitoring	150,000

Solid Waste

Fleet Replacement RL Garbage Packing Truck	190,000
Fleet LD Garbage Truck	45,000

Airport

Terminal Building Renovation Project	500,000
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Golf

Clubhouse Roof Replacement	35,000
Cushman Truckster	25,000

Vehicle Services

Fleet Replacement - Truck	42,000
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Parks & Recreation

Youth Sports Complex	205,000
Civic Center Exterior Improvements	75,000
Parks Master Plan	150,000
Desota Park Renovations	225,000
Playground Improvements - Systemwide	130,000
Lanier Point Athletic Complex Improvements	75,000

Gainesville Convention and Visitors Bureau

Gainesville Signage	100,000
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TOTAL EXPENDITURES AND OTHER USES

<u>\$ 20,601,422</u>

**FISCAL YEAR 2018 APPROPRIATIONS RESOLUTION
ATTACHMENT A**

DEBT SERVICE FUND

REVENUES AND OTHER SOURCES

Ad Valorem Taxes @ 0.569 Mills	\$ 2,398,030
Interest on Investments	5,386
Transfers in	298,267
Budgeted Fund Balance	-

TOTAL REVENUES AND OTHER SOURCES	\$ 2,701,683
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EXPENDITURES AND OTHER USES

Bond Principal & Interest	\$ 1,871,552
Lease Principal & Interest	342,131
Bond Refund Costs	2,200
Available for Future Debt Service	485,800

TOTAL EXPENDITURES AND OTHER USES	\$ 2,701,683
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DEPARTMENT OF WATER RESOURCES

REVENUES AND OTHER SOURCES

Water Revenue	\$ 32,071,777
Water Connection Fees	1,914,134
Water Connection Administration Fees	56,619
Water Tapping Fees	1,133,313
Account Service Fees	3,603,937
Service Fees	263,849
Late Payment Penalty	616,804
Sewer Revenue	28,414,857
Surcharge	788,581
Sewer Tapping Fees	30,780
Sewer Connection Fees	1,777,146
Sewer Connection Administration Fees	53,265
Recovery of Bad Debts	-
Interest on Investments	62,815
Gain/(Loss) on Sale of Fixed Assets	-
Miscellaneous	695,976

TOTAL REVENUES AND OTHER SOURCES	\$ 71,483,853
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EXPENDITURES AND OTHER USES

Personal Services	\$ 16,049,104
Professional & Other Services	3,335,998
Supplies & Operating Charges	8,676,100
Repairs & Maintenance	2,718,210
Indirect Cost Allocation	1,042,707
Capital Outlay	940,500
Contingency	-
Debt Service	19,663,182
Transfers out	19,058,052
Available for Capital Projects	-

TOTAL EXPENDITURES AND OTHER USES	\$ 71,483,853
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**FISCAL YEAR 2018 APPROPRIATIONS RESOLUTION
ATTACHMENT A**

SOLID WASTE FUND

REVENUES AND OTHER SOURCES

Residential Collections	\$ 2,407,500
Commercial - Franchise Fee	150,000
Special Services	8,000
Interest	2,500
Other Revenue	90,000
Budgeted Net Assets	-

TOTAL REVENUES AND OTHER SOURCES	\$ 2,658,000
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EXPENDITURES AND OTHER USES

Personal Services	\$ 1,344,989
Professional & Other Services	196,368
Supplies & Operating Charges	419,724
Repairs & Maintenance	308,500
Indirect Cost Allocation	146,452
Transfers to Other Funds	5,660
Capital Outlay	236,307

TOTAL EXPENDITURES AND OTHER USES	\$ 2,658,000
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AIRPORT FUND

REVENUES AND OTHER SOURCES

T-Hangar Rent	\$ 348,272
Corporate Hangar Rent	366,092
Industrial Park Rent	154,891
Fuel	20,808
Interest on Investments	2,320
Fixed Base Operator	33,854
Miscellaneous Revenue	1,200
Budgeted Retained Earnings	99,981

TOTAL REVENUES AND OTHER SOURCES	\$ 1,027,418
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EXPENDITURES AND OTHER USES

Personal Services	\$ 80,286
Professional & Other Services	54,951
Supplies & Operating Charges	55,520
Repairs & Maintenance	60,200
Indirect Cost Allocation	209,561
Debt Service	441,900
Capital Outlay	125,000

TOTAL EXPENDITURES AND OTHER USES	\$ 1,027,418
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**FISCAL YEAR 2018 APPROPRIATIONS RESOLUTION
ATTACHMENT A**

CHATTAHOOCHEE GOLF COURSE FUND

REVENUES AND OTHER SOURCES

Greens Fees	\$ 679,447
Cart Fees	280,261
Other Revenue	108,278
Transfer from General Fund	289,311

TOTAL REVENUES AND OTHER SOURCES	\$ 1,357,297
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EXPENDITURES AND OTHER USES

Personal Services	\$ 576,272
Professional & Other Services	52,550
Supplies & Operating Charges	134,928
Repairs & Maintenance	209,750
Capital Outlay	73,000
Debt Service	310,797

TOTAL EXPENDITURES AND OTHER USES	\$ 1,357,297
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GENERAL INSURANCE FUND

REVENUES AND OTHER SOURCES

Premiums & Losses Paid by Department	\$ 1,771,254
Interest on Investments	2,026
Budgeted Retained Earnings	41,889

TOTAL REVENUES AND OTHER SOURCES	\$ 1,815,169
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EXPENDITURES AND OTHER USES

Professional & Other Services	\$ 1,637,498
Indirect Cost Allocation	177,671

TOTAL EXPENDITURES AND OTHER USES	\$ 1,815,169
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**FISCAL YEAR 2018 APPROPRIATIONS RESOLUTION
ATTACHMENT A**

EMPLOYEE BENEFITS FUND

REVENUES AND OTHER SOURCES

Premiums	\$ 9,362,081
Interest	3,000
Budgeted Fund Balance	612,108
TOTAL REVENUES AND OTHER SOURCES	\$ 9,977,189

EXPENDITURES AND OTHER USES

Health Claims/Premiums Expense	\$ 7,933,064
Life Insurance Premiums	237,542
Vision Insurance Premiums	44,663
Dental Insurance Premiums	375,061
Long & Short-term Disability Premiums	100,614
Short-term Disability Expense	131,187
Medical Clinic Operations	870,000
Administration/Wellness Program	35,348
Other Costs	249,710
TOTAL EXPENDITURES AND OTHER USES	\$ 9,977,189

VEHICLE SERVICES FUND

REVENUES AND OTHER SOURCES

Charges For Services	\$ 929,750
Sales - Fuel	1,455,336
TOTAL REVENUES AND OTHER SOURCES	\$ 2,385,086

EXPENDITURES AND OTHER USES

Personal Services	\$ 371,629
Professional & Other Services	30,677
Supplies & Operating Charges	1,956,810
Repairs & Maintenance	25,970
TOTAL EXPENDITURES AND OTHER USES	\$ 2,385,086

GRAND TOTAL	\$ 160,013,408
LESS TRANSFERS COUNTED TWICE	(11,880,977)
TOTAL NET BUDGET	\$ 148,132,431

CITY OF GAINESVILLE

AUTHORIZED POSITIONS BY FUND

(5-year Summary)

DEPARTMENTS	Budget									
	FY2014		FY2015		FY2016		FY2017		FY2018	
	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT
City Council		7		7		8		7		6
City Manager	7		6		6		6		6	
Financial Services	15		15		15		15		14	
Information Technology	6		6		6		7		7	
Human Resources Department	9		9		9		9		10	
Municipal Court	8	2	8	2	8	2	8	2	8	2
Community Development Dept.	15	7	14	7	14	7	15	7	15	7
Police Department	113		114	2	114	2	114	2	115	2
Fire Department	103		103		103		103		103	
Public Land and Buildings	4		4		4		4		5	
Engineering Services	7		7		10		10		11	
Traffic Services	8		8		7		7		7	
Streets	30		25		24		24		25	
Storm Water			2		2		6		5	
Cemetery	4		7		8		8		8	
Total General Fund	329	16	328	18	330	19	336	18	339	17
Community Service Center	26	23	26	12	26	12	26	14	26	14
Cable TV	2	2	2	2	2	1	2	1	2	1
Parks and Recreation	35	Varies	39	Varies	39	Varies	37	Varies	37	Varies
Airport	1		1		1		1		1	
Department of Water Resources	230	1	231	-	233	-	233	-	234	-
Solid Waste Department	24	-	24	-	24	-	24	-	24	-
Golf Course	4	Various	4	Various	4	Various	4	Various	5	Various
Vehicle Services	6	-	6	-	6	-	6	-	6	-
Gainesville Convention and Visitor's Bureau	4	-	4	-	4	-	4	-	4	-
Non-Profit Housing	2	-	2	-	2	-	2	-	2	-
TOTAL AUTHORIZED POSITIONS	663	42	667	32	671	32	675	33	680	32

*Marshall moved to HR

*HEAT Grant Employee

*Added PL&B Superintendent

*Added Engineering Proj & Asset Manger, Dept. Dir of Public Services & moved Traffic coordinator to Traffic dept.

*Added Street Maintenance Supt.

*Moved MS4 Coordinator to DWR

*Added Instrumentation Specialist; Moves MS4 Coordinator back; Removed Eng & Planning Section Chief; Meter sales Rep added, Added Director of Strategic Infrastructure.

*Added Assistant Golf Pro.

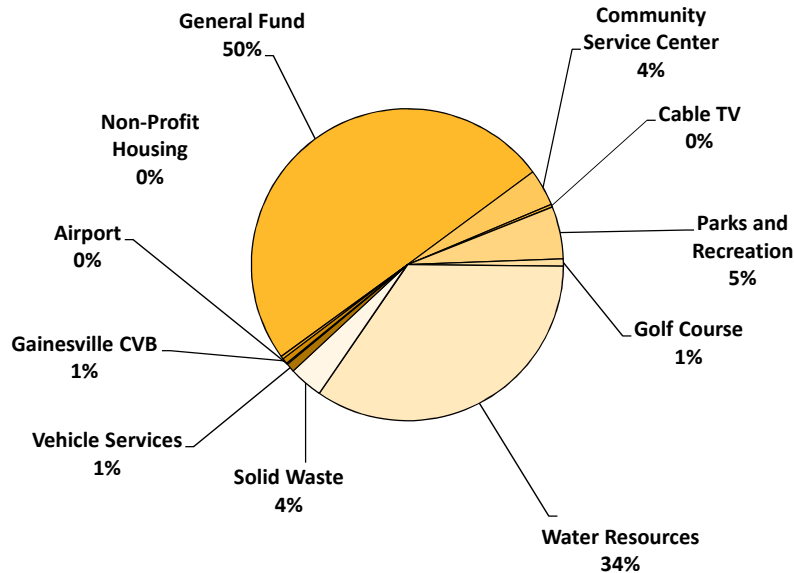
*City Attorney is now contract labor.

CITY OF GAINESVILLE

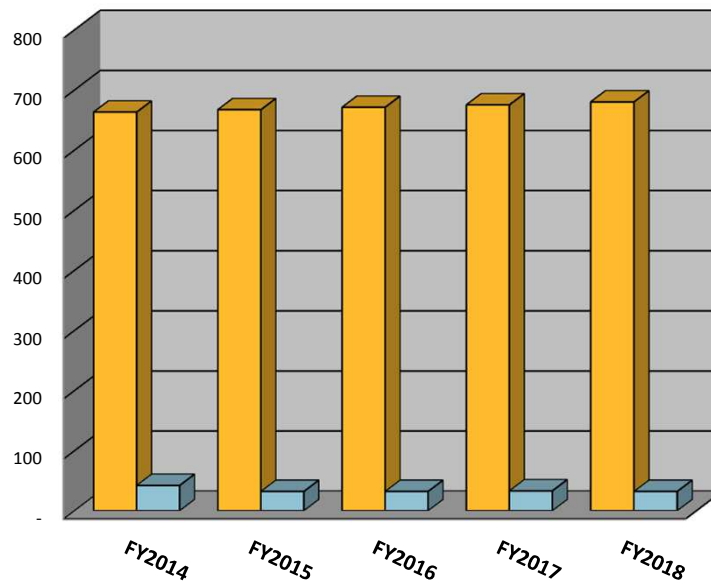
AUTHORIZED POSITIONS BY FUND (5-year Summary)

DEPARTMENTS	Budget									
	FY2014		FY2015		FY2016		FY2017		FY2018	
	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT

Authorized Positions by Fund FY 2018



Five-Year Positional Change Chart



CITY OF GAINESVILLE

WORKSESSIONREQUEST

Date Submitted: 5/23/2017
Presenter: Jeremy Perry
Item of Business: Ordinance: Fiscal Year 2018 Ad Valorem Tax Rate - Board of Education
Meeting Date: 6/1/2017

Purpose of Request:

Presentation of the FY2018 Board of Education Millage Ordinance to establish the FY2018 millage rate.

History/Background:

Historically the FY2018 Board of Education Millage is established via ordinance by the City Council.

Facts & Issues for Consideration:

Department Recommendation:

To approve first reading of proposed ordinance.

Department Director:

Jeremy Perry

If funding is involved, are funds approved within the current budget?

N/A

Amount Requested:

Source of Funds:

Finance Comments:

Administrative Comments:

ATTACHMENTS:

Description	Type
 FY2018 Board of Education Millage Ordinance	Ordinance

First Reading: _____
Passed: _____

AN ORDINANCE

No. 2017-

AN ORDINANCE OF THE GOVERNING AUTHORITY OF THE CITY OF GAINESVILLE, GEORGIA, TO FIX THE AD VALOREM TAX RATE FOR THE GAINESVILLE BOARD OF EDUCATION FOR THE FISCAL YEAR 2018; AND OTHER PURPOSES.

BE IT HEREBY ORDAINED BY THE GOVERNING AUTHORITY OF THE CITY OF GAINESVILLE, GEORGIA, AS FOLLOWS:

WHEREAS, a budget has been established for the Gainesville Board of Education for Fiscal Year 2018; and

WHEREAS, a specified amount of revenue for this budget comes from ad valorem taxes.

NOW THEREFORE BE IT ORDAINED by the Governing Authority of the City of Gainesville, Georgia as follows:

SECTION I. In accordance with Act No. 64 (HB 841) approved March 4, 1993, and OCGA 48-5-32, the ad valorem tax rate for the Gainesville Board of Education for the calendar year, on property subject to ad valorem taxation by the City is hereby fixed at \$6.85 on each \$1,000.00 of property subject to ad valorem tax in the City.

SECTION II. Said rate of \$6.85 on each \$1,000.00 of taxable property is hereby levied as follows:

(a) For maintenance and operations \$6.85 on each \$1,000.00 of taxable property.

(b) For debt service \$0.00 on each \$1,000.00 of taxable property.

SECTION III. All ordinances and part of ordinances in conflict herewith are hereby repealed.

NOW THEREFORE BE IT FURTHER ORDAINED that the City of Gainesville Tax Office shall bill property taxes in one installment and collect payment of said taxes which shall be due on or before December 1, 2017.

NOW THEREFORE BE IT FURTHER ORDAINED the City of Gainesville will take appropriate action when the Tax Digest as certified by the State Revenue Commissioner is available and property reassessments are confirmed.

ORDINANCE NO. 2017-

C. Danny Dunagan, Jr., Mayor

This is to certify that I am City Clerk of the City of Gainesville. As such, I keep its official records, including its minutes. In that capacity, my signature below certifies this resolution was adopted as stated and will be recorded in the official minutes.

ATTEST:

Denise O. Jordan, City Clerk

CITY OF GAINESVILLE

WORKSESSIONREQUEST

Date Submitted: 5/23/2017

Presenter: Jeremy Perry

Item of Business: Ordinance: Fiscal Year 2018 Ad Valorem Tax Rate - City of Gainesville

Meeting Date: 6/1/2017

Purpose of Request:

Presentation of the FY2018 Millage Ordinance for the City of Gainesville.

History/Background:

Historically, the Millage rate must be adopted and set by ordinance.

Facts & Issues for Consideration:

Department Recommendation:

To approve first reading of the proposed ordinance.

Department Director:

Jeremy Perry

If funding is involved, are funds approved within the current budget?

N/A

Amount Requested:

Source of Funds:

Finance Comments:

Administrative Comments:

ATTACHMENTS:

	Description	Type
📎	FY2018 City of Gainesville Millage Ordinance	Ordinance
📎	Presentation	Presentation

AN ORDINANCE

No. 2017-

AN ORDINANCE BY THE GOVERNING AUTHORITY OF THE CITY OF GAINESVILLE, GEORGIA, TO FIX THE AD VALOREM TAX RATE FOR THE CITY OF GAINESVILLE, GEORGIA EXCLUSIVE OF ACTIVITIES OF THE GAINESVILLE BOARD OF EDUCATION FOR THE FISCAL YEAR 2018; AND OTHER PURPOSES.

BE IT HEREBY ORDAINED BY THE GOVERNING AUTHORITY OF THE CITY OF GAINESVILLE, GEORGIA, AS FOLLOWS:

WHEREAS, a budget has been established for the City of Gainesville for Fiscal Year 2018; and

WHEREAS, a specified amount of revenue for this budget comes from ad valorem taxes.

NOW THEREFORE BE IT ORDAINED by the Governing Authority of the City of Gainesville, Georgia as follows:

SECTION I. The ad valorem tax rate for the City of Gainesville, Georgia for the calendar year, on property subject to ad valorem taxation by the City is hereby fixed at \$2.864 on each \$1,000.00 of property subject to ad valorem tax by the City.

SECTION II. Said rate of \$2.864 on each \$1,000.00 of taxable property is hereby levied as follows:

(a) For General Government purposes, \$1.545 on each \$1,000.00 of taxable property.

(b) For the purpose of providing Parks and Recreation operations, \$0.750 on each \$1,000.00 of taxable property.

(c) For the purpose of retiring outstanding governmental fund type debt and related interest, \$0.569 on each \$1,000.00 of taxable property.

SECTION III. All ordinances and part of ordinances in conflict herewith are hereby repealed.

NOW THEREFORE BE IT FURTHER ORDAINED that the City of Gainesville Tax Office shall bill property taxes in one installment and collect payment of said taxes which shall be due on or before December 1, 2017.

NOW THEREFORE BE IT FURTHER ORDAINED the City of Gainesville will take appropriate action when the Tax Digest as certified by the State Revenue Commissioner is available and property reassessments are confirmed.

ORDINANCE NO. 2017-

C. Danny Dunagan, Jr., Mayor

This is to certify that I am City Clerk of the City of Gainesville. As such, I keep its official records, including its minutes. In that capacity, my signature below certifies this resolution was adopted as stated and will be recorded in the official minutes.

ATTEST:

Denise O. Jordan, City Clerk

Ad Valorem Tax Rate
for
Fiscal Year 2018 /
Tax Year 2017

Tax Year 2016
Approved

General Fund	1.63
Parks & Recreation	0.75
Debt Service	0.60
Total	<u>2.98</u>

Tax Year 2017
Proposed Rollback of
Millage Rate

General Fund	1.545
Parks & Recreation	0.750
Debt Service	0.569
Total	<u>2.864</u>

Fair market home value - \$200,000

Homeowner's prior year tax bill - \$596.00

Non-reassessed homeowner's full rollback tax bill - \$564.80

Non-reassessed homeowner's proposed tax bill - \$572.80

CITY OF GAINESVILLE

WORKSESSIONREQUEST

Date Submitted: 5/22/2017
Presenter: Danny Dunagan
Item of Business: Appointment(s): Metropolitan Planning Organization Citizens Advisory Committee
Meeting Date: 6/1/2017

Purpose of Request:

The purpose of this request is to address terms that will expire soon.

History/Background:

Members of the committee serve two-year terms. They follow the guidelines of the City Charter and the Code of Ordinances as well as the bylaws of the committee.

Facts & Issues for Consideration:

Diane O'Kelley is not available to serve another term.

Department Recommendation:

Mayor Dunagan will present nominations for consideration.

Department Director:

Danny Dunagan

If funding is involved, are funds approved within the current budget?

N/A

Amount Requested:

Source of Funds:

Finance Comments:

Administrative Comments:

ATTACHMENTS:

Description	Type
 MPOCAC Members	Backup Material

METROPOLITAN PLANNING ORGANIZATION - CITIZENS ADVISORY COMMITTEE

POST	LAST NAME	FIRST NAME	APPOINTED	REAPPOINTED	EXPIRES
Ward 1	Propes	Connie	7/5/2011	3/19/2013 8/18/2015	6/30/2017
Ward 2	O'Kelley	Diane	7/5/2011	3/19/2013 7/1/2014	6/30/2017
Ward 3	Castleberry	Jerry	8/18/2015		6/30/2017
Ward 4	Lipscomb	Berlinda	12/2/2003	4/3/2007 7/5/2011 3/19/2013 7/19/2016	6/30/2019
Ward 5	Jardine	Mary	7/5/2011	3/19/2013 7/1/2014	6/30/2017

TERMS: Two year terms *Wards 2, 4, and 5 are 3 year terms

NOTES: Part of Gainesville-Hall MPO (GHMPO).

CONTACT: Rusty Ligon, Community Development Director
Srikanth Yamala, Hall County Planning Director

UPDATED: Wednesday, July 20, 2016

CITY OF GAINESVILLE

WORKSESSIONREQUEST

Date Submitted: 5/26/2017

Presenter:

Item of Business: THE CALLED MAYOR/COUNCIL MEETING WILL BEGIN IMMEDIATELY
AFTER THE WORK SESSION.

Meeting Date: 6/1/2017

Purpose of Request:

History/Background:

Facts & Issues for Consideration:

Department Recommendation:

Department Director:

If funding is involved, are funds approved within the current budget?

Amount Requested: Source of Funds:

Finance Comments:

Administrative Comments:
