



AGENDA

**Gainesville Planning and Appeals Board
Tuesday, March 14, 2017, 5:30 PM
Gainesville Justice Center**

1. CALL TO ORDER

2. MINUTES

A. January 17, 2017 PAB Meeting Minutes

3. OLD BUSINESS

4. NEW BUSINESS

A. Special Use Requests

- (1) Request from **Hanh My Thi Doan** for a Special Use on a 0.52± acre tract located on the east side of South Enota Drive, north of its intersection with Sherwood Park Drive (a/k/a **502 South Enota Drive NE**), having a zoning classification of Office and Institutional (O-I).

Ward Number: Three

Tax Parcel Number(s): 01-064-002-030

Request: Nail Salon

B. Annexation Requests

- (1) Request from **Masy Seng** to annex a 0.19± acre tract located on the northwest side of the intersection of Shallowford Road and Albert Street (a/k/a **593 and 597 Shallowford Road**) and to establish zoning as General Business (G-B).

Ward Number: Five

Tax Parcel Number(s): 00-119A-001-012 and 013

Request: Donut shop

- (2) 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

- (3) 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

C. Rezoning Requests

- (1) 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

5. MISCELLANEOUS

6. ADJOURNMENT

CITY OF GAINESVILLE

AGENDA REQUEST

Date Submitted: 2/21/2017
Presenter: N/A
Item of Business: January 17, 2017 PAB Meeting Minutes
Meeting Date: 3/14/2017

Purpose of Request:

The purpose of this request is to allow the Planning and Appeals Board to approve the minutes from the referenced meeting.

History/Background:

Facts & Issues for Consideration:

The draft minutes were reviewed by the Planning Manager and Community Development Director.

Department Recommendation:

Approval of the minutes as presented.

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
 Draft Minutes	Minutes

GAINESVILLE PLANNING AND APPEALS BOARD
DRAFT MINUTES OF MEETING
JANUARY 17, 2017

CALL TO ORDER Chairman Carter at 5:30 p.m.

Members Present: Chairman Doug Carter, Vice-Chair Jane Fleming, Board Members Eddie Martin, Sr. and Ryan Thompson

Members Absent: Board Members Connie Rucker, Carmen Delgado and Lemuel Betancourt

Staff Present: Community Development Director Rusty Ligon, Planning Manager Matt Tate and Recording Secretary Judy Foster

Others Present: Council Member George Wangemann

MINUTES OF DECEMBER 13, 2016

There was a motion to approve the minutes as presented.

Motion made by Board Member Martin

Motion seconded by Board Member Thompson

Vote – 4 favor, 3 absent (Rucker, Delgado, Betancourt)

OLD BUSINESS

There was a motion to remove the Code Amendment request from the table.

Motion made by Vice-Chair Fleming

Motion seconded by Board Member Martin

Vote – 4 favor, 3 absent (Rucker, Delgado, Betancourt)

A. Code Amendment Request

- 1) Request from the **City of Gainesville** to amend Article 9-18 of the Unified Land Development Code for the City of Gainesville, Georgia. The proposed amendment will repeal and replace Article 9-18 entitled “Sign Regulations” with a new Article 9-18 entitled “Signs and Advertising Devices.”

Presentation: Consultant Jerry Weitz, 1225 Rucker Road, Alpharetta, stated the City is in the process of making major revisions to the Unified Land Development Code, noting this amendment emphasizes the sign ordinance primarily to insure content neutrality, i.e. making sure the regulations do not violate the First Amendment of the U. S. Constitution. He stated they have spent several months with about five drafts of the amendment, going through a deliberative process to come up with a product which has been looked at different ways with Administration. They reviewed the practical feasibility of the amendment and asked if we are solving problems with the current sign permitting process. He stated he was available to answer any questions about the process or the content of various articles if needed.

FAVOR: None

OPPOSE: None

Planning and Appeals Board Comments: None

There was a motion to recommend approval of the Code Amendment as presented.

Motion made by Vice-Chair Fleming

Motion seconded by Board Member Thompson

Vote – 4 favor, 3 absent (Rucker, Delgado, Betancourt)

NEW BUSINESS

A. Road Action Request

- 1) Request from **Rainmaker & Associates** to rename Touchdown Drive, located between Pearl Nix Parkway and Century Place, to Deshaun Watson Drive.

Ward Number: Five

Request: Road name change

Staff Presentation: Planning Manager Matt Tate gave the following staff presentation:

The applicant, Rainmaker & Associates, is proposing to rename Touchdown Drive. The new road name is to be called Deshaun Watson Drive in honor of former Gainesville High School graduate Deshaun Watson. Touchdown Drive is approximately 180± linear feet in length and is located between Pearl Nix Parkway and Century Place. The road serves as one of the access roads to Gainesville High School. The proposal appears to be reasonable given that the road primarily serves the Gainesville High School campus and no adjacent property owners will be impacted. Presently, there are no properties that have addresses from Touchdown Drive. In 2005, a similar request was approved to rename a short segment of nearby Rainey Street to Billy Lothridge Boulevard. There were no comments from other departments regarding this request.

Applicant Presentation: Sammy Smith, with Rainmaker & Associates, 302 Spring Street, stated he submitted the application for the road renaming on behalf of a few friends. He stated Touchdown Drive was constructed as the west bypass was completed in the late 1960s and was a two lane entrance way to Gainesville High School. He stated it was rebuilt in 2008 and changed to a four lane road to accommodate traffic for the high school and the Centennial Arts Academy. He stated the application speaks for itself and he appreciated the recommendation of staff.

FAVOR: Bruce Miller, Gainesville High School Head Football Coach, stated it's not just naming a street after a player, but to name it after somebody with the character Deshaun Watson has portrayed, noting he has made a lot of people proud and is a fine young man. He had the opportunity to visit with Deshaun over Christmas, before he had to return for the national championship run, and stated he is not a kid anymore as he is about to be a millionaire, but he had not changed from the ninth grade Deshaun Watson who is so special. He thought it would be great to have it right outside the GHS practice field to remind everyone of what you have to do to be great.

OPPOSE: None

Planning and Appeals Board Comments: None

There was a motion to recommend approval of the road renaming as presented.

Motion made by Board Member Martin

Motion seconded by Board Member Thompson

Vote – 4 favor, 3 absent (Rucker, Delgado, Betancourt)

Chairman Carter commended Coach Miller for the key role he played in Deshaun's development of character, noting he was very proud of him as well. He also thanked Mr. Smith for spearheading the acknowledgement of Deshaun's achievements.

ADJOURNMENT

There was a motion to adjourn the meeting at 5:45 p.m.

Motion made by Board Member Martin

Motion seconded by Vice-Chair Fleming

Vote – 4 favor, 3 absent (Rucker, Delgado, Betancourt)

Respectfully submitted,

Doug Carter, Chairman

Judy Foster, Recording Secretary

CITY OF GAINESVILLE

AGENDA REQUEST

Date Submitted: 2/21/2017

Presenter: Matt Tate

Item of Business: Request from **Hanh My Thi Doan** for a Special Use on a 0.52± acre tract located on the east side of South Enota Drive, north of its intersection with Sherwood Park Drive (a/k/a **502 South Enota Drive NE**), having a zoning classification of Office and Institutional (O-I).

Ward Number: Three

Tax Parcel Number(s): 01-064-002-030

Request: Nail Salon

Meeting Date: 3/14/2017

Purpose of Request:

The applicant is proposing to occupy a vacant office building for a nail salon. The change in use requires special use approval as the property is currently zoned for professional office purposes. The applicant's business known as Royale' Nails is currently located across the street within the Sherwood Plaza retail center. The business has eight employees and business hours are from 9:30 A.M. to 8:00 P.M. every day of the week. Minimal changes are proposed for the exterior of the building which will include new signage. There are currently 18 parking spaces provided on site of which no changes are proposed for parking or access. Adjacent uses include Walgreens Pharmacy, Wendy's Restaurant, Georgia Poultry Federation, Inc. and a single-family home.

History/Background:

Facts & Issues for Consideration:

Department Recommendation:

Planning staff is recommending conditional approval of this request with one condition.

See the Staff Recommendation Report for details.

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
☐ Staff Report	Report
☐ Location Maps	Backup Material
☐ Narrative	Backup Material
☐ Plat	Backup Material

- 📁 Maps
- 📁 Pictures of Site

- Backup Material
- Backup Material

**GAINESVILLE PLANNING and APPEALS BOARD
STAFF RECOMMENDATION**

Applicant Hanh My Thi Doan
Property Owner G. Todd Tyson
Location 502 South Enota Drive NE
Request Special Use within O-I zoning
Size 0.52± acre
Ward Three
Proposed Use Nail Salon
Planning Division Staff Recommendation **Approval, with condition**
Date March 14, 2017

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

The applicant is proposing a special use within the Office and Institutional (O-I) zoning district to establish a nail salon. The subject property contains a vacant, 2,344 square foot building that was previously occupied as a medical equipment office. The applicant's business known as Royale' Nails is currently located across the street within the Sherwood Plaza retail center. There are eight employees and the business hours are from 9:30 A.M. to 8:00 P.M. Monday thru Sunday. Minimal changes are proposed for the exterior of the building which will include new signage. There are currently 18 parking spaces provided on site of which no changes are proposed for parking or access. Adjacent uses include Walgreens Pharmacy, Wendy's Restaurant, Georgia Poultry Federation, Inc. and a single-family home.

▪ **Adjacent Land Use and Zoning**

Location	Use	Zoning
North	Georgia Poultry Federation, Inc. office	Office and Institutional (O-I)
South	Walgreens	Office and Institutional (O-I)
East	Single-family residential	Residential-I (R-I)
West	Wendy's Restaurant, Rite Aid Pharmacy, Sherwood Plaza Shopping Center	Regional Business (R-B)

▪ **Other Departmental Comments**

There were no other departmental comments regarding this request.

▪ **Zoning History**

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

2014 – A request by Beehive Homes of Gainesville to rezone a 2.0[±] acres tract located at 1351 Park Hill Drive from Residential-I (R-I) to Residential-II (R-II) with a special use was conditionally approved for an assisted living facility.

2010 – A request by Harold A. Hinchman to rezone a 1.89[±] acres tract located at 1050 Park Street from Residential-I (R-I) to Residential-II (R-II) was denied for a group home.

2008 – A request by JHME Properties, LLC to rezone 10.0[±] acres located at 1465 Jesse Jewell Parkway from Residential-II (R-II) to Office and Institutional (O-I) was approved with conditions for medical office uses, general office uses and accessory retail/restaurant uses.

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.

2007 – A request by Northeast Georgia Medical Center/Health System, Inc. to annex 4.218[±] acres with P-U-D zoning and to rezone 4.218[±] from Residential-II (R-II) & General Business (G-B) to Planned Unit Development (P-U-D) located at 0, 1295, 1317, 1319, 1321 & 1405 Jesse Jewell Parkway and 1284 & 1285 Sims Street was approved with conditions for medical uses.

▪ **Staff Analysis**

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

The subject property contains a small office building that was constructed in 1967 that is similar in scale with other nearby commercial buildings. The proposed use is a suitable use in view of the zoning and development of adjacent and nearby properties. The subject property is located along South Enota Drive which consists of a mixture of office and commercial uses of which most are zoned Office and Institutional and Regional Business (R-B) within the immediate vicinity. Nearby single-family residential uses are located along secondary streets such as Vine Street to the east.

(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 are to remain mostly unchanged. As well, the property has functioned as a non-residential use in the past including a medical equipment office and a blood bank facility. Adjacent and nearby uses include a mixture of residential and non-residential uses which appear to support the proposal. Traffic generated from the facility should be minimal as the existing driveway is expected to be utilized along South Enota Drive.

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

It is staff's opinion that the proposed development 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 *Traditional Neighborhoods* Character Area specifically within the *Northern Neighborhoods subarea*. The vision for this 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 in the *Northern Neighborhoods subarea* include low-density and medium-density residential, and mixed-use / commercial.

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

The subject property is zoned Office and Institutional (O-I) which will remain unchanged. The applicant is requesting a Special Use for a nail salon which requires special use approval within O-I zoning. If approved, the property will allow the proposed use and those uses currently permitted within the O-I zoning district. If the request is denied, the existing structure would retain its ability to be used separately for primarily professional office purposes. It appears the existing building and parking areas are conducive for the proposed use.

(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 cause no excessive or burdensome use of public facilities or services over and above any previous use of the property. The subject property currently utilizes various City services; including police/fire protection, and water and sewer utilities. The City of Gainesville Fire Station #2 is located approximately 2.3 miles from the subject property. Access and traffic patterns should remain unchanged. Based on the nature of the request, there will be no adverse 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?

Given the previous non-residential use of the property and the nearby development of Northeast Georgia Medical Center and Sherwood Plaza, it is expected that the subject property will continue to function as a non-residential use.

(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?

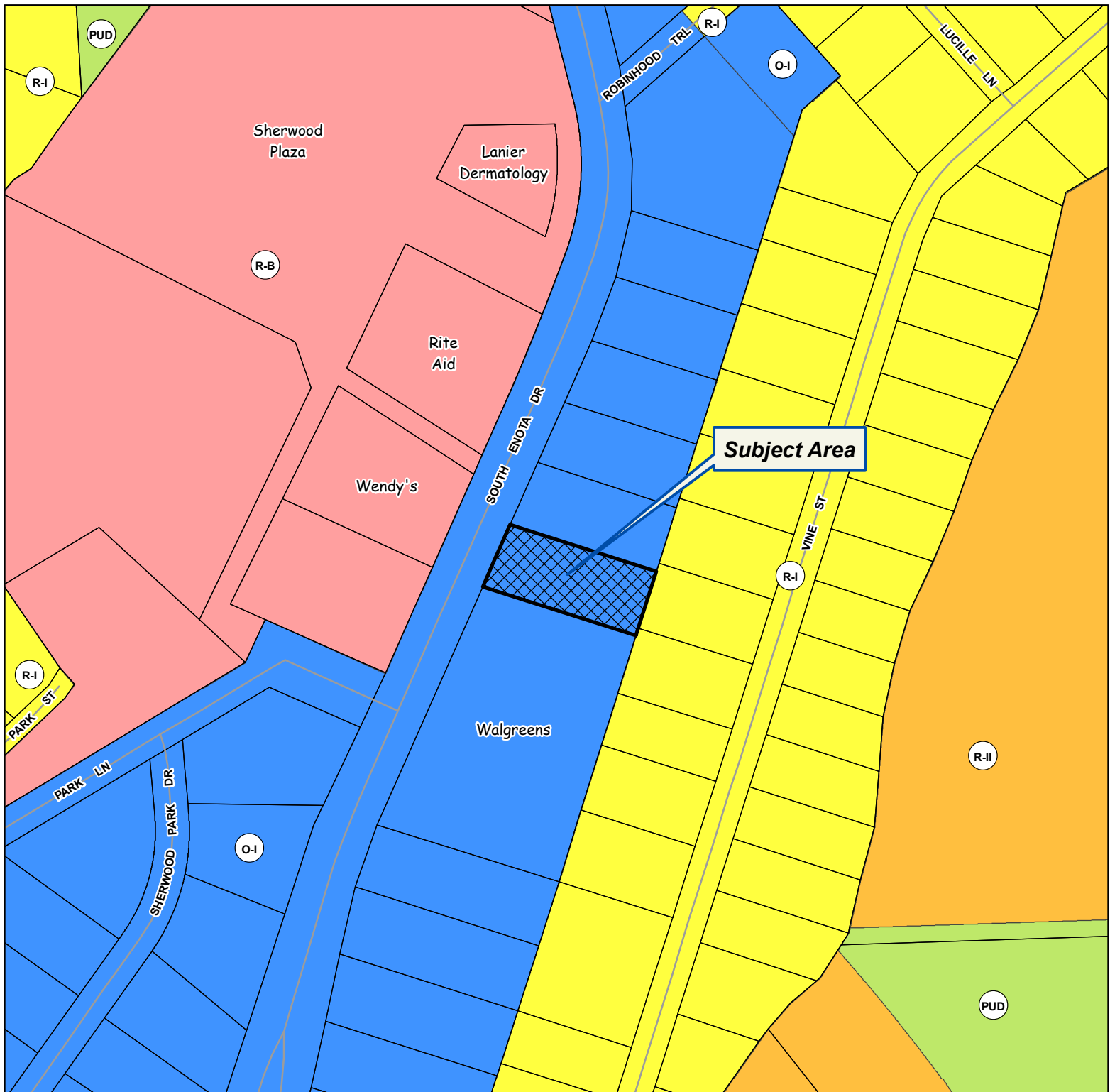
The proposal reflects a reasonable balance between the promotion of the public health, safety, morality, and general welfare and the right to unrestricted use of property. The proposed use appears to be reasonable given the property's location to non-residential and residential uses, as well as the fact that the existing building can be reused for the proposed use with little to no impact to the adjacent uses.

▪ **Staff Recommendation**

The Planning Division staff is recommending **conditional approval** of this Special Use request within **O-I zoning**, based on the Comprehensive Plan and the surrounding residential and non-residential land uses.

Condition

The existing monument sign or any replacement monument sign shall not be increased in size or height above the current monument sign dimensions so as to remain residential in scale.



Applicant:

HANH MY THI DOAN

Gainesville Community Development Department

SPECIAL USE REQUEST



Request:

Special Use for a nail salon within the Office and Institutional zoning district

Subject Area Address:

502 South Enota Drive NE

Meeting: 3/14/2017

Prepared: 2/1/2017

 Subject Area



0 120 240 360 480 Feet

1" = 200'

Tax Parcel: 01-064-002-030



Applicant:

HANH MY THI DOAN

Gainesville Community Development Department

SPECIAL USE REQUEST

 Subject Property

Aerial from 2015



0 120 240 360 480 Feet

1" = 200'



Request:

Special Use for a nail salon within the Office and Institutional zoning district

Subject Area Address:

502 South Enota Drive NE

Meeting: 3/14/2017

Prepared: 2/1/2017

Tax Parcel: 01-064-002-030

Narrative for Conversion of Existing Building into Nail Salon

The applicant is requesting Special Use approval for a Nail Salon within the Office and Institutional O-I) zoning district.

502 S. Enota is the parcel directly to the left of Walgreens Pharmacy.

The last use of the 502 S. Enota Building was a medical supply office. It is vacant now.

The existing business, Royale Nails, is directly across the street in the shopping center, at 601 S. Enota, Suite F. (Photo included). The hours are 9:30 AM to 8:00PM – seven days a week. They have approximately 8 people working there full and part time. No changes in service are planned.

The plan is to move the existing business across the street to 502 S. Enota.

No changes to the existing outside of the structure of 502 S. Enota are planned. And, any proposed sign changes will meet the standards of the City of Gainesville.

There are 18 existing parking spaces including a handicapped parking designated space. The number of parking spaces are sufficient for the use of both employees, and patrons alike.

Improvements to the landscape could be done, however are not currently planned.

The interior of the building will be upgraded. The existing interior of 502 S. Enota is set up as open space and offices. The bathrooms have not been updated for 30 years. The plan is to have a professional contractor upgrade the interior to include finishes appropriate for a fine nail salon (like the current interior finishes of Royale Nails) and to upgrade the interior into ADA compliance.

SHERWOOD PLAZA INC.

SOUTH ENOTA DRIVE
GEORGIA HWY. CONN. N213

PLAZA LANE

R/W

8" SANITARY SEWER

100' 100' 100' 100'

N 23° 20' E

100'

BLOCK "F"

BLOCK "G"

BASE BEARING THIS SURVEY

N 72° 40' W 279.8'

(S 72° 40' E → 280')

FROM PLAT
BOOK 50 P. 241
HALL CO.
NOV. 21, 1963 SURVEY

S 72° 45' E → 225.2'

S 72° 57' E → 236.2'

S 73° 10' E → 247.2'

S 73° 35' E → 267.3'

98.2' 98.6' 98.6' 179.9' 103.6'

S 17° 01' W

S 17° 01' W

S 16° 11' W
(COMPUTED)

MAGNETIC 1963

James Sayer

RECORDING PERMIT

By Deo L. Sears 8/27/65
GAINESVILLE PLANNING COMMISSION

In my opinion, this plat is a correct
representation of the land plotted and
has been prepared in conformity with
the custom standards and requirements

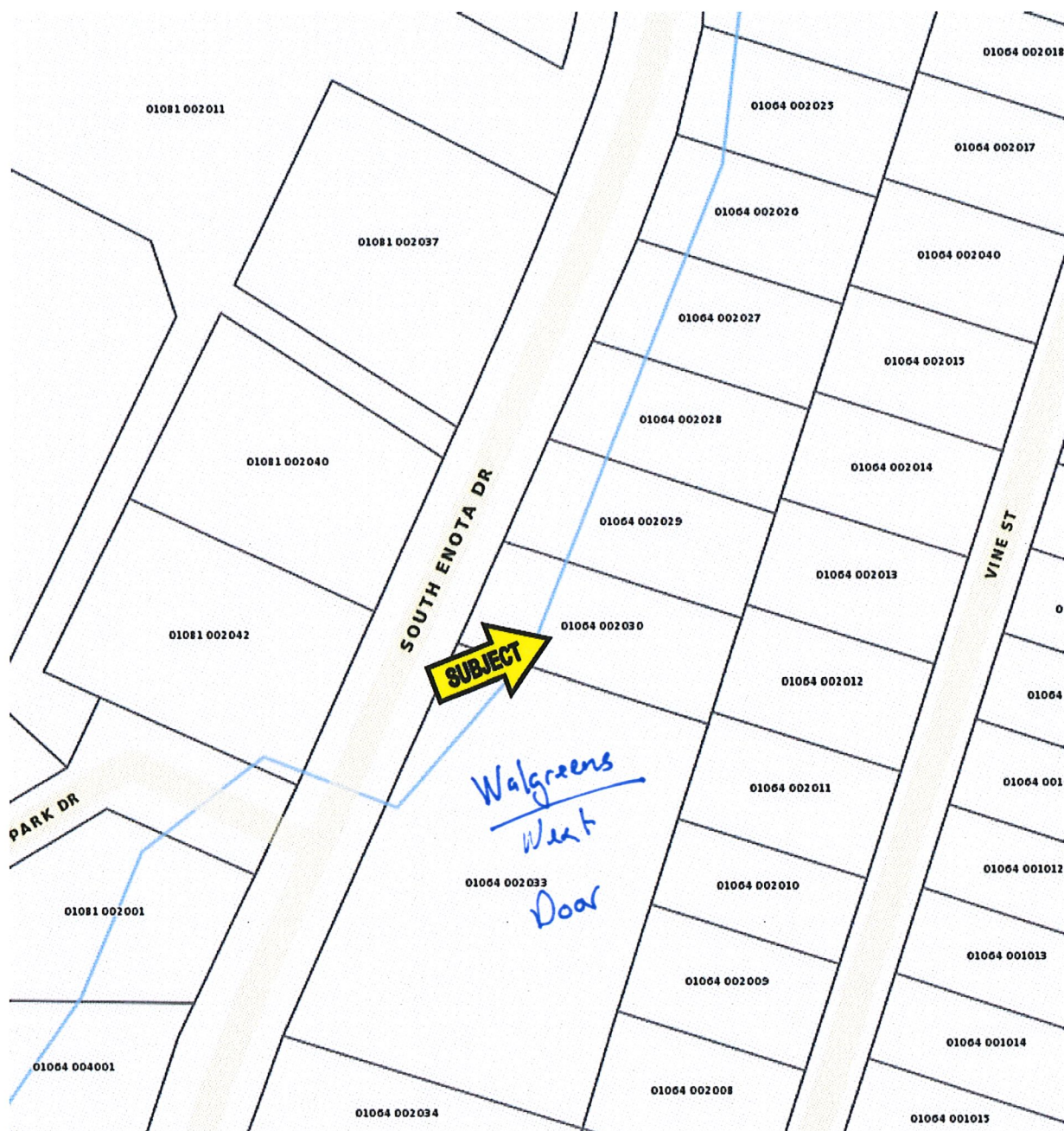
RESURVEY-LOTS 13-22 BLOCK "F"
& LOT 8 BLOCK "G" SHERWOOD HTS. S/D.

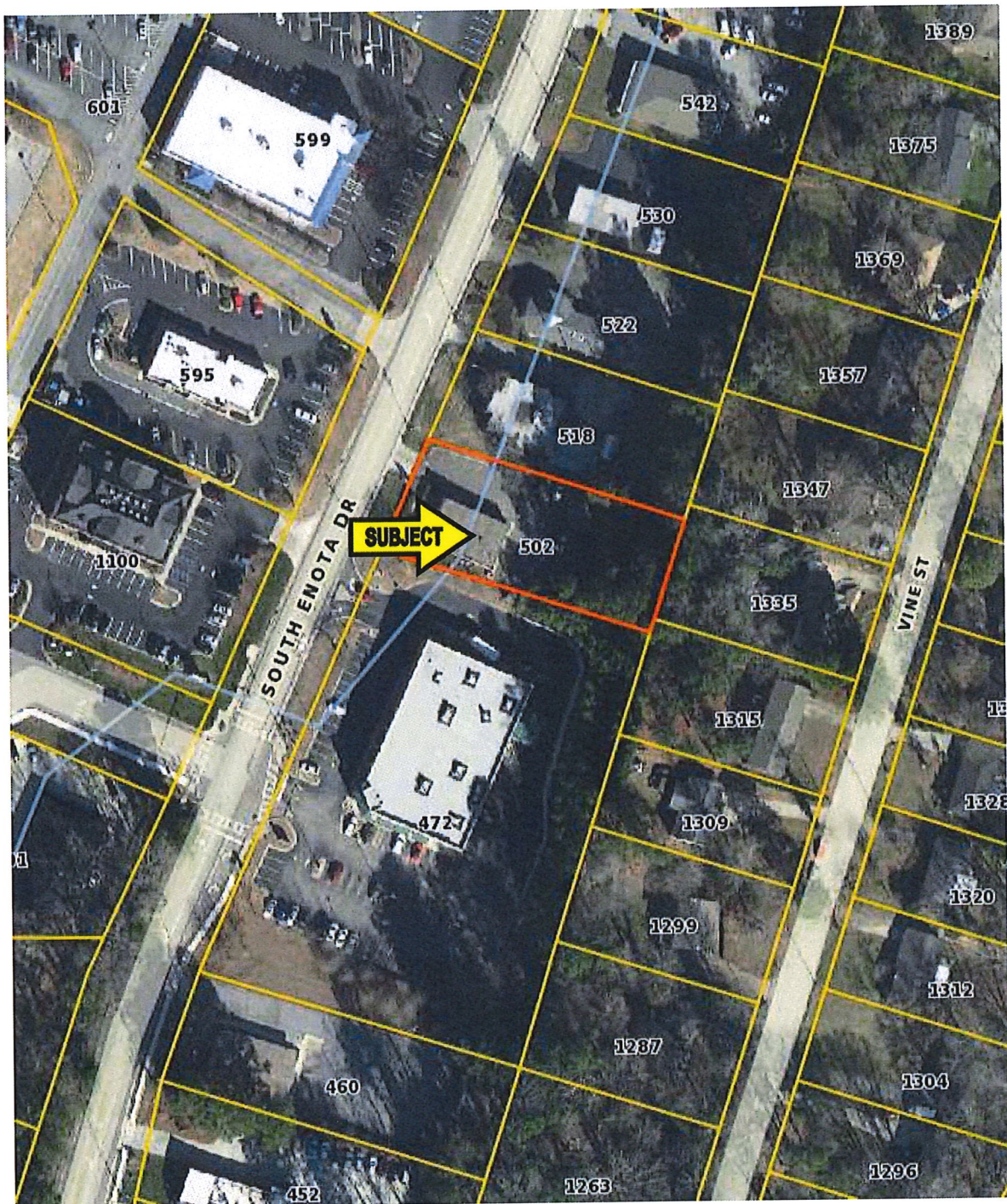
GAINESVILLE, HALL CO., GA.
WALLIS LAND CO.
(OWNER)

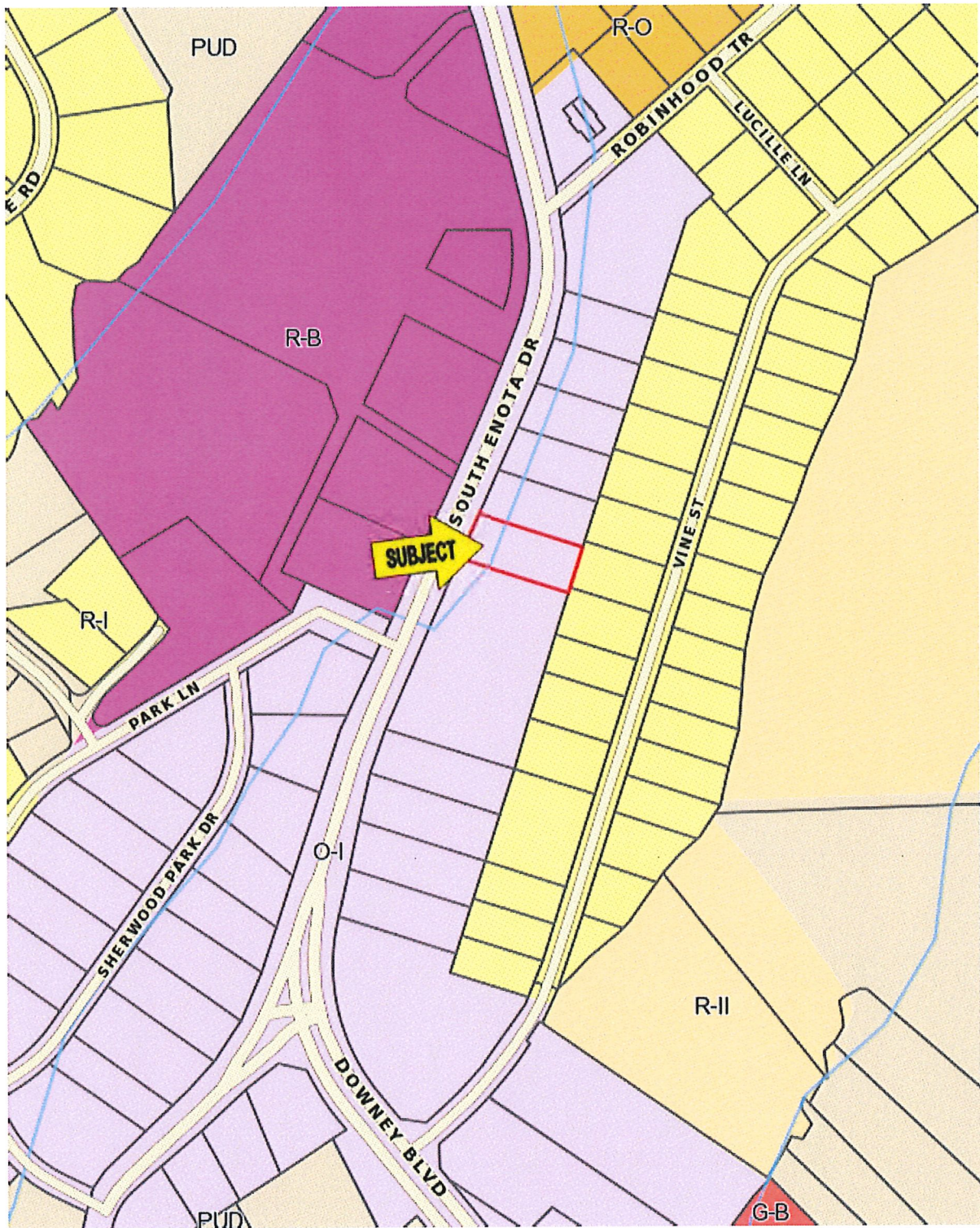
JULY 29, 1965 1" = 50'
BOUNDARY CLOSURE 1/5130

ORIGINAL SUBDIVISION SURVEY
RECORDED IN PLAT BOOK 50 P. 117-118
HALL CO., GA. PLAT RECORDS

PATTON, PLESS & TAYLOR

Tax Plat Map

Aerial

Zoning Map

IMPROVEMENT DESCRIPTION

General Description

The subject site is improved with a 2,344 SF office building built in 1967. The land-to-building ratio of the subject is 9.66:1.

Property Condition and Effective Age

The subject has good overall market appeal and has been adequately maintained. The overall appearance and condition of the building is average and the property possesses average overall market appeal. The subject's actual age is 48 years. The effective age of the improvements is 30 years with a remaining economic life of 20 years. These estimates have been based, in part, upon a typical projected economic life for similar buildings of 50 years, which was derived from the *Marshall Valuation Service* "Life Expectancy Guidelines," Section 97.

Construction Details

Subject photographs can be found in the Addenda of this report. General construction details of the buildings are as follows:

FOOTINGS & FOUNDATION	:	Reinforced concrete slab on grade with poured concrete footings around perimeter of buildings.
EXTERIOR WALLS	:	Wood frame with brick veneer on all sides.
INTERIOR WALLS	:	Walls are painted gypsum board.
ROOF	:	Flat built-up roof over wood sheeting.
FLOORS	:	Combination of commercial grade carpet, vinyl, and laminate wood flooring.
CEILINGS	:	Predominantly acoustical tiling with some painted gypsum board.
DOORS	:	Entrance doors are storefront glass in metal frames. Interior doors are wood doors in metal frames. Rear metal personnel door.
WINDOWS	:	Double-pane glass in metal frames.
HVAC	:	Served by two adequate HVAC systems with zoned heating and air.
ELECTRICAL	:	Three-phase electrical panel with adequate capacity. Ceiling mounted fluorescent lights throughout.
PLUMBING	:	Copper supply lines and cast-iron or PVC waste lines. Two restrooms serve the building.
LANDSCAPING	:	Adequate.







Royale' NAILS

WAXING
EYEBROWS
BIKINI
LEGS

WALK-INS WELCOME
770-539-9102

GIFT CERTIFICATES
AVAILABLE

MON - SAT
9:30 - 8:00
SUN
12:00 - 6:00

WE ACCEPT
AMERICAN EXPRESS
DISCOVER
VISA
MASTERCARD

EXCLUSIVE PROFESSIONAL NAIL CARE
FOR LADIES AND GENTLEMEN
ACRYLIC NAILS
PINK & WHITE
UV GEL
SPA PEDICURE
MANICURE
NAIL DESIGN



CITY OF GAINESVILLE

AGENDA REQUEST

Date Submitted: 2/21/2017

Presenter: Matt Tate

Item of Business: Request from **Masy Seng** to annex a 0.19± acre tract located on the northwest side of the intersection of Shallowford Road and Albert Street (a/k/a **593 and 597 Shallowford Road**) and to establish zoning as General Business (G-B).

Ward Number: Five

Tax Parcel Number(s): 00-119A-001-012 and 013

Request: Donut shop

Meeting Date: 3/14/2017

Purpose of Request:

The applicant is proposing to annex two undeveloped parcels into the city limits of Gainesville. The parcels are currently part of a larger unincorporated island and are zoned Highway Business (H-B) which is a comparable zoning to General Business (G-B) in the City. The applicant intends to utilize City water and sewer services in order to develop a 1,200 square foot donut shop. Access is proposed from Shallowford Road and an exit only drive from Albert Street. Surrounding uses include Regions Bank branch, dry cleaners, single-family home and the U.S. Army Reserve facility.

History/Background:

Facts & Issues for Consideration:

Department Recommendation:

Planning staff is recommending conditional approval of this request with three conditions.

See the Staff Recommendation Report for details.

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
☐ Staff Report	Report
☐ Location Maps	Backup Material
☐ Narrative	Backup Material
☐ Survey	Backup Material
☐ Concept Plan	Backup Material
☐ Pictures	Backup Material

**GAINESVILLE PLANNING and APPEALS BOARD
STAFF RECOMMENDATION**

Applicant Masy Seng
Property Owner DWM, Inc.
Location 593 and 597 Shallowford Road
Request Annex with General Business (G-B) zoning
Size 0.19[±] acre
Ward Five
Proposed Use Donut shop
Planning Division Staff Recommendation **Approval, with conditions**
Date March 14, 2017

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

The applicant is proposing to annex two undeveloped parcels into the city limits of Gainesville. The parcels are currently part of a larger unincorporated island and are currently zoned Highway Business (H-B) which is a comparable zoning to General Business (G-B) in the City. The applicant intends to utilize City water and sewer services in order to develop a 1,200 square foot donut shop, a small parking area and dumpster pad. A two-way access driveway is proposed along Shallowford Road and an exit only driveway is proposed along Albert Street. Anticipated store hours are Monday thru Sunday from 5 A.M. to 5 P.M.

▪ **Adjacent Land Use and Zoning**

Location	Use	Zoning
North	Single-family home	Highway Business (H-B) -County
South	US Army Reserve facility	Highway Business (H-B) -County
East	Regions Bank branch	General Business (G-B) -City
West	Vacant land; Dry cleaner	Highway Business (H-B) -County

Other significant uses within the area include Lakeshore Mall, Target and Walmart Shopping Centers which are zoned Regional Business (R-B).

▪ **Other Departmental Comments**

There were no comments from other departments for this request.

▪ **Zoning History**

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

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?

Surrounding uses include single-family homes, Regions Bank branch, dry cleaners and the U.S. Army Reserve facility. The predominant land use pattern along Shallowford Road consists of established commercial business with zonings of Neighborhood Business (N-B), Regional Business (R-B), General Business (G-B) and Highway Business (H-B). The proposed donut shop is consistent with other uses located along Shallowford Road.

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

The proposed donut shop should have minimal impacts on the adjacent and nearby properties given the small scale of the proposal. However, the adjacent single-family home to the north will be most impacted given its close proximity to the subject property. While the long term use for this property is not expected to be for residential purposes, the existing single-family home should be safeguarded.

(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 *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 *Longwood Cove* character area. This character area includes the Longwood Cove, Pearl Nix Parkway, Lakeshore Mall and Alta Vista Cemetery areas. The mall area is identified as a potential infill area that could be redeveloped in the long term as a mixed-use "town center". One of the quality community objectives includes redeveloping underutilized land and buildings to enable both commercial and residential growth. Land uses allowed within this character area include medium-density residential, multi-family residential, mixed-use, commercial, public / institutional, and parks / recreation / conservation.

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

The property is currently zoned Highway Business (H-B) within unincorporated Hall County which permits numerous commercial uses including a donut shop. The applicant is required to annex into the City of Gainesville as the property is contiguous to the city limits and will be utilizing sanitary sewer.

(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 donut shop will not be burdensome to the existing public facilities or services provided by the City of Gainesville. The subject property is part of a larger unincorporated island surrounded by the city limits, and numerous public facilities such as water and sewer are readily available. While Shallowford Road is capable of supporting additional traffic from the proposed use, Albert Street is a narrow county road and access should be limited.

The closest fire station is Gainesville Fire Station #1 which is approximately 2.0 miles from the subject property.

Given the nonresidential nature of the request there should 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 surrounding area falls within a mixed-use area which contains some older properties that are in need of redevelopment. The subject property is expected to be developed for non-residential purposes in the future given the surrounding commercial and availability of sewer. Some of the adjacent parcels could be assembled and annexed in the future.

(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?

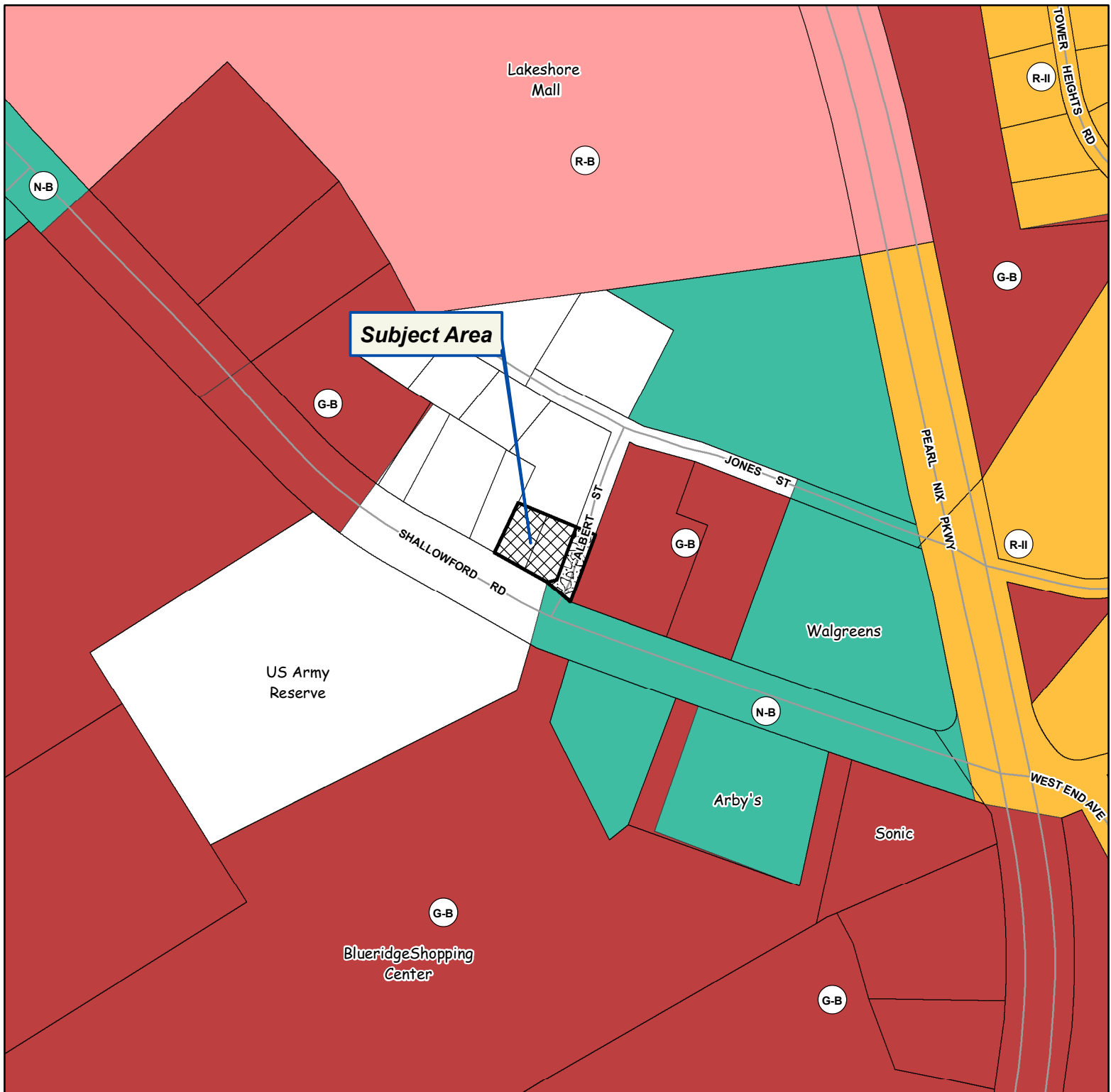
Due to the fact that the subject property is part of an unincorporated island and is surrounded by commercially zoned properties, the proposed donut shop appears to reflect a reasonable balance between the promotion of the public health, safety, morality, or general welfare and the right to unrestricted use of the property.

▪ **Staff Recommendation**

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

Conditions

1. The developer shall provide a minimum 8-foot tall two sided, opaque fence against the adjacent residential property to the north.
2. There shall be no signs allowed along Albert Street.
3. Access along Albert Street shall be limited to an exit only upon review and approval by the Public Works Director.



Applicant:

MASY SENG

ANNEXATION REQUEST



Request:

Annex 0.19+/- acre with General Business (G-B) zoning for a donut shop

Subject Area Address:

593 and 597 Shallowford Road

Meeting: 3/14/2017

Prepared: 2/1/2017

Gainesville Community Development Department



Subject Area



Right of Way to be Annexed



0 120 240 360 480 Feet

1" = 200'

Tax Parcel: 00-119A-001-012, 013

Page 28 of 583



Applicant:

MASY SENG

Gainesville Community Development Department

ANNEXATION REQUEST



Subject Area

Aerial from 2015

N



0 120 240 360 480 Feet

1" = 200'



Request:

Annex 0.19+/- acre with General Business (G-B) zoning for a donut shop

Subject Area Address:

593 and 597 Shallowford Road

Meeting: 3/14/2017

Prepared: 2/1/2017

Tax Parcel: 00-119A-001-012, 013

Application for Annexation to City of Gainesville

NW Corner Shallowford Road & Albert Street

Applicant, Mr. Masy Seng, submits to the City of Gainesville for annexation and concurrent rezoning of a 0.19 acre property. This property is vacant and currently owned by DWM, Inc. The recent Boundary Survey, prepared by Davis Engineering and Surveying indicates it is comprised of Tax Parcel Numbers 00119A001012 and 00119A001013.

Subject property is located at the northwest corner of Shallowford Road and Albert Street. Property currently lies within an unincorporated island of Hall County, and within the Highway Business Zoning District of Hall County. The nearest corporate limits of Gainesville are found along the eastern right of way of Albert Street.

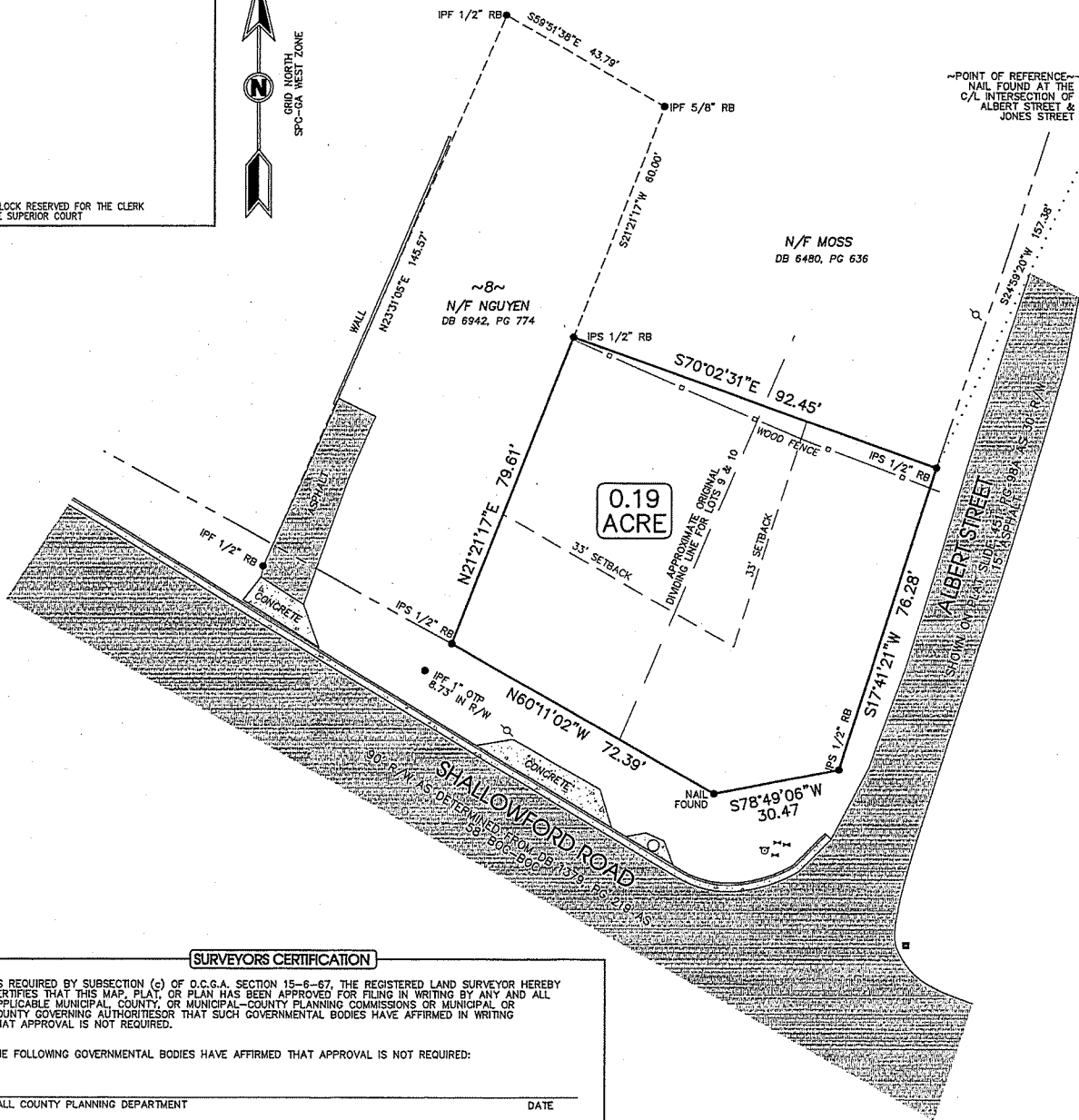
Neighboring parcels include an undeveloped tract to the west, which is also in the unincorporated island and has Highway Business zoning. A single-family home sits on the parcel adjacent to the north, although the property has Highway Business zoning. It too, lies within the aforementioned unincorporated island. The neighboring parcel to the east, sits across Albert Street, and is within City limits and operates as Regions Bank. The bank parcel has the City's General Business zoning. The neighboring parcel to the south, across Shallowford Road, is the home of the U.S. Army Reserve 802nd Ordnance, and is also in the unincorporated island with Highway Business zoning.

The applicant requests annexation to the City of Gainesville and concurrent rezoning to the City's General Business District. Should this be approved, the property's frontage along Shallowford Road would include it in the City's Gateway Corridor Overlay District, in addition to the General Business District.

The proposed use is a donut shop, involving the baking and retail sale of donuts on site. Pastries, donuts, muffins, and coffee are among menu items at other locations of the family-owned shops. The proposed use is allowed within the General Business District zoning. No special permission is required to operate thusly. The existing conditions of the property are vacant land, with public roads along two frontages. No water features, critical slopes, or wetlands are present, making the parcel ideal for development.

Development of this parcel as retail business is consistent with the Future Development Map of the City's 2030 Comprehensive Plan, which shows the area as commercial development. Annexation and commercial development of this parcel would enhance the City's tax digest, while new retail business would generate additional SPLOT revenue for the community.

THIS BLOCK RESERVED FOR THE CLERK
OF THE SUPERIOR COURT



FIELD MEASUREMENTS WERE TAKEN WITH A TRIMBLE S6 ROBOTIC INSTRUMENT.
FIELD DATA FOUND TO HAVE A CLOSURE PRECISION OF 1 FOOT IN 418,261 FEET, AND AN ANGULAR ERROR OF 27 SECONDS PER ANGLE.
FIELD DATA ADJUSTED USING THE LEAST SQUARES METHOD.
THIS PLAT HAS BEEN CALCULATED FOR CLOSURE AND FOUND TO HAVE A PRECISION OF 1 FOOT IN 34,931 FEET.

THIS PLAT DOES NOT CONSTITUTE AND SHALL NOT BE CONSTRUED AS A TITLE SEARCH OR REPORT, AND THUS MAY BE SUBJECT TO ANY EASEMENTS, RIGHT OF WAY OR RESTRICTIONS ONE MAY FIND.

THIS PLAT WAS PREPARED FOR THE EXCLUSIVE USE OF THE PERSON, PERSONS OR ENTITY NAMED ON THIS PLAT. THIS DOES NOT EXTEND TO ANY UNNAMED THIRD PARTY WITHOUT AN EXPRESSED RESTATEMENT BY THE SURVEYOR.

THIS SURVEY COMPLIES WITH BOTH THE RULES OF THE GEORGIA BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS AND LAND SURVEYORS AND THE OFFICIAL CODE OF GEORGIA ANNOTATED (OCCA) 15-6-67 AS AMENDED BY HB1004 (2016), IN THAT WHERE A CONFLICT EXISTS BETWEEN THOSE TWO SETS OF SPECIFICATIONS, THE REQUIREMENTS OF THE LAW PREVAIL.

TYPE OF SURVEY: RETRACEMENT

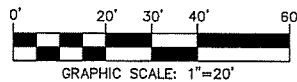
SOURCE OF TITLE DESCRIPTION:
FOR PROPERTY SHOWN HEREON:
DB2535, PG 37

PROPERTY OWNERS AS OF SURVEY DATE:
D.W.M. INC.

PARCEL NUMBERS: 00119A001012 & 00119A001013

NOTE:
33' SETBACK PER CITY OF GAINESVILLE.

LEGEND	
PROPERTY	
○	CALCULATED POSITION
●	IRON PIN FOUND/SET (IPF/PS)
○	CORP OF ENGINEERS MONUMENT
C/L	CENTERLINE
CTP	CRIMPED TOP PIPE
DB	DEED BOOK
N/F	LAND LOT LINE (L/L)
OTF	NOW OR FORMERLY OPEN TOP PIPE
PS	PLAT BOOK
PG	PAGE
P/L	PROPERTY LINE
RESAR	REAR
R/W	RIGHT OF WAY (R/W)
R/W	RIGHT OF WAY MONUMENT
SYMBOLS	
+	ACCESSIBLE SPACE
+	AIR CONDITION UNIT
+	BOLLARD
+	BORE HOLE
+	CORRUGATED METAL PIPE
+	CLEAN OUT
+	DROP INLET
+	DOUBLE WING CATCH BASIN
+	ELECTRIC BOX
+	FIRE DEPARTMENT CONNECTION
+	FIRE HYDRANT
+	FLAG POLE
+	GAS VALVE
+	GATE VALVE
+	GRAVE
+	GUY WIRE
+	HEADWALL
+	IRRIGATION VALVE
+	JUNCTION BOX
+	LIGHT POLE
+	MANHOLE
+	REINFORCED CONCRETE PIPE
+	SIGN
+	SINGLE WING CATCH BASIN
+	SPRING HEAD
+	TELECOMMUNICATIONS BOX
+	TRANSFORMER
+	UTILITY POLE
+	UTILITY MANHOLE
+	WATER METER
+	WATER VALVE
+	WATER VAULT
LINE TYPES	
---	ADJUNCTION
---	CABLE LINE
---	CENTERLINE (C/L)
---	FENCE (WOOD)
---	FENCE (CHAINLINK)
---	FENCE (WIRE)
---	FENCE (WIRE/METAL)
---	FIBER OPTIC
---	GAS
---	OVERHEAD UTILITY
---	POWER
---	POWER AND TELEPHONE
---	SANITARY SINKER LINE (S.S.)
---	SANITARY STUB OUT
---	STORM LINE
---	TELEPHONE LINE
---	TREE LINE/WOODS LINE
---	WATER LINE



SURVEYORS CERTIFICATION

AS REQUIRED BY SUBSECTION (c) OF O.C.G.A. SECTION 15-6-67, THE REGISTERED LAND SURVEYOR HEREBY CERTIFIES THAT THIS MAP, PLAT, OR PLAN HAS BEEN APPROVED FOR FILING IN WRITING BY ANY AND ALL APPLICABLE MUNICIPAL, COUNTY, OR MUNICIPAL-COUNTY PLANNING COMMISSIONS OR MUNICIPAL OR COUNTY GOVERNING AUTHORITIES OR THAT SUCH GOVERNMENTAL BODIES HAVE AFFIRMED IN WRITING THAT APPROVAL IS NOT REQUIRED.

THE FOLLOWING GOVERNMENTAL BODIES HAVE AFFIRMED THAT APPROVAL IS NOT REQUIRED:

HALL COUNTY PLANNING DEPARTMENT _____ DATE _____

HALL COUNTY ENVIRONMENTAL HEALTH DEPARTMENT _____ DATE _____

SUCH APPROVALS OR AFFIRMATIONS SHOULD BE CONFIRMED WITH THE APPROPRIATE GOVERNMENTAL BODIES BY ANY PURCHASER AS TO INTENDED USES OF ANY PARCEL. THE REGISTERED LAND SURVEYOR FURTHER CERTIFIES THAT THIS MAP, PLAT, OR PLAN COMPLIES WITH THE MINIMUM STANDARDS AND SPECIFICATIONS OF THE STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS AND LAND SURVEYORS AND THE GEORGIA SUPERIOR COURT CLERKS' COOPERATIVE AUTHORITY. THE APPROVAL SIGNATURES ABOVE WERE NOT IN PLACE WHEN THIS SURVEY WAS ISSUED, AND ARE TO BE PROPERLY OBTAINED PRIOR TO RECORDING.

JASON D. WATKINS GA RLS #3241

1/25/17
DATE

DES DAVIS

ENGINEERING & SURVEYING
81 CROWN MTN. PLACE
SUITE A-400
DAHLONEGA, GA 30533
PH: (706) 864-0012
FAX: (706) 864-0052
DAVISENGINEERS.COM



SURVEY FOR: MASY SENG

PORTION OF LOTS 9 & 10
OF THE JONES, ATKINS, GREEN SUBDIVISION (PB 2, PG 101)
LAND LOT 165
9TH DISTRICT
HALL COUNTY, GEORGIA

DRAWN BY: LAW

FIELD CREW: JR, JG, CC, JB

PLAT DATE: 1/20/17

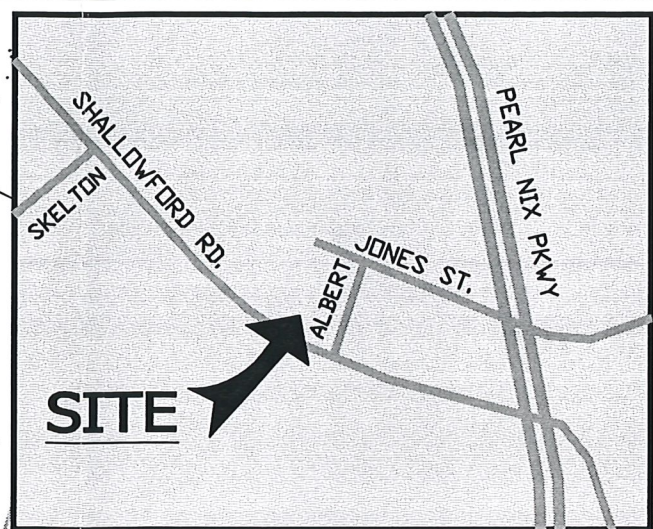
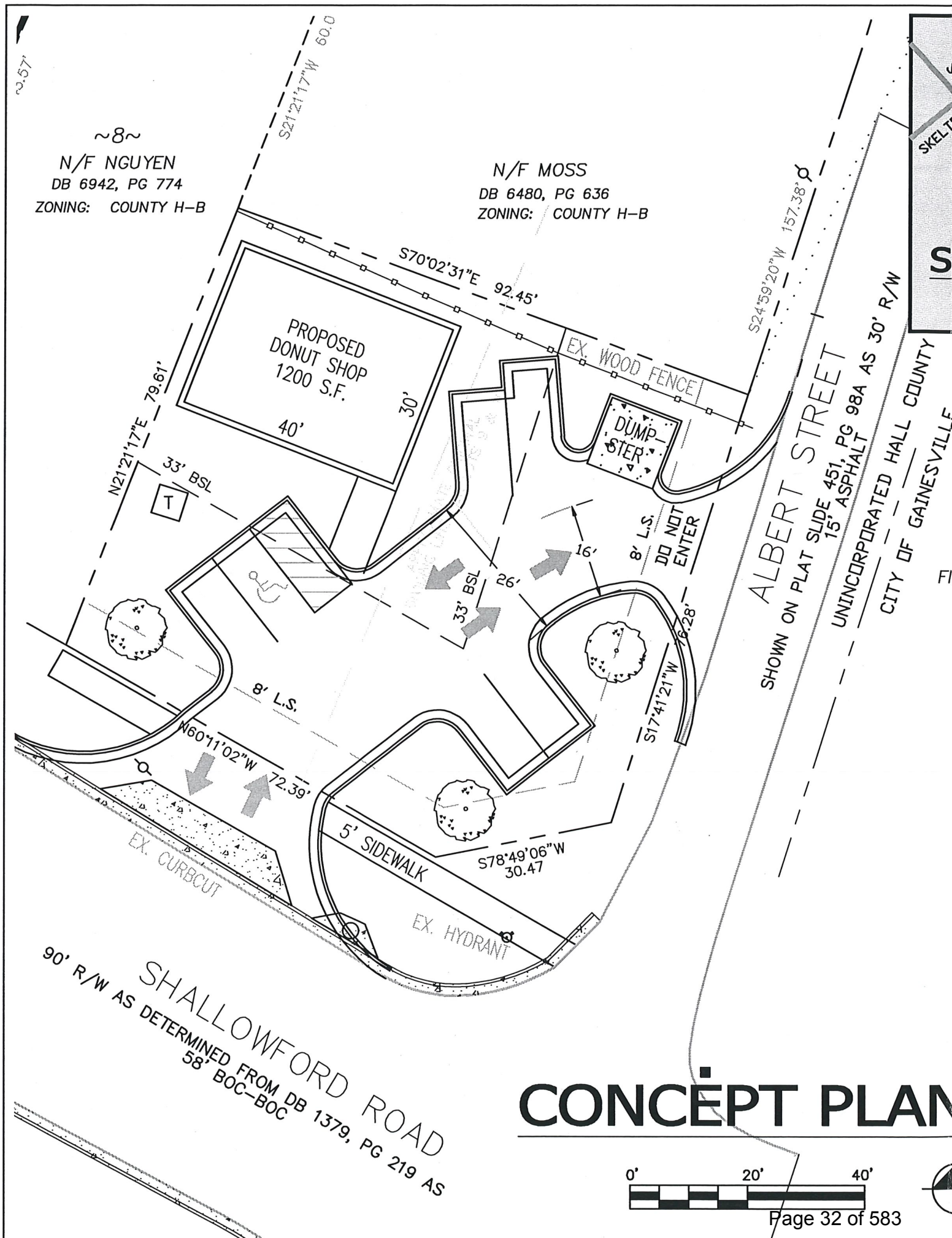
SURVEY DATE: 1/20/17

SHEET NO.

1 OF 1

PROJECT NO.

17-005



LOCATION
MAP

N/F
FIRST NATIONAL BANK
DB 2430, PG 299
ZONING: CITY G-B

SITE ANALYSIS	
LOT AREA	0.19 ACRES
IMPERVIOUS AREA	4850 S.F.
IMPERVIOUS COVERAGE	59%
BUILDING AREA	1200 S.F.
BUILDING COVERAGE	.14 FAR
RETAIL PARKING: 1/275 SF (MIN.)	5 SPACES
PROPOSED PARKING	6 SPACES

GAPE 026617
PEF 006791

1. OWNER OF PROPERTY:
DWM, INC.
P.O. BOX 1492
DAWSONVILLE, GEORGIA 30534
CONTACT: JAMES SWAFFORD
PHONE: (706)974-4452

APPLICANT:
MR. MASY SENG
2876 VALAISE PATH
LITHONIA, GEORGIA 30038
PHONE: (951)905-4363
2. BOUNDARY SURVEY PREPARED BY DAVIS ENGINEERING & SURVEYING DAHLONEGA, GEORGIA, DATED JANUARY 20, 2017 UTILIZED FOR EXISTING CONDITIONS OF THIS CONCEPT PLAN.

3. PROPOSED USE OF PROPERTY IS RETAIL SPACE AND ASSOCIATED PARKING TO HOUSE BUSINESS ENGAGED IN BAKING AND SALE OF DONUTS.

4. PROPERTY LOCATED IN LAND LOT 165, 9TH DISTRICT. PARCEL COMPRISED OF 0.19 ACRES.

5. SUBJECT PROPERTY IS CURRENTLY WITHIN UNINCORPORATED HALL COUNTY, AND HAS HIGHWAY BUSINESS ZONING. ITS FRONTAGE ON SHALLOWFORD ROAD PLACES IT WITHIN THE GATEWAY CORRIDOR OVERLAY DISTRICT. ADJACENT PARCELS TO NORTH AND WEST ARE ALSO WITHIN UNINCORPORATED HALL COUNTY AND HAVE HIGHWAY BUSINESS ZONING. PROPERTY TO EAST, ACROSS ALBERT STREET, IS WITHIN GAINESVILLE MUNICIPAL LIMITS AND HAS GENERAL BUSINESS ZONING. PROPERTY TO SOUTH, ACROSS SHALLOWFORD ROAD, IS WITHIN UNINCORPORATED HALL COUNTY, AND HAS HIGHWAY BUSINESS ZONING.

6. EXISTING CONDITIONS OF PROPERTY DESCRIBED AS GRASS WITH GENTLY SLOPING GRADES. NO WATER FEATURES ARE PRESENT.

7. PARCEL IS VACANT, WITH THE EXCEPTION OF A FENCE ALONG NORTH PROPERTY LINE. ACCESS TO PARCEL IMPROVED WITH A PAVED CURBCUT OFF SHALLOWFORD ROAD. FIRE HYDRANT LOCATED NEAR SE CORNER OF PROPERTY IN ROW.

8. CONCEPT PLAN DEPICTS PROPOSED LOCATION OF BUILDING, PARKING, DRIVES, AND ACCESS. FACILITY TO BE CONSTRUCTED IN SINGLE PHASE.

9. CONNECTION TO MUNICIPAL WATER AND SANITARY SEWAGE PROPOSED. PROPOSED PARCEL DEVELOPMENT CREATES LESS THAN 5000 S.F. IMPERVIOUS COVER AND IS NOT SUBJECT TO CHAPTER 9-13-12, STORM WATER MANAGEMENT, OF THE GAINESVILLE UNIFIED LAND DEVELOPMENT CODE (9-13-12-5a.)

10. PROPOSED ADMINISTRATIVE VARIANCES INCLUDE THE FOLLOWING:
A. REDUCE FRONT SETBACK BY 7' FROM CODIFIED 40' TO 33' (9-24-3-2a)
B. REDUCE LANDSCAPE STRIP BY 2' FROM CODIFIED 10' TO 8'. (9-24-3-2h)
C. WAIVE NEED FOR 40'x14' LOADING SPACE. (9-17-6-4)

REVISIONS		BY:
01/28/17	ANNEXATION SUBMITTAL	AQUATERRA DESIGN, LLC
		3292 THOMPSON BRIDGE RD #176
		GAINESVILLE, GA 30506
		(770)316-2762
		PROJECT:
		DONUT SHOP
		593 & 597 SHALLOWFORD RD.
		GAINESVILLE, HALL CO., GEORGIA
PARCELS: 00119A001012 & 00119A001013		ANNEXATION CONCEPT PLAN
2017001c4.DWG		PS1

Danny's Donuts





CITY OF GAINESVILLE

AGENDA REQUEST

Date Submitted: 2/21/2017

Presenter: Matt Tate

Item of Business: 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: 3/14/2017

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 anticipated development will consist of 90 active adult units to include 56 attached terrace homes, 10 single-family detached homes and 24 stacked flats (condominiums). The development will include a community clubhouse and pool. Access is proposed from Strickland Drive and storm water detention is proposed underground. It is the intent for the proposal to complement the below proposed mixed-use request.

History/Background:

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

Facts & Issues for Consideration:

Department Recommendation:

Planning staff has determined that the applicant will need to provide additional traffic data prior to staff giving an official recommendation. Therefore, staff is recommending the three Oak Hall Companies, LLC agenda items be **tabled** for a period of 60-days to be scheduled for the May 9, 2017 Planning and Appeals Board meeting.

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
 Staff Memo	Backup Material

Location Maps	Backup Material
Overall Location Map	Backup Material
Narrative	Backup Material
Survey	Backup Material
Concept Plan	Backup Material
Elevations and Floor Plans	Backup Material
Traffic Impact Study	Backup Material



CITY OF GAINESVILLE

COMMUNITY
DEVELOPMENT
DEPARTMENT

Post Office Box 2496

Gainesville, Georgia 30503-2496

Telephone: 770-531-6570

Fax: 770-297-7826

Web Site: www.gainesville.org

MEMORANDUM

TO: Gainesville Planning and Appeals Board

FROM: Community Development Department – Planning Division

DATE: March 14, 2017

SUBJECT: Oak Hall Companies, LLC

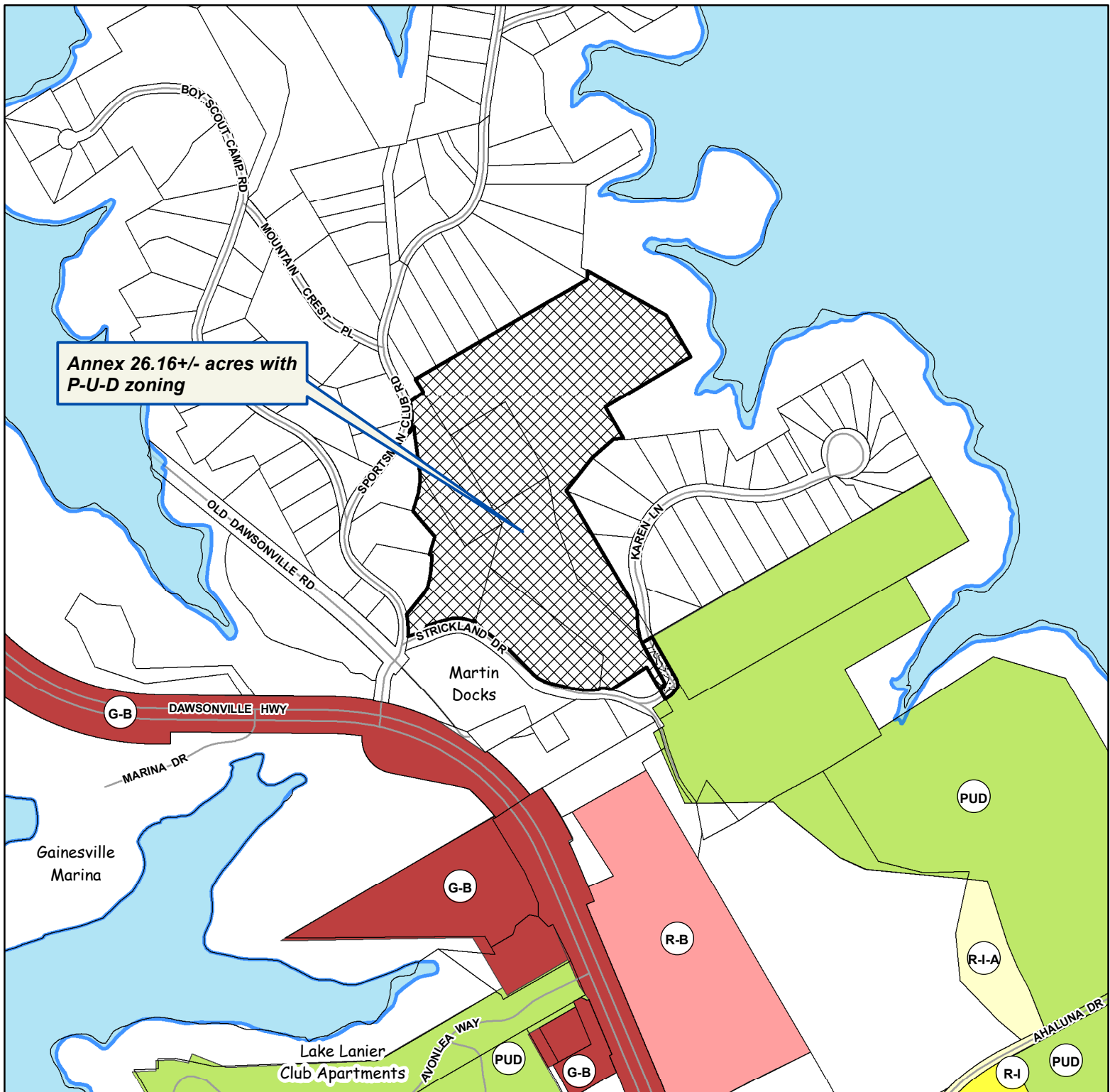
Oak Hall Companies, LLC has submitted three applications which are scheduled to be heard at the March 14, 2017, Planning and Appeals Board meeting. Below is a brief description of the three applications.

1. Rezoning of 157.98[±] acres to Planned Unit Development (P-U-D) and General Business (G-B) for an 820-unit age-restricted, mixed-use development to include 261 single-family detached homes; 64 single-family cottages; 55 detached terrace homes; 52 attached terrace homes; 63 stacked flats (multi-story condominiums); and 175 independent living units and 150 assisted living units. Amenities are to include a swimming pool, club house, passive park and two community docks totaling 130 boat slips.

Proposed non-residential uses are to include 24,000 square feet of retail/office/restaurant space, seven commercial parcels each having approximately 8,000 square feet of building space, a 40,000 square foot storage facility and a 3.0[±] acres tract of land reserved for a 10,650[±] square foot fire station.

2. Annexation of 50.81[±] acres with a zoning of Planned Unit Development (P-U-D) and General Business (G-B) to include the same 820-unit age-restricted, mixed-use development described above.
3. Annexation of 26.16[±] acres with a zoning of Planned Unit Development (P-U-D) for a 90-unit, age-restricted, active adult development to include 56 attached terrace homes, 10 single-family detached homes and 24 stacked flats (condominiums). Amenities are to include common green space/park areas, community clubhouse and pool.

Upon review of these agenda items, the Community Development Department has determined that the applicant will need to provide additional traffic data prior to staff giving an official recommendation. Therefore, staff is recommending the three agenda items be **tabled** for a period of 60-days to be scheduled for the May 9, 2017 Planning and Appeals Board meeting.



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: 2/1/2017

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
Page 3 of 5



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: 2/1/2017

Prepared: 3/14/2017

Gainesville Community Development Department



Subject Property

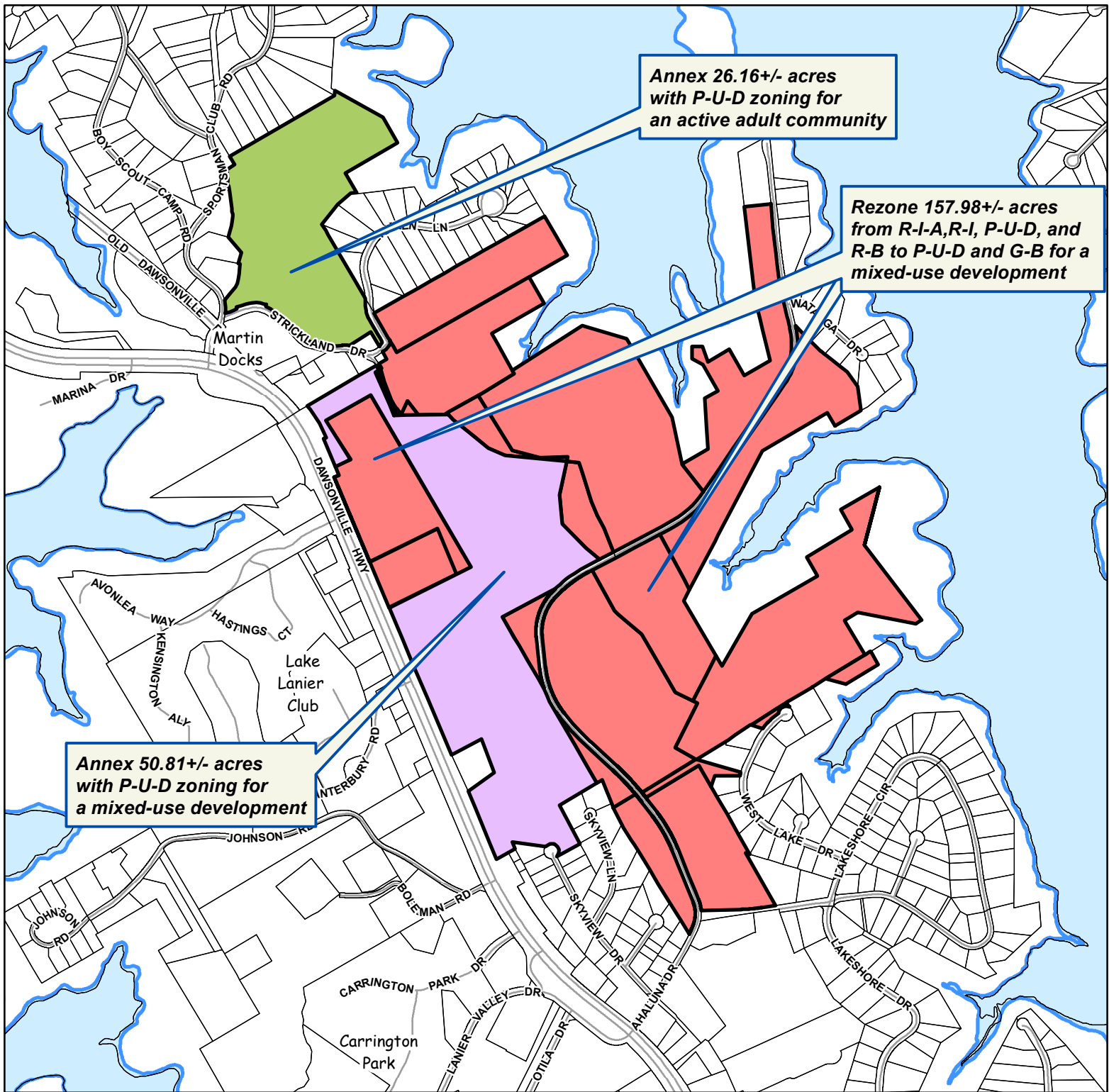
Aerial from 2015

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
Page 3 of 5



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: 3/14/2017

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 2017-1-27

**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 Detached, Zero-Lot Line, and Condominium Dwellings
ROW Access:	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 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 28, 2016, 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

Economic Impact Statement: Oak Hall Companies, LLC - Willow Springs

Population	193,535		Millage Rate	0.011369		Total Expenditures per	\$ -
Households	61,992		Sales Tax Revenue	\$52,096,442.00		Expenditures per	\$ -
Average Home	\$ 325,000.00					Sheriff's Budget	\$28,679,357.00
Impact Fees per Unit	\$ 1,575.83		Linear Feet of Public Road in Development	5,000		Fire Expenditures	\$ 21,667,821.00

Table 1: Projected Subdivision Population			
Year	New Houses	Total Houses	Population
1	30	30	94
2	30	60	187
3	30	90	281
4			
5			
6			
7			
8			
9			
10			

Table 2: Projected Annual Property Tax Revenue from Residential		
Average Home Price	Year	Revenue
\$325,000.00	1	\$43,656.96
Avg. Prop Tax per House	2	\$87,313.92
\$1,455	3	\$130,970.88
	4	
	5	
	6	
	7	
	8	
	9	
	10	

Table 3: Projected Annual Sales Tax Revenue from Residential	
Year	Revenue
1	\$25,211.21
2	\$50,422.42
3	\$75,633.63
4	
5	
6	
7	
8	
9	
10	

Table 4: Projected Total Annual Tax Revenue from Residential	
Year	Revenue
1	\$68,868.17
2	\$137,736.34
3	\$206,604.51
4	
5	
6	
7	
8	
9	
10	

Table 5: Projected Residential Impact Fees: One Time Fee per Annum		
Year	Total	
1	\$	47,274.90
2	\$	47,274.90
3	\$	47,274.90
4	\$	-
5	\$	-
6	\$	-
7	\$	-
8	\$	-
9	\$	-
10	\$	-

Table 8: Cost of Law Enforcement Services		
Year	Total Houses	Enforcement
1	30	\$13,878.90
2	60	\$27,757.80
3	90	\$41,636.70
4		
5		
6		
7		
8		
9		
10		

Table 9: Cost of Fire Protection Services		
Year	Total Houses	Expenditures
1	30	\$10,485.78
2	60	\$20,971.57
3	90	\$31,457.35
4		
5		
6		
7		
8		
9		
10		

Table 10: Summary of Annual Impact at		
Impact Summary	Column1	Totals
Revenues		
Property Taxes		\$130,970.88
Sales Taxes		\$75,633.63
Total Revenue		\$206,604.51
Expenditures		
Streets		\$5,000.00
Law Enforcement		\$41,636.70
Fire		\$31,457.35
Total Expenditure		\$78,094.04
Annual Net Revenue		\$128,510.46
Total Impact Fees		\$141,824.70

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. 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.

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

Residential units are designed to allow residents to "age in place." Independent living products will consist of a mixture of 90 Age-Restricted, Single Family Detached, Zero-Lot Line, and Condominium Dwellings.

I. Detached Residential

Type	Maximum # of Units
• Single Family Detached	10 units

PERFORMANCE STANDARDS – DETACHED RESIDENTIAL

- Minimum lot width – 60 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:
 - 20' front
 - 5' side
 - 10' building separation
 - 10' interior rear



II. Zero-Lot Line Residential

Type	Maximum # of Units
• Terrace Homes – Attached	56 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 – 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



III. Condominium Residential

Type	Maximum # of Units
• Stacked Flats	24 units

Stacked flats are multi-story condominiums, with each story potentially being held in separate ownership. Buildings may contain up to three units, and multiple buildings may be located on a single lot. In areas designated for stacked flats, all lots will be owned by a condominium association, all building exteriors and other improved areas will be maintained by a mandatory condominium association as “common area,” and all undeveloped areas will be maintained as “open space.”

PERFORMANCE STANDARDS – CONDOMINIUM RESIDENTIAL

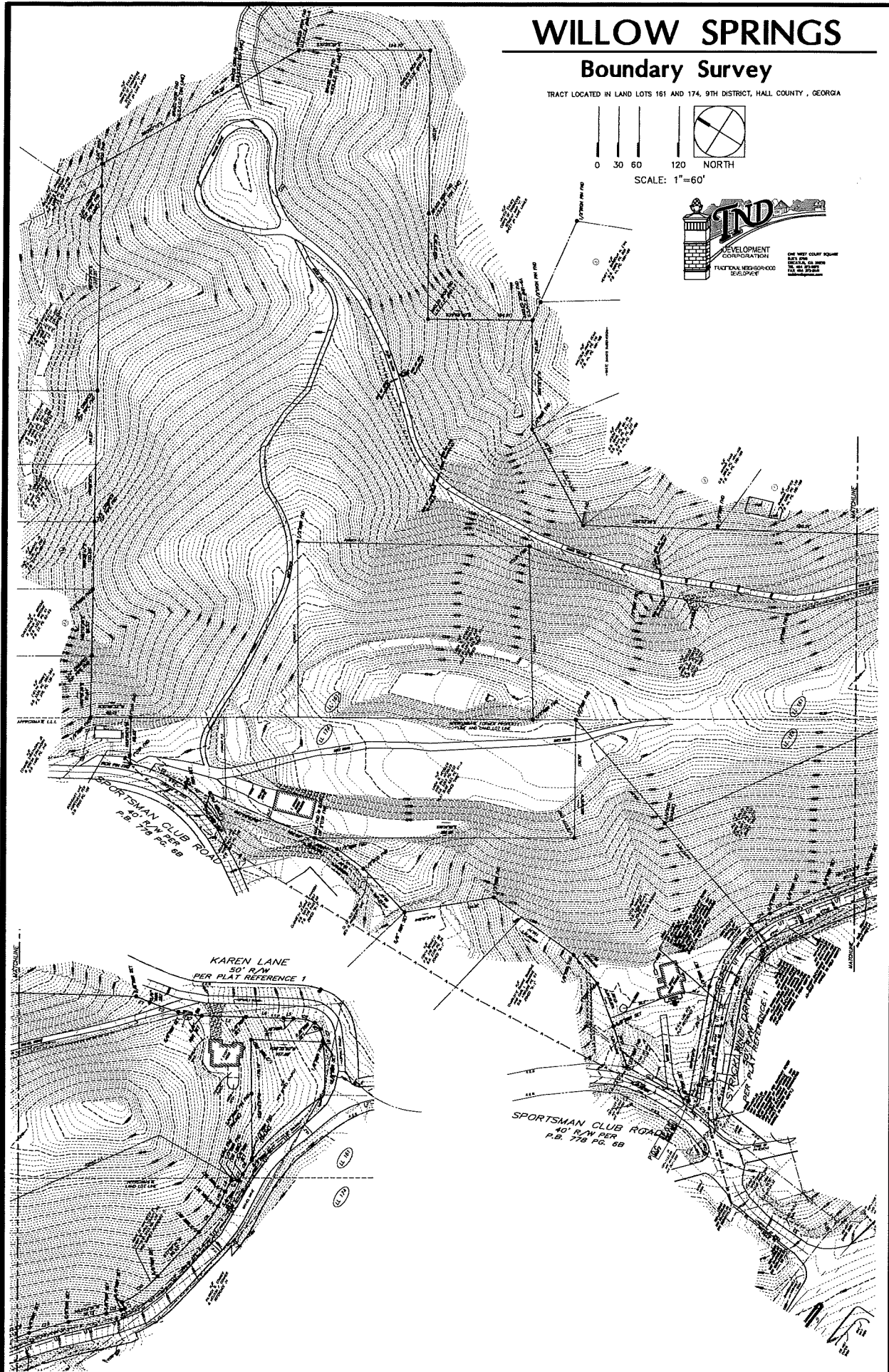
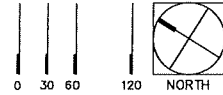
- Minimum unit width – 24 feet
- Minimum Heated Floor Area (1,100 sf per unit)
- Maximum building height – 40 feet
- Each building’s driveway will have a minimum of 18 feet of pavement from the back of sidewalk to the building face or 20 feet from the back of the curb to the building when there is no sidewalk
- Setbacks, excluding steps, roof overhangs, chimneys, bay windows, and patios:
 - 0’ front
 - 0’ side
 - 0’ interior rear



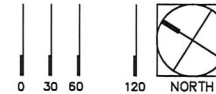
WILLOW SPRINGS

Boundary Survey

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



NOTE:
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.



SCALE: 1"=60'



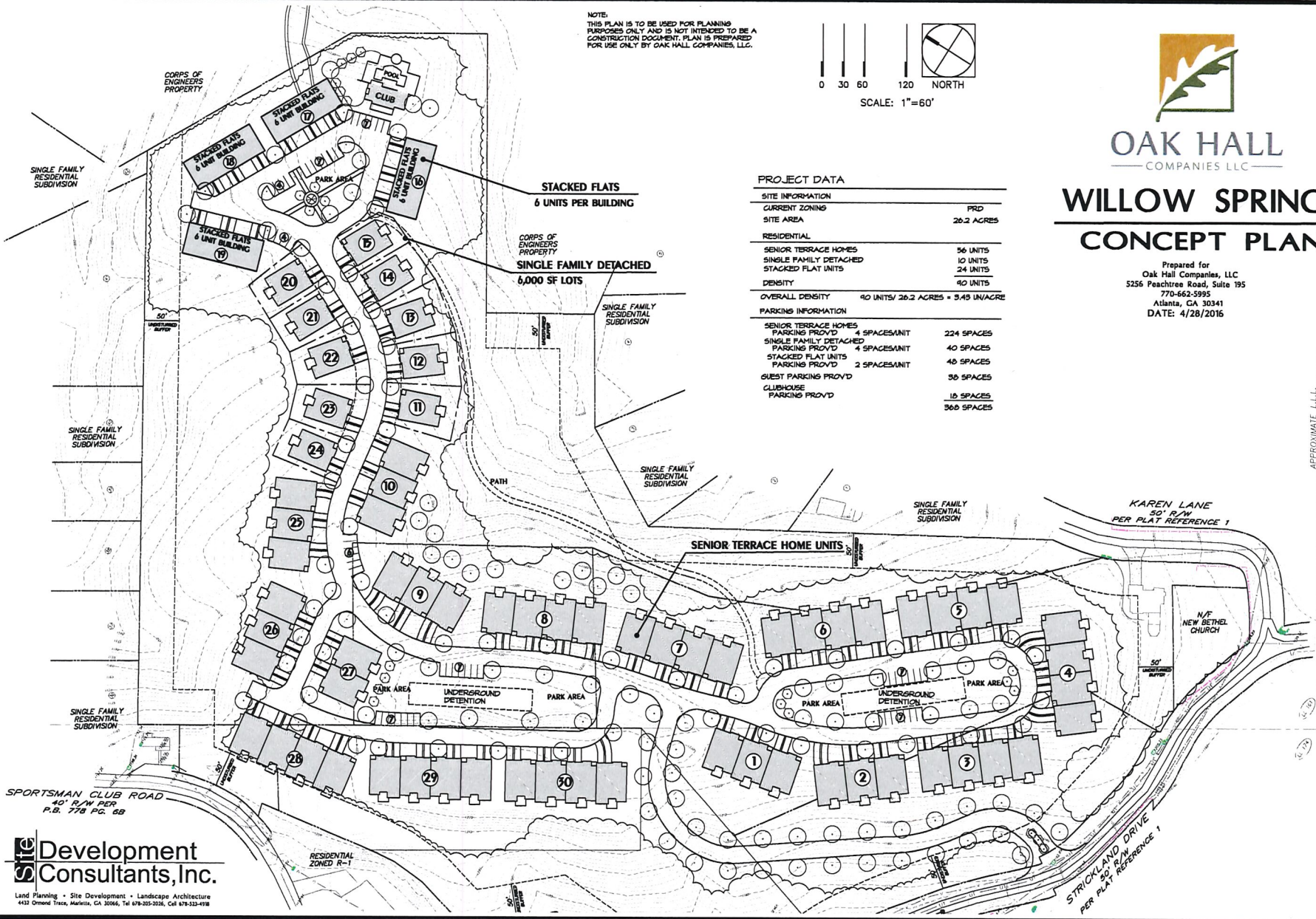
OAK HALL
COMPANIES LLC

WILLOW SPRINGS CONCEPT PLAN

Prepared for
Oak Hall Companies, LLC
5256 Peachtree Road, Suite 195
770-662-5995
Atlanta, GA 30341
DATE: 4/28/2016

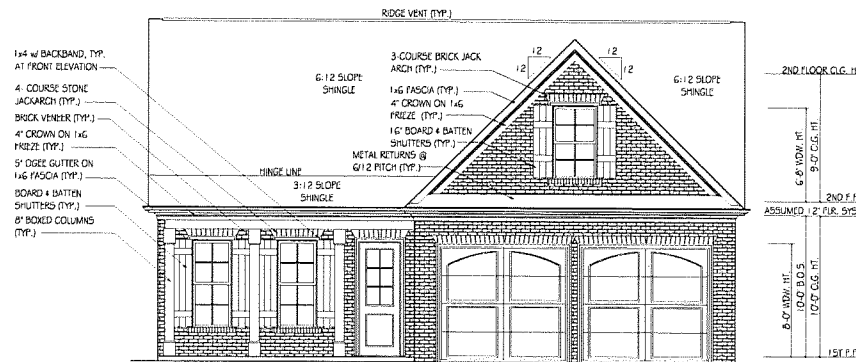
PROJECT DATA

SITE INFORMATION	
CURRENT ZONING	PRD
SITE AREA	26.2 ACRES
RESIDENTIAL	
SENIOR TERRACE HOMES	56 UNITS
SINGLE FAMILY DETACHED	10 UNITS
STACKED FLAT UNITS	24 UNITS
DENSITY	40 UNITS
OVERALL DENSITY	40 UNITS/ 26.2 ACRES = 3.43 UNITS/ACRE
PARKING INFORMATION	
SENIOR TERRACE HOMES	224 SPACES
PARKING PROVIDED	4 SPACES/UNIT
SINGLE FAMILY DETACHED	40 SPACES
PARKING PROVIDED	4 SPACES/UNIT
STACKED FLAT UNITS	48 SPACES
PARKING PROVIDED	2 SPACES/UNIT
GUEST PARKING PROVIDED	30 SPACES
CLUBHOUSE	18 SPACES
PARKING PROVIDED	368 SPACES



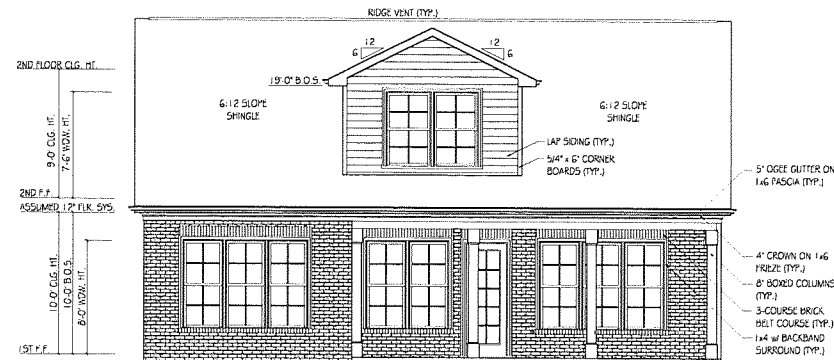
Development Consultants, Inc.

Land Planning • Site Development • Landscape Architecture
4432 Ormond Trace, Marietta, GA 30066, Tel 678-205-2036, Cell 678-333-4198



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 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

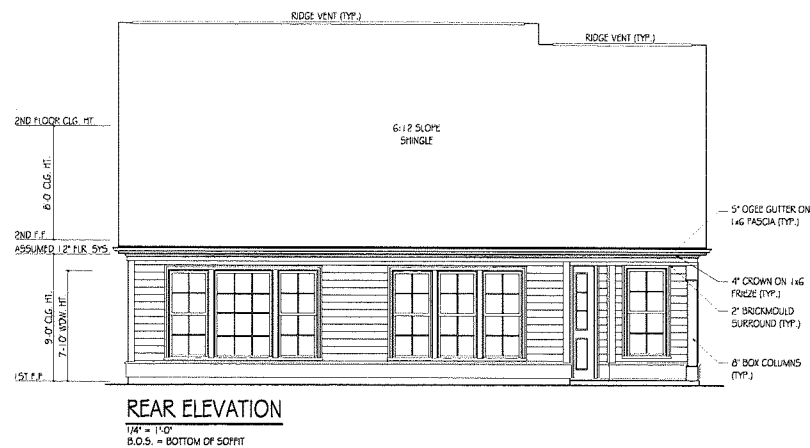
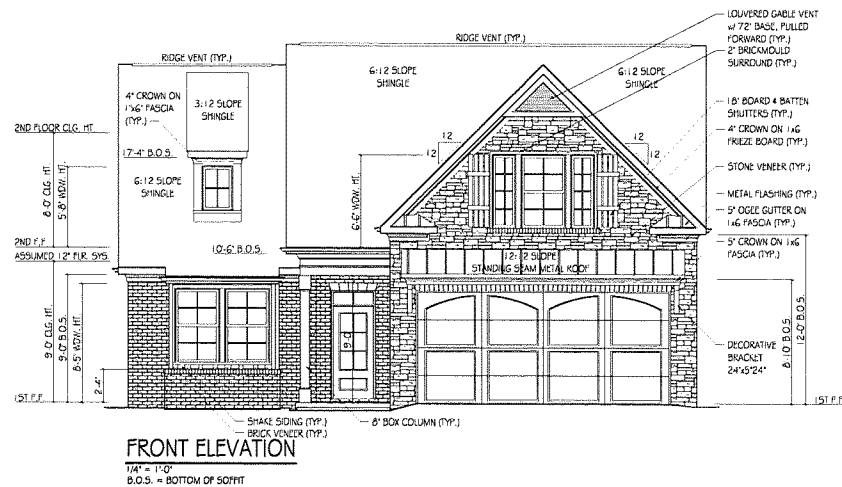
404-226-6964 404-401-7298
(DAVID) (MARY)

CCADORAN@YAHOO.COM
MFITZDORAN@AOL.COM

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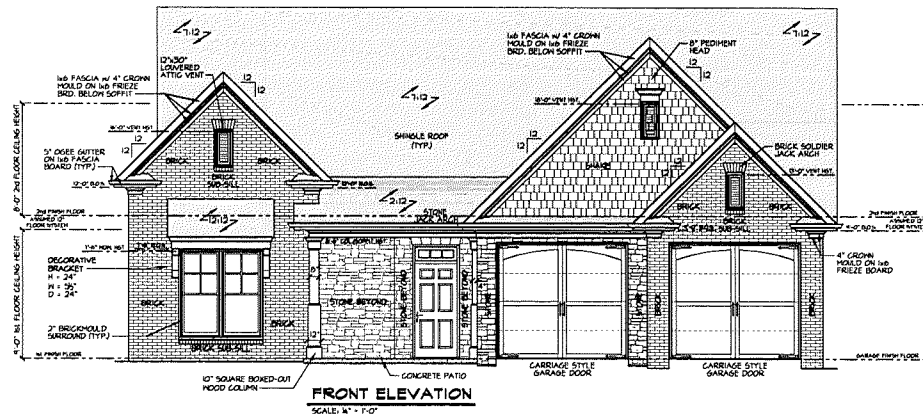
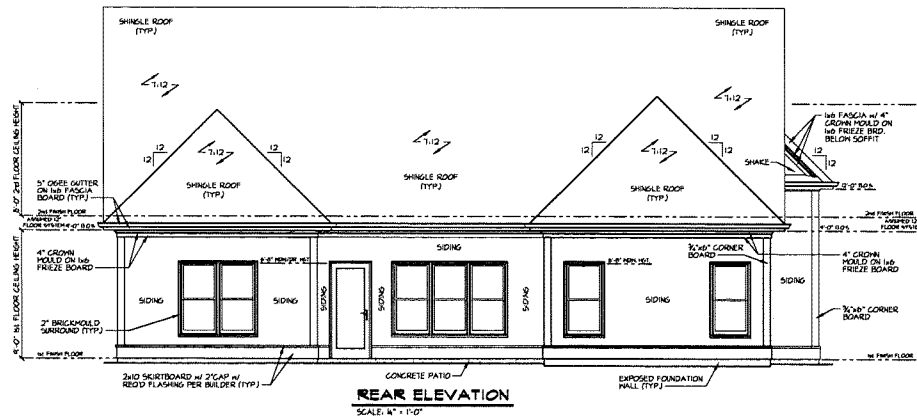
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DRAWN	SHEET #
BCLLC	D1 of 6



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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)
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DRAWN	SHEET #
BCLLC	D1 of 5



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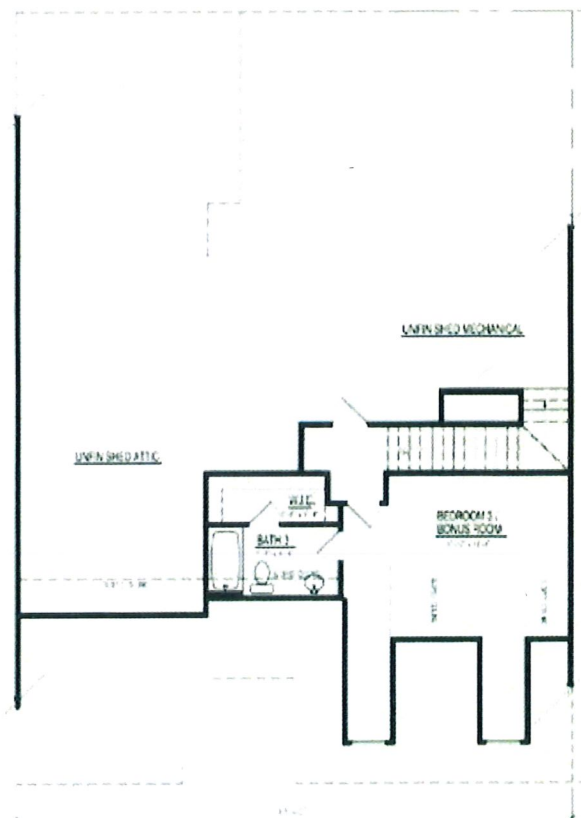
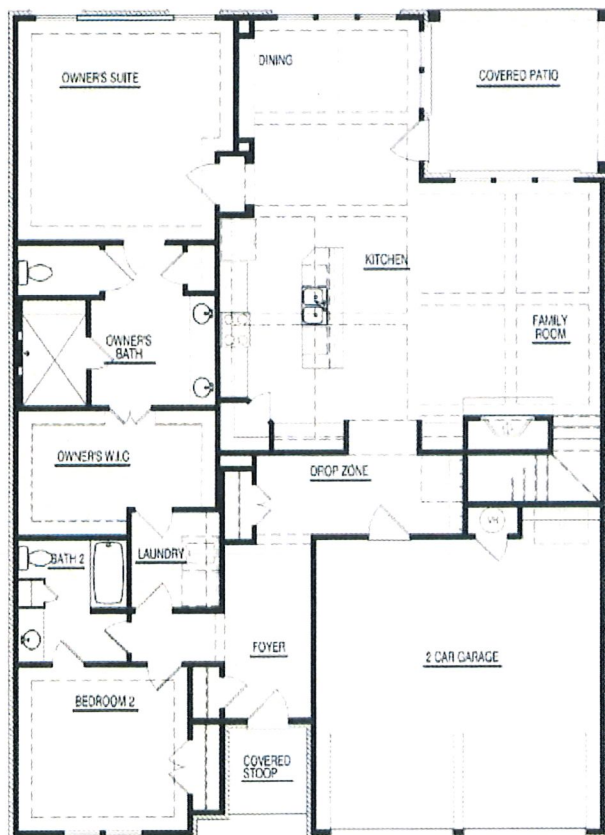
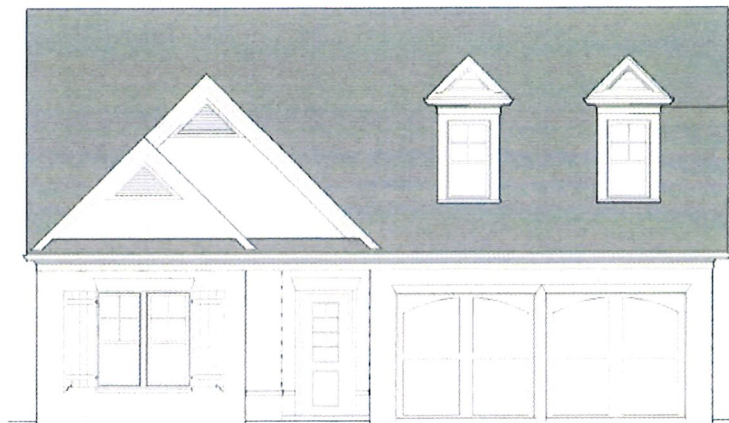
TUBE	JOB #
1277	16172
DATE	REVISED
9/12/16	
SQUARE FOOTAGE	
2,576 Square Feet	
LOT #	SUBDIVISION
	Nestle Down Farms
PROJECT	
Custom Home for	
JIM CHAPMAN Communities	
Brighton "A"	
"2-Car Garage"	
CLASSICAL CONCEPTS ATLANTA	
P.O. BOX 492973 LAWRENCEVILLE, GA. 30049	
404-226-6964 (DAVID)	404-401-7298 (MARY)
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DRAWN	SHEET #
MKH	D1 of 6
FRONT & REAR ELEV.'S	

THE OVERLOOK

AT OLD ATLANTA

Attached Villas

Hanover A Plan
2,339 Square Feet



**JIM
CHAPMAN**
COMMUNITIES

Building Trust. Building Futures.

JimChapmanCommunities.com

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

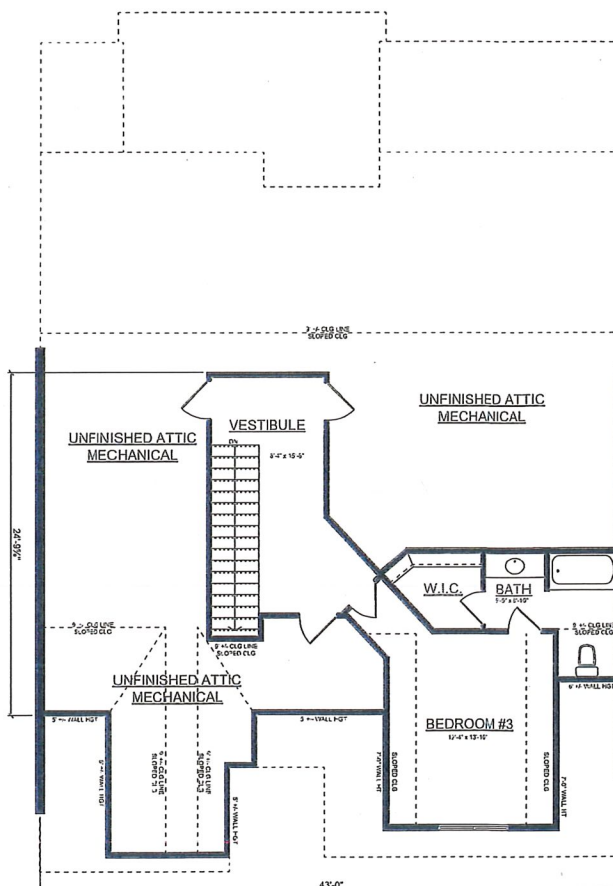
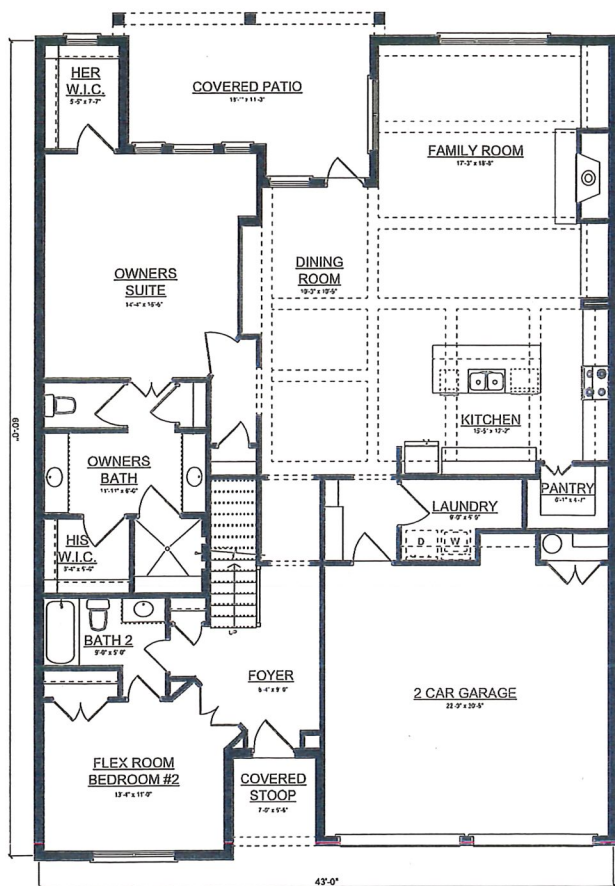
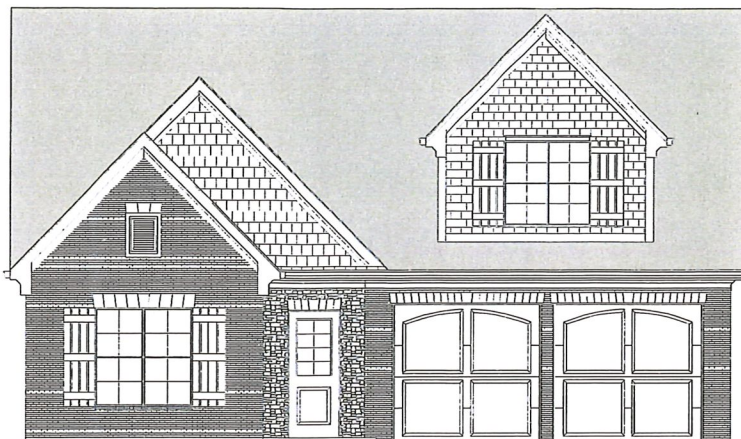


THE OVERLOOK

AT OLD ATLANTA

Attached Villas

Avery Plan
2,305 Square Feet



**JIM
CHAPMAN**
COMMUNITIES

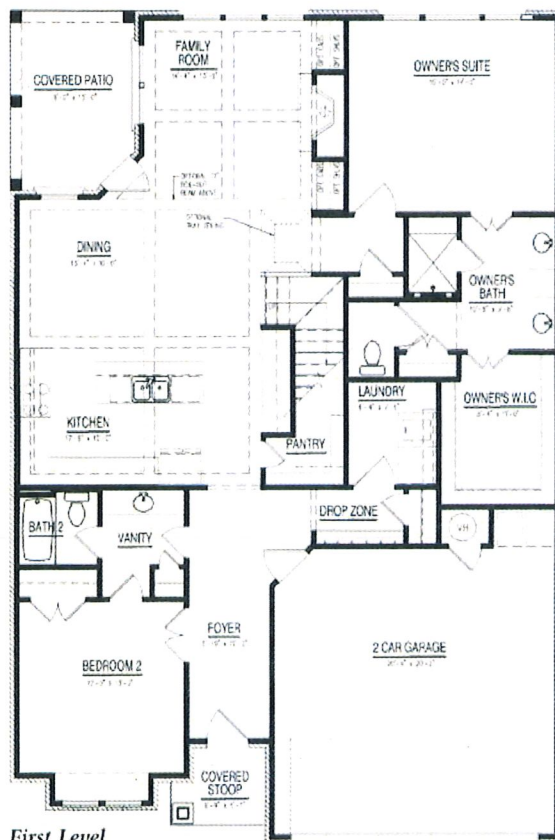
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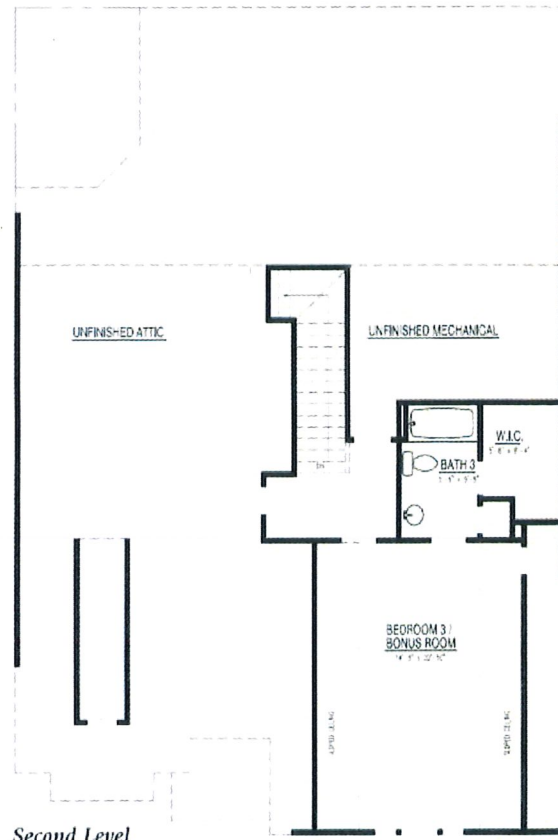


THE OVERLOOK AT OLD ATLANTA Attached Villas

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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Traffic Impact Study

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

January 24, 2017

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

January 24, 2017



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

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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 project will include a mix of senior living facilities, including single family homes, stacked flats, terrace units, independent living apartments, and assisted living. In addition, the project will include a retail and office tract. The site is located along the east side Georgia State Route 53, and the east and west sides of Ahaluna Drive, as shown in the location map in Figure 1.

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.

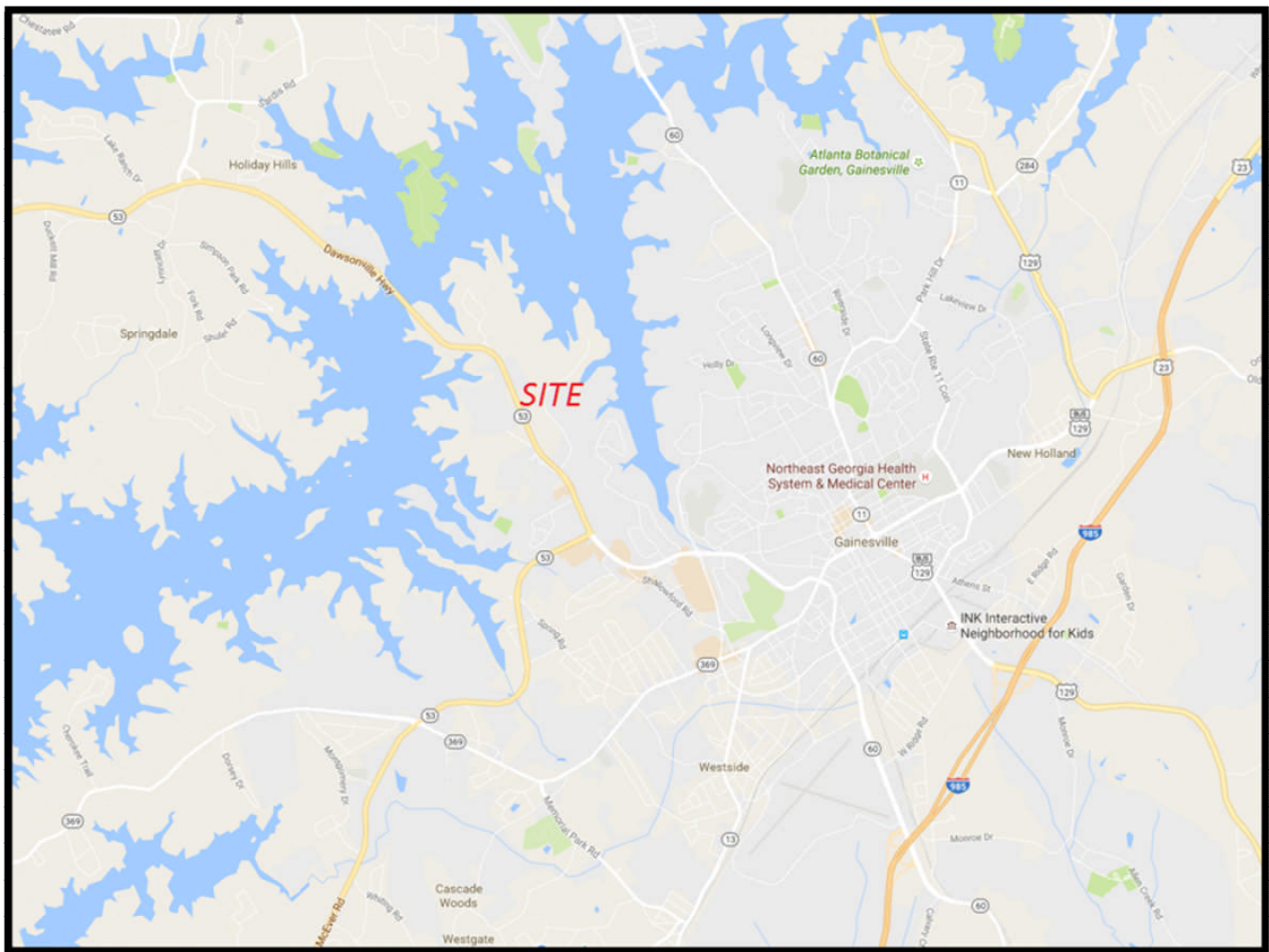


Figure 1 – Lanier Tract Location Map

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, and summarized later in Table 6. The peak hour trip generation for the project was calculated at 263 trips and the 24-hour volume is 3,344 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. These 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 Beachwood Boulevard
7. Dawsonville Highway at McEver Road
8. Dawsonville Highway at Green Hill Circle
9. Dawsonville Highway at Shallowford Road

Existing full turning movement traffic volume counts were collected at each of these intersections. The 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. Area schools were in standard session on the date 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 Future 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).

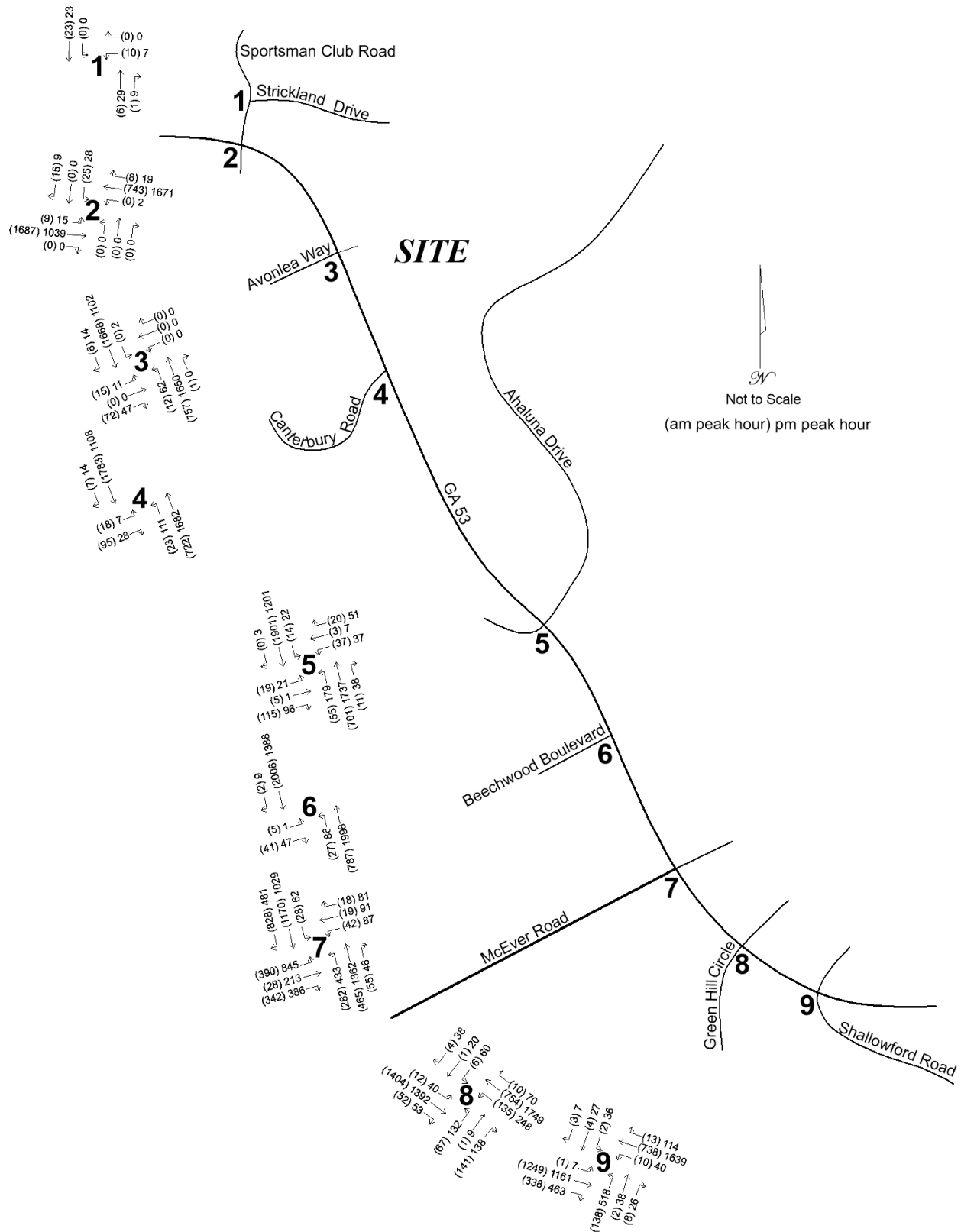


Figure 2 – Existing Traffic Volumes

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 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
7. 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
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8. 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
9. 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 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 very 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 the 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 westbound exclusive right turn lane should be constructed on GA 53 at Sportsman Club Road.
- 3. Dawsonville Highway at Avonlea Way, 4. Dawsonville Highway at Canterbury Road, and 6. 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 weak 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 turners on red who 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.

7. **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.

8. **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.

9. **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 analysis of this condition 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 two components – the counted traffic volumes, increased by a general background growth factor, and the specific trips that will be added by the outparcels that are expected to be developed along the east side of GA 53 adjacent to the Lanier DRI. These outparcels are planned to be annexed into the City of Gainesville concurrently with the annexation of the Lanier DRI, but will be developed by others and are not considered part of the Lanier DRI.

In order to develop a 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 more 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 outparcels along the east side of GA 53, adjacent to the Lanier DRI are estimated to be developed in 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 4.

Table 4 – 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 Ahaluna Drive. This will allow some site trips from the proposed Lanier DRI to access GA 53. It will also allow some existing trips to shift from the Ahaluna Drive intersection at GA 53 to the new access that will align with Canterbury Road (and the new access for the Lanier DRI that will align with Avonlea Way). New Lanier Tract DRI trips were assigned to these new access points. However, no existing trips turning into and out of Ahaluna Drive at GA 53 were shifted to the Canterbury Road and Avonlea Way accesses for three reasons. First, it is estimated that a notable portion of the trips currently turning at the Ahaluna intersection are generated at the southern portion of Ahaluna Drive (a large retail center accesses the southern portion of Ahaluna Drive, along with the highest density of homes, including along Skyview Drive). These trips will continue to use the GA 53 / Ahaluna intersection. Second, there is an existing signal at the GA 53 / Ahaluna intersection which facilitates safe and efficient access at that location, while the Avonlea and Canterbury intersections are currently not signalized (though they could be in the future). Finally, shifting a small portion of the modest side street volumes turning to and from Ahaluna to the other accesses is not expected to have a significant impact of the findings of this traffic study.

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 Ahaluna Drive, 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). These distribution percentages are shown later in this report, in Figure 5, which depicts the Lanier Tract trips.

The existing, counted traffic volumes were increased by the 10.4% growth factor. The trips from the outparcels were added to these increased volumes. The result is 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.

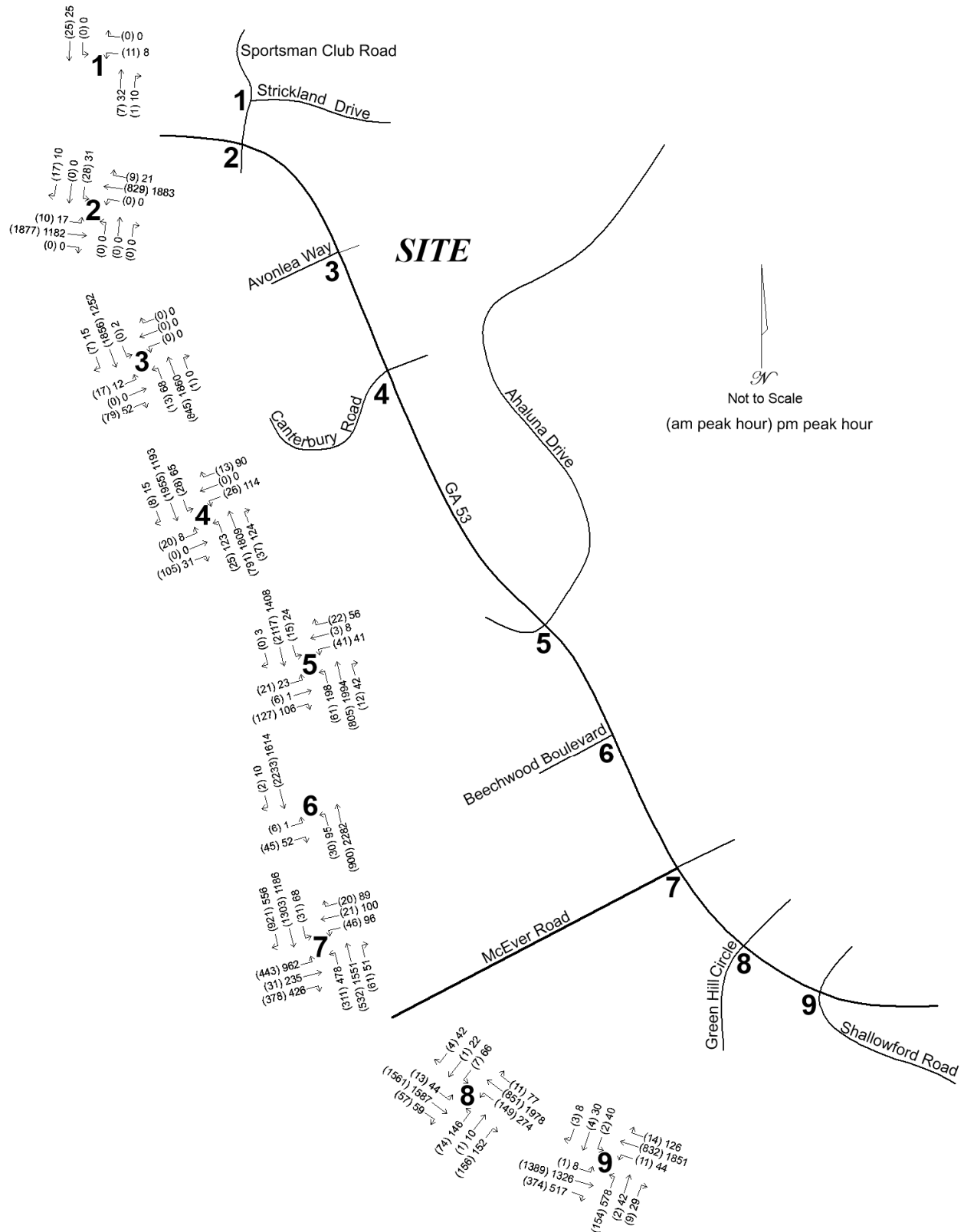


Figure 3 – Future No-Build Traffic Volumes

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 5. Computer printouts containing detailed results of the analysis are located in Appendix D.

Table 5 – 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	12.5	D	42.9
northbound approach (turn lane)	A	0.0	A	0.0
southbound approach	F	533.7	F	2,280.3
eastbound left turn (GA 53)	B	10.3	C	18.4
westbound left turn (GA 53)	A	0.0	B	11.5
3. Dawsonville Highway at Avonlea Way	A	4.8	A	1.9
northbound left turn (GA 53)	C	20.6	B	12.5
eastbound left turn	F	599.2	F	284.7
eastbound right turn	D	34.4	C	15.1
4. Dawsonville Highway at Canterbury Road	C	25.4	F	511.6
northbound left turn (GA 53)	C	21.5	B	13.4
southbound left turn	B	10.1	C	19.6
eastbound left turn	F	1,504.7	F	1,442.4
eastbound right turn	E	40.5	B	14.1
westbound left turn	F	1,488.0	F	NA
westbound right turn	B	11.8	D	26.4
5. Dawsonville Highway at Ahaluna Drive	C	22.5	B	16.6
northbound approach (GA 53)	A	5.7	B	12.3
southbound approach (GA 53)	C	23.3	B	16.0
eastbound approach	E	59.8	C	23.3
westbound approach	F	139.1	F	98.5
6. Dawsonville Highway at Beachwood Boulevard	A	2.9	A	0.9
northbound left turn (GA 53)	D	29.0	C	16.9
eastbound left turn	F	1,021.4	F	534.2
eastbound right turn	E	37.0	C	19.6
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7. Dawsonville Highway at McEver Road	D	49.4	F	138.0
northbound approach (GA 53)	E	78.3	F	151.4
southbound approach (GA 53)	B	19.7	E	58.7
eastbound approach	F	99.9	F	225.9
westbound approach	E	61.8	E	76.0
8. Dawsonville Highway at Green Hill Circle	B	14.1	E	66.7
northbound approach (GA 53)	A	8.3	E	72.1
southbound approach (GA 53)	B	13.4	E	56.0
eastbound approach	D	44.0	E	59.6
westbound approach	D	38.8	F	119.2
9. Dawsonville Highway at Shallowford Road	B	12.7	E	76.9
northbound approach (GA 53)	A	6.1	E	73.0
southbound approach (GA 53)	A	9.4	E	64.9
eastbound approach	E	76.4	F	122.6
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. It did assume that a northbound exclusive right turn lane would be constructed on GA 53 at the new access to the outparcels, aligning with Canterbury Road, that were assumed to be built in the no-build condition. The no-build 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 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 6. Dawsonville Highway at Beachwood Boulevard** – The operations at these three unsignalized intersections will continue 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 weak 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.

7. **Dawsonville Highway at McEver Road** – Operations will continue to be congested at this intersection. The mitigation discussed in the existing condition is still applicable.
8. **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.
9. **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 DRI 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. 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 the adjacent outparcels (discussed in the no-build analysis), 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 attached units were calculated using ITE Land Use 252 – Senior Adult Housing – Attached. The trips for the assisted living facility were determined using ITE Land Use – 254 – Assisted Living. The office / retail trip generation was calculated by dividing the total square footage 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 also 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 state highway adjacent to the project and will serve not just this project, but 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 6.

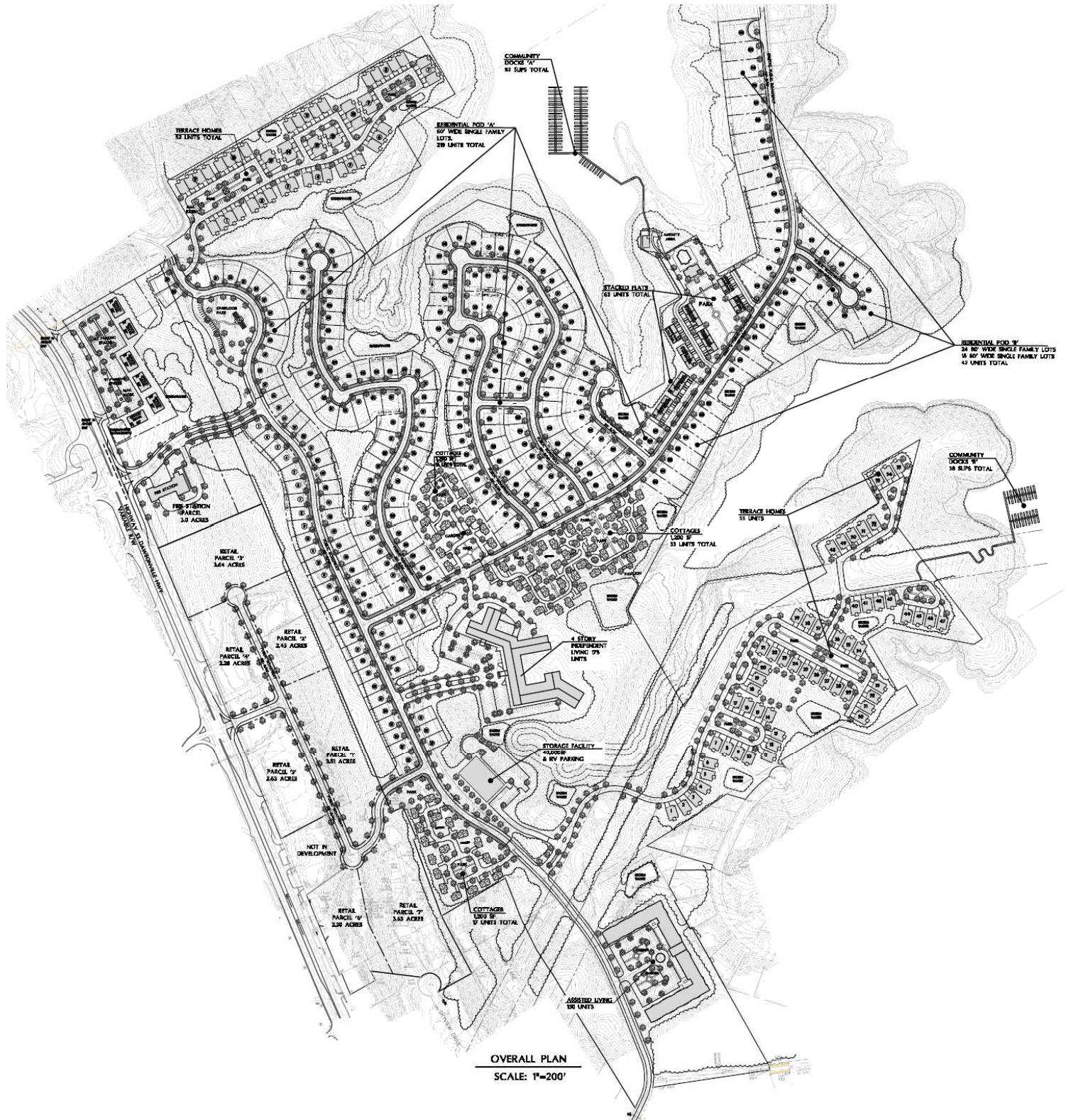


Figure 4 – Lanier Tract Site Plan

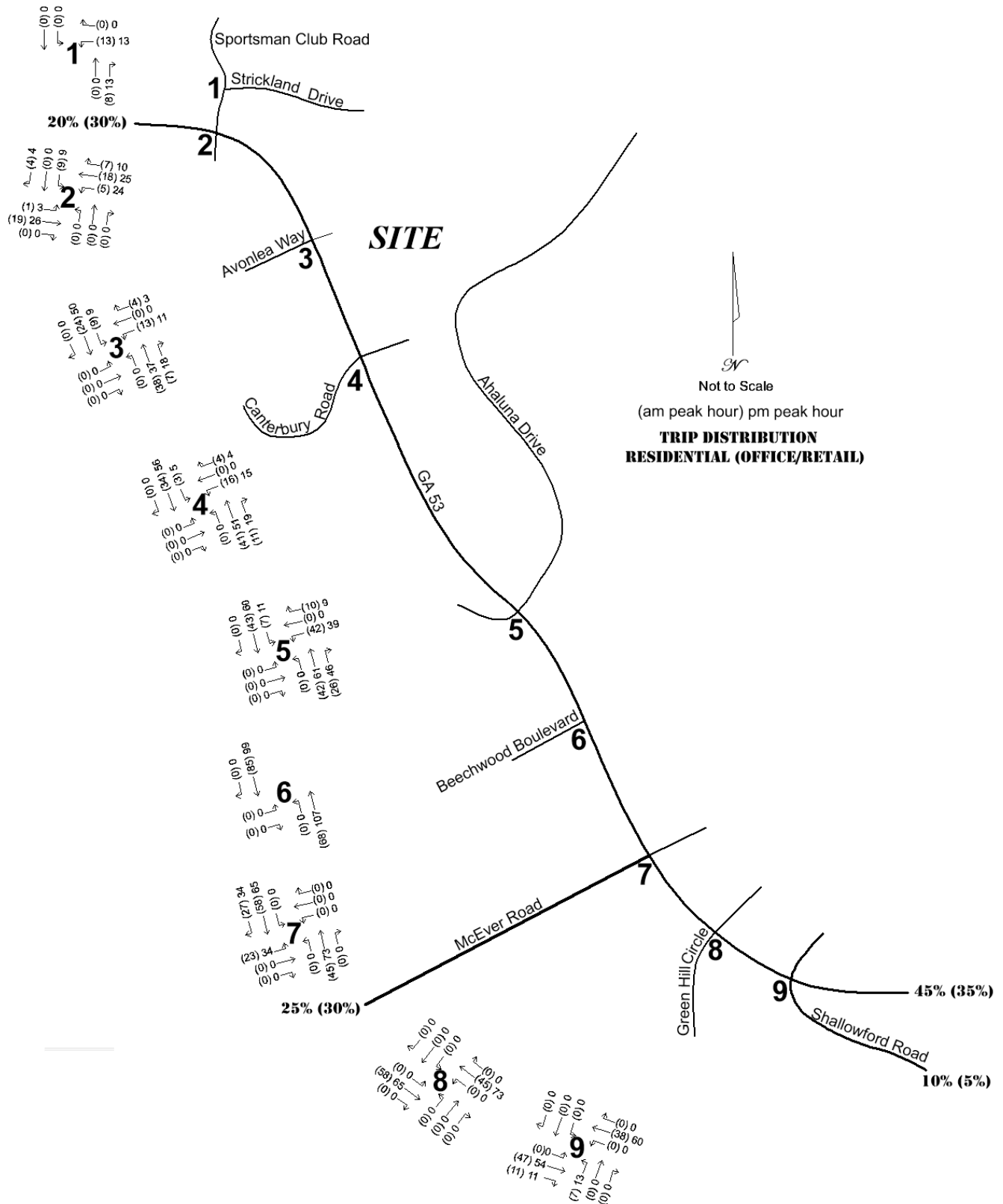
Table 6 – Lanier Tract DRI Trip Generation

Land Use	ITE Code	Size	A.M. Peak Hour			P.M. Peak Hour			24-Hour
			In	Out	Total	In	Out	Total	2-Way
Strickland (north) Tract									
Stacked Flats Attached	252	24 units	2	3	5	3	3	6	82
Single Family Detached	251	10 homes	1	1	2	2	1	3	36
Senior Terrace Homes Attached	252	56 units	4	7	11	7	7	14	192
Senior Terrace Homes Attached	252	52 units	4	6	10	7	6	13	178
Pod A Single Family Detached	251	198 homes	15	29	44	33	20	53	728
Stacked Flats Attached	252	27 units	2	3	5	4	3	7	92
Pod B Single Family Detached	251	50 homes	4	7	11	8	6	14	184
Cottages Detached	251	32 homes	2	5	7	5	4	9	118
Senior Terrace Homes Detached	251	55 homes	4	8	12	9	6	15	202
Independent Living 4 Story Attached	252	175 units	12	23	35	24	20	44	602
Assisted Living	254	150 beds	<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			64	99	163	117	94	211	2,770
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			88	106	194	135	128	263	3,344

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 within the rezoning were based on ITE average rates due to square footages much smaller than average sizes in the ITE data.

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 for each land use. The residential trips 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 6, were assigned to the roadway network based on these 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.



Future Traffic Conditions

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

Future Traffic Volumes

The trips from the Lanier Tract DRI were added to the future no-build volumes (comprised of the counted volumes increased by 10.4% plus the outparcel trips, as described previously). The resulting volumes are the traffic volumes that will be at each intersection when the subject development is fully operational. The future traffic volume projections are shown in Figure 6. These volumes are also shown in the intersection volume worksheets in Appendix A.

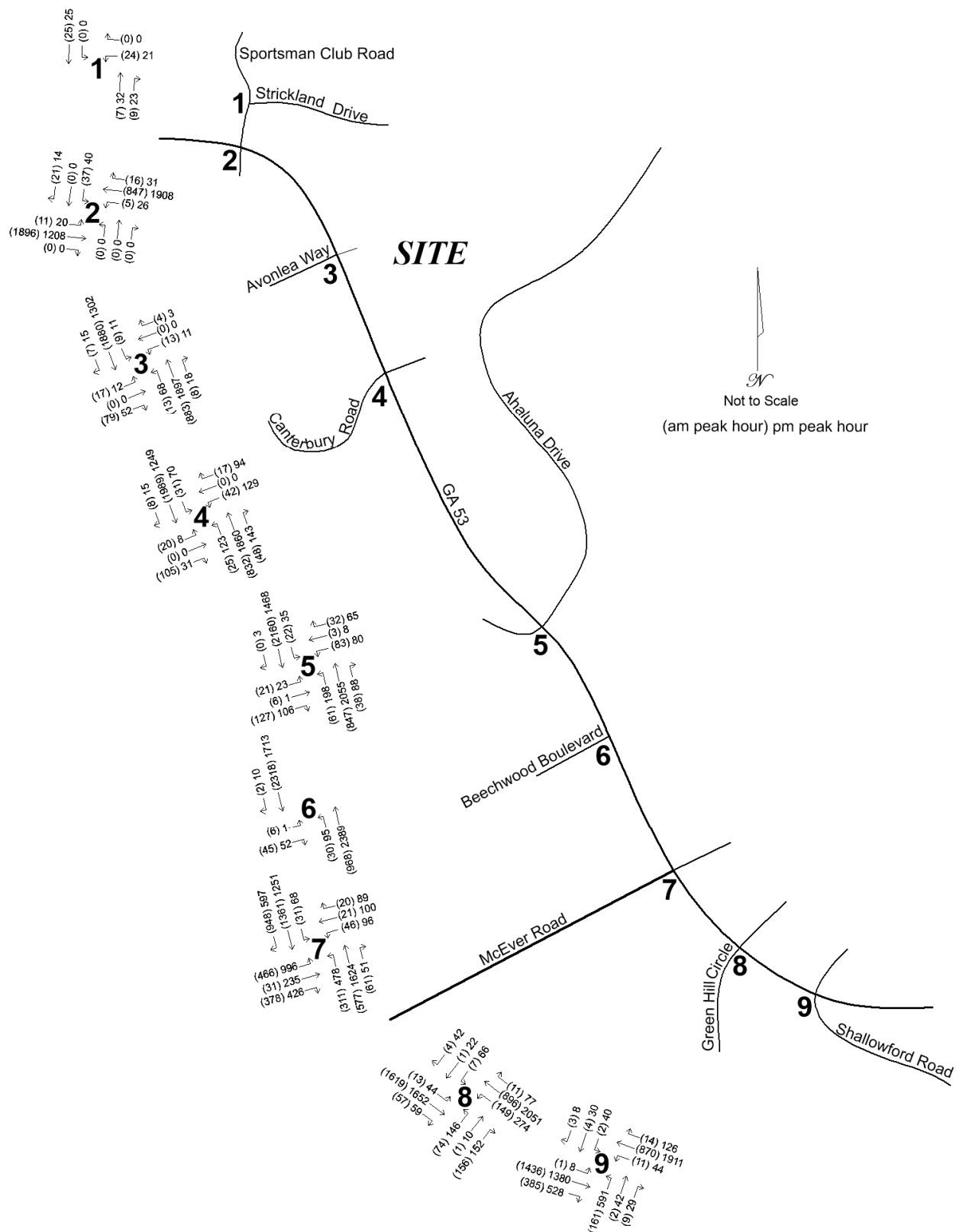


Figure 6 – Future Peak Hour Traffic Volume Projections

Future Intersection Operations

An operational analysis was performed for the future 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 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	3.8	A	3.1
southbound left turn	A	0.0	A	0.0
westbound approach	A	9.0	A	9.1
2. Dawsonville Highway at Sportsman Club Road	D	25.9	F	77.6
northbound approach (turn lane)	A	0.0	A	0.0
southbound approach	F	878.0	F	3,237.1
eastbound left turn (GA 53)	B	10.5	C	19.0
westbound left turn (GA 53)	C	20.7	B	12.0
3. Dawsonville Highway at Avonlea Way	B	12.6	B	10.7
northbound left turn (GA 53)	C	21.1	B	12.9
southbound left turn	B	10.3	C	18.2
eastbound left turn	F	1,381.4	F	722.2
eastbound right turn	E	35.6	C	15.5
westbound left turn	F	666.6	F	1,734.2
westbound right turn	B	12.1	C	20.1
4. Dawsonville Highway at Canterbury Road	F	53.2	F	623.4
northbound left turn (GA 53)	C	22.1	B	14.0
southbound left turn	B	10.3	C	20.9
eastbound left turn	F	1,733.4	F	2,303.8
eastbound right turn	E	42.9	B	14.1
westbound left turn	F	2,832.7	F	NA
westbound right turn	B	12.1	D	28.5
5. Dawsonville Highway at Ahaluna Drive	C	32.1	B	19.3
northbound approach (GA 53)	A	6.8	B	11.8
southbound approach (GA 53)	D	36.6	C	21.1
eastbound approach	D	48.9	B	18.8
westbound approach	F	130.7	F	106.6
6. Dawsonville Highway at Beachwood Boulevard	A	3.2	A	1.0
northbound left turn (GA 53)	D	31.9	C	18.4
eastbound left turn	F	1,230.3	F	620.4
eastbound right turn	E	40.8	C	21.0
table continued next page				

table continued from previous page				
7. Dawsonville Highway at McEver Road	D	52.7	F	135.4
northbound approach (GA 53)	E	75.3	F	143.4
southbound approach (GA 53)	C	22.1	D	36.5
eastbound approach	F	113.7	F	257.5
westbound approach	E	61.8	E	67.9
8. Dawsonville Highway at Green Hill Circle	B	15.0	D	53.5
northbound approach (GA 53)	A	8.9	E	73.0
southbound approach (GA 53)	B	14.4	C	20.2
eastbound approach	D	47.4	E	59.7
westbound approach	D	38.8	F	119.2
9. Dawsonville Highway at Shallowford Road	B	13.6	F	82.2
northbound approach (GA 53)	A	6.3	E	75.1
southbound approach (GA 53)	B	10.7	E	74.6
eastbound approach	E	76.7	F	125.7
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 westbound left turn from Canterbury Road will incur an average delay of 47 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 conditions reveals that most levels of service will remain the same as in the no-build condition. The most notable changes are increases in the side street delays at both unsignalized and signalized intersections. However, at a few locations, the delays actually decrease slightly. This is attributed to a slight reallocation of greentime to adjust for the changing proportions of volumes between the main street and the side street. The Lanier Tract DRI generally contributes a small proportion to the increases in volumes between the existing condition and the future, while the background growth and the outparcels contribute 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 site'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. Specific Recommendations for each location are presented in the next sections of this report.

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 8, 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.

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. At Sportsman Club Drive, the existing right turn volume is 8 in the morning and 19 in the evening, or a total of 27 RTVs in the two peak hours. The future RTVs at this location are 16 in the a.m. and 31 in the p.m., or a total of 47 RTVs in the two peak hours. As a general rule of thumb, p.m. peak hour volumes are typically about 10% of 24-hour volumes. If this relationship applies at the subject location, then the existing 24 hour RTV would be approximately 190 and the future RTV would be approximately 470. Observations suggest that the off-peak activity turning into and out of this intersection is very low, so it is uncertain if the 10% rule of thumb is applicable. Based on a review of the counts, and the volume rule of thumb, it is considered probable that the 75 RTV per day threshold is satisfied in the existing condition. In the future condition, the RTV volume in just the two peak hours is 47. It is considered very likely that the remaining 22 hours in the day will contribute at least 28 additional right turn vehicles, so that the 75 RTV threshold will be satisfied. Therefore, it is recommended that a northbound exclusive right turn lane should be provided on GA 53 at Sportsman Club Road. Table 9, below, is Table 4-8 from the Driveway Manual, and presents the right turn lane design standards. Based on the posted 45 mph speed limit, this right turn lane should include 175 feet of full-width storage and a 100 foot taper.

The same evaluation was made for the proposed site access across from Avonlea Way. At this site access, the northbound RTV is projected at 8 in the a.m. and 18 in the p.m., for a total in the two peak hours of 26 RTV. Due to the nature of the trip characteristics of senior living facilities, it is difficult to conclude with confidence if the northbound RTV will satisfy the 75 RTV per day threshold. Therefore, at this time, it is advised that consideration should be given to providing this lane. If constructed, this lane should comply with the standards identified in Table 9, to include 175 feet of storage and a 100 foot taper. The site plan for the project anticipates providing a right turn lane at this access.

The proposed site connection, through the outparcels, across from Canterbury Road was likewise evaluated for a northbound right turn lane on GA 53. At this location, the northbound RTV is projected at 48 in the a.m. and 143 in the p.m., for a total in the two peak hours of 191 RTV. Just the p.m. peak hour well exceeds the 75 RTV threshold. These high right turn volumes will be primarily generated by the outparcels. It is concluded that a deceleration lane should be provided at this access. This lane would be constructed to the standards identified in Table 9, to include 175 feet of storage and a 100 foot taper. The site plan for the project anticipates providing a right turn lane at this access.

At Ahaluna Way, the existing northbound RTV is 11 in the a.m. and 38 in the p.m. for a two-hour total of 49 RTV. It is considered likely that the balance of the 24 hour day would contribute the additional right turn vehicles, so that a northbound exclusive right turn lane should be considered on GA 53 at Ahaluna Drive based on existing

volumes. With the addition of the Lanier Tract DRI, the future RTV is projected at 38 in the a.m. peak hour and 88 in the p.m. peak hour. Therefore, the 75 RTV per day threshold will be well-exceeded in the future and a northbound exclusive right turn lane should be provided on GA 53 at Ahaluna Drive. This lane should include a minimum of 175 feet of full-width storage and a 100 foot taper.

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.

Table 8 – 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

Table 9 – 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

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:

Sportsman Club Road at Strickland Drive – No changes are recommended at this intersection for the existing, no-build, or future conditions.

Dawsonville Highway at Sportsman Club Road – The side street delays at this intersection are significant now and will increase in the future. The potential for signalization of this intersection should be evaluated according to the *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 the intersection a weak candidate for signalization in the existing condition, but the potential for justifying signalization will increase in the future. 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, Dawsonville Highway at Canterbury Road, and Dawsonville Highway at Beachwood Boulevard – Side street delays are high at all three of these intersections, and these delays will increase in the no-build and future conditions. The side street volumes at each intersection are predominately right turners, with extremely low left turn volumes. For this reason, these three intersections are considered weak candidates for signalization in the existing condition.

The Lanier Tract DRI 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. While the exiting volumes from the site will include a few more left turners than right turners, these volumes will be extremely low. Therefore, this intersection is considered likely to continue to be a weak candidate for signalization in the no-build and future, even with the addition of the Lanier Tract DRI trips. The Georgia DOT deceleration 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 an exiting shared left/through lane and an exclusive right turn lane. Unless signalization is warranted, the side street approach exiting the site should be controlled by side street stop sign and accompanying stop bar.

The outparcel access will align with Canterbury Road and the Lanier Tract DRI 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 will be significant, primarily due to the outparcels, and a northbound deceleration lane is recommended for this location. The 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 a signal warrant study be performed for this location according to the MUTCD standards. This new site access should be constructed with one entering lane and an exiting shared left/through lane and

an exclusive right turn lane. Until signalization is warranted, the side street approach exiting the outparcel tracts should be controlled by side street stop sign and accompanying stop bar.

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 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 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. 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 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.

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.

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%	
Retail Outparcels	0	0	0	0	0	0	0	0	0
No-Build Volumes	7	1	8	0	25	25	11	0	11
Lanier Tract Senior Living Residential New Trips	0	8	8	0	0	0	13	0	13
Lanier Tract Office/Retail New Trips	0	0	0	0	0	0	0	0	0
Total Lanier Tract Site Trips	0	8	8	0	0	0	13	0	13
Build Volumes	7	9	16	0	25	25	24	0	24

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%	
Retail Outparcels	0	0	0	0	0	0	0	0	0
No-Build Volumes	32	10	42	0	25	25	8	0	8
Lanier Tract Senior Living Residential New Trips	0	13	13	0	0	0	13	0	13
Lanier Tract Office/Retail New Trips	0	0	0	0	0	0	0	0	0
Total Lanier Tract Site Trips	0	13	13	0	0	0	13	0	13
Build Volumes	32	23	55	0	25	25	21	0	21

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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%	
Retail Outparcels	0	9	0	9	0	14	0	14	0	0	0	0	0	0	0	0
No-Build Volumes	0	829	9	838	10	1877	0	1887	0	0	0	0	28	0	17	44
Lanier Tract Senior Living Residential New Trips	0	16	7	23	1	12	0	13	0	0	0	0	9	0	4	13
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	18	7	30	1	19	0	20	0	0	0	0	9	0	4	13
Build Volumes	5	847	16	868	11	1896	0	1907	0	0	0	0	37	0	21	57

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%	
Retail Outparcels	0	38	0	38	0	35	0	35	0	0	0	0	0	0	0	0
No-Build Volumes	2	1883	21	1906	17	1182	0	1199	0	0	0	0	31	0	10	41
Lanier Tract Senior Living Residential New Trips	0	15	10	25	3	21	0	24	0	0	0	0	9	0	4	13
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	25	10	59	3	26	0	29	0	0	0	0	9	0	4	13
Build Volumes	26	1908	31	1965	20	1208	0	1228	0	0	0	0	40	0	14	54

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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%	
Retail Outparcels	0	9	0	9	0	14	0	14	0	0	0	0	0	0	0	0
No-Build Volumes	13	845	1	859	0	1856	7	1862	17	0	79	96	0	0	0	0
Lanier Tract Senior Living Residential New Trips	0	21	7	28	2	19	0	21	0	0	0	0	13	0	4	17
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	38	7	45	9	24	0	33	0	0	0	0	13	0	4	17
Build Volumes	13	883	8	904	9	1880	7	1895	17	0	79	96	13	0	4	17

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%	
Retail Outparcels	0	38	0	38	0	35	0	35	0	0	0	0	0	0	0	0
No-Build Volumes	68	1860	0	1928	2	1252	15	1269	12	0	52	64	0	0	0	0
Lanier Tract Senior Living Residential New Trips	0	24	18	42	4	26	0	30	0	0	0	0	11	0	3	14
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	37	18	55	9	50	0	59	0	0	0	0	11	0	3	14
Build Volumes	68	1897	18	1983	11	1302	15	1328	12	0	52	64	11	0	3	14

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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%					
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
No-Build Volumes	25	791	37	854	28	1955	8	1990	20	0	105	125	26	0	13	39
Lanier Tract Senior Living Residential New Trips	0	24	11	35	3	29	0	32	0	0	0	0	16	0	4	20
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	41	11	52	3	34	0	37	0	0	0	0	16	0	4	20
Build Volumes	25	832	48	906	31	1989	8	2027	20	0	105	125	42	0	17	59

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%					
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
No-Build Volumes	123	1809	124	2056	65	1193	15	1274	8	0	31	39	114	0	90	204
Lanier Tract Senior Living Residential New Trips	0	38	19	57	5	32	0	37	0	0	0	0	15	0	4	19
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	51	19	70	5	56	0	61	0	0	0	0	15	0	4	19
Build Volumes	123	1860	143	2126	70	1249	15	1335	8	0	31	39	129	0	94	223

MARC R. ACAMPORA, PE, LLC

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

January 2017

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%	
Retail Outparcels	0	31	0	31	0	18	0	18	0	0	0	0	0	0	0	0
No-Build Volumes	61	805	12	878	15	2117	0	2132	21	6	127	153	41	3	22	66
Lanier Tract Senior Living Residential New Trips	0	25	26	51	7	38	0	45	0	0	0	0	42	0	10	52
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	42	26	68	7	43	0	50	0	0	0	0	42	0	10	52
Build Volumes	61	847	38	946	22	2160	0	2182	21	6	127	153	83	3	32	118

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%	
Retail Outparcels	0	76	0	76	0	82	0	82	0	0	0	0	0	0	0	0
No-Build Volumes	198	1994	42	2233	24	1408	3	1436	23	1	106	130	41	8	56	105
Lanier Tract Senior Living Residential New Trips	0	48	46	94	11	36	0	47	0	0	0	0	39	0	9	48
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	61	46	107	11	60	0	71	0	0	0	0	39	0	9	48
Build Volumes	198	2055	88	2340	35	1468	3	1507	23	1	106	130	80	8	65	153

MARC R. ACAMPORA, PE, LLC

Lanier Tract Multi-Use DRI Traffic Impact Study

City of Gainesville, Georgia

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Intersection 6: Georgia State Route 53 at Beechwood Boulevard

Weekday A.M. Peak Hour

	Northbound GA 53			Southbound GA 53			Eastbound Beechwood Boulevard			Westbound Commercial Access			
	L	T	Tot	T	R	Tot	L	R	Tot	L	T	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%					
Retail Outparcels	0	31	31	18	0	18	0	0	0				
No-Build Volumes	30	900	930	2233	2	2235	6	45	51				
Lanier Tract Senior Living Residential New Trips	0	51	51	80	0	80	0	0	0				
Lanier Tract Office/Retail New Trips	0	17	17	5	0	5	0	0	0				
Total Lanier Tract Site Trips	0	68	68	85	0	85	0	0	0				
Build Volumes	30	968	998	2318	2	2320	6	45	51				

Weekday P.M. Peak Hour

	Northbound GA 53			Southbound GA 53			Eastbound Beechwood Boulevard			Westbound Commercial Access			
	L	T	Tot	T	R	Tot	L	R	Tot	L	T	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%					
Retail Outparcels	0	76	76	82	0	82	0	0	0				
No-Build Volumes	95	2282	2377	1614	10	1624	1	52	53				
Lanier Tract Senior Living Residential New Trips	0	94	94	75	0	75	0	0	0				
Lanier Tract Office/Retail New Trips	0	13	13	24	0	24	0	0	0				
Total Lanier Tract Site Trips	0	107	107	99	0	99	0	0	0				
Build Volumes	95	2389	2484	1713	10	1723	1	52	53				

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Lanier Tract Multi-Use DRI Traffic Impact Study
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January 2017

Intersection 7: 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%	
Retail Outparcels	0	19	0	19	0	11	7	18	12	0	0	0	0	0	0	0
No-Build Volumes	311	532	61	904	31	1303	921	2255	443	31	378	851	46	21	20	87
Lanier Tract Senior Living Residential New Trips	0	35	0	35	0	55	25	80	16	0	0	16	0	0	0	0
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	45	0	45	0	58	27	85	23	0	0	23	0	0	0	0
Build Volumes	311	577	61	949	31	1361	948	2340	466	31	378	874	46	21	20	87

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%	
Retail Outparcels	0	47	0	47	0	50	32	82	29	0	0	0	0	0	0	0
No-Build Volumes	478	1551	51	2080	68	1186	563	1818	962	235	426	1623	96	100	89	286
Lanier Tract Senior Living Residential New Trips	0	65	0	65	0	51	24	75	29	0	0	29	0	0	0	0
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	73	0	73	0	65	34	99	34	0	0	34	0	0	0	0
Build Volumes	478	1624	51	2153	68	1251	597	1917	996	235	426	1657	96	100	89	286

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Lanier Tract Multi-Use DRI Traffic Impact Study
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Intersection 8: 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%	
Retail Outparcels	0	19	0	19	0	11	0	11	0	0	0	0	0	0	0	0
No-Build Volumes	149	851	11	1012	13	1561	57	1632	74	1	156	231	7	1	4	12
Lanier Tract Senior Living Residential New Trips	0	35	0	35	0	55	0	55	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	45	0	45	0	58	0	58	0	0	0	0	0	0	0	0
Build Volumes	149	896	11	1057	13	1619	57	1690	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%	
Retail Outparcels	0	47	0	47	0	50	0	50	0	0	0	0	0	0	0	0
No-Build Volumes	274	1978	77	2329	44	1587	59	1690	146	10	152	308	66	22	42	130
Lanier Tract Senior Living Residential New Trips	0	65	0	65	0	51	0	51	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	73	0	73	0	65	0	65	0	0	0	0	0	0	0	0
Build Volumes	274	2051	77	2402	44	1652	59	1755	146	10	152	308	66	22	42	130

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Lanier Tract Multi-Use DRI Traffic Impact Study
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January 2017

Intersection 9: 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%	
Retail Outparcels	0	17	0	17	0	10	1	11	2	0	0	0	0	0	0	0
No-Build Volumes	11	832	14	857	1	1389	374	1764	154	2	9	165	2	4	3	10
Lanier Tract Senior Living Residential New Trips	0	29	0	29	0	45	10	55	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	38	0	38	0	47	11	58	7	0	0	7	0	0	0	0
Build Volumes	11	870	14	895	1	1436	385	1822	161	2	9	172	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%	
Retail Outparcels	0	41	0	41	0	44	6	50	6	0	0	0	0	0	0	0
No-Build Volumes	44	1851	126	2021	8	1326	517	1851	578	42	29	649	40	30	8	77
Lanier Tract Senior Living Residential New Trips	0	53	0	53	0	42	9	51	12	0	0	12	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	60	0	60	0	54	11	65	13	0	0	13	0	0	0	0
Build Volumes	44	1911	126	2081	8	1380	528	1916	591	42	29	662	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	

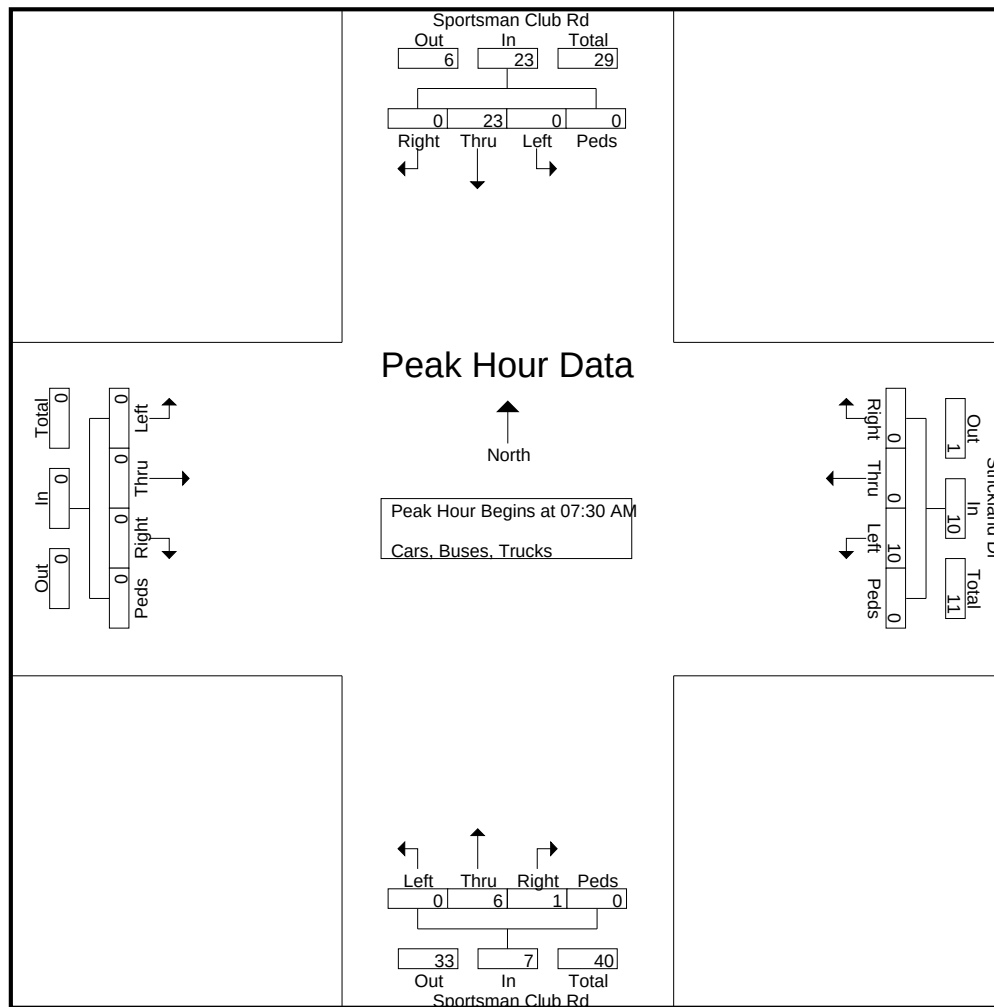
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TMC Data
Sportsman Club Rd @ Strickland Dr
Gainesville, GA
7-9am | 4.30-6.30pm

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



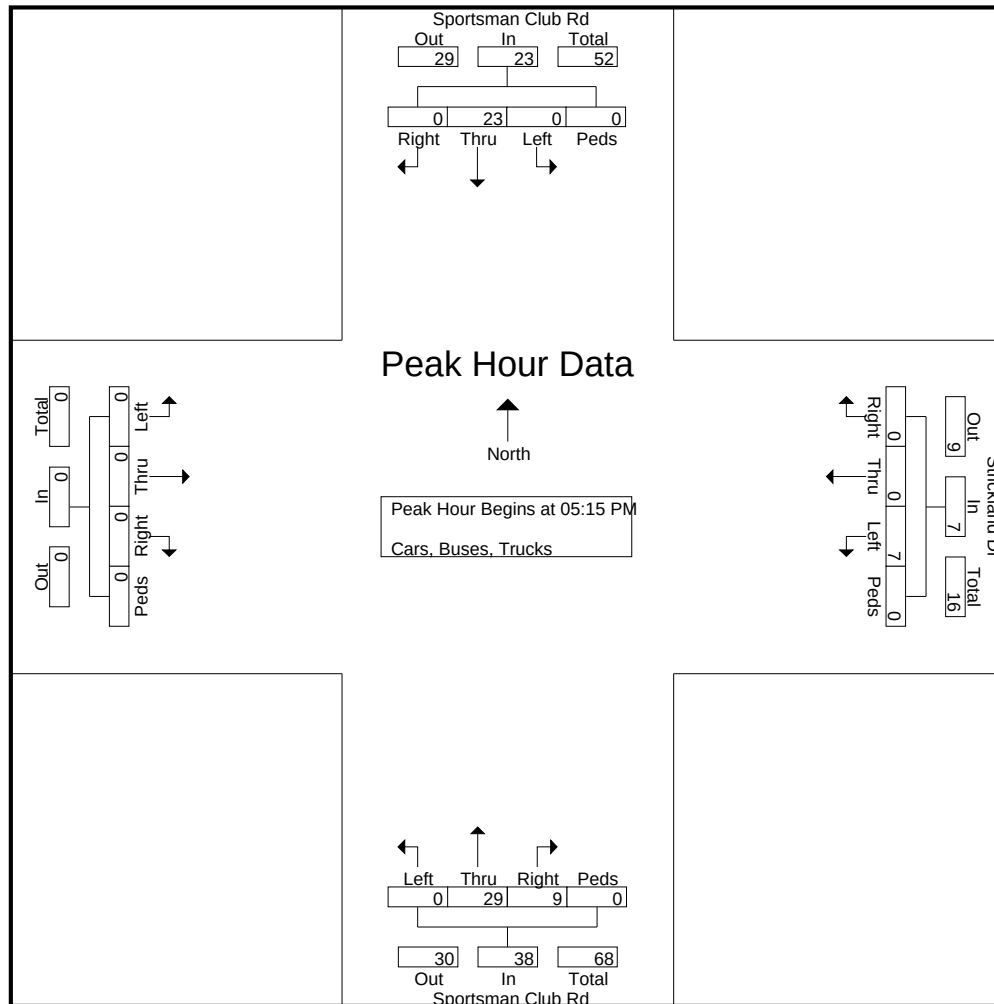
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TMC Data
Sportsman Club Rd @ Strickland Dr
Gainesville, GA
7-9am | 4.30-6.30pm

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	

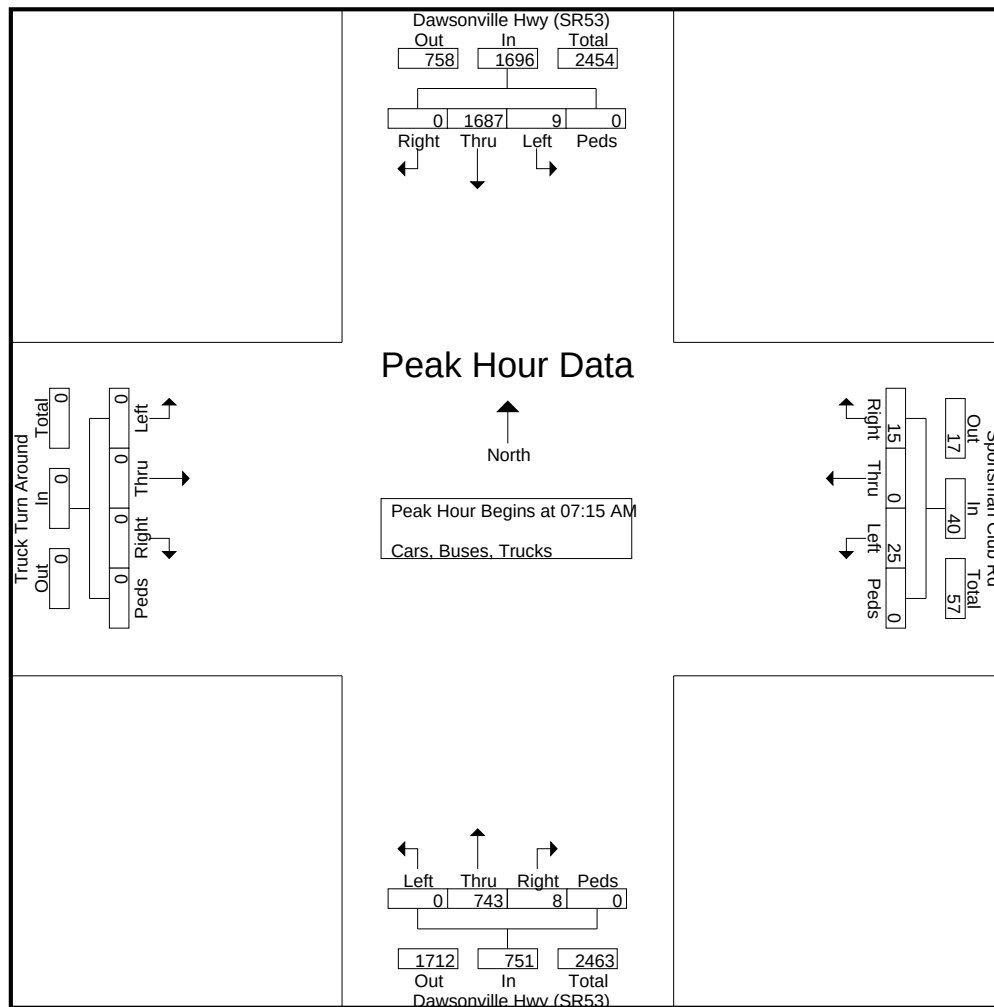
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TMC Data
Dawsonville Hwy (SR53) @
Sportsman Club Rd, Gainesville, GA
7-9am | 4.30-6.30pm

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



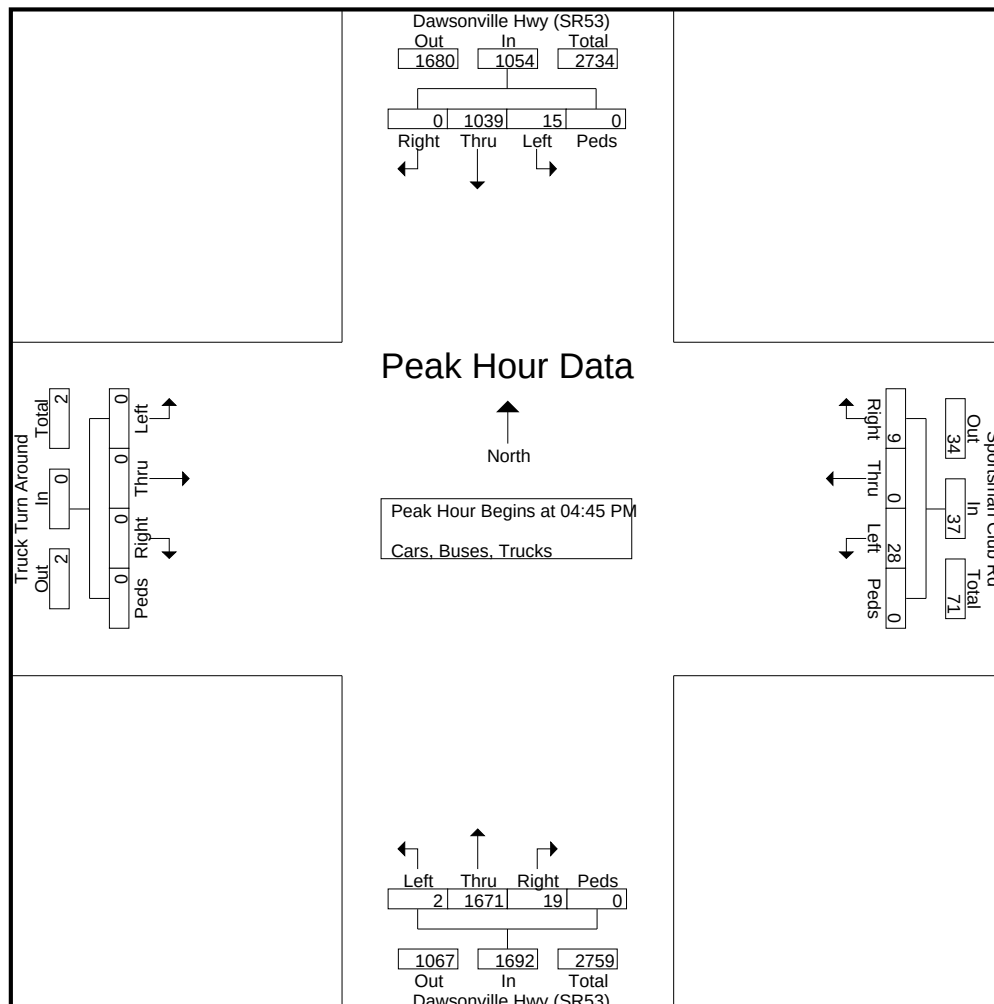
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TMC Data
Dawsonville Hwy (SR53) @
Sportsman Club Rd, Gainesville, GA
7-9am | 4.30-6.30pm

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	

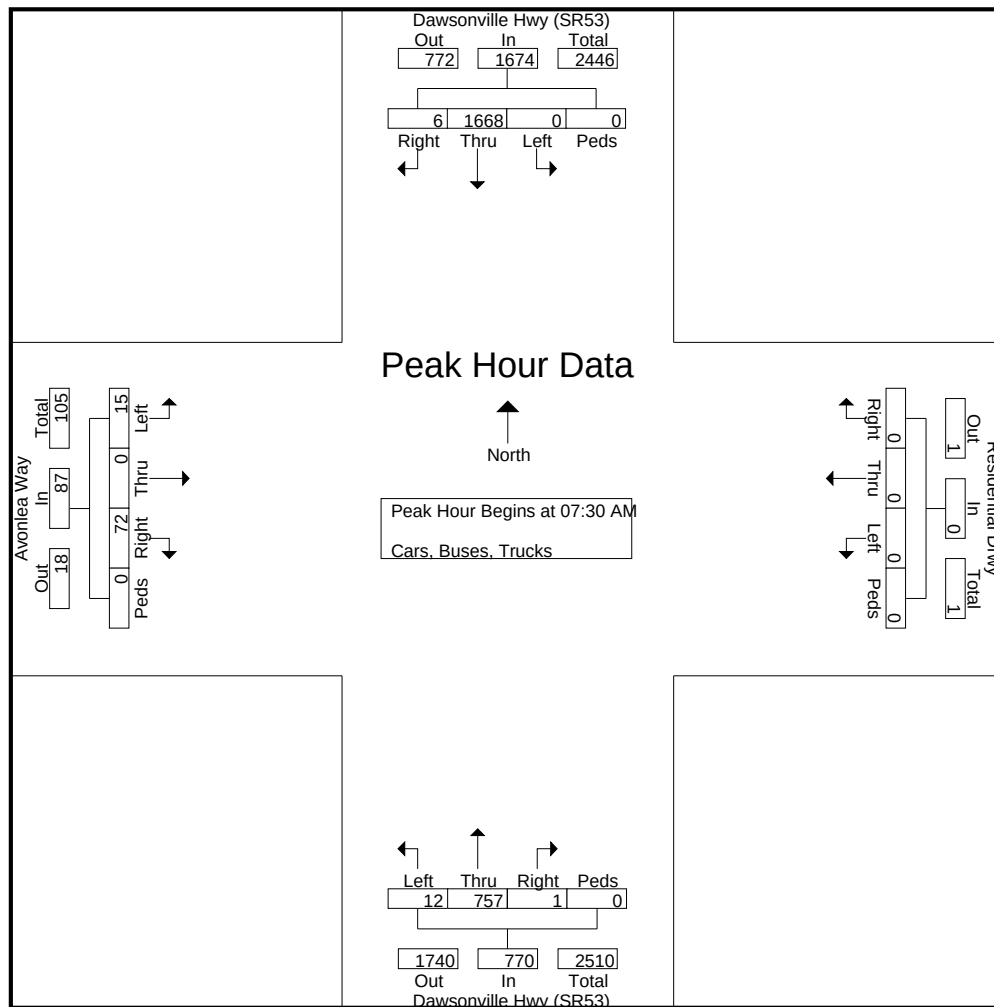
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TMC Data
Dawsonville Hwy (SR53) @ Avonlea Way
Gainesville, GA
7-9am | 4.30-6.30pm

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



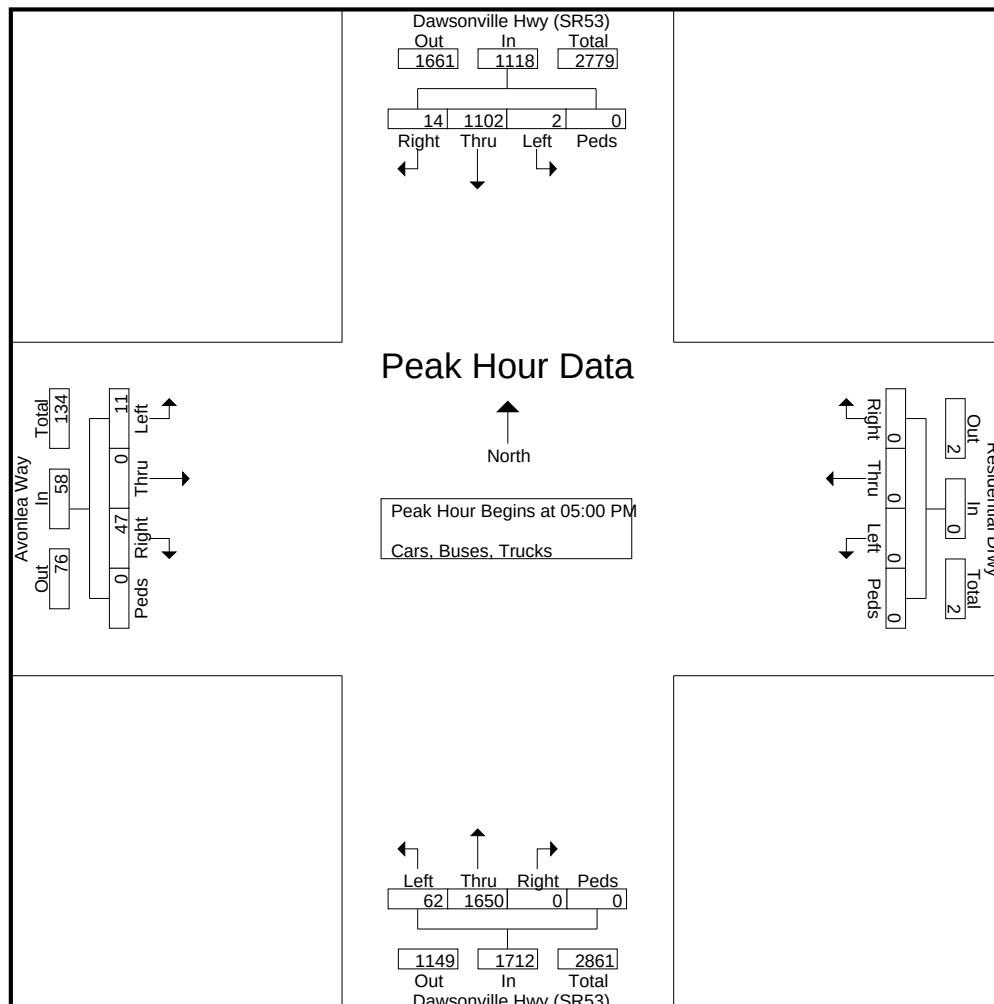
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TMC Data
Dawsonville Hwy (SR53) @ Avonlea Way
Gainesville, GA
7-9am | 4.30-6.30pm

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	

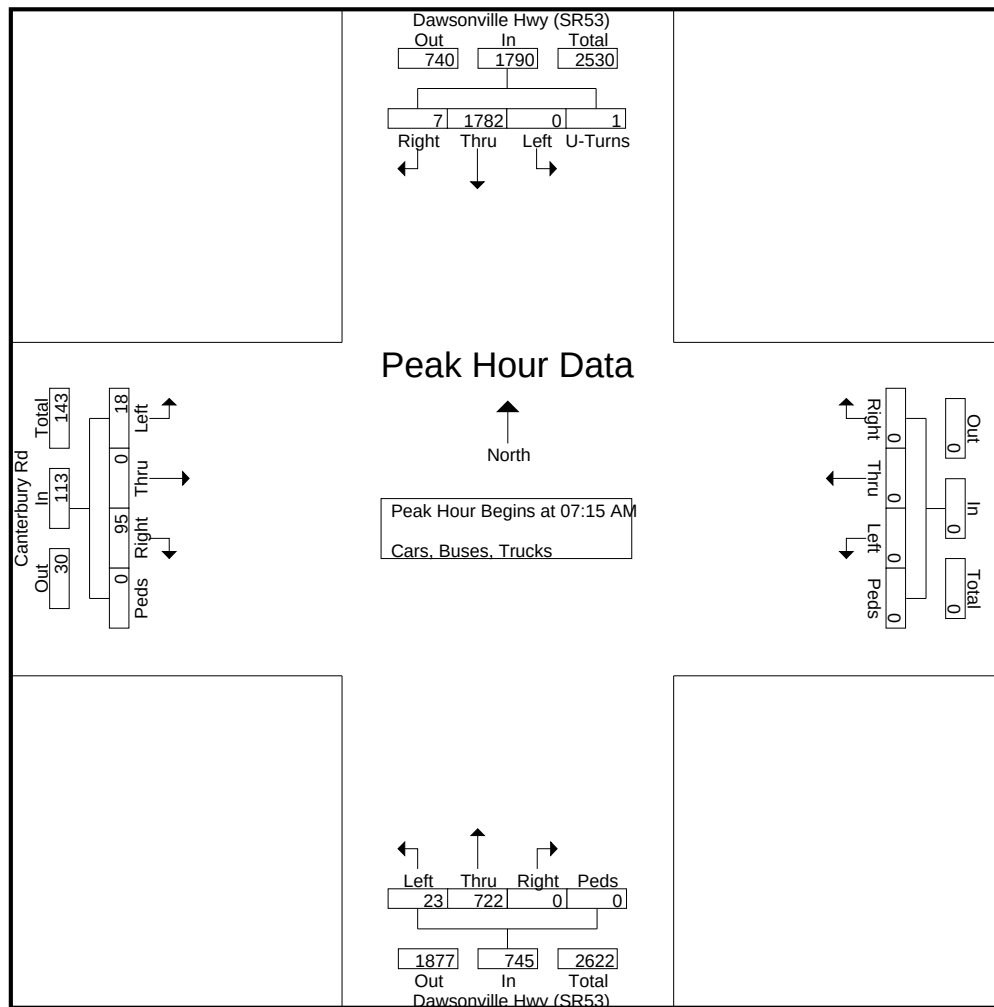
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TMC Data
Dawsonville Hwy (SR53) @ Canterbury Rd
Gainesville, GA
7-9am | 4.30-6.30pm

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



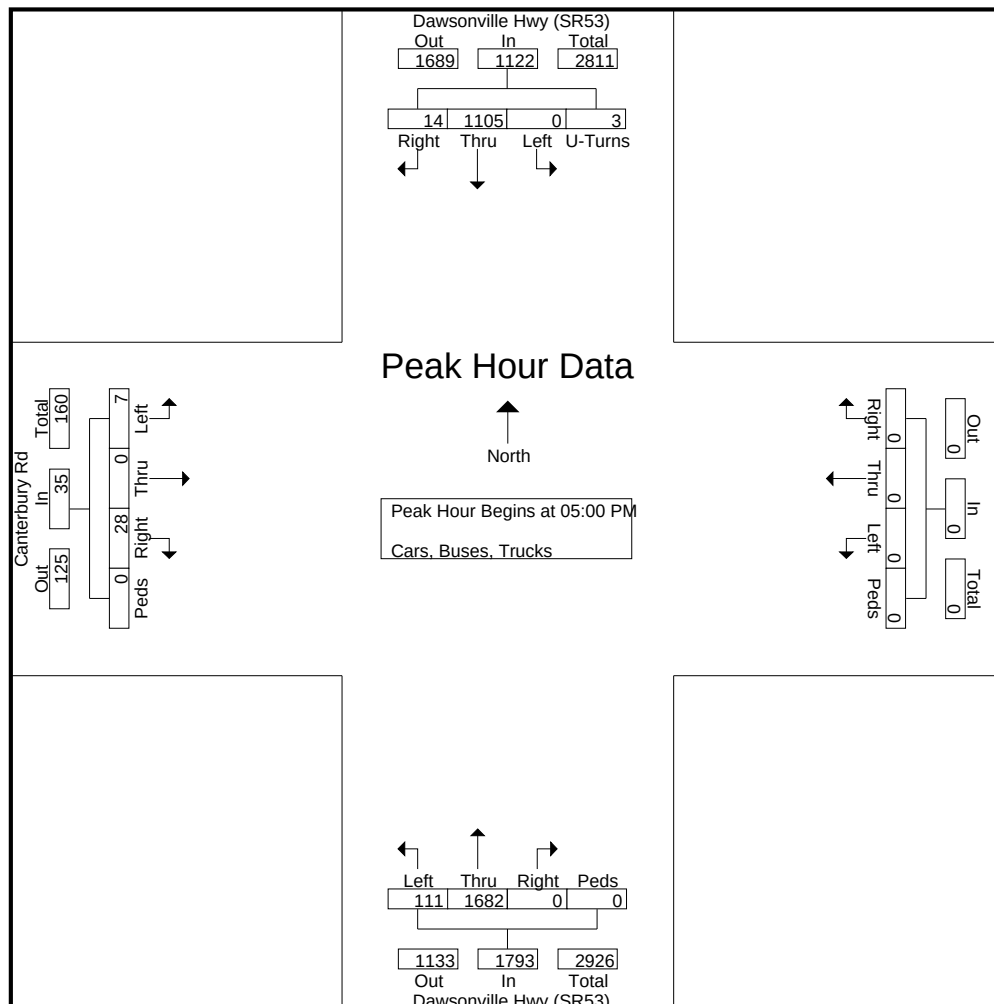
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TMC Data
Dawsonville Hwy (SR53) @ Canterbury Rd
Gainesville, GA
7-9am | 4.30-6.30pm

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	

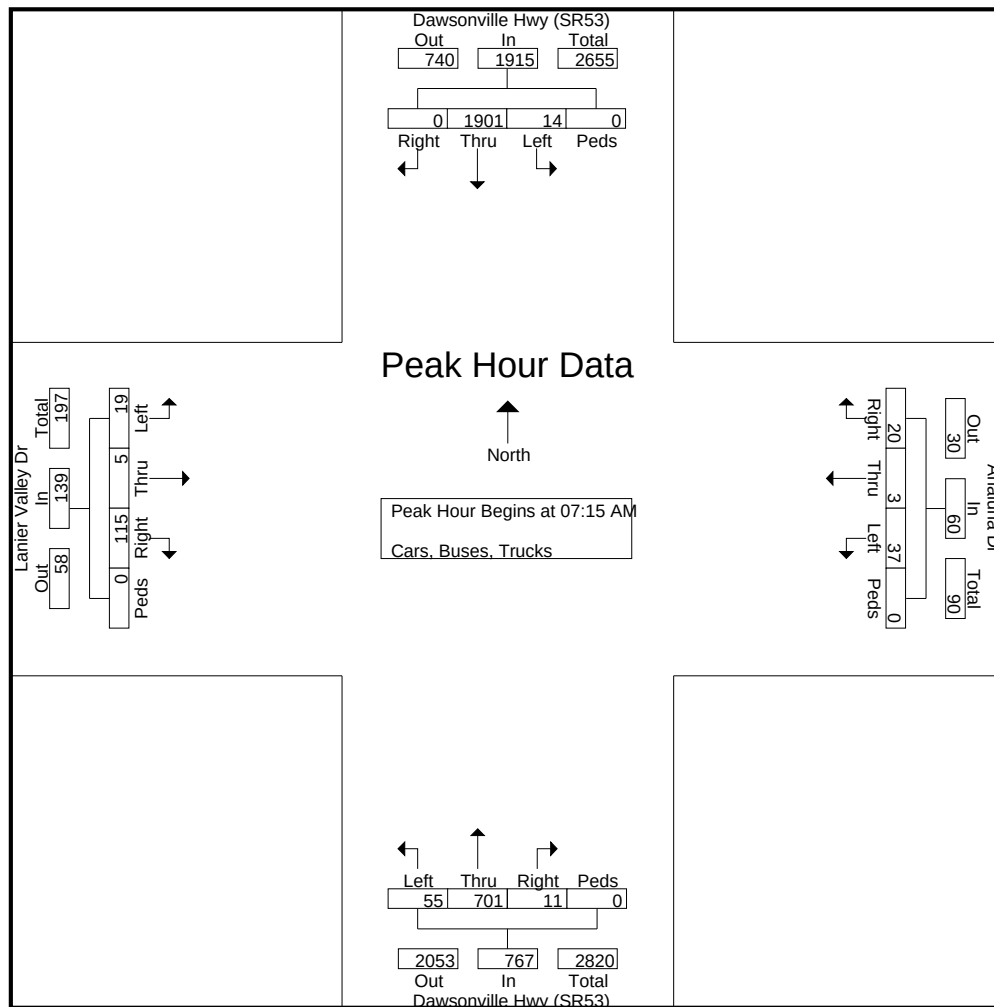
Reliable Traffic Data Services, LLC

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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



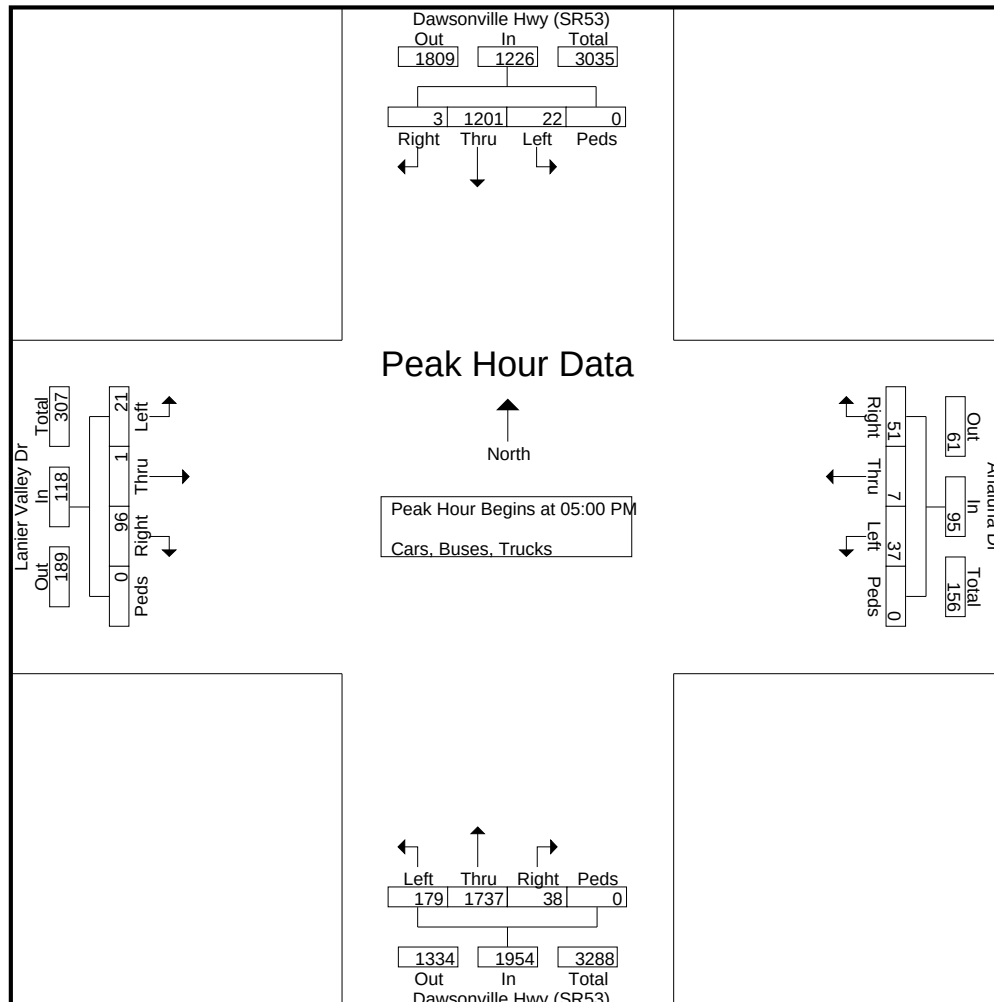
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TMC Data
Dawsonville Hwy (SR53) @ Ahaluna Dr/
Lanier Valley Dr, Gainesville, GA
7-9am | 4.30-6.30pm

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) @ 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	

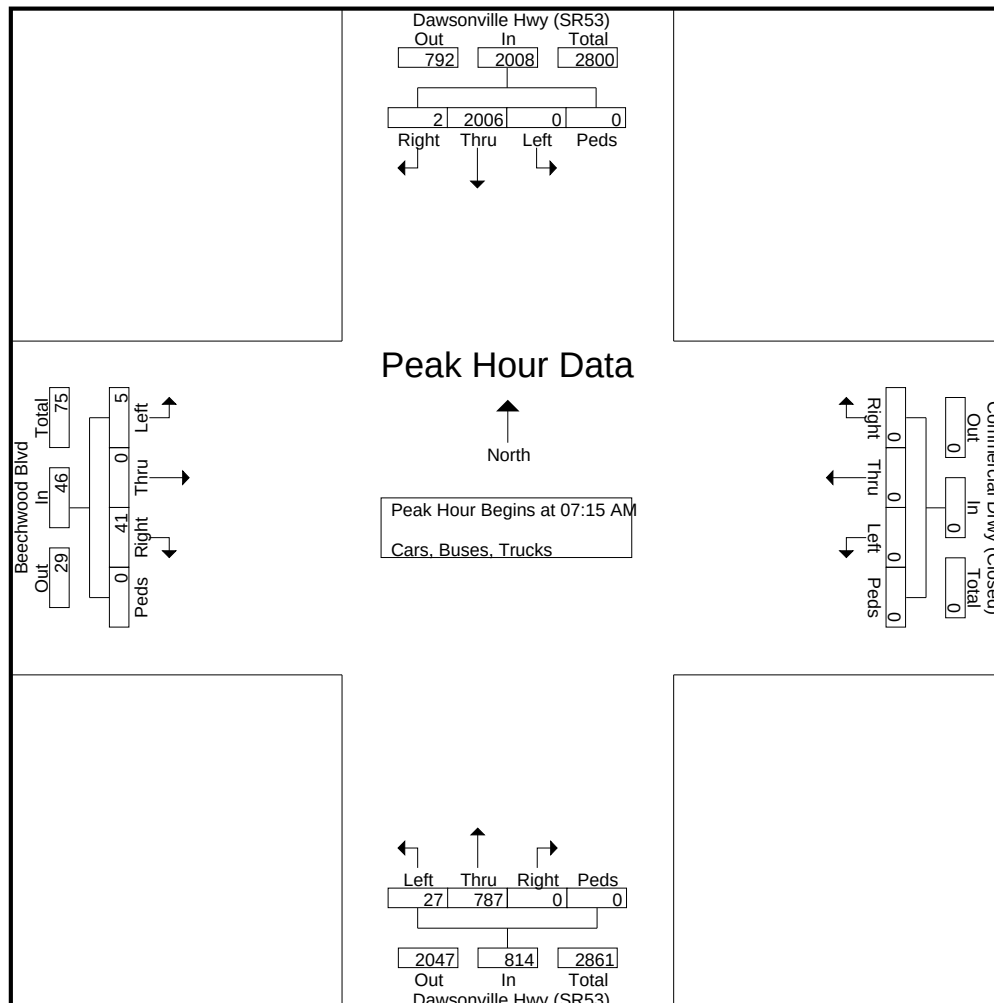
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TMC Data
Dawsonville Hwy (SR53) @ Beechwood Blvd
Gainesville, GA
7-9am | 4.30-6.30pm

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



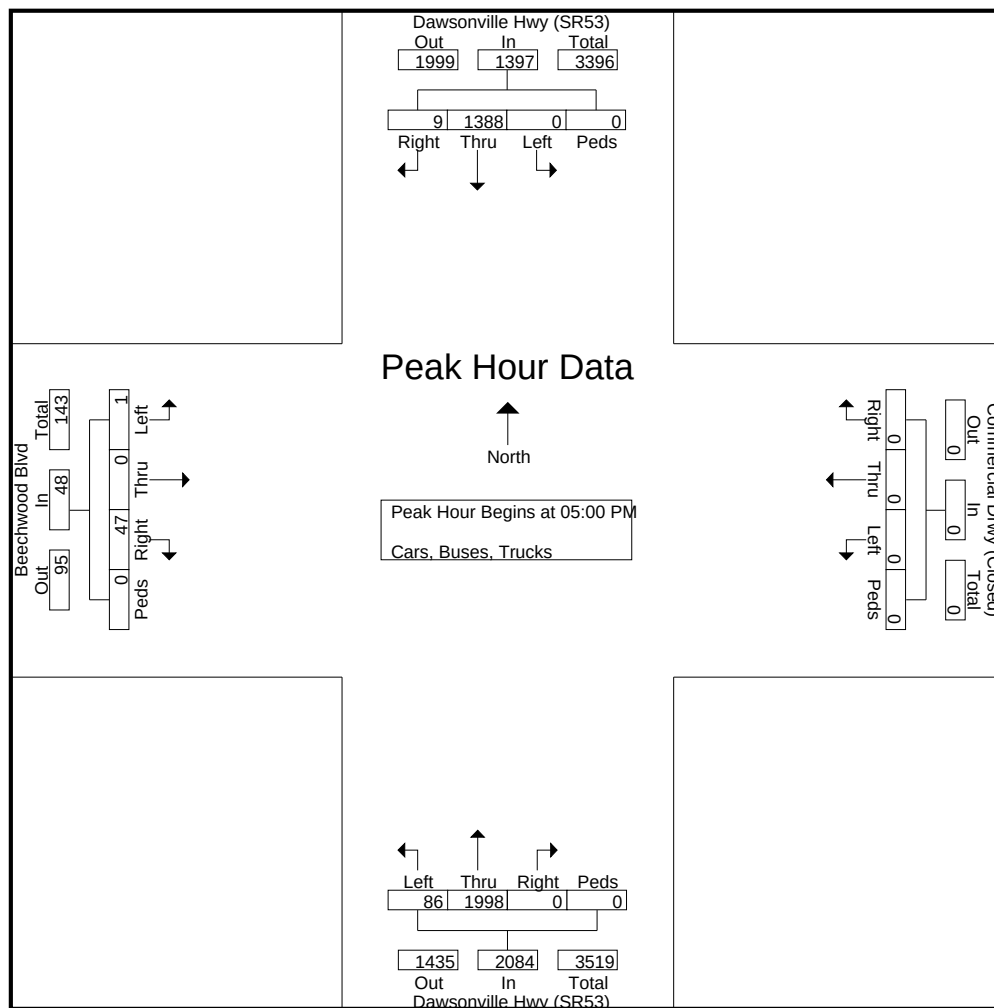
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TMC Data
Dawsonville Hwy (SR53) @ Beechwood Blvd
Gainesville, GA
7-9am | 4.30-6.30pm

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	

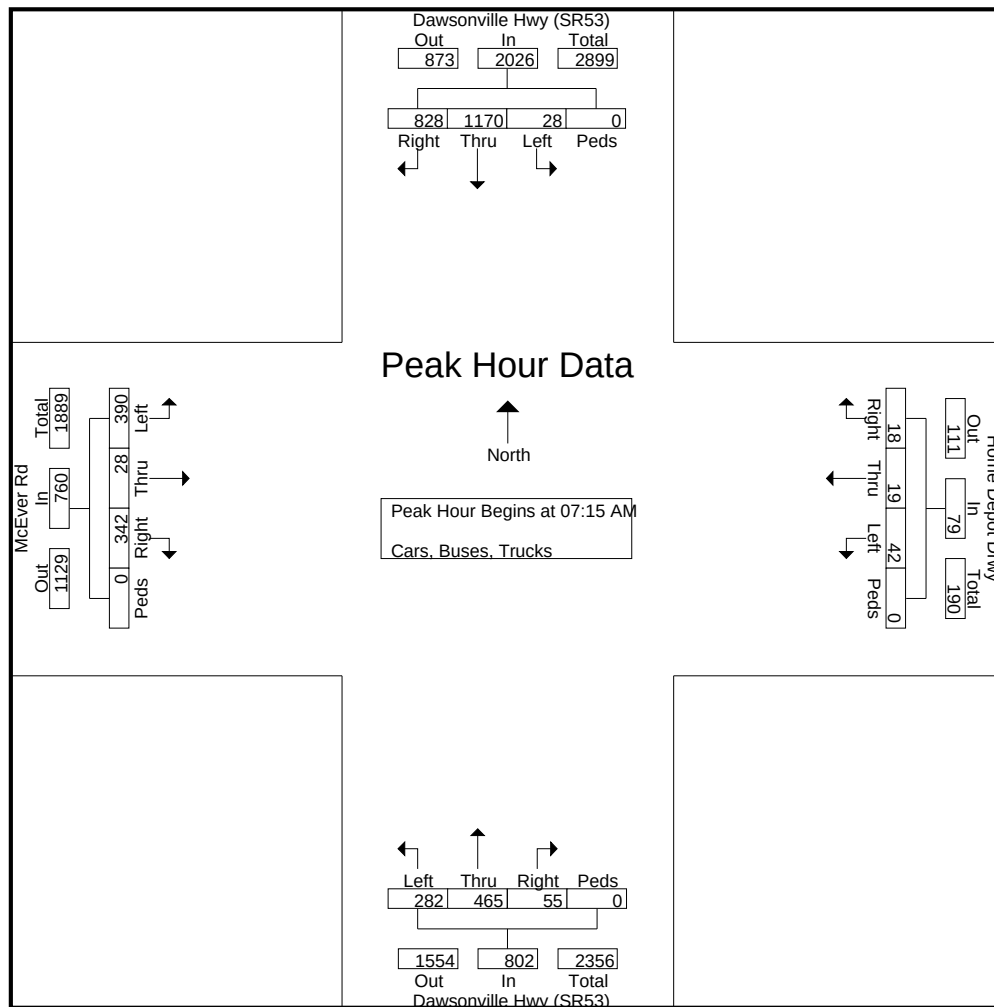
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TMC Data
Dawsonville Hwy (SR53) @ McEver Rd
Gainesville, GA
7-9am | 4.30-6.30pm

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



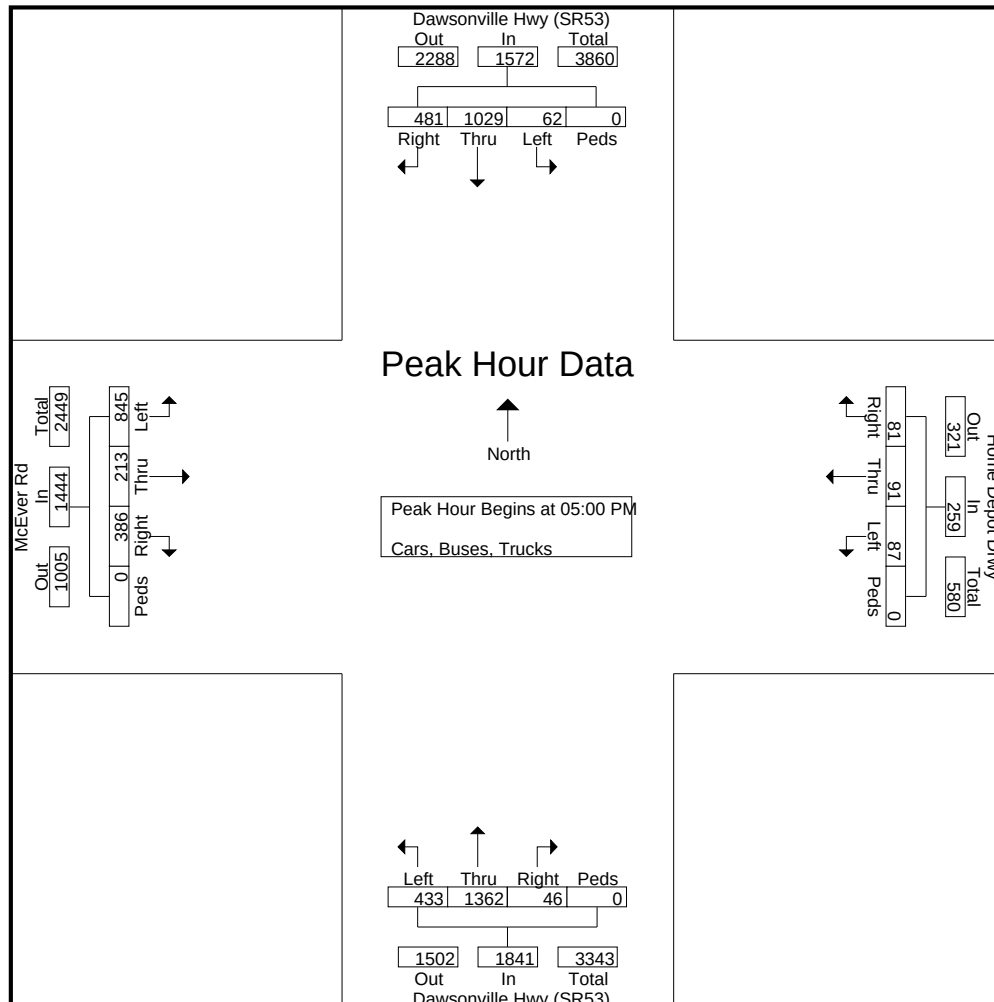
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TMC Data
Dawsonville Hwy (SR53) @ McEver Rd
Gainesville, GA
7-9am I 4.30-6.30pm

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	

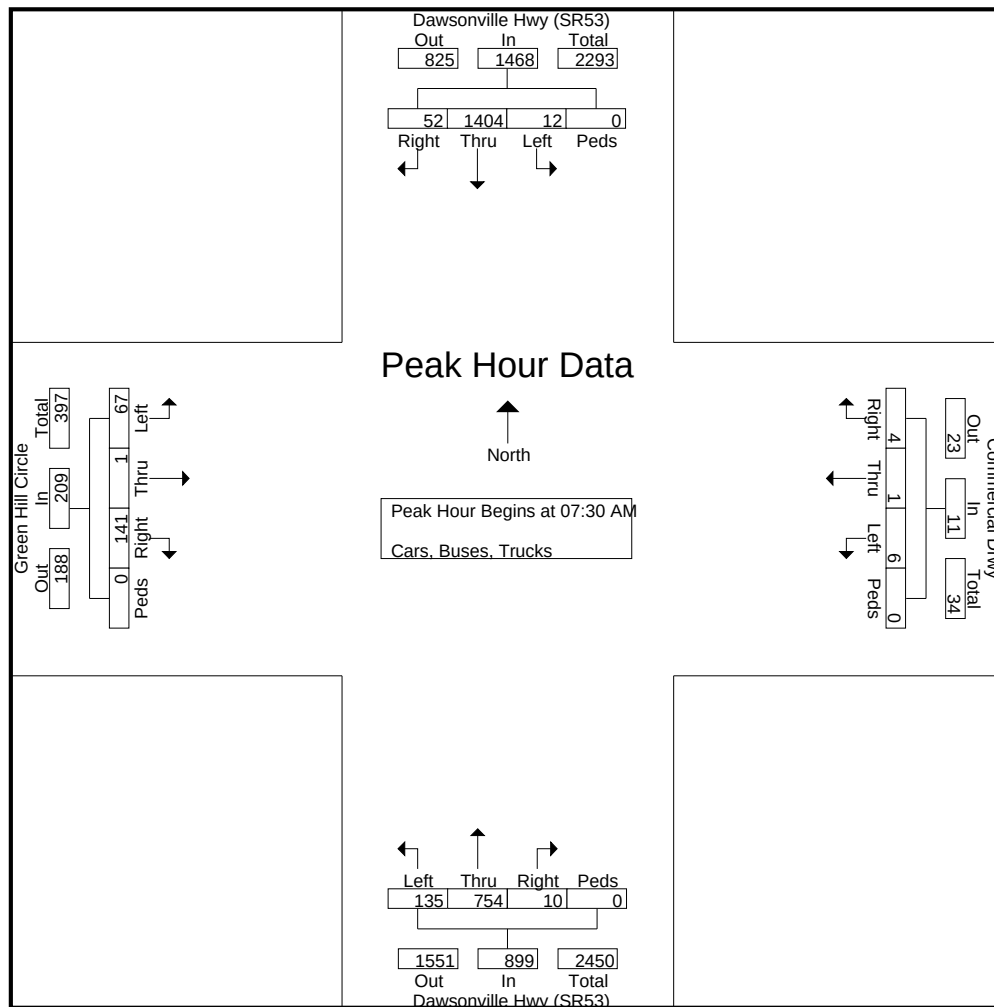
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TMC Data
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	Dawsonville Hwy (SR53) Northbound					Dawsonville Hwy (SR53) Southbound					Green Hill Circle Eastbound					Commercial Drwy Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	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



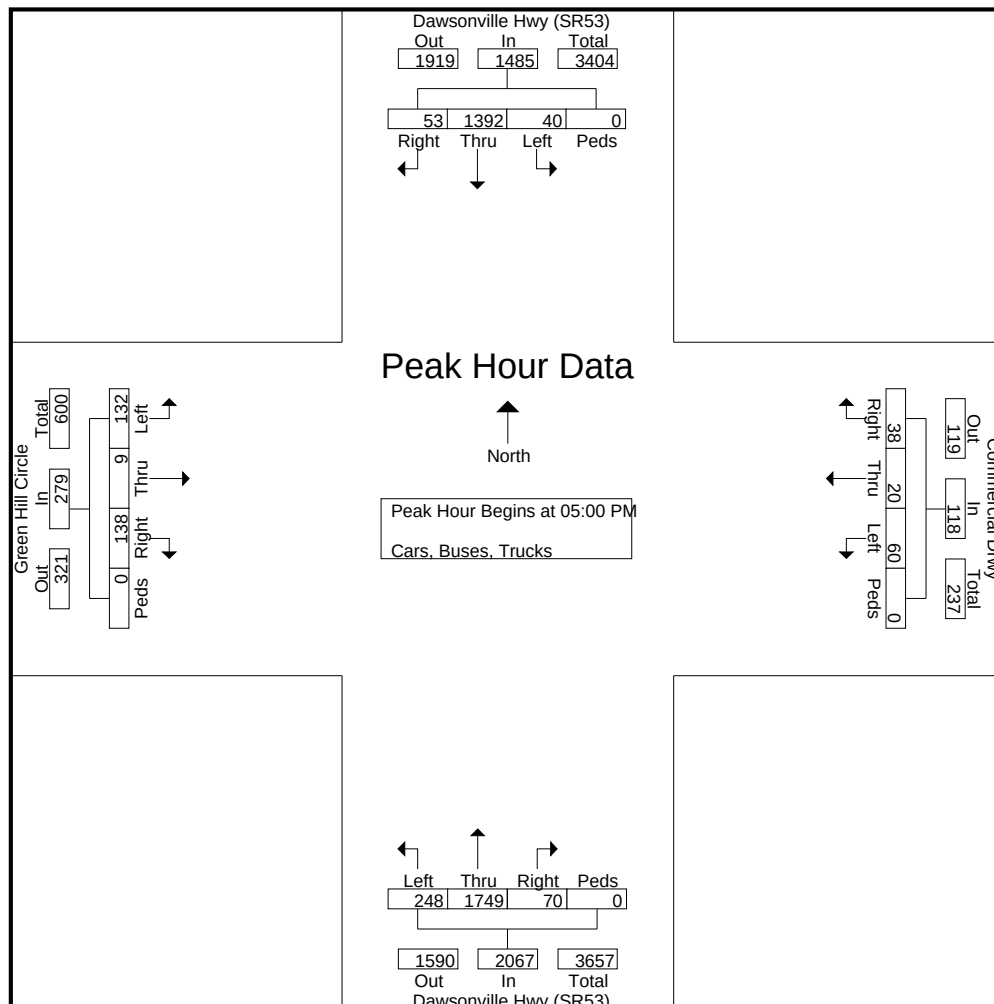
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Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	60	436	20	0	516	7	348	13	0	368	21	1	45	0	67	16	8	4	0	28	979
05:15 PM	62	453	19	0	534	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) @
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7-9am | 4.30-6.30pm

File Name : 39520009
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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	

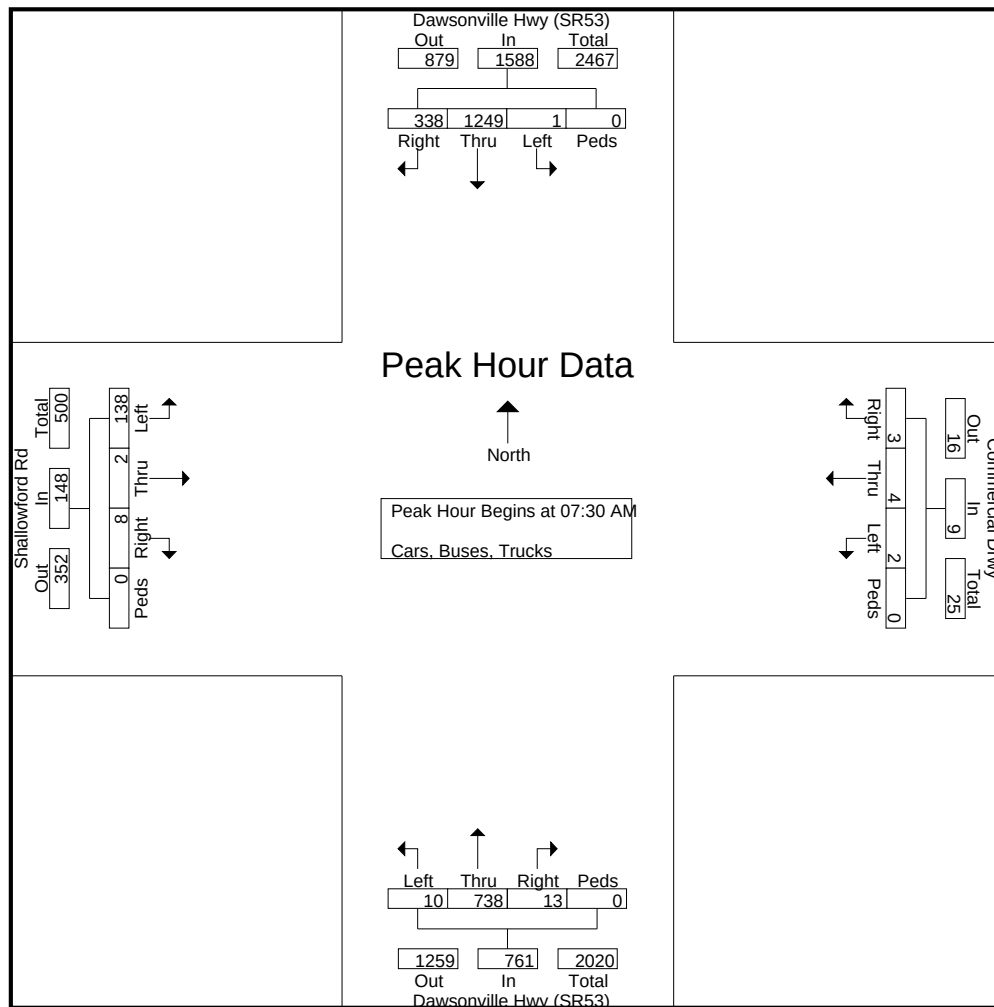
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TMC Data
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7-9am | 4.30-6.30pm

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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



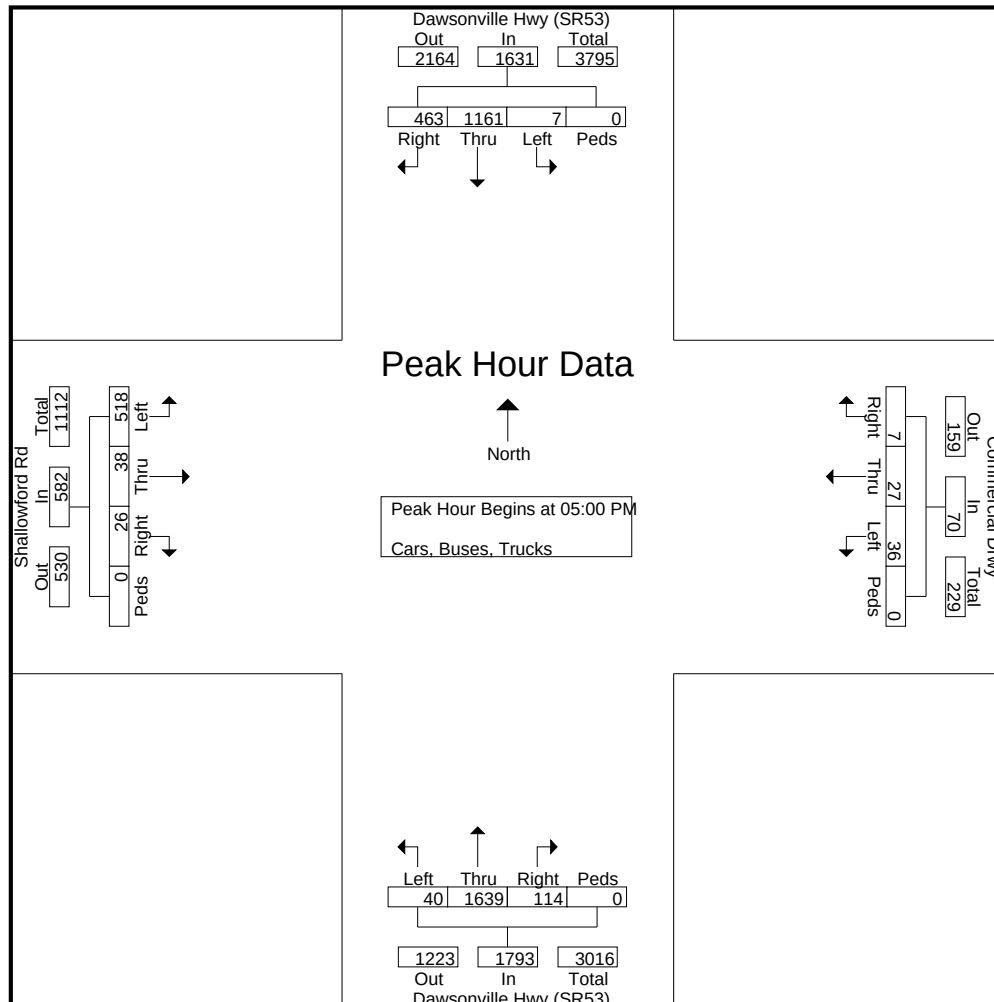
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Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire 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
6: 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

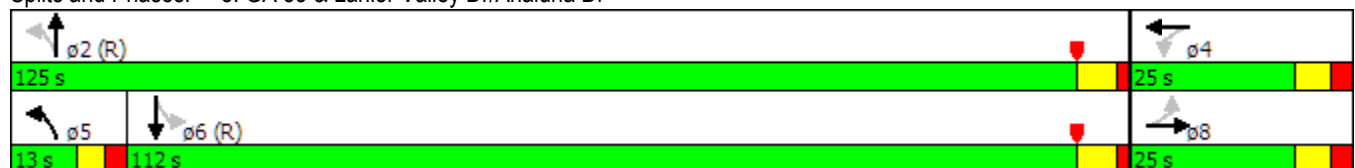
Intersection LOS: B

Intersection Capacity Utilization 73.2%

ICU Level of Service D

Analysis Period (min) 15

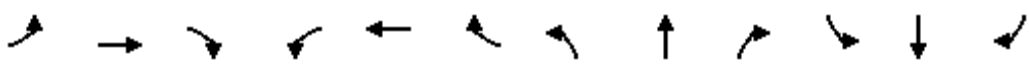
Splits and Phases: 5: GA 53 & Lanier Valley Dr/Ahaluna Dr



Lanier Tract DRI

7: 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

7: 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

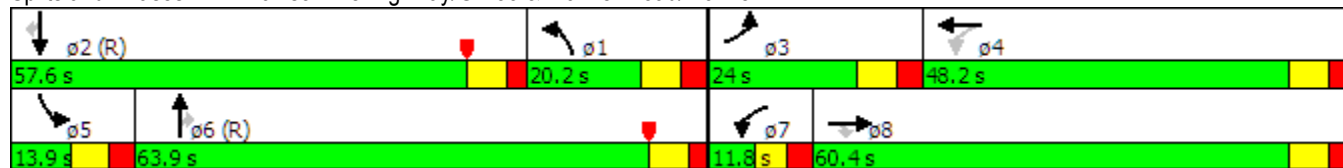
Intersection LOS: D

Intersection Capacity Utilization 81.3%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 7: Dawsonville Highway/GA 53 & McEver Road/McEver



Lanier Tract DRI

8: 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

8: 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

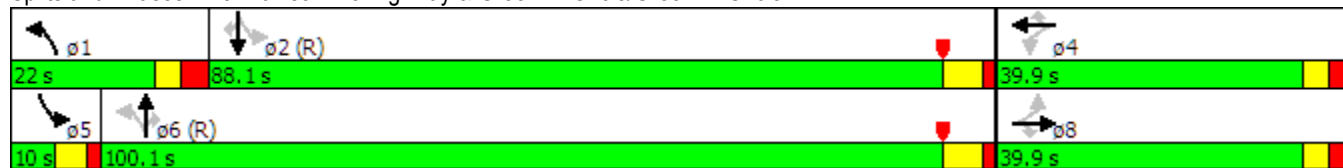
Intersection LOS: B

Intersection Capacity Utilization 71.6%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 8: Dawsonville Highway & Greenhill Circle/Greenhill Circle



Lanier Tract DRI

9: 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

9: 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: 9: Dawsonville Highway & Shallowford Rd/Best Buy

 p1	 p2 (R)		 p3	 p4
10.8 s	63.6 s		36.7 s	38.9 s
 p6 (R)				
74.4 s				

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	-	-

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
Lane Configurations												
Volume (vph)	21	1	96	37	7	51	179	1737	38	22	1201	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		0.859			0.595		0.178			0.108		
Satd. Flow (perm)	0	1438	0	0	1070	0	337	3581	0	206	3592	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		108			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)	24	1	108	44	8	60	186	1809	40	23	1251	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	133	0	0	112	0	186	1849	0	23	1254	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 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

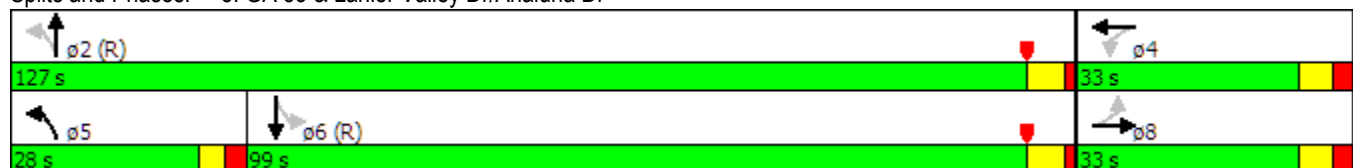
Intersection LOS: B

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

7: 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

7: 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

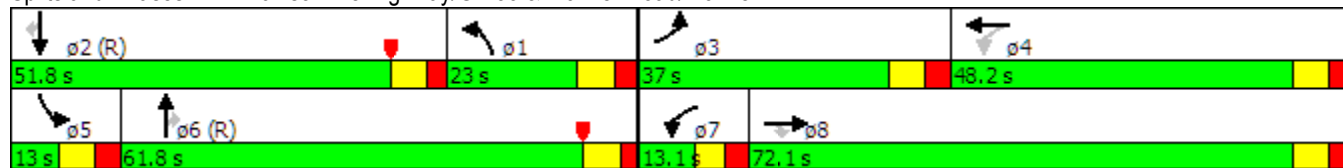
Intersection LOS: F

Intersection Capacity Utilization 99.3%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 7: Dawsonville Highway/GA 53 & McEver Road/McEver



Lanier Tract DRI

8: 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

8: 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: 8: Dawsonville Highway & Greenhill Circle/Greenhill Circle



Lanier Tract DRI

9: 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

9: 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

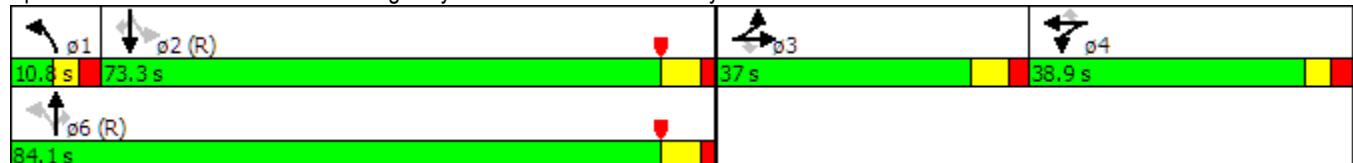
Intersection LOS: D

Intersection Capacity Utilization 81.0%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 9: 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		12.5										
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	10	1877	0	0	829	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	2183	0	0	987	11	0	0	0	47	0	29
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	998	0	0	2183	0	0	2699	3204	1091	2107	3198	499
Stage 1	-	-	-	-	-	-	2206	2206	-	992	992	-
Stage 2	-	-	-	-	-	-	493	998	-	1115	2206	-
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	689	-	-	240	-	-	10	10	210	~ 29	10	517
Stage 1	-	-	-	-	-	-	45	81	-	264	322	-
Stage 2	-	-	-	-	-	-	526	320	-	222	81	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	689	-	-	240	-	-	9	10	210	~ 29	10	517
Mov Cap-2 Maneuver	-	-	-	-	-	-	9	10	-	~ 29	10	-
Stage 1	-	-	-	-	-	-	44	80	-	259	322	-
Stage 2	-	-	-	-	-	-	497	320	-	218	80	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0			0			\$ 533.7		
HCM LOS							A			F		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	-	689	-	-	240	-	-	45				
HCM Lane V/C Ratio	-	0.017	-	-	-	-	-	1.695				
HCM Control Delay (s)	0	10.3	-	-	0	-	-	\$ 533.7				
HCM Lane LOS	A	B	-	-	A	-	-	F				
HCM 95th %tile Q(veh)	-	0.1	-	-	0	-	-	7.6				
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	4.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	17	79	13	845	1856	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	960	2158	8
Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2668	1079	2158	0	-	0
Stage 1	2158	-	-	-	-	-
Stage 2	510	-	-	-	-	-
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	214	245	-	-	-
Stage 1	74	-	-	-	-	-
Stage 2	568	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 17	214	245	-	-	-
Mov Cap-2 Maneuver	~ 17	-	-	-	-	-
Stage 1	74	-	-	-	-	-
Stage 2	533	-	-	-	-	-
Approach	EB		NB		SB	
HCM Control Delay, s	134.4		0.3		0	
HCM LOS	F					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	245	-	17	214	-	-
HCM Lane V/C Ratio	0.06	-	1.19	0.439	-	-
HCM Control Delay (s)	20.6	-\$	599.2	34.4	-	-
HCM Lane LOS	C	-	F	D	-	-
HCM 95th %tile Q(veh)	0.2	-	3	2.1	-	-
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	25.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	20	0	105	26	0	13	25	791	37	28	1955	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	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	92	88	85	92	85	86	86	86	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	23	0	119	31	0	15	29	920	43	31	2148	9
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2728	3188	1074	2114	3188	460	2148	0	0	920	0	0
Stage 1	2210	2210	-	978	978	-	-	-	-	-	-	-
Stage 2	518	978	-	1136	2210	-	-	-	-	-	-	-
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	216	~ 29	10	548	247	-	-	738	-	-
Stage 1	45	81	-	269	327	-	-	-	-	-	-	-
Stage 2	509	327	-	215	81	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 9	8	216	~ 11	8	548	247	-	-	738	-	-
Mov Cap-2 Maneuver	~ 9	8	-	~ 11	8	-	-	-	-	-	-	-
Stage 1	40	78	-	237	289	-	-	-	-	-	-	-
Stage 2	437	289	-	92	78	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	274.8			\$ 995.9			0.6			0.1		
HCM LOS	F			F								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR		
Capacity (veh/h)	247	-	-	9	216	11	548	738	-	-		
HCM Lane V/C Ratio	0.118	-	-	2.525	0.552	2.781	0.028	0.042	-	-		
HCM Control Delay (s)	21.5	-		\$ 1504.7	40.5	\$ 1488	11.8	10.1	-	-		
HCM Lane LOS	C	-	-	F	E	F	B	B	-	-		
HCM 95th %tile Q(veh)	0.4	-	-	3.9	3	4.8	0.1	0.1	-	-		
Notes												
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon												

Lanier Tract DRI
6: GA 53 & Beechwood Boulevard

no build a.m.

Intersection						
Int Delay, s/veh	2.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	6	45	30	900	2233	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	1034	2509	2
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	3095	1254	2509	0	-	0
Stage 1	2509	-	-	-	-	-
Stage 2	586	-	-	-	-	-
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	166	184	-	-	-
Stage 1	48	-	-	-	-	-
Stage 2	525	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 7	166	184	-	-	-
Mov Cap-2 Maneuver	~ 7	-	-	-	-	-
Stage 1	48	-	-	-	-	-
Stage 2	428	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	152.8	0.9		0		
HCM LOS	F					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	184	-	7	166	-	-
HCM Lane V/C Ratio	0.187	-	1.045	0.331	-	-
HCM Control Delay (s)	29	\$	1021.4	37	-	-
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

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	805	12	15	2117	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	3515	0	1814	3628	0
Flt Permitted		0.940			0.380		0.035			0.298		
Satd. Flow (perm)	0	1572	0	0	703	0	66	3515	0	569	3628	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		69			14			3				
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	947	14	17	2433	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	170	0	0	80	0	72	961	0	17	2433	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		11.8	126.0		114.2	114.2	
Total Split (%)	16.0%	16.0%		16.0%	16.0%		7.9%	84.0%		76.1%	76.1%	
Maximum Green (s)	17.4	17.4		17.4	17.4		6.2	119.9		108.1	108.1	
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		110.2	110.2	
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	0.34		0.04	0.91	
Control Delay		59.8			139.1		52.1	2.2		6.3	23.4	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		59.8			139.1		52.1	2.2		6.3	23.4	
LOS		E			F		D	A		A	C	
Approach Delay		59.8			139.1			5.7			23.3	
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: 120

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.95

Intersection Signal Delay: 22.5

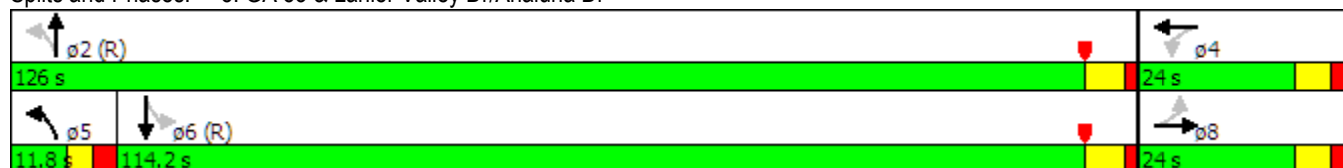
Intersection LOS: C

Intersection Capacity Utilization 81.4%

ICU Level of Service D

Analysis Period (min) 15

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



Lanier Tract DRI

7: 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)	443	31	378	46	21	20	311	532	61	31	1303	921
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			549
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)	457	32	390	74	34	32	334	572	66	34	1448	1023
Shared Lane Traffic (%)			47%									
Lane Group Flow (vph)	457	215	207	74	66	0	334	572	66	34	1448	1023
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

7: 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		19.0	64.6	64.6	14.2	59.8	59.8
Total Split (%)	15.3%	39.4%	39.4%	8.1%	32.1%		12.7%	43.1%	43.1%	9.5%	39.9%	39.9%
Maximum Green (s)	15.7	51.8	51.8	5.6	40.9		11.5	58.0	58.0	7.0	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	17.5	17.5	14.0	8.8		11.5	93.5	93.5	8.3	87.5	87.5
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	1.23	0.62	0.57	0.58	0.51		1.25	0.26	0.06	0.34	0.68	0.87
Control Delay	176.4	20.5	13.5	70.3	52.3		197.5	17.5	1.5	80.9	21.6	15.1
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	176.4	20.5	13.5	70.3	52.3		197.5	17.5	1.5	80.9	21.6	15.1
LOS	F	C	B	E	D		F	B	A	F	C	B
Approach Delay		99.9			61.8			78.3			19.7	
Approach LOS		F			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: 1.25

Intersection Signal Delay: 49.4

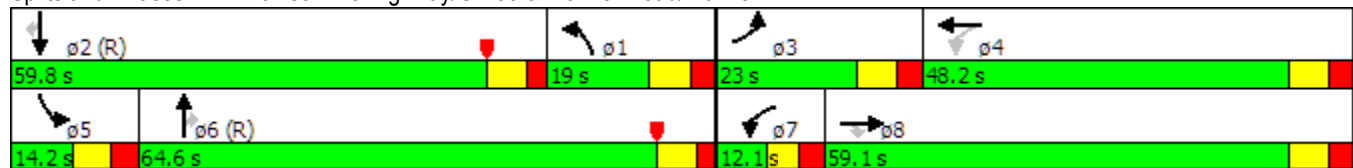
Intersection LOS: D

Intersection Capacity Utilization 87.9%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 7: Dawsonville Highway/GA 53 & McEver Road/McEver



Lanier Tract DRI

8: 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	851	11	13	1561	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		0.080			0.289		
Satd. Flow (perm)	0	1349	1591	0	1377	1558	151	3522	1607	549	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	990	13	14	1697	62
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	83	173	0	11	6	173	990	13	14	1697	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

8: 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	0.59	0.35	0.01	0.03	0.69	0.05
Control Delay		85.5	24.1		59.9	0.2	29.9	4.6	0.0	4.0	13.9	0.7
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	29.9	4.6	0.0	4.0	14.0	0.7
LOS		F	C		E	A	C	A	A	A	B	A
Approach Delay		44.0			38.8			8.3			13.4	
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: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.69

Intersection Signal Delay: 14.1

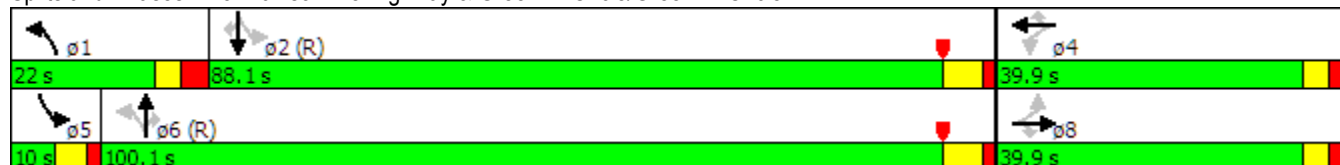
Intersection LOS: B

Intersection Capacity Utilization 77.1%

ICU Level of Service D

Analysis Period (min) 15

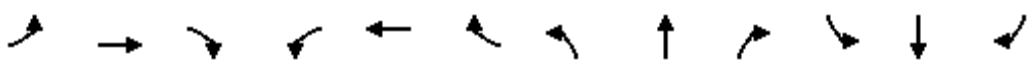
Splits and Phases: 8: Dawsonville Highway & Greenhill Circle/Greenhill Circle



Lanier Tract DRI

9: 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)	154	2	9	2	4	3	11	832	14	1	1389	374
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		0.123			0.286		
Satd. Flow (perm)	1723	1729	1623	0	1773	1534	238	3646	1647	546	3592	1623
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			113			119			70			217
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)	183	2	11	4	7	5	13	1002	17	1	1494	402
Shared Lane Traffic (%)	49%											
Lane Group Flow (vph)	93	92	11	0	11	5	13	1002	17	1	1494	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		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

9: 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	112.9	112.9	112.9
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	0.60	0.04		0.14	0.03	0.05	0.35	0.01	0.00	0.55	0.32
Control Delay	81.3	80.6	0.3		72.5	0.3	5.9	6.2	0.0	7.0	10.5	4.2
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	81.3	80.6	0.3		72.5	0.3	5.9	6.2	0.0	7.0	10.9	4.2
LOS	F	F	A		E	A	A	A	A	A	B	A
Approach Delay		76.4			49.9			6.1			9.4	
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: 12.7

Intersection LOS: B

Intersection Capacity Utilization 62.9%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 9: Dawsonville Highway & Shallowford Rd/Best Buy

								
10.8 s	63.6 s			36.7 s			38.9 s	
								
74.4 s								

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	42.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	17	1182	0	2	1883	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	1244	0	2	1961	22	0	0	0	47	0	15
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1983	0	0	1244	0	0	2265	3268	622	2635	3257	992
Stage 1	-	-	-	-	-	-	1280	1280	-	1977	1977	-
Stage 2	-	-	-	-	-	-	985	1988	-	658	1280	-
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	287	-	-	555	-	-	22	9	430	~ 11	9	244
Stage 1	-	-	-	-	-	-	175	235	-	64	106	-
Stage 2	-	-	-	-	-	-	266	105	-	420	235	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	287	-	-	555	-	-	20	8	430	~ 10	8	244
Mov Cap-2 Maneuver	-	-	-	-	-	-	20	8	-	~ 10	8	-
Stage 1	-	-	-	-	-	-	164	220	-	60	106	-
Stage 2	-	-	-	-	-	-	249	105	-	394	220	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			0			0			\$ 2280.3		
HCM LOS							A			F		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	-	287	-	-	555	-	-	13				
HCM Lane V/C Ratio	-	0.062	-	-	0.004	-	-	4.779				
HCM Control Delay (s)	0	18.4	-	-	11.5	-	\$ 2280.3					
HCM Lane LOS	A	C	-	-	B	-	-	F				
HCM 95th %tile Q(veh)	-	0.2	-	-	0	-	-	8.8				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined			*: All major volume in platoon					

Intersection						
Int Delay, s/veh	1.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	12	52	68	1860	1254	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	16	68	72	1958	1254	15
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	2376	627	1254	0	-	0
Stage 1	1254	-	-	-	-	-
Stage 2	1122	-	-	-	-	-
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	29	426	551	-	-	-
Stage 1	232	-	-	-	-	-
Stage 2	273	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	25	426	551	-	-	-
Mov Cap-2 Maneuver	25	-	-	-	-	-
Stage 1	232	-	-	-	-	-
Stage 2	237	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	65.7	0.4		0		
HCM LOS	F					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	551	-	25	426	-	-
HCM Lane V/C Ratio	0.13	-	0.632	0.161	-	-
HCM Control Delay (s)	12.5	-	284.7	15.1	-	-
HCM Lane LOS	B	-	F	C	-	-
HCM 95th %tile Q(veh)	0.4	-	1.9	0.6	-	-

Lanier Tract DRI
4: Canterbury Road & GA 53

no build p.m.

Intersection												
Int Delay, s/veh	511.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	8	0	31	114	0	90	123	1809	124	65	1193	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	92	80	92	92	92	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	124	0	98	128	1884	129	68	1243	16
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2576	3519	621	2898	3519	942	1243	0	0	1884	0	0
Stage 1	1378	1378	-	2141	2141	-	-	-	-	-	-	-
Stage 2	1198	2141	-	757	1378	-	-	-	-	-	-	-
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	430	~ 7	6	264	556	-	-	314	-	-
Stage 1	152	210	-	~ 50	87	-	-	-	-	-	-	-
Stage 2	197	87	-	366	210	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 6	4	430	~ 4	4	264	556	-	-	314	-	-
Mov Cap-2 Maneuver	~ 6	4	-	~ 4	4	-	-	-	-	-	-	-
Stage 1	117	165	-	~ 38	67	-	-	-	-	-	-	-
Stage 2	95	67	-	261	165	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	\$ 307.2			\$ 8544.2			0.8			1		
HCM LOS	F			F								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR		
Capacity (veh/h)	556	-	-	6	430	4	264	314	-	-		
HCM Lane V/C Ratio	0.23	-	-	1.667	0.09	30.978	0.371	0.216	-	-		
HCM Control Delay (s)	13.4	-	-	\$ 1442.4	\$ 25268.7	26.4	19.6	-	-	-		
HCM Lane LOS	B	-	-	F	B	F	D	C	-	-		
HCM 95th %tile Q(veh)	0.9	-	-	2.2	0.3	17.6	1.6	0.8	-	-		
Notes												
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon												

Lanier Tract DRI
6: 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	2282	1614	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	2305	1647	10
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	2991	824	1647	0	-	0
Stage 1	1647	-	-	-	-	-
Stage 2	1344	-	-	-	-	-
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	11	320	398	-	-	-
Stage 1	145	-	-	-	-	-
Stage 2	211	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	8	320	398	-	-	-
Mov Cap-2 Maneuver	8	-	-	-	-	-
Stage 1	145	-	-	-	-	-
Stage 2	160	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	29.3	0.7		0		
HCM LOS	D					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	398	-	8	320	-	-
HCM Lane V/C Ratio	0.241	-	0.176	0.229	-	-
HCM Control Delay (s)	16.9	-	534.2	19.6	-	-
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

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	1994	42	24	1408	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		0.864			0.597		0.122			0.071		
Satd. Flow (perm)	0	1446	0	0	1074	0	231	3581	0	136	3592	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		119			26			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	2077	44	25	1467	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	146	0	0	123	0	206	2121	0	25	1470	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)		18.0			18.0		129.8	129.3		110.6	110.6	
Actuated g/C Ratio		0.11			0.11		0.81	0.81		0.69	0.69	
v/c Ratio		0.54			0.86		0.65	0.73		0.27	0.59	
Control Delay		23.3			98.5		24.2	11.1		22.8	15.9	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		23.3			98.5		24.2	11.1		22.8	15.9	
LOS		C			F		C	B		C	B	
Approach Delay		23.3			98.5			12.3			16.0	
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: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.86

Intersection Signal Delay: 16.6

Intersection LOS: B

Intersection Capacity Utilization 88.2%

ICU Level of Service E

Analysis Period (min) 15

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



Lanier Tract DRI

7: 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)	962	235	426	96	100	89	478	1551	51	68	1186	563
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	308		27				172			320
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)	1013	247	448	112	116	103	493	1599	53	75	1303	619
Shared Lane Traffic (%)			27%									
Lane Group Flow (vph)	1013	368	327	112	219	0	493	1599	53	75	1303	619
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

7: 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		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	44.8	44.8	31.5	23.5		14.5	65.4	65.4	15.0	65.6	65.6
Actuated g/C Ratio	0.17	0.28	0.28	0.20	0.15		0.09	0.41	0.41	0.09	0.41	0.41
v/c Ratio	1.68	0.75	0.50	0.54	0.80		1.57	1.09	0.07	0.44	0.89	0.72
Control Delay	351.1	59.4	8.0	47.6	77.6		314.4	106.2	0.1	67.3	66.9	40.3
Queue Delay	0.0	14.4	1.3	25.2	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	351.1	73.8	9.3	72.8	77.6		314.4	106.2	0.1	67.3	66.9	40.3
LOS	F	E	A	E	E		F	F	A	E	E	D
Approach Delay		225.9			76.0			151.4			58.7	
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: 1.68

Intersection Signal Delay: 138.0

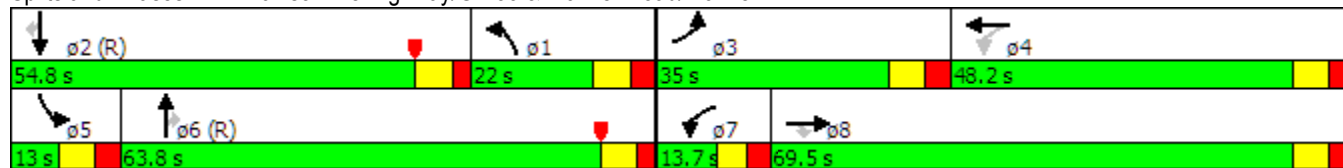
Intersection LOS: F

Intersection Capacity Utilization 108.9%

ICU Level of Service G

Analysis Period (min) 15

Splits and Phases: 7: Dawsonville Highway/GA 53 & McEver Road/McEver



Lanier Tract DRI

8: 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	1978	77	44	1587	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		0.045			0.048		
Satd. Flow (perm)	0	1106	1591	0	884	1558	85	3592	1607	91	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	2039	79	46	1671	62
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	171	167	0	113	54	282	2039	79	46	1671	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

8: 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	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	0.89	0.81	0.07	0.40	0.82	0.07
Control Delay		103.0	9.8		87.7	1.7	55.8	29.8	5.4	23.1	56.9	11.5
Queue Delay		0.0	5.4		87.6	0.0	0.0	47.2	0.0	0.0	1.6	0.0
Total Delay		103.0	15.2		175.3	1.7	55.8	76.9	5.4	23.1	58.5	11.5
LOS		F	B		F	A	E	E	A	C	E	B
Approach Delay		59.6			119.2			72.1			56.0	
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: 120

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.89

Intersection Signal Delay: 66.7

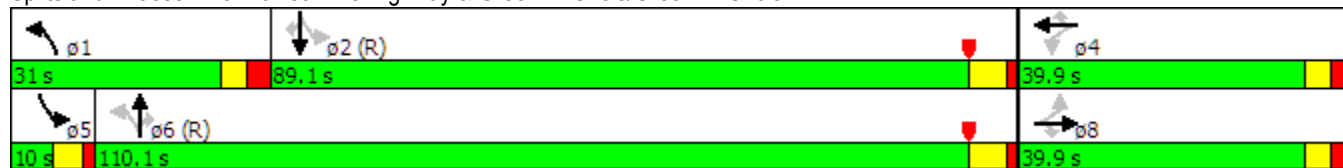
Intersection LOS: E

Intersection Capacity Utilization 89.2%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 8: Dawsonville Highway & Greenhill Circle/Greenhill Circle



Lanier Tract DRI

9: 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)	578	42	29	40	30	8	44	1851	126	8	1326	517
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		0.075			0.046		
Satd. Flow (perm)	1723	1740	1623	0	1754	1534	145	3682	1647	88	3628	1623
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			106			111			65			315
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)	642	47	32	45	34	9	47	1969	134	9	1457	568
Shared Lane Traffic (%)	47%											
Lane Group Flow (vph)	340	349	32	0	79	9	47	1969	134	9	1457	568
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

9: 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)	36.7	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	1.05	1.07	0.08		0.57	0.04	0.29	0.87	0.13	0.19	0.74	0.55
Control Delay	125.0	129.2	0.4		86.5	0.4	17.2	31.8	7.4	56.6	55.0	33.1
Queue Delay	1.1	1.2	0.0		0.0	0.0	0.0	46.9	0.0	0.0	22.1	0.8
Total Delay	126.1	130.4	0.4		86.5	0.4	17.2	78.7	7.4	56.6	77.0	33.9
LOS	F	F	A		F	A	B	E	A	E	E	C
Approach Delay		122.6			77.7			73.0			64.9	
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: 1.07

Intersection Signal Delay: 76.9

Intersection LOS: E

Intersection Capacity Utilization 88.6%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 9: Dawsonville Highway & Shallowford Rd/Best Buy

											
10.8 s	73.6 s			36.7 s			38.9 s				
											
84.4 s											

Appendix E

Future Intersection Analysis

Lanier Tract DRI
1: Sportsman Club Road & Strickland Drive

future a.m.

Intersection						
Int Delay, s/veh	3.8					
Movement	WBL	WBR		NBT	NBR	SBL SBT
Vol, veh/h	24	0		7	9	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	48	0		12	16	0 39
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	59	20	0	0	28	0
Stage 1	20	-	-	-	-	-
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	948	1058	-	-	1585	-
Stage 1	1003	-	-	-	-	-
Stage 2	983	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	948	1058	-	-	1585	-
Mov Cap-2 Maneuver	948	-	-	-	-	-
Stage 1	1003	-	-	-	-	-
Stage 2	983	-	-	-	-	-
Approach	WB		NB		SB	
HCM Control Delay, s	9		0		0	
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	948	1585	-	
HCM Lane V/C Ratio	-	-	0.051	-	-	
HCM Control Delay (s)	-	-	9	0	-	
HCM Lane LOS	-	-	A	A	-	
HCM 95th %tile Q(veh)	-	-	0.2	0	-	

Lanier Tract DRI
2: GA 53 & Sportsman Club Road

future a.m.

Intersection												
Int Delay, s/veh	25.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	11	1896	0	5	847	16	0	0	0	37	0	21
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	13	2205	0	6	1008	19	0	0	0	63	0	36

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1027	0	0	2205	0	0	2746	3269	1102	2158	3260	514
Stage 1	-	-	-	-	-	-	2230	2230	-	1030	1030	-
Stage 2	-	-	-	-	-	-	516	1039	-	1128	2230	-
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	672	-	-	235	-	-	9	9	206	~ 27	9	505
Stage 1	-	-	-	-	-	-	44	79	-	250	309	-
Stage 2	-	-	-	-	-	-	510	306	-	218	79	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	672	-	-	235	-	-	8	9	206	~ 26	9	505
Mov Cap-2 Maneuver	-	-	-	-	-	-	8	9	-	~ 26	9	-
Stage 1	-	-	-	-	-	-	43	77	-	245	301	-
Stage 2	-	-	-	-	-	-	462	298	-	214	77	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.1	0	\$ 878
HCM LOS			A	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	672	-	-	235	-	-	40
HCM Lane V/C Ratio	-	0.019	-	-	0.025	-	-	2.458
HCM Control Delay (s)	0	10.5	-	-	20.7	-	-	\$ 878
HCM Lane LOS	A	B	-	-	C	-	-	F
HCM 95th %tile Q(veh)	-	0.1	-	-	0.1	-	-	10.7

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

Lanier Tract DRI
3: GA 53 & Avonlea Way

future a.m.

Intersection												
Int Delay, s/veh	12.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	17	0	79	13	0	4	13	883	8	9	1880	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	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	92	84	80	92	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	16	0	5	15	1003	9	10	2186	8
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2738	3240	1093	2147	3240	502	2186	0	0	1003	0	0
Stage 1	2207	2207	-	1033	1033	-	-	-	-	-	-	-
Stage 2	531	1033	-	1114	2207	-	-	-	-	-	-	-
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	9	209	27	9	515	239	-	-	686	-	-
Stage 1	45	81	-	249	308	-	-	-	-	-	-	-
Stage 2	500	308	-	222	81	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 9	8	209	~ 14	8	515	239	-	-	686	-	-
Mov Cap-2 Maneuver	~ 9	8	-	~ 14	8	-	-	-	-	-	-	-
Stage 1	42	80	-	233	289	-	-	-	-	-	-	-
Stage 2	464	289	-	120	80	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	273.9			\$ 512.6			0.3			0		
HCM LOS	F			F								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR		
Capacity (veh/h)	239	-	-	9	209	14	515	686	-	-		
HCM Lane V/C Ratio	0.062	-	-	2.249	0.45	1.161	0.01	0.015	-	-		
HCM Control Delay (s)	21.1	-	\$ 1381.4	35.6	\$ 666.6	12.1	10.3	-	-	-		
HCM Lane LOS	C	-	-	F	E	F	B	B	-	-		
HCM 95th %tile Q(veh)	0.2	-	-	3.5	2.1	2.6	0	0	-	-		
Notes												
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon												

Lanier Tract DRI
4: GA 53 & Canterbury Road

future a.m.

Intersection												
Int Delay, s/veh	53.2											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	20	0	105	42	0	17	25	832	48	31	1989	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	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	92	88	85	92	85	86	86	86	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	23	0	119	49	0	20	29	967	56	34	2186	9

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2796	3280	1093	2187	3280	484	2186	0	0	967	0	0
Stage 1	2254	2254	-	1026	1026	-	-	-	-	-	-	-
Stage 2	542	1026	-	1161	2254	-	-	-	-	-	-	-
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	~ 25	9	529	239	-	-	708	-	-
Stage 1	42	76	-	251	310	-	-	-	-	-	-	-
Stage 2	492	310	-	208	76	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 8	8	209	~ 9	8	529	239	-	-	708	-	-
Mov Cap-2 Maneuver	~ 8	8	-	~ 9	8	-	-	-	-	-	-	-
Stage 1	37	72	-	221	272	-	-	-	-	-	-	-
Stage 2	416	272	-	85	72	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	\$ 313.4	\$ 2020	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)	239	-	-	8	209	9	529	708	-	-
HCM Lane V/C Ratio	0.122	-	-	2.841	0.571	5.49	0.038	0.048	-	-
HCM Control Delay (s)	22.1	-	-	\$ 1733.4	42.9	\$ 2832.7	12.1	10.3	-	-
HCM Lane LOS	C	-	-	F	E	F	B	B	-	-
HCM 95th %tile Q(veh)	0.4	-	-	4	3.1	7.5	0.1	0.2	-	-

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

Lanier Tract DRI
6: GA 53 & Beechwood Boulevard

future a.m.

Intersection						
Int Delay, s/veh	3.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	6	45	30	968	2318	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	1113	2604	2
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	3229	1302	2604	0	-	0
Stage 1	2604	-	-	-	-	-
Stage 2	625	-	-	-	-	-
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	154	168	-	-	-
Stage 1	43	-	-	-	-	-
Stage 2	501	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 6	154	168	-	-	-
Mov Cap-2 Maneuver	~ 6	-	-	-	-	-
Stage 1	43	-	-	-	-	-
Stage 2	400	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	180.7	1		0		
HCM LOS	F					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	168	-	6	154	-	-
HCM Lane V/C Ratio	0.205	-	1.22	0.356	-	-
HCM Control Delay (s)	31.9	\$	1230.3	40.8	-	-
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

future a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	21	6	127	83	3	32	61	847	38	22	2160	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			0.963			0.994				
Flt Protected		0.993			0.966		0.950			0.950		
Satd. Flow (prot)	0	1661	0	0	1803	0	1796	3503	0	1814	3628	0
Flt Permitted		0.942			0.484		0.036			0.275		
Satd. Flow (perm)	0	1575	0	0	903	0	68	3503	0	525	3628	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		57			11			9				
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	100	4	39	72	996	45	25	2483	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	170	0	0	143	0	72	1041	0	25	2483	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

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	29.0	29.0		29.0	29.0		10.6	121.0		110.4	110.4	
Total Split (%)	19.3%	19.3%		19.3%	19.3%		7.1%	80.7%		73.6%	73.6%	
Maximum Green (s)	22.4	22.4		22.4	22.4		5.0	114.9		104.3	104.3	
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)		22.4			22.4		115.4	114.9		104.3	104.3	
Actuated g/C Ratio		0.15			0.15		0.77	0.77		0.70	0.70	
v/c Ratio		0.60			0.99		0.66	0.39		0.07	0.98	
Control Delay		48.9			130.7		58.1	3.2		7.9	36.9	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		48.9			130.7		58.1	3.2		7.9	36.9	
LOS		D			F		E	A		A	D	
Approach Delay		48.9			130.7			6.8			36.6	
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: 0.99

Intersection Signal Delay: 32.1

Intersection LOS: C

Intersection Capacity Utilization 91.8%

ICU Level of Service F

Analysis Period (min) 15

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



Lanier Tract DRI

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

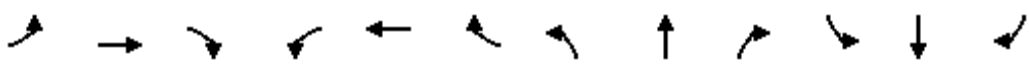
future a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	466	31	378	46	21	20	311	577	61	31	1361	948
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			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)	480	32	390	74	34	32	334	620	66	34	1512	1053
Shared Lane Traffic (%)			47%									
Lane Group Flow (vph)	480	215	207	74	66	0	334	620	66	34	1512	1053
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

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

future 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	64.6	64.6	14.2	59.8	59.8
Total Split (%)	15.3%	39.4%	39.4%	8.1%	32.1%		12.7%	43.1%	43.1%	9.5%	39.9%	39.9%
Maximum Green (s)	15.7	51.8	51.8	5.6	40.9		11.5	58.0	58.0	7.0	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	17.5	17.5	14.0	8.8		11.5	93.5	93.5	8.3	87.5	87.5
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	1.29	0.62	0.57	0.58	0.51		1.25	0.29	0.06	0.34	0.71	0.90
Control Delay	198.7	20.5	13.5	70.3	52.3		197.3	17.5	1.4	74.8	24.0	17.7
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	198.7	20.5	13.5	70.3	52.3		197.3	17.5	1.4	74.8	24.0	17.7
LOS	F	C	B	E	D		F	B	A	E	C	B
Approach Delay		113.7			61.8			75.3			22.1	
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: 1.29

Intersection Signal Delay: 52.7

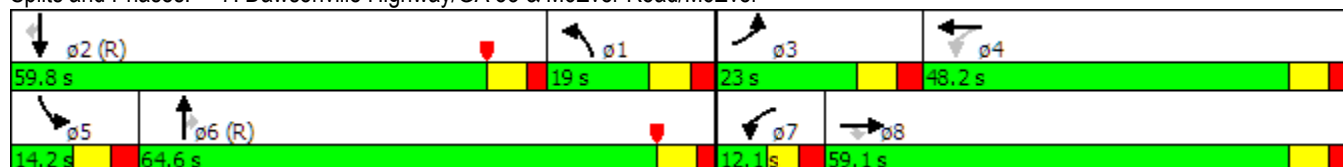
Intersection LOS: D

Intersection Capacity Utilization 89.6%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 7: Dawsonville Highway/GA 53 & McEver Road/McEver



Lanier Tract DRI

8: Dawsonville Highway & Greenhill Circle/Greenhill Circle

future 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	896	11	13	1619	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		0.070			0.275		
Satd. Flow (perm)	0	1349	1591	0	1377	1558	132	3522	1607	522	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	1042	13	14	1760	62
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	83	173	0	11	6	173	1042	13	14	1760	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

8: Dawsonville Highway & Greenhill Circle/Greenhill Circle

future 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	0.62	0.37	0.01	0.03	0.72	0.05
Control Delay		85.5	29.1		59.9	0.2	34.7	4.7	0.0	4.2	14.9	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	34.7	4.7	0.0	4.2	15.0	1.0
LOS		F	C		E	A	C	A	A	A	B	A
Approach Delay		47.4			38.8			8.9			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: 0.72

Intersection Signal Delay: 15.0

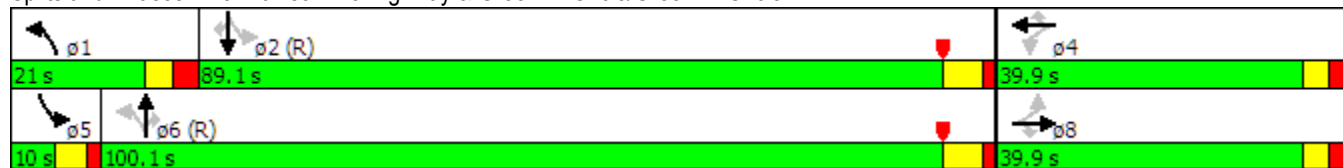
Intersection LOS: B

Intersection Capacity Utilization 78.7%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 8: Dawsonville Highway & Greenhill Circle/Greenhill Circle



Lanier Tract DRI

9: Dawsonville Highway & Shallowford Rd/Best Buy

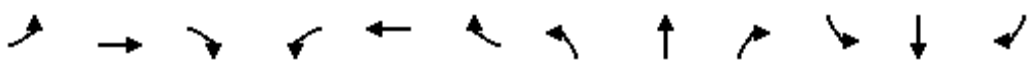
future a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	161	2	9	2	4	3	11	870	14	1	1436	385
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		0.113			0.271		
Satd. Flow (perm)	1723	1729	1623	0	1773	1534	219	3646	1647	517	3592	1623
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			113			119			70			216
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)	192	2	11	4	7	5	13	1048	17	1	1544	414
Shared Lane Traffic (%)	50%											
Lane Group Flow (vph)	96	98	11	0	11	5	13	1048	17	1	1544	414
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

9: Dawsonville Highway & Shallowford Rd/Best Buy

future 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	0.62	0.04		0.14	0.03	0.06	0.37	0.01	0.00	0.57	0.33
Control Delay	80.7	81.3	0.3		72.5	0.3	6.1	6.5	0.0	7.0	11.8	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	80.7	81.3	0.3		72.5	0.3	6.1	6.5	0.0	7.0	12.3	4.6
LOS	F	F	A		E	A	A	A	A	A	B	A
Approach Delay		76.7			49.9			6.3			10.7	
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: 13.6

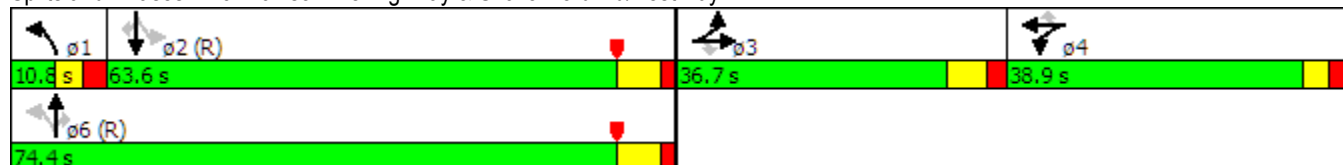
Intersection LOS: B

Intersection Capacity Utilization 64.2%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 9: Dawsonville Highway & Shallowford Rd/Best Buy



Lanier Tract DRI
1: Sportsman Club Road & Strickland Drive

future p.m.

Intersection						
Int Delay, s/veh	3.1					
Movement	WBL	WBR		NBT	NBR	SBL SBT
Vol, veh/h	21	0		32	23	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	48	0		37	27	0 30
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	81	51	0	0	64	0
Stage 1	51	-	-	-	-	-
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	921	1017	-	-	1538	-
Stage 1	971	-	-	-	-	-
Stage 2	993	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	921	1017	-	-	1538	-
Mov Cap-2 Maneuver	921	-	-	-	-	-
Stage 1	971	-	-	-	-	-
Stage 2	993	-	-	-	-	-
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)	-	-	921	1538	-	
HCM Lane V/C Ratio	-	-	0.052	-	-	
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

future p.m.

Intersection												
Int Delay, s/veh		77.6										
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	20	1208	0	26	1908	31	0	0	0	40	0	14
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	21	1272	0	27	1988	32	0	0	0	61	0	21
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	2020	0	0	1272	0	0	2362	3388	636	2736	3372	1010
Stage 1	-	-	-	-	-	-	1314	1314	-	2058	2058	-
Stage 2	-	-	-	-	-	-	1048	2074	-	678	1314	-
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	278	-	-	542	-	-	19	7	421	~ 10	8	238
Stage 1	-	-	-	-	-	-	167	226	-	~ 57	96	-
Stage 2	-	-	-	-	-	-	244	95	-	408	226	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	278	-	-	542	-	-	16	6	421	~ 9	7	238
Mov Cap-2 Maneuver	-	-	-	-	-	-	16	6	-	~ 9	7	-
Stage 1	-	-	-	-	-	-	154	209	-	~ 53	91	-
Stage 2	-	-	-	-	-	-	211	90	-	377	209	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			0.2			0			\$ 3237.1		
HCM LOS							A			F		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	-	278	-	-	542	-	-	12				
HCM Lane V/C Ratio	-	0.076	-	-	0.05	-	-	6.818				
HCM Control Delay (s)	0	19	-	-	12	-		\$ 3237.1				
HCM Lane LOS	A	C	-	-	B	-	-	F				
HCM 95th %tile Q(veh)	-	0.2	-	-	0.2	-	-	11.4				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined			*: All major volume in platoon					

Lanier Tract DRI
3: Avonlea Way & GA 53

future p.m.

Intersection												
Int Delay, s/veh	10.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	12	0	52	11	0	3	68	1897	18	11	1302	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	76	92	76	80	92	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	14	0	4	72	1997	19	11	1302	15
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2466	3464	651	2813	3464	998	1302	0	0	1997	0	0
Stage 1	1324	1324	-	2140	2140	-	-	-	-	-	-	-
Stage 2	1142	2140	-	673	1324	-	-	-	-	-	-	-
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	~ 15	7	411	~ 8	7	242	528	-	-	284	-	-
Stage 1	165	224	-	50	87	-	-	-	-	-	-	-
Stage 2	213	87	-	411	224	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 13	6	411	~ 6	6	242	528	-	-	284	-	-
Mov Cap-2 Maneuver	~ 13	6	-	~ 6	6	-	-	-	-	-	-	-
Stage 1	143	215	-	43	75	-	-	-	-	-	-	-
Stage 2	181	75	-	329	215	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	148			\$ 1366.9			0.4			0.2		
HCM LOS	F			F								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR		
Capacity (veh/h)	528	-	-	13	411	6	242	284	-	-		
HCM Lane V/C Ratio	0.136	-	-	1.215	0.166	2.292	0.015	0.039	-	-		
HCM Control Delay (s)	12.9	-	-	\$ 722.2	15.5	\$ 1734.2	20.1	18.2	-	-		
HCM Lane LOS	B	-	-	F	C	F	C	C	-	-		
HCM 95th %tile Q(veh)	0.5	-	-	2.6	0.6	2.8	0	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

future p.m.

Intersection												
Int Delay, s/veh	623.4											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	8	0	31	129	0	94	123	1860	143	70	1249	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	92	80	92	92	92	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	140	0	102	128	1938	149	73	1301	16

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2672	3641	651	2990	3641	969	1301	0	0	1938	0	0
Stage 1	1447	1447	-	2194	2194	-	-	-	-	-	-	-
Stage 2	1225	2194	-	796	1447	-	-	-	-	-	-	-
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	411	~ 6	5	253	528	-	-	299	-	-
Stage 1	138	195	-	~ 46	82	-	-	-	-	-	-	-
Stage 2	190	82	-	347	195	-	-	-	-	-	-	-
Platoon blocked, %							-	-	-	-	-	-
Mov Cap-1 Maneuver	~ 4	3	411	~ 4	3	253	528	-	-	299	-	-
Mov Cap-2 Maneuver	~ 4	3	-	~ 4	3	-	-	-	-	-	-	-
Stage 1	105	147	-	~ 35	62	-	-	-	-	-	-	-
Stage 2	86	62	-	238	147	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	\$ 484.3	\$ 9907.3	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)	528	-	-	4	411	4	253	299	-	-
HCM Lane V/C Ratio	0.243	-	-	2.5	0.094	35.054	0.404	0.244	-	-
HCM Control Delay (s)	14	-	\$ 2303.8	14	77105.8	28.5	20.9	-	-	-
HCM Lane LOS	B	-	F	B	F	D	C	-	-	-
HCM 95th %tile Q(veh)	0.9	-	-	2.3	0.3	19.7	1.9	0.9	-	-

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

Lanier Tract DRI
6: GA 53 & Beechwood Boulevard

future p.m.

Intersection						
Int Delay, s/veh	1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	1	52	95	2389	1713	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	2413	1748	10
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	3146	875	1748	0	-	0
Stage 1	1748	-	-	-	-	-
Stage 2	1398	-	-	-	-	-
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	198	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	7	297	364	-	-	-
Mov Cap-2 Maneuver	7	-	-	-	-	-
Stage 1	128	-	-	-	-	-
Stage 2	146	-	-	-	-	-
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

future p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	23	1	106	80	8	65	198	2055	88	35	1468	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			0.943			0.994				
Flt Protected		0.991			0.974		0.950			0.950		
Satd. Flow (prot)	0	1659	0	0	1780	0	1796	3570	0	1814	3592	0
Flt Permitted		0.896			0.616		0.099			0.045		
Satd. Flow (perm)	0	1500	0	0	1126	0	187	3570	0	86	3592	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		119			20			8				
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	94	9	76	206	2141	92	36	1529	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	146	0	0	179	0	206	2233	0	36	1532	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

future p.m.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	34.0	34.0		34.0	34.0		22.0	126.0		104.0	104.0	
Total Split (%)	21.3%	21.3%		21.3%	21.3%		13.8%	78.8%		65.0%	65.0%	
Maximum Green (s)	27.4	27.4		27.4	27.4		16.4	119.9		97.9	97.9	
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)		25.0			25.0		122.8	122.3		103.9	103.9	
Actuated g/C Ratio		0.16			0.16		0.77	0.76		0.65	0.65	
v/c Ratio		0.44			0.93		0.76	0.82		0.65	0.66	
Control Delay		18.8			106.6		29.0	10.2		75.5	19.8	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		18.8			106.6		29.0	10.2		75.5	19.8	
LOS		B			F		C	B		E	B	
Approach Delay		18.8			106.6			11.8			21.1	
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: 19.3

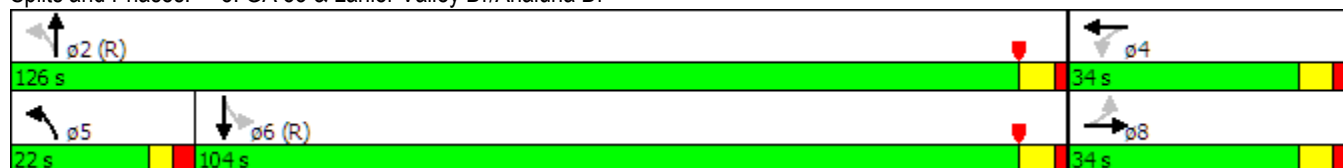
Intersection LOS: B

Intersection Capacity Utilization 94.9%

ICU Level of Service F

Analysis Period (min) 15

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



Lanier Tract DRI

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

future 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	89	478	1624	51	68	1251	597
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			0.427			0.950			0.950		
Satd. Flow (perm)	3484	1708	1527	791	1721	0	3484	3592	1607	1814	3592	1623
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18	301		27				172			324
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	103	493	1674	53	75	1375	656
Shared Lane Traffic (%)			27%									
Lane Group Flow (vph)	1048	368	327	112	219	0	493	1674	53	75	1375	656
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

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

future 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	43.5	43.5	31.8	23.5		14.5	66.4	66.4	15.0	66.6	66.6
Actuated g/C Ratio	0.17	0.27	0.27	0.20	0.15		0.09	0.42	0.42	0.09	0.42	0.42
v/c Ratio	1.80	0.77	0.52	0.55	0.80		1.57	1.12	0.07	0.44	0.92	0.76
Control Delay	403.8	61.9	8.9	48.9	77.6		304.5	100.5	0.1	68.4	44.1	16.9
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	403.8	61.9	8.9	48.9	77.6		304.5	100.5	0.1	68.4	44.1	16.9
LOS	F	E	A	D	E		F	F	A	E	D	B
Approach Delay		257.5			67.9			143.4			36.5	
Approach LOS		F			E			F			D	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 0 (0%), 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: 135.4

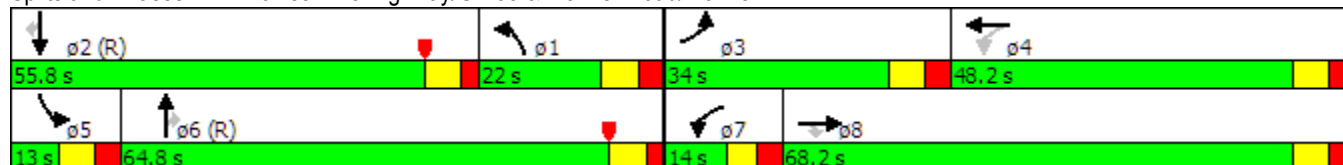
Intersection LOS: F

Intersection Capacity Utilization 111.8%

ICU Level of Service H

Analysis Period (min) 15

Splits and Phases: 7: Dawsonville Highway/GA 53 & McEver Road/McEver



Lanier Tract DRI

8: Dawsonville Highway & Greenhill Circle/Greenhill Circle

future 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	2051	77	44	1652	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	2114	79	46	1739	62
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	171	167	0	113	54	282	2114	79	46	1739	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

8: Dawsonville Highway & Greenhill Circle/Greenhill Circle

future 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	0.84	0.07	0.41	0.85	0.07
Control Delay		103.0	9.8		87.7	1.7	58.3	30.5	5.2	27.3	19.7	1.0
Queue Delay		0.0	5.5		87.6	0.0	0.0	46.9	0.0	0.0	1.0	0.0
Total Delay		103.0	15.3		175.3	1.7	58.3	77.5	5.2	27.3	20.7	1.0
LOS		F	B		F	A	E	E	A	C	C	A
Approach Delay		59.7			119.2			73.0			20.2	
Approach LOS		E			F			E			C	

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: 53.5

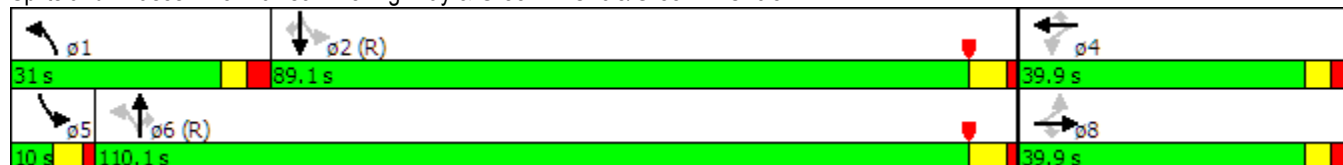
Intersection LOS: D

Intersection Capacity Utilization 91.0%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 8: Dawsonville Highway & Greenhill Circle/Greenhill Circle



Lanier Tract DRI

9: Dawsonville Highway & Shallowford Rd/Best Buy

future p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	591	42	29	40	30	8	44	1911	126	8	1380	528
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		0.063			0.047		
Satd. Flow (perm)	1723	1738	1623	0	1754	1534	122	3682	1647	90	3628	1623
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			106			111			65			308
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)	657	47	32	45	34	9	47	2033	134	9	1516	580
Shared Lane Traffic (%)	47%											
Lane Group Flow (vph)	348	356	32	0	79	9	47	2033	134	9	1516	580
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

9: Dawsonville Highway & Shallowford Rd/Best Buy

future 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	1.07	1.08	0.08		0.57	0.04	0.31	0.90	0.13	0.19	0.77	0.57
Control Delay	128.3	131.9	0.4		86.5	0.4	18.3	34.5	7.5	54.2	53.6	31.3
Queue Delay	1.2	1.2	0.0		0.0	0.0	0.0	46.4	0.0	0.0	37.4	0.8
Total Delay	129.5	133.2	0.4		86.5	0.4	18.3	80.9	7.5	54.2	91.0	32.1
LOS	F	F	A		F	A	B	F	A	D	F	C
Approach Delay		125.7			77.7			75.1			74.6	
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: 1.08

Intersection Signal Delay: 82.2

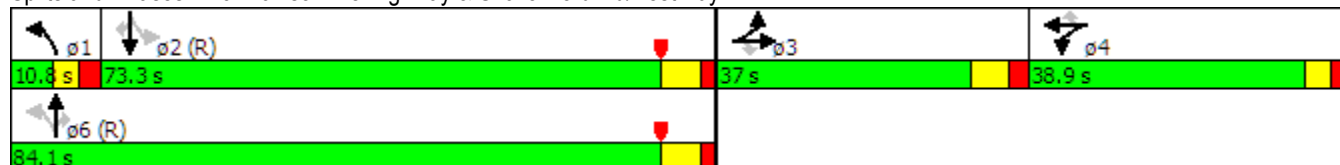
Intersection LOS: F

Intersection Capacity Utilization 90.6%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 9: Dawsonville Highway & Shallowford Rd/Best Buy



CITY OF GAINESVILLE

AGENDA REQUEST

Date Submitted: 2/21/2017

Presenter: Matt Tate

Item of Business: 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: 3/14/2017

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 out buildings and a cellular tower. The proposed development includes a total of 820 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: 261 single-family detached homes; 64 single-family cottages; 55 detached terrace homes; 52 attached terrace homes; 63 stacked flats (multi-story condominiums); and 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, 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:

Facts & Issues for Consideration:

Department Recommendation:

Planning staff has determined that the applicant will need to provide additional traffic data prior to staff giving an official recommendation. Therefore, staff is recommending the three Oak Hall Companies, LLC agenda items be **tabled** for a period of 60-days to be scheduled for the May 9, 2017 Planning and Appeals Board meeting.

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
	Staff Memo	Backup Material
	Location Maps	Backup Material
	Overall Location Map	Backup Material
	Narrative	Backup Material
	Survey	Backup Material
	Concept Plan	Backup Material
	Elevations and Floor Plans	Backup Material
	Traffic Impact Study	Backup Material



CITY OF GAINESVILLE

COMMUNITY
DEVELOPMENT
DEPARTMENT

Post Office Box 2496

Gainesville, Georgia 30503-2496

Telephone: 770-531-6570

Fax: 770-297-7826

Web Site: www.gainesville.org

MEMORANDUM

TO: Gainesville Planning and Appeals Board

FROM: Community Development Department – Planning Division

DATE: March 14, 2017

SUBJECT: Oak Hall Companies, LLC

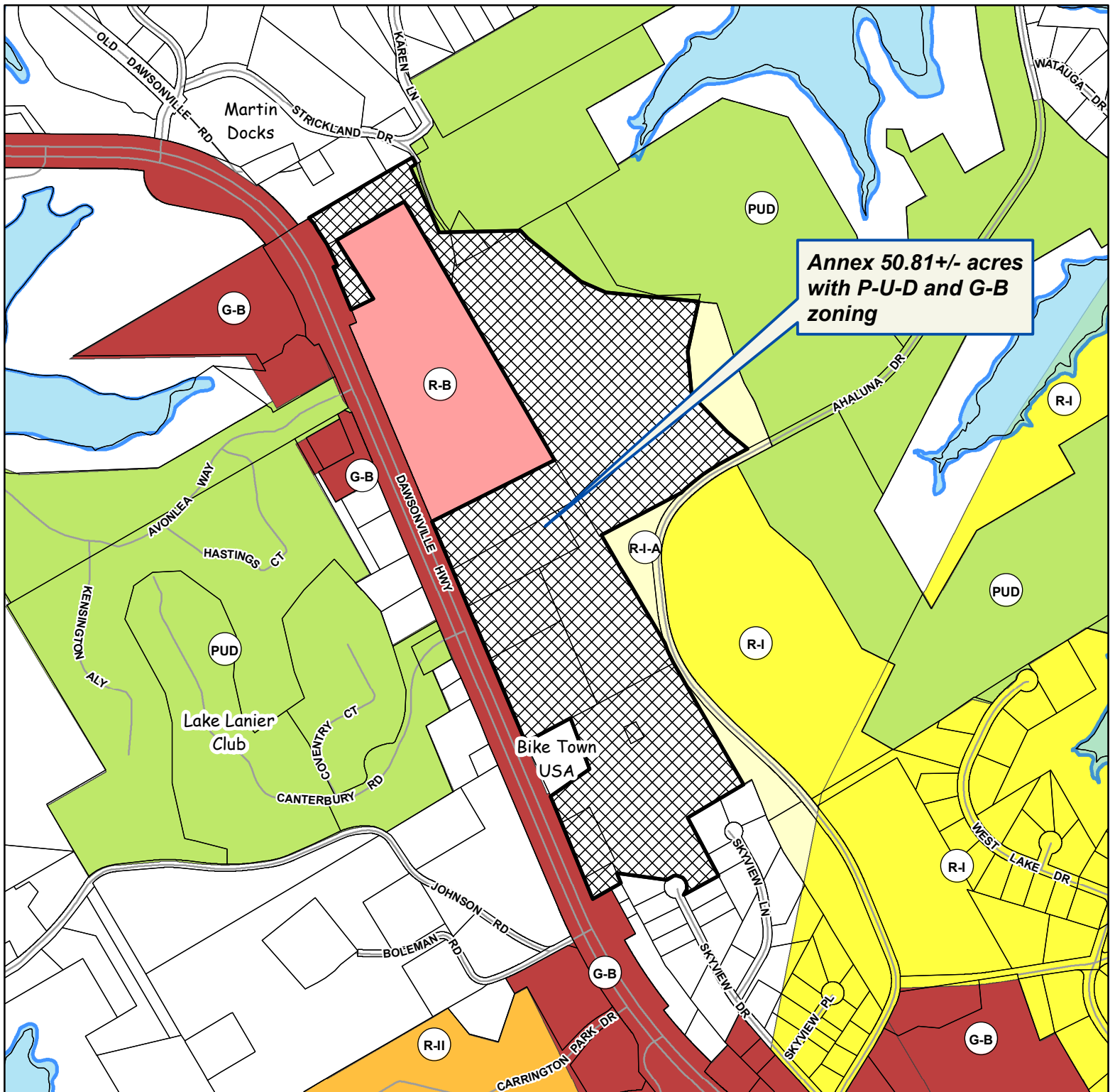
Oak Hall Companies, LLC has submitted three applications which are scheduled to be heard at the March 14, 2017, Planning and Appeals Board meeting. Below is a brief description of the three applications.

1. Rezoning of 157.98[±] acres to Planned Unit Development (P-U-D) and General Business (G-B) for an 820-unit age-restricted, mixed-use development to include 261 single-family detached homes; 64 single-family cottages; 55 detached terrace homes; 52 attached terrace homes; 63 stacked flats (multi-story condominiums); and 175 independent living units and 150 assisted living units. Amenities are to include a swimming pool, club house, passive park and two community docks totaling 130 boat slips.

Proposed non-residential uses are to include 24,000 square feet of retail/office/restaurant space, seven commercial parcels each having approximately 8,000 square feet of building space, a 40,000 square foot storage facility and a 3.0[±] acres tract of land reserved for a 10,650[±] square foot fire station.

2. Annexation of 50.81[±] acres with a zoning of Planned Unit Development (P-U-D) and General Business (G-B) to include the same 820-unit age-restricted, mixed-use development described above.
3. Annexation of 26.16[±] acres with a zoning of Planned Unit Development (P-U-D) for a 90-unit, age-restricted, active adult development to include 56 attached terrace homes, 10 single-family detached homes and 24 stacked flats (condominiums). Amenities are to include common green space/park areas, community clubhouse and pool.

Upon review of these agenda items, the Community Development Department has determined that the applicant will need to provide additional traffic data prior to staff giving an official recommendation. Therefore, staff is recommending the three agenda items be **tabled** for a period of 60-days to be scheduled for the May 9, 2017 Planning and Appeals Board meeting.



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: 2/1/2017

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: 2/1/20107

Prepared: 3/14/2017

Gainesville Community Development Department



Subject Property

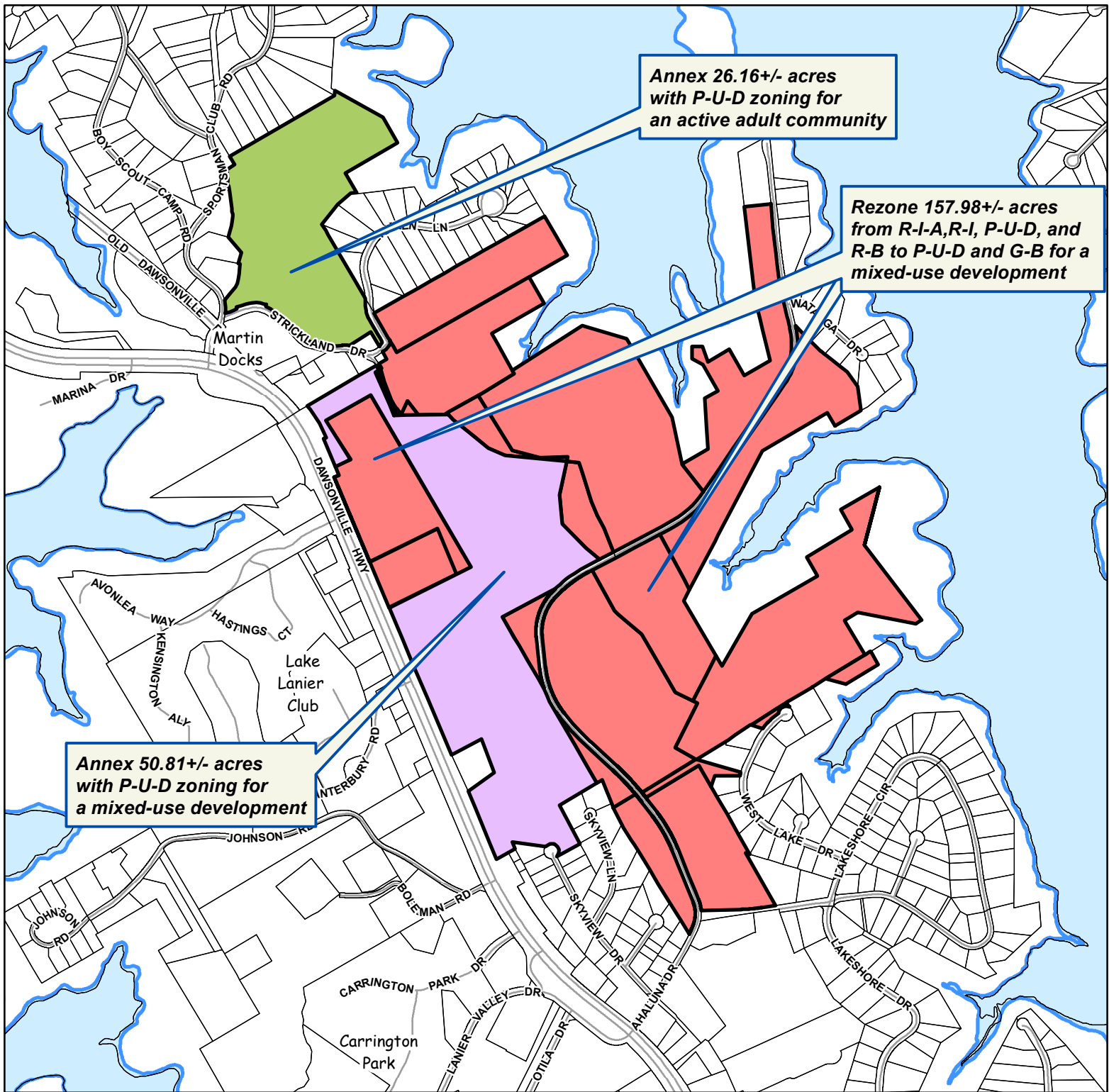
Aerial from 2015

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), 018 (part) and 019



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: 3/14/2017

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 2017-1-27

**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: ▪ 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 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 January 27, 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

Economic Impact Statement: Oak Hall Companies, LLC

Population	193,535	Millage Rate	0.011369	Total Expenditures per Student	\$ -
Households	61,992	Sales Tax Revenue	\$52,096,442.00	Expenditures per Sheriff's Budget	\$ -
Average Home	\$ 325,000.00	Linear Feet of Public Road in Development	30,000	Fire Expenditures	\$28,679,357.00
Impact Fees per	\$ 1,575.83				\$ 21,667,821.00

Table 1: Projected Subdivision Population

Year	New Houses	Total Houses	Population
1	82	82	256
2	82	164	512
3	82	246	768
4	82	328	1024
5	82	410	1280
6	82	492	1536
7	82	574	1792
8	82	656	2048
9	82	738	2304
10	82	820	2560

Table 2: Projected Annual Property Tax Revenue from Residential

Average Home Price	Year	Revenue
\$325,000.00	1	\$119,329.02
Avg. Prop Tax per House	2	\$238,658.05
\$1,455	3	\$357,987.07
	4	\$477,316.10
	5	\$596,645.12
	6	\$715,974.14
	7	\$835,303.17
	8	\$954,632.19
	9	\$1,073,961.22
	10	\$1,193,290.24

Table 3: Projected Annual Sales Tax Revenue from Residential

Year	Revenue
1	\$68,910.64
2	\$137,821.28
3	\$206,731.91
4	\$275,642.55
5	\$344,553.19
6	\$413,463.83
7	\$482,374.46
8	\$551,285.10
9	\$620,195.74
10	\$689,106.38

Table 4: Projected Total Annual Tax Revenue from Residential

Year	Revenue
1	\$188,239.66
2	\$376,479.32
3	\$564,718.98
4	\$752,958.65
5	\$941,198.31
6	\$1,129,437.97
7	\$1,317,677.63
8	\$1,505,917.29
9	\$1,694,156.95
10	\$1,882,396.62

Table 5: Projected Residential Impact Fees: One Time Fee per Annum

Year	Total
1	\$ 129,218.06
2	\$ 129,218.06
3	\$ 129,218.06
4	\$ 129,218.06
5	\$ 129,218.06
6	\$ 129,218.06
7	\$ 129,218.06
8	\$ 129,218.06
9	\$ 129,218.06
10	\$ 129,218.06

Table 6: Projected Property Tax Revenue from Commercial

Average Value per SF	Year	Revenue
\$100.00	1	\$14,529.12
	2	\$28,331.78
Total SF	3	\$41,444.31
120,000.00	4	\$53,901.22
	5	\$65,735.28
Depreciation	6	\$76,977.63
5%	7	\$87,657.87
	8	\$97,804.10
	9	\$107,443.01
	10	\$116,599.98

Table 7: Projected Commercial Impact Fees: One Time Fee per Annum

Average Fee per 1000 SF	Year	Revenue
\$175.00	1	\$2,100.00
	2	\$2,100.00
Total SF	3	\$2,100.00
120,000.00	4	\$2,100.00
	5	\$2,100.00
	6	\$2,100.00
	7	\$2,100.00
	8	\$2,100.00
	9	\$2,100.00
	10	\$2,100.00

Table 8: Cost of Law Enforcement Services		
Year	Total Houses	Annual Law Enforcement Expenditures
1	82	\$37,935.66
2	164	\$75,871.31
3	246	\$113,806.97
4	328	\$151,742.63
5	410	\$189,678.29
6	492	\$227,613.94
7	574	\$265,549.60
8	656	\$303,485.26
9	738	\$341,420.92
10	820	\$379,356.57

Table 9: Cost of Fire Protection Services		
Year	Total Houses	Annual Fire Expenditures
1	82	\$28,661.14
2	164	\$57,322.28
3	246	\$85,983.42
4	328	\$114,644.56
5	410	\$143,305.69
6	492	\$171,966.83
7	574	\$200,627.97
8	656	\$229,289.11
9	738	\$257,950.25
10	820	\$286,611.39

Table 10: Summary of Annual Impact at		
Impact Summary	Column1	Totals
Revenues		
Property Taxes		\$1,309,890.22
Sales Taxes		\$689,106.38
Total Revenue		\$1,998,996.60
Expenditures		
Streets		\$30,000.00
Law Enforcement		\$379,356.57
Fire		\$286,611.39
Total Expenditure		\$695,967.96
Annual Net Revenue		\$1,303,028.64
Total Impact Fees		\$1,313,180.60

PUD Performance Standards

I. Residential Performance Standards

RESIDENTIAL USE

Maximum 820 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

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. 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, club house, and community docks for use of residents will be provided.

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

Residents will also have access to community docks and boat slips.

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	219 units
• POD B – Single Family Detached	42 units

PERFORMANCE STANDARDS – DETACHED RESIDENTIAL

- Minimum lot width – 60 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:
 - 20' front
 - 5' side
 - 10' building separation
 - 10' interior rear



II. Zero-Lot Line Residential

Type	Maximum # of Units
• Single Family Cottages	64 units
• Terrace Homes – Detached	55 units
• Terrace Homes – Attached	52 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 – 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



III. Condominium Residential

Type	Maximum # of Units
• Stacked Flats	63 units

Stacked flats are multi-story condominiums, with each story potentially being held in separate ownership. Buildings may contain up to three units, and multiple buildings may be located on a single lot. In areas designated for stacked flats, all lots will be owned by a condominium association, all building exteriors and other improved areas will be maintained by a mandatory condominium association as “common area,” and all undeveloped areas will be maintained as “open space.”

PERFORMANCE STANDARDS – CONDOMINIUM RESIDENTIAL

- Minimum unit width – 24 feet
- Minimum Heated Floor Area (1,100 sf per unit)
- Maximum building height – 40 feet
- Each building’s driveway will have a minimum of 18 feet of pavement 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



IV. 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; provided that no more than 90% of the storage units may be leased to non-residents of the Planned Unit Development.

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



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: 0.999909887. (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 REALTIME KINEMATIC OBSERVATIONS PROCESSED THROUGH THE EOPS NETWORK.

3. THE FIELD DATA UPON WHICH THIS PLAN IS BASED HAS A CLOSURE PRECISION OF ONE FOOT IN 56,789 FEET AND AN ANGULAR CLOSURE OF 0'00'00"2" PER ANGLE POINT, AND WAS ADJUSTED USING LEAST SQUARES. BUREAU OF LAND MANAGEMENT, BLM

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 THEIR OWN RISK.

6. THE FIELD SURVEY WAS CONDUCTED FEBRUARY 8TH AND 10TH, 2015.

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 4935, 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. 15-8-87.

[illegible]

REGISTERED PROFESSIONAL

O. BOX 256
AINESVILLE, GA. 30503
PHONE: (770) 532-6492
FAX: (770) 532-1995
www.pattonsurveying.com



PATTON
LAND SURVEYING, LLC



.....

SPECIAL ANNEXATION EXHIBIT FOR:
AMERICA'S HOME PLACE

- LOCATED IN -

[illegible]

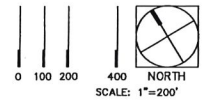
1 of 1

SCALE: NOT TO SCALE

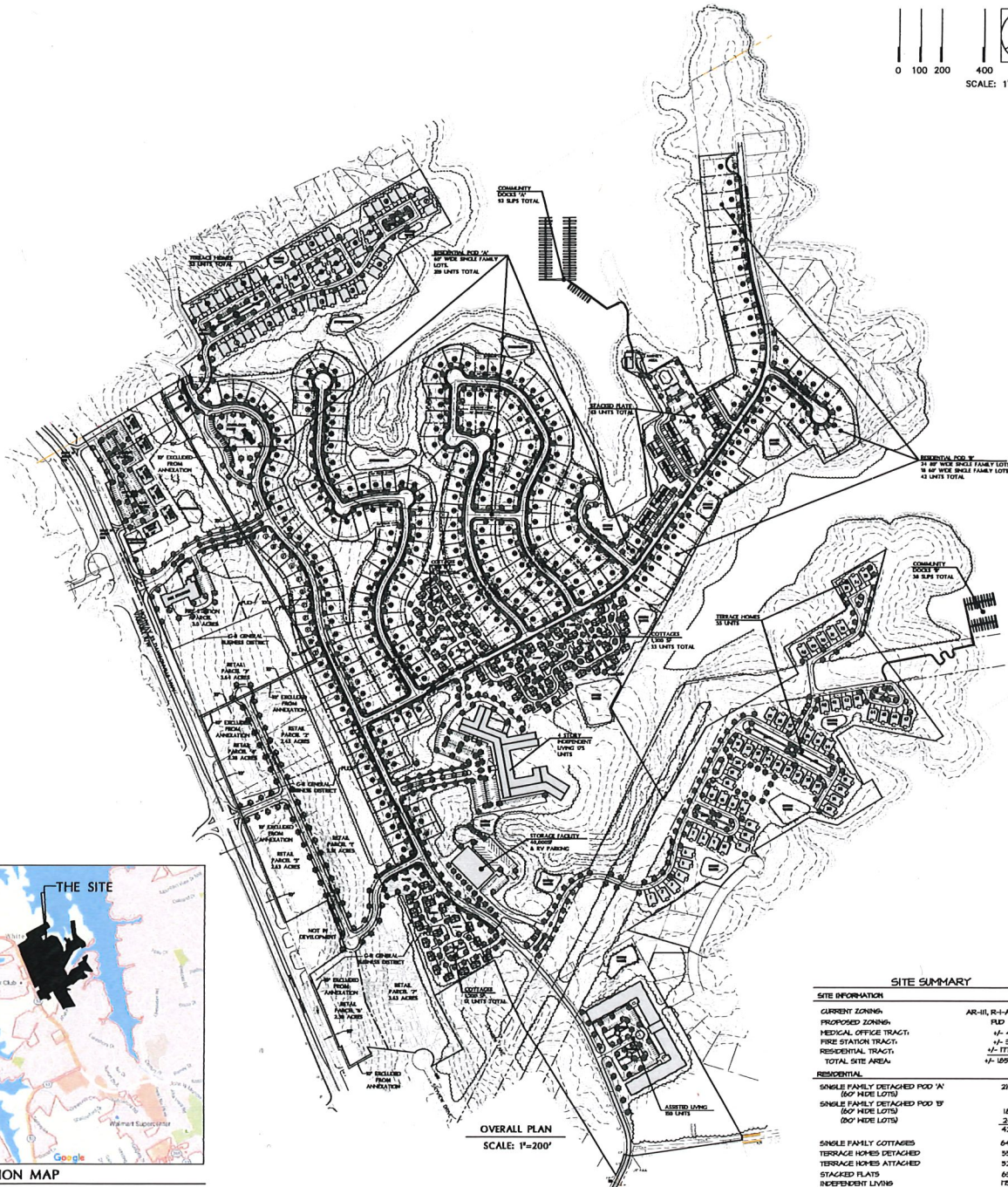
SURVEY DATE: 02/12/1

PLAT DATE: 09/20/11

12-937-ANNEXATION



LOCATION MAP
NTS



OVERALL PLAN
SCALE: 1"=200'

SITE SUMMARY

SITE INFORMATION	
CURRENT ZONING:	AR-II, R-1-A, R-1, R-1-H, H-B, R-B, PUD
PROPOSED ZONING:	PUD
MEDICAL OFFICE TRACT:	1/4- 4.22 ACRES
FIRE STATION TRACT:	1/4- 9.0 ACRES
RESIDENTIAL TRACT:	1/4- 177.80 ACRES
TOTAL SITE AREA:	1/4- 199.02 ACRES
RESIDENTIAL	
SINGLE FAMILY DETACHED POD 'A'	294 LOTS
(80' WIDE LOTS)	
SINGLE FAMILY DETACHED POD 'B'	18 LOTS
(80' WIDE LOTS)	
COTTAGES	24 LOTS
(80' WIDE LOTS)	
STAGED HOMES DETACHED	42 LOTS
STAGED HOMES ATTACHED	64 LOTS
STAGED HOMES	39 LOTS
STAGED HOMES	92 LOTS
STAGED HOMES	65 UNITS
INDEPENDENT LIVING	175 UNITS
ASSISTED LIVING	180 UNITS
TOTAL	830 UNITS
STORAGE FACILITY	
2 STORY STORAGE BUILDING	40,000 SF
RV PARKING PROVIDED	14 SPACES
CAR PARKING PROVIDED	10 SPACES
OFFICE/RETAIL	
OFFICE / RETAIL	24,000 SF
4,000 SF BUILDINGS	
PARKING REQ'D (60P/220SF)	96 SPACES
PARKING PROVIDED	84 SPACES
UTILITIES	
FIRE STATION	10,800 SF
DENSITY	
DENSITY OVERALL PROJECT:	4.45 UNITS / ACRE
(830 UNITS / 189.02 ACRES)	
TOTAL SPACE	
OVER SPACE PROVIDED:	1/4- 12.0 ACRES
	314.0 %
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	
BOUNDARY OBTAINED FROM A SURVEY PREPARED BY PATTON SURVEYING, LLC DATED 1/26/2017. TOPOGRAPHIC INFORMATION BASED ON AVAILABLE AND COMPILED DATA.	
COMMERCIAL PARCEL TOTAL ACRES:	25.71 ACRES
PROPOSED ZONING:	O-B GENERAL BUSINESS DISTRICT
PROPOSED USE:	1 COMMERCIAL PARCELS
RETAIL SPACE:	5,000 SF AVERAGE PER PARCEL



OAK HALL
COMPANIES LLC

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: 1/27/2017

Site Development
Consultants, Inc.

Land Planning • Site Development • Landscape Architecture
4030 Dream Drive, Norcross, GA 30071, Tel: 404.380.8000, Fax: 404.380.8000

Sheet
1
of 3



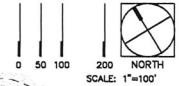
OAK HALL
 COMPANIES LLC

Lanier Tract

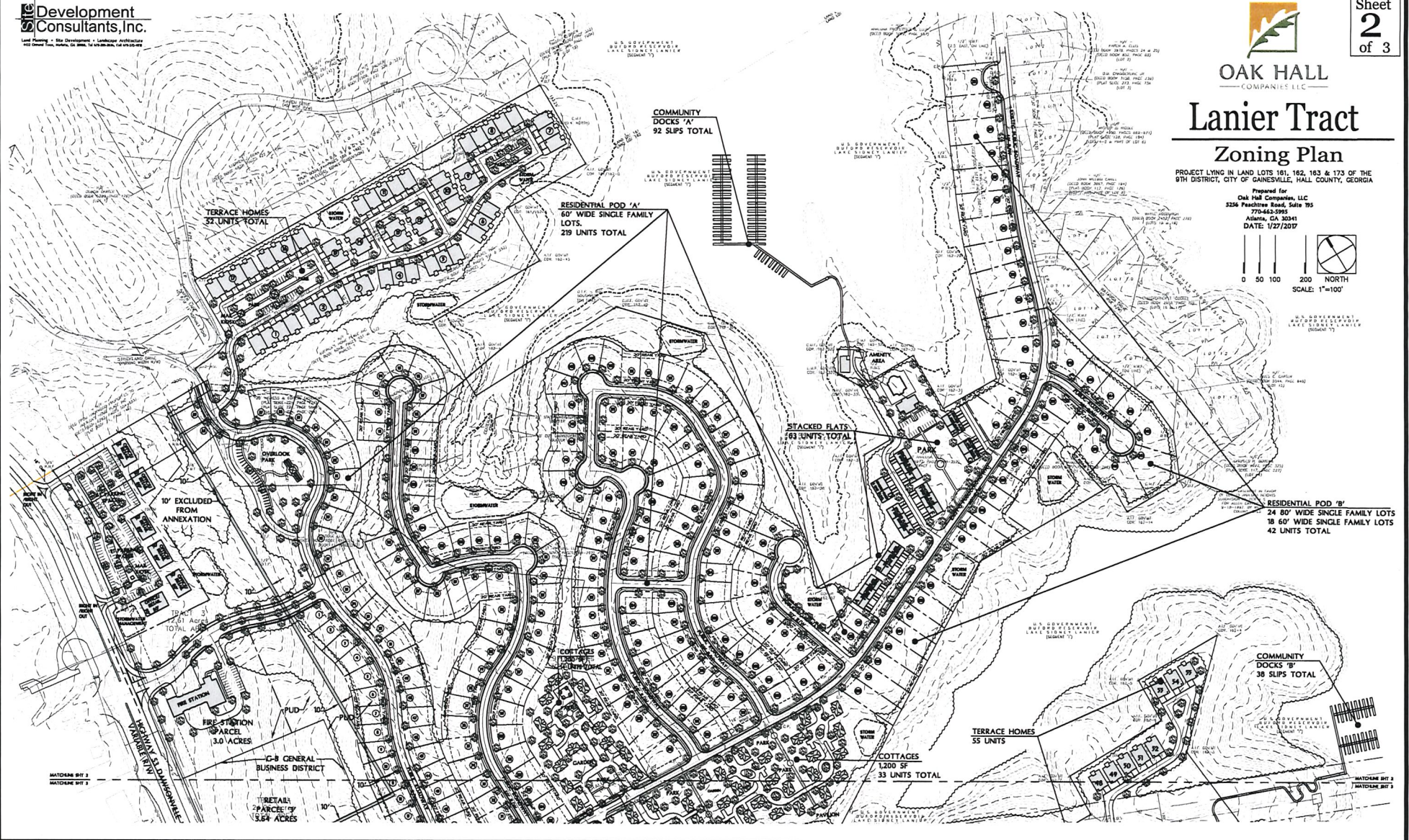
Zoning Plan

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
 3256 Peachtree Road, Suite 195
 Atlanta, GA 30341
 DATE: 1/27/2017



Sheet
2
 of 3





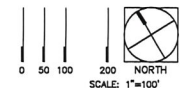
OAK HALL
COMPANIES, LLC

Lanier Tract

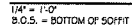
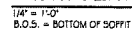
Zoning Plan

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
3236 Peachtree Road, Suite 105
Atlanta, GA 30341
DATE: 1/27/2017

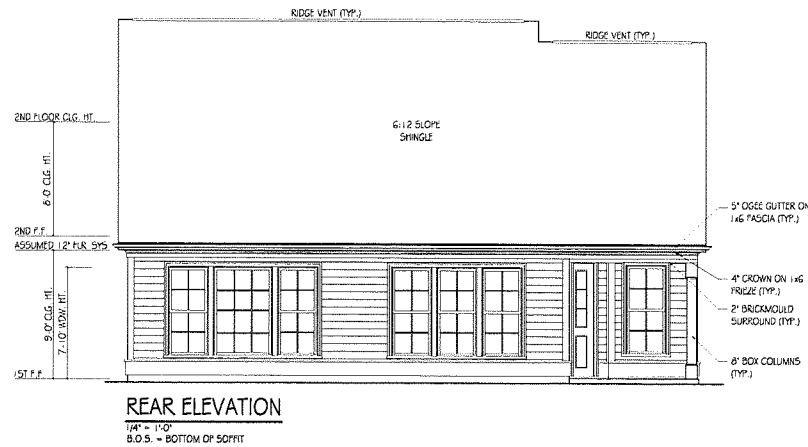
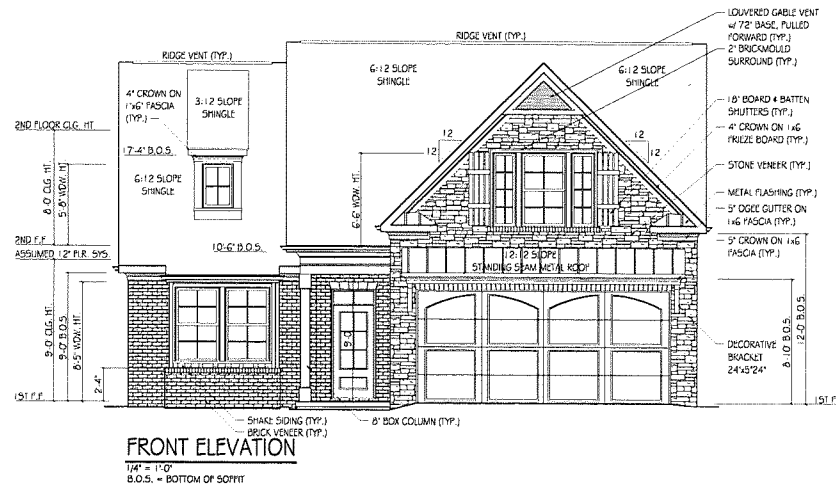


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of 3



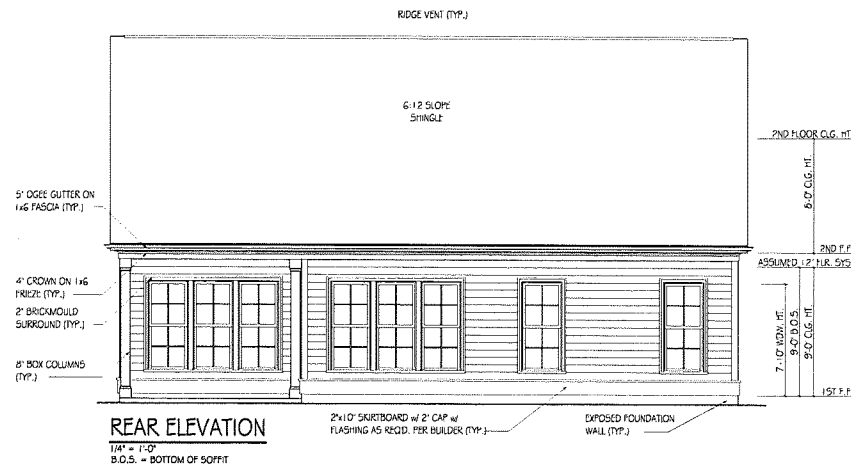
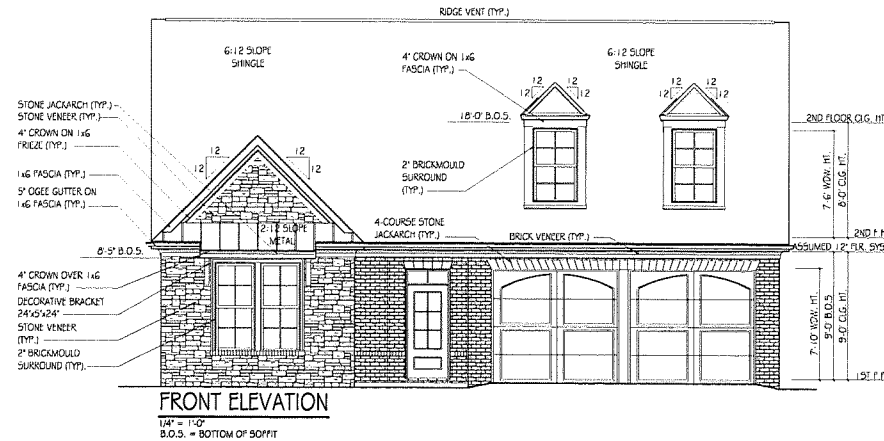
ALL GRADES SHOWN MAY VARY PER ACTUAL SITE CONDITIONS IN THE FIELD. THE NUMBER OF EXTERIOR TREADS AND RISERS AT GARAGE, TERRACES, PORCHES, DECKS, ETC., ARE TO BE DETERMINED BY THE BUILDER / CONTRACTOR ACCORDING TO ACTUAL GRADES.

DRAWN	SHEET #
BCLLC	D1 OF 6



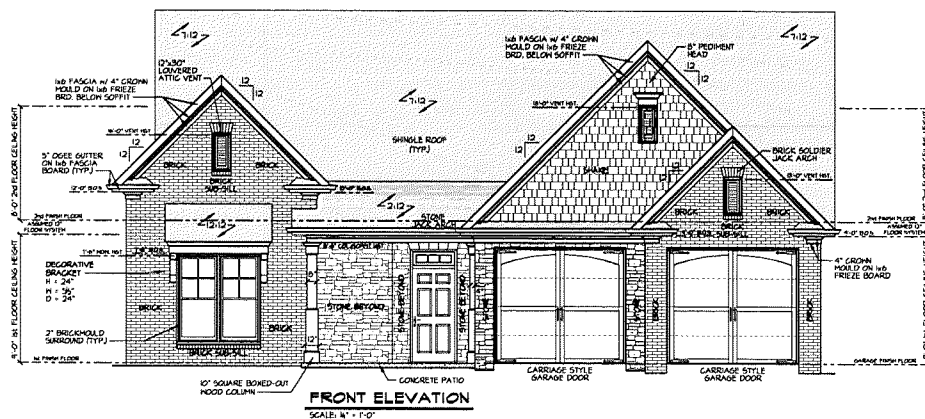
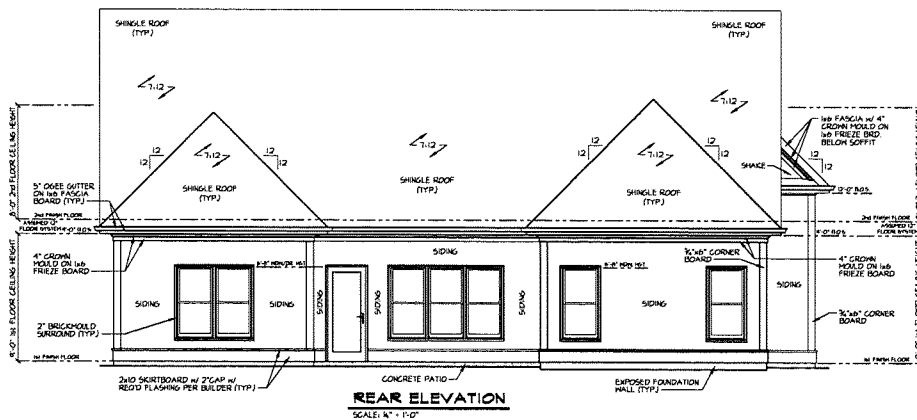
GENERAL NOTE:
 ALL GRADES SHOWN MAY VARY PER ACTUAL SITE CONDITIONS. TO FIELD THE NUMBER OF EXTERIOR TILES AND RISERS AT GARAGE, TERRACES, PORCHES, DECKS, ETC., ARE TO BE DETERMINED BY THE SUBSEDER CONTRACTOR ACCORDING TO ACTUAL DRAWS.

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	
P.O. BOX 732 FLOWERY BRANCH, GA. 30542	
404-225-5964	404-401-7298
(DAVID)	(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 (DAVID)	404-401-7298 (MARY)
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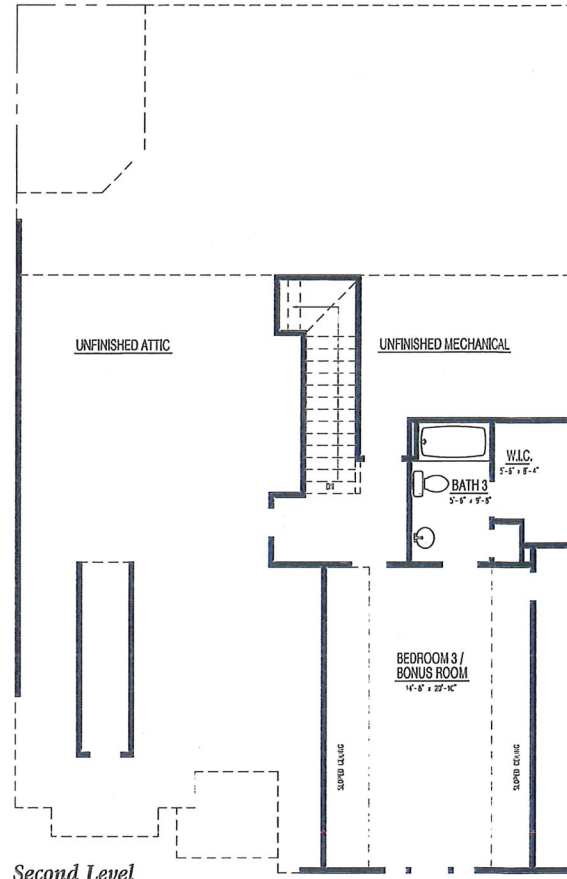
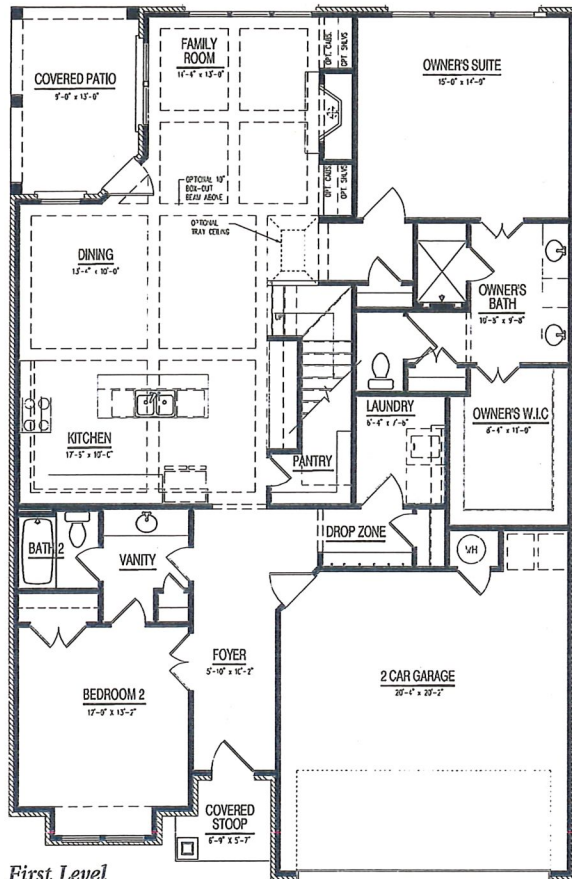
TIME	JOB #
1277	16172
DATE	REVISED
9/12/16	
SQUARE FOOTAGE	
2,576 Square Feet	
LOT #	SUBDIVISION
	Nestle Down Farms
PROJECT	
Custom Home for	
JIM CHAPMAN Communities	
Brighton "A"	
"2-Car Garage"	
CLASSICAL CONCEPTS ATLANTA	
P.O. BOX 492973 LAWRENCEVILLE, GA. 30049	
404-226-6964 (DAVID)	404-401-7298 (MARY)
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DRAWN	SHEET #
MKH	D1 of 6
FRONT & REAR ELEV.'S	

THE OVERLOOK

AT OLD ATLANTA

Attached Villas

Dalton Plan
2,270 Square Feet



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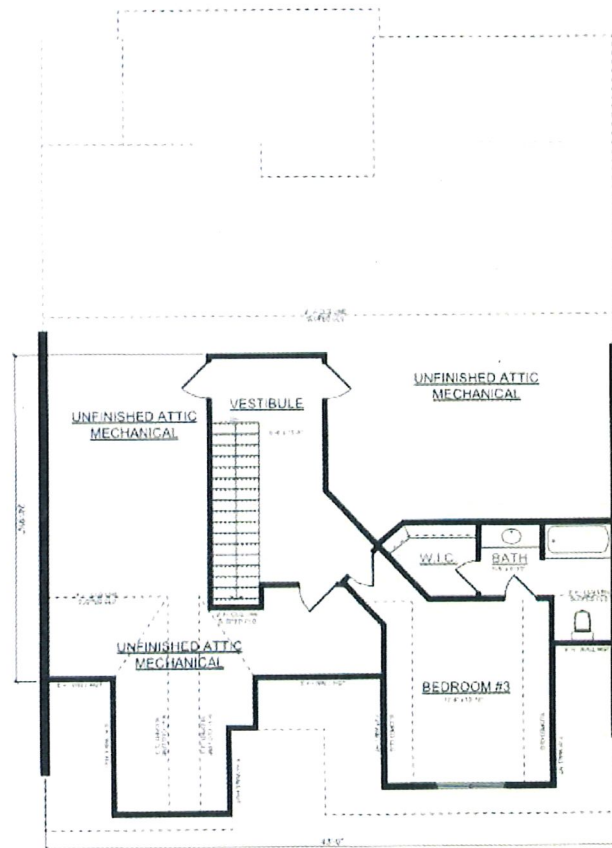
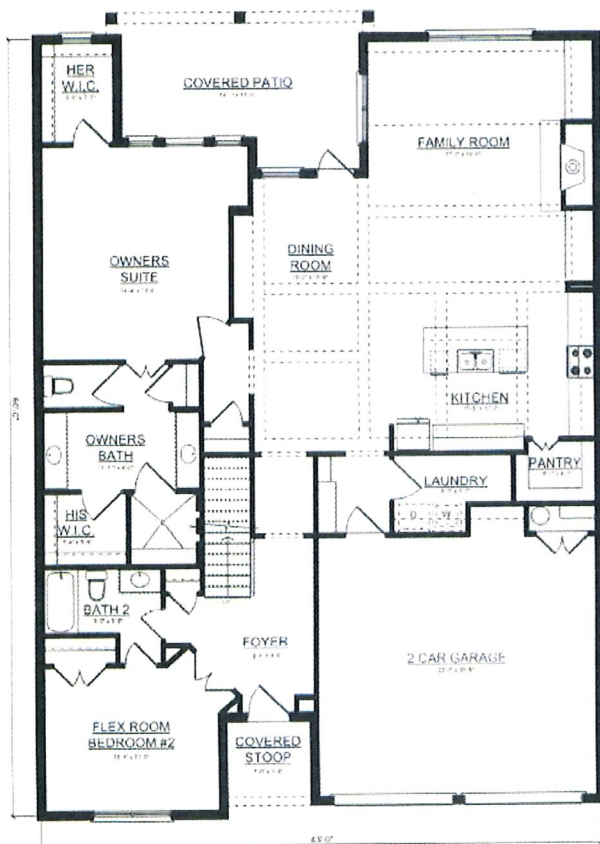
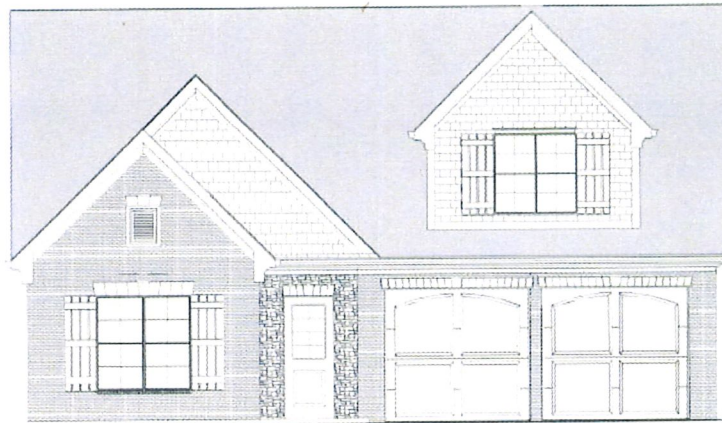
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THE OVERLOOK AT OLD ATLANTA

Attached Villas

Avery Plan
2,305 Square Feet



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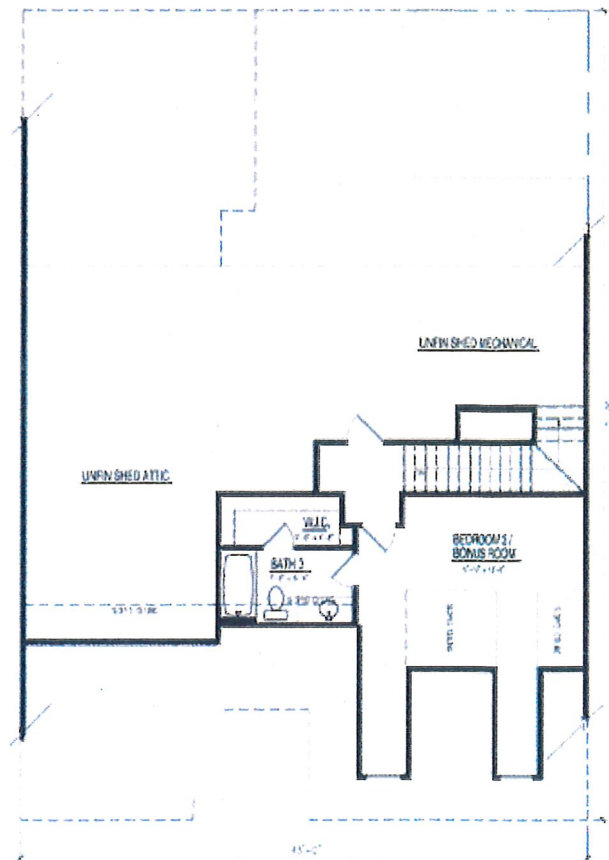
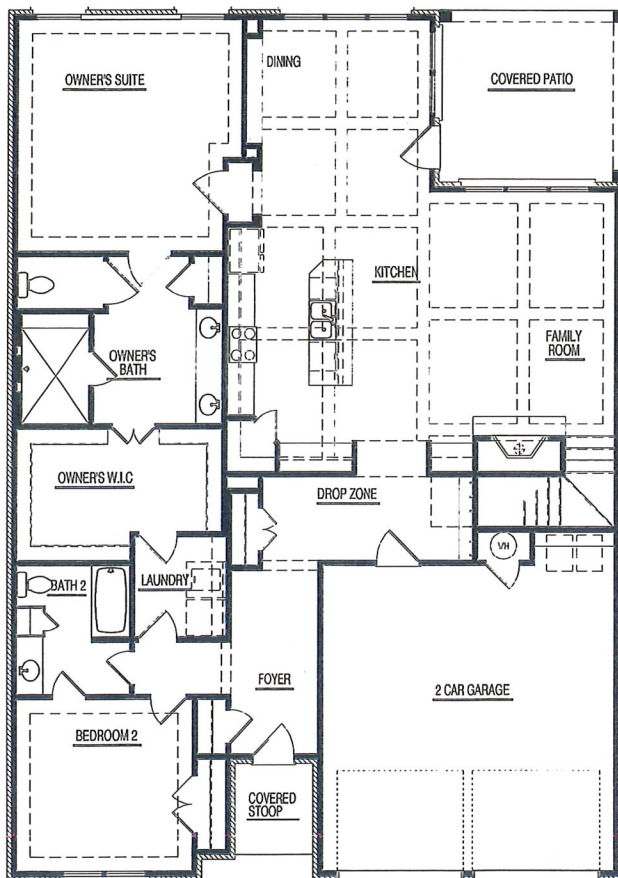
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THE OVERLOOK

AT OLD ATLANTA

Attached Villas

Hanover A Plan
2,339 Square Feet



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Traffic Impact Study

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

January 24, 2017

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

January 24, 2017



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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 project will include a mix of senior living facilities, including single family homes, stacked flats, terrace units, independent living apartments, and assisted living. In addition, the project will include a retail and office tract. The site is located along the east side Georgia State Route 53, and the east and west sides of Ahaluna Drive, as shown in the location map in Figure 1.

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.

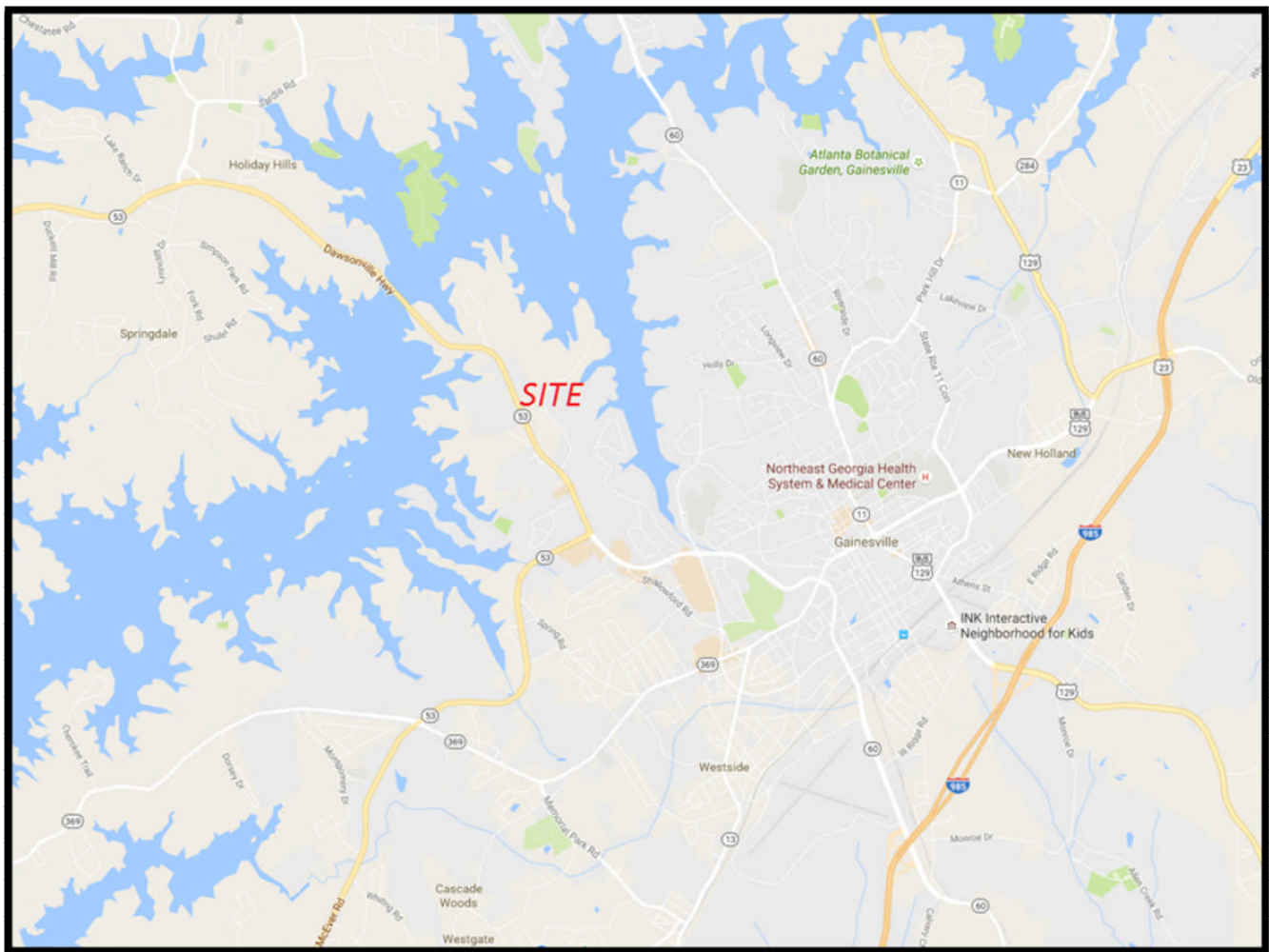


Figure 1 – Lanier Tract Location Map

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, and summarized later in Table 6. The peak hour trip generation for the project was calculated at 263 trips and the 24-hour volume is 3,344 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. These 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 Beachwood Boulevard
7. Dawsonville Highway at McEver Road
8. Dawsonville Highway at Green Hill Circle
9. Dawsonville Highway at Shallowford Road

Existing full turning movement traffic volume counts were collected at each of these intersections. The 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. Area schools were in standard session on the date 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 Future 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).

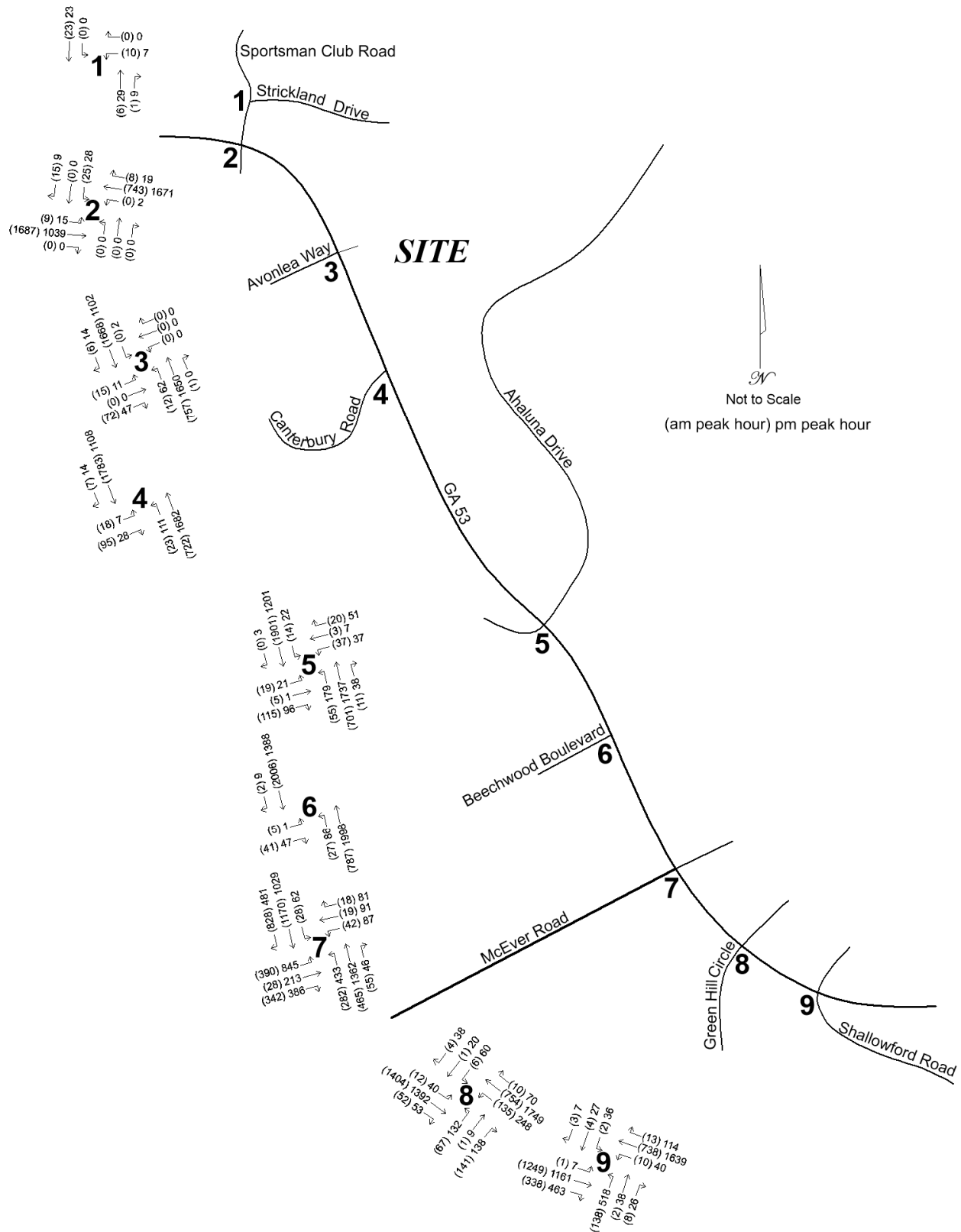


Figure 2 – Existing Traffic Volumes

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 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
7. 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
table continued next page				

table continued from previous page				
8. 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
9. 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 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 very 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 the 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 westbound exclusive right turn lane should be constructed on GA 53 at Sportsman Club Road.
- 3. Dawsonville Highway at Avonlea Way, 4. Dawsonville Highway at Canterbury Road, and 6. 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 weak 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 turners on red who 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.

7. **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.

8. **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.

9. **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 analysis of this condition 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 two components – the counted traffic volumes, increased by a general background growth factor, and the specific trips that will be added by the outparcels that are expected to be developed along the east side of GA 53 adjacent to the Lanier DRI. These outparcels are planned to be annexed into the City of Gainesville concurrently with the annexation of the Lanier DRI, but will be developed by others and are not considered part of the Lanier DRI.

In order to develop a 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 more 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 outparcels along the east side of GA 53, adjacent to the Lanier DRI are estimated to be developed in 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 4.

Table 4 – 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 Ahaluna Drive. This will allow some site trips from the proposed Lanier DRI to access GA 53. It will also allow some existing trips to shift from the Ahaluna Drive intersection at GA 53 to the new access that will align with Canterbury Road (and the new access for the Lanier DRI that will align with Avonlea Way). New Lanier Tract DRI trips were assigned to these new access points. However, no existing trips turning into and out of Ahaluna Drive at GA 53 were shifted to the Canterbury Road and Avonlea Way accesses for three reasons. First, it is estimated that a notable portion of the trips currently turning at the Ahaluna intersection are generated at the southern portion of Ahaluna Drive (a large retail center accesses the southern portion of Ahaluna Drive, along with the highest density of homes, including along Skyview Drive). These trips will continue to use the GA 53 / Ahaluna intersection. Second, there is an existing signal at the GA 53 / Ahaluna intersection which facilitates safe and efficient access at that location, while the Avonlea and Canterbury intersections are currently not signalized (though they could be in the future). Finally, shifting a small portion of the modest side street volumes turning to and from Ahaluna to the other accesses is not expected to have a significant impact of the findings of this traffic study.

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 Ahaluna Drive, 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). These distribution percentages are shown later in this report, in Figure 5, which depicts the Lanier Tract trips.

The existing, counted traffic volumes were increased by the 10.4% growth factor. The trips from the outparcels were added to these increased volumes. The result is 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.

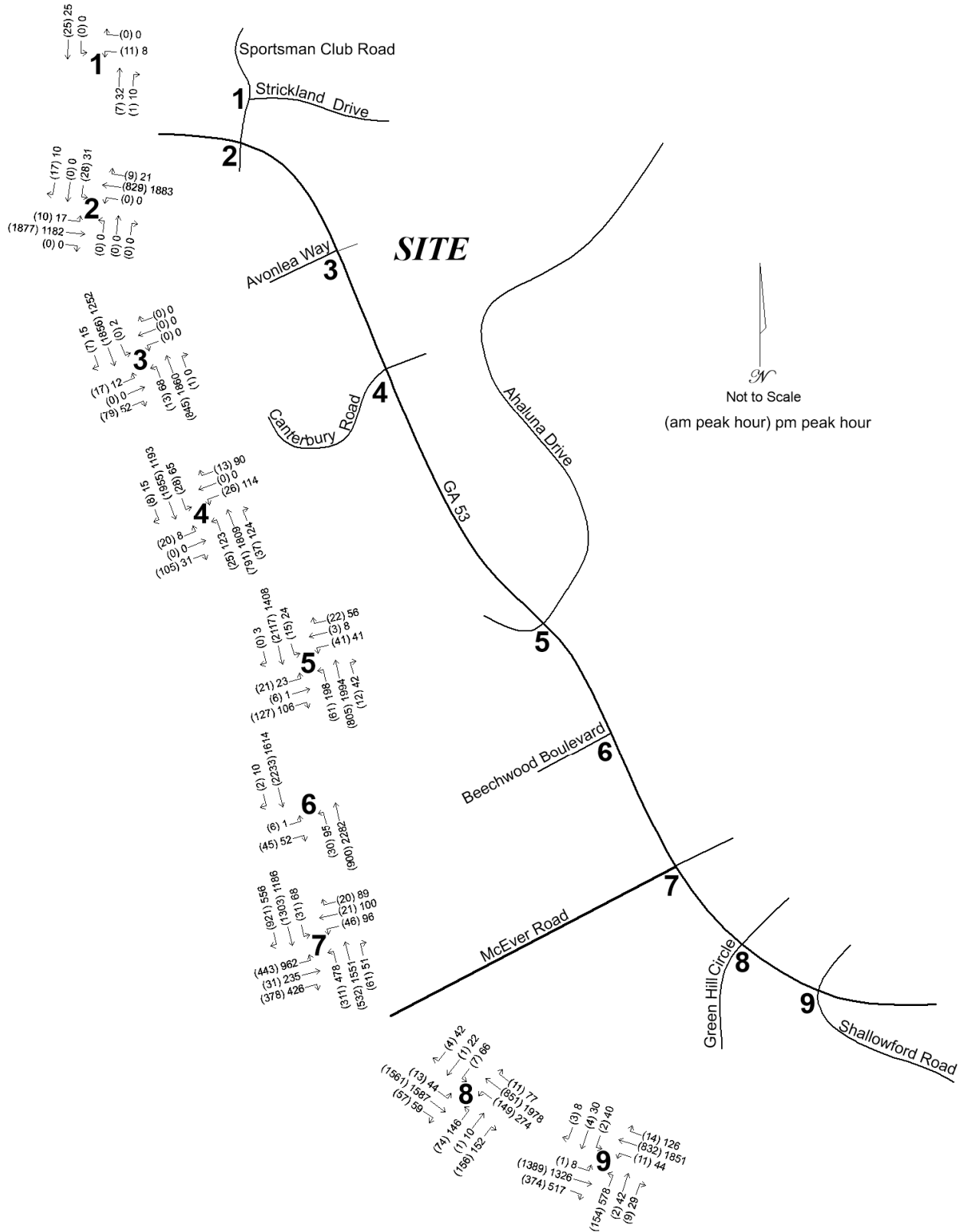


Figure 3 – Future No-Build Traffic Volumes

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 5. Computer printouts containing detailed results of the analysis are located in Appendix D.

Table 5 – 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	12.5	D	42.9
northbound approach (turn lane)	A	0.0	A	0.0
southbound approach	F	533.7	F	2,280.3
eastbound left turn (GA 53)	B	10.3	C	18.4
westbound left turn (GA 53)	A	0.0	B	11.5
3. Dawsonville Highway at Avonlea Way	A	4.8	A	1.9
northbound left turn (GA 53)	C	20.6	B	12.5
eastbound left turn	F	599.2	F	284.7
eastbound right turn	D	34.4	C	15.1
4. Dawsonville Highway at Canterbury Road	C	25.4	F	511.6
northbound left turn (GA 53)	C	21.5	B	13.4
southbound left turn	B	10.1	C	19.6
eastbound left turn	F	1,504.7	F	1,442.4
eastbound right turn	E	40.5	B	14.1
westbound left turn	F	1,488.0	F	NA
westbound right turn	B	11.8	D	26.4
5. Dawsonville Highway at Ahaluna Drive	C	22.5	B	16.6
northbound approach (GA 53)	A	5.7	B	12.3
southbound approach (GA 53)	C	23.3	B	16.0
eastbound approach	E	59.8	C	23.3
westbound approach	F	139.1	F	98.5
6. Dawsonville Highway at Beachwood Boulevard	A	2.9	A	0.9
northbound left turn (GA 53)	D	29.0	C	16.9
eastbound left turn	F	1,021.4	F	534.2
eastbound right turn	E	37.0	C	19.6
table continued next page				

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7. Dawsonville Highway at McEver Road	D	49.4	F	138.0
northbound approach (GA 53)	E	78.3	F	151.4
southbound approach (GA 53)	B	19.7	E	58.7
eastbound approach	F	99.9	F	225.9
westbound approach	E	61.8	E	76.0
8. Dawsonville Highway at Green Hill Circle	B	14.1	E	66.7
northbound approach (GA 53)	A	8.3	E	72.1
southbound approach (GA 53)	B	13.4	E	56.0
eastbound approach	D	44.0	E	59.6
westbound approach	D	38.8	F	119.2
9. Dawsonville Highway at Shallowford Road	B	12.7	E	76.9
northbound approach (GA 53)	A	6.1	E	73.0
southbound approach (GA 53)	A	9.4	E	64.9
eastbound approach	E	76.4	F	122.6
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. It did assume that a northbound exclusive right turn lane would be constructed on GA 53 at the new access to the outparcels, aligning with Canterbury Road, that were assumed to be built in the no-build condition. The no-build 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 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 6. Dawsonville Highway at Beachwood Boulevard** – The operations at these three unsignalized intersections will continue 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 weak 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.

7. **Dawsonville Highway at McEver Road** – Operations will continue to be congested at this intersection. The mitigation discussed in the existing condition is still applicable.
8. **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.
9. **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 DRI 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. 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 the adjacent outparcels (discussed in the no-build analysis), 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 attached units were calculated using ITE Land Use 252 – Senior Adult Housing – Attached. The trips for the assisted living facility were determined using ITE Land Use – 254 – Assisted Living. The office / retail trip generation was calculated by dividing the total square footage 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 also 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 state highway adjacent to the project and will serve not just this project, but 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 6.

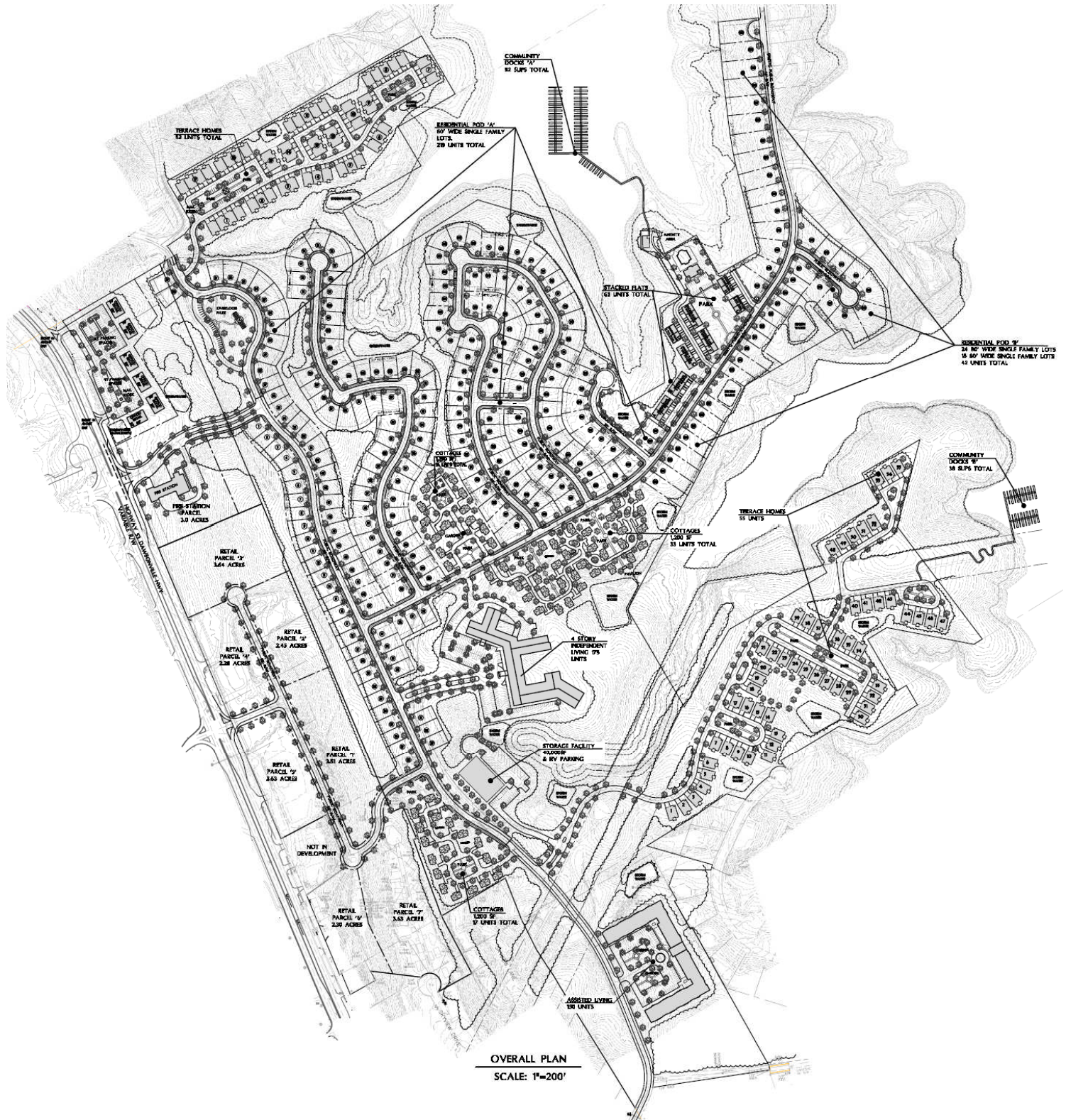


Figure 4 – Lanier Tract Site Plan

Table 6 – Lanier Tract DRI 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
Strickland (north) Tract									
Stacked Flats Attached	252	24 units	2	3	5	3	3	6	82
Single Family Detached	251	10 homes	1	1	2	2	1	3	36
Senior Terrace Homes Attached	252	56 units	4	7	11	7	7	14	192
Senior Terrace Homes Attached	252	52 units	4	6	10	7	6	13	178
Pod A Single Family Detached	251	198 homes	15	29	44	33	20	53	728
Stacked Flats Attached	252	27 units	2	3	5	4	3	7	92
Pod B Single Family Detached	251	50 homes	4	7	11	8	6	14	184
Cottages Detached	251	32 homes	2	5	7	5	4	9	118
Senior Terrace Homes Detached	251	55 homes	4	8	12	9	6	15	202
Independent Living 4 Story Attached	252	175 units	12	23	35	24	20	44	602
Assisted Living	254	150 beds	<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			64	99	163	117	94	211	2,770
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			88	106	194	135	128	263	3,344

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 within the rezoning were based on ITE average rates due to square footages much smaller than average sizes in the ITE data.

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 for each land use. The residential trips 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 6, were assigned to the roadway network based on these 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.

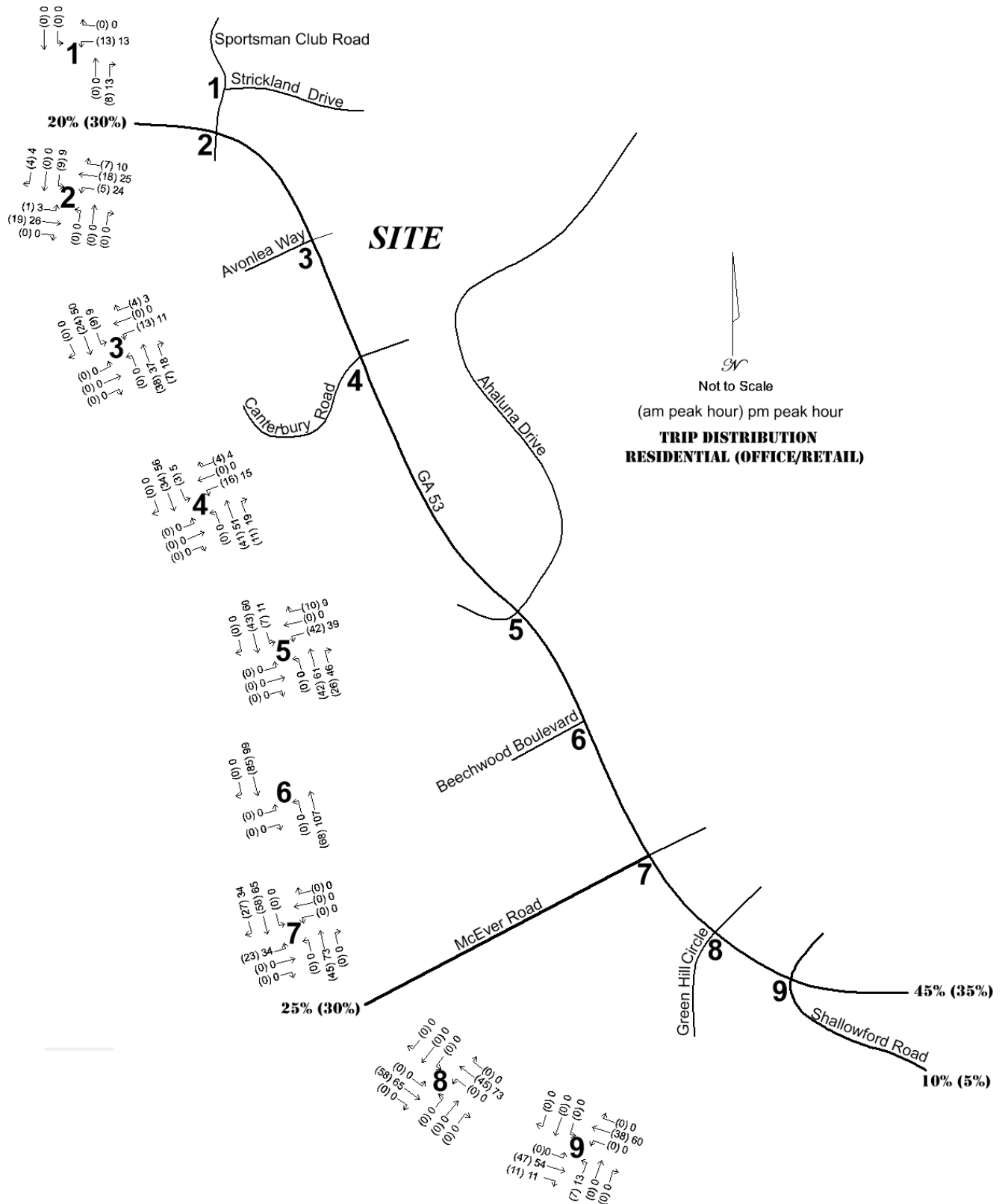


Figure 5 – Site New Trip Distribution Percentages and Total Site-Generated Trips

Future Traffic Conditions

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

Future Traffic Volumes

The trips from the Lanier Tract DRI were added to the future no-build volumes (comprised of the counted volumes increased by 10.4% plus the outparcel trips, as described previously). The resulting volumes are the traffic volumes that will be at each intersection when the subject development is fully operational. The future traffic volume projections are shown in Figure 6. These volumes are also shown in the intersection volume worksheets in Appendix A.

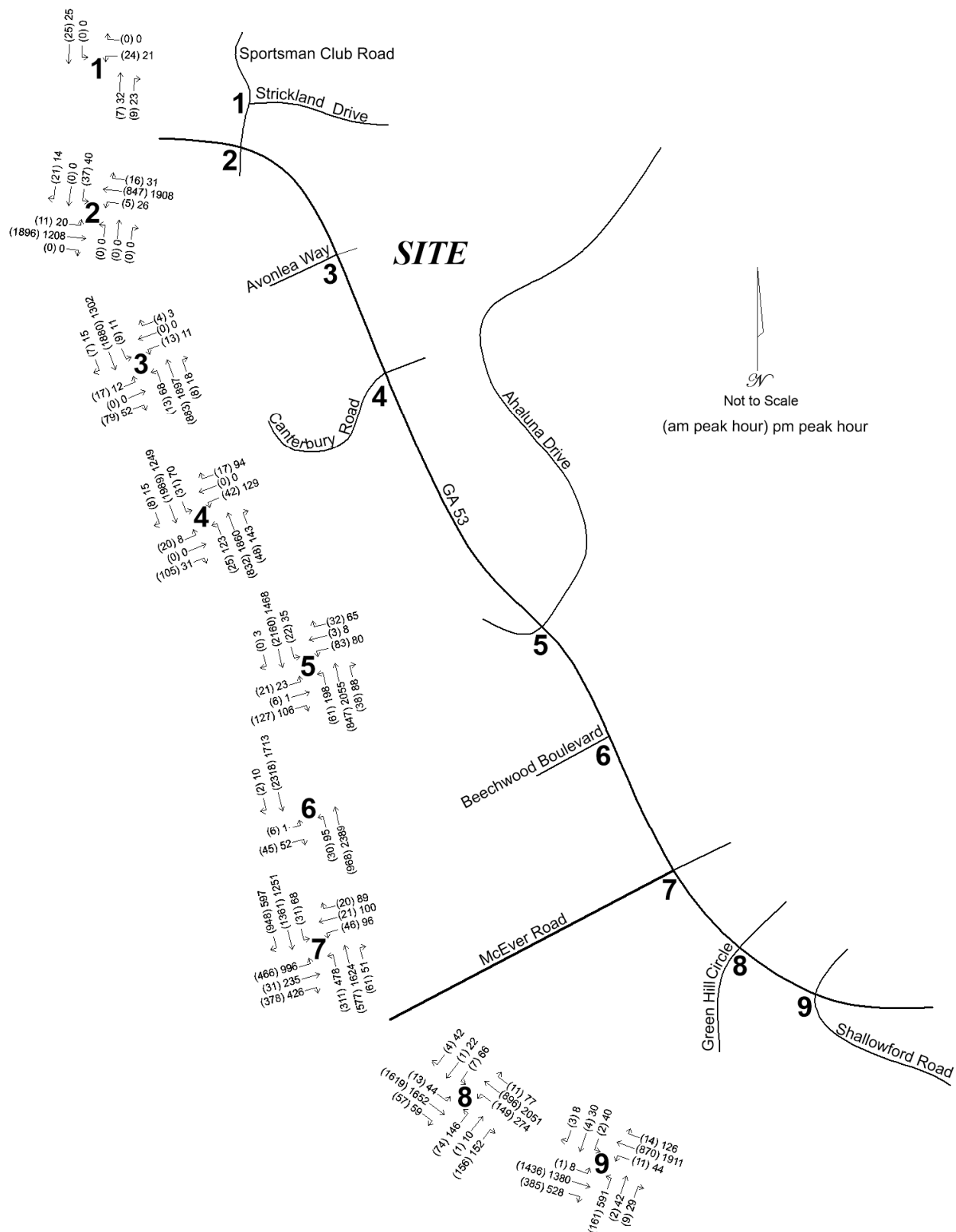


Figure 6 – Future Peak Hour Traffic Volume Projections

Future Intersection Operations

An operational analysis was performed for the future 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 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	3.8	A	3.1
southbound left turn	A	0.0	A	0.0
westbound approach	A	9.0	A	9.1
2. Dawsonville Highway at Sportsman Club Road	D	25.9	F	77.6
northbound approach (turn lane)	A	0.0	A	0.0
southbound approach	F	878.0	F	3,237.1
eastbound left turn (GA 53)	B	10.5	C	19.0
westbound left turn (GA 53)	C	20.7	B	12.0
3. Dawsonville Highway at Avonlea Way	B	12.6	B	10.7
northbound left turn (GA 53)	C	21.1	B	12.9
southbound left turn	B	10.3	C	18.2
eastbound left turn	F	1,381.4	F	722.2
eastbound right turn	E	35.6	C	15.5
westbound left turn	F	666.6	F	1,734.2
westbound right turn	B	12.1	C	20.1
4. Dawsonville Highway at Canterbury Road	F	53.2	F	623.4
northbound left turn (GA 53)	C	22.1	B	14.0
southbound left turn	B	10.3	C	20.9
eastbound left turn	F	1,733.4	F	2,303.8
eastbound right turn	E	42.9	B	14.1
westbound left turn	F	2,832.7	F	NA
westbound right turn	B	12.1	D	28.5
5. Dawsonville Highway at Ahaluna Drive	C	32.1	B	19.3
northbound approach (GA 53)	A	6.8	B	11.8
southbound approach (GA 53)	D	36.6	C	21.1
eastbound approach	D	48.9	B	18.8
westbound approach	F	130.7	F	106.6
6. Dawsonville Highway at Beachwood Boulevard	A	3.2	A	1.0
northbound left turn (GA 53)	D	31.9	C	18.4
eastbound left turn	F	1,230.3	F	620.4
eastbound right turn	E	40.8	C	21.0
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7. Dawsonville Highway at McEver Road	D	52.7	F	135.4
northbound approach (GA 53)	E	75.3	F	143.4
southbound approach (GA 53)	C	22.1	D	36.5
eastbound approach	F	113.7	F	257.5
westbound approach	E	61.8	E	67.9
8. Dawsonville Highway at Green Hill Circle	B	15.0	D	53.5
northbound approach (GA 53)	A	8.9	E	73.0
southbound approach (GA 53)	B	14.4	C	20.2
eastbound approach	D	47.4	E	59.7
westbound approach	D	38.8	F	119.2
9. Dawsonville Highway at Shallowford Road	B	13.6	F	82.2
northbound approach (GA 53)	A	6.3	E	75.1
southbound approach (GA 53)	B	10.7	E	74.6
eastbound approach	E	76.7	F	125.7
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 westbound left turn from Canterbury Road will incur an average delay of 47 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 conditions reveals that most levels of service will remain the same as in the no-build condition. The most notable changes are increases in the side street delays at both unsignalized and signalized intersections. However, at a few locations, the delays actually decrease slightly. This is attributed to a slight reallocation of greentime to adjust for the changing proportions of volumes between the main street and the side street. The Lanier Tract DRI generally contributes a small proportion to the increases in volumes between the existing condition and the future, while the background growth and the outparcels contribute 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 site'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. Specific Recommendations for each location are presented in the next sections of this report.

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 8, 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.

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. At Sportsman Club Drive, the existing right turn volume is 8 in the morning and 19 in the evening, or a total of 27 RTVs in the two peak hours. The future RTVs at this location are 16 in the a.m. and 31 in the p.m., or a total of 47 RTVs in the two peak hours. As a general rule of thumb, p.m. peak hour volumes are typically about 10% of 24-hour volumes. If this relationship applies at the subject location, then the existing 24 hour RTV would be approximately 190 and the future RTV would be approximately 470. Observations suggest that the off-peak activity turning into and out of this intersection is very low, so it is uncertain if the 10% rule of thumb is applicable. Based on a review of the counts, and the volume rule of thumb, it is considered probable that the 75 RTV per day threshold is satisfied in the existing condition. In the future condition, the RTV volume in just the two peak hours is 47. It is considered very likely that the remaining 22 hours in the day will contribute at least 28 additional right turn vehicles, so that the 75 RTV threshold will be satisfied. Therefore, it is recommended that a northbound exclusive right turn lane should be provided on GA 53 at Sportsman Club Road. Table 9, below, is Table 4-8 from the Driveway Manual, and presents the right turn lane design standards. Based on the posted 45 mph speed limit, this right turn lane should include 175 feet of full-width storage and a 100 foot taper.

The same evaluation was made for the proposed site access across from Avonlea Way. At this site access, the northbound RTV is projected at 8 in the a.m. and 18 in the p.m., for a total in the two peak hours of 26 RTV. Due to the nature of the trip characteristics of senior living facilities, it is difficult to conclude with confidence if the northbound RTV will satisfy the 75 RTV per day threshold. Therefore, at this time, it is advised that consideration should be given to providing this lane. If constructed, this lane should comply with the standards identified in Table 9, to include 175 feet of storage and a 100 foot taper. The site plan for the project anticipates providing a right turn lane at this access.

The proposed site connection, through the outparcels, across from Canterbury Road was likewise evaluated for a northbound right turn lane on GA 53. At this location, the northbound RTV is projected at 48 in the a.m. and 143 in the p.m., for a total in the two peak hours of 191 RTV. Just the p.m. peak hour well exceeds the 75 RTV threshold. These high right turn volumes will be primarily generated by the outparcels. It is concluded that a deceleration lane should be provided at this access. This lane would be constructed to the standards identified in Table 9, to include 175 feet of storage and a 100 foot taper. The site plan for the project anticipates providing a right turn lane at this access.

At Ahaluna Way, the existing northbound RTV is 11 in the a.m. and 38 in the p.m. for a two-hour total of 49 RTV. It is considered likely that the balance of the 24 hour day would contribute the additional right turn vehicles, so that a northbound exclusive right turn lane should be considered on GA 53 at Ahaluna Drive based on existing

volumes. With the addition of the Lanier Tract DRI, the future RTV is projected at 38 in the a.m. peak hour and 88 in the p.m. peak hour. Therefore, the 75 RTV per day threshold will be well-exceeded in the future and a northbound exclusive right turn lane should be provided on GA 53 at Ahaluna Drive. This lane should include a minimum of 175 feet of full-width storage and a 100 foot taper.

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.

Table 8 – 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

Table 9 – 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

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:

Sportsman Club Road at Strickland Drive – No changes are recommended at this intersection for the existing, no-build, or future conditions.

Dawsonville Highway at Sportsman Club Road – The side street delays at this intersection are significant now and will increase in the future. The potential for signalization of this intersection should be evaluated according to the *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 the intersection a weak candidate for signalization in the existing condition, but the potential for justifying signalization will increase in the future. 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, Dawsonville Highway at Canterbury Road, and Dawsonville Highway at Beachwood Boulevard – Side street delays are high at all three of these intersections, and these delays will increase in the no-build and future conditions. The side street volumes at each intersection are predominately right turners, with extremely low left turn volumes. For this reason, these three intersections are considered weak candidates for signalization in the existing condition.

The Lanier Tract DRI 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. While the exiting volumes from the site will include a few more left turners than right turners, these volumes will be extremely low. Therefore, this intersection is considered likely to continue to be a weak candidate for signalization in the no-build and future, even with the addition of the Lanier Tract DRI trips. The Georgia DOT deceleration 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 an exiting shared left/through lane and an exclusive right turn lane. Unless signalization is warranted, the side street approach exiting the site should be controlled by side street stop sign and accompanying stop bar.

The outparcel access will align with Canterbury Road and the Lanier Tract DRI 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 will be significant, primarily due to the outparcels, and a northbound deceleration lane is recommended for this location. The 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 a signal warrant study be performed for this location according to the MUTCD standards. This new site access should be constructed with one entering lane and an exiting shared left/through lane and

an exclusive right turn lane. Until signalization is warranted, the side street approach exiting the outparcel tracts should be controlled by side street stop sign and accompanying stop bar.

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 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 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. 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 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.

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.

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%	
Retail Outparcels	0	0	0	0	0	0	0	0	0
No-Build Volumes	7	1	8	0	25	25	11	0	11
Lanier Tract Senior Living Residential New Trips	0	8	8	0	0	0	13	0	13
Lanier Tract Office/Retail New Trips	0	0	0	0	0	0	0	0	0
Total Lanier Tract Site Trips	0	8	8	0	0	0	13	0	13
Build Volumes	7	9	16	0	25	25	24	0	24

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%	
Retail Outparcels	0	0	0	0	0	0	0	0	0
No-Build Volumes	32	10	42	0	25	25	8	0	8
Lanier Tract Senior Living Residential New Trips	0	13	13	0	0	0	13	0	13
Lanier Tract Office/Retail New Trips	0	0	0	0	0	0	0	0	0
Total Lanier Tract Site Trips	0	13	13	0	0	0	13	0	13
Build Volumes	32	23	55	0	25	25	21	0	21

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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%	
Retail Outparcels	0	9	0	9	0	14	0	14	0	0	0	0	0	0	0	0
No-Build Volumes	0	829	9	838	10	1877	0	1887	0	0	0	0	28	0	17	44
Lanier Tract Senior Living Residential New Trips	0	16	7	23	1	12	0	13	0	0	0	0	9	0	4	13
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	18	7	30	1	19	0	20	0	0	0	0	9	0	4	13
Build Volumes	5	847	16	868	11	1896	0	1907	0	0	0	0	37	0	21	57

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%	
Retail Outparcels	0	38	0	38	0	35	0	35	0	0	0	0	0	0	0	0
No-Build Volumes	2	1883	21	1906	17	1182	0	1199	0	0	0	0	31	0	10	41
Lanier Tract Senior Living Residential New Trips	0	15	10	25	3	21	0	24	0	0	0	0	9	0	4	13
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	25	10	59	3	26	0	29	0	0	0	0	9	0	4	13
Build Volumes	26	1908	31	1965	20	1208	0	1228	0	0	0	0	40	0	14	54

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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%	
Retail Outparcels	0	9	0	9	0	14	0	14	0	0	0	0	0	0	0	0
No-Build Volumes	13	845	1	859	0	1856	7	1862	17	0	79	96	0	0	0	0
Lanier Tract Senior Living Residential New Trips	0	21	7	28	2	19	0	21	0	0	0	0	13	0	4	17
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	38	7	45	9	24	0	33	0	0	0	0	13	0	4	17
Build Volumes	13	883	8	904	9	1880	7	1895	17	0	79	96	13	0	4	17

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%	
Retail Outparcels	0	38	0	38	0	35	0	35	0	0	0	0	0	0	0	0
No-Build Volumes	68	1860	0	1928	2	1252	15	1269	12	0	52	64	0	0	0	0
Lanier Tract Senior Living Residential New Trips	0	24	18	42	4	26	0	30	0	0	0	0	11	0	3	14
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	37	18	55	9	50	0	59	0	0	0	0	11	0	3	14
Build Volumes	68	1897	18	1983	11	1302	15	1328	12	0	52	64	11	0	3	14

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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%					
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
No-Build Volumes	25	791	37	854	28	1955	8	1990	20	0	105	125	26	0	13	39
Lanier Tract Senior Living Residential New Trips	0	24	11	35	3	29	0	32	0	0	0	0	16	0	4	20
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	41	11	52	3	34	0	37	0	0	0	0	16	0	4	20
Build Volumes	25	832	48	906	31	1989	8	2027	20	0	105	125	42	0	17	59

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%					
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
No-Build Volumes	123	1809	124	2056	65	1193	15	1274	8	0	31	39	114	0	90	204
Lanier Tract Senior Living Residential New Trips	0	38	19	57	5	32	0	37	0	0	0	0	15	0	4	19
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	51	19	70	5	56	0	61	0	0	0	0	15	0	4	19
Build Volumes	123	1860	143	2126	70	1249	15	1335	8	0	31	39	129	0	94	223

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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%	
Retail Outparcels	0	31	0	31	0	18	0	18	0	0	0	0	0	0	0	0
No-Build Volumes	61	805	12	878	15	2117	0	2132	21	6	127	153	41	3	22	66
Lanier Tract Senior Living Residential New Trips	0	25	26	51	7	38	0	45	0	0	0	0	42	0	10	52
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	42	26	68	7	43	0	50	0	0	0	0	42	0	10	52
Build Volumes	61	847	38	946	22	2160	0	2182	21	6	127	153	83	3	32	118

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%	
Retail Outparcels	0	76	0	76	0	82	0	82	0	0	0	0	0	0	0	0
No-Build Volumes	198	1994	42	2233	24	1408	3	1436	23	1	106	130	41	8	56	105
Lanier Tract Senior Living Residential New Trips	0	48	46	94	11	36	0	47	0	0	0	0	39	0	9	48
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	61	46	107	11	60	0	71	0	0	0	0	39	0	9	48
Build Volumes	198	2055	88	2340	35	1468	3	1507	23	1	106	130	80	8	65	153

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Intersection 6: Georgia State Route 53 at Beechwood Boulevard

Weekday A.M. Peak Hour	Northbound GA 53			Southbound GA 53			Eastbound Beechwood Boulevard			Westbound Commercial Access			
	L	T	Tot	T	R	Tot	L	R	Tot	L	T	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%					
Retail Outparcels	0	31	31	18	0	18	0	0	0				
No-Build Volumes	30	900	930	2233	2	2235	6	45	51				
Lanier Tract Senior Living Residential New Trips	0	51	51	80	0	80	0	0	0				
Lanier Tract Office/Retail New Trips	0	17	17	5	0	5	0	0	0				
Total Lanier Tract Site Trips	0	68	68	85	0	85	0	0	0				
Build Volumes	30	968	998	2318	2	2320	6	45	51				

Weekday P.M. Peak Hour	Northbound GA 53			Southbound GA 53			Eastbound Beechwood Boulevard			Westbound Commercial Access			
	L	T	Tot	T	R	Tot	L	R	Tot	L	T	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%					
Retail Outparcels	0	76	76	82	0	82	0	0	0				
No-Build Volumes	95	2282	2377	1614	10	1624	1	52	53				
Lanier Tract Senior Living Residential New Trips	0	94	94	75	0	75	0	0	0				
Lanier Tract Office/Retail New Trips	0	13	13	24	0	24	0	0	0				
Total Lanier Tract Site Trips	0	107	107	99	0	99	0	0	0				
Build Volumes	95	2389	2484	1713	10	1723	1	52	53				

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Intersection 7: 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%	
Retail Outparcels	0	19	0	19	0	11	7	18	12	0	0	0	0	0	0	0
No-Build Volumes	311	532	61	904	31	1303	921	2255	443	31	378	851	46	21	20	87
Lanier Tract Senior Living Residential New Trips	0	35	0	35	0	55	25	80	16	0	0	16	0	0	0	0
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	45	0	45	0	58	27	85	23	0	0	23	0	0	0	0
Build Volumes	311	577	61	949	31	1361	948	2340	466	31	378	874	46	21	20	87

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%	
Retail Outparcels	0	47	0	47	0	50	32	82	29	0	0	0	0	0	0	0
No-Build Volumes	478	1551	51	2080	68	1186	563	1818	962	235	426	1623	96	100	89	286
Lanier Tract Senior Living Residential New Trips	0	65	0	65	0	51	24	75	29	0	0	29	0	0	0	0
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	73	0	73	0	65	34	99	34	0	0	34	0	0	0	0
Build Volumes	478	1624	51	2153	68	1251	597	1917	996	235	426	1657	96	100	89	286

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Intersection 8: 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%	
Retail Outparcels	0	19	0	19	0	11	0	11	0	0	0	0	0	0	0	0
No-Build Volumes	149	851	11	1012	13	1561	57	1632	74	1	156	231	7	1	4	12
Lanier Tract Senior Living Residential New Trips	0	35	0	35	0	55	0	55	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	45	0	45	0	58	0	58	0	0	0	0	0	0	0	0
Build Volumes	149	896	11	1057	13	1619	57	1690	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%	
Retail Outparcels	0	47	0	47	0	50	0	50	0	0	0	0	0	0	0	0
No-Build Volumes	274	1978	77	2329	44	1587	59	1690	146	10	152	308	66	22	42	130
Lanier Tract Senior Living Residential New Trips	0	65	0	65	0	51	0	51	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	73	0	73	0	65	0	65	0	0	0	0	0	0	0	0
Build Volumes	274	2051	77	2402	44	1652	59	1755	146	10	152	308	66	22	42	130

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Intersection 9: 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%	
Retail Outparcels	0	17	0	17	0	10	1	11	2	0	0	0	0	0	0	0
No-Build Volumes	11	832	14	857	1	1389	374	1764	154	2	9	165	2	4	3	10
Lanier Tract Senior Living Residential New Trips	0	29	0	29	0	45	10	55	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	38	0	38	0	47	11	58	7	0	0	7	0	0	0	0
Build Volumes	11	870	14	895	1	1436	385	1822	161	2	9	172	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%	
Retail Outparcels	0	41	0	41	0	44	6	50	6	0	0	0	0	0	0	0
No-Build Volumes	44	1851	126	2021	8	1326	517	1851	578	42	29	649	40	30	8	77
Lanier Tract Senior Living Residential New Trips	0	53	0	53	0	42	9	51	12	0	0	12	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	60	0	60	0	54	11	65	13	0	0	13	0	0	0	0
Build Volumes	44	1911	126	2081	8	1380	528	1916	591	42	29	662	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	

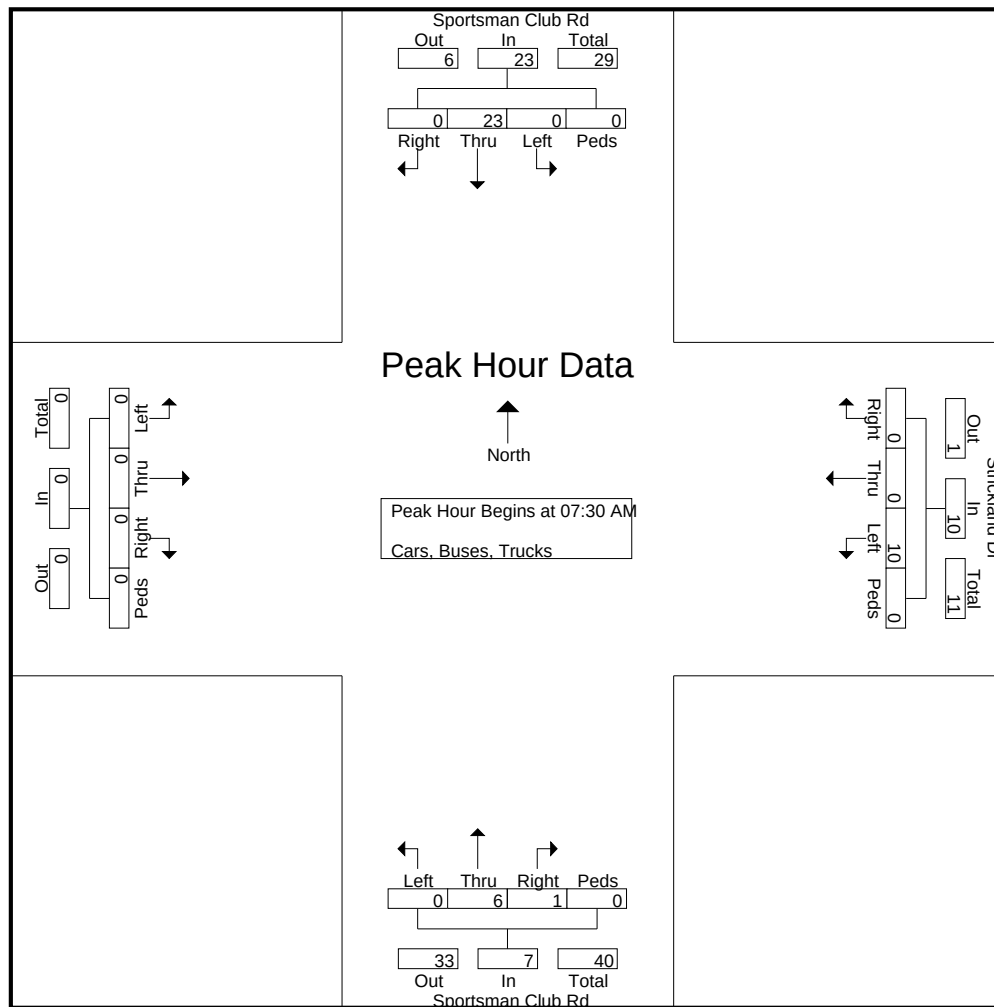
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TMC Data
Sportsman Club Rd @ Strickland Dr
Gainesville, GA
7-9am | 4.30-6.30pm

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



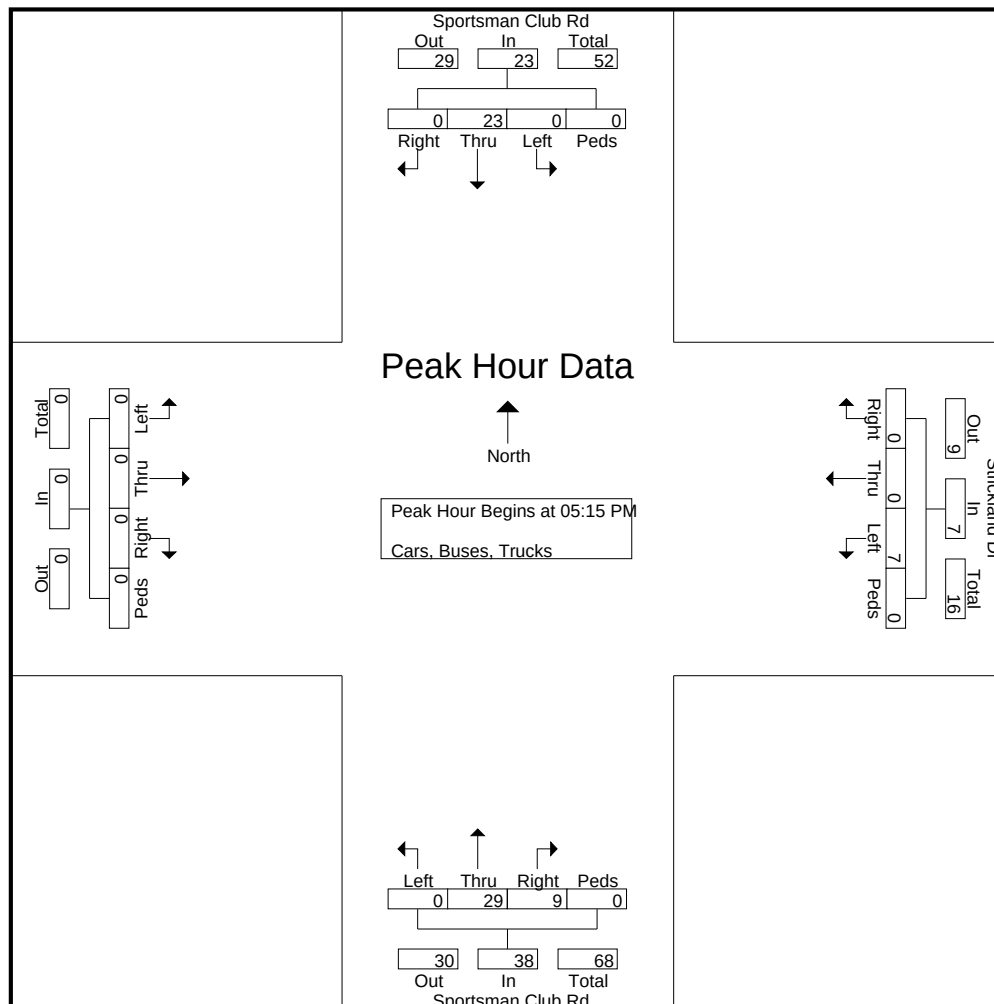
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TMC Data
Sportsman Club Rd @ Strickland Dr
Gainesville, GA
7-9am | 4.30-6.30pm

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	

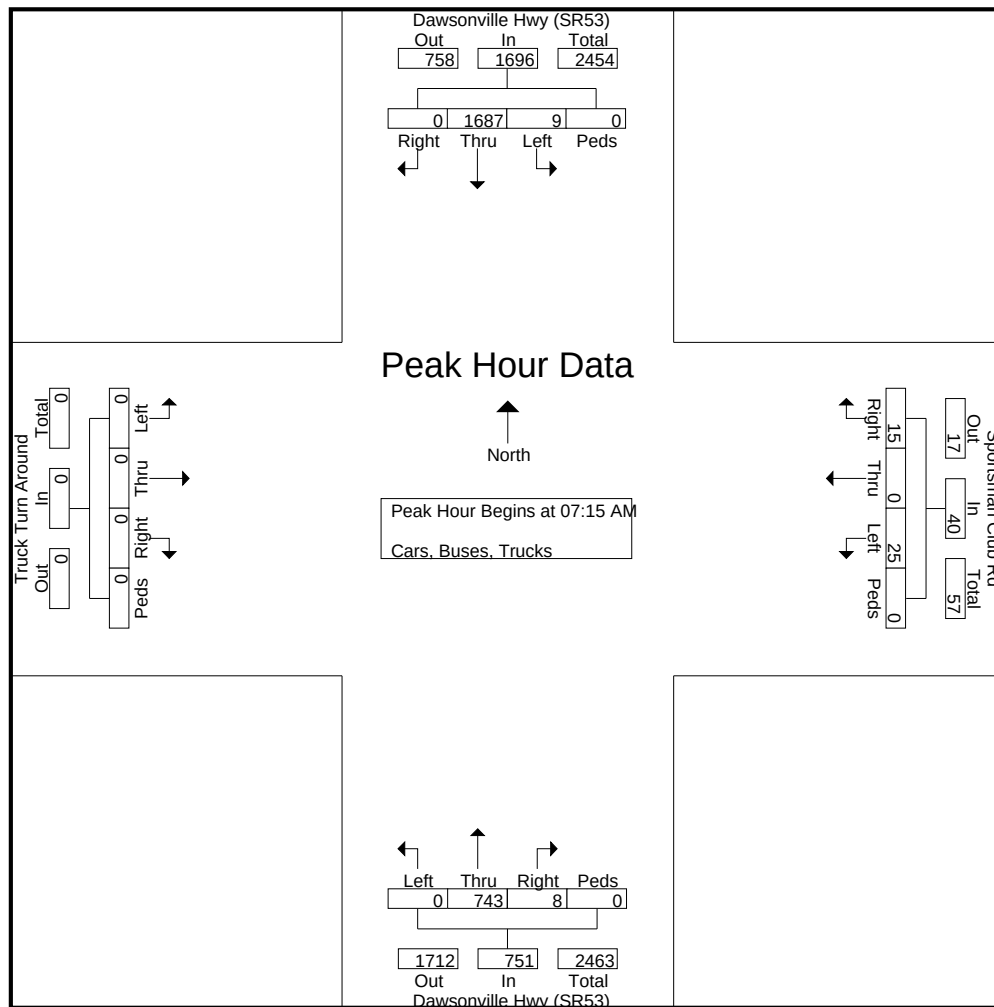
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TMC Data
Dawsonville Hwy (SR53) @
Sportsman Club Rd, Gainesville, GA
7-9am | 4.30-6.30pm

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



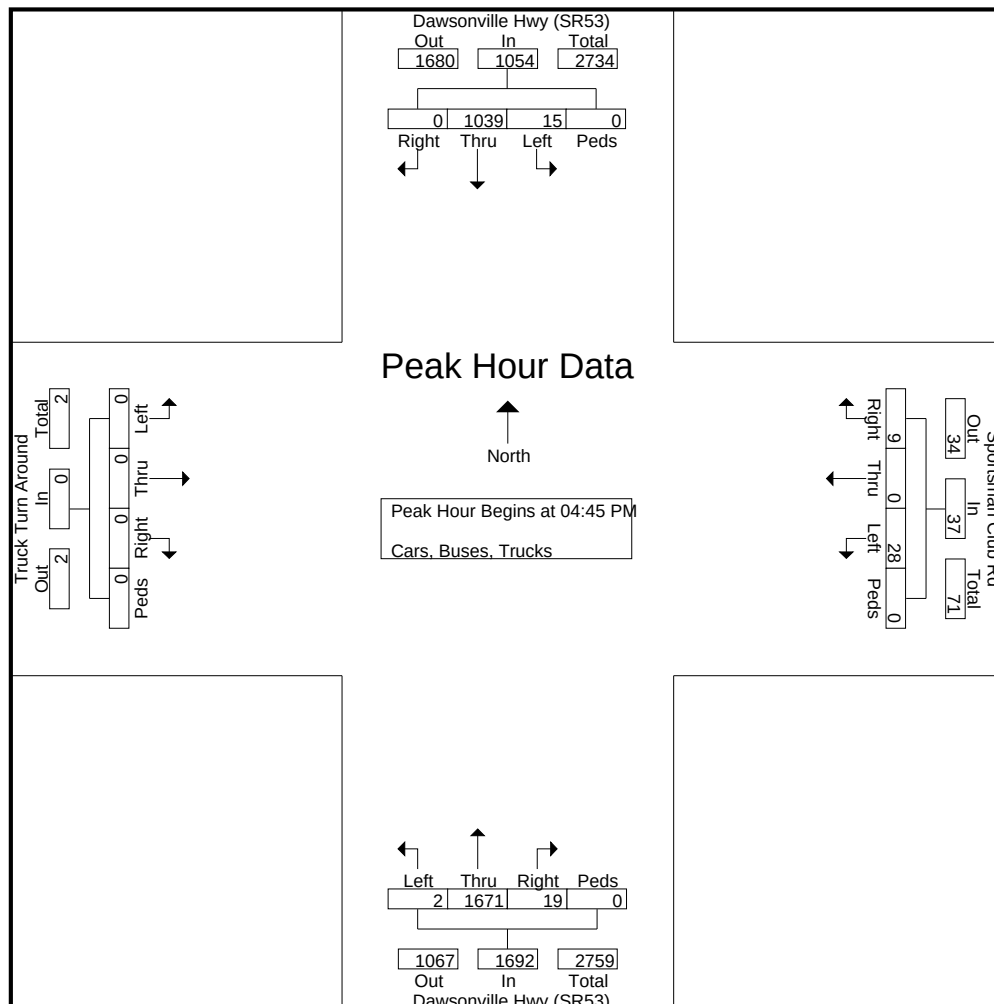
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TMC Data
Dawsonville Hwy (SR53) @
Sportsman Club Rd, Gainesville, GA
7-9am I 4.30-6.30pm

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	

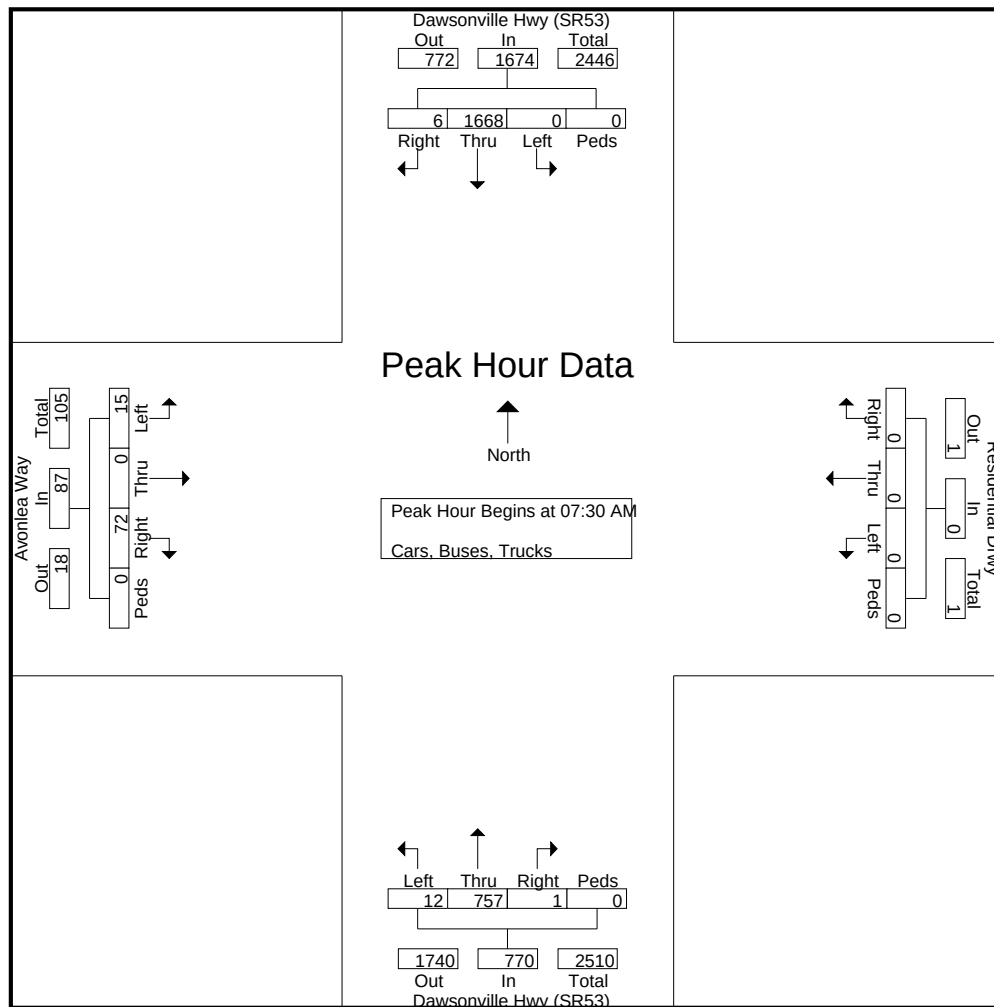
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TMC Data
Dawsonville Hwy (SR53) @ Avonlea Way
Gainesville, GA
7-9am | 4.30-6.30pm

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



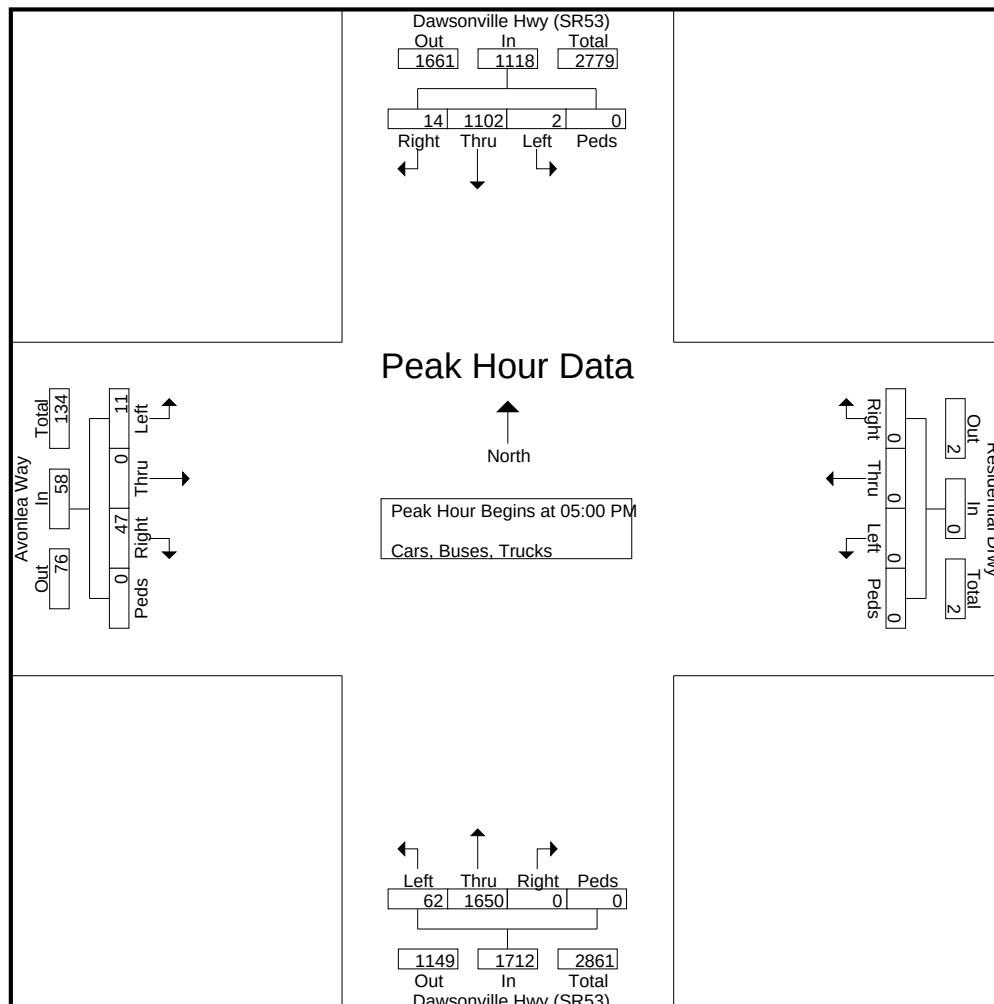
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TMC Data
Dawsonville Hwy (SR53) @ Avonlea Way
Gainesville, GA
7-9am | 4.30-6.30pm

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	

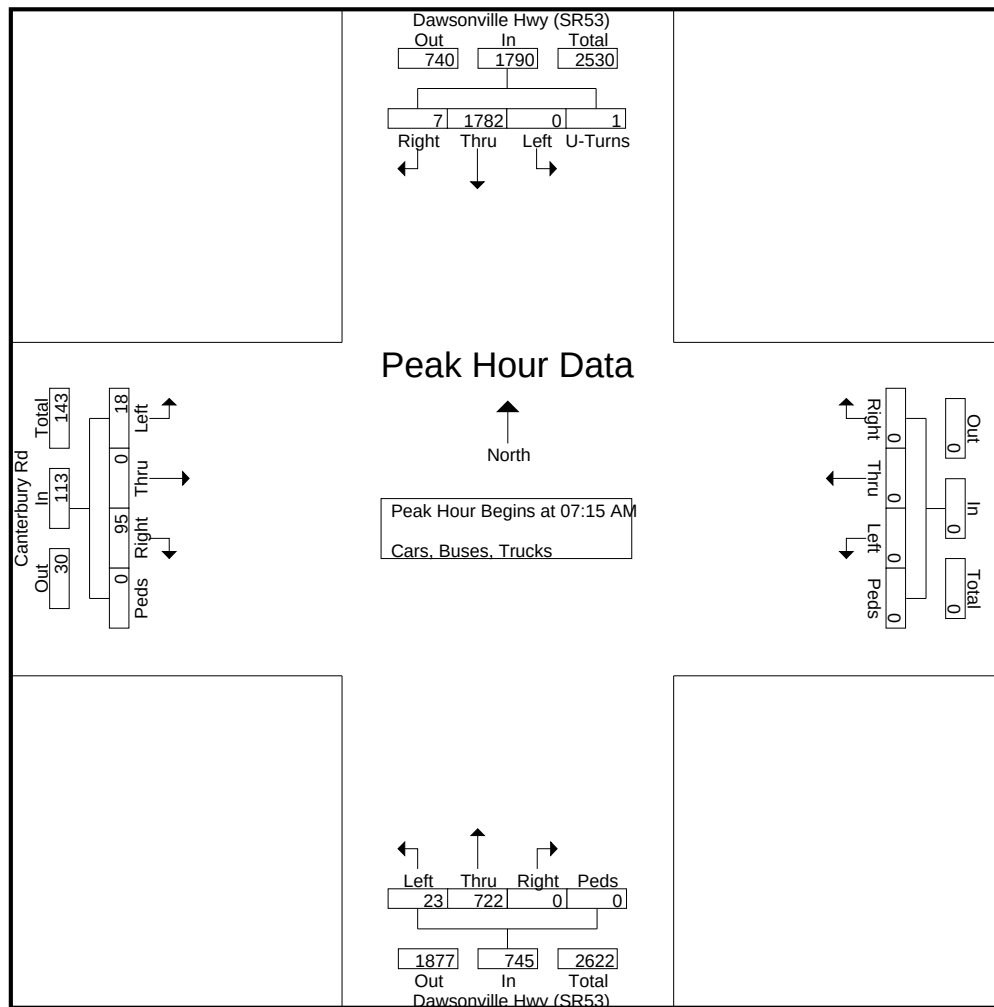
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TMC Data
Dawsonville Hwy (SR53) @ Canterbury Rd
Gainesville, GA
7-9am | 4.30-6.30pm

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



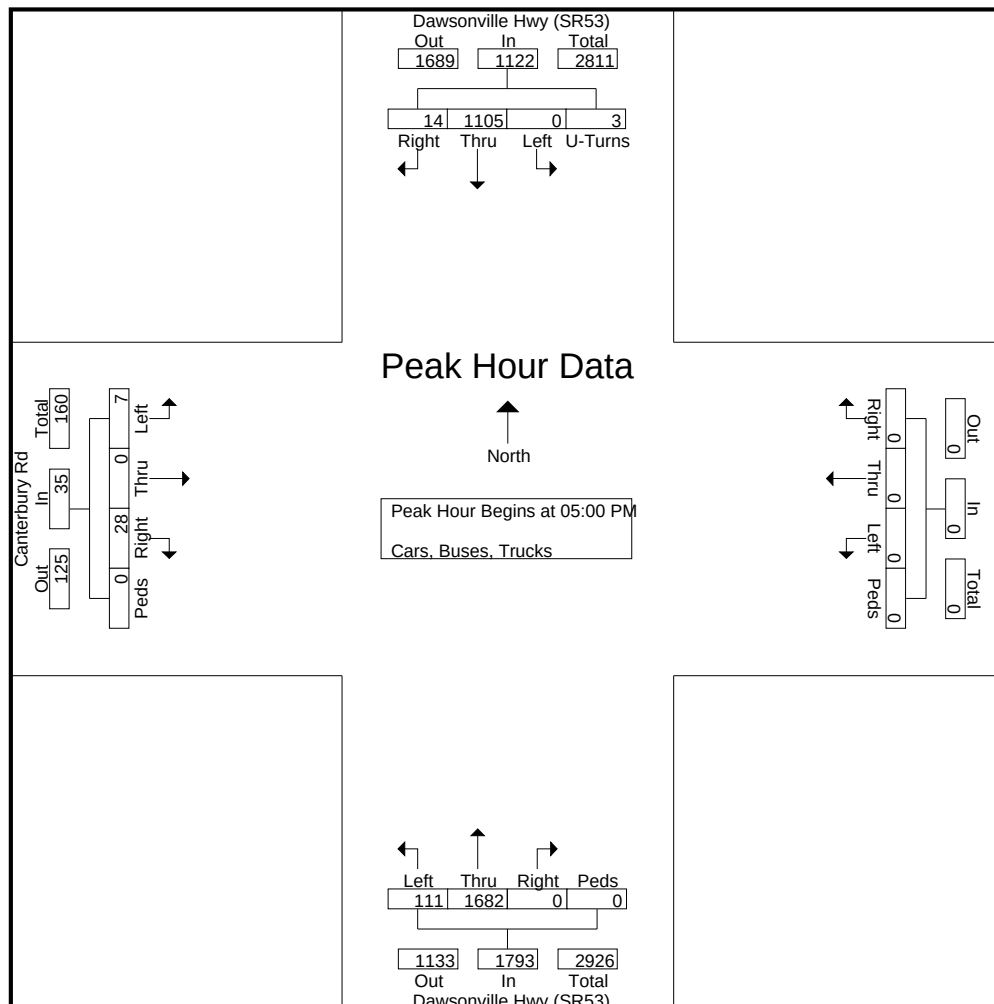
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TMC Data
Dawsonville Hwy (SR53) @ Canterbury Rd
Gainesville, GA
7-9am | 4.30-6.30pm

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	

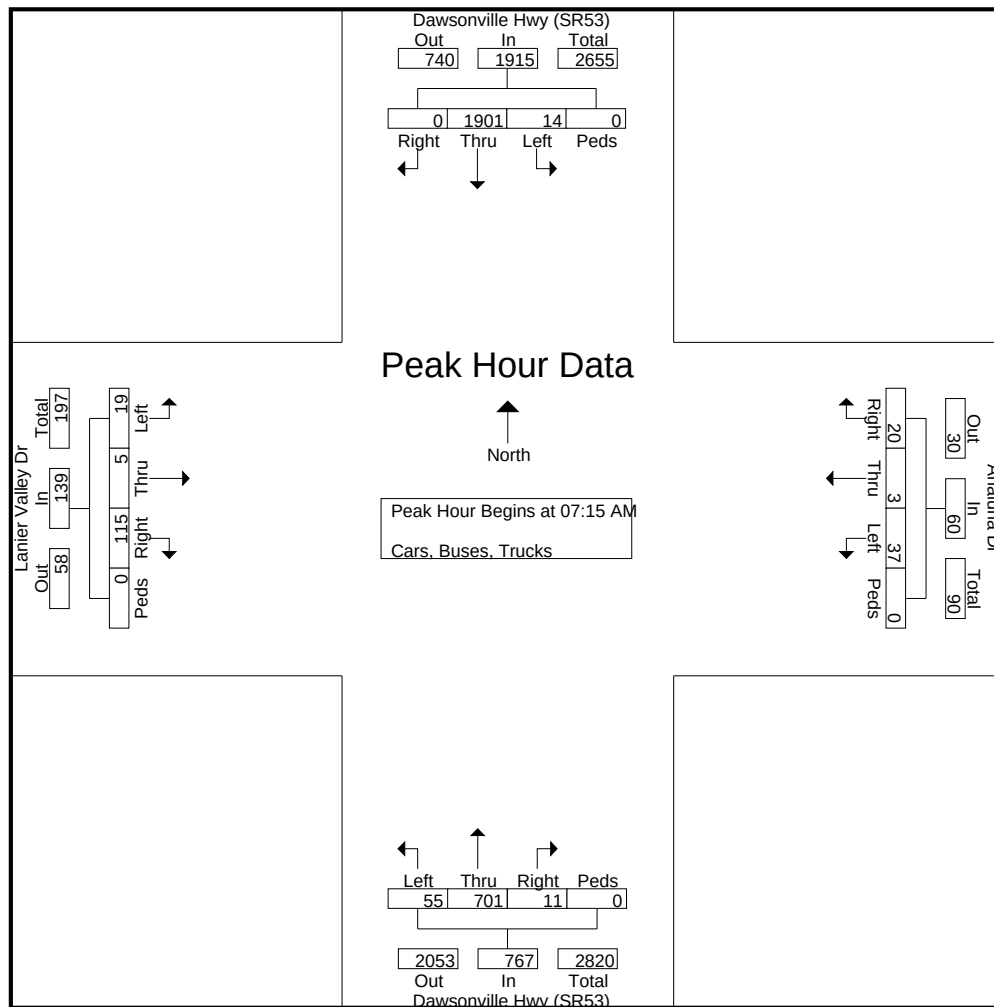
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TMC Data
Dawsonville Hwy (SR53) @ Ahaluna Dr/
Lanier Valley Dr, Gainesville, GA
7-9am | 4.30-6.30pm

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



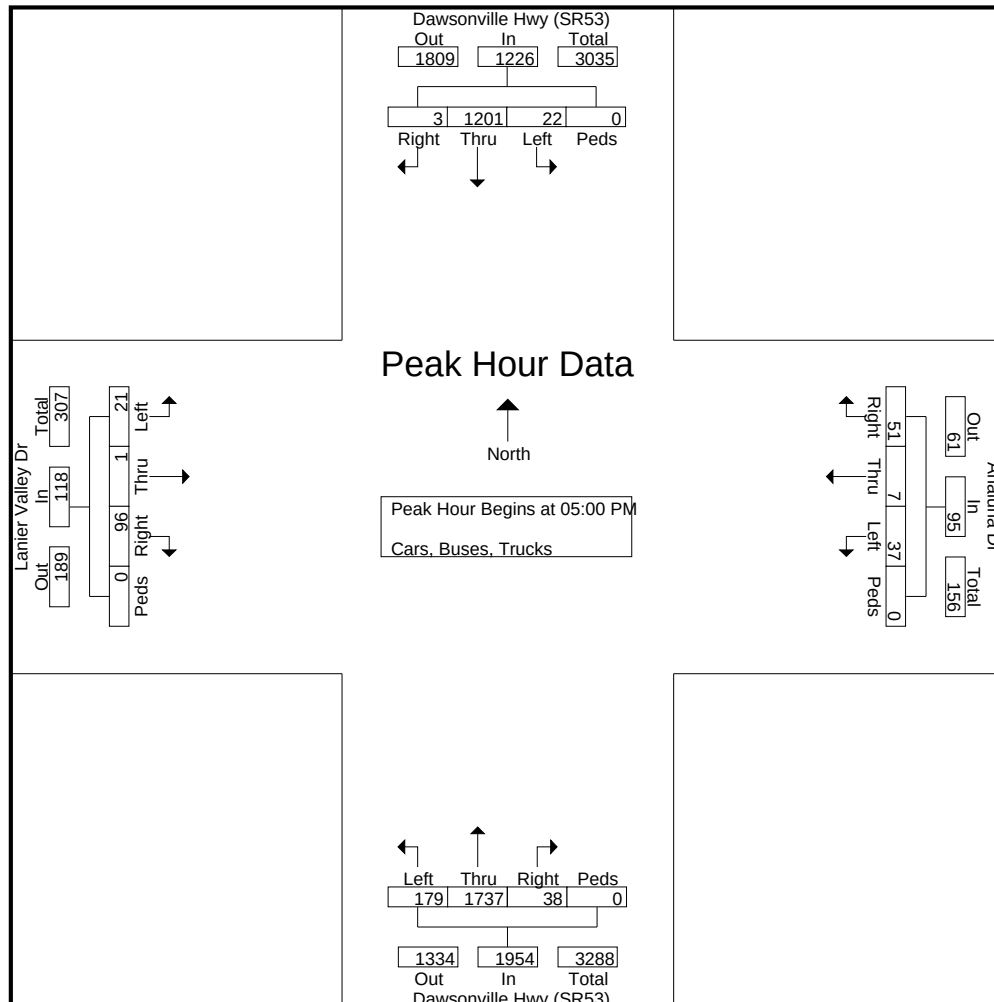
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TMC Data
Dawsonville Hwy (SR53) @ Ahaluna Dr/
Lanier Valley Dr, Gainesville, GA
7-9am | 4.30-6.30pm

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) @ 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	

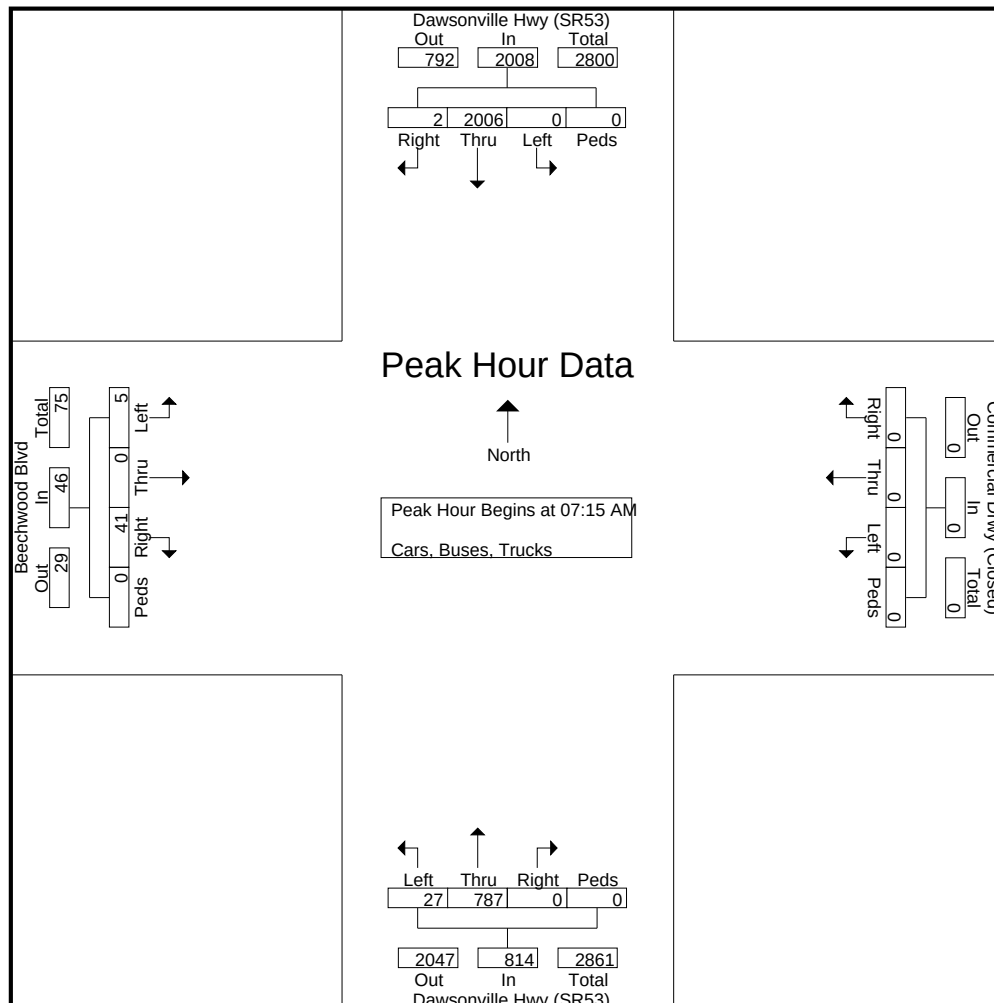
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TMC Data
Dawsonville Hwy (SR53) @ Beechwood Blvd
Gainesville, GA
7-9am | 4.30-6.30pm

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



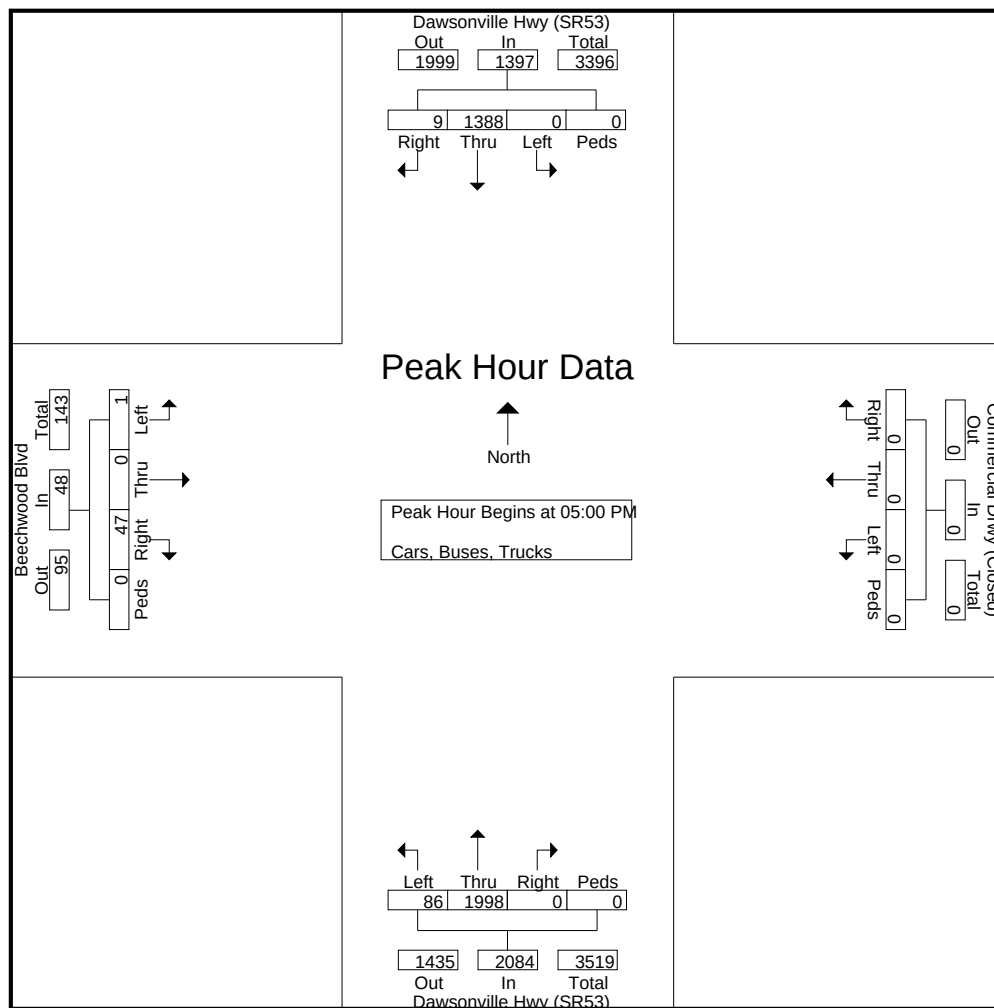
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TMC Data
Dawsonville Hwy (SR53) @ Beechwood Blvd
Gainesville, GA
7-9am | 4.30-6.30pm

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	

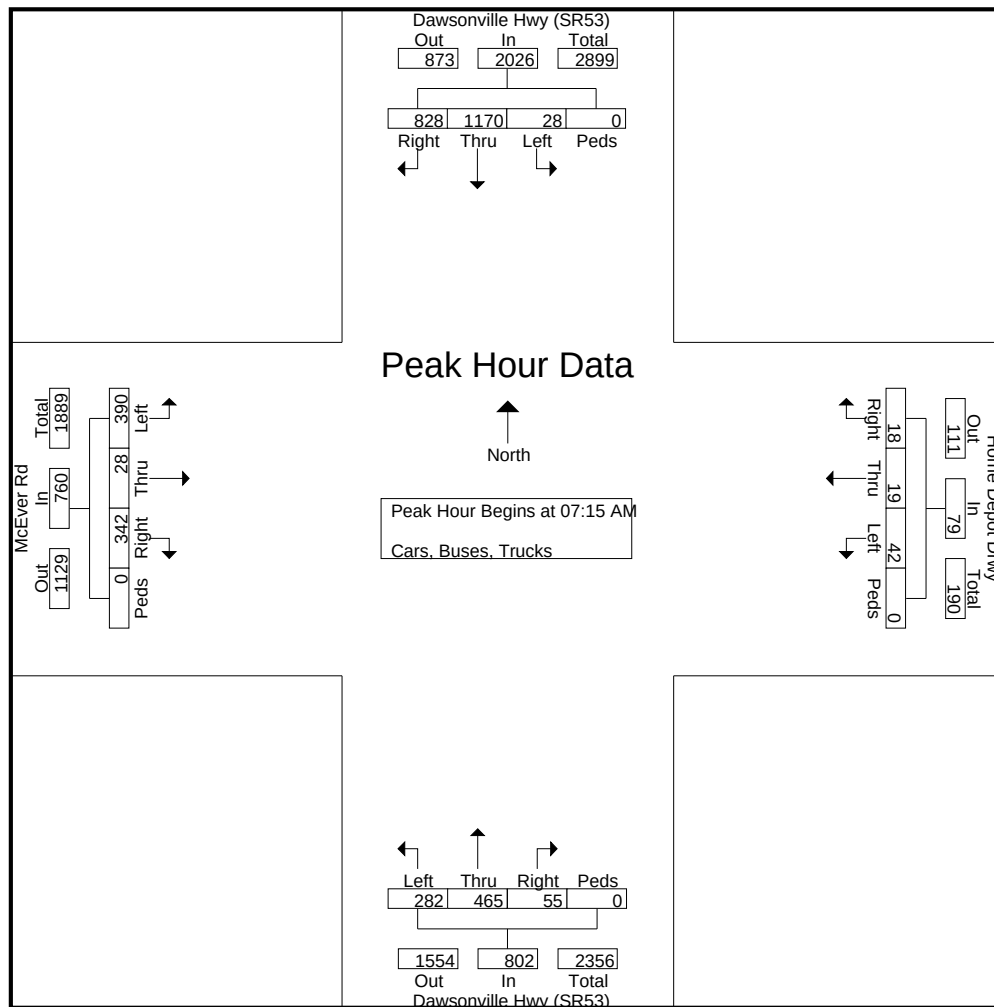
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TMC Data
Dawsonville Hwy (SR53) @ McEver Rd
Gainesville, GA
7-9am | 4.30-6.30pm

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



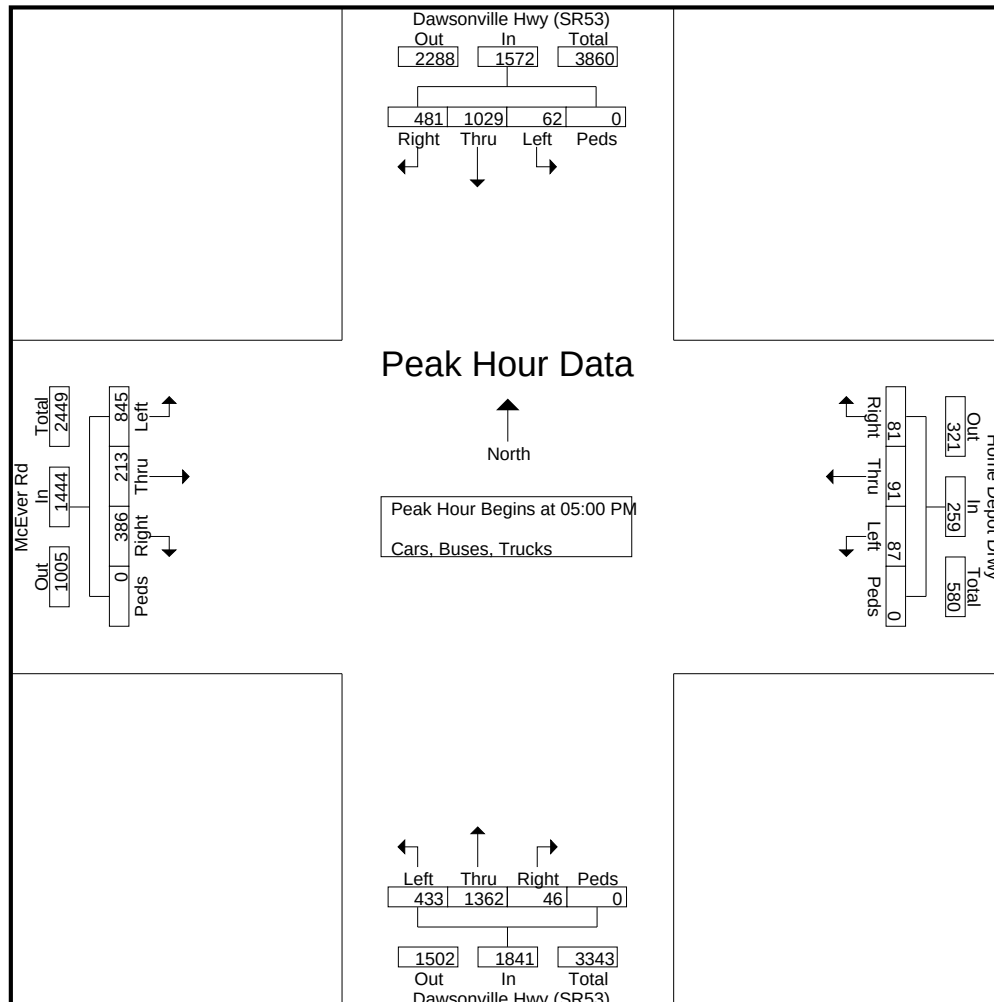
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TMC Data
Dawsonville Hwy (SR53) @ McEver Rd
Gainesville, GA
7-9am | 4.30-6.30pm

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	

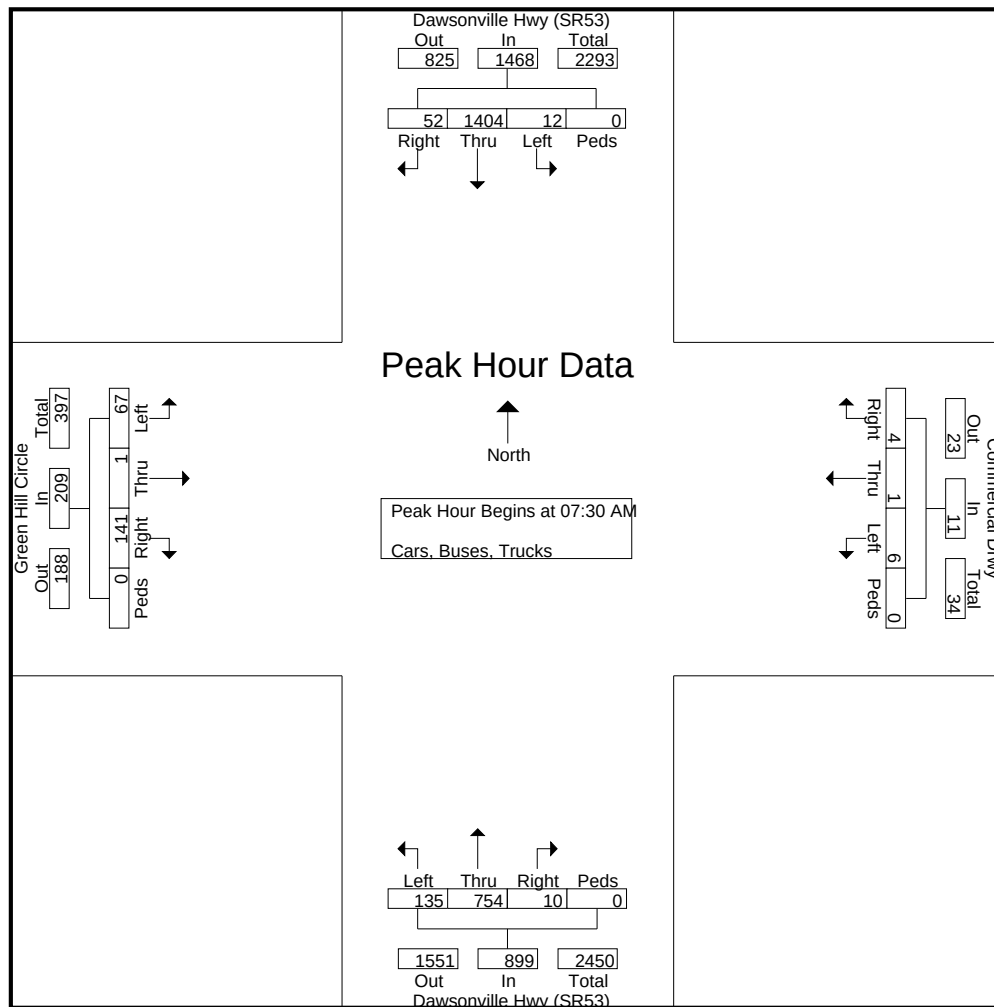
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TMC Data
Dawsonville Hwy (SR53) @ Green Hill Cir
Gainesville, GA
7-9am | 4.30-6.30pm

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



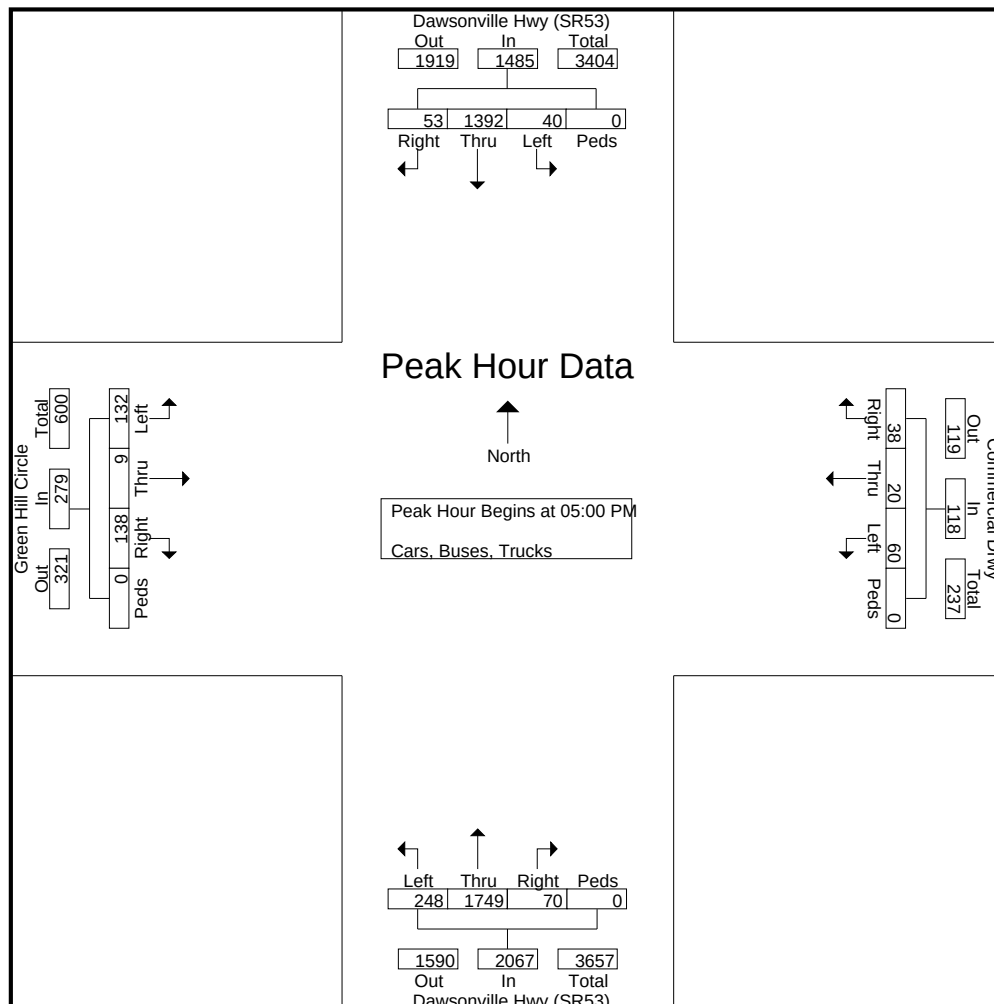
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TMC Data
Dawsonville Hwy (SR53) @ Green Hill Cir
Gainesville, GA
7-9am | 4.30-6.30pm

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	

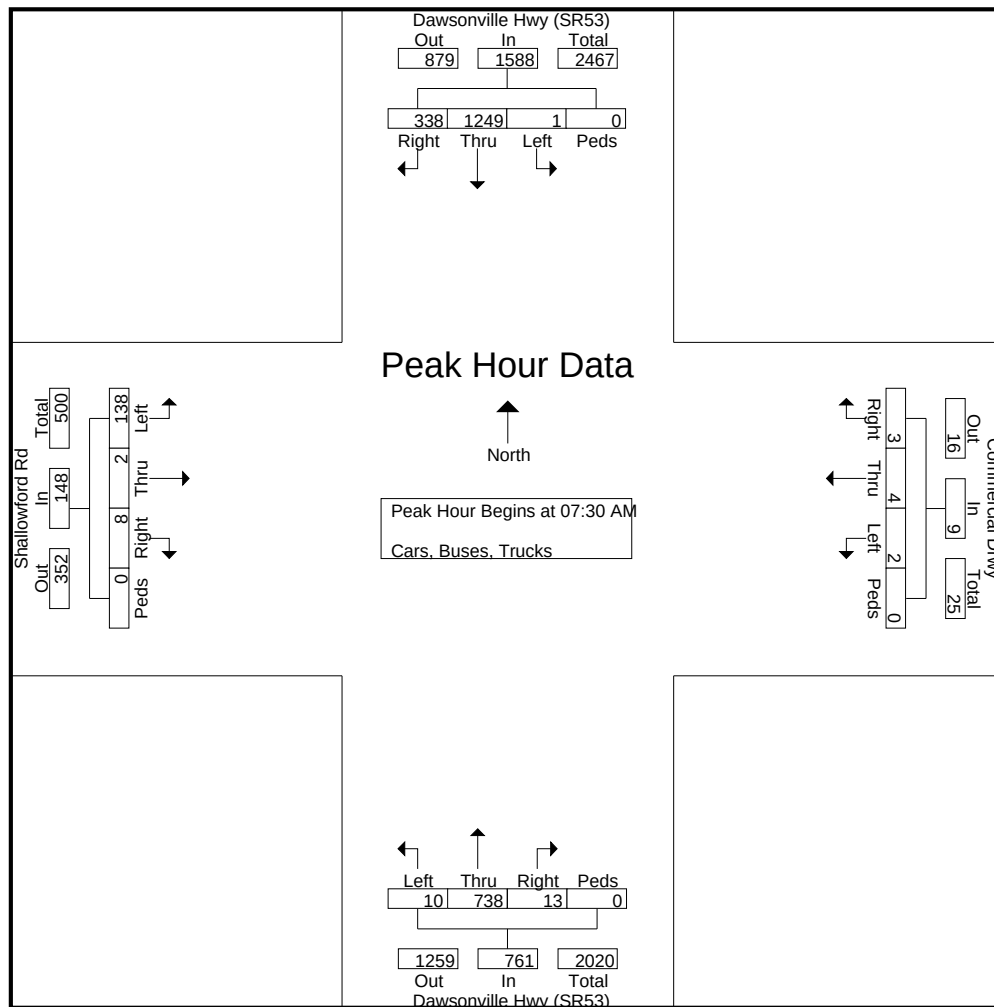
Reliable Traffic Data Services, LLC

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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



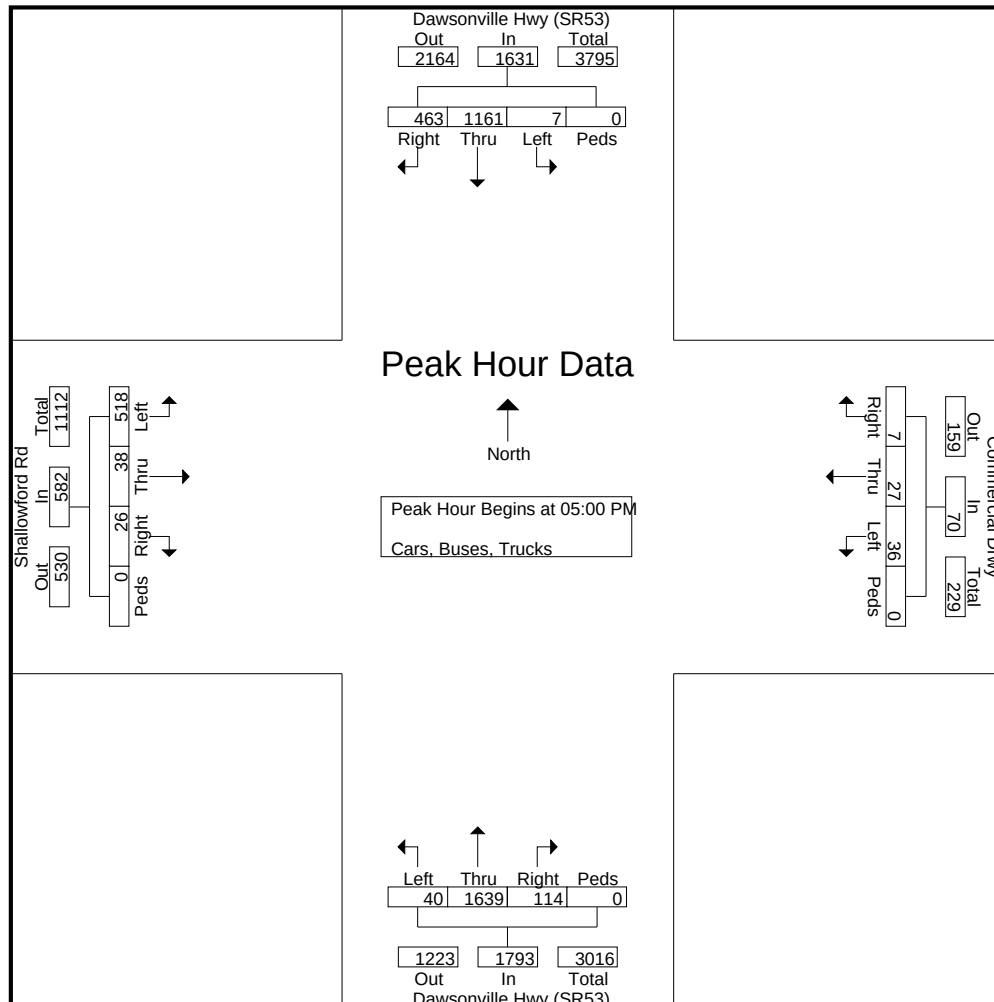
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TMC Data
Dawsonville Hwy (SR53) @
Shallowford Rd, Gainesville, GA
7-9am | 4.30-6.30pm

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	-	-

Lanier Tract DRI
6: 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

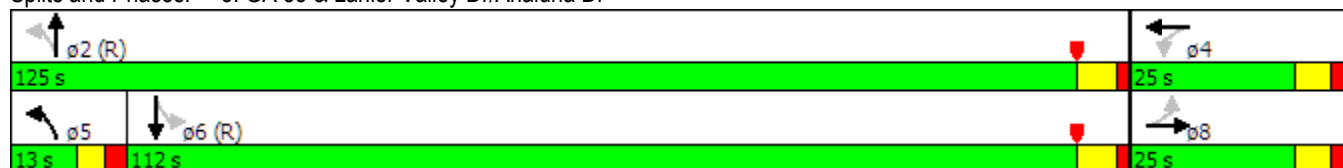
Intersection LOS: B

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

7: 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

7: 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

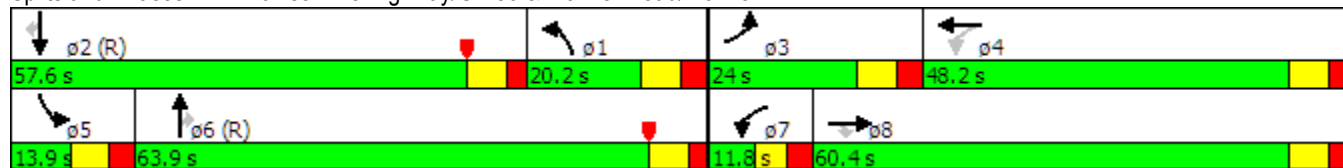
Intersection LOS: D

Intersection Capacity Utilization 81.3%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 7: Dawsonville Highway/GA 53 & McEver Road/McEver



Lanier Tract DRI

8: 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

8: 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

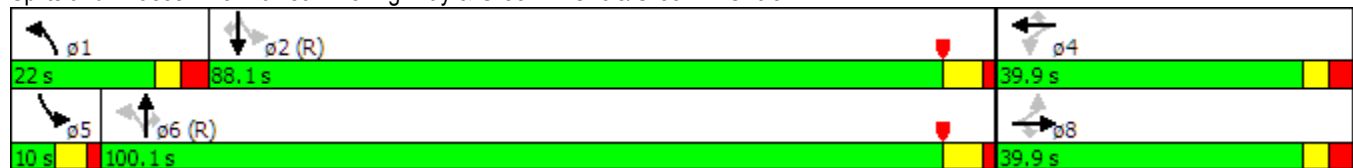
Intersection LOS: B

Intersection Capacity Utilization 71.6%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 8: Dawsonville Highway & Greenhill Circle/Greenhill Circle



Lanier Tract DRI

9: 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

9: 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

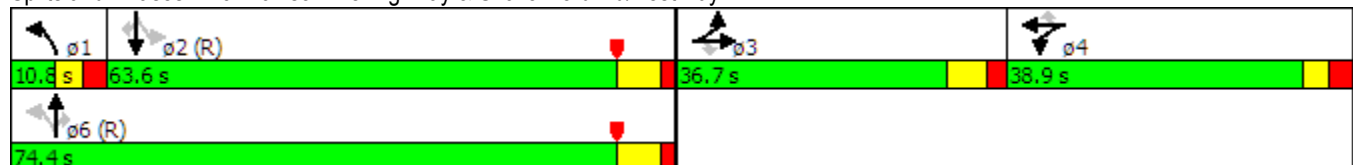
Intersection LOS: B

Intersection Capacity Utilization 59.0%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 9: 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	-	-

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
6: 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

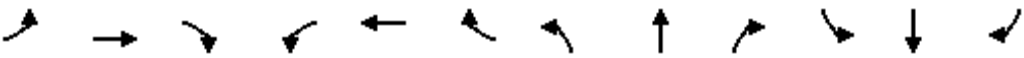
existing p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	21	1	96	37	7	51	179	1737	38	22	1201	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		0.859			0.595		0.178			0.108		
Satd. Flow (perm)	0	1438	0	0	1070	0	337	3581	0	206	3592	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		108			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)	24	1	108	44	8	60	186	1809	40	23	1251	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	133	0	0	112	0	186	1849	0	23	1254	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 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

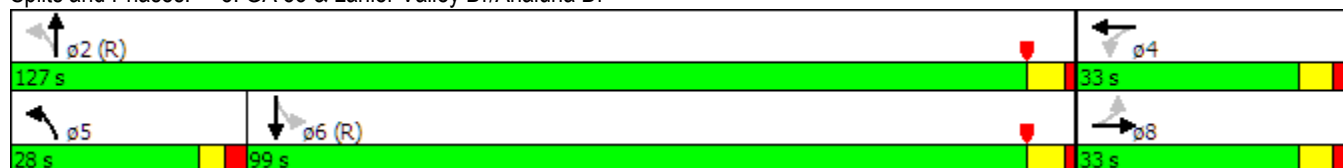
Intersection LOS: B

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

7: 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

7: 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

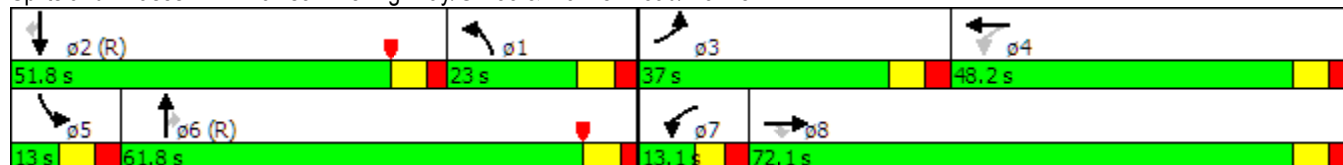
Intersection LOS: F

Intersection Capacity Utilization 99.3%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 7: Dawsonville Highway/GA 53 & McEver Road/McEver



Lanier Tract DRI

8: 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

8: 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

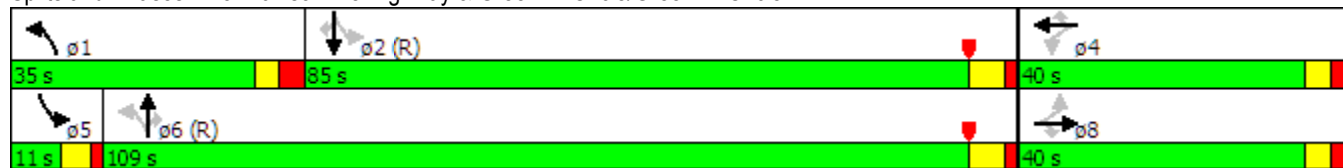
Intersection LOS: D

Intersection Capacity Utilization 81.6%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 8: Dawsonville Highway & Greenhill Circle/Greenhill Circle



Lanier Tract DRI

9: Dawsonville Highway & Shallowford Rd/Best Buy

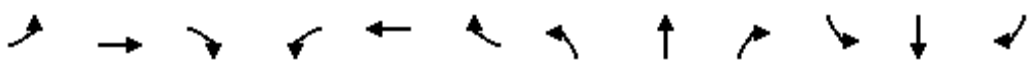
existing p.m.

												
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

9: 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

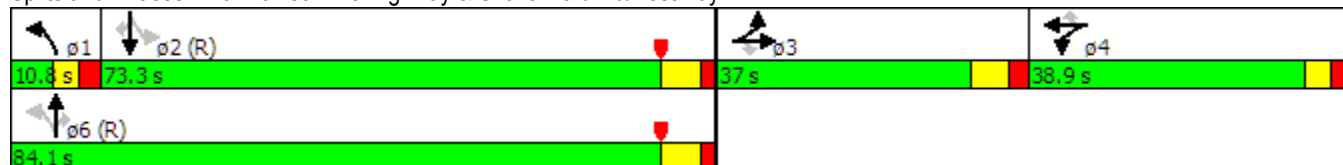
Intersection LOS: D

Intersection Capacity Utilization 81.0%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 9: 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		12.5										
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	10	1877	0	0	829	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	2183	0	0	987	11	0	0	0	47	0	29
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	998	0	0	2183	0	0	2699	3204	1091	2107	3198	499
Stage 1	-	-	-	-	-	-	2206	2206	-	992	992	-
Stage 2	-	-	-	-	-	-	493	998	-	1115	2206	-
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	689	-	-	240	-	-	10	10	210	~ 29	10	517
Stage 1	-	-	-	-	-	-	45	81	-	264	322	-
Stage 2	-	-	-	-	-	-	526	320	-	222	81	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	689	-	-	240	-	-	9	10	210	~ 29	10	517
Mov Cap-2 Maneuver	-	-	-	-	-	-	9	10	-	~ 29	10	-
Stage 1	-	-	-	-	-	-	44	80	-	259	322	-
Stage 2	-	-	-	-	-	-	497	320	-	218	80	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0			0			\$ 533.7		
HCM LOS							A			F		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	-	689	-	-	240	-	-	45				
HCM Lane V/C Ratio	-	0.017	-	-	-	-	-	1.695				
HCM Control Delay (s)	0	10.3	-	-	0	-	-	\$ 533.7				
HCM Lane LOS	A	B	-	-	A	-	-	F				
HCM 95th %tile Q(veh)	-	0.1	-	-	0	-	-	7.6				
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	4.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	17	79	13	845	1856	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	960	2158	8
Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2668	1079	2158	0	-	0
Stage 1	2158	-	-	-	-	-
Stage 2	510	-	-	-	-	-
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	214	245	-	-	-
Stage 1	74	-	-	-	-	-
Stage 2	568	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 17	214	245	-	-	-
Mov Cap-2 Maneuver	~ 17	-	-	-	-	-
Stage 1	74	-	-	-	-	-
Stage 2	533	-	-	-	-	-
Approach	EB		NB		SB	
HCM Control Delay, s	134.4		0.3		0	
HCM LOS	F					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	245	-	17	214	-	-
HCM Lane V/C Ratio	0.06	-	1.19	0.439	-	-
HCM Control Delay (s)	20.6	-\$	599.2	34.4	-	-
HCM Lane LOS	C	-	F	D	-	-
HCM 95th %tile Q(veh)	0.2	-	3	2.1	-	-
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	25.4											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	20	0	105	26	0	13	25	791	37	28	1955	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	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	92	88	85	92	85	86	86	86	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	23	0	119	31	0	15	29	920	43	31	2148	9

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2728	3188	1074	2114	3188	460	2148	0	0	920	0	0
Stage 1	2210	2210	-	978	978	-	-	-	-	-	-	-
Stage 2	518	978	-	1136	2210	-	-	-	-	-	-	-
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	216	~ 29	10	548	247	-	-	738	-	-
Stage 1	45	81	-	269	327	-	-	-	-	-	-	-
Stage 2	509	327	-	215	81	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 9	8	216	~ 11	8	548	247	-	-	738	-	-
Mov Cap-2 Maneuver	~ 9	8	-	~ 11	8	-	-	-	-	-	-	-
Stage 1	40	78	-	237	289	-	-	-	-	-	-	-
Stage 2	437	289	-	92	78	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	274.8	\$ 995.9	0.6	0.1
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	247	-	-	9	216	11	548	738	-	-
HCM Lane V/C Ratio	0.118	-	-	2.525	0.552	2.781	0.028	0.042	-	-
HCM Control Delay (s)	21.5	-	-	\$ 1504.7	40.5	\$ 1488	11.8	10.1	-	-
HCM Lane LOS	C	-	-	F	E	F	B	B	-	-
HCM 95th %tile Q(veh)	0.4	-	-	3.9	3	4.8	0.1	0.1	-	-

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

Lanier Tract DRI
6: GA 53 & Beechwood Boulevard

no build a.m.

Intersection						
Int Delay, s/veh	2.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	6	45	30	900	2233	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	1034	2509	2
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	3095	1254	2509	0	-	0
Stage 1	2509	-	-	-	-	-
Stage 2	586	-	-	-	-	-
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	166	184	-	-	-
Stage 1	48	-	-	-	-	-
Stage 2	525	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 7	166	184	-	-	-
Mov Cap-2 Maneuver	~ 7	-	-	-	-	-
Stage 1	48	-	-	-	-	-
Stage 2	428	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	152.8	0.9		0		
HCM LOS	F					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	184	-	7	166	-	-
HCM Lane V/C Ratio	0.187	-	1.045	0.331	-	-
HCM Control Delay (s)	29	\$	1021.4	37	-	-
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

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	805	12	15	2117	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	3515	0	1814	3628	0
Flt Permitted		0.940			0.380		0.035			0.298		
Satd. Flow (perm)	0	1572	0	0	703	0	66	3515	0	569	3628	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		69			14			3				
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	947	14	17	2433	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	170	0	0	80	0	72	961	0	17	2433	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		11.8	126.0		114.2	114.2	
Total Split (%)	16.0%	16.0%		16.0%	16.0%		7.9%	84.0%		76.1%	76.1%	
Maximum Green (s)	17.4	17.4		17.4	17.4		6.2	119.9		108.1	108.1	
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		110.2	110.2	
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	0.34		0.04	0.91	
Control Delay		59.8			139.1		52.1	2.2		6.3	23.4	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		59.8			139.1		52.1	2.2		6.3	23.4	
LOS		E			F		D	A		A	C	
Approach Delay		59.8			139.1			5.7			23.3	
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: 120

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.95

Intersection Signal Delay: 22.5

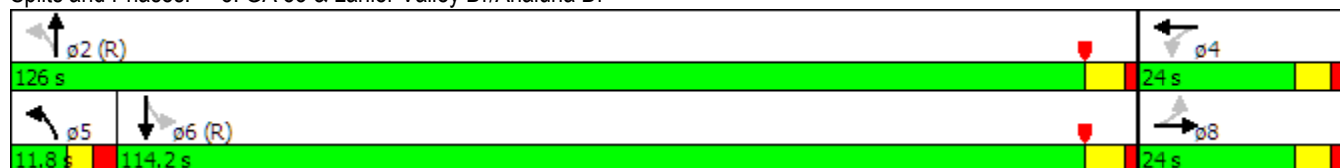
Intersection LOS: C

Intersection Capacity Utilization 81.4%

ICU Level of Service D

Analysis Period (min) 15

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



Lanier Tract DRI

7: 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)	443	31	378	46	21	20	311	532	61	31	1303	921
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			549
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)	457	32	390	74	34	32	334	572	66	34	1448	1023
Shared Lane Traffic (%)			47%									
Lane Group Flow (vph)	457	215	207	74	66	0	334	572	66	34	1448	1023
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

7: 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		19.0	64.6	64.6	14.2	59.8	59.8
Total Split (%)	15.3%	39.4%	39.4%	8.1%	32.1%		12.7%	43.1%	43.1%	9.5%	39.9%	39.9%
Maximum Green (s)	15.7	51.8	51.8	5.6	40.9		11.5	58.0	58.0	7.0	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	17.5	17.5	14.0	8.8		11.5	93.5	93.5	8.3	87.5	87.5
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	1.23	0.62	0.57	0.58	0.51		1.25	0.26	0.06	0.34	0.68	0.87
Control Delay	176.4	20.5	13.5	70.3	52.3		197.5	17.5	1.5	80.9	21.6	15.1
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	176.4	20.5	13.5	70.3	52.3		197.5	17.5	1.5	80.9	21.6	15.1
LOS	F	C	B	E	D		F	B	A	F	C	B
Approach Delay		99.9			61.8			78.3			19.7	
Approach LOS		F			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: 1.25

Intersection Signal Delay: 49.4

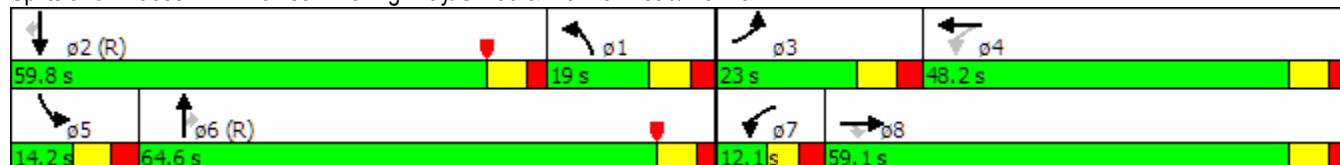
Intersection LOS: D

Intersection Capacity Utilization 87.9%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 7: Dawsonville Highway/GA 53 & McEver Road/McEver



Lanier Tract DRI

8: 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	851	11	13	1561	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		0.080			0.289		
Satd. Flow (perm)	0	1349	1591	0	1377	1558	151	3522	1607	549	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	990	13	14	1697	62
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	83	173	0	11	6	173	990	13	14	1697	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

8: 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	0.59	0.35	0.01	0.03	0.69	0.05
Control Delay		85.5	24.1		59.9	0.2	29.9	4.6	0.0	4.0	13.9	0.7
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	29.9	4.6	0.0	4.0	14.0	0.7
LOS		F	C		E	A	C	A	A	A	B	A
Approach Delay		44.0			38.8			8.3			13.4	
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: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.69

Intersection Signal Delay: 14.1

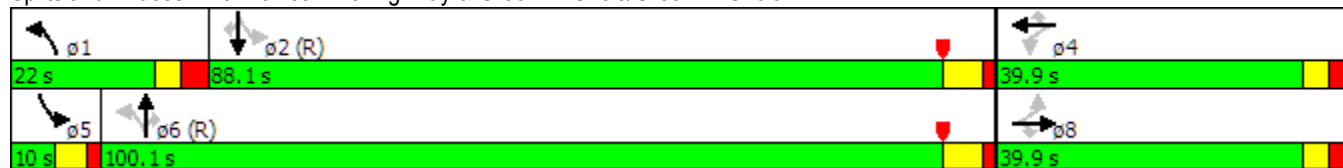
Intersection LOS: B

Intersection Capacity Utilization 77.1%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 8: Dawsonville Highway & Greenhill Circle/Greenhill Circle



Lanier Tract DRI

9: 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)	154	2	9	2	4	3	11	832	14	1	1389	374
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		0.123			0.286		
Satd. Flow (perm)	1723	1729	1623	0	1773	1534	238	3646	1647	546	3592	1623
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			113			119			70			217
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)	183	2	11	4	7	5	13	1002	17	1	1494	402
Shared Lane Traffic (%)	49%											
Lane Group Flow (vph)	93	92	11	0	11	5	13	1002	17	1	1494	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		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

9: 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	112.9	112.9	112.9
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	0.60	0.04		0.14	0.03	0.05	0.35	0.01	0.00	0.55	0.32
Control Delay	81.3	80.6	0.3		72.5	0.3	5.9	6.2	0.0	7.0	10.5	4.2
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	81.3	80.6	0.3		72.5	0.3	5.9	6.2	0.0	7.0	10.9	4.2
LOS	F	F	A		E	A	A	A	A	A	B	A
Approach Delay		76.4			49.9			6.1			9.4	
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: 12.7

Intersection LOS: B

Intersection Capacity Utilization 62.9%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 9: Dawsonville Highway & Shallowford Rd/Best Buy

 p1	 p2 (R)	 p3	 p4
10.8 s	63.6 s	36.7 s	38.9 s
 p6 (R)			
74.4 s			

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	42.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	17	1182	0	2	1883	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	1244	0	2	1961	22	0	0	0	47	0	15
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1983	0	0	1244	0	0	2265	3268	622	2635	3257	992
Stage 1	-	-	-	-	-	-	1280	1280	-	1977	1977	-
Stage 2	-	-	-	-	-	-	985	1988	-	658	1280	-
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	287	-	-	555	-	-	22	9	430	~ 11	9	244
Stage 1	-	-	-	-	-	-	175	235	-	64	106	-
Stage 2	-	-	-	-	-	-	266	105	-	420	235	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	287	-	-	555	-	-	20	8	430	~ 10	8	244
Mov Cap-2 Maneuver	-	-	-	-	-	-	20	8	-	~ 10	8	-
Stage 1	-	-	-	-	-	-	164	220	-	60	106	-
Stage 2	-	-	-	-	-	-	249	105	-	394	220	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			0			0			\$ 2280.3		
HCM LOS							A			F		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	-	287	-	-	555	-	-	13				
HCM Lane V/C Ratio	-	0.062	-	-	0.004	-	-	4.779				
HCM Control Delay (s)	0	18.4	-	-	11.5	-	\$ 2280.3					
HCM Lane LOS	A	C	-	-	B	-	-	F				
HCM 95th %tile Q(veh)	-	0.2	-	-	0	-	-	8.8				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined			*: All major volume in platoon					

Intersection						
Int Delay, s/veh	1.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	12	52	68	1860	1254	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	16	68	72	1958	1254	15
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	2376	627	1254	0	-	0
Stage 1	1254	-	-	-	-	-
Stage 2	1122	-	-	-	-	-
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	29	426	551	-	-	-
Stage 1	232	-	-	-	-	-
Stage 2	273	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	25	426	551	-	-	-
Mov Cap-2 Maneuver	25	-	-	-	-	-
Stage 1	232	-	-	-	-	-
Stage 2	237	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	65.7	0.4		0		
HCM LOS	F					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	551	-	25	426	-	-
HCM Lane V/C Ratio	0.13	-	0.632	0.161	-	-
HCM Control Delay (s)	12.5	-	284.7	15.1	-	-
HCM Lane LOS	B	-	F	C	-	-
HCM 95th %tile Q(veh)	0.4	-	1.9	0.6	-	-

Lanier Tract DRI
4: Canterbury Road & GA 53

no build p.m.

Intersection												
Int Delay, s/veh	511.6											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	8	0	31	114	0	90	123	1809	124	65	1193	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	92	80	92	92	92	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	124	0	98	128	1884	129	68	1243	16

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2576	3519	621	2898	3519	942	1243	0	0	1884	0	0
Stage 1	1378	1378	-	2141	2141	-	-	-	-	-	-	-
Stage 2	1198	2141	-	757	1378	-	-	-	-	-	-	-
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	430	~ 7	6	264	556	-	-	314	-	-
Stage 1	152	210	-	~ 50	87	-	-	-	-	-	-	-
Stage 2	197	87	-	366	210	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 6	4	430	~ 4	4	264	556	-	-	314	-	-
Mov Cap-2 Maneuver	~ 6	4	-	~ 4	4	-	-	-	-	-	-	-
Stage 1	117	165	-	~ 38	67	-	-	-	-	-	-	-
Stage 2	95	67	-	261	165	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	\$ 307.2	\$ 8544.2	0.8	1
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	556	-	-	6	430	4	264	314	-	-
HCM Lane V/C Ratio	0.23	-	-	1.667	0.09	30.978	0.371	0.216	-	-
HCM Control Delay (s)	13.4	-	-	\$ 1442.4	\$ 25268.7	26.4	19.6	-	-	-
HCM Lane LOS	B	-	-	F	B	F	D	C	-	-
HCM 95th %tile Q(veh)	0.9	-	-	2.2	0.3	17.6	1.6	0.8	-	-

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	2282	1614	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	2305	1647	10
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	2991	824	1647	0	-	0
Stage 1	1647	-	-	-	-	-
Stage 2	1344	-	-	-	-	-
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	11	320	398	-	-	-
Stage 1	145	-	-	-	-	-
Stage 2	211	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	8	320	398	-	-	-
Mov Cap-2 Maneuver	8	-	-	-	-	-
Stage 1	145	-	-	-	-	-
Stage 2	160	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	29.3	0.7		0		
HCM LOS	D					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	398	-	8	320	-	-
HCM Lane V/C Ratio	0.241	-	0.176	0.229	-	-
HCM Control Delay (s)	16.9	-	534.2	19.6	-	-
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

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	1994	42	24	1408	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		0.864			0.597		0.122			0.071		
Satd. Flow (perm)	0	1446	0	0	1074	0	231	3581	0	136	3592	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		119			26			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	2077	44	25	1467	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	146	0	0	123	0	206	2121	0	25	1470	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)		18.0			18.0		129.8	129.3		110.6	110.6	
Actuated g/C Ratio		0.11			0.11		0.81	0.81		0.69	0.69	
v/c Ratio		0.54			0.86		0.65	0.73		0.27	0.59	
Control Delay		23.3			98.5		24.2	11.1		22.8	15.9	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		23.3			98.5		24.2	11.1		22.8	15.9	
LOS		C			F		C	B		C	B	
Approach Delay		23.3			98.5			12.3			16.0	
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: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.86

Intersection Signal Delay: 16.6

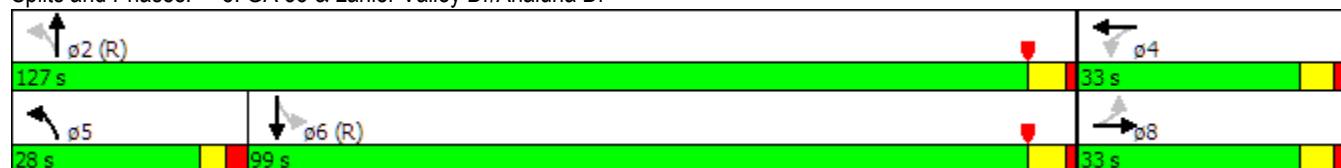
Intersection LOS: B

Intersection Capacity Utilization 88.2%

ICU Level of Service E

Analysis Period (min) 15

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



Lanier Tract DRI

7: 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)	962	235	426	96	100	89	478	1551	51	68	1186	563
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	308		27				172			320
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)	1013	247	448	112	116	103	493	1599	53	75	1303	619
Shared Lane Traffic (%)			27%									
Lane Group Flow (vph)	1013	368	327	112	219	0	493	1599	53	75	1303	619
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

7: 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		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	44.8	44.8	31.5	23.5		14.5	65.4	65.4	15.0	65.6	65.6
Actuated g/C Ratio	0.17	0.28	0.28	0.20	0.15		0.09	0.41	0.41	0.09	0.41	0.41
v/c Ratio	1.68	0.75	0.50	0.54	0.80		1.57	1.09	0.07	0.44	0.89	0.72
Control Delay	351.1	59.4	8.0	47.6	77.6		314.4	106.2	0.1	67.3	66.9	40.3
Queue Delay	0.0	14.4	1.3	25.2	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	351.1	73.8	9.3	72.8	77.6		314.4	106.2	0.1	67.3	66.9	40.3
LOS	F	E	A	E	E		F	F	A	E	E	D
Approach Delay		225.9			76.0			151.4			58.7	
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: 1.68

Intersection Signal Delay: 138.0

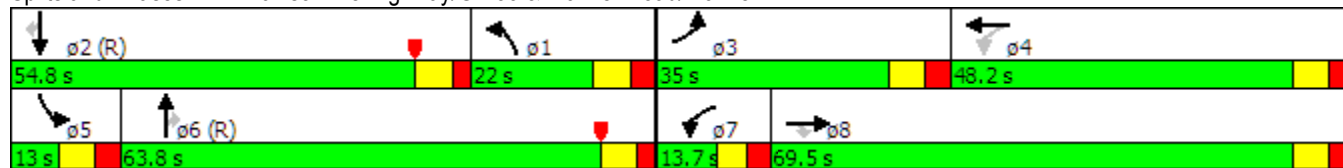
Intersection LOS: F

Intersection Capacity Utilization 108.9%

ICU Level of Service G

Analysis Period (min) 15

Splits and Phases: 7: Dawsonville Highway/GA 53 & McEver Road/McEver



Lanier Tract DRI

8: 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	1978	77	44	1587	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		0.045			0.048		
Satd. Flow (perm)	0	1106	1591	0	884	1558	85	3592	1607	91	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	2039	79	46	1671	62
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	171	167	0	113	54	282	2039	79	46	1671	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

8: 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	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	0.89	0.81	0.07	0.40	0.82	0.07
Control Delay		103.0	9.8		87.7	1.7	55.8	29.8	5.4	23.1	56.9	11.5
Queue Delay		0.0	5.4		87.6	0.0	0.0	47.2	0.0	0.0	1.6	0.0
Total Delay		103.0	15.2		175.3	1.7	55.8	76.9	5.4	23.1	58.5	11.5
LOS		F	B		F	A	E	E	A	C	E	B
Approach Delay		59.6			119.2			72.1			56.0	
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: 120

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.89

Intersection Signal Delay: 66.7

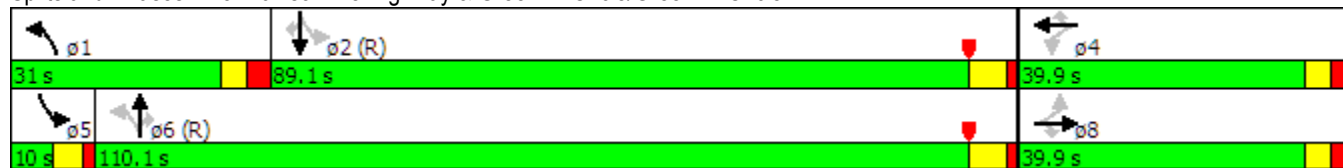
Intersection LOS: E

Intersection Capacity Utilization 89.2%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 8: Dawsonville Highway & Greenhill Circle/Greenhill Circle



Lanier Tract DRI

9: 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)	578	42	29	40	30	8	44	1851	126	8	1326	517
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		0.075			0.046		
Satd. Flow (perm)	1723	1740	1623	0	1754	1534	145	3682	1647	88	3628	1623
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			106			111			65			315
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)	642	47	32	45	34	9	47	1969	134	9	1457	568
Shared Lane Traffic (%)	47%											
Lane Group Flow (vph)	340	349	32	0	79	9	47	1969	134	9	1457	568
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

9: 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)	36.7	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	1.05	1.07	0.08		0.57	0.04	0.29	0.87	0.13	0.19	0.74	0.55
Control Delay	125.0	129.2	0.4		86.5	0.4	17.2	31.8	7.4	56.6	55.0	33.1
Queue Delay	1.1	1.2	0.0		0.0	0.0	0.0	46.9	0.0	0.0	22.1	0.8
Total Delay	126.1	130.4	0.4		86.5	0.4	17.2	78.7	7.4	56.6	77.0	33.9
LOS	F	F	A		F	A	B	E	A	E	E	C
Approach Delay		122.6			77.7			73.0			64.9	
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: 1.07

Intersection Signal Delay: 76.9

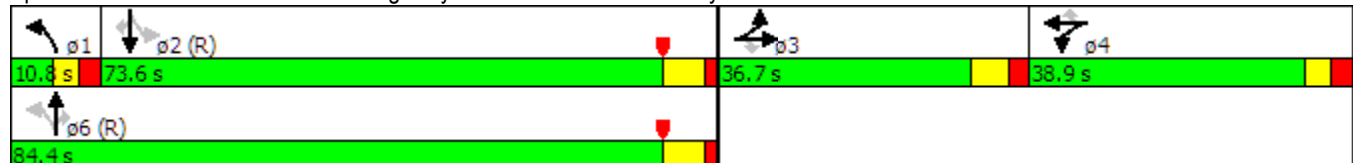
Intersection LOS: E

Intersection Capacity Utilization 88.6%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 9: Dawsonville Highway & Shallowford Rd/Best Buy



Appendix E

Future Intersection Analysis

Lanier Tract DRI
1: Sportsman Club Road & Strickland Drive

future a.m.

Intersection						
Int Delay, s/veh	3.8					
Movement	WBL	WBR		NBT	NBR	SBL SBT
Vol, veh/h	24	0		7	9	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	48	0		12	16	0 39
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	59	20	0	0	28	0
Stage 1	20	-	-	-	-	-
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	948	1058	-	-	1585	-
Stage 1	1003	-	-	-	-	-
Stage 2	983	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	948	1058	-	-	1585	-
Mov Cap-2 Maneuver	948	-	-	-	-	-
Stage 1	1003	-	-	-	-	-
Stage 2	983	-	-	-	-	-
Approach	WB		NB		SB	
HCM Control Delay, s	9		0		0	
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	948	1585	-	
HCM Lane V/C Ratio	-	-	0.051	-	-	
HCM Control Delay (s)	-	-	9	0	-	
HCM Lane LOS	-	-	A	A	-	
HCM 95th %tile Q(veh)	-	-	0.2	0	-	

Lanier Tract DRI
2: GA 53 & Sportsman Club Road

future a.m.

Intersection												
Int Delay, s/veh	25.9											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	11	1896	0	5	847	16	0	0	0	37	0	21
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	13	2205	0	6	1008	19	0	0	0	63	0	36

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1027	0	0	2205	0	0	2746	3269	1102	2158	3260	514
Stage 1	-	-	-	-	-	-	2230	2230	-	1030	1030	-
Stage 2	-	-	-	-	-	-	516	1039	-	1128	2230	-
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	672	-	-	235	-	-	9	9	206	~ 27	9	505
Stage 1	-	-	-	-	-	-	44	79	-	250	309	-
Stage 2	-	-	-	-	-	-	510	306	-	218	79	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	672	-	-	235	-	-	8	9	206	~ 26	9	505
Mov Cap-2 Maneuver	-	-	-	-	-	-	8	9	-	~ 26	9	-
Stage 1	-	-	-	-	-	-	43	77	-	245	301	-
Stage 2	-	-	-	-	-	-	462	298	-	214	77	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.1	0	\$ 878
HCM LOS			A	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	672	-	-	235	-	-	40
HCM Lane V/C Ratio	-	0.019	-	-	0.025	-	-	2.458
HCM Control Delay (s)	0	10.5	-	-	20.7	-	-	\$ 878
HCM Lane LOS	A	B	-	-	C	-	-	F
HCM 95th %tile Q(veh)	-	0.1	-	-	0.1	-	-	10.7

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

Lanier Tract DRI
3: GA 53 & Avonlea Way

future a.m.

Intersection												
Int Delay, s/veh	12.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	17	0	79	13	0	4	13	883	8	9	1880	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	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	92	84	80	92	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	16	0	5	15	1003	9	10	2186	8
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2738	3240	1093	2147	3240	502	2186	0	0	1003	0	0
Stage 1	2207	2207	-	1033	1033	-	-	-	-	-	-	-
Stage 2	531	1033	-	1114	2207	-	-	-	-	-	-	-
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	9	209	27	9	515	239	-	-	686	-	-
Stage 1	45	81	-	249	308	-	-	-	-	-	-	-
Stage 2	500	308	-	222	81	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 9	8	209	~ 14	8	515	239	-	-	686	-	-
Mov Cap-2 Maneuver	~ 9	8	-	~ 14	8	-	-	-	-	-	-	-
Stage 1	42	80	-	233	289	-	-	-	-	-	-	-
Stage 2	464	289	-	120	80	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	273.9			\$ 512.6			0.3			0		
HCM LOS	F			F								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR		
Capacity (veh/h)	239	-	-	9	209	14	515	686	-	-		
HCM Lane V/C Ratio	0.062	-	-	2.249	0.45	1.161	0.01	0.015	-	-		
HCM Control Delay (s)	21.1	-		\$ 1381.4	35.6	\$ 666.6	12.1	10.3	-	-		
HCM Lane LOS	C	-	-	F	E	F	B	B	-	-		
HCM 95th %tile Q(veh)	0.2	-	-	3.5	2.1	2.6	0	0	-	-		
Notes												
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon												

Lanier Tract DRI
4: GA 53 & Canterbury Road

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Intersection												
Int Delay, s/veh	53.2											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	20	0	105	42	0	17	25	832	48	31	1989	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	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	92	88	85	92	85	86	86	86	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	23	0	119	49	0	20	29	967	56	34	2186	9

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2796	3280	1093	2187	3280	484	2186	0	0	967	0	0
Stage 1	2254	2254	-	1026	1026	-	-	-	-	-	-	-
Stage 2	542	1026	-	1161	2254	-	-	-	-	-	-	-
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	~ 25	9	529	239	-	-	708	-	-
Stage 1	42	76	-	251	310	-	-	-	-	-	-	-
Stage 2	492	310	-	208	76	-	-	-	-	-	-	-
Platoon blocked, %							-	-			-	-
Mov Cap-1 Maneuver	~ 8	8	209	~ 9	8	529	239	-	-	708	-	-
Mov Cap-2 Maneuver	~ 8	8	-	~ 9	8	-	-	-	-	-	-	-
Stage 1	37	72	-	221	272	-	-	-	-	-	-	-
Stage 2	416	272	-	85	72	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	\$ 313.4	\$ 2020	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)	239	-	-	8	209	9	529	708	-	-
HCM Lane V/C Ratio	0.122	-	-	2.841	0.571	5.49	0.038	0.048	-	-
HCM Control Delay (s)	22.1	-	-	\$ 1733.4	42.9	\$ 2832.7	12.1	10.3	-	-
HCM Lane LOS	C	-	-	F	E	F	B	B	-	-
HCM 95th %tile Q(veh)	0.4	-	-	4	3.1	7.5	0.1	0.2	-	-

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

Lanier Tract DRI
6: GA 53 & Beechwood Boulevard

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Intersection

Int Delay, s/veh 3.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	6	45	30	968	2318	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	1113	2604	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	3229	1302	2604	0	-	0
Stage 1	2604	-	-	-	-	-
Stage 2	625	-	-	-	-	-
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	154	168	-	-	-
Stage 1	43	-	-	-	-	-
Stage 2	501	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 6	154	168	-	-	-
Mov Cap-2 Maneuver	~ 6	-	-	-	-	-
Stage 1	43	-	-	-	-	-
Stage 2	400	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	180.7	1	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	168	-	6	154	-	-
HCM Lane V/C Ratio	0.205	-	1.22	0.356	-	-
HCM Control Delay (s)	31.9	\$	1230.3	40.8	-	-
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

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	21	6	127	83	3	32	61	847	38	22	2160	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			0.963			0.994				
Flt Protected		0.993			0.966		0.950			0.950		
Satd. Flow (prot)	0	1661	0	0	1803	0	1796	3503	0	1814	3628	0
Flt Permitted		0.942			0.484		0.036			0.275		
Satd. Flow (perm)	0	1575	0	0	903	0	68	3503	0	525	3628	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		57			11			9				
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	100	4	39	72	996	45	25	2483	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	170	0	0	143	0	72	1041	0	25	2483	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

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	29.0	29.0		29.0	29.0		10.6	121.0		110.4	110.4	
Total Split (%)	19.3%	19.3%		19.3%	19.3%		7.1%	80.7%		73.6%	73.6%	
Maximum Green (s)	22.4	22.4		22.4	22.4		5.0	114.9		104.3	104.3	
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)		22.4			22.4		115.4	114.9		104.3	104.3	
Actuated g/C Ratio		0.15			0.15		0.77	0.77		0.70	0.70	
v/c Ratio		0.60			0.99		0.66	0.39		0.07	0.98	
Control Delay		48.9			130.7		58.1	3.2		7.9	36.9	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		48.9			130.7		58.1	3.2		7.9	36.9	
LOS		D			F		E	A		A	D	
Approach Delay		48.9			130.7			6.8			36.6	
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: 0.99

Intersection Signal Delay: 32.1

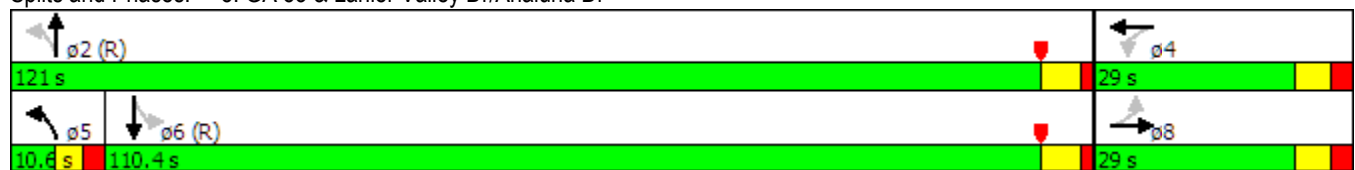
Intersection LOS: C

Intersection Capacity Utilization 91.8%

ICU Level of Service F

Analysis Period (min) 15

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



Lanier Tract DRI

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

future a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	466	31	378	46	21	20	311	577	61	31	1361	948
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			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)	480	32	390	74	34	32	334	620	66	34	1512	1053
Shared Lane Traffic (%)			47%									
Lane Group Flow (vph)	480	215	207	74	66	0	334	620	66	34	1512	1053
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

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

future 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	64.6	64.6	14.2	59.8	59.8
Total Split (%)	15.3%	39.4%	39.4%	8.1%	32.1%		12.7%	43.1%	43.1%	9.5%	39.9%	39.9%
Maximum Green (s)	15.7	51.8	51.8	5.6	40.9		11.5	58.0	58.0	7.0	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	17.5	17.5	14.0	8.8		11.5	93.5	93.5	8.3	87.5	87.5
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	1.29	0.62	0.57	0.58	0.51		1.25	0.29	0.06	0.34	0.71	0.90
Control Delay	198.7	20.5	13.5	70.3	52.3		197.3	17.5	1.4	74.8	24.0	17.7
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	198.7	20.5	13.5	70.3	52.3		197.3	17.5	1.4	74.8	24.0	17.7
LOS	F	C	B	E	D		F	B	A	E	C	B
Approach Delay		113.7			61.8			75.3			22.1	
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: 1.29

Intersection Signal Delay: 52.7

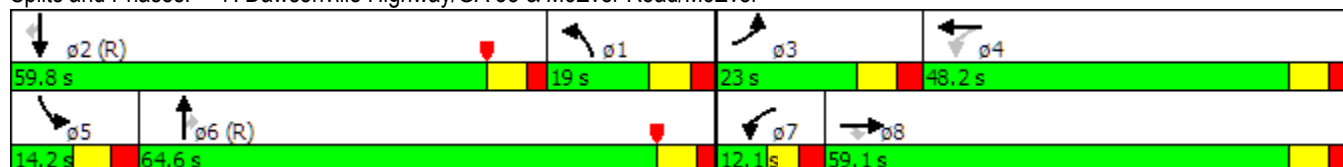
Intersection LOS: D

Intersection Capacity Utilization 89.6%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 7: Dawsonville Highway/GA 53 & McEver Road/McEver



Lanier Tract DRI

8: Dawsonville Highway & Greenhill Circle/Greenhill Circle

future 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	896	11	13	1619	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		0.070			0.275		
Satd. Flow (perm)	0	1349	1591	0	1377	1558	132	3522	1607	522	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	1042	13	14	1760	62
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	83	173	0	11	6	173	1042	13	14	1760	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

8: Dawsonville Highway & Greenhill Circle/Greenhill Circle

future 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	0.62	0.37	0.01	0.03	0.72	0.05
Control Delay		85.5	29.1		59.9	0.2	34.7	4.7	0.0	4.2	14.9	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	34.7	4.7	0.0	4.2	15.0	1.0
LOS		F	C		E	A	C	A	A	A	B	A
Approach Delay		47.4			38.8			8.9			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: 0.72

Intersection Signal Delay: 15.0

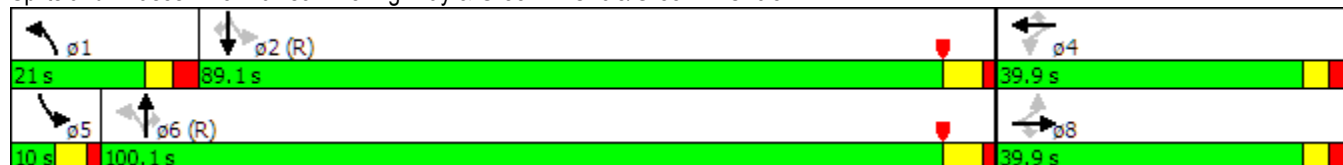
Intersection LOS: B

Intersection Capacity Utilization 78.7%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 8: Dawsonville Highway & Greenhill Circle/Greenhill Circle



Lanier Tract DRI

9: Dawsonville Highway & Shallowford Rd/Best Buy

future a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	161	2	9	2	4	3	11	870	14	1	1436	385
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		0.113			0.271		
Satd. Flow (perm)	1723	1729	1623	0	1773	1534	219	3646	1647	517	3592	1623
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			113			119			70			216
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)	192	2	11	4	7	5	13	1048	17	1	1544	414
Shared Lane Traffic (%)	50%											
Lane Group Flow (vph)	96	98	11	0	11	5	13	1048	17	1	1544	414
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

9: Dawsonville Highway & Shallowford Rd/Best Buy

future 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	0.62	0.04		0.14	0.03	0.06	0.37	0.01	0.00	0.57	0.33
Control Delay	80.7	81.3	0.3		72.5	0.3	6.1	6.5	0.0	7.0	11.8	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	80.7	81.3	0.3		72.5	0.3	6.1	6.5	0.0	7.0	12.3	4.6
LOS	F	F	A		E	A	A	A	A	A	B	A
Approach Delay		76.7			49.9			6.3			10.7	
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: 13.6

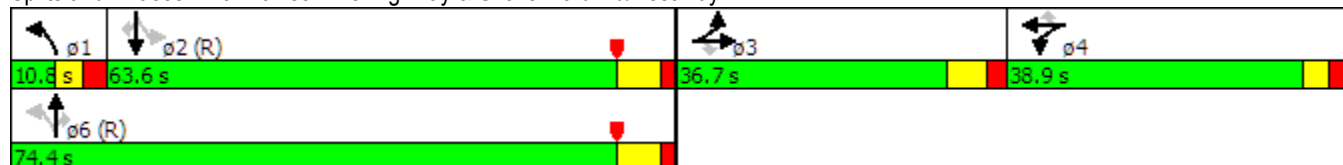
Intersection LOS: B

Intersection Capacity Utilization 64.2%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 9: Dawsonville Highway & Shallowford Rd/Best Buy



Lanier Tract DRI
1: Sportsman Club Road & Strickland Drive

future p.m.

Intersection						
Int Delay, s/veh	3.1					
Movement	WBL	WBR		NBT	NBR	SBL SBT
Vol, veh/h	21	0		32	23	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	48	0		37	27	0 30
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	81	51	0	0	64	0
Stage 1	51	-	-	-	-	-
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	921	1017	-	-	1538	-
Stage 1	971	-	-	-	-	-
Stage 2	993	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	921	1017	-	-	1538	-
Mov Cap-2 Maneuver	921	-	-	-	-	-
Stage 1	971	-	-	-	-	-
Stage 2	993	-	-	-	-	-
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)	-	-	921	1538	-	
HCM Lane V/C Ratio	-	-	0.052	-	-	
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

future p.m.

Intersection												
Int Delay, s/veh	77.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	20	1208	0	26	1908	31	0	0	0	40	0	14
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	21	1272	0	27	1988	32	0	0	0	61	0	21

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	2020	0	0	1272	0	0	2362	3388	636	2736	3372	1010
Stage 1	-	-	-	-	-	-	1314	1314	-	2058	2058	-
Stage 2	-	-	-	-	-	-	1048	2074	-	678	1314	-
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	278	-	-	542	-	-	19	7	421	~ 10	8	238
Stage 1	-	-	-	-	-	-	167	226	-	~ 57	96	-
Stage 2	-	-	-	-	-	-	244	95	-	408	226	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	278	-	-	542	-	-	16	6	421	~ 9	7	238
Mov Cap-2 Maneuver	-	-	-	-	-	-	16	6	-	~ 9	7	-
Stage 1	-	-	-	-	-	-	154	209	-	~ 53	91	-
Stage 2	-	-	-	-	-	-	211	90	-	377	209	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0.2	0	\$ 3237.1
HCM LOS			A	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	278	-	-	542	-	-	12
HCM Lane V/C Ratio	-	0.076	-	-	0.05	-	-	6.818
HCM Control Delay (s)	0	19	-	-	12	-	-	\$ 3237.1
HCM Lane LOS	A	C	-	-	B	-	-	F
HCM 95th %tile Q(veh)	-	0.2	-	-	0.2	-	-	11.4

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

Lanier Tract DRI
3: Avonlea Way & GA 53

future p.m.

Intersection												
Int Delay, s/veh	10.7											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	12	0	52	11	0	3	68	1897	18	11	1302	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	76	92	76	80	92	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	14	0	4	72	1997	19	11	1302	15

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2466	3464	651	2813	3464	998	1302	0	0	1997	0	0
Stage 1	1324	1324	-	2140	2140	-	-	-	-	-	-	-
Stage 2	1142	2140	-	673	1324	-	-	-	-	-	-	-
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	~ 15	7	411	~ 8	7	242	528	-	-	284	-	-
Stage 1	165	224	-	50	87	-	-	-	-	-	-	-
Stage 2	213	87	-	411	224	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 13	6	411	~ 6	6	242	528	-	-	284	-	-
Mov Cap-2 Maneuver	~ 13	6	-	~ 6	6	-	-	-	-	-	-	-
Stage 1	143	215	-	43	75	-	-	-	-	-	-	-
Stage 2	181	75	-	329	215	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	148	\$ 1366.9	0.4	0.2
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	528	-	-	13	411	6	242	284	-	-
HCM Lane V/C Ratio	0.136	-	-	1.215	0.166	2.292	0.015	0.039	-	-
HCM Control Delay (s)	12.9	-	-	\$ 722.2	15.5	\$ 1734.2	20.1	18.2	-	-
HCM Lane LOS	B	-	-	F	C	F	C	C	-	-
HCM 95th %tile Q(veh)	0.5	-	-	2.6	0.6	2.8	0	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

future p.m.

Intersection												
Int Delay, s/veh	623.4											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	8	0	31	129	0	94	123	1860	143	70	1249	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	92	80	92	92	92	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	140	0	102	128	1938	149	73	1301	16

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2672	3641	651	2990	3641	969	1301	0	0	1938	0	0
Stage 1	1447	1447	-	2194	2194	-	-	-	-	-	-	-
Stage 2	1225	2194	-	796	1447	-	-	-	-	-	-	-
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	411	~ 6	5	253	528	-	-	299	-	-
Stage 1	138	195	-	~ 46	82	-	-	-	-	-	-	-
Stage 2	190	82	-	347	195	-	-	-	-	-	-	-
Platoon blocked, %							-	-	-	-	-	-
Mov Cap-1 Maneuver	~ 4	3	411	~ 4	3	253	528	-	-	299	-	-
Mov Cap-2 Maneuver	~ 4	3	-	~ 4	3	-	-	-	-	-	-	-
Stage 1	105	147	-	~ 35	62	-	-	-	-	-	-	-
Stage 2	86	62	-	238	147	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	\$ 484.3	\$ 9907.3	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)	528	-	-	4	411	4	253	299	-	-
HCM Lane V/C Ratio	0.243	-	-	2.5	0.094	35.054	0.404	0.244	-	-
HCM Control Delay (s)	14	-	\$ 2303.8	14	77105.8	28.5	20.9	-	-	-
HCM Lane LOS	B	-	F	B	F	D	C	-	-	-
HCM 95th %tile Q(veh)	0.9	-	-	2.3	0.3	19.7	1.9	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	2389	1713	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	2413	1748	10
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	3146	875	1748	0	-	0
Stage 1	1748	-	-	-	-	-
Stage 2	1398	-	-	-	-	-
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	198	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	7	297	364	-	-	-
Mov Cap-2 Maneuver	7	-	-	-	-	-
Stage 1	128	-	-	-	-	-
Stage 2	146	-	-	-	-	-
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

future p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	23	1	106	80	8	65	198	2055	88	35	1468	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			0.943			0.994				
Flt Protected		0.991			0.974		0.950			0.950		
Satd. Flow (prot)	0	1659	0	0	1780	0	1796	3570	0	1814	3592	0
Flt Permitted		0.896			0.616		0.099			0.045		
Satd. Flow (perm)	0	1500	0	0	1126	0	187	3570	0	86	3592	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		119			20			8				
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	94	9	76	206	2141	92	36	1529	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	146	0	0	179	0	206	2233	0	36	1532	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

future p.m.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	34.0	34.0		34.0	34.0		22.0	126.0		104.0	104.0	
Total Split (%)	21.3%	21.3%		21.3%	21.3%		13.8%	78.8%		65.0%	65.0%	
Maximum Green (s)	27.4	27.4		27.4	27.4		16.4	119.9		97.9	97.9	
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)		25.0			25.0		122.8	122.3		103.9	103.9	
Actuated g/C Ratio		0.16			0.16		0.77	0.76		0.65	0.65	
v/c Ratio		0.44			0.93		0.76	0.82		0.65	0.66	
Control Delay		18.8			106.6		29.0	10.2		75.5	19.8	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		18.8			106.6		29.0	10.2		75.5	19.8	
LOS		B			F		C	B		E	B	
Approach Delay		18.8			106.6			11.8			21.1	
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: 19.3

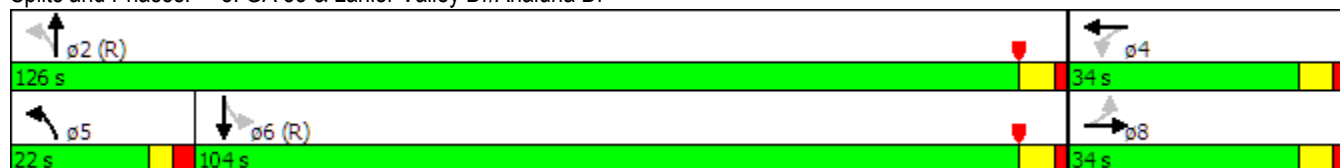
Intersection LOS: B

Intersection Capacity Utilization 94.9%

ICU Level of Service F

Analysis Period (min) 15

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



Lanier Tract DRI

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

future 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	89	478	1624	51	68	1251	597
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			0.427			0.950			0.950		
Satd. Flow (perm)	3484	1708	1527	791	1721	0	3484	3592	1607	1814	3592	1623
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18	301		27				172			324
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	103	493	1674	53	75	1375	656
Shared Lane Traffic (%)			27%									
Lane Group Flow (vph)	1048	368	327	112	219	0	493	1674	53	75	1375	656
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

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

future 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	43.5	43.5	31.8	23.5		14.5	66.4	66.4	15.0	66.6	66.6
Actuated g/C Ratio	0.17	0.27	0.27	0.20	0.15		0.09	0.42	0.42	0.09	0.42	0.42
v/c Ratio	1.80	0.77	0.52	0.55	0.80		1.57	1.12	0.07	0.44	0.92	0.76
Control Delay	403.8	61.9	8.9	48.9	77.6		304.5	100.5	0.1	68.4	44.1	16.9
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	403.8	61.9	8.9	48.9	77.6		304.5	100.5	0.1	68.4	44.1	16.9
LOS	F	E	A	D	E		F	F	A	E	D	B
Approach Delay		257.5			67.9			143.4			36.5	
Approach LOS		F			E			F			D	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 0 (0%), 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: 135.4

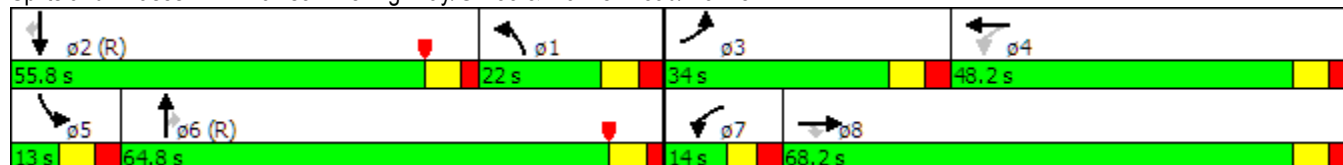
Intersection LOS: F

Intersection Capacity Utilization 111.8%

ICU Level of Service H

Analysis Period (min) 15

Splits and Phases: 7: Dawsonville Highway/GA 53 & McEver Road/McEver



Lanier Tract DRI

8: Dawsonville Highway & Greenhill Circle/Greenhill Circle

future 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	2051	77	44	1652	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	2114	79	46	1739	62
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	171	167	0	113	54	282	2114	79	46	1739	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

8: Dawsonville Highway & Greenhill Circle/Greenhill Circle

future 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	0.84	0.07	0.41	0.85	0.07
Control Delay		103.0	9.8		87.7	1.7	58.3	30.5	5.2	27.3	19.7	1.0
Queue Delay		0.0	5.5		87.6	0.0	0.0	46.9	0.0	0.0	1.0	0.0
Total Delay		103.0	15.3		175.3	1.7	58.3	77.5	5.2	27.3	20.7	1.0
LOS		F	B		F	A	E	E	A	C	C	A
Approach Delay		59.7			119.2			73.0			20.2	
Approach LOS		E			F			E			C	

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: 53.5

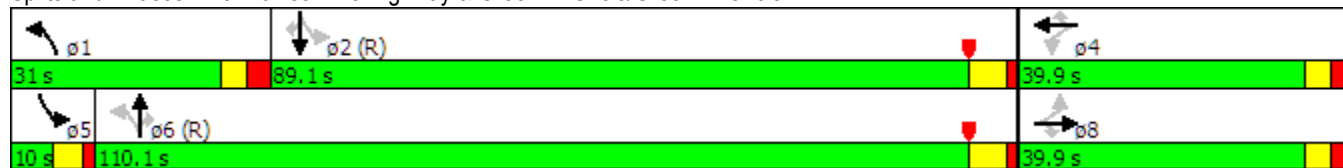
Intersection LOS: D

Intersection Capacity Utilization 91.0%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 8: Dawsonville Highway & Greenhill Circle/Greenhill Circle



Lanier Tract DRI

9: Dawsonville Highway & Shallowford Rd/Best Buy

future p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	591	42	29	40	30	8	44	1911	126	8	1380	528
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		0.063			0.047		
Satd. Flow (perm)	1723	1738	1623	0	1754	1534	122	3682	1647	90	3628	1623
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			106			111			65			308
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)	657	47	32	45	34	9	47	2033	134	9	1516	580
Shared Lane Traffic (%)	47%											
Lane Group Flow (vph)	348	356	32	0	79	9	47	2033	134	9	1516	580
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

9: Dawsonville Highway & Shallowford Rd/Best Buy

future 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	1.07	1.08	0.08		0.57	0.04	0.31	0.90	0.13	0.19	0.77	0.57
Control Delay	128.3	131.9	0.4		86.5	0.4	18.3	34.5	7.5	54.2	53.6	31.3
Queue Delay	1.2	1.2	0.0		0.0	0.0	0.0	46.4	0.0	0.0	37.4	0.8
Total Delay	129.5	133.2	0.4		86.5	0.4	18.3	80.9	7.5	54.2	91.0	32.1
LOS	F	F	A		F	A	B	F	A	D	F	C
Approach Delay		125.7			77.7			75.1			74.6	
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: 1.08

Intersection Signal Delay: 82.2

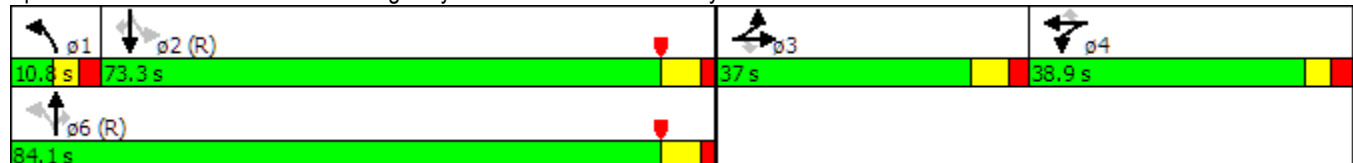
Intersection LOS: F

Intersection Capacity Utilization 90.6%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 9: Dawsonville Highway & Shallowford Rd/Best Buy



CITY OF GAINESVILLE

AGENDA REQUEST

Date Submitted: 2/21/2017

Presenter: Matt Tate

Item of Business: 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-L-A (R-L-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: 3/14/2017

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:

Facts & Issues for Consideration:

Department Recommendation:

Planning staff has determined that the applicant will need to provide additional traffic data prior to staff giving an official recommendation. Therefore, staff is recommending the three Oak Hall Companies, LLC agenda items be **tabled** for a period of 60-days to be scheduled for the May 9, 2017 Planning and Appeals Board meeting.

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
☐ Staff Memo	Backup Material
☐ Location Maps	Backup Material
☐ Overall Location Map	Backup Material
☐ Narrative	Backup Material

▣	Survey	Backup Material
▣	Concept Plan	Backup Material
▣	Elevations and Floor Plans	Backup Material
▣	Traffic Impact Study	Backup Material



CITY OF GAINESVILLE

COMMUNITY
DEVELOPMENT
DEPARTMENT

Post Office Box 2496

Gainesville, Georgia 30503-2496

Telephone: 770-531-6570

Fax: 770-297-7826

Web Site: www.gainesville.org

MEMORANDUM

TO: Gainesville Planning and Appeals Board

FROM: Community Development Department – Planning Division

DATE: March 14, 2017

SUBJECT: Oak Hall Companies, LLC

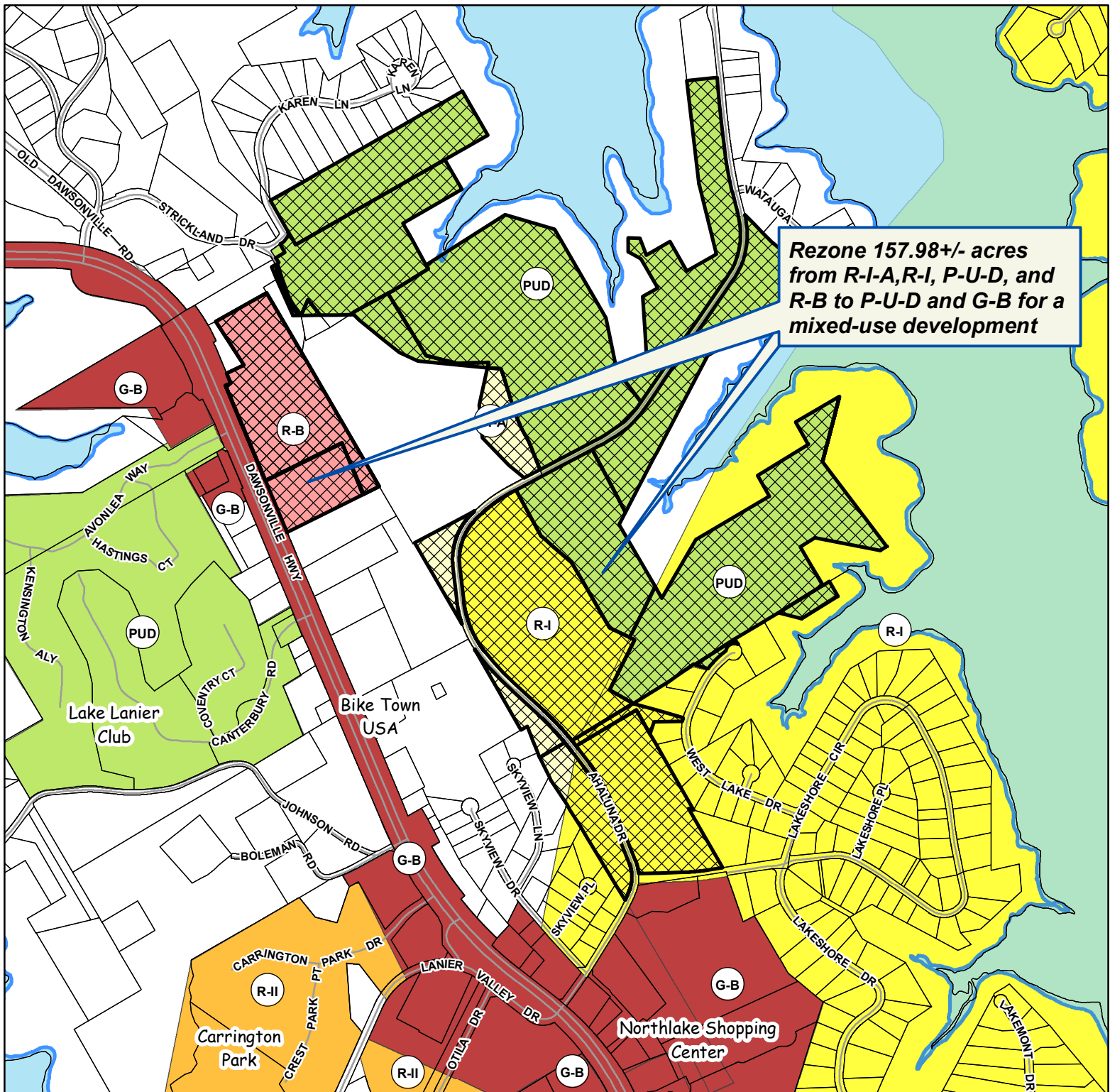
Oak Hall Companies, LLC has submitted three applications which are scheduled to be heard at the March 14, 2017, Planning and Appeals Board meeting. Below is a brief description of the three applications.

1. Rezoning of 157.98[±] acres to Planned Unit Development (P-U-D) and General Business (G-B) for an 820-unit age-restricted, mixed-use development to include 261 single-family detached homes; 64 single-family cottages; 55 detached terrace homes; 52 attached terrace homes; 63 stacked flats (multi-story condominiums); and 175 independent living units and 150 assisted living units. Amenities are to include a swimming pool, club house, passive park and two community docks totaling 130 boat slips.

Proposed non-residential uses are to include 24,000 square feet of retail/office/restaurant space, seven commercial parcels each having approximately 8,000 square feet of building space, a 40,000 square foot storage facility and a 3.0[±] acres tract of land reserved for a 10,650[±] square foot fire station.

2. Annexation of 50.81[±] acres with a zoning of Planned Unit Development (P-U-D) and General Business (G-B) to include the same 820-unit age-restricted, mixed-use development described above.
3. Annexation of 26.16[±] acres with a zoning of Planned Unit Development (P-U-D) for a 90-unit, age-restricted, active adult development to include 56 attached terrace homes, 10 single-family detached homes and 24 stacked flats (condominiums). Amenities are to include common green space/park areas, community clubhouse and pool.

Upon review of these agenda items, the Community Development Department has determined that the applicant will need to provide additional traffic data prior to staff giving an official recommendation. Therefore, staff is recommending the three agenda items be **tabled** for a period of 60-days to be scheduled for the May 9, 2017 Planning and Appeals Board meeting.



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: 3/14/2017

Prepared: 2/16/2017

Gainesville Community Development Department

 Subject Property

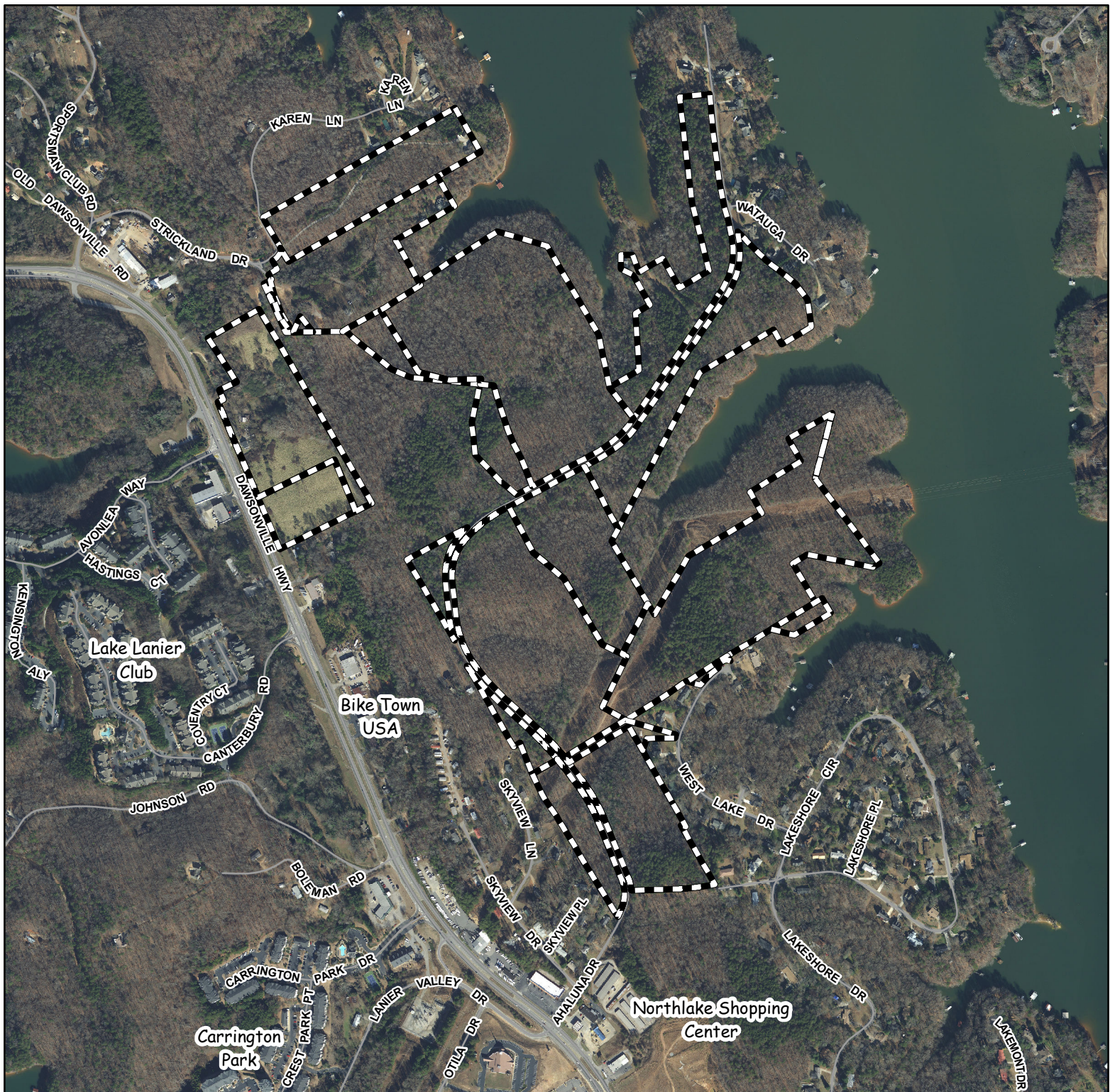


0 480 960 1,440 1,920 Feet

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 1494



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: 3/14/2017

Prepared: 2/16/2017

Gainesville Community Development Department



Subject Property

Aerial from 2015

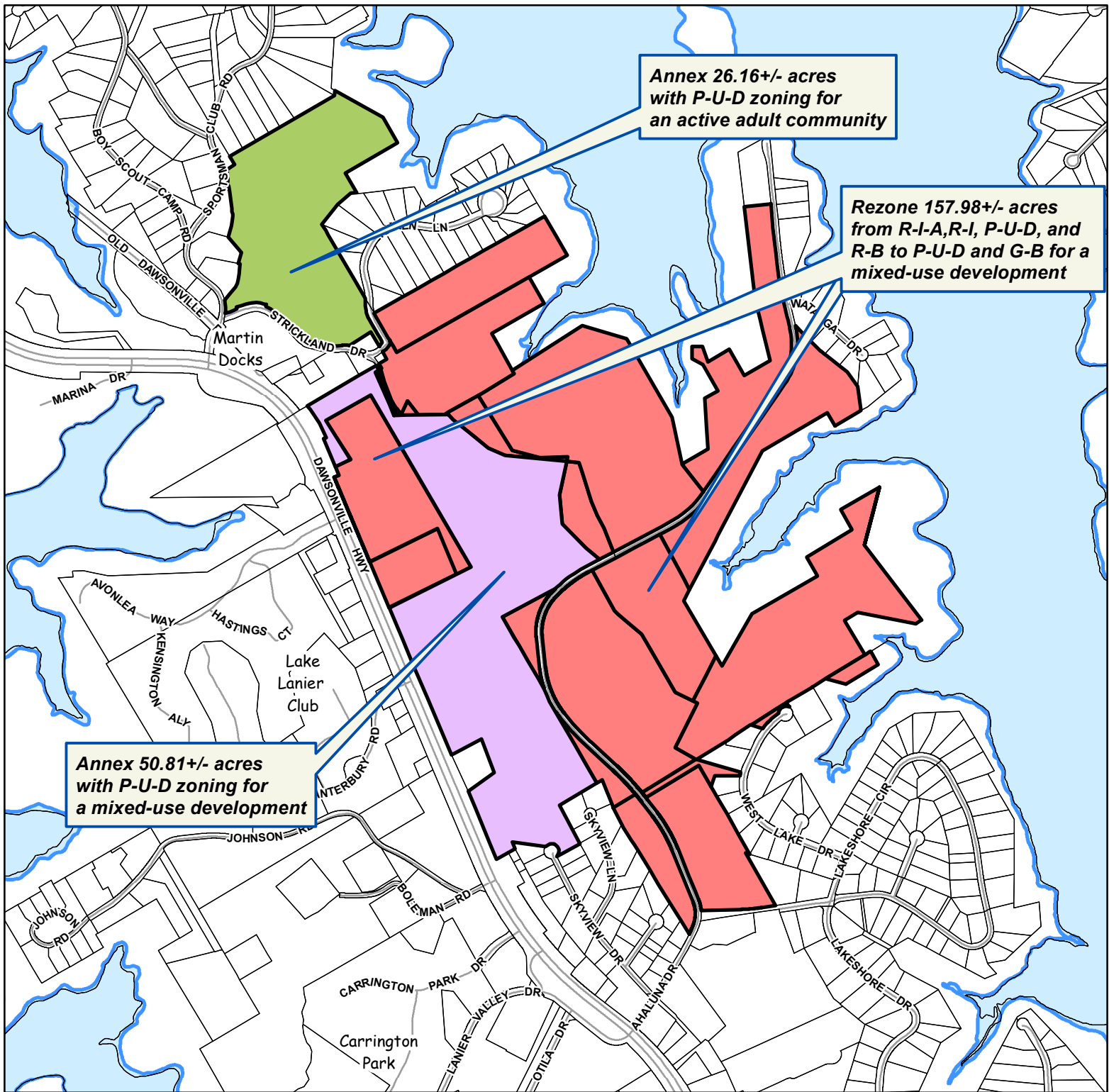
0 480 960 1,440 1,920 Feet



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 161



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: 3/14/2017
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

J. Ethan Underwood
underwood@mhtlegal.com

REVISED 2017-1-27

**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: ▪ 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 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 January 26, 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 January 27, 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

Economic Impact Statement: Oak Hall Companies, LLC

Population	193,535	Millage Rate	0.011369	Total Expenditures per Student	\$ -
Households	61,992	Sales Tax Revenue	\$52,096,442.00	Expenditures per	\$ -
Average Home	\$ 325,000.00			Sheriff's Budget	\$28,679,357.00
Impact Fees per	\$ 1,575.83	Linear Feet of Public Road in Development	30,000	Fire Expenditures	\$ 21,667,821.00

Table 1: Projected Subdivision Population

Year	New Houses	Total Houses	Population
1	82	82	256
2	82	164	512
3	82	246	768
4	82	328	1024
5	82	410	1280
6	82	492	1536
7	82	574	1792
8	82	656	2048
9	82	738	2304
10	82	820	2560

Table 2: Projected Annual Property Tax Revenue from Residential

Average Home Price	Year	Revenue
\$325,000.00	1	\$119,329.02
Avg. Prop Tax per House	2	\$238,658.05
\$1,455	3	\$357,987.07
	4	\$477,316.10
	5	\$596,645.12
	6	\$715,974.14
	7	\$835,303.17
	8	\$954,632.19
	9	\$1,073,961.22
	10	\$1,193,290.24

Table 3: Projected Annual Sales Tax Revenue from Residential

Year	Revenue
1	\$68,910.64
2	\$137,821.28
3	\$206,731.91
4	\$275,642.55
5	\$344,553.19
6	\$413,463.83
7	\$482,374.46
8	\$551,285.10
9	\$620,195.74
10	\$689,106.38

Table 4: Projected Total Annual Tax Revenue from Residential

Year	Revenue
1	\$188,239.66
2	\$376,479.32
3	\$564,718.98
4	\$752,958.65
5	\$941,198.31
6	\$1,129,437.97
7	\$1,317,677.63
8	\$1,505,917.29
9	\$1,694,156.95
10	\$1,882,396.62

Table 5: Projected Residential Impact Fees: One Time Fee per Annum

Year	Total
1	\$ 129,218.06
2	\$ 129,218.06
3	\$ 129,218.06
4	\$ 129,218.06
5	\$ 129,218.06
6	\$ 129,218.06
7	\$ 129,218.06
8	\$ 129,218.06
9	\$ 129,218.06
10	\$ 129,218.06

Table 6: Projected Property Tax Revenue from Commercial

Average Value per SF	Year	Revenue
\$100.00	1	\$14,529.12
	2	\$28,331.78
Total SF	3	\$41,444.31
120,000.00	4	\$53,901.22
	5	\$65,735.28
Depreciation	6	\$76,977.63
5%	7	\$87,657.87
	8	\$97,804.10
	9	\$107,443.01
	10	\$116,599.98

Table 7: Projected Commercial Impact Fees: One Time Fee per Annum

Average Fee per 1000 SF	Year	Revenue
\$175.00	1	\$2,100.00
	2	\$2,100.00
Total SF	3	\$2,100.00
120,000.00	4	\$2,100.00
	5	\$2,100.00
	6	\$2,100.00
	7	\$2,100.00
	8	\$2,100.00
	9	\$2,100.00
	10	\$2,100.00

Table 8: Cost of Law Enforcement Services		
Year	Total Houses	Annual Law Enforcement Expenditures
1	82	\$37,935.66
2	164	\$75,871.31
3	246	\$113,806.97
4	328	\$151,742.63
5	410	\$189,678.29
6	492	\$227,613.94
7	574	\$265,549.60
8	656	\$303,485.26
9	738	\$341,420.92
10	820	\$379,356.57

Table 9: Cost of Fire Protection Services		
Year	Total Houses	Annual Fire Expenditures
1	82	\$28,661.14
2	164	\$57,322.28
3	246	\$85,983.42
4	328	\$114,644.56
5	410	\$143,305.69
6	492	\$171,966.83
7	574	\$200,627.97
8	656	\$229,289.11
9	738	\$257,950.25
10	820	\$286,611.39

Table 10: Summary of Annual Impact at		
Impact Summary	Column1	Totals
Revenues		
Property Taxes		\$1,309,890.22
Sales Taxes		\$689,106.38
Total Revenue		\$1,998,996.60
Expenditures		
Streets		\$30,000.00
Law Enforcement		\$379,356.57
Fire		\$286,611.39
Total Expenditure		\$695,967.96
Annual Net Revenue		\$1,303,028.64
Total Impact Fees		\$1,313,180.60

PUD Performance Standards

I. Residential Performance Standards

RESIDENTIAL USE

Maximum 820 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

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. 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, club house, and community docks for use of residents will be provided.

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

Residents will also have access to community docks and boat slips.

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	219 units
• POD B – Single Family Detached	42 units

PERFORMANCE STANDARDS – DETACHED RESIDENTIAL

- Minimum lot width – 60 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:
 - 20' front
 - 5' side
 - 10' building separation
 - 10' interior rear



II. Zero-Lot Line Residential

Type	Maximum # of Units
• Single Family Cottages	64 units
• Terrace Homes – Detached	55 units
• Terrace Homes – Attached	52 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 – 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



III. Condominium Residential

Type	Maximum # of Units
• Stacked Flats	63 units

Stacked flats are multi-story condominiums, with each story potentially being held in separate ownership. Buildings may contain up to three units, and multiple buildings may be located on a single lot. In areas designated for stacked flats, all lots will be owned by a condominium association, all building exteriors and other improved areas will be maintained by a mandatory condominium association as “common area,” and all undeveloped areas will be maintained as “open space.”

PERFORMANCE STANDARDS – CONDOMINIUM RESIDENTIAL

- Minimum unit width – 24 feet
- Minimum Heated Floor Area (1,100 sf per unit)
- Maximum building height – 40 feet
- Each building’s driveway will have a minimum of 18 feet of pavement 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



IV. 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; provided that no more than 90% of the storage units may be leased to non-residents of the Planned Unit Development.

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

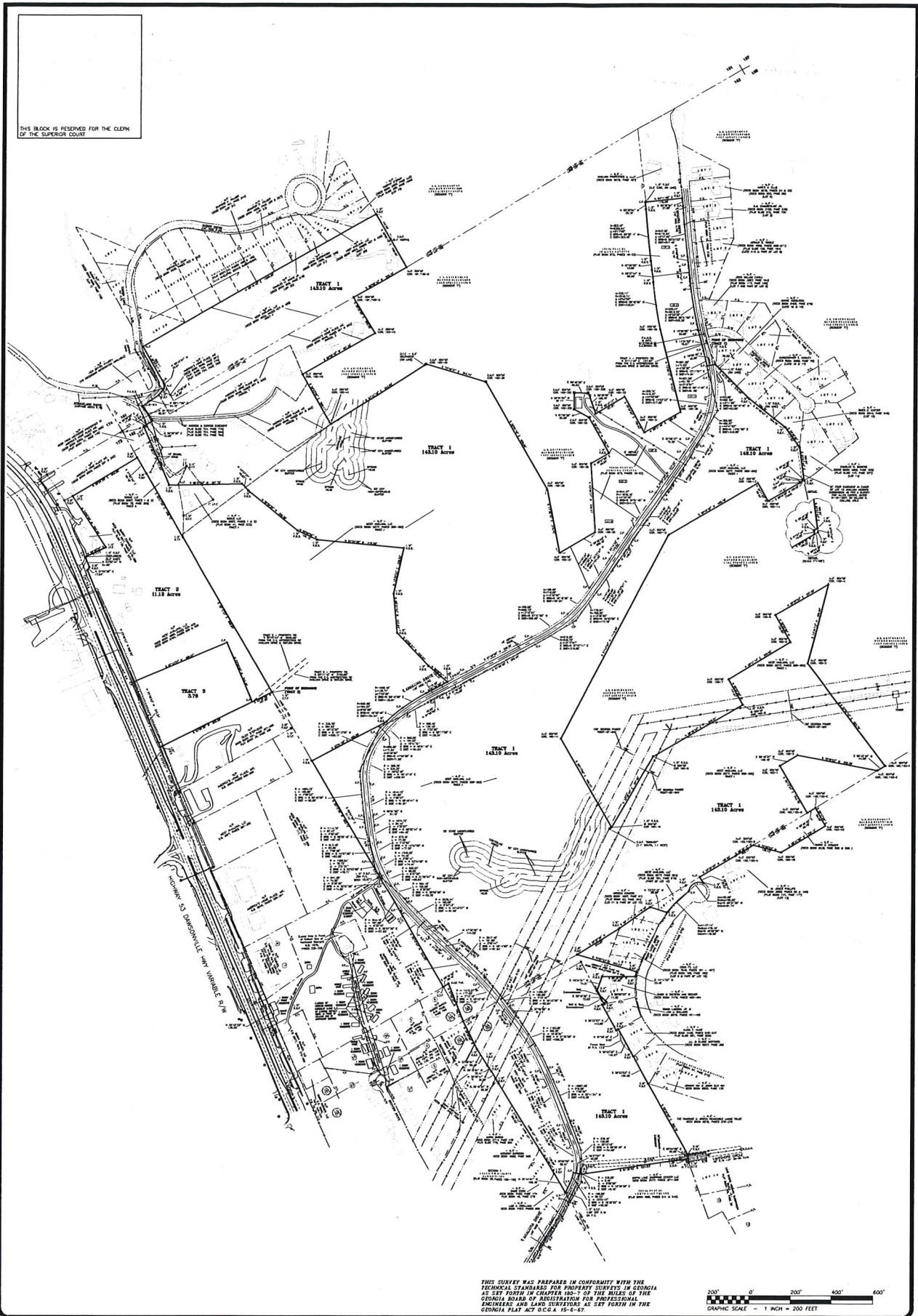
Ground and building-mounted mechanical equipment, such as coolers, HVAC equipment, meters, utility banks, trash receptacles, and electrical or telephone utility cabinets must be placed within the interior side and rear yards; provided, such mechanical equipment may be located in the front or corner side 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



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)

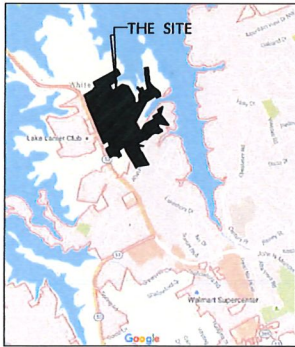
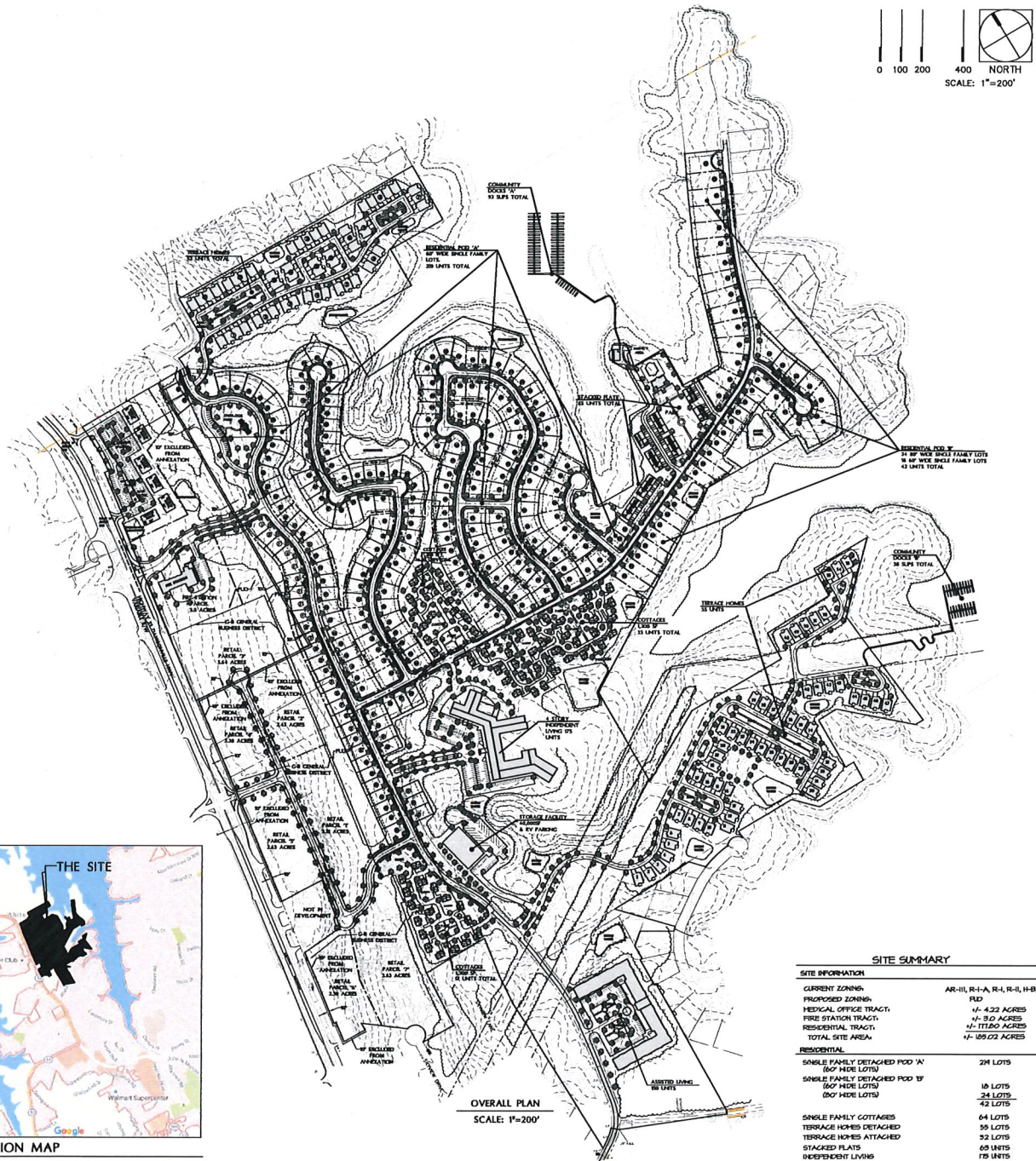
- LOCATED IN -

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



LOCATION MAP
NTS

OVERALL PLAN
SCALE: 1"=200'

SITE SUMMARY

SITE INFORMATION	
CURRENT ZONING:	AR-II, R-1-A, R-1, R-II, H-B, R-B, PUD
PROPOSED ZONING:	R1D
MEDICAL OFFICE TRACT:	4.422 ACRES
FIRE STATION TRACT:	4.9 D ACRES
RESIDENTIAL TRACT:	4.177 ACRES
TOTAL SITE AREA:	4.177 ACRES
RESIDENTIAL	
SINGLE FAMILY DETACHED POD 'A'	24 LOTS
SINGLE FAMILY DETACHED POD 'B'	18 LOTS
SINGLE FAMILY DETACHED POD 'C'	24 LOTS
SINGLE FAMILY COTTAGES	64 LOTS
TERRACE HOMES DETACHED	35 LOTS
TERRACE HOMES ATTACHED	32 LOTS
STAGGED PLAYS	65 UNITS
INDEPENDENT LIVING	75 UNITS
ASSISTED LIVING	150 UNITS
TOTAL:	830 UNITS
STORAGE FACILITY	
2 STORY STORAGE BUILDING	40,000 SF
RV PARKING PROVIDED	14 SPACES
CAR PARKING PROVIDED	10 SPACES
OFFICE/RETAIL	
OFFICE / RETAIL	24,000 SF
4,000 SF BUILDINGS	96 SPACES
PARKING PROVIDED	54 SPACES
OTHER	
FIRE STATION	10,800 SF
DENSITY	
DENSITY OVERALL PROJECT:	4.45 UNITS / ACRE
(830 UNITS / 186.22 ACRES)	
OVER SPACE	
OVER SPACE PROVIDED:	4.177 ACRES
	31.0 %
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:	25.71 ACRES
PROPOSED ZONING:	G-B GENERAL BUSINESS DISTRICT
PROPOSED USE:	1 COMMERCIAL PARCELS
RETAIL SPACE:	8,000 SF AVERAGE PER PARCEL



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
770-662-5993
Atlanta, GA 30341
DATE: 1/27/2017

Site Development Consultants, Inc.
Land Planning • Site Development • Landscape Architecture
1401 Green Park, Marietta, GA 30066, Tel: 478-388-8000, Fax: 478-388-8000

Sheet
1
of 3



OAK HALL
 COMPANIES LLC

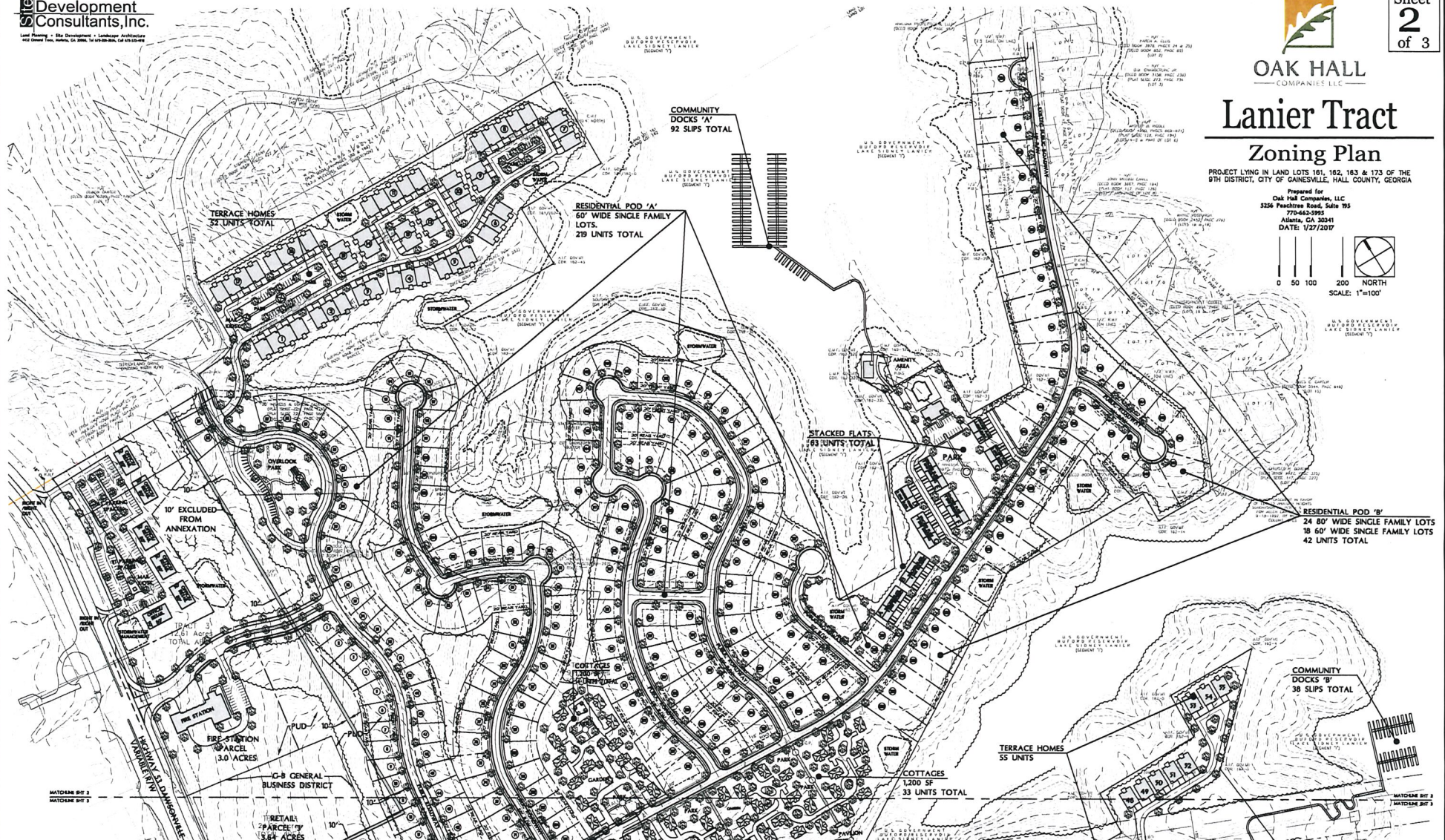
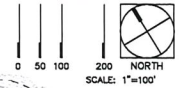
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2
 of 3

Lanier Tract

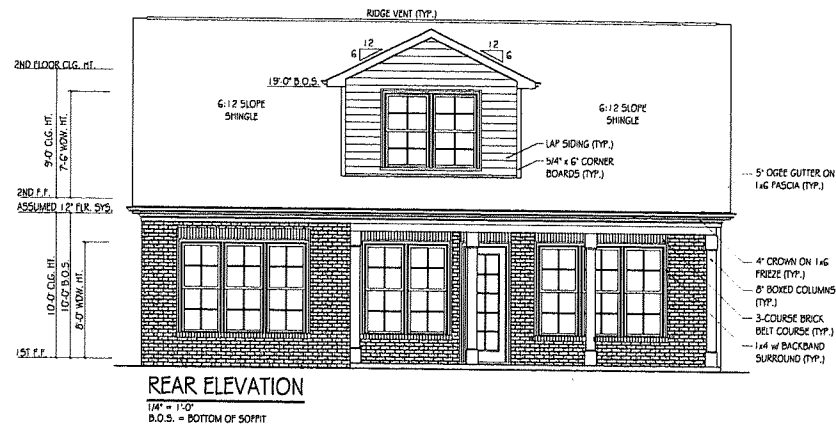
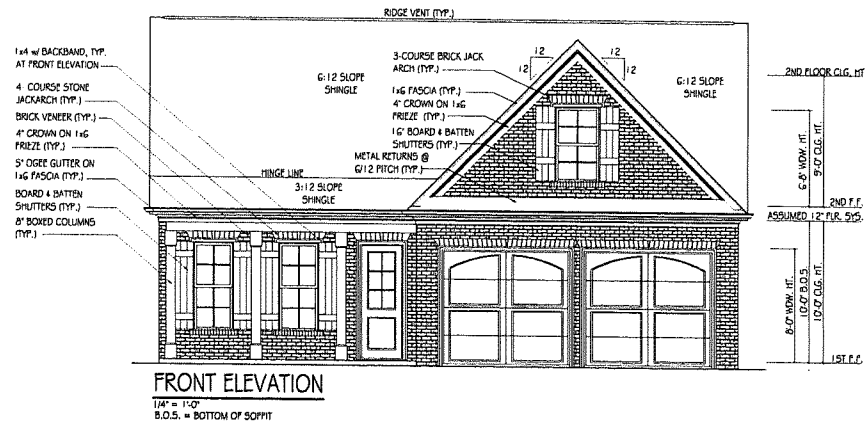
Zoning Plan

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
 3256 Peachtree Road, Suite 100
 Atlanta, GA 30341
 DATE: 1/27/2007

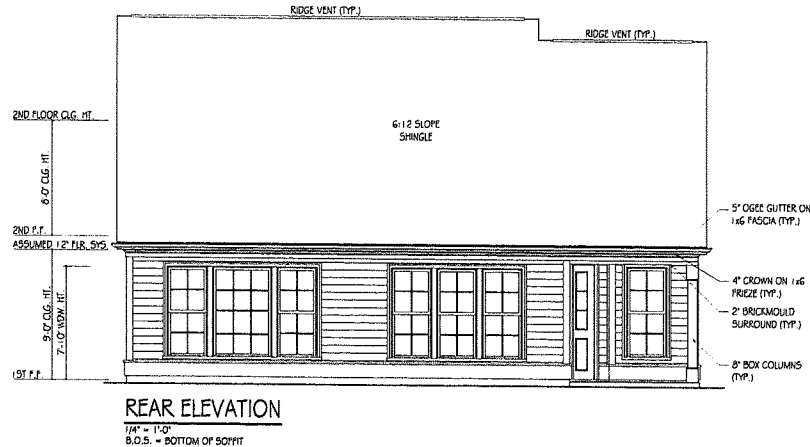
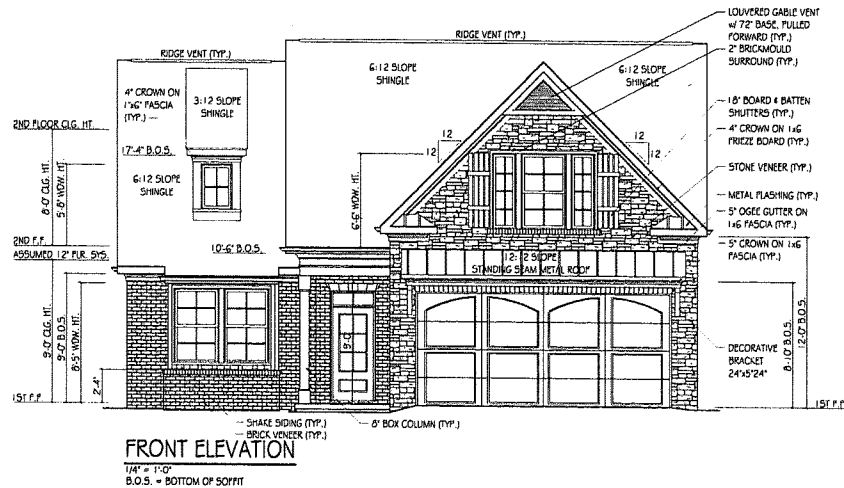






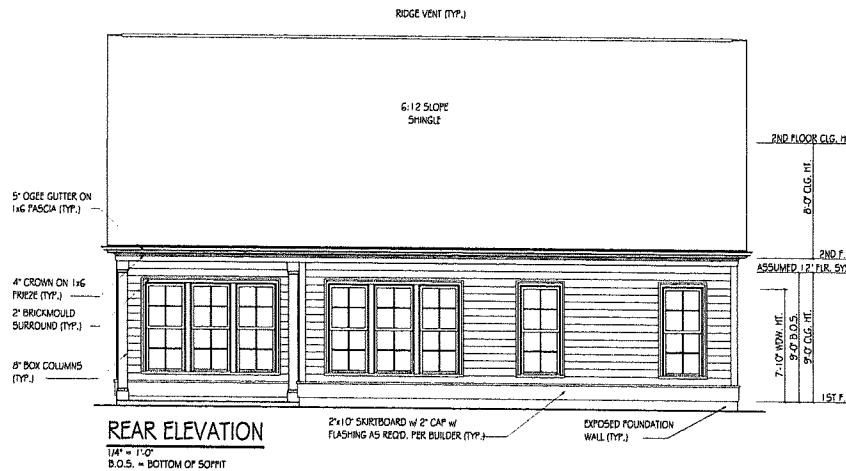
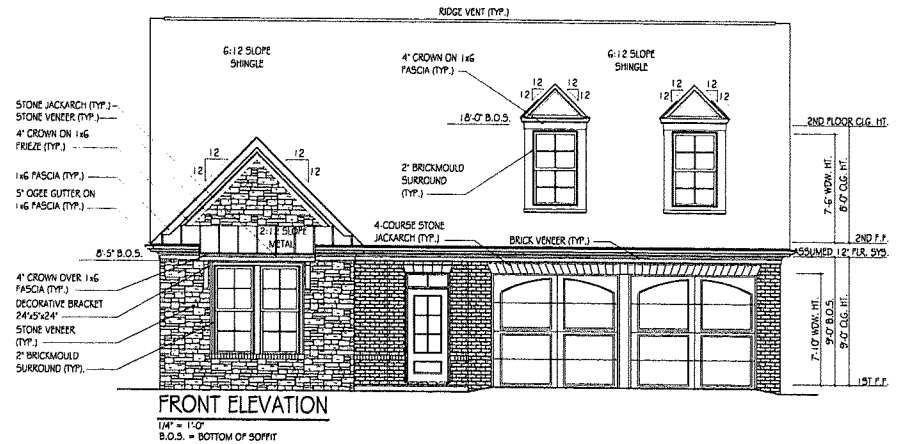
GENERAL NOTE:
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TUBE	JOB #
1203	15143
DATE	REVISED
08/19/16	
SQUARE FOOTAGE	
2303 SF	
LOT #	SUBDIVISION
	THE OVERLOOK AT OLD ATLANTA
PROJECT	
CUSTOM HOME FOR JIM CHAPMAN COMMUNITIES	
THE NEWBURY - A	
CLASSICAL CONCEPTS ATLANTA	
P.O. BOX 732 FLOWERY BRANCH, GA. 30542 404-226-8864 404-401-7288 (DAVID) (MARY) CCADORAN@YAHOO.COM MFITZDORAN@AOL.COM	
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DRAWN	SHEET #
BCLLC	D1 of 6



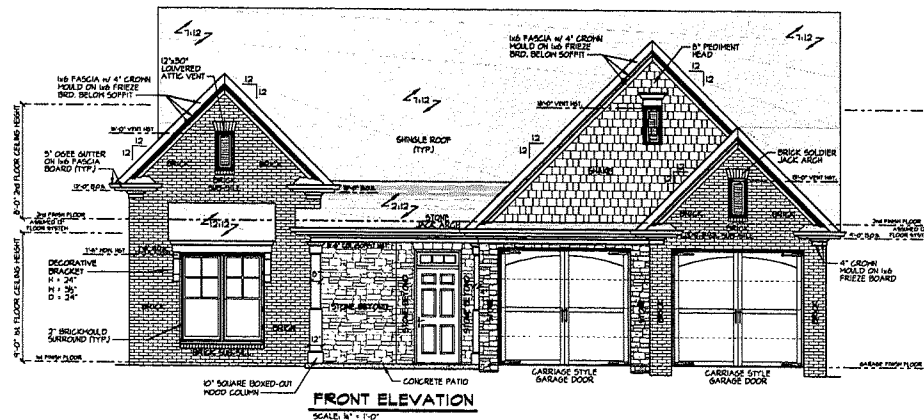
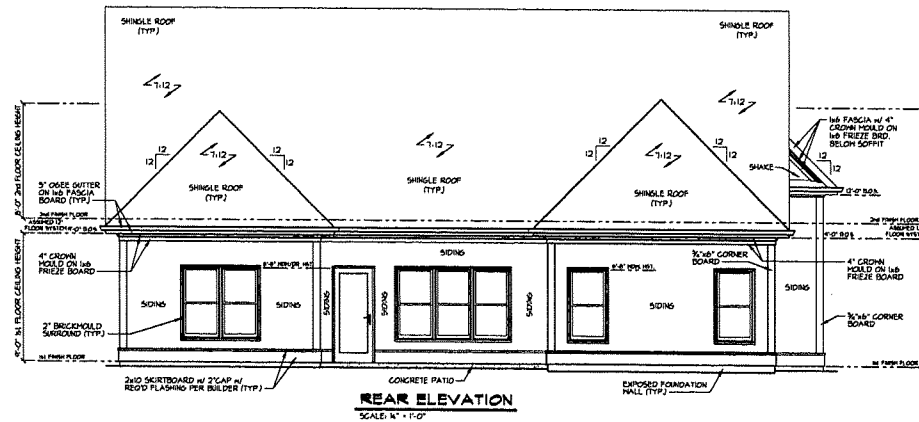
GENERAL NOTE:
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TUBE	JOB #
1283	16178
DATE	REVISED
09/10/16	
SQUARE FOOTAGE	
2229 SF	
LOT #	SUBDIVISION
	NESTLE DOWN FARMS
PROJECT	
CUSTOM HOME FOR JIM CHAPMAN COMMUNITIES	
THE DALTON - A	
CLASSICAL CONCEPTS ATLANTA	
P.O. BOX 732 FLOWERY BRANCH, GA. 30542	
404-226-6964 (DAVID)	404-401-7298 (MARY)
CCADORAN@YAHOO.COM MFTZDORAN@AOL.COM	
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Please Note: 1. CLASSICAL CONCEPTS reserves the right to make any changes to this plan, in whole or in part, without notice. 2. Conditions may vary, especially with respect to local building codes in the area where the house is to be constructed. 3. Please read all instructions carefully. Regarding permits, consult your local building department. 4. Please note that this plan is for informational purposes only. It is not a contract.	
DRAWN	SHEET #
BCLLC	D1 OF 5



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 BUILDER. 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	
404-228-6964	404-401-7288
(DAVID)	(MARY)
CCADORAN@YAHOO.COM MFITZDORAN@AOL.COM	
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DRAWN	SHEET #
BCLLC	D1 OF 5



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 BUILDER/CONTRACTOR ACCORDING TO ACTUAL GRADES.

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 404-401-7298
(DAVID) (MARY)

CCADORAN@YAHOO.COM
MFTZDORAN@AOL.COM

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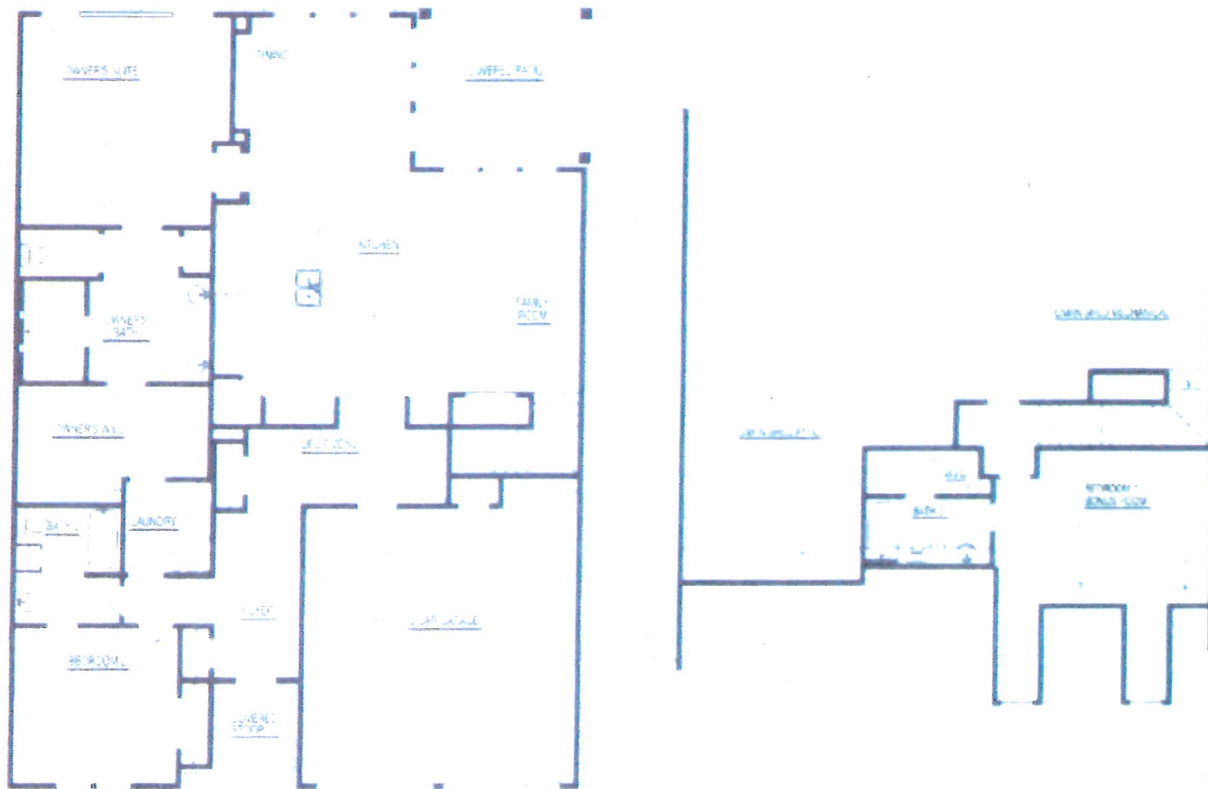
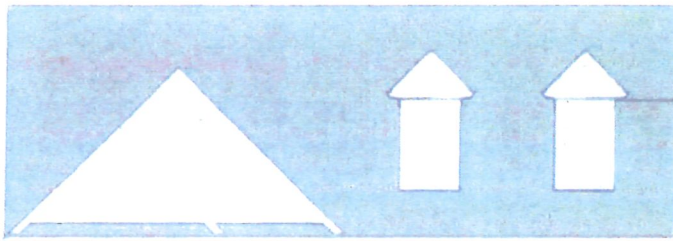
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DRAWN	SHEET #
MKH	D1 of 6

FRONT & REAR ELEV.'S

Attached Villas

2,339 Square Feet

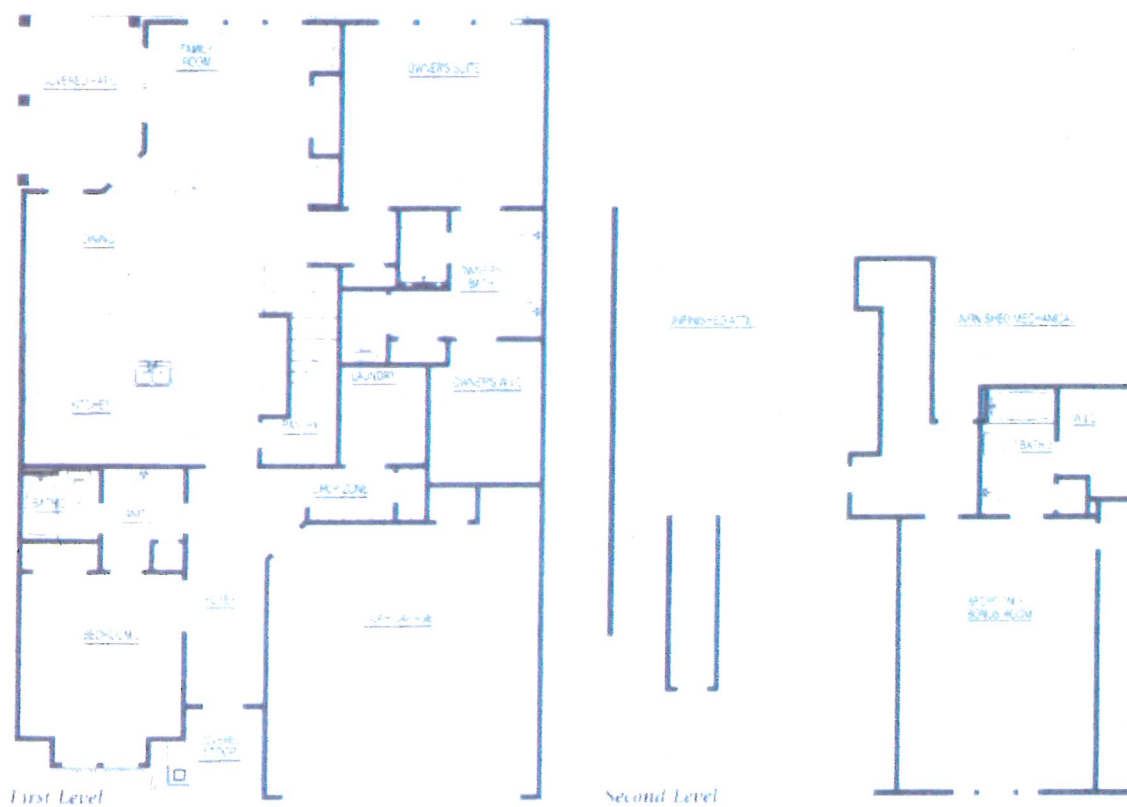
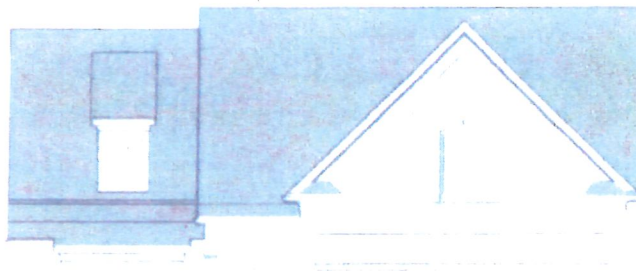


JIM
CHAPMAN

limChapmanCommunities.com



Dalton Plan
2,270 Square Feet



**JIM
CHAPMAN**
JIMMY KILLS

Bob Long Teo Building Futures
JimChapmanCommunities.com

Traffic Impact Study

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

January 24, 2017

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

January 24, 2017



MARC R. ACAMPORA, PE, LLC

TRAFFIC ENGINEERING

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

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web: www.acamporatraffic.com

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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 project will include a mix of senior living facilities, including single family homes, stacked flats, terrace units, independent living apartments, and assisted living. In addition, the project will include a retail and office tract. The site is located along the east side Georgia State Route 53, and the east and west sides of Ahaluna Drive, as shown in the location map in Figure 1.

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.

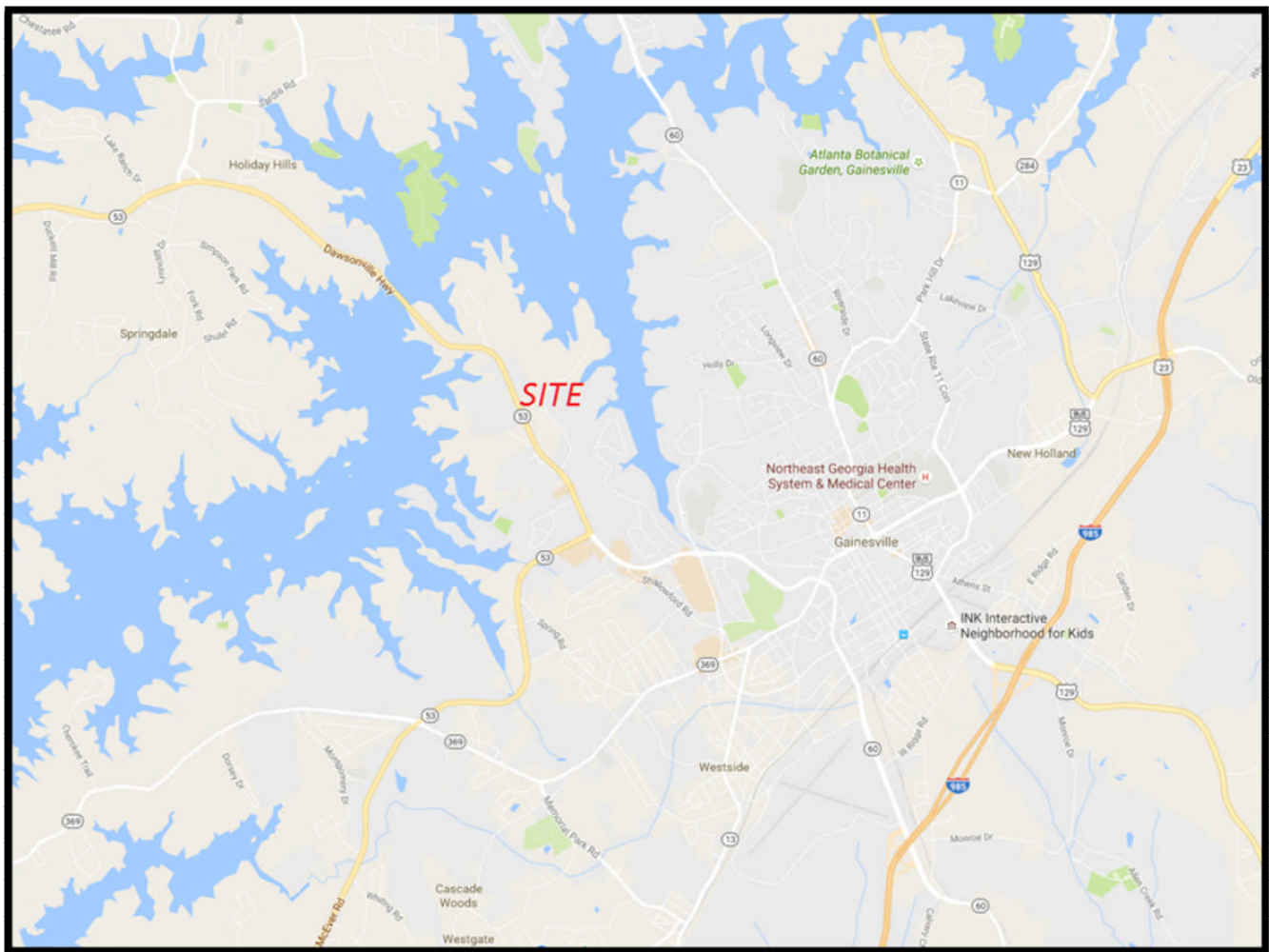


Figure 1 – Lanier Tract Location Map

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

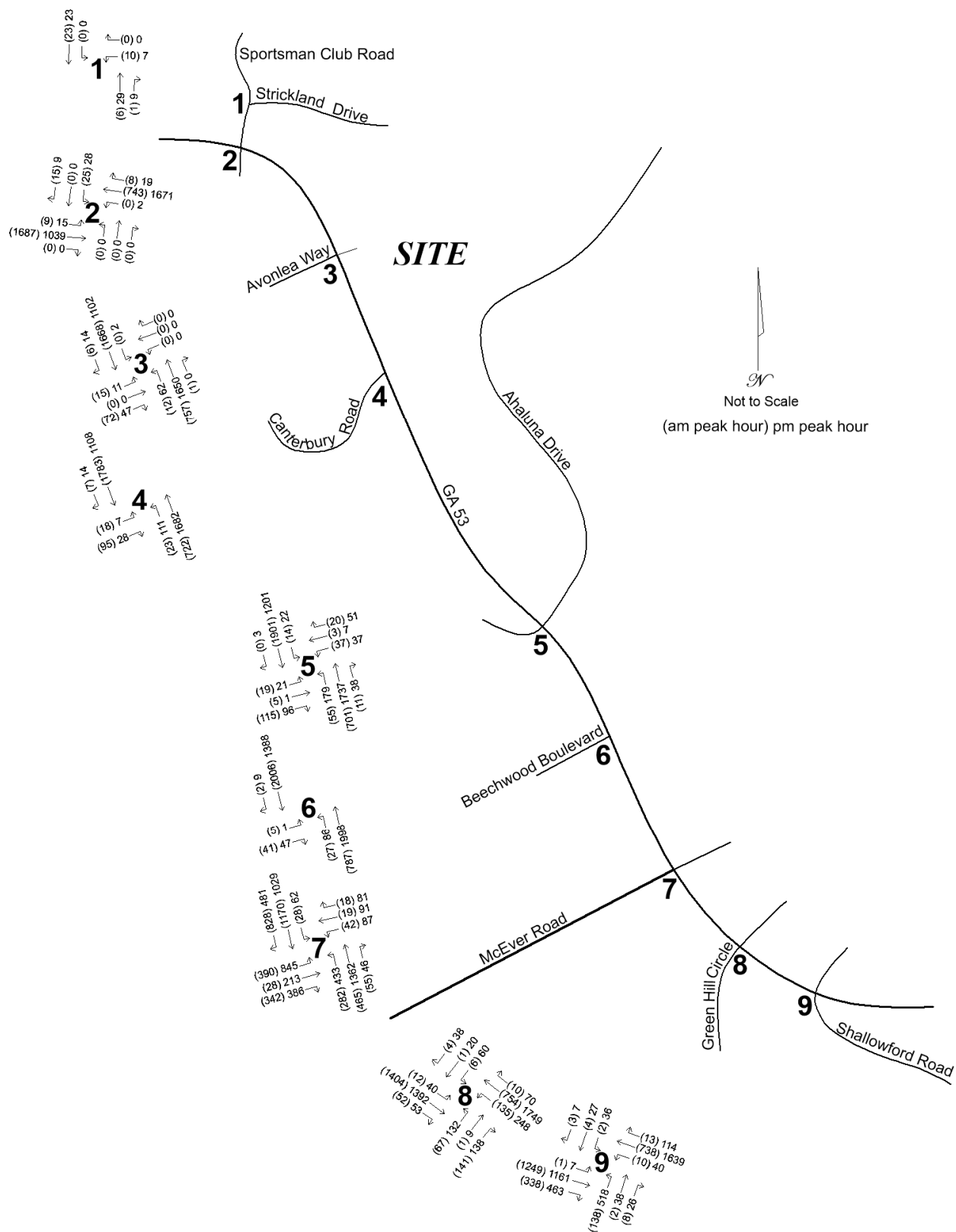
The trip generation for the proposed development is presented later in this report, and summarized later in Table 6. The peak hour trip generation for the project was calculated at 263 trips and the 24-hour volume is 3,344 trips. Based on these numbers, applied to the ULDC standard presented above, the study network was

determined to extend for one mile from the limits of the proposed site. These 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 Beachwood Boulevard
7. Dawsonville Highway at McEver Road
8. Dawsonville Highway at Green Hill Circle
9. Dawsonville Highway at Shallowford Road

Existing full turning movement traffic volume counts were collected at each of these intersections. The 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. Area schools were in standard session on the date 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 Future 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 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
7. 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
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8. 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
9. 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 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 very 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 the 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 westbound exclusive right turn lane should be constructed on GA 53 at Sportsman Club Road.
- 3. Dawsonville Highway at Avonlea Way, 4. Dawsonville Highway at Canterbury Road, and 6. 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 weak 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 turners on red who 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.

7. **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.

8. **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.

9. **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 analysis of this condition 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 two components – the counted traffic volumes, increased by a general background growth factor, and the specific trips that will be added by the outparcels that are expected to be developed along the east side of GA 53 adjacent to the Lanier DRI. These outparcels are planned to be annexed into the City of Gainesville concurrently with the annexation of the Lanier DRI, but will be developed by others and are not considered part of the Lanier DRI.

In order to develop a 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 more 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 outparcels along the east side of GA 53, adjacent to the Lanier DRI are estimated to be developed in 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 4.

Table 4 – 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 Ahaluna Drive. This will allow some site trips from the proposed Lanier DRI to access GA 53. It will also allow some existing trips to shift from the Ahaluna Drive intersection at GA 53 to the new access that will align with Canterbury Road (and the new access for the Lanier DRI that will align with Avonlea Way). New Lanier Tract DRI trips were assigned to these new access points. However, no existing trips turning into and out of Ahaluna Drive at GA 53 were shifted to the Canterbury Road and Avonlea Way accesses for three reasons. First, it is estimated that a notable portion of the trips currently turning at the Ahaluna intersection are generated at the southern portion of Ahaluna Drive (a large retail center accesses the southern portion of Ahaluna Drive, along with the highest density of homes, including along Skyview Drive). These trips will continue to use the GA 53 / Ahaluna intersection. Second, there is an existing signal at the GA 53 / Ahaluna intersection which facilitates safe and efficient access at that location, while the Avonlea and Canterbury intersections are currently not signalized (though they could be in the future). Finally, shifting a small portion of the modest side street volumes turning to and from Ahaluna to the other accesses is not expected to have a significant impact of the findings of this traffic study.

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 Ahaluna Drive, 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). These distribution percentages are shown later in this report, in Figure 5, which depicts the Lanier Tract trips.

The existing, counted traffic volumes were increased by the 10.4% growth factor. The trips from the outparcels were added to these increased volumes. The result is 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.

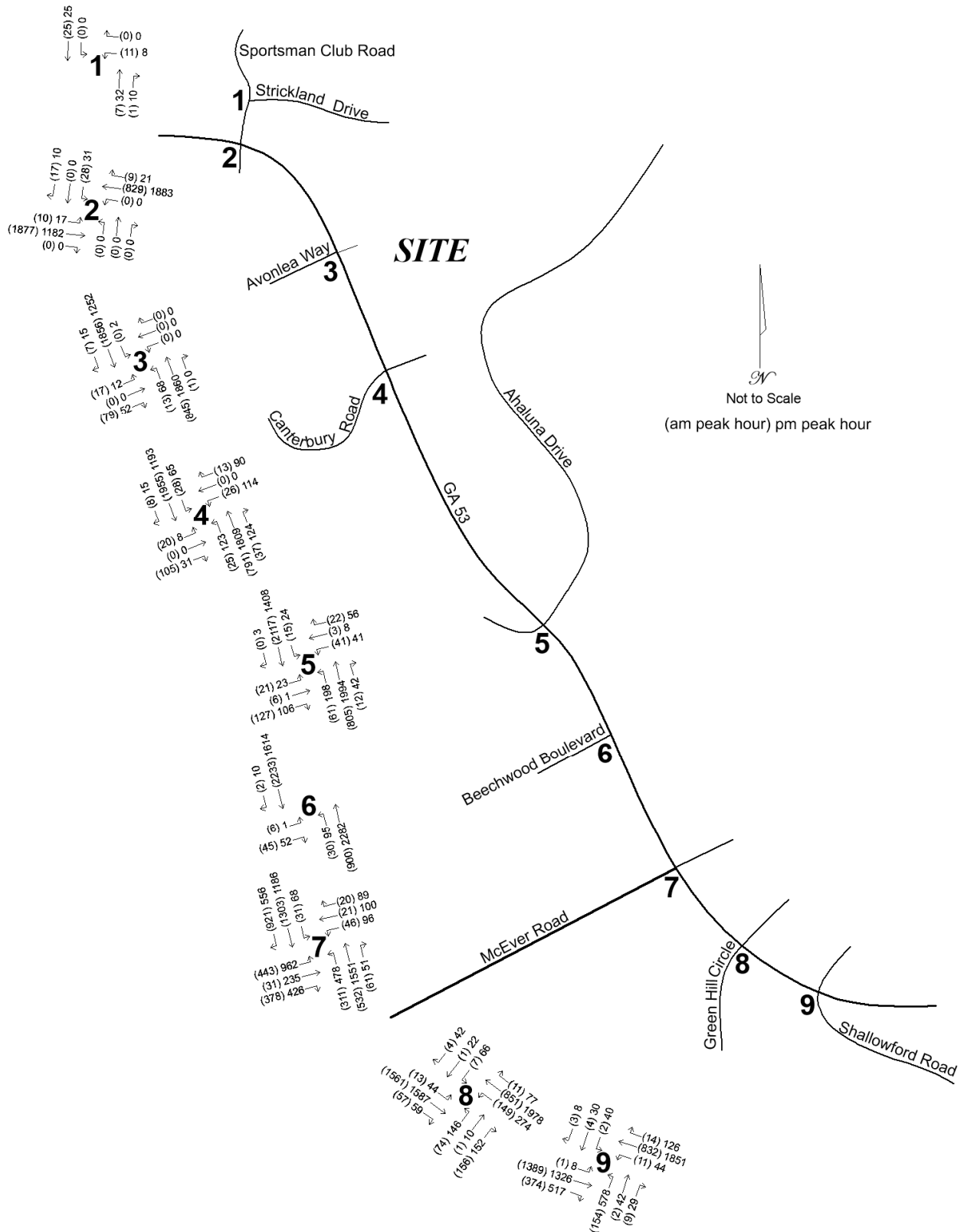


Figure 3 – Future No-Build Traffic Volumes

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 5. Computer printouts containing detailed results of the analysis are located in Appendix D.

Table 5 – 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	12.5	D	42.9
northbound approach (turn lane)	A	0.0	A	0.0
southbound approach	F	533.7	F	2,280.3
eastbound left turn (GA 53)	B	10.3	C	18.4
westbound left turn (GA 53)	A	0.0	B	11.5
3. Dawsonville Highway at Avonlea Way	A	4.8	A	1.9
northbound left turn (GA 53)	C	20.6	B	12.5
eastbound left turn	F	599.2	F	284.7
eastbound right turn	D	34.4	C	15.1
4. Dawsonville Highway at Canterbury Road	C	25.4	F	511.6
northbound left turn (GA 53)	C	21.5	B	13.4
southbound left turn	B	10.1	C	19.6
eastbound left turn	F	1,504.7	F	1,442.4
eastbound right turn	E	40.5	B	14.1
westbound left turn	F	1,488.0	F	NA
westbound right turn	B	11.8	D	26.4
5. Dawsonville Highway at Ahaluna Drive	C	22.5	B	16.6
northbound approach (GA 53)	A	5.7	B	12.3
southbound approach (GA 53)	C	23.3	B	16.0
eastbound approach	E	59.8	C	23.3
westbound approach	F	139.1	F	98.5
6. Dawsonville Highway at Beachwood Boulevard	A	2.9	A	0.9
northbound left turn (GA 53)	D	29.0	C	16.9
eastbound left turn	F	1,021.4	F	534.2
eastbound right turn	E	37.0	C	19.6
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7. Dawsonville Highway at McEver Road	D	49.4	F	138.0
northbound approach (GA 53)	E	78.3	F	151.4
southbound approach (GA 53)	B	19.7	E	58.7
eastbound approach	F	99.9	F	225.9
westbound approach	E	61.8	E	76.0
8. Dawsonville Highway at Green Hill Circle	B	14.1	E	66.7
northbound approach (GA 53)	A	8.3	E	72.1
southbound approach (GA 53)	B	13.4	E	56.0
eastbound approach	D	44.0	E	59.6
westbound approach	D	38.8	F	119.2
9. Dawsonville Highway at Shallowford Road	B	12.7	E	76.9
northbound approach (GA 53)	A	6.1	E	73.0
southbound approach (GA 53)	A	9.4	E	64.9
eastbound approach	E	76.4	F	122.6
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. It did assume that a northbound exclusive right turn lane would be constructed on GA 53 at the new access to the outparcels, aligning with Canterbury Road, that were assumed to be built in the no-build condition. The no-build 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 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 6. Dawsonville Highway at Beachwood Boulevard** – The operations at these three unsignalized intersections will continue 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 weak 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.

7. **Dawsonville Highway at McEver Road** – Operations will continue to be congested at this intersection. The mitigation discussed in the existing condition is still applicable.
8. **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.
9. **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 DRI 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. 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 the adjacent outparcels (discussed in the no-build analysis), 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 attached units were calculated using ITE Land Use 252 – Senior Adult Housing – Attached. The trips for the assisted living facility were determined using ITE Land Use – 254 – Assisted Living. The office / retail trip generation was calculated by dividing the total square footage 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 also 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 state highway adjacent to the project and will serve not just this project, but 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 6.



Figure 4 – Lanier Tract Site Plan

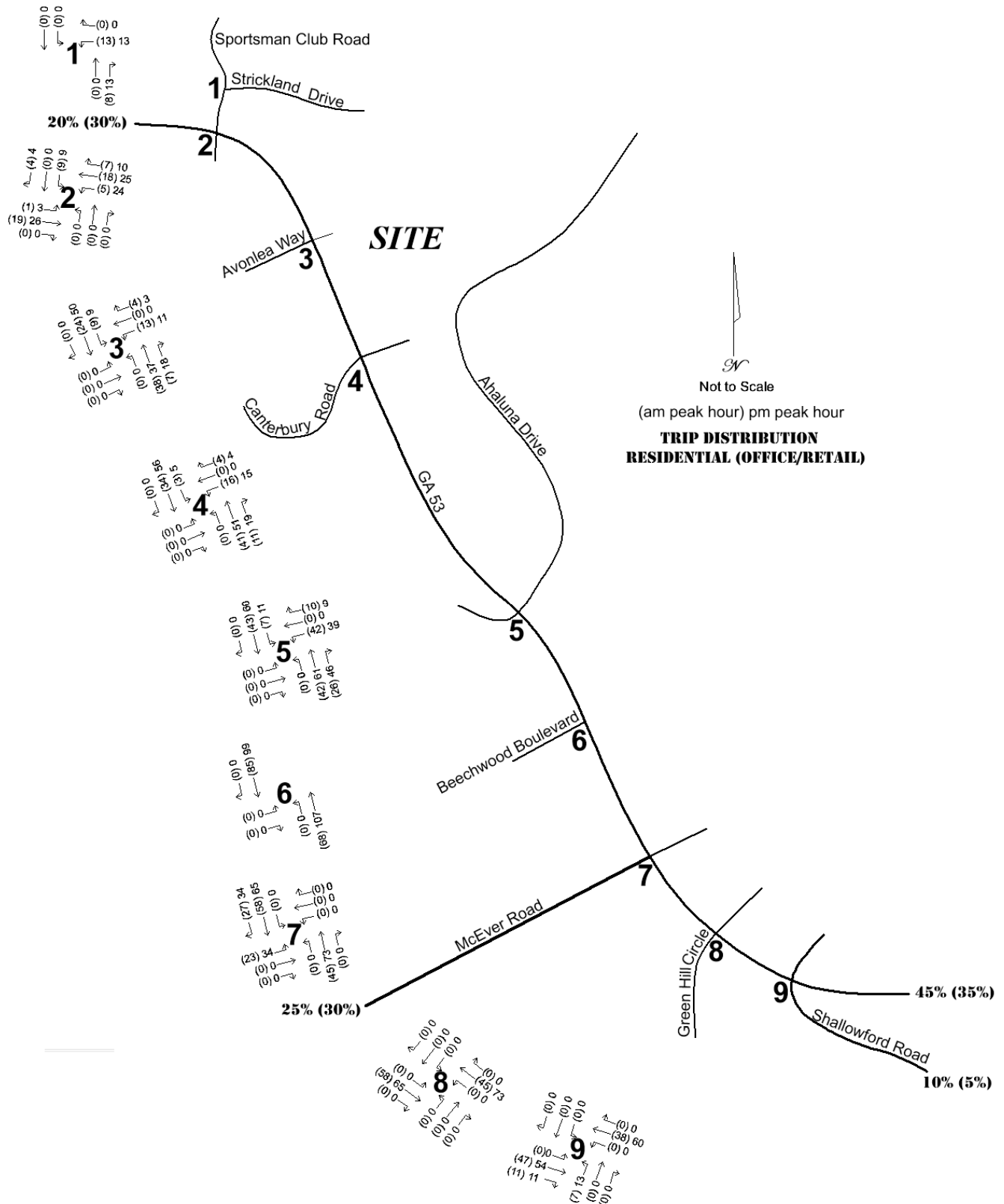
Table 6 – Lanier Tract DRI Trip Generation

Land Use	ITE Code	Size	A.M. Peak Hour			P.M. Peak Hour			24-Hour
			In	Out	Total	In	Out	Total	2-Way
Strickland (north) Tract									
Stacked Flats Attached	252	24 units	2	3	5	3	3	6	82
Single Family Detached	251	10 homes	1	1	2	2	1	3	36
Senior Terrace Homes Attached	252	56 units	4	7	11	7	7	14	192
Senior Terrace Homes Attached	252	52 units	4	6	10	7	6	13	178
Pod A Single Family Detached	251	198 homes	15	29	44	33	20	53	728
Stacked Flats Attached	252	27 units	2	3	5	4	3	7	92
Pod B Single Family Detached	251	50 homes	4	7	11	8	6	14	184
Cottages Detached	251	32 homes	2	5	7	5	4	9	118
Senior Terrace Homes Detached	251	55 homes	4	8	12	9	6	15	202
Independent Living 4 Story Attached	252	175 units	12	23	35	24	20	44	602
Assisted Living	254	150 beds	<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			64	99	163	117	94	211	2,770
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			88	106	194	135	128	263	3,344

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 within the rezoning were based on ITE average rates due to square footages much smaller than average sizes in the ITE data.

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 for each land use. The residential trips 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 6, were assigned to the roadway network based on these 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.



Future Traffic Conditions

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

Future Traffic Volumes

The trips from the Lanier Tract DRI were added to the future no-build volumes (comprised of the counted volumes increased by 10.4% plus the outparcel trips, as described previously). The resulting volumes are the traffic volumes that will be at each intersection when the subject development is fully operational. The future traffic volume projections are shown in Figure 6. These volumes are also shown in the intersection volume worksheets in Appendix A.

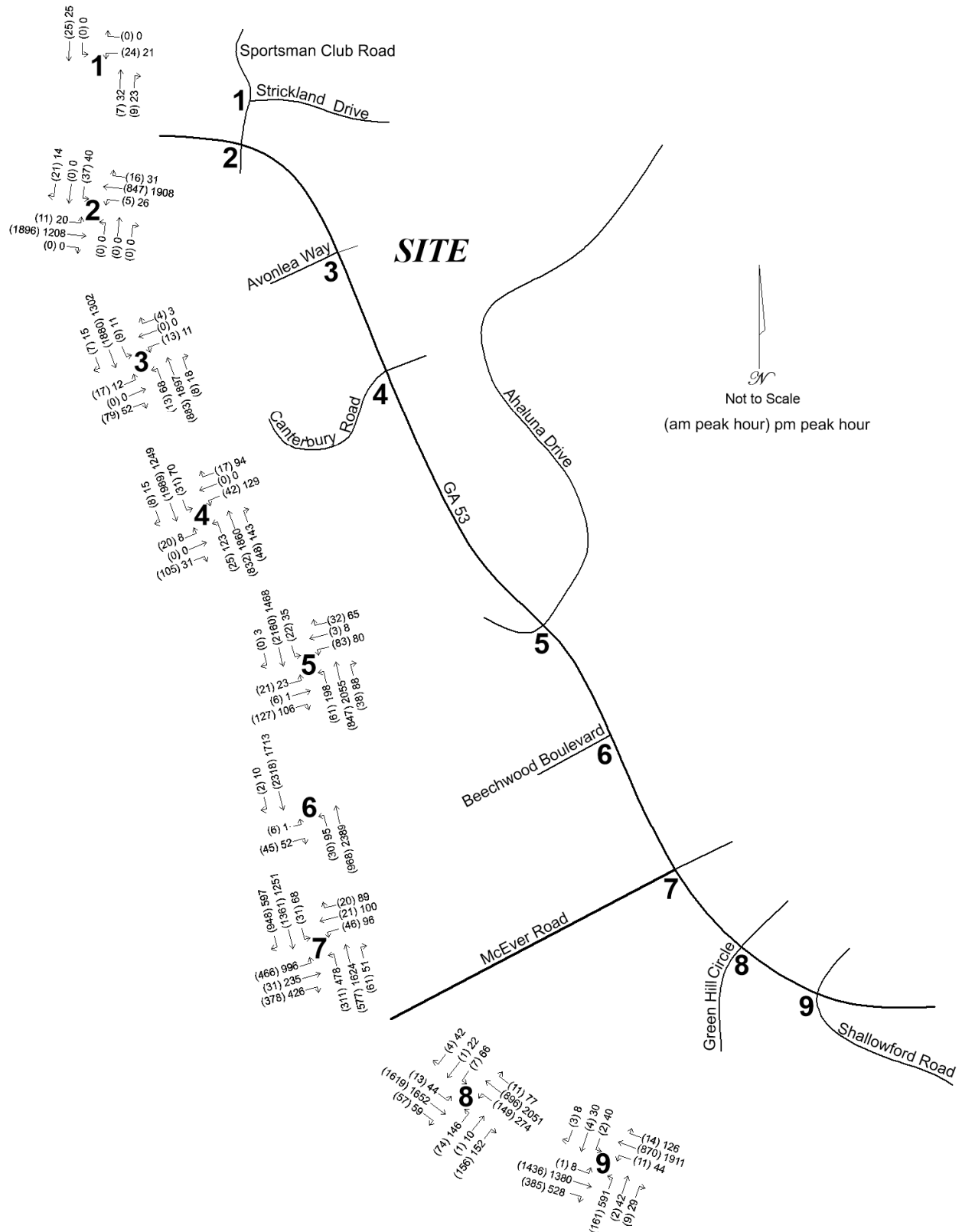


Figure 6 – Future Peak Hour Traffic Volume Projections

Future Intersection Operations

An operational analysis was performed for the future 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 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	3.8	A	3.1
southbound left turn	A	0.0	A	0.0
westbound approach	A	9.0	A	9.1
2. Dawsonville Highway at Sportsman Club Road	D	25.9	F	77.6
northbound approach (turn lane)	A	0.0	A	0.0
southbound approach	F	878.0	F	3,237.1
eastbound left turn (GA 53)	B	10.5	C	19.0
westbound left turn (GA 53)	C	20.7	B	12.0
3. Dawsonville Highway at Avonlea Way	B	12.6	B	10.7
northbound left turn (GA 53)	C	21.1	B	12.9
southbound left turn	B	10.3	C	18.2
eastbound left turn	F	1,381.4	F	722.2
eastbound right turn	E	35.6	C	15.5
westbound left turn	F	666.6	F	1,734.2
westbound right turn	B	12.1	C	20.1
4. Dawsonville Highway at Canterbury Road	F	53.2	F	623.4
northbound left turn (GA 53)	C	22.1	B	14.0
southbound left turn	B	10.3	C	20.9
eastbound left turn	F	1,733.4	F	2,303.8
eastbound right turn	E	42.9	B	14.1
westbound left turn	F	2,832.7	F	NA
westbound right turn	B	12.1	D	28.5
5. Dawsonville Highway at Ahaluna Drive	C	32.1	B	19.3
northbound approach (GA 53)	A	6.8	B	11.8
southbound approach (GA 53)	D	36.6	C	21.1
eastbound approach	D	48.9	B	18.8
westbound approach	F	130.7	F	106.6
6. Dawsonville Highway at Beachwood Boulevard	A	3.2	A	1.0
northbound left turn (GA 53)	D	31.9	C	18.4
eastbound left turn	F	1,230.3	F	620.4
eastbound right turn	E	40.8	C	21.0
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7. Dawsonville Highway at McEver Road	D	52.7	F	135.4
northbound approach (GA 53)	E	75.3	F	143.4
southbound approach (GA 53)	C	22.1	D	36.5
eastbound approach	F	113.7	F	257.5
westbound approach	E	61.8	E	67.9
8. Dawsonville Highway at Green Hill Circle	B	15.0	D	53.5
northbound approach (GA 53)	A	8.9	E	73.0
southbound approach (GA 53)	B	14.4	C	20.2
eastbound approach	D	47.4	E	59.7
westbound approach	D	38.8	F	119.2
9. Dawsonville Highway at Shallowford Road	B	13.6	F	82.2
northbound approach (GA 53)	A	6.3	E	75.1
southbound approach (GA 53)	B	10.7	E	74.6
eastbound approach	E	76.7	F	125.7
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 westbound left turn from Canterbury Road will incur an average delay of 47 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 conditions reveals that most levels of service will remain the same as in the no-build condition. The most notable changes are increases in the side street delays at both unsignalized and signalized intersections. However, at a few locations, the delays actually decrease slightly. This is attributed to a slight reallocation of greentime to adjust for the changing proportions of volumes between the main street and the side street. The Lanier Tract DRI generally contributes a small proportion to the increases in volumes between the existing condition and the future, while the background growth and the outparcels contribute 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 site'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. Specific Recommendations for each location are presented in the next sections of this report.

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 8, 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.

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. At Sportsman Club Drive, the existing right turn volume is 8 in the morning and 19 in the evening, or a total of 27 RTVs in the two peak hours. The future RTVs at this location are 16 in the a.m. and 31 in the p.m., or a total of 47 RTVs in the two peak hours. As a general rule of thumb, p.m. peak hour volumes are typically about 10% of 24-hour volumes. If this relationship applies at the subject location, then the existing 24 hour RTV would be approximately 190 and the future RTV would be approximately 470. Observations suggest that the off-peak activity turning into and out of this intersection is very low, so it is uncertain if the 10% rule of thumb is applicable. Based on a review of the counts, and the volume rule of thumb, it is considered probable that the 75 RTV per day threshold is satisfied in the existing condition. In the future condition, the RTV volume in just the two peak hours is 47. It is considered very likely that the remaining 22 hours in the day will contribute at least 28 additional right turn vehicles, so that the 75 RTV threshold will be satisfied. Therefore, it is recommended that a northbound exclusive right turn lane should be provided on GA 53 at Sportsman Club Road. Table 9, below, is Table 4-8 from the Driveway Manual, and presents the right turn lane design standards. Based on the posted 45 mph speed limit, this right turn lane should include 175 feet of full-width storage and a 100 foot taper.

The same evaluation was made for the proposed site access across from Avonlea Way. At this site access, the northbound RTV is projected at 8 in the a.m. and 18 in the p.m., for a total in the two peak hours of 26 RTV. Due to the nature of the trip characteristics of senior living facilities, it is difficult to conclude with confidence if the northbound RTV will satisfy the 75 RTV per day threshold. Therefore, at this time, it is advised that consideration should be given to providing this lane. If constructed, this lane should comply with the standards identified in Table 9, to include 175 feet of storage and a 100 foot taper. The site plan for the project anticipates providing a right turn lane at this access.

The proposed site connection, through the outparcels, across from Canterbury Road was likewise evaluated for a northbound right turn lane on GA 53. At this location, the northbound RTV is projected at 48 in the a.m. and 143 in the p.m., for a total in the two peak hours of 191 RTV. Just the p.m. peak hour well exceeds the 75 RTV threshold. These high right turn volumes will be primarily generated by the outparcels. It is concluded that a deceleration lane should be provided at this access. This lane would be constructed to the standards identified in Table 9, to include 175 feet of storage and a 100 foot taper. The site plan for the project anticipates providing a right turn lane at this access.

At Ahaluna Way, the existing northbound RTV is 11 in the a.m. and 38 in the p.m. for a two-hour total of 49 RTV. It is considered likely that the balance of the 24 hour day would contribute the additional right turn vehicles, so that a northbound exclusive right turn lane should be considered on GA 53 at Ahaluna Drive based on existing

volumes. With the addition of the Lanier Tract DRI, the future RTV is projected at 38 in the a.m. peak hour and 88 in the p.m. peak hour. Therefore, the 75 RTV per day threshold will be well-exceeded in the future and a northbound exclusive right turn lane should be provided on GA 53 at Ahaluna Drive. This lane should include a minimum of 175 feet of full-width storage and a 100 foot taper.

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.

Table 8 – 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

Table 9 – 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

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:

Sportsman Club Road at Strickland Drive – No changes are recommended at this intersection for the existing, no-build, or future conditions.

Dawsonville Highway at Sportsman Club Road – The side street delays at this intersection are significant now and will increase in the future. The potential for signalization of this intersection should be evaluated according to the *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 the intersection a weak candidate for signalization in the existing condition, but the potential for justifying signalization will increase in the future. 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, Dawsonville Highway at Canterbury Road, and Dawsonville Highway at Beachwood Boulevard – Side street delays are high at all three of these intersections, and these delays will increase in the no-build and future conditions. The side street volumes at each intersection are predominately right turners, with extremely low left turn volumes. For this reason, these three intersections are considered weak candidates for signalization in the existing condition.

The Lanier Tract DRI 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. While the exiting volumes from the site will include a few more left turners than right turners, these volumes will be extremely low. Therefore, this intersection is considered likely to continue to be a weak candidate for signalization in the no-build and future, even with the addition of the Lanier Tract DRI trips. The Georgia DOT deceleration 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 an exiting shared left/through lane and an exclusive right turn lane. Unless signalization is warranted, the side street approach exiting the site should be controlled by side street stop sign and accompanying stop bar.

The outparcel access will align with Canterbury Road and the Lanier Tract DRI 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 will be significant, primarily due to the outparcels, and a northbound deceleration lane is recommended for this location. The 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 a signal warrant study be performed for this location according to the MUTCD standards. This new site access should be constructed with one entering lane and an exiting shared left/through lane and

an exclusive right turn lane. Until signalization is warranted, the side street approach exiting the outparcel tracts should be controlled by side street stop sign and accompanying stop bar.

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 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 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. 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 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.

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.

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%	
Retail Outparcels	0	0	0	0	0	0	0	0	0
No-Build Volumes	7	1	8	0	25	25	11	0	11
Lanier Tract Senior Living Residential New Trips	0	8	8	0	0	0	13	0	13
Lanier Tract Office/Retail New Trips	0	0	0	0	0	0	0	0	0
Total Lanier Tract Site Trips	0	8	8	0	0	0	13	0	13
Build Volumes	7	9	16	0	25	25	24	0	24

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%	
Retail Outparcels	0	0	0	0	0	0	0	0	0
No-Build Volumes	32	10	42	0	25	25	8	0	8
Lanier Tract Senior Living Residential New Trips	0	13	13	0	0	0	13	0	13
Lanier Tract Office/Retail New Trips	0	0	0	0	0	0	0	0	0
Total Lanier Tract Site Trips	0	13	13	0	0	0	13	0	13
Build Volumes	32	23	55	0	25	25	21	0	21

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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%	
Retail Outparcels	0	9	0	9	0	14	0	14	0	0	0	0	0	0	0	0
No-Build Volumes	0	829	9	838	10	1877	0	1887	0	0	0	0	28	0	17	44
Lanier Tract Senior Living Residential New Trips	0	16	7	23	1	12	0	13	0	0	0	0	9	0	4	13
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	18	7	30	1	19	0	20	0	0	0	0	9	0	4	13
Build Volumes	5	847	16	868	11	1896	0	1907	0	0	0	0	37	0	21	57

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%	
Retail Outparcels	0	38	0	38	0	35	0	35	0	0	0	0	0	0	0	0
No-Build Volumes	2	1883	21	1906	17	1182	0	1199	0	0	0	0	31	0	10	41
Lanier Tract Senior Living Residential New Trips	0	15	10	25	3	21	0	24	0	0	0	0	9	0	4	13
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	25	10	59	3	26	0	29	0	0	0	0	9	0	4	13
Build Volumes	26	1908	31	1965	20	1208	0	1228	0	0	0	0	40	0	14	54

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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%	
Retail Outparcels	0	9	0	9	0	14	0	14	0	0	0	0	0	0	0	0
No-Build Volumes	13	845	1	859	0	1856	7	1862	17	0	79	96	0	0	0	0
Lanier Tract Senior Living Residential New Trips	0	21	7	28	2	19	0	21	0	0	0	0	13	0	4	17
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	38	7	45	9	24	0	33	0	0	0	0	13	0	4	17
Build Volumes	13	883	8	904	9	1880	7	1895	17	0	79	96	13	0	4	17

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%	
Retail Outparcels	0	38	0	38	0	35	0	35	0	0	0	0	0	0	0	0
No-Build Volumes	68	1860	0	1928	2	1252	15	1269	12	0	52	64	0	0	0	0
Lanier Tract Senior Living Residential New Trips	0	24	18	42	4	26	0	30	0	0	0	0	11	0	3	14
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	37	18	55	9	50	0	59	0	0	0	0	11	0	3	14
Build Volumes	68	1897	18	1983	11	1302	15	1328	12	0	52	64	11	0	3	14

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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%					
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
No-Build Volumes	25	791	37	854	28	1955	8	1990	20	0	105	125	26	0	13	39
Lanier Tract Senior Living Residential New Trips	0	24	11	35	3	29	0	32	0	0	0	0	16	0	4	20
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	41	11	52	3	34	0	37	0	0	0	0	16	0	4	20
Build Volumes	25	832	48	906	31	1989	8	2027	20	0	105	125	42	0	17	59

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%					
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
No-Build Volumes	123	1809	124	2056	65	1193	15	1274	8	0	31	39	114	0	90	204
Lanier Tract Senior Living Residential New Trips	0	38	19	57	5	32	0	37	0	0	0	0	15	0	4	19
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	51	19	70	5	56	0	61	0	0	0	0	15	0	4	19
Build Volumes	123	1860	143	2126	70	1249	15	1335	8	0	31	39	129	0	94	223

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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%	
Retail Outparcels	0	31	0	31	0	18	0	18	0	0	0	0	0	0	0	0
No-Build Volumes	61	805	12	878	15	2117	0	2132	21	6	127	153	41	3	22	66
Lanier Tract Senior Living Residential New Trips	0	25	26	51	7	38	0	45	0	0	0	0	42	0	10	52
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	42	26	68	7	43	0	50	0	0	0	0	42	0	10	52
Build Volumes	61	847	38	946	22	2160	0	2182	21	6	127	153	83	3	32	118

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%	
Retail Outparcels	0	76	0	76	0	82	0	82	0	0	0	0	0	0	0	0
No-Build Volumes	198	1994	42	2233	24	1408	3	1436	23	1	106	130	41	8	56	105
Lanier Tract Senior Living Residential New Trips	0	48	46	94	11	36	0	47	0	0	0	0	39	0	9	48
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	61	46	107	11	60	0	71	0	0	0	0	39	0	9	48
Build Volumes	198	2055	88	2340	35	1468	3	1507	23	1	106	130	80	8	65	153

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Intersection 6: Georgia State Route 53 at Beechwood Boulevard

Weekday A.M. Peak Hour	Northbound GA 53			Southbound GA 53			Eastbound Beechwood Boulevard			Westbound Commercial Access			
	L	T	Tot	T	R	Tot	L	R	Tot	L	T	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%					
Retail Outparcels	0	31	31	18	0	18	0	0	0				
No-Build Volumes	30	900	930	2233	2	2235	6	45	51				
Lanier Tract Senior Living Residential New Trips	0	51	51	80	0	80	0	0	0				
Lanier Tract Office/Retail New Trips	0	17	17	5	0	5	0	0	0				
Total Lanier Tract Site Trips	0	68	68	85	0	85	0	0	0				
Build Volumes	30	968	998	2318	2	2320	6	45	51				

Weekday P.M. Peak Hour	Northbound GA 53			Southbound GA 53			Eastbound Beechwood Boulevard			Westbound Commercial Access			
	L	T	Tot	T	R	Tot	L	R	Tot	L	T	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%					
Retail Outparcels	0	76	76	82	0	82	0	0	0				
No-Build Volumes	95	2282	2377	1614	10	1624	1	52	53				
Lanier Tract Senior Living Residential New Trips	0	94	94	75	0	75	0	0	0				
Lanier Tract Office/Retail New Trips	0	13	13	24	0	24	0	0	0				
Total Lanier Tract Site Trips	0	107	107	99	0	99	0	0	0				
Build Volumes	95	2389	2484	1713	10	1723	1	52	53				

MARC R. ACAMPORA, PE, LLC

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

January 2017

Intersection 7: 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%	
Retail Outparcels	0	19	0	19	0	11	7	18	12	0	0	0	0	0	0	0
No-Build Volumes	311	532	61	904	31	1303	921	2255	443	31	378	851	46	21	20	87
Lanier Tract Senior Living Residential New Trips	0	35	0	35	0	55	25	80	16	0	0	16	0	0	0	0
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	45	0	45	0	58	27	85	23	0	0	23	0	0	0	0
Build Volumes	311	577	61	949	31	1361	948	2340	466	31	378	874	46	21	20	87

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%	
Retail Outparcels	0	47	0	47	0	50	32	82	29	0	0	0	0	0	0	0
No-Build Volumes	478	1551	51	2080	68	1186	563	1818	962	235	426	1623	96	100	89	286
Lanier Tract Senior Living Residential New Trips	0	65	0	65	0	51	24	75	29	0	0	29	0	0	0	0
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	73	0	73	0	65	34	99	34	0	0	34	0	0	0	0
Build Volumes	478	1624	51	2153	68	1251	597	1917	996	235	426	1657	96	100	89	286

MARC R. ACAMPORA, PE, LLC

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

January 2017

Intersection 8: 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%	
Retail Outparcels	0	19	0	19	0	11	0	11	0	0	0	0	0	0	0	0
No-Build Volumes	149	851	11	1012	13	1561	57	1632	74	1	156	231	7	1	4	12
Lanier Tract Senior Living Residential New Trips	0	35	0	35	0	55	0	55	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	45	0	45	0	58	0	58	0	0	0	0	0	0	0	0
Build Volumes	149	896	11	1057	13	1619	57	1690	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%	
Retail Outparcels	0	47	0	47	0	50	0	50	0	0	0	0	0	0	0	0
No-Build Volumes	274	1978	77	2329	44	1587	59	1690	146	10	152	308	66	22	42	130
Lanier Tract Senior Living Residential New Trips	0	65	0	65	0	51	0	51	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	73	0	73	0	65	0	65	0	0	0	0	0	0	0	0
Build Volumes	274	2051	77	2402	44	1652	59	1755	146	10	152	308	66	22	42	130

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

January 2017

Intersection 9: 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%	
Retail Outparcels	0	17	0	17	0	10	1	11	2	0	0	0	0	0	0	0
No-Build Volumes	11	832	14	857	1	1389	374	1764	154	2	9	165	2	4	3	10
Lanier Tract Senior Living Residential New Trips	0	29	0	29	0	45	10	55	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	38	0	38	0	47	11	58	7	0	0	7	0	0	0	0
Build Volumes	11	870	14	895	1	1436	385	1822	161	2	9	172	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%	
Retail Outparcels	0	41	0	41	0	44	6	50	6	0	0	0	0	0	0	0
No-Build Volumes	44	1851	126	2021	8	1326	517	1851	578	42	29	649	40	30	8	77
Lanier Tract Senior Living Residential New Trips	0	53	0	53	0	42	9	51	12	0	0	12	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	60	0	60	0	54	11	65	13	0	0	13	0	0	0	0
Build Volumes	44	1911	126	2081	8	1380	528	1916	591	42	29	662	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	

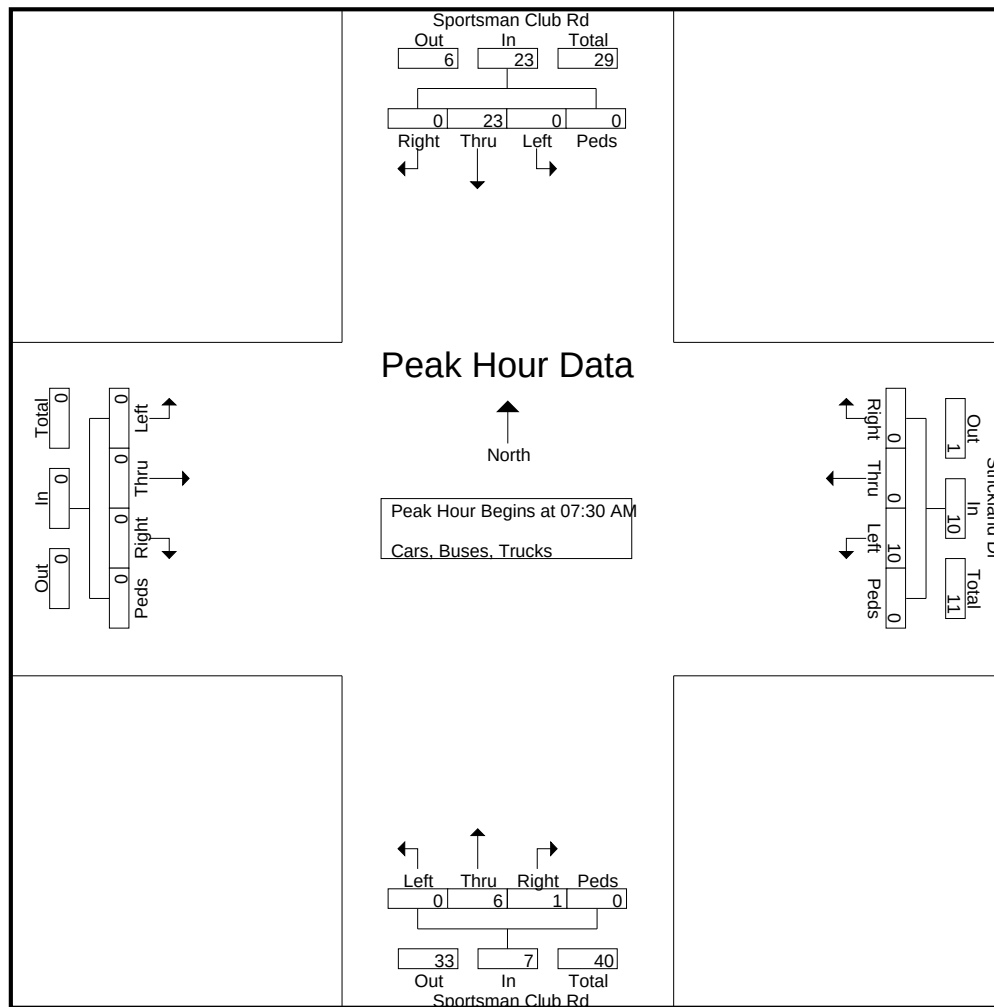
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TMC Data
Sportsman Club Rd @ Strickland Dr
Gainesville, GA
7-9am | 4.30-6.30pm

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



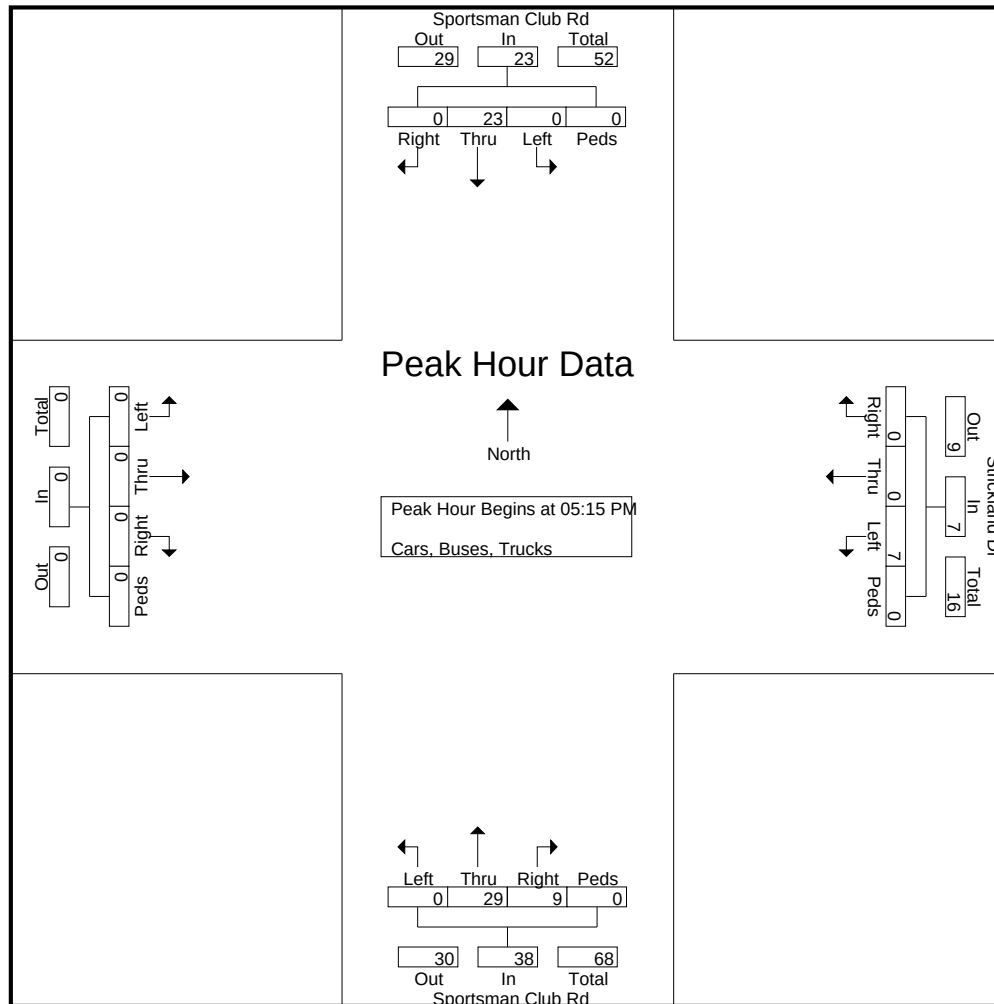
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TMC Data
Sportsman Club Rd @ Strickland Dr
Gainesville, GA
7-9am I 4.30-6.30pm

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	0	1	0	0.4	0	1.3	

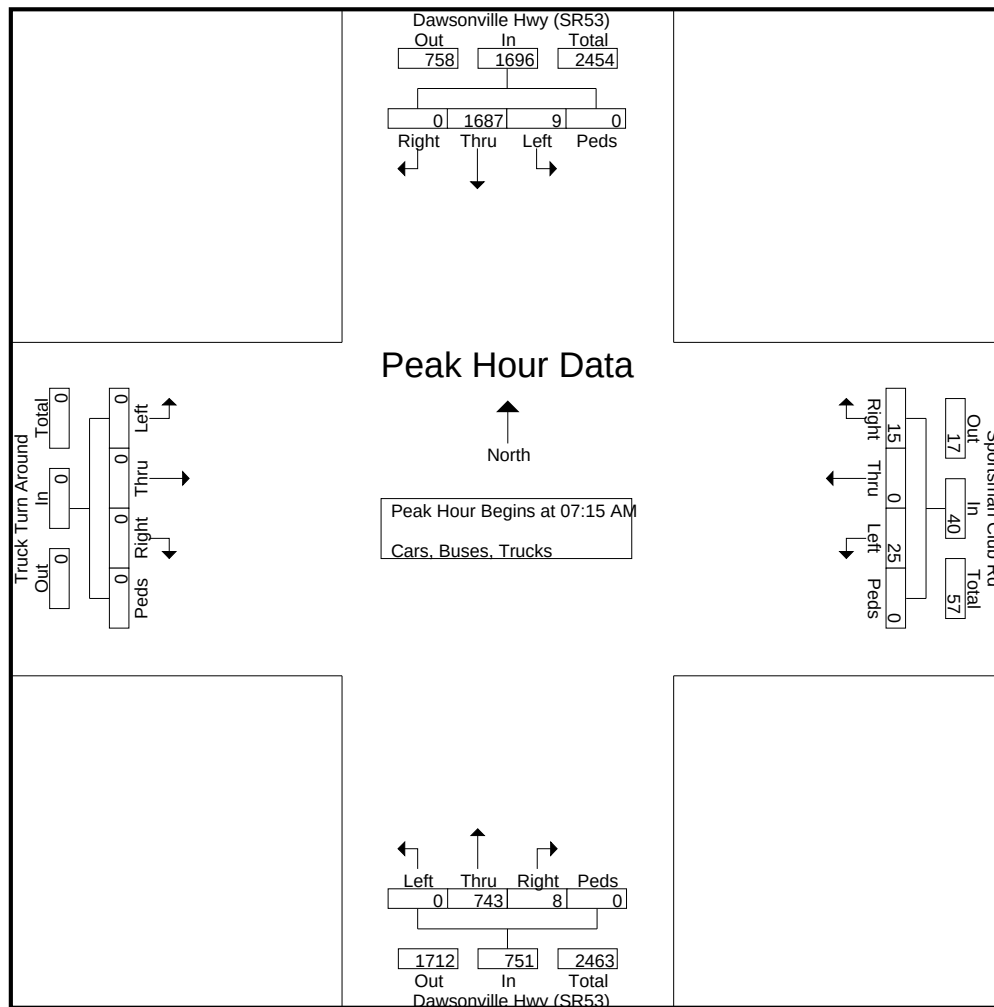
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TMC Data
Dawsonville Hwy (SR53) @
Sportsman Club Rd, Gainesville, GA
7-9am | 4.30-6.30pm

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



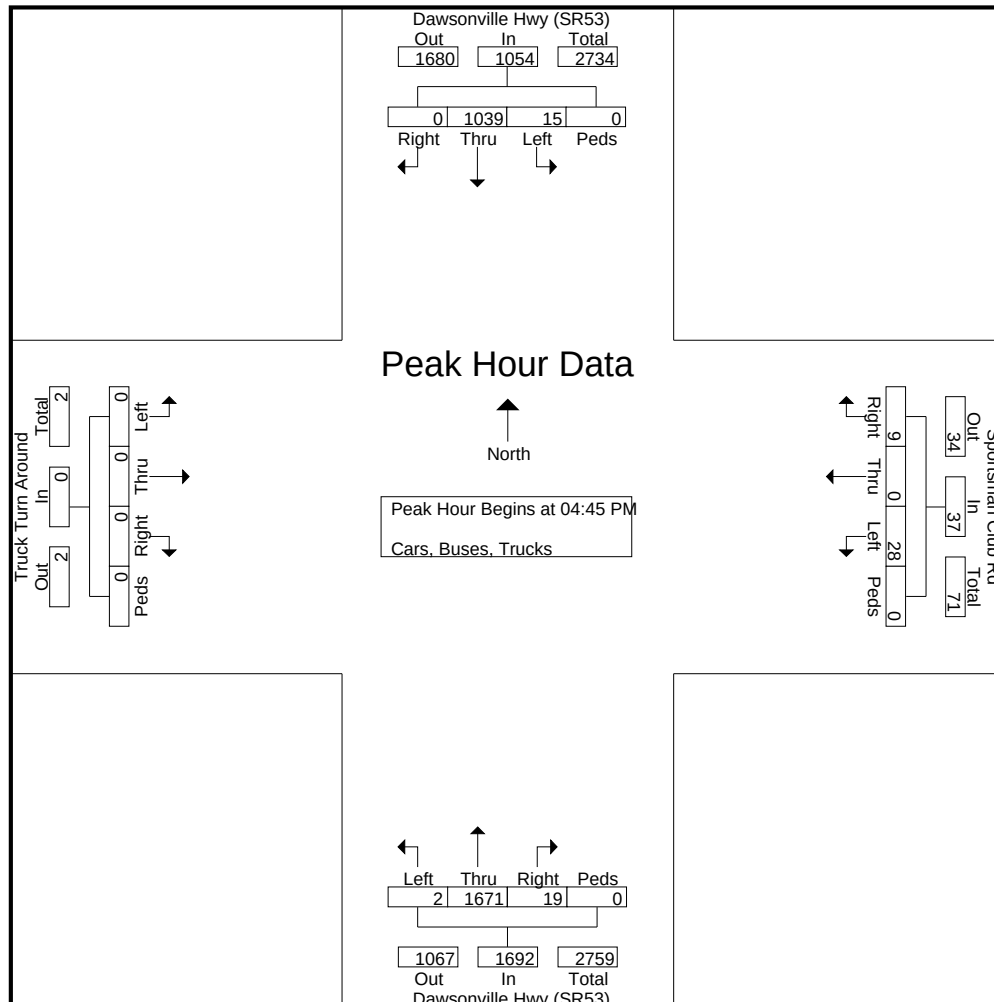
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TMC Data
Dawsonville Hwy (SR53) @
Sportsman Club Rd, Gainesville, GA
7-9am I 4.30-6.30pm

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	

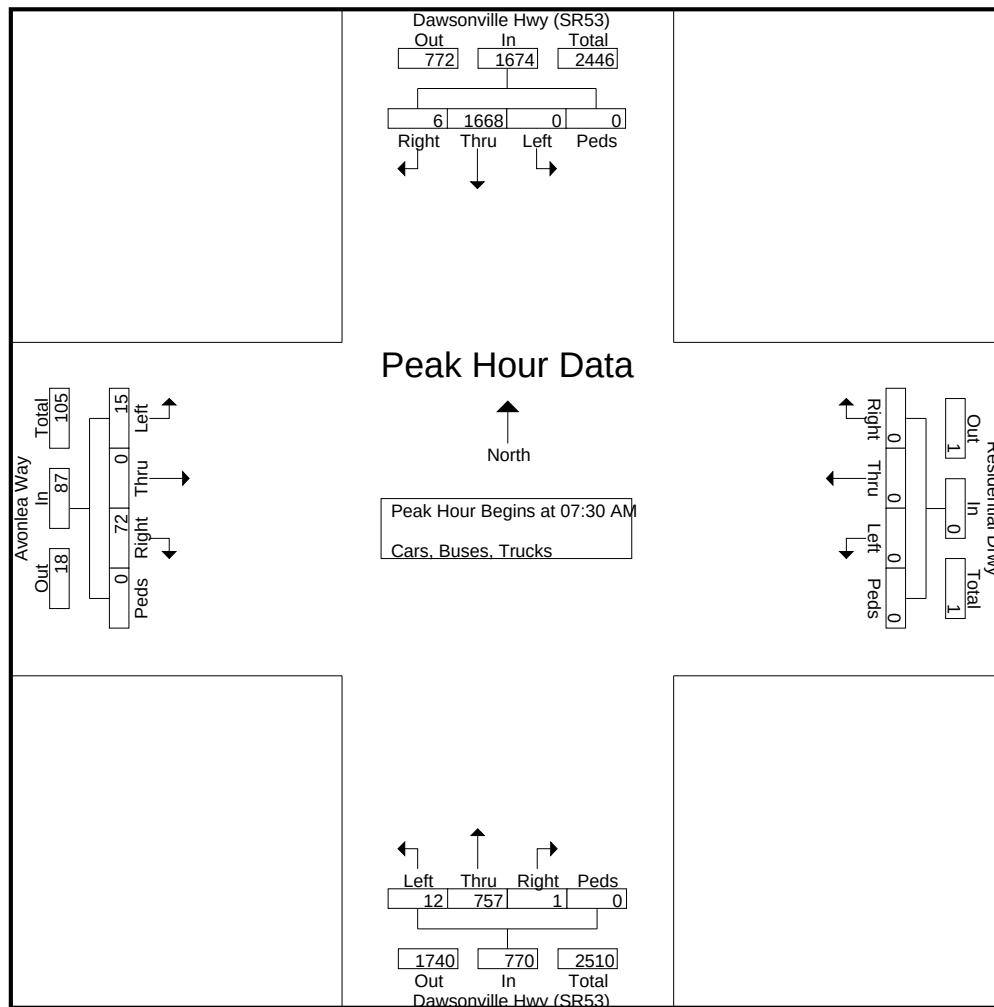
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TMC Data
Dawsonville Hwy (SR53) @ Avonlea Way
Gainesville, GA
7-9am | 4.30-6.30pm

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



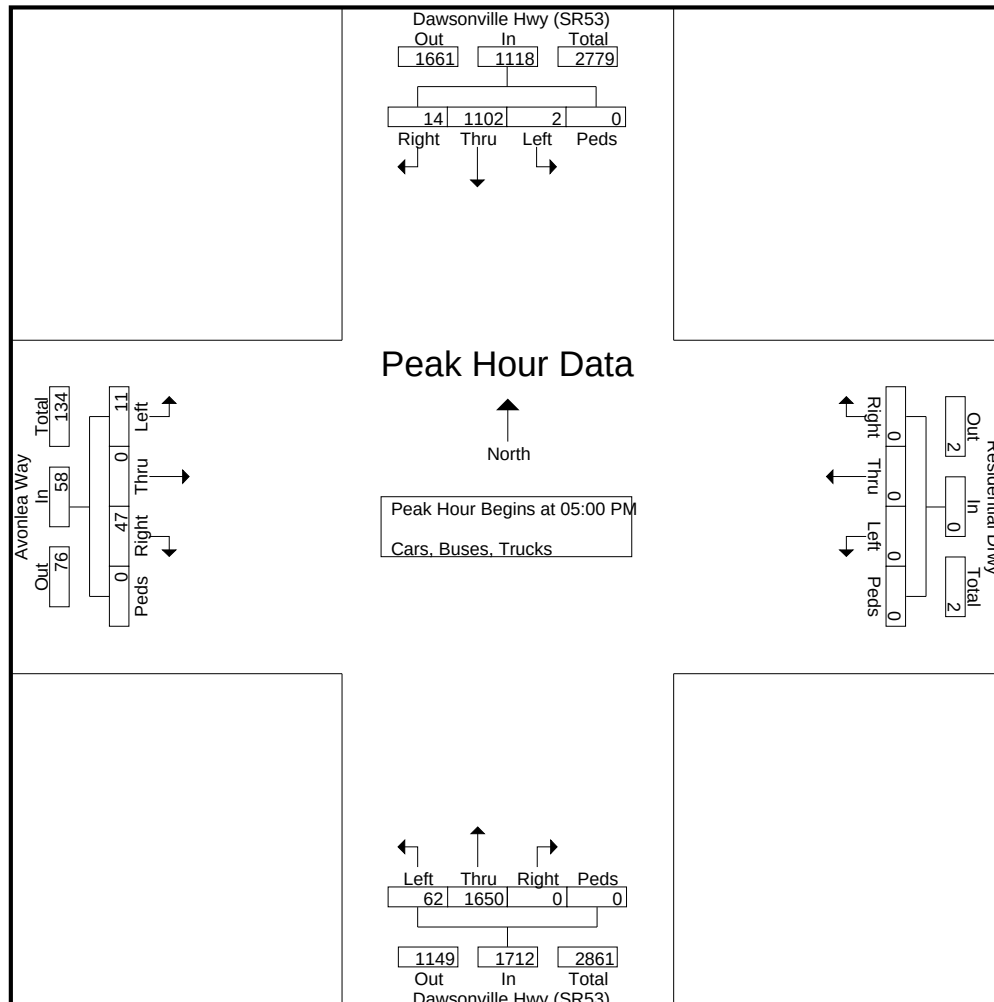
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TMC Data
Dawsonville Hwy (SR53) @ Avonlea Way
Gainesville, GA
7-9am | 4.30-6.30pm

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	

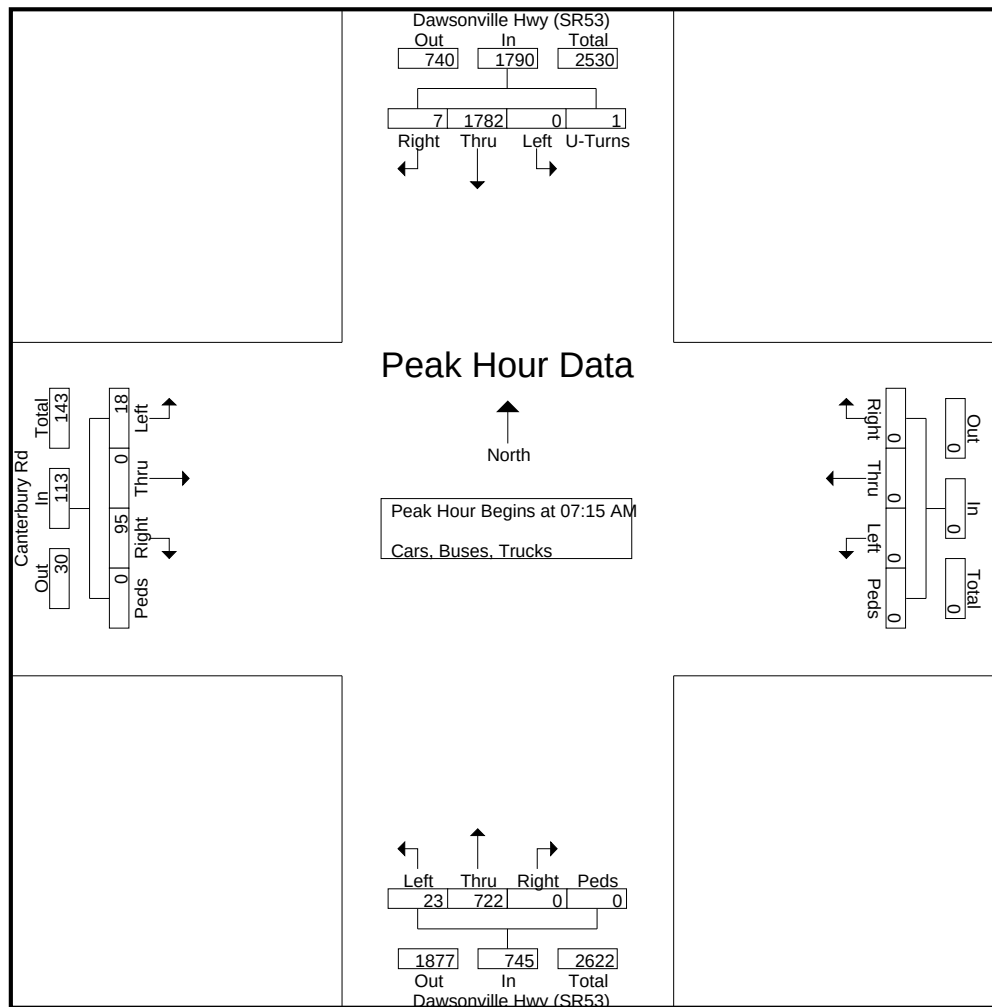
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TMC Data
Dawsonville Hwy (SR53) @ Canterbury Rd
Gainesville, GA
7-9am | 4.30-6.30pm

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



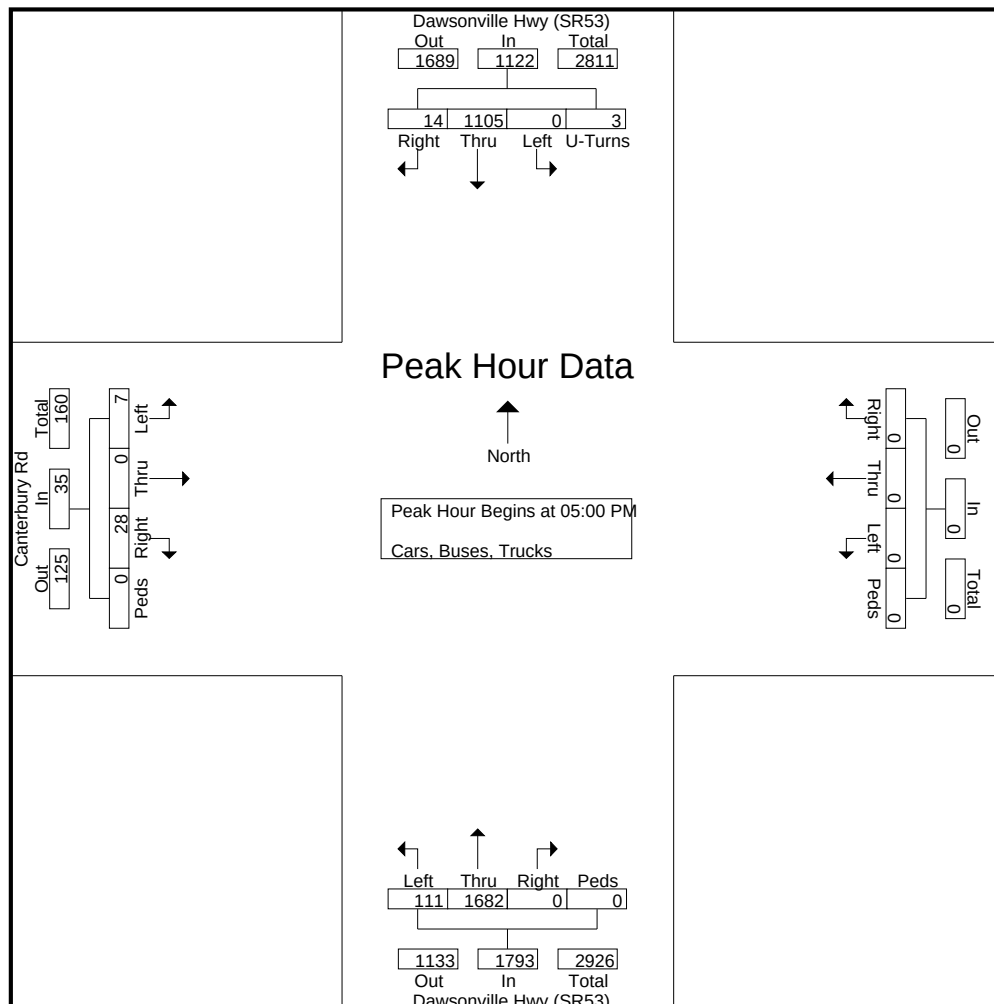
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TMC Data
Dawsonville Hwy (SR53) @ Canterbury Rd
Gainesville, GA
7-9am | 4.30-6.30pm

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	

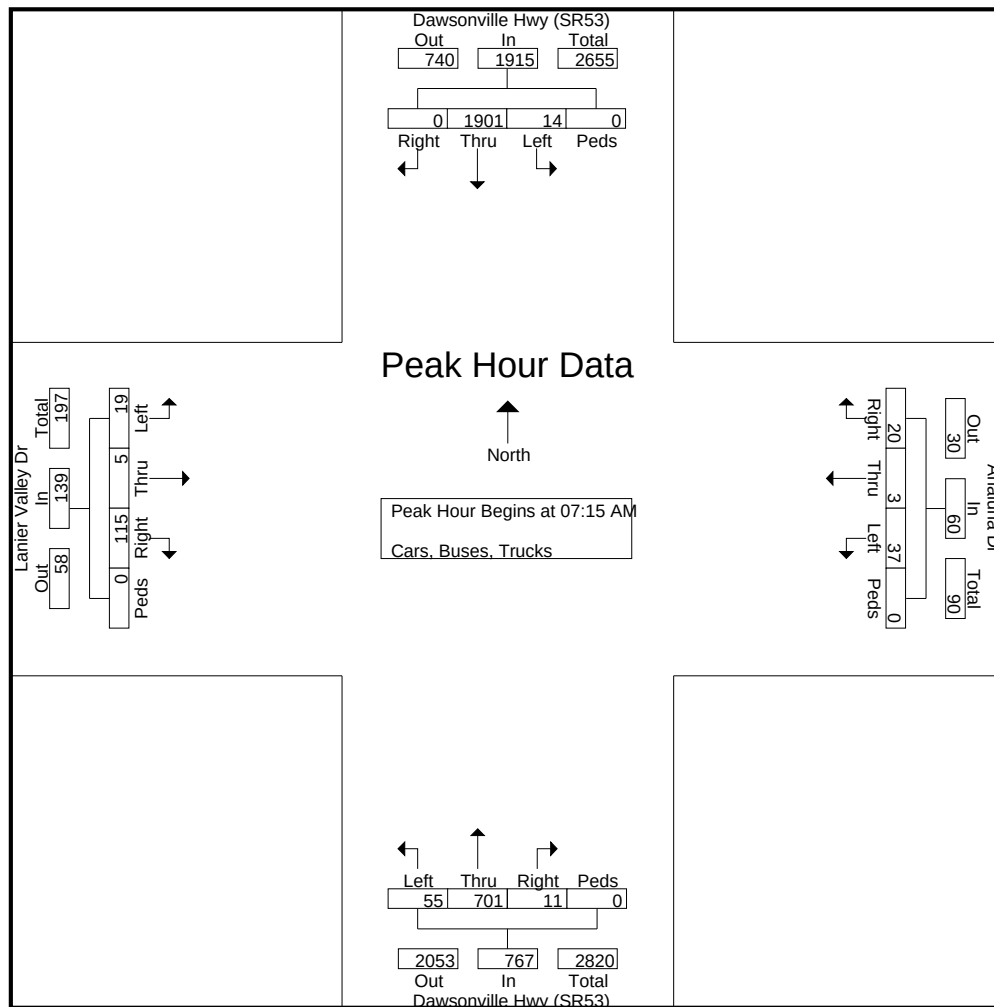
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TMC Data
Dawsonville Hwy (SR53) @ Ahaluna Dr/
Lanier Valley Dr, Gainesville, GA
7-9am | 4.30-6.30pm

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



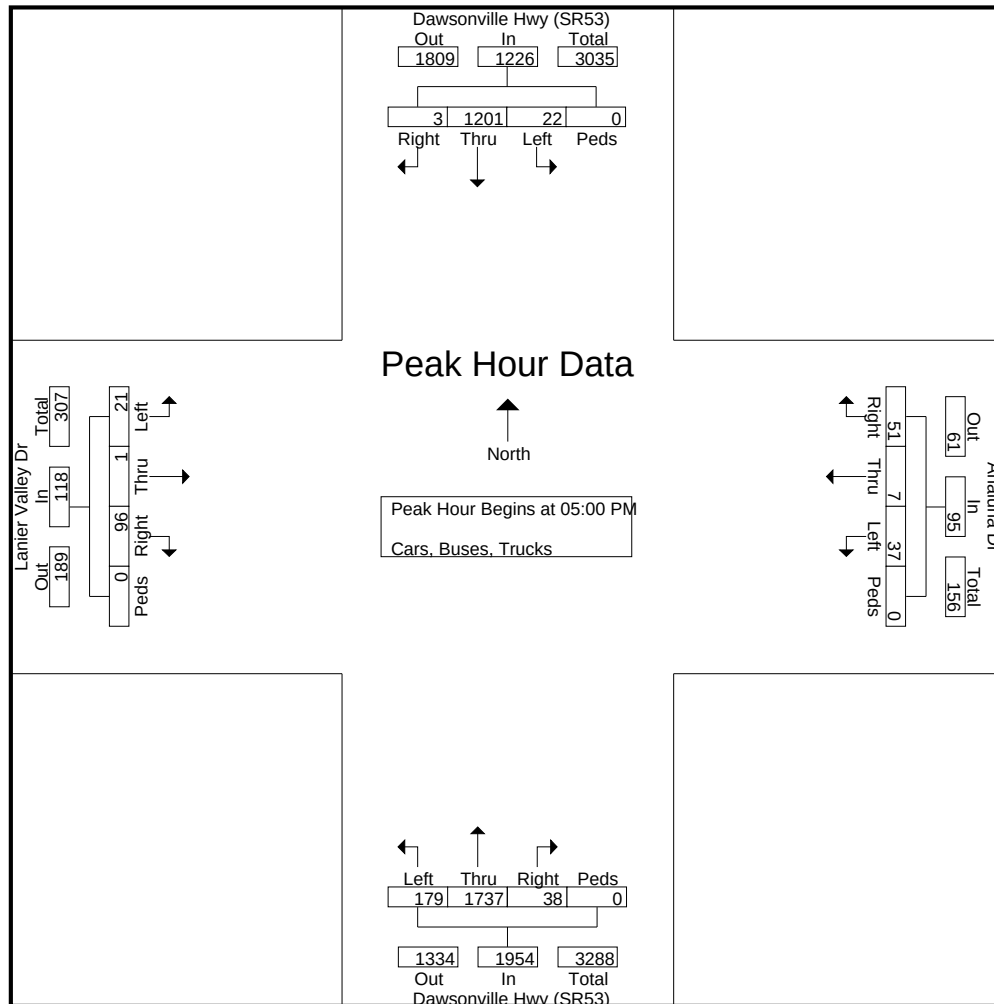
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TMC Data
Dawsonville Hwy (SR53) @ Ahaluna Dr/
Lanier Valley Dr, Gainesville, GA
7-9am | 4.30-6.30pm

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) @ 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	

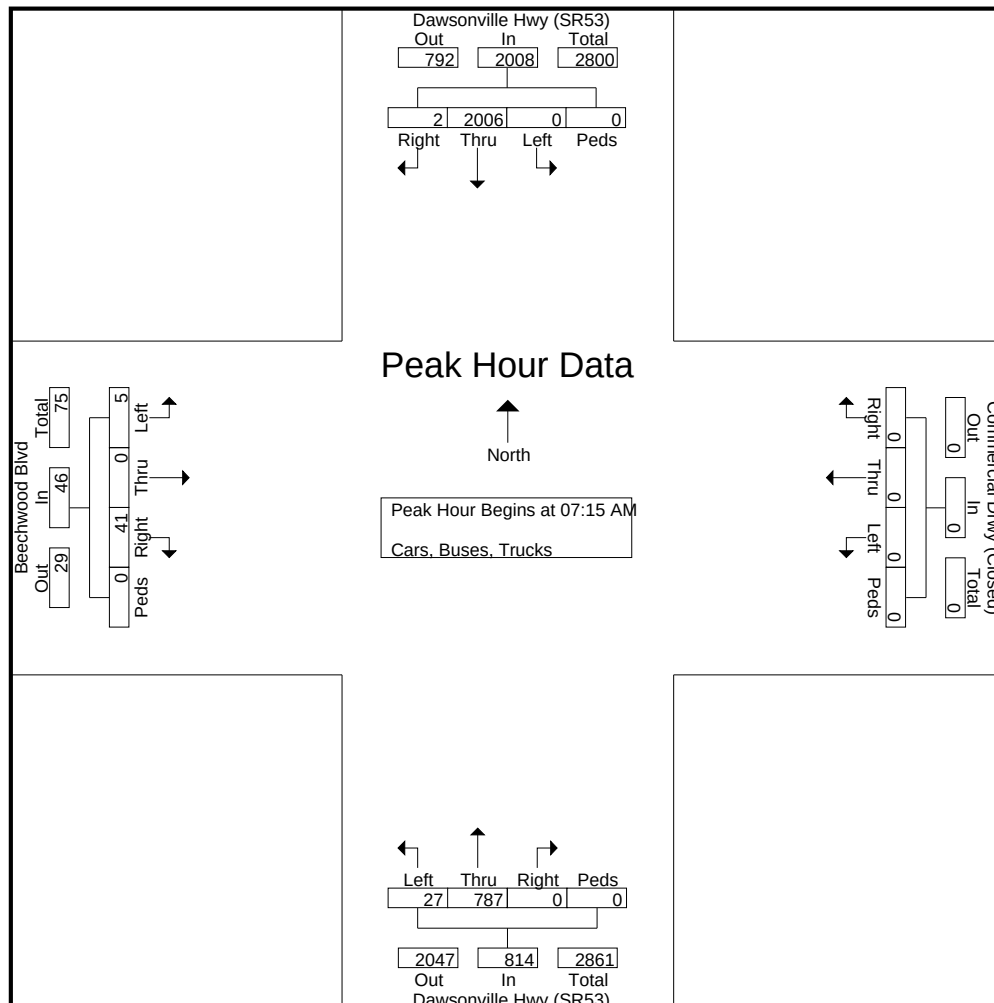
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TMC Data
Dawsonville Hwy (SR53) @ Beechwood Blvd
Gainesville, GA
7-9am | 4.30-6.30pm

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



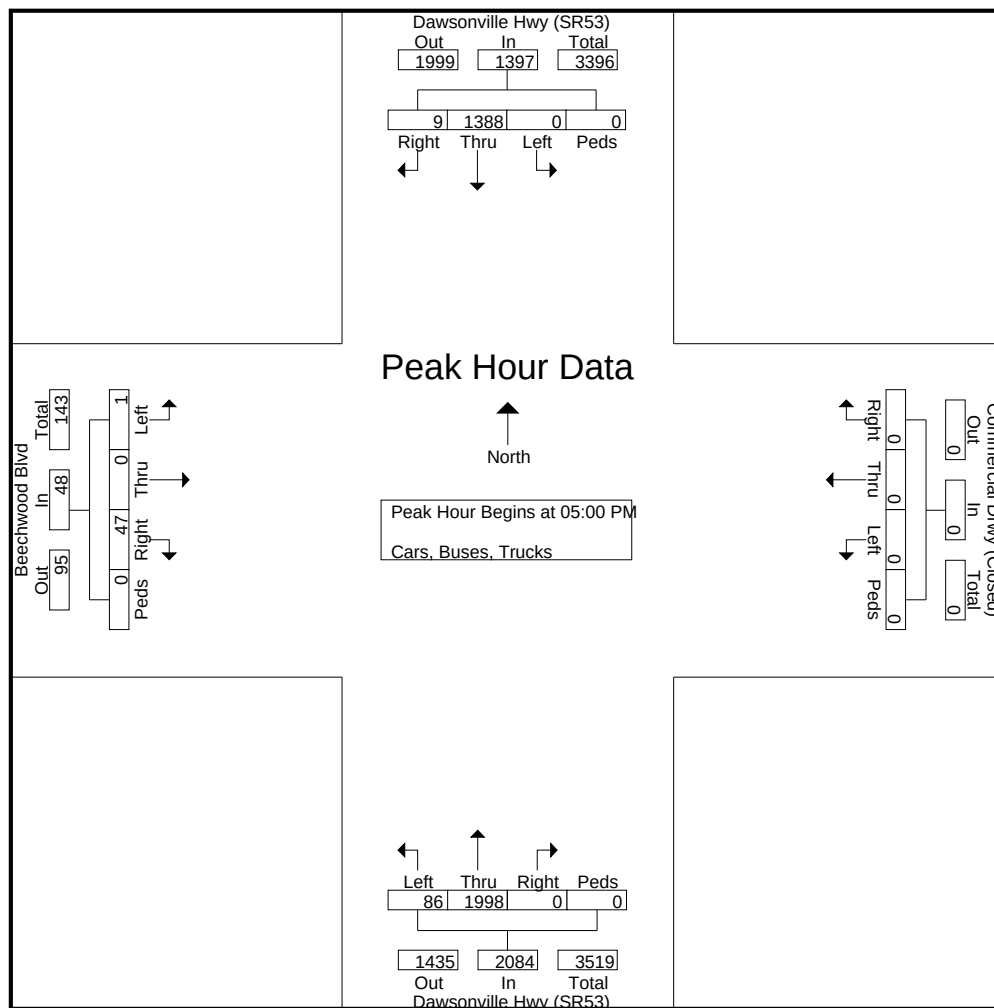
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TMC Data
Dawsonville Hwy (SR53) @ Beechwood Blvd
Gainesville, GA
7-9am | 4.30-6.30pm

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	

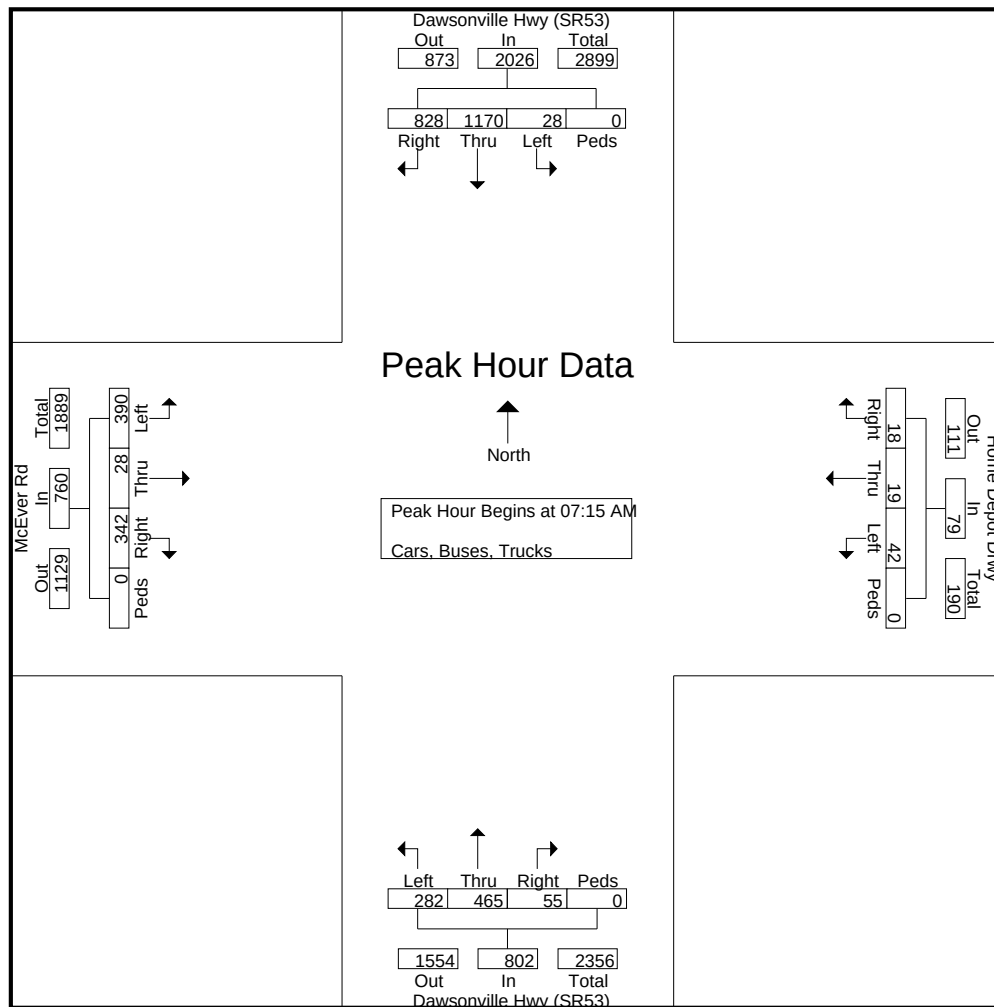
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TMC Data
Dawsonville Hwy (SR53) @ McEver Rd
Gainesville, GA
7-9am | 4.30-6.30pm

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



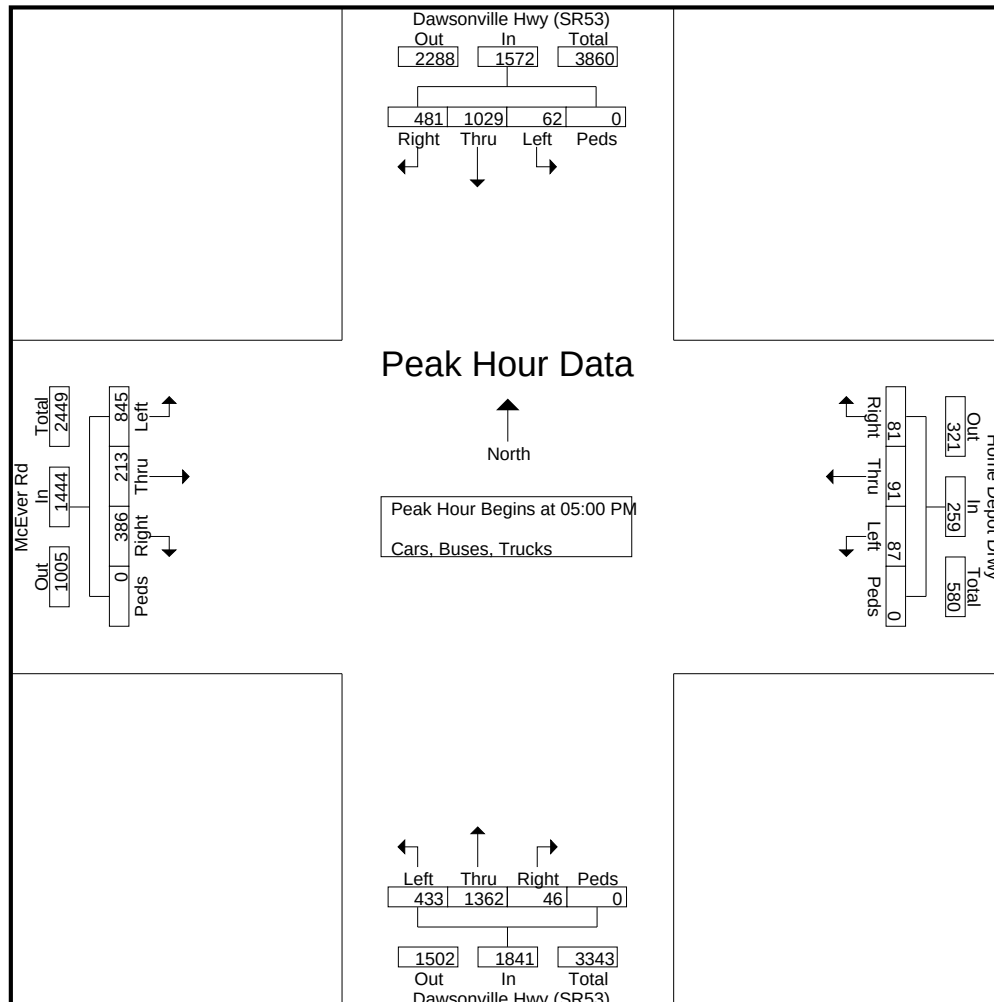
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TMC Data
Dawsonville Hwy (SR53) @ McEver Rd
Gainesville, GA
7-9am | 4.30-6.30pm

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	

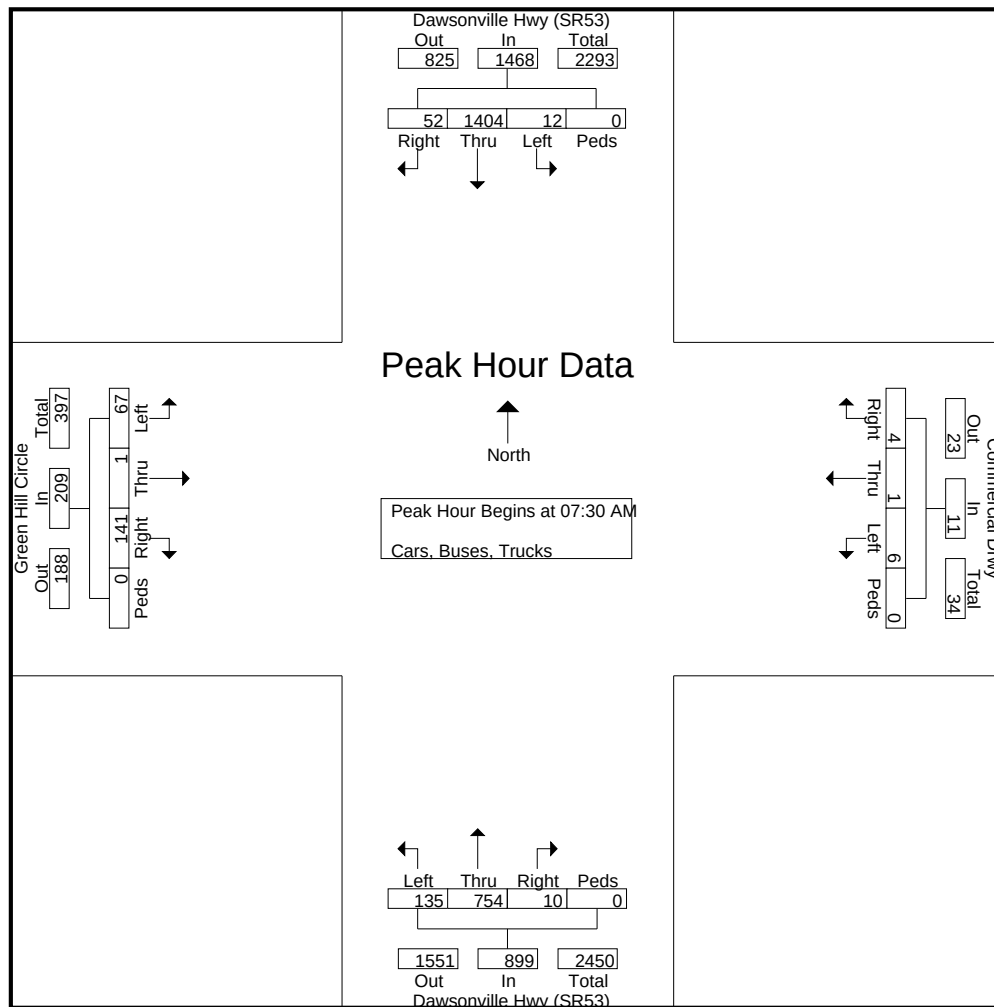
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TMC Data
Dawsonville Hwy (SR53) @ Green Hill Cir
Gainesville, GA
7-9am | 4.30-6.30pm

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



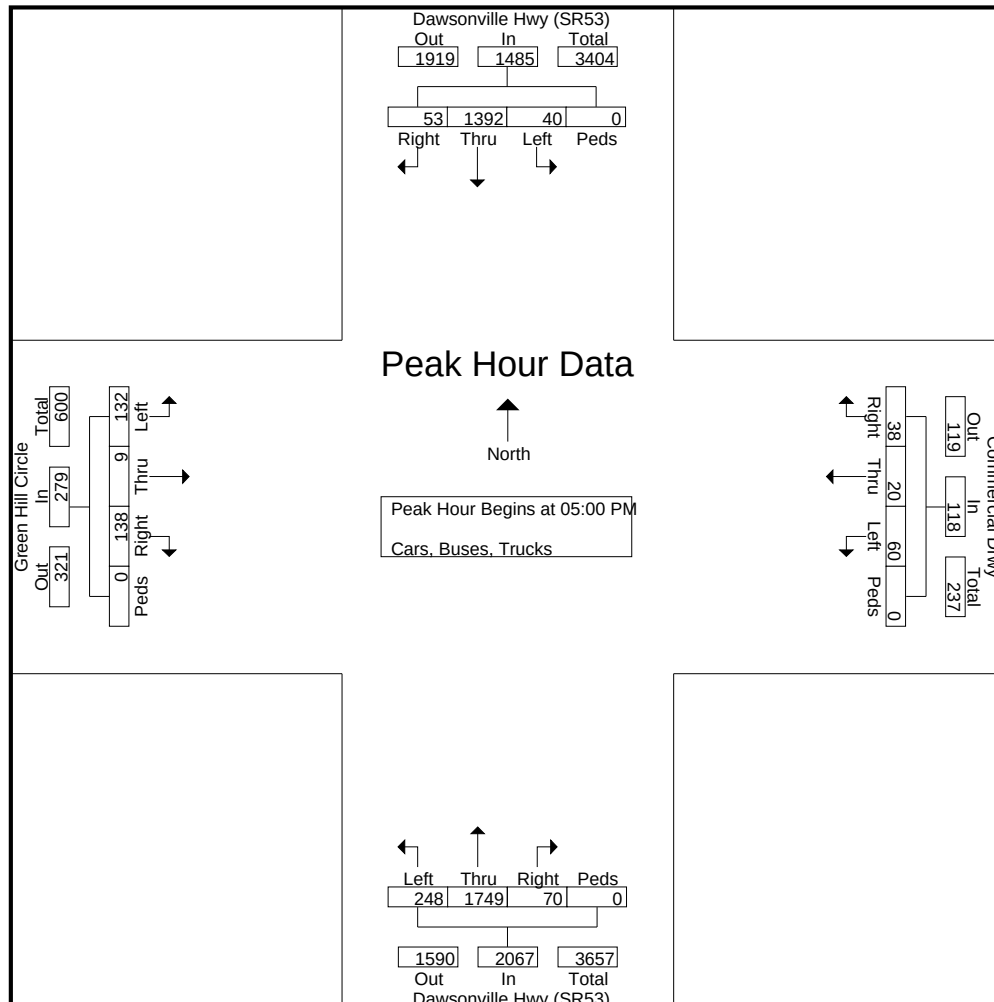
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TMC Data
Dawsonville Hwy (SR53) @ Green Hill Cir
Gainesville, GA
7-9am I 4.30-6.30pm

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	

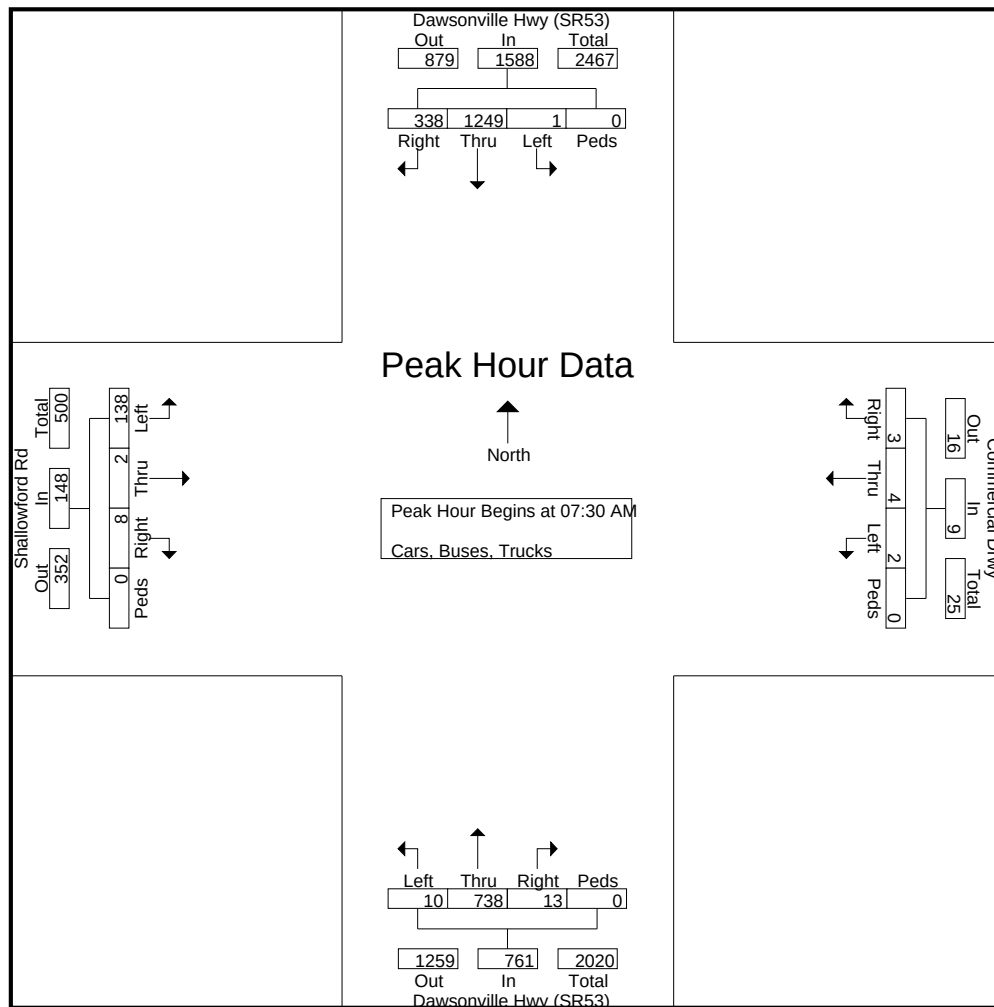
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TMC Data
Dawsonville Hwy (SR53) @
Shallowford Rd, Gainesville, GA
7-9am | 4.30-6.30pm

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



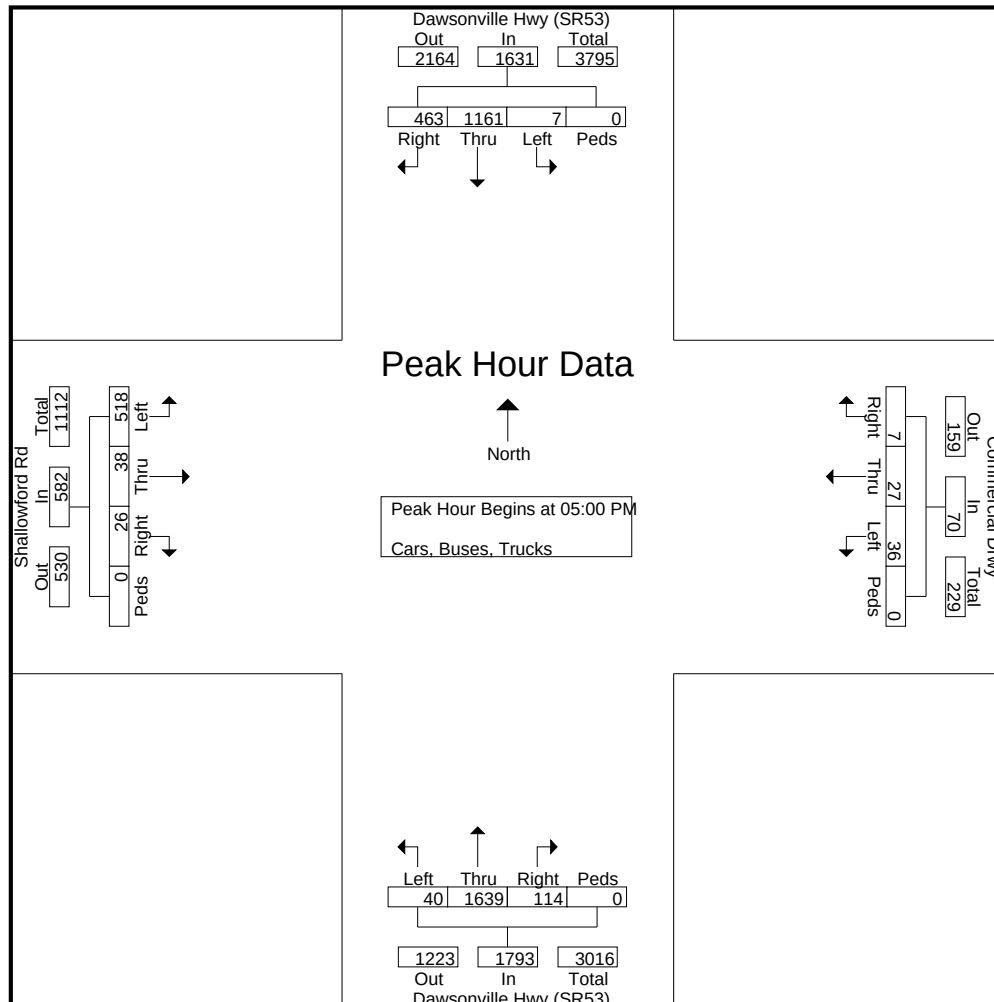
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TMC Data
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7-9am I 4.30-6.30pm

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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
6: 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

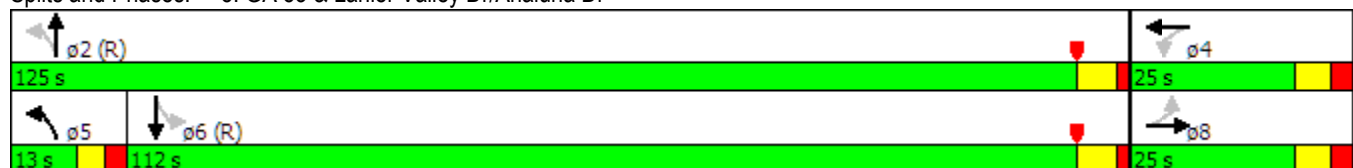
Intersection LOS: B

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

7: 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

7: 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

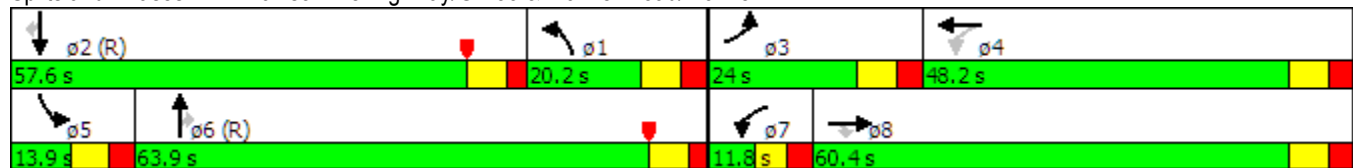
Intersection LOS: D

Intersection Capacity Utilization 81.3%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 7: Dawsonville Highway/GA 53 & McEver Road/McEver



Lanier Tract DRI

8: 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

8: 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

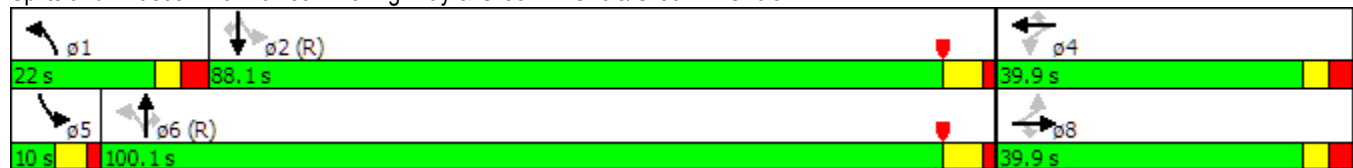
Intersection LOS: B

Intersection Capacity Utilization 71.6%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 8: Dawsonville Highway & Greenhill Circle/Greenhill Circle



Lanier Tract DRI

9: 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

9: 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: 9: Dawsonville Highway & Shallowford Rd/Best Buy

 p1	 p2 (R)	 p3	 p4
10.8 s	63.6 s	36.7 s	38.9 s
 p6 (R)			
74.4 s			

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
6: 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
Lane Configurations												
Volume (vph)	21	1	96	37	7	51	179	1737	38	22	1201	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		0.859			0.595		0.178			0.108		
Satd. Flow (perm)	0	1438	0	0	1070	0	337	3581	0	206	3592	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		108			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)	24	1	108	44	8	60	186	1809	40	23	1251	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	133	0	0	112	0	186	1849	0	23	1254	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 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

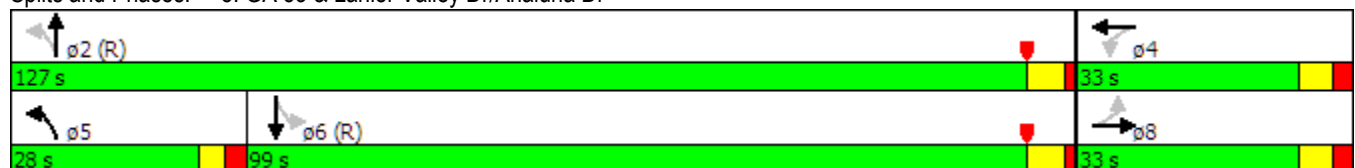
Intersection LOS: B

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

7: 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

7: 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

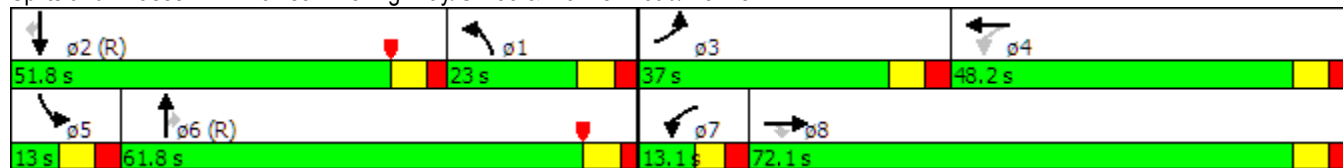
Intersection LOS: F

Intersection Capacity Utilization 99.3%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 7: Dawsonville Highway/GA 53 & McEver Road/McEver



Lanier Tract DRI

8: 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

8: 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: 8: Dawsonville Highway & Greenhill Circle/Greenhill Circle



Lanier Tract DRI

9: 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

9: 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

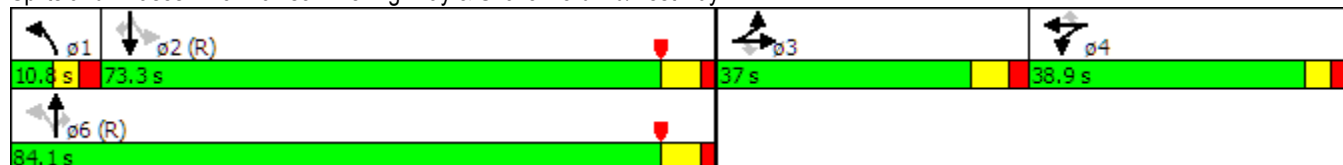
Intersection LOS: D

Intersection Capacity Utilization 81.0%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 9: 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	12.5											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	10	1877	0	0	829	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	2183	0	0	987	11	0	0	0	47	0	29

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	998	0	0	2183	0	0	2699	3204	1091	2107	3198	499
Stage 1	-	-	-	-	-	-	2206	2206	-	992	992	-
Stage 2	-	-	-	-	-	-	493	998	-	1115	2206	-
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	689	-	-	240	-	-	10	10	210	~ 29	10	517
Stage 1	-	-	-	-	-	-	45	81	-	264	322	-
Stage 2	-	-	-	-	-	-	526	320	-	222	81	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	689	-	-	240	-	-	9	10	210	~ 29	10	517
Mov Cap-2 Maneuver	-	-	-	-	-	-	9	10	-	~ 29	10	-
Stage 1	-	-	-	-	-	-	44	80	-	259	322	-
Stage 2	-	-	-	-	-	-	497	320	-	218	80	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0	0	\$ 533.7
HCM LOS			A	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	689	-	-	240	-	-	45
HCM Lane V/C Ratio	-	0.017	-	-	-	-	-	1.695
HCM Control Delay (s)	0	10.3	-	-	0	-	-	\$ 533.7
HCM Lane LOS	A	B	-	-	A	-	-	F
HCM 95th %tile Q(veh)	-	0.1	-	-	0	-	-	7.6

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	4.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	17	79	13	845	1856	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	960	2158	8
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	2668	1079	2158	0	-	0
Stage 1	2158	-	-	-	-	-
Stage 2	510	-	-	-	-	-
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	214	245	-	-	-
Stage 1	74	-	-	-	-	-
Stage 2	568	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 17	214	245	-	-	-
Mov Cap-2 Maneuver	~ 17	-	-	-	-	-
Stage 1	74	-	-	-	-	-
Stage 2	533	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	134.4	0.3		0		
HCM LOS	F					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	245	-	17	214	-	-
HCM Lane V/C Ratio	0.06	-	1.19	0.439	-	-
HCM Control Delay (s)	20.6	-	\$ 599.2	34.4	-	-
HCM Lane LOS	C	-	F	D	-	-
HCM 95th %tile Q(veh)	0.2	-	3	2.1	-	-
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	25.4											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	20	0	105	26	0	13	25	791	37	28	1955	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	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	92	88	85	92	85	86	86	86	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	23	0	119	31	0	15	29	920	43	31	2148	9

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2728	3188	1074	2114	3188	460	2148	0	0	920	0	0
Stage 1	2210	2210	-	978	978	-	-	-	-	-	-	-
Stage 2	518	978	-	1136	2210	-	-	-	-	-	-	-
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	216	~ 29	10	548	247	-	-	738	-	-
Stage 1	45	81	-	269	327	-	-	-	-	-	-	-
Stage 2	509	327	-	215	81	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 9	8	216	~ 11	8	548	247	-	-	738	-	-
Mov Cap-2 Maneuver	~ 9	8	-	~ 11	8	-	-	-	-	-	-	-
Stage 1	40	78	-	237	289	-	-	-	-	-	-	-
Stage 2	437	289	-	92	78	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	274.8	\$ 995.9	0.6	0.1
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	247	-	-	9	216	11	548	738	-	-
HCM Lane V/C Ratio	0.118	-	-	2.525	0.552	2.781	0.028	0.042	-	-
HCM Control Delay (s)	21.5	-	-	\$ 1504.7	40.5	\$ 1488	11.8	10.1	-	-
HCM Lane LOS	C	-	-	F	E	F	B	B	-	-
HCM 95th %tile Q(veh)	0.4	-	-	3.9	3	4.8	0.1	0.1	-	-

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

Lanier Tract DRI
6: GA 53 & Beechwood Boulevard

no build a.m.

Intersection						
Int Delay, s/veh	2.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	6	45	30	900	2233	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	1034	2509	2
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	3095	1254	2509	0	-	0
Stage 1	2509	-	-	-	-	-
Stage 2	586	-	-	-	-	-
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	166	184	-	-	-
Stage 1	48	-	-	-	-	-
Stage 2	525	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 7	166	184	-	-	-
Mov Cap-2 Maneuver	~ 7	-	-	-	-	-
Stage 1	48	-	-	-	-	-
Stage 2	428	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	152.8	0.9		0		
HCM LOS	F					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	184	-	7	166	-	-
HCM Lane V/C Ratio	0.187	-	1.045	0.331	-	-
HCM Control Delay (s)	29	\$	1021.4	37	-	-
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

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	805	12	15	2117	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	3515	0	1814	3628	0
Flt Permitted		0.940			0.380		0.035			0.298		
Satd. Flow (perm)	0	1572	0	0	703	0	66	3515	0	569	3628	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		69			14			3				
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	947	14	17	2433	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	170	0	0	80	0	72	961	0	17	2433	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		11.8	126.0		114.2	114.2	
Total Split (%)	16.0%	16.0%		16.0%	16.0%		7.9%	84.0%		76.1%	76.1%	
Maximum Green (s)	17.4	17.4		17.4	17.4		6.2	119.9		108.1	108.1	
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		110.2	110.2	
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	0.34		0.04	0.91	
Control Delay		59.8			139.1		52.1	2.2		6.3	23.4	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		59.8			139.1		52.1	2.2		6.3	23.4	
LOS		E			F		D	A		A	C	
Approach Delay		59.8			139.1			5.7			23.3	
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: 120

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.95

Intersection Signal Delay: 22.5

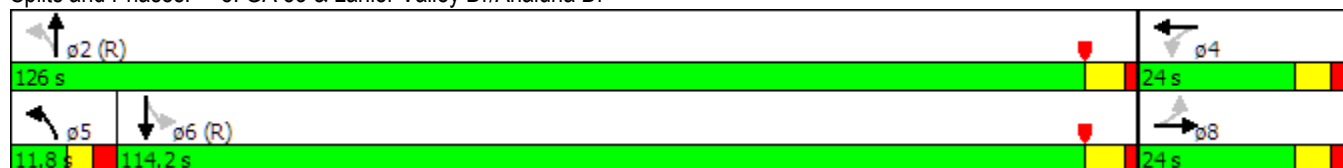
Intersection LOS: C

Intersection Capacity Utilization 81.4%

ICU Level of Service D

Analysis Period (min) 15

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



Lanier Tract DRI

7: 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)	443	31	378	46	21	20	311	532	61	31	1303	921
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			549
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)	457	32	390	74	34	32	334	572	66	34	1448	1023
Shared Lane Traffic (%)			47%									
Lane Group Flow (vph)	457	215	207	74	66	0	334	572	66	34	1448	1023
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

7: 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		19.0	64.6	64.6	14.2	59.8	59.8
Total Split (%)	15.3%	39.4%	39.4%	8.1%	32.1%		12.7%	43.1%	43.1%	9.5%	39.9%	39.9%
Maximum Green (s)	15.7	51.8	51.8	5.6	40.9		11.5	58.0	58.0	7.0	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	17.5	17.5	14.0	8.8		11.5	93.5	93.5	8.3	87.5	87.5
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	1.23	0.62	0.57	0.58	0.51		1.25	0.26	0.06	0.34	0.68	0.87
Control Delay	176.4	20.5	13.5	70.3	52.3		197.5	17.5	1.5	80.9	21.6	15.1
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	176.4	20.5	13.5	70.3	52.3		197.5	17.5	1.5	80.9	21.6	15.1
LOS	F	C	B	E	D		F	B	A	F	C	B
Approach Delay		99.9			61.8			78.3			19.7	
Approach LOS		F			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: 1.25

Intersection Signal Delay: 49.4

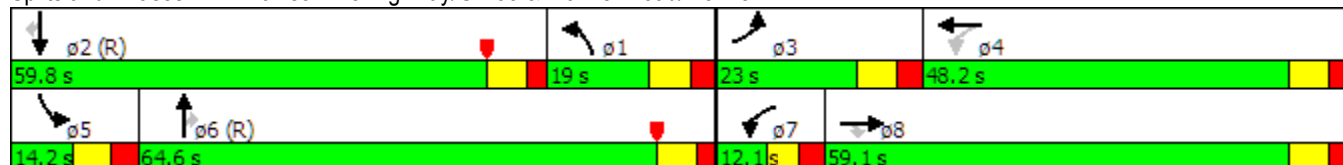
Intersection LOS: D

Intersection Capacity Utilization 87.9%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 7: Dawsonville Highway/GA 53 & McEver Road/McEver



Lanier Tract DRI

8: 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	851	11	13	1561	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		0.080			0.289		
Satd. Flow (perm)	0	1349	1591	0	1377	1558	151	3522	1607	549	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	990	13	14	1697	62
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	83	173	0	11	6	173	990	13	14	1697	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

8: 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	0.59	0.35	0.01	0.03	0.69	0.05
Control Delay		85.5	24.1		59.9	0.2	29.9	4.6	0.0	4.0	13.9	0.7
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	29.9	4.6	0.0	4.0	14.0	0.7
LOS		F	C		E	A	C	A	A	A	B	A
Approach Delay		44.0			38.8			8.3			13.4	
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: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.69

Intersection Signal Delay: 14.1

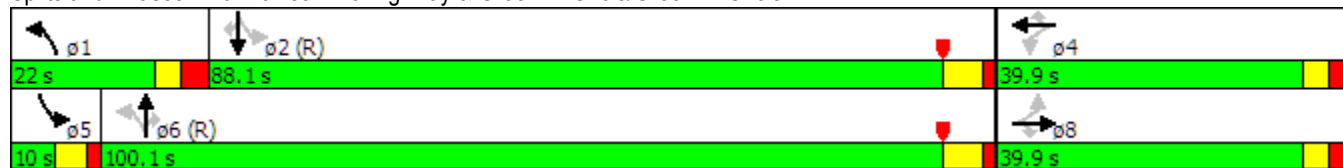
Intersection LOS: B

Intersection Capacity Utilization 77.1%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 8: Dawsonville Highway & Greenhill Circle/Greenhill Circle



Lanier Tract DRI

9: 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)	154	2	9	2	4	3	11	832	14	1	1389	374
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		0.123			0.286		
Satd. Flow (perm)	1723	1729	1623	0	1773	1534	238	3646	1647	546	3592	1623
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			113			119			70			217
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)	183	2	11	4	7	5	13	1002	17	1	1494	402
Shared Lane Traffic (%)	49%											
Lane Group Flow (vph)	93	92	11	0	11	5	13	1002	17	1	1494	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		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

9: 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	112.9	112.9	112.9
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	0.60	0.04		0.14	0.03	0.05	0.35	0.01	0.00	0.55	0.32
Control Delay	81.3	80.6	0.3		72.5	0.3	5.9	6.2	0.0	7.0	10.5	4.2
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	81.3	80.6	0.3		72.5	0.3	5.9	6.2	0.0	7.0	10.9	4.2
LOS	F	F	A		E	A	A	A	A	A	B	A
Approach Delay		76.4			49.9			6.1			9.4	
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: 12.7

Intersection LOS: B

Intersection Capacity Utilization 62.9%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 9: Dawsonville Highway & Shallowford Rd/Best Buy

 p1	 p2 (R)	 p3	 p4
10.8 s	63.6 s	36.7 s	38.9 s
 p6 (R)			
74.4 s			

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	42.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	17	1182	0	2	1883	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	1244	0	2	1961	22	0	0	0	47	0	15
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1983	0	0	1244	0	0	2265	3268	622	2635	3257	992
Stage 1	-	-	-	-	-	-	1280	1280	-	1977	1977	-
Stage 2	-	-	-	-	-	-	985	1988	-	658	1280	-
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	287	-	-	555	-	-	22	9	430	~ 11	9	244
Stage 1	-	-	-	-	-	-	175	235	-	64	106	-
Stage 2	-	-	-	-	-	-	266	105	-	420	235	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	287	-	-	555	-	-	20	8	430	~ 10	8	244
Mov Cap-2 Maneuver	-	-	-	-	-	-	20	8	-	~ 10	8	-
Stage 1	-	-	-	-	-	-	164	220	-	60	106	-
Stage 2	-	-	-	-	-	-	249	105	-	394	220	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			0			0			\$ 2280.3		
HCM LOS							A			F		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	-	287	-	-	555	-	-	13				
HCM Lane V/C Ratio	-	0.062	-	-	0.004	-	-	4.779				
HCM Control Delay (s)	0	18.4	-	-	11.5	-		\$ 2280.3				
HCM Lane LOS	A	C	-	-	B	-	-	F				
HCM 95th %tile Q(veh)	-	0.2	-	-	0	-	-	8.8				
Notes												
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon												

Intersection

Int Delay, s/veh 1.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	12	52	68	1860	1254	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	16	68	72	1958	1254	15

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2376	627	1254	0	-	0
Stage 1	1254	-	-	-	-	-
Stage 2	1122	-	-	-	-	-
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	29	426	551	-	-	-
Stage 1	232	-	-	-	-	-
Stage 2	273	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	25	426	551	-	-	-
Mov Cap-2 Maneuver	25	-	-	-	-	-
Stage 1	232	-	-	-	-	-
Stage 2	237	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	65.7	0.4	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	551	-	25	426	-	-
HCM Lane V/C Ratio	0.13	-	0.632	0.161	-	-
HCM Control Delay (s)	12.5	-	284.7	15.1	-	-
HCM Lane LOS	B	-	F	C	-	-
HCM 95th %tile Q(veh)	0.4	-	1.9	0.6	-	-

Lanier Tract DRI
4: Canterbury Road & GA 53

no build p.m.

Intersection												
Int Delay, s/veh	511.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	8	0	31	114	0	90	123	1809	124	65	1193	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	92	80	92	92	92	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	124	0	98	128	1884	129	68	1243	16
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2576	3519	621	2898	3519	942	1243	0	0	1884	0	0
Stage 1	1378	1378	-	2141	2141	-	-	-	-	-	-	-
Stage 2	1198	2141	-	757	1378	-	-	-	-	-	-	-
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	430	~ 7	6	264	556	-	-	314	-	-
Stage 1	152	210	-	~ 50	87	-	-	-	-	-	-	-
Stage 2	197	87	-	366	210	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 6	4	430	~ 4	4	264	556	-	-	314	-	-
Mov Cap-2 Maneuver	~ 6	4	-	~ 4	4	-	-	-	-	-	-	-
Stage 1	117	165	-	~ 38	67	-	-	-	-	-	-	-
Stage 2	95	67	-	261	165	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	\$ 307.2			\$ 8544.2			0.8			1		
HCM LOS	F			F								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR		
Capacity (veh/h)	556	-	-	6	430	4	264	314	-	-		
HCM Lane V/C Ratio	0.23	-	-	1.667	0.09	30.978	0.371	0.216	-	-		
HCM Control Delay (s)	13.4	-		\$ 1442.4	\$ 25268.7	26.4	19.6	-	-	-		
HCM Lane LOS	B	-	-	F	B	F	D	C	-	-		
HCM 95th %tile Q(veh)	0.9	-	-	2.2	0.3	17.6	1.6	0.8	-	-		
Notes												
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon												

Lanier Tract DRI
6: 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	2282	1614	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	2305	1647	10
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	2991	824	1647	0	-	0
Stage 1	1647	-	-	-	-	-
Stage 2	1344	-	-	-	-	-
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	11	320	398	-	-	-
Stage 1	145	-	-	-	-	-
Stage 2	211	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	8	320	398	-	-	-
Mov Cap-2 Maneuver	8	-	-	-	-	-
Stage 1	145	-	-	-	-	-
Stage 2	160	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	29.3	0.7		0		
HCM LOS	D					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	398	-	8	320	-	-
HCM Lane V/C Ratio	0.241	-	0.176	0.229	-	-
HCM Control Delay (s)	16.9	-	534.2	19.6	-	-
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

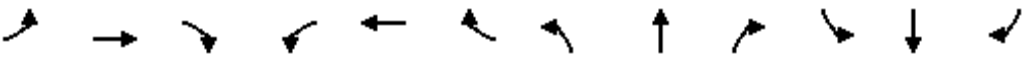
no build p.m.

												
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	1994	42	24	1408	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		0.864			0.597		0.122			0.071		
Satd. Flow (perm)	0	1446	0	0	1074	0	231	3581	0	136	3592	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		119			26			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	2077	44	25	1467	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	146	0	0	123	0	206	2121	0	25	1470	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)		18.0			18.0		129.8	129.3		110.6	110.6	
Actuated g/C Ratio		0.11			0.11		0.81	0.81		0.69	0.69	
v/c Ratio		0.54			0.86		0.65	0.73		0.27	0.59	
Control Delay		23.3			98.5		24.2	11.1		22.8	15.9	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		23.3			98.5		24.2	11.1		22.8	15.9	
LOS		C			F		C	B		C	B	
Approach Delay		23.3			98.5			12.3			16.0	
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: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.86

Intersection Signal Delay: 16.6

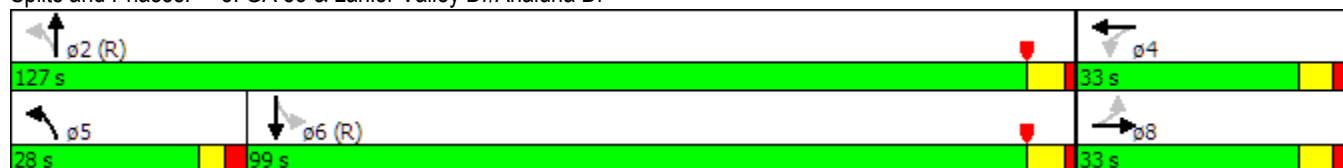
Intersection LOS: B

Intersection Capacity Utilization 88.2%

ICU Level of Service E

Analysis Period (min) 15

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



Lanier Tract DRI

7: 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)	962	235	426	96	100	89	478	1551	51	68	1186	563
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	308		27				172			320
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)	1013	247	448	112	116	103	493	1599	53	75	1303	619
Shared Lane Traffic (%)			27%									
Lane Group Flow (vph)	1013	368	327	112	219	0	493	1599	53	75	1303	619
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

7: 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		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	44.8	44.8	31.5	23.5		14.5	65.4	65.4	15.0	65.6	65.6
Actuated g/C Ratio	0.17	0.28	0.28	0.20	0.15		0.09	0.41	0.41	0.09	0.41	0.41
v/c Ratio	1.68	0.75	0.50	0.54	0.80		1.57	1.09	0.07	0.44	0.89	0.72
Control Delay	351.1	59.4	8.0	47.6	77.6		314.4	106.2	0.1	67.3	66.9	40.3
Queue Delay	0.0	14.4	1.3	25.2	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	351.1	73.8	9.3	72.8	77.6		314.4	106.2	0.1	67.3	66.9	40.3
LOS	F	E	A	E	E		F	F	A	E	E	D
Approach Delay		225.9			76.0			151.4			58.7	
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: 1.68

Intersection Signal Delay: 138.0

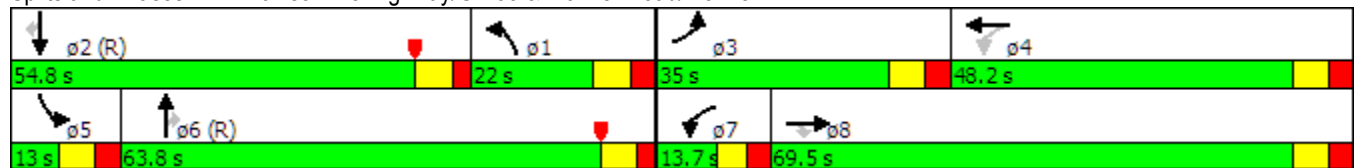
Intersection LOS: F

Intersection Capacity Utilization 108.9%

ICU Level of Service G

Analysis Period (min) 15

Splits and Phases: 7: Dawsonville Highway/GA 53 & McEver Road/McEver



Lanier Tract DRI

8: 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	1978	77	44	1587	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		0.045			0.048		
Satd. Flow (perm)	0	1106	1591	0	884	1558	85	3592	1607	91	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	2039	79	46	1671	62
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	171	167	0	113	54	282	2039	79	46	1671	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

8: 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	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	0.89	0.81	0.07	0.40	0.82	0.07
Control Delay		103.0	9.8		87.7	1.7	55.8	29.8	5.4	23.1	56.9	11.5
Queue Delay		0.0	5.4		87.6	0.0	0.0	47.2	0.0	0.0	1.6	0.0
Total Delay		103.0	15.2		175.3	1.7	55.8	76.9	5.4	23.1	58.5	11.5
LOS		F	B		F	A	E	E	A	C	E	B
Approach Delay		59.6			119.2			72.1			56.0	
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: 120

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.89

Intersection Signal Delay: 66.7

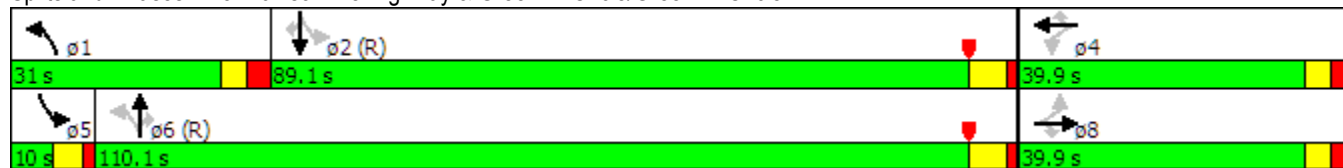
Intersection LOS: E

Intersection Capacity Utilization 89.2%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 8: Dawsonville Highway & Greenhill Circle/Greenhill Circle



Lanier Tract DRI

9: 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)	578	42	29	40	30	8	44	1851	126	8	1326	517
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		0.075			0.046		
Satd. Flow (perm)	1723	1740	1623	0	1754	1534	145	3682	1647	88	3628	1623
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			106			111			65			315
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)	642	47	32	45	34	9	47	1969	134	9	1457	568
Shared Lane Traffic (%)	47%											
Lane Group Flow (vph)	340	349	32	0	79	9	47	1969	134	9	1457	568
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

9: 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)	36.7	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	1.05	1.07	0.08		0.57	0.04	0.29	0.87	0.13	0.19	0.74	0.55
Control Delay	125.0	129.2	0.4		86.5	0.4	17.2	31.8	7.4	56.6	55.0	33.1
Queue Delay	1.1	1.2	0.0		0.0	0.0	0.0	46.9	0.0	0.0	22.1	0.8
Total Delay	126.1	130.4	0.4		86.5	0.4	17.2	78.7	7.4	56.6	77.0	33.9
LOS	F	F	A		F	A	B	E	A	E	E	C
Approach Delay		122.6			77.7			73.0			64.9	
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: 1.07

Intersection Signal Delay: 76.9

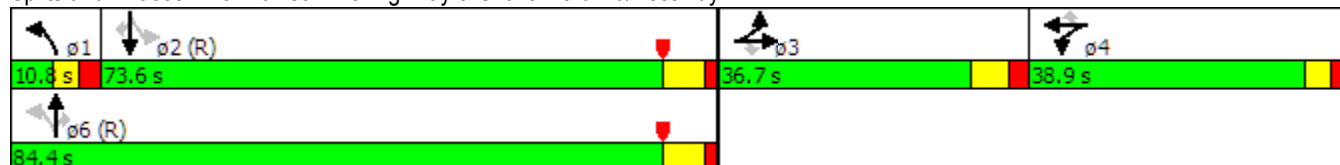
Intersection LOS: E

Intersection Capacity Utilization 88.6%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 9: Dawsonville Highway & Shallowford Rd/Best Buy



Appendix E

Future Intersection Analysis

Lanier Tract DRI
1: Sportsman Club Road & Strickland Drive

future a.m.

Intersection						
Int Delay, s/veh	3.8					
Movement	WBL	WBR		NBT	NBR	SBL SBT
Vol, veh/h	24	0		7	9	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	48	0		12	16	0 39
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	59	20	0	0	28	0
Stage 1	20	-	-	-	-	-
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	948	1058	-	-	1585	-
Stage 1	1003	-	-	-	-	-
Stage 2	983	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	948	1058	-	-	1585	-
Mov Cap-2 Maneuver	948	-	-	-	-	-
Stage 1	1003	-	-	-	-	-
Stage 2	983	-	-	-	-	-
Approach	WB		NB		SB	
HCM Control Delay, s	9		0		0	
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	948	1585	-	
HCM Lane V/C Ratio	-	-	0.051	-	-	
HCM Control Delay (s)	-	-	9	0	-	
HCM Lane LOS	-	-	A	A	-	
HCM 95th %tile Q(veh)	-	-	0.2	0	-	

Lanier Tract DRI
2: GA 53 & Sportsman Club Road

future a.m.

Intersection												
Int Delay, s/veh	25.9											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	11	1896	0	5	847	16	0	0	0	37	0	21
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	13	2205	0	6	1008	19	0	0	0	63	0	36

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1027	0	0	2205	0	0	2746	3269	1102	2158	3260	514
Stage 1	-	-	-	-	-	-	2230	2230	-	1030	1030	-
Stage 2	-	-	-	-	-	-	516	1039	-	1128	2230	-
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	672	-	-	235	-	-	9	9	206	~ 27	9	505
Stage 1	-	-	-	-	-	-	44	79	-	250	309	-
Stage 2	-	-	-	-	-	-	510	306	-	218	79	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	672	-	-	235	-	-	8	9	206	~ 26	9	505
Mov Cap-2 Maneuver	-	-	-	-	-	-	8	9	-	~ 26	9	-
Stage 1	-	-	-	-	-	-	43	77	-	245	301	-
Stage 2	-	-	-	-	-	-	462	298	-	214	77	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.1	0	\$ 878
HCM LOS			A	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	672	-	-	235	-	-	40
HCM Lane V/C Ratio	-	0.019	-	-	0.025	-	-	2.458
HCM Control Delay (s)	0	10.5	-	-	20.7	-	-	\$ 878
HCM Lane LOS	A	B	-	-	C	-	-	F
HCM 95th %tile Q(veh)	-	0.1	-	-	0.1	-	-	10.7

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

Lanier Tract DRI
3: GA 53 & Avonlea Way

future a.m.

Intersection												
Int Delay, s/veh	12.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	17	0	79	13	0	4	13	883	8	9	1880	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	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	92	84	80	92	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	16	0	5	15	1003	9	10	2186	8
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2738	3240	1093	2147	3240	502	2186	0	0	1003	0	0
Stage 1	2207	2207	-	1033	1033	-	-	-	-	-	-	-
Stage 2	531	1033	-	1114	2207	-	-	-	-	-	-	-
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	9	209	27	9	515	239	-	-	686	-	-
Stage 1	45	81	-	249	308	-	-	-	-	-	-	-
Stage 2	500	308	-	222	81	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 9	8	209	~ 14	8	515	239	-	-	686	-	-
Mov Cap-2 Maneuver	~ 9	8	-	~ 14	8	-	-	-	-	-	-	-
Stage 1	42	80	-	233	289	-	-	-	-	-	-	-
Stage 2	464	289	-	120	80	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	273.9			\$ 512.6			0.3			0		
HCM LOS	F			F								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR		
Capacity (veh/h)	239	-	-	9	209	14	515	686	-	-		
HCM Lane V/C Ratio	0.062	-	-	2.249	0.45	1.161	0.01	0.015	-	-		
HCM Control Delay (s)	21.1	-		\$ 1381.4	35.6	\$ 666.6	12.1	10.3	-	-		
HCM Lane LOS	C	-	-	F	E	F	B	B	-	-		
HCM 95th %tile Q(veh)	0.2	-	-	3.5	2.1	2.6	0	0	-	-		
Notes												
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon												

Lanier Tract DRI
4: GA 53 & Canterbury Road

future a.m.

Intersection												
Int Delay, s/veh	53.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	20	0	105	42	0	17	25	832	48	31	1989	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	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	92	88	85	92	85	86	86	86	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	23	0	119	49	0	20	29	967	56	34	2186	9
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2796	3280	1093	2187	3280	484	2186	0	0	967	0	0
Stage 1	2254	2254	-	1026	1026	-	-	-	-	-	-	-
Stage 2	542	1026	-	1161	2254	-	-	-	-	-	-	-
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	~ 25	9	529	239	-	-	708	-	-
Stage 1	42	76	-	251	310	-	-	-	-	-	-	-
Stage 2	492	310	-	208	76	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 8	8	209	~ 9	8	529	239	-	-	708	-	-
Mov Cap-2 Maneuver	~ 8	8	-	~ 9	8	-	-	-	-	-	-	-
Stage 1	37	72	-	221	272	-	-	-	-	-	-	-
Stage 2	416	272	-	85	72	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	\$ 313.4			\$ 2020			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)	239	-	-	8	209	9	529	708	-	-		
HCM Lane V/C Ratio	0.122	-	-	2.841	0.571	5.49	0.038	0.048	-	-		
HCM Control Delay (s)	22.1	-		\$ 1733.4	42.9	\$ 2832.7	12.1	10.3	-	-		
HCM Lane LOS	C	-	-	F	E	F	B	B	-	-		
HCM 95th %tile Q(veh)	0.4	-	-	4	3.1	7.5	0.1	0.2	-	-		
Notes												
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon												

Lanier Tract DRI
6: GA 53 & Beechwood Boulevard

future a.m.

Intersection						
Int Delay, s/veh	3.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	6	45	30	968	2318	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	1113	2604	2
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	3229	1302	2604	0	-	0
Stage 1	2604	-	-	-	-	-
Stage 2	625	-	-	-	-	-
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	154	168	-	-	-
Stage 1	43	-	-	-	-	-
Stage 2	501	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 6	154	168	-	-	-
Mov Cap-2 Maneuver	~ 6	-	-	-	-	-
Stage 1	43	-	-	-	-	-
Stage 2	400	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	180.7	1		0		
HCM LOS	F					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	168	-	6	154	-	-
HCM Lane V/C Ratio	0.205	-	1.22	0.356	-	-
HCM Control Delay (s)	31.9	\$	1230.3	40.8	-	-
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

future a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	21	6	127	83	3	32	61	847	38	22	2160	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			0.963			0.994				
Flt Protected		0.993			0.966		0.950			0.950		
Satd. Flow (prot)	0	1661	0	0	1803	0	1796	3503	0	1814	3628	0
Flt Permitted		0.942			0.484		0.036			0.275		
Satd. Flow (perm)	0	1575	0	0	903	0	68	3503	0	525	3628	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		57			11			9				
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	100	4	39	72	996	45	25	2483	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	170	0	0	143	0	72	1041	0	25	2483	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

future a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	29.0	29.0		29.0	29.0		10.6	121.0		110.4	110.4	
Total Split (%)	19.3%	19.3%		19.3%	19.3%		7.1%	80.7%		73.6%	73.6%	
Maximum Green (s)	22.4	22.4		22.4	22.4		5.0	114.9		104.3	104.3	
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)		22.4			22.4		115.4	114.9		104.3	104.3	
Actuated g/C Ratio		0.15			0.15		0.77	0.77		0.70	0.70	
v/c Ratio		0.60			0.99		0.66	0.39		0.07	0.98	
Control Delay		48.9			130.7		58.1	3.2		7.9	36.9	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		48.9			130.7		58.1	3.2		7.9	36.9	
LOS		D			F		E	A		A	D	
Approach Delay		48.9			130.7			6.8			36.6	
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: 0.99

Intersection Signal Delay: 32.1

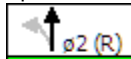
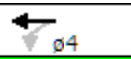
Intersection LOS: C

Intersection Capacity Utilization 91.8%

ICU Level of Service F

Analysis Period (min) 15

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

							
121 s				29 s			
							
10.6 s				110.4 s			
				29 s			

Lanier Tract DRI

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

future a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	466	31	378	46	21	20	311	577	61	31	1361	948
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			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)	480	32	390	74	34	32	334	620	66	34	1512	1053
Shared Lane Traffic (%)			47%									
Lane Group Flow (vph)	480	215	207	74	66	0	334	620	66	34	1512	1053
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

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

future 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	64.6	64.6	14.2	59.8	59.8
Total Split (%)	15.3%	39.4%	39.4%	8.1%	32.1%		12.7%	43.1%	43.1%	9.5%	39.9%	39.9%
Maximum Green (s)	15.7	51.8	51.8	5.6	40.9		11.5	58.0	58.0	7.0	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	17.5	17.5	14.0	8.8		11.5	93.5	93.5	8.3	87.5	87.5
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	1.29	0.62	0.57	0.58	0.51		1.25	0.29	0.06	0.34	0.71	0.90
Control Delay	198.7	20.5	13.5	70.3	52.3		197.3	17.5	1.4	74.8	24.0	17.7
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	198.7	20.5	13.5	70.3	52.3		197.3	17.5	1.4	74.8	24.0	17.7
LOS	F	C	B	E	D		F	B	A	E	C	B
Approach Delay		113.7			61.8			75.3			22.1	
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: 1.29

Intersection Signal Delay: 52.7

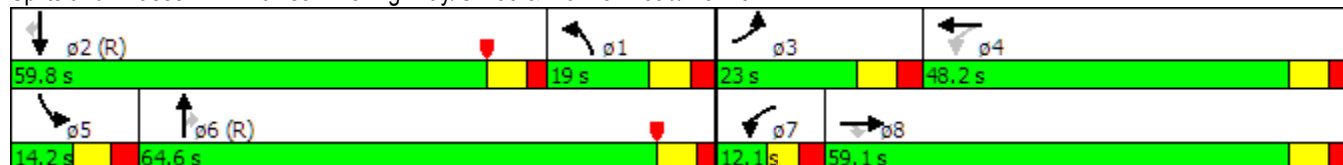
Intersection LOS: D

Intersection Capacity Utilization 89.6%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 7: Dawsonville Highway/GA 53 & McEver Road/McEver



Lanier Tract DRI

8: Dawsonville Highway & Greenhill Circle/Greenhill Circle

future 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	896	11	13	1619	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		0.070			0.275		
Satd. Flow (perm)	0	1349	1591	0	1377	1558	132	3522	1607	522	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	1042	13	14	1760	62
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	83	173	0	11	6	173	1042	13	14	1760	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

8: Dawsonville Highway & Greenhill Circle/Greenhill Circle

future 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	0.62	0.37	0.01	0.03	0.72	0.05
Control Delay		85.5	29.1		59.9	0.2	34.7	4.7	0.0	4.2	14.9	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	34.7	4.7	0.0	4.2	15.0	1.0
LOS		F	C		E	A	C	A	A	A	B	A
Approach Delay		47.4			38.8			8.9			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: 0.72

Intersection Signal Delay: 15.0

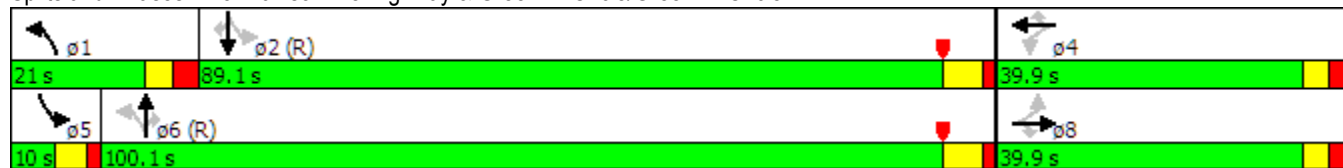
Intersection LOS: B

Intersection Capacity Utilization 78.7%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 8: Dawsonville Highway & Greenhill Circle/Greenhill Circle



Lanier Tract DRI

9: Dawsonville Highway & Shallowford Rd/Best Buy

future a.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	161	2	9	2	4	3	11	870	14	1	1436	385
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		0.113			0.271		
Satd. Flow (perm)	1723	1729	1623	0	1773	1534	219	3646	1647	517	3592	1623
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			113			119			70			216
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)	192	2	11	4	7	5	13	1048	17	1	1544	414
Shared Lane Traffic (%)	50%											
Lane Group Flow (vph)	96	98	11	0	11	5	13	1048	17	1	1544	414
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

9: Dawsonville Highway & Shallowford Rd/Best Buy

future 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	0.62	0.04		0.14	0.03	0.06	0.37	0.01	0.00	0.57	0.33
Control Delay	80.7	81.3	0.3		72.5	0.3	6.1	6.5	0.0	7.0	11.8	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	80.7	81.3	0.3		72.5	0.3	6.1	6.5	0.0	7.0	12.3	4.6
LOS	F	F	A		E	A	A	A	A	A	B	A
Approach Delay		76.7			49.9			6.3			10.7	
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: 13.6

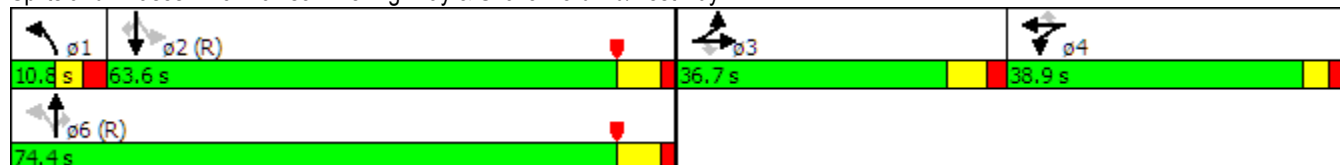
Intersection LOS: B

Intersection Capacity Utilization 64.2%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 9: Dawsonville Highway & Shallowford Rd/Best Buy



Lanier Tract DRI
1: Sportsman Club Road & Strickland Drive

future p.m.

Intersection						
Int Delay, s/veh	3.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	21	0	32	23	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	48	0	37	27	0	30
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	81	51	0	0	64	0
Stage 1	51	-	-	-	-	-
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	921	1017	-	-	1538	-
Stage 1	971	-	-	-	-	-
Stage 2	993	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	921	1017	-	-	1538	-
Mov Cap-2 Maneuver	921	-	-	-	-	-
Stage 1	971	-	-	-	-	-
Stage 2	993	-	-	-	-	-
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)	-	-	921	1538	-	
HCM Lane V/C Ratio	-	-	0.052	-	-	
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

future p.m.

Intersection												
Int Delay, s/veh	77.6											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	20	1208	0	26	1908	31	0	0	0	40	0	14
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	21	1272	0	27	1988	32	0	0	0	61	0	21

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	2020	0	0	1272	0	0	2362	3388	636	2736	3372	1010
Stage 1	-	-	-	-	-	-	1314	1314	-	2058	2058	-
Stage 2	-	-	-	-	-	-	1048	2074	-	678	1314	-
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	278	-	-	542	-	-	19	7	421	~ 10	8	238
Stage 1	-	-	-	-	-	-	167	226	-	~ 57	96	-
Stage 2	-	-	-	-	-	-	244	95	-	408	226	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	278	-	-	542	-	-	16	6	421	~ 9	7	238
Mov Cap-2 Maneuver	-	-	-	-	-	-	16	6	-	~ 9	7	-
Stage 1	-	-	-	-	-	-	154	209	-	~ 53	91	-
Stage 2	-	-	-	-	-	-	211	90	-	377	209	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0.2	0	\$ 3237.1
HCM LOS			A	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	278	-	-	542	-	-	12
HCM Lane V/C Ratio	-	0.076	-	-	0.05	-	-	6.818
HCM Control Delay (s)	0	19	-	-	12	-	-	\$ 3237.1
HCM Lane LOS	A	C	-	-	B	-	-	F
HCM 95th %tile Q(veh)	-	0.2	-	-	0.2	-	-	11.4

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

Lanier Tract DRI
3: Avonlea Way & GA 53

future p.m.

Intersection												
Int Delay, s/veh	10.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	12	0	52	11	0	3	68	1897	18	11	1302	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	76	92	76	80	92	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	14	0	4	72	1997	19	11	1302	15
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2466	3464	651	2813	3464	998	1302	0	0	1997	0	0
Stage 1	1324	1324	-	2140	2140	-	-	-	-	-	-	-
Stage 2	1142	2140	-	673	1324	-	-	-	-	-	-	-
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	~ 15	7	411	~ 8	7	242	528	-	-	284	-	-
Stage 1	165	224	-	50	87	-	-	-	-	-	-	-
Stage 2	213	87	-	411	224	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 13	6	411	~ 6	6	242	528	-	-	284	-	-
Mov Cap-2 Maneuver	~ 13	6	-	~ 6	6	-	-	-	-	-	-	-
Stage 1	143	215	-	43	75	-	-	-	-	-	-	-
Stage 2	181	75	-	329	215	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	148			\$ 1366.9			0.4			0.2		
HCM LOS	F			F								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR		
Capacity (veh/h)	528	-	-	13	411	6	242	284	-	-		
HCM Lane V/C Ratio	0.136	-	-	1.215	0.166	2.292	0.015	0.039	-	-		
HCM Control Delay (s)	12.9	-	-	\$ 722.2	15.5	\$ 1734.2	20.1	18.2	-	-		
HCM Lane LOS	B	-	-	F	C	F	C	C	-	-		
HCM 95th %tile Q(veh)	0.5	-	-	2.6	0.6	2.8	0	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

future p.m.

Intersection												
Int Delay, s/veh	623.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	8	0	31	129	0	94	123	1860	143	70	1249	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	92	80	92	92	92	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	140	0	102	128	1938	149	73	1301	16
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2672	3641	651	2990	3641	969	1301	0	0	1938	0	0
Stage 1	1447	1447	-	2194	2194	-	-	-	-	-	-	-
Stage 2	1225	2194	-	796	1447	-	-	-	-	-	-	-
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	411	~ 6	5	253	528	-	-	299	-	-
Stage 1	138	195	-	~ 46	82	-	-	-	-	-	-	-
Stage 2	190	82	-	347	195	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 4	3	411	~ 4	3	253	528	-	-	299	-	-
Mov Cap-2 Maneuver	~ 4	3	-	~ 4	3	-	-	-	-	-	-	-
Stage 1	105	147	-	~ 35	62	-	-	-	-	-	-	-
Stage 2	86	62	-	238	147	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	\$ 484.3			\$ 9907.3			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)	528	-	-	4	411	4	253	299	-	-		
HCM Lane V/C Ratio	0.243	-	-	2.5	0.094	35.054	0.404	0.244	-	-		
HCM Control Delay (s)	14	-	\$ 2303.8	14	7105.8	28.5	20.9	-	-			
HCM Lane LOS	B	-	-	F	B	F	D	C	-	-		
HCM 95th %tile Q(veh)	0.9	-	-	2.3	0.3	19.7	1.9	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	2389	1713	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	2413	1748	10
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	3146	875	1748	0	-	0
Stage 1	1748	-	-	-	-	-
Stage 2	1398	-	-	-	-	-
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	198	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	7	297	364	-	-	-
Mov Cap-2 Maneuver	7	-	-	-	-	-
Stage 1	128	-	-	-	-	-
Stage 2	146	-	-	-	-	-
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

future p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	23	1	106	80	8	65	198	2055	88	35	1468	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			0.943			0.994				
Flt Protected		0.991			0.974		0.950			0.950		
Satd. Flow (prot)	0	1659	0	0	1780	0	1796	3570	0	1814	3592	0
Flt Permitted		0.896			0.616		0.099			0.045		
Satd. Flow (perm)	0	1500	0	0	1126	0	187	3570	0	86	3592	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		119			20			8				
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	94	9	76	206	2141	92	36	1529	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	146	0	0	179	0	206	2233	0	36	1532	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

future p.m.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	34.0	34.0		34.0	34.0		22.0	126.0		104.0	104.0	
Total Split (%)	21.3%	21.3%		21.3%	21.3%		13.8%	78.8%		65.0%	65.0%	
Maximum Green (s)	27.4	27.4		27.4	27.4		16.4	119.9		97.9	97.9	
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)		25.0			25.0		122.8	122.3		103.9	103.9	
Actuated g/C Ratio		0.16			0.16		0.77	0.76		0.65	0.65	
v/c Ratio		0.44			0.93		0.76	0.82		0.65	0.66	
Control Delay		18.8			106.6		29.0	10.2		75.5	19.8	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		18.8			106.6		29.0	10.2		75.5	19.8	
LOS		B			F		C	B		E	B	
Approach Delay		18.8			106.6			11.8			21.1	
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: 19.3

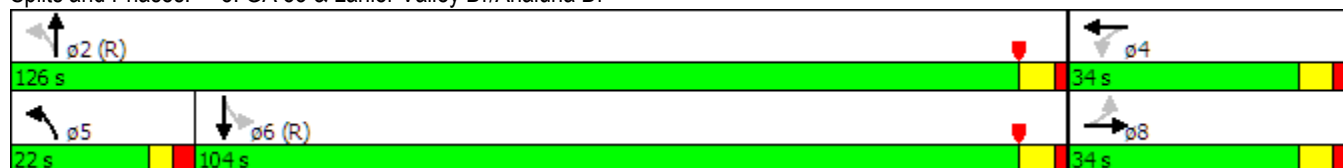
Intersection LOS: B

Intersection Capacity Utilization 94.9%

ICU Level of Service F

Analysis Period (min) 15

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



Lanier Tract DRI

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

future 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	89	478	1624	51	68	1251	597
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			0.427			0.950			0.950		
Satd. Flow (perm)	3484	1708	1527	791	1721	0	3484	3592	1607	1814	3592	1623
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18	301		27				172			324
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	103	493	1674	53	75	1375	656
Shared Lane Traffic (%)			27%									
Lane Group Flow (vph)	1048	368	327	112	219	0	493	1674	53	75	1375	656
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

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

future 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	43.5	43.5	31.8	23.5		14.5	66.4	66.4	15.0	66.6	66.6
Actuated g/C Ratio	0.17	0.27	0.27	0.20	0.15		0.09	0.42	0.42	0.09	0.42	0.42
v/c Ratio	1.80	0.77	0.52	0.55	0.80		1.57	1.12	0.07	0.44	0.92	0.76
Control Delay	403.8	61.9	8.9	48.9	77.6		304.5	100.5	0.1	68.4	44.1	16.9
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	403.8	61.9	8.9	48.9	77.6		304.5	100.5	0.1	68.4	44.1	16.9
LOS	F	E	A	D	E		F	F	A	E	D	B
Approach Delay		257.5			67.9			143.4			36.5	
Approach LOS		F			E			F			D	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 0 (0%), 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: 135.4

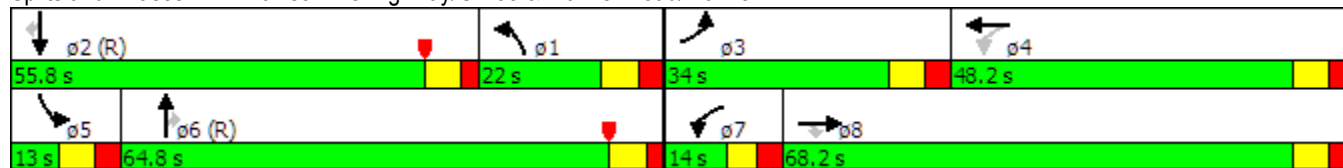
Intersection LOS: F

Intersection Capacity Utilization 111.8%

ICU Level of Service H

Analysis Period (min) 15

Splits and Phases: 7: Dawsonville Highway/GA 53 & McEver Road/McEver



Lanier Tract DRI

8: Dawsonville Highway & Greenhill Circle/Greenhill Circle

future 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	2051	77	44	1652	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	2114	79	46	1739	62
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	171	167	0	113	54	282	2114	79	46	1739	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

8: Dawsonville Highway & Greenhill Circle/Greenhill Circle

future 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	0.84	0.07	0.41	0.85	0.07
Control Delay		103.0	9.8		87.7	1.7	58.3	30.5	5.2	27.3	19.7	1.0
Queue Delay		0.0	5.5		87.6	0.0	0.0	46.9	0.0	0.0	1.0	0.0
Total Delay		103.0	15.3		175.3	1.7	58.3	77.5	5.2	27.3	20.7	1.0
LOS		F	B		F	A	E	E	A	C	C	A
Approach Delay		59.7			119.2			73.0			20.2	
Approach LOS		E			F			E			C	

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: 53.5

Intersection LOS: D

Intersection Capacity Utilization 91.0%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 8: Dawsonville Highway & Greenhill Circle/Greenhill Circle



Lanier Tract DRI

9: Dawsonville Highway & Shallowford Rd/Best Buy

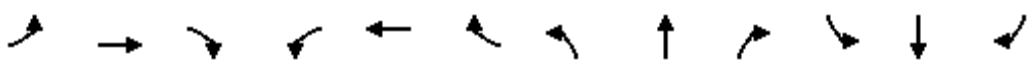
future p.m.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	591	42	29	40	30	8	44	1911	126	8	1380	528
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		0.063			0.047		
Satd. Flow (perm)	1723	1738	1623	0	1754	1534	122	3682	1647	90	3628	1623
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			106			111			65			308
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)	657	47	32	45	34	9	47	2033	134	9	1516	580
Shared Lane Traffic (%)	47%											
Lane Group Flow (vph)	348	356	32	0	79	9	47	2033	134	9	1516	580
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

9: Dawsonville Highway & Shallowford Rd/Best Buy

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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	1.07	1.08	0.08		0.57	0.04	0.31	0.90	0.13	0.19	0.77	0.57
Control Delay	128.3	131.9	0.4		86.5	0.4	18.3	34.5	7.5	54.2	53.6	31.3
Queue Delay	1.2	1.2	0.0		0.0	0.0	0.0	46.4	0.0	0.0	37.4	0.8
Total Delay	129.5	133.2	0.4		86.5	0.4	18.3	80.9	7.5	54.2	91.0	32.1
LOS	F	F	A		F	A	B	F	A	D	F	C
Approach Delay		125.7			77.7			75.1			74.6	
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: 1.08

Intersection Signal Delay: 82.2

Intersection LOS: F

Intersection Capacity Utilization 90.6%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 9: Dawsonville Highway & Shallowford Rd/Best Buy

