



SANDY SPRINGS

GEORGIA

CITY COUNCIL

Rusty Paul, Mayor
John Paulson – District 1
Steve Soteres – District 2
Chris Burnett – District 3
Jody Reichel – District 4
Tibby DeJulio – District 5
Andy Bauman – District 6

Tuesday, April 6, 2021

Regular Meeting Agenda

Following Work Session

The April 6, 2021 City Council Meetings will be held virtually.

Live-stream: Sandy Springs Facebook: <https://www.facebook.com/SandySpringsGA/>
Zoom Webinar: <http://spr.gs/2021mcc1>

Teleconference: **Dial Options** (for higher quality, dial a number based on your current location):

- 1 312 626 6799
- 1 646 558 8656
- 1 301 715 8592
- 1 346 248 7799
- 1 669 900 9128
- 1 253 215 8782

Webinar ID: 815 5716 7823

Public Comment: Public Comment Cards may be submitted online: <http://spr.gs/publiccomment>

I. Call to Order - Mayor Rusty Paul

II. Roll Call and General Announcements - City Clerk

III. Pledge of Allegiance - Mayor Rusty Paul

IV. Public Comment

V. Approval of Meeting Agenda

VI. Consent Agenda

- A. **2021-106** Meeting Minutes
March 16, 2021 City Council Work Session
March 16, 2021 City Council Regular Meeting
- B. **2021-107** Request for Mayor and City Council Consideration of Permanent Drainage Easement on Property Located in Land Lot 126 of the 17th District, City of Sandy Springs
(Presented by William H. Martin, Jr., AIA, Public Works Director)

Individuals with disabilities who require certain accommodations in order to allow them to observe and/or participate in a public meeting, or who have questions regarding the accessibility of the meeting or facilities should contact the City Clerk at 770-730-5600 promptly for assistance. The City will make reasonable accommodations for those persons.

1 Galambos Way, Sandy Springs, Georgia 30328 • 770-730-5600 • SandySpringsGA.gov



SANDY SPRINGS

GEORGIA

VII. Presentations

- A. **2021-108** A Proclamation in Recognition of Days of Remembrance Week, April 4 - 11, 2021
(Presented by Mayor Rusty Paul)

VIII. Public Hearing

- A. **2021-109** ABL_75753 - Approval of Alcoholic Beverage License Application for Capitan III Holdings LLC DBA El Capitan, 8540 Roswell Rd Ste 400 Sandy Springs, GA 30350. Applicant is Natalia Garcia for Consumption on the premises of Wine, Malt Beverages, and Distilled Spirits.
(Presented by Toni Jo Howard, Finance Director)

IX. New Business

- A. **2021-110** Request for Mayor and City Council Consideration of Acceptance of a Real Estate Agreement for a Fee Simple Right of Way and Temporary Construction Easement on Property Located in Land Lot 15 of the 17th District, City of Sandy Springs, Fulton County, Georgia
(Presented by William H. Martin, Jr., AIA, Public Works Director)
- B. **2021-111** Request for Mayor and City Council Consideration of a Resolution to Adopt the Transportation Master Plan
(Presented by Kristen Wescott, Traffic / Transportation Unit Manager)
- C. **2021-112** Request for Mayor and City Council Consideration of Approval to Authorize the City Manager to Execute a Change Order and the Revised Contract for Engineering Design Services with Columbia Engineering for the Roswell Road at Grogans Ferry Road Intersection Improvement Project (TS105)

(Presented by William H. Martin Jr. , AIA, Public Works Director)
- D. **2021-113** Request for Mayor and City Council Consideration of Approval to Authorize the City Manager to Execute a Change Order and the Revised Contract for Engineering Design Services with KCI Technologies for the Roswell Road at Dalrymple Road Intersection Improvement Project (TS108)
(Presented by William H. Martin Jr., AIA, Public Works Director)
- E. **2021-114** Request for Mayor and City Council Consideration of Approval of a Contract with CMES, Incorporated to Construct Interstate North Parkway Sidepath Project, TS170, and Authorization for the City Manager to Execute the Contract
(Presented by William H. Martin, Jr., AIA, Public Works Director)

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SANDY SPRINGS

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- F. **2021-115** Request for Mayor and City Council Consideration of a Resolution to Authorize the Purchase of MSA G1 Self Contained Breathing Apparatus (SCBA) for the City of Sandy Springs Fire Department and Authorizing the City Manager to Execute Documents and Effectuate the Same

(Presented by Keith Sanders, Fire Chief)

- G. **2021-116** Request for Mayor and Council Consideration of Approval of a Contract with Mauldin & Jenkins for Financial Audit Services and Authorization for the City Manager to Execute the Contract

(Presented by Toni Jo Howard, Finance Director)

X. Reports

- A. **2021-117** Mayor and Council Report

- B. **2021-118** Staff Reports

XI. Executive Session - Litigation

XII. Adjournment

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SANDY SPRINGS

CITY CLERK'S OFFICE

TO: Andrea Surratt, City Manager

FROM: William H. Martin, Jr., AIA, Public Works Director

DATE: December 28, 2020 Submission for the April 6, 2021 Meeting

ITEM: Request for Mayor and City Council Consideration of Permanent Drainage Easement on Property Located in Land Lot 126 of the 17th District, City of Sandy Springs

Recommendation:

Staff recommends that the Mayor and City Council accept a Permanent Drainage Easement on that tract of land lying and located in Land Lot 126 of the 17th District, Fulton County, Georgia to facilitate the construction of the Landsdowne Stormwater Project. The property owner is the Sarah T. Langsfeld Trust located at 120 Landsdowne Drive, as shown in the attached exhibits.

Background:

The acquisition of a permanent drainage easement area containing 359 square feet has been donated by the property owner. This permanent drainage easement is required to construct the proposed project.

Discussion:

Staff was able to negotiate a donation of the required land rights with the property owners.

Financial Impact:

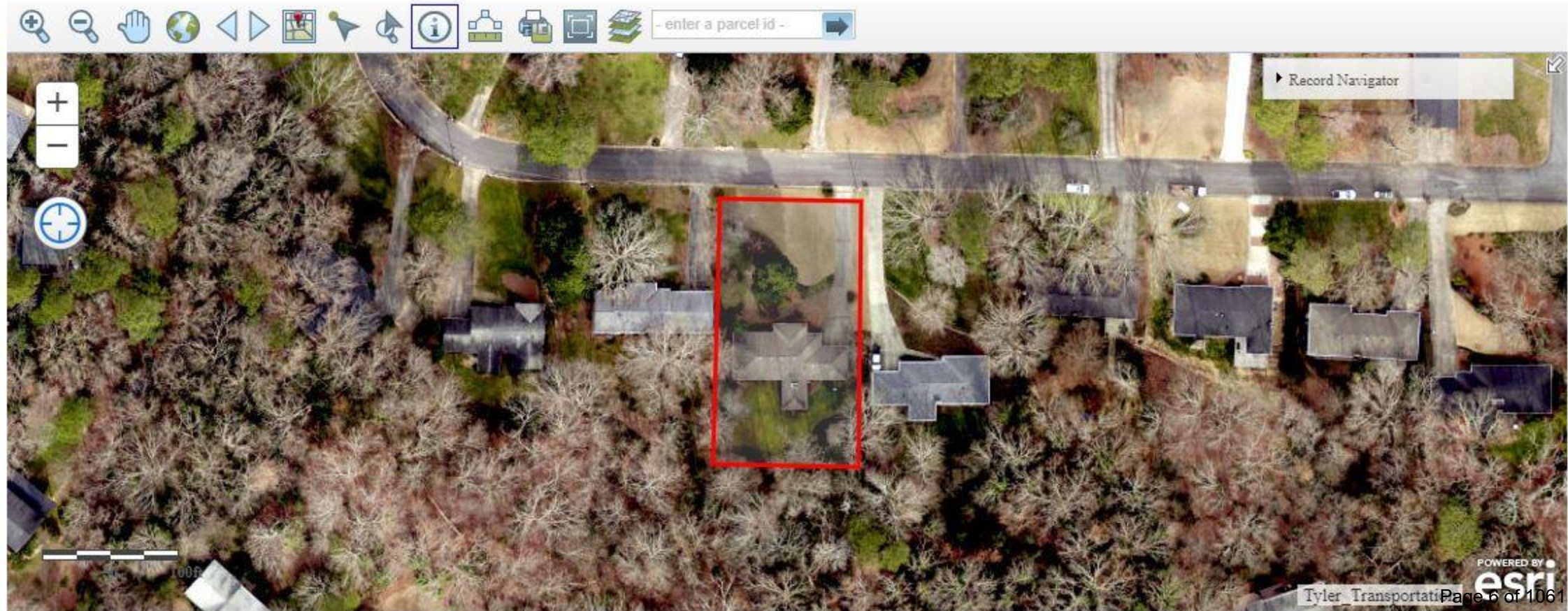
As stated, the property owner donated the required land rights to the City.

Alternatives:

N/A

Attachments:

1. Fulton ID Aerial and Profile - 120 Landsdowne
2. Executed PDE - Langsfeld.120 Landsdowne
3. RESOLUTION



PARID: 17 012600020704
SARAH T LANGSFELD TRUST THE

120 LANDSDOWNE DR NW

Parcel

Parcel ID:	17 012600020704
Property Location:	120 LANDSDOWNE DR
Unit:	
City:	SANDY SPRINGS
Neighborhood:	17831
Improvement Strata:	R1
Property Class:	R3
Land Use Code:	101-Residential 1 family
Living Units:	1
Acres:	.4821
Zoning:	R3-
Location	6
Fronting:	9 - 9
Parking Type:	3-ON AND OFF STREET
Parking Quantity:	2
Street 1/Street 2:	1-Paved/-
Topo 1/Topo2/Topo3:	2-ABOVE STREET/-/-
Util1/Util2/Util3:	1-ALL PUBLIC/-/-

Legal

Tax District	59
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Owners

Owners:	SARAH T LANGSFELD TRUST THE
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Mailing Address

Address	FUL Exmp Code	ATL Exmp Code
SARAH T LANGSFELD TRUST THE		
C/O RUTH LANGSFELD		
565 MOUNT VERNON HWY NW		
ATLANTA GA 30327		

AFTER RECORDING, PLEASE RETURN TO:
City of Sandy Springs
City Clerk's Office
1 Galambos Way
Sandy Springs, GA 30328

CROSS REFERENCE:
Deed Book 52191, Page 262

STATE OF GEORGIA

COUNTY OF FULTON

DRAINAGE EASEMENT AGREEMENT

THIS DRAINAGE EASEMENT AGREEMENT (this "Agreement") is made and entered into as of the 3rd day of March, 2021 by and between RUTH J. LANGSFELD, AS TRUSTEE OF THE SARAH T. LANGSFELD TRUST ("Grantor"), and the CITY OF SANDY SPRINGS, GEORGIA ("Grantee").

WHEREAS, Grantor is the fee simple owner of that certain property located in Land Lot 126 of the 17th Land District of Fulton County, Georgia, being Lot 8 in the Windham Hills Unit 5 Subdivision recorded in Plat Book 65, Page 25, Fulton County, Georgia records and commonly known as 120 Landsdowne Drive, N.W., Sandy Springs, Fulton County, Georgia ("Grantor's Property");

WHEREAS, an eighteen inch (18") corrugated metal pipe which is used for storm water drainage is presently located in the public right of way adjacent to Grantor's Property and a related junction box which is used for storm water drainage is presently located under a portion of Grantor's Property and/or the public right of way adjacent to Grantor's Property (the "Existing Drainage Facilities");

WHEREAS, Grantee desires to obtain an easement from Grantor in order to maintain and repair the Existing Drainage Facilities;

NOW, THEREFORE, for and in consideration of the sum of Ten and 00/100 Dollars (\$10.00) and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Grantor does hereby grant and convey to Grantee, the permanent easement and right to maintain and repair the Existing Drainage Facilities under and across that portion of

Grantor's Property more particularly described on Exhibit "A" attached hereto and incorporated herein by reference and as depicted in the drawing attached hereto as Exhibit "B" and incorporated herein by reference (the "Easement Area").

Grantor and its contractors and subcontractors shall have the right to enter the Easement Area for purposes of maintaining and repairing the Existing Drainage Facilities and reasonably related purposes; provided, however, Grantee and/or its contractors and subcontractors shall have no right to enter or otherwise disturb any other portion of Grantor's Property without Grantor's prior written consent, which Grantor may withhold in its sole and absolute discretion.

The maintenance and repair of the Existing Drainage Facilities shall be the sole responsibility of Grantee; provided, however, (i) that no cost or expense shall be incurred by Grantor in connection with the maintenance and repair of the Existing Drainage Facilities located under or adjacent to the Easement Area pursuant to this Agreement, (ii) that the Easement Area shall be returned to its original condition as close as practical as soon as reasonably possible after such maintenance and repair is completed and (iii) that all such maintenance and repair shall be done in a timely and safe manner.

To the extent allowed by law, Grantee hereby agrees to indemnify and hold Grantor harmless from and against any and all claims of property or personal damages resulting from the aforesaid maintenance or repair, or failure to maintain and repair, the Existing Drainage Facilities.

Grantee agrees that the Existing Drainage Facilities will be maintained at a depth sufficient to avoid interference with surface use. Without limiting the generality of the foregoing, the top of any storm sewer drainage line and any junction box shall be buried not less than six (6) inches below the existing surface and shall be covered with structural fill compacted in accordance with good engineering practice and covered with sod and landscaping acceptable to Grantor.

initial

This Agreement is intended to convey only an easement for the aforesaid purpose; said easement being limited to the Easement Area only with all rights conveyed hereunder to cease and revert to Grantor at such time as Grantee shall cease to use the Easement Area for the purposes set forth herein.

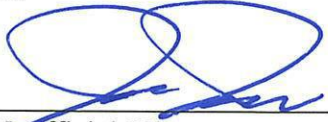
The terms "Grantor" and "Grantee" as used herein shall be deemed to mean their respective heirs, successors and assigns, and this Agreement shall inure to the benefit of and be binding upon Grantor, Grantee and their respective heirs, successors and assigns.

[Signatures begin on the following page]

IN WITNESS WHEREOF, the parties hereto have executed and delivered this Agreement on the day and year first above written.

Signed, sealed and delivered in the presence of:

GRANTOR:



Unofficial Witness



Ruth J. Langsfeld, as Trustee of the Sarah T. Langsfeld Trust



Notary Public

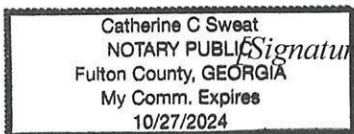
Exact Date of Execution by Notary Public:

3/3/2021

My Commission Expires:

10/27/2024

[NOTARIAL SEAL]



Signatures continue on the following page]

Signed, sealed and delivered in the presence
of:

Unofficial Witness

Notary Public

Exact Date of Execution by Notary Public:

My Commission Expires:

[NOTARIAL SEAL]

GRANTEE:

THE CITY OF SANDY SPRINGS,
GEORGIA

By: _____
Name: _____
Title: _____

EXHIBIT "A"

LEGAL DESCRIPTION OF EASEMENT AREA

All that tract or parcel of land lying and being in Land Lot 126 of the 17th District, Fulton County, City of Sandy Springs, Georgia and being more particularly described as follows:

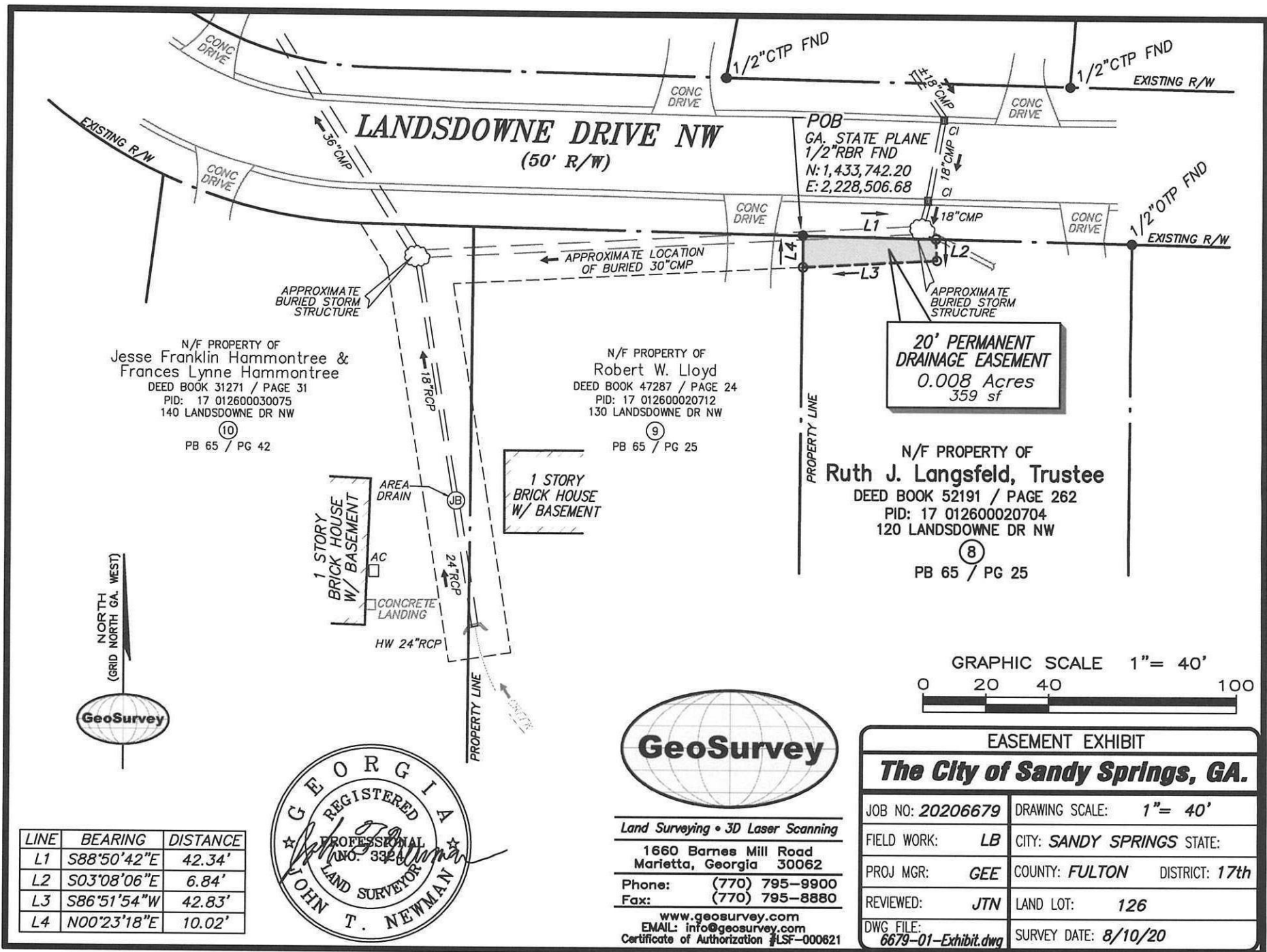
BEGINNING at a ½ inch rebar found located at the intersection of the Northeastern corner of Lot 9, Unit 5, Wyndham Hills Subdivision, as recorded in Plat Book 65, Page 26, Fulton County records, with the southern right-of-way of Landsdowne Drive NW (50-foot right-of-way); said point having Georgia State Plane coordinate values Northing: 1,433,742.20; Easting: 2,228,506.68, Georgia West Zone; thence continuing along said right-of-way South 88 degrees 50 minutes 42 seconds East, a distance of 42.34 feet to a point; thence departing said right-of-way South 03 degrees 08 minutes 06 seconds East, a distance of 6.84 feet to a point; thence South 86 degrees 51 minutes 54 seconds West, a distance of 42.83 feet to a point; thence North 00 degrees 23 minutes 18 seconds East, a distance of 10.02 feet to a point located on the southern right-of-way of said Landsdowne Drive NW, which is the POINT OF BEGINNING.

Said tract or parcel of land contains 0.008 Acres (359 Square Feet).

EXHIBIT "B"

EXISTING DRAINAGE FACILITIES

[Easement Exhibit to be attached]



STATE OF GEORGIA
COUNTY OF FULTON

**A RESOLUTION TO ACCEPT A PERMANENT DRAINAGE EASEMENT
ON PROPERTY LOCATED IN LAND LOT 126 OF THE 17th DISTRICT,
CITY OF SANDY SPRINGS, FULTON COUNTY, GEORGIA**

WHEREAS, it is necessary, from time to time, to establish policies, procedures and guidelines consistent with the administration of a municipal government consistent with the US Constitution, Federal Statutes, alignment with Federal, Georgia's State Constitution, and the Charter for the City of Sandy Springs, and

WHEREAS, the City Manager directed the Department of Public Works to develop standard policies for recurring matters, to establish appropriate internal controls and legal compliance, and to provide for an efficient and effective means to serve constituents; and

WHEREAS, the Department of Public Works, in response to the guidance provided by the City Manager, has reviewed and approves the acceptance of Permanent Drainage Easement by the City of Sandy Springs for property located at 120 Landsdowne Drive owned by the Sarah T. Langsfeld Trust in Land Lot 126 of the 17th District, Fulton County, City of Sandy Springs, Georgia

NOW, THEREFORE, BE IT RESOLVED BY THE MAYOR AND CITY COUNCIL OF THE CITY OF SANDY SPRINGS, GEORGIA

To facilitate the construction of the Landsdowne Stormwater Project, the City approves the acceptance of the Permanent Drainage Easement on property located in Land Lot 126 of the 17th District, Fulton County, City of Sandy Springs, Georgia.

RESOLVED this 6th day of April, 2021.

APPROVED:

Russell K. Paul, Mayor

Attest:

Raquel Gonzalez, City Clerk
(Seal)



SANDY SPRINGS

CITY CLERK'S OFFICE

TO: Andrea Surratt, City Manager

FROM: Toni Jo Howard, Finance Director

DATE: March 23, 2021 Submission for the April 6, 2021 Meeting

ITEM: ABL_75753 - Approval of Alcoholic Beverage License Application for Capitan III Holdings LLC DBA El Capitan, 8540 Roswell Rd Ste 400 Sandy Springs, GA 30350. Applicant is Natalia Garcia for Consumption on the premises of Wine, Malt Beverages, and Distilled Spirits.

Recommendation:

Approve the application for Consumption of Wine, Malt Beverages, and Distilled Spirits for Capitan III Holdings LLC DBA El Capitan 8540 Roswell Rd Ste 400 Sandy Springs, GA 30350.

Background:

Applicant submitted a completed application on March 03, 2021. Applicant has passed the background investigation.

Discussion:

This is a Change of Ownership for Consumption of Wine, Malt Beverages, and Distilled Spirits. Business is located between Northridge Pkwy and Hightower Trail.

Staff has reviewed this application and recommends approval.

Financial Impact:

\$5,950.00

Alternatives:

NONE

Attachments:

1. final hearing letter- El Capitan
2. Public Hearing Letter - El Capitan



To: Andrea Surratt, City Manager

From: Toni Jo Howard, Finance Director

Date: March 23, 2021 for Submission onto the April 06, 2021 City Council Meeting

Agenda Item: 75753 - Approval of Alcoholic Beverage License Application for Capitan III Holdings LLC DBA El Capitan 8540 Roswell Rd Ste 400 Sandy Springs, GA 30350. Applicant is Natalia Garcia for Consumption on the premises of Wine, Malt Beverages, and Distilled Spirits.

CMO (City Manager's Office) Recommendation:

Approve the application for Consumption of Wine, Malt Beverages, and Distilled Spirits for Capitan III Holdings LLC DBA El Capitan 8540 Roswell Rd Ste 400 Sandy Springs, GA 30350.

Background:

Applicant submitted a completed application on March 03, 2021. Applicant has passed the background investigation.

Discussion:

This is a Change of Ownership for Consumption of Wine, Malt Beverages, and Distilled Spirits. Business is located between Northridge Pkwy and Hightower Trail.

Staff has reviewed this application and recommends approval.

Alternatives:

None

Financial Impact:

Revenue - \$5,950.00

Concurrent Review:

Celeste Ruelas, Revenue Lead



SANDY SPRINGS

GEORGIA

**CITY OF SANDY SPRINGS
PUBLIC NOTICE
21-75753**

PLACE: City of Sandy Springs City Hall
1 Galambos Way
Sandy Springs, GA 30328

DATE & TIME: April 6, 2021
6:00 P.M.

PURPOSE: Alcoholic Beverage License Application
Consumption on the premises
Wine, Malt Beverage & Distilled Spirits.

APPLICANT: Capitan III Holdings LLC
DBA El Capitan
8540 Roswell Rd Ste 400
Sandy Springs, GA 30350



SANDY SPRINGS

CITY CLERK'S OFFICE

TO: Andrea Surratt, City Manager

FROM: William H. Martin, Jr., AIA, Public Works Director

DATE: January 12, 2021 Submission for the April 6, 2021 Meeting

ITEM: Request for Mayor and City Council Consideration of Acceptance of a Real Estate Agreement for a Fee Simple Right of Way and Temporary Construction Easement on Property Located in Land Lot 15 of the 17th District, City of Sandy Springs, Fulton County, Georgia

Recommendation:

Staff recommends that the Mayor and City Council accept an Agreement to Purchase Real Estate for a Right of Way Fee Simple and Temporary Construction Easement on that tract of land lying and located in Land Lot 15 of the 17th District, Fulton County, Georgia. The property owners are Trisha L. and James R. Wilson located at 5265 Peachtree Dunwoody Road, Sandy Springs, Georgia, as shown in the attached exhibits.

Background:

The acquisition is 114.61 square feet of Fee Simple Right of Way (ROW) and 72.53 square feet of Temporary Construction Easement (TCE) on their property that is required in order to construct the Peachtree Dunwoody at Telford Road Improvement Project. The property owners have negotiated with the City for the necessary land interest required to construct the proposed project.

Discussion:

Staff was able to negotiate a reasonable compensation amount for the required land rights with the property owner. The property owners have landscaping and an ornamental fence with brick pillars adjacent to the existing acquisition areas and are requesting additional reimbursement to their landscaping on their property. City staff has negotiated a reasonable settlement for the land interests required for the project.

Financial Impact:

The City's offer to the owner totaled \$3,050 for the acquisition areas and improvements. It includes Fee Simple ROW, Temporary Construction Easement, Landscaping and Irrigation. The City's appraiser determined Fair Market Value for the property at \$10.54 per square foot. The areas of value are: (ROW: 114.61 SF X \$10.54/SF = \$1,207.99), (TCE: 72.53 SF X \$10.54/SF X 20% = \$152.89) and landscaping with irrigation equaling \$1,680.00. The City's total offered amount was \$3,050.00. The property owners

are requesting an additional \$3,134.60 above the City's offer amount based on the increase of land values in their area and the landscaping quote they obtained to replace their landscaping improvements. The additional compensation amount is within the range of value of the City's appraisal, therefore, staff believes this is reasonable and recommends acceptance and approval.

Alternatives:

N/A

Attachments:

1. Aerial Map and Property Profile
2. Executed Real Estate Agreement with Exhibits
3. Landscaping Quote
4. Resolution

[Profile](#)

[Sales](#)

[Residential](#)

[Commercial](#)

[Permits](#)

[OBY](#)

[Values](#)

[Values History](#)

[Land](#)

[Agricultural](#)

[Sketch](#)

[Pictometry Imagery](#)

[Map](#)

[Appeals](#)

[Appeals History](#)

[Personal Property](#)

[PP Value History](#)

[Tax Information](#)

PARID: 17 001500010378
WILSON JAMES R &

- enter a parcel id -



PARID: 17 001500010378
WILSON JAMES R &

5265 PEACHTREE DUNWOODY RD

Parcel

Parcel ID:	17 001500010378
Property Location:	5265 PEACHTREE DUNWOODY RD
Unit:	
City:	SANDY SPRINGS
Neighborhood:	1766
Improvement Strata:	R1
Property Class:	R3
Land Use Code:	101-Residential 1 family
Living Units:	1
Acres:	1.8748
Zoning:	R1-
Location	6
Fronting:	2 - 2
Parking Type:	3-ON AND OFF STREET
Parking Quantity:	2
Street 1/Street 2:	1-Paved/-
Topo 1/Topo2/Topo3:	1-LEVEL/-/-
Util1/Util2/Util3:	1-ALL PUBLIC/-/-

Legal

Tax District	59
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Owners

Owners:	WILSON JAMES R & WILSON TRICIA L
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Mailing Address

Address	FUL Exmp Code	ATL Exmp Code
WILSON JAMES R & WILSON TRICIA L 5265 PEACHTREE DUNWOODY RD ATLANTA GA 30342		

Sales

Sale Date:	Sale Price:
16-OCT-15	\$2,050,000
07-MAR-14	\$389,000
15-NOV-12	\$325,000
30-SEP-02	\$385,000
01-JAN-88	\$0

Sale Details

1 of 5

Grantor:	HEATHERWOOD MANOR HOMES, LLC
Grantee:	WILSON JAMES R &
Sales Date:	16-OCT-15
Sale Price Sale Validity:	9 : Unvalidated/Deed Stamps
Sale Source:	6 : PT61

Sales Type:	2 : LAND & BUILDING
Sale Flag:	
Deed Book:	55501
Deed Page:	0382
Deed Type:	LW

Residential

Card:	1
Stories:	2
Year Built:	2014
Effective Year Built:	
Remodeled Year:	
Living Area:	8,849
Total Living Area:	8,849
Total Rooms:	9
Bedrooms:	5
Family Rooms:	2
Attic:	1-NONE
Basement LA:	1500
Basement Rec Area:	
Full Baths:	4
Half Baths:	0
Additional Fixtures:	15
Total Fixtures:	27
Pre Fab Fireplace:	4
Masonry Fireplaces:	
Grade:	X+
CDU:	EX
% Complete	

Additions

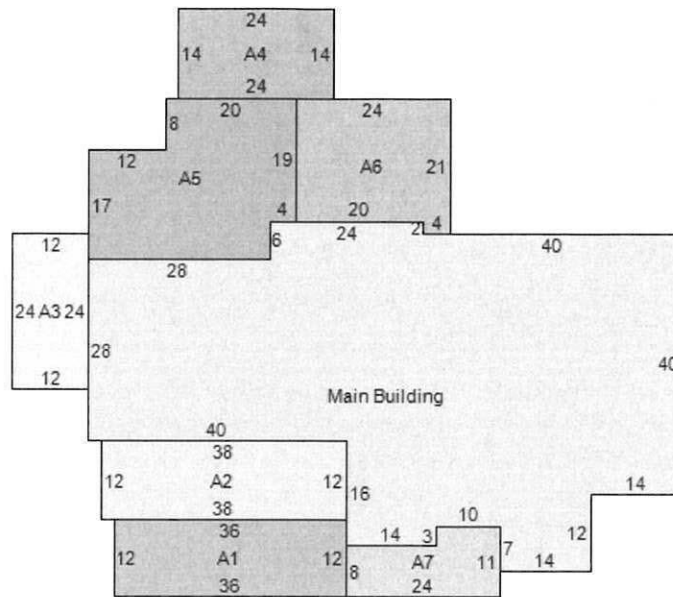
Addition Number:	Description:	Area
0	---	3,626
1	-MG/BG MASONRY/BRICK GARAGE-AT FN ATTIC-FINISHED-	432
2	-MG/BG MASONRY/BRICK GARAGE-ISMAS MASONRY-	456
4	-MG/BG MASONRY/BRICK GARAGE-ISMAS MASONRY-	288
5	OMP OPEN MASONRY PORCH-OPF OPEN FRAME PORCH--	336
6	UNFIN BSMT BASEMENT UNFINISHED-ISMAS MASONRY--	680
7	OMP OPEN MASONRY PORCH-OMP OPEN MASONRY PORCH--	464
8	-OMP OPEN MASONRY PORCH--	222

OBJ Details

Card #:	Description:	Year Built:	Grade:	Width:	Length:	Area:
1	RP5-POOL GUNI	2014	B	18	40	720

Land

Line Number:	1
Land Type:	S - SQUARE FOOT
Land Code:	1
Square Feet:	81,665
Acres:	1.8748



Item	Area
Main Building	3626
POOL GUNI - RP5:POOL GUNI	720
A1 - 23/19:MG/BG MASONRY/BRICK GARAGE/AT FN ATTIC-FINISHED	432
A2 - 23/20:MG/BG MASONRY/BRICK GARAGE/ISMAS MASONRY	456
A3 - 23/20:MG/BG MASONRY/BRICK GARAGE/ISMAS MASONRY	288
A4 - 21/11:OMP OPEN MASONRY PORCH/OFP OPEN FRAME PORCH	336
A5 - 50/20:UNFIN BSMT BASEMENT UNFINISHED/ISMAS MASONRY	680
A6 - 21/21:OMP OPEN MASONRY PORCH/OMP OPEN MASONRY PORCH	464
A7 - 21:OMP OPEN MASONRY PORCH	222

AGREEMENT TO PURCHASE REAL ESTATE

PROJECT: Peachtree Dunwoody Road @ Telford Place
OWNER: James R. & Tricia L. Wilson
TAX ID#: 17-0015-0001-037-8

PROJECT #: T-0064
PARCEL #: 10

STATE OF GEORGIA, FULTON COUNTY

For and in consideration of the sum of One Dollar (\$1.00), receipt whereof being acknowledged, the undersigned grants to the City of Sandy Springs an option to acquire the following described real estate:

Right of Way and/or Easement rights through that tract or parcel of land located in Land Lot 15 of the 17th District, of Fulton County, Georgia, and being more particularly described on Exhibit "A" attached hereto and made a part hereof by reference.

For the offer of settlement sum of \$6,184.60, the undersigned agrees to execute and deliver to the City of Sandy Springs, fee simple right of way and an easement to the lands owned by the undersigned as reflected on the attached Exhibit "A" and "B".

The following conditions are imposed upon the grant of this option:

- 1) This option shall extend for 90 days from this date.
- 2) The consideration recited is full payment for the rights conveyed.

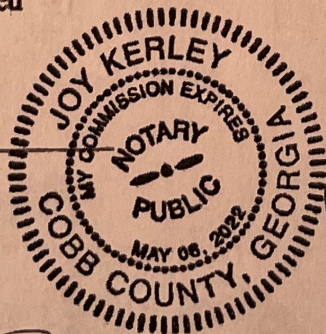
<u>114.61</u>	Square Feet of Fee Simple Right of Way
<u>72.53</u>	Square Feet of Temporary Construction Easement
<u>N/A</u>	Temporary Driveway Easement

- 3) All Temporary Easements will terminate upon (2) years from the date of the conveyance of these easements or by the completion and acceptance of said project by the City of Sandy Springs Department of Public Works; whichever shall occur first.
- 4) The undersigned shall obtain all quit claim deeds or releases from any tenant now in possession and any other parties having a claim or interest in the property described above.
- 5) Special Provisions, if any, are listed on Exhibit "C", which is attached hereto and incorporated herein by reference.

Witness my hand and seal this 22nd day of March, 2021.

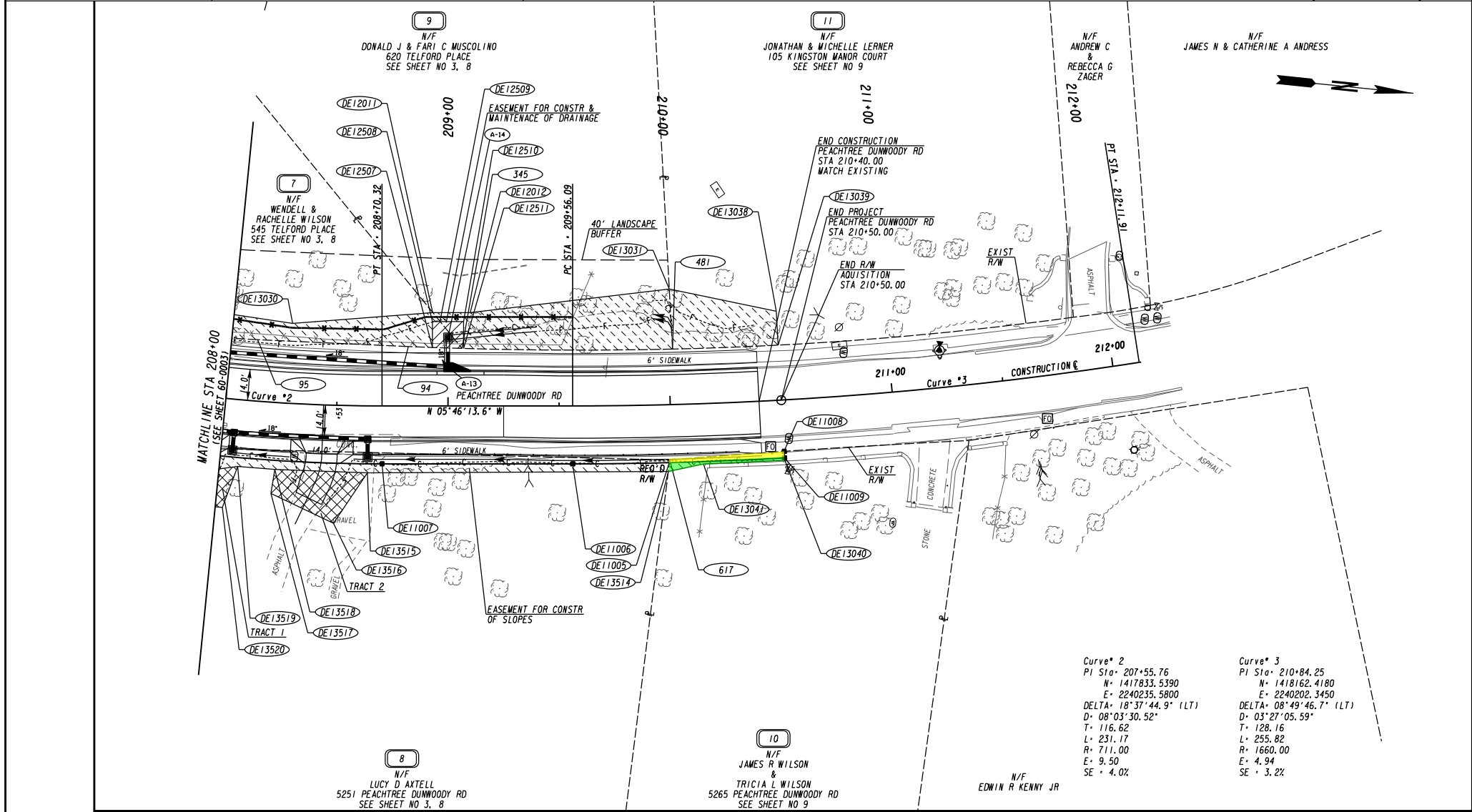
Signed, Sealed and Delivered
in the Presence of:

Beth Lee
Witness



Tricia L. Wilson
TRICIA L. WILSON

James R. Wilson
JAMES R. WILSON



Curve* 2

PI Sta= 207+55.76

N= 1417833.5390

E= 2240235.5800

DELTA= 18°37'44.9" (LT)

D= 08°03'30.52"

T= 116.62

L= 231.17

R= 711.00

E= 9.50

SE = 4.0%

Curve* 3

PI Sta= 210+84.25

N= 1418162.4180

E= 2240202.3450

DELTA= 08°49'46.7" (LT)

D= 03°27'05.59"

T= 128.16

L= 255.82

R= 1660.00

E= 4.94

SE = 3.2%

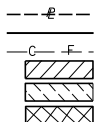
PROPERTY AND EXISTING R/W LINE REQUIRED R/W LINE CONSTRUCTION LIMITS EASEMENT FOR CONSTR & MAINTENANCE OF SLOPES EASEMENT FOR CONSTR OF SLOPES EASEMENT FOR CONSTR OF DRIVES	—●— —C— —F— —X—	BEGIN LIMIT OF ACCESS.....BLA END LIMIT OF ACCESS.....ELA LIMIT OF ACCESS REQ'D R/W & LIMIT OF ACCESS	DATE REVISIONS	DATE REVISIONS	CITY OF SANDY SPRINGS RIGHT OF WAY MAP PROJECT NO: 10064 COUNTY: FULTON LAND LOT NO: 15 LAND DISTRICT: 17 GND: 1100 DATE 06-26-20 SH 4 OF 9	DRAWING No. 60-0004

PARCEL 10 N/F JAMES R WILSON & TRICIA L WILSON REQ'D R/W DE103			
PNT	OFFSET/ DIST	STATION/ BEARING	ALIGNMENT
617	24.79 R	209+99.12	PEACHTREE DUNWOODY RD
	51.64	N 10°03'54.9" W	
DE11008	23.04 R	210+50.00	PEACHTREE DUNWOODY RD
	2.96	N 80°59'17.7" E	
DE11009	26.00 R	210+50.00	PEACHTREE DUNWOODY RD
ARC LENGTH = 51.87			
CHORD BEAR = S 8°07'49.7" E			
LNTH CHORD = 51.86			
RADIUS = 1686.00			
DEGREE = 3°23'54.0"			
DE11005	26.00 R	209+98.93	PEACHTREE DUNWOODY RD
	1.23	N 88°36'45.0" W	
617	24.79 R	209+99.12	PEACHTREE DUNWOODY RD
REQD R/W = 114.61 SF			
REQD R/W = 0.003 ACRES			
REMAINDER = +/- 1.775 ACRES			

PARCEL 10 N/F JAMES R WILSON & TRICIA L WILSON REQ'D EASMT FOR THE CONSTR OF SLOPES DE366			
PNT	OFFSET/ DIST	STATION/ BEARING	ALIGNMENT
DE11005	26.00 R	209+98.93	PEACHTREE DUNWOODY RD
ARC LENGTH = 51.87			
CHORD BEAR = N 8°07'49.7" W			
LNTH CHORD = 51.86			
RADIUS = 1686.00			
DEGREE = 3°23'54.0"			
DE11009	26.00 R	210+50.00	PEACHTREE DUNWOODY RD
DE13040	27.00 R	210+50.00	PEACHTREE DUNWOODY RD
DE13041	27.00 R	210+14.00	PEACHTREE DUNWOODY RD
DE13514	30.00 R	209+98.34	PEACHTREE DUNWOODY RD
DE11005	26.00 R	209+98.93	PEACHTREE DUNWOODY RD
REQD EASMT AREA = 72.53 SF			

PARCEL 11 N/F JONATHAN & MICHELLE LERNER REQ'D EASMT FOR THE CONSTR OF SLOPES DE312			
PNT	OFFSET/ DIST	STATION/ BEARING	ALIGNMENT
481	25.00 L	210+01.72	PEACHTREE DUNWOODY RD
DE13031	52.00 L	210+00.99	PEACHTREE DUNWOODY RD
DE13038	40.00 L	210+50.00	PEACHTREE DUNWOODY RD
DE13039	24.77 L	210+50.00	PEACHTREE DUNWOODY RD
ARC LENGTH = 47.56			
CHORD BEAR = S 7°54'25.0" E			
LNTH CHORD = 47.55			
RADIUS = 1595.51			
DEGREE = 3°35'27.8"			
481	25.00 L	210+01.72	PEACHTREE DUNWOODY RD
REQD EASMT AREA = 1009.25 SF			

PROPERTY AND EXISTING R/W LINE
REQUIRED R/W LINE
CONSTRUCTION LIMITS
EASEMENT FOR CONSTR
& MAINTENANCE OF SLOPES
EASEMENT FOR CONSTR OF SLOPES
EASEMENT FOR CONSTR OF DRIVES



BEGIN LIMIT OF ACCESS.....BLA
END LIMIT OF ACCESS.....ELA
LIMIT OF ACCESS
REQ'D R/W & LIMIT OF ACCESS

DATE	REVISIONS

DATE	REVISIONS

CITY OF SANDY SPRINGS

RIGHT OF WAY MAP

PROJECT NO: T0064
COUNTY: FULTON
LAND LOT NO: 15
LAND DISTRICT: 17
GND: 1100
DATE 06-26-20 SH 9 OF 9

DRAWING NO.
60-0009



January 11, 2021

Property: Tricia Wilson
5265 Peachtree Dunwoody Road
Atlanta, GA. 30342

Dear Mrs. Wilson,

LANDSCAPE REPLACEMENT ACROSS FRONT OF PROPERTY

Upon the completion of the utility work that will occur towards the front of the property and within the construction limits as noted on the provided diagram;

- The following plant material will be installed to replace the plant material that will be removed.

4	-	American Boxwoods (30"x30")
450	-	Mondo Grass (4")

- The plant material will be installed with the necessary soil amendments, fertilizer upon installation, will be hand-watered, and
- In addition, the existing irrigation will be replaced/repared as needed to ensure appropriate water coverage.

TOTAL COST: \$4,054.00

If you would like to proceed, please return a copy of the signed proposal and we will gladly schedule the services accordingly. Payment shall be requisitioned upon completion and will be due, in full, within fifteen (15) days. If paid by credit card, there is a 3% convenience fee added to the total job cost. This proposal will only be valid for thirty (30) days from the proposed date after which, the price for this proposal will need to be evaluated to accommodate potential material price fluctuation.

Respectfully submitted,

Zachary Chromiak
Enhancement Designer
Ruppert Landscape, Inc.
770-931-9900 (o)
770-634-0225 (c)

Client Name _____ Title _____

Client Signature _____ Date _____



LANDSCAPE WARRANTY

All trees and shrubs installed by Ruppert Landscape, Inc. are covered by a one-year warranty that commences on the date of completion of the project only if the property is irrigated by an in-ground sprinkler system with a functioning digital clock subject to evaluation. Perennials, groundcovers, annuals, and sod/seed is only warranted with a property maintenance agreement with Ruppert Landscape. Transplanted plant material is not warranted. Ruppert Landscape, Inc. guarantees all plants to be true to name, free from disease and harmful insects, healthy at the time of delivery, and be installed per contract specifications. All materials, other than plant material, and workmanship are also covered by a one-year warranty that commences upon the date of substantial completion.

During the one-year warranty period all plants not under contract to be maintained by Ruppert Landscape, Inc. must be properly maintained and watered by the owner. All plants must also be monitored for insects and disease problems and treated promptly as appropriate. Any tree, shrub, perennial or groundcover that is more than 50% dead shall be replaced one time at the end of the one-year period from the date of completion, at no charge, provided that the plants have been properly maintained and that Ruppert Landscape, Inc. has received payment for all work performed in accordance with the terms of the contract. Replacement plant material carries no warranty. Ruppert Landscape, Inc. will not replace plants damaged by drought, severe cold, vandalism, fire, relocation, removal, acts of God, government enacted watering bans, or other events beyond our control.

STATE OF GEORGIA
COUNTY OF FULTON

**A RESOLUTION TO ACCEPT A REAL ESTATE AGREEMENT FOR
FEE SIMPLE RIGHT OF WAY AND TEMPORARY CONSTRUCTION EASEMENT
ON PROPERTY LOCATED IN LAND LOT 15 OF THE 17th DISTRICT,
CITY OF SANDY SPRINGS, FULTON COUNTY, GEORGIA**

WHEREAS, it is necessary, from time to time, to establish policies, procedures and guidelines consistent with the administration of a municipal government consistent with the US Constitution, Federal Statutes, alignment with Federal, Georgia's State Constitution, and the Charter for the City of Sandy Springs, and

WHEREAS, the City Manager directed the Department of Public Works to develop standard policies for recurring matters, to establish appropriate internal controls and legal compliance, and to provide for an efficient and effective means to serve constituents; and

WHEREAS, the Department of Public Works, in response to the guidance provided by the City Manager, has reviewed and approves the acceptance of a Real Estate Agreement for the acquisition of Fee Simple Right of Way and Temporary Construction Easement by the City of Sandy Springs for property located at 5265 Peachtree Dunwoody Road owned by Tricia L. Wilson and James R. Wilson in Land Lot 15 of the 17th District, Fulton County, City of Sandy Springs, Georgia

NOW, THEREFORE, BE IT RESOLVED BY THE MAYOR AND CITY COUNCIL OF THE CITY OF SANDY SPRINGS, GEORGIA

To facilitate the construction of the Peachtree Dunwoody at Telford Project, the City approves the acceptance of the Real Estate Agreement acquiring a Temporary Construction Easement on property located in Land Lot 15 of the 17th District, Fulton County, City of Sandy Springs, Georgia.

RESOLVED this 6th day of April, 2021.

APPROVED:

Russell K. Paul, Mayor

Attest:

Raquel Gonzalez, City Clerk
(Seal)



SANDY SPRINGS

CITY CLERK'S OFFICE

TO: Andrea Surratt, City Manager

FROM: William H. Martin Jr., AIA, Public Works Director

DATE: March 24, 2021 Submission for the April 6, 2021 Meeting

ITEM: Request for Mayor and City Council Consideration of a Resolution to Adopt the Transportation Master Plan

Recommendation:

Staff recommends the adoption of the Transportation Master Plan.

Background:

Comprehensive transportation plans guide transportation policy and network development in cities and prioritize transportation investments. The City of Sandy Springs developed its first Transportation Master Plan 12 years ago in 2008. The City has since completed many of the projects identified in the initial plan, and as such, there was a need to reevaluate the 2008 plan, assess current transportation needs, and identify policies and projects to prepare the City for the future.

In February 2020, the City undertook a planning study to identify existing and future needs and determine the next steps to continue to improve safety and mobility within the City. The City contracted Kimley Horn and Associates to document existing conditions, perform a needs assessment, conduct extensive public outreach, and develop a list of prioritized project and policy recommendations, culminating into the 2021 Transportation Master Plan.

Discussion:

The Transportation Master Plan provides an overview of each step of the planning process, leading to the final step of prioritizing the projects into fiscally constrained short- and mid-range project lists.

The Existing Conditions report documented demographic and employment trends, land use patterns, and the transportation network as it is in Sandy Springs today. The demographic data, employment trends, and land use patterns help us understand travel behavior and the transportation needs of the people who live, work, and visit the City. The documentation of the City infrastructure established the existing conditions of the transportation system, in which the needs assessment further evaluates to identify needs and improvements.

The Needs Assessment was made up of a series of evaluations and assessments of the transportation

network. As part of this assessment, the City's Travel Demand Model was updated, which forecasts future travel patterns and volumes based on expected travel patterns. The assessment also analyzed traffic operations and safety, pedestrian infrastructure needs near activity centers, methods to increase connectivity within the street network, appropriate bicycle infrastructure needs to provide a comfortable cycling environment for all ages and abilities, and last mile connections to transit.

Findings from the Needs Assessment, along with recommendations from previous City plans, were compiled and evaluated based on criteria aligned with the plan's goals. The projects were prioritized into a final list of short- and mid-range projects.

Throughout the plan, there was extensive public engagement to collect feedback on the City's transportation needs and public priorities. The City hosted its first project meeting in June 2020, with a corresponding survey (available in English and Spanish), that asked the public for feedback on the plan goals and what they thought was most important. That feedback helped assign weight to the goals when prioritizing the project list in later stages. The City held a second round of public feedback in January 2021 to share the draft project list and policy recommendations. The public was also able to comment on each specific project via an online map survey released for a month after the January public meeting. In between the rounds of engagement, there were six focus groups and several one on one interviews around the themes of transit, safety, bicycling, livable communities, transportation demand management, and agency coordination.

The final list of project and policy recommendations will serve as a basis of transportation priorities for the City for the next 10 years.

Financial Impact:

The approval of the Transportation Master Plan does not have any direct financial impacts. The plan is intended to provide guidance for future investment in the City's transportation infrastructure and policies, but the City is not beholden to the plan recommendations.

Alternatives:

N/A

Attachments:

1. 01 Executive Summary
2. 02 Transportation Master Plan & Appendix
3. 03 Existing Conditions Report
4. 04 Performance Measures

5. 05 Multimodal Needs Assessment
6. TMP Adoption_Resolution 04-06-2021

SANDY SPRINGS

Transportation Master Plan

EXECUTIVE SUMMARY



Kimley»Horn

APRIL 2021



1

INTRODUCTION

Sandy Springs is an established city and major employment center near the heart of the nation's fourth-fastest growing metropolitan area. As the City continues to mature over the coming decades, current transportation issues will only become more pressing.

The Sandy Springs Transportation Master Plan (TMP) establishes a transportation vision for the City that enables a livable and vibrant community. The TMP seeks to integrate transportation and land-use policy while considering the needs of all modes, including driving, biking, walking, and transit. The plan also considers newer mobility options.

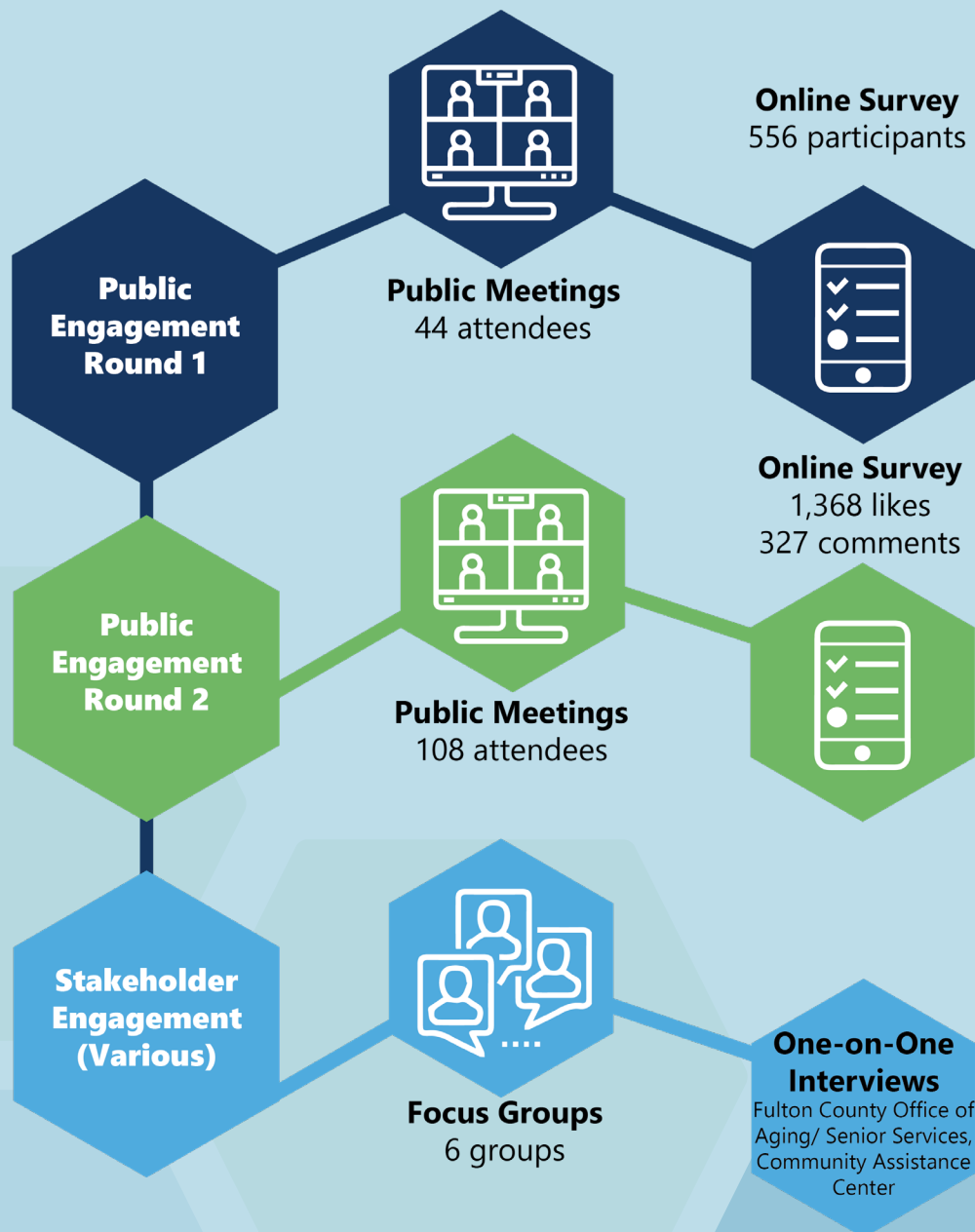
The TMP provides direction to the City of Sandy Springs on how transportation projects, policies, initiatives, and best practices should be implemented moving through the next 5, 10, to 20 years. The report includes an Existing Conditions Assessment and Multimodal Assessment to assess the City's current challenges and needs, followed by a project evaluation to identify solutions. The prioritized projects are organized into short- and mid-range programming levels to indicate their level of priority.



2

PROCESS

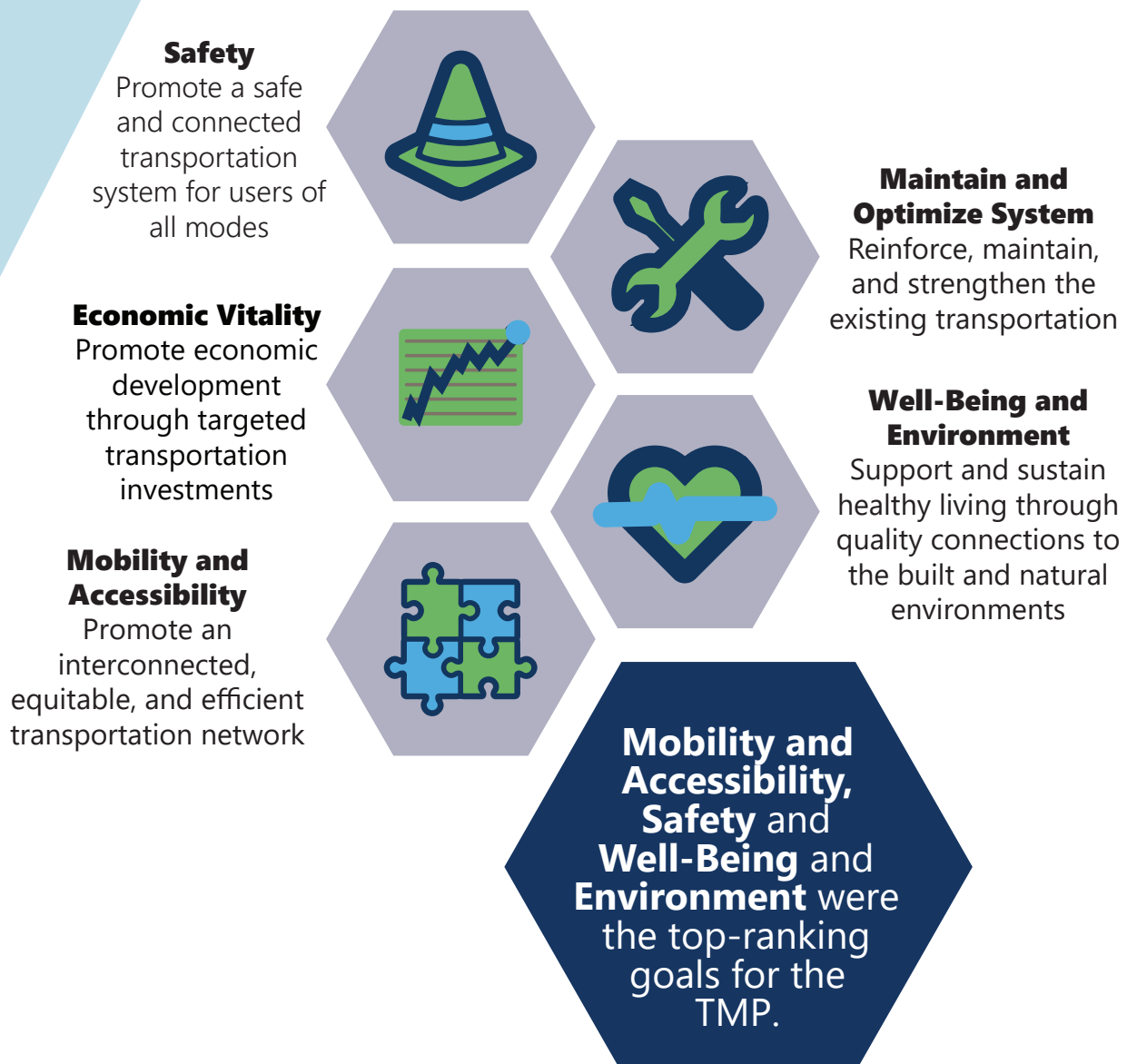
The TMP was a process that began in February 2020. Over a 15-month planning process, the TMP team conducted intensive technical work to understand the transportation network as it exists today and how the future may impact travel for all modes. The technical analysis was further informed by public engagement that focused on integrating the community's vision into the TMP. While all engagement was online due to the COVID-19 pandemic, engagement included a series of opportunities for the community to be involved including virtual public meetings, focus groups, and online surveys, providing great insight in the community's needs and desires.



3

VISION AND GOALS

From the very beginning, the TMP worked to develop a set of goals for the plan. The goals represent the community values and are also tied to local, regional, statewide, and national planning priorities set by the City's Comprehensive Plan, Atlanta Regional Commission (ARC), Georgia Department of Transportation (GDOT) and federal agencies (Federal Highway Administration [FHWA], and Federal Transit Administration [FTA]). The TMP's goals were continuously refined and validated through the public involvement process, and ultimately gave impetus to the plan recommendations.

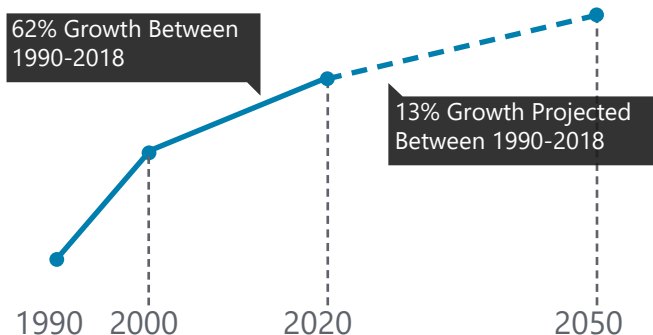


4

EXISTING CONDITIONS

Understanding where we are today is critical to helping us get where we need to go. This section explores key takeaways from the separate Existing Conditions Report. These major trends outlined shape transportation and mobility in Sandy Springs.

Population Growth Trends in Sandy Springs



Population Growth

Sandy Springs is a growing community, but growth is projected to slow in the coming years. This requires a shift in the way we think about transportation investments.

Mobility Impaired

Just over six percent of Sandy Springs total residents have a vision, hearing, cognitive, ambulatory, self-care, or independent living difficulty.

Diversity

31% of Sandy Springs residents identify as a race other than white. Slightly under 15% of Sandy Springs residents identify as Hispanic/LatinX, and 6% of households have limited English proficiency.

Older Person

Almost a third of Sandy Springs residents are age 50 or older. This cohort is closely followed by adolescents who are under the age of 19 (22%).

Vehicle Ownership

More than 3,000 households in Sandy Springs – 1 in every 15 – have no access to a personal vehicle.

Employment Growth

By 2050, it is estimated that nearly 60,000 new jobs will be added to the City.

Renters v. Owners

Sandy Springs residents are split roughly evenly between renters and owners. In 2018, 51% of total housing units in Sandy Springs were occupied by renters, and 49% by owners.

Income

11% of Sandy Springs residents live below the Federal poverty level. The portion of City residents making \$200,000 or more per year (12%) is approximately double that of residents across the entire Atlanta region (6%).

Employment

The United States Census Bureau estimates that as of 2017, there are approximately 132,000 jobs available in Sandy Springs. However, just 8,250 of these jobs are held by residents of the City, meaning almost 94% of jobs are held by persons who live outside Sandy Springs.

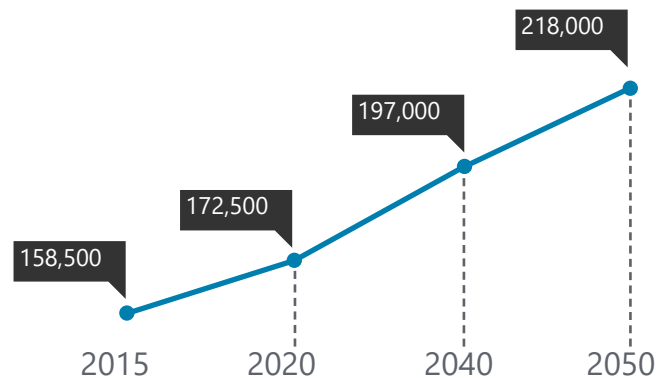
How Residents Get to Work

Almost 75% of Sandy Springs residents commute to work by driving alone. 9% of the residents worked from home, closely followed by 7% who took transit, and 6% who carpooled.

Education

Almost two-thirds of Sandy Springs residents over age 25 have completed a four-year college degree or higher.

Projected Employment Growth in Sandy Springs



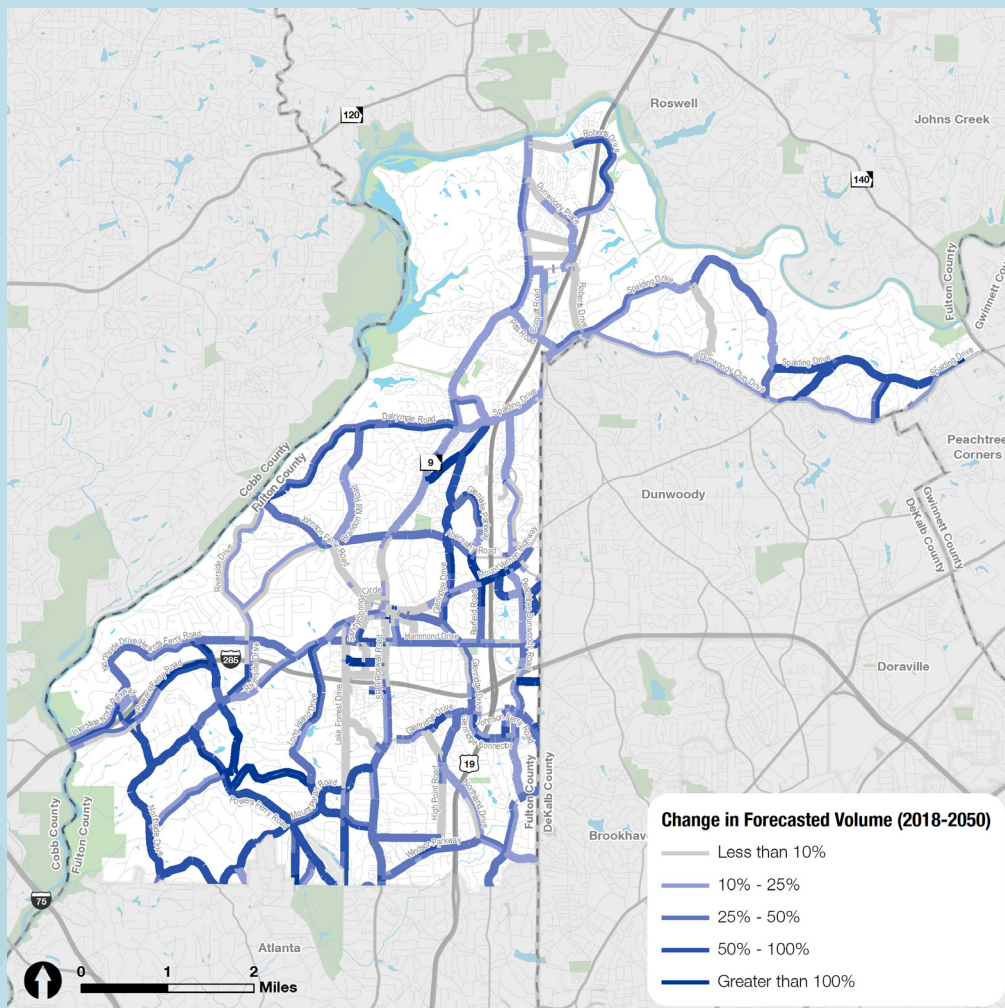
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MULTIMODAL ASSESSMENT

The **Multimodal Assessment** offers an understanding of the transportation needs that exist in Sandy Springs today based on mode: roadway, bicycle, pedestrian, and transit. This assessment is unique in that within each mode, there are series of memorandums that address areas of focus identified by the City of Sandy Springs. Ultimately the goal of the **Multimodal Assessment** document was to build on the Existing Conditions Report and bridge the gap towards project development for the TMP.

Citywide Travel Demand Forecasting Model Analysis

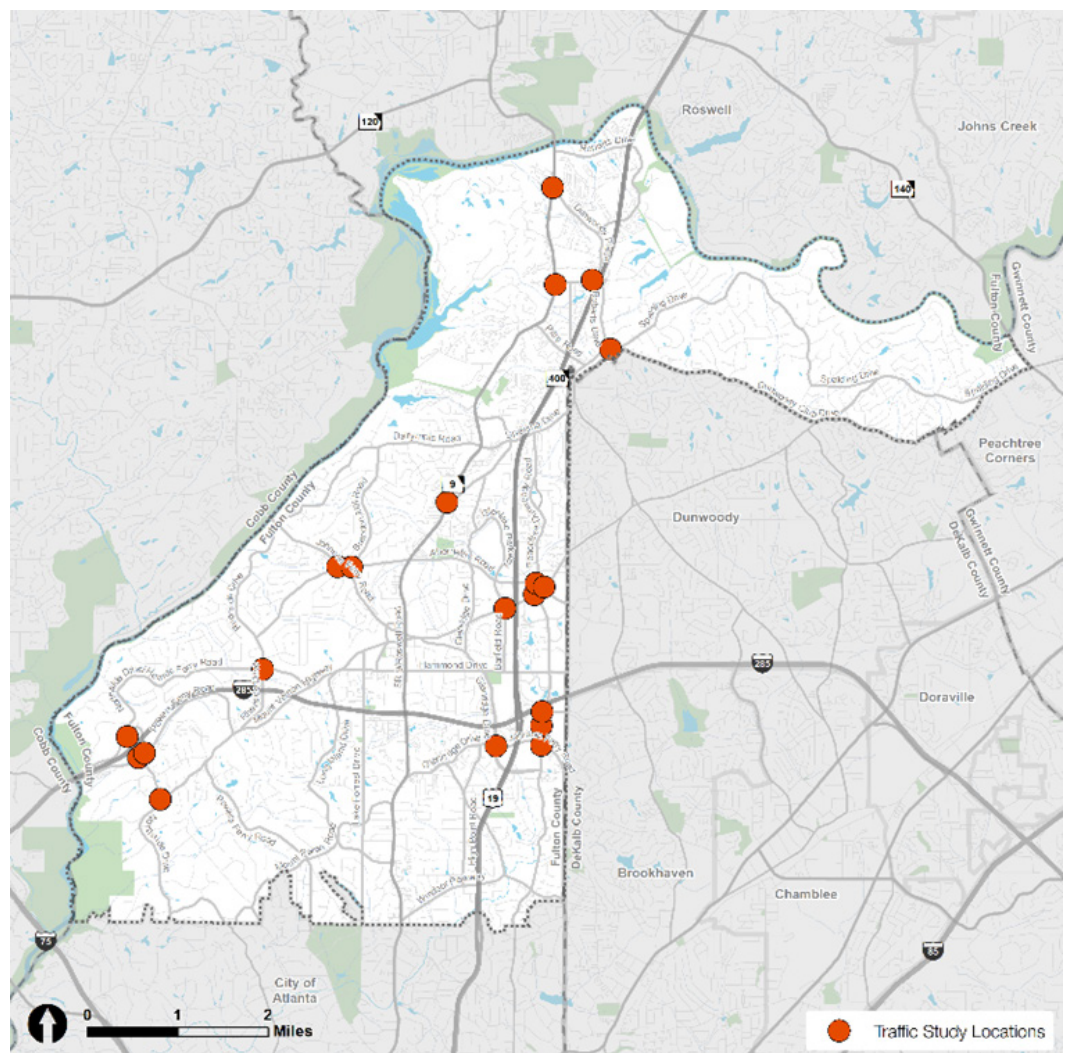
- **Purpose** - The travel demand model (TDM) analysis aimed to understand existing and projected travel behaviors in Sandy Springs.
- **Highlights** - Many of the same roadways that have the highest volumes in 2018 will have the highest volumes in 2050. Most roadways are expected to increase in volume, many doubling by 2050. The highest increases in volume are anticipated in western Sandy Springs: Northside Drive, Powers Ferry Road; and Mount Vernon Highway. Higher increases in volume also are anticipated in eastern Sandy Springs nears SR 400, along Mount Vernon Highway, Barfield Road, and Glenridge Drive.



Forecasted Change in Traffic Volumes (2018-2050)

Traffic Operations Evaluation

- **Purpose** - The purpose of this was to study 20 specific intersections in more detail to understand the operations at each intersection, conduct a high-level crash analysis, and develop recommendations for each of the intersections. The intersections are identified in the map below.
- **Highlights** - Several short-term improvements are proposed to address and mitigate the safety, operational, and capacity deficiencies at the 20 traffic evaluation intersections. These short-term improvements range in scope and include repaving, restriping, signage and pavement marking recommendations, intersection lighting, traffic signal phasing updates and changes to intersection lane geometry.



Traffic Evaluation Intersections

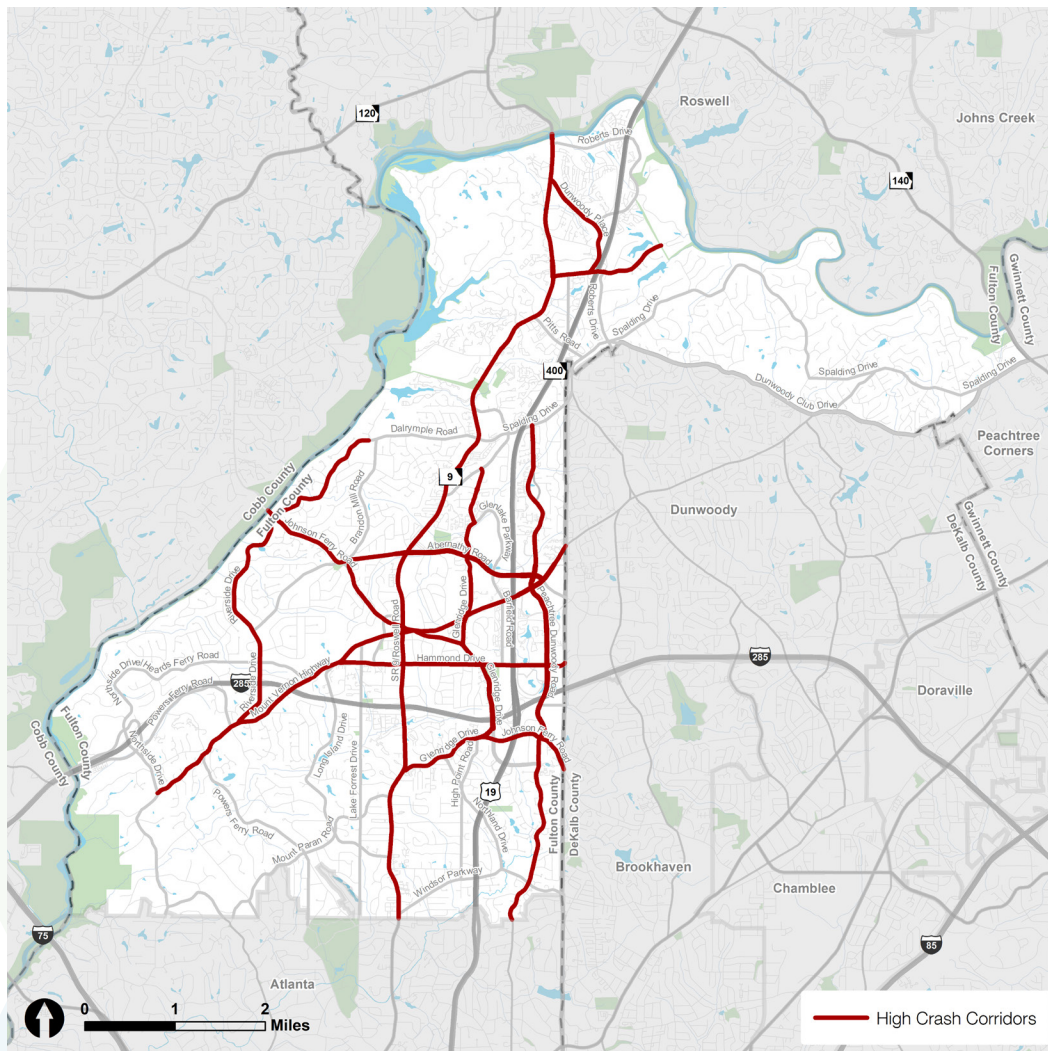
Safety Evaluation

- **Purpose** - The citywide safety memorandum identified safety needs by completing an evaluation of the identified high-crash corridors and through a citywide evaluation of trends compared to Fulton County as well as GDOT District 7. Based on safety crash analysis, five specific intersections were reviewed in further detail.
- **Highlights** – High crash corridors were identified to understand how the roadways rank based on number, crashes per mile and crash rates. Based on the three ranking types, Roswell Road, Northridge Road, Dunwoody Place, and Hammond Drive stand out as high-priority corridors.

The GDOT includes 15 emphasis areas that describe programmatic factors that contribute to crashes.

The City's top 5 emphasis areas are:

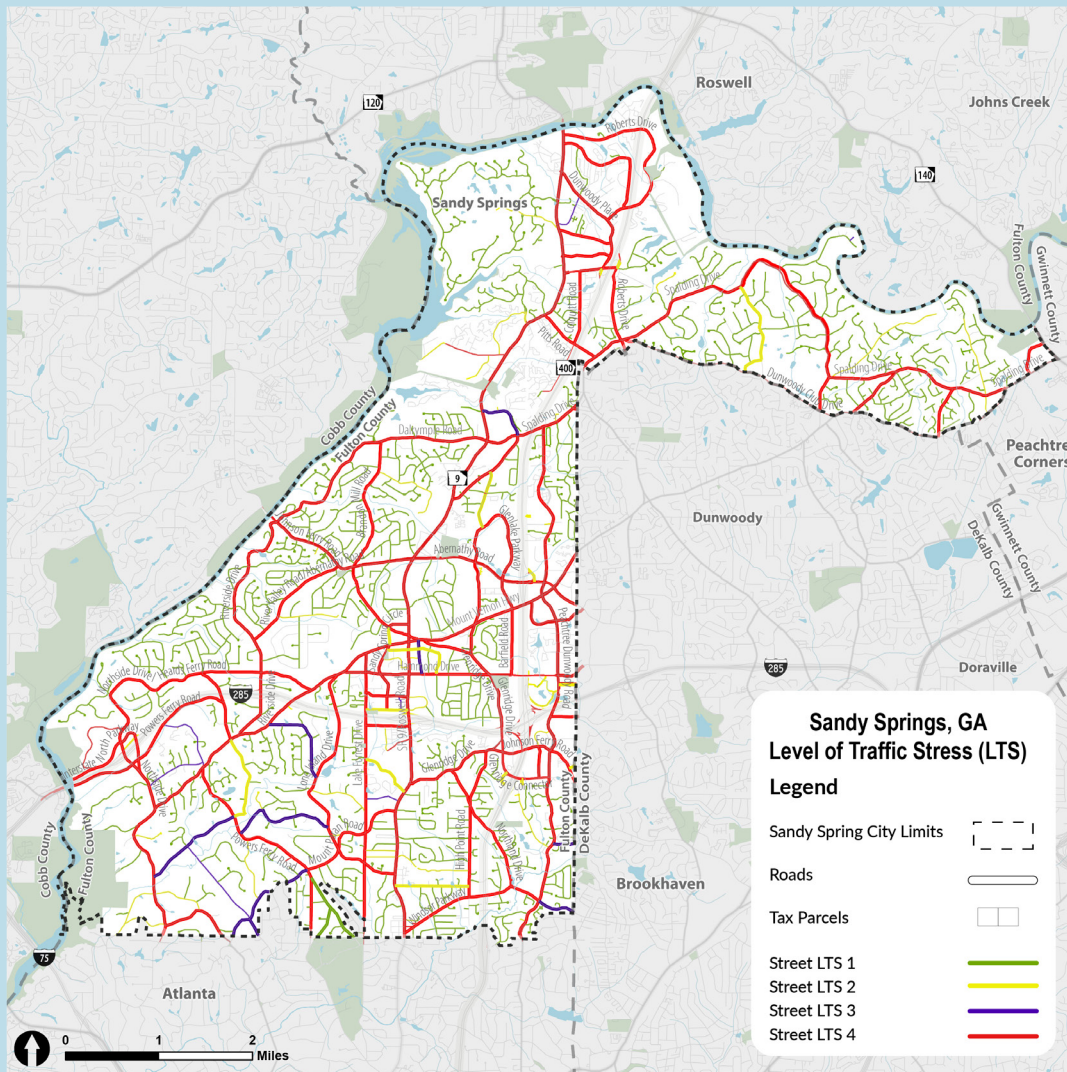
- Intersection
- Distracted Drivers
- Older Drivers (55-64)
- Older Drivers (65+)
- Hit & Run



High Crash Corridors

Bicycle and Pedestrian Network Analysis

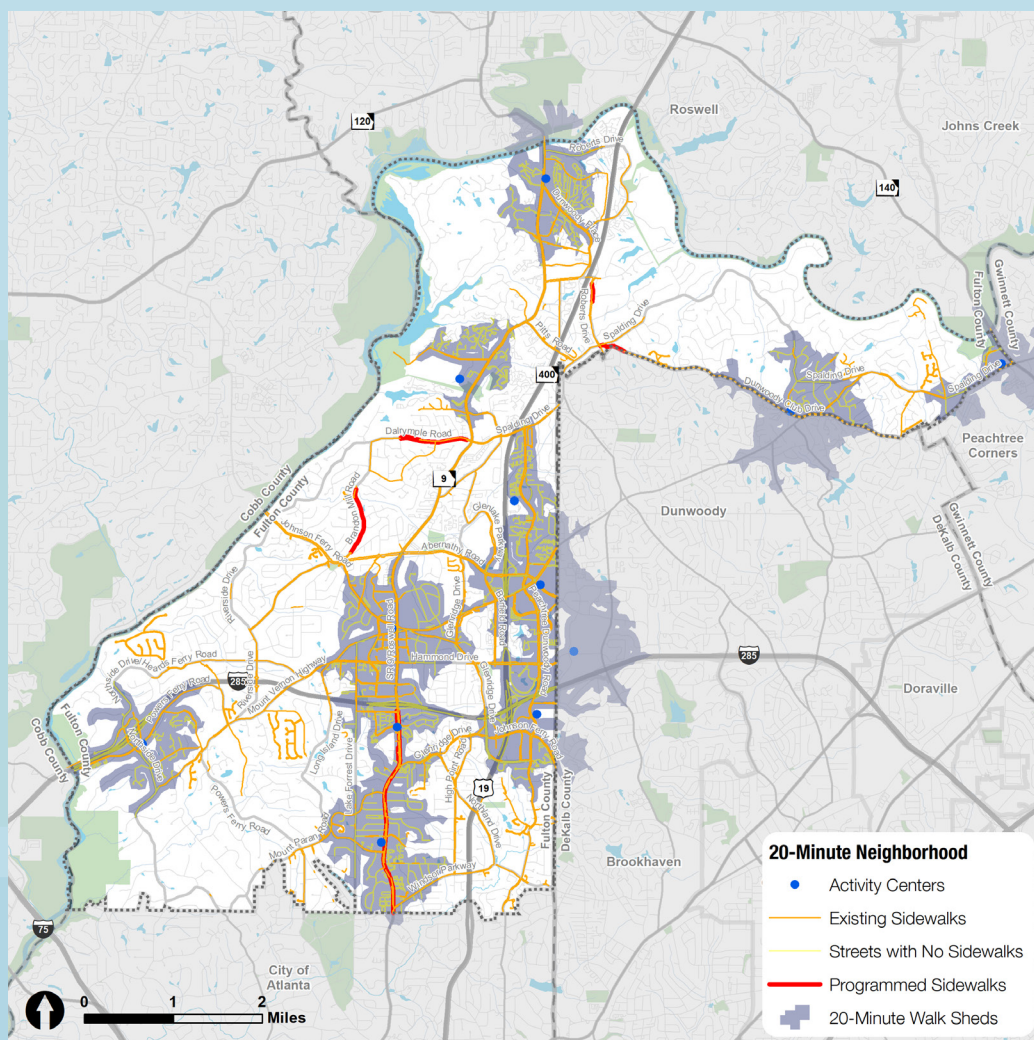
- **Purpose** - The purpose of this analysis was to identify additions or new connections to the existing bicycle and pedestrian networks that bring the most value to the City and its users. A high-level policy overview as well as an assessment of personal transportation devices are also included.
- **Highlights** – Based on a Level of Stress analysis that identifies streets most suitable for bicycling with vehicular traffic, it was found that many of the City's primary and secondary street network is really only suitable for the most experienced and confident of riders unless a facility that is separated from the roadway, like a sidepath, is provided.



Level of Traffic Stress Analysis

20-Minute Neighborhoods Analysis

- **Purpose** – The analysis identified 12 Neighborhood Activity Centers that have the potential to serve as walking destinations for a 20-minute Neighborhood Analysis. The underlying value of this type of analysis is looking at the ability for people to meet most of their everyday needs within a 20-minute walk (which is typically the time it takes a person to walk one mile). There are a number of potential benefits for 20-minute neighborhoods such as higher levels of physical activity, more focus on connections to local businesses and resources, and potentially less congestion on roadways due to less demand for using cars for short trips.
- **Highlights** - This analysis suggests that there are minor pedestrian facility gaps within these walk sheds. These gaps, if filled, can enhance pedestrian coverage and neighborhood access to the activity centers. The proposed sidewalks should be considered as priorities for implementation due to their location within the activity center walk sheds.

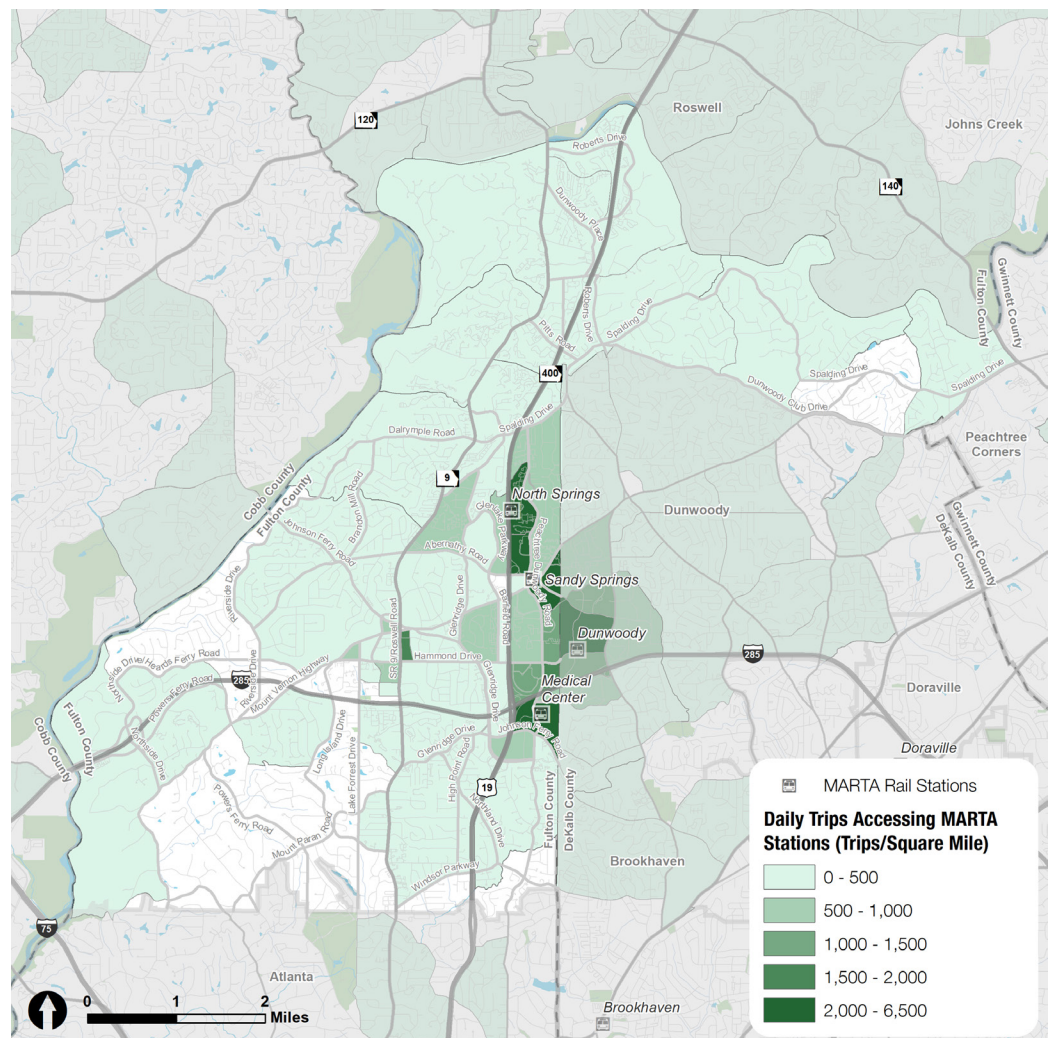


20-Minute Neighborhood Analysis

Transit Network Analysis

- Purpose** - The network analysis for transit is built on the findings of past City and regional transit planning efforts and had specific areas of focus: 1) last mile connections to transit stops and stations; 2) local circulation within Sandy Springs, 3) travel needs between Sandy Springs and adjacent jurisdictions. Since the City is not an operator of public transportation services, this analysis sought to identify transit-supportive recommendations.
- Highlights** – A deeper dive into MARTA’s on-board rail survey showed that the highest concentrations of people accessing MARTA rail stations come from nearby the station. However, depending on the MARTA rail station, the share of people who park and ride versus using other modes, changes. For example, nearly 40 percent of MARTA rail users for the North Springs Station drive versus less than 10 percent for Dunwoody and Medical Center Stations.

MARTA and Xpress are the only two transit operators within the City of Sandy Springs. The City does not directly operate transit services. The recommendations from the TMP ultimately include projects that improve the efficiencies of transit within the City.

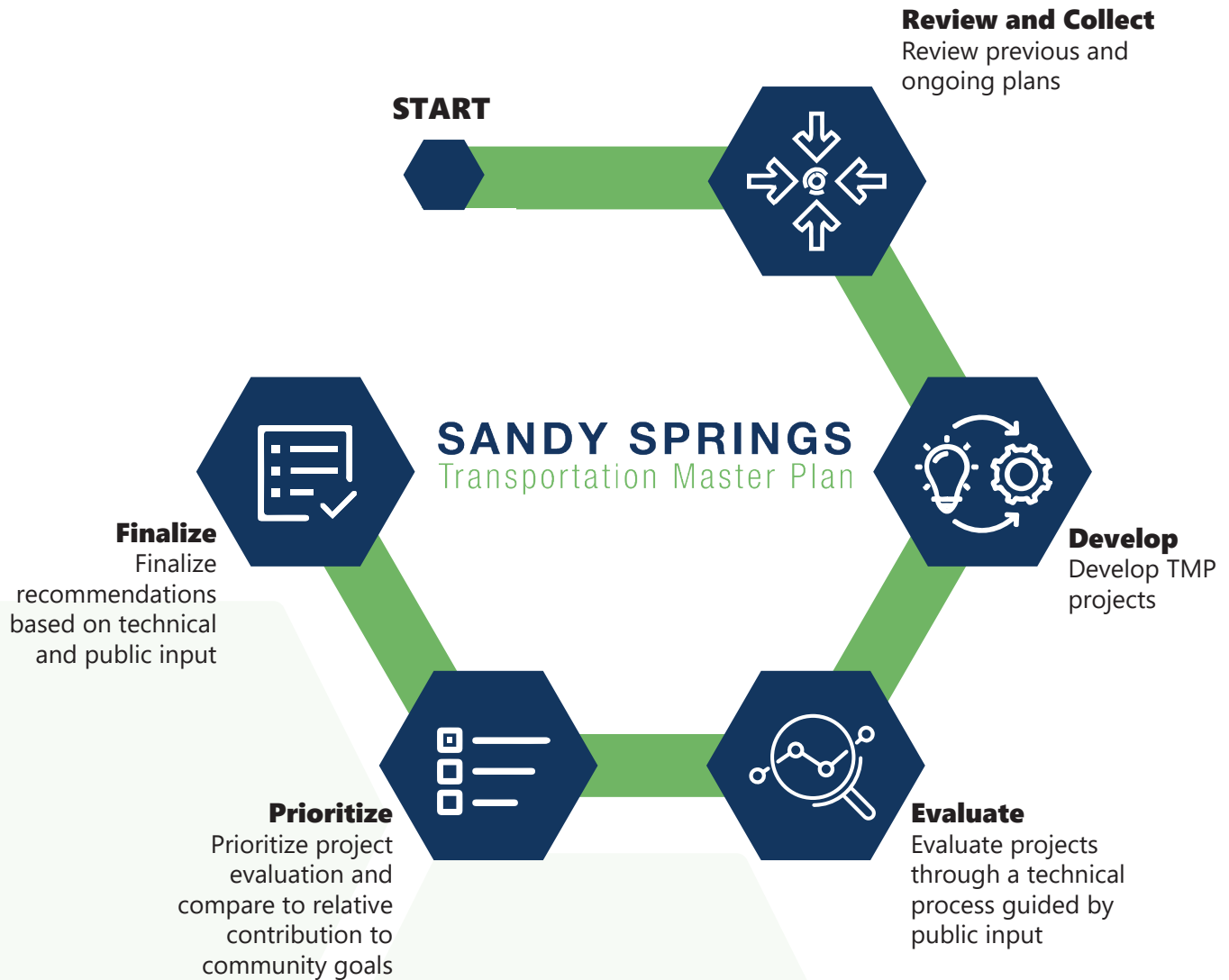


Daily Trips Accessing MARTA Stations Analysis

6

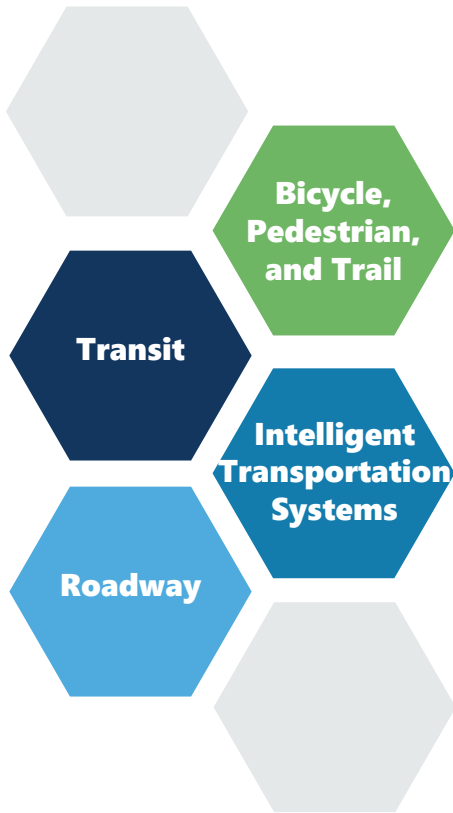
PROJECT DEVELOPMENT AND EVALUATION

The TMP offers the City the ability to collect and evaluate projects from previous and ongoing efforts and prioritize them alongside the projects developed specifically through the TMP. This chapter lays out the process that the TMP took to arrive at a set of recommendations to help the City of Sandy Springs to continue focusing its efforts and seeking strategic partnerships to expedite the TMP's implementation.



Project Categories

The recommended project list includes four categories of projects: **roadway, bicycle, pedestrian, and trail, ITS, and transit**. Each project category includes specific project types that further describe the specific type of improvements.



Project Types

Roadway

- **Intersection** – These projects include safety and operational improvements and studies that are focused on vehicles, cyclists, and pedestrians. These are larger-scale intersection level improvements.
- **Safety** – These projects are smaller-scale intersection improvements that are focused on improving safety specifically.
- **Corridor** – These projects are non-widening projects that include improvements such as access management, complete streets, and corridor studies.
- **Capacity** – These projects include a widening of the roadway to address higher volume and congested corridors.
- **Bridge** – These projects include upgrading, repairing, or reconstructing bridges to bring them to standard. These can also include multimodal and/or aesthetic bridge treatments.

Bicycle, Pedestrian, and Trail

- **Bicycle/Trail** – The projects include side paths or multi-use paths as well as trail studies to further look at opportunities to enhance connections.
- **Sidewalk Program** – The sidewalk program is an established citywide annual evaluation process of potential sidewalk projects. The TMP provides a set-aside funding allotment for projects in the program.

Transit

- **Regional Transit Supportive Studies** – These projects include studies to focus on future regional transit service and how the City's transportation network will connect.
- **Transit Signal Priority** – These projects include preparing the traffic signals system to provide travel priority to transit buses.

Intelligent Transportation Systems

- **ITS** – These projects include specific improvements for a build out of the fiber optic cable network to ensure communications to signals, cameras, and other devices are improved.



FINANCIAL PLAN

A fiscal constraint exercise was conducted based on the projects that could reasonably be funded with the City's expected revenues and current capital assumptions. Planning level cost estimates were completed for each project, and the list of projects were organized into two programming levels denoting their likely timeline for implementation, as defined below.

- Short-Range: Likely to be implemented within five years.
- Mid-Range: Likely to be implemented within five to ten years.

Project Category	Project Type	Short-Range	Mid-Range	Total
Roadway	Intersection	\$7,500,000	\$36,300,000	\$43,800,000
	Safety	\$3,500,000	\$850,000	\$4,350,000
	Corridor	\$10,350,000	\$12,000,000	\$22,350,000
	Capacity	\$36,000,000	\$20,000,000	\$56,000,000
	Bridge	\$12,600,000	\$8,000,000	\$20,600,000
Bicycle, Pedestrian, and Trail	Bicycle/Trail	\$20,250,000	\$30,350,000	\$50,600,000
	Sidewalk Program	\$12,000,000	\$12,000,000	\$24,000,000
Transit		\$600,000	\$2,800,000	\$3,400,000
ITS		\$2,840,000	\$1,500,000	\$4,340,000
Total		\$105,640,000	\$123,800,000	\$229,440,000

PROJECT TYPE

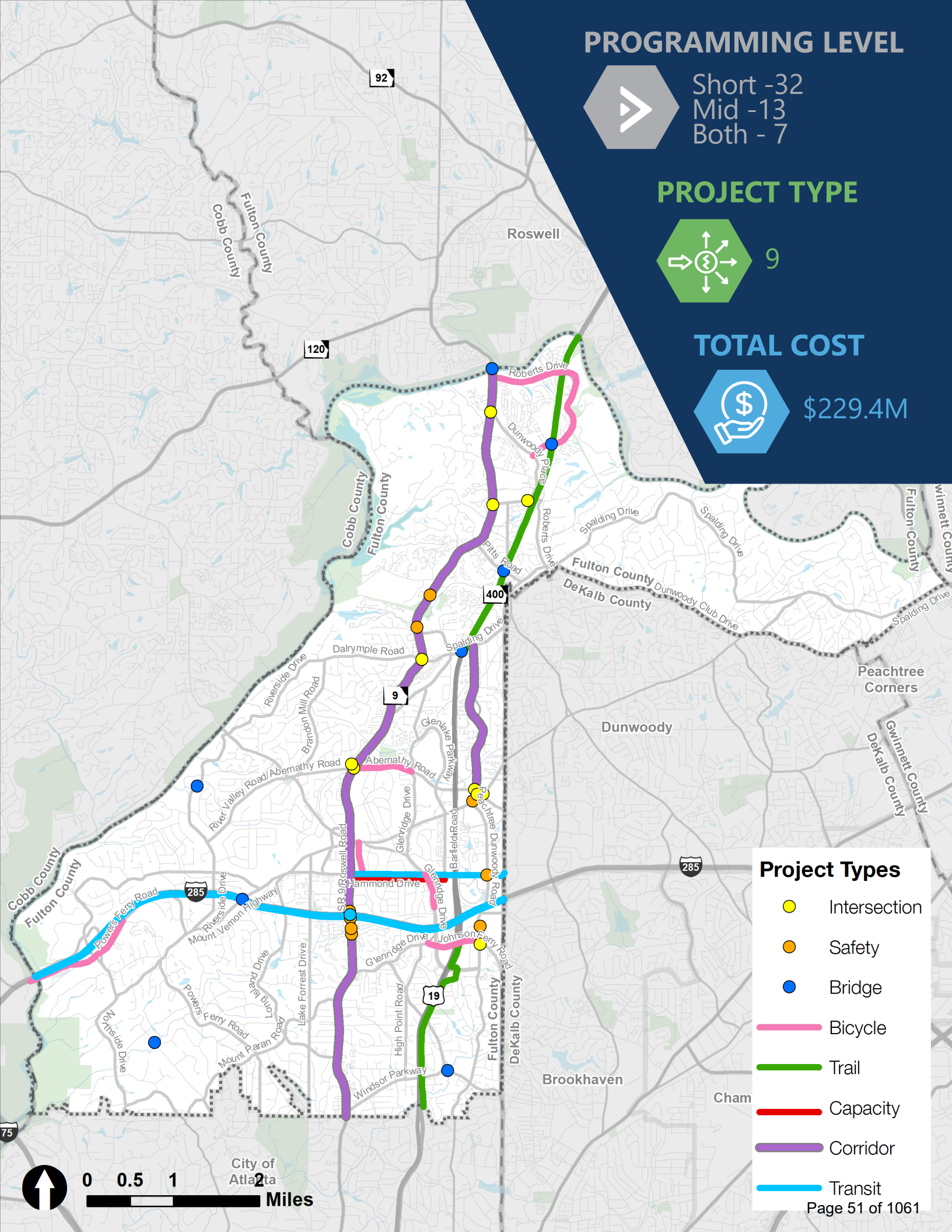


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\$229.4M

- Intersection
- Safety
- Bridge
- Bicycle
- Trail
- Capacity
- Corridor

Page 51 of 1061



PROGRAMMING LEVEL



Short -20
Mid -9
Both - 4

PROJECT TYPE

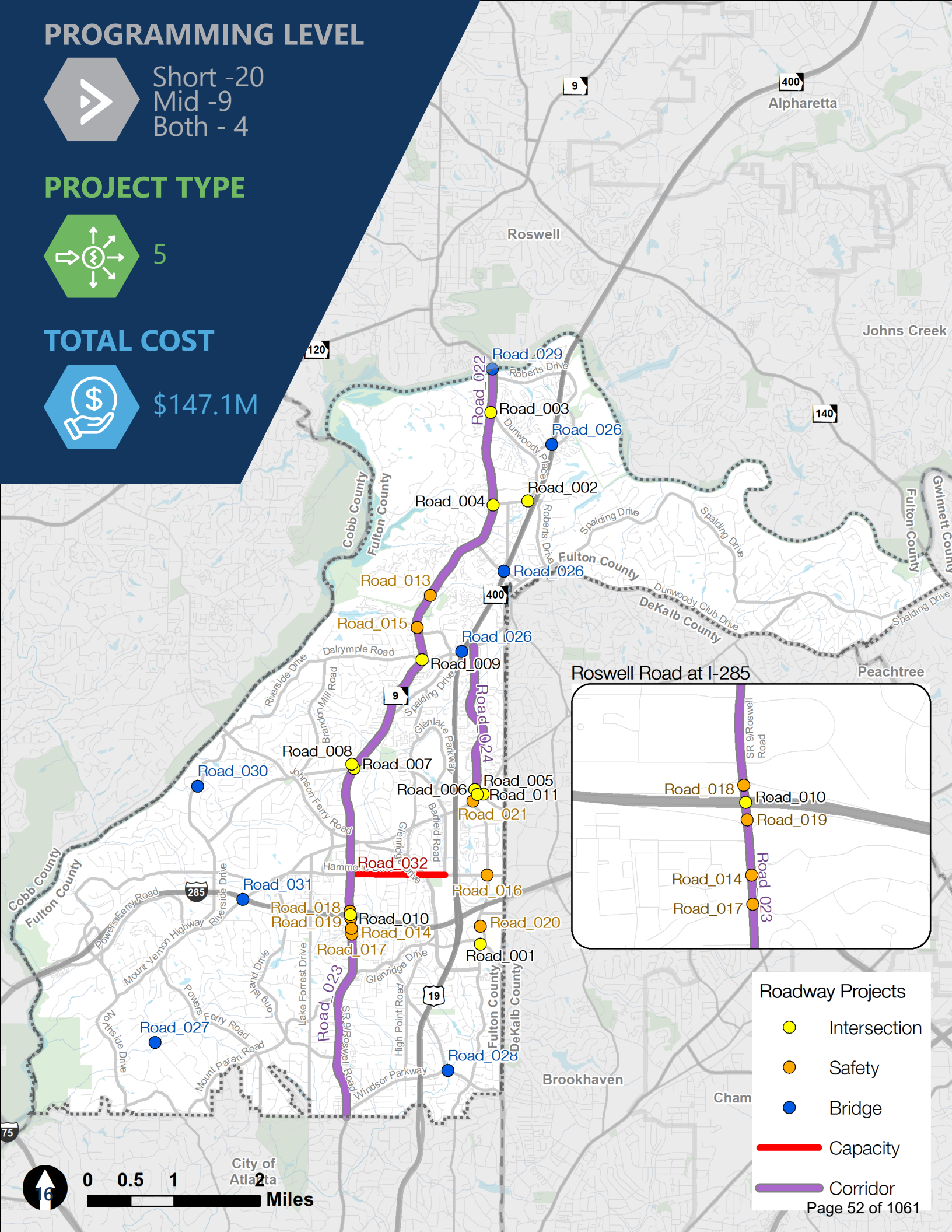


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TOTAL COST



\$147.1M



Roadway Projects

- Yellow dot: Intersection
- Orange dot: Safety
- Blue dot: Bridge
- Red line: Capacity
- Purple line: Corridor

ROADWAY

The following table identifies the 33 roadway projects by category. Information provided includes Project ID, Project Name (with location description), Programming Level denoting likely timeline for implementation, and Cost.

Project ID	Project Name	Programming Level	Cost
Roadway Projects			
Intersections			
Road_001	Johnson Ferry Road at Peachtree Dunwoody Road Intersection Improvement	Short & Mid-Range	\$17,000,000
Road_002	Northridge Road at SR 400 SB Intersection Improvement	Mid-Range	\$1,000,000
Road_003	Dunwoody Place at Roswell Road Intersection Improvement	Short-Range	\$2,000,000
Road_004	Northridge Road at Roswell Road Short-Term Intersection Improvement	Short-Range	\$2,200,000
Road_005	Abernathy Road at Mount Vernon Highway Intersection Improvement	Mid-Range	\$1,000,000
Road_006	Abernathy Road at Peachtree Dunwoody Road Intersection Improvement	Mid-Range	\$1,000,000
Road_007	Roswell Road and Abernathy Road Short-Term Improvements Intersection Improvements	Short-Range	\$500,000
Road_008	Roswell Road and Abernathy Road Intersection Long-Term Improvements	Mid-Range	\$12,000,000
Road_009	Roswell Road at Dalrymple Road Operational Improvements Phase 2	Mid-Range	\$7,800,000
Road_010	I-285/Roswell Road Innovative Interchange Study	Short-Range	\$150,000
Road_011	Abernathy/Mount Vernon Highway/Peachtree Dunwoody Road Intersections Study	Short-Range	\$150,000
Road_012	Bring 10 Intersections up to Standard	Short-Range	\$1,000,000
Safety			
Road_013	Fulton County Annex Midblock Crossing	Short-Range	\$500,000
Road_014	Roswell Road between Prado Place and Northwood Drive Midblock Crossing	Short-Range	\$500,000
Road_015	Roswell Road between Cimarron Parkway and Trowbridge Road Midblock Crossing	Mid-Range	\$500,000
Road_016	Hammond Drive at Peachtree Dunwoody Road Intersection Improvement	Short-Range	\$150,000
Road_017	SR 9 (Roswell Road) at Lake Placid Drive Intersection Improvement	Short-Range	\$225,000
Road_018	SR 9 (Roswell Road) at I-285 Eastbound Intersection Improvement	Short-Range	\$500,000
Road_019	SR 9 (Roswell Road) at I-285 Westbound Safety Improvements	Short-Range	\$300,000
Road_020	Hollis Cobb Circle at Peachtree Dunwoody Road Intersection Improvement	Short-Range	\$325,000
Road_021	Mount Vernon Highway at Peachtree Dunwoody Road Intersection Improvement	Mid-Range	\$350,000
Corridor			
Road_022	Roswell Road North Boulevard Median Project	Short-Range	\$7,000,000
Road_023	Roswell Road Access Management and Complete Streets Improvements	Short & Mid-Range	\$10,000,000
Road_024	Peachtree Dunwoody Road Corridor Study and Improvements	Short & Mid-Range	\$5,150,000
Road_025	Powers Ferry Multimodal Circulation Study	Short-Range	\$200,000
Bridges			
Road_026	GA 400 Bridge Enhancements	Short-Range	\$6,000,000
Road_027	Jett Road over Long Island Creek Bridge	Mid-Range	\$3,000,000
Road_028	Windsor Parkway over Nancy Creek Bridge	Mid-Range	\$5,000,000
Road_029	SR 9 (Roswell Road/Atlanta Street) Pedestrian Improvements	Short-Range	\$1,000,000
Road_030	Riverside Drive over Chattahoochee River Tributary Bridge	Short-Range	\$3,200,000
Road_031	I-285 Top End Bridge Enhancements	Short-Range	\$2,400,000
Capacity			
Road_032	Hammond Drive Widening from Roswell Road to Barfield Road	Short & Mid-Range	\$55,000,000
Road_033	City Contribution to New Streets Built with Redevelopment	Short-Range	\$1,000,000

PROGRAMMING LEVEL



Short -6
Mid -2
Both -2

PROJECT TYPE

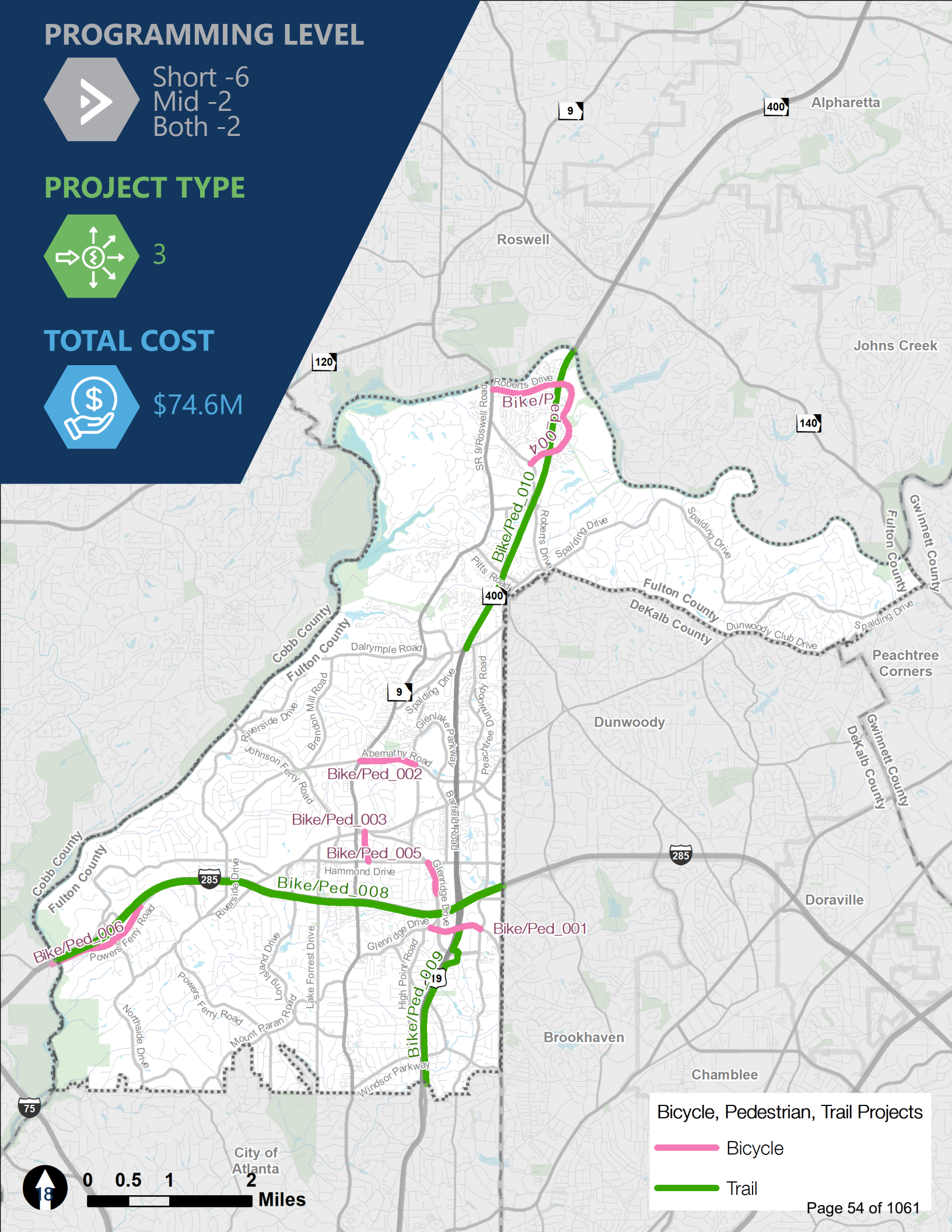


3

TOTAL COST



\$74.6M



Bicycle, Pedestrian, Trail Projects

Bicycle

Trail

BICYCLE, PEDESTRIAN, TRAILS

The following table identifies the 10 bicycle, pedestrian, and trail projects by category. Information provided includes Project ID, Project Name (with location description), Programming Level denoting likely timeline for implementation, and Cost.

Project ID	Project Name	Programming Level	Cost
Bicycle, Pedestrian, and Trail Projects			
Bicycle			
Bike/Ped_001	Johnson Ferry Rd Side Path, from Glenridge Dr to Peachtree	Short-Range	\$6,000,000
Bike/Ped_002	Abernathy Side Path, from Roswell Road to Glenridge Drive	Mid-Range	\$6,100,000
Bike/Ped_003	Boylston Drive Side Path, from Mt. Vernon Hwy to Hammond Drive	Short-Range	\$4,000,000
Bike/Ped_004	Roberts Drive Side Path, from Roswell Rd to Dunwoody Pl	Short & Mid-Range	\$14,500,000
Bike/Ped_005	Glenridge Dr Side Path, from Hammond Dr to south of Wellington Trace	Short-Range	\$2,500,000
Bike/Ped_006	Powers Ferry Dr Side Path, from City Limits to Dupree Drive	Mid-Range	\$10,000,000
Pedestrian			
Bike/Ped_007	Sidewalk Program	Short & Mid-Range	\$24,000,000
Trail			
Bike/Ped_008	I-285 Multi-Use Trail Study	Short-Range	\$250,000
Bike/Ped_009	GA 400 Multi-Use Trail	Short-Range	\$7,000,000
Bike/Ped_010	GA 400 Multi-Use Trail North Study	Short-Range	\$250,000

PROGRAMMING LEVEL



Short -3
Mid -1
Both - 1

PROJECT TYPE

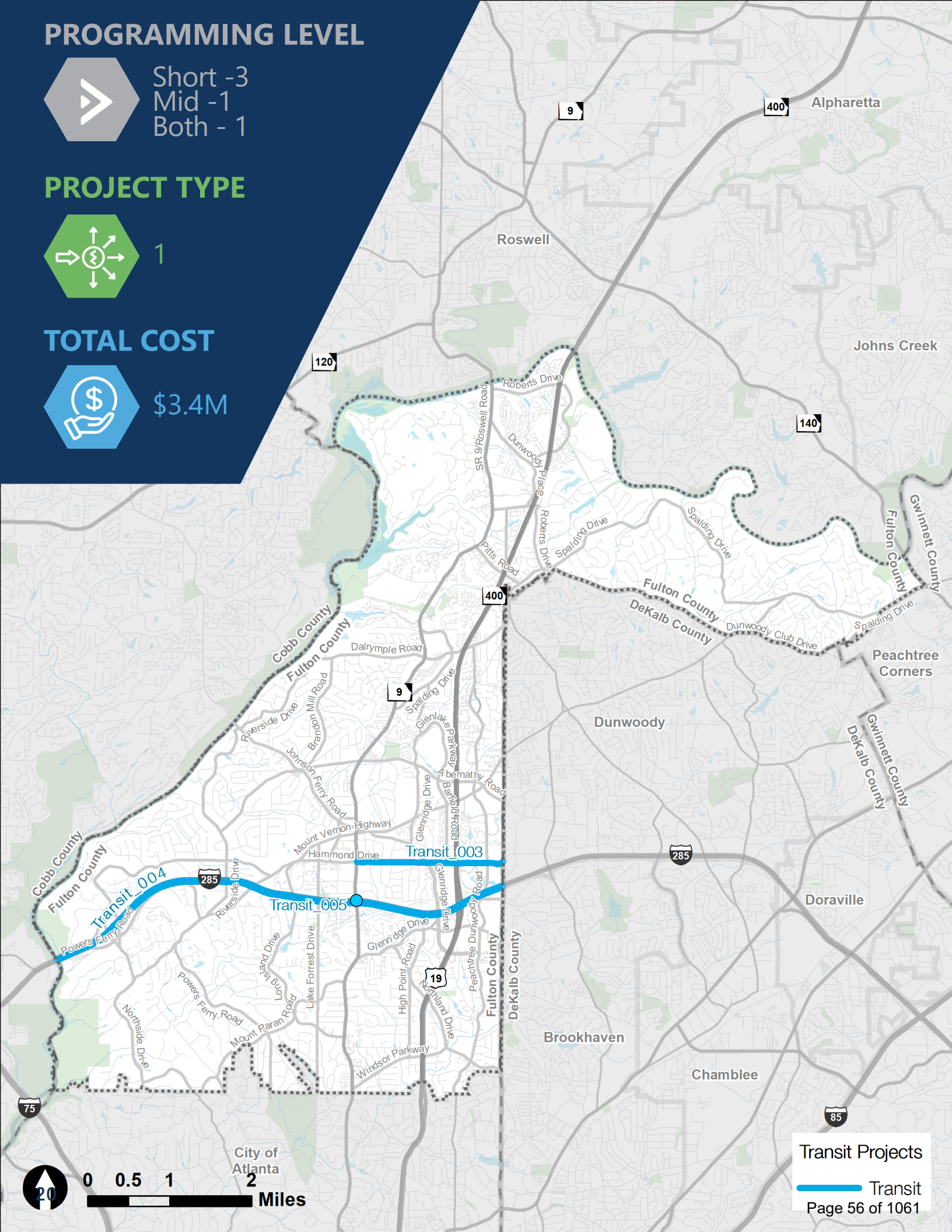


1

TOTAL COST



\$3.4M



TRANSIT

The following table identifies the 5 transit projects by category. Information provided includes Project ID, Project Name (with location description), Programming Level denoting likely timeline for implementation, and Cost.

Project ID	Project Name	Programming Level	Cost
Transit			
Transit_001	Traveler Information Kiosks/Transit Curbside Management (partnership with MARTA)	Short & Mid-Range	\$300,000
Transit_002	Transit Signal Priority Technical Upgrades along MARTA Routes	Short-Range	\$250,000
Transit_003	Transit Signal Priority Supportive Improvements along Hammond Drive	Mid-Range	\$2,700,000
Transit_004	I-285 BRT Feasibility Study	Short-Range	\$50,000
Transit_005	I-285 at Roswell Road Station Area Study	Short-Range	\$100,000

PROGRAMMING LEVEL



Short -3
Mid -1
Both - 0

ITS

PROJECT TYPE



1

TOTAL COST



\$4.4M

The following table identifies the 4 ITS projects by category. Information provided includes Project ID, Project Name (with location description), Programming Level denoting likely timeline for implementation, and Cost.

Project ID	Project Name	Programming Level	Cost
Intelligent Transportation Systems			
ITS_001	Design and Construct Fiber	Short-Range	\$1,500,000
ITS_002	Design and Construct Fiber	Mid-Range	\$1,500,000
ITS_003	Install Hub at Morgan Falls Public Safety Complex	Short-Range	\$690,000
ITS_004	Fiber Connection to Fire	Short-Range	\$650,000

POLICIES AND INITIATIVES

There are a number of policies and initiatives that are recommended as a part of the TMP that have been summarized below. Details regarding each of these can be found in the **Transportation Master Plan**.

POLICIES

Zero Deaths and Safe Systems Policy

Complete Streets Policy

Micromobility Policy

Ridesharing Service Guiding Policy

Reconciling Inconsistencies between Development Code and Technical Manual

Sidewalk Master Plan Amendment

Promote Transportation Demand Management (TDM) Citywide

Host Bicycling and Walking Days

Track and Coordinate Transportation Performance Metrics

INITIATIVES

Coordinate New Transportation Projects with Other Enhancements

Develop City Transportation Safety Working Group

Coordinate with Regional Transit Providers to Improve City Service

8

NEXT STEPS

The success of the City of Sandy Springs TMP hinges on the collaborative effort of local, regional, and statewide agencies and partners to implement the projects and policies moving forward. One of the keys to implementation will be securing funding for the projects that are identified in the TMP by understanding the following:

- **Realistic funding streams and available local matches**
- **Partnership opportunities** - funding partnerships between the City and other public, private, and/or quasi-public entities
- **Project consolidation opportunities** – identification of specific modal projects that could be combined with other larger efforts
- **Policy-level changes** – continued incentivization of transportation investments through ordinance

Collaboration and Coordination

Implementation of projects for the short- and mid-range programming levels will require collaboration and coordination between the City and other agencies and entities.

Realistic Funding Streams

Securing future funding is critical to the implementation of the projects included in the TMP.

Accountability

The Vision and Goals for the TMP were established through a public engagement process driven by the community. By tracking them beyond the life of the TMP, the City can maintain accountability through implementation.

A Foundation for Investments

The TMP will serve as the guiding document for the City for transportation investments over the next 5, 10, to 20 years.

ACKNOWLEDGEMENTS

Sandy Springs Mayor and City Council

Mayor Rusty Paul

Councilmember John Paulson | Councilmember Steve Soteres | Councilmember Chris Burnett |
Councilmember Jody Reichel | Councilmember Tibby DeJulio | Councilmember Andy Bauman

City Departments

City Management | Communication and Media | Community Development | Economic Development |
Fire | Information Services | Police | Public Works | Recreation and Parks | Sustainability

Stakeholders

Atlanta Regional Commission | Atlanta - Region Transit Link Authority | City of Atlanta | City of
Brookhaven | City of Dunwoody | City of Roswell | Cobb County | CobbLinc | Community Assistance
Center | Cumberland CID | Dunwoody Cycling Club | Fulton County Aging Services | Fulton County
Schools | GDOT | Gwinnett County Transit | Leadership Sandy Springs | MARTA | PATH Foundation
| City of Peachtree Corners | Perimeter CIDs | Perimeter Connects | Safe Routes to School | Sandy
Springs Chamber of Commerce | Xpress

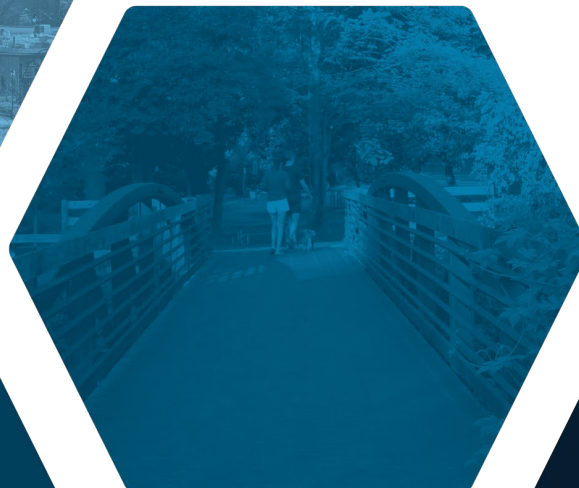
Consultant Team

Kimley-Horn

Gresham Smith

Perez Planning + Design





SANDY SPRINGS

Transportation Master Plan

Kimley»Horn

APRIL 2021

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1 | Introduction

The Transportation Master Plan

Sandy Springs is an established city and major employment center near the heart of the nation's fourth-fastest growing metropolitan area. As the city continues to mature over the coming decades, current transportation issues will only become more pressing.

The Sandy Springs Transportation Master Plan (TMP) establishes a transportation vision for the city that enables a livable and vibrant community. The TMP seeks to integrate transportation and land-use policy while considering the needs of all modes, including driving, biking, walking, transit, and freight transportation. The plan also considers newer mobility options such as bikeshare, rideshare, and micromobility (i.e. electric scooters).

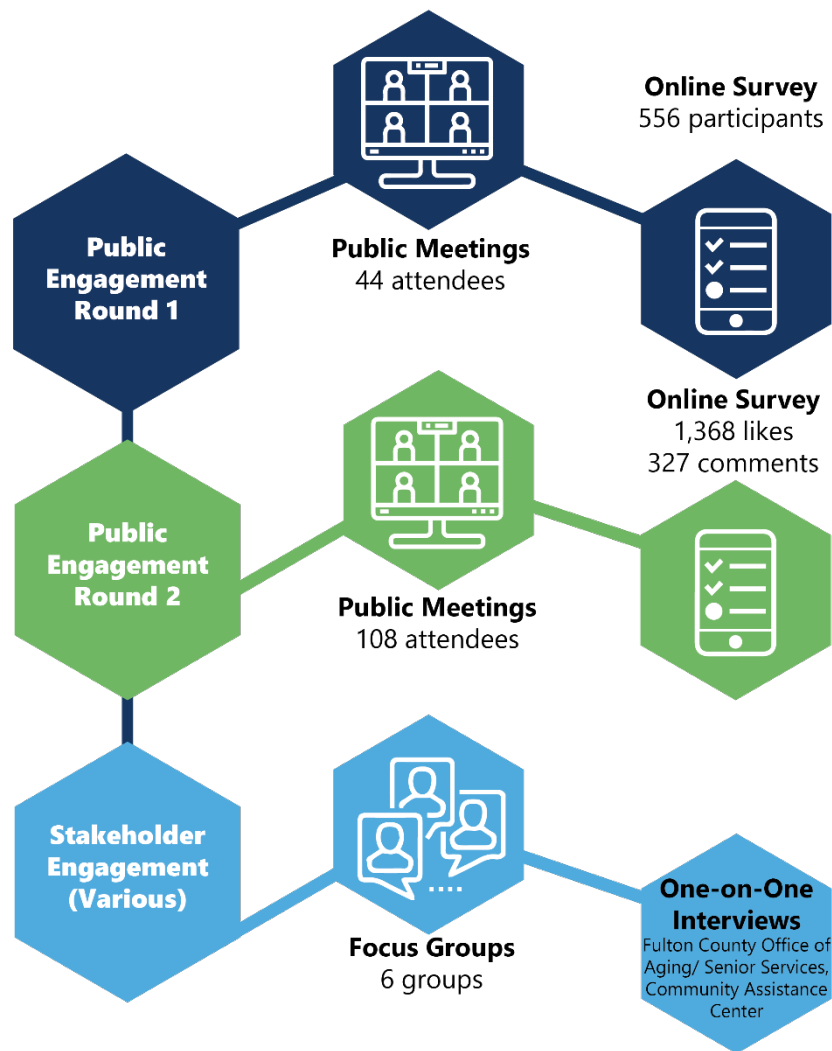
About this Report

This report represents the final steps in the TMP process providing direction to the City of Sandy Springs on how transportation projects, policies, initiatives, and best practices should be implemented moving through the next 5, 10, to 20 years. The first few chapters of this report provide highlights from the **Existing Conditions Report** and the **Multimodal Assessment**, which catalogue how the city's transportation existing conditions and needs were identified through a visioning process, a series of technical tools and methods, and community-based input. The chapters that follow provide details on how recommendations were developed through the planning process from initial development, evaluation, to financial constraint. The prioritized projects are organized into short- and mid-range programming levels to indicate their level of priority.



2 | Process

The TMP was a process that began in February 2020. Over a 15-month planning process, the TMP team conducted intensive technical work to understand the transportation network as it exists today and how the future may impact travel for all modes. The technical analysis was further informed by public engagement that focused on integrating the community's vision into the TMP. While all engagement was online due to the COVID-19 pandemic, engagement included a series of opportunities for the community to be involved, including virtual public meetings, focus groups, and online surveys, providing great insight into the community's needs and desires. Findings from public engagement can be found in the ***Public Engagement Summary Documents*** in **Appendix A**.



3 | Vision and Goals

From the very beginning, the TMP worked to develop a set of goals for the plan. The goals represent the community values and are also tied to local, regional, statewide, and national planning priorities set by the City's Comprehensive Plan, the Atlanta Regional Commission (ARC), Georgia Department of Transportation (GDOT), and federal agencies (Federal Highway Administration [FHWA], Federal Transit Administration [FTA]). The TMP's goals were continuously refined and validated through the public involvement process and ultimately gave impetus to the plan recommendations.





4 | Existing Conditions

Understanding where we are today is critical to helping us get where we need to go. This section explores key takeaways from the separate **Existing Conditions Report**. These major trends outlined below shape transportation and mobility in Sandy Springs.

People

Population Growth

Sandy Springs is a growing community, but growth is projected to slow in the coming years. This requires a shift in the way we think about transportation investments.

Population Growth Trends in Sandy Springs

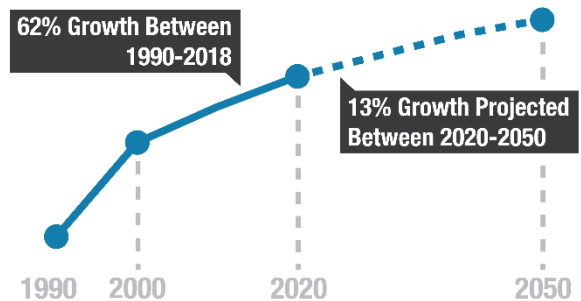


Figure 1: Sandy Springs Population Growth

Diversity

Just under a third (31%) of Sandy Springs residents identify as a race other than white, and portions of the city along the GA 400 corridor are majority-minority. Slightly under 15% of Sandy Springs residents identify as Hispanic/LatinX, and 6% of households have limited English proficiency.

Mobility Impaired

Just over 6% of Sandy Springs residents have a vision, hearing, cognitive, ambulatory, self-care, or independent living difficulty.

Vehicle Ownership

More than 3,000 households in Sandy Springs – 1 in every 15 – have no access to a personal vehicle.

Older Persons

Almost a third of Sandy Springs residents are age 50 or older. This cohort is closely followed by adolescents who are under the age of 19 (22%).

Education

Almost two-thirds of Sandy Springs residents over age 25 have completed a four-year college degree or higher

Income

Approximately 11% of Sandy Springs residents live below the federal poverty level. Meanwhile, the portion of city residents making \$200,000 or more per year (12%, according to 2018 ACS data) is approximately double that of residents across the entire Atlanta region (6%).

Renters v. Owners

Sandy Springs residents are split roughly evenly between renters and owners. In 2018, 51% of total housing units in Sandy Springs were occupied by renters and 49% by owners.

Employment Growth

By 2050, it is estimated that nearly 60,000 new jobs will be added to the city.

Employment in the City

Based on the Longitudinal Employer-Household Dynamics (LEHD), the United States Census Bureau estimates that as of 2017, there are approximately 132,000 jobs in Sandy Springs. However, just 8,250 of these jobs are held by Sandy Springs residents, meaning almost 94% of jobs are held by persons who live outside Sandy Springs.

Projected Employment Growth in Sandy Springs

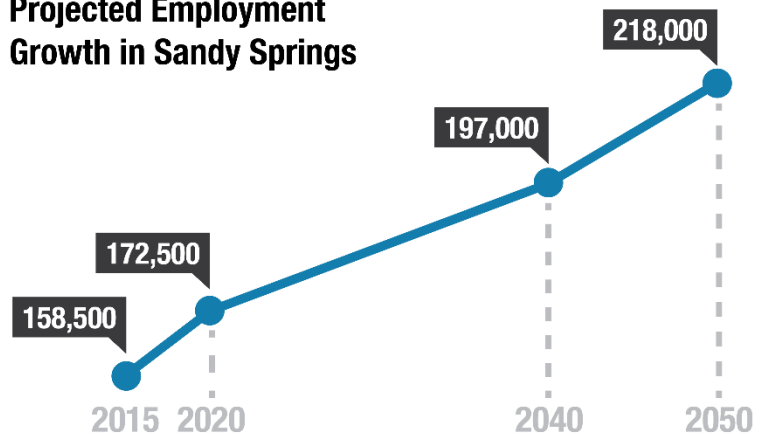


Figure 2: Projected Sandy Springs Population Growth

How Residents Get to Work

Prior to the COVID-19 pandemic almost 75% of Sandy Springs residents commute to work by driving alone, in line with the average for Fulton County and much higher than of the metro Atlanta region. 9% of the residents worked from home, 7% took transit, 6% carpooled, and 2% walked. The long-term impact of the pandemic on working habits and how residents travel to work is currently unknown but should be monitored.



Land Use

Land use in Sandy Springs is largely driven by the *Next Ten* Comprehensive Plan, which was adopted in 2017. The plan lays ambitious goals to improve the built environment in Sandy Springs and indicates the community's desires to balance the needs of a densifying and maturing community with the preservation of neighborhoods. Future land use changes established through the *Next Ten* will not enable growth everywhere – but where growth occurs, it will lead to more concentrated, node-based vibrant and distinctive destinations.

Sandy Springs grew out of a bedroom community for Atlanta – and existing land uses in most of the city are still influenced by this strong neighborhood community heritage.

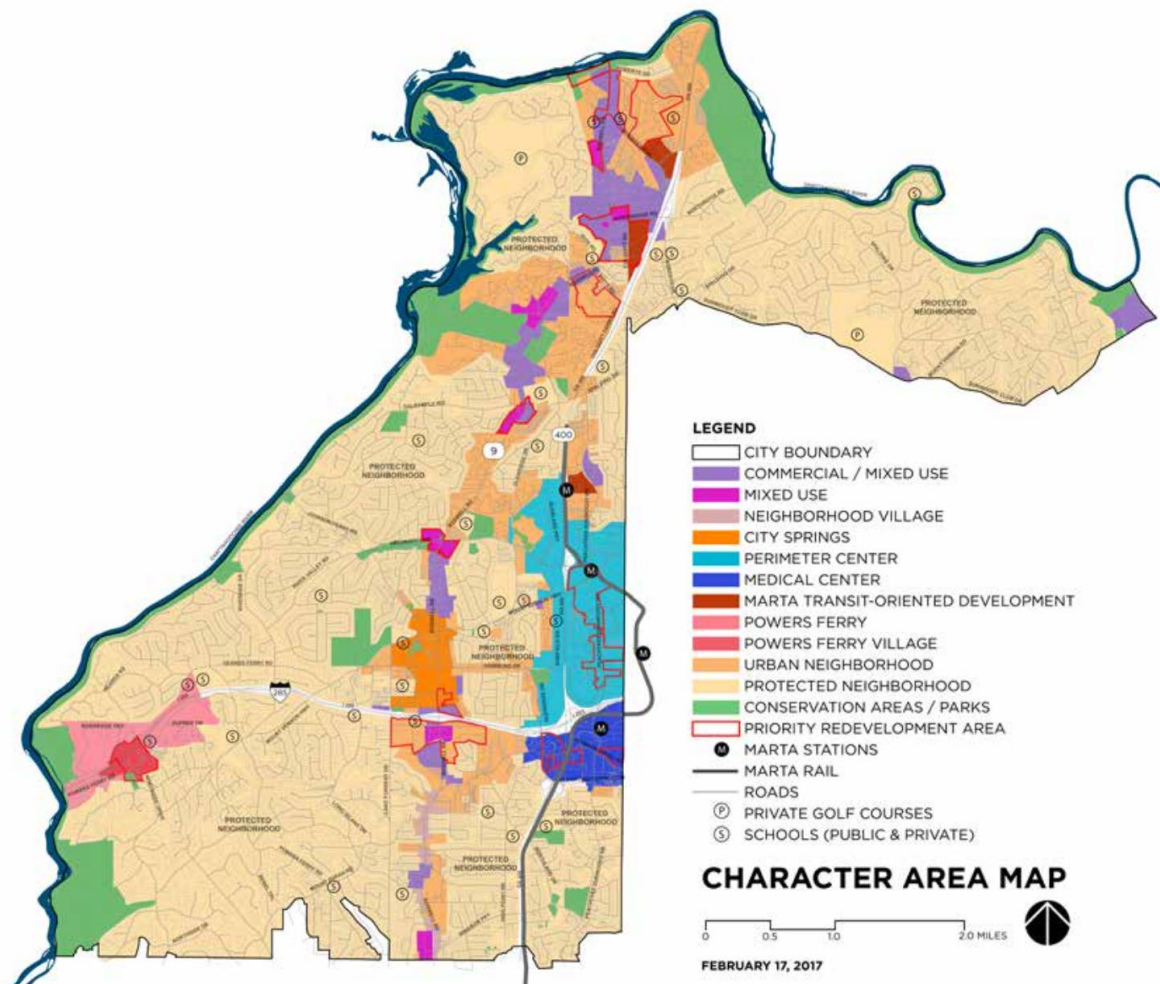


Figure 3: Land Use Character Areas from the Next Ten Comprehensive Plan

Community Resources

Beyond land use, the extensive tree canopy, rolling terrain, and proximity to the Chattahoochee River inform the city's identity and facilitate a strong connection to nature for the community. This recreational land, along with the community resources and activity centers within the city, highlight areas that require continued access and enhanced transportation connections.

Community Resources in Sandy Springs



22
Schools

6 Elementary Schools

2 Middle Schools

2 High Schools

12 Private / Other



7
Technical Colleges
and Universities



3
Major Hospitals



1
Public Library



950+
Acres of Parkland



1
Police
Headquarters



5
Fire Stations

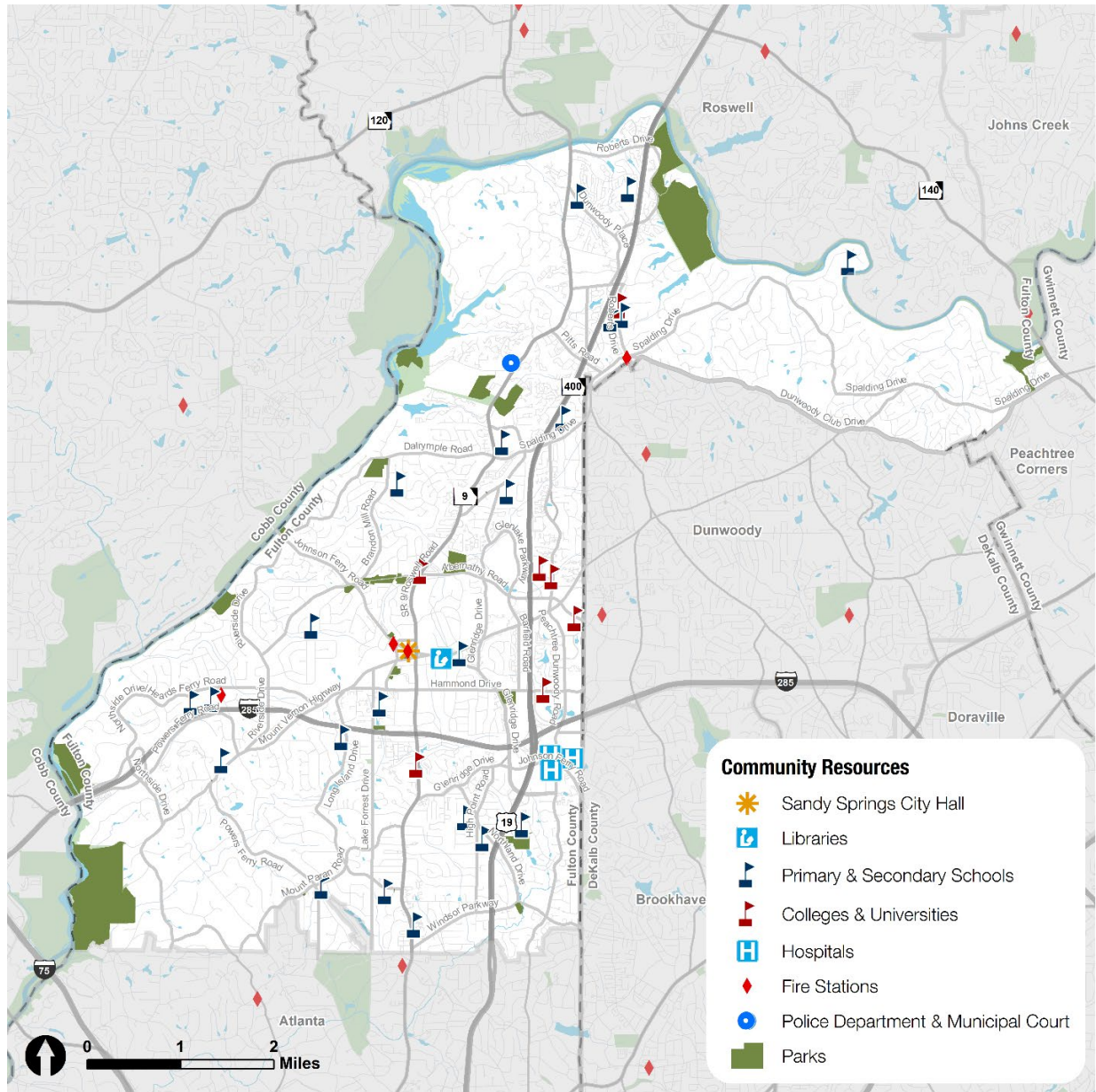


Figure 4: Community Resources in Sandy Springs

Mobility

Roadway

There are just over 500 miles of roadway in Sandy Springs. Almost three quarters of roadway-miles in Sandy Springs are local (or neighborhood-level) facilities. About 75% of the roadways in Sandy Springs are publicly owned, and 25% are privately owned. Of the publicly owned streets, 65% are owned by the City and 10% by the State/Federal government.

Although interstates and expressways comprise just seven percent of total roadway mileage in the City, these facilities carry more traffic than the other classes of roadway.

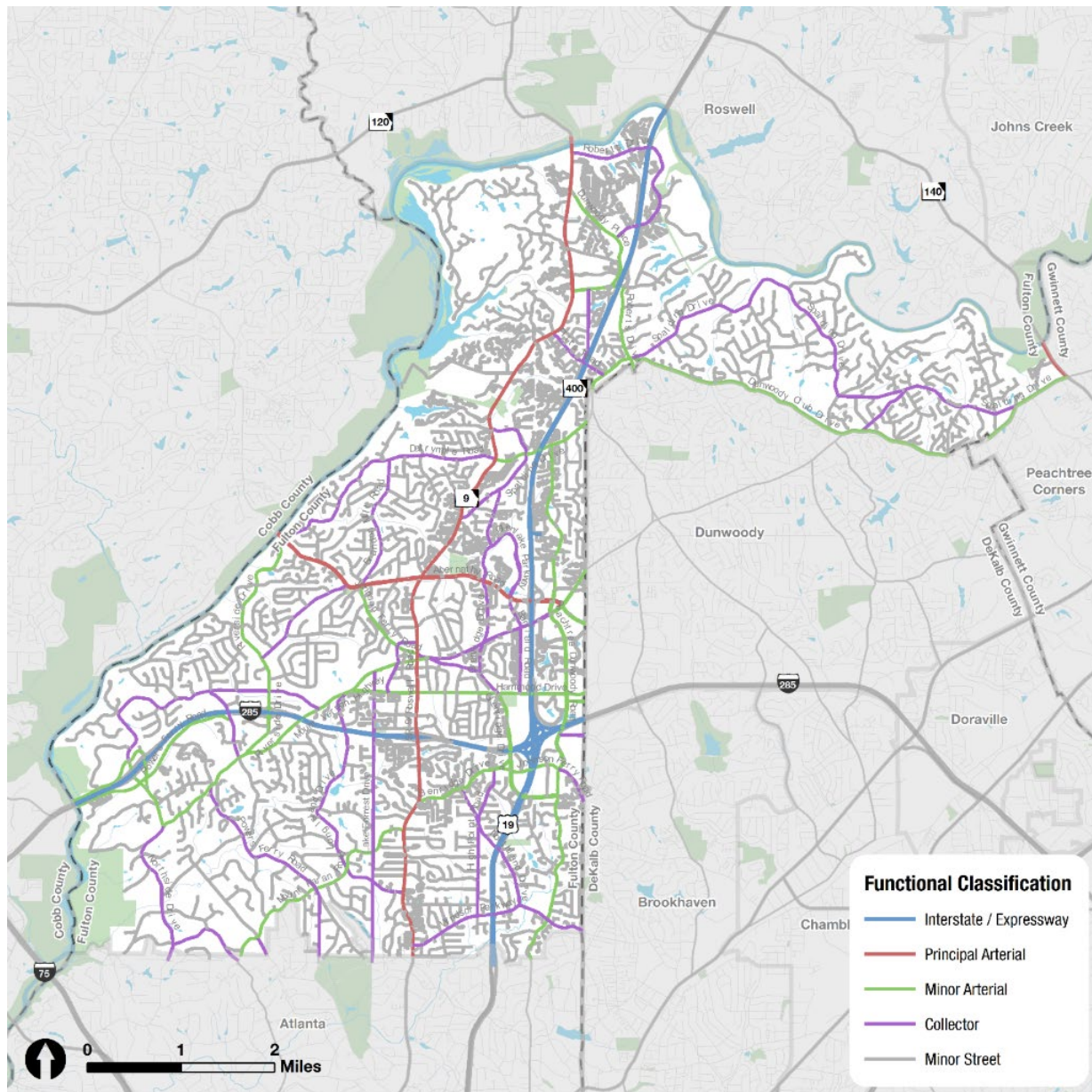


Figure 5: Functionally Classified Roads Sandy Springs



Traffic Volumes

Daily traffic volume forecasts from the refined Sandy Springs 2018 travel demand model are mapped in Figure 6. In 2018, only a few roadways have greater than 15,000 vehicles per day in each direction. Those roads include Abernathy Road and Roswell Road as well as segments of Peachtree Dunwoody Road, Johnson Ferry Road, and Hammond Drive, all of which are currently multi-lane facilities.

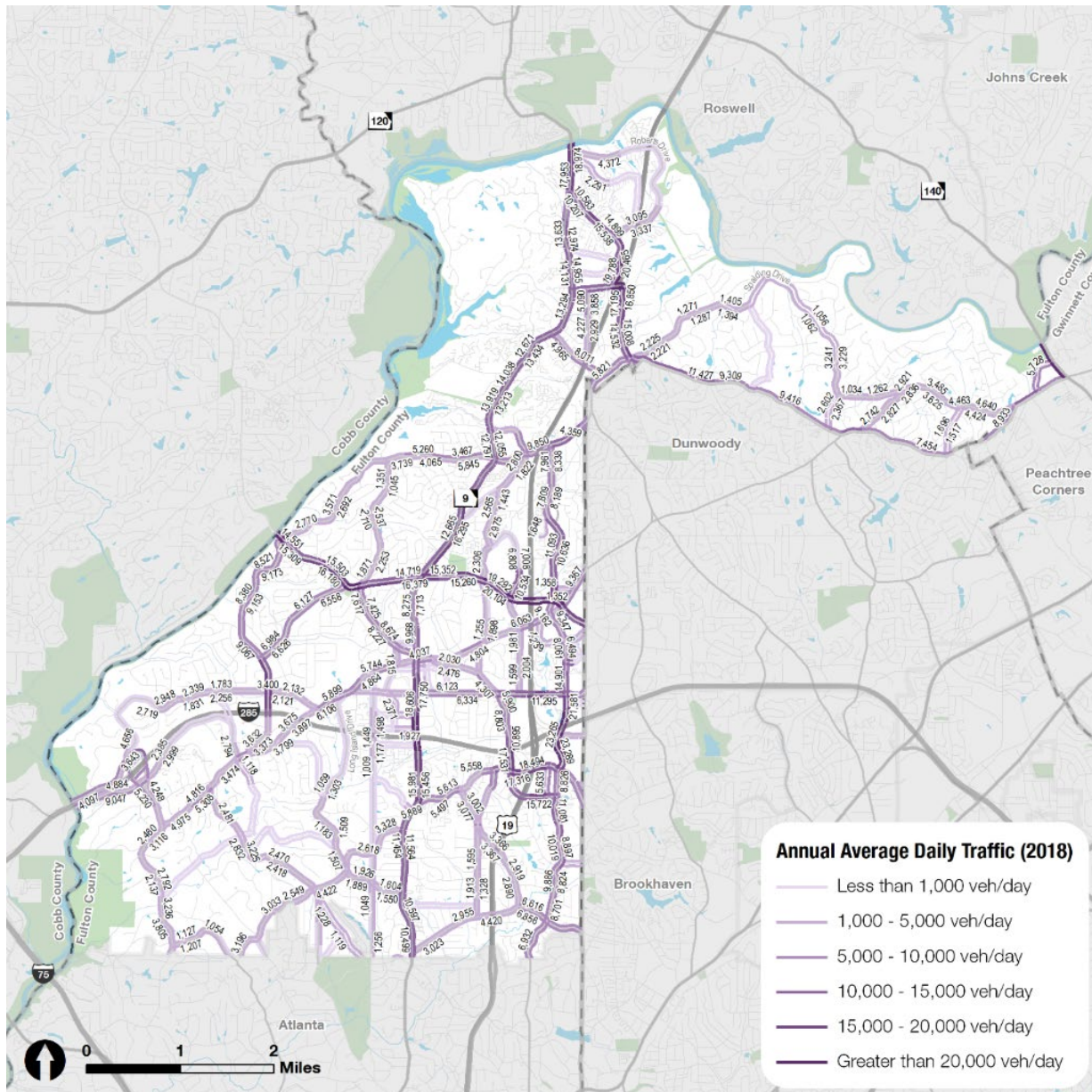


Figure 6: 2018 AADT in Sandy Springs

Level of Service

Level of service (LOS) is a measure of congestion that is used in transportation planning. LOS for Sandy Springs' 2018 AM and PM conditions are mapped in Figure 7 and Figure 8. LOS is developed for a four-hour peak modeling period and not a single peak hour. It is likely that the level of congestion on roadways during peak hours of the day is not fully depicted in these exhibits since the model does not fully capture intersection delay or other aspects of the roadway network's design that impact the ability of its users to travel through the system.

In 2018, LOS tends to be worse in the eastbound and southbound directions in the morning peak period and higher in the westbound and northbound directions in the evening peak period. This flow indicates a distinct travel pattern towards Atlanta and Perimeter (via SR 400, I-285, Roswell Road, and Peachtree Dunwoody Road) in the morning and away from Atlanta and Perimeter in the evening. The directionality of LOS is stronger in the morning compared to the evening, with some segments showing similar LOS in both directions during the evening peak period, such as along River Valley Road.

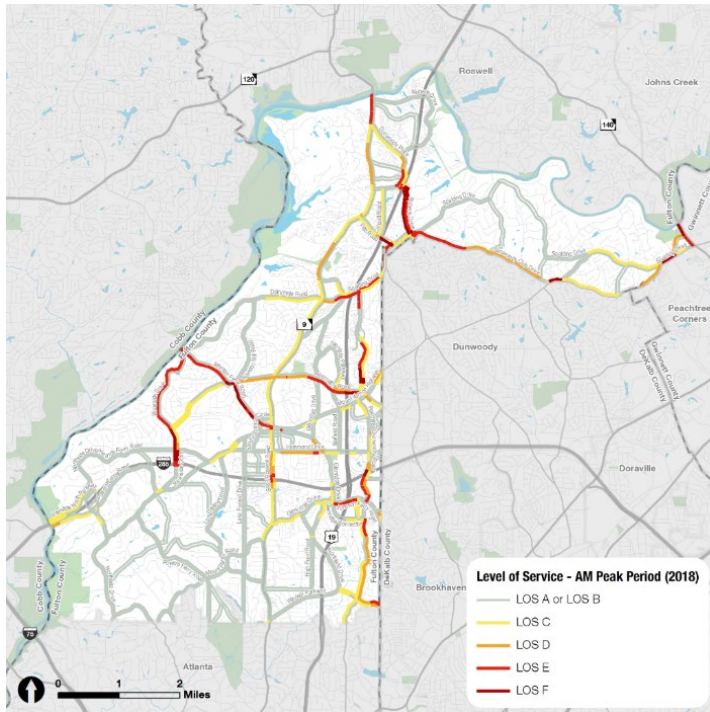


Figure 7: 2018 LOS in AM Peak Period

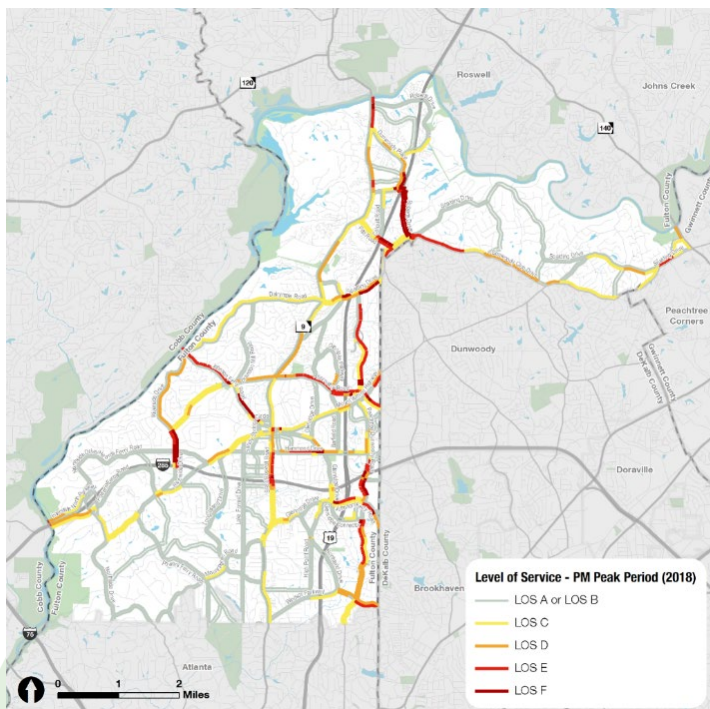


Figure 8: 2018 LOS in PM Peak Period



Maintenance and Paving

As part of the City's "Operation Pave On" program, a pavement condition survey was conducted for all roads owned by Sandy Springs in 2015 and updated in 2018. **This survey assessed and scored the condition of city roadways and showed that 80% of the City-owned roadways are in Fair condition or better.**

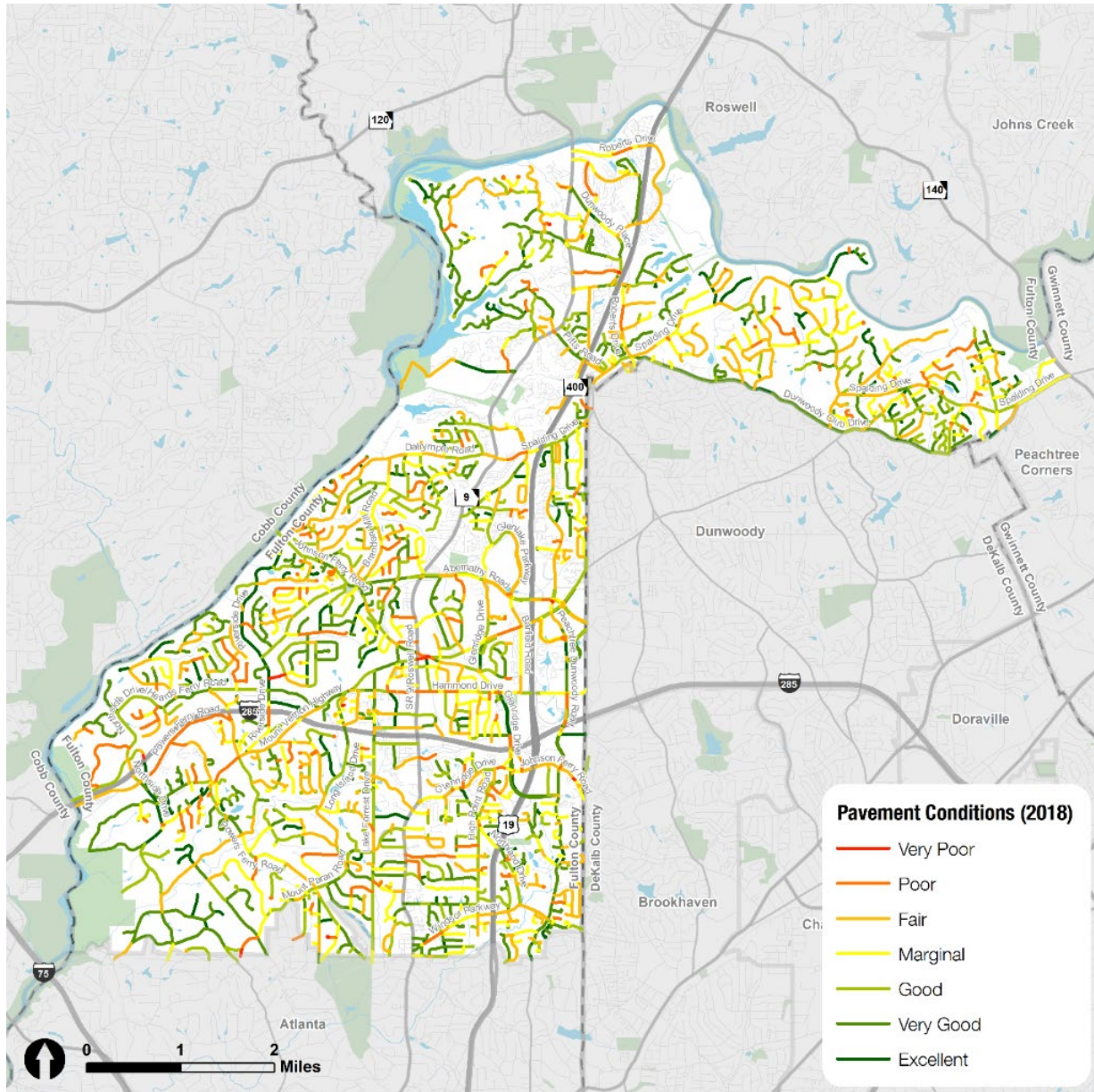


Figure 9: 2018 Sandy Springs Pavement Quality

Bridge Inventory and Conditions

There are 46 bridges in Sandy Springs, of which 24 are owned and maintained by the Georgia Department of Transportation (GDOT) and 22 are owned and maintained by the City of Sandy Springs. Of the 22 city-owned bridges, seven (32%) are in Good condition, and fourteen (64%) are in Fair condition. However, there are three City-owned bridges that have a bridge sufficiency score under 50: Spalding Drive over Crooked Creek; Jett Road over Long Island Creek; and Powers Ferry Road over Long Island Creek.

All 22 City-owned bridges in Sandy Springs are in Fair condition or better.

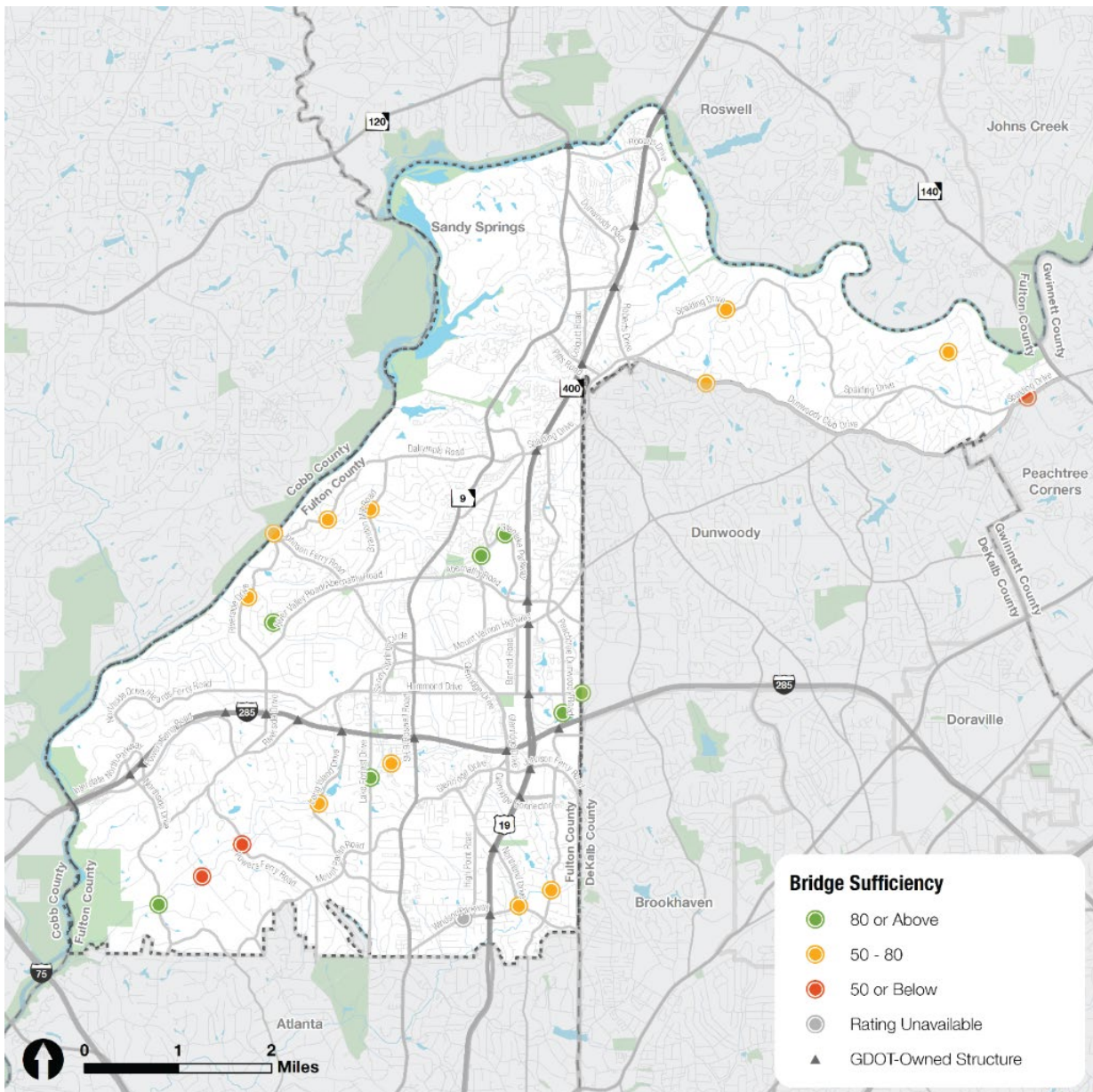


Figure 10: Bridge Sufficiency Ratings



Safety

From 2015 to 2019, there were 18,056 crashes on city surface streets (not including I-285 and GA-400). The most common incident type was rear-end crashes (44%). Almost 70% of all surface street crashes occurred on ten corridors in the city, with more than a quarter of all surface street crashes occurring on Roswell Road.

Notable safety trends include:

- 119 crashes resulted in a serious injury or fatality.
- There were 167 pedestrian-involved and 39 bicycle-involved crashes. More than a third of pedestrian-involved crashes, and more than 20% of bicycle-involved crashes, occurred on Roswell Road.
- Bicycle- and pedestrian-involved crashes resulted in a much higher frequency of serious injuries and fatalities than automobile-only crashes.

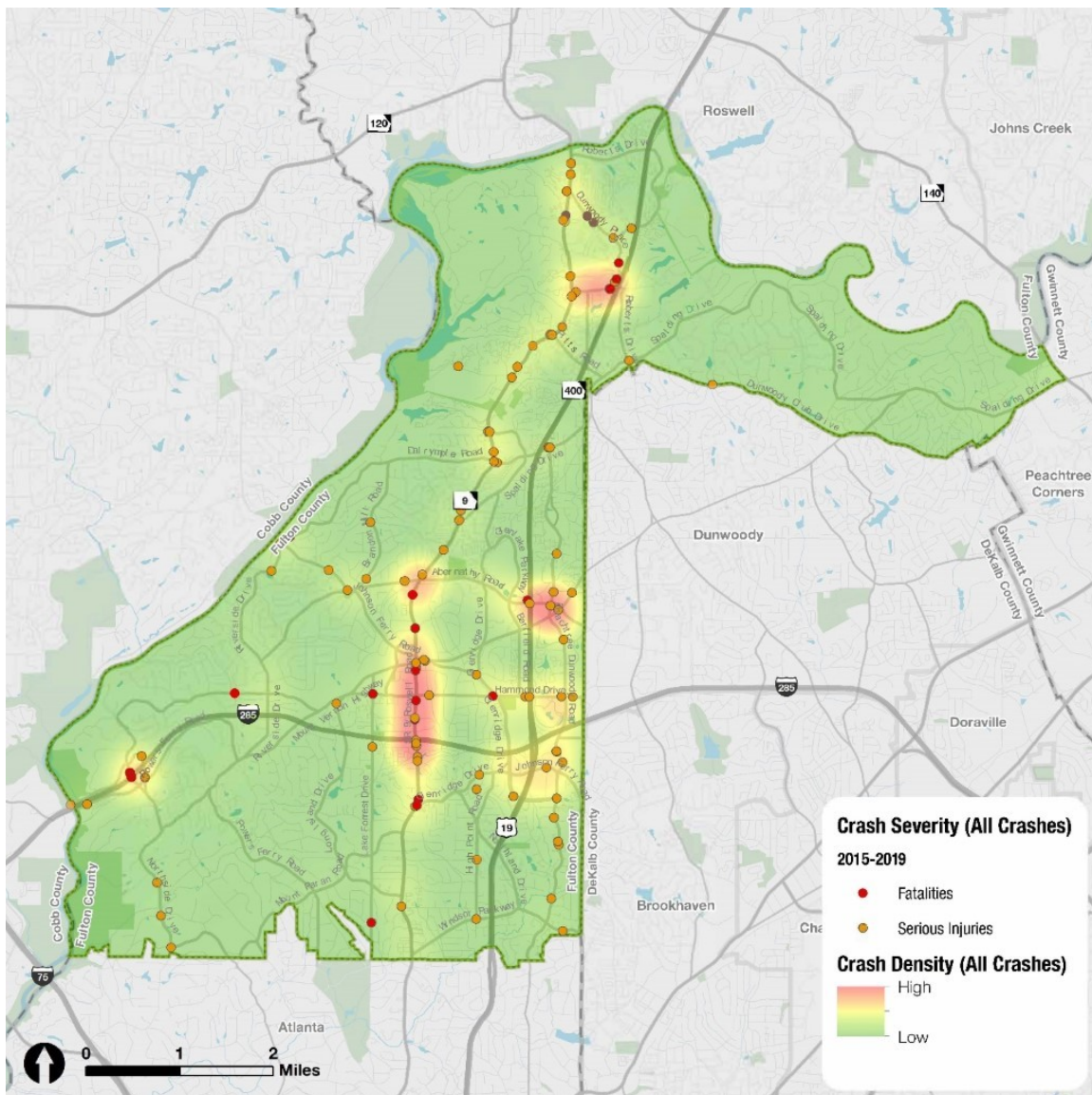


Figure 11: Crash Density and Severity 2015-2019

Technology

The city's Intelligent Transportation Systems (ITS) infrastructure includes an interconnected network of traffic control devices, data collection units, and communications infrastructure. Traffic signals are the most visible portion of the city's ITS network to residents. There are 132 traffic signals in Sandy Springs, although the City TMC monitors an additional four signals in Atlanta. This technology keeps traffic operations in the city running smoothly by monitoring crashes, vehicle queue lengths, and incidents and enabling adaptive responses. The existing technology also will assist in the City's deployment of Smart City and connected technologies that will bring the next generation of parking management and emergency management, and help pave the way for autonomous vehicles.

Multimodal Transportation

The public engagement process showed that the residents of Sandy Springs primarily using cars to get around but there is a desire for multimodal transportation options. Sandy Springs has an existing active transportation network and is connected to many types of transit.

Sandy Springs ITS Network by the Numbers

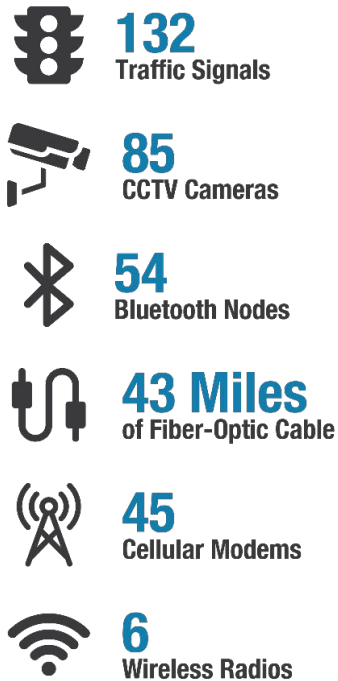
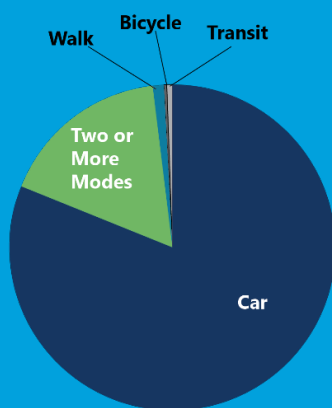


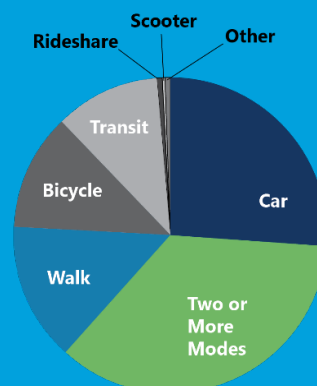
Figure 12: Sandy Springs ITS Network

According to the TMP's public engagement process, over 80% of people use a car as their main mode to travel. There was a smaller percentage of respondents who said they use two or more modes – which could mean walking to transit, driving to transit, or even driving to a parking lot and walking the rest of the distance. In the future, 26% of participants still want driving to be their main mode, but there is a larger percentage of participants who want to walk, bike, take transit, or use a variety of these options.



What mode do you use today?

What is your desired travel mode in the future?





Active Transportation (Bicycling and Walking)

The city's existing active transportation network consists of 184.2 miles of sidewalks, 0.7 miles of shared-use paths, 4.6 miles of bike lanes, 4.1 miles of sharrows, and 7.2 miles of bikeable shoulders. While numerous roadways have active transportation facilities, some areas are not well-connected or are not comfortable for most cyclists. Future projects aim to evolve the current system to be more robust and accommodating of people of all ages using all modes. The City is actively undertaking sidewalk projects based on the Sidewalk Master Plan to fill gaps along roadways in the city as well. Some of these projects, along with several sidepath projects, are part of the City's Capital Improvement Program (CIP) and the Fulton County Transportation Special Purpose Local Option Sales Tax (T-SPLOST) program for the city.

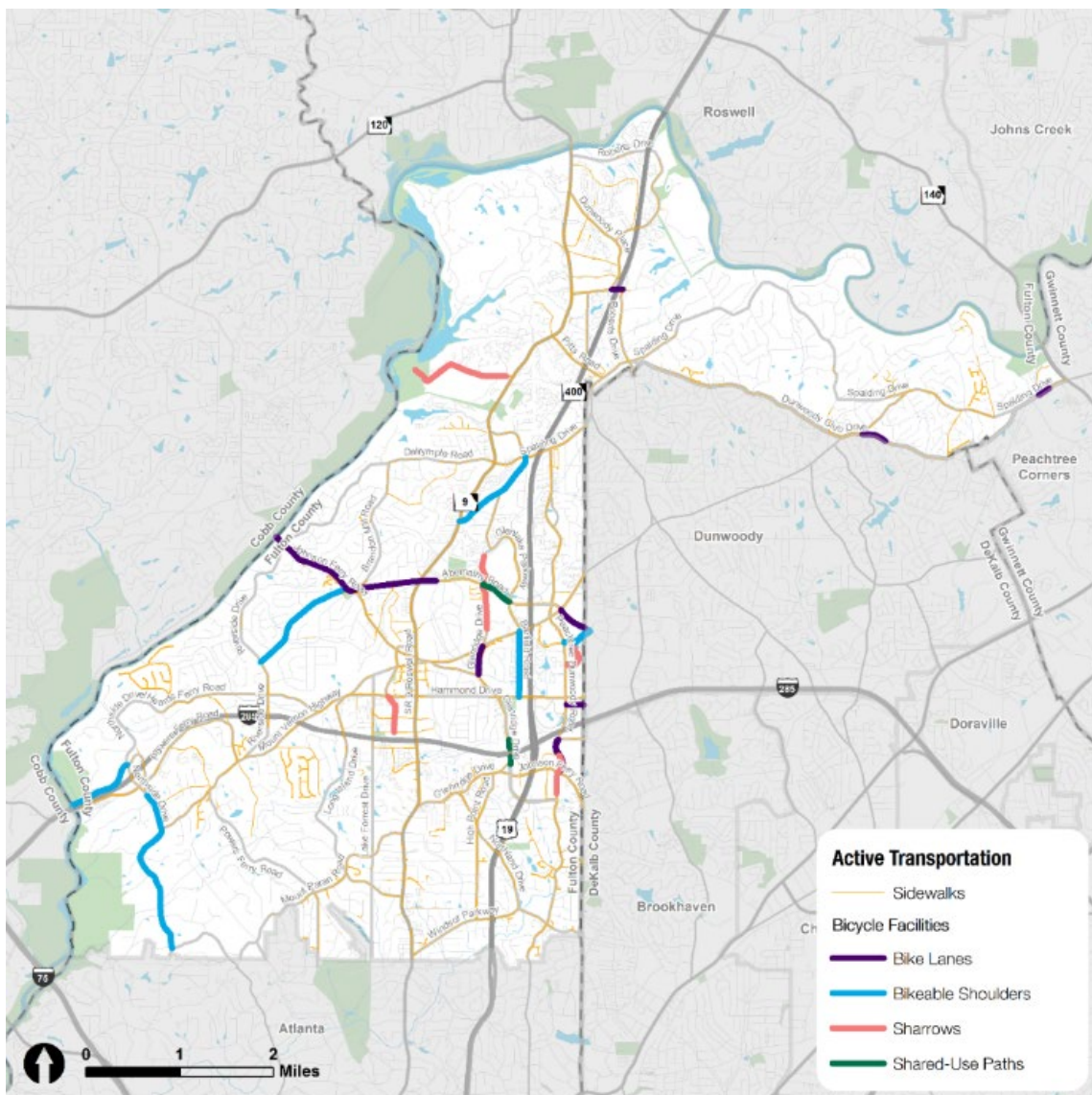
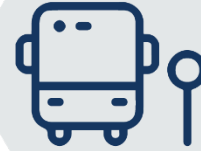


Figure 13: Current Active Transportation Facilities

Transit

Sandy Springs is served by an extensive network of rail and bus routes from multiple agencies. As shown in Figure 14, rail, local bus, and paratransit service is provided by the Metropolitan Atlanta Rapid Transit Authority (MARTA) and the Atlanta-Region Transit Link Authority (ATL) provides the commuter-focused bus services, Xpress.

- There are twelve local bus services that provide connections to/from and within the city. Two local routes that serve Sandy Springs are among the highest ridership in the MARTA system: Route 87 (Roswell Road / Sandy Springs), with an average weekday ridership of 2,121 passengers and Route 5 (Piedmont Road / Sandy Springs), with an average weekday ridership of 3,359 passengers.
- Sandy Springs status as a growing regional employment hub is supported by four Xpress commuter bus routes that connect to the city from Forsyth, Gwinnett, Cobb, and Rockdale Counties.
- Approximately 80% of Sandy Springs residents live within the paratransit service area. Just over 600 MARTA Mobility trips a month originate in the city.
- Sixteen privately operated shuttle routes provide last-mile connectivity from the Medical Center, Dunwoody, and Sandy Springs MARTA stations to offices around the Perimeter Center area.
- Additional senior-focused mobility service is offered by the Fulton County Office of Senior Services. Through the non-profit group Common Courtesy, the County provides subsidized rideshare services to eligible seniors over the age of 60.



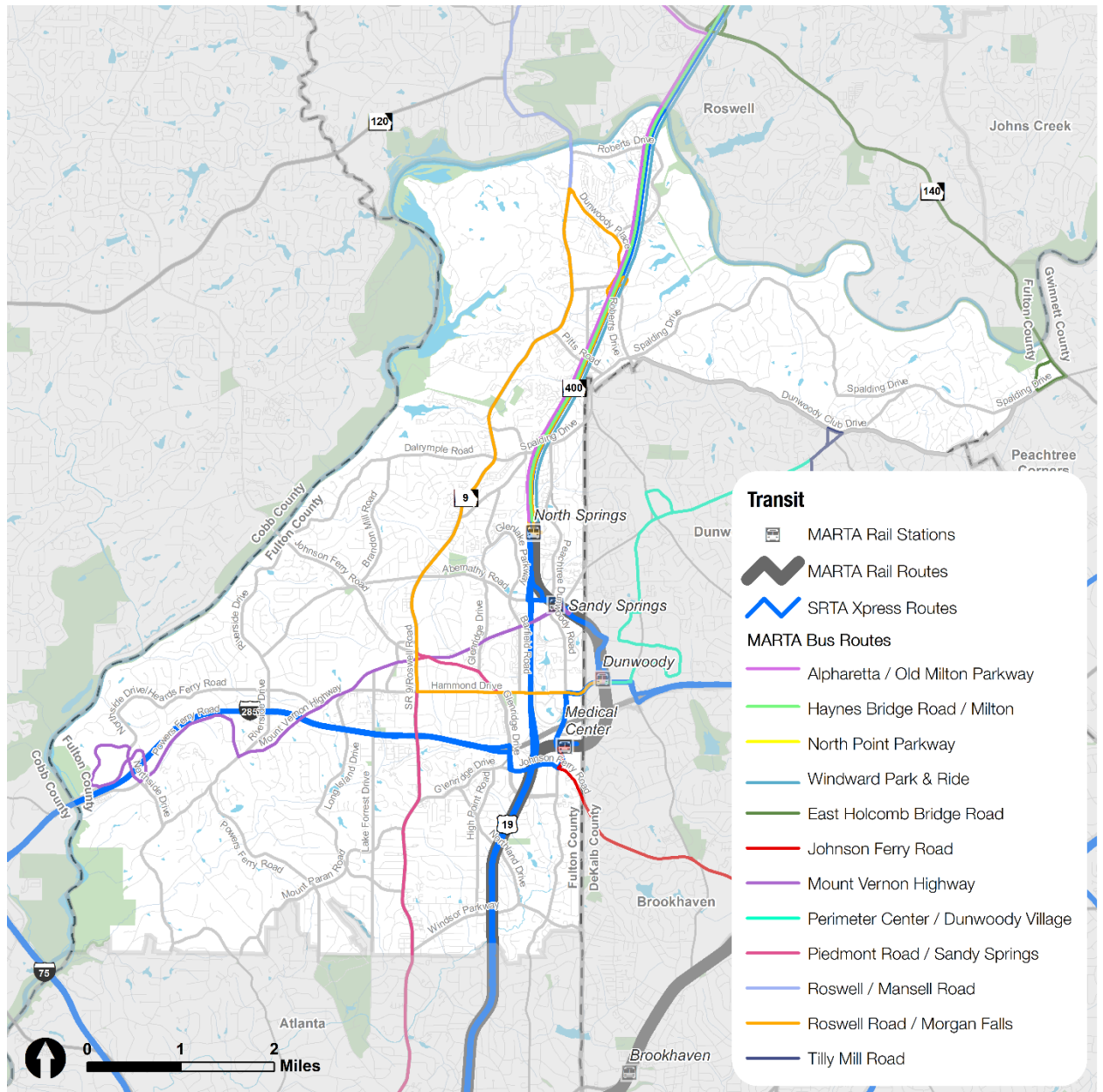


Figure 14: Current Transit Routes

Relevant Programs and Planning Context

There are several transportation programs and planning efforts that will affect mobility in Sandy Springs. These programs either provide transportation funding that may help implement some of the projects in this plan or set goals and provide guidance to which future projects must adhere. It is important to understand the context and goals of these efforts to successfully implement the TMP. Additional details on each can be found in the ***Existing Conditions Report***.

Federal

- Federal Highway Administration (FHWA) Fixing America's Surface Transportation (FAST) Act

State

- Georgia Department of Transportation (GDOT) Major Mobility Investment Program (MMIP)
- GDOT Strategic Highway Safety Plan

Regional/County

- Atlanta Regional Commission (ARC) Regional Transportation Plan (RTP)
- Atlanta Regional Commission (ARC) Transportation Improvement Program (TIP)
- MARTA Comprehensive Operations Analysis (COA)
- Atlanta-Region Transit Link Authority (ATL) ATL Regional Transit Plan (ARTP)
- Fulton County Transit Master Plan /I-285 Transit Study
- Fulton County TSPLOST Program

City

- Next Ten Comprehensive Plan (2017)
- Sandy Springs Intelligent Transportation Systems Master Plan (2019)
- Sandy Springs Trail Master Plan (2019)
- Sandy Springs Sidewalk Master Plan (2016)
- Sandy Springs Bicycle, Pedestrian, Trail Plan (2014)
- Sandy Springs City Center Master Plan (2012)
- Sandy Springs Capital Improvement Program (CIP)



5 | Multimodal Assessment

The **Multimodal Assessment** offers an understanding of the transportation needs that exist in Sandy Springs today based on mode: roadway, bicycle, pedestrian, and transit. This assessment is unique in that within each mode, there are series of memorandums that address areas of focus identified by the City of Sandy Springs. These documents are summarized below, with additional detail available within each memo. Ultimately, the goal of this document is to build on the **Existing Conditions Report** and bridge the gap towards project development for the TMP.

Roadway

Travel Demand Model Analysis

The travel demand model analysis aimed to understand existing and projected travel behaviors in Sandy Springs. The TMP developed and analyzed an existing (2018) conditions model and a future (2050) conditions mode to forecast future traffic conditions, specifically analyzing future traffic volumes, level of service, vehicle hours of delay, travel statistics, and transportation modes.

In 2018, few roadways have greater than 15,000 vehicles per day in each direction. Many of the roads with the highest volumes in 2018 continue to exhibit the highest volumes in 2050. **Most roadways are expected to increase in volume, many doubling their 2018 volume by 2050.** In 2050, volumes begin to exceed 20,000 vehicles in some segments, as shown in Figure 15. The highest increases in volume are anticipated in western Sandy Springs: Northside Drive, Powers Ferry Road, and Mount Vernon Highway. Higher increases in volume also are anticipated in eastern Sandy Springs near SR 400, along Mount Vernon Highway, Barfield Road, and Glenridge Drive.

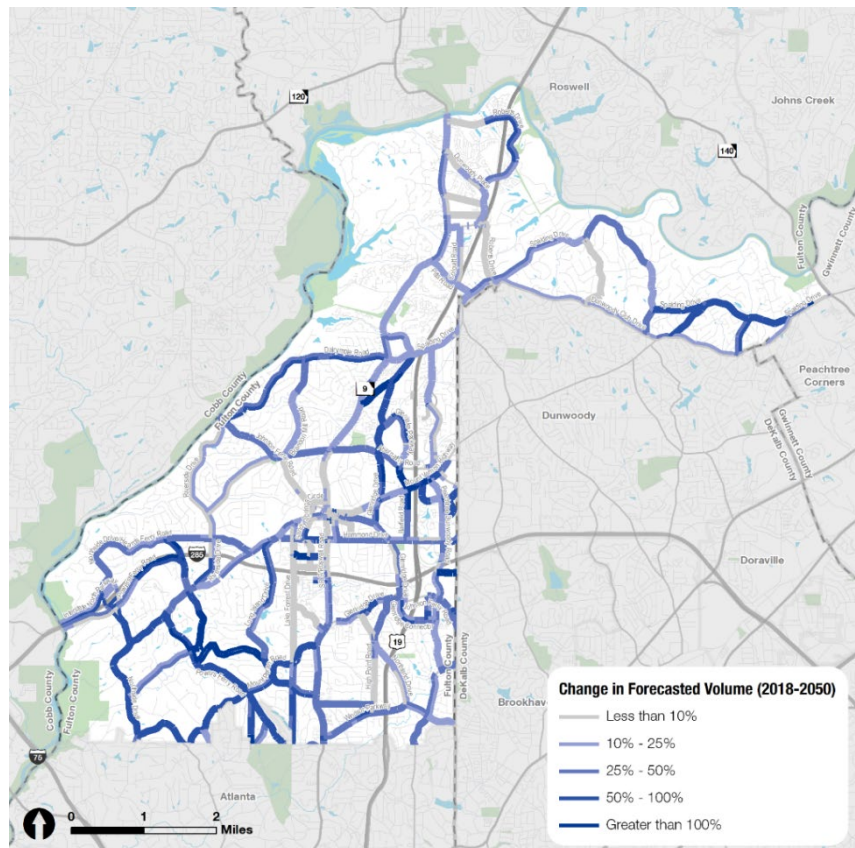


Figure 15: Forecasted Change in Traffic Volumes (2018-2050)

Operations for many of the roadways experiencing poor level of service (LOS E or F) in 2018 continue to deteriorate by 2050, with several additional corridors expected to degrade to LOS F or worse. Some examples of these corridors include portions of Johnson Ferry Road, Roswell Road, Windsor Parkway, and Peachtree Dunwoody Road.

Table 1: Roadways with LOS F in 2050 (AM and/or PM Peak Period)

Roadway	From	To	Functional Class	Number of Lanes (2050)
Abernathy Rd	Williamson Dr	Glenlake Pkwy	Principal Arterial	4
Dunwoody Club Dr	Grapevine Run	Spalding Dr	Minor Arterial	2
Dunwoody Pl	Northridge Rd	Hightower Tr	Minor Arterial	4
Holcomb Bridge Rd NW (SR 140)	Spalding Dr	Johns Creek Env Campus	Principal Arterial	4
Roswell Rd (SR 9)	Chattahoochee River	Dunwoody Pl	Principal Arterial	4
Johnson Ferry Rd NE	Bonnie Lane	Sandy Springs Cir	Minor Arterial	2
Johnson Ferry Rd NW	Cobb County	Wright Rd	Minor Arterial	2-4
Johnson Ferry Rd	Glenridge Conn	Hollis Cobb Cir/ Meridian Mark Rd	Minor Arterial	4
Johnson Ferry Rd	Peachtree Dunwoody Rd	Old Johnson Ferry Rd	Minor Arterial	3
Northridge Rd	Dunwoody Pl	Roberts Dr	Minor Arterial	4
Peachtree Dunwoody Rd	Spalding Dr	Northpark Pl	Minor Arterial	2-3
Peachtree Dunwoody Rd	Springwood Conn	Hollis Cobb Cir	Minor Arterial	4-7
Peachtree Dunwoody Rd	Glenridge Conn	Evergreen Dr	Minor Arterial	2
Pitts Rd	Colquitt Rd	Spalding Dr	Major Collector	2
Riverside Dr	I-285	River Valley Rd	Minor Arterial	2
Roberts Dr	Spalding Dr	Northridge Rd	Minor Arterial	2
Spalding Dr	Holcomb Bridge Rd	Winters Chapel Rd	Minor Arterial	4
Spalding Dr	Pitts Rd	DeKalb County	Minor Arterial	2
Spalding Dr	Nesbitt Ferry Rd	Happy Hollow Rd	Minor Arterial	4
Windsor Pkwy	Peachtree Dunwoody Rd	DeKalb County	Major Collector	2
Winters Chapel Rd	Spalding Dr	Spalding Ln	Minor Arterial	2

Table 2: Future Year (2030) Intersection Level of Service – With and Without Improvements

ID	Intersection Name	Intersection Control Type	With Improvements		Without Improvements	
			AM LOS Delay (s)	PM LOS Delay (s)	AM LOS Delay (s)	PM LOS Delay (s)
1	Johnson Ferry Rd at Peachtree Dunwoody Rd	Signal	E 67.8	D 51.4	E 71.7	D 53.6
2	Northridge Rd at SR 400 SB/Dunwoody Pl	Signal	D 49.3	D 53.6	D 50.8	E 63.1
3	Northside Dr at Powers Ferry Rd	Signal	D 41.2	C 32.3	D 42.0	C 32.3
4	Dunwoody Pl/Hannover Park Rd at Roswell Rd (SR 9)	Signal	D 35.5	D 52.2	C 34.8	D 53.2
5	Northridge Rd at Roswell Rd (SR 9)	Signal	D 43.4	D 54.3	D 52.3	E 58.8
6	Interstate North Pkwy/New Northside Dr at Northside Dr	Signal	C 30.6	D 43.4	C 28.6	C 35.4
7	Heards Ferry Rd at Riverside Dr	Signal	D 38.7	E 55.8	E 69.6	F 85.5
		Roundabout	A 9.4	A 8.1		
8	New Northside Dr at Powers Ferry Rd	Signal	C 31.5	D 37.5	C 30.9	D 38.1
9	Abernathy Rd at Mt Vernon Hwy	Signal	D 35.5	D 51.8	D 43.8	E 62.2
10	Johnson Ferry Rd/Abernathy Rd at Brandon Mill Rd	Signal	D 41.9	E 75.2	D 51.0	E 73.4
11	Abernathy Rd at Peachtree Dunwoody Rd	Signal	D 43.8	D 54.2	D 43.4	D 55.0
12	Hollis Cobb Cir at Peachtree Dunwoody Rd	Signal	C 20.7	C 27.6	B 13.7	B 18.6
13	Johnson Ferry Rd at River Valley Rd	Signal	D 38.8	E 65.7	F > 100s	E 71.2
14	Mt Vernon Hwy at Northside Dr	Roundabout	B 14.7	A 8.8	F > 100s	F > 100s
15	Roswell Rd (SR 9) at Spalding Dr	Signal	A 7.6	A 8.5	A 7.6	A 8.5
16	Spalding Dr at Roberts Dr	Signal	D 38.1	D 42.6	D 43.6	D 51.1
16	Spalding Dr at Dunwoody Club Dr	Signal	C 29.2	C 22.5	C 29.2	C 22.5



ID	Intersection Name	Intersection Control Type	With Improvements		Without Improvements	
			AM LOS Delay (s)	PM LOS Delay (s)	AM LOS Delay (s)	PM LOS Delay (s)
16	Spalding Dr at Roberts Dr & Dunwoody Club Dr	5-Legged Roundabout	B 12.9	B 11.2	--	--
17	Mt Vernon Hwy at Barfield Rd	Signal	D 38.6	D 52.0	D 38.6	D 52.0
18	Mt Vernon Hwy at Peachtree Dunwoody Rd	Signal	C 33.8	D 46.3	C 35.0	D 46.0
19	Lake Hearn Dr at Peachtree Dunwoody Rd	Signal	B 18.8	C 28.9	B 18.8	C 28.9
20	Johnson Ferry Rd at Glenridge Con	Signal	D 43.0	D 52.1	E 56.4	E 64.4

Based on the Traffic Operations Evaluation analysis, there were several improvements that were recommended to bring intersections up to the latest standards, including:

- Repaving and restriping
- Traffic signal backplates with retroreflective borders
- Raised pavement markers
- Flashing Yellow Arrows (FYAs)
- Retroreflective median nose delineators

Bottlenecks

RITIS (Regional Integration Transportation Information Systems) was leveraged as a database platform to holistically understand major congestion points within the city and where there may be opportunities for improvement at specific intersections.

Travel Time Index

Travel Time Index (TTI) is the ratio of travel time during a peak congestion period to the time required to travel the same segment

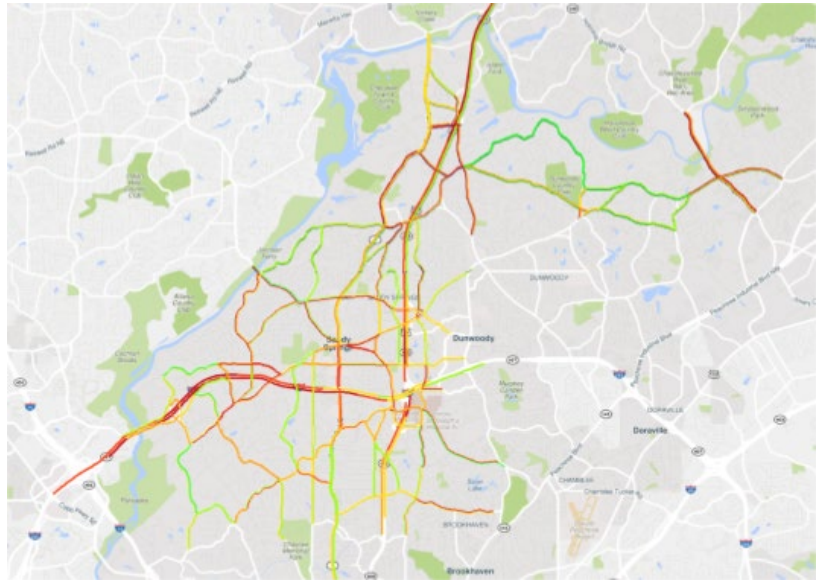


Figure 17: Travel Time Index on Key Sandy Springs Roadways

of roadway during free-flow or no congestion conditions. A travel time index of 2.0 indicates that a trip during that peak period would take twice as long as it would during free flow conditions. RITIS travel time index data for the Sandy Springs network was evaluated for October 2019 using HERE probe data, which is a probe data vendor that aggregates real time and archived data on speed, reference speed (free-flow speed), and travel time.

During the AM peak period, twelve corridors have a TTI of 2.5 or higher, meaning it takes 2.5 times as long to traverse the same roadway segment during this peak period as it does during free-flow conditions. Thirteen corridors have a similar TTI during the peak period. Many of these corridors show commuter traffic patterns with congestion reversing direction in the AM vs PM peak. However, Heard's Ferry Road, Glenridge Drive northbound, and Peachtree Dunwoody Road southbound towards I-285 on-ramps show consistently high travel time indices in the same direction for both the AM and PM peak, indicating these roadway segments have particularly high levels of congestion throughout the day.

Bottlenecks

A traffic bottleneck occurs when a roadway section experiences delays or decreased speeds due to congestion or excess traffic volume demand. The RITIS Bottleneck Ranking tool identifies bottlenecks when reported data speed for a roadway segment falls below 60% of the free-flow speed over an extended period. This data determines intersection approaches where bottlenecks are located, their duration, their average length, and their frequency. As bottlenecks



propagate upstream along consecutive roadway segments, the bottleneck tool combines these segments to identify the extent of the bottleneck impact.

The Bottleneck Ranking tool was used to identify and rank bottlenecks at intersection approaches within the Sandy Springs network in October 2019 using the HERE probe data source. The intersection approaches in Sandy Springs that have a bottleneck for a length of time during the day are shown in Figure 17. The average time ranges from less than 15 minutes to greater than six hours. Average length of vehicle cues during bottlenecks ranges from 0.5 miles to 3 miles.

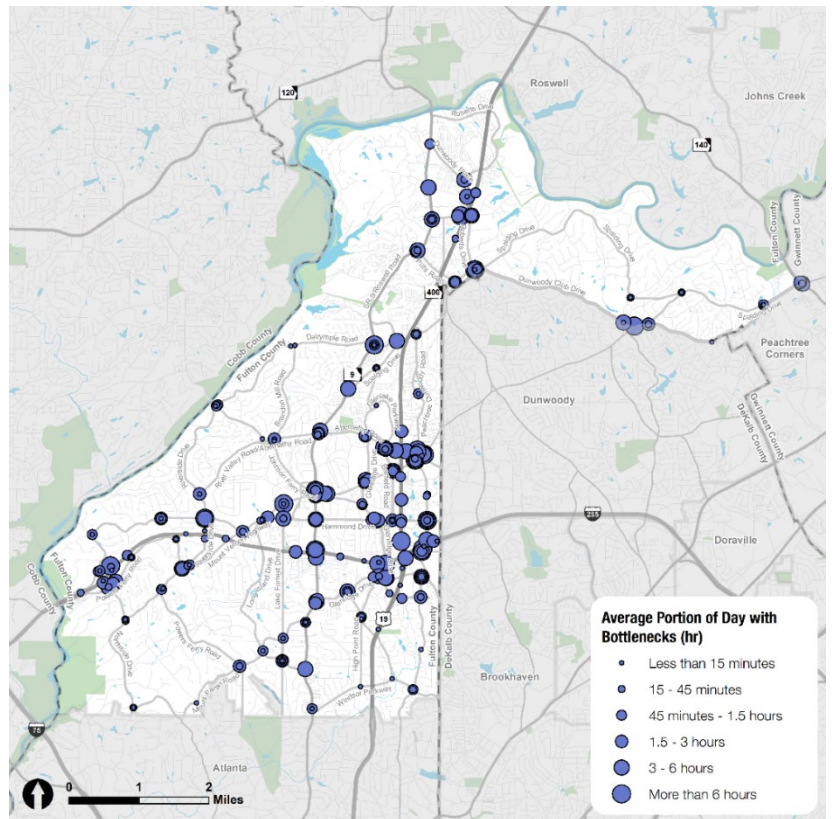


Figure 18: Average Portion of Day with Bottlenecks (RITIS)

New Location Roadways

The New Location Roadways memorandum offers recommendations and strategies that can improve mobility and connectivity in the long-term through a variety of methods such as future capacity expansions; roadway extensions; and changes to the city's traffic calming and development/re-development policies.

The roadways identified as having LOS F in 2050 (Table 1 in the Travel Demand Model section) may be considered for capacity expansions in the future, with consideration for logical termini and coordination with adjacent counties, adjacent cities, and GDOT. Capacity expansion may be difficult and infeasible where there are major property impacts, particularly when the roadways are adjacent to residential land uses.

Where capacity improvements are not feasible, several types of non-capacity improvements may improve roadway operations:

- **Access management** is the systematic control of entrances onto a roadway, including driveways, median openings, and intersections, to help preserve traffic efficiency and safety along the roadway.
- **Intelligent Transportation System (ITS)** strategies may be deployed along roadways to help improve traffic mobility. The timing of traffic signals, for example, can be adjusted to optimize traffic flow on the mainline roadway. Traffic signals can also be actively managed and adjusted in real-time in response to traffic incidents or other unanticipated congestion.
- Investing in **multimodal infrastructure** will provide more opportunity for travelers to shift from using vehicles to using sidewalks or multi-use paths, particularly for shorter trips. While most travelers will likely remain in their vehicles, even a slight shift in modes can help to improve traffic mobility.

The memorandum also includes a street connectivity toolbox to educate the community on the importance of connected street networks and provide guidance on how to achieve connectivity. This toolbox provides the City with the justification needed to enforce the city code to improve street connectivity during the development process. In addition, educating residents on the benefits of street connectivity allows the City to be more transparent regarding decisions to not approve cul-de-sac retrofit requests and allows the City to work more closely with communities to identify alternate and more appropriate traffic calming strategies to address residents' concerns.



Safety

Citywide Safety

The citywide safety memorandum identified safety needs by completing an evaluation of the identified high-crash corridors and through a citywide evaluation of trends compared to Fulton County as well as GDOT District 7.

The ten highest-crash corridors identified in the existing conditions analysis are shown in Figure 19. A citywide evaluation was then performed to further understand crash trends. Of those corridors, Roswell Road, Northridge Road, Dunwoody Place, and Hammond Drive stand out as high-priority corridors.

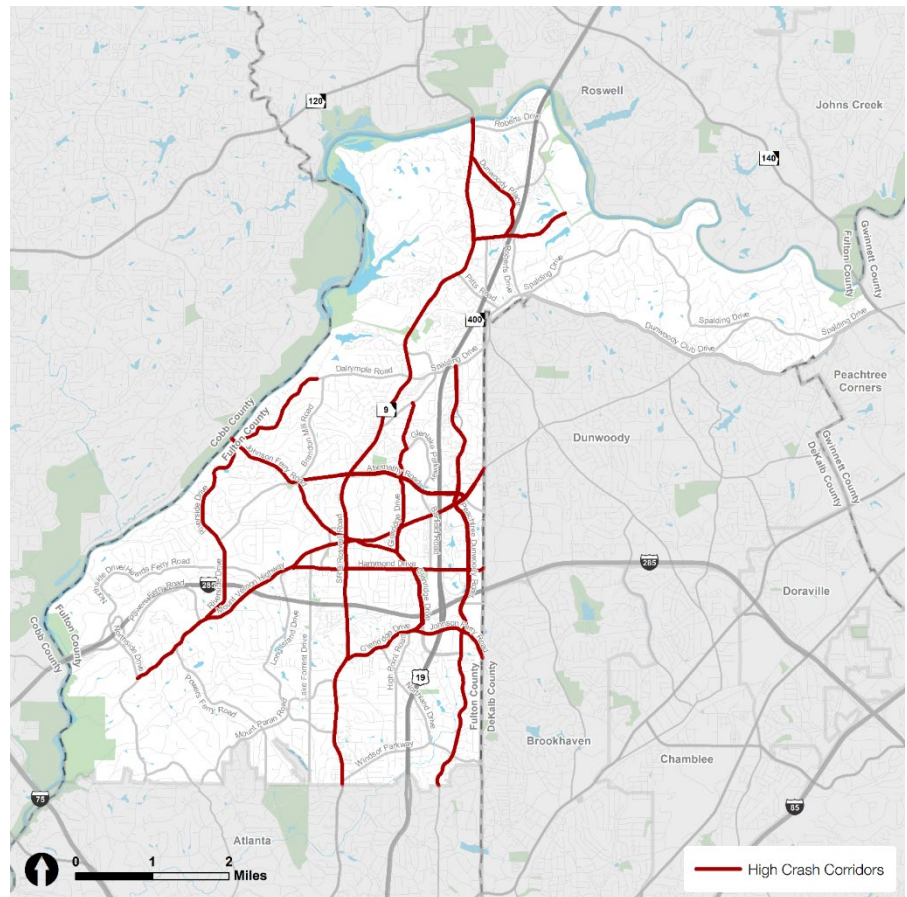


Figure 19: Sandy Springs High Crash Corridors

The GDOT *Numetric* tool was used to analyze the 16 crash emphasis areas defined by GDOT, which are similar to the 11 emphasis areas included in the State's SHSP. Each GDOT emphasis area was ranked based upon the total number of crashes that occurred during the study period for the city, Fulton County, and GDOT District 7, excluding crashes on interstates and GA 400. The ranking of each emphasis area as well as a summary of crashes is included in Table 3. Since a single crash may be associated with multiple emphasis areas, column totals for percentages and crashes may add up to greater than 100 percent and/or the total number of crashes.

Table 3: GDOT Emphasis Area Ranking

City Rank	GDOT Emphasis Area	Total Crashes	% of Total Crashes	Fatal and Serious Injury Crashes	% of Fatal and Serious Injury Crashes	County Rank	District 7 Rank
1	Intersection	11,328	72%	59	68%	1	1
2	Distracted Driver (Suspected)	6,554	42%	14	16%	2	2
3	Older Driver (55-64)	3,038	19%	12	14%	3	3
4	Older Driver (65+)	2,392	15%	20	23%	5	5
5	Hit & Run	2,358	15%	7	8%	4	4
6	Young Driver	1,432	9%	5	6%	6	6
7	Roadway Departure	1,395	9%	12	14%	7	7
8	Distracted Driver (Confirmed)	555	4%	3	3%	8	8
9	Impaired Driving (Confirmed)	288	2%	13	15%	12	12
10	Commercial Motor Vehicle (CMV) Related	252	2%	1	1%	9	9
11	Aggressive Driving	232	1%	4	5%	10	10
12	Pedestrian	161	1%	12	14%	13	13
13	Secondary Crash	106	1%	0	0%	14	15
14	Motorcycle	81	1%	8	9%	15	14
15	Bicycle	30	<1%	2	2%	16	16
16	Impaired (Suspected)	23	<1%	2	2%	11	11

The top eight emphasis areas are consistent for the city, county and district except for Older Driver (65+) and Hit & Run, which are flip-flopped in the Fulton County and District 7 rankings. Intersection-related crashes account for a larger percentage of fatal and serious injury crashes in Sandy Springs (68 percent) compared to the Fulton County (54 percent) and District 7 (60 percent). This data reinforces the observation that congestion, and specifically congestion at intersections, contributes greatly to the total number of crashes within the city.



Intersection Safety Analysis

The purpose of this area of focus was to analyze crash data for five specific intersections, identified based on the frequency and severity of crashes that have occurred at each of these locations.

Five-year crash data provided by the City of Sandy Springs was reviewed to identify a subset of high-crash intersections, based on the frequency of fatal and injury crashes. Intersections that are currently being evaluated by the City in ongoing traffic engineering/safety study efforts and intersections included in recently completed or scoped efforts were not considered. Intersections included in the Traffic Evaluation analysis task of the TMP also were not considered. The City selected the following five study intersections for this review:

- Hammond Drive at Peachtree Dunwoody Road
- SR 9 (Roswell Road) at Lake Placid Drive
- SR 9 (Roswell Road) at Trowbridge Road
- SR 9 (Roswell Road) at I-285 Eastbound
- SR 9 (Roswell Road) at I-285 Westbound

Table 4 summarizes the five-year crash data for each of the study intersections.

Table 4: Summary Crash Statistics for Five Study Intersections

Intersection	Total Crashes	Fatal Crashes	Injury Crashes	Bike/Ped Crashes
Hammond Dr at Peachtree Dunwoody Rd	270	0	48	0
SR 9 at Lake Placid Dr	198	1	41	11
SR 9 at Trowbridge Rd	155	1	52	2
SR 9 at I-285 EB	401	0	106	2
SR 9 at I-285 WB	342	0	86	0

For each of the study intersections, historical crash data was analyzed to identify any potentially correctable crash trends that may be related to, but not limited to, geometric configurations, lighting conditions, pavement conditions, signage, or access management. Several recommendations were made for each of the study intersections, including striping and signing improvements, maintenance or repairs, repaving projects, signal equipment upgrades, access management, pedestrian improvements, lighting upgrades, and improvements to roadway and geometric features. These recommendations are based on a high-level review of crash data, as such, some of the recommendations will need further analysis. Furthermore, while this evaluation is engineering focused, there are education and enforcement initiatives that can have positive impacts to crash trends on Sandy Springs' streets. These elements are explored further in the Safety Needs assessment.

Bicycle and Pedestrian

Bicycle and Pedestrian Network

The purpose of this memorandum was to identify additions or new connections to the existing bicycle and pedestrian networks that bring the most value to the city and its users. A high-level policy overview as well as an assessment of personal transportation devices is also included.

To understand the pedestrian and bicycling needs of Sandy Springs, demographics information was mapped alongside existing,

programmed, and proposed facilities. This analysis suggests that most areas with high concentrations of population, employment, and households without access to vehicles are already served by existing infrastructure along major roadways or will have access through the City's programmed and/or planned projects.

In recent years, the City has been concentrating on filling the gaps of pedestrian and bicycling facilities on major roadways that offer connectivity within the city. However, there is an opportunity for Sandy Springs to identify facilities that connect to its main corridors from the city's neighborhood streets. Many of the streets from the city's neighborhoods do not have existing or programmed pedestrian or bicycle projects. It is important to note that due to the city's historic development pattern, not every neighborhood street can serve as a potential access point because of various barriers (e.g., single-family development patterns, environmental constraints, right-of-way constraints, etc.).

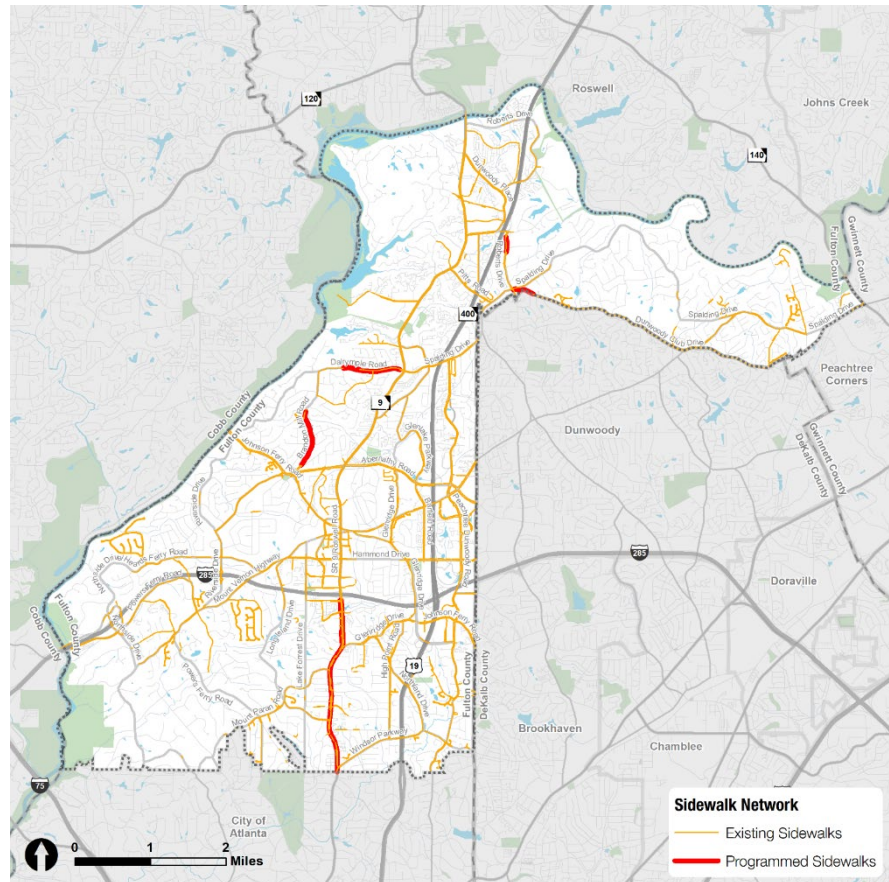


Figure 20: Existing and Programmed Sidewalks



20-Minute Neighborhoods Analysis

In collaboration with city staff, the project team identified 12 neighborhood activity centers that have the potential to serve as walking destinations for a 20-minute Neighborhood Analysis. The 12 activity centers were selected for having features consistent with a 20-minute neighborhood, including having multiple uses, such as shopping or employment opportunities, health facilities, and local public transportation.

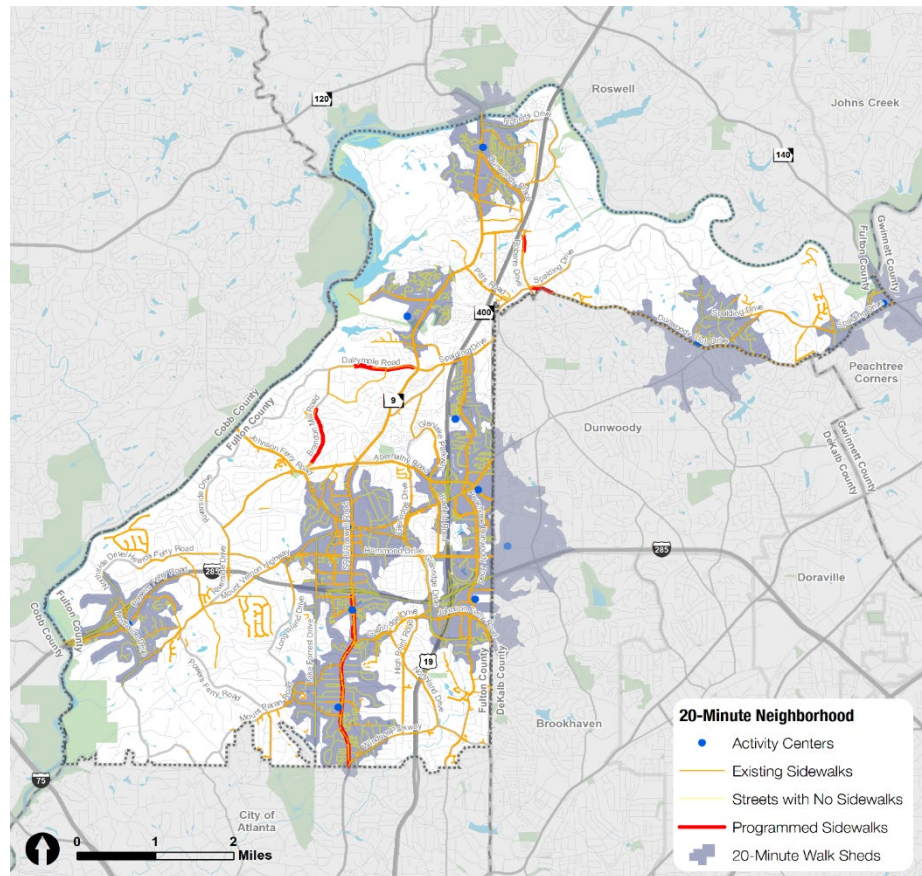


Figure 21: 20-Minute Neighborhoods Analysis

The underlying value of this type of analysis is looking at the ability for people to meet most of their everyday needs within a 20-minute walk (which is typically the time it takes a person to walk one mile). There are a number of potential benefits for 20-minute neighborhoods such as higher levels of physical activity, more focus on connections to local businesses and resources, and potentially less congestion on roadways due to less demand for using cars for short trips.

20-minute travel sheds from the center of these activity centers were established based on the existing street network and overlaid with existing, programmed, and proposed sidewalks, bicycle facilities, and trails to determine where gaps within these walk sheds may exist.

This analysis suggests that there are minor pedestrian facility gaps within these walk sheds. These gaps, if filled, can enhance pedestrian coverage and neighborhood access to the activity centers. The proposed sidewalks should be considered as priorities for implementation due to their location within the activity center walk sheds.

Level of Traffic Stress

This assessment also included a Level of Traffic Stress (LTS) analysis. This analysis helps identify streets that are most suitable for bicycling with traffic. LTS Analysis classifies streets into four categories. These categories range from LTS 1, which suggests streets that are suitable for bicycling by users of all ages and abilities to LTS 4, which suggests streets that are most suitable for only the most experienced and confident riders.

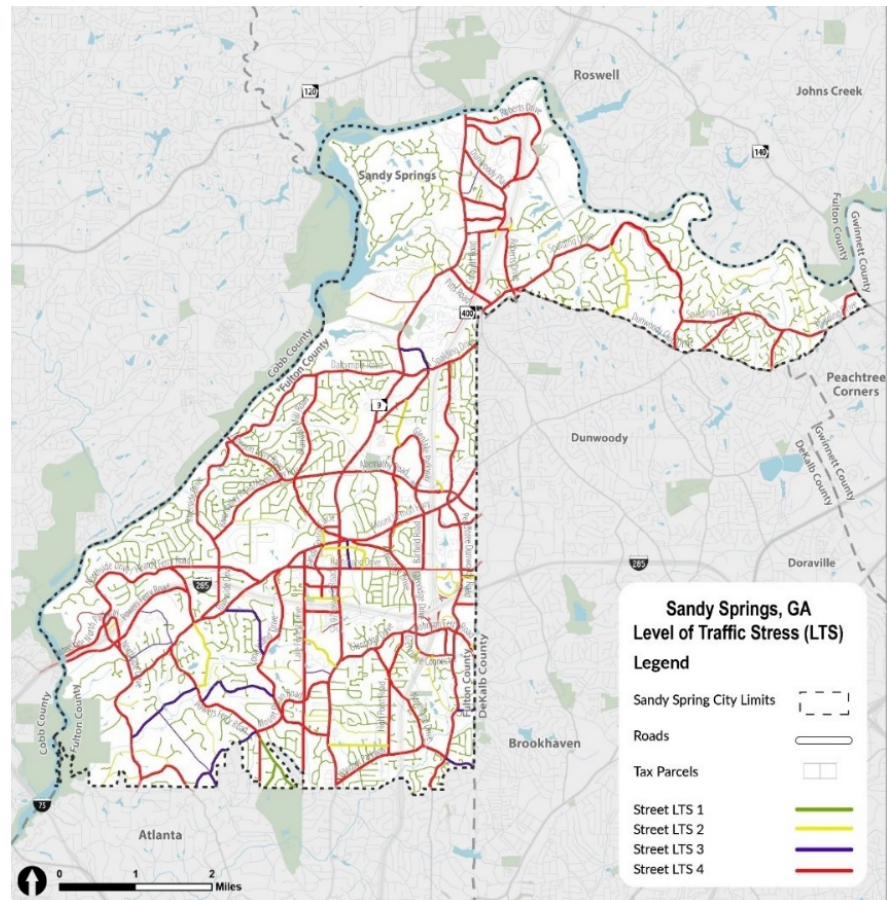


Figure 22: Level of Traffic Stress

The mapping shows that most of Sandy Springs' primary and secondary street networks are classified as LTS 4. This indicates that these streets are currently only suitable for the most experienced and confident riders. These findings also suggest that, to encourage users of all ages to bike along these streets, the City should consider facilities that are separated from vehicles such as side paths or protected cycle tracks along streets classified as LTS 4. Bicycle lanes along LTS 4 roadways are not a preferred facility when looking to provide users of all ages and abilities with a comfortable cycling environment.

The city's neighborhood streets on the other hand, are classified as LTS 1, which suggests that these streets may be suitable for users of all ages and abilities. These findings suggest that these street types could serve as an alternative bicycle network to those on major thoroughfares. If connected, this alternative network could provide an additional level of connectivity throughout the city.



Transit

Transit Network Analysis

The network analysis for transit is built on the findings of past city and regional transit planning efforts. This analysis offers a documentation of specific transit-related needs within the city, based on four specific areas of potential need that is described within this section.

Serving first and last mile connections to transit stops and stations

Existing and proposed high-capacity transit stations were mapped and overlaid with ¼-mile and ½-mile buffers. These buffers represent typical walking distances for passengers accessing high-capacity transit stations and represent the areas from which stations could be reasonably expected to capture passengers who can walk between the station and their trip origin or destination.

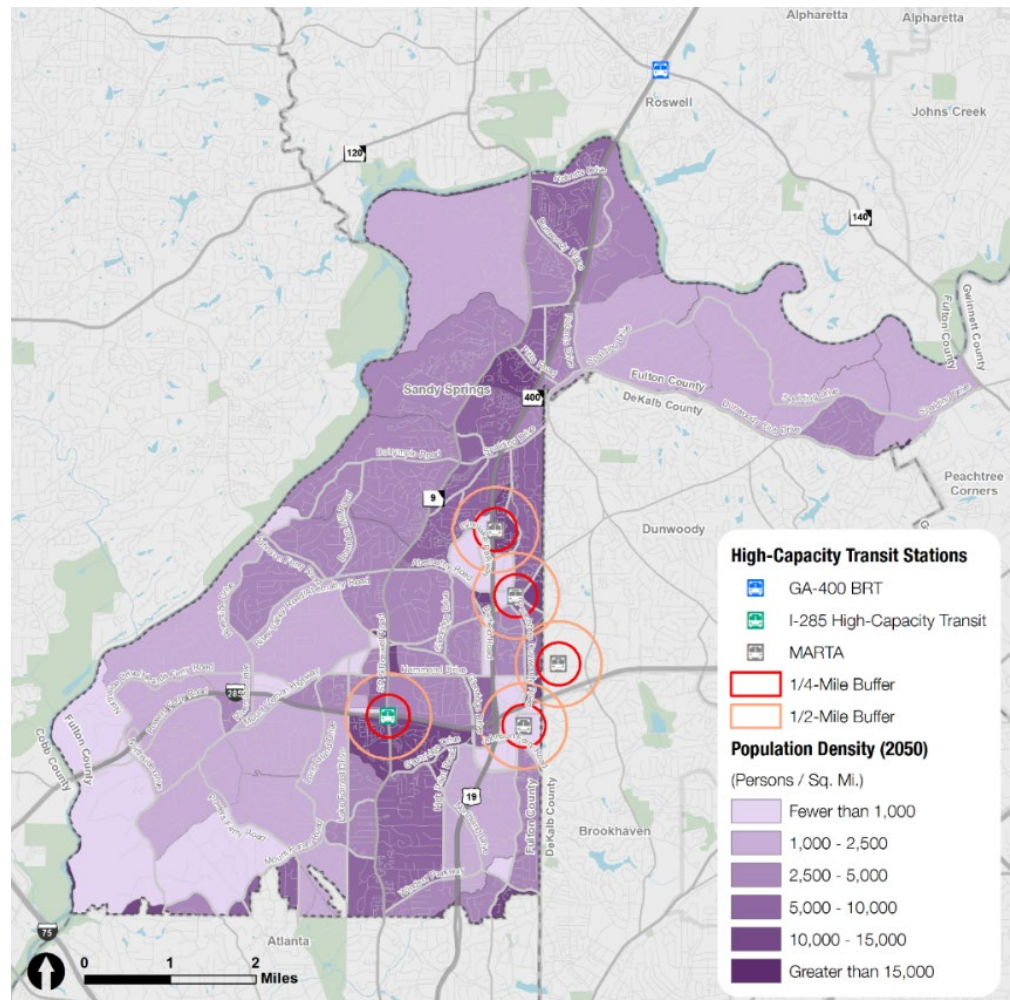


Figure 23: 1/4-Mile and 1/2 Mile Buffers vs. 2050 Population Density

The areas outside of these walking-trip capture areas represent locations where there is an opportunity to connect passengers to stations via transit. The maps show that the City Springs area represents an opportunity to provide last-mile connections to high-capacity transit in a location just outside of walking distance from existing and proposed stations.

A deeper dive into MARTA's on-board rail survey showed that the highest concentrations of people accessing MARTA rail stations come from nearby the station. However, based on the MARTA rail station, the share of people who park-and-ride versus using other modes changes. For example, nearly 40 percent of MARTA rail users for the North Springs Station drive to the station versus less than 10 percent for Dunwoody and Medical Center Stations.

Providing Service for Senior Citizens

The needs analysis for senior citizens aimed to understand existing transit services in the city, the usage of these services by senior citizens, and how these correlate with existing demographic information. Most of the aging population in the city is within the paratransit service area, except for people living in the panhandle area; residents in this area do have access to services provided by the Fulton County Office of Aging and Senior Services North Fulton.

MARTA Mobility trip data revealed that the most popular location to access via paratransit was the Medical Center MARTA station and the Perimeter Center area, which have major trip attractors in medical facilities, shopping, and MARTA stations. Outside of the Perimeter area, major activity locations include Kaiser Permanente Glenlake, shopping destinations in City Springs, and residential areas along Roswell Road and GA 400 north of Spalding Drive. Since most of the high-activity areas shown on the maps are trip attractors, it suggests that home origin locations are dispersed throughout the service area.

Local circulation between major activity centers within Sandy Springs

The needs analysis for local circulation explored the potential for a locally focused transit service that circulates within a smaller area than typical fixed bus routes and is usually intended to serve short-hop trips.

To understand where potential demand for this type of service might be, population density was overlaid with the locations of community resources, such as social services, government facilities, and medical facilities, shown in Figure 23. The same was overlaid onto the zero-auto household population density.

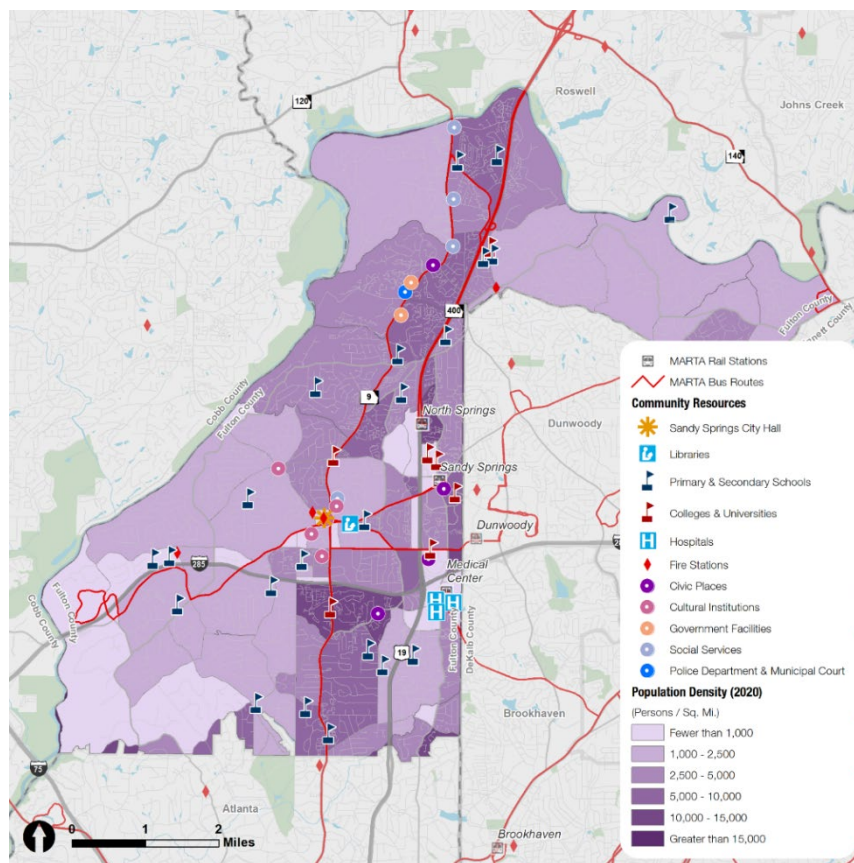


Figure 24: Transit Service and Community Resources vs. Population Density

Notably, zero-auto households are concentrated on Roswell Road (south of I-285), the North End, and Perimeter areas. While these areas are connected to major community resources by transit, the lack of quality service (i.e. frequency) weakens that connection. Improving frequency and reliability of transit service along Roswell Road, i.e. Route 87, represents an opportunity to better connect major population centers to community resources.

Serving travel needs between Sandy Springs and adjacent jurisdictions

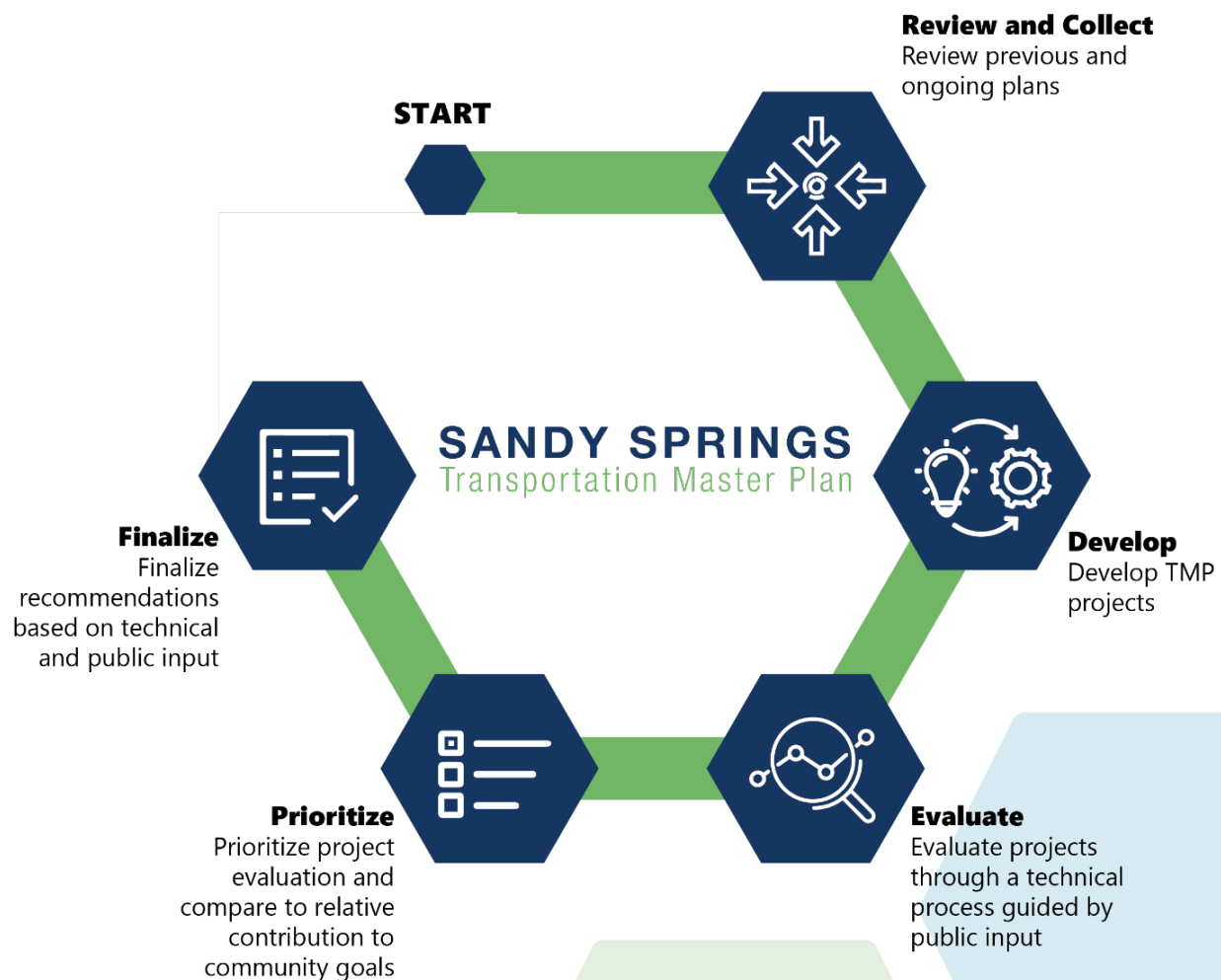
The Chattahoochee River constrains the number of access points connecting Sandy Springs to its neighbors, creating a need for improved connections across the river. The travel movement that connects Cobb County and Sandy Springs – shows that there is a strong connection between East Cobb County and Cumberland to the Perimeter area within the city.

Public transportation is most successful when there is a level of concentrated demand in one area to travel to another concentrated area of demand. This is a challenge that exists when looking to better serve the connections between Cobb County and Sandy Springs – since the home locations of those traveling from Cobb County into Sandy Springs are widely dispersed.

Sandy Springs should continue to work with the regional transit operators and advocate for the transit improvements identified in the TMP.

6 | Project Development and Evaluation

The TMP offers the City the ability to collect and evaluate projects from previous and ongoing efforts and prioritize them alongside the projects developed specifically through the TMP. This chapter lays out the process that the TMP took to arrive at a set of recommendations to help the City of Sandy Springs to continue focusing its efforts and seeking strategic partnerships to expedite the TMP's implementation.





Review and Collect

A list of specific project recommendations from previous plans was developed as the starting point for the TMP project recommendations evaluation. Over 300 roadway, intersection, bicycle, pedestrian, transit, and technology recommendations were collected from previous and ongoing studies.



Develop

The TMP developed a list of projects and these were added to the master list of projects to further address gaps and identified needs that were not addressed through previous planning efforts. As a part of this, the TMP considered the current list of ongoing transportation projects. The full list of ongoing projects and associated map can be found in the **Appendix B**.



Evaluate

Following the development of the total project list, each project was evaluated through a technical process. This process was consistent among all types of projects to ensure that the merits of each individual project were compared consistently. A variety of criteria and scoring guidelines within each goal were developed in coordination with public input. Table 5 summarizes the evaluation criteria and scoring.



Prioritize

Following the quantitative evaluation, the projects were ranked according to their overall score. The prioritization process tied the project's performance to the plan goals through a quantitative score to easily compare each project's relative contribution to the community's goals.



Finalize

The draft list of projects and policies were taken to the public for additional input during Phase 2 of the engagement process. The top scoring projects were reviewed for constructability and timing. The results of the public engagement informed the final recommendations for TMP inclusion which can be found in the **Appendix A**. The full list of other projects considered as a part of the TMP can be found in **Appendix C**.

Table 5: Quantitative Project Evaluation Criteria

Evaluation Criteria	Points Available
TMP Goal 1: Safety	25
The project is along a facility with a significant number of crashes.	15
The project is along a facility that has crashes that resulted in serious injury and fatalities.	10
TMP Goal 2: Mobility & Accessibility	20
The project improves system reliability.	10
The project improves connectivity or fills a gap in the network.	10
TMP Goal 3: Well-Being & Environment	20
The project fills a gap by connecting to at least one community resource or activity center within the City.	10
The project includes a transit, bicycle or pedestrian element.	5
The project is within an underserved area (e.g., lower income, no access to personal vehicle).	5
TMP Goal 4: Land Use & Transportation Integration	15
The project aligns with the priorities of Next Ten character areas.	15
TMP Goal 5: Maintenance & Management	10
The project maximizes the use of existing infrastructure (within the existing right of way).	10
TMP Goal 6: Economic Vitality	5
The project improves access to jobs.	3
Project is within The Next Ten Focus Areas (Small Area Plans) or within an identified activity center.	2
Public Support	5
The project is a need identified by the public.	5



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7 | Recommendations

Because the city's current and future transportation needs are greater than the available resources, a compact set of fiscally constrained recommendations was developed. Due to funding limitations, projects should be paired with policy and program changes that reinforce the goals developed in the TMP. The TMP recommendations include projects, future studies, policies, and initiatives to create a comprehensive program of transportation improvements for the city moving forward.

Project Categories

The recommended project list includes four categories of projects: roadway, bicycle pedestrian, and trail, transit, and intelligent transportation system (ITS). Each project category includes specific project types that further describe the specific type of improvement.

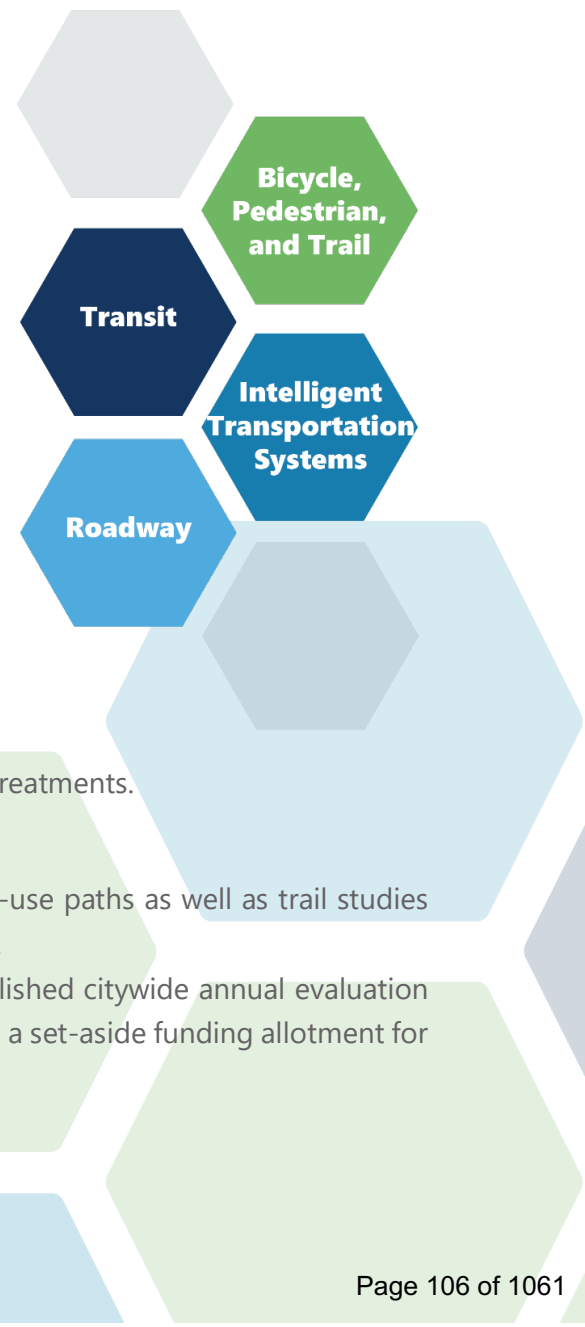
Project Types

Roadway

- **Intersection** – These projects include safety and operational improvements and studies that are focused on vehicles, cyclists, and pedestrians. These are larger-scale intersection level improvements.
- **Safety** – These projects are smaller-scale intersection improvements that are focused on improving safety specifically.
- **Corridor** – These projects are non-widening projects that include improvements such as access management, complete streets, and corridor studies.
- **Capacity** – These projects include a widening of the roadway to address higher volume and congested corridors.
- **Bridge** – These projects include upgrading, repairing, or reconstructing bridges to bring them to standard. These also include multimodal and/or aesthetic bridge treatments.

Bicycle, Pedestrian, and Trail*

- **Bicycle/Trail** – The projects include side paths or multi-use paths as well as trail studies to further look at opportunities to enhance connections.
- **Sidewalk Program** – The sidewalk program is an established citywide annual evaluation process of potential sidewalk projects. The TMP provides a set-aside funding allotment for projects in the program.





Transit

- **Regional Transit Supportive Studies** – These projects include studies to focus on future regional transit service and how the city’s transportation network will connect.
- **Transit Signal Priority** – These projects include preparing the traffic signals system to provide travel priority to transit buses.

Intelligent Transportation Systems

- **ITS** – These projects include specific improvements for a build out of the fiber optic cable network to ensure communications to signals, cameras, and other devices is improved.

*The full network buildout for bicycle/trail including existing, programmed, and TMP recommended projects can be found in **Appendix D**. The Sidewalk Program’s list of projects can be found in **Appendix E**.

Fiscal Constraint

A fiscal constraint exercise was conducted based on the projects that could reasonably be funded with the city’s expected revenues and current capital assumptions. These assumptions included new TSPLOST measures in both the short-range and mid-range that would generate approximately \$85M each. Planning level cost estimates were completed for each project, and the list of projects was organized into two programming levels denoting their likely timeline for implementation, as defined below. The list of short- and mid-range projects and corresponding project fact sheets can also be found in **Appendix F** and **G**, respectively.

- Short-Range: Likely to be implemented within five years.
- Mid-Range: Likely to be implemented within five to 10 years.

Table 6: Total Projects in Short- and Mid-Range Programming Levels.

Project Category	Project Type	Short-Range	Mid-Range	Total
Roadway	Intersection	\$7,500,000	\$36,300,000	\$43,800,000
	Safety	\$3,500,000	\$850,000	\$4,350,000
	Corridor	\$10,350,000	\$12,000,000	\$22,350,000
	Capacity	\$36,000,000	\$20,000,000	\$56,000,000
	Bridge	\$12,600,000	\$8,000,000	\$20,600,000
Bicycle, Pedestrian, and Trail	Bicycle/Trail	\$20,250,000	\$30,350,000	\$50,600,000
	Sidewalk Program	\$12,000,000	\$12,000,000	\$24,000,000
Transit	Transit	\$600,000	\$2,800,000	\$3,400,000
ITS	ITS	\$2,840,000	\$1,500,000	\$4,340,000
	Total	\$105,640,000	\$123,800,000	\$229,440,000

Roadway

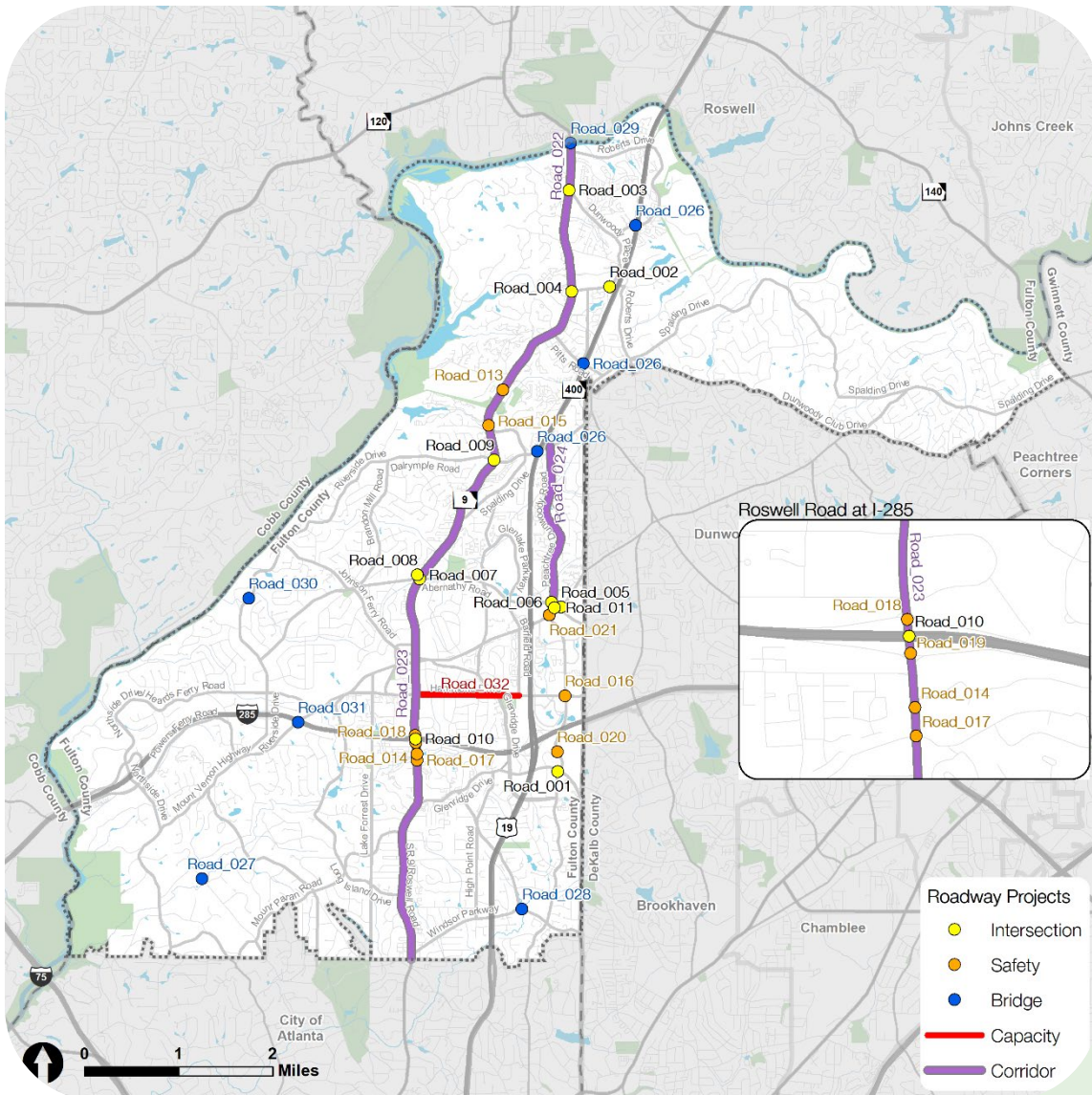
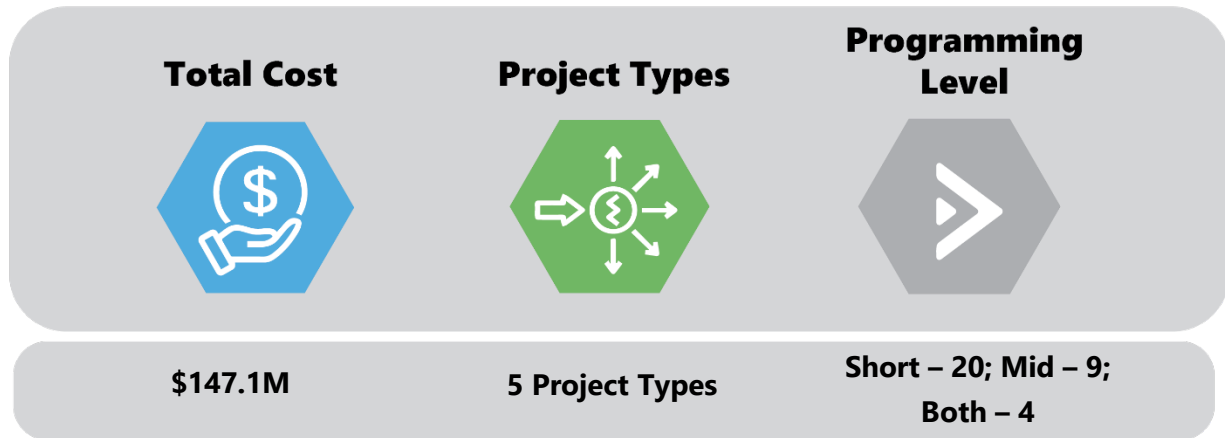


Figure 25: Roadway Projects



Table 7: Intersection Projects

ID	Project Name	Project Description	Programming Level	Cost
Road_001	Johnson Ferry Road at Peachtree Dunwoody Road Intersection Improvement	This project proposes safety and operational improvements, which may include reconstruction of the horizontal and vertical geometry, addition of one through lane eastbound, a second southbound left-turn lane, and a dedicated right-turn lane westbound.	Short-Range and Mid-Range	\$17,000,000
Road_002	Northridge Road at SR 400 SB Intersection Improvement	This project proposes safety and operational improvements, which may include adding a southbound left-turn lane with raised median island; adding median along westbound right-turn lane; signal modifications; signage, and pavement marking upgrades.	Mid-Range	\$1,000,000
Road_003	Dunwoody Place at Roswell Road Intersection Improvement	This project proposes safety and operational improvements, which may include removing one westbound left-turn lane on Dunwoody Place; timing modification; adding raised median on Dunwoody Place, adding pedestrian refuge island; and access management.	Short-Range	\$2,000,000
Road_004	Northridge Road at Roswell Road Intersection Improvement	This project proposes safety and operational improvements, which may include operational upgrades; intersection lighting; pavement markings, and access management.	Short-Range	\$2,200,000

ID	Project Name	Project Description	Programming Level	Cost
Road_005	Abernathy Road at Mount Vernon Highway Intersection Improvement	This project proposes operational improvements, which may include signal timing modifications, signal upgrades, modification of the southwest and northeast concrete islands, signage upgrades, and pavement markings.	Mid-Range	\$1,000,000
Road_006	Abernathy Road at Peachtree Dunwoody Road Intersection Improvement	This project proposes safety improvements, which may include prohibition of westbound left turn from Abernathy Road to southbound Peachtree Dunwoody Road, modifying the southeast corner and concrete island, signal and signage upgrades, and pavement markings.	Mid-Range	\$1,000,000
Road_007	Roswell Road and Abernathy Road Short-Term Improvements Intersection Improvements	This project proposes safety improvements, which may include a signal for westbound to northbound right turns; modification of the east median; signage modifications, pavement markings, and access management treatments.	Short-Range	\$500,000
Road_008	Roswell Road and Abernathy Road Intersection Long-Term Improvements	This project proposes long-term safety and operational upgrades through innovative intersection treatments.	Mid-Range	\$12,000,000



ID	Project Name	Project Description	Programming Level	Cost
Road_009	Roswell Road at Dalrymple Road Operational Improvements Phase 2	This project proposes operational upgrades, which may include addition of a dedicated northbound, eastbound, and westbound right turn lanes; additional eastbound and westbound left turn lanes; raised median; and streetscape enhancements.	Mid-Range	\$7,800,000
Road_010	I-285/Roswell Road Innovative Interchange Study	Proposed innovative interchange study of the Roswell Road at I-285 eastbound ramps and I-285 westbound ramps to identify long term improvement.	Short-Range	\$150,000
Road_011	Abernathy/Mount Vernon Highway/Peachtree Dunwoody Road Intersections Study	Proposed safety and operations study of Abernathy Road/Peachtree Dunwoody Road, Mount Vernon Highway/Peachtree Dunwoody Road, and Mount Vernon Highway/Perimeter Center West.	Short-Range	\$150,000
Road_012	Bring 10 Intersections up to Standard	Bring 10 Intersections up to Standard	Short-Range	\$1,000,000

Table 8: Safety Projects

ID	Project Name	Project Description	Programming Level	Cost
Road_013	Fulton County Annex Midblock Crossing	This project proposes a signalized pedestrian midblock crossing (HAWK beacon) across Roswell Road near the Fulton County Government Center with crosswalks and median refuge island.	Short-Range	\$500,000

Road_014	Roswell Road between Prado Place and Northwood Drive Midblock Crossing	This project proposes a signalized pedestrian midblock crossing (HAWK beacon) across Roswell Road between Prado Place and Northwood Drive with crosswalks and median refuge island.	Short-Range	\$500,000
Road_015	Roswell Road between Cimarron Parkway and Trowbridge Road Midblock Crossing	This project proposes a signalized pedestrian midblock crossing (HAWK beacon) across Roswell Road between Cimarron Parkway and Trowbridge Road with crosswalks and median refuge island.	Mid-Range	\$500,000
Road_016	Hammond Drive at Peachtree Dunwoody Road Intersection Improvement	This project proposes safety improvements, which may include signal upgrades, signal timing modifications, and signage upgrades.	Short-Range	\$150,000
Road_017	SR 9 (Roswell Road) at Lake Placid Drive Intersection Improvement	This project proposes safety improvements, which may include signal upgrades, signal timing modifications, wider crosswalks, lighting, and access management.	Short-Range	\$225,000
Road_018	SR 9 (Roswell Road) at I-285 Eastbound Intersection Improvement	This project proposes safety improvements, which may include signal upgrades, signal timing modification, signage upgrades, and lighting.	Short-Range	\$500,000
Road_019	SR 9 (Roswell Road) at I-285 Westbound Safety Improvements	This project proposes safety improvements, which may include signal upgrades, signal timing modifications, and lighting.	Short-Range	\$300,000



Road_020	Hollis Cobb Circle at Peachtree Dunwoody Road Intersection Improvement	This project proposes safety improvements, which may include adding an exclusive traffic signal phase for pedestrian crossings; signal upgrades, signage upgrades; and installing street furniture at the northwest corner of the intersection.	Short-Range	\$325,000
Road_021	Mount Vernon Highway at Peachtree Dunwoody Road Intersection Improvement	This project proposes safety improvements, which may include upgrades to signage and pavement markings.	Mid-Range	\$350,000

Table 9: Corridor Projects

ID	Project Name	Project Description	Programming Level	Cost
Road_022	Roswell Road North Boulevard Median Project	This project proposes a traffic study, design, and construction of a raised median on Roswell Road with pedestrian and bicycle improvements.	Short-Range	\$7,000,000
Road_023	Roswell Road Access Management and Complete Streets Improvements	This project proposes access management and complete streets improvements along areas of Roswell Road based on Next 10 and Access Management Plan recommendations.	Short-Range and Mid-Range	\$10,000,000
Road_024	Peachtree Dunwoody Road Corridor Study and Improvements	Proposed corridor study of the Peachtree Dunwoody Road, from Abernathy Road to Spalding Drive and funding for recommended improvements.	Short-Range and Mid-Range	\$5,150,000
Road_025	Powers Ferry Multimodal Circulation Study	Proposed multimodal circulation study in the Powers Ferry area to determine holistic improvements to support pedestrian, bicycle, transit, and vehicular travel. This technical study will build off the City's Powers Ferry small area plan.	Short-Range	\$200,000

Table 10: Bridge Projects

ID	Project Name	Project Description	Programming Level	Cost
Road_026	GA 400 Bridge Enhancements	This project proposes bicycle and pedestrian facilities and aesthetic enhancements for the Spalding Drive bridge, Pitts Road Bridge, and Roberts Drive Bridge over SR 400 that will be replaced as part of the GDOT SR 400 Managed Lanes project.	Short-Range	\$6,000,000
Road_027	Jett Road over Long Island Creek Bridge	This project proposes to replace the Jett Road bridge over Long Island Creek.	Mid-Range	\$3,000,000
Road_028	Windsor Parkway over Nancy Creek Bridge	This project proposes to upgrade the bridge to raise it out of the flood plain.	Mid-Range	\$5,000,000
Road_029	SR 9 (Roswell Road/Atlanta Street) Pedestrian Improvements	This project proposes installing a new bicycle and pedestrian bridge parallel to Roswell Road across the Chattahoochee River.	Short-Range	\$1,000,000
Road_030	Riverside Drive over Chattahoochee River Tributary Bridge	This project proposes to upgrade the bridge to accommodate heavier vehicles.	Short-Range	\$3,200,000
Road_031	I-285 Top End Bridge Enhancements	This project proposes bicycle and pedestrian facilities and aesthetic enhancements for the Mt. Vernon Highway Bridge over I-285 that will be replaced as part of the GDOT Top End 285 Managed Lanes Project.	Short-Range	\$2,400,000



Table 11: Capacity Projects

ID	Project Name	Project Description	Programming Level	Cost
Road_032	Hammond Drive Widening	This project includes right-of-way acquisition and widening of Hammond Drive from 2 to 4 lanes with associated bicycle and pedestrian infrastructure from Roswell Road to Barfield Road.	Short-Range and Mid-Range	\$55,000,000
Road_033	City Contribution to New Streets Built with Redevelopment	City Contribution to New Streets Built with Redevelopment	Short-Range	\$1,000,000

Bicycle, Pedestrian, and Trail

Total Cost	Project Types	Programming Level
		
\$74.6M	3 Project Types	Short – 6; Mid – 2; Both – 2

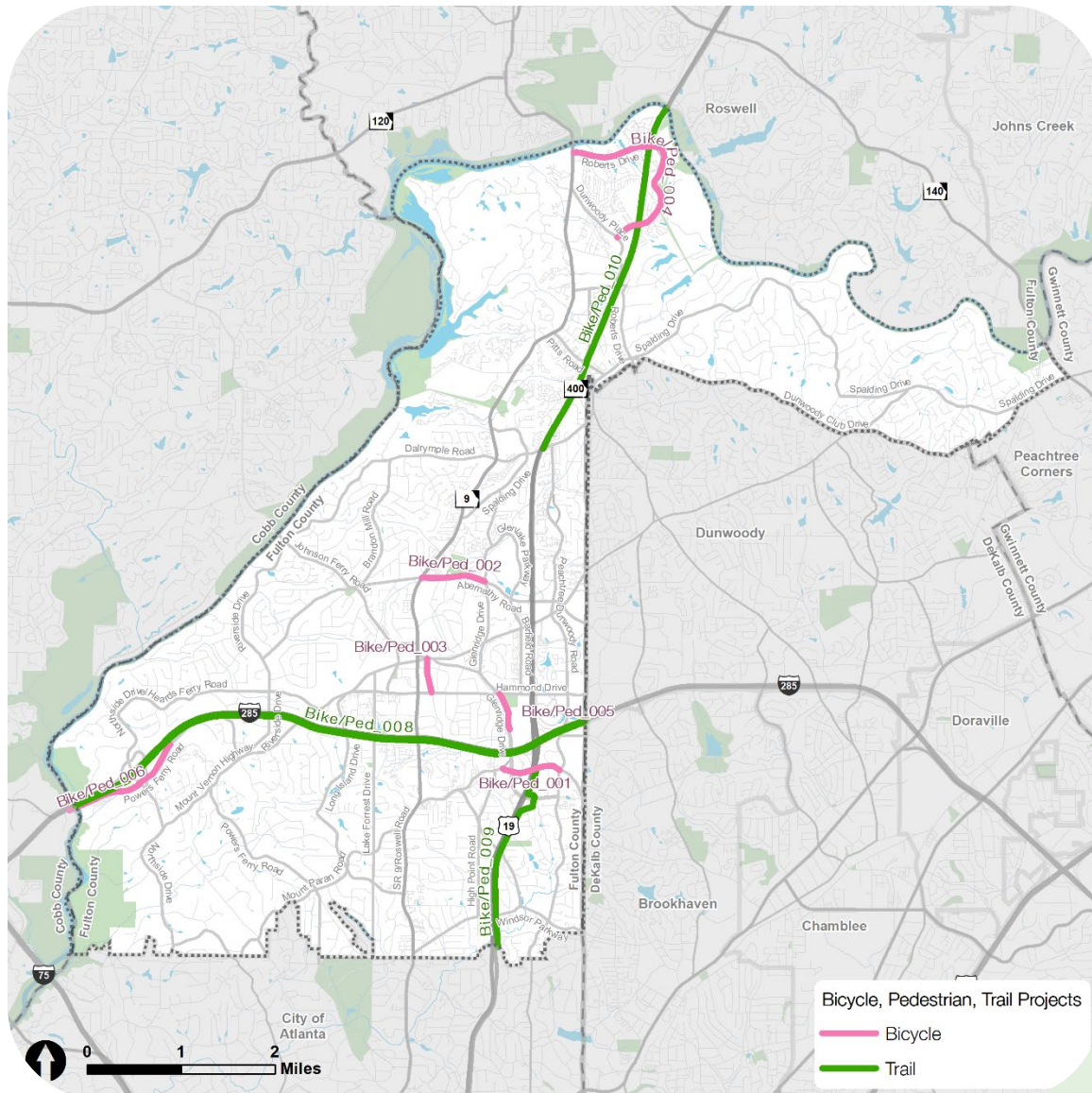


Figure 26: Bicycle, Pedestrian, and Trail Projects



Table 12: Bicycle Projects

ID	Project Name	Project Description	Programming Level	Cost
Bike/Ped_001	Johnson Ferry Rd Side Path, from Glenridge Dr to Peachtree Dunwoody Rd	This project proposes a multi-use side path along Johnson Ferry Road, from Glenridge Drive to Peachtree Dunwoody Road.	Short-Range	\$6,000,000
Bike/Ped_002	Abernathy Side Path, from Roswell Road to Glenridge Drive	This project proposes a side path along Abernathy Road, from Roswell Road to Glenridge Drive.	Mid-Range	\$6,100,000
Bike/Ped_003	Boylston Drive Side Path	This project will include comprehensive bicycle and pedestrian improvements, such as a side path, along Boylston Drive from Mount Vernon Highway to Hammond Drive. The realignment of the intersection will occur at Hammond Drive.	Short-Range	\$4,000,000
Bike/Ped_004	Roberts Drive Side Path, from Roswell Rd to Dunwoody Pl	This project proposes a multi-use side path along Roberts Drive from Roswell Road/SR 9 to Dunwoody Place.	Short-Range and Mid-Range	\$14,500,000
Bike/Ped_005	Glenridge Dr Side Path, from Hammond Dr to south of Wellington Trace	This project proposes a multi-use side path along Glenridge Drive from Hammond Drive to existing side path, just south of Wellington Trace.	Short-Range	\$2,500,000
Bike/Ped_006	Powers Ferry Dr Side Path, from City Limits to Dupree Drive	This project proposes a multi-use side path along Powers Ferry Road from the Chattahoochee River to Dupree Drive.	Mid-Range	\$10,000,000

Table 13: Pedestrian Projects

ID	Project Name	Project Description	Programming Level	Cost
Bike/Ped_007	Sidewalk Program	This project funds installing new or maintaining existing sidewalk facilities throughout the city to improve pedestrian access and connectivity.	Short-Range and Mid-Range	\$24,000,000

Table 14: Trail Projects

ID	Project Name	Project Description	Programming Level	Cost
Bike/Ped_008	I-285 Multi-use Trail Study	Proposed conceptual study for comprehensive bicycle and pedestrian improvements, which may include a multi-use trail along I-285 from the Cobb County Line to the DeKalb County line.	Short-Range	\$250,000
Bike/Ped_009	GA 400 Multi-Use Trail	This project proposes the construction for a multi-use trail parallel to SR 400 from the City Limits to Johnson Ferry Road.	Short-Range	\$7,000,000
Bike/Ped_010	GA 400 Multi-Use Trail North Study	Proposed feasibility study of the GA 400 Multi-use Trail from Spalding Drive to the Chattahoochee River.	Short-Range	\$250,000



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Transit

Total Cost



\$3.4M

Project Types



1 Project Type

Programming Level



**Short – 3; Mid – 1;
Both – 1**

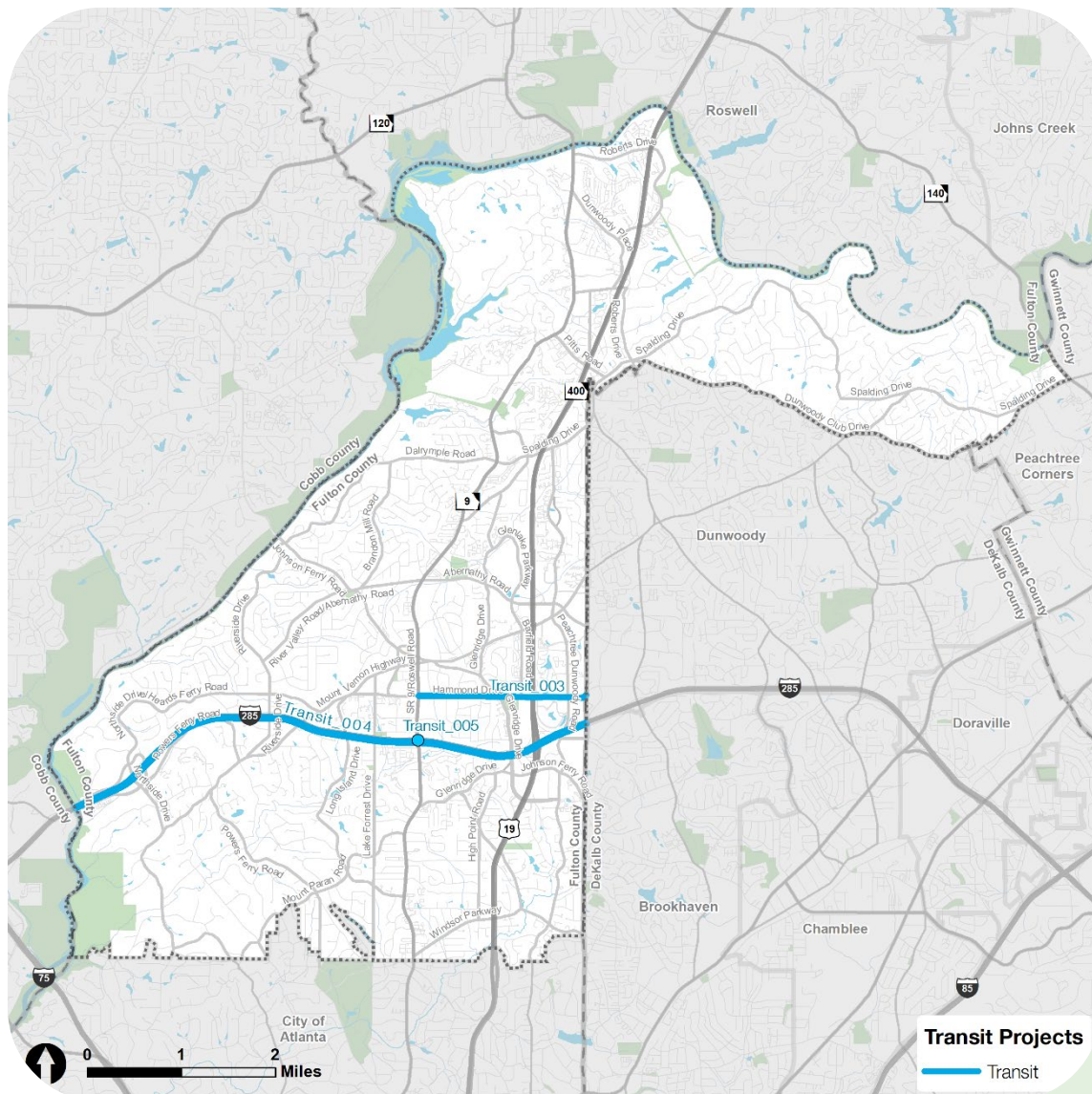


Figure 27: Transit Projects



Table 15: Transit Projects

ID	Project Name	Project Description	Programming Level	Cost
Transit_001	Traveler Information Kiosks/Transit Curbside Management (partnership with MARTA)	This project proposes adding traveler information kiosks / transit curbside management at MARTA rail stations.	Short-Range and Mid-Range	\$300,000
Transit_002	Transit Signal Priority Technical Upgrades along MARTA Routes	This project proposes modifications to signal timing to implement transit signal priority on signals along transit corridors.	Short-Range	\$250,000
Transit_003	Transit Signal Priority Supportive Improvements along Hammond Drive	This project proposes a study of transit supportive improvements along Hammond Drive, which may include bus stop modifications, queue jumper lanes, and pedestrian signal upgrades.	Mid-Range	\$2,700,000
Transit_004	I-285 BRT Feasibility Study	Proposed feasibility study for Bus Rapid Transit along I-285. Includes conceptual station planning and design, service plan, implementation plan.	Short-Range	\$50,000
Transit_005	I-285 at Roswell Road Station Area Study	Proposed station area study to assess connectivity and land use improvements for the planned I-285 BRT station at Roswell Road.	Short-Range	\$100,000

Table 16: Intelligent Transportation Systems

ID	Project Name	Project Description	Programming Level	Cost
ITS_001	Design and Construct Fiber Ring A	Design and Construct Fiber Ring A	Short-Range	\$1,500,000
ITS_002	Design and Construct Fiber Ring B	Design and Construct Fiber Ring B	Mid-Range	\$1,500,000
ITS_003	Install Hub at Morgan Falls Public Safety Complex	Phase I of this project should provide a new field hub cabinet located west of the SR 9 (Roswell Rd.) and Morgan Falls intersection (NE quadrant) within the GDOT ROW. Phase II will remove the existing fiber connection from the Morgan Falls Building. Additionally, this project will provide a new field hub cabinet located west of the SR 9/Roswell Road and Abernathy Road intersection (NW quadrant) within the GDOT ROW.	Short-Range	\$690,000
ITS_004	Fiber Connection to Fire Station 1	This project will provide fiber connection to Fire Station 1 at Spalding Drive and Roberts Drive.	Short-Range	\$650,000



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Policies

Zero Deaths and Safe Systems Policy

The Zero Deaths and Safety Systems Policy is an initiative out of the Federal Highway Administration that sets of a goal of achieving zero traffic deaths. The initiative grew out of the popular “Vision Zero” movement, which began in Sweden in 1997, and the FHWA Zero Deaths and Safe Systems approach adapts the goal to focus on system design and engineering.

Reaching zero deaths requires the implementation of a Safe System approach, which was founded on the principles that humans make mistakes and that human bodies have limited ability to tolerate crash impacts. In a Safe System, those mistakes should never lead to death. Applying the Safe System approach involves anticipating human mistakes by designing and managing road infrastructure to keep the risk of a mistake low; and when a mistake leads to a crash, the impact on the human body does not result in a fatality or serious injury. Road design and management should encourage safe speeds and manipulate appropriate crash angles to reduce injury severity. This approach is designed to be **proactive** (anticipating and planning for safe roads) rather than the traditional **reactive** approach (making decisions based on historic data).

Traditional

Safe System

Prevent crashes	→	Prevent deaths and serious injuries
Improve human behavior	→	Design for human mistakes/limitations
Control speeding	→	Reduce system kinetic energy
Individuals are responsible	→	Share responsibility
React based on crash history	→	Proactively identify and address risks

Figure 28: Traditional Reactive vs. the Safe System Proactive approach. Source; FHWA

Making a commitment to zero traffic deaths means addressing all aspects of safety through the following five Safe System elements that, together, create a holistic approach with layers of protection for road users: safe road users, safe vehicles, safe speeds, safe roads, and post-crash care.



Safe Road Users



Safe Vehicles



Safe Speeds



Safe Roads



Post-Crash Care

Figure 29: The five elements of a Safe Systems approach. Source: FHWA

The Safe System approach requires a supporting safety culture that places safety first and foremost in road system investment decisions. To achieve zero deaths vision, everyone must accept that fatalities and serious injuries are unacceptable and preventable.

Next Step: Sandy Springs should develop and adopt a Zero Deaths action plan to identify capital projects, design strategies, programs, and initiatives that lead to a safer transportation system.

Complete Streets Policy

Complete Streets is a transportation policy and design approach that looks for streets to be planned, designed, operated, and maintained to enable safe and comfortable travel for all users, all modes, ages and abilities. Complete Streets policies typically contain design guidelines and policies that apply to all transportation projects, including new roadways, reconstructions, and sometimes maintenance. Complete Streets policies have been adopted by over 1,600 city, county, and state governments nationwide.

The National Complete Streets Coalition publishes a set of essential elements that should be included in complete streets policies to ensure they are effective, implementable, and equitable.

1. **Vision and intent:** Includes an equitable vision for how and why the community wants to complete its streets. Specifies need to create complete, connected, network and specifies at least four modes, two of which must be biking or walking.
2. **Diverse users:** Benefits all users equitably, particularly vulnerable users and the most underinvested and underserved communities.
3. **Commitment in all projects and phases:** Applies to new, retrofit/reconstruction, maintenance, and ongoing projects.
4. **Clear, accountable expectations:** Makes any exceptions specific and sets a clear procedure that requires high-level approval and public notice prior to exceptions being granted.
5. **Jurisdiction:** Requires interagency coordination between government departments and partner agencies on Complete Streets.
6. **Design:** Directs the use of the latest and best design criteria and guidelines and sets a timeframe for their implementation.

7. **Land use and context sensitivity:** Considers the surrounding community's current and expected land use and transportation needs.
8. **Performance measures:** Establishes performance standards that are specific, equitable, and available to the public.
9. **Project selection criteria:** Provides specific criteria to encourage funding prioritization for Complete Streets implementation.
10. **Implementation steps:** Includes specific next steps for implementation of the policy.

Next Step: The City is currently working towards complete streets, especially through the recent Next 10 comprehensive plan effort, but has not formalized it into policy. The City should utilize resources available from the National Complete Streets Coalition and other resources to develop and adopt a formal Complete Streets Policy that aligns with city practices.

Micromobility Policy

Micromobility refers to a series of small lightweight personal driving devices such as electric scooters and e-bicycles. Micromobility is playing a significant role in changing the transportation network across the nation – and has started to influence the Atlanta metro region. Micromobility devices are leveraged for a variety of trip purposes, but generally can help to make shorter-distance, first- and last-mile connections more viable and accessible. Many cities around the country have begun developing micromobility policies to regulate the operation of these devices on public right-of-way. The City of Sandy Springs follows state and local laws on how to regulate where the devices can be operated and parked.

Although micromobility does not currently playing a significant role in the city's transportation network, the City anticipates that with investment into quality infrastructure and better connectivity in the bicycle network, there could be an increase in demand for use of these types of devices.

Micromobility policies can take very different formats depending on the specific community, but most regulate the device rental operator in terms of vehicle fleet size, the use of user data, fees, and operational requirements (such as barring the devices from certain areas). Placing limits on operation and setting permit requirements that include insurance minimums and maintenance agreements ensure that these operators provide a transportation option that is safe for users. The City should also consider regulations of users of non-rental devices.

Next Step: Sandy Springs should continue to monitor micromobility usage within the city and in the Atlanta region and consider an adoption of a policy to guide micromobility device usage on the city's transportation network. It is recommended that the City proactively develop its own



framework now. Resources on best practices and example policies are available from the National Association of City Transportation Officials.

Ridesharing Service Guiding Policy

Ridesharing services are a transportation option that arranges on-demand transportation services. Uber and Lyft are examples of companies that provide ridesharing services. The rapid growth of popularity of ridesharing influences travel behavior in ways that are still being studied and understood. As residents begin to increasingly rely on these services to replace or supplement their personal vehicles, there may be an increase in competition for curb space as drivers frequently pull over to drop off and pick up passengers.

Some cities and states areas have required companies to obtain permits, required driver background checks, and require insurance for rideshare drivers. These requirements are often difficult to enforce given the non-centralized nature of the business and the fact that drivers often cross municipal boundaries.

Next Step: Sandy Springs should continue to monitor ridesharing usage within the city and in the Atlanta region and consider an adoption of a policy to guide access and curb usage on the city's transportation network. It is recommended the City proactively examine its curb lane management policies to prepare for increasing competition for this limited space. Policies such as designated drop-off and pick-up areas and larger and more frequent loading zones in some areas may be helpful. The City should also explore partnerships with ridesharing companies to provide last mile trips to MARTA stations and data sharing opportunities.

Reconciling of Inconsistencies between Development Code and Technical Manual

The City's Development Code, Technical Manual, and land use policies were reviewed to determine if these documents are consistent with each other and complement existing and potential transportation policies. It was found that generally both the Development Code and the Technical Manual generally work well together in implementing several comprehensive plan policies from the City's Next Ten Comprehensive Plan. However, there were areas of improvement that require the City to revisit the Development Code street sections and reconcile inconsistencies, such as the Mount Vernon Highway Standards and some street types.

Next Step: Sandy Springs should work to reconcile inconsistencies between the two documents.

Sidewalk Master Plan Amendment

As a part of the **Multimodal Assessment**, the TMP project team evaluated gaps in the network evident through the 20-Minute Neighborhoods analysis. The 20-Minute Neighborhoods analysis identified gaps in the sidewalk network that would help the community access every day needs

through walking and biking. These gaps are critical in promoting physical health in the community reducing the number of short-distance car trips along the city roadways.

Next Step: Sandy Springs should consider amending the Sidewalk Master Plan to include sidewalk projects identified through the 20-Minute Neighborhoods analysis and other requested sidewalk projects from the public.

Initiatives

Promote Transportation Demand Management (TDM) Citywide

Georgia Commute Options is a program managed by the Atlanta Regional Commission and funded through GDOT that promotes Transportation Demand Management (TDM). The program works with employers, commuters, and schools to reduce the use of single-occupancy vehicles and to motivate people to choose alternative commute options. Some examples of TDM strategies include employee commute surveys, onsite events to talk about commute options, carpool/vanpool coordination assistance, commuter ride-matching and guaranteed ride home options. Perimeter Connects does a great job assisting employers within the Perimeter Community Improvement District (PCID), but the City can also promote these initiatives with City residents and employers outside of PCID.

Next Step: Sandy Springs explores partnership with Georgia Commute Options to educate residents and employers about alternative commute options and incentives available to them.

Host Bicycle and Walking Events

Bicycle and walking events help to encourage residents to bike and walk by providing safe spaces to do so, educating residents about the benefits from biking and walking, and creating a sense of community around biking and walking.

Open Streets

Across the nation and metro Atlanta, several organizations and municipalities have partnered to promote "Open Street" events where specific street segments are temporarily closed vehicles to create opportunities for more open and vibrant street experiences catered to non-driving modes. These types of events are not only used to promote healthy active living but can also serve as an educational opportunity to walking and biking and the promotion of local businesses.



Walk/Bike to Work/School Days

Walk and Bike to Work/School days are events that are hosted on an annual basis in communities across the nation. These days work do not require temporarily closing vehicular access on roadways – but can have similar impacts such as changes to commuting policies or the physical environment in communities. These types of events can have smartphone-based apps or paper logs of those who participated and offer various incentives to participants.

Next Step: The City should continue to promote national and state Walk/Bike to School Days, as coordinated by the Safe Routes to School program. The City should consider partnerships with interested organizations to explore hosting an Open Streets event, and identify potential candidate streets.

Track and Coordinate Transportation Performance Metrics

Transportation Performance Management (TPM) programs use performance information collected from the transportation network to target transportation investments toward projects and programs that align with a jurisdiction's stated goals and objectives for the system. Benefits of a well-implemented TPM program include the ability to make data-driven investment decisions, improve governmental transparency and accountability, address transportation equity concerns, and improve overall connectivity and safety for all users.

By law, transportation performance measuring programs must be implemented at the national, state, and regional levels. Implementation at the municipal level in Sandy Springs, in addition to being a first for the metro Atlanta area, can help the City meet the goals and objectives established in the ongoing transportation master plan (TMP) update and continue to track them after the planning process is finished. A performance measurement program could help Sandy Springs to continue to measure and track how the implementation of the TMP projects and policies have continued forward the vision and goals of the plan. Examples of metrics that could be tracked by the City are included and categorized by overall goal below.

Safety

- Number of crashes along city-owned roadways versus all roadways
- Percent of crashes resulting in serious injury/fatality
- Number of non-motorized crashes

Mobility & Accessibility

- Peak period travel time along key corridors (personal vehicles and transit)
- Roadway system health metrics (percent arrivals on green, progression ratio, etc.)
- Mode share for passengers arriving at MARTA rail stations

Economic Vitality

- Placemaking and/or streetscape projects completed
- Projects completed in the Next Ten focus areas
- Peak delay traffic duration and clearance times on key corridors and employment centers

Land Use and Transportation Integration

- Percent of new projects (transportation and land use) that include bicycle infrastructure (bicycle lanes, bicycle storage units, etc.)
- Percent of new commercial/residential projects within walking distance to MARTA service
- Percent of population within a walking distance to common destinations (grocery, pharmacy, etc.)

Maintain and Optimize System

- Average pavement condition and response time for related complaints received by City
- Number of signals requiring preventative and regular maintenance
- Number of bridge structures are obsolete/deficient

Well-Being and Environment

- Number of trail and sidewalk projects underway and/or completed
- Residents per mile of sidewalk, trails, or bicycle facilities
- Percent of City funding expended on active transportation projects

Next Step: Identify key metrics that are most important for the City to track internally, and share with the public. The City can refer to the list of potential performance metrics developed for the TMP to help select the appropriate performance metrics. As part of the selection process, the City should assess the data and resources required and identify responsible parties for tracking these metrics.

Coordinate New Transportation Projects with Other Enhancements

Communities across the nation are rethinking the way that transportation projects are designed and implemented. The design of transportation projects typically follows traditional processes that do not always consider placemaking principles that can allow for more creative strategies for transportation solutions. As the City move forward with new transportation projects, especially those in the TMP, it should consider how each project could strategically incorporate public art and/or environmental features that could create more welcome interactions between the transportation infrastructure and neighboring land uses and community hubs.

Next Step: Formalize process for considering public art and environmental features for transportation projects during the concept phase or earlier.

Develop COSS Transportation Safety Working Group



The **Multimodal Assessment** conducted as a part of the TMP highlighted critical safety trends and issues that the City should consider moving forward. The takeaways from the safety assessment, particularly through the GDOT Emphasis Areas, illustrate a need for the City to look at the Six E's of Transportation Safety – Education, Enforcement, Encouragement, Engineering, Evaluation, and Emergency Response. The Six E's are related to the Zero Deaths and Safe Systems Policy in the acknowledgement that engineering cannot be the only solution in making streets safer for all users. It is recommended that the City create an interdepartmental working group that includes Communications, Public Works, Police, Fire, among others to discuss ways to partner to make the transportation network safer in the city.

Next Step: Identify potential work group members and resources needed to develop working group.

Coordinate with Regional Transit Providers to Improve City Service

Although the Sandy Springs does not directly operate transit service, the City can leverage its existing infrastructure to help the movement of transit buses along major roadways, as well as partner with transit operators and coordinate opportunities to improve transit in the City. The City should continue an open line of communication with MARTA to discuss transit-supportive improvements, such as providing signal equipment outfitted to provide transit signal priority to buses, and transit needs identified in the **Multimodal Assessment**. The City has partnered with MARTA to test TSP in the city, but it should also coordinate with Xpress commuter bus services to ensure that Xpress buses can also take advantage of potential time-savings for buses.

Next Step: Develop a Transit Signal Priority Implementation Plan. Discuss transit needs with existing transit operators in the City.

8 | Funding and Implementation

The success of the City of Sandy Springs TMP hinges on the collaborative effort of local, regional, and statewide agencies and partners to implement the projects and policies moving forward. One of the keys to implementation will be securing funding for the projects that are identified in the TMP by understanding the following:

- **Realistic funding streams and available local matches**
- **Partnership opportunities** - funding partnerships between the City and other public, private, and/or quasi-public entities
- **Project consolidation opportunities** – identification of specific modal projects that could be combined with other larger efforts
- **Policy-level changes** – continued incentivization of transportation investments through ordinance

Realistic Funding Streams and Available Local Matches

The funding strategy for TMP projects considers the different funding streams that are available based on project type. For example, there are varied funding streams available for trails that are transportation versus recreational – and based on network development, some that can serve as hybrids. The existing major funding sources that the TMP projects recommended are:

- **Federal** - Transportation Alternatives Program (TAP), Better Utilizing Investment to Leverage Development (BUILD) Grants, Federal Recreational Trails Program (RTP) Grants, Congestion Mitigation and Air Quality Program (CMAQ), Federal Lands and Tribal Transportation Program (FLTTP), National Recreation Trails (NRT), Community Development Block Grant (CDBG), Transit-Oriented Development (TOD) Pilot Program, Highway Safety Improvement Program (HSIP), Advanced Transportation and Congestion Management Technologies Deployment (ATCMTD), Georgia Smart Communities Challenge
- **State** – Georgia Department of Natural Resources (DNR) Grants, GDOT Maintenance and Improvement Grant (LMIG), GDOT Transportation Enhancement (TE) Program, Georgia Transportation Infrastructure Bank (GTIB), Quick Response projects, GDOT Local Bridge Program (LBP) and Low-Impact Bridge Replacement Program (LIBRP), Safe Routes to School (SRTS),
- **Regional (Atlanta Regional Commission)**– Livable Centers Initiative, Community Development Assistance Program, Transportation Improvement Program (TIP) (TIP is used to distribute some federal funding sources like CMAQ, TAP, and STBG)
- **Sales Tax** - Fulton County TSPLOST



- **Other** – there are a series of private funding opportunities available to 501c3 organizations to invest in transportation infrastructure (especially bicycle, pedestrian, and trail facilities) to connect and close gaps in the network. Although the City cannot be a direct recipient of these monies, the City could partner with a local non-profit organization in the City to move smaller-scale projects forward.

The **Appendix F** includes funding information for specific projects. Funding sources change over time and it is recommended that the City continue to monitor new regional, state, and federal opportunities for funding.

9 | Appendix

The appendix contains the following elements:

- Public Engagement Summary
 - Round 1 Public Meeting Summary
 - Round 2 Public Meeting Summary
 - ESRI Online Engagement
 - Focus Groups
- Current Transportation Projects Map
- Other Projects Considered
- Bike Network Map
- Sidewalk Program Map
- Short- and Mid-Range Project List
- Project Fact Sheets



A – Public Engagement Summary

Public Meetings Summary – Round 1

The Sandy Springs Transportation Master Plan (TMP) will identify and recommend forward-thinking transportation projects and policies that improve mobility, safety, and transportation equity for all users. The plan will focus on innovative multimodal transport solutions that maximize use of existing infrastructure and expand mobility options for residents and visitors.

The Plan is scheduled to have two rounds of public engagement efforts. The first round of public meetings included two virtual public meetings and a MetroQuest survey. The second round of public engagement is planned to occur in the Fall of 2020.

Introduction

The public meetings were both held virtually on Thursday, June 18, 2020, at Noon and 6:30 PM, respectively. There was a total of 44 attendees at both meetings. Each meeting began with an existing conditions presentation and the unveiling of draft, preliminary goals for the Plan. The attendees provided input on these draft goals.

Preliminary Goals

These preliminary goals were established by looking through a variety of guidance and previous plans including the Federal - FAST Act, FTA guidance, GDOT, ARC, Next Ten, North Fulton CTP among others. The draft preliminary goals for the Plan are listed below.

- **Safety**
 - Promote a safer transportation system for users of all modes
- **Mobility & Accessibility**
 - Promote an interconnected and efficient transportation network
- **Economic Vitality**
 - Promote economic development through targeted transportation investments
- **Land Use & Transportation Integration**
 - Transportation system is context sensitive and supports surrounding land use
- **Maintain & Optimize System**
 - Reinforce, maintain, and strengthen the existing transportation network
- **Well-Being & Environment**
 - Support healthy living through quality connections to the built and natural environments

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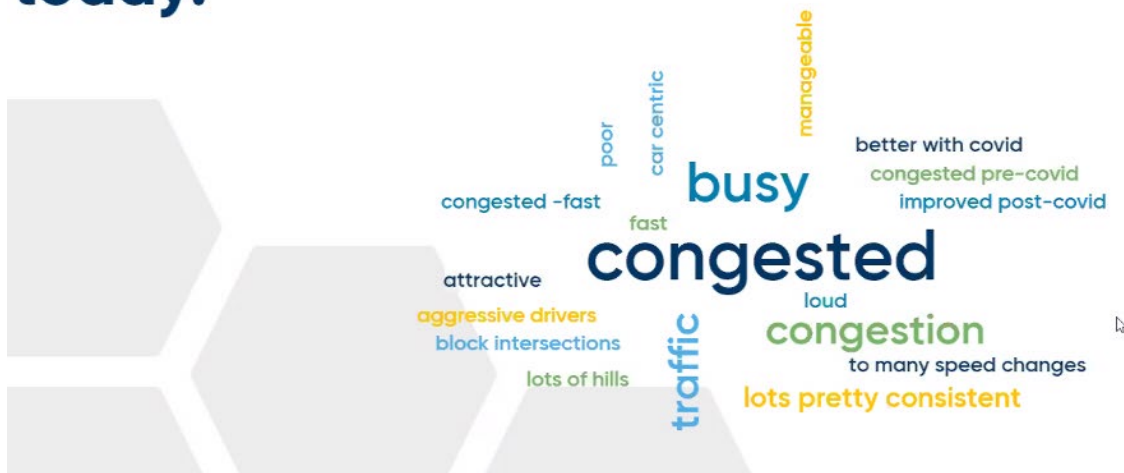
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Catch Phrase Activity

Mentimeter, an interactive presentation software, was used to collect real-time responses from the participants. Attendees were first asked to describe transportation in Sandy Springs today and then to describe transportation in Sandy Springs in the future. Attendees were then asked to write a word or phrase that they feel are important to include in the goals and objectives. Participants had unlimited responses. The responses instantaneously created word clouds, the words that were more frequent displayed larger than other words that were only mentioned once. These responses helped shape the Plan's goals and objectives.

Noon Meeting Responses

Describe transportation in Sandy Springs today.



Describe transportation in Sandy Springs in the future.



Safety



Mobility & Accessibility



Economic Vitality



Land Use & Transportation Integration



Maintain & Optimize System



Well-Being & Environment



Evening Meeting Responses (6:30PM)

Describe transportation in Sandy Springs today.



Describe transportation in Sandy Springs in the future.



Safety



Mobility & Accessibility



Economic Vitality



Land Use & Transportation Integration



Maintain & Optimize System



Well-Being & Environment



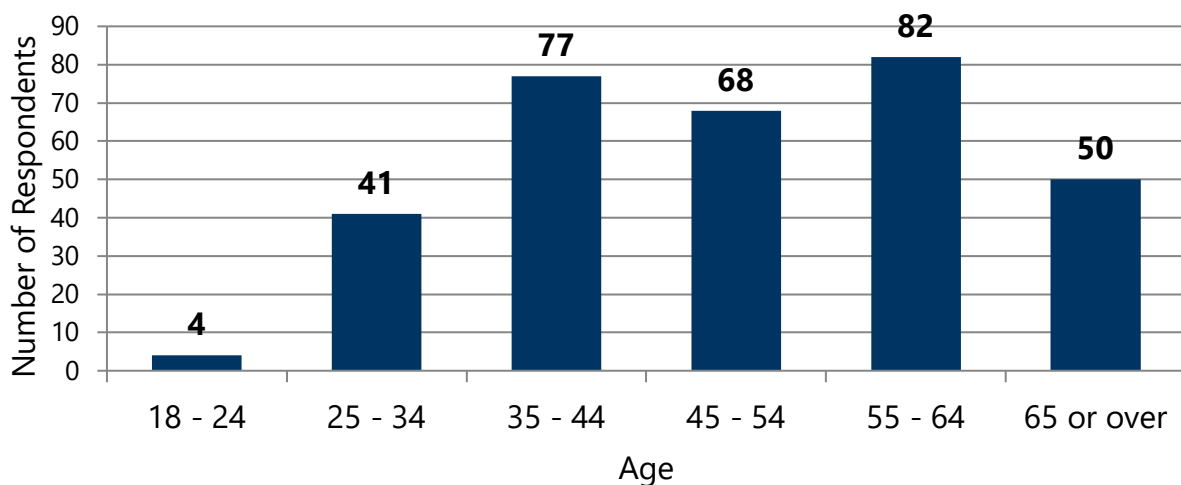
MetroQuest Online Survey

The MetroQuest online survey was open between June 18th and July 17th. The purpose of this online survey was to reach the public that were not able to attend the two virtual public meeting sessions. The online survey was advertised on Nextdoor, on Facebook, and in the Sandy Springs Newsletter as well as at the public meeting. The survey also offered a Spanish version.

The online activities mimicked the public meeting Catch Phrase activity to solicit feedback on the initial goals and locations for transportation improvements. On the last slide, there were optional questions that asked about travel habits. Overall, there were 843 individuals who visited the survey and 556 individuals who participated in the survey. Based on the results, 303 participants who took the survey are residents who live in Sandy Springs and 166 people who work in Sandy Springs.

Age of Respondents

There was a total of 322 participants that answered this optional question. Based on the age of respondents, engagement of the older population through a virtual environment was successful, but engagement of the population under the age of 35 was not as successful. The next round of outreach and engagement will have more targeted efforts for this age group.



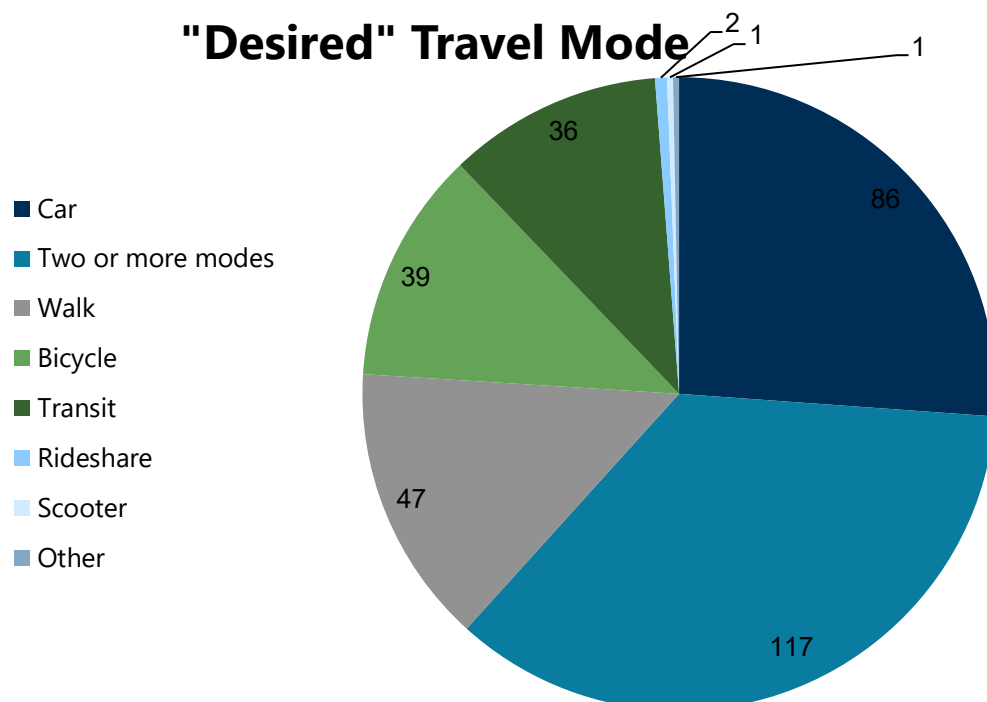
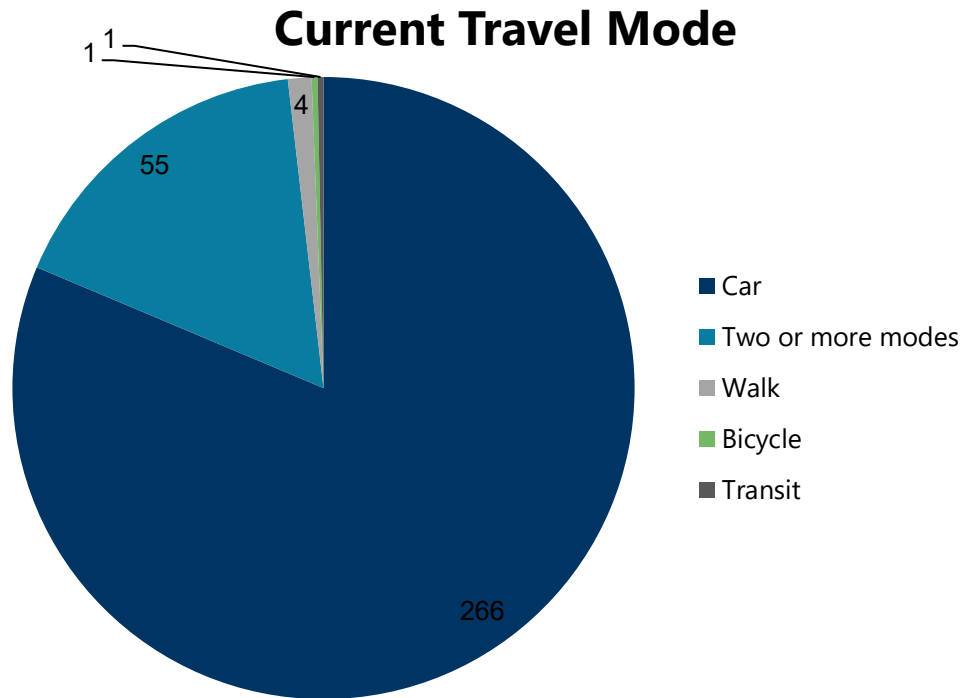
Mode of Transportation

Another question from the travel habits slide asked how participants are traveling today within the City and asked how participants would like to travel in the future. Currently, over 80% of people used a car to travel. There was a smaller percentage of respondents who said they use two or more modes – which could mean walking to transit, driving to transit, or even driving to a parking lot and walking the rest of the distance.

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There is more variability in the responses for the question about how people want to be traveling within Sandy Springs in the future. 26% of participants still wanted driving to be their main mode to travel, but there was a larger percentage of participants who wanted to walk, bike, take transit, or use a variety of these options together.

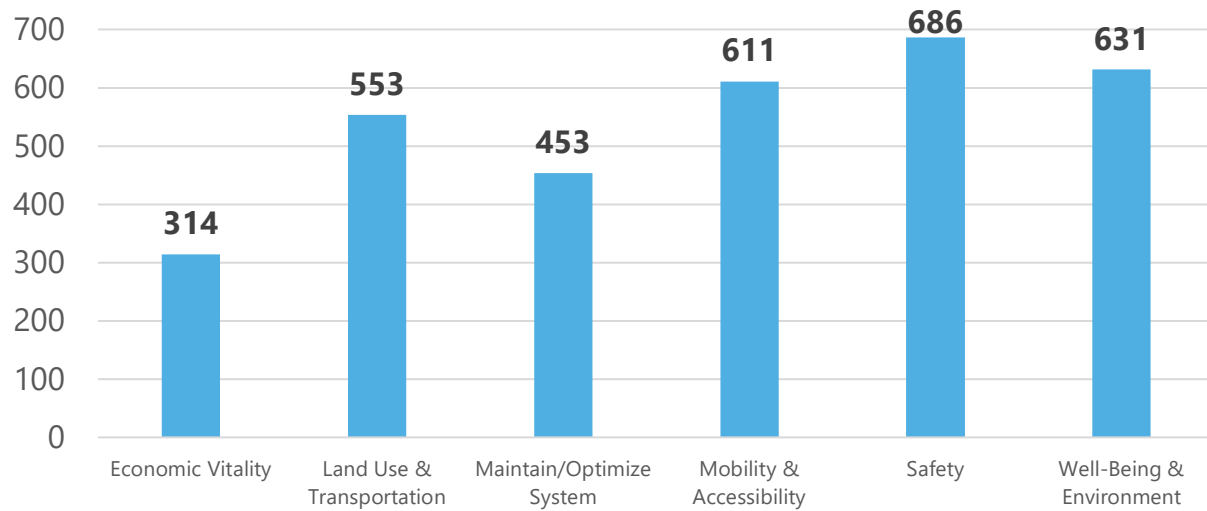


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Rank Your Top Goals

Participants were asked to rank their top three goals out of the six available goals. The highest ranked goals are Safety, Mobility and Accessibility, and Well-Being and Environment. Not far behind is integrating Land Use and Transportation.



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What Should the Goals Capture

Similar to the Catch Phrase activity, participants were asked to write two words or phrases to describe the top three goals chosen from the previous slide. Some words/themes that were mentioned multiple times are listed below.

Safety • Accessible • Adaptable • Bike Lanes • Side Paths • Sidewalks • Connected • Integrated • Traffic Calming Roundabouts	Mobility & Accessibility • Reduce Crashes • Air Quality • Better signage • Bike Lanes • Enforcement • Improve Intersections • Maintain Pavement • Pedestrian Safety • Safety • Separated Facilities • Sidewalks • Reduce Traffic/Volume • Traffic Control • Optimize Signal Timing • Better Lighting	Economic Vitality • Accessible • Interconnected • More alternative mode options • Public Transportation • Reduce Congestion • Sidewalks • Traffic Flow • Walkability • Bikeable • Ease of Use • Parks • ADA Accessible
Land Use & Transportation • Accessibility • Attractive • Connected • Investment • Local Businesses • Growth in Businesses • Pedestrian-Friendly • Walkability • Adequate Parking • Ease of Access • Vibrant	Maintain & Optimize System • Better Road Conditions • Efficiency • Fix Pavement • Maintenance • Optimize Traffic Flow • Continuously Improving • Leverage Technology Upgrades	Well-Being & Environment • Bike Lanes, Side Paths, and Sidewalks • Connection • Environmentally Responsible • Green Spaces / Parks • Healthy Living • Less Pollution • Sustainability • Walkability • Greenway / Trails • Tree Canopy

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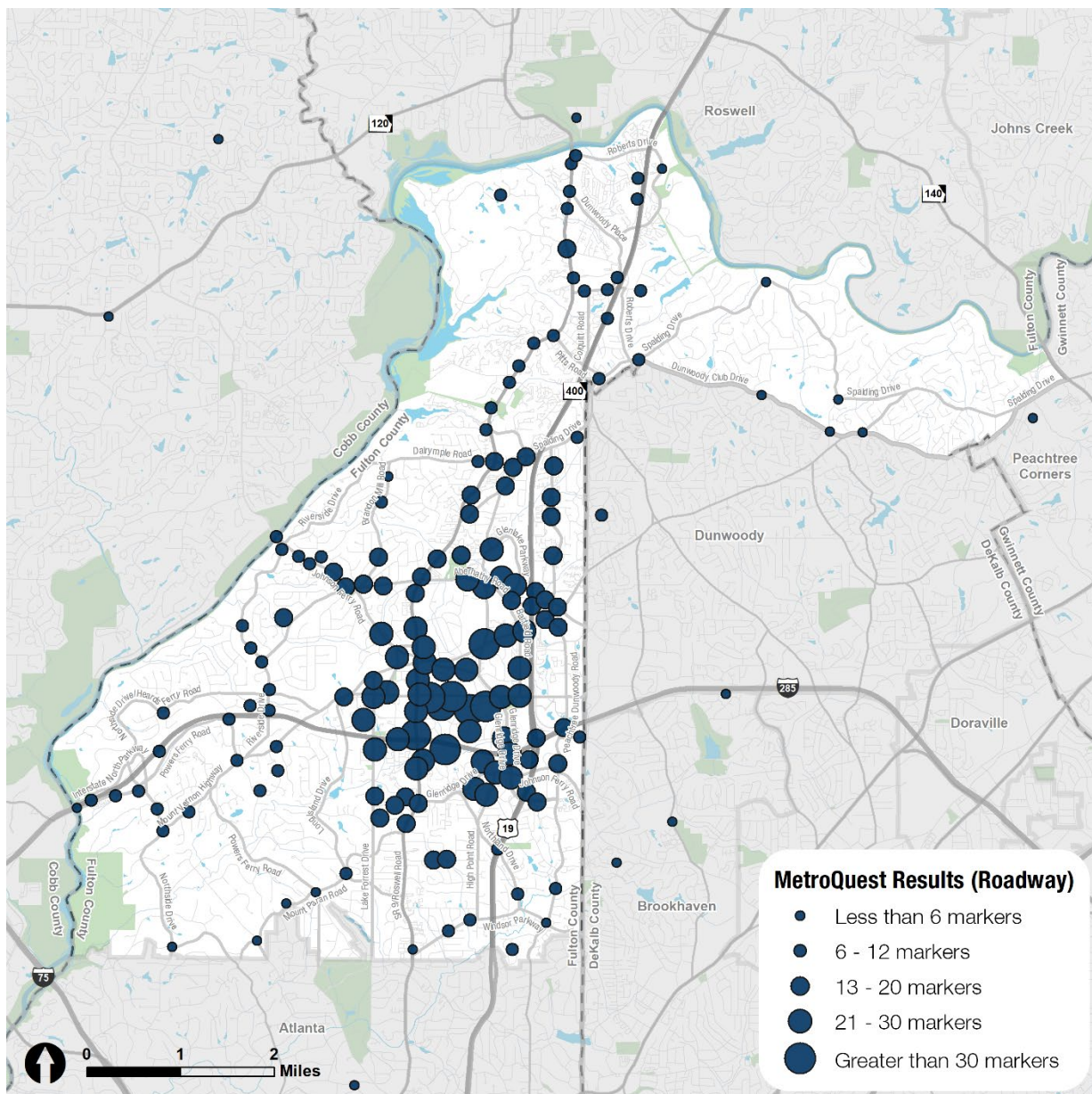
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What are the Improvements Needed?

One of the slides included a mapping feature where participants were instructed to identify on the map at least three transportation concerns of improvement. There were five options to mark on the map: Roadway, Transit, Pedestrian, Bicycle, and Other.

Roadway

There was a total of 338 markers placed about roadway facilities. The responses about roadway centered along Hammond Drive, Abernathy Road, and Roswell Road. The responses varied greatly, but included subjects such as roundabouts, speeding, and congestion. Lowering speeds was of high concern for the respondents.

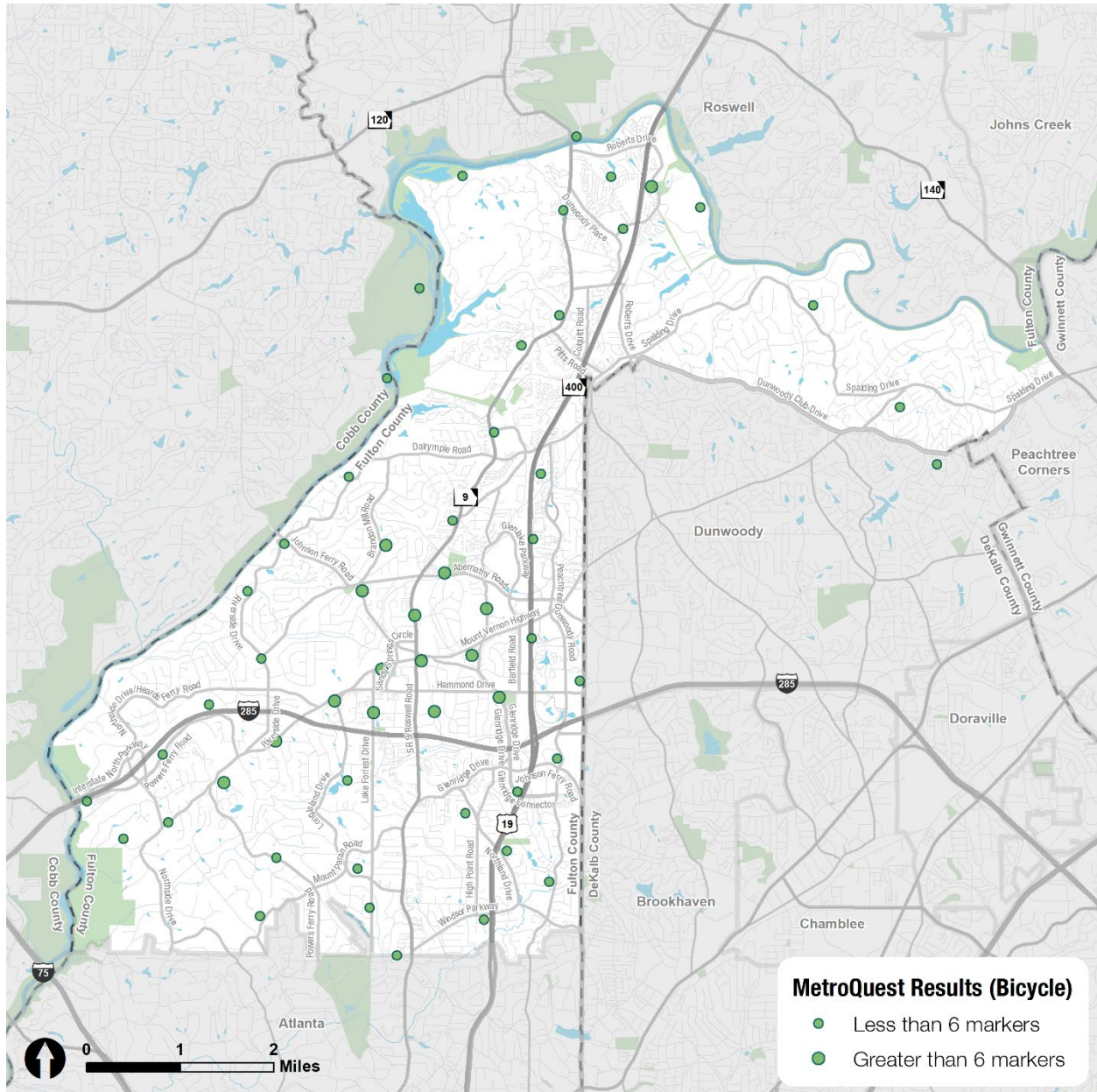


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Bicycle

There was a total of 145 markers evenly distributed around the city. Many respondents requested more bikes lanes and safer bike facilities.

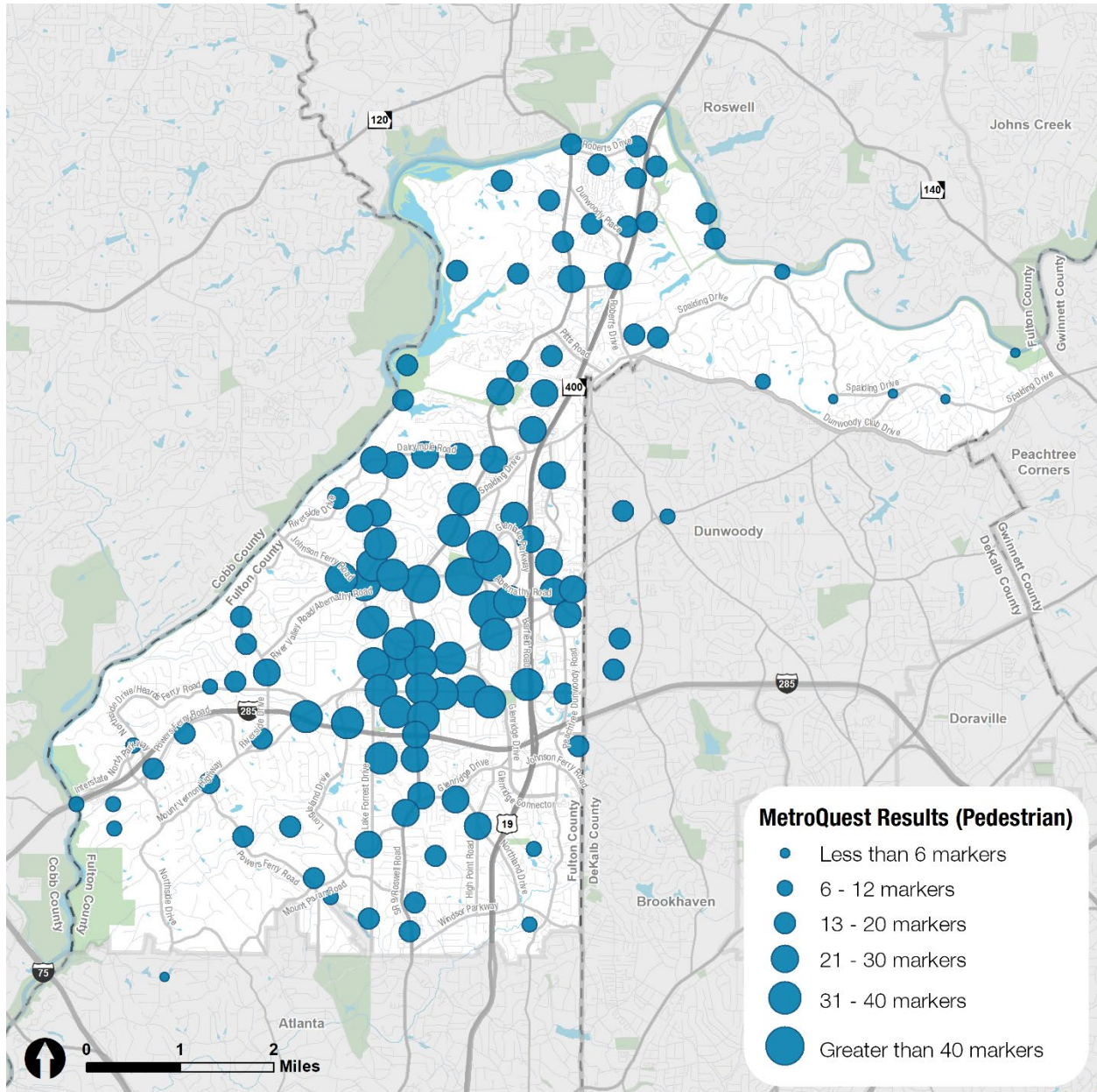


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Pedestrian

There was a total of 272 markers placed about pedestrian facilities. The respondents mostly provided insight into where there are gaps in the sidewalk network.

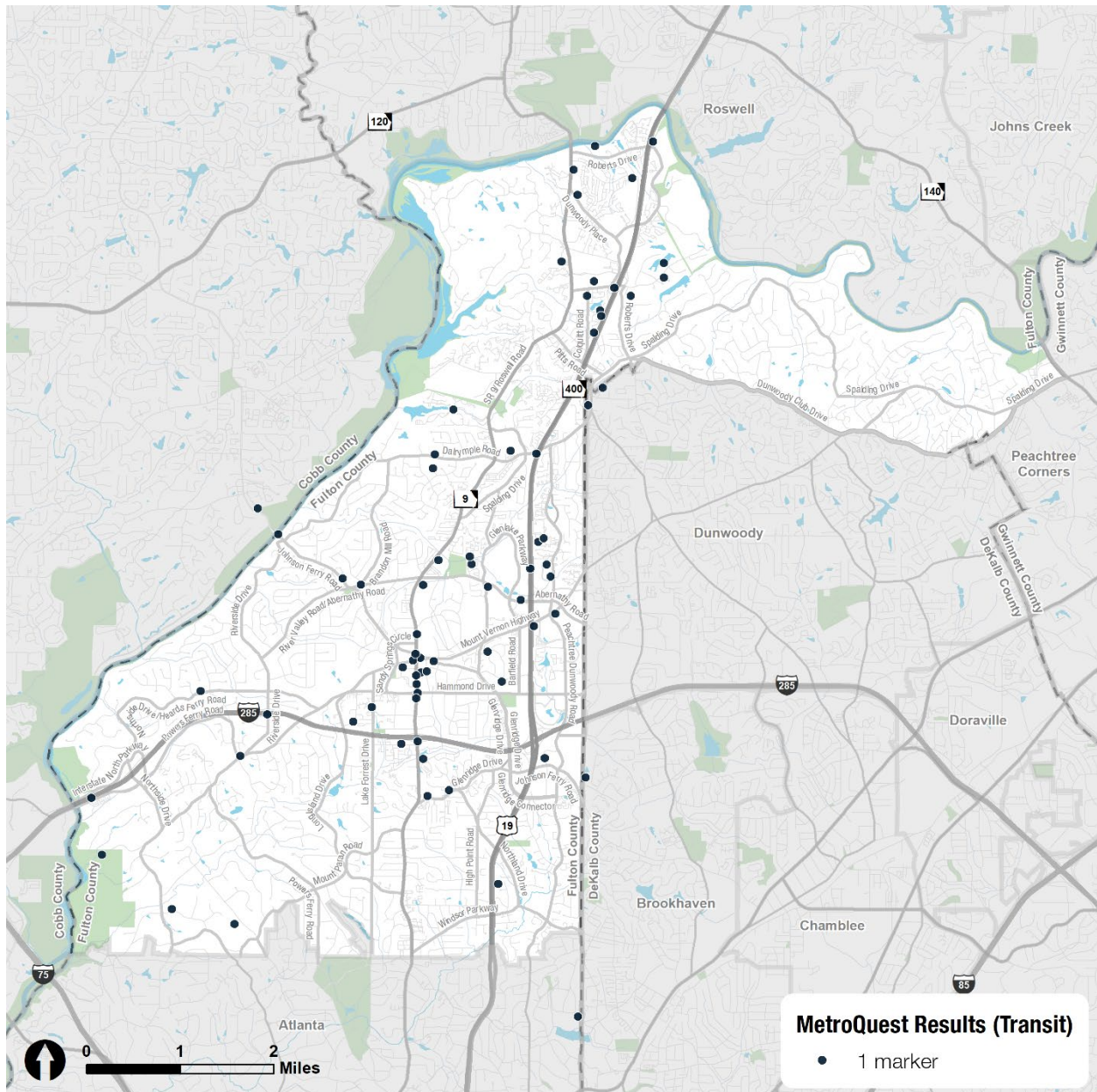


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Transit

There was a total of 72 markers placed about transit. The transit comments were based largely where existing transit routes already exist today – the comments that are in other areas were suggestions for providing additional connectivity within the City limits. Many comments were overall centered around providing better connectivity within Sandy Springs.

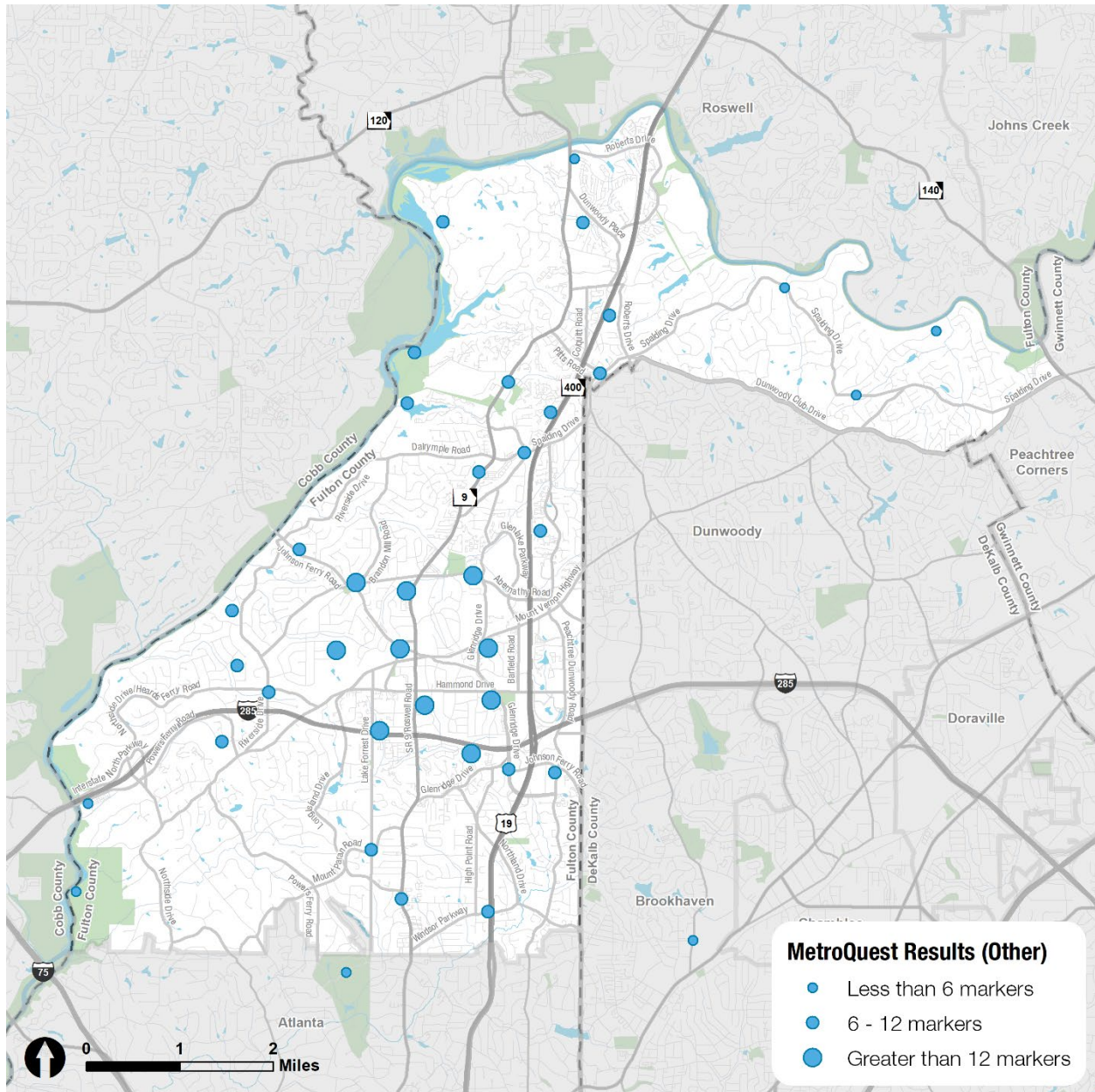


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Other

There was a total of 90 markers placed for the "Other" category. Some of the comments include improving parks, add street lighting, better navigation, add off leash dog parks, and potential sound barriers.



Public Meetings Summary – Round 2

The Sandy Springs Transportation Master Plan (TMP) will identify and recommend forward-thinking transportation projects and policies that improve mobility, safety, and transportation equity for all users. The plan will focus on innovative multimodal transport solutions that maximize use of existing infrastructure and expand mobility options for residents and visitors.

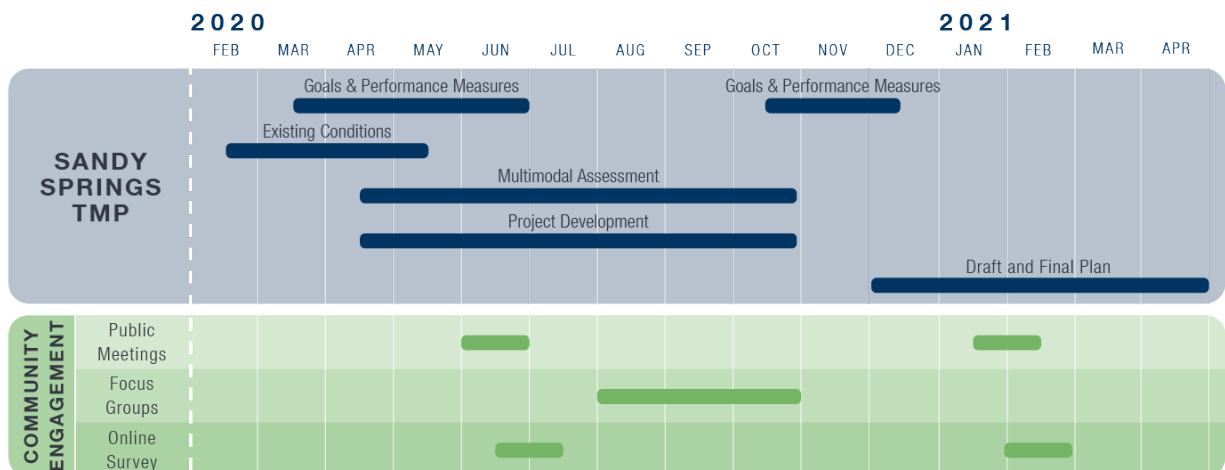
The Plan had two rounds of public engagement efforts. The first round of public meetings included two virtual public meetings and a MetroQuest survey conducted June 2020. The second round of public meetings included two virtual public meetings and an ESRI online feedback tool conducted January 2021. The following describes the second round of public engagement.

Introduction

Two public meetings were both held virtually on Thursday, January 28, 2021 at 11:30 AM and 6:30 PM, respectively. There was a total of 76 attendees at both meetings. Each meeting began with the project progress and schedule, then transitioned into the overview of the multimodal needs assessment findings. The main goal of the second round of public meetings was to introduce the proposed projects and policies to the public and receive strategic feedback on them. The meeting concluded with a demonstration of the ESRI online feedback tool.

The Planning Process

The planning process for the Transportation Master Plan started in February of last year and is anticipated to be finished by April 2021. Since the last round of public meetings back in June, the majority of effort has been for the Multimodal Assessment as well as the Project Development and Evaluation.



ESRI Online Feedback Tool

The ESRI Online Feedback Tool was open for public feedback between January 28th and February 18th. The purpose of this tool was to offer the public the opportunity to give project-specific feedback on projects proposed to be recommended as a part of the TMP. The public meetings and online feedback tool were advertised on Facebook, Nextdoor, City Calendar, City Newsletter, the Sandy Springs Neighbor and the Sandy Springs Reporter. English/Spanish postcards and posters were distributed to apartments and businesses within Sandy Springs. Notification was also sent to the following groups and organizations: Homeowner Associations, Sandy Springs Chamber of Commerce, Leadership Sandy Springs, Perimeter Connects, and Chamber of Commerce Young Professionals.

Online Feedback Tool Format

There were several tabs included along the top of the webpage that provided specific exercises for the public. The first tab provided instructions on how to navigate through the online feedback tool. The second tab included a survey to understand the participants travel habits. There were three interactive mapping tabs that displayed the proposed projects by mode: Bicycle and Walking, Transit, and Roadway. For each project in each tab, project information was available upon clicking the project as well as an opportunity to “like” or to leave specific comments for the project. The sixth tab contained another open-ended survey that asked, “What’s Missing”, giving the public an opportunity to provide a general comment or identify a specific project not contained within the interactive maps. Finally, the seventh tab was designed for frequently asked questions.

Overall, there were 1,210 visits to the site. There were 1,368 “likes” and 327 comments on projects, 279 individuals who participated in the Travel Habits Survey, and 98 individuals who participated in the What’s Missing survey. Based on the results, 222 participants who took the survey are residents who live in Sandy Springs and 130 people who work in Sandy Springs. Several participants both live and work in Sandy Springs.

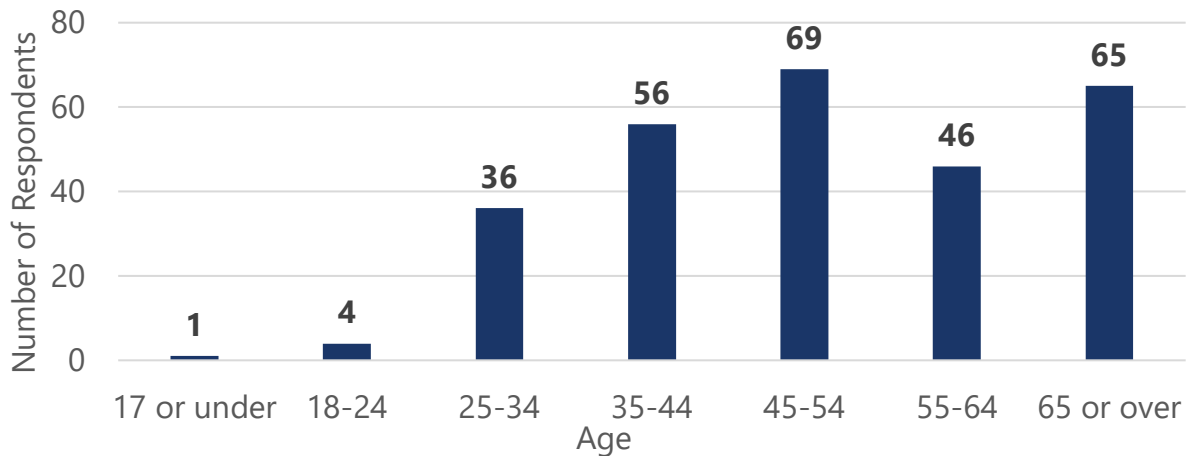
Travel Habits Survey

Age of Respondents

There was a total of 277 participants that answered this optional question. Like the first round of public engagement, there were a higher number of participants who were ages 45 or older, versus those who were 45 or younger.

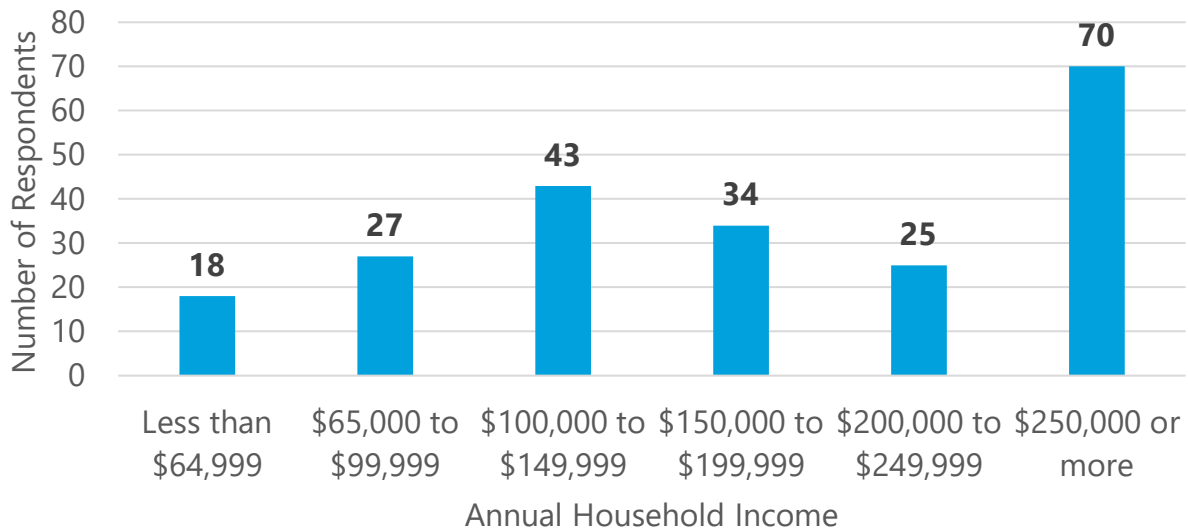
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Annual Household Income

There was a total of 261 participants that answered this optional question, 44 individuals answered, "Prefer not to answer". Based on the 217 numeric responses, approximately 44% of the participants have an annual household income of over \$200,000.

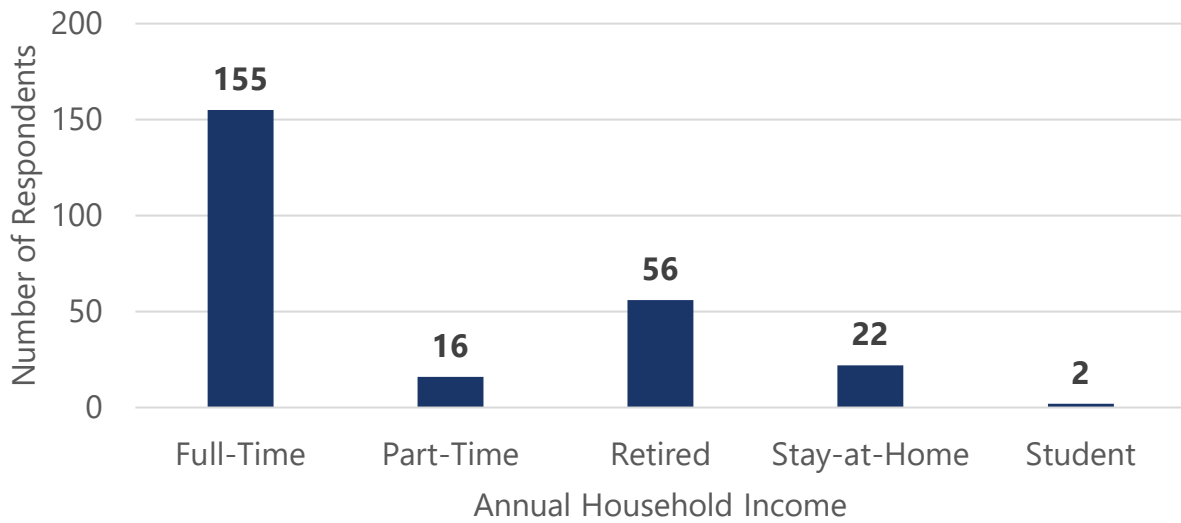


Employment Status

Participants were asked about their employment status to better understand the travel patterns, whether that be from home to work or work to run errands. Approximately 62% of the participants are employed full-time.

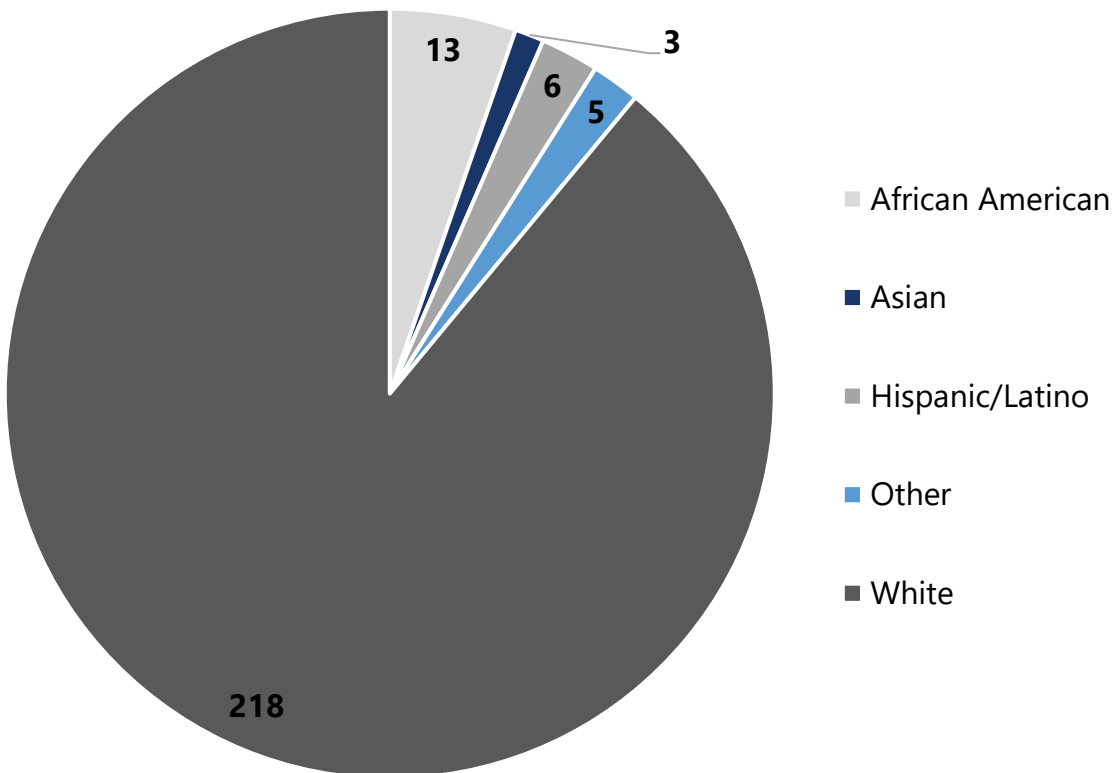
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Race

Finally, the last question on the Travel Habits survey was about race. Out of 262 responses, 17 participants answered with "Prefer not to answer". A large portion of the respondent population, approximately 89%, identifies as White.



Project Maps

The three interactive project map tabs, Bicycling and Walking, Roadway, and Transit, were developed to provide feedback on the draft list of projects for the Transportation Master Plan by mode. Project information was available upon clicking specific projects as well as an opportunity to “like” or to leave specific comments for the project.

Bicycling and Walking

There was a total of 828 likes, about 61% of total likes, for bicycle and pedestrian projects. Out of 828 likes, 152 likes were for bicycle projects, 593 likes were for sidewalk projects, and 83 likes were for trail projects. The project that received the most likes for the whole interactive mapping activity was the Abernathy Side Path from Roswell Road to Glenridge Drive with 45 likes. This is a critical gap in the bicycle network connecting the existing bike lanes along Johnson Ferry Road to the existing side path along Abernathy Road east of Glenridge Drive. The second most liked project was the GA 400 Multi-Use Trail North Study with 44 likes, and the third most liked project was the I-285 Multi-use Trail Study with 39 likes. Both projects propose feasibility studies for adding regional trails within Sandy Springs. The fourth most liked project was the Mt. Vernon Highway sidewalk connecting Glen Errol Road to existing sidewalks at 500 Mt. Vernon Highway with 32 likes. This sidewalk project will be prioritized in the Sidewalk Program.

There were several bicycle projects that received positive comments including: Glenridge Drive Side Path from Hammond Drive to South of Wellington Trace and Powers Ferry Drive Side Path from the City Limits to Dupree Drive. One of the consistent comments about the bicycle projects was designing appropriate facilities including adequate right-of-way, signage, striping, lighting, and safety measures.

There were several projects noted that the public suggested to consider lowering priority, these included: Barfield Road Bicycle Improvements from Mt. Vernon Highway to Abernathy Road and the Fulton County Annex Midblock Crossing. Comments related to Barfield Road included notes about the distance of the segment and the roadway conditions that make it a safer facility for bicyclists. The Fulton County Annex Midblock Crossing received comments that suggested moving the mid-block crossing closer to the QT due to the higher pedestrian movements noted near there.

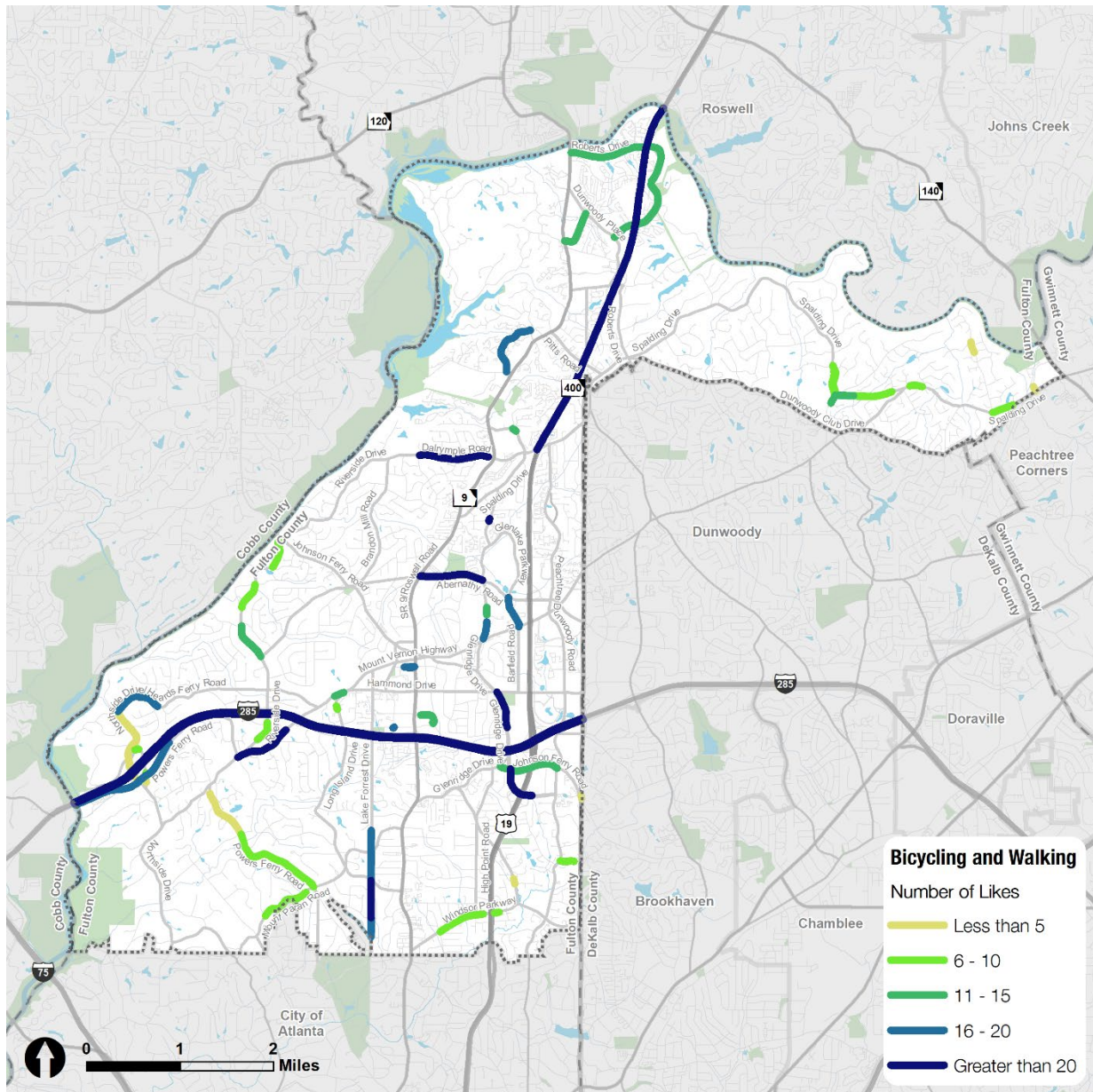
Both trail projects considered received supporting comments. While these project descriptions include a feasibility study, most of the comments were in favor to design and build the trail segments. Several comments regarding the I-285 trail suggest designing the trail a distance away from I-285 to reduce noise and air pollution. Additionally, comments suggested that the City consider appropriate access points to connect the proposed trail to existing local roadways or existing bicycle and pedestrian facilities.

Overall, the comments for the sidewalk projects were positive and encourage filling the gaps in the City’s sidewalk network. Some of the comments included suggestions like extending the

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segments, adding crosswalks, lighting, trashcans, and traffic calming measures. Some of the other comments suggested to prioritize other segments based off limited costs.

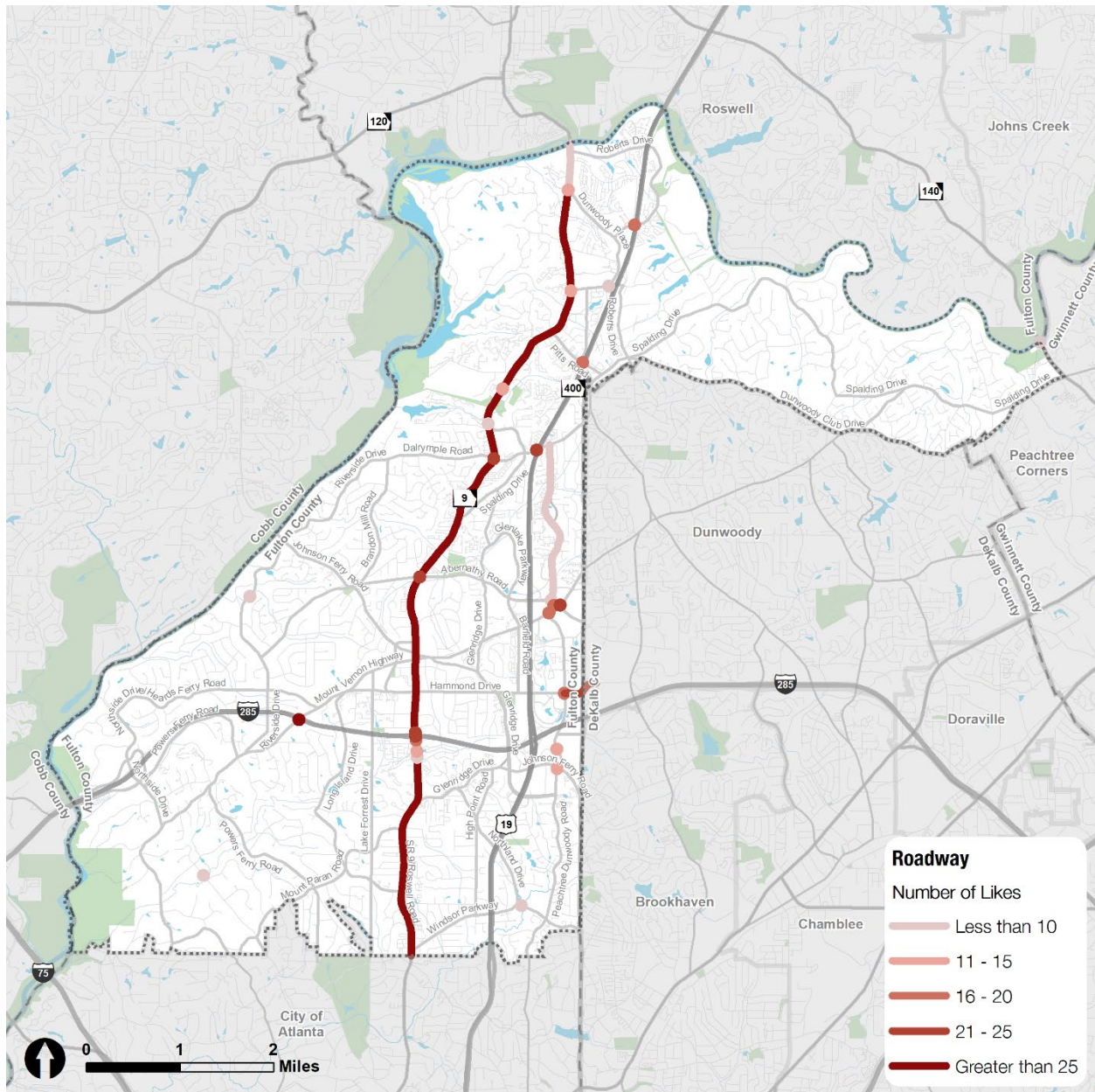


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Roadway

There was a total of 466 likes, about 34% of total likes, for roadway projects. Out of the 466 likes, 292 likes were for intersection projects, 104 likes were for bridge projects, 22 likes were for capacity projects, and 48 likes were for corridor projects. The top liked roadway project was the Roswell Road Access Management and Complete Streets Improvement with 29 likes. The second most liked roadway project was the I-285 Top End Bridge Enhancement crossing Mt. Vernon Highway with 26 likes.



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The GA 400 bridge projects across Spalding Drive, Pitts Road, and Roberts Drive proposes bicycle and pedestrian facilities and aesthetic enhancements as a part of the GDOT SR 400 Managed Lanes project. These projects received support to enhance bicycle and pedestrian safety at these locations. Other notable comments included projects along Windsor Parkway over Nancy Creek Bridge and Riverside Drive over Chattahoochee River Tributary Bridge, where the public asked for the City to complete a benefit-cost analysis.

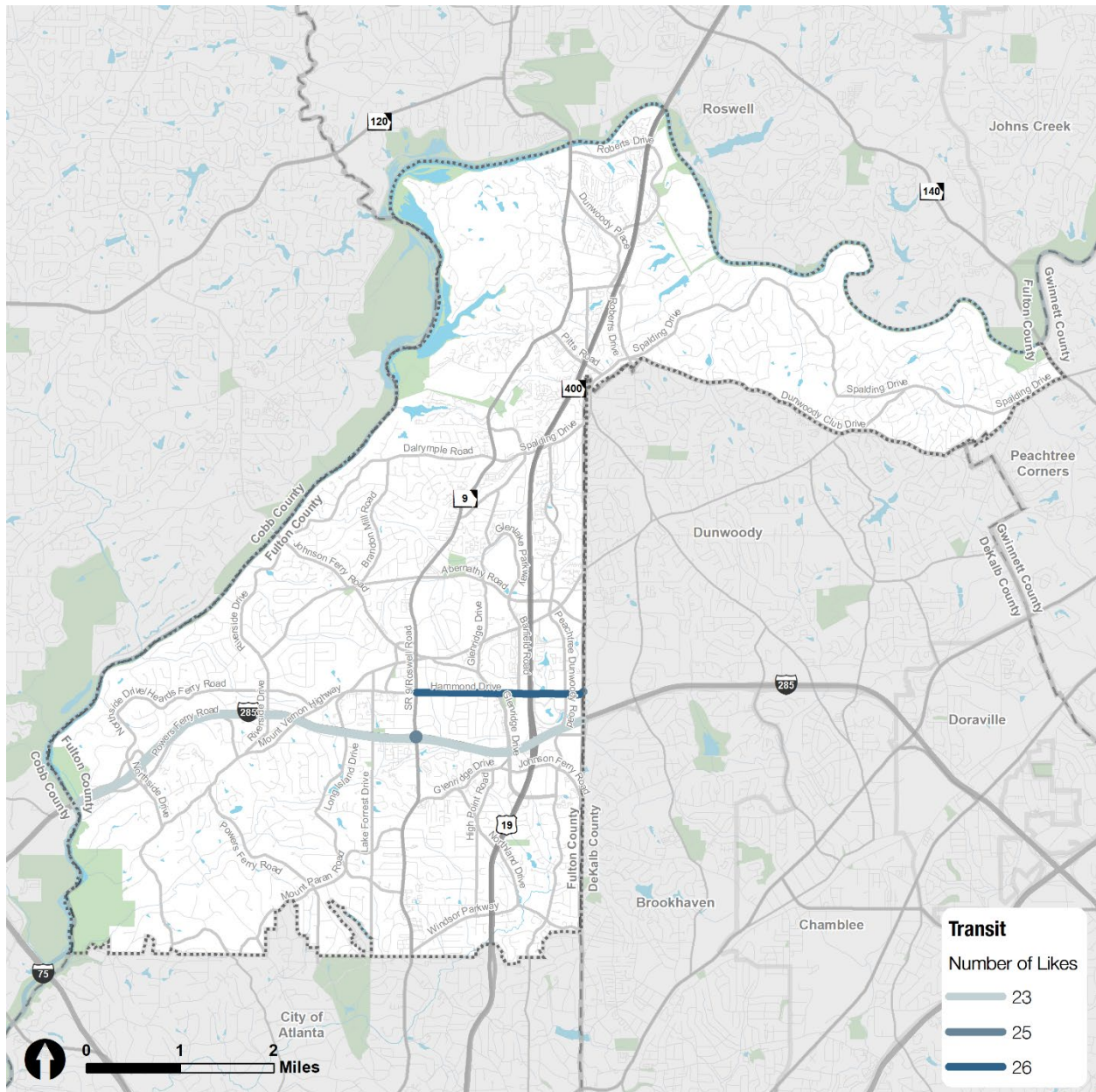
Most intersection comments were supportive and included additional improvements to consider like signal timing improvements, additional turn lanes, improved detection, signage, and signal design enhancements. Northridge Road at SR 400 SB specifically called out safety improvements including better signage and access management through medians.

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Transit

There was a total of 74 likes, about 5% of total likes, for transit projects. The top liked transit project was the Transit Signal Priority Supportive Improvements along Hammond Drive with 26 likes. The second transit project receiving the most likes was the I-285 at Roswell Road Station Area Study with 25 likes. The third most liked transit project was the I-285 BRT Feasibility Study with 23 likes.



What's Missing?

There was a total of 98 comments from the “What’s Missing” survey. The survey consisted of an open-ended comment box that gave the public an opportunity to provide a general comment or identify a specific project recommendation not contained within the interactive maps. The complete list of comments is attached to the pages that follow.

Project Comments

ID	Project Name	Comment
1001	Nesbit Ferry Road (Coles Way south to Ex. SW)	Only if this is a key "fill in the gaps" program.
1003	Spalding Drive (Old Cobblestone Drive to Jett Ferry Road)	Are you going to leave a shoulder for cyclists?
1003	Spalding Drive (Old Cobblestone Drive to Jett Ferry Road)	We need these sidewalks to go further along Spalding, especially heading north from there.
1004	Jett Ferry Road/Spalding Drive (Jett Ferry Court to Ryefield Drive)	Currently this is a very dangerous area for pedestrians.
1005	Spalding Drive (Ryefield Drive to SW at Spalding Heights Drive)	Definite need for safe pedestrian/bike use
1006	Spalding Drive (Nesbit Ferry to Spalding Lake Court)	In conjunction with the new bridge over Crooked Creek, Spalding sidewalk needs to be extended beyond Spalding Lk court to meet sidewalk at River Exchange & the new park. Justified by the large residential population west of Crooked Creek.
1008	Spalding Drive (Sagebrush Drive to Jett Ferry Road)	Again, drivers are aggressive in this area. Are you going to leave a shoulder for cyclists?
1008	Spalding Drive (Sagebrush Drive to Jett Ferry Road)	beginning of access to get residents to enjoy Crooked Creek
2001	Adair Lane (Grogans Ferry Road to Morgan Falls Road)	Yes. More sidewalks everywhere!!!
2001	Adair Lane (Grogans Ferry Road to Morgan Falls Road)	Please move forward with this.
2001	Adair Lane (Grogans Ferry Road to Morgan Falls Road)	There also needs to be a sidewalk added from the Grogans Bluff/Roswell Rd intersection to Adair Lane.
2001	Adair Lane (Grogans Ferry Road to Morgan Falls Road)	beginning of getting access north along the Roswell Road Corridor with OFF ROSWELL ROAD access
2002	Hope Road (Roswell Road to Dunwoody Place)	Assuming this is within the area that is being considered for holistic redevelopment, it would make sense to back-burner this project.
2002	Hope Road (Roswell Road to Dunwoody Place)	I jog on this road, and as much as I'd like to see sidewalks on both sides, the side walk on the east side is sufficient. There isn't enough traffic on this road that pedestrians can't just cross to the side that has a sidewalk for now.
3001	Allen Road (@ NE corner of SSC intersection & to ex. SW)	Assuming this provides safer pedestrian access to Allen Road Park, I'm in favor of it.
3001	Allen Road (@ NE corner of SSC intersection & to ex. SW)	This will better connect pedestrians to Allen Park! Good idea!
3001	Allen Road (@ NE corner of SSC intersection & to ex. SW)	need to connect as many parcels with sidewalks as possible - this is inexpensive and access Allen Road by many who would be able to safely walk to makr.
3002	Dalrymple Road (Glencourtney Drive to 605 Dalrymple Road)	Sidewalks along Dalrymple are essential to maximize the amazing resource that Lost Corners is.
3002	Dalrymple Road (Glencourtney Drive to 605 Dalrymple Road)	I don't see the need for this run of sidewalk. Why can't something be done about that bombed out shopping center on the SW corner of Roswell and Dalrymple?
3002	Dalrymple Road (Glencourtney Drive to 605 Dalrymple Road)	The road here is narrow with lots of cars. This is a good candidate for improvement.
3002	Dalrymple Road (Glencourtney Drive to 605 Dalrymple Road)	Sidewalks near highschools = no brainer!
3002	Dalrymple Road (Glencourtney Drive to 605 Dalrymple Road)	Obviously need a continuum of safe walking access to the high school!! not to mention if we hope to revitalize the businesses in that area
3002	Dalrymple Road (Glencourtney Drive to 605 Dalrymple Road)	Definitely an essential area for sidewalk. Students need safe walking access to school in addition to people who walk that route for exercise and to businesses on Roswell Rd.
3003	Dalrymple Road (Duncourtney Drive to Glencourtney Drive)	Sidewalks along Dalrymple are essential to maximize the amazing resource that Lost Corners is.
3003	Dalrymple Road (Duncourtney Drive to Glencourtney Drive)	Unless this connects to existing sidewalk that leads to Lost Corner Park, I'm not in favor of it. Price tag is high for the run of sidewalk proposed.
3003	Dalrymple Road (Duncourtney Drive to Glencourtney Drive)	The roadway is narrow here, and there's lots of car traffic. If there is foot traffic, we should add sidewalks to improve safety.
3003	Dalrymple Road (Duncourtney Drive to Glencourtney Drive)	Absolutely - we need to have safe walking sidewalks to connect to Roswell Road businesses, restaurants and imporantly the high school.
3003	Dalrymple Road (Duncourtney Drive to Glencourtney Drive)	This is a necessity as high schoolers walk to and from North Springs and others walk to and from Lost Corner and Roswell Rd. It's extremely dangerous to walk along the side of the roadway.
3003	Dalrymple Road (Duncourtney Drive to Glencourtney Drive)	This sidewalk should most definitely extend beyond Duncourtney, to Brandon Mill Rd and Lost Corner.

Project Comments

ID	Project Name	Comment
3004	Heards Ferry Road (Winterthur Way to Cameron Glen Drive)	This would be a much-needed extension of heavily-used sidewalk
3004	Heards Ferry Road (Winterthur Way to Cameron Glen Drive)	A multiuse path all the way to the river trail would be much better. I have to drive my bike to the river because it is too dangerous to ride on that portion of Heards Ferry.
3005	Northside Drive (Winterthur Way to I285)	Multiuse trail instead so bicycles can get to river trail safely.
3006	Hilderbrand Drive (Ex SW across from Police gym to Ex sidewalk at Roswell Rd.)	Yes sidewalks should be everywhere in the heart of Sandy Springs. People want to get out of cars and walk but needs to be safe.
3006	Hilderbrand Drive (Ex SW across from Police gym to Ex sidewalk at Roswell Rd.)	Improve walkability near the City Center!
3007	Hilderbrand Drive - Police gym to Roswell Rd	Yes, sidewalks everywhere in heart of Sandy Springs so easier and safer to leave car at home or parked when you are visiting multiple places.
3007	Hilderbrand Drive - Police gym to Roswell Rd	This is a no brainer with the recent completion of the north-south pedestrian path near the powerlines. Make this area more walkable!
3010	Mt. Vernon Highway (Ex. SW at DeClaire Court to Long Island Drive)	Bicyclers do not need or want trails where we already have roads.. Give us a marked lane like Dunwoody does.
3010	Mt. Vernon Highway (Ex. SW at DeClaire Court to Long Island Drive)	Sidewalk on the south side is sufficient. Over 1/4 million for a tenth of a mile is absolutely outrageous.
3010	Mt. Vernon Highway (Ex. SW at DeClaire Court to Long Island Drive)	And linking both sides of street East to City Springs
3010	Mt. Vernon Highway (Ex. SW at DeClaire Court to Long Island Drive)	Sidewalk not needed along both sides of the street. Instead extend the north sidewalk so it connects along Arlington to City Springs.
3012	Long Island Drive @ 5910 Gap Fill	Definitely support more sidewalk installation to our intermittent approach to date. Lighting should be a big part of it as well -- for public safety purposes. Also believe tat walking pats/sidewalks should be not immediately adjacent to the road.
3013	Interstate North Parkway (at 5665 New Northside Drive)	Sidewalk to nowhere, for the benefit of office workers who are unlikely to use it. Let the commercial owners in that area chip in for the cost, it's truly an amenity or necessity.
3013	Interstate North Parkway (at 5665 New Northside Drive)	The sidewalk should extend all the way to the river. Otherwise, there's no point,
3015	Riverside Drive (Edgewater Drive to River Valley Road)	This is a great way to link into the sidewalks on River Valley and get you into the heart of Sandy Springs.
4001	Glenridge Drive (Ex. SW at Glenridge Commons to Mt. Vernon Highway)	Crazy that there is no sidewalk here when so many people walk to and from the church
4002	Glenridge Drive (Messina Way to Ex. SW at Spalding Trace)	This project will greatly enhance walkability on the west side of Glenridge Drive. Thank you for including it in the TMP.
4002	Glenridge Drive (Messina Way to Ex. SW at Spalding Trace)	If you do this project are you going to reduce the width of the shoulder and make the location less safe for cyclists?
4002	Glenridge Drive (Messina Way to Ex. SW at Spalding Trace)	Given the limited use of the sidewalk on the east side of Glenridge over the proposed path, is this needed?
4002	Glenridge Drive (Messina Way to Ex. SW at Spalding Trace)	My family and I walk over the mud here multiple times/week. Thank you for when this is completed
4002	Glenridge Drive (Messina Way to Ex. SW at Spalding Trace)	This is a well-needed extension as shown by the ware from foot-traffic. An additional sidewalk is needed along Glendridge Dr to connect to the future March Creek Trail and to Aria.
4002	Glenridge Drive (Messina Way to Ex. SW at Spalding Trace)	This is much needed and a bargain compared to other proposed projects.
4002	Glenridge Drive (Messina Way to Ex. SW at Spalding Trace)	This is a much needed improvement. I walk this often and have to get on the road with cars so this will be very helpful
4002	Glenridge Drive (Messina Way to Ex. SW at Spalding Trace)	My family walks this way every day, either through the mud, or by crossing the street at Messina with a double stroller.
4003	Glenridge Drive (Ex. Sidewalk at Glenridge Close to Mt. Vernon Hwy)	Yes to better access to parks for people on that side of the road.
4004	Trowbridge Road (Spalding Trail to Trowbridge Lake Drive)	Needed!
4004	Trowbridge Road (Spalding Trail to Trowbridge Lake Drive)	You can tell by the worn-out grass that this is needed.
4004	Trowbridge Road (Spalding Trail to Trowbridge Lake Drive)	An important connection point to connect neighborhoods and the multi family units on Trowbridge...Need now

Project Comments

ID	Project Name	Comment
4004	Trowbridge Road (Spalding Trail to Trowbridge Lake Drive)	Serving the High School students is important
5002	Carpenter Drive (Allen Road to Cliftwood Drive)	Assuming it will be plenty of use and improve pedestrian safety, I'm in favor of it. What sort of surveys are being done of traffic, pedestrian activity, etc. with regard to all of your proposed projects?
5002	Carpenter Drive (Allen Road to Cliftwood Drive)	This would greatly increase pedestrian safety, especially around the bend which cars tend to speed around. There are a fair amount of pedestrians with the retirement home and apartments.
5002	Carpenter Drive (Allen Road to Cliftwood Drive)	in favor of increasing sidewalk accessibility for safe walking - but would want to see how this usage count would compare with others as you prioritize ones to be done first
5003	Evergreen Drive (Ex SW at Greenwood Close to PDR)	not necessary. very few houses or occupants on this stretch of road. save for another time when it is needed
5003	Evergreen Drive (Ex SW at Greenwood Close to PDR)	Again, it would be nice to know what the pedestrian demand is here. One positive is that it would afford a safe connection to Trimble and its sidewalks, which would afford access to Ridgeview Park.
5003	Evergreen Drive (Ex SW at Greenwood Close to PDR)	yes we need sidewalks throughout Sandy Springs - but need to know how many would/could use this. Access to a park is a huge plus
5005	Northland Drive (Landmark Drive to Ex. SW at Northland Ridge Trail)	Important to get connections down Northland to Windsor - and each section helps
5005	Northland Drive (Landmark Drive to Ex. SW at Northland Ridge Trail)	Please also consider adding crosswalks, lighting, trashcans and lowering the speed limit here.
5007	Windsor Parkway (GA 400 Bridge to 721 Windsor Parkway)	Existing sidewalk on the north side of Windsor Parkway is sufficient. Huge difference between price tags for all of these segments proposed on the south side. What's the issue? Are you acquiring ROW?
5007	Windsor Parkway (GA 400 Bridge to 721 Windsor Parkway)	All sidewalks should be accompanied by better/safer lighting and frequent public trash receptacles. Also attention to lower speed limits on these commuter roads that are still residential. Hi Point, Northland, Windsor
5007	Windsor Parkway (GA 400 Bridge to 721 Windsor Parkway)	Please consider also adding crosswalks, trash cans, and lighting along this sidewalk.
5008	Windsor Parkway (High Point Road to 635 Windsor Parkway)	There is sidewalk on the north side of Windsor Parkway here. Unless this is to complete a connection on the south side, I'm not in favor of it. Price tag is huge for 0.06 miles.
5008	Windsor Parkway (High Point Road to 635 Windsor Parkway)	Please also consider adding lighting, crosswalks and trashcans. If more foot traffic is what we are going for, consider lowering the speed limit as well.
5010	Windsor Parkway (Ex. SW at 445 Windsor Parkway to Pine Haven Drive)	This one at least is priced reasonably. But what's the need when there is continuous sidewalk on the north side and huge need elsewhere in SS?
5010	Windsor Parkway (Ex. SW at 445 Windsor Parkway to Pine Haven Drive)	I like that people can have sidewalks to walk or take kids or pets for walks. Priority should be given to the sides where there is no sidewalk at all. You must standardize pricing for these projects along the whole Windsor Parkway to cover more. Thanks.
5011	Windsor Parkway (Dalmer Road to Ex. SW at 435 Windsor Parkway)	Is this for purposes of connecting existing sidewalk segments? If not, I don't support it.
5011	Windsor Parkway (Dalmer Road to Ex. SW at 435 Windsor Parkway)	connecting sidewalks along Windsor Parkway from Peachtree Dunwoody to Roswell Road is important for safety, and to encourage less automobiles...but should include bicycle accommodations along this key roadway. Windsor Park with the YMCA Soccer fields
5011	Windsor Parkway (Dalmer Road to Ex. SW at 435 Windsor Parkway)	Connecting sidewalks is a great idea. The sidewalk work already done along Windsor Parkway from Brookhaven to Peachtree Dunwoody has been a success. It would be ideal if crosswalk lines were added at each intersection with a traffic light.
6001	Lake Forrest Drive (Burdette Road to Mt. Paran Road)	It is difficult now for cyclists on Lake Forrest in this location. Are you going to reduce the width of the shoulder and make this area less safe for cyclists?
6001	Lake Forrest Drive (Burdette Road to Mt. Paran Road)	This should be continued all the way along Lake Forrest and connect to the new multi-use trail on I-285.
6001	Lake Forrest Drive (Burdette Road to Mt. Paran Road)	It would be helpful for all of your proposed sidewalk projects if the description included any info as to existing sidewalks in the area. Are there any there now? And what is pedestrian traffic like in the area?
6001	Lake Forrest Drive (Burdette Road to Mt. Paran Road)	Lake Forest needs a multi use path all the way to Chastain. Too dangerous to bike on Lake Forest or Roswell Road.

Project Comments

ID	Project Name	Comment
6001	Lake Forrest Drive (Burdette Road to Mt. Paran Road)	LakeForrest needs to have sidewalks from Burnett's to Chastain Park.
6002	Lake Forrest Drive (Forrest Lake to City Limit)	Lake Forest needs a multiuse path all the way to Chastain Park. Too dangerous to bike on Lake Forest or Roswell Road.
6002	Lake Forrest Drive (Forrest Lake to City Limit)	Are there sidewalks along Lake Forrest in the City of Atlanta to tie down to Chastain Park. If not, why would SS spend money unless it coordinates with COA?
6002	Lake Forrest Drive (Forrest Lake to City Limit)	Coordination is underway with City of Atlanta, which has plans to build sidewalks along its portion of Lake Forrest
6004	Mt. Vernon Highway (Glen Errol Road to Ex. SW at 500 Mt. Vernon Highway)	Where we need sidewalk on Mt, Vernon is in front of the cemetery where there is no sidewalk on either side. This is a very dangerous area for the many walkers that traverse this area, which includes anyone who want to walk to City Center
6004	Mt. Vernon Highway (Glen Errol Road to Ex. SW at 500 Mt. Vernon Highway)	I agree with the comment below. The only places sidewalk should be added is where there is none existing on either side of the road. There is a huge need for sidewalks in SS, and they should be built in a more equitable fashion.
6004	Mt. Vernon Highway (Glen Errol Road to Ex. SW at 500 Mt. Vernon Highway)	First put sidewalks on Mt Vernon by cemetery.
6004	Mt. Vernon Highway (Glen Errol Road to Ex. SW at 500 Mt. Vernon Highway)	I support adding a sidewalk along this portion of Mt. Vernon Hwy. It is dangerous to cross Mt. Vernon Hwy from the south due to no traffic signal or pedestrian crosswalk, from Powers Ferry Rd to Heard's Ferry Road.
6004	Mt. Vernon Highway (Glen Errol Road to Ex. SW at 500 Mt. Vernon Highway)	I support a sidewalk on the south side of Mt. Vernon Highway. It is a very busy road with curves. It is very dangerous crossing this road. I do also agree that sidewalks are needed in front of the cemetery
6004	Mt. Vernon Highway (Glen Errol Road to Ex. SW at 500 Mt. Vernon Highway)	I support finishing the sidewalks on the south side of Mt Vernon. Currently, if you want to walk on sidewalks from Glen Errol, you must cross the road without the help of a light or a crosswalk. It is ver hazardous as there are blind curves and speeders.
6004	Mt. Vernon Highway (Glen Errol Road to Ex. SW at 500 Mt. Vernon Highway)	AND in front of Cemetery - ideally both sides of Mt V
6004	Mt. Vernon Highway (Glen Errol Road to Ex. SW at 500 Mt. Vernon Highway)	I support this project. As a neighbor living off of Glenn Errol and a daily walker using Mount Vernon, this would be helpful to avoid crossing Mt Vernon without a light and crosswalk markings. Also, it would allow to walk in the shade on a hot day!
6004	Mt. Vernon Highway (Glen Errol Road to Ex. SW at 500 Mt. Vernon Highway)	It is a very busy road and has a lot of traffic by cars , walkers , runners and bicylers.Magdi Hanafi, MD
6004	Mt. Vernon Highway (Glen Errol Road to Ex. SW at 500 Mt. Vernon Highway)	I support this sidewalk extension project in order to make this area safer for its many walkers/runners.
6005	Mt. Vernon Hwy (Powers Ferry Road to Glen Errol Road)	Bicyclers do not want trails where we already have roads. Give us marked bicycle lanes like Dunwoody does.
6005	Mt. Vernon Hwy (Powers Ferry Road to Glen Errol Road)	Why is it that private schools are getting neighborhood to school connectors and that is not the same for our public schools, in particular, Lake Forest ?
6005	Mt. Vernon Hwy (Powers Ferry Road to Glen Errol Road)	I would like to see a sidewalk built on the south side of Mt. Vernon Hwy, as it is difficult and dangerous for pedestrians to cross Mt. Vernon Hwy without any traffic signal from Powers Ferry Rd all the way to Heard's Ferry Road.
6005	Mt. Vernon Hwy (Powers Ferry Road to Glen Errol Road)	I support finishing the sidewalks
6005	Mt. Vernon Hwy (Powers Ferry Road to Glen Errol Road)	Yes, please add a sidewalk. Very dangerous crossing occurs all the time here.
6007	New Northside Drive (Ex. Driveway to Powers Ferry Rd)	Not sure this is necessary or a priority.
6007	New Northside Drive (Ex. Driveway to Powers Ferry Rd)	This is also an area where there needs to be sidewalks on both sides of Powers Ferry. It is dangerous shifting from side to side to get to the sidewalks.
6008	New Northside Drive (ex. Driveway and Powers Ferry Road)	I don't see anyone walking here - this one may not be necessary.
6008	New Northside Drive (ex. Driveway and Powers Ferry Road)	I walk this area multiple times each week and observe others doing the same. All have to dodge traffic where there are no sidewalks or existing ones shift to opposite side of the street.

Project Comments

ID	Project Name	Comment
6008	New Northside Drive (ex. Driveway and Powers Ferry Road)	I also walk this area multiple times/ week. There needs to be sidewalks on both sides of Powers Ferry. It is dangerous to cross the street at all times of the day due to high traffic.
6014	Powers Ferry Road (Carol Lane to Mt. Paran Road)	No trail on Powers Ferry. There is no room and the road has many blind spots which could lead to collisions between cars, pedestrians and bikers. Please place this on a street with better sight lines.
6015	Powers Ferry Road (Crest Valley Drive to Carol Lane)	I would be scared to even walk on a side walk on Powers Ferry. I wouldn't advise spending money here.
6015	Powers Ferry Road (Crest Valley Drive to Carol Lane)	This project is long overdue. There should be a sidewalk running from Mt. Vernon Hwy to Chastain park.
6016	Powers Ferry Road (Reds Ridge Court to Crest Valley Drive)	You should be able to travel from Mt. Vernon Hwy to Chastain park on a sidewalk.
6017	Powers Ferry Road (New Northside Drive to 6201 Powers Ferry Road)	Asked this on earlier Powers Ferry item: status of raised lane for I285 and how integrate with sidewalk. I like in One River Place and crossing bridge to walk or bike at Cochran Shoals can be difficult when traffic is heavy.
6017	Powers Ferry Road (New Northside Drive to 6201 Powers Ferry Road)	As a resident of One River Place, there needs to be a sound barrier that blocks sound from the raised express lanes on 285.
6017	Powers Ferry Road (New Northside Drive to 6201 Powers Ferry Road)	I live at One River Place. There needs to be a full sidewalk on the northbound side of the road from River Place connecting to the bridge and from the bridge to the pedestrian path leading Cochran Shoals. Also, need a cross walk.
6020	Riverside Drive (5758 Riverside Drive to Fair Oaks Manor NW)	I support this project as it provides an alternate walking path with a sidewalk for the community.
6022	Mt. Paran Road (Rebel Trail to Laurel Chase Court)	Absolutely! And it really needs to keep going beyond that towards the west. It's scary to drive on this road with people walking/running along.
6023	Lake Forrest Drive (Long Island Drive to Forrest Lake Drive)	This one makes a bit more sense to me than the last, given that it affords a connection to Chastain Park for people walking from Long Island and the multifamily properties along Roswell Road. Again, are there any existing sidewalks along this stretch?
6023	Lake Forrest Drive (Long Island Drive to Forrest Lake Drive)	Lake Forest needs a multiuse path all the way to Chastain Park. Too dangerous to bike on Lake Forest or Roswell Road.
6023	Lake Forrest Drive (Long Island Drive to Forrest Lake Drive)	This is Lake Forrest Road, not Drive right?
6023	Lake Forrest Drive (Long Island Drive to Forrest Lake Drive)	no brainer...
6024	Lake Forrest Drive (Mt. Paran Drive to Long Island Drive)	We need more sidewalks as well as a flashing light to enable joggers and pedestrians to cross safely. Many motorists do not stop at the 4 way stop completely and ignore pedestrians.
6024	Lake Forrest Drive (Mt. Paran Drive to Long Island Drive)	Very high price to serve areas where the vast majority of residents will be in cars, anyway.
6024	Lake Forrest Drive (Mt. Paran Drive to Long Island Drive)	Lake Forest needs a multiuse path all the way to Chastain Park. Too dangerous to bike on Lake Forest or Roswell Road.
6024	Lake Forrest Drive (Mt. Paran Drive to Long Island Drive)	This needs to be extended ALL the way to Mt. Vernon Road. Why has the North tip of Lake Forest been ignored?
6024	Lake Forrest Drive (Mt. Paran Drive to Long Island Drive)	This is an important connection to Chastain Park and to retail centers on Roswell Road. Very badly needed
6024	Lake Forrest Drive (Mt. Paran Drive to Long Island Drive)	side walk would increase home value and prevent future accidents with pedestrians...also prevents unsightly trails through peoples yards
A_001	Barfield Rd Bicycle Improvements, from Mt. Vernon Hwy to Abernathy Rd	I'm an avid cyclist, but this road is short and already safe for cyclists, since it does not have heavy car traffic. I feel this money could be better spent elsewhere.
A_001	Barfield Rd Bicycle Improvements, from Mt. Vernon Hwy to Abernathy Rd	I agree with the previous comment. \$6,500,000 for this short connection? You could spend the money more efficiently.
A_001	Barfield Rd Bicycle Improvements, from Mt. Vernon Hwy to Abernathy Rd	I agree with the comments below. Very high price for something that is not necessary given the existing traffic and road configuration. Enhanced streetscape on a street where residential is behind a wall and commercial is set back is a waste.
A_001	Barfield Rd Bicycle Improvements, from Mt. Vernon Hwy to Abernathy Rd	Agree with other comments. Road size and the amount of traffic don't make this a high priority for improvement, and for such a high price tag, this money can be better-spent elsewhere.
A_001	Barfield Rd Bicycle Improvements, from Mt. Vernon Hwy to Abernathy Rd	If we want to avoid car traffic - need to have safe bicycling options to major employment areas..and also allow for recreation riders and walkers
A_007	GA 400 Multi-Use Trail North Study	Don't just study it. Build it.
A_007	GA 400 Multi-Use Trail North Study	Any extension of the GA 400 multi-use trail would be welcome.

Project Comments

ID	Project Name	Comment
A_007	GA 400 Multi-Use Trail North Study	100% please move forward with this
A_007	GA 400 Multi-Use Trail North Study	What is the constuction cost? Cost of study vs. completion?
A_007	GA 400 Multi-Use Trail North Study	I'm in favor of any trail network that affords access to the Chattahoochee and expands multiuse trail networks such as the GA 400 Trail. BUT we need progress updates on status of construction of this trail in SS, and status of Federal grant applications.
A_007	GA 400 Multi-Use Trail North Study	Huge benefit to a lot of people--Do it!
A_007	GA 400 Multi-Use Trail North Study	Please do it!!!
A_007	GA 400 Multi-Use Trail North Study	Connect this to PATH 400 or to Big Creek Parkway
A_007	GA 400 Multi-Use Trail North Study	Yes - for the relatively small \$\$ we need to complete trail studies to get a comprehensive study in place to maximize benefi of total expenditures so are shovel ready as grant funds become available.
A_007	GA 400 Multi-Use Trail North Study	this is overdue get on with it
A_007	GA 400 Multi-Use Trail North Study	Support extension of any and all walking.biking opportunities, especially able to connect with other such projects (Path 400), eventually to beltline, to east and west biking corridors (Silver Comet Trail)
A_010	I-285 Multi-use Trail Study	Yes, more bike paths
A_010	I-285 Multi-use Trail Study	This multi-use path would GREATLY enhance connectivity for pedestrians and cyclists in the area
A_010	I-285 Multi-use Trail Study	Good for recreation, but a path from nowhere to nowhere is pointless. need more vision
A_010	I-285 Multi-use Trail Study	This is a great idea, please explore this
A_010	I-285 Multi-use Trail Study	Each time the new i285 trail passes over or under a road bridge there should be easy access to that road (Lake Forest, Mont Vernont, Long Island) for bikers and walkers to leave the trail and continue on the existing road (where they live or parked a car)
A_010	I-285 Multi-use Trail Study	There is no point spending the money on planning for this unless and until DOT agrees to cooperate and afford the needed ingress and egress points. I love increasing access to units of the Chattahoochee Park, but I-285 corridor is noisy and exhaust-filled
A_010	I-285 Multi-use Trail Study	The Trail Study should involve connecting the the amazing city resources of Chastain and the Chattahoochee National Park. In addition there should be a connector to ALL public schools so biking to school is a safe option and alternative to driving/carpool
A_010	I-285 Multi-use Trail Study	Anything we can do to get the bicycles off the street is good. It is dangerous for bicyclists to be on the streets.
A_010	I-285 Multi-use Trail Study	The study will need to consider the impacts of the MMIP project on the northern arc of 285
A_010	I-285 Multi-use Trail Study	Would prefer a bicycle/walking trail away from the noice and congestion of I285.
A_010	I-285 Multi-use Trail Study	Walking or biking parallel to a 10 lane highway doesn't sound attractive at all. Noise and air pollution is extremely high along that ccorridor.
A_047	Johnson Ferry Rd Side Path, from Glenridge Dr to Peachtree Dunwoody Rd	It would be very helpful to know how/if this proposed path (vs. the proposed improvements to the Glenridge Connector) syncs up with PATH 400. I'm in favor of anything that enhances PATH 400.
A_049	Abernathy Side Path, from Roswell Road to Glenridge Drive	Is this on both sides of the street? Is it like the bicycle path that starts at the townhomes and ends at the light?
A_049	Abernathy Side Path, from Roswell Road to Glenridge Drive	This path would provide excellent walking and cycling connectivity to the Abernathy Greenway, that adults and children would find safe.
A_049	Abernathy Side Path, from Roswell Road to Glenridge Drive	Will there be sensors on Glenridge so that the traffic lights detect cyclist so the cyclist can get to the path?
A_049	Abernathy Side Path, from Roswell Road to Glenridge Drive	Why does .68 mile cost 4.4 million?? Would love to see this connectivity but wonder if cost is worth it.
A_049	Abernathy Side Path, from Roswell Road to Glenridge Drive	Good idea. Will connect well to the greenway! Better to spend money on this than more road expansion.
A_049	Abernathy Side Path, from Roswell Road to Glenridge Drive	Important to connect to Glenridge office parks, Mercedes development and various housing types near Roswell Road and Abernathy.
A_049	Abernathy Side Path, from Roswell Road to Glenridge Drive	Key to connect to the MARTA Line on Peachtree Dunwoody Rd
A_152	Roberts Drive Side Path, from Roswell Rd to Dunwoody Pl	I am deeply concerned about the damage to all the beautiful greenery that a multi-use path on Roberts Drive would cause. What is the point of enjoying nature if we destroy it?

Project Comments

ID	Project Name	Comment
A_152	Roberts Drive Side Path, from Roswell Rd to Dunwoody Pl	We should absolutely move forward with this. Everything that increase access to this amazing public resource that we have here is good for the community. If we take 25 ft of forest to bring 200 more families to be active in the forest, its well worth it.
A_152	Roberts Drive Side Path, from Roswell Rd to Dunwoody Pl	Would support this ONLY is it affords direct pedestrian/bike access to the existing parks and trail networks along the Chattahoochee. This requires coordination and buy-in from National Park Service and City of Roswell.
A_152	Roberts Drive Side Path, from Roswell Rd to Dunwoody Pl	Well worth the price. Narrow road with lots of fast cars, blind curves, and pedestrians. A recipe for disaster - the increased safety of a sidewalk is well worth it.
A_152	Roberts Drive Side Path, from Roswell Rd to Dunwoody Pl	very important to connect to Roswell and the massive trail system in cobb and and north Fulton
A_152	Roberts Drive Side Path, from Roswell Rd to Dunwoody Pl	Important to make the wonderful resource we have in Island Ford accessible to all socio economic groups. safe access from Roswell Road Bus lines.
A_155	Holcomb Bridge Bicycle/Pedestrian Bridge	What has SS done or is it doing to afford access to the miles of Chattahoochee River within its city limits? This looks like a project for the city of Roswell.
A_155	Holcomb Bridge Bicycle/Pedestrian Bridge	Better to spend money on this than more road expansion.
A_160	Glenridge Dr Side Path, from Hammond Dr to south of Wellington Trace	This is a very dangerous road currently for cyclists, as evidenced by the death of a cyclist last year, despite the cyclist obeying all traffic laws.
A_160	Glenridge Dr Side Path, from Hammond Dr to south of Wellington Trace	This is a critical missing piece to connect south of I285 to Sandy Springs north. With the new 400 ramp, the traffic on this section of road has increased dramatically.
A_160	Glenridge Dr Side Path, from Hammond Dr to south of Wellington Trace	like the idea but not sure about the price tag associated with project
A_160	Glenridge Dr Side Path, from Hammond Dr to south of Wellington Trace	If the city narrowed the lanes just a little, you could have a shoulder for cyclist and make it safer for a lot less money. The city isn't going to do this project for many years if at all.
A_160	Glenridge Dr Side Path, from Hammond Dr to south of Wellington Trace	With increased residential density area and Hammond Park along this proposed route, this seems like a no-brainer to afford safer access to the park, BUT ONLY IF safe and appropriate, signalized crosswalks are added at appropriate points along Glenridge.
A_160	Glenridge Dr Side Path, from Hammond Dr to south of Wellington Trace	I am always in favor of better non-car access to parks.
A_160	Glenridge Dr Side Path, from Hammond Dr to south of Wellington Trace	Great way to connect to Hammond Park
A_160	Glenridge Dr Side Path, from Hammond Dr to south of Wellington Trace	This is important. This will make my family's walks to Hammond Park safer!
A_160	Glenridge Dr Side Path, from Hammond Dr to south of Wellington Trace	needs to be time with the Hammong Drive improvements. Can really walk to park at this point
A_160	Glenridge Dr Side Path, from Hammond Dr to south of Wellington Trace	Like the idea but the price tag is too high for .4 miles of road. A better, safe way to do this for far less money?
A_161	Glenridge Connector Bicycle Improvements, from Johnson Ferry Rd to Path 400	We also need increased education about existing access to PATH 400
A_161	Glenridge Connector Bicycle Improvements, from Johnson Ferry Rd to Path 400	Any improvements to walking and cycling safety to allow better access to Path 400 would be welcome.
A_161	Glenridge Connector Bicycle Improvements, from Johnson Ferry Rd to Path 400	Your map doesn't even show existing PATH from Wieuca to Lenox connector. Total bike plan is lame
A_161	Glenridge Connector Bicycle Improvements, from Johnson Ferry Rd to Path 400	This is a dangerous area for cyclist. Are you going to include any sensors that will detect cyclist so when they want to turn the turning signal activates?
A_161	Glenridge Connector Bicycle Improvements, from Johnson Ferry Rd to Path 400	Seems like a high price tag for enabling enhanced bicycle access to PATH 400, which is already planned to have a number of access point via neighborhood streets. The Glenridge Connector is high speed, noisy car travel, with little to no residential use.
A_161	Glenridge Connector Bicycle Improvements, from Johnson Ferry Rd to Path 400	Important to connect PATH 400 to other office area but not sure important as a first part of the plans
A_161	Glenridge Connector Bicycle Improvements, from Johnson Ferry Rd to Path 400	Support and important to make connections, but there has to be a safe and more affordable way than spending \$3M for less tan 1/2 mile.
A_162	Powers Ferry Dr Side Path, from City Limits to Dupree Drive	Yes and include a way for bicycles and pedestrians to get across the river that is separated from the cars that fly down that road.
A_162	Powers Ferry Dr Side Path, from City Limits to Dupree Drive	This will be a key connection to the cobb county and NPS lands in the area
A_162	Powers Ferry Dr Side Path, from City Limits to Dupree Drive	As a bicyclist who frequents this area and fears the traffic I encounter, this would be a great addition to our community and help bring more people to the gorgeous paths along the Chatahoochee river.

Project Comments

ID	Project Name	Comment
A_162	Powers Ferry Dr Side Path, from City Limits to Dupree Drive	How would this path integrate with raised I285 lane which is planned as I understand for I285?
A_162	Powers Ferry Dr Side Path, from City Limits to Dupree Drive	I live in the area and crossing the bridge to access Cochran Shoals is a danger as the sidewalk was not designed with pedestrians in mind so it is very narrow allowing only one person (no bikes, no dogs) to talk at a time. All while cars drive very close.
A_162	Powers Ferry Dr Side Path, from City Limits to Dupree Drive	What are the chances we could get a stairwell under the Powers Ferry bridge to access Cochran Shoals without having to cross with the cars? There's already a path there for those who live in Chattahoochee Chase.
A_162	Powers Ferry Dr Side Path, from City Limits to Dupree Drive	I live at one river place and the sidewalk over the bridge needs to be widened and we need a safer way to access to choral shoals.
A_162	Powers Ferry Dr Side Path, from City Limits to Dupree Drive	I think this would add value to the overall area.
A_162	Powers Ferry Dr Side Path, from City Limits to Dupree Drive	In addition, if you can please ass pedestrian crossing signs and make sure trees around it are well groomed so drivers can see the lights would be perfect. I was run over by a car in Oct/19 in the crosswalk closest to cumberland/akers while running
A_162	Powers Ferry Dr Side Path, from City Limits to Dupree Drive	I live at River Place. Need a crossing from southside to northside of Powers Ferry in order to access Cochran shoals. Raised would be ideal so traffic doesn't have to stop.
A_162	Powers Ferry Dr Side Path, from City Limits to Dupree Drive	The sound barrier for 285 needs to be raised to account for raised express lanes.
A_162	Powers Ferry Dr Side Path, from City Limits to Dupree Drive	Agree that pedestrian crossing of the bridge from one river place to Cochran shoals needs improvement. Sidewalk runs out in both the sides on the west side of bridge. Trying to go to river with jogging stroller or dog is very scary.
A_374	Fulton County Annex Midblock Crossing	No - who does this help? This will cause further confusion and congestion that is unnecessary. Only helps the few not the many.
A_374	Fulton County Annex Midblock Crossing	500k for this? Please explain why so much?
A_374	Fulton County Annex Midblock Crossing	More people seem to cross Roswell Rd further north, near the QT.
A_374	Fulton County Annex Midblock Crossing	Very few people cross the street here. This would be a waste of money!!
A_374	Fulton County Annex Midblock Crossing	A good first step in prioritizing pedestrians as much as you do cars along Roswell Rd.,
A_374	Fulton County Annex Midblock Crossing	Dangerous area with people running to catch busses.. need to start making Roswell Road Bicycle and pedestrian friendly - especially with all theMulti family units in the area...and schools in close proximity
A_375	Roswell Road between Lake Placid Drive and Northwood Drive Midblock Crossing	We have to provide safety for the pedestrians.
A_380	Roswell Road between Cimarron Parkway and Trowbridge Road Midblock Crossing	Yes, please. There are a lot of pedestrians that cross in this area.
A_380	Roswell Road between Cimarron Parkway and Trowbridge Road Midblock Crossing	Yes to pedestrian friendly improvements near a High School!
A_400	GA 400 Bridge Enhancements	Yes, please.
A_400	GA 400 Bridge Enhancements	Is this \$6M combined for all three bridges or \$6M each?
A_400	GA 400 Bridge Enhancements	love the idea but think the price tag is too high
A_400	GA 400 Bridge Enhancements	In it's current status- it forces pedestrians into traffic. Please make this as nice as it should be- and safe.
A_400	GA 400 Bridge Enhancements	The curb here is huge (currently) and a danger. Would love to see something here safe and family friendly.
A_400	GA 400 Bridge Enhancements	Great project and much needed for pedestrian and cyclist safety.
A_400	GA 400 Bridge Enhancements	Better to spend money on this than more road expansion.
A_400	GA 400 Bridge Enhancements	Yes while they have 400 messed up lets get the bridges to be real connections from one side of SS to the other - for pedestrians and bicycles
A_400	GA 400 Bridge Enhancements	Bicycle transit improvements are top priority
R_003	Jett Road over Long Island Creek Bridge	If this bridge is old and in need of replacement, sure.
R_021	Windsor Parkway over Nancy Creek Bridge	The bridge is narrow and there are many bike riders in this area. If possible, it might be nice to have a bike lane on each side but there may not be enough room for that.
R_021	Windsor Parkway over Nancy Creek Bridge	This only makes sense if the cost-benefit analysis supports it. I know the bridge closes from time to time due to flooding, but there are reasonable detours. Thank goodness for the pedestrian/bike trail option that allows those users to cross the creek.
R_021	Windsor Parkway over Nancy Creek Bridge	This seems like a lot of money for the benefit.

Project Comments

ID	Project Name	Comment
R_021	Windsor Parkway over Nancy Creek Bridge	I agree with the comment that the cost benefit does not support it for the very few times it is flooded. If it proceeds, it would be important to slightly widen it and lessen the angle on the side closest to the pedestrian bridge.
R_032	Hammond Drive Improvements	Expanding to six lanes will induce more demand. However, the bicycle/pedestrian lanes are a good idea.
R_032	Hammond Drive Improvements	I do not want Hammond widen because it will permit more traffic and issues. Pedestrian and bike paths would be nice.
R_032	Hammond Drive Improvements	Four lanes would be reasonable. Six lanes will have serious impact to neighborhoods along Hammond. Please limit access to Kayron, Harleston, hildebrand etc to reduce cut through.
R_032	Hammond Drive Improvements	A better solution to address overcapacity on Hammond and Perimeter Center west would be to build a new road from Central Park Dr to the Mall. We sorely need additional roads going East/West.
R_032	Hammond Drive Improvements	6 lanes is an over-reach and unnecessary. Again, who are serving? The pedestrians and cyclers or the motorists? Your North star is traffic. Let's not create more bottlenecks.
R_032	Hammond Drive Improvements	Six lanes is too much. I would much rather see 4 lanes for motorized vehicles and a bike lane and sidewalks.
R_032	Hammond Drive Improvements	Bike and Ped improvements would be good. But 6 lanes of vehicles is too much.
R_032	Hammond Drive Improvements	This is unneeded and will lead to bottle necks on Hammond heading west
R_032	Hammond Drive Improvements	I agree with the other comments that 6 lanes are too many and will create more problems that it solves. 4 is reasonable, and walking/bike paths are needed from Glenridge Connector to Roswell Rd. to access restaurants and retail.
R_032	Hammond Drive Improvements	Hammond west of Glenridge should be the same width (number os lands) as east of Glenridge so the west bound traffic from Glenridge to Roswell will go through easier. Widening Hammond to 4 lanes would do it.
R_032	Hammond Drive Improvements	I agree with others that widening roads principally invites more traffic and disproportionately rewards single occupant vehicle and organizations that don't use flexible scheduling and teleworking.
R_032	Hammond Drive Improvements	The bottleneck will still exist west as Hammond narrows. This is near MARTA rail. Lets spend more on making this pedestrian friendly and less on additional lanes.
R_032	Hammond Drive Improvements	4 lanes should be sufficient
R_032	Hammond Drive Improvements	The Abernathy widening project was a success and is only 4 lanes of vehicle traffic. This project will change SS irrevocably and it will mostly serve Cobb commuters vs those that live in Hammond Hill and are SS residents
R_100	Hammond Drive at Peachtree Dunwoody Road Intersection Improvement	If this makes it easier and safer for people who are driving alone in car to move themselves then I can support it.
R_101	SR 9 (Roswell Road) at Lake Placid Drive Intersection Improvement	This intersection needs a new signal that gives exclusive right-of-way, one at a time, to westbound and eastbound Lake Placid traffic.
R_103	SR 9 (Roswell Road) at I-285 Eastbound Intersection Improvement	Current state of 285 & Roswell Road is untenable.
R_103	SR 9 (Roswell Road) at I-285 Eastbound Intersection Improvement	Safety improvements are welcomed here!
R_103	SR 9 (Roswell Road) at I-285 Eastbound Intersection Improvement	Lighting is very good.
R_105	Johnson Ferry Road at Peachtree Dunwoody Road Intersection Improvement	Going east at this intersection and turning left (north) here is dangerous because 2 lanes turn left - that is a high risk turn. Making that safer is a good idea.
R_105	Johnson Ferry Road at Peachtree Dunwoody Road Intersection Improvement	I can't support this without knowing if there is a higher than expected accident count at this intersection. I agree that the topography at this intersection isn't ideal, but the price tag is steep.
R_106	Northridge Road at SR 400 SB Intersection Improvement	Dunwoody Place needs a second left-turn lane. Also, the green light from Dunwoody Place is too short at certain times of day. Finally, the offramp from 400 needs a "Right on red after stop" sign; I've seen multiple near-misses there.
R_106	Northridge Road at SR 400 SB Intersection Improvement	So many accidents waiting to happen at this intersection. Signage and some sort of control is in order. Motorists that are not from the area are always confused.
R_106	Northridge Road at SR 400 SB Intersection Improvement	This intersection is an accident generator! I've seen SO much post-collision debris in this intersection, it isn't even funny. People change their minds halfway through and then bam! Better signage? Or change a change to signaling?

Project Comments

ID	Project Name	Comment
R_106	Northridge Road at SR 400 SB Intersection Improvement	The white plastic posts will finally be replaced with a real concrete median? They get run over all the time... we should just put concrete. If you made a wrong turn, make a u-turn on Dunwoody Pl.
R_108	Dunwoody Place at Roswell Road Intersection Improvement	I live off of Hannover Park road. The left turn sensor to Hannover Park could be improved. If cars are too far forward, the sensor won't trip and then we're waiting there for a half hour (spoiler alert: we just go around).
R_108	Dunwoody Place at Roswell Road Intersection Improvement	I'd like to see a concrete island to enforce the right turn lane from Hannover Park to Roswell Rd. Getting stuck behind someone that's waiting to go straight from the right-turn-only lane is incredibly aggravating, and a line of cars always piles up.
R_108	Dunwoody Place at Roswell Road Intersection Improvement	Yes to Pedestrian safety.!
R_108	Dunwoody Place at Roswell Road Intersection Improvement	should be done in conjunction with master plan for North River Shopping Center to accommodate exit from that area to individuals going South on Roswell Road...
R_109	Northridge Road at Roswell Road Intersection Improvement	Very busy intersection. I'm sure improvements wouldn't be missed.
R_113	Abernathy Road at Mount Vernon Highway Intersection Improvement	When coming from Abernathy Road, we can't see the status of this signal until we're almost at the intersection. Please put an approach signal on the north end of this intersection facing west towards Abernathy.
R_113	Abernathy Road at Mount Vernon Highway Intersection Improvement	The problem with this intersection has always been cars driving north trying to make a left hand turn. The bottleneck is at Roswell Rd and Abernathy. Putting a band aid on the Mt. Vernon intersection is not going to solve the problem at Roswell Rd.
R_113	Abernathy Road at Mount Vernon Highway Intersection Improvement	Per the Ashton woods and Mercedes representatives this intersection was to improve once the new Ashton woods housing was built allowing people to live closer to where they work. Hmmmm???
R_113	Abernathy Road at Mount Vernon Highway Intersection Improvement	Driving from Sandy Springs, making a left on MT VERNON is too long a wait.
R_115	Abernathy Road at Peachtree Dunwoody Road Intersection Improvement	What benefit do you see with this plan?? Would it ease the congestion and facilitate smoother traffic movements?
R_115	Abernathy Road at Peachtree Dunwoody Road Intersection Improvement	Think it's a waste of money for this project
R_115	Abernathy Road at Peachtree Dunwoody Road Intersection Improvement	What do you hope to gain with this project? Seems like a waste of money.
R_115	Abernathy Road at Peachtree Dunwoody Road Intersection Improvement	The problem at this intersection is that cars coming off 400N enter the same lane used to turn R on PtreeDun.
R_116	Hollis Cobb Circle at Peachtree Dunwoody Road Intersection Improvement	This would increase pedestrian safety and given its proximity to MARTA and Northside Hospital is sorely needed.
R_116	Hollis Cobb Circle at Peachtree Dunwoody Road Intersection Improvement	Any multimodal improvements near transit would be great
R_116	Hollis Cobb Circle at Peachtree Dunwoody Road Intersection Improvement	This area serves people with disabilities who need extra time and a dedicated pedestrian phase.
R_165	Roswell Road and Abernathy Road Intersection Improvements	Improve left turn east on Abernathy and Roswell light does not stay green long enough
R_165	Roswell Road and Abernathy Road Intersection Improvements	What would help most is a bridge over Roswell Rd to eliminate the traffic signal and turn lanes/ramps to keep traffic moving
R_165	Roswell Road and Abernathy Road Intersection Improvements	I agree with the other comment. This needs a bridge-based solution.
R_165	Roswell Road and Abernathy Road Intersection Improvements	improvements are always nice --- but there are other areas where NO improvements have been made - this is functional and until bicycle lanes are constructed handles cars and pedestrians fairly well
R_202	Roswell Road North Boulevard Median Project	There needs to be at least one additional traffic light in here. It is also worth studying whether to connect Roberts Drive and N. River Pkwy. east of Roswell Road.
R_202	Roswell Road North Boulevard Median Project	The median would be nice, but it seems the new light posts preclude a median - is there room?
R_202	Roswell Road North Boulevard Median Project	Probably need a traffic light at Roberts Drive (and N River Pkwy?). I don't want to see a median unless there are a couple extra lights. The center lane makes the left turn from Roberts to Roswell possible.
R_202	Roswell Road North Boulevard Median Project	While Costly - this is essential to the redevelopment of the North End and will more than be repaid in future taxes . Also addresses key safety issues with pedestrians crossing back and forth and high speed drivers

Project Comments

ID	Project Name	Comment
R_408	Roswell Road at Dalrymple Road Operational Improvements Phase 2	Turn lanes at this intersection would be a significant improvement. Why isn't Roswell Rd. southbound mentioned as getting a right turn lane? This would help keep turners moving when Dalrymple has a left turn signal.
R_408	Roswell Road at Dalrymple Road Operational Improvements Phase 2	Turn lanes would be great here! Very much needed.
R_408	Roswell Road at Dalrymple Road Operational Improvements Phase 2	topography good for an over under
R_415	Riverside Drive over Chattahoochee River Tributary Bridge	\$3 million is A TON of \$. Do we REALLY need it?
R_415	Riverside Drive over Chattahoochee River Tributary Bridge	How about disallowing heavier vehicles. Would be a bit cheaper.
R_415	Riverside Drive over Chattahoochee River Tributary Bridge	Is the map location accurate?
R_426	I-285 Top End Bridge Enhancements	YES, with a heavy emphasis on bicycle and pedestrian facilities than aesthetic enhancements. You can't put lipstick on the 285 pig and fool anyone.
R_426	I-285 Top End Bridge Enhancements	Yes; there should be sidewalks on either side of the road all along this corridor and if memory serves when I have biked along here that's not true now.
R_426	I-285 Top End Bridge Enhancements	Better to spend money on this than more road expansion.
R_500	Roswell Road Access Management and Complete Streets Improvements	We need a cross walk and light at Green Hill Rd NE to enable safe pedestrian crossing; There are 2 bus stops on both sides of the road and pedestrians are not safe to cross Roswell Road. At minimum we need a do not block the box to improve safety
R_500	Roswell Road Access Management and Complete Streets Improvements	What happened to the plan to put a median with trees up and down Roswell Road? It would improve safety and look great!
R_500	Roswell Road Access Management and Complete Streets Improvements	I have a similar question about the tree lined median with large sidewalks on both sides?
R_500	Roswell Road Access Management and Complete Streets Improvements	This description is too vague to give any help via comments.
R_500	Roswell Road Access Management and Complete Streets Improvements	This is vague. The Roswell Rd small plan does not seem to be followed - is there a planned divider in the road?
R_500	Roswell Road Access Management and Complete Streets Improvements	Better to spend money on this than more road expansion. Make Roswell Rd Pedestrian friendly . The segment between Hilderbrand and Mt. Vernon has no sidewalk and is a stone's throw from City Springs.
R_500	Roswell Road Access Management and Complete Streets Improvements	More details needed . This is a big chunk of money. If GADOT is not on board it would be a waste of funds.
R_500	Roswell Road Access Management and Complete Streets Improvements	No sure what is planned here but definitely need improvements in traffic merging into and off Roswell Rd and for walkers/bikers.
R_501	I-285/Roswell Road Innovative Interchange Study	This is functioning so much better than it used to. Please apply your funds for more needed projects in the city.
R_501	I-285/Roswell Road Innovative Interchange Study	The description is vague.
R_501	I-285/Roswell Road Innovative Interchange Study	More details please.
R_505	Peachtree Dunwoody Road Corridor Study and Improvements	seems expensive for a study
R_505	Peachtree Dunwoody Road Corridor Study and Improvements	If "improvements" means better flow of traffic and less bottlenecks, I would agree with this need.
R_505	Peachtree Dunwoody Road Corridor Study and Improvements	Would only support this if it's something that would hasten PATH 400. Isn't a portion of it to run along Peachtree Dunwoody?
T_012	Transit Signal Priority Supportive Improvements along Hammond Drive	love this idea but that's a lot of money for a study
T_012	Transit Signal Priority Supportive Improvements along Hammond Drive	What Hammond Needs is widening (within reason, i.e., for turning cars) and SIDEWALKS. SS has been buying land for years. When will this begin?
T_012	Transit Signal Priority Supportive Improvements along Hammond Drive	HAMMOND NEEDS SIDEWALKS
T_012	Transit Signal Priority Supportive Improvements along Hammond Drive	Not sure this is needed. There are other transit projects I'd like to see before we dump money onto this corridor.
T_012	Transit Signal Priority Supportive Improvements along Hammond Drive	SS has resisted synchronizing the light at Boyleston/Hammond with Roswell Rd/Hammond for years and caused further backup; I suspect this is in part to artificially justify the gigantic new Hammond Dr project (5-10 yrs & \$65-\$100mill. + displacing families
T_012	Transit Signal Priority Supportive Improvements along Hammond Drive	Hammond needs to be studied seems expensive for study

Project Comments

ID	Project Name	Comment
T_012	Transit Signal Priority Supportive Improvements along Hammond Drive	\$2.7 million? Really? Rather have consistent sidewalks.
T_012	Transit Signal Priority Supportive Improvements along Hammond Drive	No thank you. I would rather spend our funds on Bike and Pedestrian usage.
T_012	Transit Signal Priority Supportive Improvements along Hammond Drive	I've been attending meetings about Hammond widening for 17 years. SS already knows exactly what they're going to do, dont waste money on more studies to justify the conclusion you've already drawn
T_503	I-285 BRT Feasibility Study	No
T_503	I-285 BRT Feasibility Study	Why not explore train options
T_503	I-285 BRT Feasibility Study	More transit! I highly support any addition to transit in the area! Please consider dedicating a lane to the buses!
T_503	I-285 BRT Feasibility Study	Strong "no."
T_503	I-285 BRT Feasibility Study	I'm fine with studying this, but I do not support any new transit that isn't dedicated right-of-way. I'd prefer to see extension of the red line HRT before we do anything on I285. Cobb doesn't want transit - I don't see any reason to build it for them.
T_503	I-285 BRT Feasibility Study	We have got to get some 285 relief and study is the first step.
T_503	I-285 BRT Feasibility Study	No. Not until Cobb County is on board
T_503	I-285 BRT Feasibility Study	No to BRT study
T_504	I-285 at Roswell Road Station Area Study	Current intersection design is totally unfeasible for the volume.
T_504	I-285 at Roswell Road Station Area Study	A roswell road station would be very helpful for getting around! It would be best if light rail (or even better, a metro line) could be considered!
T_504	I-285 at Roswell Road Station Area Study	No. There are plenty of major roads in this area already trafficked by buses. No more bus traffic is needed in an already highly trafficked area.
T_504	I-285 at Roswell Road Station Area Study	Not sure why we'd fork out the money for this when we aren't even sure we're going to put something here, yet. BRT is not very attractive. Is this hooking into MARTA? Don't we want this to be managed by them?
T_504	I-285 at Roswell Road Station Area Study	Let's look at how it would impact SS... need to facilitate easy connection to MARTA Rail
T_504	I-285 at Roswell Road Station Area Study	no thank you
T_504	I-285 at Roswell Road Station Area Study	No. Waste of money at this time. May change later.

What's Missing?

1. Northridge Drive needs a concrete barrier between Roswell Road and Colquitt Road. There are too many dangerous left turns that occur in here.
2. The intersection of Roberts Dr., Spalding Dr., and Dunwoody Club Dr. is a mess. One option is to move the Spalding-Dunwoody Club intersection well to the east and reconfigure the Roberts-Spalding intersection.
3. The signal onto Peachtree-Dunwoody coming out of Costco and Home Depot needs to give exclusive right-of-way, one at a time, to westbound and eastbound traffic. The westbound center lane should allow both straight and left turns.
4. Consider a multipurpose path parallel to North River Parkway instead of Roberts Drive.

Green Hill Rd NE and Roswell Rd intersection is extremely dangerous. There are 2 bus stops on both sides of Roswell Rd and bus riders have to risk their lives to cross the street safely. Residents of Green Hill Rd. NE are often blocked to enter the street and we at minimum need a "don't block the box" and/or a flashing light at the intersection to improve safety. Often drivers on Roswell speed through this area which makes it a hazard for all pedestrians, children and dog walkers.

Consider more bike friendly paths especially near the king and queen area.

Urgent need for new sidewalk installation along Franklin Road in its entirety extending from Roswell Road & Franklin Road to High Point Road & Franklin Road

I would like to provide an additional project recommendation under the 'Bicycling and Walking' tab. If the deadline hasn't passed for voting yet, I believe it is critical to install a pedestrian sidewalk on Franklin Road that would be perpendicular connecting Roswell Road to High Point Road. There are many residents walking their dogs and using the entire street to enjoy the neighborhood by foot in groups. Given the proximity, Franklin Road also coincidentally seems to attract pedestrians walking to/from the Fountain Oaks shopping center with the Kroger, which would fall under the "20-minute Neighborhood" project proposal. Please consider this as a formal 'write-in vote' for a Franklin Road!

The most difficult section of biking in Sandy Springs is how to get from inside the perimeter up to the City Springs (and the heart of Sandy Springs). It's easier, and safer to get to Piedmont Park from south Sandy Springs on quiet roads and paths than it is to get north.

More sidewalks, more bike lanes, more connections between parks, more accessibility overall

ORGANIZATION CHART OF THE PRINCIPAL OWNERS WITH ROLES AND RESPONSIBILITIES

YOU REFERENCED MANY DIFFERENT INPUTS THAT WERE NOT A PART OF THIS PLAN, LIKE THE CITY PLAN, LIKE THE MARTA PLAN , LIJE THE ROSWELL ROAD PLAN, I BECAME VERY CONFUSED

LET ME ASK THE QUESTION ANOTHER WAY. I LIVE AT CORNER OF HANNOND AND GLENRIDGE, HOW CAN I FIND OUT WHAT IS BEING DONE ON ALL THE DIFFERENT PROJECTS WITHIN THREE MILES OF MY HOME?

The 4-way stop at Jett Ferry Road and Spalding remains a mess. Cars do not really come to complete stops traveling on Spalding heading towards Roberts Dr. Maybe a lit stop sign like at the Jett Ferry/Dunwoody Club intersection? Also when traveling on Spalding and going straight at the stop sign, people always signal and there is no need. I don't think people realize or acknowledge that the residential part of Jett Ferry exists. I travel this road so many times a day and is always a frustration. Surprised there aren't more accidents. With an almost new driver in my house, concerns me.

What's Missing?

Addition of short sidewalks for about the first 50 -75 feet of an intersection. Obviously the city cannot afford to pave the city in sidewalks. That is really not needed. But my neighborhood is a park for area walkers from surrounding subdivisions. Walking on Glenair on the southwest side of the intersection of Glenair and Glenridge is dangerous. There is a sidewalk on the northwest side of this intersection which should be duplicated on the southwest side. The cost for this should be minimal.

Sandy Springs Circle southbound should have a dedicated left turn lane to go eastbound on Hammond Drive.

There can never be too many sidewalks in Sandy Springs!

I know cars are king and will continue to be. But as cyclists, we are at their mercy. A bike trail needs to be able to bring people to places. Following 285 leads to nowhere. We need more of a wheel and hub vision to get commuters to get in town, and to shopping areas. Any biker on Roswell Road must have a death wish, but yet there is limited access to parallel it. Years ago Sandy Springs promised to add bike lanes any time they planned to re-stripe. Never happened. While we are at it, there was no comment area for Mt Paran: needs paving! Pothole city.

We desperately need sidewalks or traffic calming at Huntcliff Trace. Lots of walkers, lots of vehicles and speeding is out of control. It is very dangerous. SS did a speed study that confirms the same. The threshold to get 75% of residents to agree on speed bumps is ridiculous: they're the same ones who are speeding! With families walking through this neighborhood frequently and people routinely going over 45mph, this is a disaster waiting to happen.

I am especially glad to see some projects to improve pedestrian and bicycle safety for the many people who walk along Roswell Road, Lake Forest and other major streets in Sandy Springs. Currently, Lake Forest is dangerous for anything but cars. On Roswell Rd and others, there are long stretches where people must either jaywalk or walk a mile out of their way to cross the street. I hope you move forward quickly with traffic lights, medians or other measures to make these streets safer.

Please make the most of projects that complement the 285/400 work now going on, such as pedestrian and bike enhancements and medians for bridges that must be rebuilt.

Looking beyond the next 5 years, I believe that single occupancy car traffic is unlikely to increase nearly as much as population will - especially if people have safe, pleasant alternatives. Solo commuting causes stress, misery, ugliness, and environmental degradation. More roads will only bring more cars, and nobody wants that.

Attention to Roswell Rd between 285 and Northridge: landscaping, center island

Need stop light between Abernathy and Spalding.

Sandy Springs is lucky to be bordered by two big parks South (Chastain Park) and West (Chattahoochee River National Recreation Area, Cochran Shoals Unit). There should be a bigger emphasis on allowing more bicycling and walking access to those parks from neighborhoods further away or even from the center of Sandy Springs. Access to those 2 big parks can only be done via cars today and by a small portion of Lake Forest in the future. Sidewalks on both side of Riverside between 285 and River Valley.

Sidewalk on Mt Vernon between Sandy Springs United Methodist and Arlington Cemetery

Bike lanes everywhere

What's Missing?

Riverview Road NW 3027 intersection with Northside Drive. The proposed traffic circle is a poor idea. The intersection of Northside and Mt Vernon is more dangerous, but all the intersections with Northside are dangerous due to the excessive speed of traffic Northside Drive.
Speed humps on Northside Drive would be a less costly, less disruptive, better, and safer solution.
I wish this plan worked in more public transportation, more sustainable forms of transportation, and prioritized cars less.
Traffic light at intersection of Johnson Ferry Road and Breakwater Ridge to control 35MPH speed limit and enable safe left turn from Breakwater Ridge onto Johnson Ferry Road.
Speeding is common, with drivers often exceeding 55 MPH.
we need to see routes like the 87 replaced with a light rail line.
In general there are nowhere near enough bus routes though the city. Sandy springs station is almost completely unserved! Where's the buses?!
A series of dedicated connected bicycle paths to that connect all of our Parks and public schools. There is a missed opportunity to allow for a safe and sustainable alternative to driving to our city Parks and Schools that is quite frankly sad.
It's frustrating that sidewalks are not connected and bikes and are considered as an afterthought. I want to be able to run to Chastain, or to the City Center from my neighborhood safely. I want to bike to Chastain and to the Chattahoochee National Park as well as to my local schools (and so do my kids) but there is no way to safely do so because there are large swaths of missing sidewalks and no dedicated bike paths.
Public transportation options!!
Greenbelt trail alongside Northgreen where the houses were recently demolished. This could be a trail connecting to Abernathy and Spalding
Longer green arrows on left turns when traffic volume warrants, ex: left from Mt Vernon to Perimeter ? ("continuation" of Abernathy). CLEAR signage! I've lived here 20+ years and hate how small street signs are! Big intersections should have big street signs - everywhere in metro Atlanta. And turn arrows painted on the pavement that are CLEARLY painted and go back farther than one car! This is one of my biggest pet peeves - with the volume of cars at some intersections and the importance of being in the correct lane, being able to verify one's lane is going where one wants to go is crucial. Also, sidewalks are missing! Cities can't expect people to walk places (instead of drive) if it isn't safe to do so every step of the way. We need more and better sidewalks everywhere! And small, in the area shuttles - more large office buildings to places to eat, run errands, get on mass transit that run constantly in multiple loops.
Trail connection to PATH 400 to connect Morgan Falls park
Roswell Rd and Pitts/Ison intersection. So many accidents here. When traveling southbound on Roswell rd, it would be helpful to add an additional stop light on the left hand side of Roswell rd. If not familiar with the area, the curve of the road makes the current stoplight unseen. I've seen so many cars traveling southbound on Roswell rd run this light. Also more lighting at that intersection as pedestrians are hard to see.
Bicycling on our streets is dangerous. They ride on 2 lane streets in my neighborhood - they are in harm's way. Bicycling paths would be good to encourage bike use and safety.

What's Missing?

Cost benefit analysis across all projects would be good to see. Also any project that enhances or extends an existing bicycle /pedestrian path should have priority.
Pedestrian crosswalks at Windsor Parkway and Peachtree Dunwoody intersection.
As you know- support for trails is tremendous. Please, do whatever it takes, savings, taxes, negotiations, corporate sponsorships- we want these trails to happen while we are still capable of walking.
More bike lanes. Any time a road gets re-paved a bike lane should be added
An additional sidewalk is needed along Glendridge Dr from Glenlake Parkway to Abernathy Rd to connect to the future March Creek Trail and to Aria.
Also, a sidewalk and bike lanes are needed on Dunwoody Rd which connects Sandy Springs to Dunwoody. This road is split between the two cities and would have to be done jointly or under some sort of agreement.
Would love to see sidewalks on Spalding Drive between Roberts and Jett Ferry. The road is dangerous to walk or bike on.
This is a random suggestion but what if we could fund a study to see if we could possibly connect Roswell Road at the Grogan's Ferry intersection down to Spalding Drive by making a trail following Hampton Drive to the power lines, then continuing between the apartment complexes, and ending at Dumaine Terrace/Spalding Drive. This could help connect many neighborhoods to reach Spalding Drive easier, and shorten walking and biking times to North Springs MARTA.
I don't see any plans for Mt Vernon Highway from Roswell Road east past the library toward GA 400. There has been discussion about improving the Johnson Ferry/Mt Vernon/Roswell interchange and proposals have been discussed previously. I realize that GDOT probably has a lot of say here. There is acreage there that can be redesigned
Sidewalk on Colewood way in front of Epstein school!
Using a patchwork of neighborhood streets to promote biking; for example it's possible to bike commute from Abernathy south through MV Woods & Glenridge-Hammond to inside 285, and there is probably a wide network of city neighborhoods that can accommodate this and keep bikes off the dangerous main roads. For example, MV Woods also allows access to Roswell Rd and going west via Vernon Woods Dr.
Back up of cars coming off 285W onto Roswell Rd- need longer or faster Roswell Rd light as cars are stuck on 285.
Hammond Drive headed from Ptree Dunwoody Rd to Roswell Rd gets very backed up because of Roswell Rd light.
There is no sidewalk on SS Circle between Johnson Ferry and Roswell.
Heards Creek is a few feet from Riverside HS. There should be sidewalks. Kids walking in street with headphones is a recipe for disaster.
Please add roundabouts to the intersection of Heards Ferry and Riverside Drive. The congestion at this intersection is high and traffic is often backed up over the bridge on 285 and beyond the entrance to Rivershore Estates.

What's Missing?

The light when crossing from the medical center Marta station across Peachtree Dunwoody road to Northside hospital is dangerous. The light does not work and often doesn't give pedestrians a signal to walk if not pressed. Also the protected left turn from Hollis Cob Circle onto Peachtree Dunwoody Road Goes straight into pedestrian. Also it is a busy 6 lane road and the signal needs to have a beeper or sound to help indicate when it is safe to cross

Johnson Ferry between Roswell Rd. and Glenridge has unaddressed pedestrian issues.

The sidewalk network on the south side of the street is incomplete, with sections missing west of Kayron. This is an area with a school and library, yet the sidewalk just randomly ends.

I also think that a mid-block signalized pedestrian crossing at Mount Vernon Presbyterian would be heavily used by church goers and frequent recreational users. As currently constructed, there is almost a half mile without a crosswalk.

A crosswalk between Harleston and the library would also make accessing the library a less dangerous proposition by foot. There are often many pedestrians crossing there, because there are many homes whose access to Johnson Ferry is via Harleston.

On a broader scale, I think all new commercial developments should have mandated pedestrian access from the roadway. There are many shopping plazas that require a pedestrian to use the vehicle driveway for access. This is just want to make sure that that it all ties in with TSPLOST and takes advantage of what projects are being done in the region as a whole --- we need to connect with Trails/Road improvements and amenities in adjacent municipalities. Keep looking where we can "complete" a connection small connection!!

Get plans in place for shovel ready opportunities which may pop up with Governmental Grants.

Better crosswalks. A traffic light at Mt. Vernon and Glen Errol Road and a cross walk for kids that walk home from school and have no where to safely cross Mt.Vernon to get to neighborhoods off Glen Errol Road

I would caution you to not refer to people who ride bikes as "experienced" and other terms designating skill level. There are many reasons besides skill level why people would choose not to use bike infrastructure that does not meet NACTO guidelines. For instance, a caregiver may decide that the risk of known dangerous-by-design roads is too great to assume. Also, studies show women are passed more closely and harassed more often, which serve as impediments unrelated to skill level. Another example would be someone with a mobility difficulty who has no trouble riding a bike but may have trouble putting down a foot if forced to stop quickly while riding with motor vehicle traffic. An "essential rider" (someone who rides their bike for transportation out of necessity) may not want to assume the risk because he or she may be un- or under-insured. Also, there are many types of bikes (such as adult trikes and trishaws) that do not fit in too-narrow bike lanes.

Overall, this planning tool is very well done. Thank you Sandy Springs for all the effort on this to communicate your intentions with the public. Would be helpful if there was more explanation or links to more explanation on several of the projects.

With all the sidewalk additions, which are great, is there consideration of adding crosswalk markings on the pavement at intersections, and perhaps pedestrian buttons at intersections with lights to assist crossing busy intersections safely.

What's Missing?

I think the roundabouts have been a big success. We could probably use a few more. Maybe Spaulding, at Trowbridge
Unless GADOT is on board none of these studies should be conducted. We have to be judicious with the use of our money. I want more sidewalks, and bike lanes. Cobb County needs to step up financial before we do ANY more work on roads to make their commute better.
Would love to have sidewalk on Lake Forrest Drive from Mt. paran to wieuca for access to Chastain park.
GA400 exit / entrance at Spalding Drive bridge. There are no exits between Abernathy (exit 5) and North Ridge (exit 6), this is the longest span of GA400 exits. It would help with the Abernathy / Peachtree Dunwoody intersection. It is easier to do today after the the houses from talbot colony were removed
I may have miss it but is there a proposed study to create station to link riders to MARTA? Needed!
Please insert traffic signals or impediments to disallow left hand turns onto Roswell Road from North River Drive and Roberts Road.
Dedicated bicycle paths everywhere. Bicycle/Pedestrian paths on Glenridge from Glenlake to Abernathy.
Is this the place we could request a sound barrier (wall) between I-285 and Powers Ferry? The constant road noise makes living in One River Place feel like I'm on Pit Row of a NASCAR race... I've heard rumors that something like this was in the works.
As a home owner at One River Place this TMP has our attention and major concerns. We ask and plead for a sound proof barrier wall between Powers Ferry Rd and the interstate since there will be an expressed lane elevated. We need this wall to be elevated to exceed our 7th floor units. As a home owner and real estate agent by not adding this wall you be negatively affecting our quality of life at ORP along with the market value which in turns affects the city of SS. Please, please take this request serious. Concerned homeowner
As a One River Place homeowner, the Transportation Master Plan has our attention and is extremely concerning. With the elevation of the express lane, we find it extremely necessary for a soundproof barrier to be placed between Powers Ferry Road and the Interstate. The height of this wall should be elevated to exceed our 7th floor units Thank you
As a One River Place homeowner, the Transportation Master Plan has our attention and is extremely concerning. With the elevation of the express lane, we find it extremely necessary for a soundproof barrier to be placed between Powers Ferry Road and the Interstate. The height of this wall should be elevated to exceed our 7th floor units. As a homeowner in this wonderful community, both the market value and our quality of life will be significantly impacted, which in turn affects the city of Sandy Springs. This is a serious issue that needs to be addressed.
As a recent resident at One River Place, I am acutely aware of the highway noise coming from I-285. I have a machine which helps silence the noise but it is not enough. Please add a sound proof barrier the height of our seven story building to help reduce the noise. I love living here and being part of the Sandy Springs community and look forward to all the positive changes I see planned. A sound proof barrier would be a huge benefit to all of us who live here.
PLEASE install a soundproof barrier between Powers Ferry Road and the Interstate.
As a resident of One River Place, I hear more and more traffic. The idea of adding lanes or bridges will not work to the 500 homes in our community. (This is also true going west for Cobb neighbors who have similar exposure.) Any additional lanes, elevated or not, needs to be on the north side of I-285 and not on the south side where residences are concentrated. In addition, sound barriers are badly needed -even on the expressway bridge over the Chattahoochee where where much sound comes.

What's Missing?

Lights need btwee timed. Like a roundabout.

I am an One River Place homeowner, the Transportation Master Plan is concerning to me. With the elevation of the express lane, we find it extremely necessary for a soundproof barrier to be placed between Powers Ferry Road and the Interstate. The height of this wall should be elevated to exceed our 7th floor units. As a homeowner looking to sale in the future, both the market value and our quality of life will be significantly impacted, which in turn affects the city of Sandy Springs. This is a serious issue that needs to be addressed."

I am a resident of One River Place and am very concerned about the impact of the Transportation Master Plan on my community. With the elevation of the express lane on 285 I feel it is very important to consider building a sound barrier between Powers Ferry Road and the interstate, tall enough to deflect the noise from the additional traffic. I hope you will consider this request as it impacts all of Sandy Springs as well as our community!
Very concerned homeowner,

As a One River Place homeowner, the Transportation Master Plan has our attention and is extremely concerning. With the elevation of the express lane, we find it extremely necessary for a soundproof barrier to be placed between Powers Ferry Road and the Interstate. The height of this wall should be elevated to exceed our 7th floor units. As a real estate agent and a homeowner in this wonderful community, both the market value and our quality of life will be significantly impacted, which in turn affects the city of SS. This is a serious issue that needs to be addressed.

I live at one river place and we need a sound barrier for the highway project that is coming. We already experience load road noise and it will only get worse once the road is changed. It will have a deep impact on our property value and the integrity of the 33 acres natural reserve that we live on. This is a beautiful place to live and I would hate to have that diminished because of increased road noise. The bridge walkway over the Chattahoochee river also needs to be widened and we need safer access to cross the road to get to Cochran Shoals.

"As a One River Place homeowner, the Transportation Master Plan has our attention and is extremely concerning. With the elevation of the express lane, we find it extremely necessary for a soundproof barrier to be placed between Powers Ferry Road and the Interstate. The height of this wall should be elevated to exceed our 7th floor units. As a homeowner in this wonderful community, both the market value and our quality of life will be significantly impacted, which in turn affects the city of SS. This is a serious issue that needs to be addressed."

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There needs to be a sound barrier for the new express lanes from Akers Mill to Powers Ferry Road to Roswell Road and for the entire distance of the express lanes. The sound barrier should be tall enough to protect all the townhouse and condominium communities along Powers Ferry Road to have some extra sound and privacy protection from the new express lanes. There should also be some consideration for a walk over to get to other areas of the Chattahoochee River and Cochran Shoals.

What's Missing?

As a One River Place homeowner, the Transportation Master Plan has our attention and is extremely concerning. With the elevation of the express lane, we find it extremely necessary for a soundproof barrier to be placed between Powers Ferry Road and the Interstate. The height of this wall should be elevated to exceed our 7th floor units. As a real estate agent and a homeowner in this wonderful community, both the market value and our quality of life will be significantly impacted, which in turn affects the city of SS. This is a serious issue that needs to be addressed.

Two comments:

1 - Recommend that we improve the signage on Roswell Road to indicate that drivers are entering (or leaving) Sandy Springs. This is something that has been suggested by the Police chief as well. Signage / entrance marker would serve both as a safety measure - for criminal activity coming up from city of Atlanta as well as good branding for the city.

2 - Pedestrian volume on Highpoint road has grown - both because of pandemic/work from home as well as the new construction in the area. Recommend that the sidewalks be widened and improved (more aesthetic) street lighting be added. Something similar to what has been done in the Abernathy corridor.

I live at One River Place next to Ray's on the River on Powers Ferry Road. We need a soundproof barrier to be placed between Powers Ferry Road and the Interstate. The height of this wall should be elevated to exceed our 7th floor units. Thank you for your attention to this matter. Amelia Wells

As a One River Place homeowner, the Transportation Master Plan has our attention and is extremely concerning. With the elevation of the express lane, we find it extremely necessary for a soundproof barrier to be placed between Powers Ferry Road and the Interstate. The height of this wall should be elevated to exceed our 7th floor units. As a homeowner in this wonderful community, both the market value and our quality of life will be significantly impacted, which in turn affects the city of SS. This is a serious issue that needs to be addressed."

As a One River Place homeowner, the Transportation Master Plan has our attention and is extremely concerning. With the elevation of the express lane, we find it extremely necessary for a soundproof barrier to be placed between Powers Ferry Road and the Interstate. The height of this wall should be elevated to exceed our 7th floor units. As a former real estate agent, mortgage lender and a homeowner in this wonderful community, both the market value and our quality of life will be significantly impacted, which in turn affects the city of SS. This is a serious issue that needs to be addressed.

I would really like to see more VISIBLE signage everywhere for the City of Sandy Springs. We are proud of our city and people should know when they are in it. The signs now are too small.

Also, I don't think there can ever be enough sidewalks. Proof is how much the loop around High Point is used and on Windsor Parkway. It seems when sidewalks are put in, people use them!

We need large signs welcoming drivers coming into the city, especially on Roswell Road coming from the City of Atlanta

What's Missing?

have a buffer between the walk and the street, not immediately adjacent (like on High Point Rd.). Appropriate lighting should be included. Public waste receptacles should be attractive, frequently spaced and emptied regularly. Road speed limits should be reviewed. E.G. Why are Windsor Pkwy, High Point Rd and Northland Rd all at 35 mph, the same speed limit as Johnson Ferry Rd going to the river (which is 4 lanes plus turn lane, sidewalks and bike lanes on each side and fewer residential entries than these three streets on the south side of the city)? Makes no sense.

Our transportation plan should include attractive welcome signs into our city to enhance us, to support police, and to build civic pride.

Please add more crosswalks with the additional sidewalks, more public trashcans and dog waste recepticals, better lighting and SIGNS saying "WELCOME TO SANDY SPRINGS!!" at all points of entry! We want the criminals to know their BS is not welcome here. ;)

Thank you for listening to the citizens of Sandy Springs!

"As a One River Place homeowner, I would like to see what will be done for privacy between I-285 and Powers Ferry Rd."

A sound wall/barrier between 285 and Powers Ferry Road(ays on the River/One River Place/Heards Ferry Elementary) I believe this is needed now, but even more so before the expansion of 285/express lanes come in. The bridge on Powers Ferry Rd- sidewalk should've wider if only on one side, or one on both sides of street along with a pedestrian crossing light to get to Cochran Shoals. A sidewalk and on Powers Ferry road that goes from Northside to Dupree along with better lighting all along Powers Ferry Road.

Glad to see so many sidewalk projects listed- but please focus on one side of a street and spread the funds to other areas.

I would like to submit an additional sidewalk project, on Glenridge Dr, from Abernathy to Glenlake Parkway. I and my children and dog often walk that way and without a sidewalk it is very dangerous, especially with the steep hills and blind curves. I have observed many residents biking and walking and running along that stretch who are similarly forced to walk along the road. A sidewalk would connect residents with Abernathy road, which already would allow access to the shops along Roswell.

We really need more sidewalks in the southern part of the city. Especially near Mt. Vernon Hwy. south to Chastain park.

Transportation Demand Management Focus Group

Wednesday, August 19, 2020 from 9:00am – 10:00am

Participants

- John Amsberry - City of Sandy Springs Community Development,
- Andrea Worthy - City of Sandy Springs Economic Development
- Brett Beldt – Chamber of Commerce Young Professionals
- Richard McLeod - City of Dunwoody Community Development
- Rosalind Tucker - Atlanta Regional Commission, Georgia Commute Options
- Kyethea Clark - Cumberland CID
- Johann Weber - Perimeter Connects

Meeting Takeaways

- We are in a critical moment to influence the transportation landscape and growth of Sandy Springs and the Perimeter area.
- There is an appetite for multi-jurisdictional “commute-based” partnerships across the region.
- Housing and transportation are connected - there is a need to consider affordable, higher-density housing within the City of Sandy Springs. This could give workers the option to shift away from their personal vehicle.
- Telework has worked for many companies during COVID-19 (Georgia Commute Survey). We need to leverage that success into a long-term strategy.

What are we currently experiencing in the City of Sandy Springs and surrounding areas?

- The east-west traffic congestion along I-285 is a deterrent for major companies locating in Sandy Springs.
- Large companies are exclusively locating around existing MARTA stations as a lifeline for employees to access work given an over-saturated road network.
- Roadway capacity projects are not always feasible alternatives to combat existing traffic congestion.
 - The City of Dunwoody is focusing on creating connections between the dendritic neighborhood network and improving streetscapes for pedestrian safety and experience.
- There is a legacy of economic investment in the area, but job growth is conflicting with the geometric limitations of existing infrastructure. It is starting to impact recruitment and retention for companies.

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Transportation Master Plan

What are some current efforts being taken to improve the area?

- Cumberland CID
 - I-285 Top End Transit Study - assessing the feasibility of transit routes and stations along the northern portion of I-285. This is a joint effort between several cities and CID's, planned to kick off in Fall 2020.
 - I-285 Express Lanes - assessing eastbound connectivity and how express lanes could impact surface roads in the area.
 - Paces Ferry Road project - in concert with the Express Lanes study. Focuses on major employers' trip generation and contribution to surrounding traffic (i.e. Home Depot, Cumberland Mall).
 - Commute incentives are handled by Georgia Commute Options (GCO).
- Atlanta Regional Commission/GCO
 - Undergoing current efforts to model what transportation trends look like during COVID-19 and telework.
 - Currently working with several employers and municipal organizations to implement formal telework initiatives.
 - GCO has an interest in piloting some telework projects in the Sandy Springs area.

What initiatives or programs are working well?

- The City of Sandy Springs zoning rewrite has seen positive feedback from developers - institutes a maximum office parking ratio of 2.0 spaces per 1,000 square foot in the Perimeter Center/City Springs Districts.
- Telework has been effective during COVID-19. This can be leveraged into a long-term solution for the area.
- Transit is both an asset and a challenge in the area. MARTA heavy rail provides great access to more regional destinations, but the lack of a complete, localized transit fabric limits ridership, especially within the dendritic neighborhood design.

What are the primary challenges to the transportation system in and around the City of Sandy Springs?

- Affordable housing is extremely limited. Only 6% of the workers in Sandy Springs live within 3 miles of Sandy Springs. Most workers live far away from where they work and housing trends for the next 5 years will push even more people out of the urban core, inciting more urban sprawl and further constraining workers to their personal vehicles.
- The City of Sandy Springs experiences a significant amount of pass-through congestion.
- The road network in the City of Sandy Springs is not conducive for efficient or safe travel.
- Adequate transit access is limited to those living along MARTA rail lines. Bus routes and service do not provide any competitive travel time benefits for commuters because they are driving along congested roadways

What are areas of emphasis and opportunity post-COVID-19?

- Support redevelopment projects with better connections to transit. Corporations want to locate in areas with multimodal options other than a personal vehicle.
- Work with employers and municipalities to formalize a long-term telework plan and reduce demand for the roadways during peak commuting hours.
- Leverage the rise of active commuting to justify streetscape improvements, bicycle and pedestrian connections, and micro-mobility options.
- Evaluate transit connection operations to ensure coordinated transit-to-other mode transfers for patrons.
- Better communicate TDM programs that will help overcome employee- and employer-identified barriers.
- Create dedicated transit infrastructure to provide a travel time incentive.
- Implement policy-oriented measures that complement the TMP and change travel behavior.
- Convince employers that they are a part of the solution. Most employers have already indicated a desire to stay partially remote post-COVID-19.
- Work with GCO to roll out some relevant pilot projects.

Bicycle/Pedestrian Focus Group

Thursday, August 20, 2020 from 4:00pm – 5:00pm

Participants

- Kevin Linehan - Vertego Bikes (business owner and resident)
- Catherine Mercier-Baggett – COSS Sustainability Manager
- Don Hall – Dunwoody Cycling Club, avid cyclist
- Michael Perry - COSS Recreation and Parks Department
- Nick Smith – COSS Bike Sargent with the Police Department
- Cary Bearn - City of Atlanta (works on bike/ped safety plans)
- Lane Frostbaum – Former Planning Commission Board member, avid cyclist in Sandy Springs

Meeting Takeaways

- Need to focus on making high traffic areas safe for bicycles and pedestrians, especially prioritizing school zones.
- Bicyclist and motorist education is important – “3-foot rule” for passing and prohibit riding on sidewalks.
- There is a desire for new policies that prioritize bike/ped:
 - Examples include requiring restriping during maintenance projects, changing sidewalk widths and landscaping requirements in mixed-use communities, pilot projects without geographic area, etc.

What do you perceive to be the bicycle and pedestrian needs in the City?

Safety

- Need to understand the high traffic areas and make sure these corridors are safe for bicycles and pedestrians.
- There are too many bicycle fatalities in Sandy Springs.
- Need to prioritize school zones.
- Unsafe corridors include:
 - Medical District to Mt. Vernon Hwy
 - Roswell Rd southbound to I-285

Maintenance

- Need to observe signal timing/delay and detection at intersections with existing bicycle infrastructure, including:
 - Glenridge Drive at Abernathy Road
 - Roswell Road at Mount Vernon /Johnson Ferry Road
- Need to maintain existing bike lanes – clean debris from travel lanes.

Education

- Enforce the “3-foot rule” where drivers must pass bicyclist at a safe distance of at least 3 feet – add signage along bikeable roadways.
 - Dunwoody Club and Roberts Drive
- Bicyclist are not allowed to ride on sidewalks.

Connectivity

- There’s a difference between a bicycle facility and a trail – most jurisdictions are doing away with “bicycle plans” because plans should not be only one mode. Corridor projects encompass many types of modes (ex: BRT with trails).

Priority Projects

- Connections to Morgan Falls (safety of kids and grandkids)
- Medical District to Hammond Road (work commute) project - something with striping
- Improvements to turning left on Glenridge Drive
- Different types of projects need different recommendations: recreational (long distance), commuting, kids on bicycles.
- Need safety and education around school.
- “The main problem for bicyclist in Sandy Springs is the danger from the traffic. It would be hard to put bicycle lanes in since that would require more roadway, which requires money. Educate bicyclist and motorists on current bicycle and pedestrian traffic laws.” – Sergeant Pietruszka from the Police Department

Policy

- A new policy could include when maintenance happens, restriping is required.
 - City of Atlanta - 10 ft lanes (min) / 11 ft lanes (standard) with shoulder + lower speed limits - not freight or bus route
- Look at widths of the sidewalks + trees in mixed-use communities
- Equitable investments - where is money going? How is that money being spent?
- Bike District – bicycling incentives for the public in the bicycling district.
- City Springs has been too much of an area of focus.
- Pilot policies/projects – give the City a list of options without a geographic area.

Micromobility

- Scooters are too dangerous.
- We don't want to create a system that violates riders/driver's instinct.

Community Assistance Center (CAC) One-on-One Interview

Thursday, August 27, 2020 from 4:00pm – 4:30pm

Participant

- Tamara Carrera – Executive Director

Meeting Takeaways

- There is a community of people using the CAC that rely on transit to get to work and for basic needs. Most of the families do not have access to a vehicle or do not speak English as their first language.
- Need to improve existing transit efficiencies
- The streets are not safe for bicyclists and pedestrians around the community.
- There is interest in improving the MARTA stations throughout Sandy Springs that have the most ridership and recommend adding stops and routes to more dense neighborhood areas.
- There was once a shuttle that serviced that stations to specific destinations that worked well, but it was also expensive.

What does your organization do?

- CAC is the emergency assistance, homeless prevention program - not a housing program
- It works with families to get them settled and move into self-sufficiency - or a higher level of self-sufficiency
- There is a large number of immigrant communities in Sandy Springs
- It teaches English as a second language (ESL) - basic language skills
- It started classes 32 years ago
- The makeup of the immigrants has changed -
 - Right now, it is focused on Central American, South American refugees, and Middle Eastern families
 - Need the language to be able to move forward to self-sufficiency
- Most of the funding goes to rent assistance to give families homes
 - Many are in the service industry and COVID has hit these families really hard
 - Up to 200% low income scale

How do you interact with the Community Assistance Center?

- Food pantry
- Rent assistance

- Language assistance

How do the people you serve use transit today?

- Sandy Springs is an elongated City. People who live in the panhandle (L) - few apartment complexes rely on public transportation
- Efficiency - Need to change buses, 40 minute frequencies at a minimum
 - Shopping/retail is a challenge with transit especially for families
- Fortunate that there's at least MARTA rail stations, but the transfer capabilities between rail and bus aren't efficient

Where geographically do the people you serve live? Where do they work?

- Level of sophistication differs with the members
- For folks who don't have access, they have memorized the transit schedules (no schedules at stops or lack of language/understanding)
- Post COVID, everything CAC is online - about 70% of people can handle technology, about 15-25% are struggling with technology

From a more holistic transportation perspective, what are some of the needs you're seeing in the community? Walking? Biking?

- Volunteer coordinator bikes
- The streets are not user-friendly for bicyclists
- The main roads are not safe and drivers are really not used to the bicyclists
 - Azalea Road has a ton of bicyclists and the drivers are very safety-conscious there
 - Roswell Road is not the same condition as Azalea Road

What are their barriers/opportunities to using transit today? How are these different for different groups (i.e. seniors, people getting to/from MARTA stations)?

- CAC does work with seniors
 - Seniors that live in senior living in Sandy Springs (Hellenic Towers, Allen Towers, Campbell-Stone) - most of these have a mini-buses and serve their residents. They're not completely void of options
 - The issue is if they want to go to a one-off destination
- Seniors that live on their own are the folks that are struggling
 - Mobility issue
 - MARTA Mobility Service (disabled for door-to-door service) and elderly use that a lot
 - If you haven't been declared disabled, you can't use it
 - Is there an opportunity to have a service for people who are in that middle? (Medically-fragile)

Where are people going when they get on the train vs. the bus?

- Most of the movement is job-related/basic needs

What does car accessibility look like?

- From the clients, about 15% do not have access to a vehicle
- The people who do travel in a car, often - it is not theirs. They are borrowing vehicles.

In what ways do you see transit service as lacking in Sandy Springs?

- Someone historically had a mini-bus taking people from the station to specific areas. It was very successful but expensive.
 - It was available to everyone
- Need to create the critical mass and employ shuttle-like services
 - Younger generations would be more willing to take transit if there was more "cross transportation"

What's on your transportation "wish-list" for Sandy Springs?

- Think about density of population
 - Northridge Road - there are at least 10 huge apartment complexes in the area
 - Cluster of apartments right next to I-285
- People work in Roswell
- MARTA cancelled their cross-city bus recently (86) - there were quite a few people who took that
 - These folks didn't take the trip without access

How do we best reach the people you serve from a public engagement standpoint?

- COVID is creating challenges and will likely not be better by October
- We can do Zoom meetings --> could we have bilingual meetings that are targeted specifically for these non-profits
 - All classes are online (computer and ESL)
- Try to reach the Black/Latino/Hispanic community

Are there local community/organizations that we should tap into as we go through this planning process?

- Hispanic - Los Enos Primero (Sandy Springs Mission)
- Older - Mary Hall Freedom House (single women and other programs, veterans, etc.)
- Senior services can be helpful (Dorothy Benson Center)

Senior Services One-on-One Interview

Friday, September 4, 2020 from 10:00am – 10:30am

Participant

- Ron Harlow – Executive Director Senior Services North Fulton

Meeting Takeaways

- TOPS (Transportation Options Program for Seniors) primarily offers trips from seniors' homes to medical appointments and other essential trips.
- They outsource all their transportation to their four transportation partners.
 - This includes van service, one-on-one service, and Uber/Lyft (Common Courtesy)
- Affordable housing is a struggle for seniors as they try to keep their independence living alone for as long as possible.
 - Seniors with mobility challenges in these situations have a particular need for point-to-point transportation services.

What does your organization do?

- Senior Services North Fulton serves Sandy Springs to Milton through meals on wheels and transportation services.
 - Meals on wheels served 38K meals and in 2020 will be 50K meals
- It also serves three senior centers in Atlanta and three senior centers in North Fulton.

How do you interact with Fulton County Senior Services?

- North Fulton partners with Fulton County Senior Services.
 - Fulton County outsources all North Fulton trips to Ron's group
 - 40% of revenue comes from Fulton County contract
 - Other funding sources include - private, gala, etc.
 - Fulton County outsources all south Fulton trips to the other group

How do you deliver transportation service?

- TOPS (Transportation Options Program for Seniors) service:
 - Budget was \$250,000 for 2020
 - 2019 – 2,800 TOPS rides
 - Primarily trips are from seniors' homes to medical appointments and other essential trips. They also provide service to other types of recreational trips.
 - Depending on annual funding, TOPS can offer unlimited rides to seniors with chronic illnesses (dialysis or chemo for example) - fare-free service.

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- Annually, clients are asked for a donation if they're able to donate based on the number of rides they took.
- There are 250 seniors in the program right now, the volume has dropped during COVID because most trips are for wellness trips and many medical providers have pushed those appointments to a later time.
- Clients don't have technology capabilities or not comfortable using technology.
- Program spent about \$20K a month pre-COVID and now about \$10K a month during COVID.
- Dispatch process:
 - Client calls into the office, then the office outsources all transportation to one of their four transportation partners.
 - Van service to one-on-one service, Uber/Lyft (Common Courtesy)
 - Common Courtesy - national contract with Uber/Lyft and can track the trip internally, cost-efficient
 - One-on-one service – for frail/most in need seniors, takes them to the appointment, stays with them and brings them back home

Are there gaps in service?

- Trips need to begin in North Fulton, but the end destination can be anywhere in metro Atlanta.
- The limitation to service is consistent level of funding annually.

How do people make the trip if not for TOPS?

- Contractors do private pay services.

Who is eligible for service?

- Eligibility - 60 + and live in North Fulton (Sandy Springs to Milton)

How do your clients use transit/get around generally?

- Some seniors have the mobility to use the public transportation system available.
- The aim is to design a program that can pick up clients and get them where they need to be without a service that requires a level of mobility.

How can the city create an option that can serve the "unmet need" without reinventing the wheel?

- Additional funding for the program, potentially from the City
- Ron feels like they haven't gotten to capacity yet.

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Transportation Master Plan

What future trends do you see in the North Fulton/Sandy Springs area in terms of where seniors are choosing to live and how they are getting around? Especially how they relate to transportation needs/desires?

- Affordable housing is a struggle for seniors as they try to keep their independence living alone for as long as possible.
 - Seniors live in places that they can afford - and if they can be close to families, they will try to live there.
 - Once seniors go to homes, senior services lose these customers.
- Ron feels like there's enough innovation in transportation that'll keep up with that as a need - but housing is a bigger issue.

Additional Stakeholder Feedback

- When it comes to living situations and mobility limitations, seniors in Sandy Springs typically fall into one of three categories:
 - Some live in a single-family home and have few or no mobility limitations, and typically get around in the same ways as other residents.
 - Other seniors live in a single-family home, but do have mobility limitations, constraining their ability to make trips on their own.
 - Others live in dedicated care facilities or residential facilities designed for seniors, and these dedicated facilities often have transportation services provided on their own, to varying levels of coverage.
- Housing affordability is increasingly a challenge for seniors in Sandy Springs. This means that those living independently, but with mobility limitations, may elect to stay in their current home despite their mobility challenges. This creates a particular need for point-to-point transportation services for seniors in this situation.
- There are several existing transportation services available to seniors, but many are targeted at or prioritize essential travel, such as medical appointments, social services, and grocery shopping, or the services will only provide trips to a fixed set of locations. This leads mobility-challenged seniors miss out on non-essential trips, such as shopping, church, recreation, and socializing.
- Among current services provided, Common Courtesy has been very popular and well utilized. The service is cheaper on a per-ride basis than other senior-targeted transportation services.

Office of Aging Focus Group

Friday, September 4, 2020 from 10:30am – 11:30am

Participants

- Ken Vanhooose – Fulton County Senior Services

Meeting Takeaways

- There is a need for transportation services for both essential medical appointments and trips that aren't as "essential" but are still important for seniors' quality of life.
 - These trips include libraries, grocery store, social trips, church, entertainment, etc.
 - If seniors don't have family or friends who can take them on these trips, they typically do not make the trips.
- There is a desire for fixed route transportation that serves specific quadrants in Sandy Springs and brings seniors to the services they need.
- Many seniors use MARTA transportation.
- Most trips by Fulton County Senior Services are contracted out to TransDev. They own their vehicles and Senior Services pays administrative fees.
 - Also offers Common Courtesy (uber/lyft) services

What does your organization do?

- The organization hosts several different services and is the county base of funding for the Older Americans Act.
- The organization owns four multi-purpose facilities where they offer quarterly classes, meals, pools.
 - Does not offer transportation to the multi-purpose facilities as the seniors are more independent.
 - 200+/day
 - Adult day program at each facility, costing 35\$/day sliding scale based on the senior's income.
- They own neighborhood senior centers where less independent seniors are offered transportation.
 - 25-30/day
 - Holds programs that are 4 hours long and include lunch.
- They participate in 'Meals on Wheels,' helping with around 1000 meals a day.
- They have a case management unit and information assistance unit where a person can call in and request services, ask questions, etc. It is manned 8:30am-5:00pm, five days a week.

SANDY SPRINGS

Transportation Master Plan

How do you interact with North Fulton Senior Services?

- Fulton County Senior Services are offered anywhere in Fulton County so there is overlap between their services, South Fulton County Services, and North Fulton Senior Services.
- The Community Services program funds them and refers people depending on transportation needs. They consider if the trip is more localized; if the trip feels more regional, then Fulton County Senior Services handles it.

How do you deliver transportation service?

- Most trips are contracted out to TransDev (MOST – Mobility Options for Senior Transport).
 - They own their own vehicles and Fulton County Senior Services pays administrative fees (cost of buses, administrative office, etc.).
 - TransDev does adult day and neighborhood centers, training centers for behavioral health, demand response transportation (medical and essential neighborhood trips for which a senior can call and schedule).
 - They average 70 dialysis trips/day set up through subscription for 3x week.
- Common Courtesy Services:
 - Uber/Lyft - \$ 1 million a year
 - Fulton County deals with the eligibility and sends them to the transportation service that's most appropriate.
 - Operates Monday- Friday, 8-4PM
- Also offers 55 Alive classes (defensive driving through AARP) depending on their financial situation and comfort with driving.

Who is eligible for service?

- TransDev eligibility - 60+ funding
- Common Courtesy eligibility - 55+ and screening (no car ownership, can't drive, etc.)
 - Capped to 15 trips a month
 - Cheaper per ride
 - Personalized service (immediate pick up and drop off)
- Prioritizes those who have less access to a car and are mobility constrained in some way
- Fulton County helps to "filter" different types of people and how they can get their trips fulfilled.
 - Not every trip is really getting served through Fulton County.

How do your clients use transit/get around generally?

- Vast majority of seniors are driving themselves or depending on family/friends.
- The transportation need is medical appointments and the trips that aren't as "essential" (libraries, grocery store, etc.).
 - These local trips are the ones that get left out of these programs.

SANDY SPRINGS

Transportation Master Plan

- Socialization is key with senior group, but the transportation options for socializing is limited.
- Non-essential trips include church, entertainment (theater), etc.
- If seniors don't have friends/family - they typically just don't make the trips.
- There are many seniors who use MARTA.

What future trends do you see in the North Fulton/Sandy Springs area in terms of where seniors are choosing to live and how they are getting around? Especially how they relate to transportation needs/desires?

- Most seniors live with a spouse or alone, some of them are living in their homes they've lived in years but can't afford to move/downsize to a different place.
 - Issues with unfamiliarity with new location and affordability
- In Sandy Springs, assisted living facilities is a future trend.

What's on your transportation "wish-list" for Sandy Springs?

- Fixed route transportation:
 - Serve specific quadrants in Sandy Springs
 - Bring seniors to the services that they need:
 - DeKalb County Senior Affairs - Federal transportation grant money to help to fund this (through ARC).

Other comments?

- Commissioner Hausman is very active in transportation but a lot of those things won't be online for several more years.



Livable Communities Focus Group

Wednesday, September 9, 2020 from 1:00pm – 2:00pm

Participants

- Linda Cahn – Youth Leadership Sandy Springs
- Dan Coffey – COSS Communications
- Vickie Cross – Fulton County Schools
- Marielena Gutierrez – Safe Routes to School
- Bob Lepping – HOA Representative
- Michael Perry – COSS Recreation and Parks
- Mark Rosenthal – HOA Representative
- Ginger Sottile – COSS Community Development
- Wesley Waters – CIP Unit Manager – Sidewalk Program

Meeting Takeaways

- We are focusing on ped/bike connections to Activity Centers and identifying missing sidewalk linkage.
 - Priority is connectivity within walking sheds (within 20-minute walk or 1 mile) of Activity Centers.
- A large barrier to connectivity for Sandy Spring residents is crossing major roads which are either currently under construction or do not have safe crossings, including Hammond Drive, Johnson Ferry Road, Glenridge Drive, SR 400, I-285, and Roswell Road.
 - There is a desire for temporary bike/ped connections over long-term road construction projects.

How can we improve walking and biking in these areas?

- There is a desire for sidewalks on one side of the road in Hammond Hills neighborhood.
- Residents of Hammond Hill neighborhood would like to walk to Sandy Springs but there is not currently a safe way to cross Hammond Drive.
- Including lighting (LED lights, streetscape lights) in planning of new ped/bike connections is desired for safety concerns.
- Roswell Road sidewalk is considered dangerous to walk along due to narrowness and proximity to street.
 - The narrow parts of this sidewalk are scheduled to be redone in the next year
- The intersection of Riverside Drive at Roswell Road is considered unsafe for bicyclist.
 - Riverside Drive may currently be on the sidewalk scoring list for consideration.

SANDY SPRINGS

Transportation Master Plan

- The areas around schools tend to be higher speed/volume roads and schools do not promote walking/biking if they deem it unsafe.
 - Reaching out to individual school principals to get their buy in to encourage more walking/biking to school will encourage parents.
 - Some of the schools currently on the safe routes to school list are not active with the organization right now.
 - Reaching out to specific schools to improve safety and/or formalize the school's relationship with the city could help with this.

What temporary ped/bike connectivity fixes may be of interest to neighborhoods?

- Temporary crossings options over Hammond Drive, Johnson's Ferry Road to Trader Joes, Glenridge Drive to Hammond Park, and under I-285 along Glenridge Drive to blue moon pizza shopping center would be appreciated by Sandy Spring residents while connectivity is impaired due to construction.
 - Consider cost/benefit of temporary crossings (possibly HAWK or RRFB or crossing markings)
- Pedestrian timing at Glenridge Drive are currently not allowing enough time to cross.

How can we improve the integration of ped and bike mobility with transit?

- Crossing from the west side of SR 400 to get to the Sandy Springs MARTA station is currently a challenge.
 - Using Abernathy Road is currently not desirable due to high traffic volume and congestion.
- There is a desire for more bridges to connect people on the west side of SR 400 to transit.

Safety and Emergency Services Focus Group

Thursday, September 10, 2020 from 2:00pm – 3:00pm

Participants

- Keith Sanders – Fire Department Chief
- Phil Adams – Fire Department
- Jason Taylor – Fire Department
- Joshua Montefusco - GDOT
- Sam Harris– State Safety Engineer GDOT
- David Low – COSS Public Works

Meeting Takeaways

- We can facility data comparison/sharing between the fire department's crash numbers and the data shown in our report/maps.
 - Fire department thought our crash numbers looked too low for the time period shown.
 - Fire department is working on a data dashboard as well
- Fire/ambulance response wants to be considered and involved with new roadway projects/improvements.
 - Particularly focused on ingress/egress getting to accident scenes

Which corridors have the highest crash rates?

- Excluding I-285 and SR 400, the highest crash rates are perceived to be at the following locations:
 - Mount Vernon Highway
 - Riverside Drive at Heards Ferry Road
 - Roswell Road at Dalrymple Road
 - Powers Ferry at Northside Drive

What driver behavior contributes to crashes?

- Cell phone use/distracted driving
 - Continues to get worse despite distracted driving laws
- Higher Speeds
 - Higher speeds on roadways since pandemic/low traffic volumes
- New law allows 16-year-olds to get a license without passing drivers test.

What contributes to inhibited response time?

- Traffic congestion

- Narrower roads
- Difficulties parallel parking in business districts/dense areas

What are bike/ped roadway users crash trends?

- Bike/ped crashes trends are high and are not seeing any decreases
- Pedestrians crossing to get to stores are highest crashes
 - Roswell Road has the majority of crashes
 - Majority of ped crashes are not using sidewalks
- Channelized right-turn lanes not yielding to pedestrians
 - Right-turn from Johnsons Ferry to Abernathy
 - Right-turn on Roswell Road turning onto I-285 WB
- Consider adding lights to alert drivers that pedestrians have right-of-way
 - Consider viewing angle of driver and elongated ped islands to also mitigate issue
- Consider adding RRFB to alert drivers to peds
 - GDOT has set aside money for the city to install equipment for safety

What are scooter trends in the area?

- Scooters are not an issue now, but it is something the city is considering when planning for the future.

What safety issues are there boarding/un-boarding buses?

- There have been some fatalities with riders running across Roswell road to get to buses.

Achieving Vision-Zero

- Requires collaboration between city departments
 - Inner city departments already have these relationships based on prior collaborations
- Project idea: The city has just gone through a process of updating speed limits, and they used a FHWA software for lowering speed limits based on bike/ped activity, number of driveways, etc., rather than 85th percentile speed. Similar projects to this could be considered for zero-vision project
- Need to reach out to students (middle-school, high-school) before they become drivers to teach about driver safety and driver responsibility.
- Need to reach out to large, fortune 500 companies in city for partnerships.

Adjacent Communities Focus Group

Wednesday, October 21, 2020 from 3:00pm – 4:00pm

Participants

- Michael Smith – Public Works Director of the City of Dunwoody
- Dave Cox – Transportation Planning Manager for the City of Roswell
- Hari Karikaran – Public Works Director of the City of Brookhaven
- Justin Hatch – GDOT District 7 Engineer
- Greg Ramsey – Public Works Director and City Engineer for the City of Peachtree Corners

Meeting Takeaways

- Bicycle, pedestrian, and trail projects are the main type of opportunities for collaboration.
- Lots of interest for PATH400 alignment and potential connections to parks and existing facilities.
- There are many existing, programmed, and proposed projects that each community support.
 - Glenridge Connector Extension is a contentious project – Brookhaven neighborhoods do not support this, but Brookhaven elected officials and Dunwoody support it.
 - Roberts Drive needs to be multimodal, but Dunwoody is not planning to widen their section.

What are some opportunities for collaboration?

Dunwoody

- Shared use path at Winters Chapel from Dunwoody Club to Holcomb Bridge Road (next year)
- Trail along Chattahoochee River up through the Winters Chapel area
- Chamblee Dunwoody and Spalding Bike/Ped Plan (Spalding Drive - shared use path)
- Perimeter Area - Cox - High St (Perimeter Center Pkwy and Hammond Drive) - put on hold this year
- Interested in the connection to PATH 400 up Peachtree Dunwoody Road

Roswell

- Interested in the PATH400 connection to connect with Big Creek Greenway in Alpharetta
- Pedestrian Bridge across Chattahoochee River (Morgan Falls)
- Parks across the east side to connect to Roswell

GDOT

- GeoPI - to search for programmed projects

Brookhaven

- Complete sidewalk on Windsor Parkway
- RAB at Osborne Road and Windsor Parkway – will work with Sandy Springs if they have any issues on Windsor Parkway

Are there any existing, programmed, or proposed projects?

- Glenridge Connector Extension
 - Not received well by the Brookhaven neighborhoods, but Brookhaven elected officials support this project
 - PCID looked at this a few years ago - need to reach out for more context
 - Dunwoody would support this connection
- Johnson Ferry Road Corridor Study (SS and Chamblee) - in Brookhaven TMP update
- Morgan Falls Bridge - beneficial for Cobb and Roswell
 - Roswell reconstructing Willeo Creek Bridge next summer (2021)
- PATH400 alignment - Roswell is supportive
 - Is there opportunity for bike/ped on the GA400 bridge across Chattahoochee River? (GDOT says city pays for bike/ped update)
 - Need alternative routes then following 400 (especially crossing the Chattahoochee)
 - Dunwoody and Roswell suggest following 400 is better for regional connectivity
 - Dunwoody trying to connect either in Perimeter or Spalding/Pits area
- Roswell Rd @ 285 -
 - Safety and operations tracking for hot spots
 - *Need to check GDOT safety website (Justin to check)
- Spalding Drive connection to Crooked Creek Park (PTC)
- Roberts Drive Widening - needs to be multimodal (push back from Dunwoody)
 - Need to check widening projects adjacent to 400 - don't want to make a parallel route/cut through for 400
 - Dunwoody is not going to widen their section
 - Dunwoody Village is a hot spot - not enough capacity, but don't want to make it a thorough fare
- Riverside Drive widening - supported by Roswell
- I-285 Trail -
 - Dunwoody supports trail
 - Old George Town Trail Bridge completed

SANDY SPRINGS

Transportation Master Plan

- Cattellian Drive Trail completed
- Ashford Dunwoody to Peachtree Dunwoody connection is a challenge

Transit:

- Roswell - SR 9 is the major transit corridor
- New MARTA route 142 (Holcomb Bridge down to Spalding)

Transit Focus Group

Wednesday, October 28, 2020 from 12:00pm – 1:00pm

Participants

- Heather Alhadeff – MARTA
- Jacob Vallo – MARTA
- Ryan VanSickle – MARTA
- Ezekiel Guza – CobbLinc
- Karen Winger – Gwinnett County Transit
- Frank Adarkwa – ATL (Service Planning)
- Andrew Spiliotis – ATL

Meeting Takeaways

- Some potential projects including Hammond Road Widening and the North End Redevelopment could be leveraged to include transit improvements like increased service and connections.
- Shuttles/circulation plan need to be developed more in order to understand the demand.
- The City should create a list of proposed transit projects/ideas/recommendations.
- There is some interest in partnering with the City of Sandy Springs, even though they are not a primary provider.
 - MARTA – including art and wayfinding (kiosks) at stations
 - Gwinnett County Transit – direct connect routes

How does your experience align with the information shown thus far?

- LEHD is from 2017 - most of the development is more recent than that (City Springs)
- On-boarding surveys is more reliable

What opportunities are there for improvements to existing service?

- Hammond Road Widening - potential improved connection from MARTA to City Springs
 - 87 / 5 - headways ~15 min
- Service around the North End:
 - Used to have connection to Roswell Road (E-W) (down to I-285), but cut 10 years ago due to ridership and budget
- New roadway projects - opportunities for partner with MARTA (example: update stops and stations)
- What roles do the shuttles play in the role of circulation? (Specific employer to MARTA stations)

SANDY SPRINGS

Transportation Master Plan

- Privately funded, no open door, paid for the private companies
- Are there new routes/alignments that MARTA can implement?
 - With the changing of land use and demographics, are there new points that MARTA needs to consider?
- Do we have the sense that demand has increased? Do we have any information to increase frequency?

How can the City be a good partner to promote transit-supportive infrastructure?

Technologies

- Sandy Springs have some signals in Dunwoody - testing the cross jurisdictional services

Standards (art and stations)

- The city wants to include art and wayfinding (kiosks) at stations - **MARTA is interested in partnering with the City**
 - Need to verify recommended stations by March for budget
 - MARTA is working on wayfinding for routes and stops

Opportunities for Collaboration:

MARTA

- Timeline and proposed station locations for 400, 285, Roswell Road ART

CobbLinc

- Services along Johnson Ferry from Cobb to Sandy Springs
- HCT 285 from Cumberland to Roswell Rd

Gwinnett County Transit

- Direct Connect - interested partnering with Sandy Springs
- If the referendum passes, there is budget for TSP

Xpress

- TSP - great way to improve reliability
- First and last mile connectivity - P&R, bus stops, stations
- 482 is up for elimination (Town Center to Sandy Springs MARTA Station) on Jan 4

ATL

- Daniel Wall is working on interjurisdictional routes
- Great idea to list what Sandy Springs sees as local needs
- Xpress doesn't have any proposed Park & Ride in Sandy Springs
- Proposed Park & Ride in Cumberland Mall with the redevelopment (early planning stages)

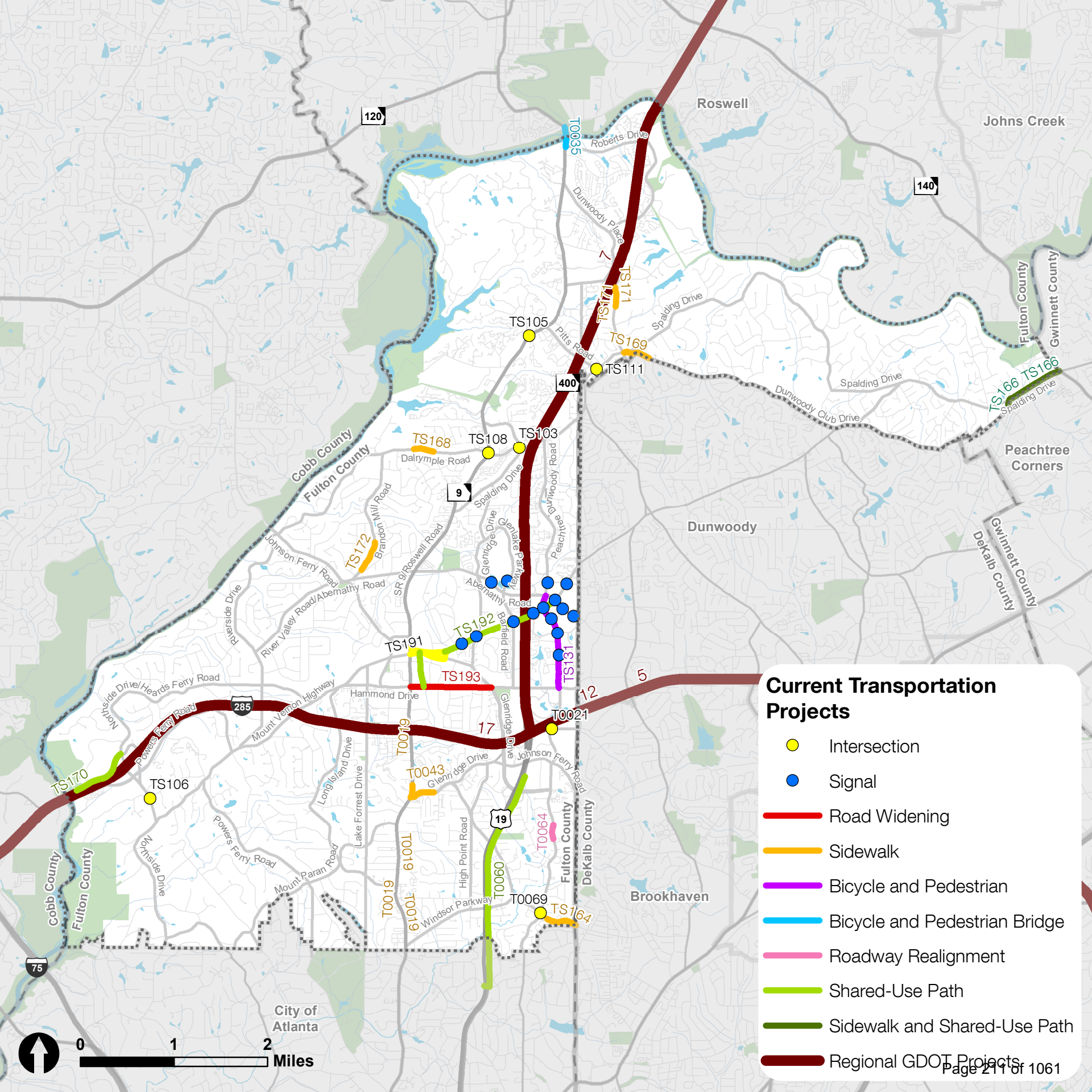
SANDY SPRINGS

Transportation Master Plan

- Park & Ride in East Cobb is not out of the question
- Used to have Route 5 years ago - don't know how successful that was

B – Current Transportation Projects





Current Transportation Projects

- Intersection
- Signal
- Road Widening
- Sidewalk
- Bicycle and Pedestrian
- Bicycle and Pedestrian Bridge
- Roadway Realignment
- Shared-Use Path
- Sidewalk and Shared-Use Path
- Regional GDOT Projects

Current Transportation Projects

Project Number	Project Name
TS105	Roswell Road at Grogans Ferry Road
TS106	Riverview Drive and Northside Drive
TS108	Roswell Road at Dalrymple Road
T0069	Peachtree-Dunwoody Road at Windsor Parkway
TS111	Spalding Drive at Pitts Road
TS103	Spalding Drive at Dalrymple Road-Trowbridge Road
T0021	Peachtree Dunwoody Rd at Lake Hearn Dr Intersection Improvement
TS107	Abernathy/Aria SCOOT Upgrade
TS107	Glenlake One/Glenlake Parkway SCOOT Upgrade
TS107	Peachtree-Dunwoody/North Park SCOOT Upgrade
TS107	Mt. Vernon/North Park SCOOT Upgrade
TS107	Abernathy/Perimeter Pointe SCOOT Upgrade
TS107	Abernathy/Sandy Springs MARTA SCOOT Upgrade
TS107	Abernathy/Mt. Vernon SCOOT Upgrade
TS107	Mt. Vernon/Peachtree Dunwoody SCOOT Upgrade
TS107	Peachtree-Dunwoody/ Perimeter Center West SCOOT Upgrade
TS107	Peachtree-Dunwoody/ Central Parkway SCOOT Upgrade
TS107	Peachtree-Dunwoody/ Central Park Dr SCOOT Upgrade
TS107	Mt. Vernon/ Crestline SCOOT Upgrade
TS107	Mt. Vernon/ Barfield SCOOT Upgrade
TS107	Mt. Vernon/ Glenridge SCOOT Upgrade
TS107	Mt. Vernon/ Mt. Vernon Presbyterian School SCOOT Upgrade
TS193	Hammond Drive Widening
TS191	Johnson Ferry Road Improvements
T0035	Chattahoochee River Bicycle and Pedestrian Bridge
T0060	Path 400 Extension
TS169	Sidewalk Program - Dunwoody Club Dr. (Spalding Dr. to Ex. Walk at Fenimore Cir.)
TS171	Sidewalk Program - Roberts Drive (Ex. Walk S of Northridge Rd to Ex. Walk at Davis Academy)
TS168	Sidewalk Program - Dalrymple Road (Ex. SW at Princeton Sq (@ Princeton Way) to Duncourtney Dr.)
TS172	Sidewalk Program - Brandon Mill Road - Lost Forest Dr. to Brandon Ridge Dr.
TS170	Sidewalk Program - Interstate North Pkwy - city limit to Northside Drive
T0021	Medical Ctr to Dunwoody MARTA Bike/Ped improvements
T0058-1	Boylston Drive Streetscape
T0019	Roswell Road/SR 9 Transit Access Program
T0043	Roswell Road/SR 9 at Glenridge Drive
T0064	Roadway Realignment Peachtree Dunwoody Road near Telford Place
TS131	Perimeter Commuter Trails - Peachtree Dunwoody Rd
TS192	Mt. Vernon Hwy Multimodal Improvement
TS166	Sidewalk Program - Spalding Dr. (Spalding Lake Ct. to Holcomb Bridge)
TS164	Sidewalk Program - Windsor Pkwy (Crestwicke Pointe to City Limit)
5	I-285 Top End Express Lanes
7	SR 400 Express Lanes
12	I-285 Westbound Ramp Extension
17	I-285 Westbound Auxiliary Lane Extension



C – Other Projects Considered

Other Projects Considered

Project								
Project ID	Source	Project Name	Road Name	Extents	Project Type	Length (Mi)	Project Description	Score
A_051	NFCTP (Asp)	Glenridge Drive Bike Lanes	Glenridge Drive	From SR 9/Roswell Road to Glenridge Connector	Bike Lanes	0.9957	This project includes bike lanes along Glenridge Drive.	77.7
A_110	Trails Master Plan 2019	Morgan Falls Park Connector Part B	Off-Road Trail	From Segment 2a to City Limits	Bridge	0.0853	This project will incorporate a multi-use side path connecting destinations around Morgan Falls Overlook Park.	
R_016	NFCTP 2017	Long Island Drive at Long Island Creek Bridge Repair	Long Island Drive	From Long Island Drive to Long Island Creek	Bridge		This project includes a bridge repair due to condition rating 6 (77.3) and bridge age (93), last reviewed Sept. 2020. The bridge sufficiency rating is 66.20.	
R_017	NFCTP 2017	Northside Drive at Long Island Creek Bridge Replacement	Northside Drive	From Northside Drive to Long Island Creek	Bridge		This project will include a bridge replacement due to condition rating 6 (76) and age (89), last reviewed Sept. 2020 - include bicycle and pedestrian accommodation. The bridge sufficiency rating is 87.1.	
R_018	NFCTP 2017	Powers Ferry Road at Long Island Creek Bridge Replacement	Powers Ferry Road	From Powers Ferry Road to Long Island Creek	Bridge		This project will include a bridge replacement due to condition rating 7(47.2) and age (27), last reviewed Sept. 2020 - include bicycle and pedestrian accommodation. The bridge sufficiency rating is 47.2.	
R_019	NFCTP 2017	Spalding Drive near Ball Mill Creek Bridge Replacement	Spalding Drive	From Spalding Drive to Ball Mill Creek	Bridge		This project will include a bridge replacement due to condition rating (75.9) and age (91), last reviewed Sept. 2020 - include bicycle and pedestrian accommodation. The bridge sufficiency rating is 75.90.	
R_020	NFCTP 2017	SR 9 at Chattahoochee River Bridge Replacement	SR 9	From SR 9 to Chattahoochee River	Bridge		This project will include a bridge replacement due to condition rating (65.5) and age (92) - include bicycle and pedestrian accommodation. This bridge is GDOT owned and the bridge sufficiency rating is not available.	
R_410	TMP	Coles Way over Chattahoochee River Tribe Bridge	Coles Way	From Coles Way to Chattahoochee River Tribe	Bridge		This project will include a bridge repair due to condition rating (7) and age (35), last reviewed Aug. 2017. The bridge sufficiency rating is 69.5.	
R_411	TMP	Johnson Ferry Road over Chattahoochee River Bridge	Johnson Ferry Road	From Johnson Ferry Road to Chattahoochee River	Bridge		This project will include a bridge repair due to condition rating (6) and age (50), last reviewed May 2018. The bridge sufficiency rating is 65.2.	
R_412	TMP	Riverside Drive over Marsh Creek Bridge	Riverside Drive	From Riverside Drive to Marsh Creek	Bridge		This project will include a bridge repair due to condition rating (7) and age (9), last reviewed Aug 2017. The bridge sufficiency rating is 79.1	
R_413	TMP	Brandon Mill Road over Marsh Creek Bridge	Brandon Mill Road	From Brandon Mill Road to Marsh Creek	Bridge		This project will include a bridge repair due to condition rating (7) and age (9), last reviewed Aug 2017. The bridge sufficiency rating is 79.1	
R_414	TMP	Glenridge Road over Marsh Creek Bridge	Glenridge Road	From Glenridge Road to Marsh Creek	Bridge		This project will include a bridge repair due to condition rating (7) and age (9), last reviewed Aug 2017. The bridge sufficiency rating is 79.1	
R_416	TMP	Tanacrest Drive over Chattahoochee River Tribe Bridge	Tanacrest Drive	From Tanacrest Drive to Chattahoochee River Tribe	Bridge		This project will include a culvert repair due to condition rating (7) and age (58), last reviewed Apr. 2018. The culvert sufficiency rating is 92.4.	
R_417	TMP	Lake Forest Drive over Long Island Creek Bridge	Lake Forest Drive	From Lake Forest Drive to Long Island Creek	Bridge		This project will include a bridge repair due to condition rating (5) and age (84), last reviewed Apr. 2018. The bridge sufficiency rating is 82.9	
R_418	TMP	Kingsport Drive over Long Island Creek Bridge	Kingsport Drive	From Kingsport Drive to Long Island Creek	Bridge		This project will include a bridge replacement due to condition rating (6) and age (53), last reviewed Apr. 2018. The bridge sufficiency rating is 75.6.	
R_419	TMP	Hammond Drive over Nancy Creek Tribe Bridge	Hammond Drive	From Hammond Drive to Nancy Creek Tribe	Bridge		This project will include a culvert repair due to condition rating (7) and age (43), last reviewed Apr. 2018. The culvert sufficiency rating is 80.8.	
R_420	TMP	Peachtree Dunwoody Road Over Nancy Creek Tribe Bridge	Peachtree Dunwoody Road	From Peachtree Dunwoody Road to Nancy Creek Tribe	Bridge		This project will include a culvert repair due to condition rating (7) and age (43), last reviewed Apr. 2018. The culvert sufficiency rating is 80.4.	
R_421	TMP	Peachtree Dunwoody Road Over Nancy Creek Tribe Bridge	Peachtree Dunwoody Road	From Peachtree Dunwoody Road to Nancy Creek Tribe	Bridge		This project will include a bridge repair due to condition rating (7) and age (9), last reviewed Aug. 2017. The bridge sufficiency rating is 65.1.	
R_422	TMP	Glenlake Parkway Over Marsh Creek Bridge	Glenlake Parkway	From Glenlake Parkway to Marsh Creek	Bridge		This project will include a culvert repair due to condition rating (6) and age (29), last reviewed Apr. 2018. The culvert sufficiency rating is 83.3.	
R_423	TMP	Dunwoody Club Drive over Ball Creek Bridge	Dunwoody Club Drive	From Dunwoody Club Drive to Ball Creek	Bridge		This project will include a bridge widening with deck rehabilitation/replacement due to condition rating (6) and age (88), last reviewed May 2018. The bridge sufficiency rating is 69.9.	
R_424	TMP	Spalding Drive over Cooked Creek Bridge	Spalding Drive	From Spalding Drive to Cooked Creek	Bridge		This project will include a bridge widening with deck rehabilitation/replacement due to condition rating (5) and age (67), last reviewed May 2018. The bridge sufficiency rating is 37.9.	
R_425	TMP	Windsor Parkway over Nancy Creek Bridge Upgrade	Windsor Parkway	From Windsor Parkway to Nancy Creek	Bridge		This project proposes to upgrade the bridge to raise it out of the flood plain.	
R_150	NFCTP 2017	Peachtree Dunwoody Road Improvements, Part 4	Peachtree Dunwoody Road	From Mount Vernon Highway to Spalding Drive	Capacity	1.8802	This project will expand Peachtree Dunwoody Road from Mount Vernon Highway to Spalding Drive from a two to three-lane roadway to four-lane roadway as well as add medians, bicycle, and pedestrian accommodations.	53.4
R_047	NFCTP 2017	Roberts Drive Widening	Roberts Drive	From SR 400 Off Ramp/North Ridge to Spalding Drive	Capacity	0.8034	This project will widen Roberts Drive from SR 400 to Spalding Drive and include bicycle and pedestrian elements. Project A_103 should be incorporated to make Roberts Drive a multimodal corridor.	48.6
R_144	TMP	Johnson Ferry Road from Abernathy Road to Roswell Road Roadway Capacity Project	Johnson Ferry Road	From Abernathy Road to Roswell Road	Capacity	1.0178	This project will expand Johnson Ferry Road from Abernathy Road to Roswell Road from a two-lane roadway to a four-lane roadway and include comprehensive bicycle and pedestrian improvements, such as a side path, along Johnson Ferry Road.	45.2
R_400	TSPLOST	Hammond Drive Phase 2 ROW & Construction	Hammond Drive	From Roswell Road to Glenridge Drive	Capacity	0.8617	Phase 2: ROW & Construction	41.6
R_132	TMP	Johnson Ferry Road Widening	Johnson Ferry Road	From Abernathy Road to Chattahoochee	Capacity	1.2306	This project will widen Johnsons Ferry from River to Abernathy including bridge over Chattahoochee.	39.6

Other Projects Considered

Project								
Project ID	Source	Project Name	Road Name	Extents	Project Type	Length (Mi)	Project Description	Score
R_134	TMP	Riverside Drive Capacity Improvement	Riverside Drive	From I-285 to Johnson Ferry Road	Capacity	2.2443	This project will include widening along Riverside Drive from I-285 to Johnsons Ferry Road. The improvements include eliminating split phase operation at Riverside Drive and Johnson Ferry Road and adding right turn lanes to Riverside Drive at Heards Ferry. Additionally, project A_364 adding sidewalks along Riverside Drive should be considered to make Riverside Drive a multimodal corridor.	35.1
R_151	TMP	Peachtree Dunwoody Road from Glenridge Connector to Evergreen Drive Roadway Capacity Project	Peachtree Dunwoody Road	From Glenridge Connector to Evergreen Drive	Capacity	0.7272	This project will expand Peachtree Dunwoody Road from Glenridge Connector to Evergreen Drive from a two-lane roadway to a four-lane roadway.	34.4
R_049	NFCTP 2017	Roswell Road Boulevard Part B (Next 10)	Roswell Road	From Abernathy Road to I-285	Corridor Projects	1.7543	This project will include bicycle, pedestrian, transit, and operational improvements including utility maintenance, side paths, paver bands, travel lanes, and a landscaped median along Roswell Road from Abernathy Road to I-285.	86.9
R_048	NFCTP 2017	Roswell Road Boulevard Part A (Next 10)	Roswell Road	From Dunwoody Place to Abernathy Road	Corridor Projects	5.2587	This project will apply bicycle, pedestrian, transit, and operational improvements along Roswell Road from Dunwoody Place to Abernathy Road.	83.4
R_029	NFCTP 2017	Glenridge Drive Improvements, Part 1	Glenridge Drive	From Roswell Road to Johnson Ferry Road	Corridor Projects	2.1937	This project will apply bicycle, pedestrian, transit, and operational improvements along Glenridge Drive from Roswell Road to Johnson Ferry Road.	78.9
R_035	NFCTP 2017	Johnson Ferry Road Improvements, Part 1	Johnson Ferry Road	From Glenridge Connector to Old Johnson Ferry Road	Corridor Projects	1.2128	This project will apply bicycle, pedestrian, transit, and operational improvements along Johnson Ferry Road from Glenridge Drive to Old Johnson Ferry Road.	78.9
R_025	NFCTP 2017	Abernathy Road Improvements	Abernathy Road	From Roswell Road to GA 400	Corridor Projects	1.2209	This project will apply bicycle, pedestrian, transit, and operational improvements on Abernathy Road from Roswell Road to Glenridge Drive.	78.6
R_050	NFCTP 2017	Roswell Road Boulevard Part C (Next 10)	Roswell Road	From I-285 to Mount Paran Road	Corridor Projects	0.9490	This project will include bicycle, pedestrian, transit, and operational improvements including tree lawns, side paths, sidewalks, paver bands, travel lanes, and a landscaped median along Roswell Road from I-285 North to Mount Paran Road.	74.5
R_031	RTP 2020	Hammond Drive Improvements, Phase 1	Hammond Drive	From Glenridge Drive to Peachtree Dunwoody Road	Corridor Projects	0.7129	This project will apply bicycle, pedestrian, transit, and operational improvements along Hammond Drive from Glenridge Drive to Peachtree Dunwoody Road.	73.8
R_027	NFCTP 2017	Dalrymple Road/Spalding Drive Improvements	Dalrymple Road/Spalding Drive	From Roswell Road to Peachtree Dunwoody Road	Corridor Projects	0.6705	This project will apply bicycle, pedestrian, transit, and operational improvements along Dalrymple Road/Spalding Drive from Roswell Road to Peachtree Dunwoody Road.	73.6
R_042	NFCTP 2017	Northridge Road Improvements	Northridge Road	From Roswell Road to Roberts Drive	Corridor Projects	0.5424	This project will apply bicycle, pedestrian, transit, and operational improvements along Northridge Road from Roswell Road to Roberts Drive.	73.2
R_401	Medical District Study	Peachtree Dunwoody Road Complete Streets	Peachtree Dunwoody Road	From Lake Hearn Drive to Glenridge Connector	Corridor Projects	0.6838	This project will include complete street treatments such as bicycle and pedestrian facilities with medians and landscaping.	66.9
R_030	NFCTP 2017	Glenridge Drive Improvements, Part 2	Glenridge Drive	From Johnson Ferry Road to Spalding Drive	Corridor Projects	1.4811	This project is a conceptual study that will apply bicycle, pedestrian, transit, and operational improvements along Glenridge Drive from Johnson Ferry Road to Spalding Drive.	64.9
R_036	NFCTP 2017	Johnson Ferry Road Improvements, Part 2	Johnson Ferry Road	From Roswell Road to Glenridge Drive	Corridor Projects	0.7050	This project will apply bicycle, pedestrian, transit, and operational improvements along Johnson Ferry Road from Roswell Road to Glenridge Drive.	63.6
R_039	NFCTP 2017	Mount Vernon Highway Improvements, Part 1	Mount Vernon Highway	From Heards Ferry Road to Sandy Springs Circle	Corridor Projects	1.0029	This project is a conceptual study will include bicycle, pedestrian, transit, and operational improvements along Mount Vernon Highway from Heards Ferry Road to Sandy Springs Circle.	61.7
R_051	NFCTP 2017	Roswell Road Boulevard Part D (Next 10)	Roswell Road	From Mount Paran Road to COSS City Limits South	Corridor Projects	1.4363	This project will include bicycle, pedestrian, transit, and operational improvements including tree lawns, sidewalks, paver bands, travel lanes, and a landscaped median along Roswell Road from Mount Paran Road to City Limits.	61.2
R_041	NFCTP 2017	New Northside Drive Improvements	New Northside Drive	From I-285 WB to I-285 EB	Corridor Projects	0.9373	This project will include bicycle, pedestrian, transit, and operational improvements on New Northside Drive from I-285 westbound to I-285 eastbound.	59.2
R_043	NFCTP 2017	Northside Drive Improvements	Northside Drive	From Interstate North Parkway to Powers Ferry Road NW	Corridor Projects	0.2771	This project will include bicycle, pedestrian, transit, and operational improvements on Northside Drive from Interstate North Parkway to Powers Ferry Road NW.	54.2
R_055	NFCTP 2017	Windsor Parkway Improvements	Windsor Parkway	From Roswell Road to Brookhaven City Limits	Corridor Projects	2.0268	This project will apply bicycle, pedestrian, transit, and operational improvements along Windsor Parkway from Roswell Road to Brookhaven City Limits.	53.6
R_046	NFCTP 2017	Riverside Drive Improvements	Riverside Drive	From Mount Vernon Highway to Heards Ferry Road	Corridor Projects	0.7853	This project will apply bicycle, pedestrian, transit, and operational improvements along Riverside Drive from Mount Vernon Highway to Heards Ferry Road.	52.6
R_054	NFCTP 2017	Spalding Drive Improvements	Spalding Drive	From Peachtree Dunwoody Road to Roberts Drive	Corridor Projects	1.3721	This project will include bicycle, pedestrian, transit, and operational improvements along Spalding Drive from Peachtree Dunwoody Road to Roberts Drive. Include segment in Dunwoody.	51.1
R_149	TMP	Pitts Road from Spalding Drive to Colquitt Road Corridor Improvement	Pitts Road	From Spalding Drive to Colquitt Road	Corridor Projects	0.2630	This project will include operational improvements along Pitts Road from Spalding Drive to Colquitt Road. This will include intersection improvements along Pitts Road and a roundabout at Colquitt Road.	50.6
R_040	NFCTP 2017	Mount Vernon Highway Improvements, Part 2	Mount Vernon Highway	From Northside Drive to Heards Ferry Road	Corridor Projects	2.1882	This project will apply bicycle, pedestrian, transit, and operational improvements along Mount Vernon Highway from Northside Drive to Heards Ferry Road.	49.1
R_045	NFCTP 2017	Raiders Drive/Powers Ferry Improvements	Raiders Drive/Powers Ferry Road	From Heards Ferry Road to Mount Vernon Highway	Corridor Projects	0.4164	This project is a conceptual study that will include bicycle, pedestrian, transit, and operational improvements on Raiders Drive/Powers Ferry Road from Heards Ferry Road to Mount Vernon Highway.	46.6

Other Projects Considered

Project ID	Project Source	Project Name	Road Name	Extents	Project Type	Length (Mi)	Project Description	Score
R_038	NFCTP 2017	Mount Paran Road Improvements	Mount Paran Road	From Long Island Drive to Roswell Road	Corridor Projects	0.8656	This project will apply bicycle, pedestrian, transit, and operational improvements along Mount Paran Road from Long Island Drive to Roswell Road.	42.6
R_057	RTP 2019	I-285 Interchange Reconstruction And Collector/Distributor	I-285	From I-285 to SR 400	Interchange	3.7118	This project is to reconstruct the I-285/SR 400 interchange. It improves existing ramp connections between I-285 east and west and SR 400 north and south, in addition to constructing collector-distributor lanes on I-285 east and west and SR 400 north.	75.4
R_114	TMP	Abernathy Road at Johnson Ferry Road Intersection Improvement	Abernathy Road	From Abernathy Road to Johnson Ferry Road	Intersection		Install a protected plus overlap phase with a flashing yellow arrow signal head for the eastbound Johnson Ferry Road right-turn lane; convert westbound Abernathy Road left-turn traffic signal phasing to a protected-only movement; during peak hours, operate the eastbound Johnson Ferry Road left-turn as a protected-only movement; install advance signal ahead signs (MUTCD W3-3) with street name plaques (MUTCD 16-8P) along both Abernathy Road and Johnson Ferry Road.	72.2
R_404	Medical District Study	Glenridge Connector at Peachtree Dunwoody Road Intersection Improvements	Glenridge Connector	From Glenridge Connector to Peachtree Dunwoody Road	Intersection		This project will improve the intersection with pedestrian and vehicular upgrades.	65.2
R_008	NFCTP 2017	Roswell Road at Trowbridge Road Intersection Improvements	Roswell Road	From Roswell Road to Trowbridge Road	Intersection		This project will design and construct east-bound and west-bound turn lane extensions and south-bound right turn lane at the intersection of Roswell Road and Trowbridge Road. (TS104)	64.0
R_102	TMP	SR 9 (Roswell Road) at Trowbridge Road Safety Improvements	SR 9 (Roswell Road)	From SR 9 (Roswell Road) to Trowbridge Road	Intersection		This project will include safety improvements including reviewing yellow and all-red times, installing an auxiliary westbound signal head, and addressing westbound right-turning rear-end crashes (install an additional receiving lane, reconstruct the westbound right-turn lane, or signalize the westbound right-turn lane)	64.0
R_014	NFCTP 2017	Mount Vernon Highway at Long Island Drive Intersection Improvements	Mount Vernon Highway	From Mount Vernon Highway to Long Island Drive	Intersection		This project will improve line of sight issues, realign intersection, and add a crosswalk on Long Island Drive at Mount Vernon Highway.	63.5
A_031	NFCTP (Asp)	Peachtree Dunwoody Road at Old Balloon Road Intersection Improvements	Peachtree Dunwoody Road	From Peachtree Dunwoody Road to Emory/St. Joseph's Driveway	Intersection		This project incorporates bicycle and pedestrian intersection improvements such as ADA ramps, mixing areas, amenities, signal timing.	63.4
R_009	NFCTP 2017	Roswell Road NE at Roberts Drive Operational Improvements	Roswell Road NE	From Roswell Road NE to Roberts Drive	Intersection		This intersection project will improve Roswell Road NE at Roberts Drive.	61.7
R_107	TMP	Northside Drive at Powers Ferry Road Intersection Improvement	Northside Road	From Northside Drive to Powers Ferry Road	Intersection		Convert and restripe the inside lane on Northside Drive southbound to an exclusive left-turn-only lane; install flashing yellow arrow signal heads for the southbound Northside Drive left-turn lane and the westbound Powers Ferry Road left-turn lane; install driveway related right-in-right-out pavement markings along the midblock short lane along southbound Northside Drive at the two driveways; install route shield pavement markings to I-285 along the southbound Northside Drive and eastbound Powers Ferry Road approaches; install one signal head per lane to the eastbound Powers Ferry Road approach to the intersection; install overhead and post-mounted signage prohibiting right-turns on red (MUTCD R10-11) along the eastbound Powers Ferry Road approach; remove access points with 250 feet of the intersection or limit movements at driveways to right-turns only; install sidewalks along both sides of Northside Drive north of the intersection and along the north side of Powers Ferry Road, east and west of the intersection.	59.4
R_119	TMP	Roswell Road at Spalding Drive Intersection Improvement	Roswell Road	From Roswell Road to Spalding Drive	Intersection		Reconstruct the northwest and southwest curb radii and install ADA curb ramps; improve overall positive drainage including gutters and drain inlets; install flashing yellow arrow signal heads to left-turn lanes on the northbound and southbound Roswell Rd approaches; install advance signal ahead signs (MUTCD W3-3) with street name plaques (MUTCD 16-8P) along Roswell Road; install vehicular-scale intersection lighting at the intersection to illuminate the intersection approaches and marked crosswalks at the intersection.	59.0
R_142	TMP	GA 400 NB Exit Ramp at Glenridge Connector Intersection Improvements	GA 400	From GA 400 NB Exit Ramp to Glenridge Connector	Intersection		This project will include widening the exit ramp for a triple left at GA 400 NB exit ramp and Glenridge Connector. This would require some improvements on Glenridge Connector.	59.0
R_140	TMP	Spalding Drive at Peachtree Dunwoody Road Intersection Improvement	Spalding Drive	From Spalding Drive to Peachtree Dunwoody Road	Intersection		This project will include realigning the driveways out of apartments to eliminate split phase operations at Spalding Drive and Peachtree Dunwoody Road.	58.7
R_123	TMP	Lake Hearn Drive at Peachtree Dunwoody Road Intersection Improvement	Lake Hearn Drive	From Lake Hearn Drive to Peachtree Dunwoody Road	Intersection		Install roadside Dynamic Message Signs along the northbound Peachtree Dunwoody Road approach displaying travel speeds on I-285 general purpose and express lanes; install advance signal ahead signs (MUTCD W3-3) with street name plaques (MUTCD 16-8P) along Peachtree Dunwoody Road; install route shield pavement markings to I-285 along the northbound Peachtree Dunwoody Road approach; install supplemental signal heads for the northbound Peachtree Dunwoody Road approach to the intersection.	58.0

Other Projects Considered

Project								
Project ID	Source	Project Name	Road Name	Extents	Project Type	Length (Mi)	Project Description	Score
R_402	Medical District Study	Glenridge Connector at SR 400 SB Ramps Intersection Improvements	Glenridge Connector	From Glenridge Connector to GA 400	Intersection		This project will improve the intersection with pedestrian and vehicular upgrades.	56.7
R_406	Medical District Study	Johnson Ferry Road at Hollis Cobb Circle/Meridian Mark Road Intersection Improvements	Johnson Ferry Road	From Johnson Ferry Road to Hollis Cobb Circle/Meridian Mark Road	Intersection		This project will improve the intersection with pedestrian and vehicular upgrades.	56.4
A_034	NFCTP (Asp)	Mount Vernon Highway at Crestline Parkway Intersection Improvements	Mount Vernon Highway	From Mount Vernon Highway to Crestline Parkway	Intersection		This project incorporates bicycle and pedestrian intersection improvements such as ADA ramps, mixing areas, amenities, signal timing.	55.0
R_112	TMP	New Northside Drive at Powers Ferry Road Intersection Improvement	New Northside Drive	From New Northside Drive to Powers Ferry Road	Intersection		Reduce the curb radius and eliminate the raised concrete island at the northeast corner; control the westbound Powers Ferry Road right-turn lane by extending the intersection stop bars across the right-turn lane; install route shield pavement markings to I-285 along all three approaches and along the northbound New Northside Drive lanes north of the intersection; install lane extension pavement markings for the eastbound left-turn lanes along Powers Ferry Road; install advance intersection lane control signage (MUTCD R3-8) on the traffic signal mast arm for the northbound New Northside Drive approach; install vehicular-scale intersection lighting; install sidewalks along the north side of Powers Ferry Road east and west of the intersection; install sidewalks along both sides of New Northside Drive north of the intersection; install sidewalks along the south side of Powers Ferry Road east of the intersection.	54.2
R_403	Medical District Study	Glenridge Connector at Meridian Mark Road Intersection Improvements	Glenridge Connector	From Glenridge Connector to Meridian Mark Road	Intersection		This project will improve the intersection with vehicular upgrades.	53.0
R_405	Medical District Study	Johnson Ferry Road at Glenridge Point Parkway Intersection Improvements	Johnson Ferry Road	From Johnson Ferry Road to Glenridge Point Parkway	Intersection		This project will improve the intersection with pedestrian and vehicular upgrades.	52.9
R_117	TMP	Johnson Ferry Road at River Valley Road Intersection Improvement	Johnson Ferry Road	From Johnson Ferry Road to River Valley Road	Intersection		Install flashing yellow arrow signal heads to left-turn lanes on the eastbound Johnson Ferry Road approach and the westbound Johnson Ferry Road approach; install an additional westbound Johnson Ferry Road left-turn lane; install advance signal ahead signs (MUTCD W3-3) with street name plaques (MUTCD 16-8P) along Johnson Ferry Road; add yield lines on pavement in the right-turn lane for northbound right-turn from River Valley Road; add striping on the loon portion of the pavement between the bike lane and the south curb along Johnson Ferry Road (adjacent to the eastbound right lane, east of the intersection) to restrict drivers turning right from River Valley Road from utilizing the pavement as a merge area; install information signage to direct eastbound right-turns to yield to westbound U-turns (similar to MUTCD R10-30).	50.0
R_110	TMP	Interstate North Parkway at Northside Drive Intersection Improvement	Interstate North Parkway	From Interstate North Parkway to Northside Drive	Intersection		Install flashing yellow arrow signal heads for the eastbound Interstate North Parkway left-turn lane and the westbound New Northside Drive left-turn lane; reduce the curb radius and eliminate the raised concrete islands at the northwest and southwest corners; control the southbound Northside Drive right-turn lane and the eastbound Interstate North Parkway right-turn lane by extending the intersection stop bars across the right-turn lanes; install route shield pavement markings to I-285 along all three approaches to the intersection and along the southbound Northside Drive lanes south of the intersection; install sidewalk along the west side of Northside Drive, north of the intersection; install sidewalk along the east side of Northside Drive, south of the intersection; install sidewalk along the south side of New Northside Drive, east of the intersection.	49.8
R_167	TMP	Sandy Springs Circle at Cliftwood Drive Roundabout	Sandy Springs Circle	From Sandy Springs Circle to Cliftwood Drive	Intersection		This project will create a concept to add a roundabout at the intersection of Sandy Springs Circle and Cliftwood Drive.	49.7
R_121	TMP	Mount Vernon Highway at Barfield Road Intersection Improvement	Mount Vernon Highway	From Mount Vernon Highway to Barfield Road	Intersection		This project will install a northbound right turn lane, add a second southbound left turn lane, and install an eastbound channelized right turn lane.	48.0
A_037	NFCTP (Asp)	Dalrymple Road at Brandon Mill Road Intersection Improvements	Dalrymple Road	From Dalrymple Road to Brandon Mill Road	Intersection		This project incorporates bicycle and pedestrian intersection improvements such as ADA ramps, mixing areas, amenities, signal timing.	47.0
A_038	NFCTP (Asp)	Riverside Drive at Wildercliff Drive Intersection Improvements	Riverside Drive	From Riverside Drive to Wildercliff Drive	Intersection		This project incorporates bicycle and pedestrian intersection improvements such as ADA ramps, mixing areas, amenities, signal timing.	47.0
R_450	TMP	Colquitt Road at Pitts Road Roundabout	Colquitt Road	From Colquitt Road to Pitts Road	Intersection		This project will include a roundabout at Colquitt Road and Pitts Road.	45.0
R_013	NFCTP 2017	Spalding Drive at Pitts Road Intersection Improvements	Spalding Drive	From Spalding Drive to Pitts Road	Intersection		This project will construct north-bound and east-bound dedicated left-turn lanes at the intersection of Spalding Drive and Pitts Road. (TS111) (CSS-9)	44.7
A_030	NFCTP (Asp)	Lake Forrest Drive at Long Island Drive Intersection Improvements	Lake Forrest Drive	From Lake Forrest Drive to Long Island Drive	Intersection		This project incorporates bicycle and pedestrian intersection improvements such as ADA ramps, mixing areas, amenities, signal timing.	44.0

Other Projects Considered

Project ID	Project Source	Project Name	Road Name	Extents	Project Type	Length (Mi)	Project Description	Score
A_033	NFCTP (Asp)	Interstate North Parkway at Riveredge Parkway Intersection Improvements	Interstate North Parkway	From Interstate North Parkway to Riveredge Parkway	Intersection		This project incorporates bicycle and pedestrian intersection improvements such as ADA ramps, mixing areas, amenities, signal timing.	43.0
A_035	NFCTP (Asp)	Dalrymple Road at Princeton Trace Intersection Improvements	Dalrymple Road	From Dalrymple Road to Princeton Trace	Intersection		This project incorporates bicycle and pedestrian intersection improvements such as ADA ramps, mixing areas, amenities, signal timing.	43.0
R_022	NFCTP 2017	Riverside Drive at Heards Ferry Road Intersection Improvements	Riverside Drive	From Riverside Drive to Heards Ferry Road	Intersection		This intersection project at Riverside Drive at Heards Ferry Road will lengthen all left-turn bays, add turn lanes, and include pedestrian facilities. (TS101)	40.0
R_111	TMP	Heards Ferry Road at Riverside Drive Intersection Improvement	Heards Ferry Road	From Heards Ferry Road to Riverside Drive	Intersection		Convert southbound Riverside Drive left-turn traffic signal phasing to a protected-only movement; install a single right-turn lane to all four approaches to the intersection; install flashing yellow arrow signal heads to left-turn lanes on all approaches to the intersection except the southbound approach; convert southbound Riverside Drive left turn traffic signal phasing to a protected-only movement; install roadside post-mounted directional signage (MUTCD M1-1, M3 Series, and M6 Series) to I-285 along the eastbound Heards Ferry Road, southbound Riverside Drive and westbound Heards Ferry Road approaches; install sidewalks along the west side of Riverside Drive, south of the intersection (appx. 515 feet); install sidewalks along the south side of Riverside Drive on both sides of the intersection; as an alternative to the additional turn lanes and signal improvements, consider converting the intersection to a multi-lane roundabout with bypass lanes in the northeast and southeast quadrants.	40.0
R_124	TMP	Johnson Ferry Road at Glenridge Drive (south of I-285) Intersection Improvement	Johnson Ferry Road	From Johnson Ferry Road to Glenridge Drive (south of I-285)	Intersection		Install a raised island and narrow raised concrete separators in the southwest corner of the intersection to channelize the eastbound Johnson Ferry Road right-turn lane into the outside southbound receiving lane along Glenridge Connector; install corresponding permissive plus overlap phase with a flashing yellow arrow signal head; install lane extension pavement markings for the southbound through-lanes along Glenridge Connector; install an additional northbound Glenridge Connector left-turn lane; convert the 5-section traffic signal head for the westbound Johnson Ferry Road right-turn lane into a 4-section traffic signal head with flashing yellow arrow; fill in the sidewalk gap along the south side of Johnson Ferry Road just west of the intersection, to connect to the crosswalks at the southwest corner of the intersection; reconstruct the southwest curb radius and install ADA curb ramps.	39.0
R_407	Medical District Study	Johnson Ferry Road at Old Johnson Ferry Road Intersection Improvements	Johnson Ferry Road	From Johnson Ferry Road to Old Johnson Ferry Road	Intersection		This project will improve the intersection with pedestrian and vehicular upgrades.	38.0
R_120	TMP	Spalding Drive at Dunwoody Club / Roberts Drive Intersection Improvement	Spalding Drive	From Spalding Drive to Dunwoody Club / Roberts Drive	Intersection		Install a permissive plus overlap phase with a flashing yellow arrow signal head for the westbound Spalding Drive right-turn lane at Roberts Drive; install flashing yellow arrow signal heads to left-turn lanes on the northbound and southbound Roberts Drive approaches; install a flared approach to the eastbound Spalding Drive right-turn movement at Dunwoody Club Drive; as an alternate to turn lane improvements, consider converting the two intersections to a 5-legged, multi-lane roundabout with bypass lanes on the northbound, southbound and westbound approaches.	37.0
R_004	NFCTP 2017	Lake Forrest Drive at Mount Paran Road Operational Improvements	Lake Forrest Drive	From Lake Forrest Drive to Mount Paran Road	Intersection		This project will add northbound and southbound dedicated right-turn lanes at the intersection of Lake Forrest Drive and Mount Paran Road. (TS113)	35.5
A_032	NFCTP (Asp)	Mount Vernon Highway at Glenridge Drive Intersection Improvements	Mount Vernon Highway	From Mount Vernon Highway to Glenridge Drive	Intersection		This project incorporates bicycle and pedestrian intersection improvements such as ADA ramps, mixing areas, amenities, signal timing.	32.0
R_005	NFCTP 2017	Mount Vernon Highway at Heards Ferry Road (Phase 2) Intersection Improvements	Mount Vernon Highway	From Mount Vernon Highway to Heards Ferry Road	Intersection		This project will construct dedicated northbound left-turn lanes at the intersection of Mount Vernon Highway and Heards Ferry Road. (TS114)	31.5
R_118	TMP	Mount Vernon Highway at Northside Drive Intersection Improvement	Mount Vernon Highway	From Mount Vernon Highway to Northside Drive	Intersection		Install sidewalk along the north side of Mount Vernon Highway east of the intersection to fill in an approximately 300-foot sidewalk gap; install a single-lane roundabout; as an alternate to the single-lane roundabout, conduct a signal warrant analysis based on new turning movement counts and if warranted, install a traffic signal.	27.0
A_036	NFCTP (Asp)	Dalrymple Road at Princeton Way Intersection Improvements	Dalrymple Road	From Dalrymple Road to Princeton Way	Intersection		This project incorporates bicycle and pedestrian intersection improvements such as ADA ramps, mixing areas, amenities, signal timing.	26.0
A_039	NFCTP (Asp)	Riverside Drive at Breakwater Ridge Intersection Improvements	Riverside Drive	From Riverside Drive to Breakwater Ridge	Intersection		This project incorporates bicycle and pedestrian intersection improvements such as ADA ramps, mixing areas, amenities, signal timing.	22.2
I_051	ITS Master Plan 2019	System-8	Various	From Various to Various	ITS		This project includes ATSPM Extension. The development of Sandy Springs interface and integration with GDOT's ATSPM System.	
I_055	ITS Master Plan 2019	System-12	Various	From Various to Various	ITS		This project includes Autonomous Shuttle from MARTA Station to Glenlake area businesses on shared-use paths.	

Other Projects Considered

Project		Project						
Project ID	Source	Project Name	Road Name	Extents	Project Type	Length (Mi)	Project Description	Score
I_057	ITS Master Plan 2019	System-14	Various	From Various to Various	ITS		This project includes Information Sharing: Aging Services and/or Fulton County Schools. Development of automated system for sharing information and streamline alerts and notifications.	
I_058	ITS Master Plan 2019	System-11	Various	From Various to Various	ITS		This project includes CAV Pilot Application Development: Bike/Ped/other. Development of application to work with existing CAV information to include bicyclists, pedestrians, and other users.	
I_060	ITS Master Plan 2019	System-16	Various	From Various to Various	ITS		This project includes video sharing (GDOT Connection to TMC for video and camera viewing access). Provide sharing access to Cobb County, Gwinnett County, City of Brookhaven, City of Dunwoody, City of Atlanta, City of Roswell.	
I_061	ITS Master Plan 2019	System-2	Various	From Various to Various	ITS		This project includes adding 15 remaining fiber locations for CCTV.	
I_062	ITS Master Plan 2019	System-3	Various	From Various to Various	ITS		This project includes short-term solution signal to wireless. Install cellular or wireless communication systems to signals not currently online.	
I_069	ITS Master Plan 2019	Network-2a	Various	From Various to Various	ITS		This project includes Ring A – Design (long-term).	
I_070	ITS Master Plan 2019	Network-2b	Various	From Various to Various	ITS		This project includes Ring A – Build (long-term).	
I_074	ITS Master Plan 2019	Network-4a	Various	From Various to Various	ITS		This project includes Ring B – Design (long-term).	
I_075	ITS Master Plan 2019	Network-4b	Various	From Various to Various	ITS		This project includes Ring B – Build (long-term).	
I_076	ITS Master Plan 2019	Network-5a	Various	From Various to Various	ITS		This project includes Ring C – Design.	
I_077	ITS Master Plan 2019	Network-5b	Various	From Various to Various	ITS		This project includes Ring C – Build.	
I_078	ITS Master Plan 2019	Network-6a	Various	From Various to Various	ITS		This project includes Ring C – Design (long-term).	
I_079	ITS Master Plan 2019	Network-6b	Various	From Various to Various	ITS		This project includes Ring C – Build (long-term).	
I_080	ITS Master Plan 2019	Network-7	Various	From Various to Various	ITS		This project includes a back up data center – design, construction, and integration to be located at Fire Station #1.	
I_081	ITS Master Plan 2019	Network-8	Various	From Various to Various	ITS		This project includes cabinet lock replacement.	
I_082	ITS Master Plan 2019	Network-9	Various	From Various to Various	ITS		This project includes Field Distribution Layer 3 Routers (Hubs) – design and installation of 3 field distribution layer 3 routers (hubs).	
R_058A	RTP 2019	I-285 Top End West Express Lanes	I-285	From Paces Ferry Road to GA 400	Managed Lanes	14.1425	This construction package focuses on adding two new at-grade and elevated, barrier-separated express lanes in both directions of I-285 between Paces Ferry Road and SR 400.	58.4
R_056	RTP 2019	GA 400 Managed Lanes	GA 400	From I-285 to McFarland Road	Managed Lanes	16.9630	This project provides travel options and more reliable trip times by adding two new Express lanes in each direction on SR 400 between the North Springs MARTA station and McGinnis Ferry Road and one Express lane in each direction from McGinnis Ferry Road to McFarland Parkway.	55.4
R_058B	RTP 2019	I-285 Top End East Express Lanes	I-285	From Henderson Road to GA 400	Managed Lanes	13.0472	The construction package focuses on adding two new at-grade and elevated, barrier-separated express lanes in both directions of I-285 between Henderson Road and SR 400, and north on SR 400 from the Glenridge Connector to the North Springs MARTA Station.	45.5
A_376	Bike, Ped, Trail Plan	Roswell Road South of Spalding Drive Midblock Crossing	Roswell Road	From Roswell Road to Spalding Drive	Mid-block Crossing		This project includes a well-designed midblock crossing along Roswell Road 632 feet south of Spalding Drive with marked crosswalks, median refuge islands, and traffic control that warns motorists of or requires motorists to stop for crossing pedestrians.	73.0
A_381	Bike, Ped, Trail Plan	Mt. Vernon Highway between Abernathy Road and North Park Place Midblock Crossing	Mt. Vernon Highway	From Abernathy Road to North Park Place	Mid-block Crossing		This project includes a well-designed midblock crossing along Roswell Road between Abernathy Road and North Park Place with marked crosswalks, median refuge islands, and traffic control that warns motorists of or requires motorists to stop for crossing pedestrians.	72.4
A_379	Bike, Ped, Trail Plan	Roswell Road between Chaseland Road and Abernathy Road Midblock Crossing	Roswell Road	From Chaseland Road to Abernathy Road	Mid-block Crossing		This project includes a well-designed midblock crossing along Roswell Road between Chaseland Road and Abernathy Road with marked crosswalks, median refuge islands, and traffic control that warns motorists of or requires motorists to stop for crossing pedestrians.	71.7
A_396	TMP	Dunwoody Place Mid-block Crossing	Dunwoody Place	From Roswell Road to River Drive	Mid-block Crossing		This project includes a well-designed midblock crossing at Dunwoody Place north of River Drive with marked crosswalks, median refuge islands, and traffic control that warns motorists of or requires motorists to stop for crossing pedestrians.	71.4
A_385	TMP	Johnson Ferry Road at Harleston Road Midblock Crossing	Johnson Ferry Road	From Johnson Ferry Road to Harleston Road	Mid-block Crossing		This project includes a well-designed midblock crossing at Johnson Ferry Road and Harleston Road with marked crosswalks, median refuge islands, and traffic control that warns motorists of or requires motorists to stop for crossing pedestrians.	69.2

Other Projects Considered

Project								
Project ID	Source	Project Name	Road Name	Extents	Project Type	Length (Mi)	Project Description	Score
A_386	TMP	Mt. Vernon Highway at Hunting Creek Road Midblock Crossing	Mt. Vernon Highway	From Mt. Vernon Highway to Hunting Creek Road	Mid-block Crossing		This project includes a well-designed midblock crossing at Mt. Vernon Highway and Hunting Creek Road with marked crosswalks, median refuge islands, and traffic control that warns motorists of or requires motorists to stop for crossing pedestrians.	69.2
A_383	TMP	High Point Road Midblock Crossing near Forest Hills Drive	High Point Road	From High Point Road to Forest Hills Drive	Mid-block Crossing		This project includes a well-designed midblock crossing along High Point Road at Forest Hills Drive with marked crosswalks, median refuge islands, and traffic control that warns motorists of or requires motorists to stop for crossing pedestrians.	65.5
A_384	TMP	Mt. Vernon Highway Midblock Crossing near Glen Errol Road	Mt. Vernon Highway	From Mt. Vernon Highway to Glen Errol Road	Mid-block Crossing		This project includes a well-designed midblock crossing along Mt. Vernon Highway at Glen Errol Road with marked crosswalks, median refuge islands, and traffic control that warns motorists of or requires motorists to stop for crossing pedestrians.	56.7
R_159	TMP	Roberts Drive and Somerset Drive New Roadway Connection	Roberts Drive	From Roberts Drive to Somerset Drive	New Location	0.6940	This project will add a new roadway connection between Roberts Drive and Somerset Drive, west of GA 400.	68.7
R_170	City Center Master Plan	Sandy Springs Place Extension	Sandy Springs Place	From Lake Forrest Drive to Sandy Springs Place	New Location	0.4581	This project includes an extension of Sandy Springs Place west to Lake Forrest Drive. This project will occur when redevelopment happens.	61.9
R_174	City Center Master Plan	Roswell Road Boylston Drive Alley New Location	Roswell Road Boylston Drive Alley	From Hammond Drive to Carpenter Drive	New Location	0.3792	This project includes a new roadway connecting Hammond Drive south to the southern Carpenter Drive leg. This project will occur when redevelopment happens.	61.1
R_173	City Center Master Plan	Whole Foods Alley New Location	Whole Foods Alley	From Sandy Springs Circle to Roswell Road Boylston Drive Alley	New Location	0.3310	This project includes a new roadway connecting Sandy Springs Circle to the proposed new location Roswell Road Boylston Drive Alley. This project will occur when redevelopment happens.	59.7
R_171	City Center Master Plan	Blue Stone Road Extension	Blue Stone Road	From Sandy Springs Place to Allen Road	New Location	0.5766	This project includes an extension of Blue Stone Road south to Allen Road. This project will occur when redevelopment happens.	57.4
R_172	City Center Master Plan	Sandy Springs Place Alley New Location	Sandy Springs Place	From Sandy Springs Circle to Hammond Drive	New Location	0.2191	This project includes a new roadway connecting Sandy Springs Place west then south to Hammond Drive. This project will occur when redevelopment happens.	56.6
R_026	NFCTP 2017	Boylston Drive Extension	Boylston Drive	From Hammond Drive to Carpenter Drive	New Location	0.2459	This project will extend Boylston Drive south from Hammond Drive to Carpenter Drive to provide 2 through lanes with sidewalks and bicycle lanes.	56.1
R_175	City Center Master Plan	Galambos Way New Location	Galambos Way	From Sandy Springs Circle to Johnson Ferry Road	New Location	0.0934	This project includes a new roadway connecting Sandy Springs Circle south to Johnson Ferry Road. This project will occur when redevelopment happens.	53.6
R_157	TMP	Hope Road and Hightower Road New Roadway Connection	Hope Road	From Hope Road to Hightower Road	New Location	0.0830	This project will add a new roadway connection from Hightower Road (south) to Hope Road.	53.5
R_161	TMP	Huntington Place Drive and Hope Road New Roadway Connection	Huntington Place Drive	From Huntington Place Drive to Hope Road	New Location	0.0334	This project will add a new roadway connection between Huntington Place Drive to Hope Road.	53.1
R_160	TMP	Sliman Pine Straw and The Forest at Huntcliff New Roadway Connection	Sliman Pine Straw	From Sliman Pine Straw to The Forest at Huntcliff	New Location	0.0507	This project will add a new roadway connection between Sliman Pine Straw off of Roswell Road and The Forest at Huntcliff apartment building.	53.0
R_155	TMP	Benwell Drive to Hampton Drive Connection	Benwell Drive	From Benwell Drive to Hampton Drive	New Location	0.2147	This project will connect Pitts Road to Roswell Road by adding a new road connecting Benwell Drive to Hampton Drive.	48.1
R_028	NFCTP 2017	Glenridge Connector Extension	Glenridge Connector	From Glenridge Connector to Perimeter Center Parkway	New Location	1.1437	This project will include a new connection between Glenridge Connector and Perimeter Center Parkway behind the Emory Saint Joseph's Hospital including bicycle and pedestrian facilities. A portion of this project is in the City of Brookhaven.	47.9
R_162	TMP	Colquitt Road and Fenwick Place New Roadway Connection	Colquitt Road	From Colquitt Road to Fenwick Place	New Location	0.1211	This project will add a new roadway from Colquitt Road to Fenwick Place connecting Colquitt Road to Dalrymple Road/Spalding Drive.	46.6
R_158	TMP	Hightower Trail and Hope Road Intersection Realignment	Hightower Trail	From Hightower Trail to Hope Road	Realignment	0.0535	This project will realign and add a signal to the intersection of Hope Road and Hightower Trail (north) enhance connectivity between Dunwoody Place and Roswell Road.	57.0
A_317	TMP	Harleston Road, Sandy Springs Public Library, Hunting Creek Road, Carriage Drive, Cherry Tree Lane Sharrows, Wayfinding, and Intersection Improvements	Harleston Road, Sandy Springs Public Library, Hunting Creek Road, Carriage Drive, Cherry Tree Lane	From Hammond Drive to Abernathy Road	Sharrows	2.5876	This project proposes to provide cyclist with a parallel and alternative route of travel and improve bicycle safety by implementing sharrows along neighborhood streets and improve bicycle and pedestrian crossings at the intersection of Harleton Road and Johnson Ferry Road, the intersection of Hunting Creek Road and Mt. Vernon Road, and through the Sandy Springs Public Library parking lot.	57.4
A_316	TMP	Glenforest Road, Brookgreen Road, Lorell Terrace, and Kayron Drive Sharrows, Wayfinding, and Intersection Improvements	Glenforest Road, Brookgreen Road, Lorell Terrace, and Kayron Drive	From Glenridge Drive to Johnson Ferry Road	Sharrows	2.2597	This project proposes to provide cyclist with a parallel and alternative route of travel and improve bicycle safety by implementing sharrows along a neighborhood street and improving bicycle and pedestrian crossing at the intersection of Kayron Drive and Hammond Drive.	52.1
A_315	TMP	Wright Road, Stone Mill Trail, and Mark Trial Sharrows, Wayfinding, and Intersection Improvements	Wright Road, Stone Mill Trail, and Mark Trial	From Johnson Ferry Road to Brandon Mill Road	Sharrows	2.0321	This project proposes to provide cyclist with a parallel and alternative route of travel and improve bicycle safety by implementing sharrows along a neighborhood street and improving bicycle and pedestrian crossing at the intersection of Wright Road and Abernathy Road.	50.6
A_314	TMP	Riverside Parkway, River Shore Parkway, Colewood Way, Bridgewood Valley Road Sharrows and Wayfinding	Riverside Parkway, River Shore Parkway, Colewood Way, Bridgewood Valley Road	From Riverside Drive to Johnson Ferry Road	Sharrows	1.6451	This project proposes to provide cyclist with a parallel and alternative route of travel and improve bicycle safety by implementing sharrows along neighborhood streets.	49.6
A_313	TMP	N Mill Road Sharrows and Wayfinding	N Mill Road	From Johnson Ferry Road to Brandon Mill Road	Sharrows	0.8627	This project proposes to provide cyclist with a parallel and alternative route of travel and improve bicycle safety by implementing sharrows along a neighborhood street.	49.1

Other Projects Considered

Project ID	Project Source	Project Name	Road Name	Extents	Project Type	Length (Mi)	Project Description	Score
A_312	TMP	Blackwater Trail Drive/N. Harbor Drive Sharrows and Wayfinding	Blackwater Trail Drive/N. Harbor Drive Sharrows	From Riverside Drive to Johnson Ferry Road	Sharrows	1.3440	This project proposes to provide cyclist with a parallel and alternative route of travel and improve bicycle safety by implementing sharrows along neighborhood streets.	48.6
A_310	TMP	Weatherly Drive, Mountain Brooke Lane, Mountain Brook Way, Edgewater Drive Sharrows and Wayfinding	Weatherly Drive, Mountain Brooke Lane, Mountain Brook Way, Edgewater Drive	From Heards Ferry Road to Riverside Drive	Sharrows	1.0293	This project proposes to provide cyclist with a parallel and alternative route of travel and improve bicycle safety by implementing sharrows along neighborhood streets.	48.0
A_127	Trails Master Plan 2019	City Springs/Perimeter Center Connectors Part A	N Hampton Drive	From Sandy Springs Circle to Abernathy Road	Sharrows	0.8043	This greenway connection will provide a delineated route for trail users to get from the Abernathy Greenway to City Springs.	45.7
A_308	TMP	Jett Ferry Road Sharrows and Traffic Calming	Jett Ferry Road	From Dunwoody Club Drive to Spalding Drive	Sharrows	0.3842	This project proposes to improve bicycle mobility and safety along Jett Ferry Road by installing sharrows, bike boxes, and traffic calming elements.	41.6
A_307	TMP	Mt. Vernon Road Sharrows and Traffic Calming	Mt. Vernon Road	From Dunwoody Club Drive to Blandford Place	Sharrows	0.5646	This project proposes to improve bicycle mobility and safety along Mt. Vernon Road by installing sharrows, bike boxes, and traffic calming elements.	36.5
A_305	TMP	Winters Chapel Road Sharrows and Traffic Calming	Winters Chapel Road	From City Limits to Spalding Drive	Sharrows	0.4499	This project proposes to improve bicycle mobility and safety along Winter Chapel Road by installing sharrows, bike boxes, and traffic calming elements.	35.0
A_306	TMP	Happy Hollow Road Sharrows and Traffic Calming	Happy Hollow Road	From Dunwoody Club Drive to Spalding Drive	Sharrows	0.5573	This project proposes to improve bicycle mobility and safety along Happy Hollow Road by installing sharrows, bike boxes, and traffic calming elements.	31.6
A_309	TMP	Chaparral Place/Ball Mill Road Sharrows and Traffic Calming	Chaparral Place/Ball Mill Road	From Dunwoody Club Drive to Spalding Drive	Sharrows	1.1170	This project proposes to improve bicycle mobility and safety along Chaparral Place/Ball Mill Road by installing sharrows, bike boxes, and traffic calming elements.	26.6
A_311	TMP	Old Riverside Drive Sharrows and Wayfinding	Old Riverside Drive	From Riverside Drive to Riverside Drive	Sharrows	0.4683	This project proposes to provide cyclist with a parallel and alternative route of travel and improve bicycle safety by implementing sharrows along a neighborhood street.	26.1
A_041	NFCTP (Asp)	SR 9/ Roswell Road Side Path	SR 9/ Roswell Road	From Abernathy Road to Dunwoody Place	Side Path	4.7474	This project includes a side path.	92.4
A_119	Trails Master Plan 2019	Colquitt Road to Glenridge Drive Sidepath Path C	Peachtree Dunwoody Road	From Spalding Drive to Abernathy Road	Side Path	2.1071	This project will incorporate a 10' side path with a 5' landscape buffer on the west side along Peachtree Dunwoody Road from Abernathy Road to Spalding Drive.	92.4
A_045	NFCTP (Asp)	SR 9/Roswell Road Side Path	SR 9/Roswell Road	From Mount Paran Road to Mount Vernon Highway	Side Path	1.8656	This project includes a side path.	88.4
A_151	RTP 2019	Medical Center to Dunwoody MARTA Bicycle and Pedestrian Improvements	Perimeter Center	From Medical Center to Dunwoody Marta Station	Side Path	1.7401	Bicycle and pedestrian infrastructure on Peachtree Dunwoody Road, Lake Hearn Drive, Perimeter Center Parkway, and Hammond Drive, and intersection modifications at Peachtree Dunwoody Road and Lake Hearn Drive.	86.5
A_166	Trails Master Plan 2019	Colquitt Road to Glenridge Drive Side Path Path B (Glenlake Parkway)	Glenlake Parkway	From Marsh Creek (North) to Marsh Creek (West)	Side Path	0.3776	This project will be a side path along Glenlake Parkway from the northern Marsh Creek intersection to the western Marsh Creek intersection. It will incorporate a 10' side path with a 5' landscape buffer on the south side.	84.9
A_042	NFCTP (Asp)	Northridge Road Side Path	Northridge Road	From SR 400 to Roswell Road	Side Path	0.4852	This project includes a side path.	84.7
A_017	Trails Master Plan 2019	Mount Vernon Highway Multi-use Path	Mount Vernon Highway	From Perimeter Center West to Sandy Springs City Limits	Side Path	0.4572	This project proposes bicycle and pedestrian improvements along Mount Vernon Highway from Perimeter Center Parkway to the Sandy Springs City Limits.	83.9
A_130	Trails Master Plan 2019	City Springs/Perimeter Center Connectors Part C (Hammond Drive)	Hammond Drive	From Peachtree Dunwoody Road to Glenridge Drive	Side Path	0.7181	This project proposes a multi-use side path along Hammond Drive, from Barfield Road to Peachtree Dunwoody Road.	83.8
A_008	NFCTP 2017	Glenlake Parkway Bicycle And Pedestrian Improvements	Glenlake Parkway	From Abernathy Road to Marsh Creek	Side Path	0.7469	This project will add appropriate bicycle facilities and upgrade streetscape along Glenlake Parkway from Abernathy Road to Marsh Creek, to include pedestrian-scale lighting and branding of the corridor to complement existing investments by developments.	83.7
A_044	NFCTP (Asp)	Mount Vernon Highway Side Path	Mount Vernon Highway	From I-285 to Sandy Springs Circle	Side Path	1.2278	This project includes a side path.	83.2
A_163	Trails Master Plan 2019	East/South Connectors Part B (Powers Ferry)	Powers Ferry Road	From Dupree Drive to Raider Drive	Side Path	0.7534	This project aims to connect the existing Cumberland CID trail system into the city. A side path is proposed along Powers Ferry Road from Dupree Drive to Raider Drive.	83.2
A_108	Trails Master Plan 2019	North End Connector Part G	Roswell Road	From Segment 1f to Roberts Drive	Side Path	0.4344	This proposed side path along Roswell Road will retrofit the greenspace between Roswell Road and the parking lot at North River Shopping Center.	83.1
A_015	NFCTP 2017	Meridian Mark Bicycle And Pedestrian Improvements	Meridian Mark	From Glenridge Connector to Johnson Ferry Road	Side Path	0.3462	This project will add appropriate bicycle and pedestrian facilities on Meridian Mark Road from Glenridge Connector to Johnson Ferry Road first with bicycle and pedestrian improvements.	82.9
A_050	NFCTP (Asp)	Abernathy Road Side Path	Abernathy Road	From Peachtree Dunwoody Road to Mount Vernon Highway	Side Path	0.1230	This project includes a side path.	82.9
A_048	NFCTP (Asp)	Hammond Drive Side Path	Hammond Drive	From Mt. Vernon Highway to SR 9/Roswell Road	Side Path	0.7179	This project includes a side path.	82.4
A_150	Trails Master Plan 2019	Peachtree Dunwoody Road Side path	Peachtree Dunwoody Road	From Hollis Cobb Circle to Lake Hearn Drive	Side Path	0.1448	This project will include a side path, sidewalk, and streetscape along Sandy Springs Circle from Allen Road to Hammond Drive, connecting the current programmed side path at Hammond Drive to an existing side path at Lake Forest Elementary School.	82.4
A_165	Trails Master Plan 2019	City Springs/Perimeter Center Connectors Part B (Sandy Springs Circle)	Sandy Springs Circle	From Hammond Drive to Allen Road	Side Path	0.3174		82.2

Other Projects Considered

Project		Project						
Project ID	Source	Project Name	Road Name	Extents	Project Type	Length (Mi)	Project Description	Score
A_056	NFCTP (Asp)	Lake Forrest Drive Side Paths	Lake Forrest Drive	From Allen Drive to Mount Vernon Highway	Side Path	0.6093	This project includes a side path.	81.2
A_105	Trails Master Plan 2019	North End Connector Part D	Northridge Road/Island Ford Parkway	From Huntingdon Trail to Roberts Drive	Side Path	1.6763	This project will incorporate a multi-use side path with raised landscape buffers within the required right-of-way.	81.1
A_053	NFCTP (Asp)	Johnson Ferry Road Side Path	Johnson Ferry Road	From Glenridge Drive to Mount Vernon Highway	Side Path	0.5194	This project includes a side path.	80.1
A_011	NFCTP 2017	Johnson Ferry Road Side Path, Part 2	Johnson Ferry Road	From Abernathy Road to Sandy Springs Circle	Side Path	0.7825	This project will include comprehensive bicycle and pedestrian improvements, such as a side path, along Johnson Ferry Road from Abernathy Road to Sandy Springs Circle.	79.6
A_025	NFCTP 2017	Sandy Springs Circle Improvements, Phase 3	Sandy Springs Circle	From Johnson Ferry Road to Roswell Road	Side Path	0.2268	This project will construct pedestrian and bicycle facilities on both sides of Sandy Springs Circle from Johnson Ferry Road to Roswell Road.	79.1
A_054	NFCTP (Asp)	Glenridge Drive Side Paths	Glenridge Drive	From Hammond Drive to Johnson Ferry Road	Side Path	0.4145	This project includes a side path.	79.0
A_055	NFCTP (Asp)	Mount Paran Road Side Paths	Mount Paran Road	From SR 9/ Roswell Road to City Limits	Side Path	2.4843	This project includes a side path.	73.6
A_125	Trails Master Plan 2019	Glenridge Drive to Johnson Ferry Road Side Path Part C	Glenridge Drive/Glenridge Parkway	From Abernathy Road to Marsh Creek	Side Path	0.2526	This project will include a 10' side path with a 3'-5' landscape buffer along Glenridge Drive and Glenridge Parkway from Abernathy Road to Marsh Creek. The City will provide additional safe crossing improvements.	72.0
A_043	NFCTP (Asp)	Dalrymple Road Side Path	Dalrymple Road	From Brandon Mill Road to Trowbridge Road	Side Path	1.5012	This project includes a side path.	69.6
A_057	NFCTP (Asp)	Lake Forrest Drive Side Paths	Lake Forrest Drive	From I-285 to Burdette Road	Side Path	1.0286	This project includes a side path.	69.1
A_022	NFCTP 2017	Riverside Drive Side path	Riverside Drive	From Johnson Ferry Road to Brandon Mill Road	Side Path	1.5598	This project will incorporate bicycle and pedestrian facilities along Riverside Drive from Johnson Ferry Road to Wildercliff Drive.	67.1
A_169	Trails Master Plan 2019	East/South Connectors Part B (Northside)	Northside Drive	From Powers Ferry Road to Interstate N Parkway	Side Path	0.2575	This project aims to connect the existing Cumberland CID trail system into the city. A side path is proposed along Northside Drive from Interstate N Parkway to Powers Ferry Road.	66.2
A_168	Trails Master Plan 2019	North End Connector Part C (Roberts Drive)	Roberts Drive	From Spalding Drive to Northridge Road	Side Path	0.8991	This project will incorporate a multi-use trail with raised landscape buffers within the required right-of-way along Roberts Drive.	66.1
A_123	Trails Master Plan 2019	Johnson Ferry Road Side Path Part B	Johnson Ferry Road	From Abernathy Road to City Limits	Side Path	1.2306	This project will include comprehensive bicycle and pedestrian improvements, such as a side path, along Johnson Ferry Road from the Chattahoochee River to Abernathy Road. It is recommended to remove the westbound bike lane and to improve the existing 8' sidewalk to a 10' side path with adequate buffer along Johnson Ferry Road.	65.6
A_134	Trails Master Plan 2019	East/South Connectors Part A	River Exchange Drive/Holcomb Bridge Road	From Spalding Drive to Holcomb Bridge Road	Side Path	0.8723	This project begins at the city's new Crooked Creek Park and follows River Exchange Drive as a side path to Holcomb Bridge Road.	64.1
A_103	Trails Master Plan 2019	North End Connector Part C (Pitts Road)	Pitts Road	From GA 400 to Spalding Drive	Side Path	0.2715	This project will incorporate a multi-use trail with raised landscape buffers within the required right-of-way along Pitts Road.	63.6
A_164	Trails Master Plan 2019	East/South Connectors Part B (Raider Drive)	Raider Drive	From Powers Ferry Road to Heard's Road	Side Path	0.5451	This project aims to connect the existing Cumberland CID trail system into the city. A side path is proposed along Raider Drive from Powers Ferry Road to Heard's Road.	63.6
A_167	Trails Master Plan 2019	North End Connector Part C (Spalding Drive)	Spalding Drive	From Pitts Road to Roberts Drive	Side Path	0.3365	This project will incorporate a multi-use trail with raised landscape buffers within the required right-of-way along Spalding Drive.	60.6
A_339	TMP	Forest Hills Drive Sidewalks	Forest Hills Drive	From Roswell Road-US 19 to Highpoint Road	Sidewalk	0.7874	This project proposes to improve pedestrian safety by constructing new sidewalks along Forest Hills Drive, extending the short existing segment at Roswell Road.	83.6
A_330	TMP	Hilderbrand Drive Sidewalks	Hilderbrand Drive	From Boylston Drive to Kayron Drive	Sidewalk	0.7834	This project proposes to improve pedestrian safety by constructing sidewalks along Hilderbrand Drive, extending the existing sidewalk east and south from Boylston Drive to Kayron Drive.	82.2
A_326	TMP	Cherry Tree Lane Sidewalks	Cherry Tree Lane	From Abernathy Road to Carriage Drive	Sidewalk	0.8340	This project proposes to improve pedestrian safety by constructing sidewalks along Cherry Tree Lane.	81.7
A_345	TMP	Mystic Drive Sidewalks	Mystic Drive	From Roswell Road-US 19 to Meadow Valley Drive	Sidewalk	0.5789	This project proposes to improve pedestrian safety by constructing sidewalks along Mystic Drive.	81.7
A_329	TMP	Kayron Drive Sidewalks	Kayron Drive	From Johnson Ferry Road to Hilderbrand Drive	Sidewalk	0.5890	This project proposes to improve pedestrian safety by constructing sidewalks along Kayron Drive.	81.6
A_349	TMP	Brinkley Lane Sidewalks	Brinkley Lane	From Windsor Parkway to Huntley Drive	Sidewalk	0.2802	This project proposes to improve pedestrian safety by constructing sidewalks along Brinkley Lane.	81.6
A_343	TMP	Kitty Hawk Drive Sidewalks	Kitty Hawk Drive	From Long Island Drive to Mystic Drive	Sidewalk	0.3716	This project proposes to improve pedestrian safety by constructing sidewalks along Kitty Hawk Drive.	81.1
A_344	TMP	Mystic Place Sidewalks	Mystic Place	From Roswell Road-US 19 to Mystic Drive	Sidewalk	0.1958	This project proposes to improve pedestrian safety by constructing sidewalks along Mystic Place.	81.1
A_350	TMP	Franklin Road Sidewalks	Franklin Road	From Roswell Road-US 19 to Highpoint Road	Sidewalk	0.5599	This project proposes to improve pedestrian safety by providing sidewalks along Franklin Road, filling numerous gaps in connectivity between existing short, disconnected sections.	81.1

Other Projects Considered

Project								
Project ID	Source	Project Name	Road Name	Extents	Project Type	Length (Mi)	Project Description	Score
A_328	TMP	Harleston Road Sidewalks	Harleston Road	From Johnson Ferry Road to Hammond Drive	Sidewalk	0.3237	This project proposes to improve pedestrian safety by constructing sidewalks along Harleston Road.	80.6
R_034	NFCTP 2017	Hilderbrand Drive Streetscape Improvements	Hilderbrand Drive	From Sandy Springs Circle to Roswell Road	Sidewalk	0.2305	This project will have streetscape improvements along Hilderbrand Drive from Sandy Springs Circle to Roswell Road. (T-0061)	79.7
A_325	TMP	Hunting Creek Road Sidewalks	Hunting Creek Road	From Mount Vernon Highway to Carriage Drive	Sidewalk	0.0942	This project proposes to improve pedestrian safety by constructing sidewalks along Hunting Creek Road.	79.6
A_324	TMP	Carriage Drive Sidewalks	Carriage Drive	From Hunting Creek Road to Vernon Woods Drive	Sidewalk	0.2102	This project proposes to improve pedestrian safety by constructing sidewalks along Carriage Drive.	79.0
A_319	TMP	Huntcliff Sidewalks	Huntcliff	From Hightower Trail to Roswell Road-US 19	Sidewalk	0.5785	This project proposes to improve pedestrian safety by constructing sidewalks along Huntcliff.	78.6
A_321	TMP	Ferry Drive Sidewalks	Ferry Drive	From Johnson Ferry Road to Johnson Ferry Road	Sidewalk	0.3872	This project proposes to improve pedestrian safety by constructing sidewalks along Ferry Drive.	78.6
A_323	TMP	Bonnie Lane Sidewalks	Bonnie Lane	From Johnson Ferry Road to Angus Trail	Sidewalk	0.4415	This project proposes to improve pedestrian safety by constructing sidewalks along Bonnie Lane.	78.6
A_338	TMP	Forrest Lake Drive Sidewalks	Forrest Lake Drive	From Lake Forrest Drive to Pine Lake Drive	Sidewalk	0.2727	This project proposes to improve pedestrian safety by constructing sidewalks along Forrest Lake Drive.	78.6
A_391	TMP	Bridgewood Valley Road Sidewalks	Bridgewood Valley Road	From River Valley Road to Colewood Way	Sidewalk	0.6285	This project includes the installation of sidewalks along Bridgewood Valley Road from River Valley Road to Colewood Way.	78.6
A_395	TMP	Heards Creek Drive Sidewalks	Heards Creek Drive	From Riverside Trace to Heards Ferry Road	Sidewalk	0.3630	This project includes the installation of sidewalk on Heards Creek Drive from Riverside Trace to Heards Ferry Road, providing sidewalk access to Riverwood International Charter School.	78.0
A_327	TMP	Vernon Woods Drive Sidewalks	Vernon Woods Drive	From Cherry Tree Lane to Mount Vernon Highway	Sidewalk	0.6414	This project proposes to improve pedestrian safety by constructing sidewalks along Vernon Woods Drive.	76.7
A_347	TMP	Cherrywood Lane Sidewalks	Cherry Lane	From Windsor Parkway to Franklin Road	Sidewalk	0.2668	This project proposes to improve pedestrian safety by constructing sidewalks along Cherrywood Lane.	75.1
A_346	TMP	Westfield Drive Sidewalks	Westfield Drive	From Windsor Parkway to Franklin Road	Sidewalk	0.2190	This project proposes to improve pedestrian safety by constructing sidewalks along Westfield Drive.	74.5
A_337	TMP	Pine Lake Drive Sidewalks	Pine Lake Drive	From Lake Forrest Drive to Forrest Lake Drive	Sidewalk	0.4585	This project proposes to improve pedestrian safety by constructing sidewalks along Pine Lake Drive.	73.5
A_320	TMP	Hightower Trail Sidewalks	Hightower Trail	From Roswell Road-US 19 to Huntcliff	Sidewalk	0.1819	This project proposes to improve pedestrian safety by constructing sidewalks along Hightower Trail, extending from the existing segment that begins at Roswell Road.	73.1
A_392	TMP	Colewood Way Sidewalks	Colewood Way	From River Valley Road to Cul-de-sac	Sidewalk	0.6633	This project includes the installation of sidewalk on Colewood Way from River Valley Road to the end of the cul-de-sac on Colewood Way.	73.0
A_340	TMP	Park Avenue Sidewalks	Park Avenue	From Roswell Road-US 19 to Belle Isle Road	Sidewalk	0.3273	This project proposes to improve pedestrian safety by constructing sidewalks along Park Avenue.	72.6
A_318	TMP	Winding River Drive Sidewalks	Winding River Drive	From N River Drive to N River Parkway	Sidewalk	0.4060	This project proposes to improve pedestrian safety by constructing sidewalks along Winding River Drive, extending the existing sidewalk segment on N River Drive north to N River Parkway.	72.1
A_348	TMP	Huntley Drive Sidewalks	Huntley Drive	From Brinkley Lane to Franklin Road	Sidewalk	0.3386	This project proposes to improve pedestrian safety by constructing sidewalks along Huntley Drive.	70.6
A_332	TMP	Riverview Road Sidewalks	Riverview Road	From Old Powers Ferry Road to Northside Drive	Sidewalk	1.6595	This project proposes to improve pedestrian safety by constructing sidewalks along Riverview Road.	70.0
A_355	TMP	Jett Ferry Road Sidewalks	Jett Ferry Road	From Spalding Drive to River Circle	Sidewalk	0.5582	This project proposes to improve pedestrian opportunity on Jett Ferry Road.	68.6
A_393	TMP	Wright Road Sidewalks	Wright Road	From Brandon Ridge Drive to Abernathy Road	Sidewalk	0.2315	This project includes the installation of sidewalk on Wright Road from Brandon Ridge Drive to Abernathy Road, connecting to the Abernathy Greenway.	68.6
A_322	TMP	Angus Trail Sidewalks	Angus Trail	From Bonnie Lane to Ferry Drive	Sidewalk	0.2237	This project proposes to improve pedestrian safety by constructing sidewalks along Angus Trail.	68.1
A_341	TMP	Hardeman Road Sidewalks	Hardeman Road	From Roswell Road-US 19 to Spruell Springs Road	Sidewalk	0.3112	This project proposes to improve pedestrian safety by constructing sidewalks along Hardeman Road.	67.1
A_342	TMP	Spruell Springs Road Sidewalks	Spruell Springs Road	From Roswell Road-US 19 to Lake Forrest Drive	Sidewalk	0.3462	This project proposes to improve pedestrian safety by constructing sidewalks along Spruell Springs Road.	67.1
A_356	TMP	Redbourne Drive Sidewalks	Redbourne Drive	From Mt. Vernon Road to Hunters Woods Drive	Sidewalk	0.4813	This project proposes to improve pedestrian opportunity on Redbourne Drive.	64.1
A_357	TMP	Brigham Drive Sidewalks	Brigham Drive	From Hunters Woods Drive to Redbourne Drive	Sidewalk	0.5875	This project proposes to improve pedestrian opportunity on Brigham Drive.	63.6
A_331	TMP	Northside Drive Sidewalks	Northside Drive	From Mount Vernon Highway to Cates Ridge Road	Sidewalk	0.6362	This project proposes to improve pedestrian safety by constructing sidewalks along Northside Drive, extending the proposed sidewalk south from Mount Vernon Highway to Cates Ridge Road.	63.0
A_353	TMP	Ryefield Drive Sidewalk	Ryefield Drive	From Spalding Drive to Mount Vernon Road	Sidewalk	0.3534	This project proposes to improve pedestrian connectivity between Spalding Drive and Mount Vernon Road.	63.0
A_354	TMP	Stoneykirk Close Sidewalks	Stoneykirk Close	From Spalding Drive to Mount Vernon Road	Sidewalk	0.2911	This project proposes to improve pedestrian connectivity between Spalding Drive and Mount Vernon Road.	63.0

Other Projects Considered

Project								
Project ID	Source	Project Name	Road Name	Extents	Project Type	Length (Mi)	Project Description	Score
A_334	TMP	Maryeanna Drive Sidewalks	Maryeanna Drive	From Roswell Road-US 19 to Lake Forrest Drive	Sidewalk	0.3741	This project proposes to improve pedestrian safety by constructing sidewalks along Maryeanna Drive.	62.1
A_335	TMP	Osner Drive Sidewalks	Osner Drive	From Roswell Road-US 19 to Mount Paran Road	Sidewalk	0.2774	This project proposes to improve pedestrian safety by constructing sidewalks along Osner Drive.	62.1
A_336	TMP	Montevallo Drive Sidewalks	Montevallo Drive	From Forest Hills Drive to Forest Valley Court	Sidewalk	0.3727	This project proposes to improve pedestrian safety by constructing sidewalks along Montevallo Drive.	60.6
A_394	TMP	Londonberry Drive Sidewalks	Londonberry Drive	From Powers Ferry Road to Long Island Drive	Sidewalk	1.1707	This project includes the installation of sidewalk on Londonberry Drive from Powers Ferry Road to Long Island Drive.	60.6
A_333	TMP	Old Powers Ferry Road Sidewalk Segment	Old Powers Ferry Road	From Kelson Drive to Northside Drive	Sidewalk	0.0656	This project proposes to improve pedestrian safety by constructing a short (350 foot) sidewalk segment to extend the existing sidewalk along Old Powers Ferry Road from Kelson Drive to Northside Drive, where new sidewalks are also proposed.	53.0
A_351	TMP	Nesbit Ferry Road Sidewalks	Nesbit Ferry Road	From Spalding Drive to Winters Chapel Road	Sidewalk	0.1927	This project proposes to improve pedestrian connectivity between Winters Chapel Road and Spalding Drive and fill a sidewalk gap.	53.0
A_352	TMP	Spalding Lane Sidewalk	Spalding Lane	From Spalding Drive to City Limits	Sidewalk	0.3852	This project proposes to improve pedestrian connectivity between city limits and Spalding Drive.	53.0
A_401	TMP	Sidewalk Program	Citywide	From Citywide to Citywide	Sidewalk		This project funds installing new or maintaining existing sidewalk facilities throughout the City to improve pedestrian access and connectivity.	
A_301	TMP	Chattahoochee River Trail	Chattahoochee River	From GA 400 to Morgan Falls Road	Trail	5.2800	This project will include a trail along Chattahoochee River from GA 400 to Morgan Falls Road.	89.1
A_114	Trails Master Plan 2019	Morgan Falls Park Connector Part D	Off-Road Trail	From Segment 2e to Segment 1b	Trail	1.1323	This project will incorporate a multi-use side path connecting destinations around Morgan Falls Overlook Park.	87.2
A_101	Trails Master Plan 2019	North End Connector Part A	Off-Road Trail	From Roberts Drive to Hightower Trail	Trail	1.3776	This project will incorporate a multi-use side path with raised landscape buffers within the required right-of-way.	86.7
A_115	Trails Master Plan 2019	Morgan Falls Park Connector Part E	Off-Road Trail	From Cimarron Parkway to Segment 2d	Trail	1.0886	This project will incorporate a multi-use side path connecting destinations around Morgan Falls Overlook Park.	86.6
A_118	Trails Master Plan 2019	Colquitt Road to Glenridge Drive Side Path Path B (Off-Road Trail)	Off-Road Trail	From Spalding Drive to Glenlake Parkway	Trail	1.1076	This project will be a new location multi-use trail along Marsh Creek between Spalding Drive and Glenlake Parkway including bicycle facilities and trail. It will incorporate a 10' side path with a 5' landscape buffer on the west side.	86.1
A_102	Trails Master Plan 2019	North End Connector Part B	Off-Road Trail	From Hightower Trail to Ison Road	Trail	1.0961	This project will incorporate a multi-use trail with raised landscape buffers within the required right-of-way.	85.6
A_121	Trails Master Plan 2019	Glenridge Drive to Johnson Ferry Road Side Path Part A	Off-Road Trail	From Glenridge Drive to Abernathy Road	Trail	1.0141	This project will be a new location multi-use trail along Marsh Creek between SR 9 and GA 400 including bicycle facilities and trail. This project will include a 10' side path with a 3'-5' landscape buffer. The City will provide additional safe crossing improvements.	85.6
A_111	Trails Master Plan 2019	Morgan Falls Park Connector Part C	Off-Road Trail	From Morgan Falls Road to Grogans Ferry Road	Trail	1.6222	This project will incorporate a multi-use side path connecting destinations around Morgan Falls Overlook Park.	85.2
A_109	Trails Master Plan 2019	Morgan Falls Park Connector Part A	Morgan Falls Road/Cimarron Parkway	From Morgan Falls Road to Roswell Road	Trail	1.6374	This project will incorporate a multi-use side path connecting destinations around Morgan Falls Overlook Park.	85.0
A_106	Trails Master Plan 2019	North End Connector Part E	Roberts Drive/Pride Place	From Island Ford Parkway to Dunwoody Place	Trail	1.1167	This project will incorporate a multi-use trail with raised landscape buffers within the required right-of-way.	84.6
A_117	Trails Master Plan 2019	Colquitt Road to Glenridge Drive Side Path Path A	Off-Road Trail	From Pitts Road to Trowbridge Road	Trail	1.1385	This project will incorporate a 10' side path with a 5' landscape buffer on the west side.	84.6
A_013	NFCTP 2017	Lakeside-Hammond Commuter Trail (Independent Alignment)	NW Corner of the GA 400/I-285 Interchange	From NW Corner of the GA 400/I-285 Interchange to Glenridge Drive	Trail	0.6536	Comprehensive bicycle and pedestrian improvements between northwest corner of the GA 400/I-285 interchange and Hammond Drive. Consider amending development code to require developers to complete a portion of these trails as areas develop/redevelop.	83.2
A_143	Trails Master Plan 2019	Cox Headquarter Multi-use Trail	Cox Headquarter Multi-use	From Perimeter Center Trail to Central Park Drive	Trail	0.5126	This project will include a side path.	82.9
A_107	Trails Master Plan 2019	North End Connector Part F	Off-Road Trail	From Segment 1e to Segment 1g	Trail	0.8422	This project will incorporate a multi-use side path with raised landscape buffers within the required right-of-way.	79.6
A_138	Trails Master Plan 2019	East/South Connectors Part C	Off-Road Trail	From GA 400 to S Trimble Road	Trail	0.4442	This trail will capture the city-owned green space by creating a greenway and a trailhead parking.	79.5
A_139	Trails Master Plan 2019	East/South Connectors Part D	E Powderhorn Road	From GA 400 to Nancy Creek	Trail	1.3141	This trail will travel along Nancy Creek and connect to PATH 400.	72.1
A_018	NFCTP 2017	Bicycle and Pedestrian Improvements North of Johnson Ferry Road	North of Johnson Ferry Road	From Chattahoochee River to SR 9	Trail	1.7222	This project will include comprehensive bicycle and pedestrian improvements north of Johnson Ferry Road from the Chattahoochee River to SR 9.	70.1
I_059	ITS Master Plan 2019	System-15	Various	From Various to Various	Transit		This project coordinates traveler information w/ hospitals + Perimeter CID. Development of automated system for sharing information and streamline alerts and notifications	
T_002	Fulton County Transit Plan	Highway 9/Roswell Road ART	Roswell Road	From Southern City Line to Northern City Line	Transit	11.1056	City to act as a partner on this project from the MARTA COA and Fulton County Transit Plan. This project will include ART along Highway 9/Roswell Road.	

Other Projects Considered

Project								
Project ID	Source	Project Name	Road Name	Extents	Project Type	Length (Mi)	Project Description	Score
T_004	Fulton County Transit Plan	400 to Old Milton BRT	GA 400	From North Springs Marta Station to Old Milton Parkway	Transit	10.3349	This project will include BRT along 400 to Old Milton.	
T_005	RTP 2019	GA 400 Transit Initiative - Phase 1	GA 400	From North Springs Marta Station to Windward Parkway	Transit	5.6448	City to act as a partner on this project from the Fulton County Transit Plan and Regional Transportation Plan. This project will provide high capacity premium transit service on the SR 400 corridor between the MARTA North Springs heavy rail station and Windward Parkway in Alpharetta.	
T_006	RTP 2019	I-285 North Corridor Bus Rapid Transit	I-285	From West Paces Ferry Road to Northlake Mall Area	Transit	8.8801	City to support project development. This project will provide high capacity premium transit service on the I-285 corridor between the Northlake Mall and West Paces Ferry Road.	
T_007	RTP 2019	Medical Center To Dunwoody Marta Pedestrian/Bicycle And Transit Connectivity Improvements	GA 400	From Medical Center to Dunwoody Marta Station	Transit	1.7445	This project will include pedestrian, bicycle, and transit connectivity improvements from the Medical Center to the Dunwoody MARTA station.	
T_010	TMP	Mt. Vernon Highway Transit Service	Mt. Vernon Highway	From Sandy Springs MARTA Station to City Springs	Transit	1.6581	Consider the feasibility of implementing the transit service as proposed in the 2018 Mount Vernon Highway Transit study as major road projects are completed and travel patterns in the City change.	

*Each project type was scored differently so projects were only evaluated within the same project type.

*ITS, Transit, and Bridge projects do not have scores as these project types were evaluated differently.

*Recreational trail component of projects were not considered in this plan.

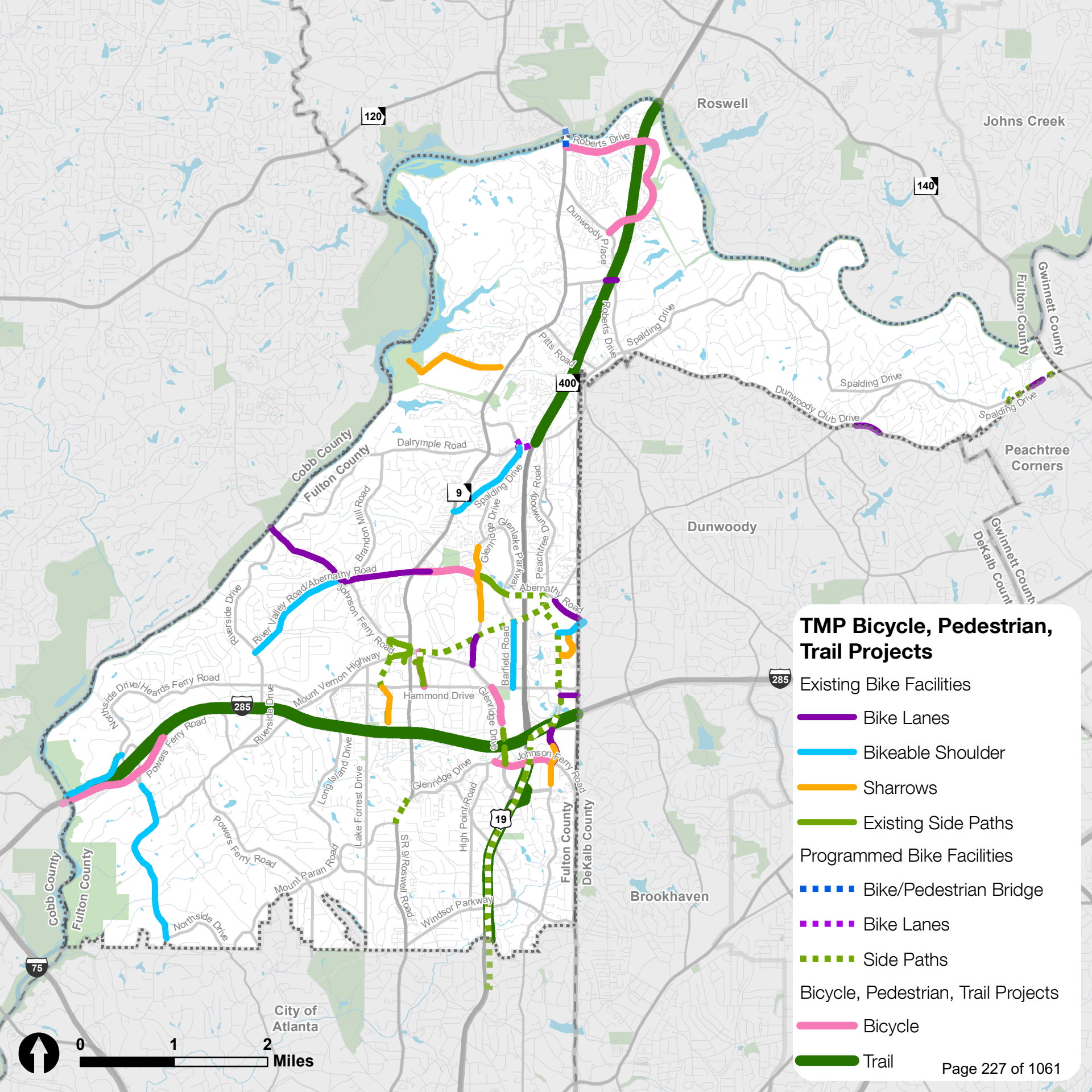
*The top scoring projects were additionally reviewed for feasibility, constructibility, and cost.

*Project Source "NFCTP 2017" is the North Fulton Comprehensive Transportation Plan adopted in 2017.

*Project Source "TMP" is the Sandy Springs Transportation Master Plan.

D – Bicycle Network





TMP Bicycle, Pedestrian, Trail Projects

Existing Bike Facilities

- Bike Lanes
- Bikeable Shoulder
- Sharrows
- Existing Side Paths

Programmed Bike Facilities

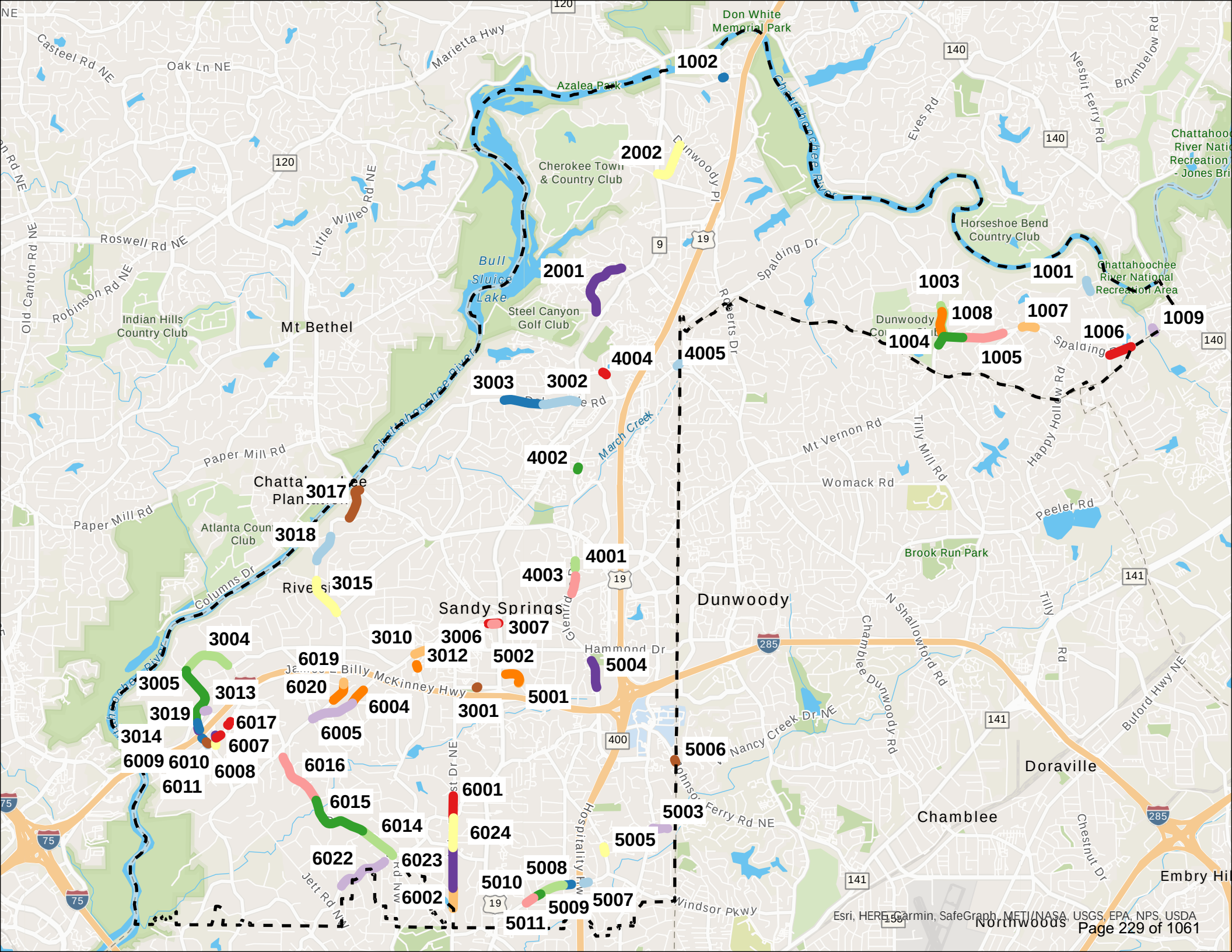
- Bike/Pedestrian Bridge
- Bike Lanes
- Side Paths

Bicycle, Pedestrian, Trail Projects

- Bicycle
- Trail



E – Sidewalk Program



GIS ID	Project Name
1001	Nesbit Ferry Road (Coles Way south to Ex. SW)
1002	Roberts Drive (Ex. SW at Rivermere Way to Rivercrest Drive)
1003	Spalding Drive (Old Cobblestone Drive to Jett Ferry Road)
1004	Jett Ferry Road/Spalding Drive (Jett Ferry Court to Ryefield Drive)
1005	Spalding Drive (Ryefield Drive to SW at Spalding Heights Drive)
1006	Spalding Drive (Nesbit Ferry to Spalding Lake Court)
1007	Spalding Drive(Stables Drive to N Spalding Lake Drive)
1008	Spalding Drive (Sagebrush Drive to Jett Ferry Road)
1009	River Exchange Spalding COSS Green Space
2001	Adair Lane (Grogans Ferry Road to Morgan Falls Road)
2002	Hope Road (Roswell Road to Dunwoody Place)
3001	Allen Road (@ NE corner of SSC intersection & to ex. SW)
3002	Dalrymple Road (Glencourtney Drive to 605 Dalrymple Road)
3003	Dalrymple Road (Duncourtney Drive to Glencourtney Drive)
3004	Heards Ferry Road (Winterthur Way to Cameron Glen Drive)
3005	Northside Drive (Winterthur Way to I285)
3006	Hilderbrand Drive (Ex SW across from Police gym to Ex sidewalk at Roswell Rd.)
3007	Hilderbrand Drive - Police gym to Roswell Rd
3010	Mt. Vernon Highway (Ex. SW at DeClaire Court to Long Island Drive)
3012	Long Island Drive @ 5910 Gap Fill
3013	Interstate North Parkway (at 5665 New Northside Drive)
3014	Northside Drive - West Side (Ex. Driveway to I285)
3015	Riverside Drive (Edgewater Drive to River Valley Road)
3017	Riverside Drive (Johnson Ferry Road to North Harbor Drive)
3018	Riverside Drive (Blackwater Trail to Old Riverside Drive)
3019	Northside Drive - East side (Interstate North Parkway to I285)
4001	Glenridge Drive (Ex. SW at Glenridge Commons to Mt. Vernon Highway)
4002	Glenridge Drive (Messina Way to Ex. SW at Spalding Trace)
4003	Glenridge Drive (Ex. Sidewalk at Glenridge Close to Mt. Vernon Hwy)
4004	Trowbridge Road (Spalding Trail to Trowbridge Lake Drive)
4005	Spalding Drive (Existing Driveway to Dunwoody City Limit)
5001	Carpenter Drive @ 345 Carpenter Dr
5002	Carpenter Drive (Allen Road to Cliftwood Drive)
5003	Evergreen Drive (Ex SW at Greenwood Close to PDR)
5004	Glenridge Drive (Novel Perimeter to Hammond Park)
5005	Northland Drive (Landmark Drive to Ex. SW at Northland Ridge Trail)
5006	S. Johnson Ferry Road(Existing SW to Brookhaven City Limit)
5007	Windsor Parkway (GA 400 Bridge to 721 Windsor Parkway)
5008	Windsor Parkway (High Point Road to 635 Windsor Parkway)
5009	Windsor Parkway (Ex. SW at 445 Windsor Parkway to High Point Road)
5010	Windsor Parkway (Ex. SW at 445 Windsor Parkway to Pine Haven Lane)
5011	Windsor Parkway (Dalmer Road to Ex. SW at 435 Windsor Parkway)
6001	Lake Forrest Drive (Burdette Road to Mt. Paran Road)
6002	Lake Forrest Drive (Forrest Lake to City Limit)
6004	Mt. Vernon Highway(Glen Errol Road to Ex. SW at 500 Mt. Vernon Highway)
6005	Mt. Vernon Hwy (Powers Ferry Road to Glen Errol Road)
6007	New Northside Dr (Ex. Driveway to Powers Ferry Rd)
6008	New Northside Drive (ex. Driveway and Powers Ferry Road)
6009	Northside Drive (ex. Driveway to Powers Ferry Road)
6010	Northside Drive (5500 Northside Drive frontage)
6011	Northside Drive (I285 to Waffle House)
6014	Powers Ferry Road (Carol Lane to Mt. Paran Road)
6015	Powers Ferry Road (Crest Valley Drive to Carol Lane)
6016	Powers Ferry Road (Reds Ridge Court to Crest Valley Drive)
6017	Powers Ferry Road (New Northside Drive to 6201 Powers Ferry Road)
6018	Powers Ferry Road (ex. Driveway to Northside Drive)
6019	Riverside Drive(Fair Oaks Manor to Riverside Drive Roundabout)
6020	Riverside Drive (5758 Riverside Drive to Fair Oaks Manor NW)
6022	Mt. Paran Road (Rebel Trail to Laurel Chase Court)
6023	Lake Forrest Drive (Long Island Drive to Forrest Lake Drive)
6024	Lake Forrest Drive (Mt. Paran Road to Long Island Drive)

F – Short-and Mid-Range Projects



Short- and Mid-Range Project List

Project ID	Project Name	Road Name	Extents	Project Type	Length (Mi)	Project Description	Score	Cost	Programming Level
Road_026	GA 400 Bridge Enhancements	GA 400	From GA 400 to Spalding Drive, Pitts Road, and Roberts Drive	Bridge		This project proposes bicycle and pedestrian facilities and aesthetic enhancements for the Spalding Drive bridge, Pitts Road Bridge, and Roberts Drive Bridge over SR 400 that will be replaced as part of the GDOT SR 400 Managed Lanes project.		\$ 6,000,000	Short-Range
Road_027	Jett Road at Long Island Creek Bridge Replacement	Jett Road	From Jett Road to Long Island Creek	Bridge		This project proposes to replace the Jett Road bridge over Long Island Creek.		\$ 3,000,000	Mid-Range
Road_028	Windsor Parkway at Nancy Creek Bridge Upgrade	Windsor Parkway	From Windsor Parkway to Nancy Creek	Bridge		This project proposes to upgrade the bridge to raise it out of the flood plain.		\$ 5,000,000	Mid-Range
Road_030	Riverside Drive over Chattahoochee River Tribe Bridge	Riverside Drive	From Riverside Drive to Chattahoochee River Tribe	Bridge		This project proposes to upgrade the bridge to accommodate heavier vehicles.		\$ 3,200,000	Short-Range
Road_031	I-285 Top End Bridge Enhancements	Mt. Vernon Highway	From Mt. Vernon Highway to I-285	Bridge		This project proposes bicycle and pedestrian facilities and aesthetic enhancements for the Mt. Vernon Highway Bridge over I-285 that will be replaced as part of the GDOT Top End 285 Managed Lanes Project.		\$ 2,400,000	Short-Range
Road_033	City Contribution to New Streets Built with Redevelopment	Various	From Various to Various	Capacity		City Contribution to New Streets build with Redevelopment		\$ 1,000,000	Short-Range
Road_022	Roswell Road North Boulevard Median Project	Roswell Road	From Chattahoochee River to Dunwoody Place	Corridor Projects	0.5055	This project proposes a traffic study, design, and construction of a raised median on Roswell Road with pedestrian and bicycle improvements.	70.1	\$ 7,000,000	Short-Range
Road_023	Roswell Road Access Management and Complete Streets Improvements	Roswell Road	From Dunwoody Place to Southern City Limit	Corridor Projects	9.3982	This project proposes access management and complete streets improvements along areas of Roswell Road based on Next 10 and Access Management Plan recommendations.	76.5	\$ 10,000,000	Short-Range and Mid-Range
Road_024	Peachtree Dunwoody Road Corridor Study and Improvements	Peachtree Dunwoody Road	From Abernathy Road to Spalding Drive	Corridor Projects	1.7386	Proposed corridor study of the Peachtree Dunwoody Road, from Abernathy Road to Spalding Drive and funding for recommended improvements.		\$ 5,150,000	Short-Range and Mid-Range

Short- and Mid-Range Project List

Project ID	Project Name	Road Name	Extents	Project Type	Length (Mi)	Project Description	Score	Cost	Programming Level
Road_025	Powers Ferry Multimodal Circulation Study	Various	From Various to Various	Corridor Projects		Proposed multimodal circulation study in the Powers Ferry area to determine holistic improvements to support pedestrian, bicycle, transit, and vehicular travel. This technical study will build off the City's Powers Ferry small area plan.		\$ 200,000	Short-Range
Road_001	Johnson Ferry Road at Peachtree Dunwoody Road Intersection Improvement	Johnson Ferry Road	From Johnson Ferry Road to Peachtree Dunwoody Road	Intersection		This project proposes safety and operational improvements which may include reconstruction of the horizontal and vertical geometry, addition of one through lane eastbound, a second southbound left-turn lane, and a dedicated right-turn lane westbound.	75.4	\$ 17,000,000	Short-Range and Mid-Range
Road_002	Northridge Road at SR 400 SB Intersection Improvement	Northridge Road	From Northridge Road to SR 400 SB	Intersection		This project proposes safety and operational improvements which may include adding a southbound left-turn lane with raised median island; adding median along westbound right-turn lane; signal modifications; signage, and pavement marking upgrades.	70.9	\$ 1,000,000	Mid-Range
Road_003	Dunwoody Place at Roswell Road Intersection Improvement	Dunwoody Place	From Dunwoody Place to Roswell Road	Intersection		This project proposes safety and operational improvements which may include removing one westbound left-turn lane on Dunwoody Place; timing modification; adding raised median on Dunwoody Place, adding pedestrian refuge island; and access management.	71.2	\$ 2,000,000	Short-Range
Road_004	Northridge Road at Roswell Road Intersection Improvement	Northridge Road	From Northridge Road to Roswell Road	Intersection		This project proposes safety and operational improvements which may include operational upgrades; intersection lighting; pavement markings, and access management.	71.7	\$ 2,200,000	Short-Range
Road_005	Abernathy Road at Mount Vernon Highway Intersection Improvement	Abernathy Road	From Abernathy Road to Mount Vernon Highway	Intersection		This project proposes operational improvements which may include signal timing modifications, signal upgrades, modification of the southwest and northeast concrete islands, signage upgrades, and pavement markings.	84.4	\$ 1,000,000	Mid-Range

Short- and Mid-Range Project List

Project ID	Project Name	Road Name	Extents	Project Type	Length (Mi)	Project Description	Score	Cost	Programming Level
Road_006	Abernathy Road at Peachtree Dunwoody Road Intersection Improvement	Abernathy Road	From Abernathy Road to Peachtree Dunwoody Road	Intersection		This project proposes safety improvements which may include prohibition of westbound left turn from Abernathy to southbound Peachtree Dunwoody, modifying the southeast corner and concrete island, signal and signage upgrades, and pavement markings.	86.9	\$ 1,000,000	Mid-Range
Road_007	Roswell Road and Abernathy Road Intersection Short-Term Improvements	Roswell Road	From Roswell Road to Abernathy Road	Intersection		This project proposes safety improvements which may include a signal for westbound to northbound right turns; modification of the east median; signage modifications, pavement markings, and access management treatments.	75.2	\$ 500,000	Short-Range
Road_008	Roswell Road at Abernathy Road Long-Term Intersection Improvement	Roswell Road	From Roswell Road to Abernathy Road	Intersection		This project proposes long-term safety and operational upgrades through innovative intersection treatments.	71.7	\$ 12,000,000	Mid-Range
Road_009	Roswell Road at Dalrymple Road Operational Improvements Phase 2	Roswell Road	From Roswell Road to Dalrymple Road	Intersection		This project proposes operational upgrades which may include addition of a dedicated northbound, eastbound, and westbound right turn lanes; additional eastbound and westbound left turn lanes; raised median; and streetscape enhancements.	69.5	\$ 7,800,000	Mid-Range
Road_010	I-285/Roswell Road Innovative Interchange Study	I-285	From I-285 to Roswell Road	Intersection		Proposed innovative interchange study of the Roswell Road at I-285 eastbound ramps and I-285 westbound ramps to identify long term improvement.		\$ 150,000	Short-Range
Road_011	Abernathy/Mount Vernon Highway/Peachtree Dunwoody Road Intersections Study	Abernathy Road	From Mt. Vernon Highway to Peachtree Dunwoody Road	Intersection		Proposed safety and operations study of Abernathy Road/Peachtree Dunwoody Road, Mount Vernon Highway/Peachtree Dunwoody Road, and Mount Vernon Highway/Perimeter Center West.		\$ 150,000	Short-Range
Road_012	Bring 10 Intersections up to Standard	Various	From Various to Various	Intersection		Bring 10 Intersections up to Standard		\$ 1,000,000	Short-Range
ITS_001	Design and Construct Fiber Ring A	Various	From Various to Various	ITS		Design and Construct Fiber Ring A		\$ 1,500,000	Short-Range
ITS_002	Design and Construct Fiber Ring B	Various	From Various to Various	ITS		Design and Construct Fiber Ring B		\$ 1,500,000	Mid-Range

Short- and Mid-Range Project List

Project ID	Project Name	Road Name	Extents	Project Type	Length (Mi)	Project Description	Score	Cost	Programming Level
ITS_003	Install Hub at Morgan Falls Public Safety Complex	Roswell Road	From Roswell Road to Morgan Falls	ITS		Phase I of this project should provide a new field hub cabinet located west of the SR 9 (Roswell Rd.) and Morgan Falls intersection (NE quadrant) within the GDOT ROW. Phase II will remove the existing fiber connection from the Morgan Falls Building. Additionally, this project will provide a new field hub cabinet located west of the SR 9/Roswell Road and Abernathy Road intersection (NW quadrant) within the GDOT ROW.		\$ 690,000	Short-Range
ITS_004	Fiber Connection to Fire Station 1	Spalding Drive	From Spalding Drive to Roberts Drive	ITS		This project will provide fiber connection to Fire Station 1 at Spalding Drive and Roberts Drive.		\$ 650,000	Short-Range
Road_013	Fulton County Annex Midblock Crossing	Roswell Road	From Roswell Road to Morgan Falls Trail Loop	Safety		This project proposes a signalized pedestrian midblock crossing (HAWK beacon) across Roswell Road near the Fulton County Government Center with crosswalks and median refuge island.	69.7	\$ 500,000	Short-Range
Road_014	Roswell Road between Prado Place and Northwood Drive Midblock Crossing	Roswell Road	From Prado Place to Northwood Drive	Safety		This project proposes a signalized pedestrian midblock crossing (HAWK beacon) across Roswell Road between Prado Place and Northwood Drive with crosswalks and median refuge island.	90.0	\$ 500,000	Short-Range
Road_015	Roswell Road between Cimarron Parkway and Trowbridge Road Midblock Crossing	Roswell Road	From Cimarron Parkway to Trowbridge Road	Safety		This project proposes a signalized pedestrian midblock crossing (HAWK beacon) across Roswell Road between Cimarron Parkway and Trowbridge Road with crosswalks and median refuge island.	76.0	\$ 500,000	Mid-Range
Road_016	Hammond Drive at Peachtree Dunwoody Road Safety Improvements	Hammond Drive	From Hammond Drive to Peachtree Dunwoody Road	Safety		This project proposes safety improvements which may include signal upgrades, signal timing modifications, and signage upgrades.	73.2	\$ 150,000	Short-Range
Road_017	SR 9 (Roswell Road) at Lake Placid Drive Safety Improvements	SR 9 (Roswell Road)	From SR 9 (Roswell Road) to Lake Placid Drive	Safety		This project proposes safety improvements which may include signal upgrades, signal timing modifications, wider crosswalks, lighting, and access management.	73.0	\$ 225,000	Short-Range

Short- and Mid-Range Project List

Project ID	Project Name	Road Name	Extents	Project Type	Length (Mi)	Project Description	Score	Cost	Programming Level
Road_018	SR 9 (Roswell Road) at I-285 Eastbound Safety Improvements	SR 9 (Roswell Road)	From SR 9 (Roswell Road) to I-285 Eastbound	Safety		This project proposes safety improvements which may include signal upgrades, signal timing modification, signage upgrades, and lighting.	73.5	\$ 500,000	Short-Range
Road_019	SR 9 (Roswell Road) at I-285 Westbound Safety Improvements	SR 9 (Roswell Road)	From SR 9 (Roswell Road) to I-285 Westbound	Safety		This project proposes safety improvements which may include signal upgrades, signal timing modifications, and lighting.	70.0	\$ 300,000	Short-Range
Road_020	Hollis Cobb Circle at Peachtree Dunwoody Road Intersection Improvement	Hollis Cobb Circle	From Hollis Cobb Circle to Peachtree Dunwoody Road	Safety		This project proposes safety improvements which may include adding an exclusive traffic signal phase for pedestrian crossings; signal upgrades, signage upgrades; and installing street furniture at the northwest corner of the intersection.	72.0	\$ 325,000	Short-Range
Road_021	Mount Vernon Highway at Peachtree Dunwoody Road Intersection Improvement	Mount Vernon Highway	From Mount Vernon Highway to Peachtree Dunwoody Road	Safety		This project proposes safety improvements which may include upgrades to signage and pavement markings.	71.0	\$ 350,000	Mid-Range
Bike/Ped_001	Johnson Ferry Rd Side Path, from Glenridge Dr to Peachtree Dunwoody Rd	Johnson Ferry Road	From Glenridge Drive to Peachtree Dunwoody Road	Side Path	0.6402	This project proposes a multi-use side path along Johnson Ferry Rd, from Glenridge Drive to Peachtree Dunwoody Road.	84.9	\$ 6,000,000	Short-Range
Bike/Ped_002	Abernathy Side Path, from Roswell Road to Glenridge Drive	Abernathy Road	From SR 9/Roswell Road to Glenridge Drive	Side Path	0.6823	This project proposes a side path along Abernathy Road, from Roswell Road to Glenridge Drive.	83.1	\$ 6,100,000	Mid-Range
Bike/Ped_004	Roberts Drive Side Path, from Roswell Rd to Dunwoody Pl	Roberts Drive	From Roswell Road to Dunwoody Place	Side Path	2.2247	This project will provide separated bicycle and pedestrian infrastructure on Roberts Drive from Roswell Road/SR 9 bicycle/pedestrian bridge to Dunwoody Place.	90.7	\$ 14,500,000	Mid-Range
Bike/Ped_005	Glenridge Dr Side Path, from Hammond Dr to south of Wellington Trace	Glenridge Connector	From Hammond Drive to Existing Side Path (south of Wellington Trace)	Side Path	0.4032	This project proposes a multi-use side path along Glenridge Drive, from Hammond Drive to existing side path, just south of Wellington Trace.	81.6	\$ 2,500,000	Short-Range
Bike/Ped_006	Powers Ferry Dr Side Path, from City Limits to Dupree Drive	Powers Ferry Road	From City Limits to Dupree Drive	Side Path	1.3554	This project proposes a multi-use side path along Powers Ferry Road from the Chattahoochee River to Dupree Drive.	80.6	\$ 10,000,000	Mid-Range

Short- and Mid-Range Project List

Project ID	Project Name	Road Name	Extents	Project Type	Length (Mi)	Project Description	Score	Cost	Programming Level
Bike/Ped_008	I-285 Multi-use Trail Study	I-285	From Cobb County Line to DeKalb County Line	Trail	11.7676	Proposed conceptual study for comprehensive bicycle and pedestrian improvements which may include a multi-use trail along I-285 from the Cobb County Line to the DeKalb County Line.		\$ 250,000	Short-Range
Bike/Ped_010	GA 400 Multi-use Trail North Study	GA 400	From Spalding Drive to Chattahoochee River	Trail	2.8821	Proposed feasibility study of the GA 400 Multi-use Trail from Spalding Drive to the Chattahoochee River.		\$ 250,000	Short-Range
Transit_001	Traveler Information Kiosks/Transit Curbside Management (partnership with MARTA)	Various	From Various to Various	Transit		This project proposes adding traveler information kiosks / transit curbside management at MARTA rail stations.		\$ 300,000	Short-Range and Mid-Range
Transit_002	Transit Signal Priority Technical Upgrades along MARTA Routes	Hammond Drive	From Roswell Road to Dunwoody Station	Transit	1.8000	This project proposes modifications to signal timing to implement transit signal priority on signals along transit corridors.		\$ 250,000	Short-Range
Transit_003	Transit Signal Priority Supportive Improvements along Hammond Drive	Hammond Drive	From Roswell Road to City Limits	Transit	1.8	This project proposes a study of transit supportive improvements along Hammond Drive, which may include bus stop modifications, queue jumper lanes, and pedestrian signal upgrades.		\$ 2,700,000	Mid-Range
Transit_004	I-285 BRT Feasibility Study	I-285	From City Limits to City Limits	Transit	11.7676	Proposed feasibility study for Bus Rapid Transit along I-285. Includes conceptual station planning and design, service plan, implementation plan.		\$ 50,000	Short-Range
Transit_005	I-285 at Roswell Road Station Area Study	I-285	From I-285 to Roswell Road	Transit		Proposed station area study to assess connectivity and land use improvements for the planned I-285 BRT station at Roswell Road.		\$ 100,000	Short-Range

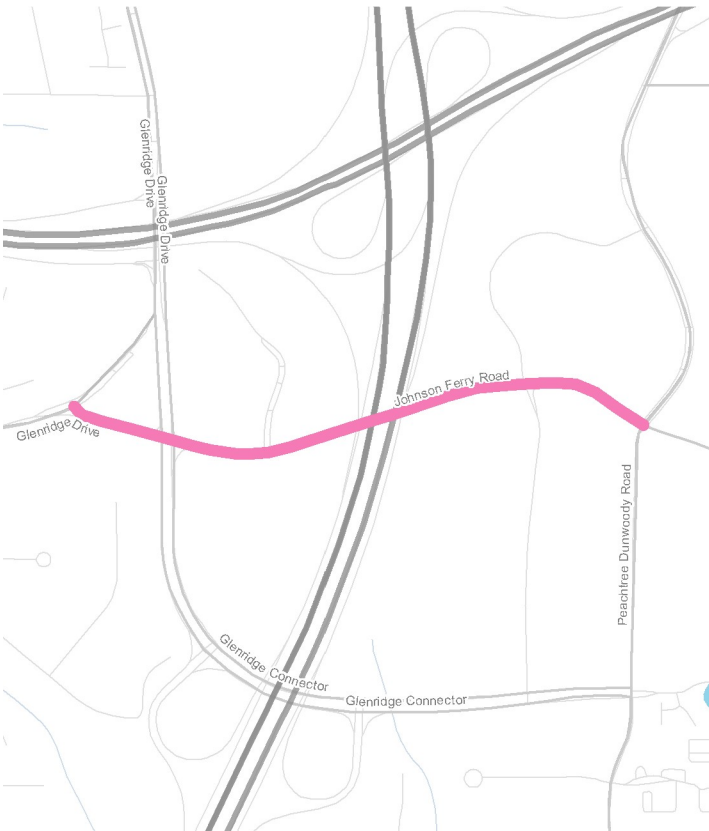


G – Project Fact Sheets

Johnson Ferry Road Side Path, from Glenridge Drive to Peachtree Dunwoody Road

Project ID: Bike/Ped_001

Project At A Glance



Project Extents	Johnson Ferry Road from Glenridge Drive to Peachtree Dunwoody Road
Project Type	Bicycle
Project Description	This project proposes a multi-use side path along Johnson Ferry Rd, from Glenridge Drive to Peachtree Dunwoody Road.
Programming Tier	Short-Range
Project Cost	\$6,000,000

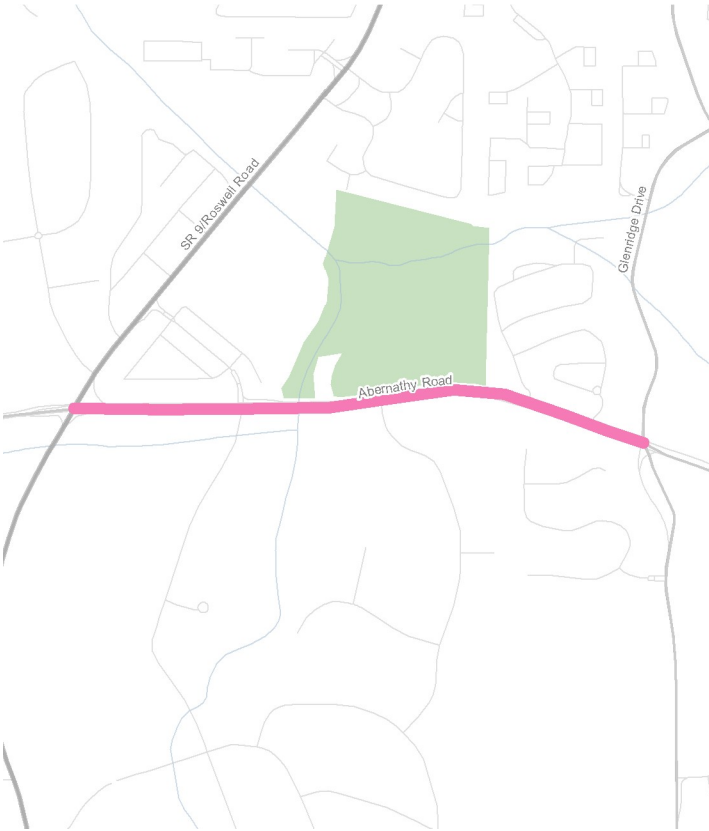
Additional Project Information

Need/Purpose	The purpose of this project is to create a safer and more comfortable walking and biking environment along Johnson Ferry Road.
Benefit/Value	Fills gap in multimodal network Improved multimodal connectivity between area residences, businesses, and future extension of PATH 400 trail Reduced risk of potential conflicts between vehicles, pedestrians, and cyclists
Implementation Factors	Limited ROW availability Utility relocation

Abernathy Side Path, from Roswell Road to Glenridge Drive

Project ID: Bike/Ped_002

Project At A Glance



Project Extents	Abernathy Road from Roswell Road to Glenridge Drive
Project Type	Bicycle
Project Description	This project proposes a side path along Abernathy Road, from Roswell Road to Glenridge Drive.
Programming Tier	Mid-Range
Project Cost	\$6,100,000

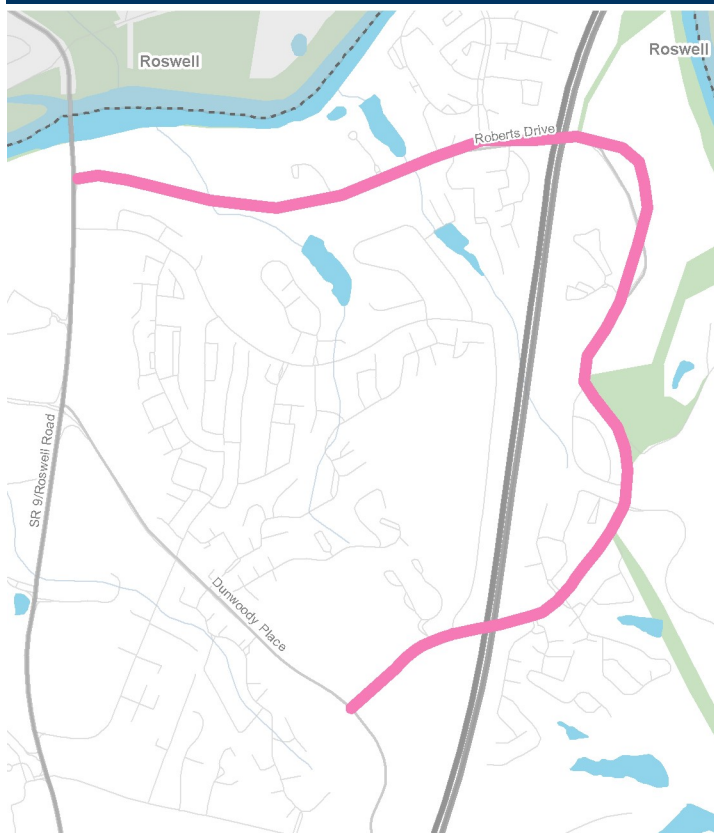
Additional Project Information

Need/Purpose	The purpose of this project is to create a safer and more comfortable walking and biking environment along Abernathy Road.
Benefit/Value	Fills gap in multimodal network Improved multimodal connectivity between area residences, businesses, Abernathy Greenway, and Sandy Springs Tennis Center Reduced risk of potential conflicts between vehicles, pedestrians, and cyclists
Implementation Factors	Limited ROW availability Utility relocation

Roberts Drive Side Path, from Roswell Road to Dunwoody Place

Project ID: Bike/Ped_004

Project At A Glance



Project Extents	Roberts Drive from Roswell Road to Dunwoody Place
Project Type	Bicycle
Project Description	This project proposes a multi-use side path along Roberts Drive from Roswell Road/SR 9 to Dunwoody Place.
Programming Tier	Short-Range and Mid-Range
Project Cost	\$14,500,000

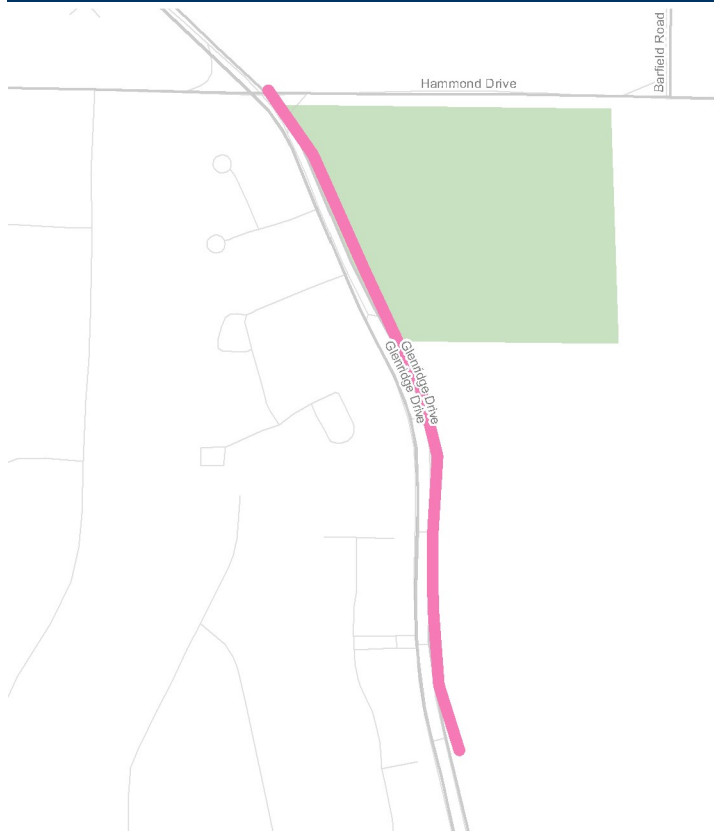
Additional Project Information

Need/Purpose	The purpose of this project is to create a safer and more comfortable walking and biking environment along Roberts Drive.
Benefit/Value	Fills gap in multimodal network Improved multimodal connectivity between area residences, businesses, and parks and trails adjacent to Chattahoochee River Reduced risk of potential conflicts between vehicles, pedestrians, and cyclists
Implementation Factors	Limited ROW availability Utility relocation NPS Coordination

Glenridge Drive Side Path, from Hammond Drive to south of Wellington Trace

Project ID: Bike/Ped_005

Project At A Glance



Project Extents	Glenridge Drive from Hammond Drive to Wellington Trace
Project Type	Bicycle
Project Description	This project proposes a multi-use side path along Glenridge Drive, from Hammond Drive to existing side path, just south of Wellington Trace.
Programming Tier	Short-Range
Project Cost	\$2,500,000

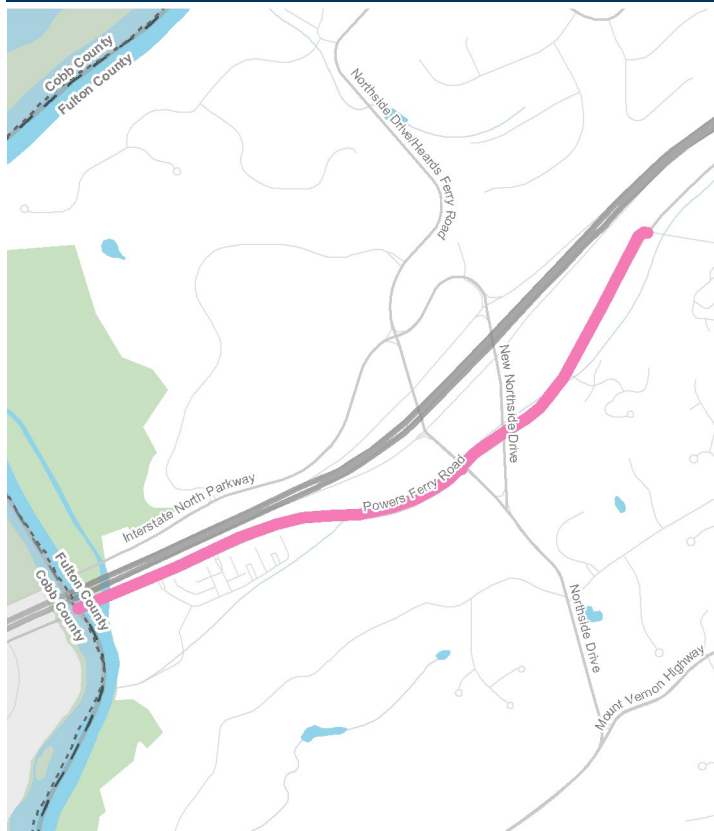
Additional Project Information

Need/Purpose	The purpose of this project is to create a safer and more comfortable walking and biking environment along Glenridge Drive.
Benefit/Value	Fills gap in multimodal network Improved multimodal connectivity between area residences, businesses, and Hammond Park Reduced risk of potential conflicts between vehicles, pedestrians, and cyclists
Implementation Factors	Limited ROW availability Utility relocation

Powers Ferry Drive Side Path, from City Limits to Dupree Drive

Project ID: Bike/Ped_006

Project At A Glance



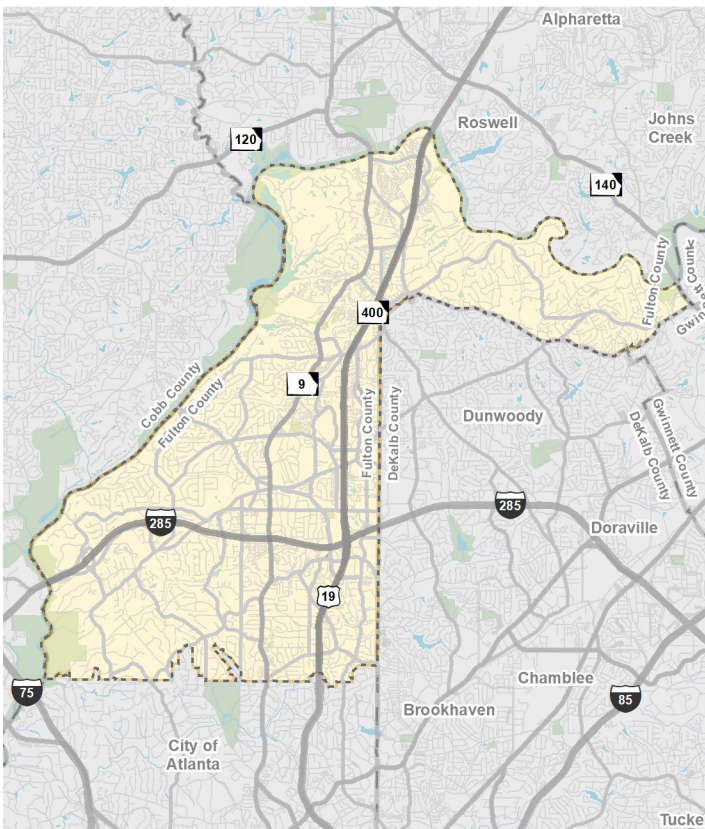
Project Extents	Powers Ferry Road from City Limits to Dupree Drive
Project Type	Bicycle
Project Description	This project proposes a multi-use side path along Powers Ferry Road from the Chattahoochee River to Dupree Drive.
Programming Tier	Mid-Range
Project Cost	\$10,000,000

Additional Project Information

Need/Purpose	The purpose of this project is to create a safer and more comfortable walking and biking environment along Powers Ferry Road.
Benefit/Value	Fills gap in multimodal network Improved multimodal connectivity between area residences, businesses, Heards Ferry Elementary School, Powers Ferry commercial area, and parks and trails adjacent to Chattahoochee River Reduced risk of potential conflicts between vehicles, pedestrians, and cyclists
Implementation Factors	Limited ROW availability Utility relocation Coordination with Cobb County Environmental considerations (crossing Chattahoochee River)

Project ID: Bike/Ped_007

Project At A Glance



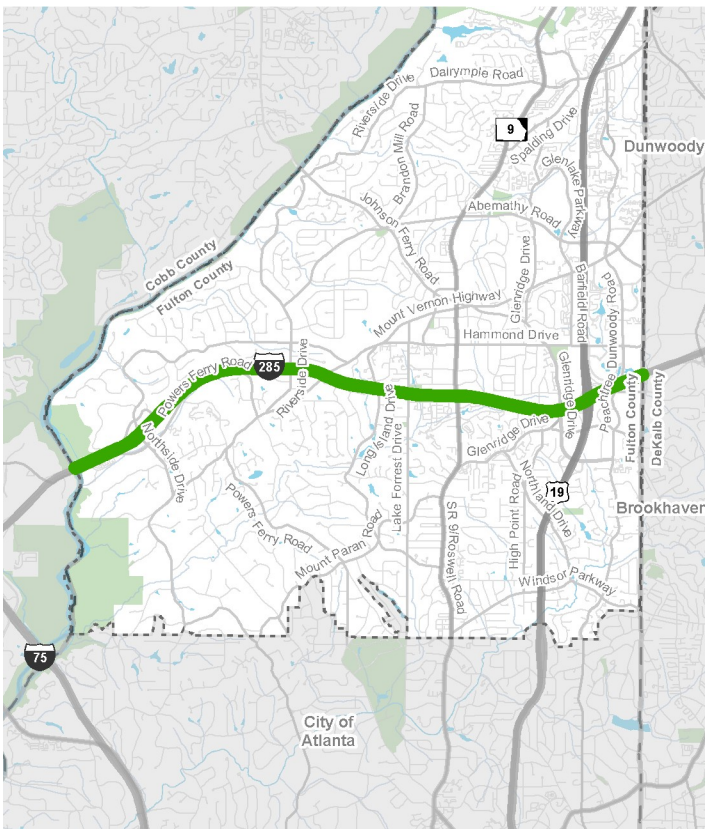
Project Extents	Citywide
Project Type	Pedestrian
Project Description	This project funds installing new or maintaining existing sidewalk facilities throughout the City to improve pedestrian access and connectivity.
Programming Tier	Short-Range and Mid-Range
Project Cost	\$24,000,000

Additional Project Information

Need/Purpose	The purpose of this project is to improve the coverage and condition of sidewalks in Sandy Springs.
Benefit/Value	Improved multimodal connectivity and safety Reduced risk of potential conflicts between vehicles and pedestrians
Implementation Factors	Potentially limited ROW availability and utility relocation (dependent upon location) May be eligible for GDOT funding

Project ID: Bike/Ped_008

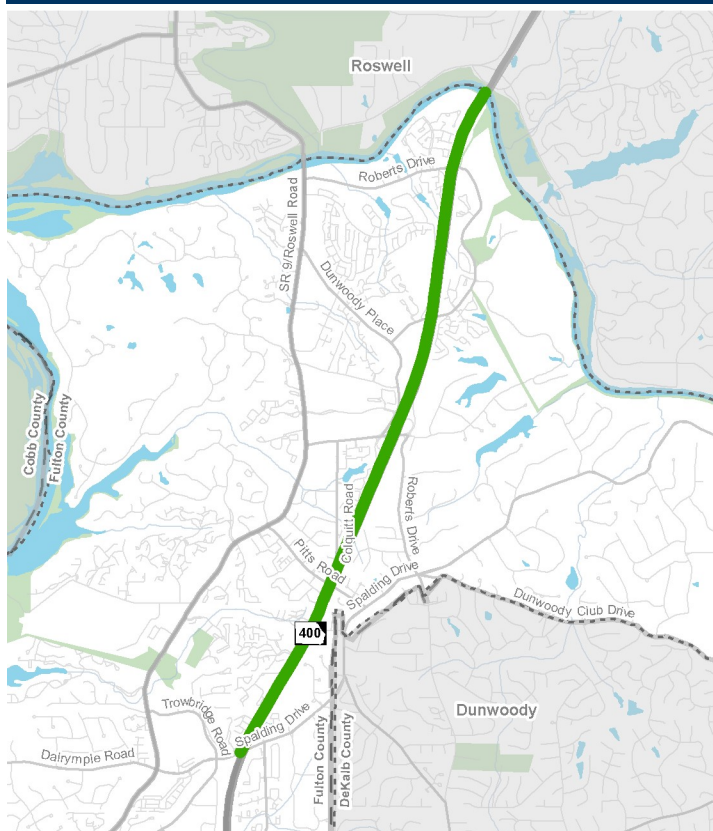
Project At A Glance



Project Extents	I-285 from Cobb County Line to DeKalb County Line
Project Type	Trail
Project Description	Proposed conceptual study for comprehensive bicycle and pedestrian improvements which may include a multi-use trail along I-285 from the Cobb County Line to the DeKalb County Line.
Programming Tier	Short-Range
Project Cost	\$250,000

Additional Project Information

Need/Purpose	The purpose of this project is to expand the trail network within Sandy Springs and create new connections to the regional trail network.
Benefit/Value	Expansion of local and regional trail network Improved multimodal connectivity between Chattahoochee River, national park network, and area residences and businesses Reduced risk of potential conflicts between vehicles, pedestrians, and cyclists
Implementation Factors	Limited ROW availability Utility relocation Coordination with GDOT, Cobb County, DeKalb County, City of Dunwoody & Perimeter CIDs Environmental considerations (crossing wetlands and Chattahoochee River)

Project ID: Bike/Ped_010
Project At A Glance


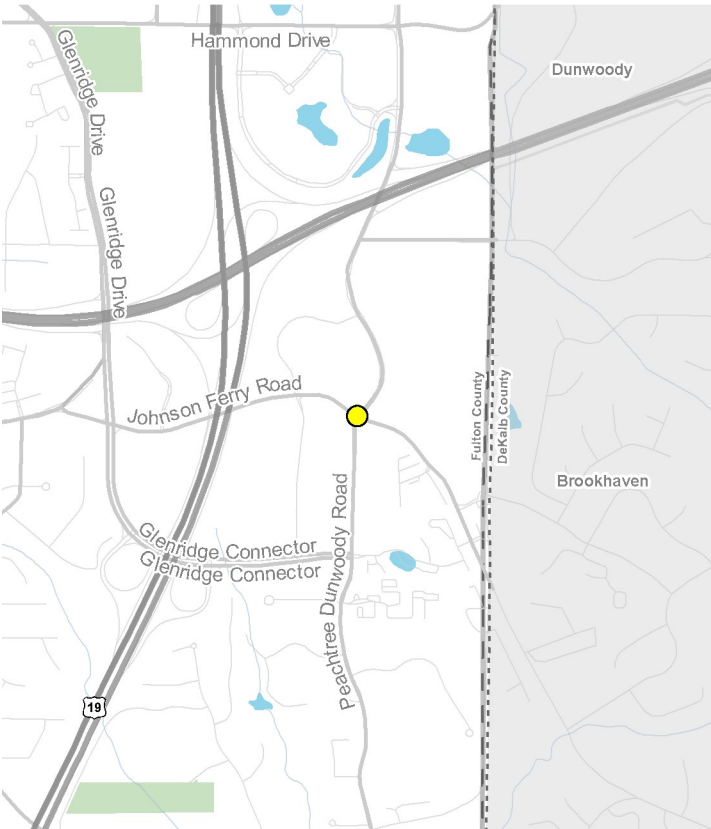
Project Extents	GA 400 from Spalding Drive to Chattahoochee River
Project Type	Trail
Project Description	Proposed feasibility study of the GA 400 Multi-use Trail from Spalding Dr to the Chattahoochee River.
Programming Tier	Short-Range
Project Cost	\$250,000

Additional Project Information

Need/Purpose	The purpose of this project is to expand the trail network within Sandy Springs and create new connections to the regional trail network.
Benefit/Value	Expansion of local and regional trail network Improved multimodal connectivity between Chattahoochee River, national park network, and area residences and businesses Reduced risk of potential conflicts between vehicles, pedestrians, and cyclists
Implementation Factors	Limited ROW availability Utility relocation Coordination with GDOT and City of Roswell Environmental considerations (crossing wetlands and Chattahoochee River) Eligible for Federal Funding through ARC

Project ID: Road_001

Project At A Glance



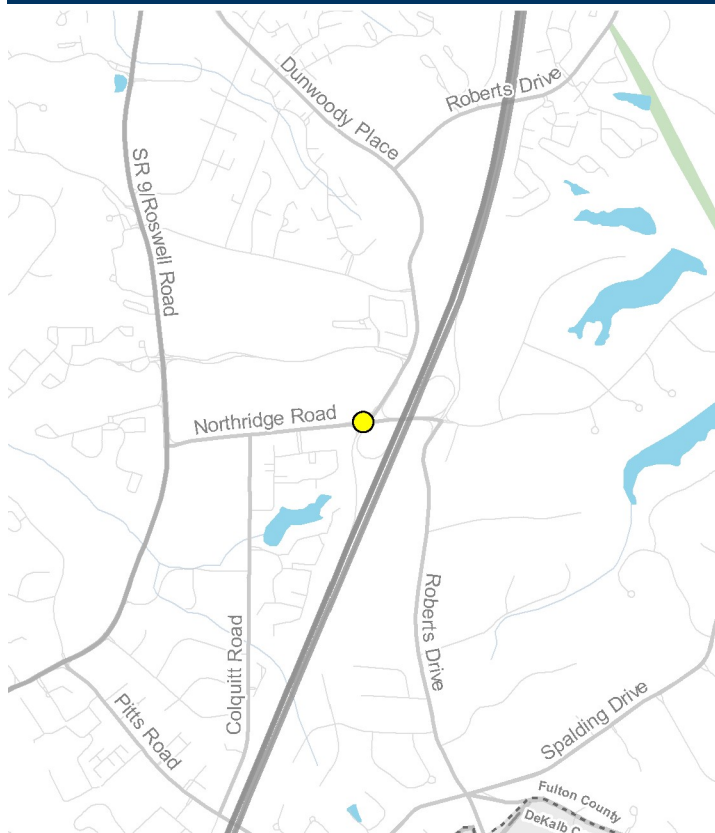
Project Extents	Johnson Ferry Road at Peachtree Dunwoody Road
Project Type	Intersection
Project Description	This project proposes safety and operational improvements which may include reconstruction of the horizontal and vertical geometry, addition of one through lane eastbound, a second southbound left-turn lane, and a dedicated right-turn lane westbound.
Programming Tier	Short-Range and Mid-Range
Project Cost	\$17,000,000

Additional Project Information	
Need/Purpose	The purpose of this project is to improve mobility and address safety deficiencies at the intersection.
Benefit/Value	Reduction in travel delay Potential reduction in crashes
Implementation Factors	Limited ROW availability Utility relocation

Northridge Road at SR 400 SB Intersection Improvement

Project ID: Road_002

Project At A Glance



Project Extents	Northridge Road at SR 400 SB
Project Type	Intersection
Project Description	This project proposes safety and operational improvements which may include adding a southbound left-turn lane with raised median island; adding median along westbound right-turn lane; signal modifications; signage, and pavement marking upgrades.
Programming Tier	Mid-Range
Project Cost	\$1,000,000

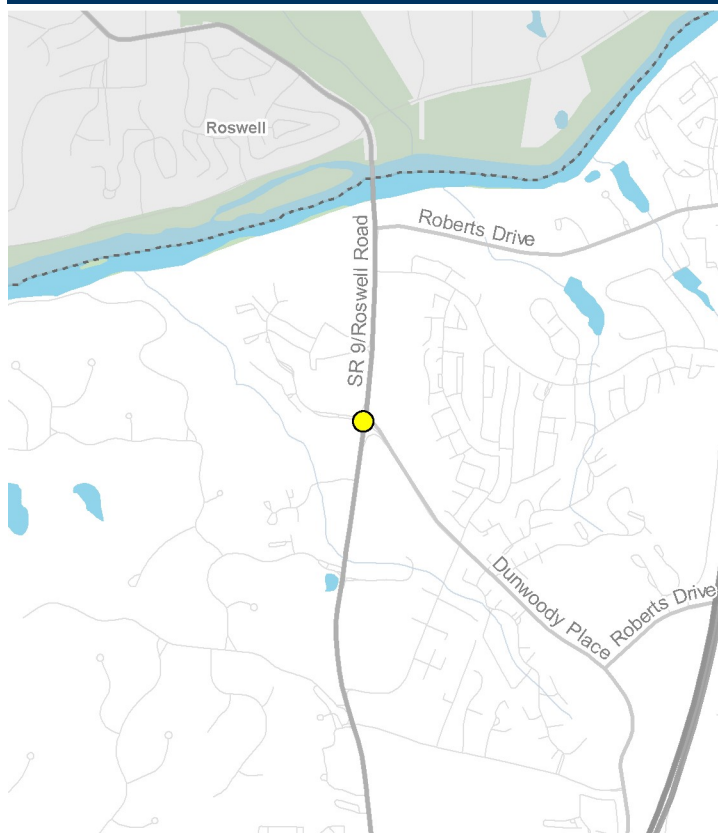
Additional Project Information

Need/Purpose	The purpose of this project is to improve mobility and address safety deficiencies at the intersection.
Benefit/Value	Reduction in congestion and travel delay Potential reduction in crashes
Implementation Factors	Limited ROW availability Utility relocation

Dunwoody Place at Roswell Road Intersection Improvement

Project ID: Road_003

Project At A Glance



Project Extents	Dunwoody Place at Roswell Road
Project Type	Intersection
Project Description	This project proposes safety and operational improvements which may include removing one westbound left-turn lane on Dunwoody Place; timing modification; adding raised median on Dunwoody Place, adding pedestrian refuge island; and access management.
Programming Tier	Short-Range
Project Cost	\$2,000,000

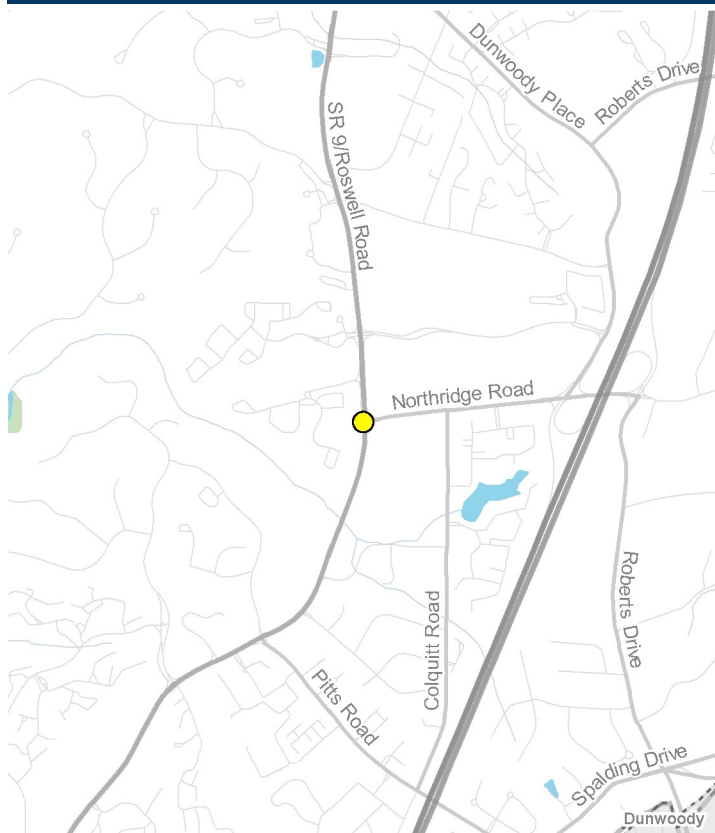
Additional Project Information

Need/Purpose	The purpose of this project is to improve mobility and address safety deficiencies at the intersection.
Benefit/Value	Reduction in travel delay Potential reduction in crashes
Implementation Factors	Limited ROW availability Utility relocation Eligible for GDOT Funding

Northridge Road at Roswell Road Intersection Improvement

Project ID: Road_004

Project At A Glance

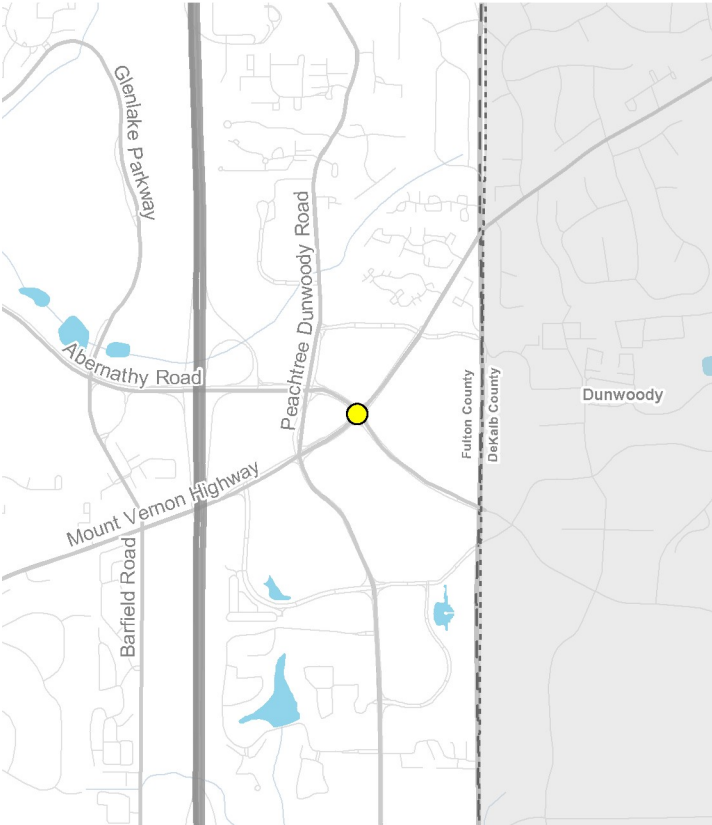


Project Extents	Northridge Road at Roswell Road
Project Type	Intersection
Project Description	This project proposes safety and operational improvements which may include operational upgrades; intersection lighting; pavement markings, and access management.
Programming Tier	Short-Range
Project Cost	\$2,200,000

Additional Project Information

Need/Purpose	The purpose of this project is to improve mobility and address safety deficiencies at the intersection.
Benefit/Value	Reduction in congestion and travel delay Potential reduction in crashes
Implementation Factors	Limited ROW availability Utility relocation Eligible for GDOT Funding

Abernathy Road at Mount Vernon Highway
Intersection Improvement

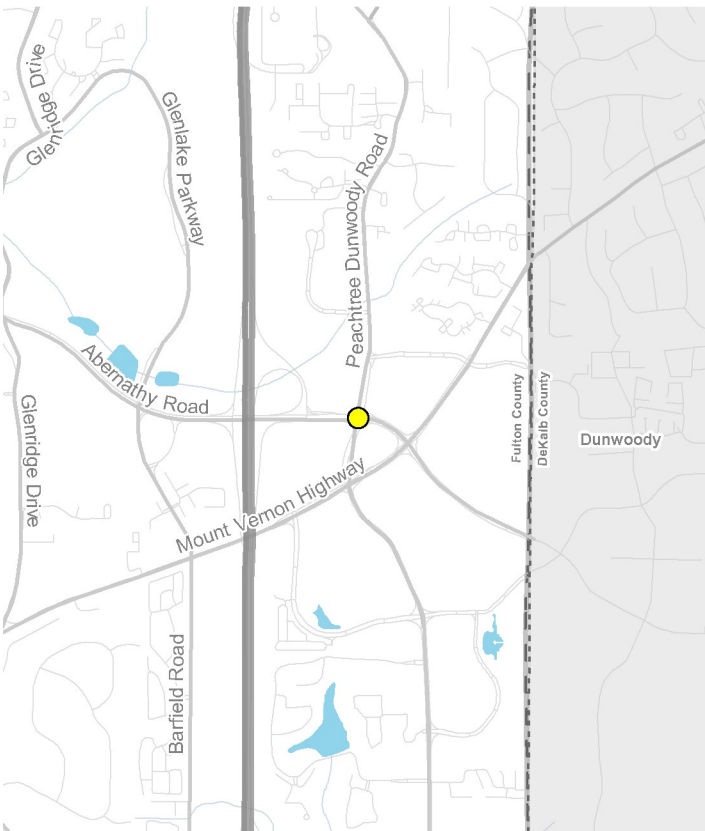
Project ID: Road_005		Project At A Glance	
		Project Extents	Abernathy Road at Mount Vernon Highway
		Project Type	Intersection
		Project Description	This project proposes operational improvements which may include signal timing modifications, signal upgrades, modification of the southwest and northeast concrete islands, signage upgrades, and pavement markings.
		Programming Tier	Mid-Range
		Project Cost	\$1,000,000

Additional Project Information	
Need/Purpose	The purpose of this project is to improve mobility and address safety deficiencies at the intersection.
Benefit/Value	Reduction in congestion and travel delay Potential reduction in crashes
Implementation Factors	Limited ROW availability Utility relocation

Abernathy Road at Peachtree Dunwoody Road Intersection Improvement

Project ID: Road_006

Project At A Glance



Project Extents	Abernathy Road at Peachtree Dunwoody Road
Project Type	Intersection
Project Description	This project proposes safety improvements which may include prohibition of westbound left turn from Abernathy to southbound Peachtree Dunwoody, modifying the southeast corner and concrete island, signal and signage upgrades, and pavement markings.
Programming Tier	Mid-Range
Project Cost	\$1,000,000

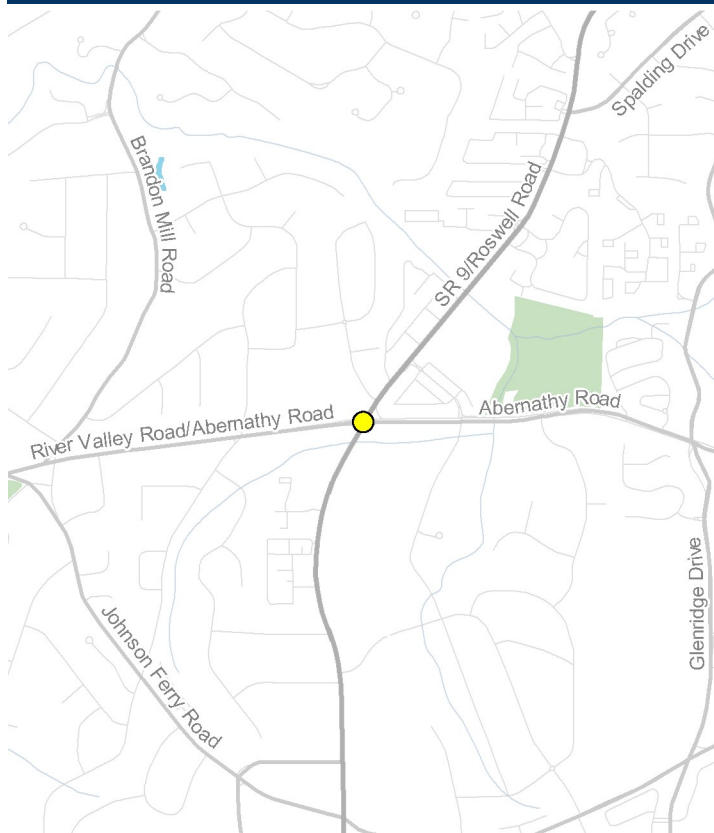
Additional Project Information

Need/Purpose	The purpose of this project is to improve mobility and address safety deficiencies at the intersection.
Benefit/Value	Reduction in travel delay Potential reduction in crashes
Implementation Factors	Limited ROW availability Utility relocation

Roswell Road and Abernathy Road Short-Term Intersection Improvements

Project ID: Road_007

Project At A Glance



Project Extents	Roswell Road at Abernathy Road
Project Type	Intersection
Project Description	This project proposes safety improvements which may include a signal for westbound to northbound right turns; modification of the east median; signage modifications, pavement markings, and access management treatments.
Programming Tier	Short-Range
Project Cost	\$500,000

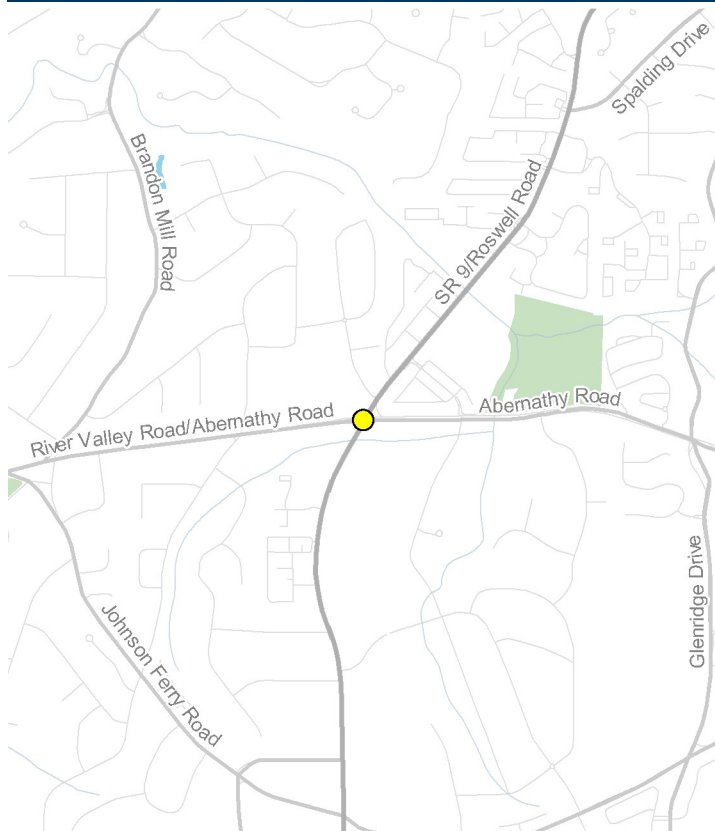
Additional Project Information

Need/Purpose	The purpose of this project is to improve mobility and address safety deficiencies at the intersection.
Benefit/Value	Potential reduction in crashes
Implementation Factors	Utility Relocation Limited ROW Availability Eligible for GDOT Funding

Roswell Road and Abernathy Road Intersection Long-Term Improvements

Project ID: Road_008

Project At A Glance



Project Extents	Roswell Road at Abernathy Road
Project Type	Intersection
Project Description	This project proposes long-term safety and operational upgrades through innovative intersection treatments.
Programming Tier	Mid-Range
Project Cost	\$12,000,000

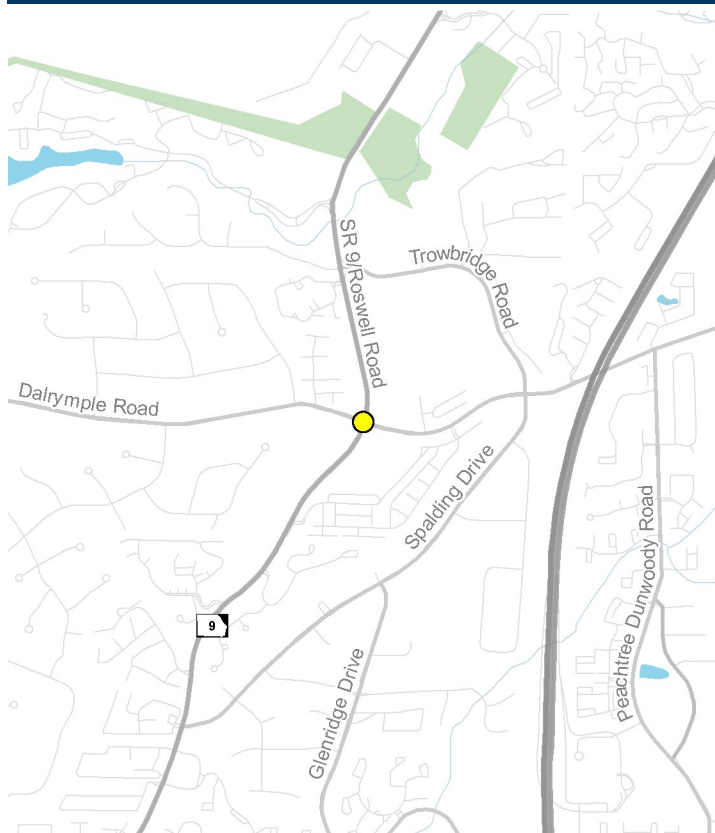
Additional Project Information

Need/Purpose	The purpose of this project is to improve mobility and address safety deficiencies at the intersection.
Benefit/Value	Potential reduction in crashes Reduction in congestion and travel delay
Implementation Factors	Utility Relocation Limited ROW Availability Eligible for GDOT Funding

Roswell Road at Dalrymple Road Operational Improvements Phase 2

Project ID: Road_009

Project At A Glance



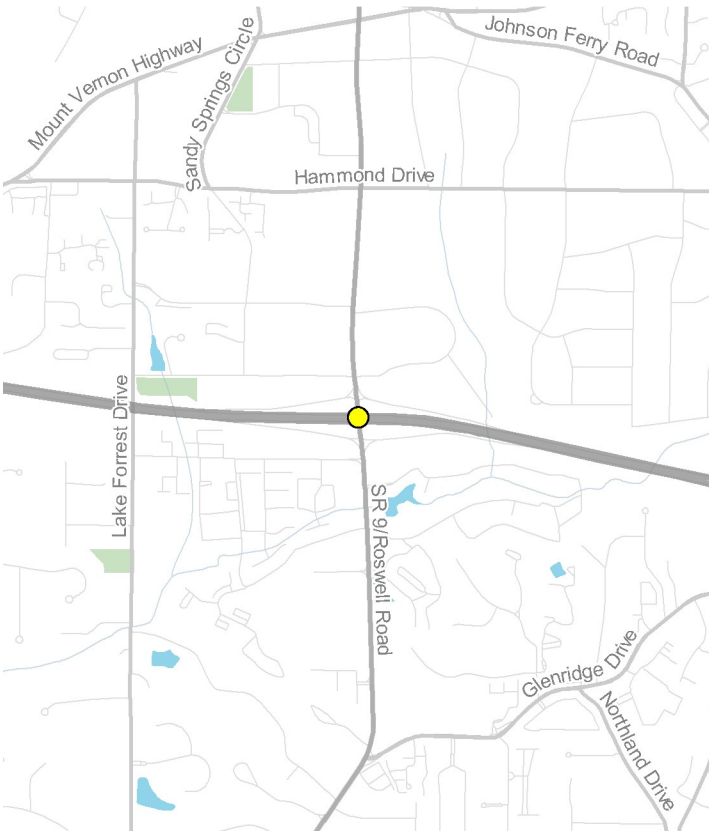
Project Extents	Roswell Road at Dalrymple Road
Project Type	Intersection
Project Description	This project proposes operational upgrades which may include addition of a dedicated northbound, eastbound, and westbound right turn lanes; additional eastbound and westbound left turn lanes; raised median; and streetscape enhancements.
Programming Tier	Mid-Range
Project Cost	\$7,800,000

Additional Project Information

Need/Purpose	The purpose of this project is to improve safety and mobility for vehicles, pedestrians, and cyclists at the intersection.
Benefit/Value	Potential reduction in crashes Improved multimodal connectivity between area residences and businesses Reduction in travel delay
Implementation Factors	Utility Relocation Limited ROW Availability Eligible for GDOT Funding

Project ID: Road_010

Project At A Glance



Project Extents	I-285 at Roswell Road
Project Type	Intersection
Project Description	Proposed innovative interchange study of the Roswell Road at I-285 eastbound ramps and I-285 westbound ramps to identify long term improvement.
Programming Tier	Short-Range
Project Cost	\$150,000

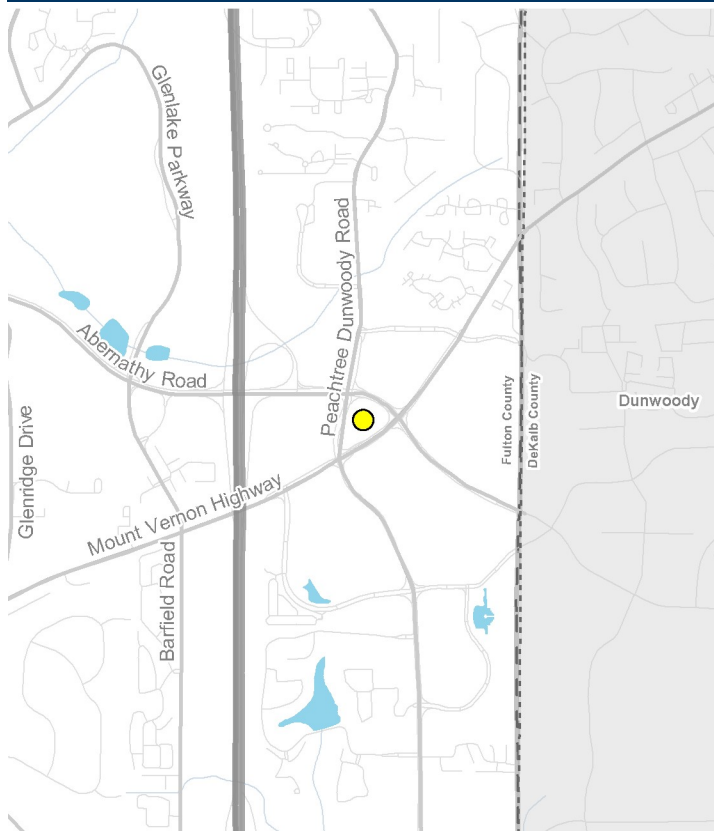
Additional Project Information

Need/Purpose	The purpose of this project is to improve mobility and address safety deficiencies at the intersection.
Benefit/Value	Potential reduction in congestion, travel delay, and crashes
Implementation Factors	Utility Relocation Limited ROW Availability Eligible for GDOT Funding and Federal Funding through ARC

Abernathy/Mount Vernon Highway/Peachtree Dunwoody Road Intersections Study

Project ID: Road_011

Project At A Glance



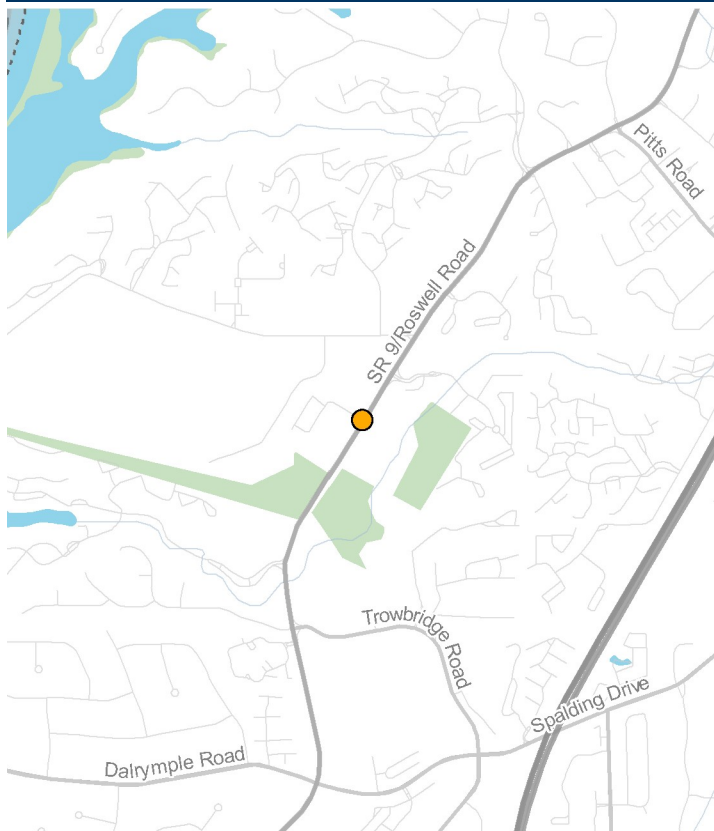
Project Extents	Abernathy Road at Mt. Vernon Highway at Peachtree Dunwoody Road
Project Type	Intersection
Project Description	Proposed safety and operations study of Abernathy Road/Peachtree Dunwoody Road, Mount Vernon Highway/Peachtree Dunwoody Road, and Mount Vernon Highway/Perimeter Center West.
Programming Tier	Short-Range
Project Cost	\$150,000

Additional Project Information

Need/Purpose	The purpose of this project is to improve mobility and address safety deficiencies at these intersections.
Benefit/Value	Potential reduction in congestion, travel delay, and crashes
Implementation Factors	Utility Relocation Limited ROW Availability

Project ID: Road_013

Project At A Glance



Project Extents	Roswell Road at Fulton County Annex
Project Type	Safety
Project Description	This project proposes a signalized pedestrian midblock crossing (HAWK beacon) across Roswell Road near the Fulton County Government Center with crosswalks and median refuge island.
Programming Tier	Short-Range
Project Cost	\$500,000

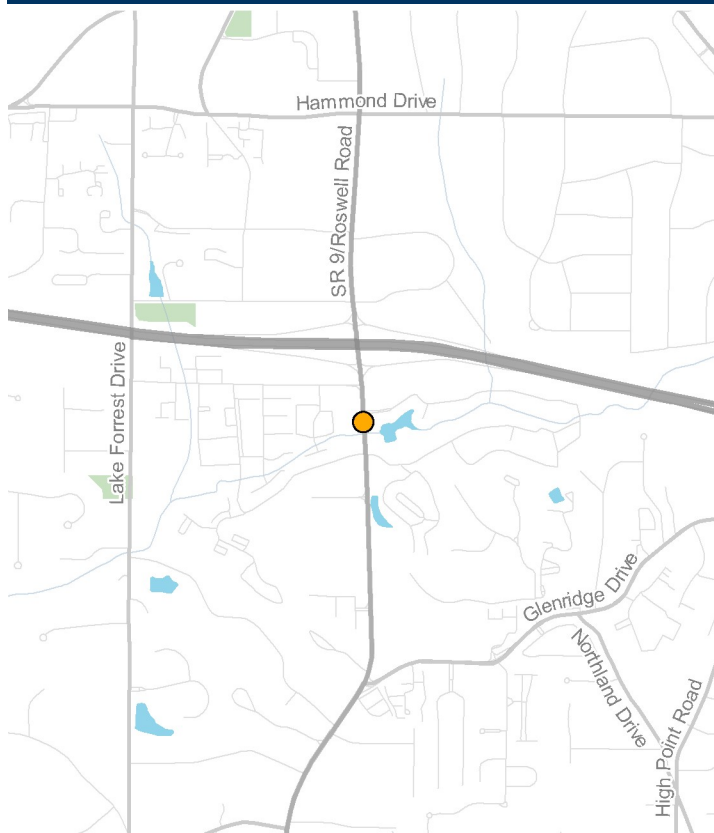
Additional Project Information

Need/Purpose	The purpose of this project is to provide a safer mid-block crossing for pedestrians.
Benefit/Value	Reduced risk of potential conflicts between vehicles and pedestrians crossing Roswell Road Improved multimodal connectivity to North Fulton Service Center, Big Trees Forest Preserve, bus stops, and area businesses and residences
Implementation Factors	Eligible for GDOT Funding

Roswell Road between Prado Place and Northwood Drive Midblock Crossing

Project ID: Road_014

Project At A Glance



Project Extents	Roswell Road from Prado Place to Northwood Drive
Project Type	Safety
Project Description	This project proposes a signalized pedestrian midblock crossing (HAWK beacon) across Roswell Road between Prado Place and Northwood Drive with crosswalks and median refuge island.
Programming Tier	Short-Range
Project Cost	\$500,000

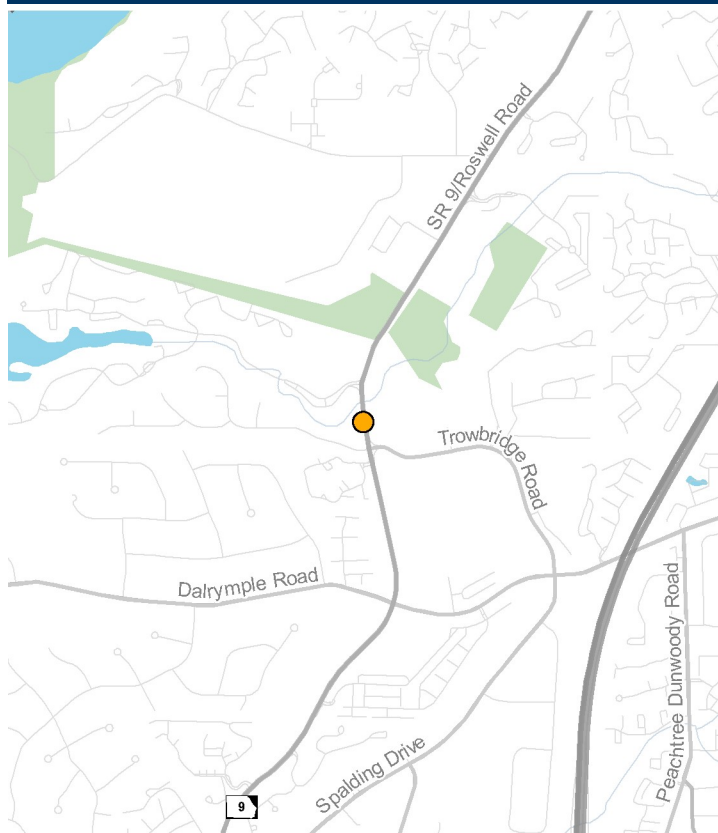
Additional Project Information

Need/Purpose	The purpose of this project is to provide a safer mid-block crossing for pedestrians.
Benefit/Value	Reduced risk of potential conflicts and collisions between vehicles and pedestrians crossing the Road Improved multimodal connectivity to area businesses, bus stops, and residences
Implementation Factors	Eligible for GDOT Funding

Roswell Road between Cimarron Parkway and Trowbridge Road Midblock Crossing

Project ID: Road_015

Project At A Glance



Project Extents	Roswell Road from Cimarron Parkway to Trowbridge Road
Project Type	Safety
Project Description	This project proposes a signalized pedestrian midblock crossing (HAWK beacon) across Roswell Road between Cimarron Parkway and Trowbridge Road with crosswalks and median refuge island.
Programming Tier	Mid-Range
Project Cost	\$500,000

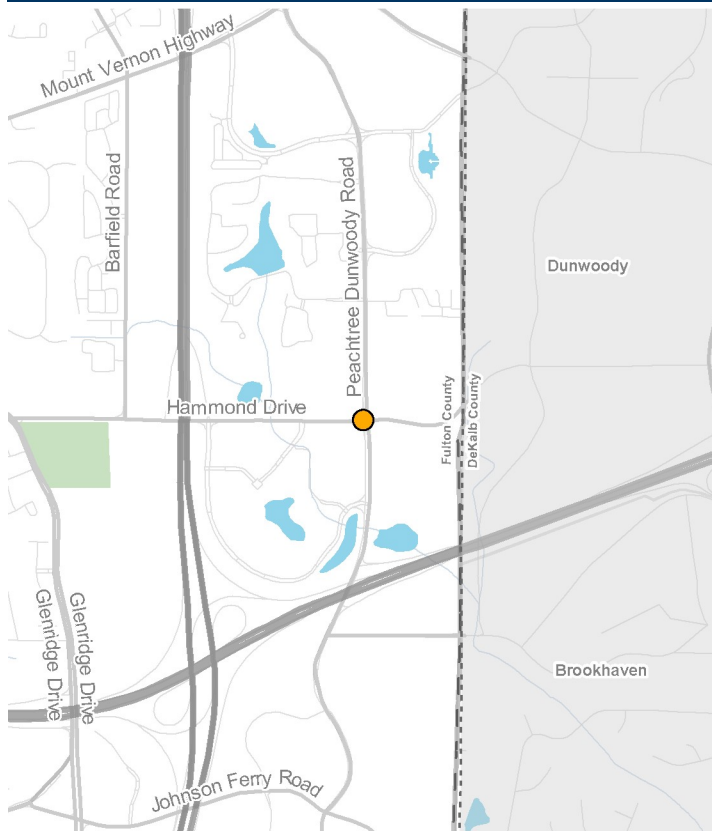
Additional Project Information

Need/Purpose	The purpose of this project is to provide a safer mid-block crossing for pedestrians.
Benefit/Value	Reduced risk of potential conflicts and collisions between vehicles and pedestrians crossing the Road Improved multimodal connectivity to North Fulton Service Center, Big Trees Forest Preserve, bus stops, and area businesses and residences
Implementation Factors	Eligible for GDOT Funding

Hammond Drive at Peachtree Dunwoody Road Intersection Improvement

Project ID: Road_016

Project At A Glance



Project Extents	Hammond Drive at Peachtree Dunwoody Road
Project Type	Safety
Project Description	This project proposes safety improvements which may include signal upgrades, signal timing modifications, and signage upgrades.
Programming Tier	Short-Range
Project Cost	\$150,000

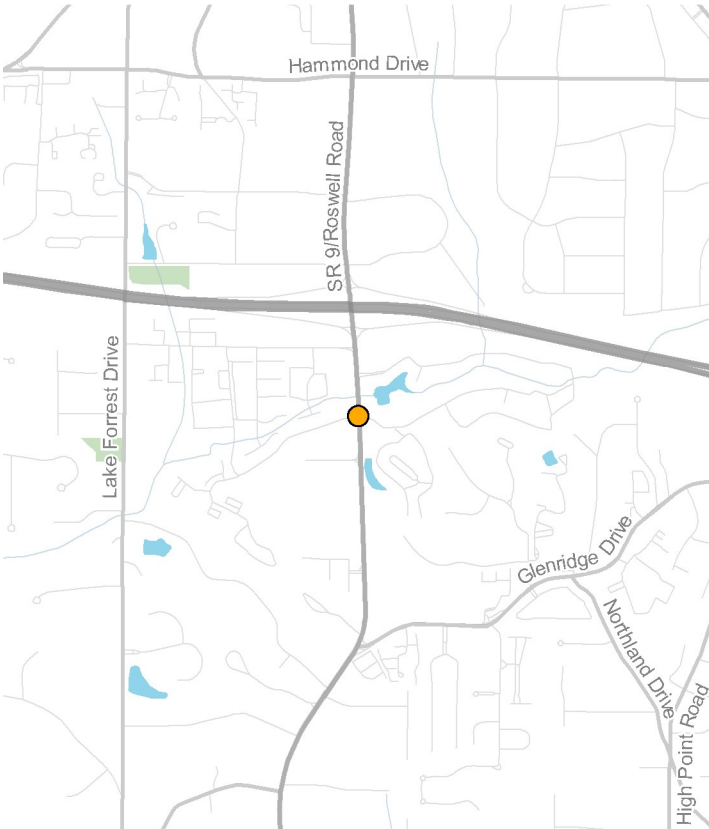
Additional Project Information

Need/Purpose	The purpose of this project is to address safety deficiencies at the intersection.
Benefit/Value	Potential reduction in crashes
Implementation Factors	Eligible for GDOT Funding (Off-System)

SR 9 (Roswell Road) at Lake Placid Drive Intersection Improvement

Project ID: Road_017

Project At A Glance



Project Extents	SR 9 (Roswell Road) at Lake Placid Drive
Project Type	Safety
Project Description	This project proposes safety improvements which may include signal upgrades, signal timing modifications, wider crosswalks, lighting, and access management.
Programming Tier	Short-Range
Project Cost	\$225,000

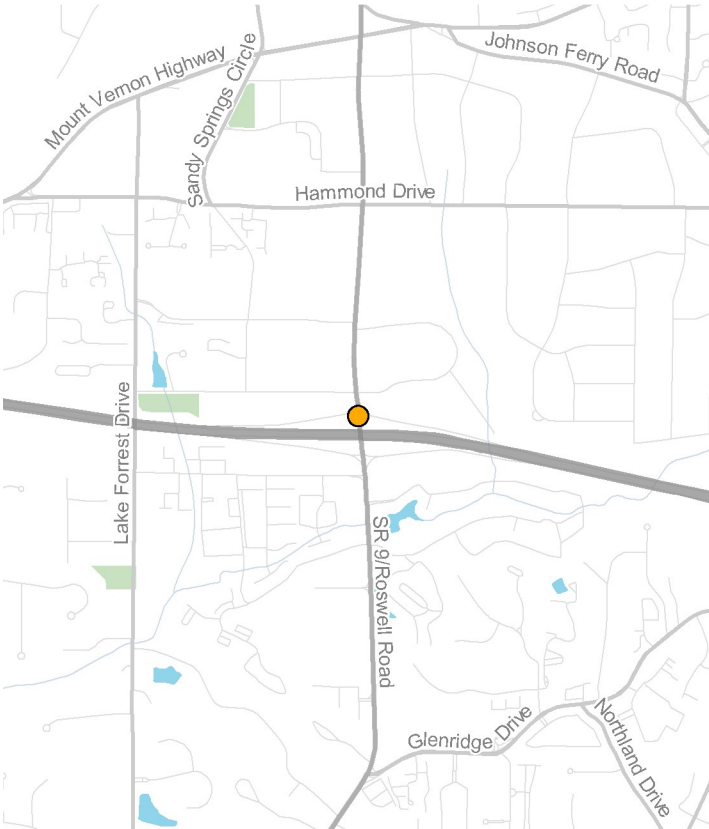
Additional Project Information

Need/Purpose	The purpose of this project is to address safety deficiencies at the intersection.
Benefit/Value	Potential reduction in crashes
Implementation Factors	Eligible for GDOT Funding

SR 9 (Roswell Road) at I-285 Eastbound Intersection Improvement

Project ID: Road_018

Project At A Glance



Project Extents	SR 9 (Roswell Road) at I-285 Eastbound
Project Type	Safety
Project Description	This project proposes safety improvements which may include signal upgrades, signal timing modification, signage upgrades, and lighting.
Programming Tier	Short-Range
Project Cost	\$500,000

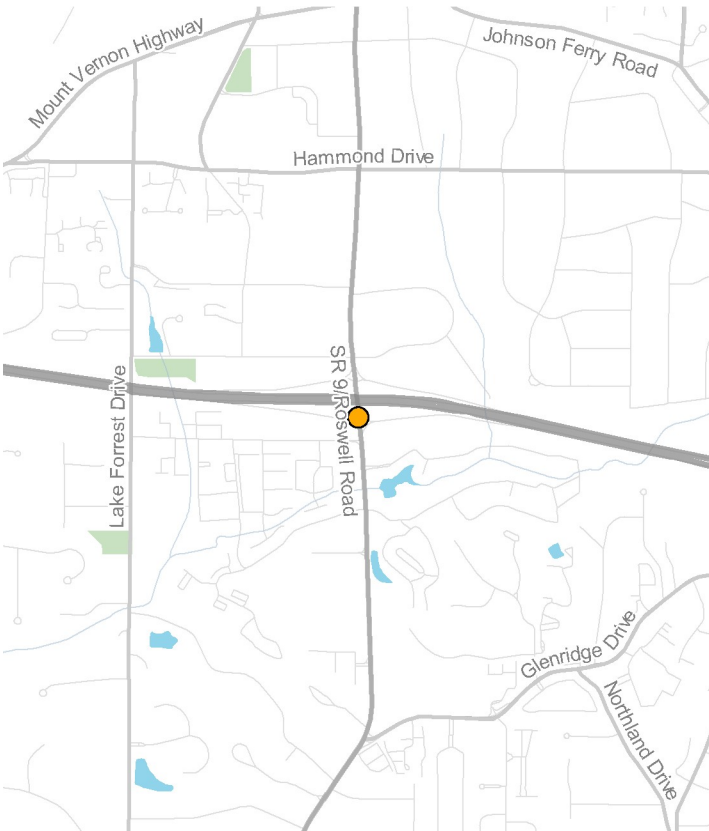
Additional Project Information

Need/Purpose	The purpose of this project is to address safety deficiencies at the intersection.
Benefit/Value	Potential reduction in crashes
Implementation Factors	Eligible for GDOT Funding

SR 9 (Roswell Road) at I-285 Westbound Safety Improvements

Project ID: Road_019

Project At A Glance



Project Extents	SR 9 (Roswell Road) at I-285 Westbound
Project Type	Safety
Project Description	This project proposes safety improvements which may include signal upgrades, signal timing modifications, and lighting.
Programming Tier	Short-Range
Project Cost	\$300,000

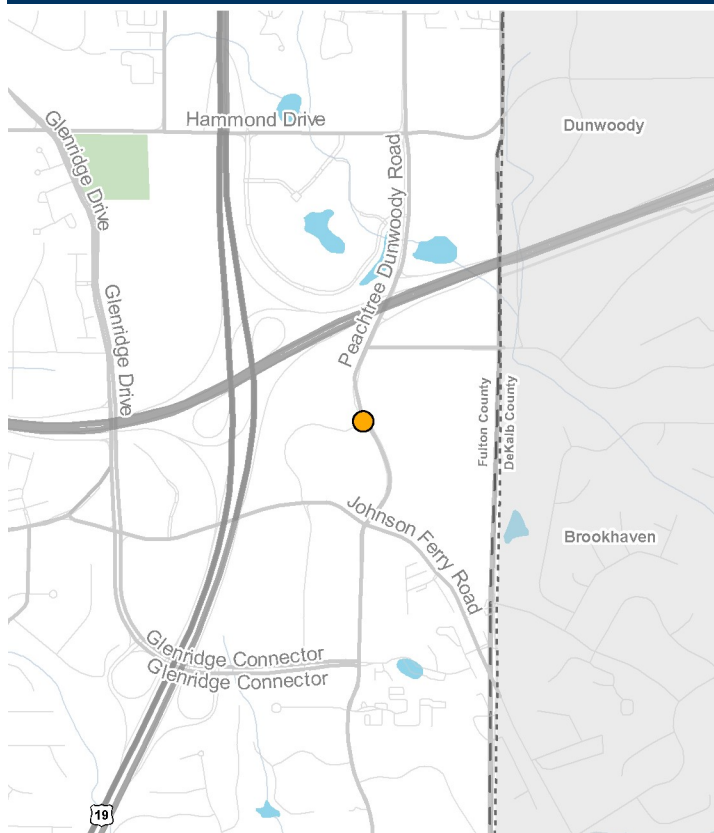
Additional Project Information

Need/Purpose	The purpose of this project is to address safety deficiencies at the intersection.
Benefit/Value	Potential reduction in crashes
Implementation Factors	Eligible for GDOT Funding

Hollis Cobb Circle at Peachtree Dunwoody Road Intersection Improvement

Project ID: Road_020

Project At A Glance



Project Extents	Hollis Cobb Circle at Peachtree Dunwoody Road
Project Type	Safety
Project Description	This project proposes safety improvements which may include adding an exclusive traffic signal phase for pedestrian crossings; signal upgrades, signage upgrades; and installing street furniture at the northwest corner of the intersection.
Programming Tier	Short-Range
Project Cost	\$325,000

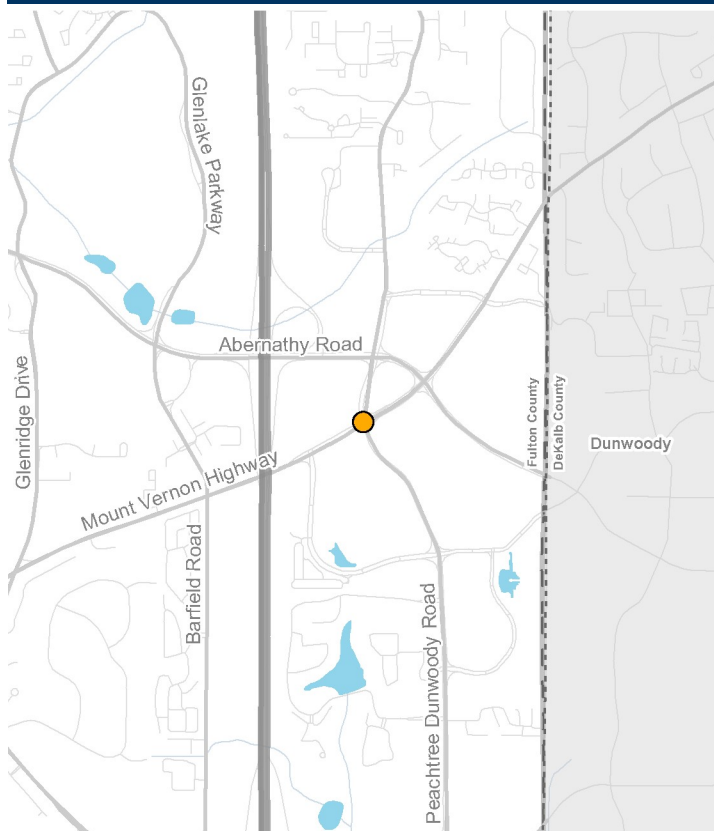
Additional Project Information

Need/Purpose	The purpose of this project is to address safety deficiencies at the intersection.
Benefit/Value	Potential reduction in crashes Improved multimodal connectivity to Medical Center MARTA Station
Implementation Factors	Coordination with MARTA and Hospitals

Mount Vernon Highway at Peachtree Dunwoody Road Intersection Improvement

Project ID: Road_021

Project At A Glance



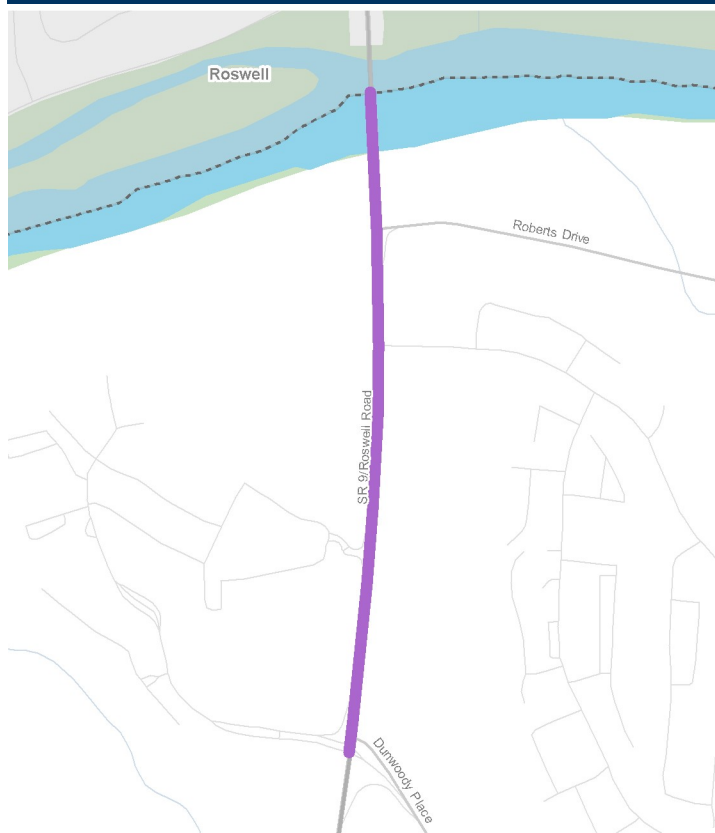
Project Extents	Mount Vernon Highway at Peachtree Dunwoody Road
Project Type	Safety
Project Description	This project proposes safety improvements which may include upgrades to signage and pavement markings.
Programming Tier	Mid-Range
Project Cost	\$350,000

Additional Project Information

Need/Purpose	The purpose of this project is to address safety deficiencies at the intersection.
Benefit/Value	Potential reduction in crashes
Implementation Factors	Eligible for GDOT Funding (Off-System)

Project ID: Road_022

Project At A Glance



Project Extents	Roswell Road from Chattahoochee River to Dunwoody Place
Project Type	Corridor
Project Description	This project proposes a traffic study, design, and construction of a raised median on Roswell Road with pedestrian and bicycle improvements.
Programming Tier	Short-Range
Project Cost	\$7,000,000

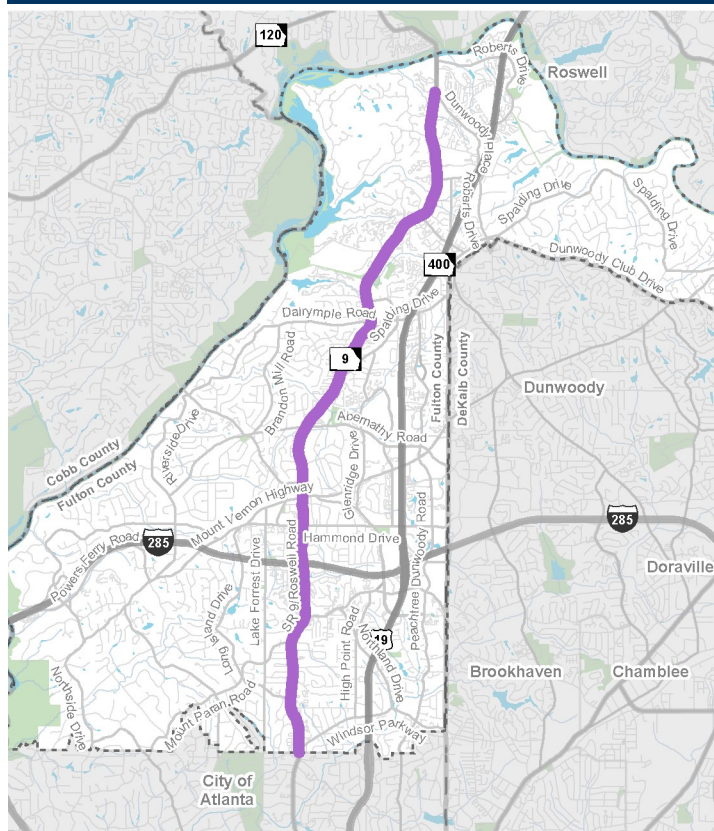
Additional Project Information

Need/Purpose	The purpose of this project is to improve safety and mobility for vehicles, pedestrians, and cyclists along Roswell Road.
Benefit/Value	Potential reduction in crashes Reduced risk of conflicts associated with driveway turning movements Improved multimodal connectivity between area residences, businesses, and future Roswell Road bicycle/pedestrian bridge Improved mobility
Implementation Factors	Limited ROW availability Utility relocation Coordination with property owners Eligible for GDOT funding

Roswell Road Access Management and Complete Streets Improvements

Project ID: Road_023

Project At A Glance



Project Extents	Roswell Road from Dunwoody Place to Southern City Limits
Project Type	Corridor
Project Description	This project proposes access management and complete streets improvements along areas of Roswell Road based on Next 10 and Access Management Plan recommendations.
Programming Tier	Short-Range and Mid-Range
Project Cost	\$10,000,000

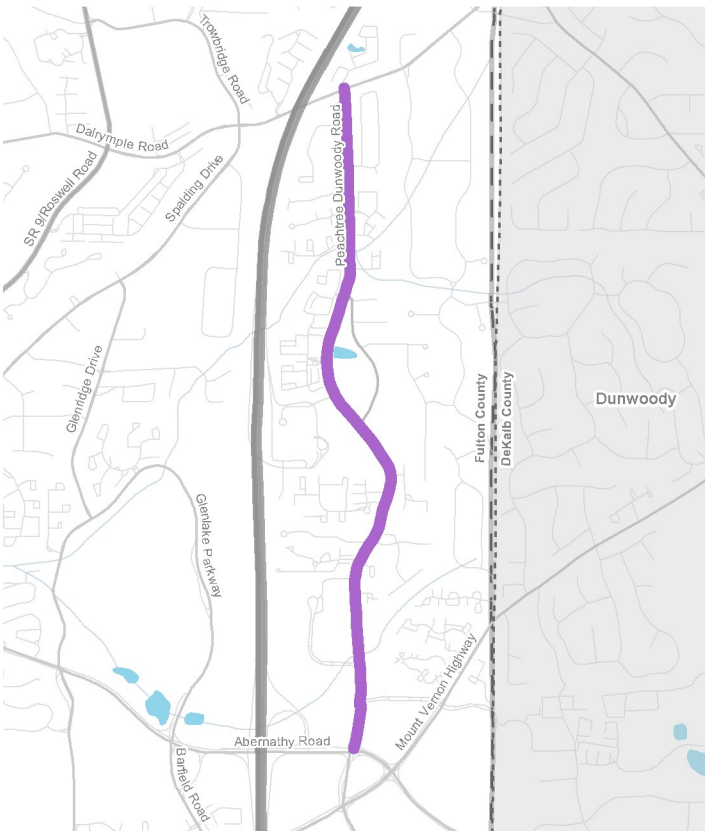
Additional Project Information

Need/Purpose	The purpose of this project is to improve safety and mobility for vehicles, pedestrians, and cyclists along Roswell Road.
Benefit/Value	Potential reduction in crashes Reduced risk of conflicts associated with driveway turning movements Improved multimodal connectivity between area residences and businesses Improved mobility
Implementation Factors	Limited ROW availability Utility relocation Coordination with property owners Eligible for GDOT funding

Peachtree Dunwoody Road Corridor Study and Improvements

Project ID: Road_024

Project At A Glance



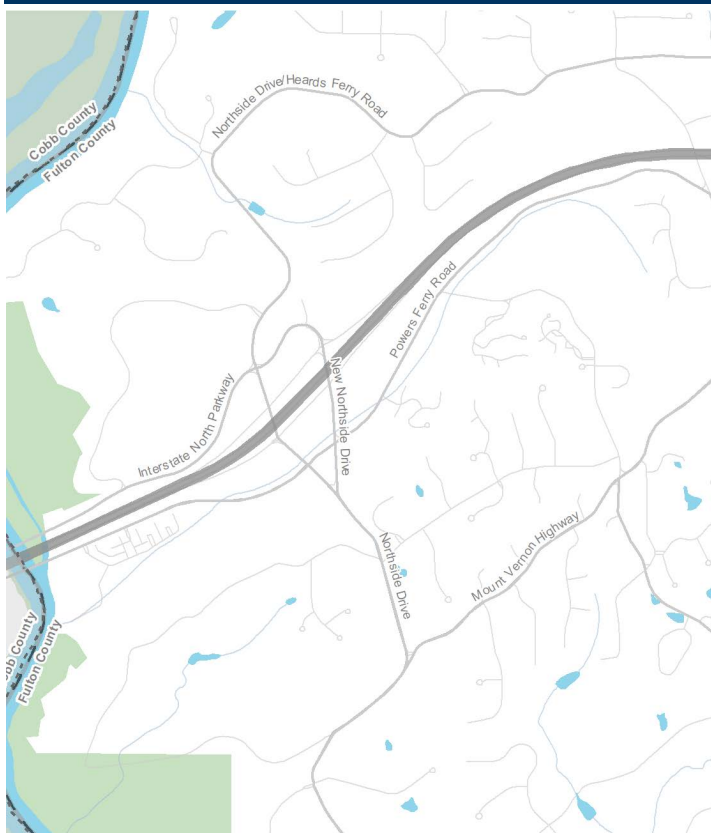
Project Extents	Peachtree Dunwoody Road from Abernathy Road to Spaulding Drive
Project Type	Corridor
Project Description	Proposed corridor study of the Peachtree Dunwoody Road, from Abernathy Road to Spaulding Drive and funding for recommended improvements.
Programming Tier	Short-Range and Mid-Range
Project Cost	\$5,150,000

Additional Project Information

Need/Purpose	The purpose of this project is to improve safety and mobility for vehicles, pedestrians, and cyclists along Peachtree Dunwoody Road.
Benefit/Value	Potential reduction in crashes Improved multimodal connectivity between area residences, businesses, and MARTA Stations Potential reduction in travel delay and congestion
Implementation Factors	Limited ROW availability Utility relocation

Project ID: Road_025

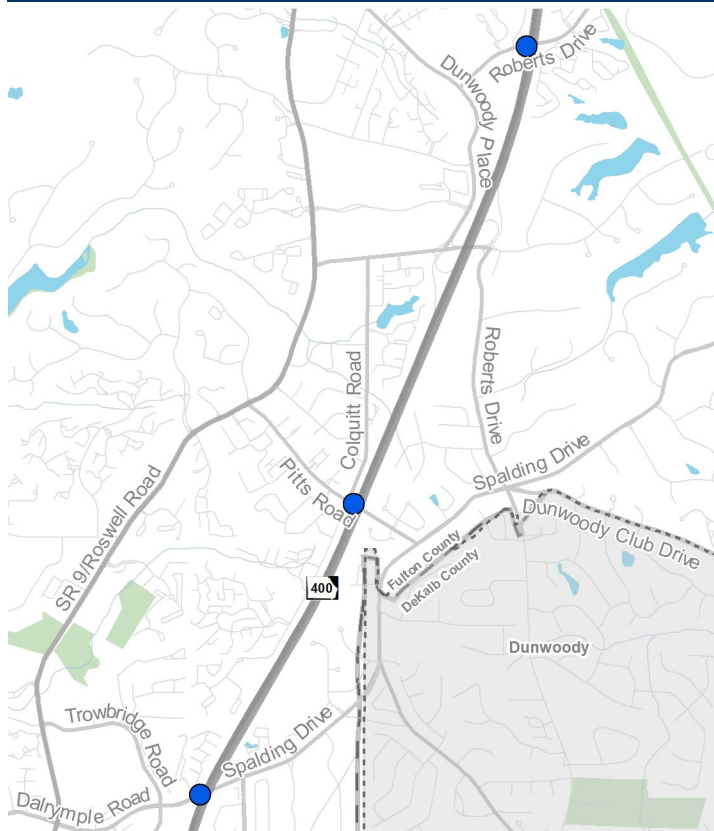
Project At A Glance



Project Extents	Powers Ferry Area
Project Type	Corridor
Project Description	Proposed multimodal circulation study in the Powers Ferry area to determine holistic improvements to support pedestrian, bicycle, transit, and vehicular travel. This technical study will build off the City's Powers Ferry small area plan.
Programming Tier	Short-Range
Project Cost	\$200,000

Additional Project Information

Need/Purpose	The purpose of this study is to conduct a technical transportation evaluation of the Powers Ferry area that will identify improvements that improve the area as a whole.
Benefit/Value	Potential reduction in crashes Improved multimodal connectivity between area residences, recreation areas, and businesses Potential reduction in travel delay
Implementation Factors	Limited ROW availability Utility relocation Coordination with GDOT, MARTA, and Cobb County Eligible for STBG funding

Project ID: Road_026
Project At A Glance


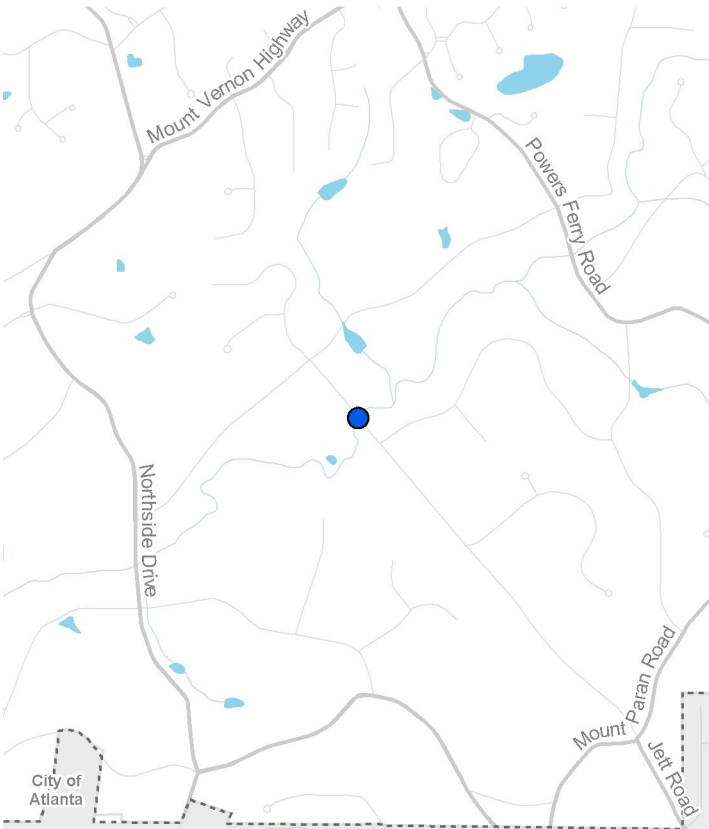
Project Extents	GA 400 at Spalding Drive/Pitts Road/Roberts Drive
Project Type	Bridge
Project Description	This project proposes bicycle and pedestrian facilities and aesthetic enhancements for the Spalding Drive bridge, Pitts Road Bridge, and Roberts Drive Bridge over SR 400 that will be replaced as part of the GDOT SR 400 Managed Lanes project.
Programming Tier	Short-Range
Project Cost	\$6,000,000

Additional Project Information

Need/Purpose	The purpose of this project is to create safer and more comfortable facilities for pedestrians and cyclists along Spalding Drive, Pitts Road, and Roberts Drive across GA 400.
Benefit/Value	Fills gaps in multimodal network Improved multimodal connectivity between area residences and businesses Reduced risk of potential conflicts between vehicles, pedestrians, and cyclists
Implementation Factors	Limited ROW availability Utility relocation Coordination with GDOT

Project ID: Road_027

Project At A Glance



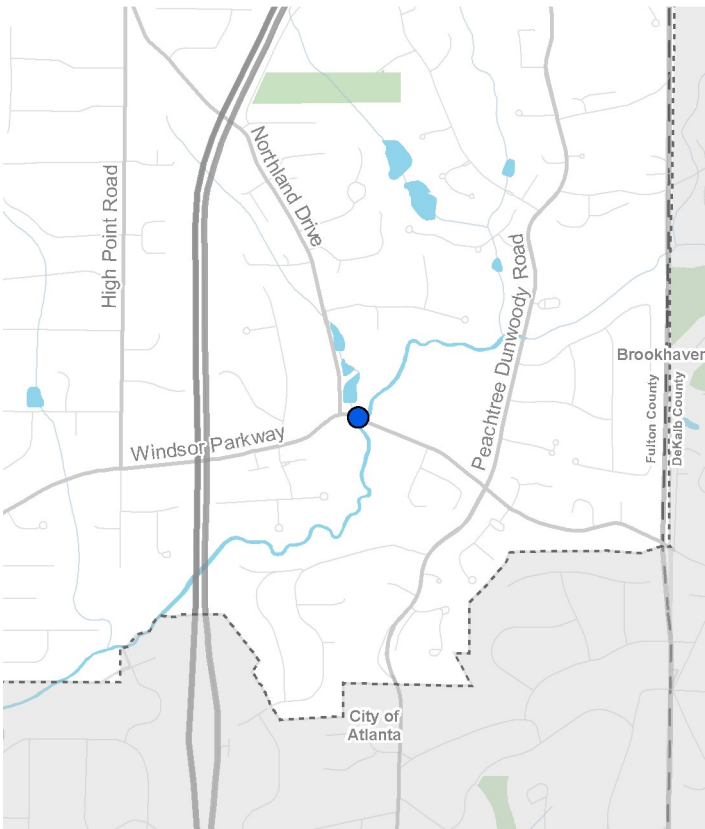
Project Extents	Jett Road at Long Island Creek
Project Type	Bridge
Project Description	This project proposes to replace the Jett Road bridge over Long Island Creek.
Programming Tier	Mid-Range
Project Cost	\$3,000,000

Additional Project Information

Need/Purpose	The purpose of this project is to replace the Jett Road bridge over Long Island Creek with a structure that adheres to current design and safety standards.
Benefit/Value	New bridge structure that adheres to current design and safety standards
Implementation Factors	Limited ROW availability Utility relocation Environmental considerations (crossing Long Island Creek) Eligible for GDOT funding

Project ID: Road_028

Project At A Glance

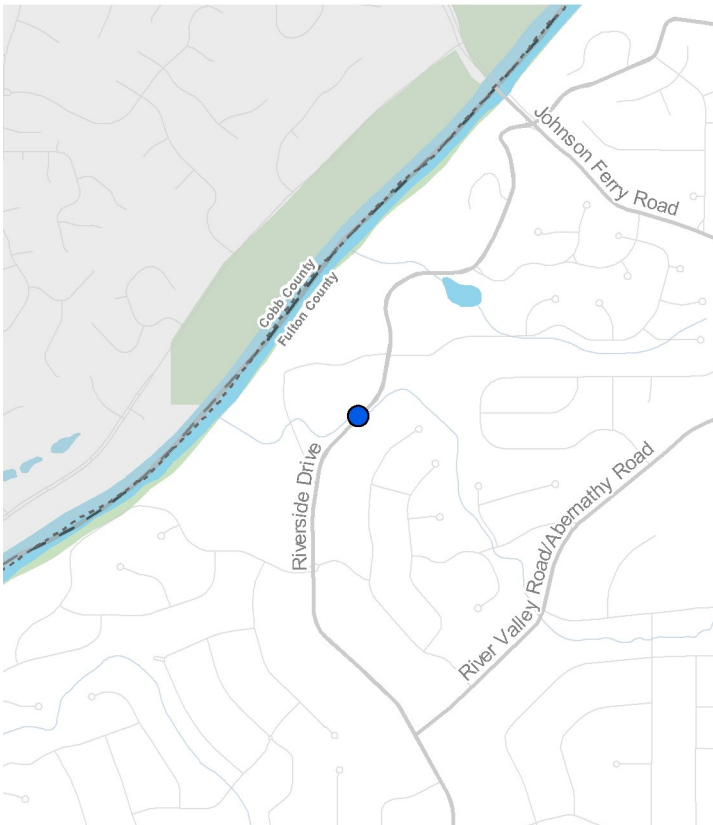


Project Extents	Windsor Parkway at Nancy Creek
Project Type	Bridge
Project Description	This project proposes to upgrade the bridge to raise it out of the flood plain.
Programming Tier	Mid-Range
Project Cost	\$5,000,000

Additional Project Information

Need/Purpose	The purpose of this project is to elevate the Windsor Parkway bridge over Nancy Creek in order to mitigate flood risk associated with heavy rains.
Benefit/Value	Lower flood risk for vehicles traversing the bridge during or after heavy rains Minimizes road closures during weather events
Implementation Factors	Limited ROW availability Utility relocation Environmental considerations (crossing Nancy Creek) Eligible for GDOT funding

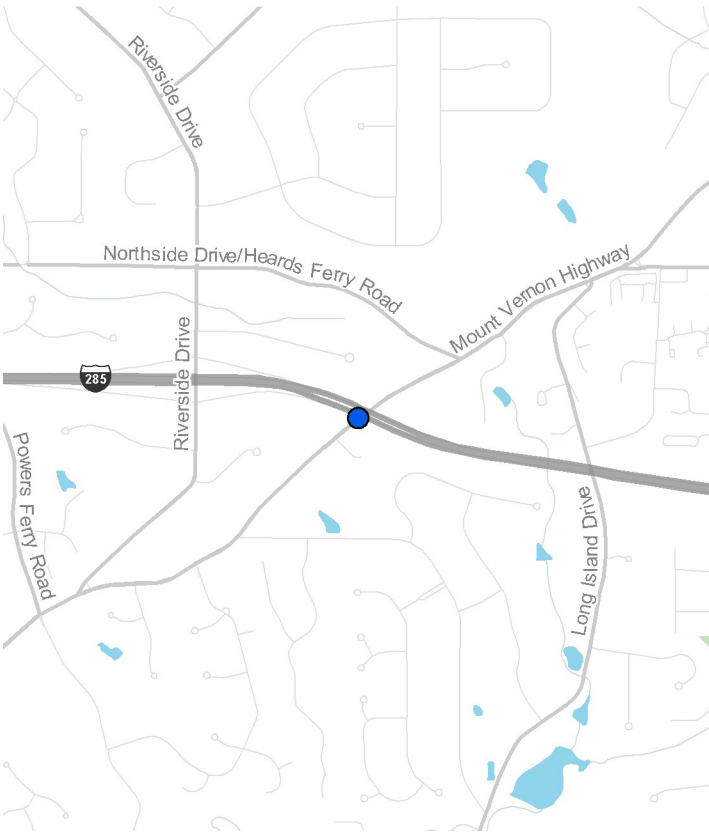
Riverside Drive over Chattahoochee River Tributary Bridge

Project ID: Road_030		Project At A Glance	
		Project Extents	Riverside Drive at Chattahoochee River Tributary
		Project Type	Bridge
		Project Description	This project proposes to upgrade the bridge to accommodate heavier vehicles.
		Programming Tier	Short-Range
		Project Cost	\$3,200,000

Additional Project Information	
Need/Purpose	The purpose of this project is to upgrade the Riverside Bridge over the Chattahoochee River to safely accommodate heavy vehicles.
Benefit/Value	Remove weight-restriction posting for bridge. Adhere to current design and safety standards.
Implementation Factors	Limited ROW availability Utility relocation Environmental considerations (crossing Chattahoochee River Tributary) Eligible for GDOT funding

Project ID: Road_031

Project At A Glance



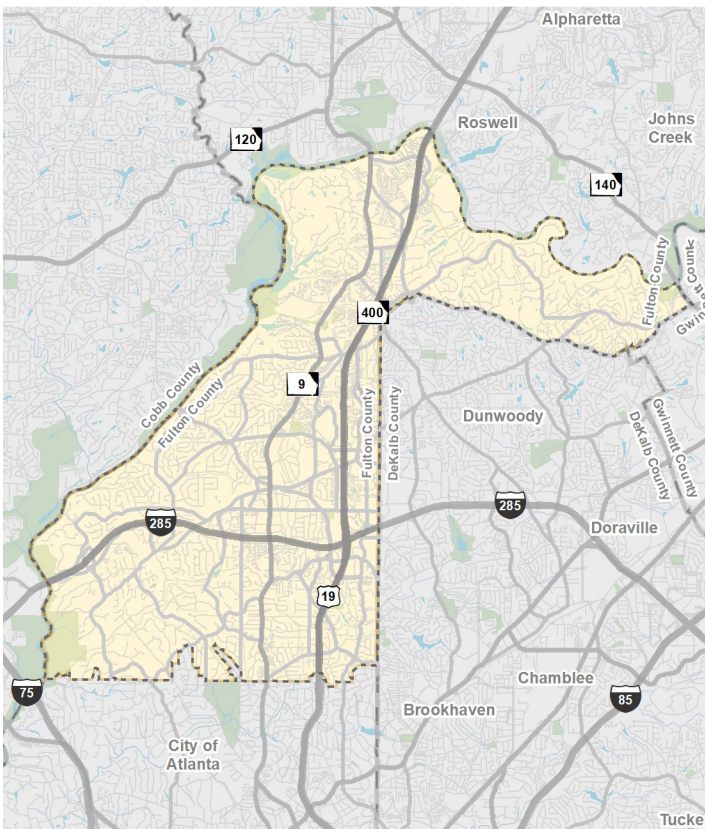
Project Extents	I-285 at Mount Vernon Highway
Project Type	Bridge
Project Description	This project proposes bicycle and pedestrian facilities and aesthetic enhancements for the Mt. Vernon Highway Bridge over I-285 that will be replaced as part of the GDOT Top End 285 Managed Lanes Project.
Programming Tier	Short-Range
Project Cost	\$2,400,000

Additional Project Information

Need/Purpose	The purpose of this project is to create a safer and more comfortable walking and biking environment along Mt. Vernon Highway.
Benefit/Value	Fills gap in multimodal network Improved multimodal connectivity between area residences Reduced risk of potential conflicts between vehicles, pedestrians, and cyclists
Implementation Factors	Limited ROW availability Utility relocation Coordination with GDOT

Project ID: Transit_001

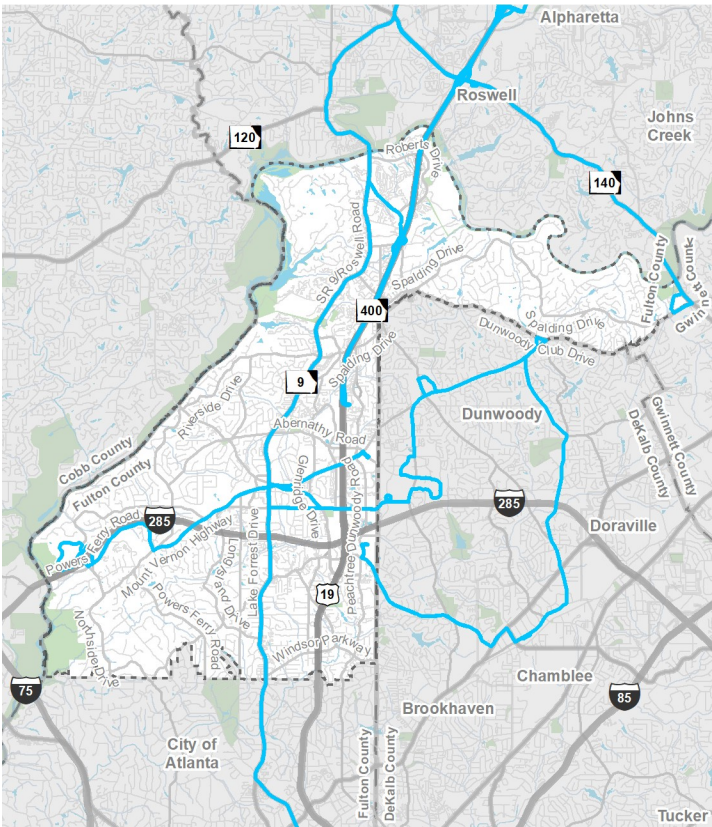
Project At A Glance



Project Extents	MARTA Rail Stations
Project Type	Transit
Project Description	This project proposes adding Traveler Information Kiosks / Transit Curbside Management at MARTA Rail Stations.
Programming Tier	Short-Range and Mid-Range
Project Cost	\$200,000

Additional Project Information

Need/Purpose	The purpose of this project is to provide wayfinding and enhanced transit information for transit users and improve bus operations at MARTA rail stations.
Benefit/Value	Wayfinding and enhanced schedule information for transit users More efficient bus operations curbside at rail stations
Implementation Factors	Coordination with MARTA

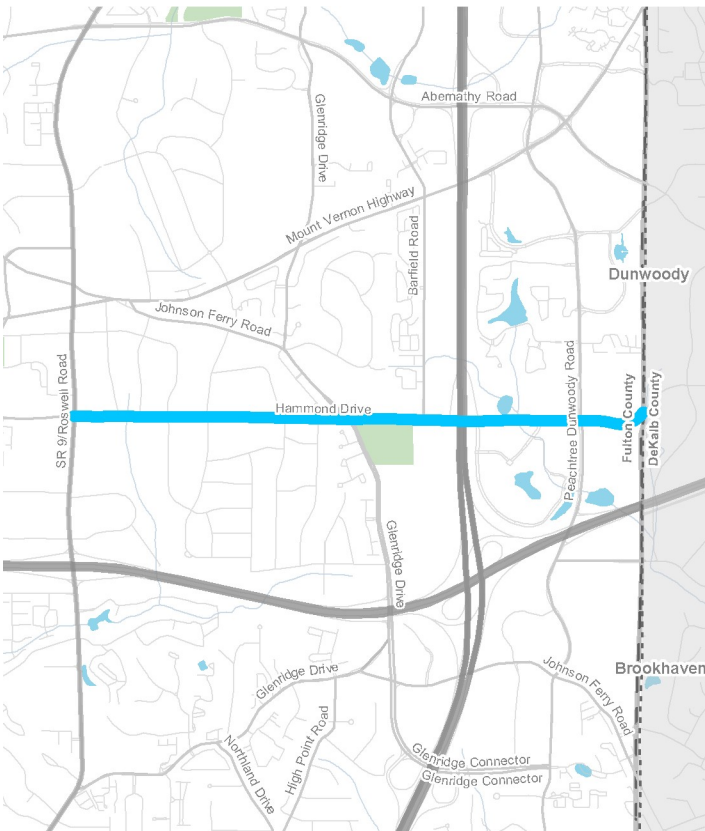
Project ID: Transit_002		Project At A Glance	
		Project Extents	Citywide
		Project Type	Transit
		Project Description	This project proposes modifications to signal timing to implement transit signal priority on signals along transit corridors.
		Programming Tier	Short-Range
		Project Cost	\$250,000

Additional Project Information	
Need/Purpose	The purpose of this project is to provide buses with green-light priority along select corridors.
Benefit/Value	Improved transit headway and reliability Improve transit rider experience
Implementation Factors	Coordination with MARTA and Adjacent Cities

Transit Signal Priority Supportive Improvements along Hammond Drive

Project ID: Transit_003

Project At A Glance



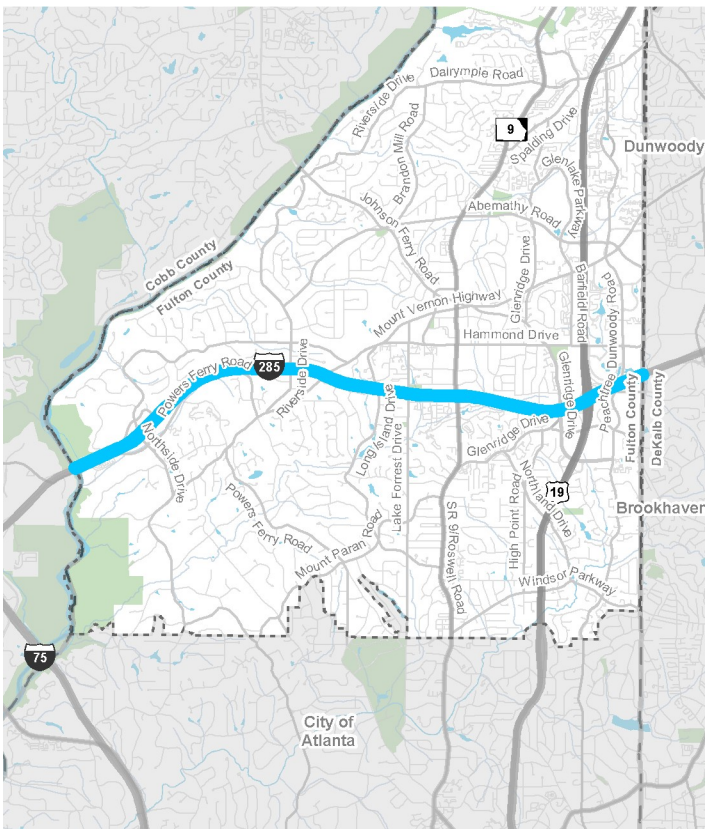
Project Extents	Hammond Drive from Roswell Road to City Limits
Project Type	Transit
Project Description	This project proposes a study of transit supportive improvements along Hammond Drive which may include bus stop modifications, queue jumper lanes, and pedestrian signal upgrades.
Programming Tier	Mid-Range
Project Cost	\$2,700,000

Additional Project Information

Need/Purpose	The purpose of this project is to provide improved amenities for transit riders and improve bus operations along Hammond Drive.
Benefit/Value	Improved transit headway and reliability Improve transit rider experience
Implementation Factors	Limited ROW availability Utility relocation Coordination with MARTA, DeKalb County, City of Dunwoody & PCIDs

Project ID: Transit_004

Project At A Glance



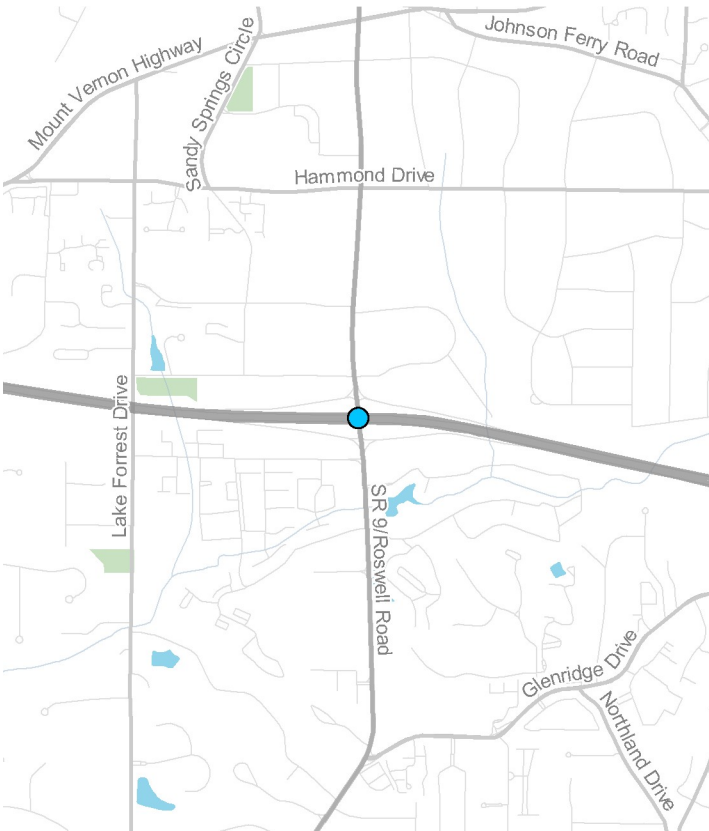
Project Extents	I-285 from DeKalb County to Cobb County
Project Type	Transit
Project Description	Proposed feasibility study for Bus Rapid Transit along I-285. Includes conceptual station planning + design, service plan, implementation plan.
Programming Tier	Short-Range
Project Cost	\$50,000

Additional Project Information

Need/Purpose	The purpose of this project is to provide enhanced transit service along I-285 and to expand the local and regional transit network.
Benefit/Value	Expansion of local and regional transit network Improved mobility along I-285
Implementation Factors	Limited ROW availability Utility relocation Coordination with GDOT, MARTA, Cobb County, DeKalb County, City of Dunwoody, City of Brookhaven & PCIDs Eligible for GDOT and FTA funding

Project ID: Transit_005

Project At A Glance



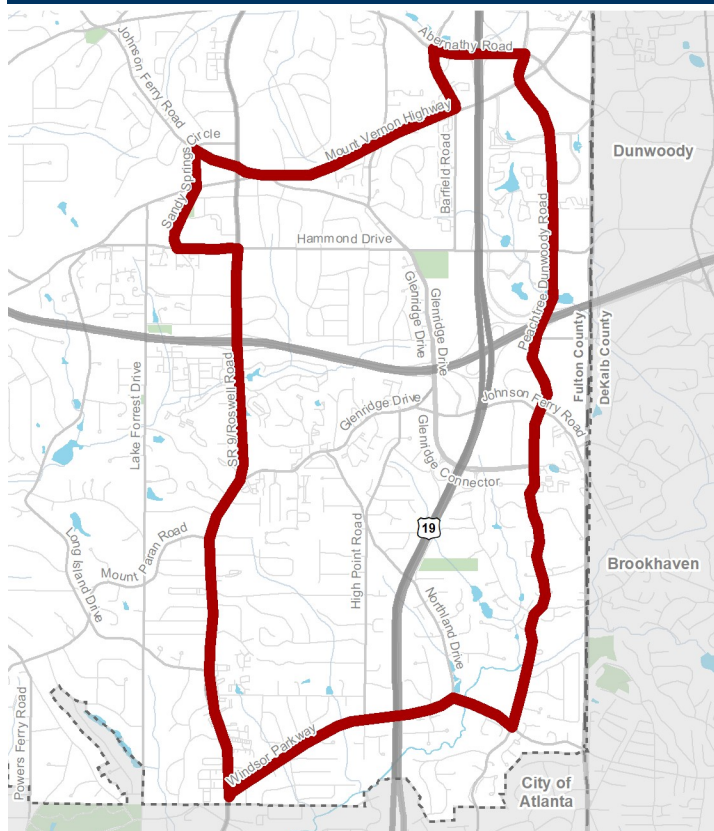
Project Extents	I-285 at Roswell Road
Project Type	Transit
Project Description	Proposed station area study to assess connectivity + land use improvements for the planned I-285 BRT station at Roswell Road.
Programming Tier	Short-Range
Project Cost	\$100,000

Additional Project Information

Need/Purpose	The purpose of this project is to identify land use and connectivity improvements to provide the best access for all travel modes to a future BRT station at Roswell Road.
Benefit/Value	Provide environment that doesn't require vehicle ownership Improved multimodal connectivity
Implementation Factors	Limited ROW availability Utility relocation Coordination with GDOT and MARTA Eligible for GDOT

Project ID: ITS_001

Project At A Glance



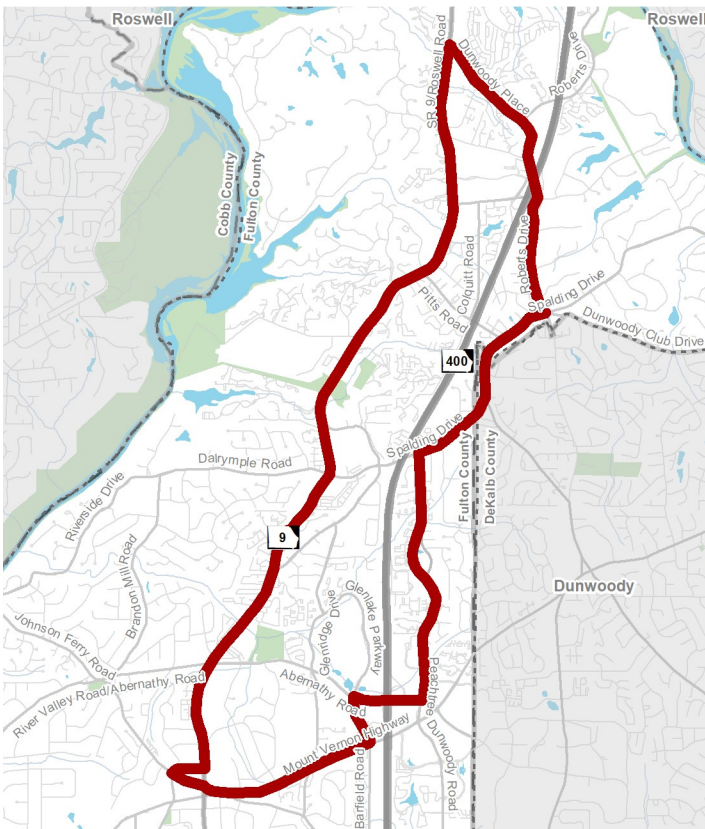
Project Extents	Various
Project Type	ITS
Project Description	Design and Construct Fiber Ring A
Programming Tier	Short-Range
Project Cost	\$1,500,000

Additional Project Information

Need/Purpose	The purpose of this project is to increase redundancy in the fiber network within Sandy Springs.
Benefit/Value	More robust and resilient fiber network to effectively manage and operate the transportation network
Implementation Factors	Potential ROW impacts Utility coordination

Project ID: ITS_002

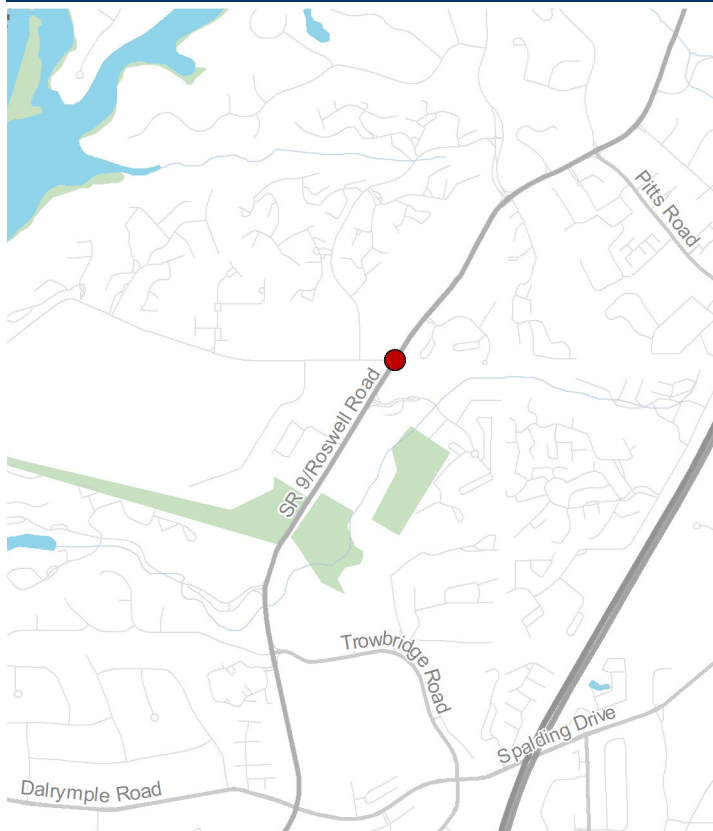
Project At A Glance



Project Extents	Various
Project Type	ITS
Project Description	Design and Construct Fiber Ring B
Programming Tier	Mid-Range
Project Cost	\$1,500,000

Additional Project Information

Need/Purpose	The purpose of this project is to increase redundancy in the fiber network within Sandy Springs.
Benefit/Value	More robust and resilient fiber network to effectively manage and operate the transportation network
Implementation Factors	Potential ROW impacts Utility coordination

Project ID: ITS_003**Project At A Glance**

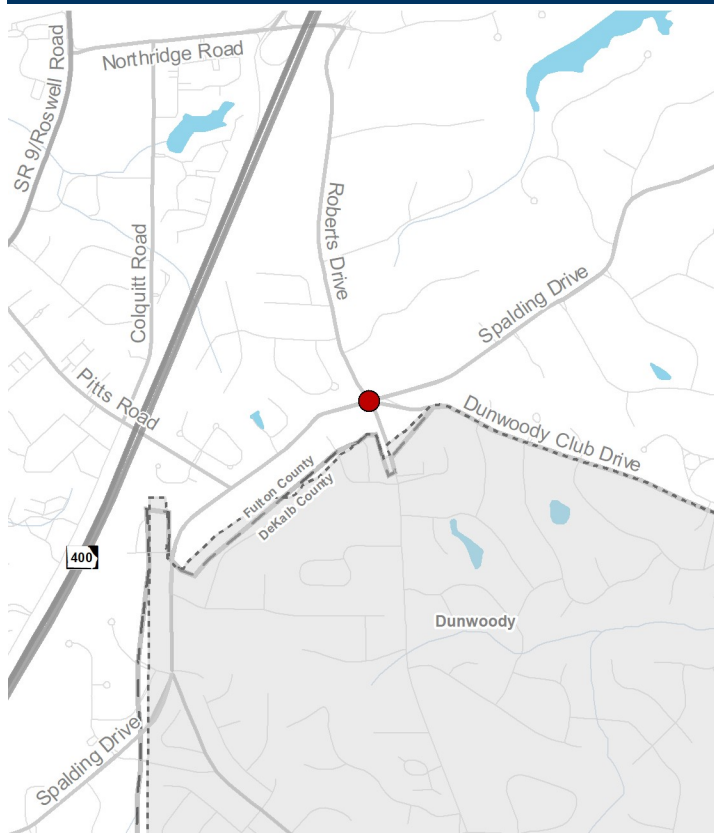
Project Extents	Roswell Road at Morgan Falls
Project Type	ITS
Project Description	Phase I of this project should provide a new field hub cabinet located west of the SR 9 (Roswell Rd.) and Morgan Falls intersection (NE quadrant) within the GDOT ROW. Phase II will remove the existing fiber connection from the Morgan Falls Building. Additionally, this project will provide a new field hub cabinet located west of the SR 9/Roswell Road and Abernathy Road intersection (NW quadrant) within the GDOT ROW.
Programming Tier	Short-Range
Project Cost	\$690,000

Additional Project Information

Need/Purpose	The purpose of this project is to increase redundancy in the fiber network within Sandy Springs.
Benefit/Value	More robust and resilient fiber network to effectively manage and operate the transportation network
Implementation Factors	Potential ROW impacts Utility coordination

Project ID: ITS_004

Project At A Glance



Project Extents	Spalding Drive at Roberts Drive
Project Type	ITS
Project Description	This project will provide fiber connection to Fire Station 1 at Spalding Drive and Roberts Drive.
Programming Tier	Short-Range
Project Cost	\$650,000

Additional Project Information

Need/Purpose	The purpose of this project is to increase redundancy in the fiber network within Sandy Springs.
Benefit/Value	More robust and resilient fiber network to improve emergency operations
Implementation Factors	Potential ROW impacts Utility coordination

1 | Introduction

The Transportation Master Plan

Sandy Springs is an established city and major employment center near the heart of the nation's fourth-fastest growing metropolitan area. As the City continues to mature over the coming decades, current transportation issues will only become more pressing.

The Sandy Springs Transportation Master Plan (TMP) establishes a transportation vision for the City that enables a livable and vibrant community. The TMP seeks to integrate transportation and land-use policy while considering the needs of all modes, including driving, biking, walking, transit, and freight transportation. The plan also considers recent mobility options such as bikeshare, e-scooters, and rideshare.

About this Report

The State of the City document is a high-level snapshot of demographic and employment trends, land use patterns, and mobility in Sandy Springs today. This report develops an understanding of existing conditions for infrastructure and policy. A vision and goals for the TMP are also established.

Context and Previous Plans

The TMP uses Sandy Springs' 2017 *The Next Ten* comprehensive plan as a baseline to understand the community's goals and their relation to the City's transportation network. Transportation improvements can fully or partially address many of the ten key actions identified in *The Next Ten* plan:

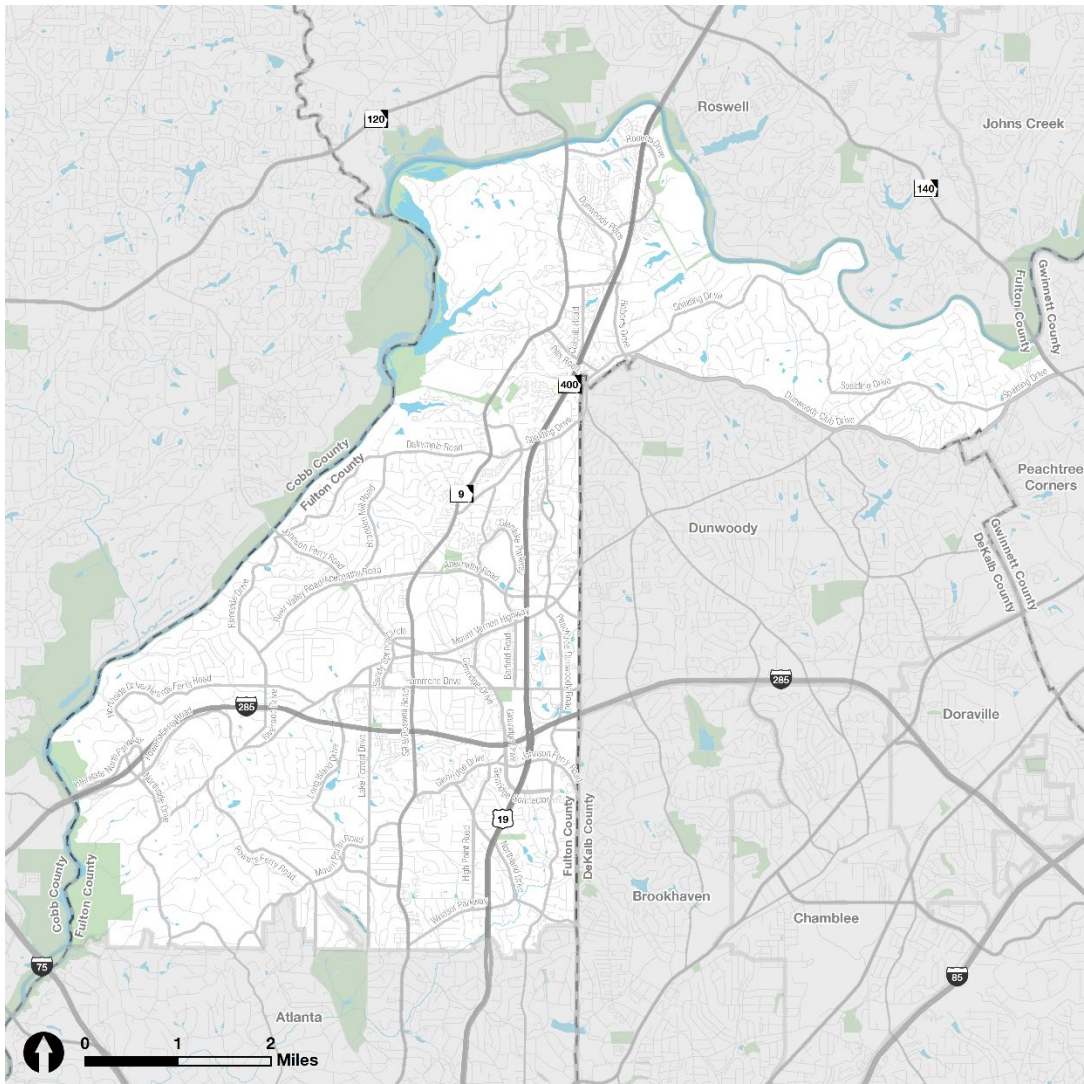
- Create a new Sandy Springs Development Code
- Revitalize Roswell Road
- Transform Perimeter Center and the Medical Center Area
- Focus high-quality, higher-density uses around existing MARTA stations
- Achieve a better housing balance
- Study options for transforming the Hammond Drive corridor between Glenridge Drive and Roswell Road, including the Roswell Road intersection, and continue to acquire right-of-way on an opportunity basis, in order to provide a multimodal connection between the Perimeter Center and City Springs districts
- Mitigate traffic congestion through provision of a viable and attractive range of transportation options, community linkages, and "last mile" connections
- Reduce parking requirements in new and redeveloped areas
- Develop an expanded trail network
- Enhance and beautify the City's public places

The TMP supports the key actions from *The Next Ten* plan by:

- Establishing goals and performance measures to guide the future City transportation investments and policy decisions
- Analyzing the City's existing infrastructure and policies to determine the existing and future needs of the City
- Developing recommended transportation projects that will be identified for future funding opportunities

Study Area

The TMP will comprehensively evaluate mobility throughout all of Sandy Springs. As of 2018, the City had a total population of just under 109,000 spread over 38 square miles. Sandy Springs is divided into six council districts, each of which represent a portion of the City. Municipal government is structured in a council-manager system.



2 | People

Understanding the transportation issues and challenges faced by Sandy Springs begins with understanding the people who live, work, and play in the City. This section provides a brief overview of demographic trends in Sandy Springs that will affect mobility in the coming decades. All demographic information was from the 2018 American Community Survey (ACS) 5-year Estimate.

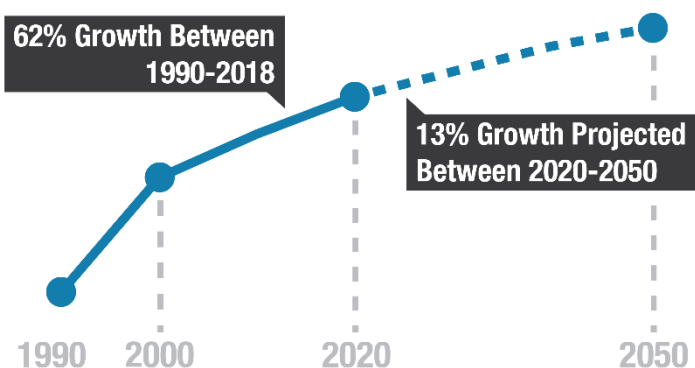
Population Trends

Sandy Springs is a growing community, but growth is projected to slow in the coming years.

This requires a shift in the way we think about transportation investments. Between 1990 and the present day, population in the area that is now Sandy Springs has increased by approximately 60%. However, as the formerly-unincorporated community has matured through its cityhood, growth has slowed. While annual population growth peaked at over 3% in the decade between 1990 and 2000, it has dropped to 1% annually between 2010 and 2018. This trend is mirrored in County-level data. Between 2015 and 2050, population of Fulton County is anticipated to grow at an annual rate of 1.1%, while the population of Sandy Springs is anticipated to grow at an annual rate of 0.6%. Overall, population growth between 2020 to 2050 is anticipated to be 13%. Most population growth is expected to occur in the central portion of the City along the GA 400 and Roswell Road corridors. In 2015, Sandy Springs accounts for nearly 10.4% of Fulton County's population, while in 2050 the population of Sandy Springs is expected to account for 8.9% of Fulton County's population.

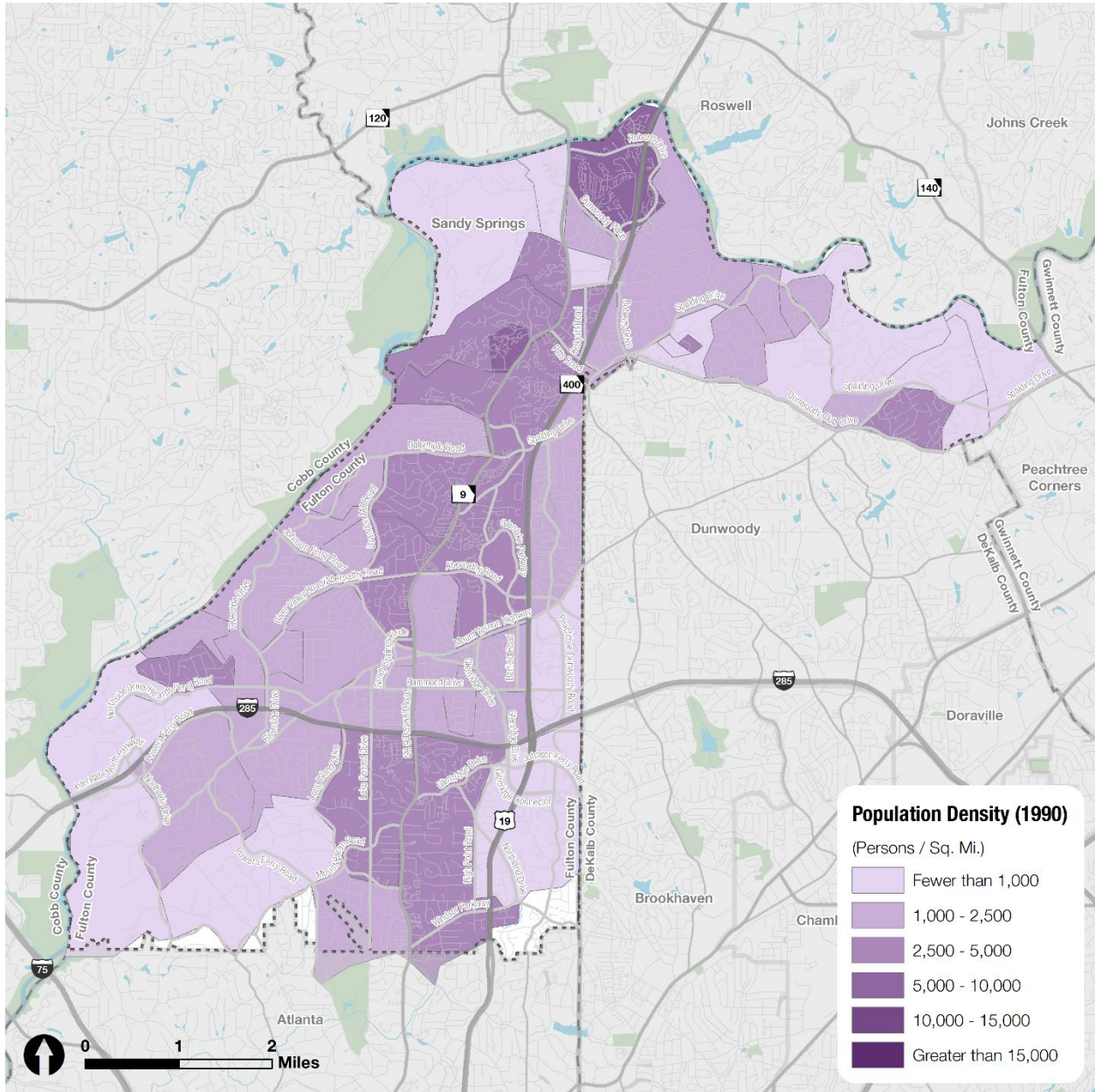
The historic growth patterns in Sandy Springs as well as future growth projections hint at a potential shift of transportation needs away from capacity expansion and towards projects that maximize use of existing infrastructure, fill gaps in the network, and provide options to users of all modes. Future capacity expansion opportunities are also constrained by land in the City being largely built out.

Population Growth Trends in Sandy Springs



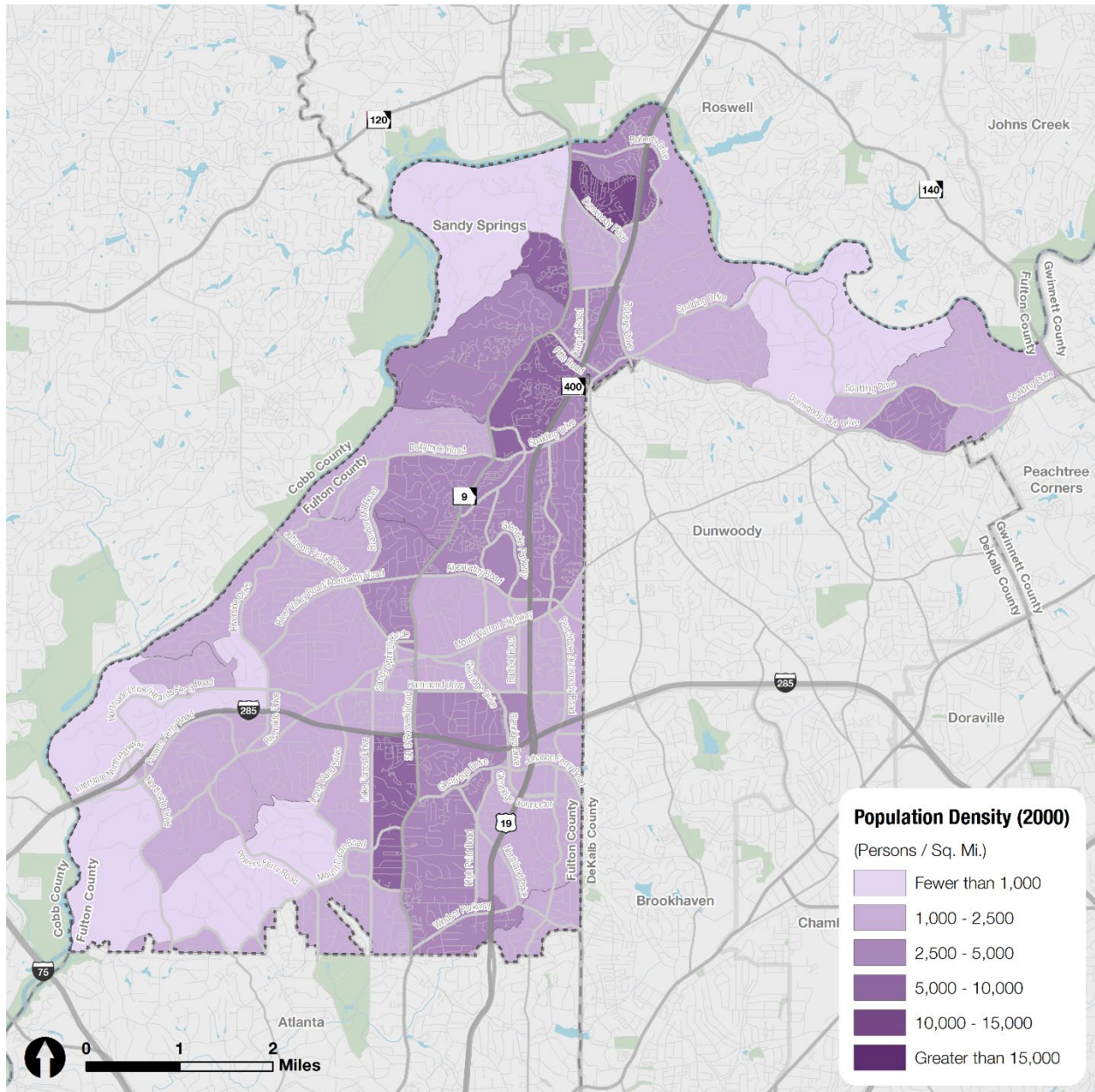
SANDY SPRINGS

Transportation Master Plan



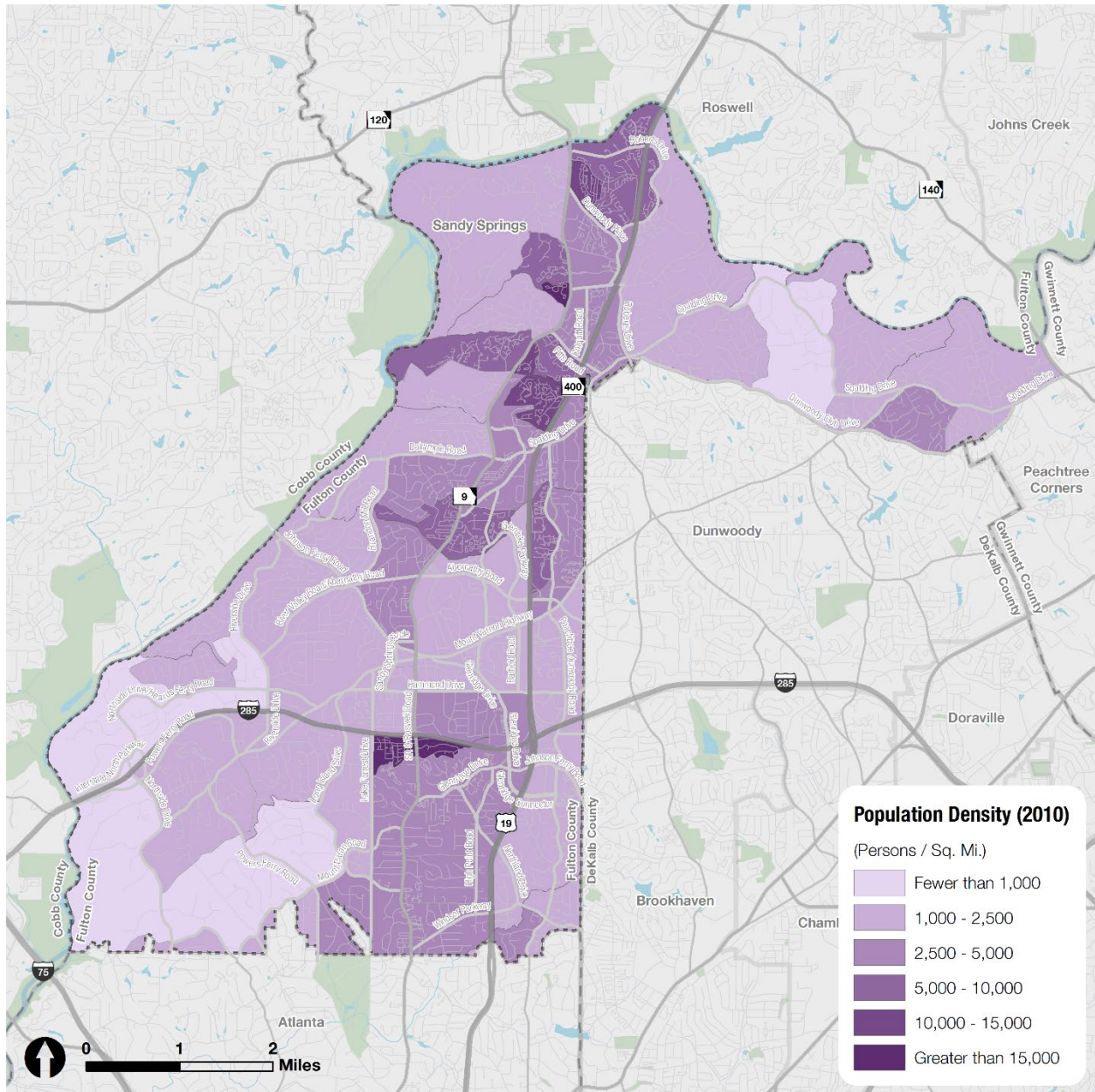
SANDY SPRINGS

Transportation Master Plan



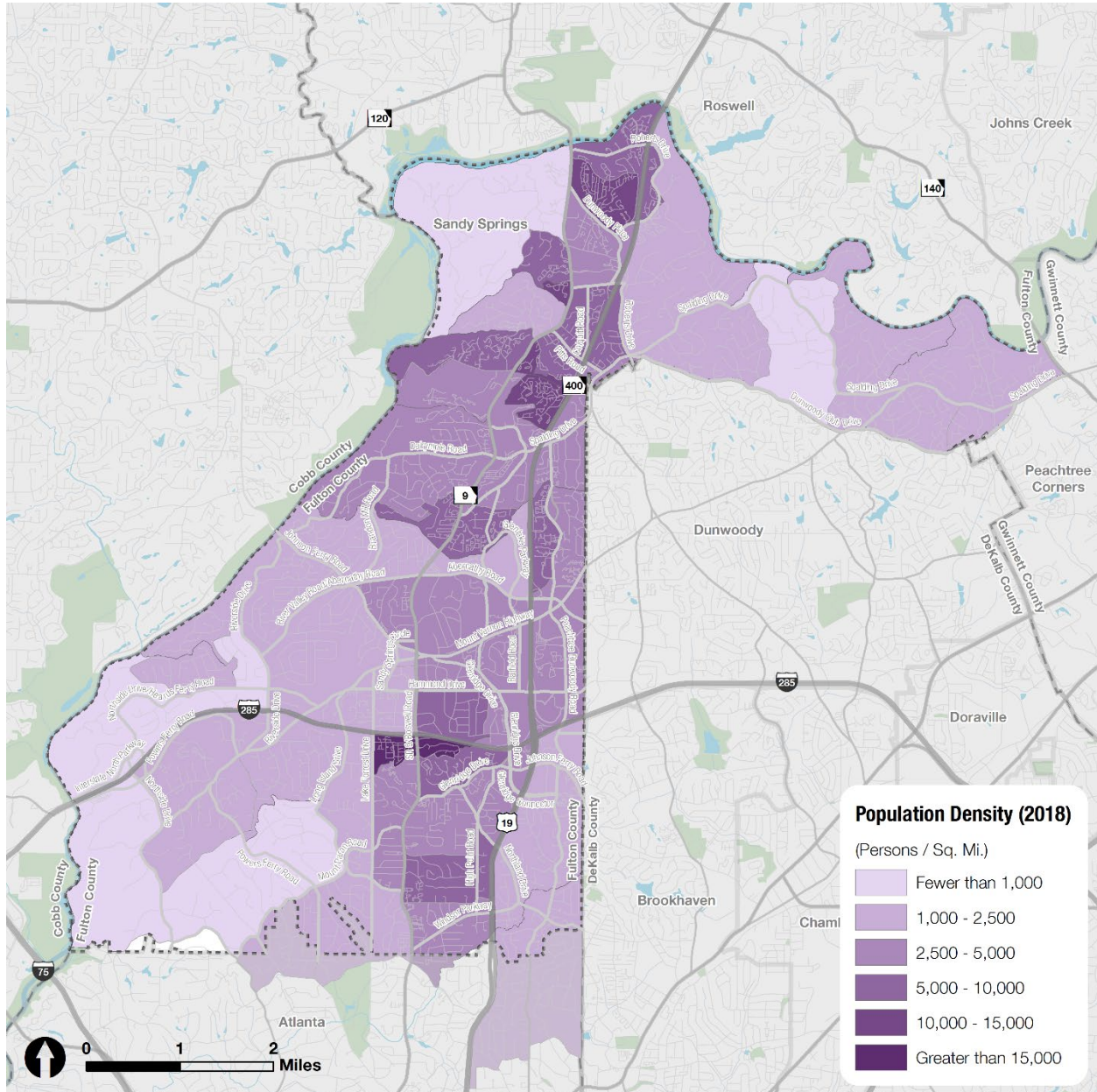
SANDY SPRINGS

Transportation Master Plan



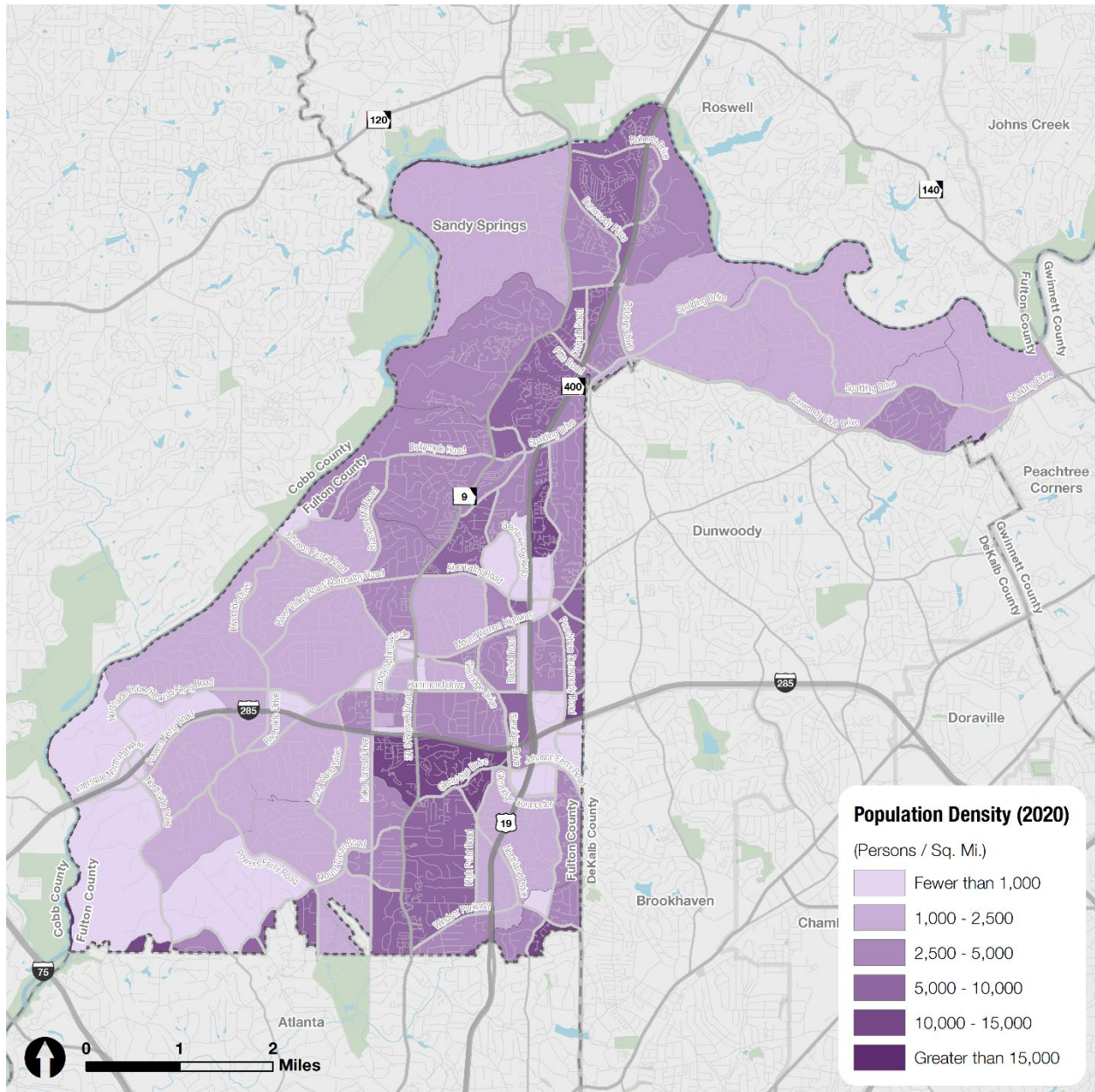
SANDY SPRINGS

Transportation Master Plan



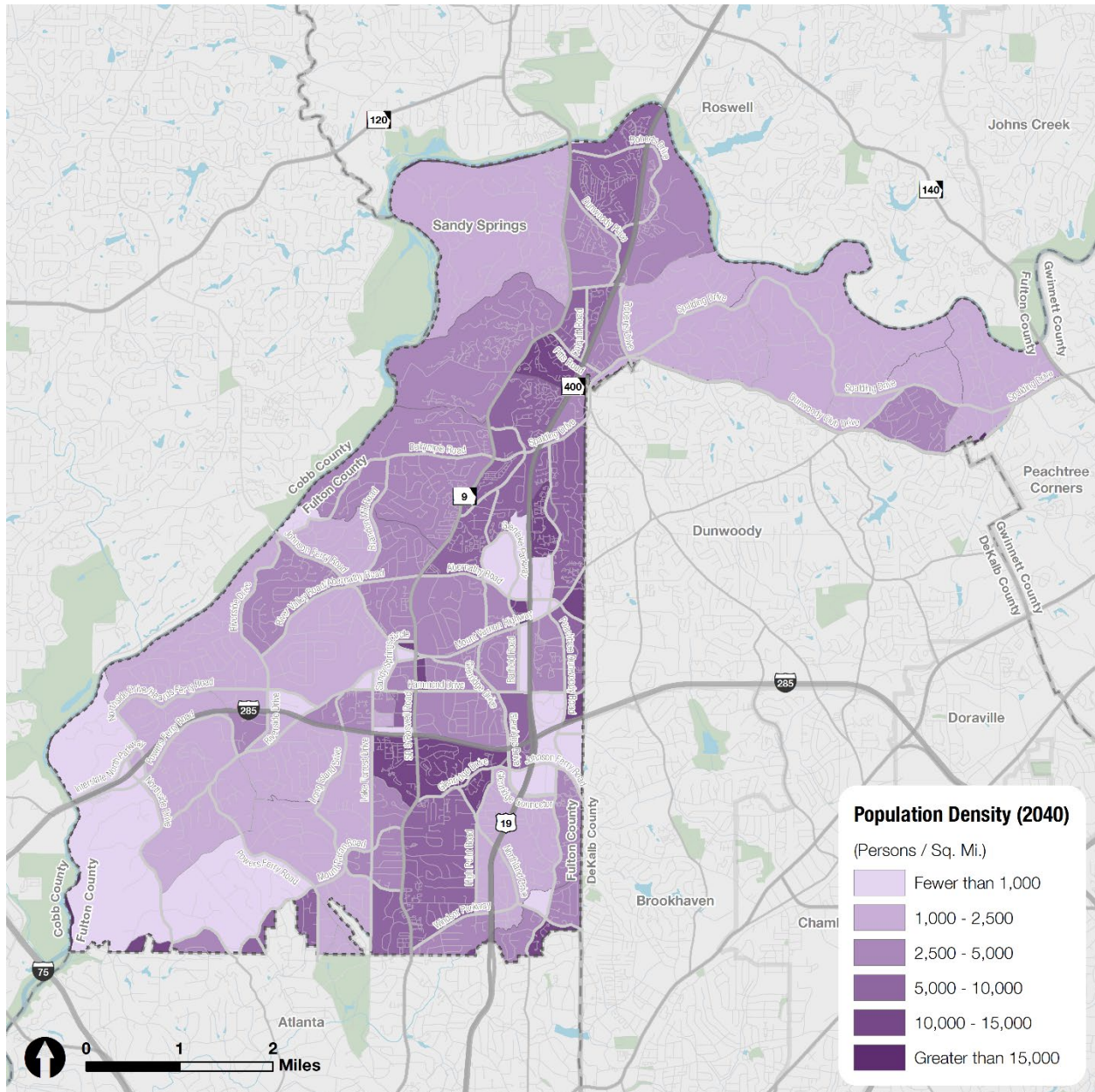
SANDY SPRINGS

Transportation Master Plan



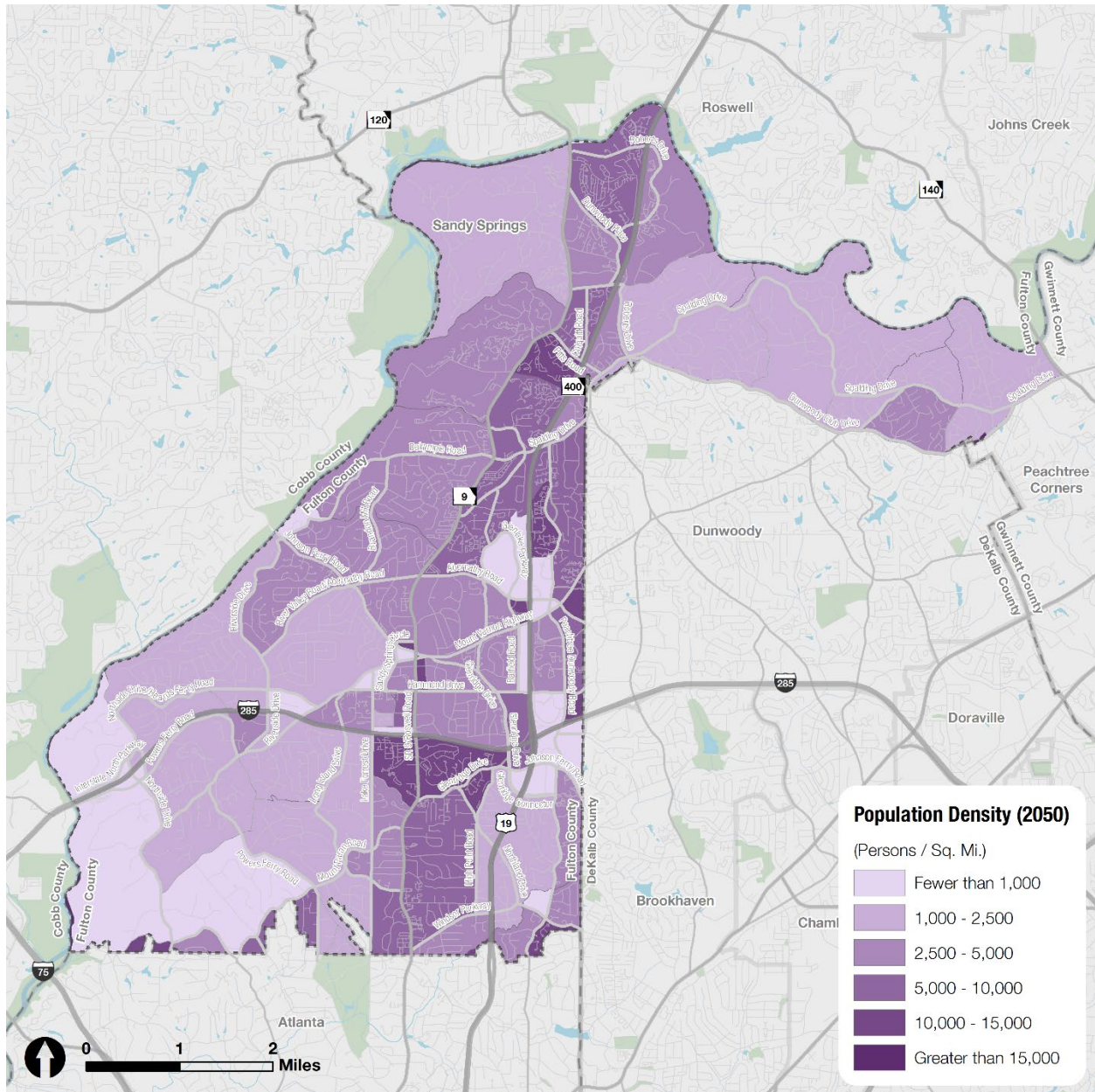
SANDY SPRINGS

Transportation Master Plan



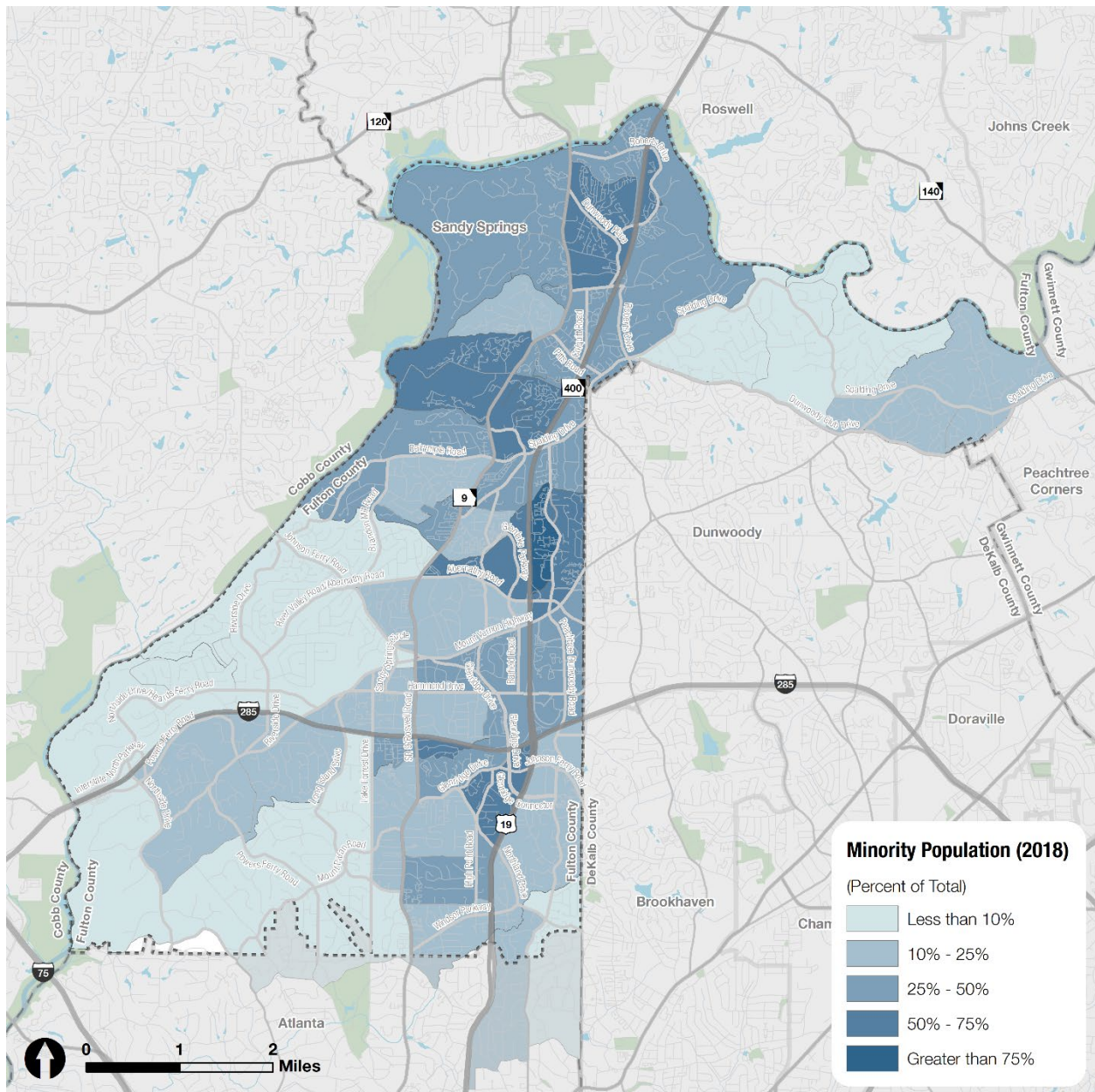
SANDY SPRINGS

Transportation Master Plan

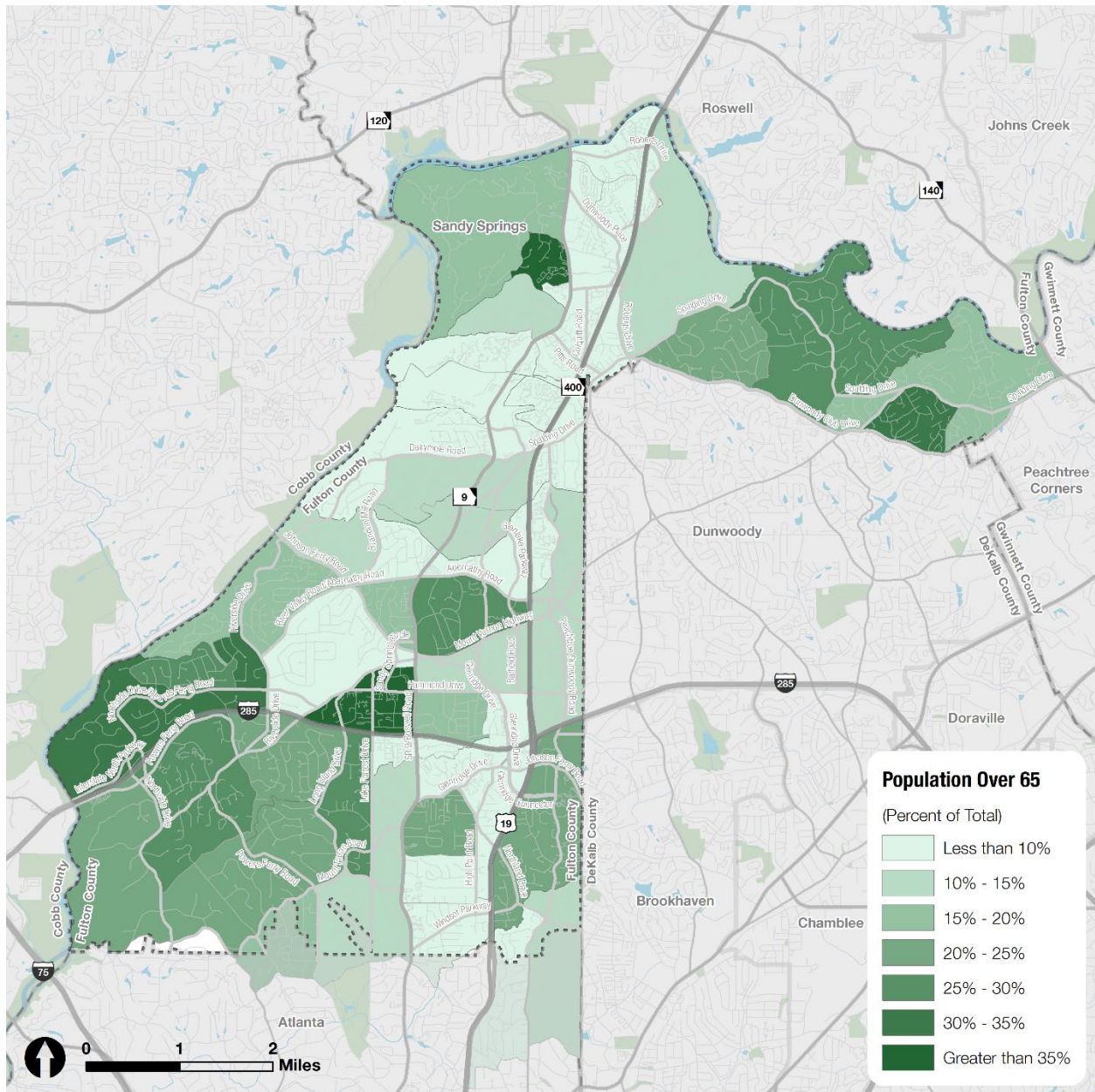


Demographic Trends

The minority population in Sandy Springs is largely concentrated in the central portion of the City. Just under a third (31%) of Sandy Springs residents identify as a race other than white, and portions of the City along this corridor are majority-minority. In contrast, minority residents comprise less than ten percent of residents in large swaths of the eastern panhandle and western portions of the City. The largest minority groups are black (19% of all residents) and Asian residents (7% of all residents). Slightly under 15% of Sandy Springs residents have Hispanic ethnicity, and 6% of households have limited English proficiency.

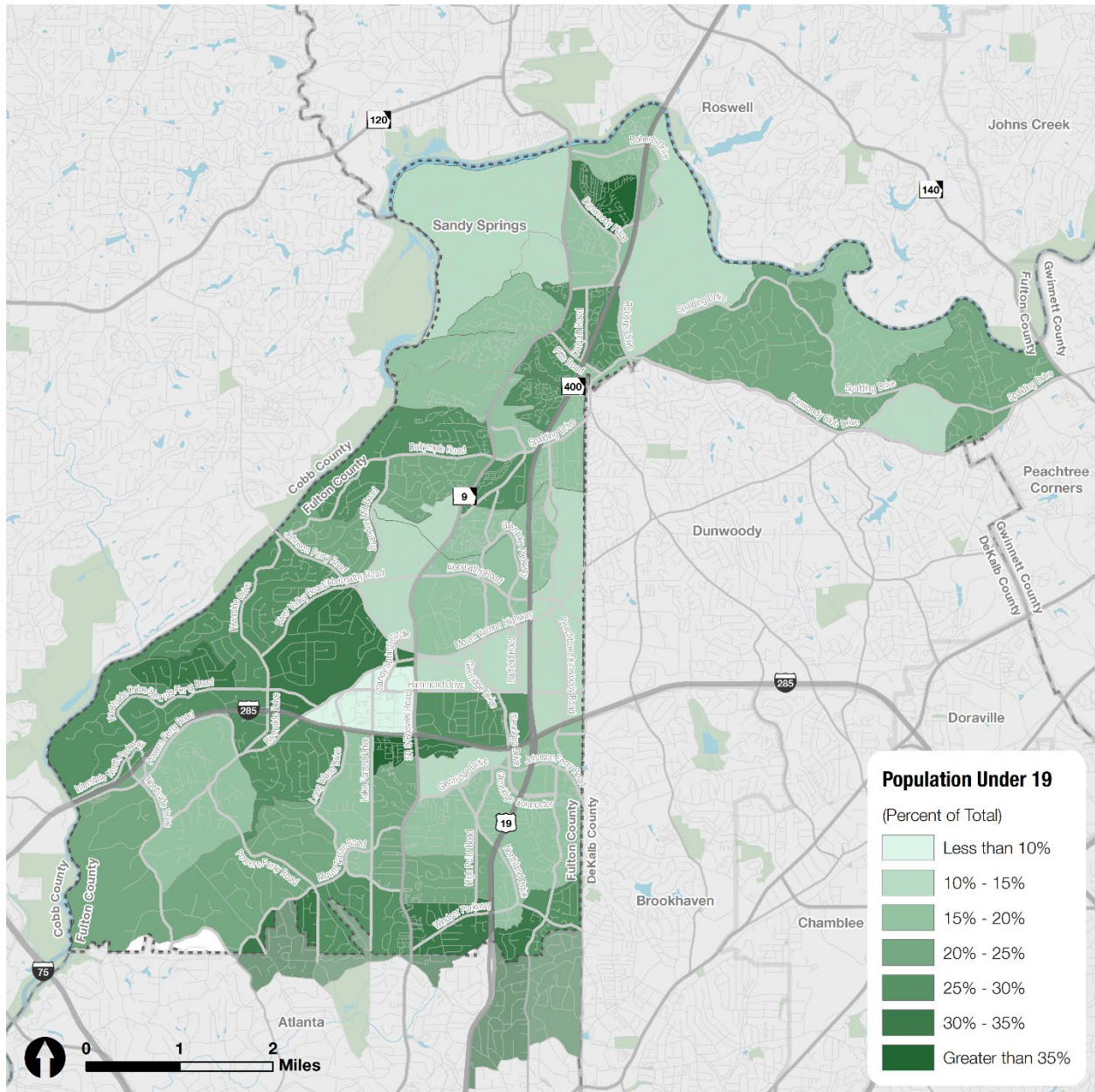


Almost a third of Sandy Springs residents are age 50 or older. Although the largest groups by age in Sandy Springs are adolescents (age 19 or under, 22% of total population) and mid-career professionals (ages 35 – 49, 22% of total population), the City has slightly higher proportions of late career professionals (ages 50 – 64, 18% of total population) and senior citizens (age 65 or older, 13% of total population) than Fulton County. Transportation options that allow residents to remain mobile and independent as they age in place will be an important focus area for Sandy Springs moving forward into the future.



SANDY SPRINGS

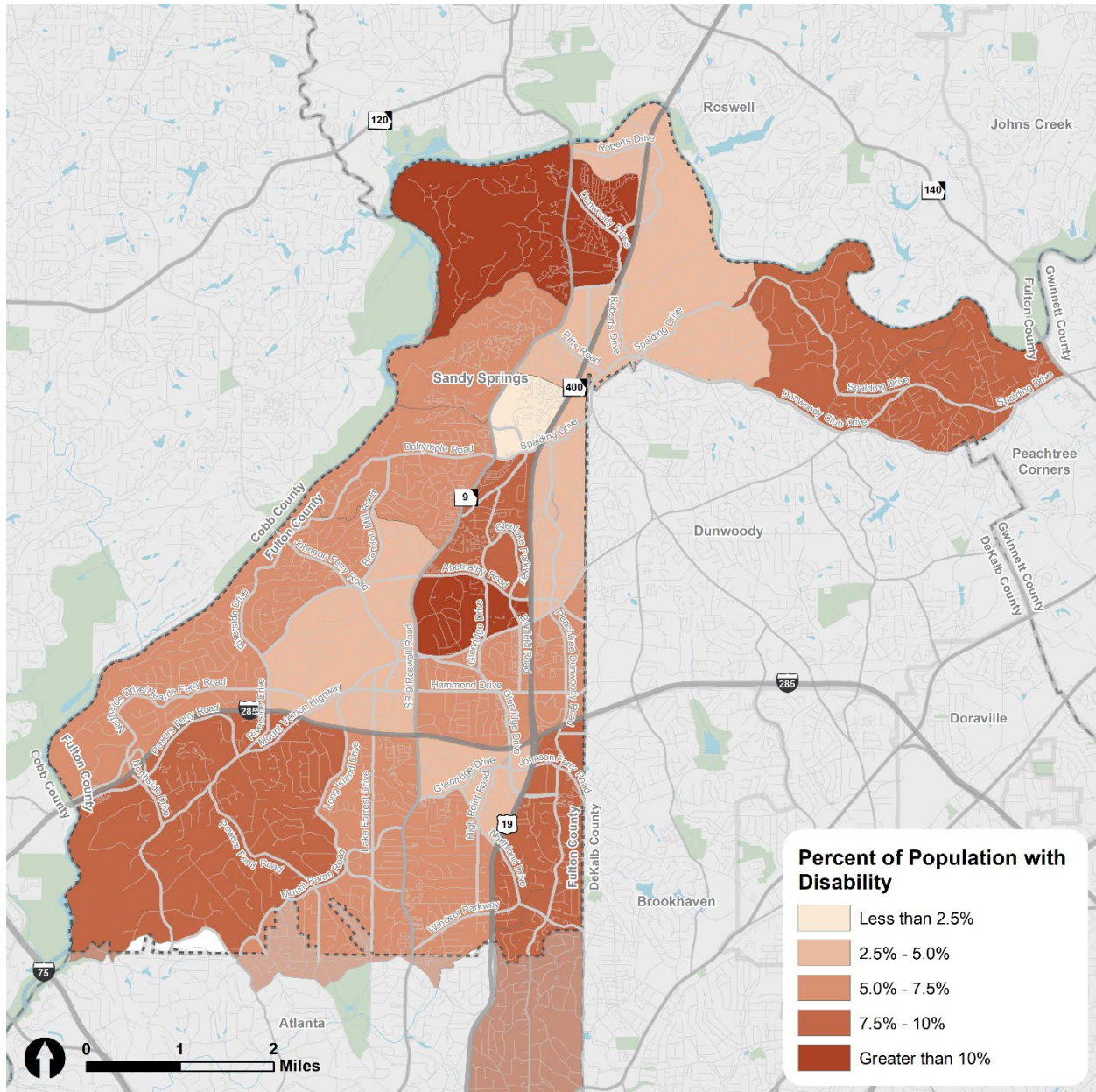
Transportation Master Plan



SANDY SPRINGS

Transportation Master Plan

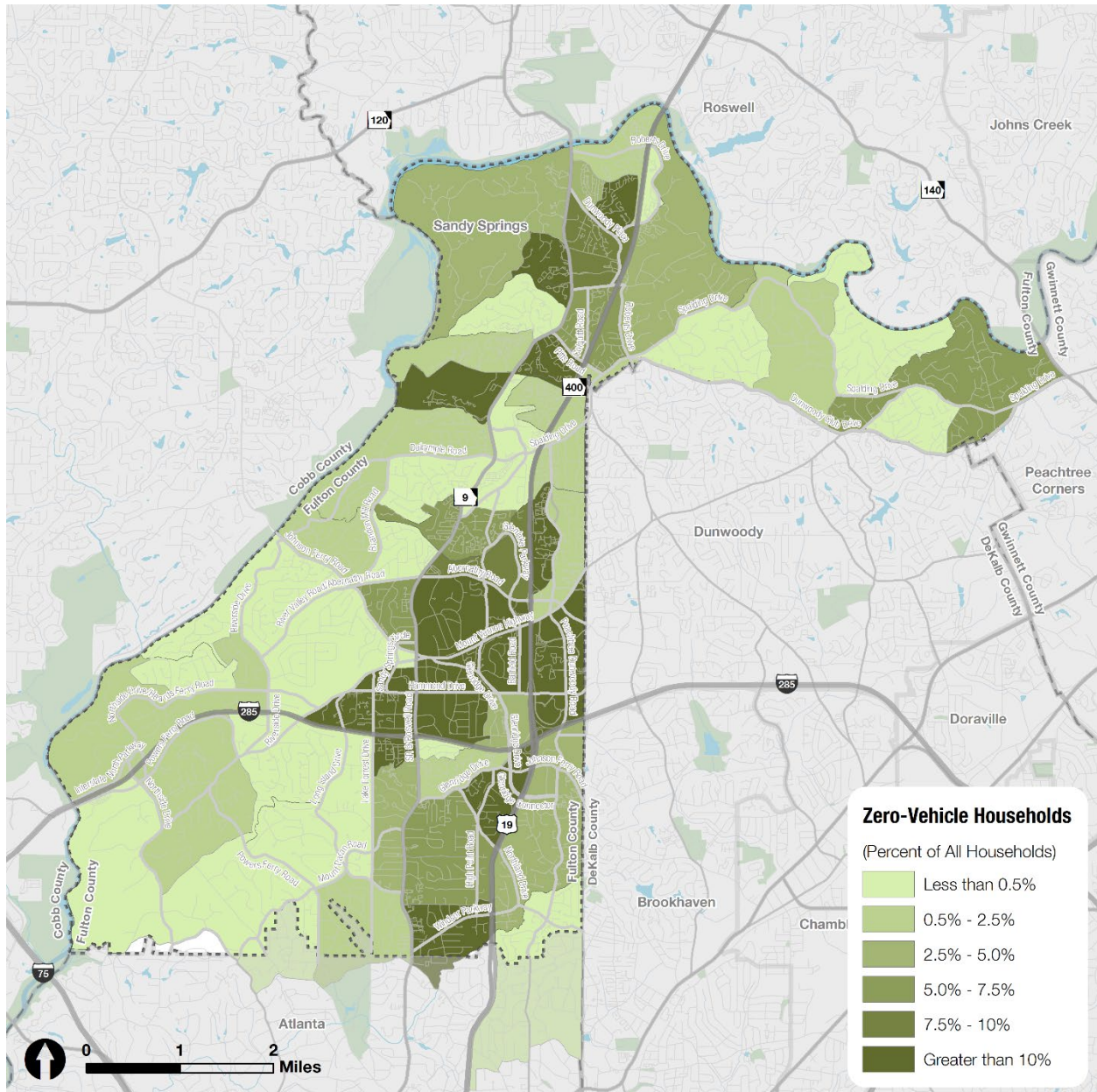
Just over six percent of Sandy Springs total residents have a vision, hearing, cognitive, ambulatory, self-care, or independent living difficulty. A connected, multimodal transportation network is especially important for these residents since driving a vehicle may be challenging or impossible.



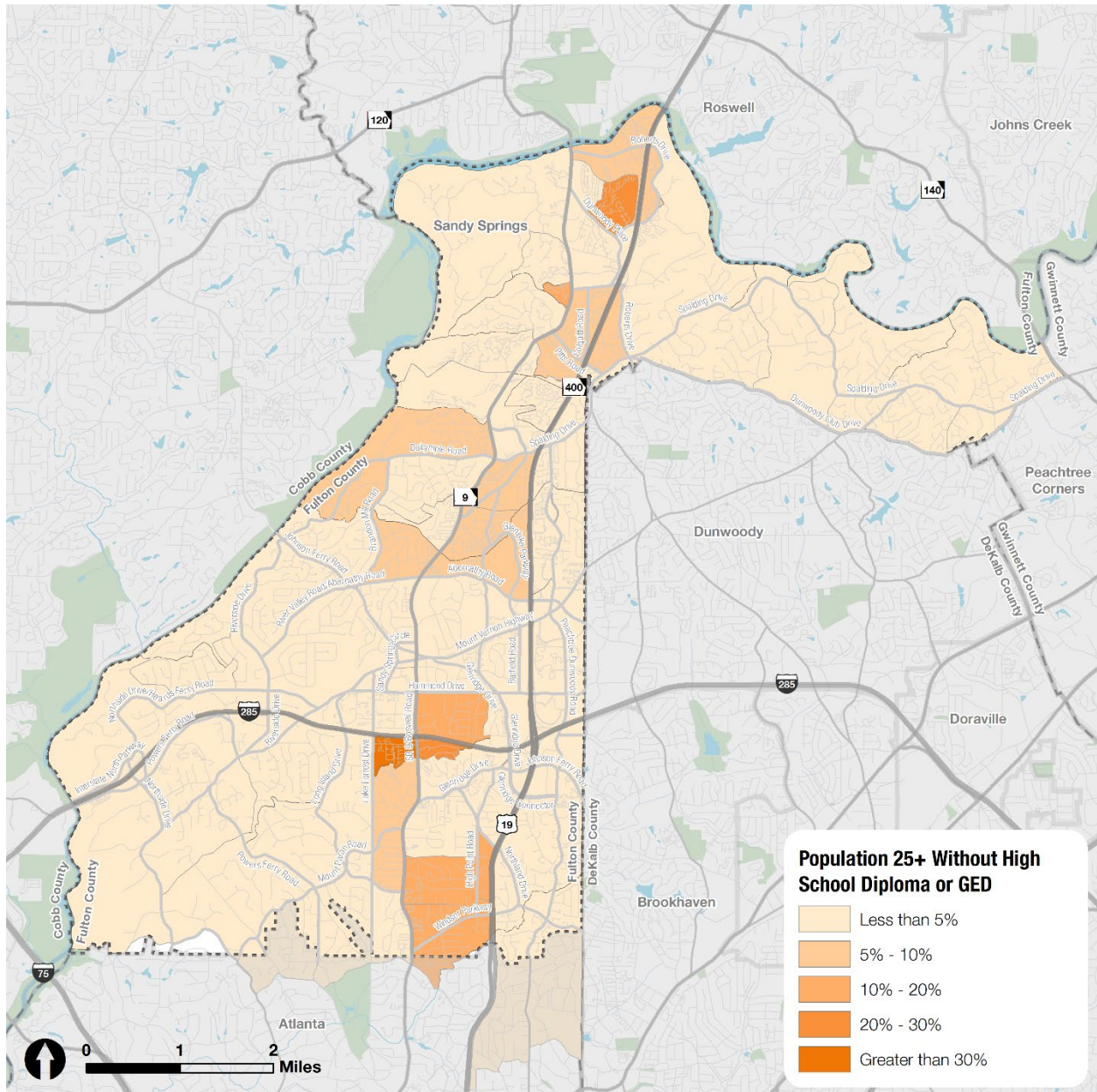
SANDY SPRINGS

Transportation Master Plan

More than 3,000 households in Sandy Springs – 1 in every 15 – have no access to a personal vehicle. For residents in these households, access to transit, biking, and walking facilities is critical to reach jobs, school, shops, and medical appointments. In the central portion of the City between the Sandy Springs and Dunwoody MARTA rail stations and Roswell Road, more than 1 in 10 (and over 30% in certain areas) households have no personal vehicle.

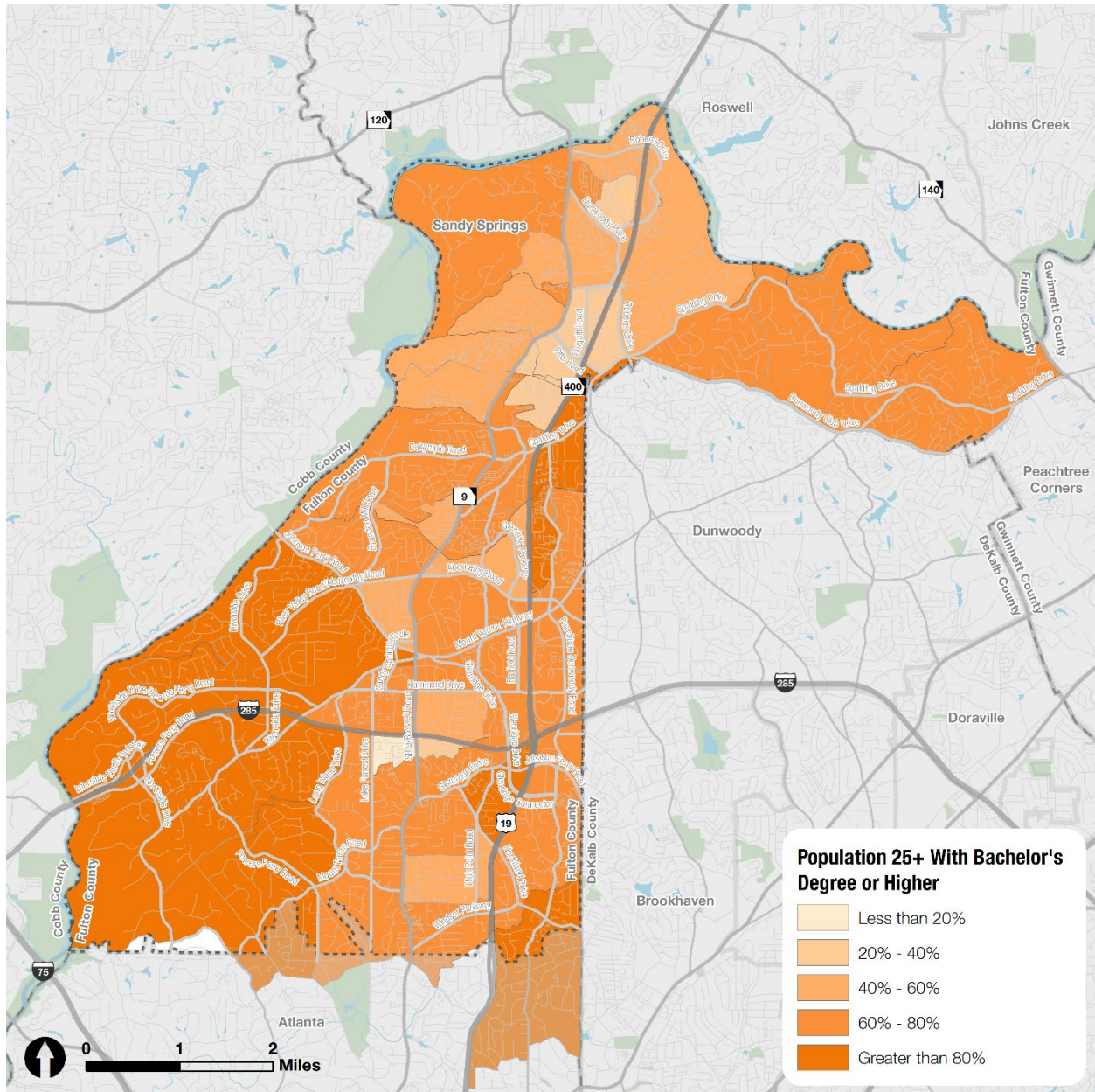


Almost two-thirds of Sandy Springs residents over age 25 have completed a four-year college degree or higher. This value is substantially higher than both county-wide and state-wide averages: 51% of Fulton County residents and 31% of Georgia residents have achieved the same qualification. Similarly, only 1 in 20 City residents over the age of 25 does not hold a high-school diploma or equivalent – 30% less than Fulton County as a whole.



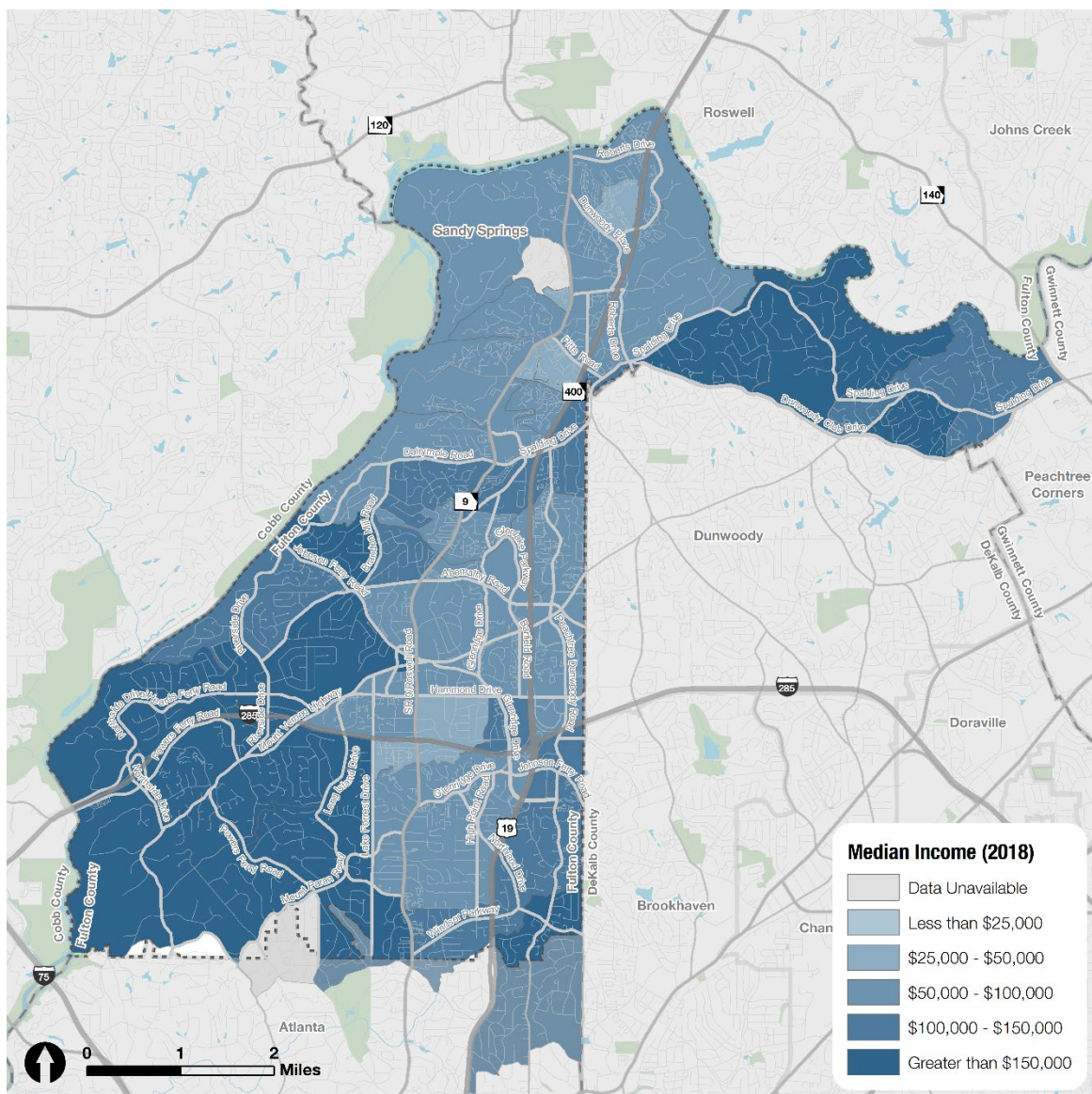
SANDY SPRINGS

Transportation Master Plan

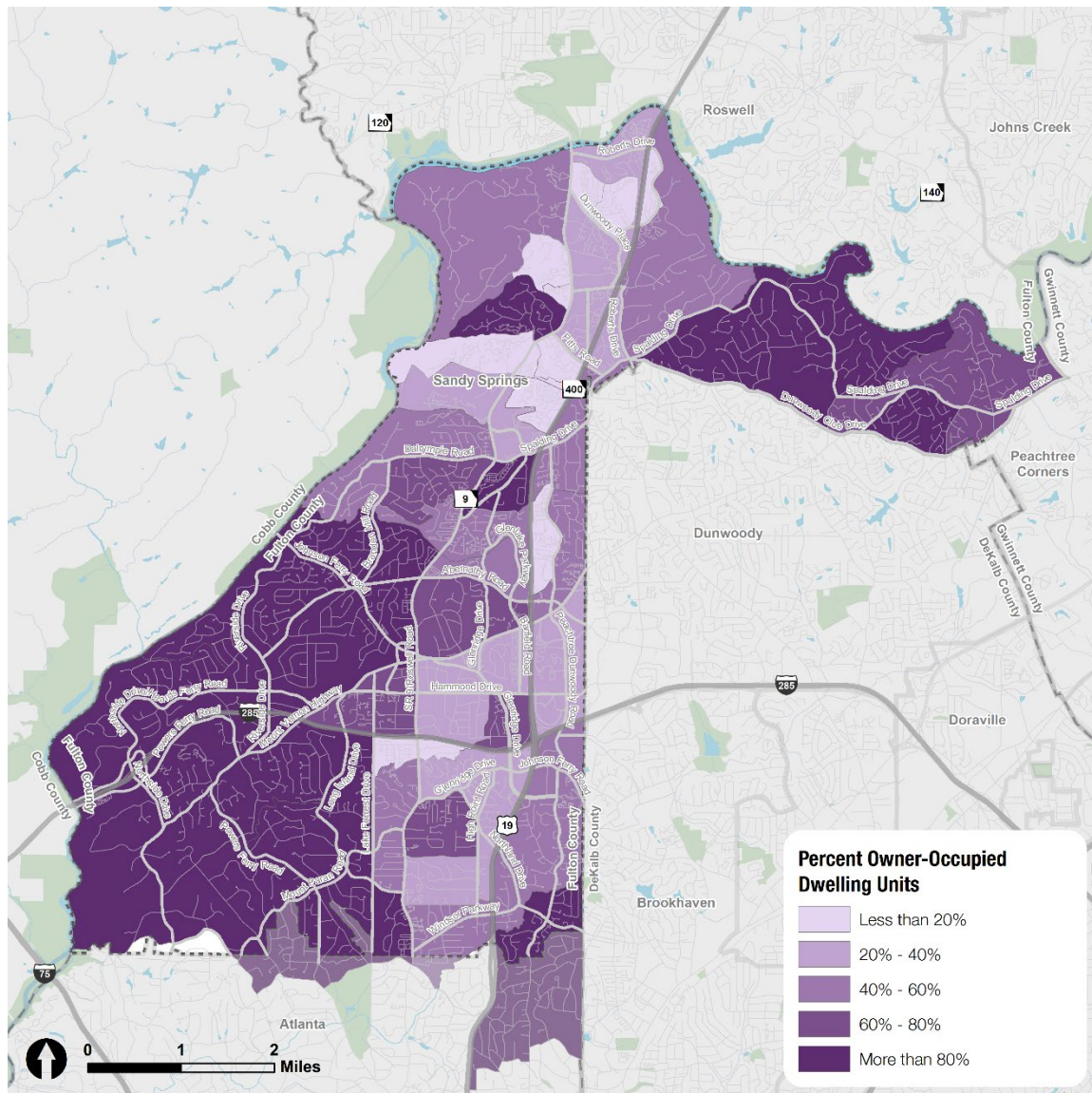


High levels of educational attainment correlate with high median incomes. In 2018, median income for households in Sandy Springs was almost \$71,000 – in line with the value for Fulton County as a whole, and well above the average for metro Atlanta as a whole (\$70,900 and \$55,700, respectively).

Sandy Springs has significant populations at both ends of the income spectrum, and these different groups have different transportation needs. Approximately eleven percent of Sandy Springs residents live below the Federal poverty level. Meanwhile, the portion of City residents making \$200,000 or more per year (12%, according to 2018 ACS data) is approximately double that of residents across the entire Atlanta region (6%).



Sandy Springs residents are split roughly evenly between renters and owners. In 2013, 53% of total housing units in Sandy Springs were occupied by renters, and 47% by owners. By 2018, this balance had changed to 51% renter-occupied units and 49% owner-occupied units. This trend is likely driven due to several recently-completed multifamily apartment projects near the Perimeter Center and City Center.



These trends speak to substantial disparities between portions of Sandy Springs. When compared to the central portion of the city, the western and eastern panhandle portions of the City have lower population density, lower percentages of minority residents, and higher percentages of adolescents (under age 19) and senior citizens (age 65 or over). These areas also have higher rates of vehicle ownership, higher educational attainment, and higher median incomes.

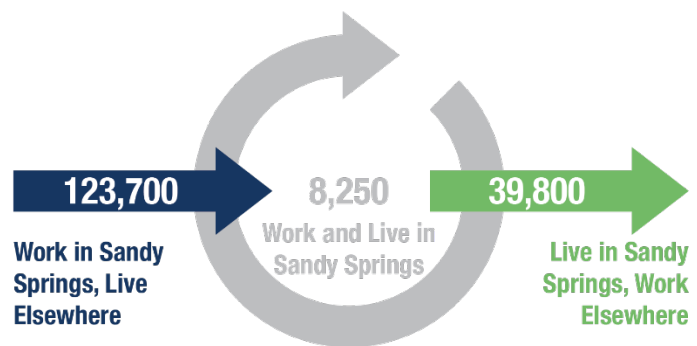
3 | Employment

Introduction

Between the Perimeter Center and Medical Center areas, Sandy Springs is a growing regional employment destination. Buoyed by robust transportation connections in each direction, high-quality rapid transit to the region's core in Midtown and Downtown Atlanta, and the high-profile relocation of multiple corporate headquarters to the area, Sandy Springs is an important employment hub within metro Atlanta.

Employment Trends

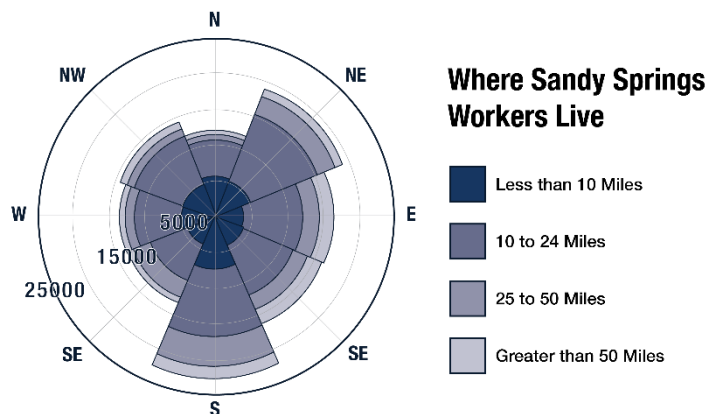
Based on the Longitudinal Employer-Household Dynamics (LEHD), the United States Census Bureau estimates that as of 2017, **there are approximately 132,000 jobs available in Sandy Springs**. However, just 8,250 of these jobs are held by residents of the City, meaning almost 94% of jobs are held by persons who live outside Sandy Springs.



Similar patterns can be observed with the **approximately 48,000 Sandy Springs residents who work** – more than 80% work outside the City. The dispersed nature of the job market in metro Atlanta means these trends are present across employment centers around the region, underscoring the importance of regional transportation connections.

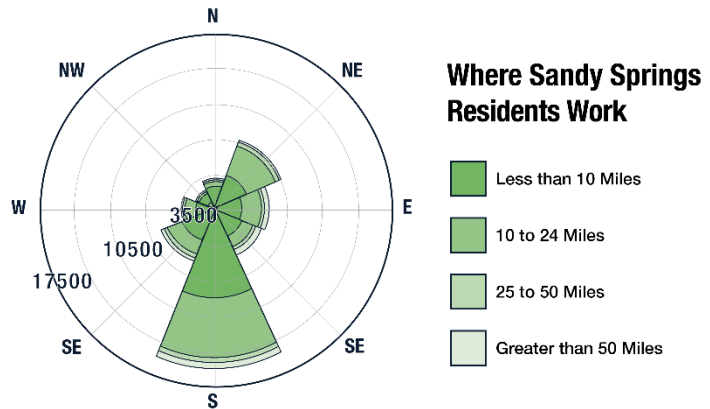
Where Workers Live

Employees who work in Sandy Springs live around the Atlanta metro area. The largest group live south of Sandy Springs within the City of Atlanta, with an especially large cluster in Midtown. Other areas with high concentrations of employees include Dunwoody, other municipalities in North Fulton County, and portions of the I-75 corridor near Cumberland, Smyrna, and Marietta.



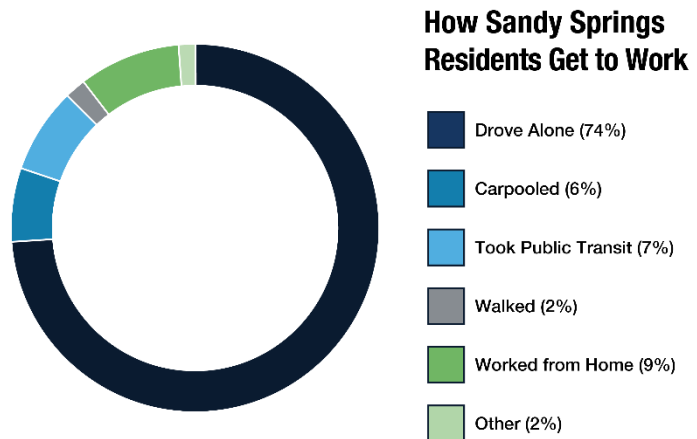
Where Residents Work

The majority of Sandy Springs residents either work in the Perimeter Center area, or south of the City towards Atlanta. Noticeable employment concentrations include Buckhead, Midtown, and Downtown. These employment centers are all accessible via MARTA, providing a high-quality transit commute option for Sandy Springs residents. Smaller employment clusters of Sandy Springs employees include Cumberland and the area around the Emory University campus.



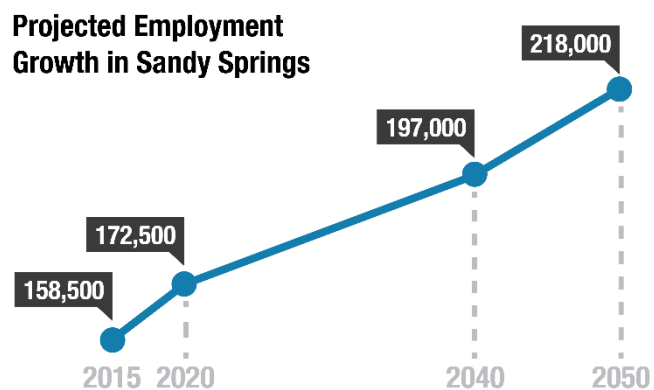
How Residents Get to Work

Almost 75% of Sandy Springs residents commute to work by driving alone, in line with the average for Fulton County and well ahead of the metro Atlanta region. The most popular alternatives to driving alone are telecommuting and public transportation. Residents who get to work using alternative modes (or do not commute) take roughly 12,000 cars a day off the road.



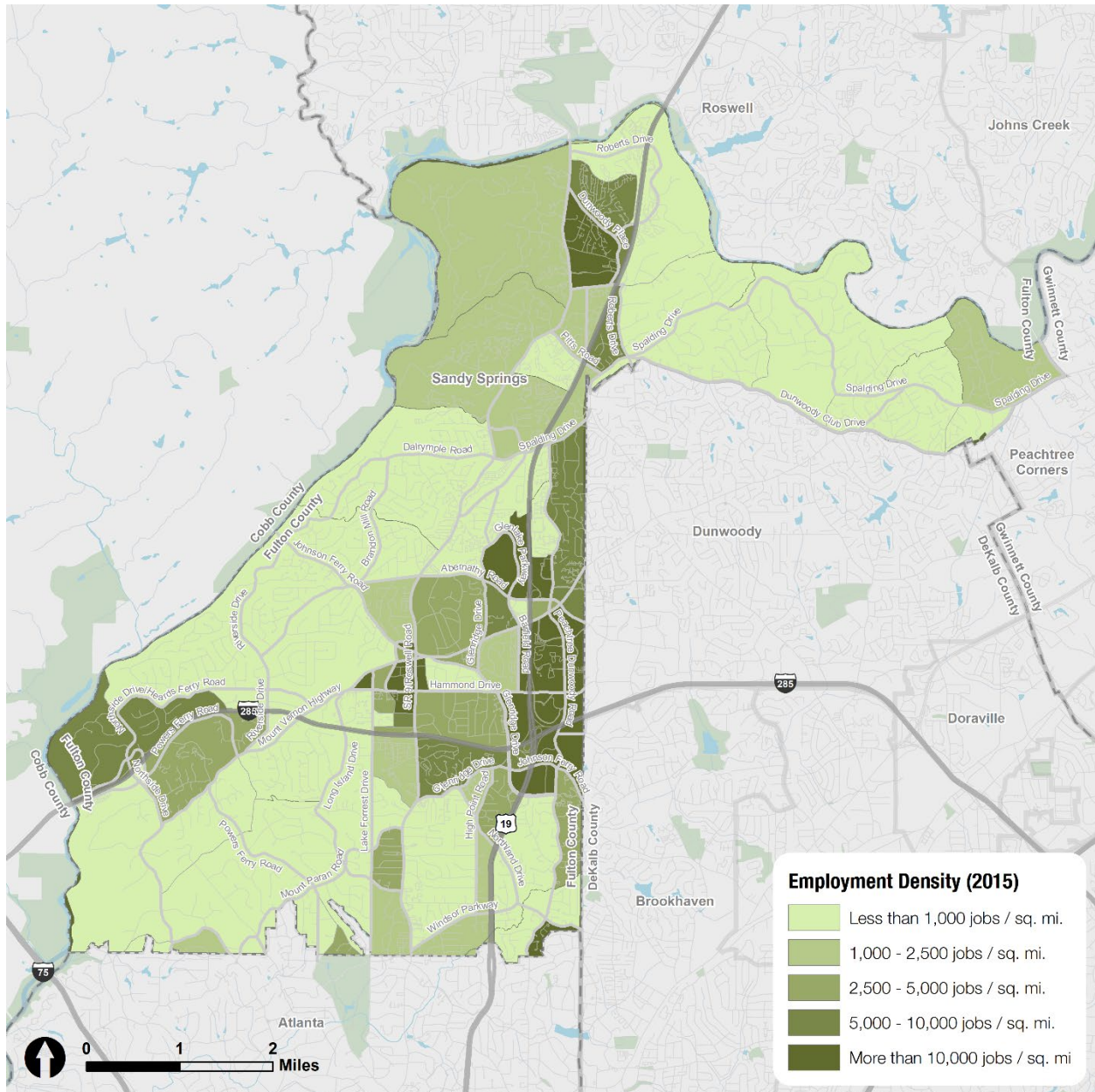
Employment Growth

Atlanta Regional Commission (ARC) estimates project employment in Sandy Springs to grow by slightly more than 0.9% annually in the period between 2015-2050. By 2050, this will result in nearly 60,000 new jobs in Sandy Springs when compared to total employment in 2015. There is a discrepancy between the 2015 ARC employment numbers and the 2017 LEHD employment numbers.



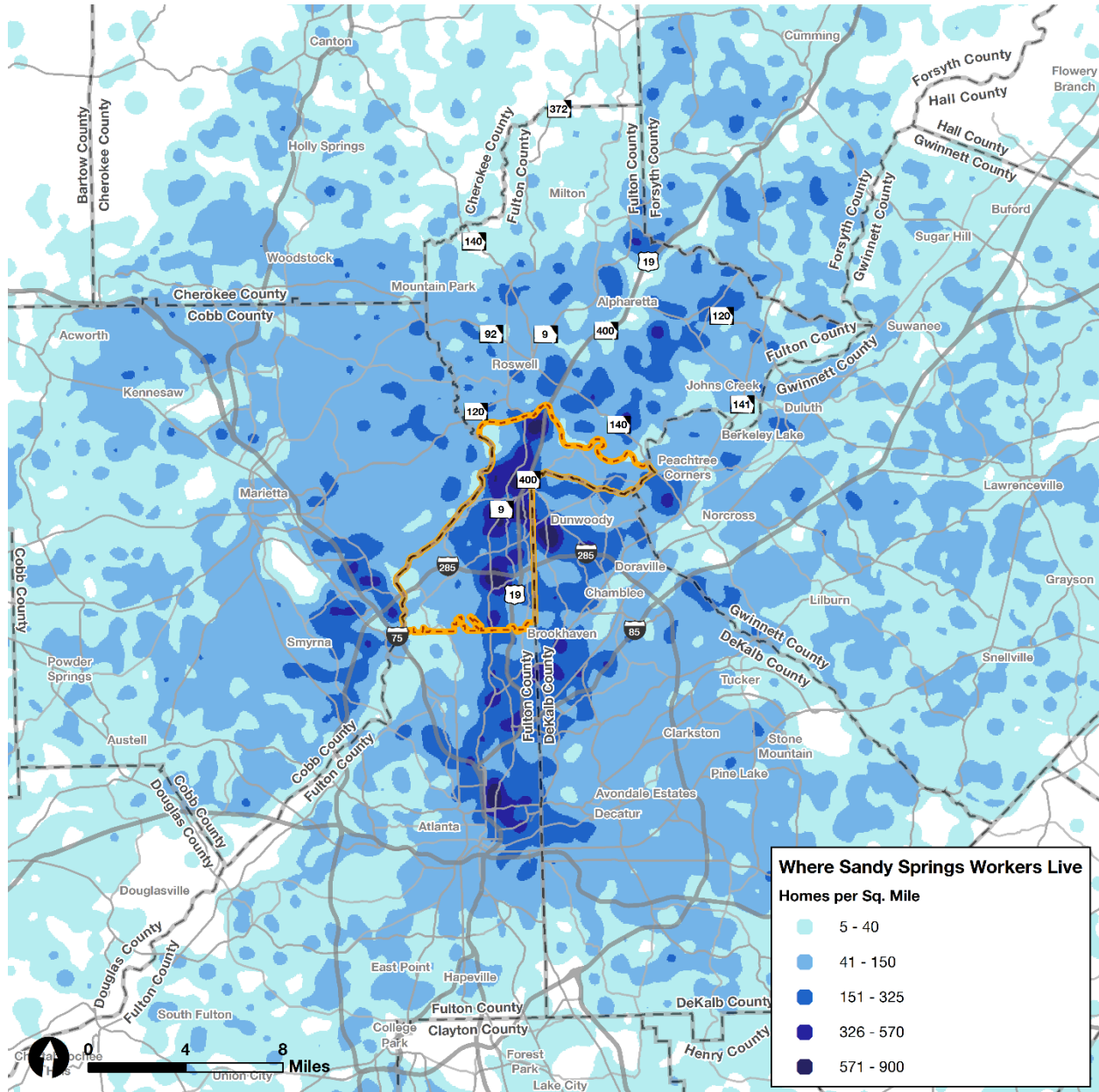
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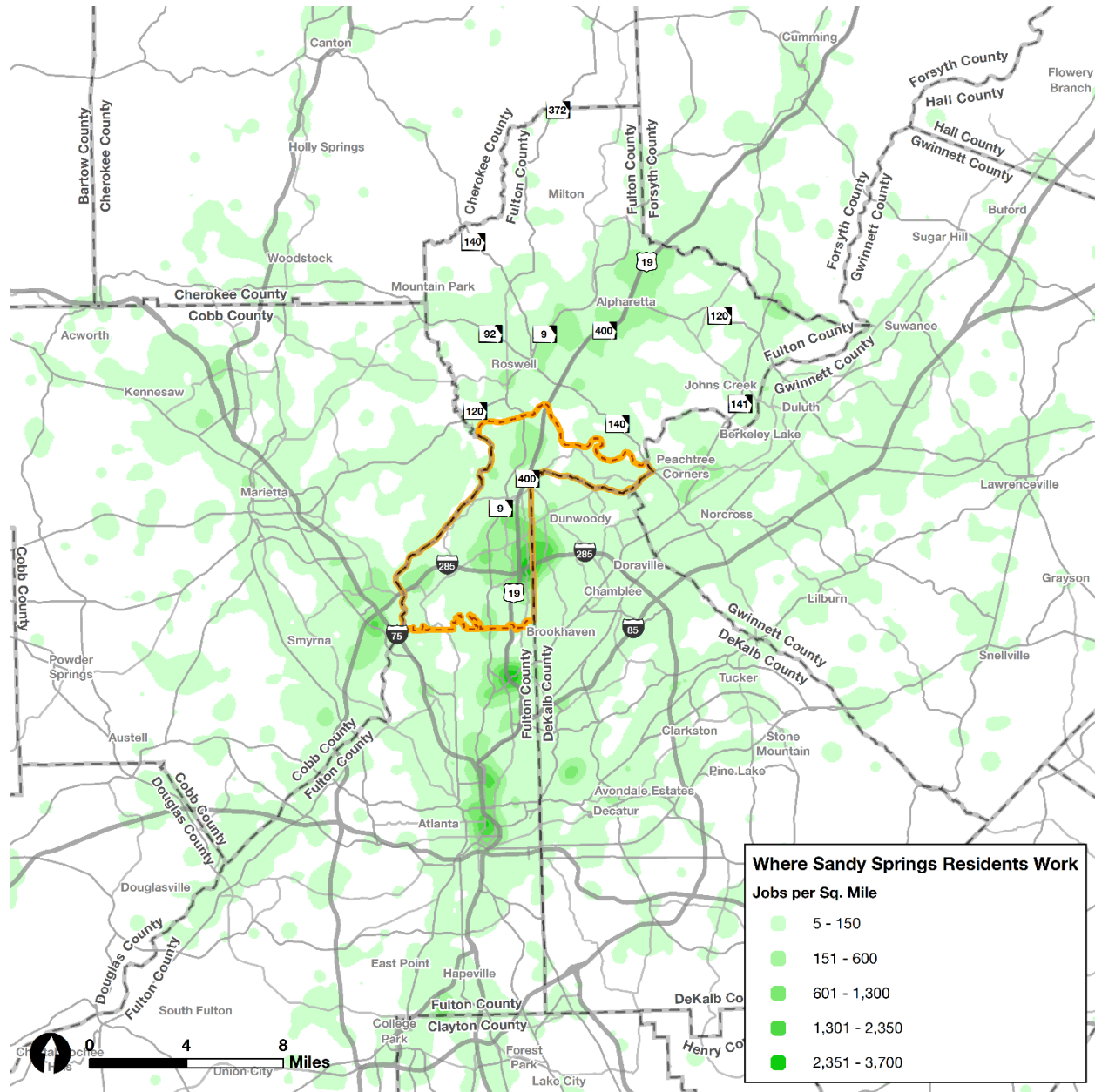
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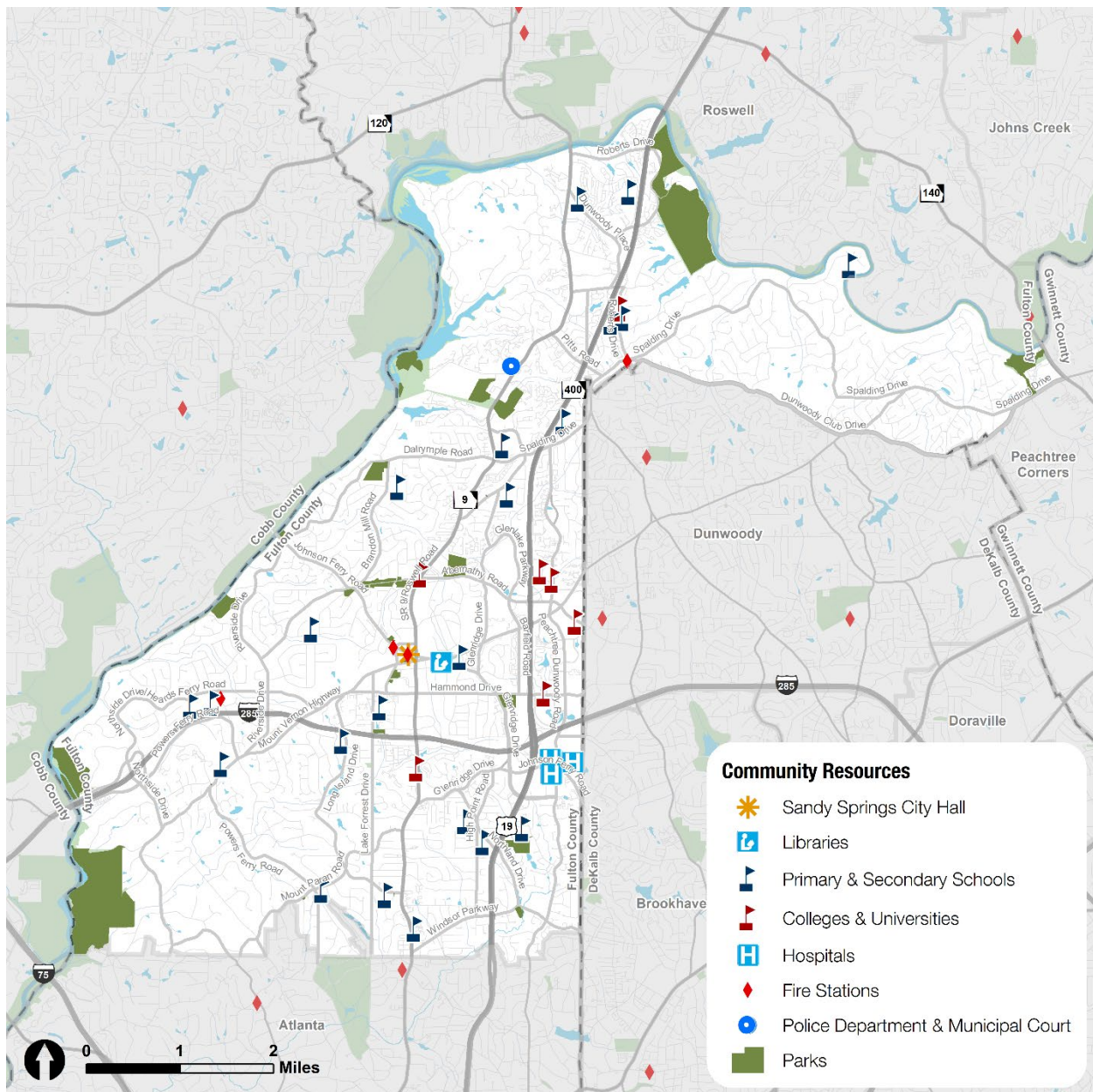
Transportation Master Plan



4 | Land Use

Introduction

The Next Ten plan, adopted in 2017, lays out ambitious goals to improve the built environment in Sandy Springs. The plan notes that although residents have a strong vision for the City, large sections of the community are built to have “neither a ‘sense of place’ nor a strong physical identity” (*The Next Ten*, p. 45). Making positive strides to mitigate this begins with improving the city’s transportation network to increase connectivity across all modes, facilitate appropriate density, and improve accessibility to Sandy Springs’ rich environmental resources.



Land Use and Environment

Over the coming decades, Sandy Springs must balance the needs of a densifying and maturing community with preserving the characteristics that originally made it a vibrant and desirable place to live.

Sandy Springs grew out of a bedroom community for Atlanta– and existing land uses in most of the City is still influenced by this strong neighborhood community heritage.

Residential uses account for roughly half of developed land in the Sandy Springs, while commercial uses are focused in the Perimeter Center area, Roswell Road corridor, and Powers Ferry area. Portions of the Perimeter Center area are included in the Perimeter Community Improvement District (PCID), which also extends into neighboring Dunwoody.

Future land use changes established through the Next Ten will not enable growth everywhere – but where growth occurs, it will lead to more concentrated, node-based vibrant and distinctive destinations. The City's adopted plans for future land use direct major growth away from existing single-family residential neighborhoods. Instead, plans seek to create a series of mixed-use destinations that enhance sense of place and are more accessible for users of all modes. Growth opportunities are directed toward replacing existing auto-centric commercial development with denser nodes that allow residents to live, work, and play without needing to travel by automobile. Specific target areas include Perimeter Center, the Roswell Road and Peachtree-Dunwoody Road corridors, and the areas around existing MARTA rail stations. A series of character areas are established in The Next Ten plan to guide development to appropriate places.

The extensive tree canopy, rolling terrain, and proximity to the Chattahoochee River inform the City's identity and facilitate a strong connection to nature. The City has adopted a Trail Master plan that will increase access to the river and allow residents to experience car-free mobility throughout the City. The proposed and planned trails will also connect Sandy Springs to neighboring Cobb County, Roswell, and Peachtree Corners. The Next Ten plan also calls for the creation of a series of ecological corridors to preserve natural assets and minimize development in and near floodplains.

In addition to parks and recreational facilities, a variety of other community resources are available in Sandy Springs.

Community Resources in Sandy Springs



22

Schools

6 Elementary Schools

2 Middle Schools

2 High Schools

12 Private / Other



7

Technical Colleges
and Universities



3

Major Hospitals



1

Public Library



950+

Acres of Parkland



1

Police
Headquarters



5

Fire Stations

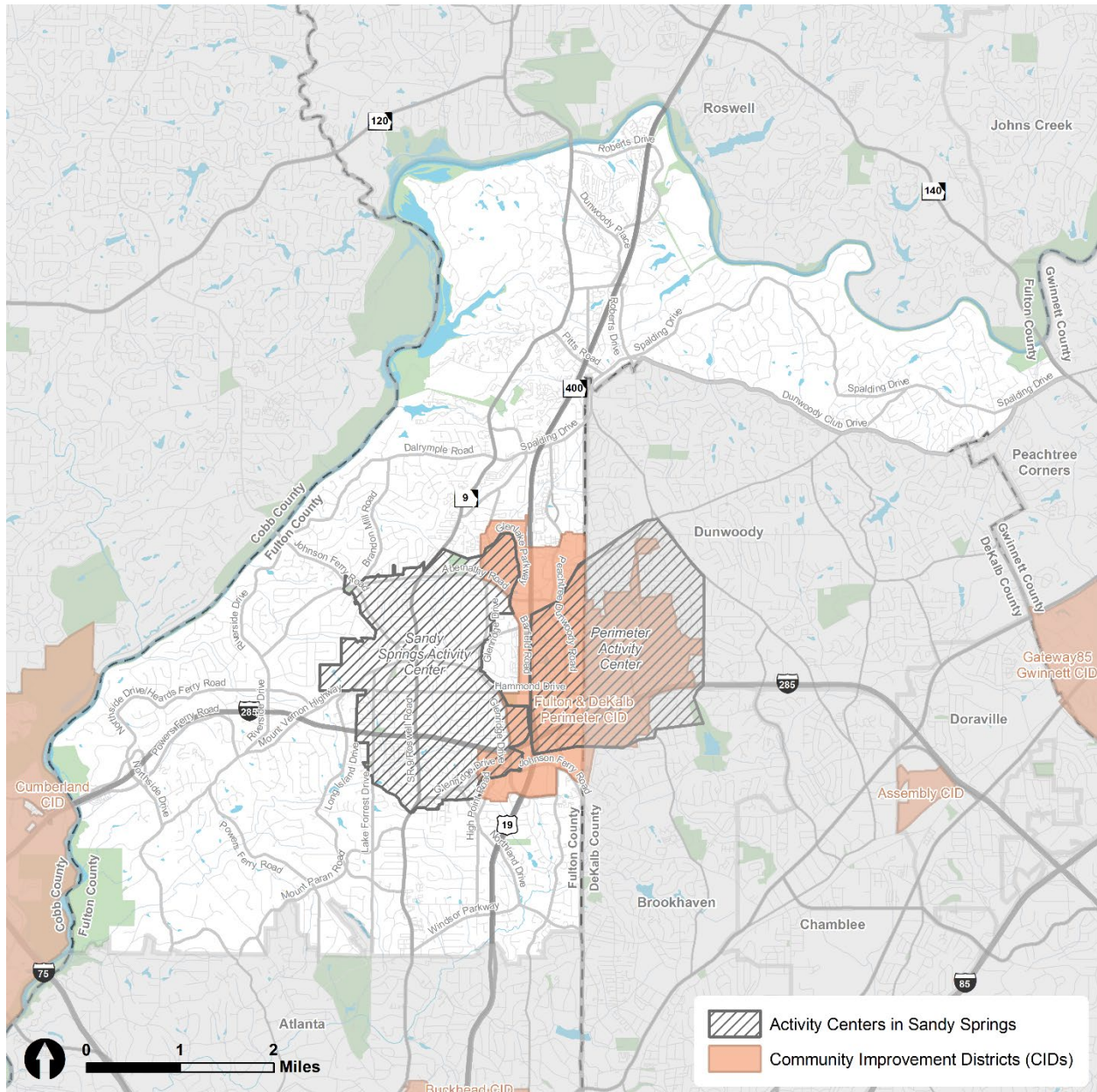
Activity Centers

As identified by ARC, two regional activity centers are located fully or partially in Sandy Springs: Perimeter, which covers the Perimeter Center and Medical Center areas, and Sandy Springs, which largely covers commercial development along the Roswell Road corridor. These regional activity centers are residential and employment centers in metro Atlanta. Local activity centers are nodes the community travels to and from in day-to day life. In Sandy Springs, these include City Springs, Powers Ferry Village, Roswell Road, and the areas around the three MARTA stations in Sandy Springs.

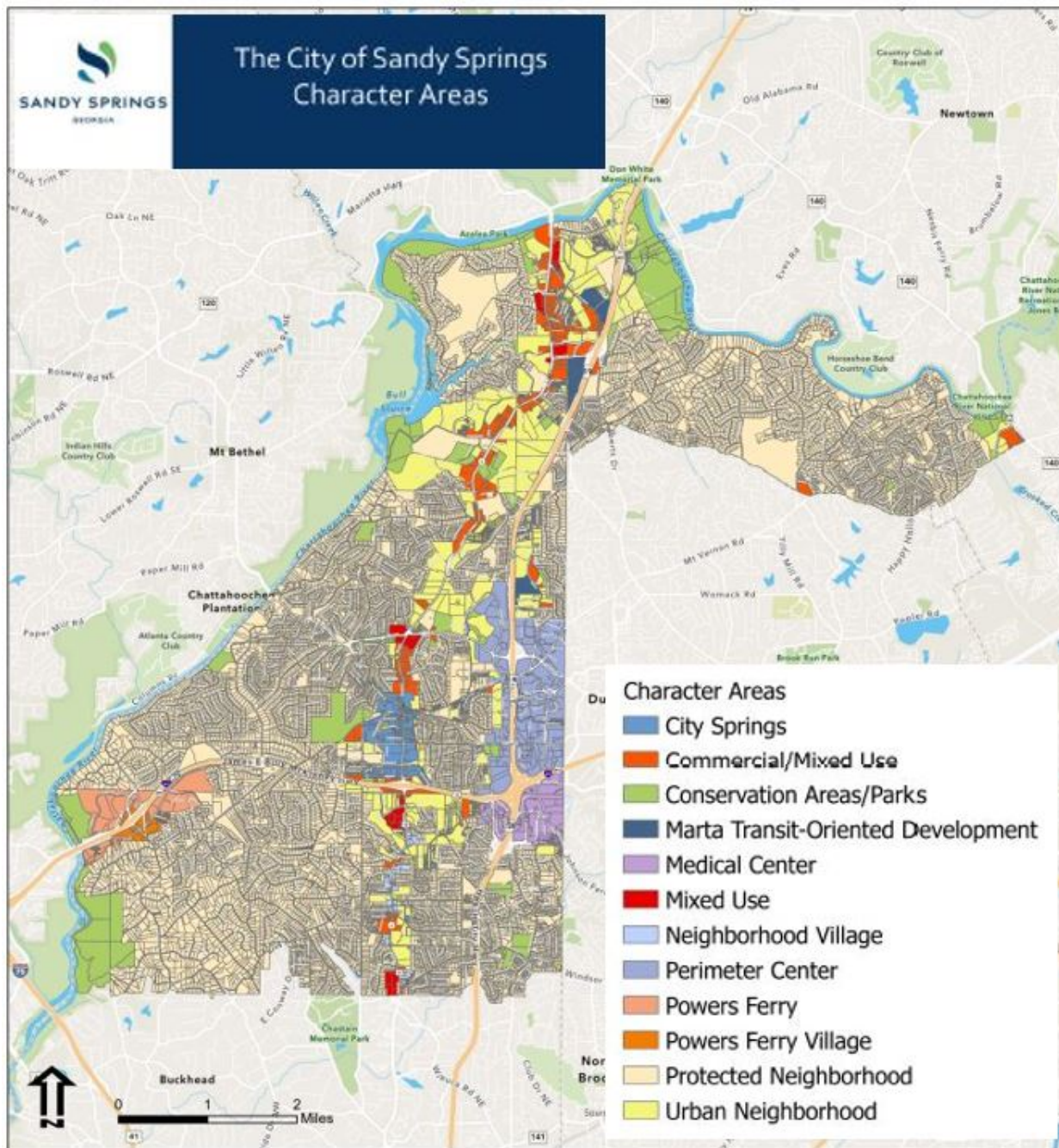
ARC's Livable Centers Initiative (LCI) program helps incentivize municipalities and communities "re-envision their communities as vibrant, walkable places that offer increased mobility options, encourage healthy lifestyles, and provide improved access to jobs and services." LCI study areas are eligible for ARC funding for transportation projects that further these goals. Three LCI study areas are fully or partially within Sandy Springs: Perimeter and Sandy Springs (both regional activity centers), and Roswell Road. The Roswell Road LCI area is located directly south of the Sandy Springs activity center area.

SANDY SPRINGS

Transportation Master Plan



Transportation Master Plan



5 | Mobility

Roadway

Roadway investments in Sandy Springs include both traditional infrastructure and a variety of technologies deployed to improve performance of the network.

Street Network

Functional Class

The roadway network in Sandy Springs includes interstates and expressways, principal and minor arterials, collectors, and minor streets. These roadways are designed to fulfill different purposes – from facilitating regional mobility down to providing neighborhood-level access. Functional classifications are used to group roadway facilities by purpose and characteristics. The Federal Highway Administration (FHWA) groups roadways into the following functional classes:

- Interstates are the highest classification of arterials. They are limited-access facilities designed and constructed with mobility and long-distance travel in mind.
- Expressways, like interstates, are controlled access facilities that do not directly serve abutting land uses, and they are intended to maximize mobility.
- Principal arterials serve major centers of metropolitan areas, provide a high degree of mobility, and offer direct access to abutting land uses. There are usually multiple arterial routes serving an urban area, which radiate out from the urban center to serve the surrounding region.
- Minor arterials facilitate trips of moderate length, serve smaller geographic areas than their higher arterial counterparts, and offer connectivity to the higher arterial system. In an urban context, they interconnect and augment the higher arterial system, provide intra-community connectivity, and may carry local bus routes.
- Collectors serve a critical role in the roadway network by gathering traffic from local roads and funneling them to the arterial network.
- Local roads generally account for the largest percentage of all roadways in terms of mileage. They are not intended for use in long distance travel, except at the origin or destination end of the trip, and they provide direct access to abutting land uses. Bus routes generally do not run on local roads, and these facilities are often designed to discourage through traffic.¹

¹ Highway Functional Classification Concepts, Criteria and Procedures, p. 14-17. FHWA (2013).
https://www.fhwa.dot.gov/planning/processes/statewide/related/highway_functional_classifications/fcaub.pdf

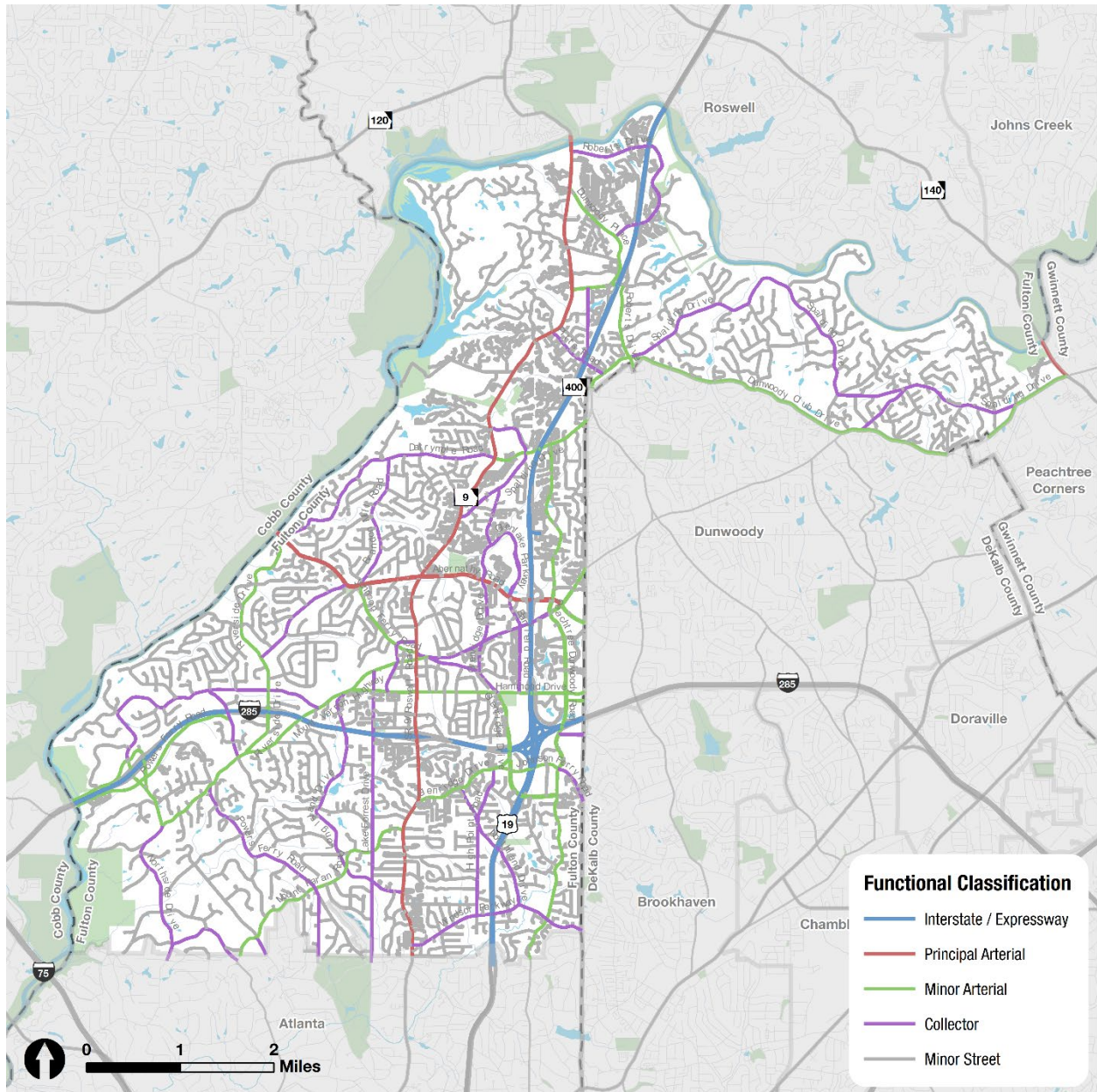
There are slightly more than 500 miles of roadway in Sandy Springs. Although interstates and expressways comprise just seven percent of total roadway mileage in the City, these facilities carry more traffic than any other functional class. Despite this, almost three quarters of roadway-miles in Sandy Springs are local facilities. The table below provides an overview of the City's roadway network by functional class, as adopted by the Sandy Springs Mayor and City Council in April 2010. Sample facilities are given to help contextualize the characteristics of each functional class.

Functional Class	Total Miles	Percent of Total Roadway-Miles	Example Facilities
Interstate/Expressway	35.9	7%	I-285, GA 400
Principal Arterial	17.0	3%	Roswell Road
Minor Arterial	40.7	8%	Mt. Vernon Highway
Collector	45.6	9%	Heards Ferry Road
Local Street	368.0	73%	Neighborhood cul-de-sac
TOTAL	507.2	100%	

The Sandy Springs functional classification system does not exactly match the statewide system developed by GDOT and ARC. The minor differences between the two systems allow Sandy Springs to have more granular control over roadway typologies in the City. For example, Sandy Springs has designated Johnson Ferry Road as a minor arterial west of Peachtree Dunwoody Road and a collector east of Peachtree Dunwoody Road, while GDOT has designated Johnson Ferry Road as minor arterial for the entirety of the road's length within Sandy Springs. All roadway data is from the City of Sandy Springs except the GDOT Functional Classification.

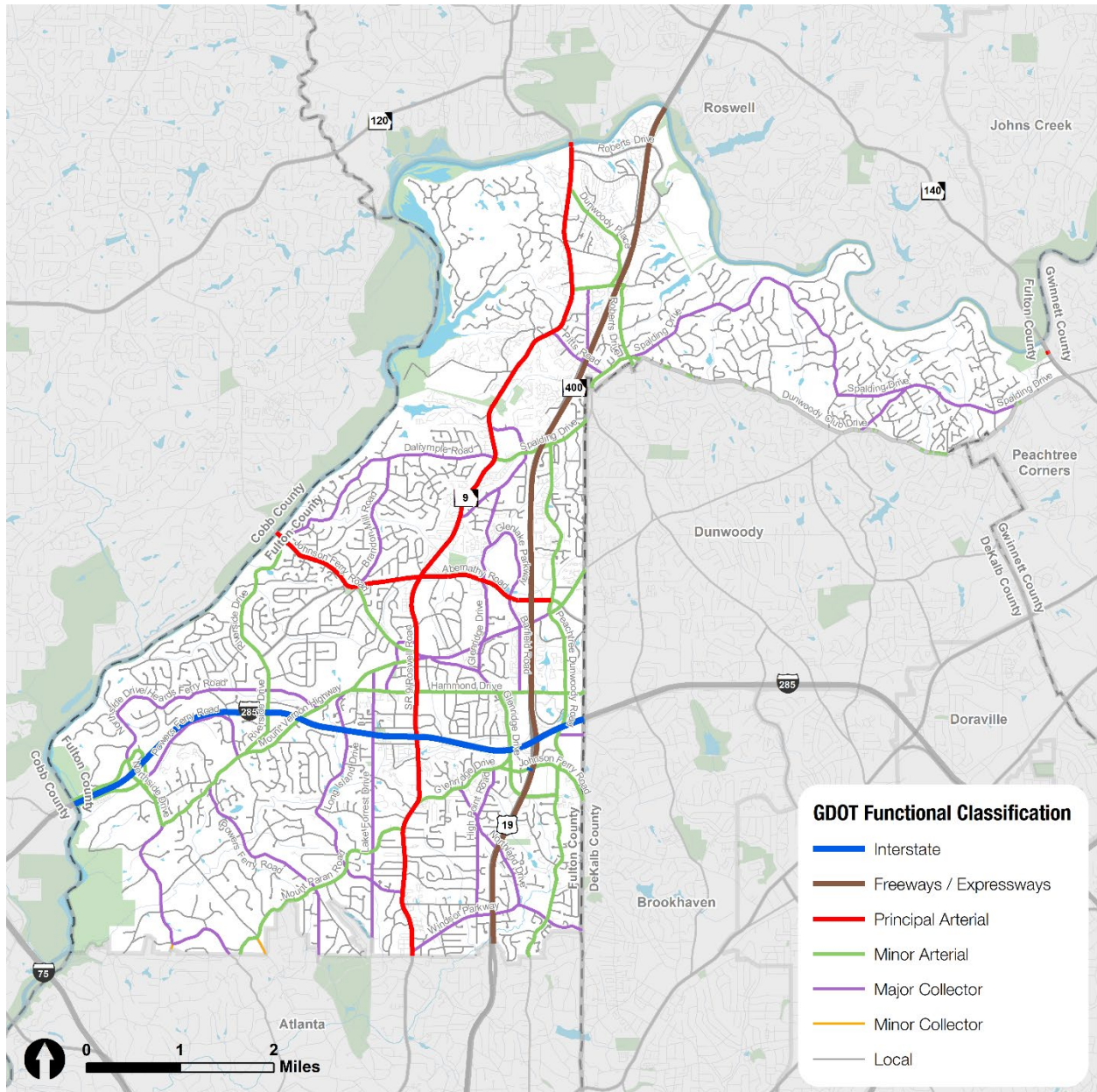
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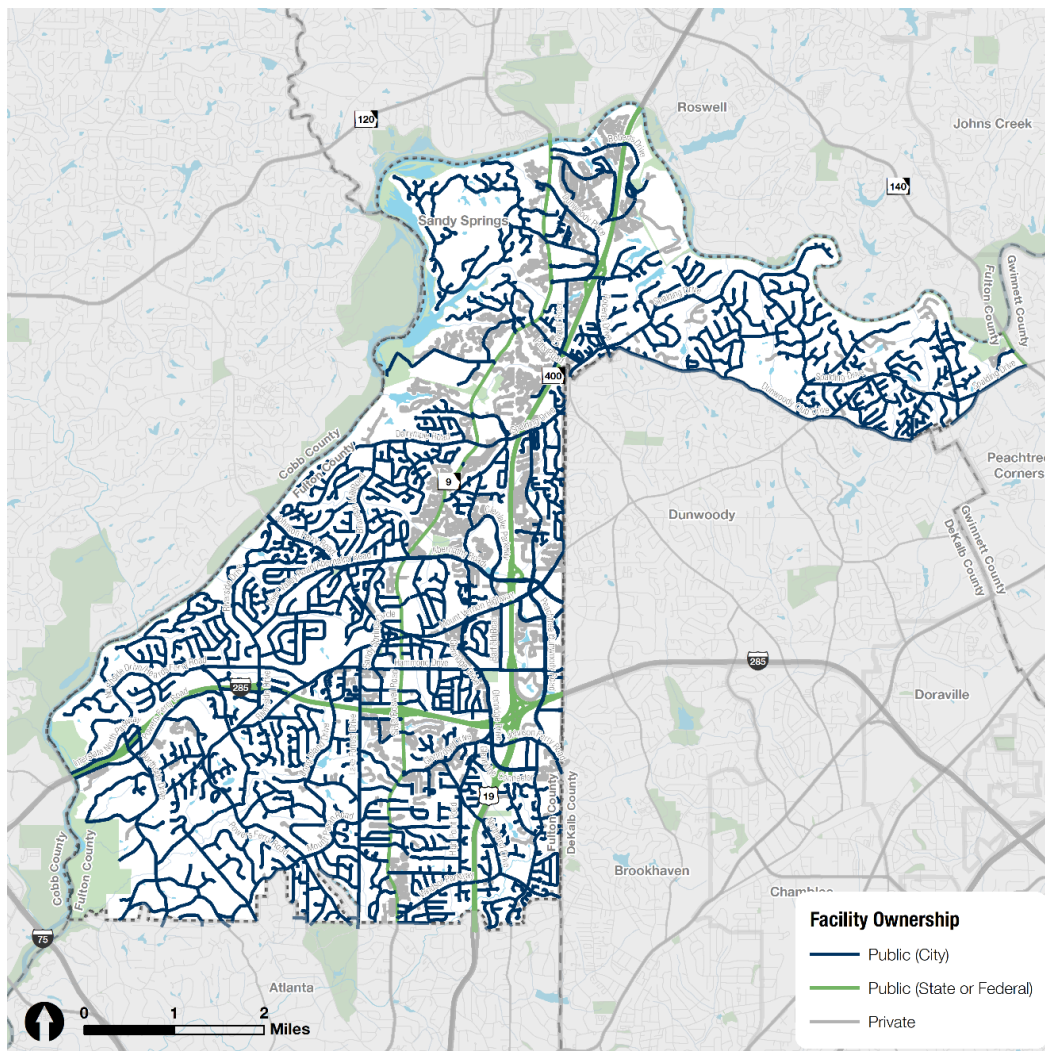
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Facility Ownership

The majority of roadways in Sandy Springs are publicly owned by either the City (approximately 65%) or the State / Federal government (approximately 10%). The remaining portions of the network, approximately 25% of the total, is privately owned. Many of these privately owned streets are internal streets located within apartment complexes, gated neighborhoods, and commercial developments. The table below summarizes the roadway network by owner.

Facility Owner	Total Miles
Public (City)*	323.4
Public (State or Federal)	56.6
Private Street	124.4
Private Driveway	2.8
TOTAL	507.2

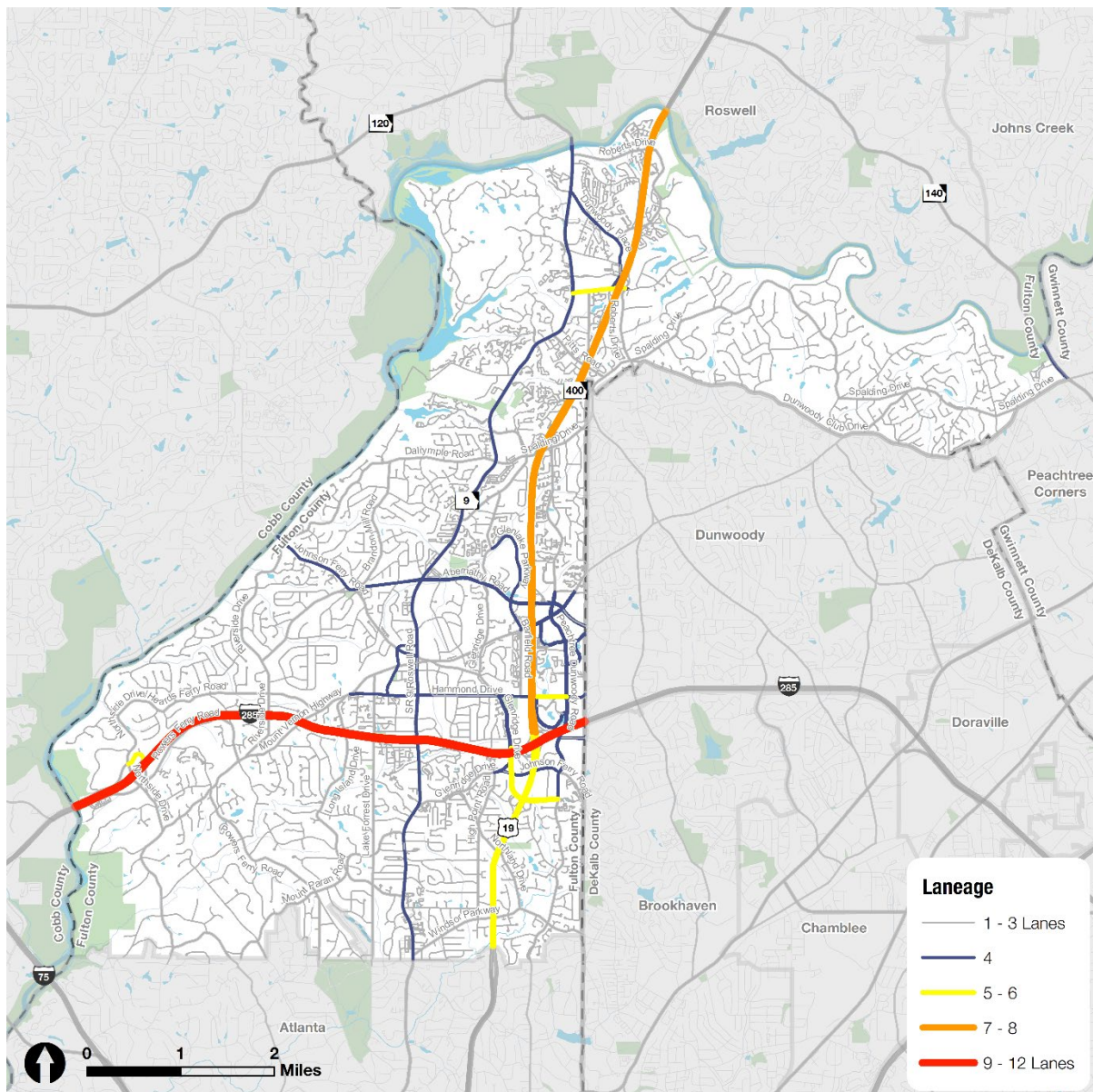
*Reported mileage is calculated based on divided roadways so it is greater than total centerline miles in the City.



Laneage

Local roadways will almost always be built as two-lane facilities, providing one lane in each direction of travel. Approximately half of non-local roadways in Sandy Springs consist of two lanes (48 percent of non-local roadway miles). Approximately 23 miles of roadway consist of four lanes (17 percent of non-local roadway miles), and 66 miles of roadway are greater than four lanes (33 percent of non-local roadway miles).

The widest facilities in Sandy Springs are I-285 and GA 400. Interstate 285 bisects Sandy Springs from east to west and generally has ten travel lanes (five in each direction), with limited portions of the facility having a total of twelve lanes. State Route 400, which runs north-south through the center of the City, is generally structured as an eight-lane facility (four lanes in each direction).



Street Typology

Sandy Springs has developed a street typology framework to establish a vision for how streets should function within the context of land use and community character. The framework grew out of a need, identified in the City's *The Next Ten* comprehensive plan, to improve integration of land use context and transportation function.

Each street type in the framework specifies the transportation role and function, dominant surrounding land use, typical users, typical operations, and corresponding functional class for a given facility. A total of five street types have been established:

- **Network Destination & Network Residential:** Arterials such as Roswell Road (SR 9), Hammond Drive, and Peachtree Dunwoody Road are classified as network residential and/or network destination streets, which are designated for moving substantial volumes of traffic through the City. These streets should be designed to manage the variety of users by providing separate facilities for motorists, pedestrians, and cyclists.
- **Low-Stress Residential:** Collectors and minor arterials are generally designated as low-stress residential roadways. These facilities are designed to carry a combination of local traffic and travelers from adjacent jurisdictions at moderate overall traffic volumes. These roadways should be designed as "yield streets," or streets that accommodate two-way traffic volume at lower speeds through predominantly residential areas. Bicycle facilities are generally on the roadway and ideally separated from pedestrian traffic.
- **Protected Local Link & Internal Neighborhood:** Local streets, and some collector streets, are designated as protected local links and/or internal neighborhood streets. These streets are intended for local travelers and should be designed as yield streets. These streets may not have sidewalks. Traffic calming features may be considered if motorists are using them to "cut-through" to other areas.

Bridge Inventory

All of City-owned bridges in Sandy Springs are in Fair condition or better. There are a total of 46 bridges in Sandy Springs, of which 24 are owned and maintained by the Georgia Department of Transportation (GDOT) and 22 are owned and maintained by the City of Sandy Springs. Of the 22 city-owned bridges, seven (32%) are in Good condition, and fourteen (64%) are in fair condition. No structures are in Poor condition, although data for one bridge (Windsor Pkwy. between Westfield and Highpoint) is unavailable.

Bridge condition scores are generated as part of the FHWA National Bridge Inventory (NBI), which classifies structures as either Good, Fair, or Poor based on bridge inspections². Classifications are

³ Recording and Coding Guide for the Structure Inventory and Appraisal of the Nation's Bridges, p. 38. FHWA (1995). <https://www.fhwa.dot.gov/bridge/mtguide.pdf>

based on four items from the inspection process: condition of the bridge deck (Item 58), condition of the superstructure (Item 59), construction of the substructure (Item 60)³, and/or condition of the culvert structure (Item 62). Each item is assessed on a score from 1 to 7. The overall bridge score is equal to the lowest assessed score from inspection items 58, 59, 60, and 62. Structures where the lowest score is 7 are assessed to be in "Good" condition while structures where the lowest item score is a 5 or 6 are assessed to be in "Fair" condition. Structures where any of the four items score a 4 or below are graded as being in "Poor" condition. Bridge conditions for the 22 city-owned structures are depicted in the table below.

Bridge Number	Location	Condition
121-0278-0	Spalding Dr. over Cooked Creek ⁴	Fair
121-0293-0	Dunwoody Club Dr. over Ball Creek	Fair
121-0443-0	Northside Dr. over Long Island Creek	Fair
121-0451-0	Powers Ferry Rd. over Long Island Creek	Fair
121-0453-0	Riverside Dr. over Chattahoochee River Trib.	Fair
121-0456-0	Long Island Dr. over Long Island Creek	Fair
121-0457-0	Johnson Ferry Rd. over Chattahoochee River	Fair
121-0458-0	Windsor Pkwy. over Nancy Creek	Fair
121-0592-0	Peachtree Dunwoody Rd. Over Nancy Creek Trib.	Good
121-0593-0	Hammond Dr. over Nancy Creek Trib.	Good
121-5030-0	Spalding Dr. over Ball Mill Creek	Good
121-5034-0	Brandon Mill Rd. over Marsh Creek	Fair
121-5035-0	Glenridge Rd. over Marsh Creek	Fair
121-5036-0	Lake Forest Dr. over Long Island Creek	Fair
121-0593-0	Hammond Dr. over Nancy Creek Tribe	Good
121-5176-0	Jett Rd. over Long Island Creek	Fair
121-5187-0	Kingsport Dr. over Long Island Creek	Fair
121-5217-0	Coles Way over Chattahoochee River Trib.	Good
121-5289-0	Glenlake Pkwy. over Marsh Creek	Fair
121-5329-0	Peachtree Dunwoody over Nancy Creek	Good
121-5330-0	Riverside Dr. over Marsh Creek	Good
--	Windsor Pkwy b/w Westfield and Highpoint	Unavailable

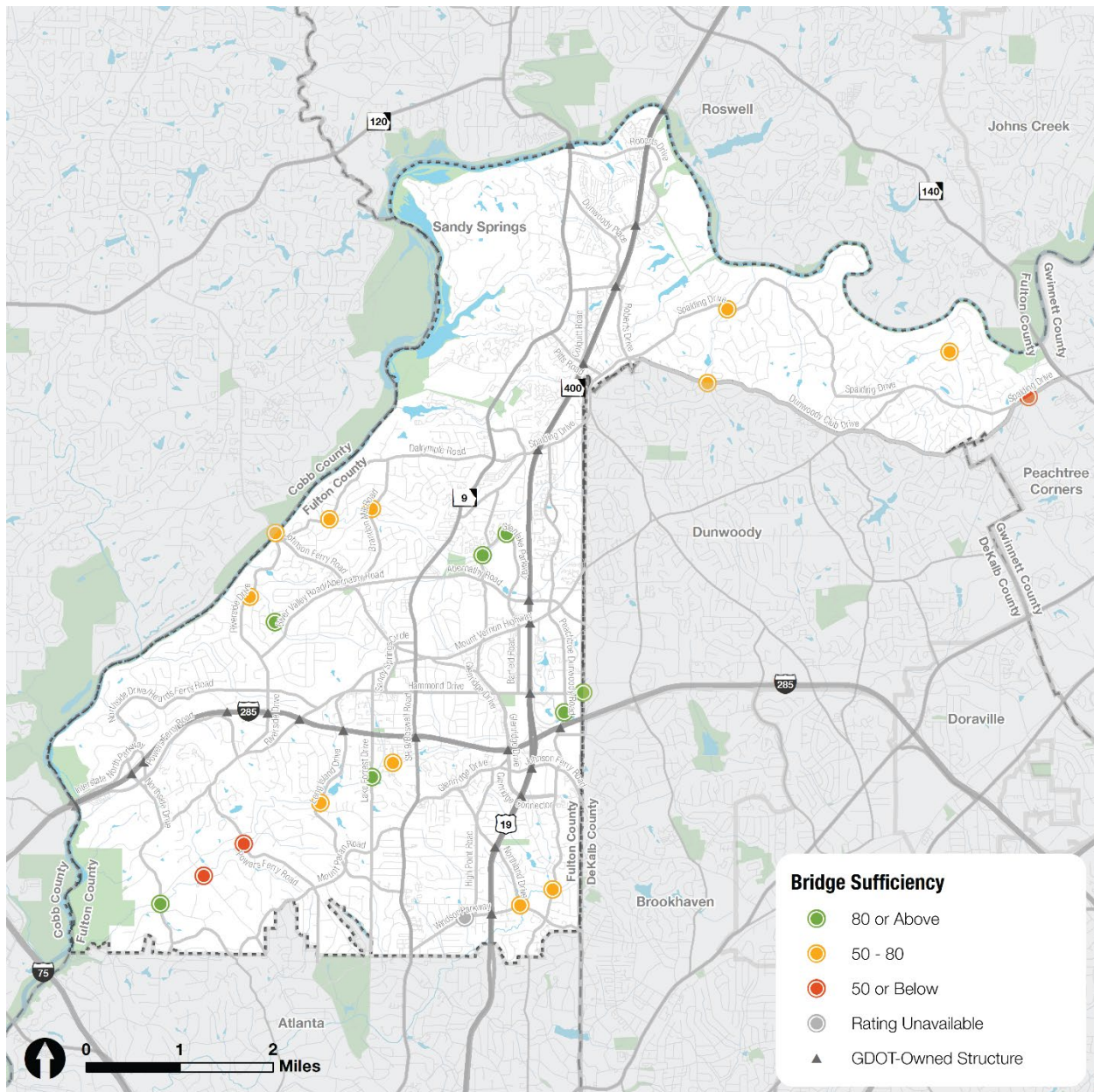
The FHWA National Bridge Inventory (NBI) also assigns sufficiency scores for bridges, which are based upon the bridge inspection items discussed above, as well as the structure's appropriateness for current and projected traffic volumes and essentiality for public use. In recent

³ Recording and Coding Guide for the Structure Inventory and Appraisal of the Nation's Bridges, p. 38. FHWA (1995). <https://www.fhwa.dot.gov/bridge/mtguide.pdf>

⁴ This bridge is programmed for replacement through a joint SPLOST project between the City of Sandy Springs and Gwinnett County.

years FHWA has moved to the simplified condition scoring system described above, although bridge sufficiency scores remain a key indicator of a structure's overall health and fitness for purpose. Three City-owned bridges in Sandy Springs have a sufficiency score under 50:

- Spalding Drive over Crooked Creek
- Jett Road over Long Island Creek
- Powers Ferry Road over Long Island Creek



Pavement Condition

As part of the City's "Operation Pave On" program, a pavement condition survey was conducted for all roads owned by Sandy Springs in 2015 and updated in 2018. The survey program follows the ASTM D6433 *Standard Practice for Roads and Parking Lots Pavement Condition Index (PCI) Surveys* methodology. Using a combination of technology and human observation, the survey assessed and scored the condition of city roadways on a scale of 0 to 100, with 0 being the worst and 100 being the best. The PCI score is weighted 33% on roughness and 67% on surface distress. Surface distress includes roadway conditions such as the following:

- Fatigue/Alligator Cracking
- Wheel Path Rutting
- Cracking Distortions & Weathering Patching
- Potholes
- Roughness
- Raveling
- Bleeding⁵

Depending on the PCI score, roadways require different treatments for maintenance or repair. The following table outlines potential treatments that Sandy Spring may apply to roadways based on assessed pavement condition.⁶

PCI Score	Potential Treatment
Excellent (0-100)	Routine and preventative maintenance, some crack and joint sealing, and localized repairs are recommended
Very Good (80-90)	Surface treatments (slurry, micro surface, chip seals), localized removing and replacement of the Portland cement concrete (PCC), crack deal and joint sealing
Good (70-80)	Surface treatments with localized repair to thin overlaps or PCC slight panel replacement
Fair (60-70)	Thin to moderate overlays with some remove and replace, or PCC moderate panel replacement
Marginal (50-60)	Progressively thicker overlays with remove and replace, PCC extensive panel replacement
Poor (35-50)	Thick overlaps to partial reconstruction (surface removal, compaction, overlay), PCC extensive panel replacement and grinding
Very Poor (0-35)	Full reconstruction and base stabilization

⁵ Pavement Condition Explorer - Sandy Springs. Fulton County (2018).

<https://gisdata.fultoncountygga.gov/datasets/f6758c83228c4f6da8e1e949fe7f31bf>

⁶ 2015 Pavement Condition Index (PCI) Analysis Presentation. City of Sandy Springs. October 20, 2015.

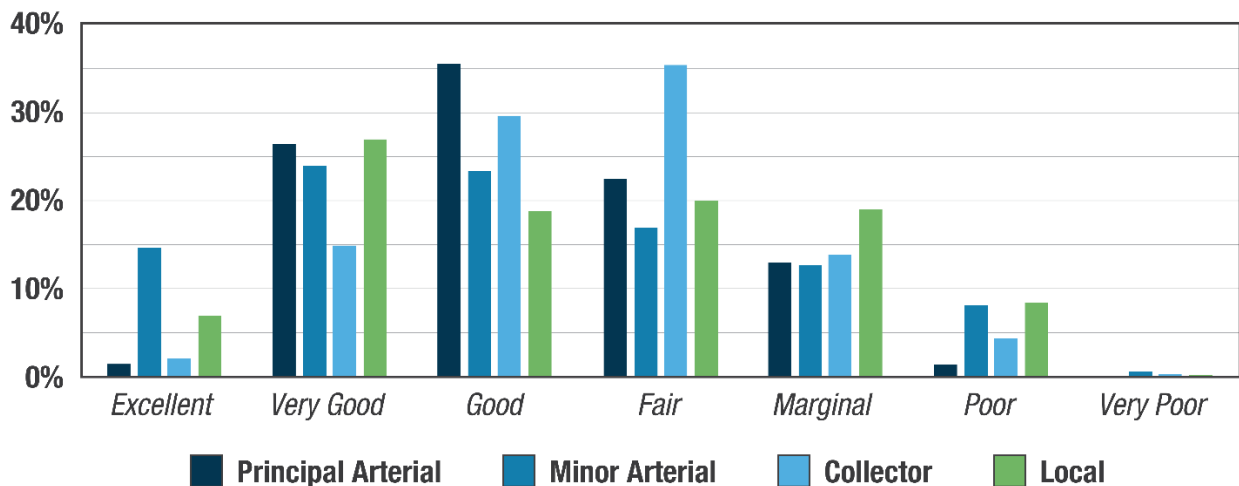
<http://www.sandyspringsga.gov/Home/Components/MeetingsManager/MeetingItem/ShowDocument/?documentID=2716>

Approximately 80% of the 309 miles of City-owned roadway (as of 2018) are in Fair condition or better. The remaining 20% of facilities will require more substantial treatment to repair. The table at right provides an overview of the road network by pavement condition.

Condition	Total Miles
Excellent	21.8
Very Good	76.5
Good	66.2
Fair	67.5
Marginal	52.9
Poor	23.5
Very Poor	0.6
TOTAL	309.0

When the overall road network is divided by functional class, principal arterials, minor arterials, and collector roads (80 percent+ in Fair or better condition) tend to exhibit better pavement condition than local streets (72 percent Fair or better condition). Since 73 percent of total roadway mileage in Sandy Springs consists of local streets, this represents a significant maintenance obligation for the City. A summary of pavement condition by functional class is illustrated in the following chart.

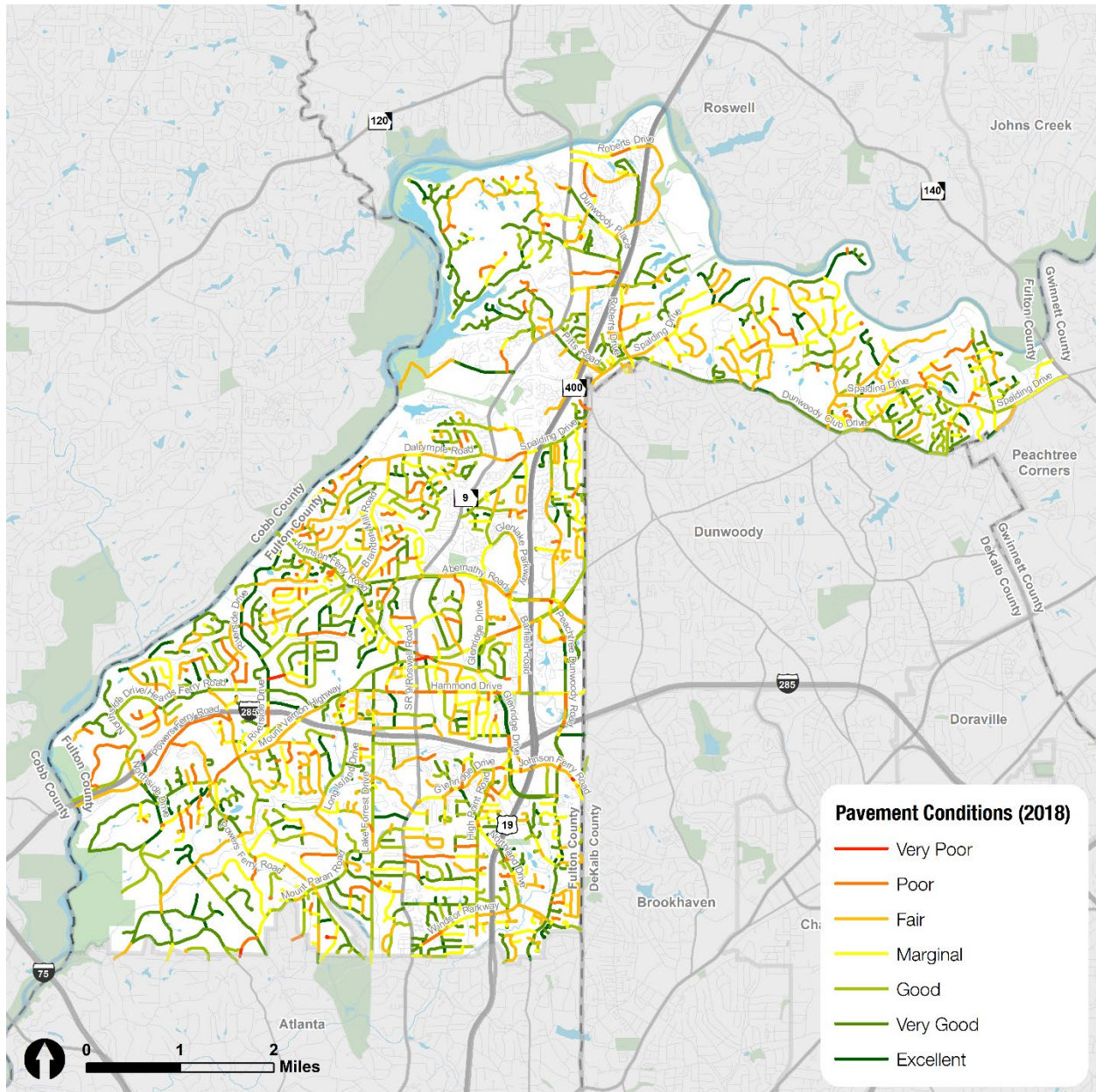
Pavement Condition by Functional Class



Since 2018, the year the data in the above chart was collected, the City has repaved 14.2 miles of roadway. As part of the City's ongoing *Operation Pave On* program, approximately 12 miles of municipal streets are scheduled for resurfacing over the next few years.

SANDY SPRINGS

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Freight Network

The freight network in Sandy Springs facilitates the safe and efficient movement of goods through the City. Sandy Springs has designated seven corridors as freight routes within the City. These routes are summarized in the table below.

Road Name	Starting Terminus	Ending Terminus
Abernathy Rd.	Johnson Ferry Rd.	Dekalb County Line
Holcomb Bridge Rd.	Alpharetta St.	Dekalb County
I-285	Cobb County Line	Dekalb County Line
Johnson Ferry Rd.	Cobb County Line	Abernathy Rd.
Northridge Rd.	Roswell Rd./SR 9	GA 400
Old Alabama Rd.	Medlock Bridge Rd.	Holcomb Bridge Rd.
Roswell Rd./SR 9	Alpharetta St.	Atlanta City Limits
GA 400	Forsyth County Line	Atlanta City Limits

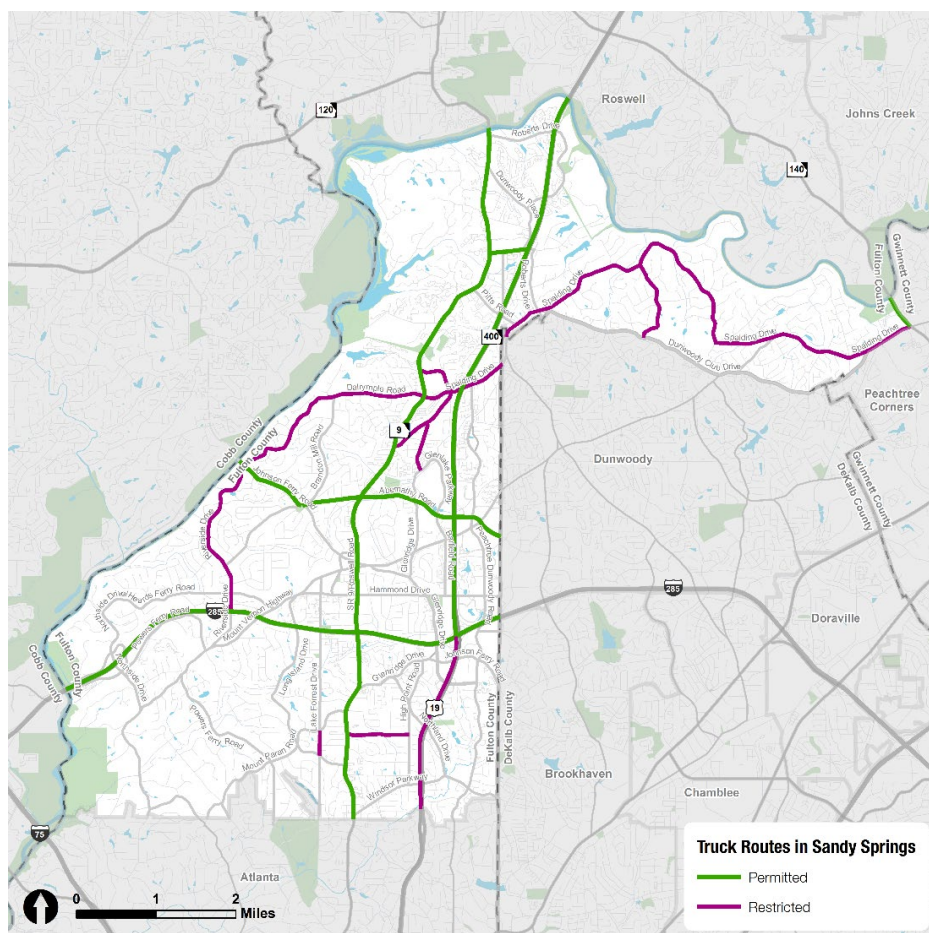
Chapter 58, Article II, Truck Routes (Sections 58-31 through 58-41) of the City of Sandy Springs Code of Ordinances provides truck route definitions and restrictions. Section 58-32 prohibits trucks from using city roadways other than those designated as truck routes.⁷ Routes specifically restricted from truck traffic within the City are shown in the following table.

Road Name	Starting Terminus	Ending Terminus
Ball Mill Rd.	Spalding Dr.	Chaparral Pl.
Chaparral Pl.	Ball Mill Rd.	Dunwoody Club Dr.
Dalrymple Rd.	Brandon Mill Rd.	Spalding Dr.
Forest Hills Dr.	Roswell Rd./SR 9	High Point Rd.
Glenridge Dr.	Glenlake Pkwy.	Spalding Dr.
Lake Forrest Dr.	Long Island Dr.	Mount Paran Rd.
Spalding Dr.	Roswell Rd./SR 9	DeKalb County Line
Riverside Dr.	I-285	Brandon Mill Rd.
Spalding Dr.	Dekalb County Line	Holcomb Bridge Rd.
Trowbridge Rd.	Morgan Falls Rd.	Spalding Dr.

At the regional level, the ARC Atlanta Strategic Truck Route Master Plan (ASTRoMaP) established a regional truck route network to direct and manage freight movement throughout the Atlanta region. The ASTRoMaP organizes truck routes into N-S Corridors, E-W Corridors, Connectors, and Interstates. Within Sandy Springs, there is one interstate, I-285, designated on the truck route network, and one named truck route, NS-E0. NS-E0 is an 88.1-mile north-south truck route stretching from the Dawson/Forsyth County line (north of Sandy Springs) to the Fulton/Coweta

county line (south of Sandy Springs). Within the City, NS-E0 travels on Roswell Road/SR 9 and is hazmat-restricted.⁸

As designated truck routes, I-285 and GA 400 facilitate regional east-west and north-south connectivity, respectively. The Roswell Road/SR 9 interchange with I-285 creates redundancy in the regional north-south truck network by allowing the Roswell Road corridor to serve as an alternate truck route to GA 400. This redundancy in freight network is supplemented by Abernathy Road and Northridge Road, which provide east-west connectivity between Roswell Road/SR 9 and GA 400. Commercial vehicle traffic is not allowed inside the perimeter except for specific circumstances. Other arterials that facilitate regional truck travel include Abernathy Road and Johnson Ferry Road, which enable connections between DeKalb and Cobb Counties through north Fulton County. The truck prohibitions on minor arterials and collectors such as Riverside Drive, Dalrymple Road, and Spalding Drive protect neighborhoods in Sandy Springs from intrusion by heavy truck traffic.



⁸ Atlanta Strategic Truck Route Master Plan. ARC (2010). <https://cdn.atlantaregional.org/wp-content/uploads/tp-astromap-recommendations-042810.pdf>

Safety

Transportation safety is a multifaceted issue; to capture the various impacts on Sandy Springs the following section is organized into three areas:

- **Crash History:** Incidents by type and severity from 2015-2019 for users of all modes
- **Traffic Calming:** Criteria for implementing traffic calming measures on neighborhood streets
- **Safety Targets:** Potential safety goals and priorities for Sandy Springs

Crash History

In the period from 2015 to 2019, there were a total of 18,056 crashes on surface streets in Sandy Springs (crashes occurring on I-285 and GA 400 are not included in this total, as the City does not have jurisdiction of these facilities) based on GEARS. **Almost 70% of all surface street crashes occurred on ten corridors in the City, with more than a quarter of all surface street crashes occurring on Roswell Road.** The ten corridors with highest number of crashes during the analysis period are summarized in the table below.

Corridor	Crashes	Percent of Total
Roswell Road	5,140	28%
Peachtree Dunwoody Road	1,457	8%
Abernathy Road	1,263	7%
Hammond Drive	965	5%
Johnson Ferry Road	861	5%
Northridge Road	674	4%
Glenridge Drive	651	4%
Mount Vernon Highway	622	3%
Dunwoody Place	563	3%
Riverside Drive	385	2%

Between 2015 and 2019, the most common incident type was rear-end crashes (44% of all surface street crashes). These crashes typically occur in congested traffic conditions. The second most prevalent crash type was angle crashes (32% of surface street crashes), which can likely be attributed to sight distance issues, intersection geometry issues, or the need for signal control at unsignalized intersections. Other types of crashes occurring in Sandy Springs were sideswipes in the same direction (13% of surface street crashes), collisions with objects other than motor vehicles (7%), sideswipes in opposing directions (2%), and head on collisions (2%). Crash data from 2015-2019 is summarized by incident type in the following table.

Year	Crash Type							Total Crashes
	Angle	Head On	Rear End	Sideswipe-Same	Sideswipe-Opposite	Collision not with Vehicle	Not Specified	
2015	1,057	65	1,663	489	84	246	33	3,637
2016	1,172	70	1,770	528	80	259	10	3,889
2017	1,311	86	1,719	472	66	243	10	3,907
2018	1,118	64	1,406	399	70	208	4	3,269
2019	1,149	49	1,430	446	41	238	1	3,354
Total	5,807	334	7,988	2,334	341	1,194	58	18,056
Percent	32.2%	1.8%	44.2%	12.9%	1.9%	6.6%	0.3%	100.0%

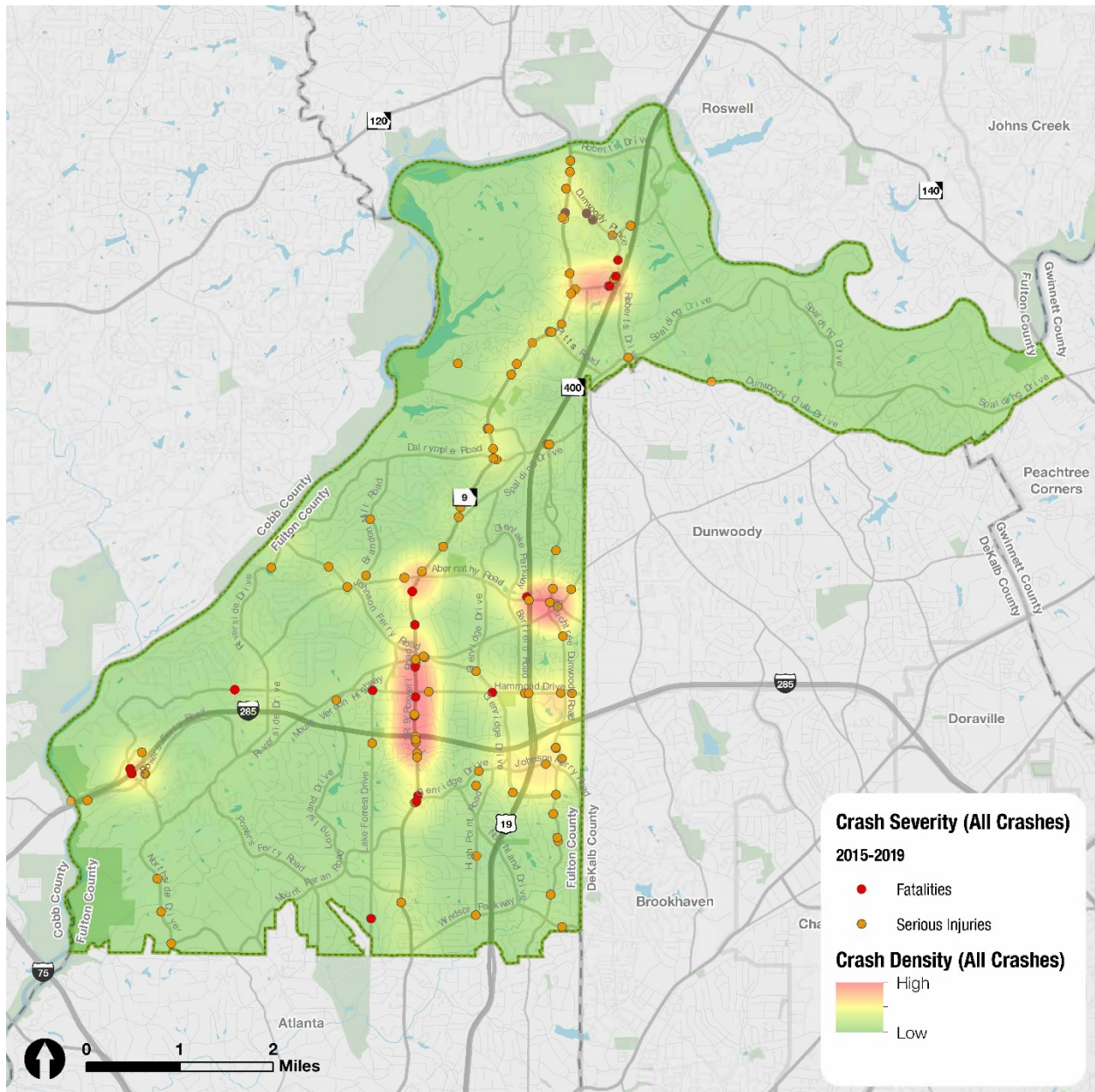
Between 2015 and 2019, 78% of surface street crashes in the City resulted in property damage only, while the remaining 22% of crashes resulted in at least one injury. A total of 26 crashes resulted in a fatality. Surface street crashes are shown by severity level in the following table.

Year	Severity			Total Crashes
	PDO	Injury	Fatal	
2015	2,798	836	3	3,637
2016	3,051	833	5	3,889
2017	3,078	827	2	3,907
2018	2,552	708	9	3,269
2019	2,608	739	7	3,354
Total	14,087	3,943	26	18,056
Percent	78%	22%	0%	100.0%

Serious Injury and Fatal Crashes

Between 2015 and 2019, a total of 119 crashes on surface streets in Sandy Springs resulted in a serious injury or fatality. The highest concentrations of serious injury and fatality crashes occurred along Roswell Road/SR 9 between Johnson Ferry Road and Lake Placid Drive (just south of I-285), near the intersection of Peachtree Dunwoody Road and Abernathy Road, Roberts Drive at Northridge Road, and at Roberts Drive at Roswell Road/SR 9. Additional concentrations of serious injury and fatal crashes were observed in the Medical Center area, near Johnson Ferry Road west of GA 400, Northside Drive and New Northside Drive at I-285, in the vicinity of Hammond Drive and Peachtree Dunwoody Road, and Roswell Road/SR 9 near Dunwoody Place.

Serious injury and fatal crashes occurred continuously along Roswell Road, between I-285 and the northern City limits at the Chattahoochee River.

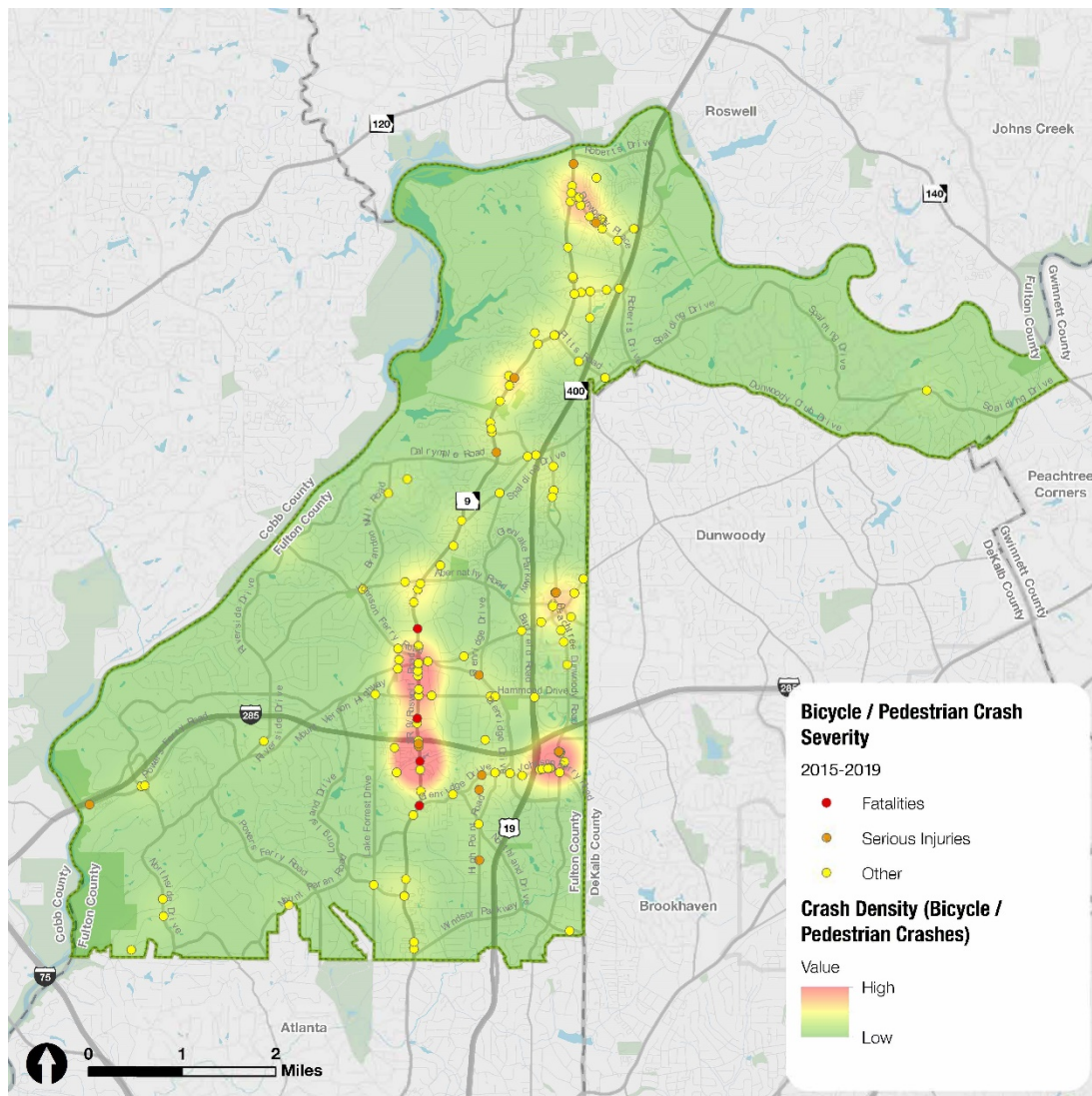


Bicycle and Pedestrian Crashes

Bicycle- and pedestrian-involved crashes involve a collision between a motor vehicle and a person walking or riding a personal conveyance such as a bicycle or electric bicycle, scooter, or skateboard. **Between 2015 and 2019, there were 167 pedestrian-involved and 39 bicycle-involved crashes on surface streets in Sandy Springs. More than a third of all pedestrian-involved crashes, and more than 20% of bicycle-involved crashes, occurred on Roswell Road (SR 9). Eighteen percent of bicycle-involved crashes occurred on Johnson Ferry Road, with a**

further eight percent of both pedestrian- and bicycle-involved crashes occurring on Peachtree Dunwoody Road. The highest concentrations of these crashes are located along Roswell Road/SR 9 between Johnson Ferry Road and Glenridge Drive, along Johnson Ferry Road and Peachtree Dunwoody Road in Medical Center area, and along Dunwoody Place.⁹

Bicycle- and pedestrian-involved crashes resulted in a much higher frequency of serious injuries and fatalities than automobile-only crashes. While less than one percent of motor vehicle-only crashes resulted in severe injuries or fatalities, almost eleven percent of pedestrian-involved crashes (18 of 167 incidents) and more than five percent of bicycle-involved crashes (2 of 39 incidents) resulted in at least one severe injury or fatality. These statistics underscore the vulnerability of those using active transportation in the City.



⁹ GDOT GEARS Crash Database

Traffic Calming

While Sandy Springs' proximity to regional corridors and activity centers is a benefit to both residents and businesses, the City's central location can sometimes have unintended negative impacts on neighborhoods. Congestion on major thoroughfares can lead to residential streets becoming alternative routes for drivers trying to avoid delays. Additionally, the Chattahoochee River border on the City's western and northern border limits the number of available river crossings, forcing traffic onto a few corridors.

To combat these issues on residential streets, the City adopted the Neighborhood Traffic Calming Manual in 2008. It was later amended in November 2013. The manual establishes a process by which residents can request the implementation of traffic calming measures on neighborhood streets where driver speeding and/or cut-through traffic is a concern. To be eligible for traffic calming treatments, streets must be classified as minor streets, have a speed limit under 30 mph, and meet a variety of other safety requirements.

If each of the safety requirements are met and the neighborhood reaches consensus, then the City may install a traffic calming treatment to alter the design of the roadway and force drivers to slow down to appropriate speeds. Examples of traffic calming treatments highlighted in the manual include roundabouts, lane or street narrowing, chicanes, or curb extensions that require vehicles to slow down to navigate the roadway. If each of the safety requirements are not met, the City may choose to apply alternative treatments, such as radar speed feedback signs, which alert drivers when they are travelling above the speed limit, or pavement markings to serve as visual cues for motorists to slow down.¹⁰

Safety Targets

As noted previously, there were 18,056 crashes on surface streets in Sandy Springs between 2015 and 2019. Of these, 3,943 crashes resulted in at least one injury, and 26 resulted in a fatality. To help reduce the frequency of injurious and fatal crashes, many local governments establish safety targets, accompanied by a framework to help strategically reduce the number of crashes. One safety target that is gaining momentum in the U.S. is "Vision Zero." Vision Zero is built around the premise that while crashes are inevitable, serious injuries and fatalities are not; and that roadway infrastructure and transportation policy can be designed to help reduce the severity of crashes. A strong Vision Zero program typically includes the following components:

- A systems-based approach, focused on the built environment and policies that influence travel behavior
- An action plan with clear strategies, timelines, and performance measures

¹⁰ Neighborhood Traffic Calming Manual. October 2008.

<http://www.sandyspringsga.gov/home/showdocument?id=379>

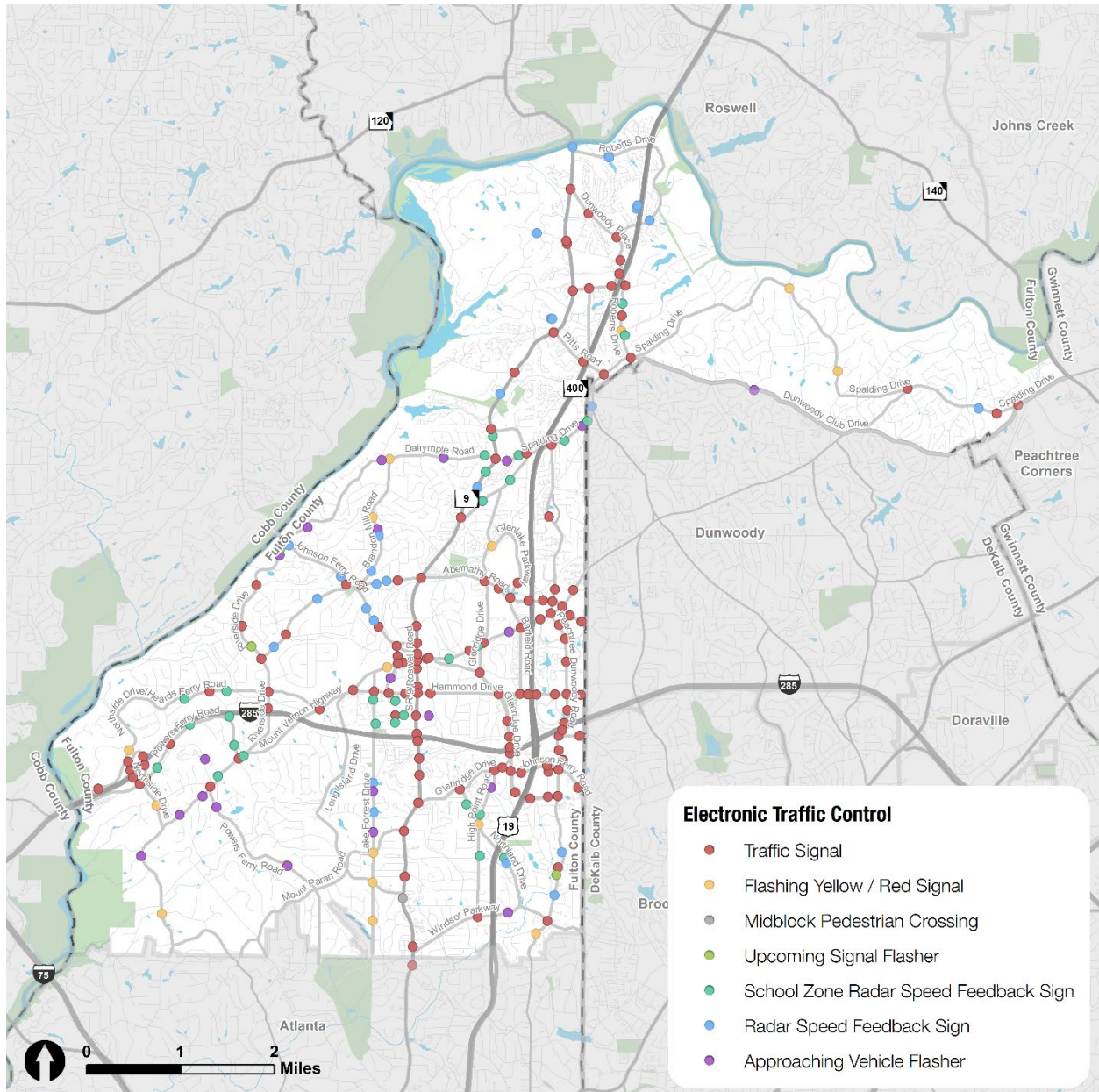
- An equitable approach that is inclusive of all groups and provides safe transportation options for all users
- Data-driven processes that ensure the sharing of pertinent data to understand traffic safety issues and prioritize resources
- Transparent processes and regular updates on the progress of the action plan and performance measures
- Opportunities for meaningful community engagement
- Political commitment from local officials
- Multi-disciplinary leadership, comprised of groups such as elected officials, transportation/public works department, public health, planning, and emergency services
- Cooperation and collaboration among stakeholders to ensure continued coordination and accountability¹¹

The City of Sandy Spring's Police Department set a goal to reduce the number of vehicle crashes for fiscal year 2021. The Next Ten Plan recommended performing a Vision Zero study for the City. The city has an opportunity to "break the mold" and become a pioneer within the Atlanta region by adopting a Vision Zero plan that includes thoughtful strategies to improve safety; and fosters collaboration among city departments to help achieve identified safety targets.

¹¹ "9 Components of a Strong Vision Zero Commitment." Vision Zero Network.
<https://visionzeronetwork.org/wp-content/uploads/2018/05/VZN-9-Components.pdf>

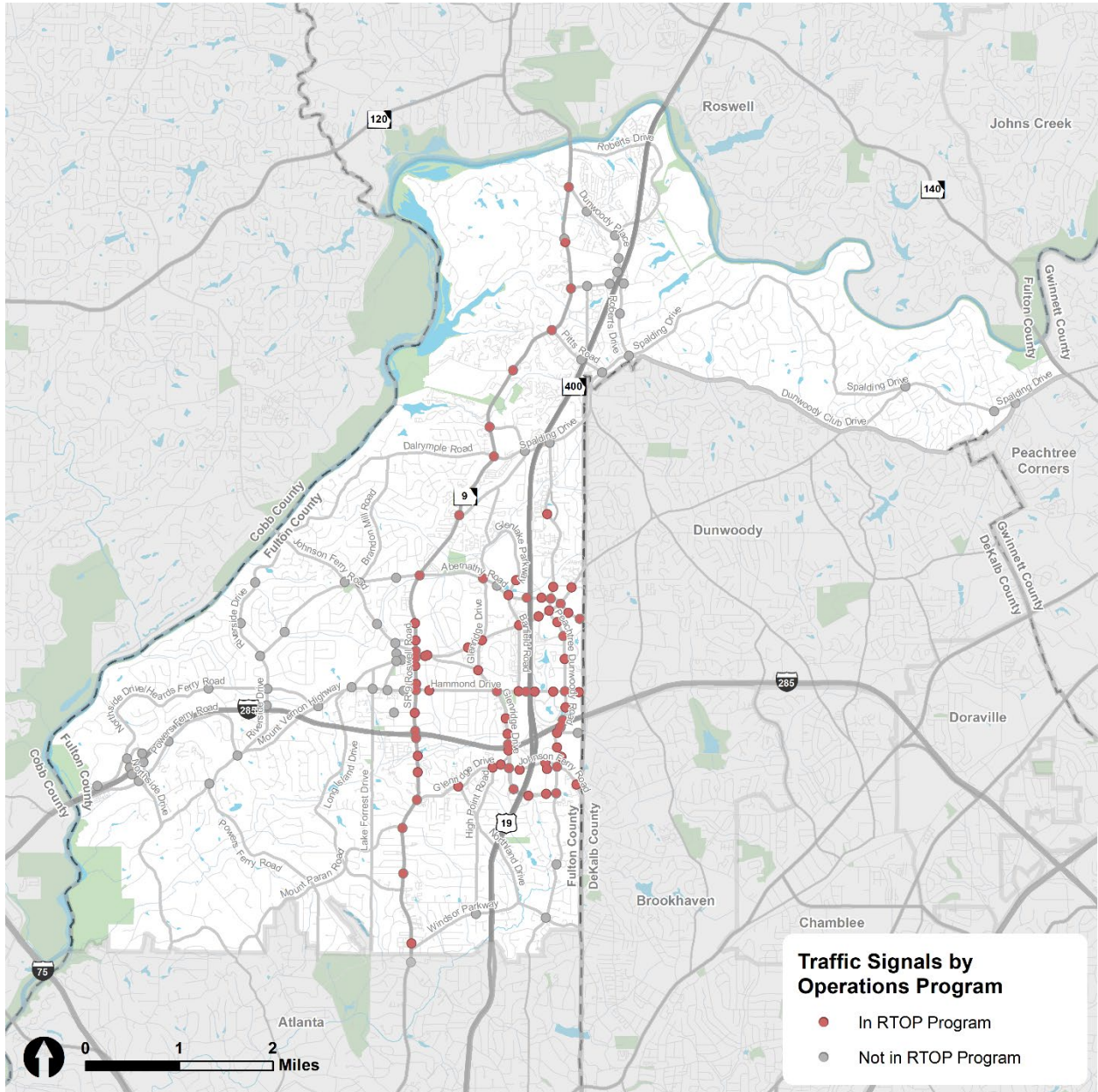
SANDY SPRINGS

Transportation Master Plan



SANDY SPRINGS

Transportation Master Plan



Technology

Sandy Springs has deployed an extensive suite of intelligent transportation system (ITS) technologies to improve the quality of the current transportation network in the City and is laying the groundwork to adopt emerging technologies in the coming years. These investments improve residents' quality of life by enhancing "**safety, mobility, connectivity, and efficiency throughout all modes of travel**" (2019 ITS Master Plan).

Existing ITS Network

The City's ITS infrastructure includes an interconnected network of traffic control devices, data collection units, and communications infrastructure. The network is monitored and controlled from a hub at the City's Traffic Management Center (TMC). In addition to overseeing operations within city limits, the Sandy Springs TMC plans to be directly connected to similar facilities in neighboring jurisdictions, as well as the central GDOT TMC in Atlanta.

Traffic signals are the most visible portion of the City's ITS network to residents. There are a total of 132 traffic signals in Sandy Springs, although the City TMC monitors an additional four signals in Atlanta. All of these installations are maintained by the City. GDOT's RTOP Program maintains the signals around Perimeter and on SR 9. Just over 60% of signals in Sandy Springs operate with standard equipment in either fixed time, actuated, or traffic-responsive timing patterns. The remaining signals use an advanced new adaptive timing system called Split Cycle Offset Optimization Technique (SCOOT). The City is in the process of rolling out the SCOOT system to an additional 50 signals. Once this project is complete, nearly 75% of traffic signals in Sandy Springs will feature SCOOT adaptive timing.

Several corridors in Sandy Springs are vital to regional traffic flow. To improve performance of these signals, the City is part of the GDOT Regional Traffic Operations Program (RTOP). RTOP improves regional traffic flows by providing optimized signal timing, upgrading and installing modern equipment, and monitoring communications and operations at signals included in the program. Roughly two-thirds (87 of 136) signals in Sandy Springs are included in the RTOP program.

Other traffic control systems operated and maintained by the City include high-intensity activated crosswalk (HAWK) beacons, school zone radar speed feedback signs, speed advisory signs, vehicle approaching warning flashers, and overhead caution dynamic messaging boards.

Keeping traffic moving at signals requires a substantial amount of real-time data. The City uses a network of 85 closed-circuit television (CCTV) cameras to monitor operations, detect and verify traffic incidents, and monitor traffic signaling equipment. All CCTV cameras can be controlled from the TMC.

Travel-time data along key corridors is collected from a network of 54 BlueTOAD nodes located at signal sites. These devices use anonymous data from Bluetooth-enabled devices such as cellphones to understand travel patterns, evaluate travel-time consistency and reliability, and provide traveler information to the public.

Queueing data at individual intersection approach lanes is also required for proper operation of signals. To collect this data, the City uses a combination of video, inductive loop, and wireless vehicle detection systems. The preferred detection solution for signal upgrades is a wireless in-pavement system developed by Sensys Networks since it is compatible with the SCOOT system. Pedestrian detection is provided by push buttons at crosswalks. Traffic signal preemption systems are installed at two fire department stations to allow emergency vehicles to enter the road network with minimal delay.

Traffic signals and data collection units are connected to the TMC via a network of fiber optic cable, wireless radios, and cellular modems. This network enables operation of all the City's ITS infrastructure - including traffic control, CCTV cameras, Bluetooth nodes, and detection devices.

Sandy Springs ITS Network by the Numbers



132
Traffic Signals



85
CCTV Cameras



54
Bluetooth Nodes



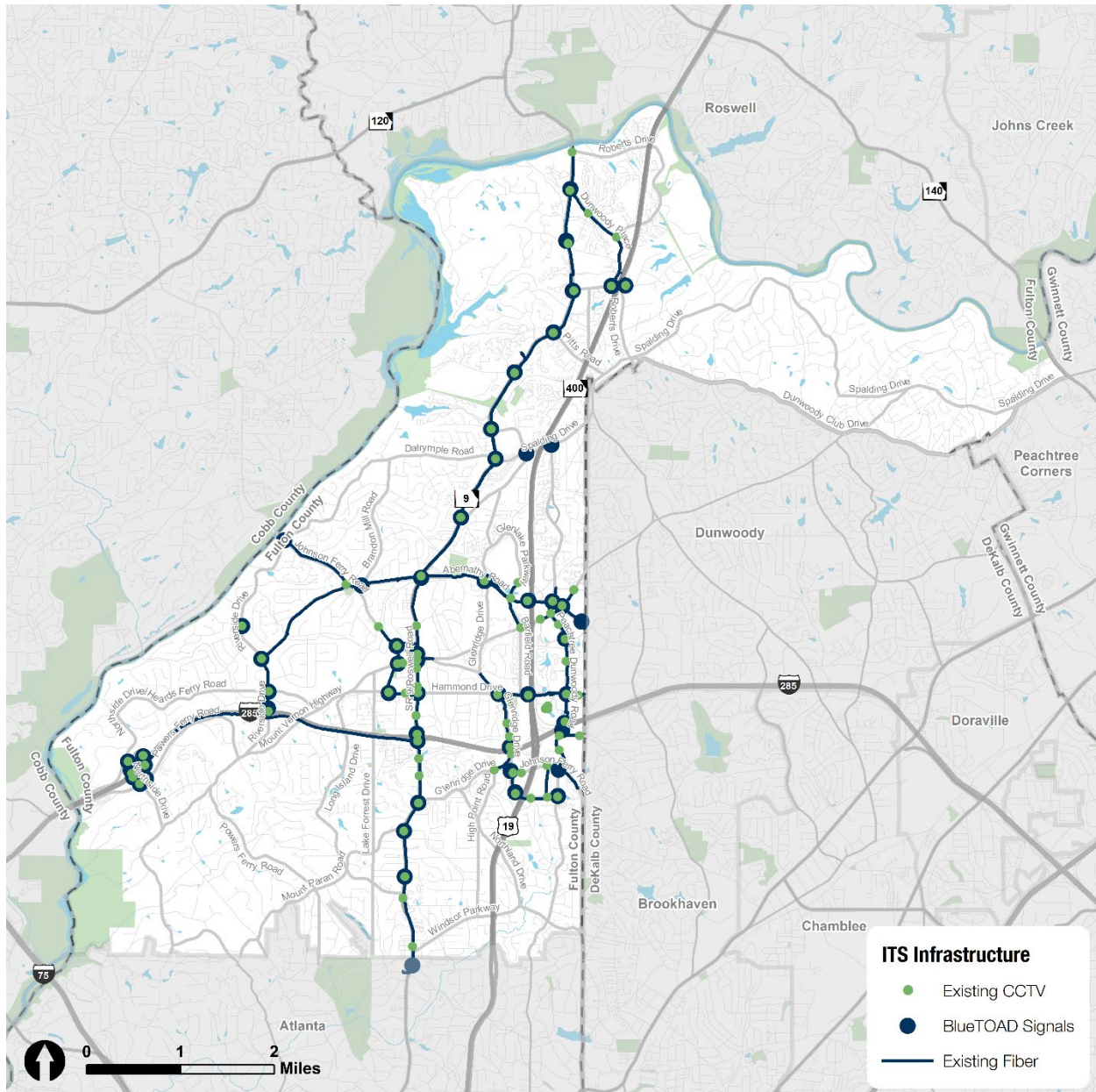
43 Miles
of Fiber-Optic Cable



45
Cellular Modems



6
Wireless Radios



Emerging Technologies

The City is preparing for Smart City, Internet of Things, and Connected and Automated Vehicles (CAV) technologies as they mature and become available. The foundation will be a robust, high quality communications network that is capable of expansion.

Sandy Springs is already working to implement emerging technologies at City facilities. One such project is installation of license plate recognition (LPR) technology at the City Hall parking deck for parking management. LPR technology uses cameras to record license plate numbers, tracking parking occupancy and duration. The system provides real-time space availability information to visitors, helps direct visitors to empty spaces, and improves overall parking utilization.

Other projects currently underway include installation of an emergency vehicle preemption (EVP) system. Glance devices will be installed at traffic signals and on City emergency vehicles to adjust signal timing as emergency vehicles approach, clearing traffic at intersections prior to the arrival of the emergency vehicle to improve incident response times. These devices also have the capability of supporting other Connected Vehicle applications such as transit signal priority.

Active Transportation

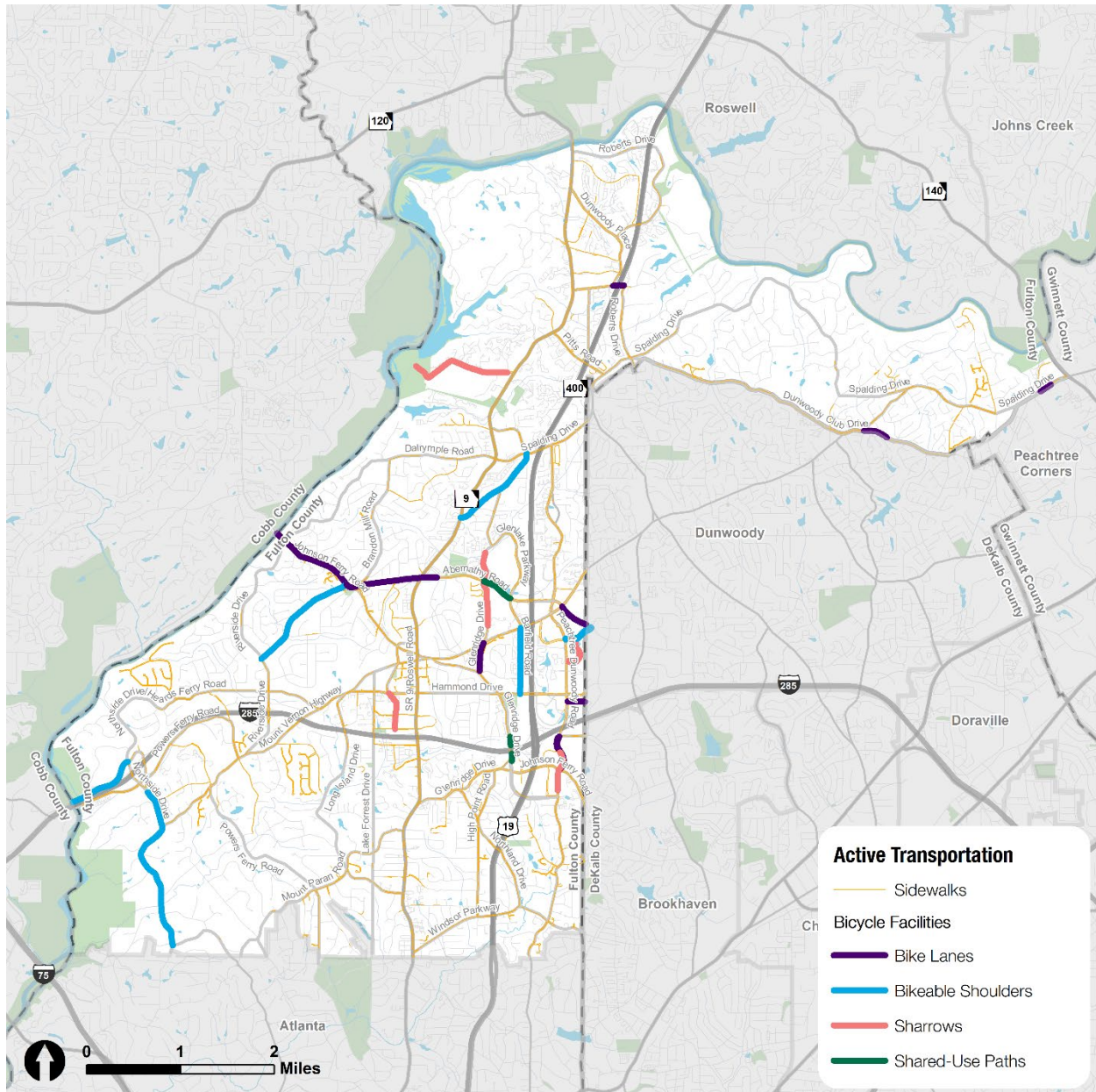
Active transportation includes travel by walking or biking, as well as micromobility – an emerging technology based on of lightweight, low-speed devices such as electric scooters. To be a viable alternative to driving, the active transportation in Sandy Springs network needs to connect to a variety of neighborhoods, employment centers, commercial developments, and other destinations – it needs to be where people need to go.

Types of Users

In 2006, Roger Geller from the City of Portland Office of Transportation developed four categories to identify the types of bicycle users:

- <1% Strong and Fearless
- 7% Enthused and Confident
- 60% Interested but Concerned
- 33% No Way, No How

Most people fall into the “Interested but Concerned” group, highlighting opportunities for local governments to increase bike trips by providing bike facilities with a greater buffer from vehicular traffic.



Infrastructure

The existing active transportation network in Sandy Springs consists of shared-use paths, bike lanes, bikeable shoulders, sharrows, and sidewalks. Future planned and programmed projects aim to evolve the current system to be more robust and accommodating of people of all ages using all modes.

The City's existing active transportation network consists of 184.2 miles of sidewalks, 0.7 miles of shared-use paths, 4.6 miles of bike lanes, 4.1 miles of sharrows, and 7.2 miles of bikeable shoulders. While numerous roadways have active transportation facilities, some areas are not well-connected. This is a common challenge for cities with development patterns and neighborhoods

established years before codes and streetscape standards required the inclusion of sidewalks and bike facilities along roadways.

Activity centers such as City Springs, Perimeter Center, and the Medical Center area are generally well-served by sidewalk infrastructure. Most principal arterials, including Roswell Road/SR 9, Johnson Ferry Road, and Abernathy Road, have sidewalks along the majority of their length. However, there are gaps in the sidewalk network along many major thoroughfares, and several collectors and local roads either have significant gaps or lack sidewalks altogether.

Shared-use paths have only been constructed in a few locations within Sandy Springs to date. The longest segment is a 0.5 mile long facility along Abernathy Road. The path runs on the south side of Abernathy Road between Glenridge Drive and Glenridge Parkway, and switches to run along the north side of Abernathy Road between Glenridge Drive and Aria Boulevard (east). Other segments are summarized in the table below.

Road Name	To	From	Functional Class	Miles
Abernathy Rd. (north side)	Glenridge Dr.	Aria Blvd. (east)	Principal Arterial	0.18
Abernathy Rd. (south side)	Glenridge Dr.	Glenridge Pkwy./Mercedes-Benz Dr.	Principal Arterial	0.34
Glenridge Dr.	Glenforest Rd.	I-285 westbound on-ramp	Minor Arterial	0.09
Glenridge Dr.	Private driveway	I-285 off-ramp	Minor Arterial	0.08
TOTAL	-	-	-	0.69

Bike lanes have been constructed along multiple facilities in the City, but substantial gaps exist in the network. This forces cyclists to travel in the roadway for all but a few short trips, largely limiting the appeal of cycling to all but the "Strong and Fearless" riders. Existing bike lanes within Sandy Springs are shown in the following table.

Road Name	To	From	Functional Class	Miles
Abernathy Rd.	Brandon Mill Rd. / Johnson Ferry Rd.	Alderwood Hill	Principal Arterial	0.97
Dunwoody Club Dr.	Dunwoody Community Church	Mt. Vernon Rd.	Minor Arterial	0.32
Glenridge Dr.	Johnson Ferry Rd.	Mt. Vernon Hwy.	Collector	0.37
Johnson Ferry Rd.	Chattahoochee River	Brandon Mill Rd. / Abernathy Rd.	Principal Arterial	1.35
Northridge Rd.	Roberts Dr.	Dunwoody Pl.	Minor Arterial	0.14
Peachtree Dunwoody Rd.	Hollis Cobb Cir.	Johnson Ferry Rd.	Minor Arterial	0.7
Perimeter Ctr. W.	Dunwoody City Limits	Mt. Vernon Hwy. / Abernathy Rd.	Minor Arterial	0.4
Spalding Dr.*	River Exchange Dr.	Shopping Center Delivery Dwy.	Minor Arterial	0.16
Springwood Conn.	Peachtree Dunwoody Rd.	Dunwoody City Limits	Minor Arterial	0.23
TOTAL	-	-	-	4.64

*The bike lane along Spalding Drive is a buffered facility

Bikeable shoulders – roadway shoulders that are wide enough to accommodate bikes while still providing appropriate separation from motor vehicles – are primarily located along minor arterials and collectors in the City. The western portion of the City has several bikeable shoulders, including along Interstate North Parkway and Northside Drive (south of I-285). Similar facilities along Central Parkway west of Perimeter Mall connect to bike lanes on Perimeter Center West, as well as sharrows on Central Park Drive. Other bikeable shoulders, such as those on Barfield Road, do not connect to other bicycle infrastructure in the City. An overview of existing shoulder facilities is shown in the table below.

Road Name	To	From	Functional Class	Miles
Barfield Rd.	Mount Vernon Hwy.	Hammond Dr.	Collector	0.86
Central Pkwy.	Peachtree Dunwoody Rd.	Perimeter Ctr. W.	Local Street	0.43
Interstate North Pkwy.	Northside Dr. / New Northside Dr.	Cobb County Line	Minor Arterial	0.93
Northside Dr.	New Northside Dr.	Mt. Vernon Hwy.	Minor Arterial	0.49
Northside Dr.	Mt. Vernon Hwy.	Garmon Rd.	Collector	1.76
River Valley Rd.	Riverside Dr.	Johnson Ferry Rd.	Collector	1.50
Spalding Dr.	Roswell Rd.	Trowbridge Rd. / Dalrymple Rd.	Collector	1.23
TOTAL	-	-	-	7.20

The City's active transportation network includes 4.12 miles of roadway with sharrows – pavement markings indicating that cyclists and drivers should share roadway space. Two roadway segments with sharrows are in close proximity to Perimeter Mall and the Sandy Springs MARTA station. Sharrows along Morgan Falls Road between Adair Lane and Morgan Falls Overlook Park facilitate bike access to recreational areas for residential neighborhoods along the corridor. Sharrows also exist on Peachtree Dunwoody Road near the Medical Center MARTA station. A summary of roadways with sharrows is provided in the table below.

Road Name	To	From	Functional Class	Miles
Central Park Dr.	Peachtree Dunwoody Rd.	Central Pkwy.	Local Street	0.80
Glenridge Dr.	Glenridge Square Dwy.	Glenridge Park Condo Dwy.	Collector	0.96
Morgan Falls Rd.	Adair Ln.	Morgan Falls Overlook Park	Local Street	1.34
Peachtree Dunwoody Rd.	Meridian Mark Plaza Dwy.	Hollis Cobb Cir.	Minor Arterial	0.52
Sandy Springs Cir.	Allen Rd.	Hammond Dr.	Collector	0.50
TOTAL	-	-	-	4.12

Connections to Adjacent Networks

The active transportation network in Sandy Springs connects with bicycle facilities, pedestrian facilities, and parks in adjacent municipalities. Bikeable shoulders on Interstate North Parkway connect to the Johnson Ferry and Cochran Shoals Units of the Chattahoochee River National Recreation Area, and to the Akers Mill East and Interstate North trails in Cobb County. Bike lanes along Johnson Ferry Road also connect to the Chattahoochee River National Recreation Area. Bikeable shoulders on Northside Drive connect to the City of Atlanta, and sidewalks on Powers Ferry Road provide a connection to the PATH trail system at Chastain Park in Atlanta. Sidewalks on Roswell Road/SR 9 provide a connection to the Roswell Riverwalk. Bike lanes along Perimeter Center West in eastern Sandy Springs continue along the length of the roadway into the City of Dunwoody. Within Dunwoody, bike lanes on Mt. Vernon Highway and a recently installed buffered bike path on Hammond Drive in front of new State Farm headquarters, provide cyclists connections into Sandy Springs.

Programmed Multimodal Projects

Programmed multimodal projects include construction of shared-use paths, sidewalks, and pedestrian improvements at intersections.

Shared-Use Paths

Several proposed shared-use paths are programmed or have dedicated funding allocated to design and/or construction. The majority of the shared-use path projects in the City are sidepaths, which are generally located alongside roadways. These projects will build upon the existing active transportation network in Sandy Springs by providing access to major points of interest as well as opportunities for recreation in neighborhoods that currently have disconnected sidewalks or are not near a City park. Portions of the City unserved or poorly served by the existing network that will benefit from investments include national park visitors in the Powers Ferry neighborhoods; office, retail, and residential development near the Sandy Springs and Dunwoody MARTA Stations; and neighborhoods along Spalding Drive east of GA 400. The programmed Sandy Springs Circle, Boylston Drive, and Hammond Drive¹² projects will enhance connectivity near and around the City Springs area. Currently programmed multimodal projects in the City include the following:

- Mt. Vernon Highway Multi-Use Path (From Mt. Vernon Church to Abernathy Road)
- Mt. Vernon Highway Multi-Use Path (From Mt. Vernon Highway to Hildebrand Drive)
- Spalding Drive Sidepath (From Spalding Lake Court to Holcomb Bridge Road)
- Boylston Drive Sidepath (From Hammond Drive to Mt. Vernon Highway)
- Hammond Drive Sidepath (From Roswell Road/SR 9 to Barfield Road)
- Interstate North Parkway Sidepath (From Chattahoochee River to Northside Drive)
- Sandy Springs Circle Shared-Use path (From Hammond Drive to Mt. Vernon Highway)
- Cox Headquarters Multi-Use Path (not sponsored by Sandy Springs)
- Perimeter Bike Improvements (Includes Hammond Drive, Lake Hearn Drive, and Perimeter Summit Parkway)
- Peachtree Dunwoody Road Sidepath
- PATH 400 Extension South Towards Buckhead/City of Atlanta
- PATH 400 Extension (Transform 285/400 Segment) – Johnson Ferry Road to Peachtree Dunwoody Road
- Glenridge Drive Sidepath at Johnson Ferry Road¹³

¹² Concept development for TS193 Hammond Drive Corridor Improvements is ongoing; the current draft proposed concept includes a multi-use path along both sides of Hammond Drive for nearly the entire segment between Roswell Road/SR 9 and Glenridge Drive.

¹³ Sandy Springs Trail Master Plan. October 2019.

<http://www.sandyspringsga.gov/home/showdocument?id=21757>

The projects listed above along Mt. Vernon Highway, Interstate North Parkway, Sandy Springs Circle, and Spalding Drive include the installation of both a shared-use path and sidewalks.

Sidewalks

As part of its Capital Improvement Program, Sandy Springs is undertaking several sidewalk projects that could fill sidewalk gaps along collector and arterial roadways. The City also has a Sidewalk Improvement Policy and Sidewalk Master Plan, which are discussed in the *Planning Context* chapter of this document. Some sidewalk projects address gaps that have previously been highlighted, including along Windsor Parkway, Sandy Springs Circle, and Dalrymple Road. These additions will provide access to area amenities and make it safer to walk in the neighborhoods where these sidewalks will be constructed. Sidewalk projects that are part of the City's Capital Improvement Program (CIP) are listed below. Projects that are also included in the Fulton County T-SPLOST program for Sandy Springs are denoted by an asterisk (*).

- Brandon Mill Road (From Marsh Creek to Lost Forest Drive)*
- Brandon Mill Road (From Lost Forest Drive to Brandon Ridge Drive)*
- Dalrymple Road (From Princeton Way to Duncourtney Drive)*
- Dunwoody Club Drive (From Spalding Drive to Fenimore Circle)*
- Interstate North Parkway (From Chattahoochee River to Northside Drive)
- Johnson Ferry Road at Glenridge Drive*
- Johnson Ferry Road/Harleston Road to Glenridge Drive
- Mt. Vernon Highway Multi-Use Path (From Mt. Vernon Church to Abernathy Road)*
- Mt. Vernon Highway Multi-Use Path (From Mt. Vernon Highway to Hildebrand Drive)*
- Roberts Drive (From Davis Academy to Northridge Road)*
- Roswell Road Pedestrian Bridge Over Chattahoochee River (in coordination with the City of Roswell)
- Roswell Road Sidewalk Enhancements (From Northwood Drive to Long Island Drive)
- Roswell Road Transit Access (From I-285 to the Atlanta City Limits)
- Sandy Springs Circle (From Mt. Vernon Highway to Johnson Ferry Road)
- Spalding Drive (From Spalding Lake Court to Holcomb Bridge Road)*
- Windsor Parkway (Crestwicke Point to DeKalb County Line)*

The projects listed above along Mt. Vernon Highway, Interstate North Parkway, Sandy Springs Circle, Spalding Drive, and at the intersection of Johnson Ferry Road and Glenridge Drive include the installation of both sidewalks and a shared-use path.

Intersection Improvements

In addition to the multimodal projects noted above, the T-SPLOST program includes multimodal improvements as part of four programmed intersection improvements:

- Spalding Drive at Pitts Road intersection improvements (currently in design and anticipated to be complete by 2023)
- Hammond Drive improvements from Roswell Road/SR 9 to Barfield Road (currently in design)^{14, 15}
- Johnson Ferry Road/Mt. Vernon Highway at Roswell Road intersection improvements, which includes a shared-use path along Mt. Vernon Highway (design and right-of-way staking underway)¹⁶
- Spalding Drive at Dalrymple Road/Trowbridge Road intersection improvements, which include bike lanes at the intersection approaches (currently under construction)¹⁷

Ongoing Programs to Expand Active Transportation

The City of Sandy Springs has taken steps to include expansion of the active transportation network in its development code and routine pavement maintenance program.

Development Code

Sandy Springs requires that parcels undergoing redevelopment to adhere to the City's new Development Code, including its streetscape requirements. These streetscape requirements are guided by the City's street typology framework. Redevelopment of parcels must include the installation of appropriate active transportation facilities for the street type the property fronts. Depending on the site location, right-of-way could instead be set aside for the City to implement streetscape improvements at a later date. Most of the existing shared use paths in Sandy Springs have been built in this manner.¹⁸ Since the adoption of the Development Code, multimodal facilities such as the bike lane on Springwood Connector and the shared-use path on Abernathy Road, have been implemented in conjunction with new development/redevelopment

¹⁴ Concept development for TS193 Hammond Drive Corridor Improvements is ongoing; the current draft proposed concept includes a multi-use path along both sides of Hammond Drive for nearly the entire segment between Roswell Road/SR 9 and Glenridge Drive.

¹⁵ Fulton County (Countywide) Transportation Special Purpose Local Option Sales Tax Project Dashboard. Fulton County, GA (2020). <https://tsplost.fultoncountyga.gov/projects>.

¹⁶ Mt. Vernon/Johnson Ferry Improvements.

<http://www.sandyspringsga.gov/Home/Components/FacilityDirectory/FacilityDirectory/136/202>

¹⁷ Spalding Drive, Trowbridge and Dalrymple Roads Intersection.

<http://www.sandyspringsga.gov/Home/Components/FacilityDirectory/FacilityDirectory/408/2825>

¹⁸ Ord. No. 2006-02-10, § 1(ch. 16, art. 1, § 7), 2-7-2006; Ord. No. 2015-07-19, 7-7-2015; Ord. No. 2015-09-32, § I, 9-15-2015

requirements. The following is a summation of streetscape standards are required for all new development and redevelopment in the city:

- All new development and redevelopment must include sidewalks and curb ramps along abutting and internal streets for the entire frontage of the property.¹⁹
- In any residential multi-unit (RM) district, Corridor & Nodes district, and Perimeter Center district, property owners are required to provide a driveway or internal street to adjacent parcels for vehicular access. Bicycle and pedestrian access is not explicitly required between adjacent parcels. If vehicular cross-access is not feasible, due to topography or other safety hazards, then bicycle and pedestrian connections are required (provided there is a not 15-foot or greater stream crossing prohibiting the connection).²⁰
- Streets must be improved to meet streetscape requirements for development or redevelopment on sites smaller than two acres, or on sites at least two acres in size where 25 percent or more of the site area is disturbed.²¹ The Sandy Springs Technical Manual outlines a street framework for the city, which designates street types for major roadways in the city.²² The Development Code specifies streetscape standards for each facility type. With the exception of alleys, each street type requires a minimum six-foot sidewalk, along with a maintenance strip and street planting zone that serve as buffers from vehicular traffic. Two-lane roads with parking and/or a median, and four-lane roads, require a minimum five-foot bikeway. Roswell Road/SR 9, Powers Ferry Road, and Mt. Vernon Highway have separate and distinctive streetscape standards that incorporate sidewalks, bike facilities, and buffer areas.²³

Repaving Program

As part of Sandy Springs' annual repaving program, the City reviews roadway segments that have been prioritized for repaving to determine whether the roadway is suitable for either wider bikeable shoulders or bike lanes. If either of these options is identified as an appropriate facility for the road segment, the selected bike infrastructure is integrated as the roadway is resurfaced. Prior to repaving, the City also determines whether roadways would benefit from a road diet – a reduction in the number of lanes to calm traffic and/or improve the streetscape. Road diets can reduce traffic volumes and turning movement conflicts, improving safety for users of all modes.

¹⁹ Ord. No. 2006-02-10, § 1(ch. 16, art. 1, § 7), 2-7-2006; [Ord. No. 2015-07-19](#), 7-7-2015; [Ord. No. 2015-09-32](#), § I, 9-15-2015

²⁰ https://library.municode.com/ga/sandy_springs/codes/development_code

²¹ [Ord. of 4-17-2018\(8\)](#), § 10-9

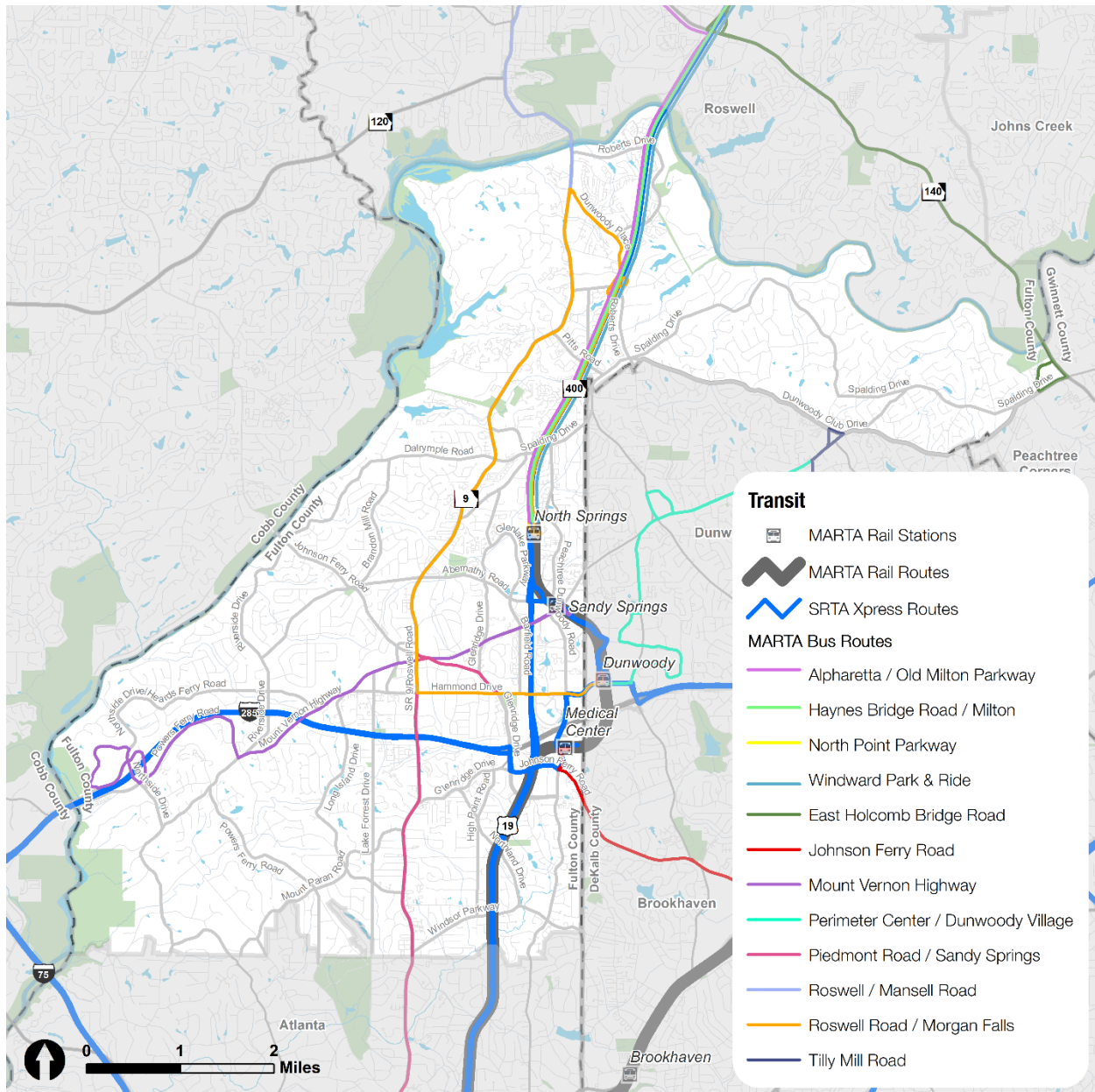
²² https://library.municode.com/ga/sandy_springs/codes/technical_manuals?nodeId=div%202

²³ [Ord. of 4-17-2018\(8\)](#), §; 10-34

Road diets also allow for portions of the paved right-of-way to be reallocated for bikeable shoulders, bike lanes, and other active transportation facilities.

Transit

Sandy Springs is served by an extensive network of rail and bus routes from multiple agencies. Rail, local bus, and paratransit service is provided by the Metropolitan Atlanta Rapid Transit Authority (MARTA), while commuter-focused Xpress bus service is provided by the State Road and Tollway Authority (SRTA).

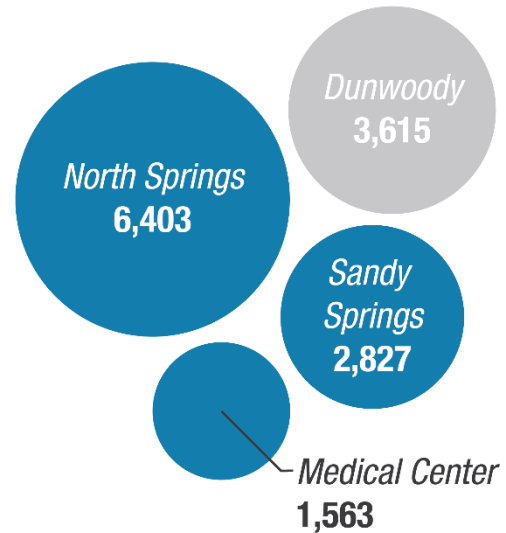


Rail

MARTA rail links Sandy Springs directly to Buckhead, Downtown and Midtown Atlanta, the Atlanta airport, and other key regional destinations. The system has three stations within Sandy Springs, as well as a fourth just outside the city in Dunwoody.

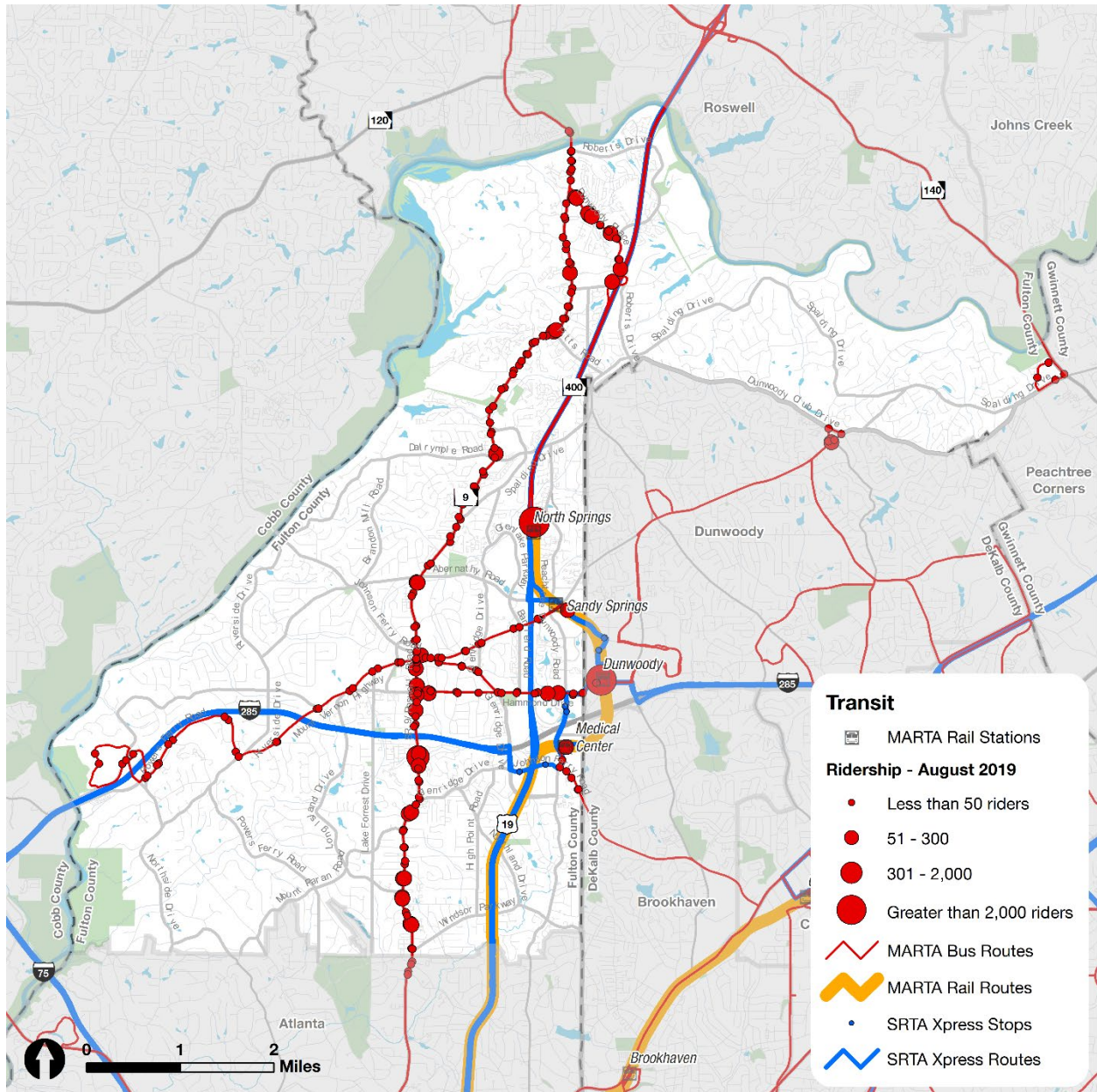
The Sandy Springs and Dunwoody rail stations both serve the Perimeter Center area. The Medical Center station primarily serves the cluster of healthcare campuses located just south of I-285 and east of GA 400. The North Springs station is the northernmost of the four stations in or near Sandy Springs and is the terminus of the MARTA Red Line. This station has the highest ridership of the four and has dedicated access to GA 400 for commuters to park-and-ride. The North Springs station is also the planned southern terminus of the future bus rapid transit (BRT) system along SR 400, which will provide high-capacity transit between Sandy Springs and Alpharetta.

Average Weekday Ridership at MARTA Stations, 2019



SANDY SPRINGS

Transportation Master Plan



Local Bus

MARTA provides a network of fixed-route bus service throughout Sandy Springs and neighboring communities in Fulton and DeKalb counties. These routes provide critical connections to employment, education, and medical appointments for many Sandy Springs residents and employees, and provide options to complete trips without using a car. A total of twelve local MARTA bus routes serve portions of Sandy Springs. Several routes are structured around bus terminals and rail connections at North Springs and Dunwoody Stations.

Route	Name	Peak Period Headway
5	Piedmont Road / Sandy Springs ²	15 minutes
85	Roswell ¹	30 minutes
87	Roswell Road / Sandy Springs ^{1, 2}	20 minutes
132	Tilly Mill Road	30 minutes
140	North Point Parkway ¹	30 minutes
141	Haynes Bridge Road / Milton ¹	30 minutes
142	East Holcomb Bridge Road	40 minutes
143	Windward Park-and-Ride ¹	10 minutes
148	Mount Vernon Highway	60 minutes
150	Dunwoody Village	40 minutes
185	Alpharetta / Old Milton Parkway ¹	30 minutes
825	Johnson Ferry Road ³	60 minutes

¹ Rail connection provided at North Springs Station

² Rail connection provided at Dunwoody Station

³ Circulator service with rail connections at Medical Center and Chamblee Stations

Two local routes that serve Sandy Springs are among the highest-ridership in the MARTA system: Route 87 (Roswell Road / Sandy Springs), with an average weekday ridership of 2,121 passengers, and Route 5 (Piedmont Road / Sandy Springs), with an average weekday ridership of 3,359 passengers.

Commuter Bus

Sandy Springs status as a growing regional employment hub is supported by four SRTA Xpress commuter bus routes. These routes originate at park-and-ride facilities around the Metro Atlanta region and provide direct, high-quality service to commuters travelling to the Perimeter Center area. Once reaching Perimeter Center, routes circulate through a limited number of curbside stops, as well as select MARTA stations. The four routes Xpress routes that currently the Perimeter area are:

- Route 401: Cumming (Forsyth County) to Perimeter Center
- Route 417: Sugarloaf Mills (Gwinnett County) to Perimeter Center

- Route 428: West Conyers / Panola (I-20 East Corridor) to Perimeter Center
- Route 482: Town Center (Cobb County) to Perimeter Center

Routes 401 and 482 provide connections to the Medical Center, Dunwoody, and Sandy Springs MARTA stations. Due to the configuration of access points to and from I-285, routes 417 and 428 serve the Dunwoody and Medical Center MARTA stations only.

Paratransit

Paratransit service in Sandy Springs is provided by MARTA Mobility and is available within three-quarters of a mile from any MARTA bus route. Approximately 80% of Sandy Springs residents live within the paratransit service area. Just over 600 MARTA Mobility trips a month originate in the City. This service expands transit accessibility to segments of the population unable to walk to a bus stop. Unlike traditional fixed-route bus service, where vehicles travel along static routes and stop at predetermined locations, paratransit service picks-up and drops-off riders at the beginning and end of their trips. Riders must book trips on the service in advance through MARTA.

Additional senior-focused mobility service is offered by the Fulton County Office of Senior Services. Through the non-profit group Common Courtesy, the County provides subsidized rideshare services to eligible seniors over the age of 60. Following an initial registration fee of \$15, rides are provided at \$1 each.

Perimeter Connects Shuttles

Sixteen shuttle routes provide last-mile connectivity from the Medical Center, Dunwoody, and Sandy Springs MARTA stations to offices around the Perimeter Center area. Routes operate with varied headways in the morning and afternoon peak periods with leased vehicles from third-party service providers. The shuttles are privately operated.

Transportation Demand Management

Sandy Springs has implemented, and is part of, several transportation demand management (TDM) programs that increase the viability and visibility of all modes to users. These programs increase utilization of existing infrastructure by encouraging use of more efficient modes of travel.

Commuter-Focused Programs

The following programs help provide employees who work in Sandy Springs options aside from commuting in a single-occupancy vehicle.

City's Employee Commute Program

The City of Sandy Springs has implemented the Sandy Springs Commute Options Program in order to reduce the number of employees (employed by the City) commuting to work by driving alone. The City provides each employee an incentive of \$50 a month to be applied toward a transit or vanpool pass. Each employee who participates in the program must demonstrate average ridership of at least three days per week. The Sandy Springs Commute Options program is a demonstration of the City's commitment to reduce the use of single-occupancy vehicles and improve mobility on Sandy Springs roadways.

Perimeter Connects

Perimeter Connects is a transportation demand program sponsored by the Perimeter Community Improvement Districts (PCIDs) and ARC. The Perimeter Connects program helps employers in the PCID area implement other programs to reduce employees' dependence on single-occupancy vehicles, including transit pass discounts, flexible hours, and telework policies. Perimeter Connects also provides commuters with information about transit services, the local bicycle network, carpooling programs, and other resources to encourage the use of alternate transportation.

Georgia Commute Options

Georgia Commute Options provides free information and resources to employers and commuters across the Atlanta region with the goal of reducing single-occupancy vehicles on the road and improving air quality. Similar to Perimeter Connects, Georgia Commute Options helps employers develop custom commute options plans with options such as teleworking and flexible schedules. These programs are available to any employer in Sandy Springs. Georgia Commute Options also offers a variety of programs and incentives for commuters. Commuters can sign up to find shared rides (carpools and vanpools) with other workers who live and work in the same areas. Those who participate in a carpool or vanpool are eligible for free "guaranteed rides home" via rideshare if there is a need to travel home in the middle of the workday. Commuters can also receive cash incentives for participating in eligible programs. These programs and incentives are available to anyone who lives or works in the Atlanta region.

Parking Policy

The Sandy Springs Development Code establishes parking requirements for newly constructed sites or buildings; for expansions of buildings or sites; and for buildings or sites where there is a change in use. In addition to the standard minimum vehicle parking requirements for a variety of residential, public and civic, commercial, industrial, and open (agricultural) uses, the Code includes standards for the provision of short-term and long-term bike parking. Minimum short- and long-term bike parking standards are required for select multifamily/group living developments and most public and civic, commercial, industrial, and open uses.²⁴ As the City builds out its planned bicycle network, the inclusion of these parking spaces will ensure that cyclists can securely and efficiently park their bikes at a variety of destinations.

To encourage the use of alternate transportation modes, the Development Code specifies maximum, rather than minimum, parking ratios for the Perimeter Center and City Springs districts. To promote alternative modes, the Code also requires parking garages be “unbundled” from development in certain zoning districts. The Code permits reductions of the minimum parking ratios for buildings or sites that are within walking distance of a transit stop or have an active on-site car-sharing program.²⁵ These types of incentives encourage developers to design sites that provide tenants with better access to transportation alternatives, and to leverage the transit investments that have been made in the Perimeter Center and City Springs districts.

Emerging Transportation Technologies

Several emerging trends, including the emergence of micromobility technologies and an increase in ridesharing, have the potential to reshape transportation in Sandy Springs in the coming years.

Micromobility

Micromobility describes a group of emerging transportation modes that use light, low-occupancy vehicles such as bicycles, pedal-assisted bicycles (e-bikes), electric scooters (e-scooters), and similar means. These devices cost much less than personal vehicles, making them attractive to students, young professionals, those in low-income households, and others with limited incomes or who choose not to invest a substantial amount of money in a personal vehicle. Micromobility services offer an alternative to driving for shorter trips, taking vehicles off the road and improving overall mobility.

E-scooters have grown as a popular mode of transportation in the most urban areas of the region, including Midtown and Downtown Atlanta. E-scooters can be an effective mode of transportation for shorter trips, taking these trips off the roadway and reducing negative externalities such as traffic congestion and air pollution. Because the cost of usage is relatively low, e-scooters are

²⁴ [Ord. of 4-17-2018\(6\)](#), §§ 8-4—8-14

²⁵ [Ord. of 4-17-2018\(6\)](#), §§ 8-4—8-14

more accessible to those with limited incomes, such as college students and those who live in low-income households. The increasing use of e-scooters, however, has raised some safety concerns. On sidewalks, the mix of e-scooters and pedestrians sometimes pose a threat to pedestrians, particularly in popular or crowded areas and those with narrow sidewalks. Some e-scooter users neglect to pay attention to or yield to pedestrian traffic, causing crashes and injuries. On roadways and at driveways, the mix of motor vehicles and e-scooters can create safety issues as well, particularly for e-scooter riders. Some cities have developed or amended ordinances to help ensure a safer environment for e-scooters by requiring operators to include headlights, reflectors, and other safety devices on e-scooters. Jurisdictions have also installed signage reminding users where riding e-scooters is or is not permitted.

In addition to bikes and scooters, many active transportation users are turning to skateboards, hoverboards, pedal-less bikes, and other options for personal transport. While the diversity in options is good for overall mobility, the mix of devices and potential conflicts between the devices can pose safety and operational challenges. As Sandy Springs expands its multimodal transportation network, the City will need to carefully consider how to accommodate a diverse mix of micromobility devices while ensuring safe and efficient travel for all users.

The City will need to consider several factors before implementing such a service such as the facilities where bikes or scooters are permitted and prohibited; how to ensure safe use with a mix of pedestrian and vehicular traffic; and where stations should be sited to meet the travel needs and desires of the community. Current State Law and City ordinances allow for e-scooters to operate on roadways, but not on shared use paths, bike lanes, or sidewalks. For micromobility devices to be used on shared use paths within the City, City ordinances would have to be amended. Within the City, the enforcement of rules for device users is allowed but does not have specific guidance regarding the operators of the services.

Shared Micromobility Services

Many cities across the US have contracted with micromobility providers to install shared stations, whereby users can rent personal mobility devices for a period of hours at a time to travel around the city. In the Atlanta region, shared bikes and e-scooters are the most prevalent micromobility services.

In the City of Atlanta, Relay Bike Share operates 114 hubs, or bike share stations, where users can rent bikes and then return to any other hub in the network. Users may choose to pay by the minute or can purchase a monthly or annual pass that allows 90 minutes of ride time per day (users pay by the minute for trips in excess of 90 minutes per day). Other cities and community improvement districts around the Atlanta region have turned to shared bike services for both commuter (work and school trips) and recreational use. For example, the Town Center Community Improvement

District (TCCID) in north Cobb County has contracted with Zagster to provide bikes at six locations along the Noonday Creek Trail. While the proximity to the Noonday Creek Trail and nearby parks makes the service appealing for recreational use, there are stations at Town Center at Cobb shopping mall and a large apartment complex, providing users the opportunity to bike to residential, retail, and employment destinations. Other jurisdictions with active bike share programs include the Cumberland Community Improvement District and the Cities of Alpharetta, Smyrna, Suwanee, to name a few.

Several services, such as Bird and Uber, have operated shared e-scooters in the Atlanta region. There are opportunities for communities to work with providers to set up geofencing through GPS applications to ensure that the services are being offered in place that the municipalities are anticipating/want. Providers can equip e-scooters with advanced technology, such as GPS devices. This allows local jurisdictions to implement geo-fences, so that when e-scooters enters particular zones, they are not able to exceed certain speed limits, or cannot operate the e-scooter at all. Such zones have been established on popular facilities like shared-use paths, where there is a mix of e-scooter, pedestrian, and bicycle traffic.

Ridesharing

Ridesharing services leverage technology to match those who wish to travel (passengers) with specific vehicles (drivers) through a website or mobile application on short notice. Many rideshare services offer “pooled” services at a lower cost, whereby multiple passengers travel in one shared vehicle to different destinations. For some, ridesharing has negated the need for a personal vehicle, and in some cases has replaced the use of public transit. The two market leaders in ridesharing, Uber and Lyft, both operate in and around Sandy Springs. Users may “hail” a shared ride to travel to or from any destination within the City that can accommodate a car trip.

Some local governments and transit agencies have contracted with ridesharing services to supplement local transit service on a temporary or long-term basis. Local transit agencies may contract with a ridesharing company to provide on-demand paratransit service for eligible users. Transit agencies may also contract with ridesharing services to provide discounted or fee-free “last mile” rides between transit stations and major destinations, providing an additional incentive to use transit. Following the collapse of the I-85 bridge in March 2017, rideshare providers Uber and Lyft offered discounted fare for travelers with a MARTA station as an origin or destination. In Fulton County, the Department of Senior Services has partnered with a non-profit to provide discounted Uber and Lyft rides for seniors to senior facilities, pharmacies, and other essential services; this service has reduced the waiting list for these trips and help improve mobility for seniors who can no longer drive or choose not to drive.

6 | Relevant Programs and Planning Context

Several transportation programs will affect mobility in Sandy Springs in the coming years. Overviews of selected major transportation programs, and their impact on the City, are presented below.

Federal Funding Legislation

The Federal Aid Highway Program is administered by the Federal Highway Administration (FHWA) and provides financial assistance for the construction, maintenance, and operations of the nation's highway network, including interstates, highways, and local roads. It requires authorization by law to operate and fund projects. The Fixing America's Surface Transportation (FAST) Act is the most recent highway authorization bill and was signed into law by President Barack Obama in December 2015. This law provides \$305 billion in long-term federal funding for surface transportation projects. It establishes, funds, and governs programs as the Surface Transportation Block Grant Program (STBG), Highway Safety Improvement Program (HSIP), and the National Highway Freight Program (NHFP). The FAST Act also stipulates apportionment to state governments of federal highway dollars through Highway Trust Fund revenues. Federal funding of transportation projects is contingent upon the collection of tax revenues and the flow of tax dollars to state and local governments. The FAST Act is set to expire in September 2020, and a funding reauthorization bill is expected to be passed by Congress in 2020.²⁶ In order for Sandy Springs to leverage federal dollars for transportation projects, the transportation project must be approved by ARC and included in the Atlanta Region's Plan, the region's long-range plan. Typically, local governments must provide a 20 percent match, and federal dollars cover 80 percent of total project costs.²⁷ This type of funding arrangement is optimal for major infrastructure projects, where the total cost would be too large for local governments to fund independently.

Major Mobility Investment Program (MMIP)

GDOT's Major Mobility Investment Program (MMIP) is a series of transportation improvements designed to increase capacity, improve freight movement, enhance safety, and decrease travel times across key locations statewide. Projects within the MMIP include interchange reconstructions, construction of express lane facilities, interstate widening projects, construction of commercial vehicle lanes, and bridge improvements. **Portions of two MMIP projects will be built within Sandy Springs – the I-285 Top End Express Lanes project, and the GA 400 Express Lanes project.** The I-285 project will construct new barrier-separated express lanes along I-285 between Paces Ferry Road and Henderson Road (in DeKalb County). This project will also

²⁶ Funding Federal-Aid Highways. Federal Highway Administration. January 2017.

https://www.fhwa.dot.gov/policy/olsp/fundingfederalaid/FFAH_2017.pdf

²⁷ FAST Act §§ 1408, 1435; 23 U.S.C. 120. <https://www.fhwa.dot.gov/fastact/factsheets/federalsharefs.cfm>

require replacement of the Mt. Vernon Highway bridge over I-285. The construction of new barrier-separated express lanes along GA 400 from the Glenridge Connector to the North Springs MARTA Station is also included as part of the I-285 project. The GA 400 Express Lanes project will construct new barrier-separated express lanes between the North Springs MARTA station and McFarland Parkway in Forsyth County.²⁸

Georgia Strategic Highway Safety Plan

The 2019-2021 Georgia Strategic Highway Safety Plan provides a framework for reducing fatalities and serious injuries on Georgia roads statewide. The plan includes 13 safety performance measures and accompanying safety target goals that address the reduction of serious injuries and fatalities for different users (motorcyclists, pedestrians, etc.); for travel choices/behaviors (alcohol impairment, seatbelt, usage, etc.); and scaled by measures such as vehicle miles traveled. With the exception of one measure (serious traffic injuries per 100 million vehicle miles traveled), the safety targets do not include an overall reduction of serious injuries and fatalities; rather, they set goals that exceed baseline values but fall below projected statistics, in order to maintain a five-year rolling average for each measure.²⁹

Regional Safety Task Force

ARC is committed to a regional safety approach that echoes Vision Zero to eliminate fatal and serious injury crashes through data-driven and proactive strategies. ARC has established the Regional Safety Task Force (RSTF), a group of multidisciplinary professionals that have committed to establishing a regional safety vision and an action plan to meet regional safety targets.³⁰ For 2020, the RSTF has recommended that ARC concur with the GDOT safety target while simultaneously establishing safety targets for the metropolitan Atlanta area. To that end, ARC has set targets representing a percentage of the GDOT safety targets for 2020.³¹

ATL Regional Transit Plan

The Atlanta-Region Transit Link Authority (the ATL) was established in 2018 to better coordinate and connect transit options in the Atlanta region, including the City of Sandy Springs. The ATL Regional Transit Plan (ARTP) (2019) uses an objective, data-driven approach to recommend transit investments that maximize local, state, and federal funding contributions. The ARTP is the primary source of transit projects that are advanced by ARC's short-range Transportation Improvement

²⁸ Major Mobility Investment Program. Georgia Department of Transportation.

<https://majormobilityga.com/>

²⁹ 2019-2021 Georgia Strategic Highway Safety Plan. Governor's Office of Highway Safety. May 2019.

<https://www.gahighwaysafety.org/fullpanel/uploads/files/2019%202021%20shsp-compressed.pdf>

³⁰ Regional Safety Task Force. Atlanta Regional Commission. <https://atlantaregional.org/transportation-mobility/boards-and-committees/regional-safety-task-force-2/>

³¹ Safety Update. Atlanta Regional Commission. February 7, 2020. <https://cdn.atlantaregional.org/wp-content/uploads/20200207-tcc-taqc-safetyupdate.pdf>

Program (TIP) and long-range Regional Transportation Plan (RTP). The 2019 ARTP includes \$27 billion in total investment in transit improvements. The projects consist of expansion of existing transit services, enhancements that improve existing infrastructure and capacity, and state of good repair projects that address maintenance needs.

There are three projects in the ARTP that fall within the City of Sandy Springs:

- **GA 400 Transit Initiative BRT:** Develop bus rapid transit (BRT) lines along GA 400 from the North Springs MARTA Station to Windward Parkway in Alpharetta. Features along this line include defined stations with amenities, signage, transit signal priority, and level platform boarding. This project is expected to cost \$300 million and is part of the six-year project list.
- **SR 9/Roswell Road Arterial Rapid Transit:** Develop an arterial rapid transit (ART) line along Roswell Road (SR 9) between Abernathy Road, extending north towards Roswell and Alpharetta across the Chattahoochee River. This ART corridor will include raised stations, pedestrian improvements, signal prioritization, and bus pull-offs. The project is expected to cost \$167.7 million and is on the 20-year project list.
- **I-285 Top End Transit Express Lanes:** This project entails the construction of rubber wheel rapid transit from Northlake Parkway in DeKalb County to Cumberland Parkway in Cobb County. In Sandy Springs, stations are proposed at Perimeter Center Parkway, Roswell Road (SR 9), and New Northside Drive/Northside Drive/Powers Ferry Road. While the system would run within the GDOT Express Lanes, the rapid transit project will include station infrastructure along I-285, pedestrian/bicycle connections between eastbound and westbound stations, and pedestrian connections to surrounding destinations, including the Medical Center MARTA station. The project is expected to cost \$247.5 million and is on the 20-year project list.³²

Fulton County T-SPLOST Program

In November 2016, Fulton County voters approved the Transportation Special Purpose Local Option Sales Tax (T-SPLOST), a referendum to fund transportation improvements in Sandy Springs and other cities within Fulton County. There are a total of 372 projects in the program, 22 of which are located within Sandy Springs. Most of the projects in the program are multimodal improvements, including sidewalks and multi-use paths. Intersection improvement and capacity

³² ATL Regional Transit Plan. The Atlanta-Region Transit Link Authority.
https://atltransit.ga.gov/wp-content/uploads/2019/12/FR1_ES_ARTLA_Plan_Dec19_COMPLETE.pdf

projects in the T-SPLOST also include multimodal elements to create safer facilities for pedestrians and cyclists. All projects are expected to be complete by December 2023.³³

Project Name	Project ID	Project Limits	Projected Completion Date
Brandon Mill Rd. Sidewalks (east side)	CSS-32	Lost Forest Dr. to Brandon Ridge Rd.	October 2021
Brandon Mill Rd. Sidewalks (east side)	CSS-27	Marsh Creek to Lost Forest Dr.	October 2020
Dalrymple Rd. Sidewalk	CSS-28	Princeton Square to Duncourtney Dr.	September 2021
Dunwoody Club Dr. Sidewalks (east side)	CSS-29	Existing sidewalk to Spalding Dr.	August 2021
Hammond Dr. – Phase 1 Efficiency Improvements (widening, operational and multimodal improvements)	CSS-20	Roswell Road/SR 9 to Glenridge Dr.	To be determined
Interstate North Parkway Sidepath	CSS-30	Park to Northside Dr.	October 2021
Johnson Ferry Rd. Sidewalk	CSS-23	Glenridge Connector to existing sidewalk on Glenridge Dr.	June 2020
Mt. Paran Rd. at Powers Ferry Rd. Roundabout	CSS-8	--	August 2022
Mt. Vernon Hwy. Multi-Use Path	CSS-19	City Springs to Sandy Springs MARTA Station	October 2023
Mt. Vernon Hwy. and Johnson Ferry Rd. Intersection Improvements	CSS-18	--	December 2023
Northside Dr. at Riverview Dr. and Old Powers Ferry Rd. Roundabout	CSS-10	--	March 2022
Peachtree Dunwoody Rd. Multi-Use Path	CSS-16	Hammond Dr. to Abernathy Rd.	May 2024
Peachtree Dunwoody Rd. at Windsor Pkwy. Intersection Improvements	CSS-7	--	September 2021
Roberts Dr. Sidewalks	CSS-31	Northridge Rd. to Davis Academy	June 2021
Roswell Rd. at Dalrymple Rd. Intersection Improvements	CSS-12	--	September 2021

³³ Fulton County T-SPLOST Project Explorer. <https://tsplost.fultoncountyga.gov/projects/CSS-%2028?tab=list>

Project Name	Project ID	Project Limits	Projected Completion Date
Roswell Rd. at Grogans Ferry Rd. Intersection Improvements	CSS-11	--	December 2022
SCOOT (Adaptive Signal) Upgrade	CSS-5	16 intersections	June 2021
Spalding Dr. at Dalrymple Rd.-Trowbridge Intersection Improvements	CSS-4	--	March 2021
Spalding Dr. at Pitts Rd. Intersection Improvements	CSS-9	--	April 2023
Spalding Dr. Sidewalk and Multi-Use Path	CSS-26	Spalding Lake Court to Holcomb Bridge Rd.	March 2022
Windsor Pkwy. Sidewalks (south side)	CSS-24	Existing sidewalk to City limits	August 2020

Source: Fulton County T-SPLOST Project Explorer

Fulton County Transit Master Plan

The Fulton County Transit Master Plan examines the need for transit expansion in Fulton County. Sandy Springs was one of 14 cities that participated in this planning effort. Four roadways within the City were evaluated as potential transit service corridors: GA 400, I-285, Roswell Road/SR 9, and Abernathy Road/Johnson Ferry Road. Following an evaluation of several factors, including population and employment density, potential ridership, and public and stakeholder input, a market-based transit scenario was developed. The developed scenario sought to match the most appropriate mode of transit to each corridor. For Sandy Springs, the transit scenario includes heavy rail along GA 400 from the North Springs MARTA Station to Holcomb Bridge Road; light rail along I-285; arterial rapid transit along Roswell Road/SR 9; and frequent local bus service on Johnson Ferry Road.

The Next Ten: Comprehensive Plan For Sandy Springs, Georgia (2017)

The Next Ten Comprehensive Plan for Sandy Springs is designed to guide the City's future land use and development patterns over the next 20 years as Sandy Springs' population continues to grow, with an emphasis on an immediate ten-year horizon. Ten overarching themes serve as a guiding framework for the plan: preserving neighborhoods, improving citywide mobility, creating connections, expanding and making open space more accessible, creating a balanced community, economic competitiveness, improving transit infrastructure, promoting compact and walkable redevelopment, creating a sense of place, and developing tools to manage and implement the City's vision.

In order to help achieve the City's vision, Next Ten establishes ten "key actions" for the next decade. These include the following actions to improve mobility and connectivity, and expand upon the City's multimodal transportation network:

- As part of the revitalization of Roswell Road, transform the corridor into a pedestrian-friendly urban boulevard.
- Transform Perimeter Center and the Medical District area into live-work nodes that offer a range of travel options, including a multimodal urban greenway along Peachtree-Dunwoody Road.
- Study options for transforming Hammond Drive (from Glenridge Drive to Roswell Road) into a multimodal connection between Perimeter Center and City Springs.
- Mitigate traffic congestion by providing a viable and attractive range of transportation options, community linkages and "last mile" connections that encourage people to walk, bike and use alternative transit modes.
- Reduce parking requirements in new and redeveloped areas where other transportation options are available, and work with MARTA to create remote lots that can help transport employees to and from work in Perimeter Center.
- Develop an expanded trail network to connect residential areas to green spaces and natural areas, including a pedestrian bridge across the Chattahoochee River.

The Next Ten Comprehensive Plan includes four Small Area Plans that provide specific land use and development guidelines for four focus areas: Roswell Road, Perimeter Center, the North Springs MARTA station and future Northridge MARTA station, and Powers Ferry.³⁴

Roswell Road Small Area Plan

The Roswell Road Small Area Plan focuses on the nine-mile stretch of Roswell Road through Sandy Springs, which serves as the City's primary surface transportation street. The existing corridor is auto-centric – the corridor carries a high volume of vehicular traffic and lacks continuous facilities that are safe and comfortable for pedestrian, cyclists, and transit users. The plan identifies a need to expand travel options along the corridor, create better multimodal connectivity between Roswell Road and adjacent residential neighborhoods, and improve connectivity with greenways, other multimodal corridors, and MARTA stations. The ultimate vision for Roswell Road is a pedestrian and bicycle-friendly boulevard with walkable, mixed-use activity centers. In order to help achieve this vision, the plan specifies design guidelines concerning street connections and

³⁴ The Next Ten: Comprehensive Plan – Sandy Springs, Georgia. 2017.
<http://www.sandyspringsga.gov/home/showdocument?id=14342>

block spacing, raised landscaped medians, major intersections, parking management, transit, and “complete streets” and the public realm.³⁵

Perimeter Center Small Area Plan

The Perimeter Center Small Area Plan provides a vision and priority actions for one of the Atlanta region’s largest employment centers. While Perimeter Center is a major jobs center, there are missing “last mile” connections between major land uses and the active transportation and transit networks, and it lacks multimodal connectivity to surrounding areas. This plan establishes a vision for Perimeter Center as a vibrant, well-connected area with land uses that are better integrated with the surrounding MARTA stations. As part of this vision, Peachtree Dunwoody Road would be transformed into a pedestrian- and bicycle-friendly urban boulevard with linear green spaces. The corridor would also include “smart” elements such as real-time information displays on bus arrival times or parking availability, and beacons that track user movements to establish patterns of how travelers move through urban spaces. Other priority actions that would help achieve the plan vision include better connections between streets and blocks, enhanced regional transit access along Hammond Drive, and the establishment of programs and policies to reduce peak-period commuting traffic volume.³⁶

MARTA Station Areas Small Area Plan

The MARTA Station Areas Small Area Plan focuses on the North Springs MARTA station and a proposed future MARTA station at Northridge Road. The North Springs station currently has poor access for pedestrians and cyclists and does not have a direct connection to GA 400. The plan envisions better pedestrian and bicycle accessibility between the North Springs station and the surrounding community, including a pedestrian bridge to the west side of GA 400, and new transit-oriented development (small retail/commercial uses and high quality housing) near the MARTA station. These improvements would create more opportunities for people to live and work close to the station.

Powers Ferry Small Area Plan

The Powers Ferry area is the western gateway to Sandy Springs and is characterized by residential neighborhoods, small-scale retail, office and hospitality uses, and proximity to natural resources such as the Chattahoochee River and parks and green spaces managed by the National Park Service. There is currently a lack of safe multimodal connections in the area, making it difficult for residents and workers to walk or bike to parks as well as retail and office developments. The vision for the Powers Ferry area includes a small-scale retail village with a walkable and bikeable

³⁵ Roswell Road Small Area Plan. February 2017.

<http://www.sandyspringsga.gov/home/showdocument?id=22051>

³⁶ Perimeter Center Small Area Plan. December 2016.

<http://www.sandyspringsga.gov/home/showdocument?id=22057>

environment; a reconfigured street network around the I-285 junction with Northside Drive and New Northside Drive; sidewalks and bikeways along Northside Drive, New Northside Drive, Powers Ferry Road, and Interstate Parkway North; better pedestrian and bike connections along the Chattahoochee River, to improve multimodal access between residential neighborhoods south of I-285 and National Park Service lands; and the continued use of trees and landscaping in transportation projects to help mitigate noise impacts from I-285.³⁷

Sidewalk Program

Sandy Springs has a Sidewalk Improvement Policy that provides an objective and consistent framework to evaluate and prioritize sidewalk projects in the city. The scoring criteria for potential sidewalk projects include factors such as right-of-way availability, proximity to schools and parks, roadway classification, and evidence of pedestrian activity.³⁸ The current sidewalk program builds on the Sidewalk Master Plan Network adopted in January 2016. Sidewalk projects with an approved fiscal year 2018 budget have been adopted into the Fulton County T-SPLOST program for Sandy Springs. Current sidewalk projects include the following:

Project Name	Status
Brandon Mill Rd. Sidewalk (From Marsh Creek to Lost Forest Dr.)*	Construction
Brandon Mill Rd. Sidewalk (From Lost Forest Dr. to Brandon Ridge Dr.)*	Design
Dalrymple Rd. Sidewalks (From Princeton Way to Duncourtney Dr.)*	Design
Dunwoody Club Dr. Sidewalks (From Spalding Dr. to Fenimore Cir.)*	Design
Interstate North Pkwy. Sidewalks (From Northside Dr. to City limits)*	Design
Johnson Ferry Rd. at Glenridge Conn. Sidewalks*	Construction
Mt. Vernon Hwy. to Hilderbrand Dr. Multi-Use Path	Construction
Roberts Dr. Sidewalks (From Davis Academy to Northridge Rd.)*	Design
Roswell Rd. Pedestrian Bridge over Chattahoochee River	Design
Roswell Rd./SR 9 Sidewalk Enhancements (From Northwood Dr. to Long Island Dr.)	Design
Sandy Springs Cir. Sidewalks (From Johnson Ferry Rd. to Mt. Vernon Rd.)	Construction

³⁷ Powers Ferry Small Area Plan. December 2016.

<http://www.sandyspringsga.gov/home/showdocument?id=22049>

³⁸ FY 2017 Capital Sidewalk Program Update - January 17, 2017.

<http://www.sandyspringsga.gov/home/showdocument?id=13214>

Project Name	Status
Spalding Dr. - Spalding Lake Court to Spalding Corners Shopping Center (Multi-use path and sidewalk from Winters Chapel Rd. to River Exchange Dr.)*	Construction
Windsor Pkwy. SW Sidewalks (Crestwicke Pointe to City limits)*	Construction

*T-SPLOST Project

Sandy Springs Trail Master Plan

The Sandy Springs Trail Master Plan, completed in October 2019, identifies approximately 31 miles of proposed trails in the City. Trails included in the plan will provide connectivity between neighborhoods, community destinations, employment centers, and MARTA stations. Regional connectivity will be improved with new connections to adjacent trails and the Chattahoochee River National Recreation Area (CRNRA). The proposed network includes a mix of trail types, including greenway trails (which travel through parks or environmental corridors and generally do not follow a roadway alignment), sidepaths (which are designed to fall within roadway right-of-way), and neighborhood greenways (which are defined in the plan as low-volume, low-speed roads appropriate for bicycle travel). The proposed projects build on the City's existing trail network and funded future trail projects. The 31 miles of trails proposed in the plan are divided into six segments:

- Segment #1: North End Connector** – A nine-mile trail loop will connect the CRNRA, the Island Ford Park National Recreation Area, the North River Shopping Center, five schools, and the Roswell Greenway located north of Sandy Springs along the Chattahoochee River. This segment complements the North End redevelopment plan and includes a trail along Roswell Road/SR 9, creating a bicycle/pedestrian connection across GA 400.
- Segment #2: Morgan Falls Park Connector** – A five-mile trail loop will connect Morgan Falls Overlook Park, Big Trees Forest Preserve, the North Fulton Government Service Center, and an apartment complex. This segment includes a pedestrian bridge across the Chattahoochee River to connect the Sandy Springs trail network to similar facilities in Cobb County. The proposed alignment also includes an at-grade mid-block crossing of Roswell Road/SR 9.
- Segment #3: Colquitt Road to Glenridge Drive** – A five-mile trail segment will provide a north-south connection between the North Springs MARTA Station and schools in eastern Sandy Springs. The proposed trail alignment includes a new sidepath on the Spalding Drive bridge over I-285. The plan recommends the City coordinate with GDOT to have this connection included in the bridge replacement necessitated by the GA 400 Express Lanes project.

- **Segment #4: Glenridge Drive to Johnson Ferry Road** – A three-mile trail segment will connect the Abernathy Greenway to the Tennis Center, the future Glenridge Park, and the CRNRA. The trail also connects users to the Glenridge employment center.
- **Segment #5: City Springs/Perimeter Center Connectors** – A 3.5-mile trail segment located primarily within city right-of-way that will link a series of programmed trail projects between City Springs and Perimeter Center. The new trail segment will primarily be composed of sidepaths and neighborhood greenways. This segment also provides a connection to the future PATH 400 trail at the Glenridge Connector.³⁹
- **Segment #6: East/South Connectors** – Four trail segments will connect the Sandy Springs trail network to similar facilities in Peachtree Corners (Segment 6A), Cumberland (Segment 6B), and the PATH 400 trail (Segments 6C and 6D). The proposed trail alignment for Segment 6B includes a new sidepath on the Powers Ferry bridge over I-285. The plan recommends the City coordinate with GDOT to have this connection included in the bridge replacement necessitated by the I-285 Top End Express Lanes project.

Sandy Springs Bike, Ped, Trail Plan

The Sandy Springs Bike, Ped, Trail Plan, completed December 2014, developed a list of bicycle and pedestrian projects as well as policies for future transportation projects. The existing sidewalk conditions scored a 26 out of 100, which characterized the city as a “Car-Dependent City” based on WalkScore. The roadway network provides limited connected routes for traveling within the City hindering any other mode of travel besides a vehicle. The right-of-way is also limited from existing and future developments resulting in the existing narrow bike lanes and “bikeable shoulders” to not be adequate to accommodate bicycles. Designated off-road facilities will ensure safety and potential connectivity. Privately-owned riverfront limits potential as a viable trail corridor. The Plan’s policy recommendations are as followed:

- Develop and adopt a Complete Streets policy to integrate bicycle/pedestrian facilities into the design of all transportation projects
- Develop and adopt a bicycle parking ordinance that requires safely located, adequate bicycle parking at major attractors

I-285 Transit Study

The I-285 Transit Study was a joint planning of seven cities along the northern arc of I-285 (Smyrna, Sandy Springs, Dunwoody, Brookhaven, Chamblee, Doraville, and Tucker) to evaluate transit options along I-285 between Cumberland Parkway and the Northlake/Tucker area. The study concluded that a high-capacity, rubber-wheeled transit system using the I-285 express lanes would be the most operationally and financially feasible transit option for travel along the I-285 top end. Utilizing the express lanes would ensure shorter travel times (compared to driving in the

³⁹ [Sandy Springs Trail Master Plan](http://www.sandyspringsga.gov/home/showdocument?id=21757), October 2019.
<http://www.sandyspringsga.gov/home/showdocument?id=21757>

general purpose lanes) without the right-of-way and infrastructure costs that associated with a heavy rail option. Within Sandy Springs, access is proposed at the Roswell Road/SR 9 and I-285 interchange. Access would configured as a pair of stations east of Roswell Road/SR 9, one north and one south I-285. Dedicated access for transit vehicles would be provided from the express lanes. A pedestrian bridge between the two stations would facilitate connectivity across the interstate.

Transform 285/400

The Transform 285/400 project will reconstruct the I-285/GA 400 interchange, with the goal of reducing traffic congestion and improving safety. In addition to reconstruction of the interchange, the project will add a new collector-distributor system, new flyover ramps, and other similar improvements along I-285 and GA 400. Improvements along I-285 extend for approximately four miles – from Roswell Road/SR 9 to Ashford Dunwoody Road. Improvements on GA 400 extend for approximately six miles – from the Glenridge Connector to Spalding Drive. The project will also add nearly one mile of shared-use path along GA 400 between Johnson Ferry Road and Peachtree Dunwoody Road. The Transform 285/400 project is currently under construction.⁴⁰

⁴⁰ I-285 & SR 400 Improvements. Georgia Department of Transportation.
<http://www.dot.ga.gov/BuildSmart/Projects/Pages/I285SR400.aspx>

Performance Measures Memorandum

Introduction and Purpose

Transportation Performance Management (TPM) programs use performance information collected from the transportation network to target transportation investments toward projects and programs that align with a jurisdiction's stated goals and objectives for the system. Benefits of a well-implemented TPM program include the ability to make data-driven investment decisions, improve governmental transparency and accountability, address transportation equity concerns, and improve overall connectivity and safety for all users.

By law, transportation performance measuring programs must be implemented at the national, state, and regional levels. Implementation at the municipal level in Sandy Springs, in addition to being a first for the metro Atlanta area, can help the City meet the goals and objectives established in the ongoing transportation master plan (TMP) update and continue to track them after the planning process is finished. In particular, a performance measurement program could help Sandy Springs:

- Improve the **safety** of the transportation network for users of all modes by providing data to support crash reduction goals and/or a vision zero approach.
- Protect and manage the City's infrastructure investments by improving the level and scope of **maintenance** data available.
- Promote **mobility and accessibility** improvements with new data to understand efficiency issues in the existing network.

This memorandum is intended to serve as a "conversation starter" that explains regulatory context, explores performance measurement programs in peer cities, and identifies potential performance measures that have value in Sandy Springs. In addition, potential challenges and staff commitments associated with the creation of a performance measurement program are summarized to facilitate future internal discussion by City staff.

Statewide and Local Context

Federal transportation policy requires the Federal Highway Administration (FHWA), state departments of transportation (DOTs), and metropolitan planning organizations (MPOs) to set and track performance measures for their respective jurisdictions. Federal metrics are generally designed to track progress towards meeting the seven Federal-aid Highway Program performance goals established by Congress.

The Georgia Department of Transportation (GDOT) uses performance metrics to track progress towards goals for Safety, Bridge and Pavement Conditions, and System Performance, Freight, and Congestion Mitigation and Air Quality (CMAQ).

- GDOT performance metrics focused on **Safety** includes number and rate (per 100 million VMT) of fatalities, number and rate of serious injuries, and number of non-motorized fatalities and serious injuries on public roadways.
- GDOT performance metrics focused on **Bridge and Pavement Conditions** include the percentage of National Highway System (NHS) bridges by deck area in good and poor condition, percentage of interstate bridges by deck area in good and poor condition, and percentage of non-interstate NHS bridges by deck area in good and poor condition.
- GDOT performance metrics focused on **System Performance, Freight, and CMAQ** include items related to travel time reliability, excessive delay per capita, non-single occupancy vehicle travel, and total emissions reductions from CMAQ projects.

In total, thirteen performance measures are used across the three categories. Data relating to these performance metrics is submitted to FHWA bi-annually. The Atlanta Regional Commission (ARC) has concurred with GDOT statewide goals and agreed to set regional goals based on prorated portions of the statewide goals. In the future, ARC may reevaluate this position and develop separate qualifiable targets for the metro Atlanta area.

Performance Metrics in Peer Cities

To understand how cities of similar size and context to Sandy Springs are using transportation performance metrics, dashboards for Bellevue, Washington and Arlington, Texas were reviewed. High-level takeaways of peer systems are presented below.

Bellevue, Washington

Bellevue Dashboard: <https://bellevuewa.gov/city-government/departments/finance/budget-and-performance/performance-reports/performance-dashboard>

The City of Bellevue, Washington maintains a robust performance metrics dashboard with data going back to 2010. Metrics in Bellevue's dashboard are grouped into nine categories that track how well the city meets its key budget outcomes. Metrics in the "improved mobility" budget outcome group are split roughly in half between calculation-based measures (such as average arterial street condition rating) and more perception-based measures (such as percent of residents who believe the transportation system is safe for all users). Calculation-based metrics use available municipal data, although specific sources are not shown in the dashboard (e.g., traffic crashes on Bellevue streets could be calculated in a variety of ways). Perception-based metrics are calculated using the results of an annual quality of governance and vision survey conducted by outside consultants.

Bellevue represents a close peer comparison to Sandy Springs. The city has a population of just under 150,000 and is similarly sited to Sandy Springs as a major employment center relatively close to the downtown area. Unlike Sandy Springs, the city does not currently have a high-capacity transit link to the regional core (although a light-rail line to the area is under construction).

The Bellevue dashboard is part of a mature performance measurement system that is tightly integrated with the City's overall budgeting process. The system provides a high level of detail and value but requires annual work by outside consultants to collect and analyze data. Data is updated once per year and presented as a series of static graphs on a traditional webpage.

Arlington, Texas

Arlington Dashboard: <https://pm-arlingtontx.opendata.arcgis.com/>

The City of Arlington, Texas tracks the performance of six groups of metrics through its "Your City at Work" program. Each set of metrics addresses one of six city priorities established by City Council. The program is designed to improve governmental transparency by providing online access to the metrics city leaders use to evaluate performance. Under the "Enhance Regional Mobility" goal, the city tracks travel time along major corridors, ridership on the city's vanpool service, pavement condition, annual maintenance for city traffic signals, and the number of pothole repairs made.

Arlington is both larger (the city has a population of 350,000) and more suburban than Sandy Springs. The city does not maintain a public transit system, but contracts with Via to provide subsidized rideshare service.

The Arlington dashboard typically shows data going back approximately two years, but at a greater sampling rate (typically two – four months between data points). The system is hosted external to the city's website on a custom ArcGIS visualization dashboard. The dashboard system allows the user to pan over individual data points in each metric, and presents a dynamic and modern interface to users.

Potential Performance Measures

Implementing a performance measuring system will help Sandy Springs track progress against the goals and objectives outlined in the TMP update. The TMP is guided by six goals:

- **Safety** - Promote a safer transportation system for users of all modes
- **Mobility & Accessibility** - Promote an interconnected and efficient transportation network
- **Economic Vitality** - Promote economic development through targeted transportation investments

- **Land Use & Transportation Integration** - Improve the integrate land use and transportation decision-making
- **Maintain & Optimize System** - Protect our infrastructure investments by maintaining them properly
- **Well-Being & Environment** - Support healthy living through quality connections to the built and natural environments

Potential performance metrics that support each of these goals are provided in a separate spreadsheet that accompanies this document. The local impact, regional context, available data sources, and ease of tracking are discussed for each metric in the spreadsheet.

Next Steps

The list of performance measures in the previous section is not meant to be a final list, but rather to be list of suggestions for metrics that could be useful and cost-effective for the City to track. In addition to further vetting of individual metrics to determine their usefulness in a City-level performance metrics reporting program, several broader items should be considered to shape the overall program direction:

- **Perception and Ownership:** The general public's impression of "transportation in Sandy Springs" includes a wider variety of infrastructure than that actually controlled by Sandy Springs. Although residents may point to congestion on SR 400 or safety concerns on Roswell Road as evidence of poor system performance, the City of Sandy Springs has limited control over these facilities. A Sandy Springs performance metrics program will need to decide if non-City controlled roadways and infrastructure should be included in measurements. Special attention should be paid when making sure this distinction is made clear in the description for each metric.

In addition to public perception issues, the differing ownership of facilities creates practical concerns in gathering, analyzing, and reporting data. If non-City owned roadways and transportation infrastructure are included in the City's performance metrics, City staff will need to ensure that relevant outside data can be collected in a reasonable amount of time.

- **Public-Facing Deliverables:** The City should involve relevant Communications and GIS staff in designing public-facing deliverables for the performance metrics tracking program. Ideally, such deliverables should be designed so that they can be updated in-house. Additionally, the City will need to decide on a reporting frequency.
- **Funding and Staffing Availability:** Adequate staff time will also need to be allocated to calculating metric results and placing results into public-facing dashboards and/or

webpages. Funding requirements can be minimized by reporting on an annual basis, choosing metrics that can be calculated in-house, and leveraging existing ITS investments to collect relevant data.

- **Coordination with Region and State:** Although the metrics best-suited for Sandy Springs to track may be different than those tracked by ARC and GDOT, selected performance measures should be consistent in purpose with regional and statewide goals. Additionally, the City should develop a process to address instances where City-level data shows different trends or results from Regional and/or Statewide data.
- **Integration into Broader City Goals:** If the initial set of transportation-specific performance metrics proves useful in increasing accountability and helping track performance against goals outlined in the TMP, the program could be expanded in the future to help track other City goals established in the *Next Ten* comprehensive plan.



Potential Performance Metrics by TMP Goal						August 2020
Safety	Metric Focus	Local Impact	Regional Context	Available Data Resources	Ease of Tracking	Notes
Number of Crashes along City-Owned Roadways	Local	Safety on City-controlled facilities	N/A	GDOT Gears Database	Moderate	
Number of Crashes along All Roadways	Local and Regional	Safety on all roadways in City	Accounts for non City-owned facilities in Sandy Springs	GDOT Gears Database	Moderate	
Percent of Crashes Resulting in Serious Injury / Fatality	Local and Regional	Safety on all roadways in City	Accounts for non City-owned facilities in Sandy Springs	GDOT Gears Database	Moderate	
Number of Non-Motorized Crashes	Local and Regional	Safety on all roadways in City	Accounts for non City-owned facilities in Sandy Springs	GDOT Gears Database	Moderate	
Vision-Zero Goals	Local and Regional	Opportunity for Sandy Springs to be a leader in safety targets	ARC and GDOT not currently pursuing vision-zero approach	TBD	Varies	Broad category to facilitate further discussion
Mobility & Accessibility	Metric Focus	Local Impact	Regional Context	Available Data Resources	Ease of Tracking	Notes
System Reliability (Travel Time Index)	Local and Regional	Public perception shapes resident's priorities for transportation investment	Public perception of time reliability driven by non-City owned facilities	RITIS	Moderate	Leverage City data-sharing agreement with GDOT
Peak-Period Travel Time along Key Corridor(s) - Personal Vehicles & Transit	Local and Regional	Public perception shapes resident's priorities for transportation investment	Key corridors may not be controlled by City	RITIS, MARTA GTFS Data	Hard	Inclusion and accuracy of GTFS data may complicate tracking
System Health Metrics (% Arrivals on Green, Progression Ratio, etc.)	Local	Collects data on which corridors may need retiming work	N/A	ATSPM, RITIS	Moderate	Should mirror GDOT RTOP program. ATSPM metrics can be used internally with a weighted average index score developed for external reporting
MARTA Rail Ridership	Local and Regional	Collects data to understand travel patterns through City, addresses transportation equity concerns	Rail ridership catchment area includes areas north of North Springs station along GA 400	MARTA Ridership Data	Easy	Medical Center, Sandy Springs, and North Springs
MARTA Bus Ridership	Local and Regional	Collects data to understand travel patterns through City, addresses transportation equity concerns	Several routes connect to destinations outside Sandy Springs	MARTA Ridership Data	Easy	Routes serving Sandy Springs - focus on Rt. 5; MARTA APC data should easily allow for data sharing. Also consider paratransit MARTA Mobility trips.
Mode Share for Passengers Arriving at Rail Stations	Local	Collects data on how well-suited station access is to station users	N/A	Survey, RITIS (potentially)	Hard	May have to report out on years when ARC conducts the on-board surveys metro-wide.
Pedestrian Facility Coverage	Local	Infrastructure helps reduce automobile trips and improves transportation equity	N/A	Sidewalk shapefile	Hard	Use shapefile to capture percent of properties accessible by sidewalk
Percent of Public Facilities with ADA Accessibility	Local	Ensures transportation system adheres to Federal policy and improves transportation equity	N/A	N/A	Moderate	City can consider conducting an ADA transition plan to further leverage this metric.
Economic Vitality	Metric Focus	Local Impact	Regional Context	Available Data Resources	Ease of Tracking	Notes
Placemaking and/or Streetscape Projects Completed	Local	Projects improve quality of life for City residents and employees	N/A	Internal project data	Easy	
Projects Completed in <i>The Next Ten</i> Focus Areas (Small Area Plans)	Local	Projects improve quality of life for City residents and employees	N/A	Internal project data, <i>The Next Ten</i>	Easy	
Cumulative Impact of Public-Private Partnerships	Local	Helps maintain City's reputation as a good place to do business	N/A	Developer agreements	Moderate	Verbiage example: "X number of improvements and/or projects have been funded by developers investing in Sandy Springs
Peak Duration and Clearance Time on Key Corridors Near Medical Center/Other Employment Hubs	Local and Regional	Maintains Medical Center/Other Employment Hubs status as a hub for the region	Key corridors may not be controlled by City	RITIS, Streetlight	Hard	
Transportation Demand Management (TDM) Policies	Local	Opportunity to expand on TDM policies implemented at City Springs development	N/A	TBD	Varies	Broad category for further discussion
"Smart City" Initiatives	Local and Regional	Helps maximize the value of City investments into ITS infrastructure	Can coordinate with efforts from other jurisdictions	TBD	Varies	Broad category for further discussion

Potential Performance Metrics by TMP Goal						August 2020
Land Use & Transportation Integration	Metric Focus	Local Impact	Regional Context	Available Data Resources	Ease of Tracking	Notes
Percent of New Projects Including Bike Lanes / Bike Storage / etc.	Local	Wider proliferation of bike-specific infrastructure will increase attractiveness of cycling	N/A	Site plans submitted by developers	Easy	
Percent of New Commercial Projects (sq. ft.) Within Walking Distance to Transit	Local	Location of new development near transit helps reduce congestion	N/A	Transit shapefiles, locations of new projects	Moderate	Walking distance typically 1/4 mile
Percent of New Residential Projects (units) Within Walking Distance to Transit	Local	Location of new development near transit helps reduce congestion	N/A	Transit shapefiles, locations of new projects	Moderate	Walking distance typically 1/4 mile
Percent of Population Within Walking Distance to Grocery Stores / Pharmacies / etc.	Local	Location of residential development near common destinations helps reduce congestion	N/A	American Community Survey (ACS)	Moderate	Walking distance typically 1/4 mile; ease of tracking dependent on implementation of metric. Need shapefile of destinations
Maintenance & Management	Metric Focus	Local Impact	Regional Context	Available Data	Ease of Tracking	Notes
Average Pavement Condition, Arterials (City-owned)	Local	Measures how well system meets state-of-good-repair goals	N/A	Pave On (Pavement Management Program)	Easy	Only include arterials City is responsible for maintaining
Average Pavement Condition, Local Roads	Local	Measures how well system meets state-of-good-repair goals	N/A	Pave On (Pavement Management Program)	Easy	
Average Pavement Repair Cost / Sq. Ft.	Local	Tracks the value City is getting from transportation maintenance dollars	N/A	City Procurement Contracts	Moderate	
Bridge Conditions - Percent of Structures Obsolete / Deficient	Local	Measures how well system meets state-of-good-repair goals	Complaints may be generated by other jurisdictions/agencies (e.g. adjacent jurisdictions, GDOT)	National Bridge Inventory (NBI)	Easy	
Percent of Potholes Fixed Within Preferred Response Time	Local	Improves accountability of City and City contractors to residents	Complaints may be generated by other jurisdictions (e.g. I-285 / GA 400 interchange reconstruction)	Sandy Springs Works Application, City Call Center	Easy	Need to define ideal response time
Number of Construction-Related Complaints Received by City	Local and Regional	Improves accountability of City and City contractors to residents	Complaints may be generated by other jurisdictions (e.g. I-285 / GA 400 interchange reconstruction)	Sandy Springs Works Application, City Call Center	Easy	Note number in/out of City control
Number of Signals Receiving Preventative Maintenance	Local	More cost-effective to conduct preventative maintenance	N/A	Internal City maintenance records	Easy	Comparison with signals receiving regular (reactive) management
Number of Signals Receiving Regular Maintenance	Local	More cost-effective to conduct preventative maintenance	N/A	Internal City maintenance records	Easy	Comparison with signals receiving preventative maintenance
ITS Equipment Health - Device Uptime Percentage	Local	Measures how well system meets state-of-good-repair goals; ensures City gets value from ITS investments	N/A		Moderate	Devices can include signal controllers, signal communications infrastructure, Glance units, BlueToads, etc.
Well-Being & Environment	Metric Focus	Local Impact	Regional Context	Available Data	Ease of Tracking	Notes
Dollars Obligated to Trail Constructed Relative Master Plan Buildout	Local and Regional	Provides accountability against Trails Master Plan goals	Projects may include connections to regional trail networks (e.g. Chattahoochee RiverLands)	City Budget, Trails Master Plan	Easy	Could track miles of trail completed instead. Tracking dollars obligated will account for lag at start of master plan implementation
Number of Trail / Sidewalk Projects Underway and/or Completed	Local and Regional	Provides accountability against Trails Master Plan goals	Projects may include connections to regional trail networks (e.g. Chattahoochee RiverLands)	City design and construction contracts	Easy	
Residents per Acre of Parkland	Local	Helps ensure City maintains a connection to nature during a period of growth	N/A	Facility inventory, ACS	Moderate	
Residents per Mile of Sidewalks, Trails, and/or Bike Lanes	Local	Helps ensure City maintains a connection to nature during a period of growth	N/A	Facility inventory, ACS	Moderate	
Percent of City Transportation Funding Expended on Active Transportation Projects	Local	Helps ensure City maintains a connection to nature during a period of growth	N/A	City Budget	Easy	

1 | Introduction

The Transportation Master Plan

Sandy Springs is an established city and major employment center near the heart of the nation's fourth-fastest growing metropolitan area. As the City continues to mature over the coming decades, current transportation issues will only become more pressing.

The Sandy Springs Transportation Master Plan (TMP) establishes a transportation vision for the City that enables a livable and vibrant community. The TMP seeks to integrate transportation and land-use policy while considering the needs of all modes, including driving, biking, walking, transit, and freight transportation. The plan also considers recent mobility options such as bikeshare, e-scooters, and rideshare.

About this Report

The Multimodal Assessment offers an understanding of the transportation needs that exist in Sandy Springs today based on mode: roadway, bicycle and pedestrian, and transit. This document is unique in that it introduces a series of memorandums that address areas of focus identified by the City of Sandy Springs. Ultimately the goal of this assessment is to build on the Existing Conditions report and bridge the gap towards project development for the TMP.

Roadway

The roadway chapter of the Multimodal Assessment within the City of Sandy Springs covers an array of topic areas from corridors and intersections to policies for consideration. Specific areas of focus were identified for Roadway that include:

- Travel Demand Model Analysis
- New Location Roadways
- Traffic Operations Evaluation

Each of these areas of focus are included within the Roadway chapter as a separate memorandum.

Travel Demand Model Analysis

The travel demand model analysis aimed to understand the effects of projects proposed as part of the Georgia Department of Transportation's (GDOT) Major Mobility Investment Program (MMIP) on the City's local roadway network.

Traffic Operations Evaluation (20 intersections)

The purpose of this area of focus was to identify 20 specific intersections to be studied in more detail to understand the operations at each intersection, conduct a high-level crash analysis, and develop recommendations for each of the intersections.

RITIS/Bottleneck/Travel Time Index

RITIS was leveraged as a database platform to holistically understand major congestion points within the City of Sandy Springs and where there may be opportunities for improvement not on within roadway segments but specific intersections.

New Location Roadways

The new location roadways memorandum offers a recommendations and strategies that can improve mobility and connectivity in the long-term through a variety of methods such as future capacity expansions; roadway extensions; and changes to the City's traffic calming and development/re-development policies.

Safety

The purpose of this analysis was to identify safety needs citywide as well as at five key intersections. This analyzed the crash data by type of crash, severity of crash, and number of crashes. Other safety metrics were used to determine crash trends such as crash rates, GDOT emphasis areas, and contributing factors. Two memorandums were completed in order to understand the safety needs of the City as a whole and at the five key intersections.

Citywide Safety

The citywide safety memorandum identified safety needs by completing a supplemental evaluation of the identified high-crash corridors and through a citywide evaluation of trends compared to Fulton County as well as GDOT District 7.

Intersection Safety Analysis (5 Intersections)

The purpose of this area of focus was to analyze crash data for five specific intersections, identified based on the frequency and severity of crashes that have occurred at each of these locations.

Bicycle and Pedestrian

The purpose of this analysis was to identify bicycle and trail network expansion opportunities within the City. This included a look at new facilities, enhancement of built facilities, and identification of low-stress routes that may not require infrastructure.

Bicycle and Pedestrian Network/20-Minute Neighborhoods Analysis

The purpose of this memorandum was to identify additions or new connections to the existing bicycle and pedestrian networks that bring the most value to the City and its users. A high-level policy overview as well as an assessment of personal transportation devices is also included.

Transit

The purpose of this analysis was to identify new or improved local transit network opportunities that would help to address first and last mile needs within the City limits. This looked at in detail how a transit user would travel within the City (origin and destination points both within the City) as well as how a transit user who is traveling into or out of the City would be able to make the first/last connections.

Transit Network Analysis

The network analysis for transit was built on the findings of past City and regional transit planning efforts. This analysis offers a documentation of specific transit-related needs within the City, integration of feedback from stakeholders, as well as an identification of transit-related policies and projects for consideration as a part of the TMP.

Travel Demand Model Analysis

The Atlanta Regional Commission's (ARC) activity-based model (ABM) is the region's travel demand model (TDM) associated with the current Regional Transportation Plan (RTP). The ABM reflects detailed demographic information, includes both household-level and person-level travel choices, and can use current travel behavior to forecast projected travel patterns and changes in traffic volumes. To better understand existing and projected travel behaviors in Sandy Springs, the Sandy Springs Transportation Master Plan (TMP) developed and analyzed an existing (2018) conditions model and a future (2050) conditions model. 2018 was selected as the existing year because the model was calibrated to annual average daily traffic (AADT) count data provided by the Georgia Department of Transportation (GDOT), of which 2018 is the most recent year of data.

Travel Demand Model Development

The travel demand model is one of many tools used to evaluate a transportation system from a future planning perspective. The TDM uses current travel behavior to estimate future behavior and is most effectively used as a comparison tool between existing conditions and projected future conditions. This comparison helps to draw an understanding of how transportation projects may impact travel. The following sections outline the development of the Sandy Springs TMP existing and future conditions TDMs.

Existing Conditions Travel Demand Model

To reflect existing travel conditions in Sandy Springs, the ARC 2015 base model was refined to ensure that the roadway network and volume projections accurately represent current conditions, based on aerial imagery, facility type classifications, and AADT count data provided by GDOT. The roadway network, traffic volumes, and socioeconomic data were reviewed as part of the refinement process, consisting of model validation and model calibration.

Existing Model Validation

The ARC 2015 base travel demand model released by ARC in February 2020 (as part of the current RTP) was used as the base model for the refined Sandy Springs TMP existing (2018) conditions model. The number of lanes and facility type classifications were validated in comparison to aerial imagery and data provided by the City of Sandy Springs and GDOT. After the number of lanes and facility type classifications of the roadway network were validated, the presence of roadways was reviewed with City of Sandy Springs staff to determine if any local roadways not included in the ARC 2015 base model should be built into the refined Sandy Springs TMP model. Based on feedback from City staff, the following streets not included in the ARC base network were added to the Sandy Springs TMP model network:

- Springwood Connector, from Peachtree Dunwoody Road to Perimeter Center Parkway

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- River Exchange Drive, from Spalding Drive to Holcomb Bridge Road
- North River Parkway, from Roswell Road to Pride Place
- Hightower Trail, from Roswell Road to Dunwoody Place
- Northridge Parkway, from Roswell Road to Dunwoody Place
- Glen Errol Road, from Mount Vernon Highway to Long Island Drive
- Londonberry Road, from Powers Ferry Road to Long Island Drive
- Franklin Road, from Roswell Road to High Point Road
- Evergreen Drive, from Peachtree Dunwoody Road to Johnson Ferry Road
- Hilderbrand Drive, from Sandy Springs Circle to Hammond Drive

Additionally, as part of the validation process, socioeconomic data by traffic analysis zone (TAZ) was reviewed with City Staff. Employment data for two TAZs in the portion of northwest Sandy Springs bound by Dalrymple Road, Roswell Road, and the Chattahoochee River were noted for further evaluation and compared to employment data provided in the US Census Bureau's *OnTheMap* online mapping tool. It was determined that the number of jobs coded in the ARC base model at these two TAZs was too high, and the number of jobs coded in the refined Sandy Springs TMP model was adjusted to match US Census Bureau data.

Existing Model Calibration

After validating the model, the refinement process continued with an initial model run, the results of which were compared to the most recent daily counts provided by the *GDOT Traffic Analysis and Data Application (TADA)* website, which reports 2018 counts. Screenlines along the borders of the city were evaluated to ensure appropriate volumes were entering and exiting the city network on the north/northeast, south, east, and west sides of the city network. Daily traffic internal to the city was also reviewed.

Throughout this comparison process, travel demand model links were determined to have too much, too little, or a reasonable amount of daily traffic based on guidance provided by the National Cooperative Highway Research Program (NCHRP). For model links with daily volumes either too high or too low, calibration edits (including adjustments to facility types, to the number and location of centroid connectors, and to travel times) were made, and additional models were run as an iterative process until the model results more closely resembled actual existing conditions. The major calibration adjustments made include time travel penalties along roadways that cross the Chattahoochee River and along SR 400 as well as facility type adjustments on Mount Paran Road and Spalding Drive.

Future Conditions Travel Demand Model

The ARC 2050 base travel demand model was used to develop the Sandy Springs TMP future model in order to project future traffic conditions. The validation and calibration edits made to

the 2018 model network were applied to the ARC 2050 base model, then the model network was validated to accurately reflect projects programmed within the study area, such as the conversion of the Abernathy Road at SR 400 interchange to a diverging diamond interchange, and major projects near the study area, such as the SR 400 Collector-Distributor System, I-285 Top End Express Lanes, and SR 400 Express Lanes. Projects included in the ARC RTP are coded in the 2050 model, including the Hammond Drive widening from Ashford Dunwoody Road to Glenridge Drive. Bus rapid transit (BRT) along SR 400 is also included in the 2050 model.

SR 400 Collector-Distributor (C-D) System

The C-D System for SR 400 is currently under construction as the Transform 285/400 Project (PI 0013546) and will be fully operational by 2050. This system is expected to operate as two C-Ds, one starting south of I-285 and ending just north of Abernathy Road and the other starting at Abernathy Road and ending north of the North Springs MARTA Station ramps.

SR 400 and I-285 Express Lanes

In coordination with GDOT and City of Sandy Springs staff, the expected express lane configuration was confirmed or updated within the ARC 2050 base ABM between I-75 and I-85. Along I-285, express lanes (EL) are expected to have access to or from neighboring arterials or the general purpose (GP) lanes at the following locations as part of the I-285 Top End Express Lanes Project (PI 0001758):

- West of Northside Drive
 - Eastbound GP to EL access
 - Westbound EL to GP access
- East of Northside Drive
 - Eastbound EL to GP access
 - Westbound GP to EL access
- SR 400
 - Eastbound EL to and from SR 400 EL access
 - Westbound EL to and from SR 400 EL access
- Perimeter Center Parkway – full EL interchange
- West of North Shallowford Road
 - Eastbound EL to Savoy Road (frontage road)
 - Westbound Cotillion Road (frontage road) to EL
- East of North Shallowford Road
 - Eastbound Savoy Road to EL
 - Westbound EL to Cotillion Road
- Flowers Road Extension (spanning across I-285 from Flowers Road to Park Avenue)

- Eastbound EL to Flowers Road Extension
- Westbound Flowers Road Extension to EL
- New Peachtree Road
 - Eastbound New Peachtree Road to EL
 - Westbound EL to New Peachtree Road

The I-285 Top End Express Lanes project extends up SR 400 to include:

- Mount Vernon Drive – Single Point EL interchange

The I-285 Top End Express Lanes transition to the SR 400 Express Lanes (PI 0001757) near the North Springs MARTA Station. Access provided north of Mount Vernon Drive to the northern city limit of Sandy Springs along SR 400 includes:

- Near North Springs MARTA Station
 - Southbound EL to GP access just north of southbound ramp
 - Southbound EL to North Springs MARTA Station
 - Northbound North Springs MARTA Station to EL
- South of Pitts Road
 - Northbound GP to EL access
 - Northbound EL to GP access
 - Southbound GP to EL access
- Between Roberts Drive Crossings
 - Northbound GP to EL
 - Southbound EL to GP

Travel Demand Model Results

The travel demand model is an estimation that does not fully represent the delay that drivers typically experience at intersections, making it most effectively used as a comparison tool between existing conditions and projected future conditions. The model does not account for all aspects of a roadway network's design that impacts the ability of users to travel through the system, such as how lanes are added or removed from intersection to intersection, the presence of turn lanes, merging and weaving segments, queuing, and delay at signalized and unsignalized intersections. These items impact the ease at which a vehicle is able to traverse through the roadway network, particularly during peak periods. In addition, the travel model reviews four-hour peak periods, rather than focusing on just the most congested hour or 15-minute period.

These two elements combined often result in the model projecting levels of congestion that do not appear as extreme as what is or will be experienced by drivers navigating through the network. As a result, the model should be used as one of many evaluation tools, and future model results

should be reviewed as a comparison to existing modeling results, not as an absolute number. The comparison of results between two scenarios are best used to draw an understanding of how travel may be impacted in the future by transportation projects. The following sections summarize results and draw comparisons from the Sandy Springs TMP 2018 and 2050 travel demand models.

Traffic Volumes

Daily traffic volume forecasts from the refined Sandy Springs TMP 2018 and 2050 travel demand models are mapped in **Figure 1** and **Figure 2**, respectively, and the percent difference between the forecasted daily traffic in 2018 and 2050 is illustrated in **Figure 3**. Results from I-285 and SR 400 were removed from the maps to better show forecasts on the surface streets within Sandy Springs, on which the TMP is more focused. In 2018, few roadways have greater than 15,000 vehicles per day in each direction. Those roads include Abernathy Road and Roswell Road as well as segments of Peachtree Dunwoody Road, Johnson Ferry Road, and Hammond Drive, all of which are currently multi-lane facilities.

Many of the roads with the highest volumes in 2018 continue to exhibit the highest volumes in 2050. However, in 2050, daily volumes begin to exceed 20,000 vehicles in some segments along Abernathy Road, Peachtree Dunwoody Road, Hammond Drive, and Roswell Road. As shown in **Figure 3**, most roadways are expected to increase in volume, many doubling their 2018 volume by 2050.

Higher increases in volume are anticipated in western Sandy Springs near Northside Drive, Powers Ferry Road, and Mount Vernon Highway. Though no direct access points to/from the managed lanes are planned for this portion of the city, these increases in volume may be attributed to the MMIP managed lanes system since multiple general purpose-to-managed lane access points are planned for this area. Additionally, higher increases in volume are anticipated in eastern Sandy Springs near SR 400, along Mount Vernon Highway, Barfield Road, and Glenridge Drive. A single point interchange for express lanes direct access is planned for SR 400 at Mount Vernon Highway.

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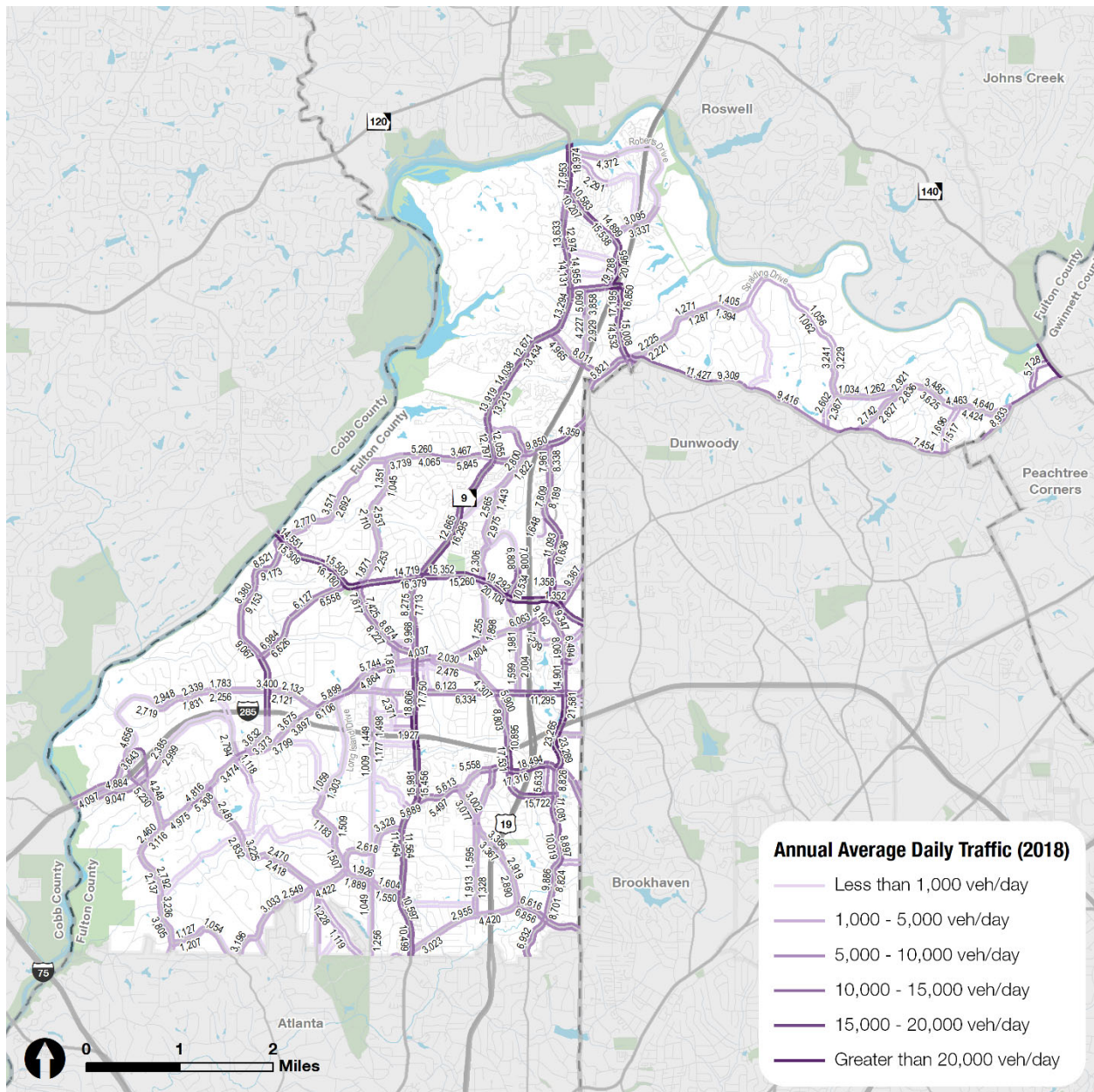


Figure 1. Existing (2018) Travel Demand Model Results – Annual Average Daily Traffic

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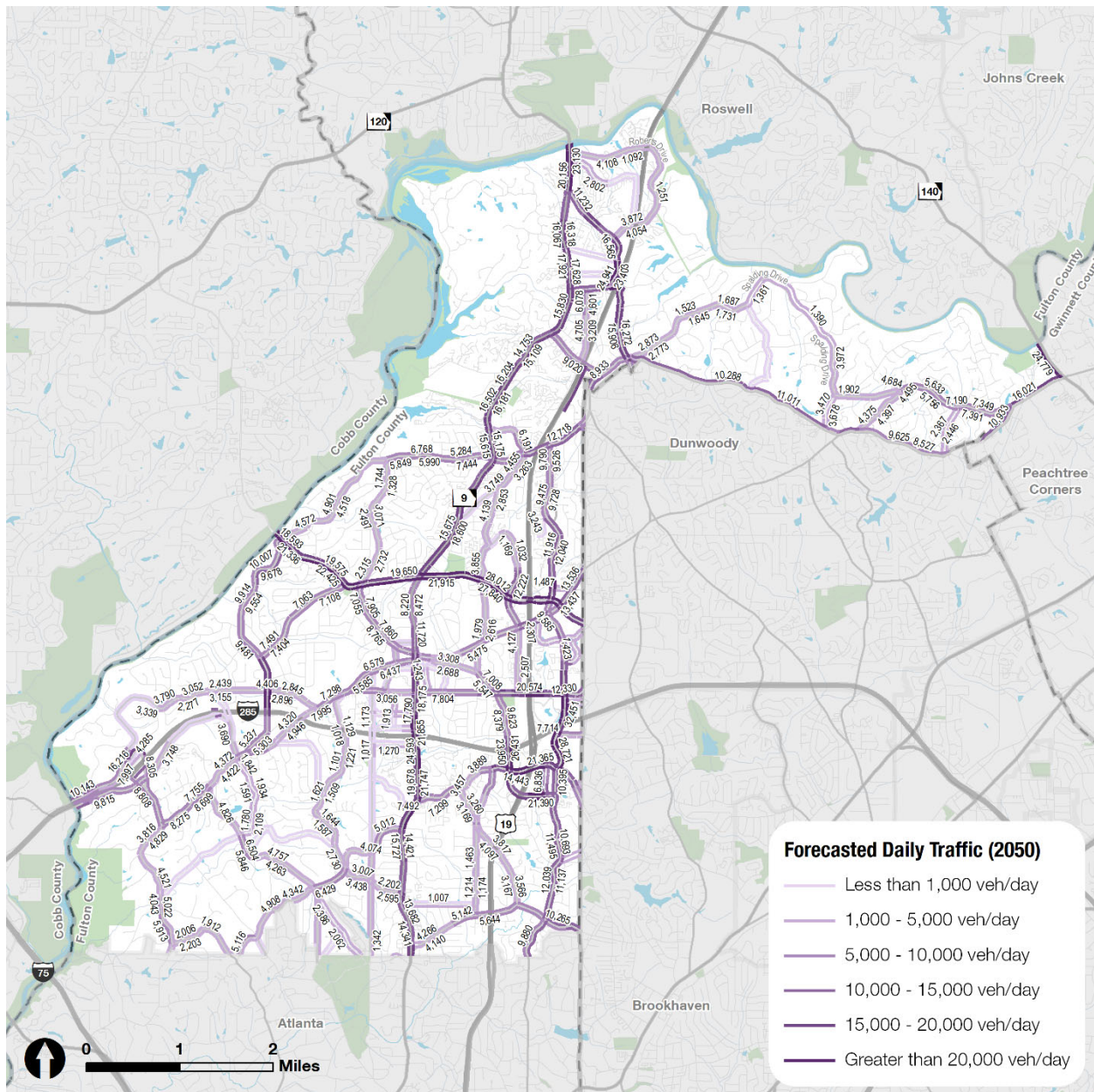


Figure 2. Future (2050) Travel Demand Model Results – Forecasted Daily Traffic

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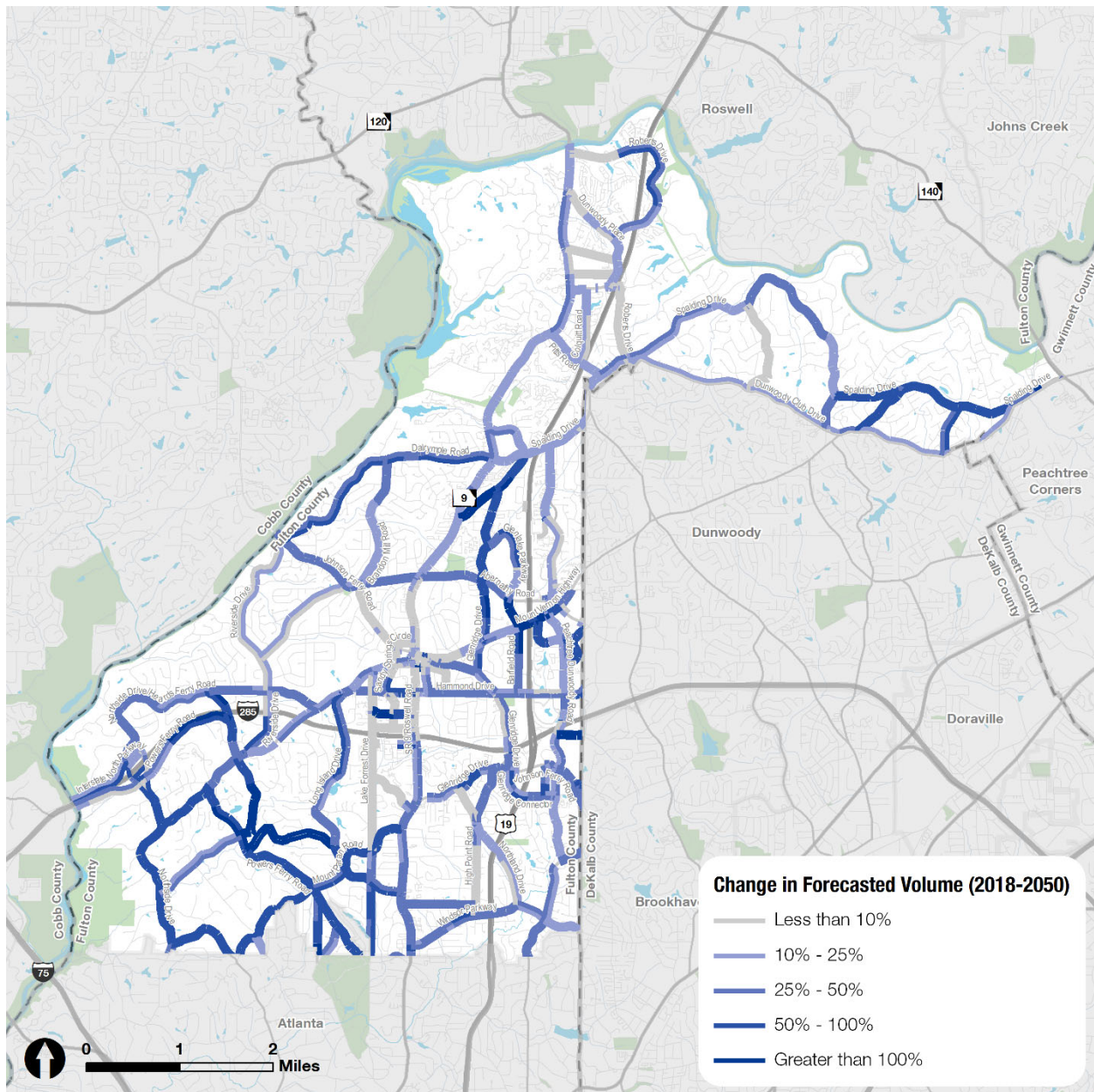


Figure 3. Travel Demand Model Results – Change in Forecasted Volume (2018 - 2050)

Level of Service

Level of service (LOS) projections from the Sandy Springs TMP 2018 and 2050 TDMs based on volume-to-capacity ratio are mapped in **Figure 4** – **Figure 7**. The 2018 LOS projections are presented for the AM peak period in **Figure 4** and for the PM peak period in **Figure 5**. LOS projections for 2050 are presented for the AM peak period in **Figure 6** and for the PM peak period in **Figure 7**. It is likely that the level of congestion perceived on roadways during peak hours of the day is not fully depicted in these exhibits as the TDM does not fully capture intersection delay as well as other aspects of the roadway network's design that impact the ability of its users to

travel through the system. Additionally, LOS is developed for the entity of the four-hour peak modeling periods and not a single peak hour. The RITIS Travel Time Index may offer better insight to congestion experienced along city corridors due to signal delay.

In 2018, LOS tends to be worse in the eastbound and southbound directions in the morning peak period and higher in the westbound and northbound directions in the evening peak period. This indicates a distinct travel pattern towards Atlanta (via SR 400, I-285, Roswell Road, and Peachtree Dunwoody Road) in the morning and away from Atlanta in the evening. The directionality of LOS is stronger in the morning compared to the evening, with some segments showing similar LOS in both directions during the evening peak period, such as along River Valley Road.

For 2018, several roadway segments stand out as operating at LOS F during at least one peak period of the day, indicating that the volume using the roadway is higher than the desired capacity of the roadway segment. These segments include:

- Riverside Drive from I-285 north to River Valley Road (AM & PM)
- Johnson Ferry Road from Abernathy Road to Sandy Springs Circle (AM & PM)
- Abernathy Road from SR 400 to Peachtree Dunwoody Road (AM)
- Peachtree Dunwoody Road just north of Abernathy Road (AM)
- Peachtree Dunwoody Road from I-285 to Johnson Ferry Road (PM)
- Roberts Drive from Northridge Road to Spalding Drive (AM & PM)

Many of the major LOS trends noted in 2018 are expected to continue in 2050. Some roadways are expected to degrade from LOS E or better to LOS F during both the morning and evening peak periods. These roads include:

- Johnson Ferry Road from Abernathy Road to the Chattahoochee River
- Johnson Ferry Road from Glenridge Drive to the east border of Sandy Springs
- Roswell Road from Dunwoody Place to the Chattahoochee River
- Windsor Parkway from Peachtree Dunwoody Road to the east border of Sandy Springs
- Peachtree Dunwoody Road from Abernathy Road to Spalding Drive

Operations for many of the roadways experiencing poor level of service (LOS E or F) in 2018 continue to deteriorate by 2050. Although some of these locations are near SR 400 and I-285, operations are generally consistent with 2018. Therefore, new access provided as part of the MMIP does not appear to have significant negative impacts to surface street operations, except for the area around the Northside Drive general purpose interchange. Multiple roadways feeding this interchange are projected to change from operating at LOS C or better in 2018 to LOS D or worse by 2050. This could be the result of changes in travel patterns due to increased capacity along I-

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285. For other locations, such as Hammond Drive, operations are projected to improve due to the increase in capacity along I-285, which runs parallel to the roadway.

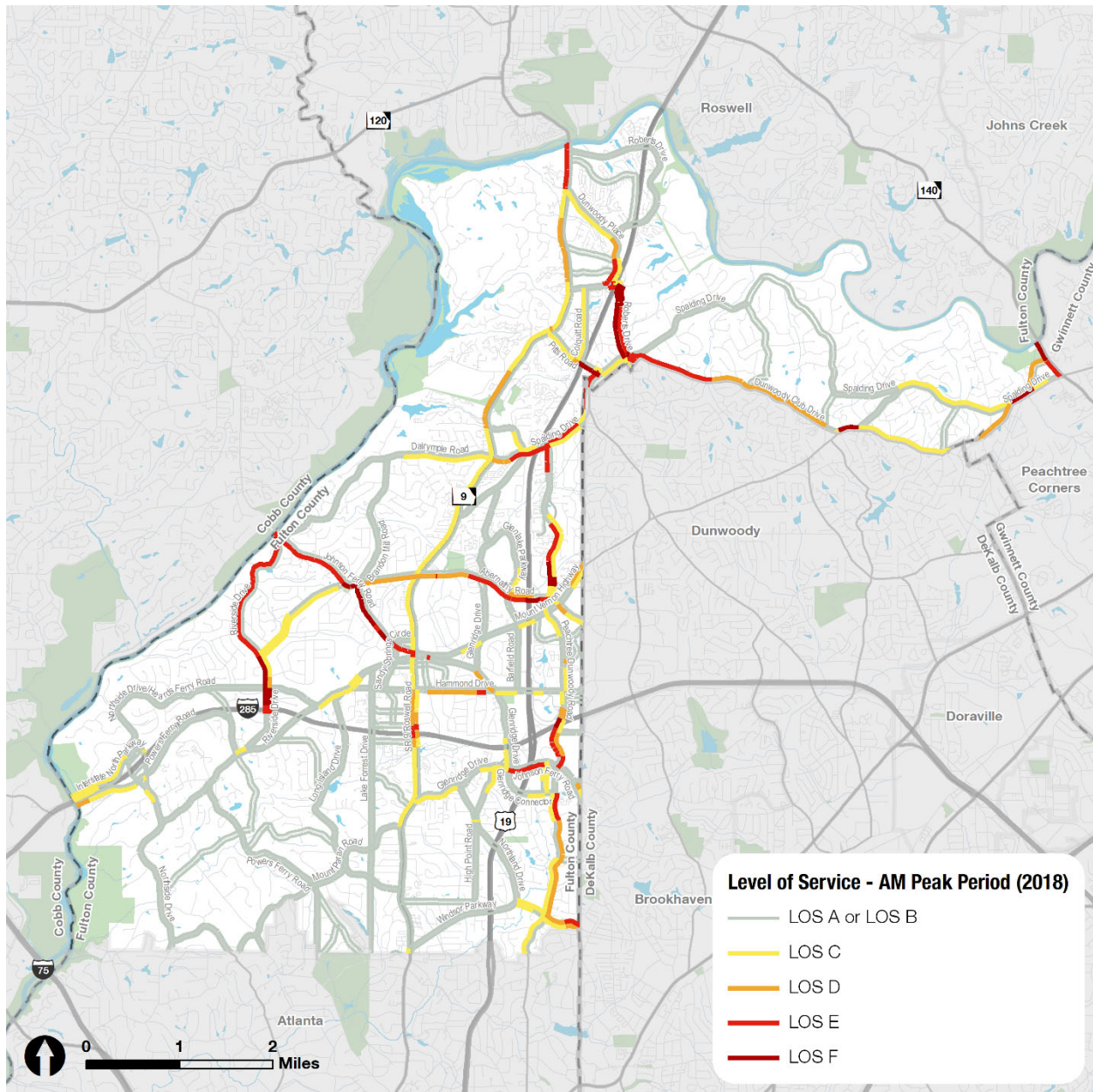


Figure 4. Existing (2018) Travel Demand Model Results – Level of Service (AM Peak Period)

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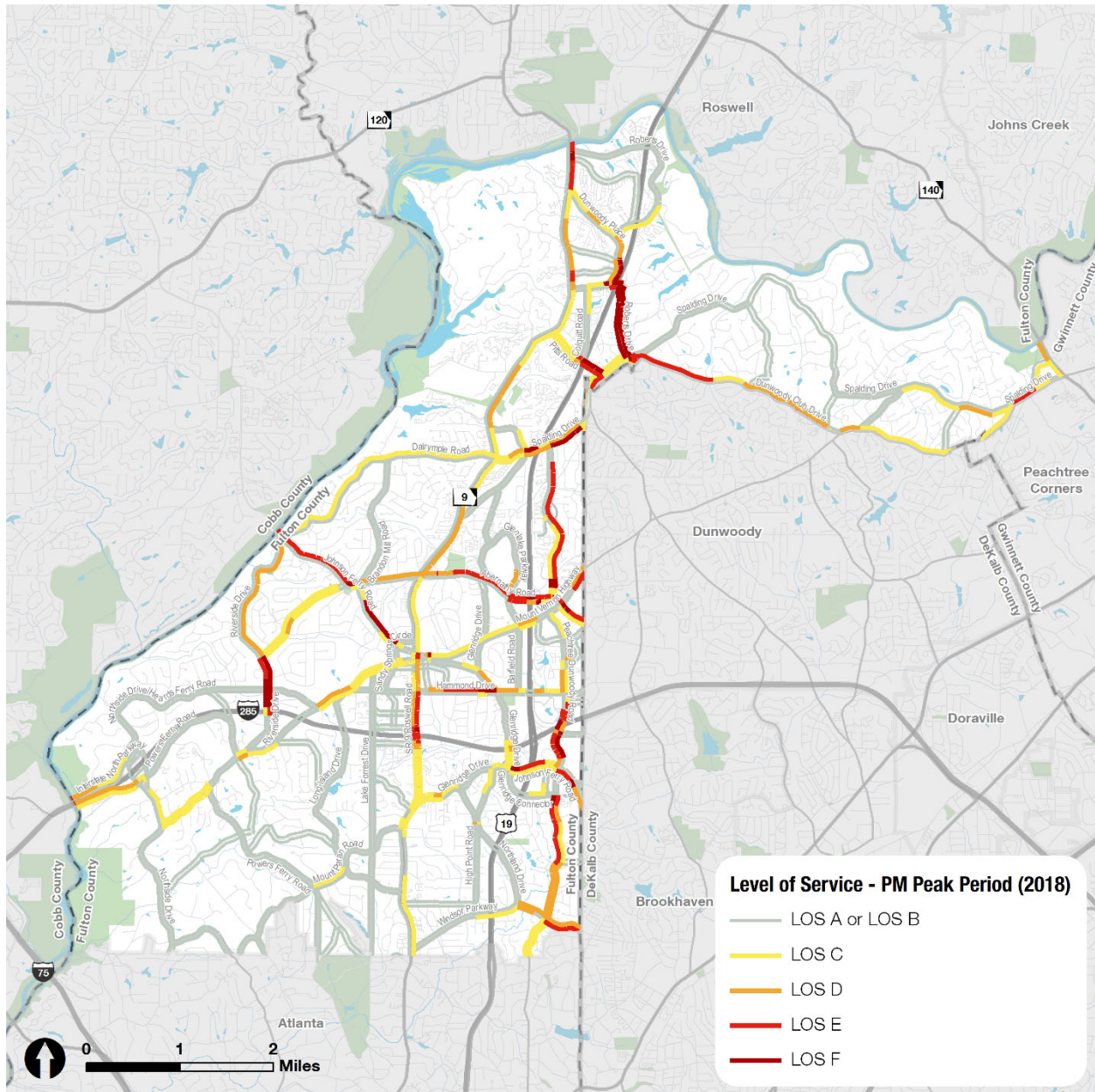


Figure 5. Existing (2018) Travel Demand Model Results – Level of Service (PM Peak Period)

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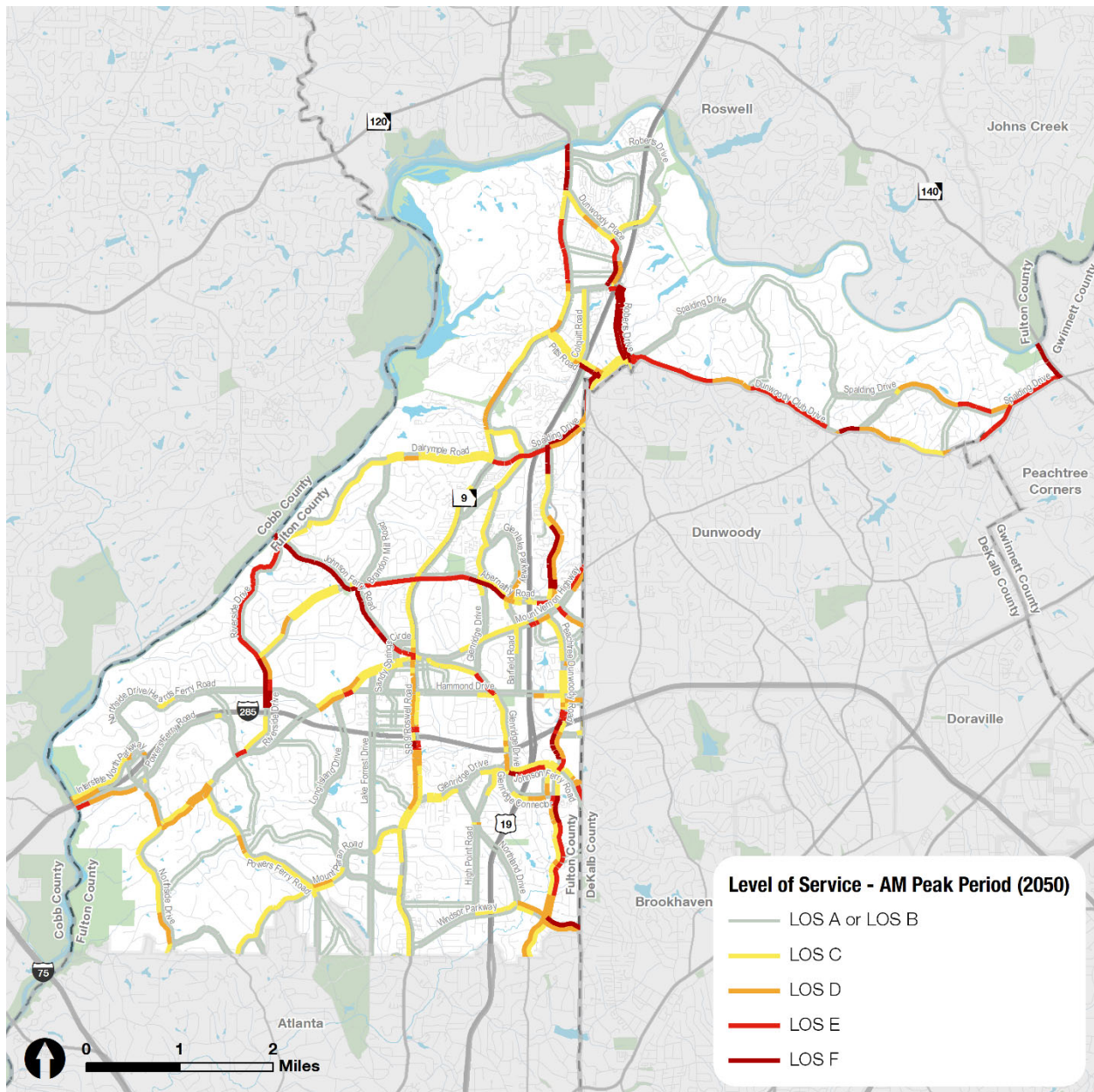


Figure 6. Future (2050) Travel Demand Model Results – Level of Service (AM Peak Period)

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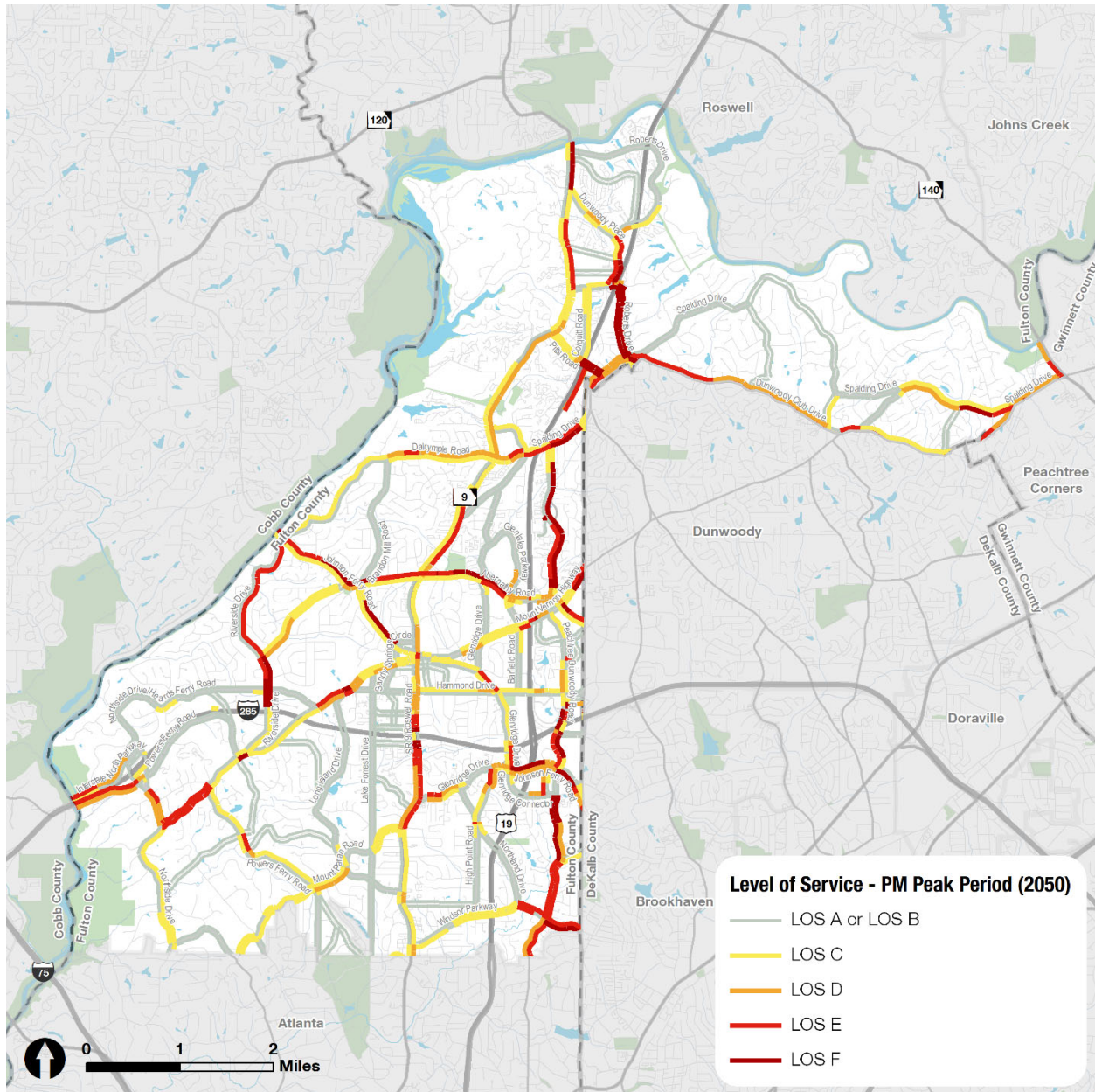


Figure 7. Future (2050) Travel Demand Model Results – Level of Service (PM Peak Period)

Vehicle-Hours of Delay

TMP model results for vehicle-hours of delay (VHD) along the Sandy Springs roadway network are mapped in **Figure 8** for 2018 and in **Figure 9** for 2050. The segments experiencing the highest delays are indicated in dark red, which represents 500 or more vehicle-hours of delay per mile each day. In 2018, these segments include:

- Abernathy Road near SR 400
- Peachtree Dunwoody Road just north of Abernathy Road
- Peachtree Dunwoody Road near I-285
- Roswell Road near I-285
- Roswell Road from Dunwoody Place to the north border of Sandy Springs
- Johnson Ferry Road near SR 400 south of I-285
- Riverside Drive from River Valley Road to I-285

With volume forecasted to nearly double on most surface streets, it is reasonable to expect that these streets would also experience significant increases in delay; however, as shown in **Figure 10**, increases in delay are projected to be minimal for most locations. Roadways with the greatest increases in delay per mile are similar to the segments previously listed that are shown to also experience the highest delays. As shown in **Figure 10**, delay for many surface streets remains constant or increases slightly as traffic volumes increase from 2018 to 2050. This could be due to the expanded capacity on SR 400 and I-285 from the C-D system and express lanes, especially on Hammond Drive where delay is expected to decrease near Roswell Road. This decrease in delay may also be attributed to the widening project which would widen Hammond Drive to two lanes in each direction between Roswell Road to Glenridge Drive. With new access to and from express lanes at Mount Vernon Highway, some vehicular trips can access SR 400 with less impact to surface streets in the future.

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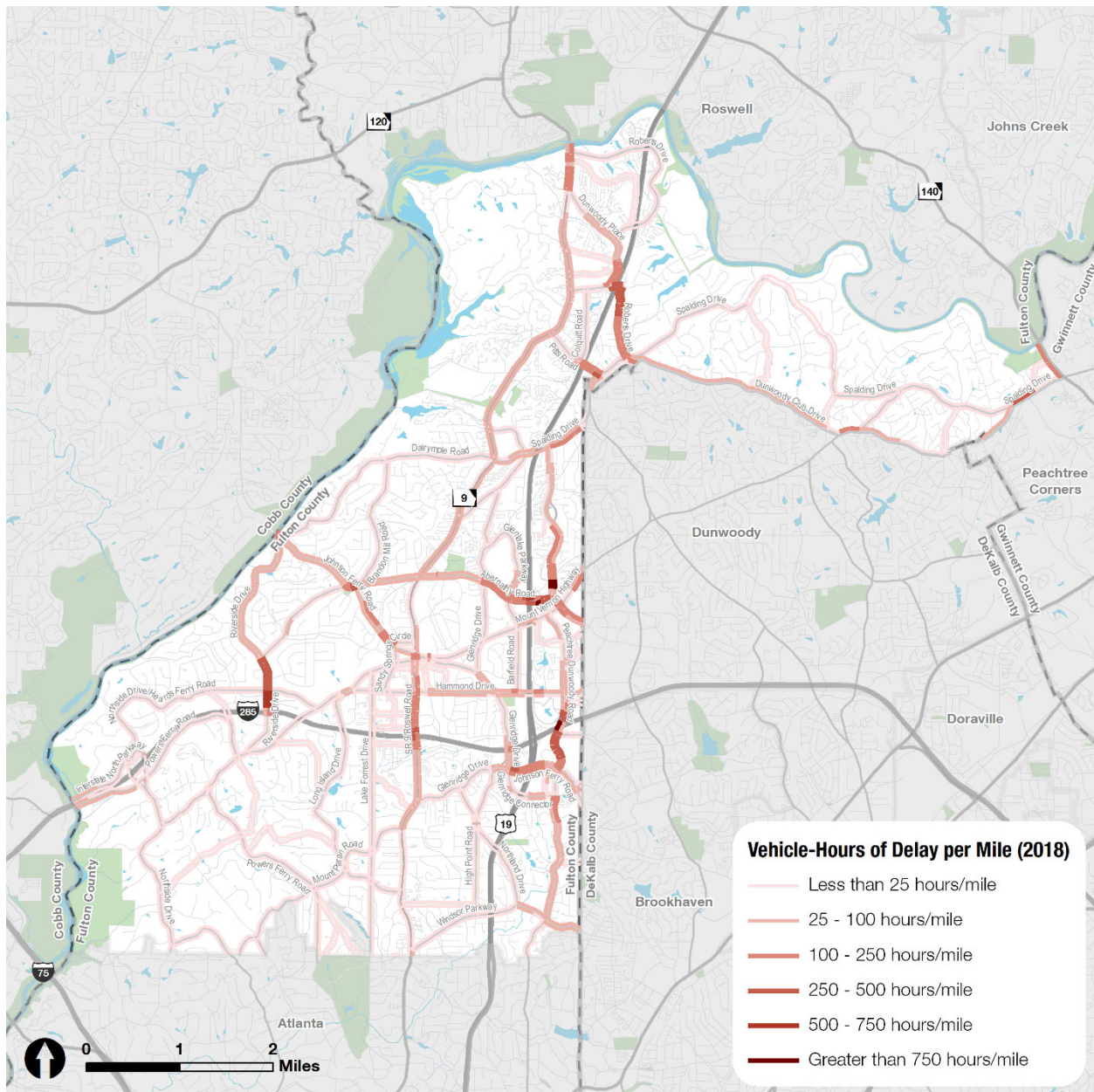


Figure 8. Existing (2018) Travel Demand Model Results – Vehicle-Hours of Delay per Mile

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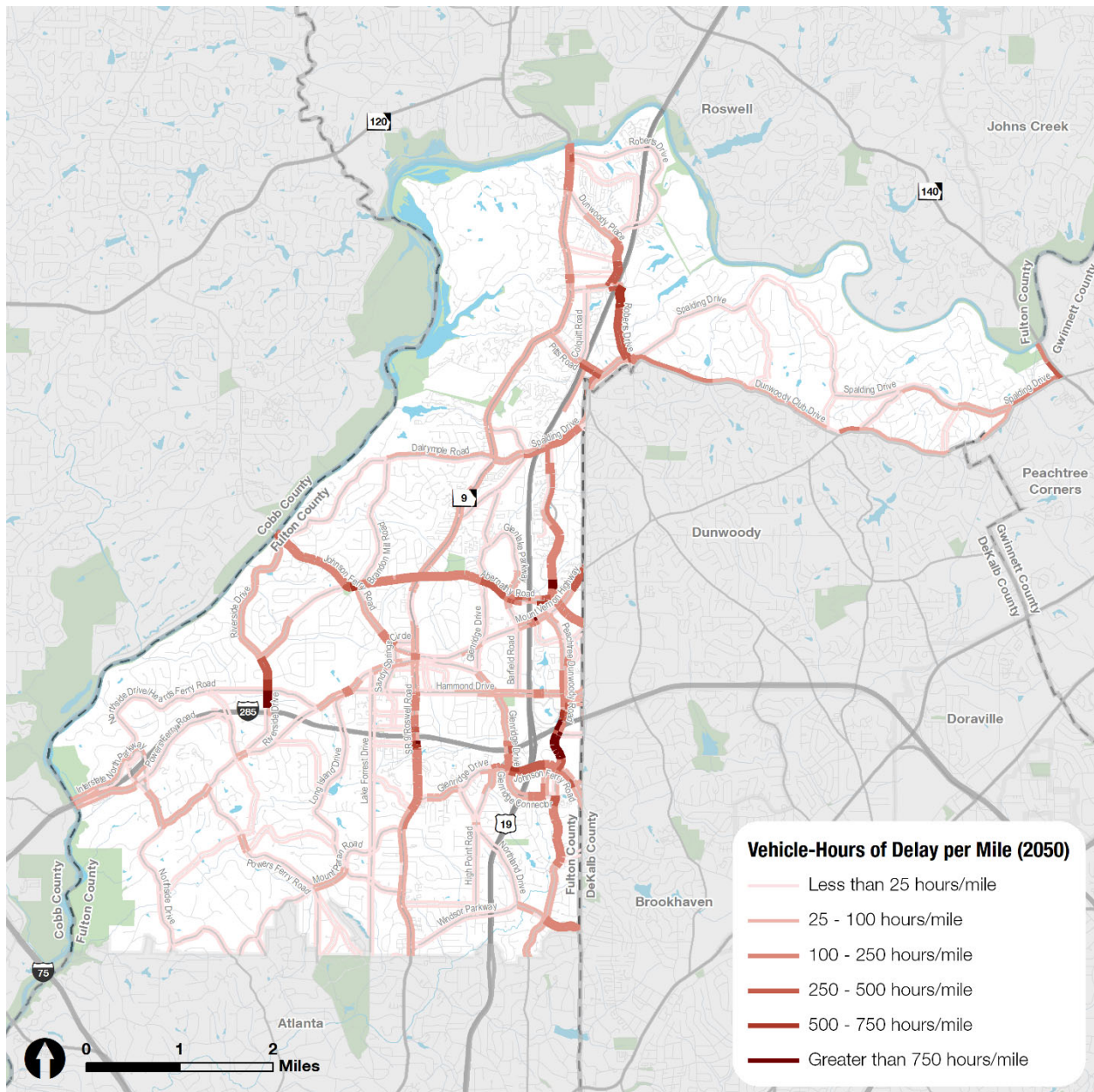


Figure 9. Future (2050) Travel Demand Model Results – Vehicle-Hours of Delay per Mile

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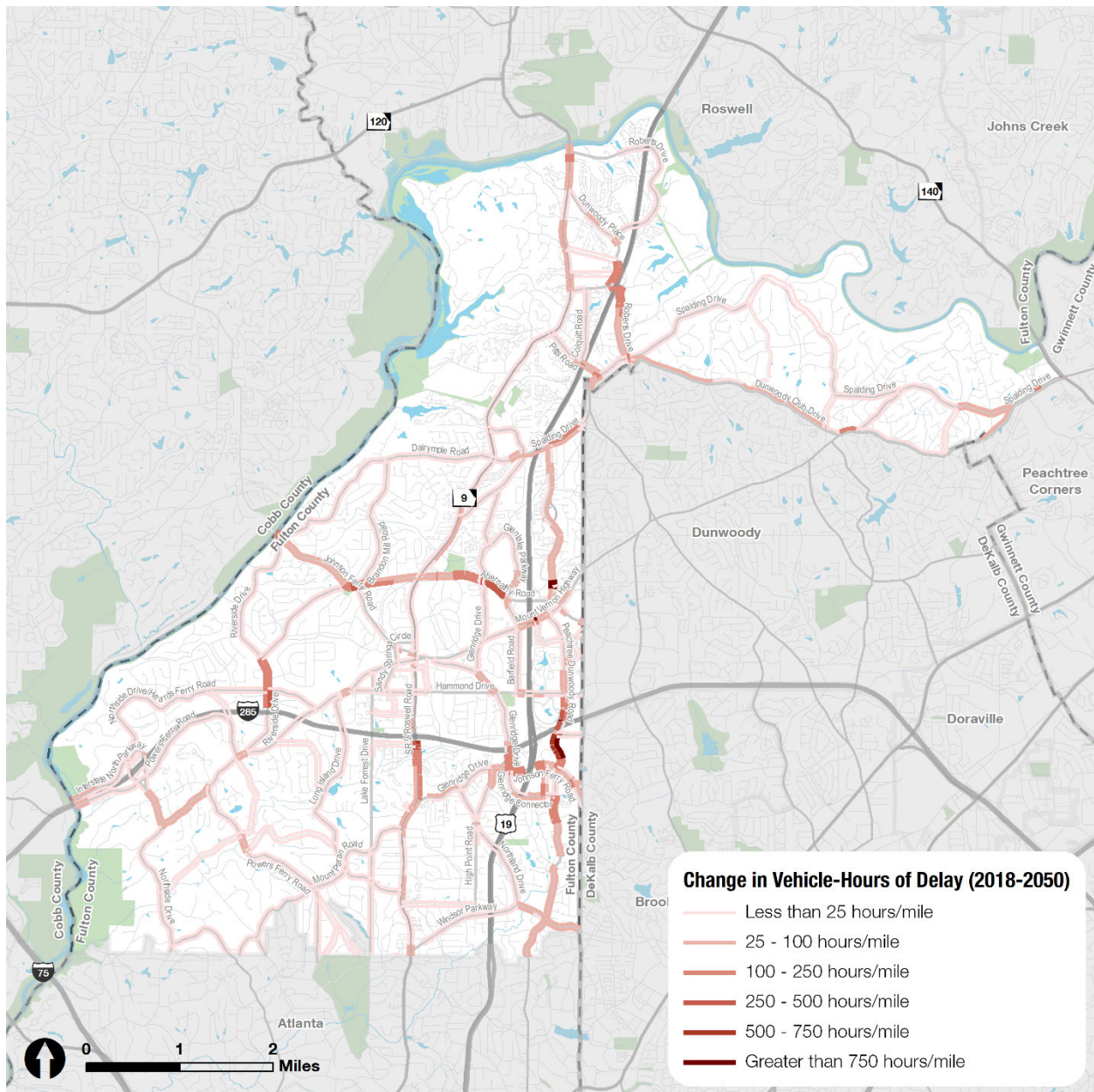


Figure 10. Travel Demand Model Results – Change in Vehicle-Hours of Delay per Mile (2018 - 2050)

Travel Statistics

Overall outputs from the TMP models were summarized for the City for three travel statistics: vehicle-miles traveled (VMT), vehicle-hours traveled (VHT), and vehicle-hours of delay (VHD). A summary of lane-miles was also developed to aid in comparing the travel statistics. VMT represents the total distance traveled by each vehicle within an area, in this case within Sandy Springs, on an average day. VHT represents the amount of time it took each vehicle to travel the distance in VMT. VHD is how much of the VHT was due to congestion, calculated by subtracting expected time traveled (based on free-flow speed) from actual time traveled. Together, these statistics can help to determine the types of solutions needed to accommodate travel demand. **Table 1 – Table 3** show total lane-miles, VMT, VHT, and VHD for the City as a whole as well as broken out by surface streets and freeways (including ramps), respectively. **Table 6** displays the same travel statistics for surface streets in Sandy Springs grouped by functional classification.

As shown in **Table 1**, lane-miles in the City increase by 21% (or about 96 lane-miles) from 2018 to 2050 with the addition of a collector-distributor system and express lanes along I-285 and SR 400, while VMT and VHT increase by 34-40% and VHD increases by 54%. Although VHD is projected to increase by 54%, the proportion of VHD/VHT remains at approximately 25% for both forecast years, suggesting that while overall delay increases, the percentage of an average trip spent in congestion will remain somewhat consistent. As shown in **Table 3**, the forecasted increase in VMT and VHT is largely driven by an increase in travel on freeways, likely as a result of the new express lane facilities. VMT on freeways in Sandy Springs is shown to increase by roughly 12 percentage points more than VMT on surface streets.

Minimal change in lane-miles is shown for surface streets from 2018 to 2050. Therefore, increases in VMT, VHT, and VHD can be directly attributed to increases in socio-economic data inputs (i.e. households and employment), the addition of new express lane access points within the City, and other improvements planned as part of the collector-distributor system along SR 400 and as part of the MMIP. While the forecasted increase in VMT on surface streets (25%) is disproportionate to the increase in VHD (69%), the amount of time a vehicle spends in congestion (VHD/VHT) is shown to increase by only about 4%.

Table 1. Summary of VMT, VHT, and VHD for All Roadways in Sandy Springs

Travel Statistic	2018	2050	% Change
Lane-Miles	465	562	21%
Vehicle-Miles Traveled (VMT)	4,851,284	6,482,748	34%
Vehicle-Hours Traveled (VHT)	136,537	190,898	40%
Vehicle-Hours of Delay (VHD)	32,667	50,257	54%
VHD/VHT	24%	26%	2%

Table 2. Summary of VMT, VHT, and VHD for Surface Streets in Sandy Springs

Travel Statistic	2018	2050	% Change
Lane-Miles	309	316	2%
Vehicle-Miles Traveled (VMT)	1,516,314	1,899,646	25%
Vehicle-Hours Traveled (VHT)	59,048	79,618	35%
Vehicle-Hours of Delay (VHD)	8,528	14,399	69%
VHD/VHT	14%	18%	4%

Table 3. Summary of VMT, VHT, and VHD for Freeways (Including Ramps) in Sandy Springs

Travel Statistic	2018	2050	% Change
Lane-Miles	156	245	57%
Vehicle-Miles Traveled (VMT)	3,334,971	4,583,102	37%
Vehicle-Hours Traveled (VHT)	77,489	111,280	44%
Vehicle-Hours of Delay (VHD)	24,138	35,858	49%
VHD/VHT	31%	32%	1%

As shown in **Table 4**, VMT and VHT in the City increase the most on collector roadways in terms of percent change. In terms of absolute change, VMT increases most on principal arterial roadways, while VHT increases most of minor arterial roadways. Even with these increases, no shift from principal arterial roadways and only a slight shift (about 2%) from minor arterial to collector roadways is seen in the proportion of VMT and VHT by functional classification, shown in **Figure 11**, **Figure 12**, **Figure 14**, and **Figure 15**. Similarly, the proportionality of VHD by functional class is shown to have a slight shift (nearly 2% reduction in the proportion of VHD on principal arterials), shown in **Figure 13** and **Figure 16**, driven by delay increasing by over 70% on minor arterials and over 80% on collectors. This is interesting in that one would expect delay on principal arterials to continue to grow based on typical driver behavior. These statistics indicate that because principal arterials are currently operating at or near capacity, they do not see a significant increase in travel. Instead, increases in travel and congestion are seen on the minor arterial and collector system as these roadways may not currently operate at capacity and will therefore see an increase in travel by 2050 that will result in additional congestion/delay.

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Table 4. Summary of % Change in VMT, VHT, and VHD (2018-2050)

Functional Class	Lane-Miles	Change (Absolute / %)		
		VMT	VHT	VHD
Principal Arterial	4 / 5%	151,336 / 24%	7,186 / 34%	2,089 / 61%
Minor Arterial	3 / 3%	119,942 / 20%	7,930 / 31%	3,066 / 72%
Collector	0 / 0%	111,983 / 37%	5,487 / 45%	716 / 83%
Total	7 / 2%	383,261 / 25%	20,603 / 35%	5,871 / 69%

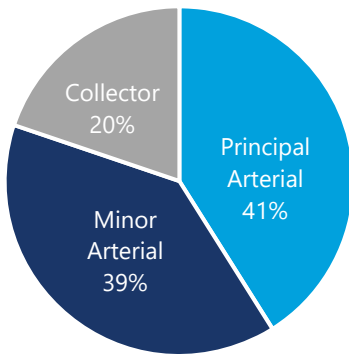


Figure 11. Surface Street VMT by Functional Class (2018)

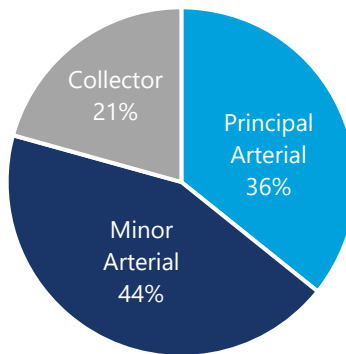


Figure 12. Surface Street VHT by Functional Class (2018)

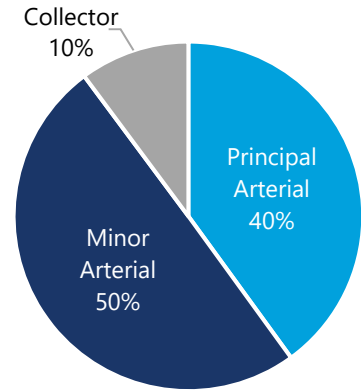


Figure 13. Surface Street VHD by Functional Class (2018)

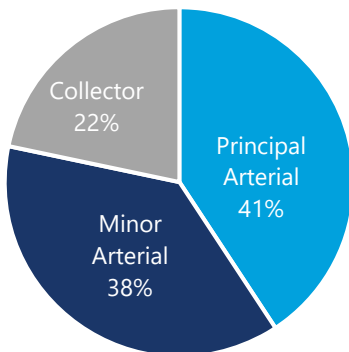


Figure 14. Surface Street VMT by Functional Class (2050)

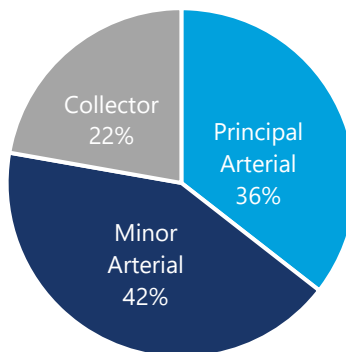


Figure 15. Surface Street VHT by Functional Class (2050)

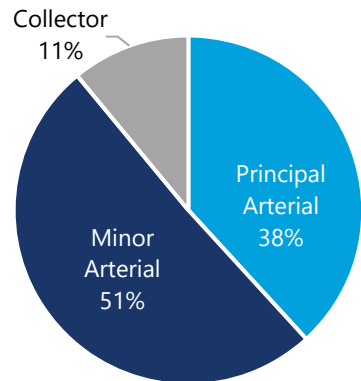


Figure 16. Surface Street VHD by Functional Class (2050)

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Transportation Modes

The travel demand model uses a combination of socio-economic data, vehicle availability, trip distance and time, and existing mode trends to determine mode of transportation for projected trips. **Table 5** shows mode choice from the 2018 and 2050 models for trips starting or ending in Sandy Springs.

Table 5. Sandy Springs Trips by Mode

Mode	2018	2050	Change	% Change
Single-Occupancy Vehicle (SOV)	465,524	603,157	137,633	30%
High-Occupancy Vehicle (HOV)	249,441	302,895	53,453	21%
Transit	22,405	43,610	21,205	95%
Active (Bike or Pedestrian)	32,900	42,829	9,929	30%
Total	770,270	992,491	222,220	29%

Figure 17 and **Figure 18** show the proportion of trips for each mode of transportation in each model. While the proportions are almost the same, with just a 1.5% shift towards transit between 2018 and 2050, the number of transit trips are projected to near double by 2050, as shown in **Table 5**. This increase in transit usage can be attributed to new transit projects and enhancements that are planned for implementation by 2050 in the ARC RTP. Additionally, active transport trips are expected to increase by the same percentage as SOV trips even as the mode proportion is expected to remain the same. HOV trips are projected to shift towards transit, by 1.5%, and SOV, by 0.4%.

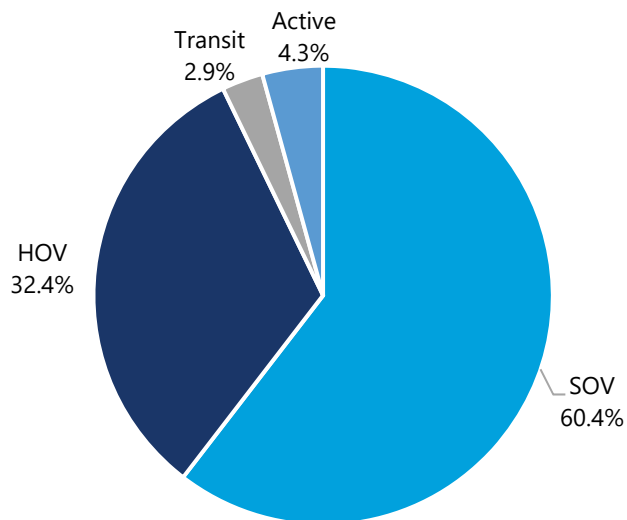


Figure 17. Sandy Springs Trips by Mode (2018)

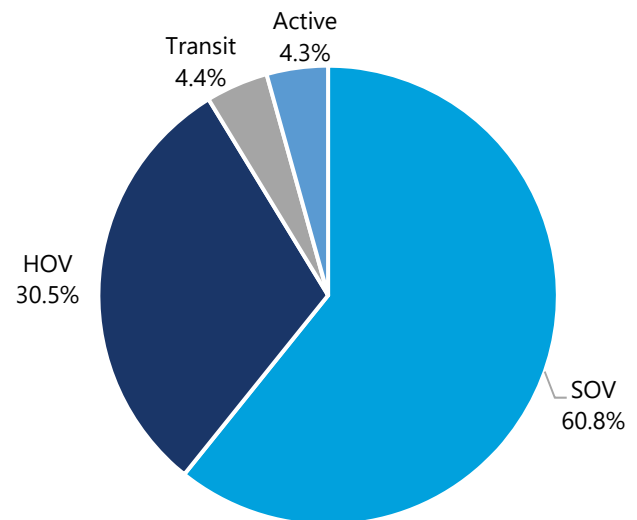


Figure 18. Sandy Springs Trips by Mode (2050)

Table 6 shows the percentage of trips by mode that start and end in Sandy Springs (which are considered internal trips). Trips that start or end outside of Sandy Springs are considered external trips and make up the remaining percentage of total trips. The percentages are fairly consistent (within 1-3 percentage points) when compared between the two model years. The increase in transit trips (shown in **Table 5**) can be attributed to an increase in external trips (or those that start or end outside of Sandy Springs) because the overall percentage of transit trips increases (shown in **Figure 17** and **Figure 18**) while internal transit trips are shown to decrease (shown in **Table 6**). Consistent with the nature of active transportation trips, the models show that almost all (80-85%) of these trips start and end within Sandy Springs, with just 15-20% of active transportation trips starting or ending elsewhere. About three-fourths of SOV trips and HOV trips in both 2018 and 2050 were external trips.

Table 6. Percentage of Total Trips Internal to Sandy Springs by Mode

Mode	2018	2050
Single-Occupancy Vehicle (SOV)	26%	25%
High-Occupancy Vehicle (HOV)	28%	26%
Transit	9%	7%
Active (Bike or Pedestrian)	85%	82%
Total	29%	27%

Traffic Evaluation

As a part of the Sandy Springs Transportation Master Plan (TMP), a traffic evaluation was conducted at 20 intersections within the city. The traffic evaluation included capacity, operational, and safety analyses of these intersections to identify deficiencies and recommend potential improvement projects to mitigate identified deficiencies. The following sections of this technical memorandum detail the traffic evaluation methodology and results as well as descriptions of proposed improvements.

1 | Intersections for Traffic Evaluation

The 20 intersections for traffic evaluation were selected based on discussions with the City staff and are shown in **Figure 1**. These 20 intersections are as follows:

1. Johnson Ferry Road at Peachtree Dunwoody Road
2. Northridge Road at SR 400 Southbound/Dunwoody Place
3. Northside Drive at Powers Ferry Road
4. Dunwoody Place/Hannover Park Road at Roswell Road (SR 9)
5. Northridge Road at Roswell Road (SR 9)
6. Interstate North Parkway/New Northside Drive at Northside Drive
7. Heards Ferry Road at Riverside Drive
8. New Northside Drive at Powers Ferry Road
9. Abernathy Road at Mt Vernon Highway
10. Johnson Ferry Road/Abernathy Road at Brandon Mill Road
11. Abernathy Road at Peachtree Dunwoody Road
12. Hollis Cobb Circle at Peachtree Dunwoody Road
13. Johnson Ferry Road at River Valley Road
14. Mt Vernon Highway at Northside Drive
15. Roswell Road (SR 9) at Spalding Drive
16. Spalding Drive at Dunwoody Club Drive/ Roberts Drive
17. Mt Vernon Highway at Barfield Road
18. Mt Vernon Highway at Peachtree Dunwoody Road
19. Lake Hearn Drive at Peachtree Dunwoody Road
20. Johnson Ferry Road at Glenridge Connector

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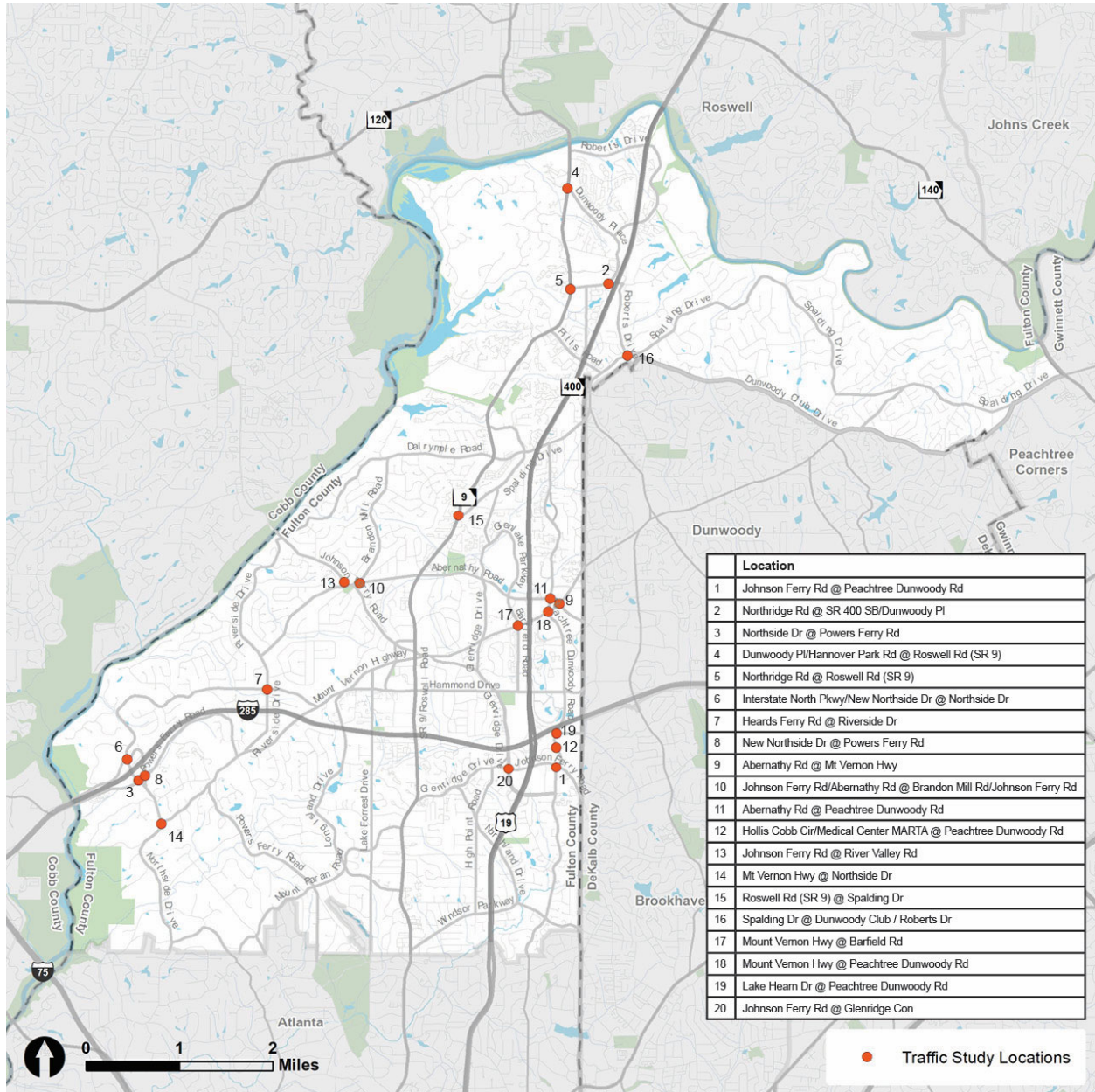


Figure 1. Traffic Evaluation Intersections

2 | Existing Conditions

The following sections summarize existing conditions at each of the study intersections, including traffic volumes, historical crash trends, and capacity analyses.

Traffic Volumes

Due to the ongoing COVID-19 pandemic and consequently the overall reduced levels of traffic volumes on Sandy Springs roadways, AM and PM peak period turning movement counts were not collected at the time of this traffic evaluation. Therefore, to more accurately reflect typical traffic conditions at each of the study intersections, historical turning movement counts were obtained from the traffic count vendor National Data & Surveying Services (NDS) and from sources within the City. These raw counts are included in **Appendix A**. The source and year of data collection of these historical turning movement counts are included in **Table 1**.

Table 1. Source and Year of Historical Turning Movement Count Data

ID	Intersection Name	Count Source	Data Collection Year
1	Johnson Ferry Rd at Peachtree Dunwoody Rd	NDS	2019
2	Northridge Rd at SR 400 SB/Dunwoody Pl	NDS	2018
3	Northside Dr at Powers Ferry Rd	City	2014
4	Dunwoody Pl/Hannover Park Rd at Roswell Rd (SR 9)	NDS	2016
5	Northridge Rd at Roswell Rd (SR 9)	NDS	2016
6	Interstate North Pkwy/New Northside Dr at Northside Dr	NDS	2017
7	Heards Ferry Rd at Riverside Dr	NDS	2015
8	New Northside Dr at Powers Ferry Rd	NDS	2017
9	Abernathy Rd at Mt Vernon Hwy	NDS	2016
10	Johnson Ferry Rd/Abernathy Rd at Brandon Mill Rd	NDS	2015
11	Abernathy Rd at Peachtree Dunwoody Rd	NDS	2019
12	Hollis Cobb Cir at Peachtree Dunwoody Rd	NDS	2018
13	Johnson Ferry Rd at River Valley Rd	NDS	2015
14	Mt Vernon Hwy at Northside Dr	City	2013
15	Roswell Rd (SR 9) at Spalding Dr	NDS	2015
16	Spalding Dr at Dunwoody Club Dr/ Roberts Dr	NDS	2018
17	Mt Vernon Hwy at Barfield Rd	City	2019
18	Mt Vernon Hwy at Peachtree Dunwoody Rd	City	2019
19	Lake Hearn Dr at Peachtree Dunwoody Rd	City	2015
20	Johnson Ferry Rd at Glenridge Con	NDS	2019

As shown in Table 1, the historical counts were collected in different years ranging from 2013 to 2019. To establish a common baseline for analysis, these counts were extrapolated to the year 2020 to represent existing traffic conditions prior to changing travel patterns due to COVID-19.

The extrapolation of the historical count data was based on recently observed historical growth rates in the study area and at each of the intersections. Annual growth rates were calculated based on historical traffic count data obtained from the Georgia Department of Transportation's (GDOT) Traffic Analysis and Data Application (TADA) at multiple count stations in the vicinity of the study intersections. The proposed annual growth rates based on this analysis are shown in **Table 2**. Detailed historical growth rate calculations are included in **Appendix B**.

Table 2. Growth Rates for Extrapolating Historical Traffic Data

ID	Intersection Name	Proposed Annual Growth Rate
1	Johnson Ferry Rd at Peachtree Dunwoody Rd	0.50%
2	Northridge Rd at SR 400 SB/Dunwoody Pl	1.50%
3	Northside Dr at Powers Ferry Rd	1.50%
4	Dunwoody Pl/Hannover Park Rd at Roswell Rd (SR 9)	0.50%
5	Northridge Rd at Roswell Rd (SR 9)	0.50%
6	Interstate North Pkwy/New Northside Dr at Northside Dr	1.75%
7	Hearns Ferry Rd at Riverside Dr	1.50%
8	New Northside Dr at Powers Ferry Rd	1.50%
9	Abernathy Rd at Mt Vernon Hwy	0.50%
10	Johnson Ferry Rd/Abernathy Rd at Brandon Mill Rd	3.75%
11	Abernathy Rd at Peachtree Dunwoody Rd	0.50%
12	Hollis Cobb Cir at Peachtree Dunwoody Rd	2.50%
13	Johnson Ferry Rd at River Valley Rd	3.75%
14	Mt Vernon Hwy at Northside Dr	1.00%
15	Roswell Rd (SR 9) at Spalding Dr	0.50%
16	Spalding Dr at Dunwoody Club Dr/ Roberts Dr	0.50%
17	Mt Vernon Hwy at Barfield Rd	2.00%
18	Mt Vernon Hwy at Peachtree Dunwoody Rd	0.50%
19	Lake Hearn Dr at Peachtree Dunwoody Rd	2.50%
20	Johnson Ferry Rd at Glenridge Con	2.00%

The existing year (2020) AM and PM peak hour traffic volumes, based on the historical counts and the proposed extrapolation methodology, are shown in **Figures 2, 3, 4 and 5**.

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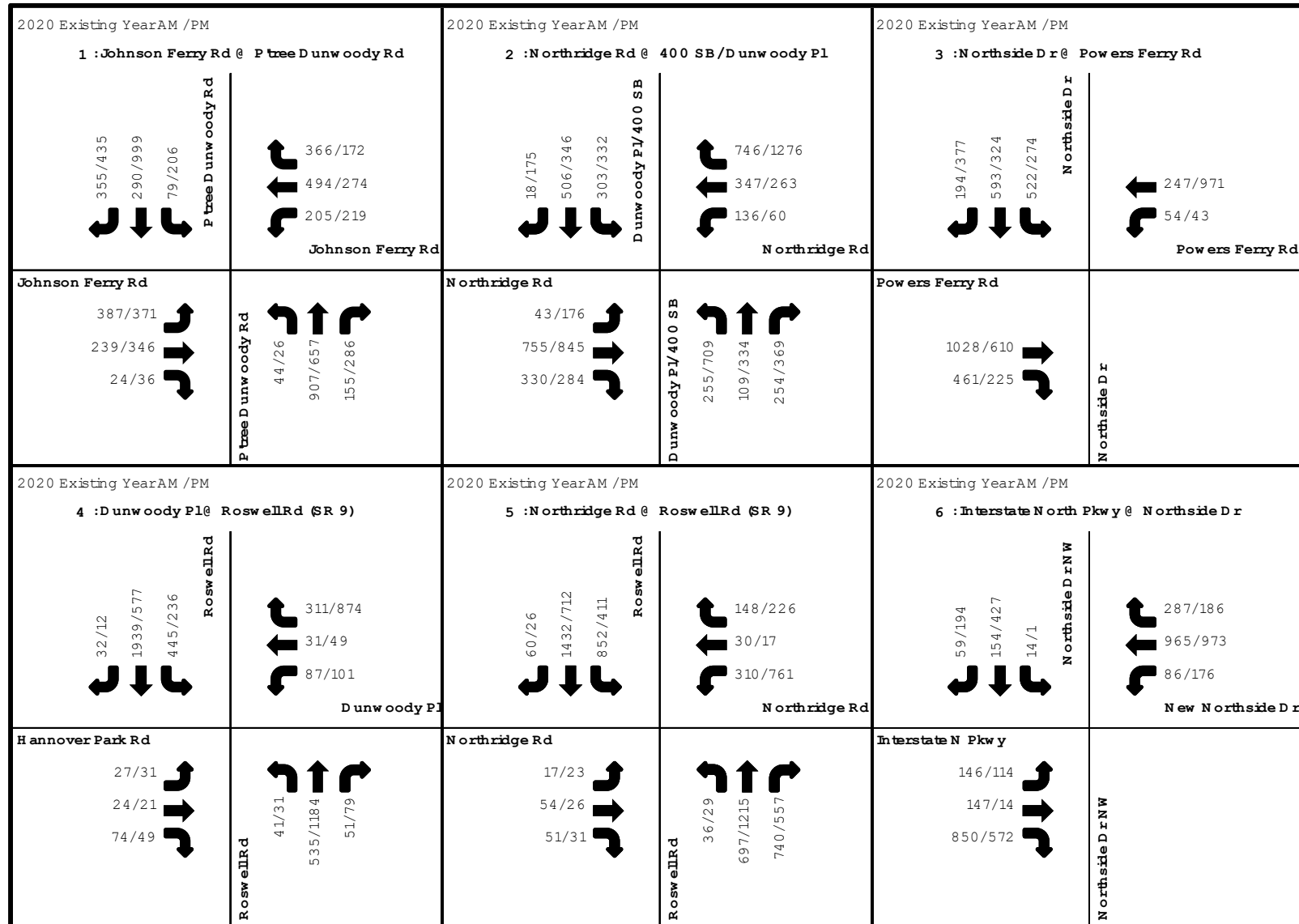


Figure 2. Existing Year (2020) AM and PM Peak Hour Traffic Volumes

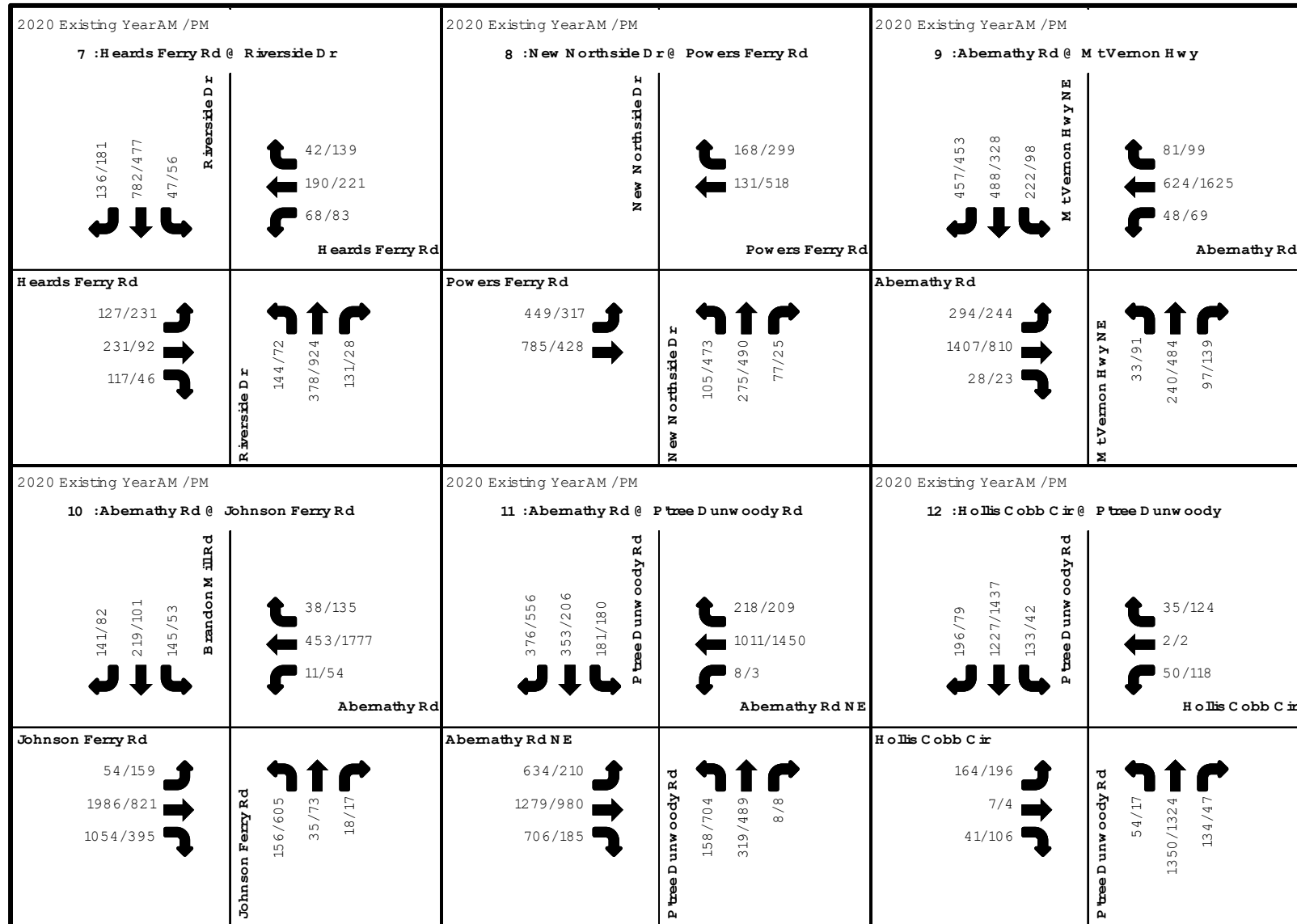


Figure 3. Existing Year (2020) AM and PM Peak Hour Traffic Volumes (Continued)

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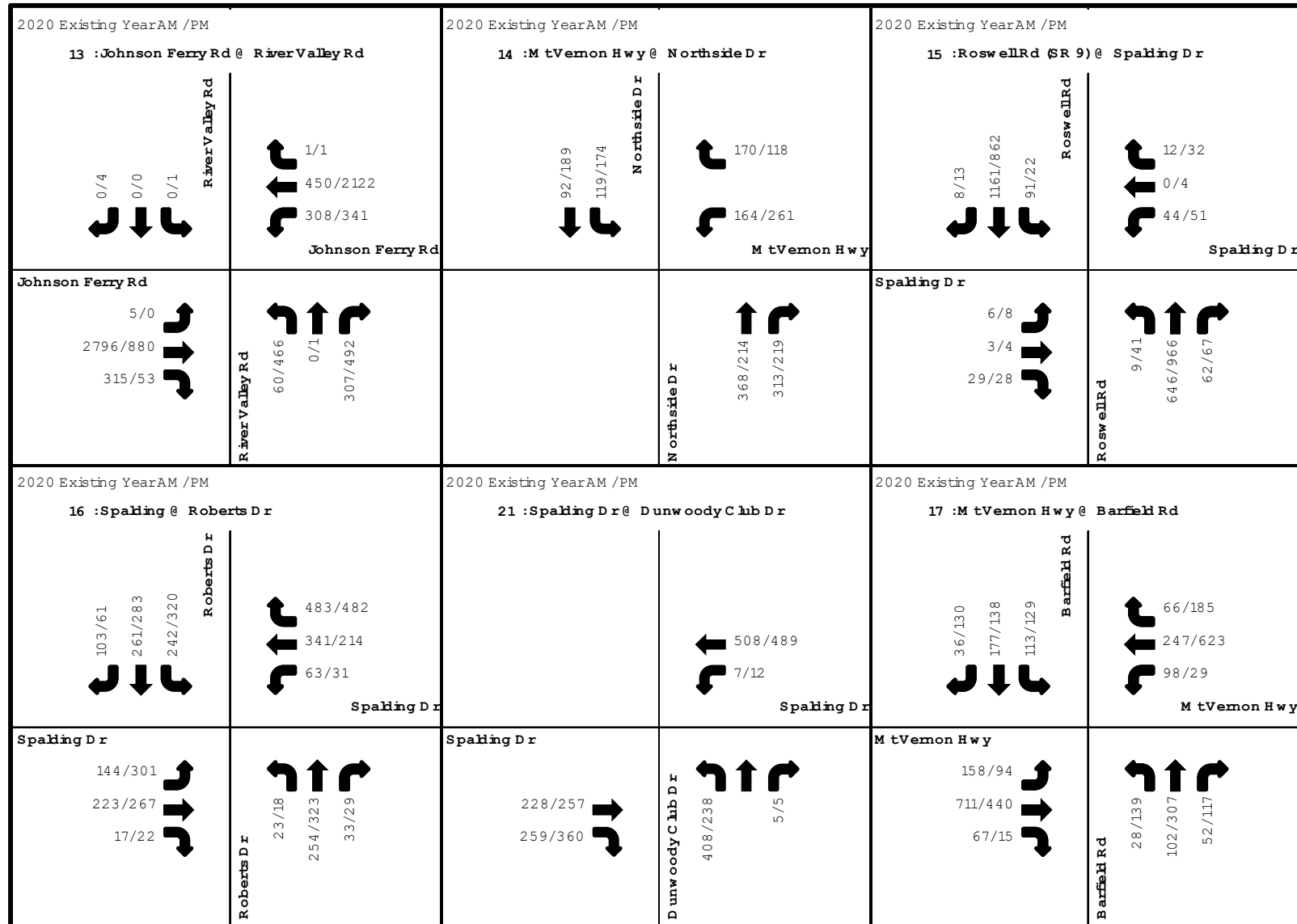


Figure 4. Existing Year (2020) AM and PM Peak Hour Traffic Volumes (Continued)

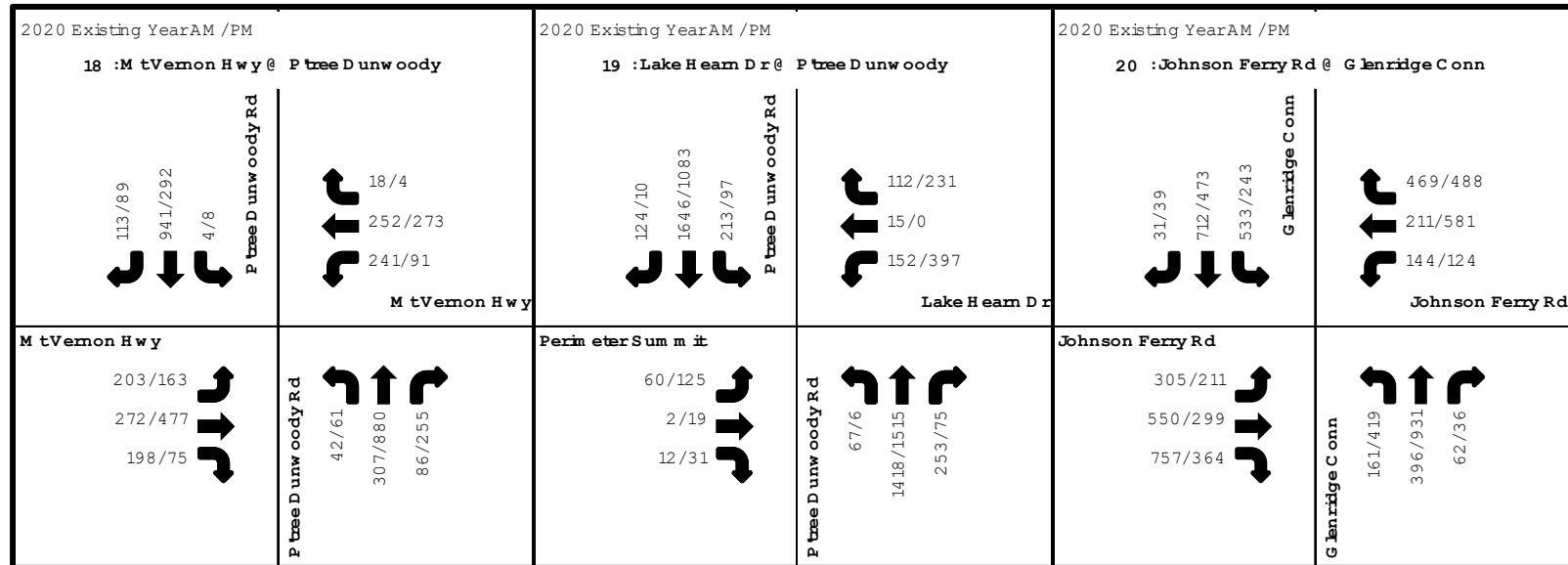


Figure 5. Existing Year (2020) AM and PM Peak Hour Traffic Volumes (Continued)

Crash History

Crash data at the 20 traffic evaluation intersections was provided by the City based on data obtained from GDOT's Georgia Electronic Accident Reporting System (GEARS) for the five-year period between January 1, 2015 and December 31, 2019. A summary of this reported crash history is shown in **Table 3**. Detailed analysis of the crash data at the 20 traffic evaluation intersections is included in **Appendix C**.

Table 3. Summary of Crash History

ID	Intersection Name	Avg. Crashes per Year	% Injury Crashes	Frequent Crash Types
1	Johnson Ferry Rd at Peachtree Dunwoody Rd	44	17%	40% rear-end, 30% same direction sideswipe, 25% angle
2	Northridge Rd at SR 400 SB/Dunwoody Pl	125	20%	54% rear-end, 24% angle
3	Northside Dr at Powers Ferry Rd	31	24%	39% angle, 29% rear-end, 25% same direction sideswipe
4	Dunwoody Pl/Hannover Park Rd at Roswell Rd (SR 9)	58	23%	56% rear-end, 30% angle
5	Northridge Rd at Roswell Rd (SR 9)	58	20%	60% rear-end, 22% angle
6	Interstate North Pkwy/New Northside Dr at Northside Dr	24	20%	56% rear-end, 28% angle
7	Heards Ferry Rd at Riverside Dr	20	16%	66% rear-end
8	New Northside Dr at Powers Ferry Rd	22	14%	40% angle, 30% same direction sideswipe, 26% rear-end
9	Abernathy Rd at Mt Vernon Hwy	52	17%	70% rear-end
10	Johnson Ferry Rd/Abernathy Rd at Brandon Mill Rd	22	25%	56% rear-end, 30% angle
11	Abernathy Rd at Peachtree Dunwoody Rd	66	17%	51% rear-end, 25% angle, 20% same direction sideswipe
12	Hollis Cobb Cir at Peachtree Dunwoody Rd	6	19%	45% angle, 22% rear-end
13	Johnson Ferry Rd at River Valley Rd	17	23%	69% rear-end, 20% angle

ID	Intersection Name	Avg. Crashes per Year	% Injury Crashes	Frequent Crash Types
14	Mt Vernon Hwy at Northside Dr	4	35%	70% angle, 15% rear-end
15	Roswell Rd (SR 9) at Spalding Dr	26	28%	46% rear-end, 31% angle
16	Spalding Dr at Dunwoody Club Dr/ Roberts Dr	13	22%	58% rear-end, 23% angle
17	Mt Vernon Hwy at Barfield Rd	13	17%	51% rear-end, 32% angle
18	Mt Vernon Hwy at Peachtree Dunwoody Rd	20	14%	49% rear-end, 30% angle
19	Lake Hearn Dr at Peachtree Dunwoody Rd	23	17%	51% rear-end, 29% angle
20	Johnson Ferry Rd at Glenridge Con	32	23%	54% rear-end, 32% angle

The crash data was analyzed in detail by examining crash attributes to identify patterns and contributing factors. The factors considered in this analysis included:

- Time of day and season of the year – to identify diurnal factors and sun-glare related crashes
- Manner of collision – to identify crash patterns related to intersection geometry or traffic control
- Injuries and fatalities – to identify severity of crashes
- Lighting – to identify whether lack of lighting was a contributing factor to the crashes
- Pavement condition – to identify whether wet or slick pavement was a contributing factor to the crashes
- Location of the crash with respect to the roadway and intersection
- Direction of vehicles involved – to identify crash patterns related to intersection geometry or traffic control
- Maneuvers of vehicles involved – to identify crash patterns related to intersection geometry or traffic control
- Involvement of pedestrians, bikes, or transit vehicles – to identify the frequency of crashes for those who choose not to use a personal vehicle or who are unable to, and are more vulnerable to injuries and fatalities

Field Observations

Field observations were conducted on June 11, 2020 and June 17, 2020 at the 20 traffic evaluation intersections to observe multimodal traffic operations during the AM and PM peak periods. Details related to the field observations are included in **Appendix D**.

Intersection Capacity Analysis

Based on the existing year (2020) AM and PM peak hour turning movement traffic volumes, and the existing traffic control and lane configurations, AM and PM peak hour traffic operations were analyzed at the 20 traffic evaluation intersections using the methodologies outlined in the Highway Capacity Manual (HCM) 6th Edition, and the Synchro 11.0 software program. According to the HCM, there are six levels of service (LOS) by which the operational performance of an intersection may be described. These levels of service range between LOS A, which indicates a relatively free-flowing condition, and LOS F, which indicates operational breakdown.

For signalized intersections, LOS is defined in terms of a weighted average control delay for all traffic movements at the intersection. Control delay is a complex measure that quantifies the increase in travel time that a vehicle experiences due to the traffic signal control, which is based on multiple variables, including signal phasing and coordination (i.e., progression of movements through the intersection and along the corridor), signal cycle length, and traffic volumes with respect to intersection capacity and resulting queues. Signalized intersection LOS is stated in terms of average control delay per vehicle (in seconds) during a specified time period (e.g., weekday PM peak hour). **Table 4** summarizes the LOS criteria for signalized intersections, as described in the HCM (Transportation Research Board, 2016).

Table 4. Level of Service Criteria for Signalized Intersections

Level of Service	Control Delay (sec/veh)	General Description
A	≤ 10 seconds	Free Flow
B	> 10 seconds and ≤ 20 seconds	Stable Flow (slight delays)
C	> 20 seconds and ≤ 35 seconds	Stable flow (acceptable delays)
D	> 35 seconds and ≤ 55 seconds	Approaching unstable flow
E	> 55 seconds and ≤ 80 seconds	Approaching intersection capacity unstable flow, unfavorable progression
F ¹	> 80 seconds	Forced flow, poor progression

Source: Highway Capacity Manual, 6th Edition, Transportation Research Board, 2016.

¹If the volume-to-capacity (v/c) ratio exceeds 1.0, LOS F is assigned.

For unsignalized intersections (i.e., minor street stop-controlled intersections) LOS criteria are defined in terms of the average control delay for each minor-street movement as well as major-street left-turn movements. Major-street through vehicles are assumed to experience zero delay because of minimal conflicts in operation. Several factors affect the control delay for unsignalized intersections, such as availability and distribution of gaps in the conflicting traffic stream. LOS A indicates excellent operations with minimal delay to motorists, while LOS F indicates insufficient gaps of acceptable size to allow vehicles on the minor street to cross safely, resulting in long delays and long queues. **Table 5** shows LOS criteria for unsignalized intersections.

Table 5. Level of Service Criteria for Unsignalized Intersections

Level of Service	Control Delay (sec/veh)	General Description
A	≤ 10 seconds	Minimal Delay
B	> 10 seconds and ≤ 15 seconds	Occasional Delay
C	> 15 seconds and ≤ 25 seconds	Moderate Delay
D	> 25 seconds and ≤ 35 seconds	Noticeable Delay
E	> 35 seconds and ≤ 50 seconds	Delay approaching tolerance
F ¹	> 50 seconds	Delay exceeding tolerance

Source: *Highway Capacity Manual, 6th Edition*, Transportation Research Board, 2016.

¹If the volume-to-capacity (v/c) ratio exceeds 1.0, LOS F is assigned.

The results of the intersection LOS and delay analysis for the existing year (2020) conditions are summarized in **Table 6**. As shown in Table 6, there are two intersections projected to operate at LOS F, seven intersections are projected to operate at LOS E, and the remaining are projected to operate at LOS D or better. Detailed HCM analyses, including capacity analysis worksheets that summarize queueing and detailed delay and LOS data by approach and movement, can be found in **Appendix E**.

Table 6. Existing Year (2020) Intersection Level of Service

ID	Intersection Name	Intersection Control Type	AM LOS Delay (s)	PM LOS Delay (s)
1	Johnson Ferry Rd at Peachtree Dunwoody Rd	Signal	E 66.8	D 51.1
2	Northridge Rd at SR 400 SB/Dunwoody PI	Signal	D 50.5	E 62.2
3	Northside Dr at Powers Ferry Rd	Signal	D 37.2	C 29.2

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ID	Intersection Name	Intersection Control Type	AM LOS Delay (s)	PM LOS Delay (s)
4	Dunwoody Pl/Hannover Park Rd at Roswell Rd (SR 9)	Signal	C 33.8	D 52.0
5	Northridge Rd at Roswell Rd (SR 9)	Signal	D 48.9	E 55.8
6	Interstate North Pkwy/New Northside Dr at Northside Dr	Signal	C 26.7	C 32.1
7	Heards Ferry Rd at Riverside Dr	Signal	E 60.0	E 72.7
8	New Northside Dr at Powers Ferry Rd	Signal	C 31.5	D 35.2
9	Abernathy Rd at Mt Vernon Hwy	Signal	D 42.6	E 58.4
10	Johnson Ferry Rd/Abernathy Rd at Brandon Mill Rd	Signal	D 46.4	E 60.2
11	Abernathy Rd at Peachtree Dunwoody Rd	Signal	D 44.4	D 53.7
12	Hollis Cobb Cir at Peachtree Dunwoody Rd	Signal	B 12.7	B 17.5
13	Johnson Ferry Rd at River Valley Rd	Signal	F >100s	D 48.8
14	Mt Vernon Hwy at Northside Dr	Two-way STOP Control	F 61.7	F >100s
15	Roswell Rd (SR 9) at Spalding Dr	Signal	A 7.4	A 8.3
16	Spalding Dr at Roberts Dr	Signal	D 42.0	D 46.4
16	Spalding Dr at Dunwoody Club Dr	Signal	C 23.4	C 20.2
17	Mt Vernon Hwy at Barfield Rd	Signal	C 34.6	D 51.2
18	Mt Vernon Hwy at Peachtree Dunwoody Rd	Signal	C 34.7	D 45.6
19	Lake Hearn Dr at Peachtree Dunwoody Rd	Signal	B 17.2	C 24.2
20	Johnson Ferry Rd at Glenridge Con	Signal	D 50.0	E 55.7

3 | Future Conditions – 2030 Horizon Year

Traffic Volumes

To determine the appropriate improvements at the 20 traffic evaluation intersections, future conditions were analyzed at each of the intersections based on projected traffic volumes. The year 2030 was chosen as the horizon year to conduct the future conditions traffic analysis. To perform the future analysis, anticipated future traffic volumes were developed at each of the 20 traffic evaluation intersections. The future conditions are defined as the existing condition traffic, plus the anticipated background growth in traffic at the intersections. Hence, the following formula was used to calculate the future condition traffic volumes.

$$F = P (1 + r) ^ n$$

Where:

F = future projected traffic volume (vehicles per hour)

P = existing traffic volume (vehicles per hour)

r = annual growth rate

n = number of projection years = future projection year – existing year

Growth Rate Analysis

The projected growth in traffic was calculated based on traffic assignments from the travel demand model developed as part of the TMP. The travel demand model was based on the Atlanta Regional Commission's activity-based travel demand model and revised to reflect the latest available socioeconomic data including population and employment data, development data, and programmed projects in the area, including express lane projects associated with the Major Mobility Investment Program (MMIP). The total entering volumes at each of the 20 traffic evaluation intersections from the 2018 and 2050 models were compared to calculate annual growth in traffic at each of the intersections for the future year 2030. The proposed average annual growth rates based on this analysis at each of the intersections are shown in **Table 7**. Detailed growth rate calculations are included in **Appendix B**.

Table 7. Proposed Future Growth Rates

ID	Intersection Name	Proposed Annual Growth Rate
1	Johnson Ferry Rd at Peachtree Dunwoody Rd	0.75%
2	Northridge Rd at SR 400 SB/Dunwoody PI	0.50%
3	Northside Dr at Powers Ferry Rd	0.75%

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ID	Intersection Name	Proposed Annual Growth Rate
4	Dunwoody Pl/Hannover Park Rd at Roswell Rd (SR 9)	0.50%
5	Northridge Rd at Roswell Rd (SR 9)	0.50%
6	Interstate North Pkwy/New Northside Dr at Northside Dr	0.75%
7	Heards Ferry Rd at Riverside Dr	0.50%
8	New Northside Dr at Powers Ferry Rd	0.75%
9	Abernathy Rd at Mt Vernon Hwy	0.50%
10	Johnson Ferry Rd/Abernathy Rd at Brandon Mill Rd	0.75%
11	Abernathy Rd at Peachtree Dunwoody Rd	0.50%
12	Hollis Cobb Cir at Peachtree Dunwoody Rd	0.75%
13	Johnson Ferry Rd at River Valley Rd	0.75%
14	Mt Vernon Hwy at Northside Dr	1.50%
15	Roswell Rd (SR 9) at Spalding Dr	0.50%
16	Spalding Dr at Dunwoody Club Dr/ Roberts Dr	0.50%
17	Mt Vernon Hwy at Barfield Rd	2.25% ¹
18	Mt Vernon Hwy at Peachtree Dunwoody Rd	1.25%
19	Lake Hearn Dr at Peachtree Dunwoody Rd	0.75%
20	Johnson Ferry Rd at Glenridge Con	0.75%

¹ The 2050 travel demand model is indicating higher growth at the intersection of Mount Vernon Highway at Barfield Road, which can be attributed to the proposed managed lane access point at Mount Vernon Highway, east of Barfield Road.

The future year (2030) AM and PM peak hour traffic volumes based on the background growth in traffic are shown in **Figures 6, 7, 8 and 9**.

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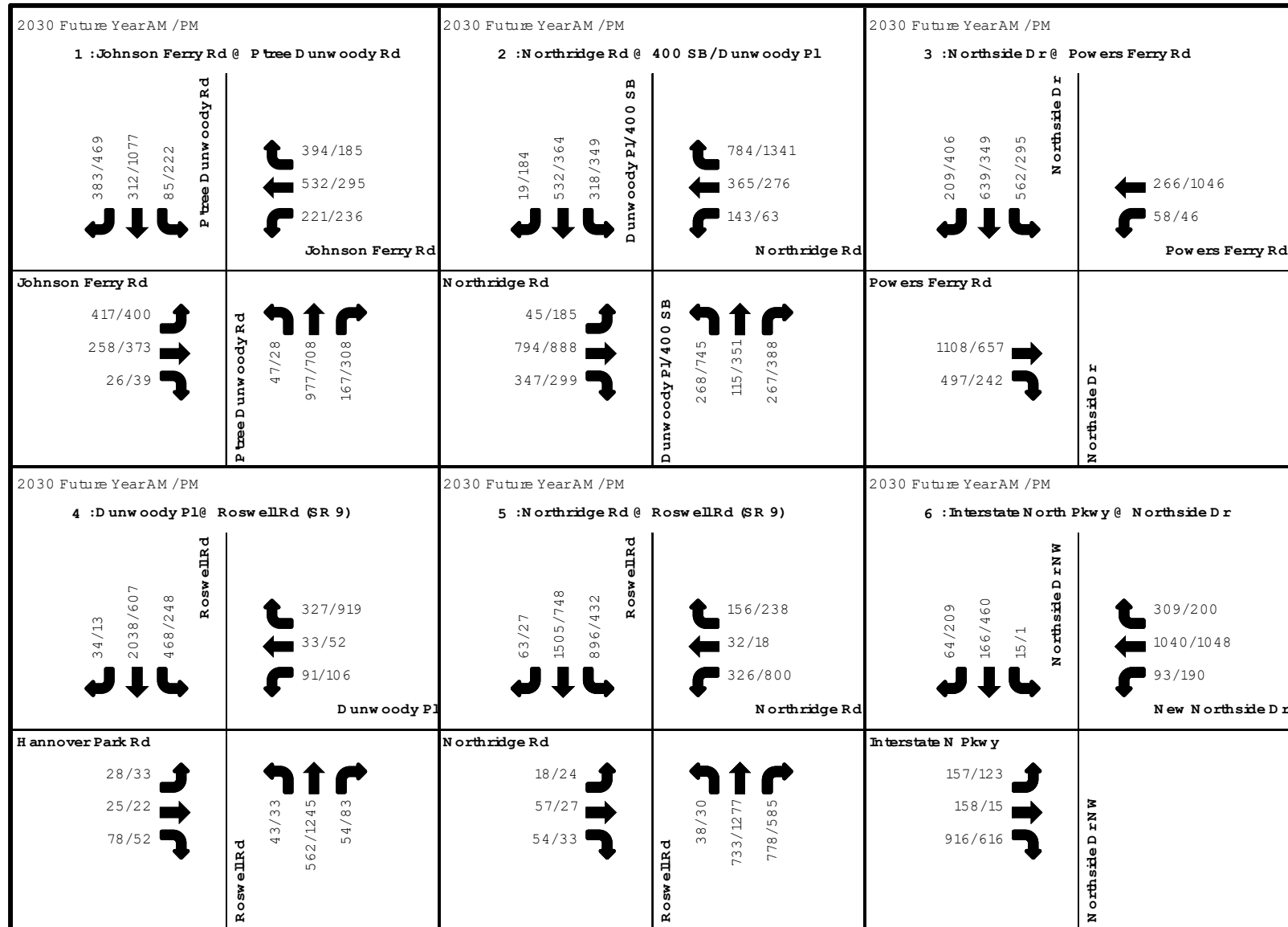


Figure 6. Future Year (2030) AM and PM Peak Hour Traffic Volumes

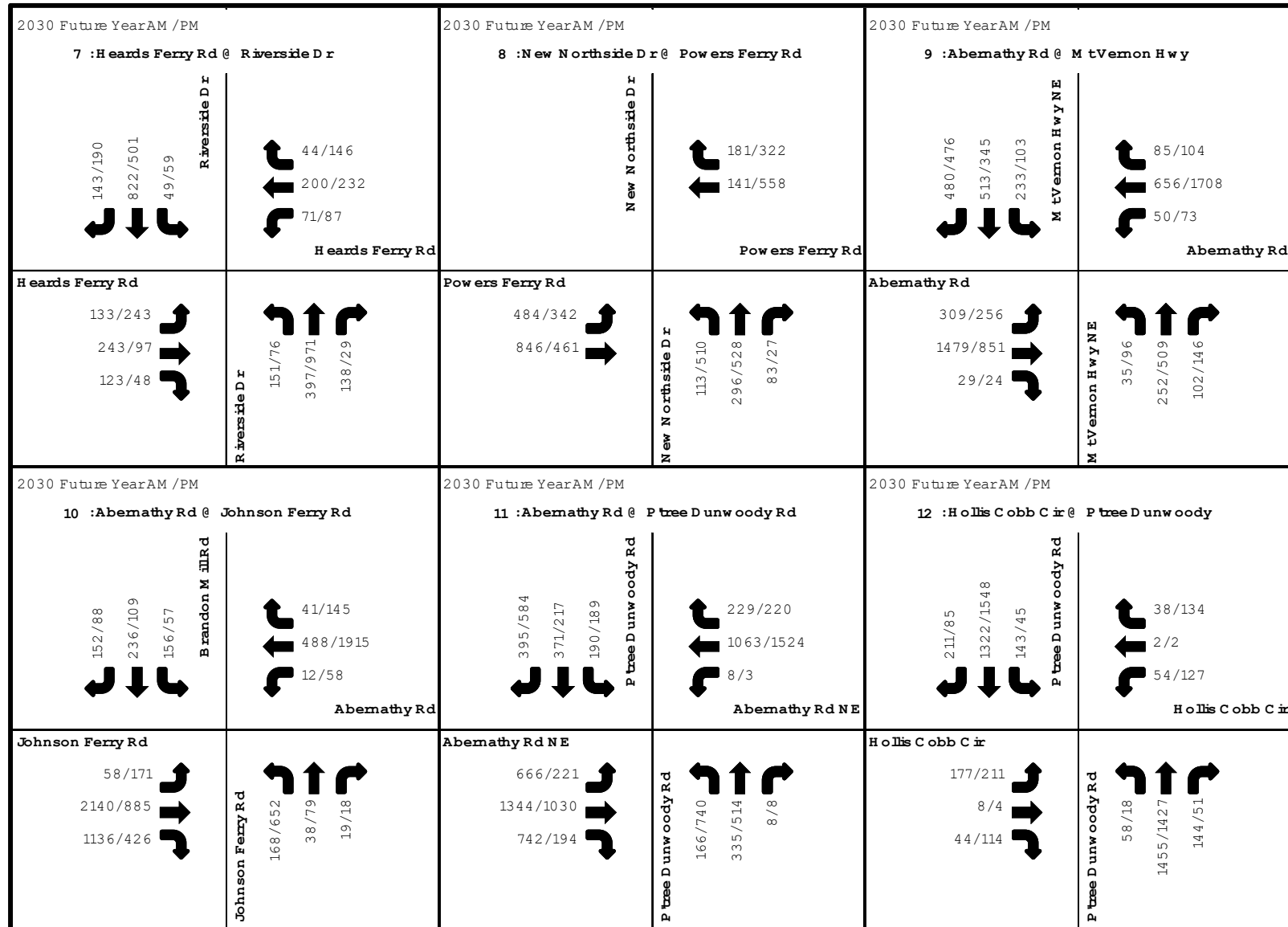


Figure 7. Future Year (2030) AM and PM Peak Hour Traffic Volumes (Continued)

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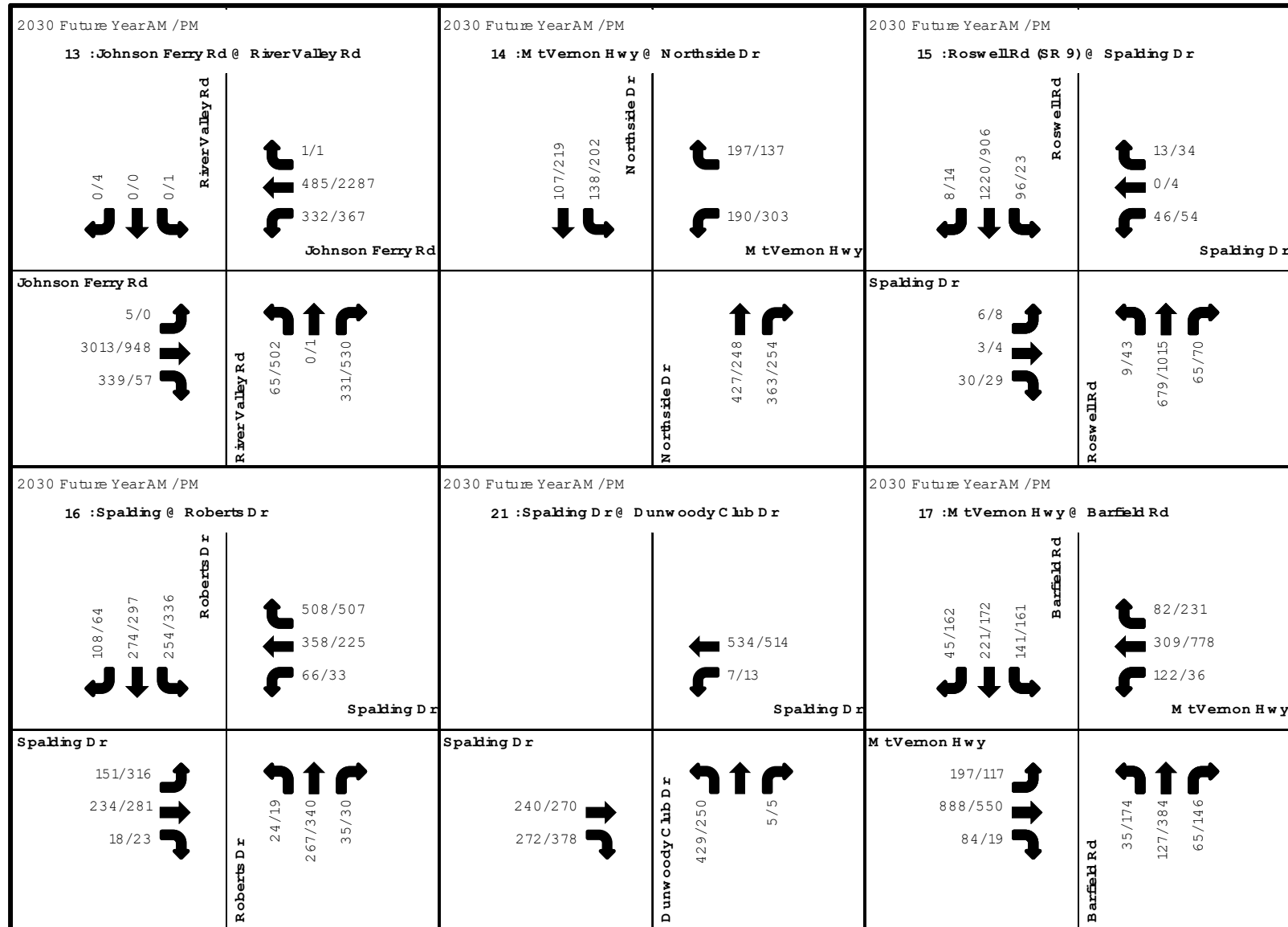


Figure 8. Future Year (2030) AM and PM Peak Hour Traffic Volumes (Continued)

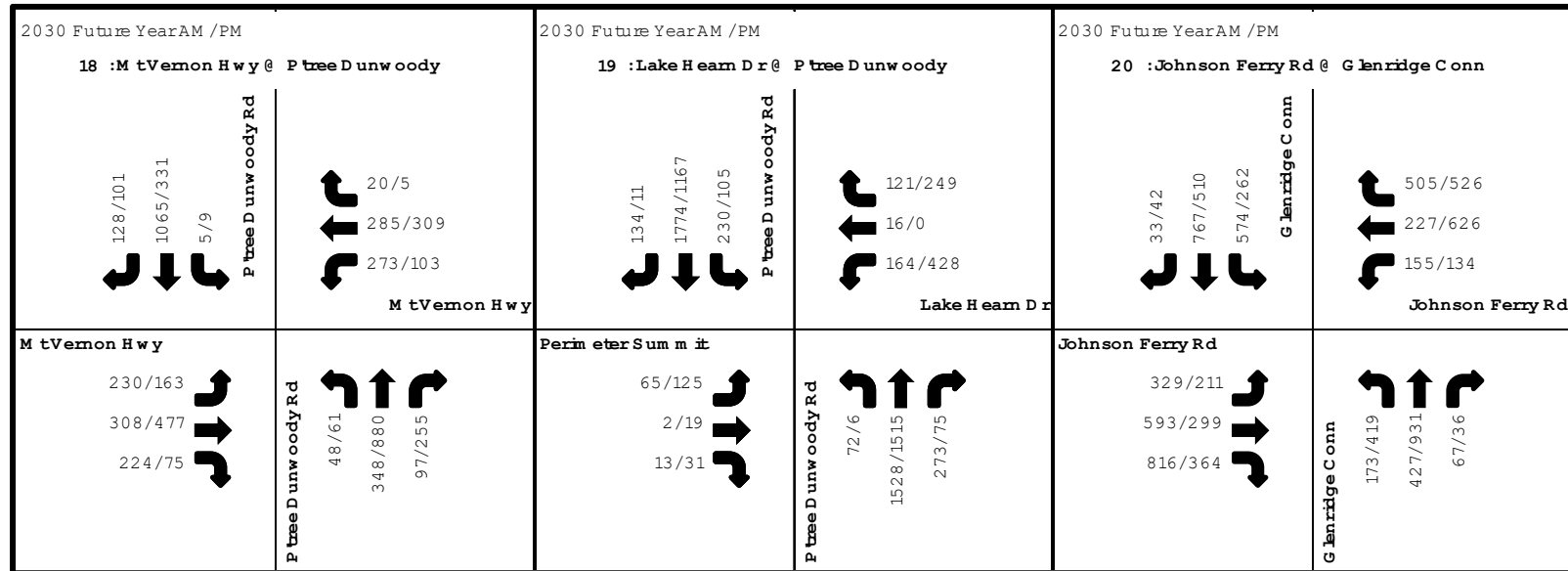


Figure 9. Future Year (2030) AM and PM Peak Hour Traffic Volumes (Continued)

Intersection Capacity Analysis – Without Improvements

Based on the future year (2030) AM and PM peak hour turning movement traffic volumes and existing traffic control and lane configurations, AM and PM peak hour traffic operations were analyzed at the 20 traffic evaluation intersections to determine the future intersection operations if no improvements were to be made. It should be noted that in addition to existing traffic control, the existing cycle lengths and signal phasings were retained in this analysis, with only very minor changes to the signal phase splits to accommodate the higher volumes. The results of the intersection LOS and delay analysis for the future year (2030) conditions with no improvements made are summarized in **Table 8**. As shown in Table 8, there are three intersections projected to operate at LOS F in 2030:

1. Heard's Ferry Road at Riverside Drive (PM peak hour)
2. Johnson Ferry Road at River Valley Road (AM peak hour)
3. Mt. Vernon Highway at Northside Drive (AM and PM peak hours)

Of these failing intersections, Johnson Ferry Road at River Valley Road and Mt. Vernon Highway at Northside Drive are also deficient in the existing conditions (2020) analysis, with Johnson Ferry Road at River Valley Road operating at LOS F in the 2020 AM peak hour and Mt. Vernon Highway at Northside Drive operating at LOS F in both 2020 peak hours. The Heard's Ferry Road at Riverside Drive intersection operates at LOS E in both 2020 peak hours and is projected to operate at LOS F by 2030 (in the PM peak hour). By 2030, a total of six intersections are projected to operate at LOS E, all of which already operate at LOS E in 2020. The remaining intersections in 2030 are projected to operate at LOS D or better. Detailed HCM analyses, including capacity analysis worksheets, are included in **Appendix E**.

Table 8. Future Year (2030) Intersection Level of Service – without Improvements

ID	Intersection Name	Intersection Control Type	AM LOS Delay (s)	PM LOS Delay (s)
1	Johnson Ferry Rd at Peachtree Dunwoody Rd	Signal	E 71.7	D 53.6
2	Northridge Rd at SR 400 SB/Dunwoody PI	Signal	D 50.8	E 63.1
3	Northside Dr at Powers Ferry Rd	Signal	D 42.0	C 32.3
4	Dunwoody PI/Hannover Park Rd at Roswell Rd (SR 9)	Signal	C 34.8	D 53.2
5	Northridge Rd at Roswell Rd (SR 9)	Signal	D 52.3	E 58.8

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ID	Intersection Name	Intersection Control Type	AM LOS Delay (s)	PM LOS Delay (s)
6	Interstate North Pkwy/New Northside Dr at Northside Dr	Signal	C 28.6	C 35.4
7	Heards Ferry Rd at Riverside Dr	Signal	E 69.6	F 85.5
8	New Northside Dr at Powers Ferry Rd	Signal	C 30.9	D 38.1
9	Abernathy Rd at Mt Vernon Hwy	Signal	D 43.8	E 62.2
10	Johnson Ferry Rd/Abernathy Rd at Brandon Mill Rd	Signal	D 51.0	E 73.4
11	Abernathy Rd at Peachtree Dunwoody Rd	Signal	D 43.4	D 55.0
12	Hollis Cobb Cir at Peachtree Dunwoody Rd	Signal	B 13.7	B 18.6
13	Johnson Ferry Rd at River Valley Rd	Signal	F >100s	E 71.2
14	Mt Vernon Hwy at Northside Dr	Two-way STOP Control	F >100s	F >100s
15	Roswell Rd (SR 9) at Spalding Dr	Signal	A 7.6	A 8.5
16	Spalding Dr at Roberts Dr	Signal	D 43.6	D 51.1
16	Spalding Dr at Dunwoody Club Dr	Signal	C 29.2	C 22.5
17	Mt Vernon Hwy at Barfield Rd	Signal	D 38.6	D 52.0
18	Mt Vernon Hwy at Peachtree Dunwoody Rd	Signal	C 35.0	D 46.0
19	Lake Hearn Dr at Peachtree Dunwoody Rd	Signal	B 18.8	C 28.9
20	Johnson Ferry Rd at Glenridge Con	Signal	E 56.4	E 64.4

Proposed Improvements (Short-Term Improvements)

Based on the 2030 future year traffic volumes, 2030 future year intersection capacity analysis, field observations, and crash history at the 20 traffic evaluation intersections, the following improvements are proposed to address and mitigate the safety, operational, and capacity deficiencies at the intersections.

City-Wide Intersection Improvements

For each of the following intersections, there are several improvements that are recommended in order to bring each intersection up to the latest safety and operational standards. These include the following:

- Traffic signal backplates with retroreflective borders
- Raised pavement markers (within 500 feet along all approaches to the intersection)
- Flashing Yellow Arrows (FYAs) for all left-turn movements with protected-permissive or permissive-only phasing at each intersection
- Retroreflective median nose delineators, where applicable
- Repaving and restriping of the intersection, as needed

Johnson Ferry Road at Peachtree Dunwoody Road

At the intersection of Johnson Ferry Road at Peachtree Dunwoody Road, the crash history shows a high occurrence of sideswipe crashes. This indicates that weaving movements may be a cause of crashes at the intersection. The following improvements are proposed to address operational and safety deficiencies at this intersection:

- Reconstruct the stamped concrete crosswalks
- Fill in the short sidewalk gap in the southeast corner
- Install post-mounted advance intersection lane control signage (MUTCD R3-8) and lane use control pavement markings along the eastbound Johnson Ferry Road approach to the intersection upstream of the horizontal curvature
- Add striping to extra pavement on the southwest corner along Peachtree Dunwoody Road
- Install Leading Pedestrian Interval (LPI) phasing at the intersection
- Add a single westbound Johnson Ferry Road right-turn lane and install corresponding permissive plus overlap phase with a FYA signal head

Northridge Road at SR 400 Southbound/Dunwoody Place

The intersection of Northridge Road at SR 400 Southbound/Dunwoody Place currently operates at LOS D in the AM peak period and LOS E in the PM peak period. Based on a projected annual growth in traffic of 0.50%, if no improvements were to be made, the intersection would operate at the same LOS during the AM and PM peak periods by 2030, but with greater delay. The

prevalence of rear-end crashes at the intersection reflects the heavy volumes at the intersection, and the high occurrence of angle crashes may be due to conflicts among several turning movements, including ingress and egress at a major interchange (SR 400). The following improvements are proposed to address operational and safety deficiencies at the intersection:

- Replace the existing delineator posts and install a narrow continuous raised concrete median with retroreflective delineators along the westbound right-turn lane from the SR 400 Northbound exit ramp to separate this westbound right-turn movement from other westbound Northridge Road traffic (westbound through and left-turning traffic)
- Install roadside post-mounted advance intersection lane control signage (MUTCD R3-8) along the SR 400 Northbound exit ramp
- Install overhead (on the traffic signal mast arms) and post-mounted (on the median) signage prohibiting U-turns (MUTCD R3-4) along the SR 400 Northbound exit ramp approach to the intersection
- Upgrade signage along the southbound exit ramp to install additional chevron signs (MUTCD W1-8R) and advisory exit speed signage (MUTCD W1-11R and W13-1P)
- Add pavement markings adjacent to the outside through lane in the eastbound direction (west of the intersection) to prohibit drivers from improperly entering the right-turn lane (for right-turn movements onto SR 400 Southbound); install overhead (on the traffic signal mast arms) signage prohibiting right-turn movements from the through lane
- Install route shield pavement markings to SR 9 along the northbound approach (SR 400 southbound exit ramp) to the intersection
- Install an additional (second) southbound Dunwoody Place left-turn lane with a narrow raised median
 - The turning radius at this movement would require the island in the northeast quadrant to be repurposed, and the westbound stop bar would need to be moved further back to accommodate the additional southbound left-turn lane
- Install an FYA signal head for the right-turn lane on the SR 400 Southbound exit ramp (protected plus overlap phasing) to prohibit right-turn movements on red when southbound left-turning motorists from Dunwoody Place have a protected left-turn phase

Northside Drive at Powers Ferry Road

At the intersection of Northside Drive at Powers Ferry Road, the crash history shows a high occurrence of angle crashes. The prevalence of angle crashes may be due to conflicts among several turning movements, including driveways located within the intersection's area of influence, and the proximity of a major interchange at I-285. Currently, the inside lane on Northside Drive accommodates both left-turn and through movements, which flow directly into a left-turn only lane, creating driver expectation issues. The following improvements are proposed to address operational and safety deficiencies at the intersection:

- Convert and restripe the inside lane on Northside Drive southbound to an exclusive left-turn-only lane to balance the traffic volume demand between left-turn and through movements and to better meet downstream driver expectation
- Install driveway related right-in-right-out pavement markings along the mid-block short lane along southbound Northside Drive at the two driveways to prevent continuous southbound through traffic on this short lane
- Install route shield pavement markings to I-285 along the southbound Northside Drive and eastbound Powers Ferry Road approaches to the intersection
- Install one signal head per lane to the eastbound Powers Ferry Road approach of the intersection
- Install overhead (on the traffic signal mast arms) and post-mounted (roadside) signage prohibiting right-turn movements on red (MUTCD R10-11) along the eastbound Powers Ferry Road approach to the intersection
- Remove access points within 250 feet of the intersection or limit movements at driveways to right-turn movements only
- Install sidewalks along both sides of Northside Drive, north of the intersection, and along the north side of Powers Ferry Road, east and west of the intersection

Dunwoody Place/Hannover Park Road at Roswell Road (SR 9)

At the intersection of Dunwoody Place/Hannover Park Road at Roswell Road (SR 9), the crash history shows a high occurrence of rear-end crashes, which is reflective of the heavy volumes at the intersection. There have also been pedestrian crashes related to long crosswalk lengths. The following improvements are proposed to address operational and safety deficiencies at the intersection:

- Remove one westbound left-turn lane on Dunwoody Place and convert to a single westbound left-turn lane.
 - Convert westbound left-turn phasing to a protected-permissive movement
- Install a raised median on Dunwoody Place that extends beyond the crosswalk and provide a pedestrian refuge area within the median
- Remove access points within 250 feet of the intersection or limit movements at driveways to right-turn movements only
- Install a permissive plus overlap phase with a FYA signal head for the westbound Dunwoody Place right-turn lane. This phasing will allow a westbound right-turn overlap phase (solid green arrow) during the southbound Roswell Road left-turn phase, prohibit westbound right-turn movements (solid red arrow) during the eastbound Hannover Park Road left-turn phase, and permit westbound right-turn movements during all other phases with a FYA.

- Remove the LED blank-out traffic sign (facing westbound Dunwoody Place) that prohibits right-turn movements on red

Northridge Road at Roswell Road (SR 9)

The intersection of Northridge Road at Roswell Road (SR 9) currently operates at LOS D in the AM peak period and LOS E in the PM peak period. Based on a projected annual growth in traffic of 0.50%, if no improvements were to be made, the intersection would operate at the same LOS during the AM and PM peak periods by 2030, but with greater delay. The prevalence of rear-end crashes at the intersection reflects the heavy volumes at the intersection. The following improvements are proposed to address operational and safety deficiencies at the intersection:

- Remove access points within 250 feet of the intersection or limit movements at driveways to right-turn movements only
- Install route shield pavement markings to SR 400 along both Roswell Road approaches to the intersection
- Install vehicular-scale intersection lighting at the intersection to illuminate the intersection approaches and marked crosswalks at the intersection
- Install an additional (second) northbound Roswell Road right-turn lane with a corresponding FYA signal head (protected plus overlap phasing)

Interstate North Parkway/New Northside Drive at Northside Drive

At the intersection of Interstate North Parkway/New Northside Drive at Northside Drive, the crash history shows a high occurrence of rear-end crashes, which is reflective of the heavy volumes at the intersection. The following improvements are proposed to address operational and safety deficiencies at the intersection:

- Install route shield pavement markings to I-285 along all three approaches to the intersection and along the southbound Northside Drive lanes south of the intersection
- Reduce the curb radius and eliminate the raised concrete islands at the northwest and southwest corners of the intersection
 - Control the southbound Northside Drive right-turn lane and the eastbound Interstate North Parkway right-turn lane by extending the intersection stop bars across the right-turn lanes
- Install sidewalk along the west side of Northside Drive, north of the intersection, to connect to the MARTA bus stop and to Riveredge Parkway
- Install sidewalk along the east side of Northside Drive, south of the intersection, to connect to the business park entrance
- Install sidewalk along the south side of New Northside Drive, east of the intersection, to connect to business park entrances

Heards Ferry Road at Riverside Drive

The intersection of Heards Ferry Road at Riverside Drive currently operates at LOS E in the AM and PM peak periods. Based on a projected annual growth in traffic of 0.50%, if no improvements were to be made, by 2030, the intersection would operate at the same LOS during the AM peak period (but with greater delay) and at LOS F in the PM peak period. The prevalence of rear-end crashes at the intersection reflects the heavy volumes at the intersection. The following improvements are proposed to address operational and safety deficiencies at the intersection:

- Install roadside post-mounted directional signage (MUTCD M1-1, M3 Series, and M6 Series) navigating to I-285 along the southbound Riverside Drive approach and both Heards Ferry Road approaches
- Install sidewalk along the west side of Riverside Drive, south of the intersection, to fill in a gap of approximately 515 feet
- Install sidewalk along the south side of Riverside Drive on both sides of the intersection
- Convert southbound Riverside Drive left-turn phasing to protected-only
- Install a single right-turn lane to all four approaches to the intersection
- As an alternative to installing additional turn lanes and making signal improvements, convert the intersection to a multi-lane roundabout with bypass lanes in the northeast and southeast quadrants (see **Appendix F**)

New Northside Drive at Powers Ferry Road

At the intersection of New Northside Drive at Powers Ferry Road, the crash history shows a high occurrence of angle crashes. These crashes may be due to conflicts among several turning movements, including driveways located within the intersection's area of influence, and the proximity of a major interchange at I-285. The high frequency of sideswipe crashes at the intersection indicates that weaving movements may be a cause of crashes at the location. The following improvements are proposed to address operational and safety deficiencies at the intersection:

- Install route shield pavement markings to I-285 along all three approaches to the intersection and along the northbound New Northside Drive lanes north of the intersection
- Install lane extension pavement markings for the eastbound left-turn lanes along Powers Ferry Road
- Install advance intersection lane control signage (MUTCD R3-8) on the traffic signal mast arm for the northbound New Northside Drive approach to the intersection
- Install vehicular-scale intersection lighting at the intersection to illuminate the intersection approaches and marked crosswalks at the intersection

- Reduce the curb radius and eliminate the raised concrete island at the northeast corner of the intersection
 - Control the westbound Powers Ferry Road right-turn lane by extending the intersection stop bars across the right-turn lane
- Install sidewalk along the north side of Powers Ferry Road, east and west of the intersection
- Install sidewalk along both sides of New Northside Drive, north of the intersection
- Install sidewalk along the south side of Powers Ferry Road, east of the intersection, to connect to Publix shopping center
- Available capacity at the New Northside Drive at Powers Ferry Road and the Interstate North Parkway/New Northside Drive at Northside Drive intersections indicates that the three-lane approaches on New Northside Drive at both intersections could be reduced to two-lane approaches, making a road diet with bike lanes feasible along New Northside Drive. However, the I-285 ramp intersections should be analyzed further before making this determination.

Abernathy Road at Mount Vernon Highway

The intersection of Abernathy Road at Mount Vernon Highway currently operates at LOS D in the AM peak period and at LOS E in the PM peak period. Based on a projected annual growth in traffic of 0.50%, if no improvements were to be made, the intersection would operate at the same LOS during the AM and PM peak periods (but with greater delay). The prevalence of rear-end crashes at the intersection reflects the heavy volumes at the intersection. The following improvements are proposed to address operational and safety deficiencies at the intersection:

- Install route shield pavement markings to SR 400 along the westbound Perimeter Center West approach to the intersection
- Install lane extension pavement markings for the eastbound through lanes on Abernathy Road
- Install advance signal ahead signs (MUTCD W3-3) with street name plaques (MUTCD 16-8P) along both Abernathy Road and Mount Vernon Highway
- Reduce the curb radius and eliminate the raised concrete islands at the northeast and southwest corners of the intersection
 - Control the westbound Perimeter Center West right-turn lane and the eastbound Abernathy Road right-turn lane by extending the intersection stop bars across the right-turn lanes
- Install a permissive plus overlap phase with a FYA signal head for the southbound Mount Vernon Highway right-turn lane

Johnson Ferry Road/Abernathy Road at Brandon Mill Road

At the intersection of Johnson Ferry Road/Abernathy Road at Brandon Mill Road, the crash history shows a high incidence of rear-end crashes, which is reflective of the heavy volumes at the intersection. The following improvements are proposed to address operational and safety deficiencies at the intersection:

- Install raised pavement markers at the intersection (within 500 feet along all approaches to the intersection)
- Install retroreflective median nose delineators at the median along all approaches (except the Brandon Mill Road approach) to the intersection
- During peak hours, operate the eastbound Johnson Ferry Road left-turn movement as protected-only
- Install advance signal ahead signs (MUTCD W3-3) with street name plaques (MUTCD 16-8P) along both Abernathy Road and Johnson Ferry Road
- Install a protected plus overlap phase with a FYA signal head for the eastbound Johnson Ferry Road right-turn lane
- Convert westbound Abernathy Road left-turn phasing to protected-only

Abernathy Road at Peachtree Dunwoody Road

At the intersection of Abernathy Road at Peachtree Dunwoody Road, the crash history shows a prevalence of sideswipe crashes. The high occurrence of sideswipe crashes at the intersection indicates that weaving movements may be a cause of crashes at the location; these may also be associated with vehicles maneuvering into the correct lanes to access the nearby interchange at SR 400. The following improvements are proposed to address operational and safety deficiencies at the intersection:

- Install one signal head per lane at both Abernathy Road approaches to the intersection
- Install route shield pavement markings to SR 400 along the westbound Abernathy Road approach to the intersection
- Install advance signal ahead signs (MUTCD W3-3) with street name plaques (MUTCD 16-8P) along both Abernathy Road and Peachtree Dunwoody Road
- Reduce the curb radius and eliminate the raised concrete island at the southeast corner of the intersection
 - Control the northbound Peachtree Dunwoody Road right-turn lane at the intersection stop bar by extending the intersection stop bars across the right-turn lane
- Prohibit westbound Abernathy Road left-turn movements at the intersection; eliminate the westbound left-turn lane, corresponding signal phasing, and traffic signal head; install overhead no-left-turn signage (MUTCD R3-2) to the traffic signal mast arm

- Repair sidewalk along the northwest corner of the intersection

Hollis Cobb Circle at Peachtree Dunwoody Road

At the intersection of Hollis Cobb Circle at Peachtree Dunwoody Road, the crash history shows a high occurrence of angle crashes. These crashes may be due to conflicts among turning movements between traffic on Peachtree Dunwoody Road and traffic entering and leaving major trip attractors at the intersection, including two hospitals and the Medical Center MARTA Station. The following improvements are proposed to address safety deficiencies at the intersection:

- Install advance signal ahead signs (MUTCD W3-3) with street name plaques (MUTCD 16-8P) along Peachtree Dunwoody Road
- Extend the stop bar across the northbound Peachtree Dunwoody Road right-turn lane
- Install street furniture, including benches and trash receptacles, at the northwest corner of the intersection for people using transit
- Examine improved pedestrian crossing options

Johnson Ferry Road at River Valley Road

The intersection of Johnson Ferry Road at River Valley Road currently operates at LOS F in the AM peak period and LOS D in the PM peak period. Based on a projected annual growth in traffic of 0.75%, if no improvements were to be made, the intersection would remain deficient during the AM peak period (LOS F) and would worsen to LOS E during the PM peak period. The prevalence of rear-end crashes reflects the heavy volumes at the intersection. The following improvements are proposed to address operational and safety deficiencies at the intersection:

- Install advance signal ahead signs (MUTCD W3-3) with street name plaques (MUTCD 16-8P) along Johnson Ferry Road
- Install an additional (second) westbound Johnson Ferry Road left-turn lane
- Add yield lines on the pavement in the right-turn lane for northbound right-turning motorists from River Valley Road
- Add striping on the loon portion of the pavement between the bike lane and the south curb along Johnson Ferry Road (adjacent to the eastbound right lane, east of the intersection) to restrict River Valley Road right-turning motorists from utilizing the pavement as a merge area
- Install information signage to direct eastbound right-turning traffic to yield to westbound U-turning traffic (similar to MUTCD R10-30)

Mount Vernon Highway at Northside Drive

The intersection of Mount Vernon Highway at Northside Drive currently operates at LOS F in the AM and PM peak periods. Based on a projected annual growth in traffic of 1.50%, if no improvements were to be made, the intersection would remain deficient during the AM and PM

improvements were to be made, the intersection would remain deficient during the AM and PM peak periods. The prevalence of angle crashes may be due to the unconventional design of the intersection. The following improvements are proposed to address operational and safety deficiencies at the intersection:

- Install sidewalk along the north side of Mount Vernon Highway, east of the intersection, to fill in an approximately 300-foot sidewalk gap
- Install a single-lane roundabout
- As an alternative to the single-lane roundabout, conduct a signal warrant analysis based on new turning movement counts and if warranted, install a traffic signal

Roswell Road (SR 9) at Spalding Drive

At the intersection of Roswell Road (SR 9) at Spalding Drive, the crash history shows a high occurrence of rear-end crashes, which is reflective of the heavy volumes at the intersection. The following improvements are proposed to address operational and safety deficiencies at the intersection:

- Install advance signal ahead signs (MUTCD W3-3) with street name plaques (MUTCD 16-8P) along Roswell Road
- Install vehicular-scale intersection lighting at the intersection to illuminate the intersection approaches and marked crosswalks at the intersection
- Reconstruct the northwest and southwest curb radii and install ADA curb ramps; improve overall positive drainage including gutters and drain inlets

Spalding Drive at Roberts Drive & Dunwoody Club Drive

The intersection of Spalding Drive at Roberts Drive currently operates at LOS D in the AM and PM peak periods, and the adjacent intersection of Spalding Drive at Dunwoody Club Drive currently operates at LOS C in the AM and PM peak periods. Based on a projected annual growth in traffic of 0.50%, if no improvements were to be made, by 2030, the intersections would remain at the same LOS during the AM and PM peak periods (but with greater delay). The prevalence of rear-end crashes reflects the heavy volumes at the intersection. The following improvements are proposed to address operational and safety deficiencies at the intersection:

- Install a permissive plus overlap phase with a FYA signal head for the westbound Spalding Drive right-turn lane at Roberts Drive
- Install a flared approach to the eastbound Spalding Drive right-turn movement at Dunwoody Club Drive
- As an alternative to turn lane improvements, convert the two intersections to a five-legged, multi-lane roundabout with bypass lanes on the northbound, southbound, and westbound approaches (see **Appendix F**)

Mount Vernon Highway at Barfield Road

At the intersection of Mount Vernon Highway at Barfield Road, the crash history shows a high occurrence of rear-end crashes, which is reflective of the heavy volumes at the intersection. The following improvements are proposed to address operational and safety deficiencies at the intersection:

- Install advance signal ahead signs (MUTCD W3-3) with street name plaques (MUTCD 16-8P) along Mount Vernon Highway

Mount Vernon Highway at Peachtree Dunwoody Road

At the intersection of Mount Vernon Highway at Peachtree Dunwoody Road, the crash history shows a high occurrence of rear-end crashes, which is reflective of the heavy volumes at the intersection. The following improvements are proposed to address operational and safety deficiencies at the intersection:

- Install overhead no-left-turn signage (MUTCD R3-2) to the traffic signal mast arm and post-mounted no-left-turn signage (MUTCD R3-2) on the median for the southbound Peachtree Dunwoody Road approach to the intersection
 - Install lane extension pavement markings for the northbound through-lanes along Peachtree Dunwoody Road
 - Install advance signal ahead signs (MUTCD W3-3) with street name plaques (MUTCD 16-8P) along both Peachtree Dunwoody Road and Mount Vernon Highway
- Conduct a study to further examine alternative intersection configurations at the Abernathy Road at Peachtree Dunwoody Road, Abernathy Road at Mount Vernon Highway, and Peachtree Dunwoody Road at Mt Vernon Highway intersections

Lake Hearn Drive at Peachtree Dunwoody Road

At the intersection of Lake Hearn Drive at Peachtree Dunwoody Road, the crash history includes a high occurrence of rear-end crashes, which is reflective of the heavy volumes at the intersection. The following improvements are proposed to address operational and safety deficiencies at the intersection:

- Install advance signal ahead signs (MUTCD W3-3) with street name plaques (MUTCD 16-8P) along Peachtree Dunwoody Road
- Install route shield pavement markings to I-285 along the northbound Peachtree Dunwoody Road approach to the intersection
- Install supplemental signal heads for the northbound through lanes at the Peachtree Dunwoody Road approach to the intersection
- Install roadside Dynamic Message Signs (DMS) along the northbound Peachtree Dunwoody Road approach with travel speeds along the I-285 general purpose and express lanes

Johnson Ferry Road at Glenridge Connector

The intersection of Johnson Ferry Road at Glenridge Connector currently operates at LOS D in the AM peak period and LOS E in the PM peak period. Based on a projected annual growth in traffic of 0.75%, if no improvements were to be made, by 2030, the intersection would worsen to LOS E in the AM peak period and remain at LOS E in the PM peak period (but with greater delay). The prevalence of rear-end crashes reflects the heavy volumes at the intersection. The following improvements are proposed to address operational and safety deficiencies at the intersection:

- Fill in the sidewalk gap along the south side of Johnson Ferry Road just west of the intersection; connect to the crosswalks at the southwest corner of the intersection; reconstruct the southwest curb radius and install ADA curb ramps
- Convert the five-section traffic signal head for the westbound Johnson Ferry Road right-turn lane into a four-section traffic signal head with FYA
- Install an additional (second) northbound Glenridge Connector left-turn lane; remove the painted island in the northwest corner of the intersection
- Replace painted island with raised pedestrian island on the southeast corner of the intersection
- Install a raised island and narrow raised concrete separators in the southwest corner of the intersection to channelize the eastbound Johnson Ferry Road right-turn lane into the outside southbound receiving lane along Glenridge Connector; install corresponding permissive plus overlap phase with a FYA signal head; install lane extension pavement markings for the southbound through-lanes along Glenridge Connector to align the two southbound through-lanes to the two inside receiving lanes

Intersection Capacity Analysis – With Improvements

Based on the future year (2030) AM and PM peak hour turning movement traffic volumes and the proposed traffic control and lane configurations, AM and PM peak hour traffic operations were analyzed at the 20 traffic evaluation intersections to determine the benefits of the proposed improvements for the future year. The results of the intersection LOS and delay analysis for the future year (2030) conditions with the proposed improvements are summarized in **Table 9**. As shown in Table 9, there are no intersections projected to operate at LOS F (three less than without improvements), four intersections are projected to operate at LOS E (two less than without improvements), and the remaining are projected to operate at LOS D or better. Detailed HCM analyses, including capacity analysis worksheets, are included in **Appendix E**. All roundabout analyses are included in **Appendix F**.

Table 9. Future Year (2030) Intersection Level of Service – With and Without Improvements

ID	Intersection Name	Intersection Control Type	With Improvements		Without Improvements	
			AM LOS Delay (s)	PM LOS Delay (s)	AM LOS Delay (s)	PM LOS Delay (s)
1	Johnson Ferry Rd at Peachtree Dunwoody Rd	Signal	E 67.8	D 51.4	E 71.7	D 53.6
2	Northridge Rd at SR 400 SB/Dunwoody Pl	Signal	D 49.3	D 53.6	D 50.8	E 63.1
3	Northside Dr at Powers Ferry Rd	Signal	D 41.2	C 32.3	D 42.0	C 32.3
4	Dunwoody Pl/Hannover Park Rd at Roswell Rd (SR 9)	Signal	D 35.5	D 52.2	C 34.8	D 53.2
5	Northridge Rd at Roswell Rd (SR 9)	Signal	D 43.4	D 54.3	D 52.3	E 58.8
6	Interstate North Pkwy/New Northside Dr at Northside Dr	Signal	C 30.6	D 43.4	C 28.6	C 35.4
7	Heards Ferry Rd at Riverside Dr	Signal	D 38.7	E 55.8	E 69.6	F 85.5
		Roundabout	A 9.4	A 8.1		
8	New Northside Dr at Powers Ferry Rd	Signal	C 31.5	D 37.5	C 30.9	D 38.1
9	Abernathy Rd at Mt Vernon Hwy	Signal	D 35.5	D 51.8	D 43.8	E 62.2
10	Johnson Ferry Rd/Abernathy Rd at Brandon Mill Rd	Signal	D 41.9	E 75.2	D 51.0	E 73.4

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ID	Intersection Name	Intersection Control Type	With Improvements		Without Improvements	
			AM LOS Delay (s)	PM LOS Delay (s)	AM LOS Delay (s)	PM LOS Delay (s)
11	Abernathy Rd at Peachtree Dunwoody Rd	Signal	D 43.8	D 54.2	D 43.4	D 55.0
12	Hollis Cobb Cir at Peachtree Dunwoody Rd	Signal	C 20.7	C 27.6	B 13.7	B 18.6
13	Johnson Ferry Rd at River Valley Rd	Signal	D 38.8	E 65.7	F >100s	E 71.2
14	Mt Vernon Hwy at Northside Dr	Roundabout	B 14.7	A 8.8	F >100s	F >100s
15	Roswell Rd (SR 9) at Spalding Dr	Signal	A 7.6	A 8.5	A 7.6	A 8.5
16	Spalding Dr at Roberts Dr	Signal	D 38.1	D 42.6	D 43.6	D 51.1
16	Spalding Dr at Dunwoody Club Dr	Signal	C 29.2	C 22.5	C 29.2	C 22.5
16	Spalding Dr at Roberts Dr & Dunwoody Club Dr	5-Legged Roundabout	B 12.9	B 11.2	--	--
17	Mt Vernon Hwy at Barfield Rd	Signal	D 38.6	D 52.0	D 38.6	D 52.0
18	Mt Vernon Hwy at Peachtree Dunwoody Rd	Signal	C 33.8	D 46.3	C 35.0	D 46.0
19	Lake Hearn Dr at Peachtree Dunwoody Rd	Signal	B 18.8	C 28.9	B 18.8	C 28.9
20	Johnson Ferry Rd at Glenridge Con	Signal	D 43.0	D 52.1	E 56.4	E 64.4

4 | Future Conditions – 2050 Horizon Year

Traffic Volumes

Future conditions were analyzed at the 20 traffic evaluation intersections for the 2050 horizon year to understand the service life of the proposed improvements identified as part of the 2030 horizon year analysis (short term improvements). This 2050 horizon year analysis was conducted to identify the needs for any long-term improvements to the roadway network. The 2050 horizon year analysis was based on projected traffic volumes for the year 2050 which were developed in a manner similar to the 2030 projected traffic volumes. The proposed growth rates developed based on the travel demand model developed as part of the TMP that were used to develop the 2030 projected traffic volumes were used in developing the 2050 projected traffic volumes as well. The future year (2050) AM and PM peak hour traffic volumes based on the background growth in traffic are shown in **Figures 10, 11, 12 and 13**.



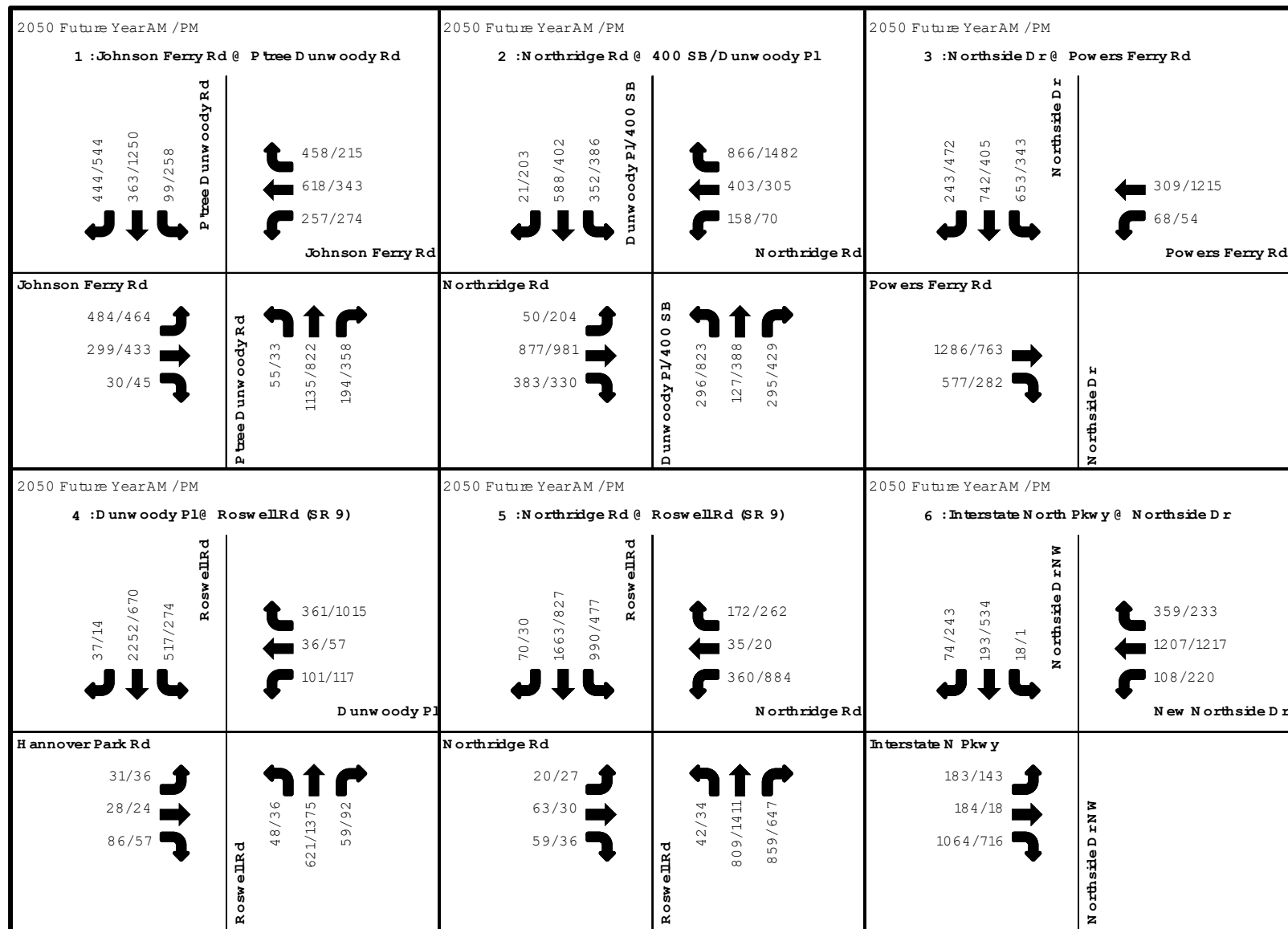


Figure 10. Future Year (2050) AM and PM Peak Hour Traffic Volumes

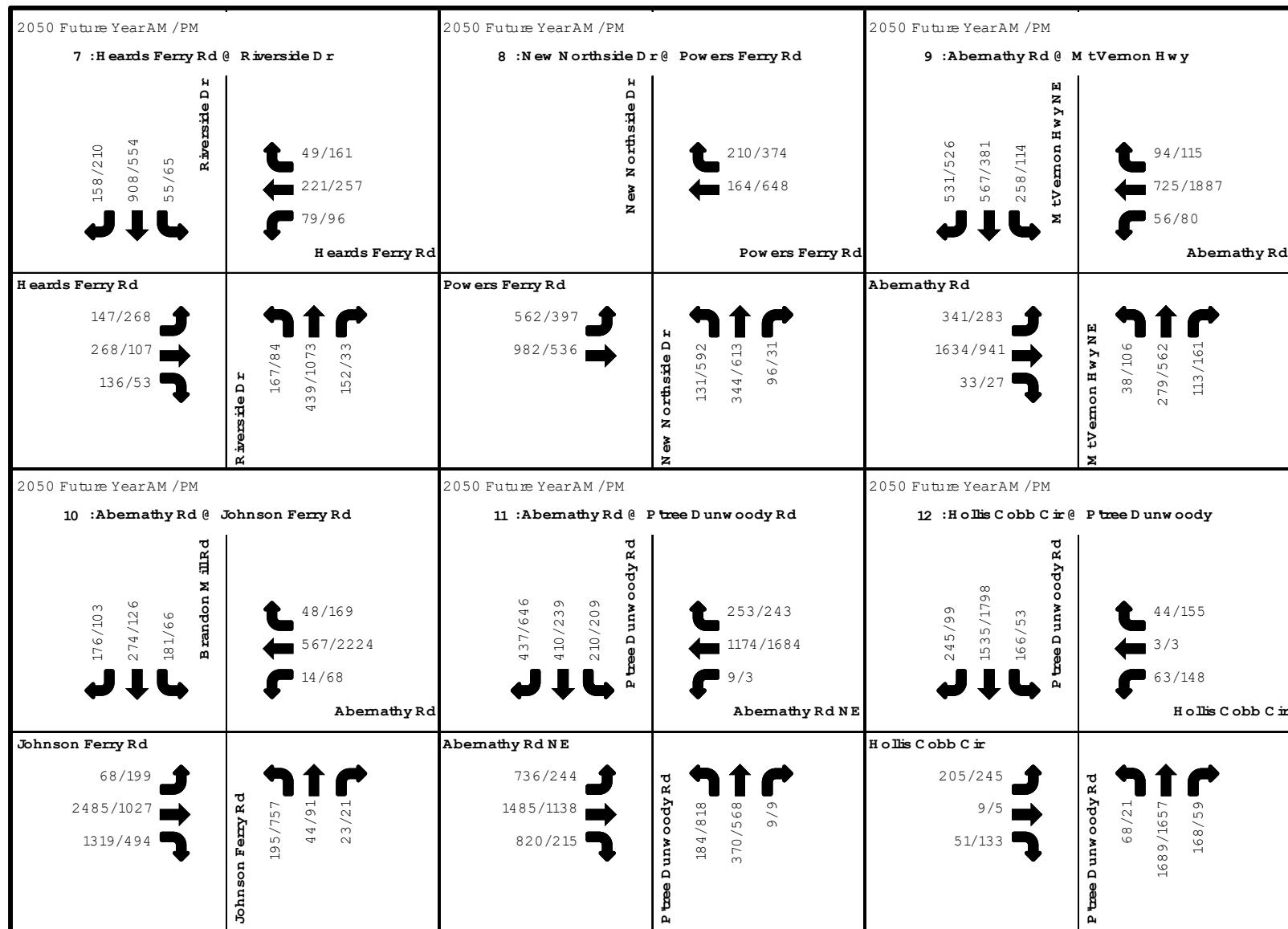


Figure 11. Future Year (2050) AM and PM Peak Hour Traffic Volumes (Continued)

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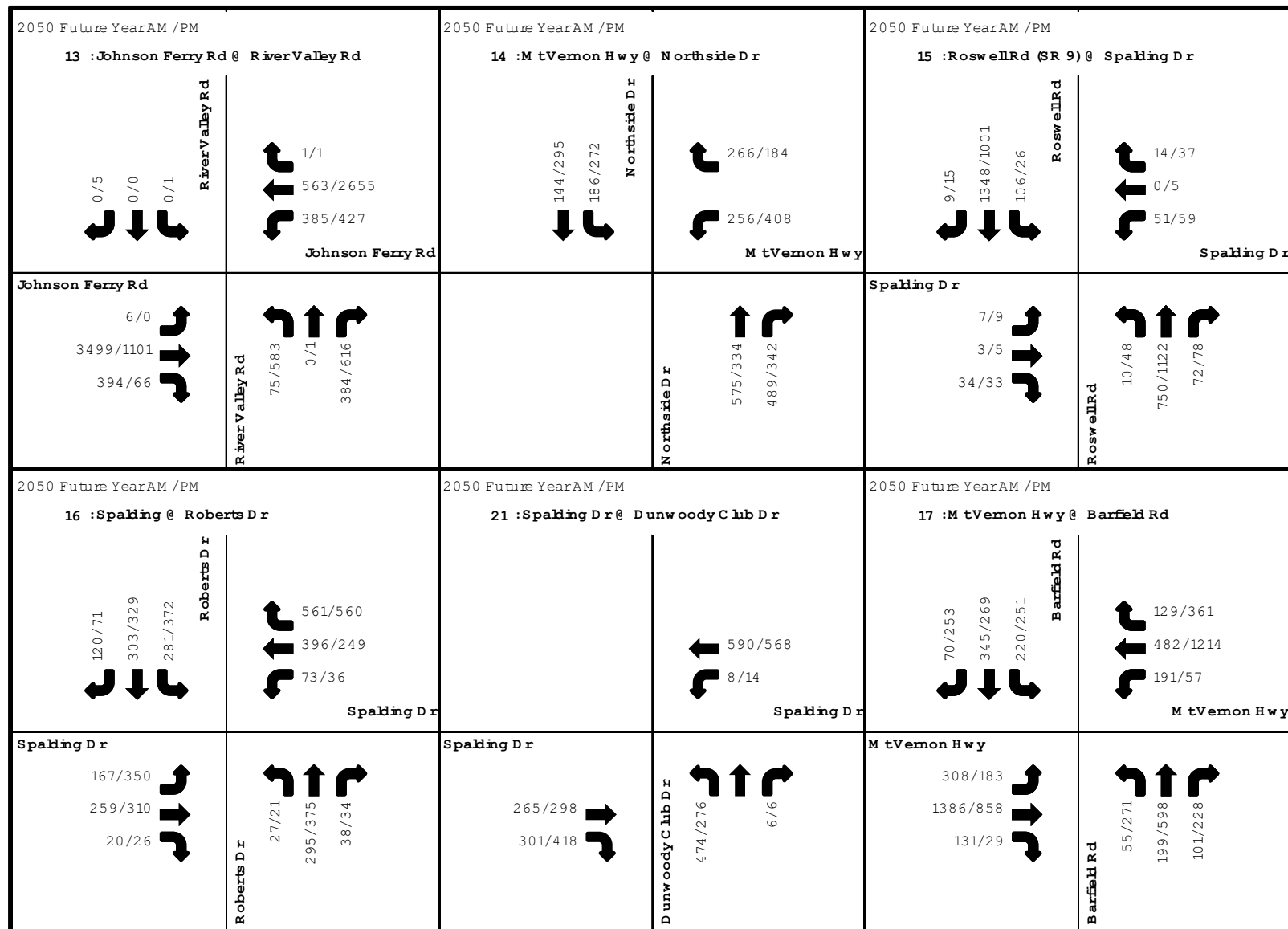


Figure 12. Future Year (2050) AM and PM Peak Hour Traffic Volumes (Continued)

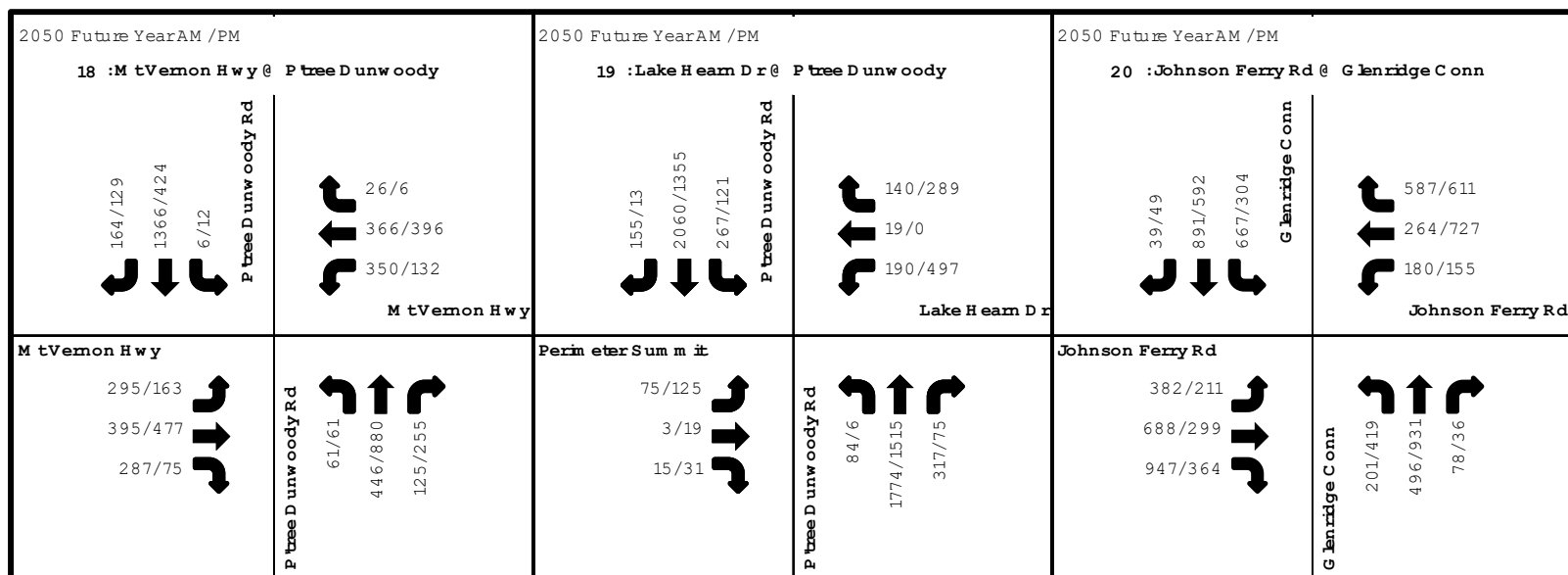


Figure 13. Future Year (2050) AM and PM Peak Hour Traffic Volumes (Continued)

Intersection Capacity Analysis – With 2030 Short Term Proposed Improvements

Based on the future year (2050) AM and PM peak hour turning movement traffic volumes, and the proposed short term improvements identified as part of the 2030 analysis, AM and PM peak hour traffic operations were analyzed at the 20 traffic evaluation intersections to determine if additional improvements were necessary at the intersections in the long term. The results of the intersection LOS and delay analysis for the future year (2050) conditions with the short term improvements are summarized in **Table 10**. As shown in Table 10, there are five intersections projected to operate at LOS F (five more than future year 2030), and the remaining are projected to operate at LOS E or better. Detailed HCM analyses, including capacity analysis worksheets, is included in **Appendix E**. All roundabout analyses are included in **Appendix F**.

Table 10. Future Year (2050) Intersection Level of Service – with Short Term Improvements

ID	Intersection Name	Intersection Control Type	AM LOS Delay (s)	PM LOS Delay (s)
1	Johnson Ferry Rd at Peachtree Dunwoody Rd	Signal	E 76.4	E 57.9
2	Northridge Rd at SR 400 SB/Dunwoody Pl	Signal	D 50.4	E 63.0
3	Northside Dr at Powers Ferry Rd	Signal	E 66.9	E 56.1
4	Dunwoody Pl/Hannover Park Rd at Roswell Rd (SR 9)	Signal	D 37.7	E 60.1
5	Northridge Rd at Roswell Rd (SR 9)	Signal	D 46.9	E 68.8
6	Interstate North Pkwy/New Northside Dr at Northside Dr	Signal	E 67.8	E 79.2
7	Heards Ferry Rd at Riverside Dr	Signal	D 46.4	E 74.7
		Roundabout	B 10.1	A 8.5
8	New Northside Dr at Powers Ferry Rd	Signal	C 29.9	D 53.4
9	Abernathy Rd at Mt Vernon Hwy	Signal	D 36.2	E 66.3
10	Johnson Ferry Rd/Abernathy Rd at Brandon Mill Rd	Signal	F 90.8	F > 100s
11	Abernathy Rd at Peachtree Dunwoody Rd	Signal	D 47.4	E 57.7

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ID	Intersection Name	Intersection Control Type	AM LOS Delay (s)	PM LOS Delay (s)
12	Hollis Cobb Cir at Peachtree Dunwoody Rd	Signal	C 28.5	D 39.7
13	Johnson Ferry Rd at River Valley Rd	Signal	F 80.5	F > 100s
14	Mt Vernon Hwy at Northside Dr	Roundabout	F 63.4	C 15.5
15	Roswell Rd (SR 9) at Spalding Dr	Signal	A 8.3	A 9.1
16	Spalding Dr at Roberts Dr	Signal	D 48.5	E 57.7
16	Spalding Dr at Dunwoody Club Dr	Signal	D 39.5	C 29.5
16	Spalding Dr at Roberts Dr & Dunwoody Club Dr	5-Legged Roundabout	C 15.3	B 14.9
17	Mt Vernon Hwy at Barfield Rd	Signal	F > 100s	F > 100s
18	Mt Vernon Hwy at Peachtree Dunwoody Rd	Signal	D 40.0	D 52.1
19	Lake Hearn Dr at Peachtree Dunwoody Rd	Signal	C 31.6	E 59.8
20	Johnson Ferry Rd at Glenridge Con	Signal	E 74.3	F > 100s

For the five intersections projected to operate at LOS F, long-term improvements should be considered.

Johnson Ferry Road/Abernathy Road at Brandon Mill Road

- Widen Johnson Ferry Road/Abernathy Road to three lanes in each direction

Johnson Ferry Road at River Valley Road

- Widen Johnson Ferry Road /Abernathy Road to three lanes in each direction

Mt Vernon Highway at Northside Drive

- Install bypass lanes along the southeast and northeast quadrants of the roundabout

Mt Vernon Highway at Barfield Road

- Widen Mt Vernon Highway to two lanes in each direction west of the intersection

Johnson Ferry Rd at Glenridge Connector

- Install one additional through lane along Johnson Ferry Road in the westbound direction; this intersection is also a good candidate for a Displaced Left-Turn Intersection with the displaced left-turns along the northbound and southbound Glenridge Connector approaches with corresponding right-turn bypass lanes (along the eastbound and westbound Johnson Ferry Road approaches)

5 | Conclusions

- Under the existing year (2020) conditions, there are two intersections projected to operate at LOS F, seven intersections are projected to operate at LOS E, and the remaining are projected to operate at LOS D or better.
- Based on the expected growth in traffic at the intersections and with no improvements made, under the future year (2030) conditions, there are three intersections projected to operate at LOS F (one more than in the existing year), seven intersections are projected to operate at LOS E (same as in the existing year), and the remaining are projected to operate at LOS D or better.
- Based on the future year (2030) traffic volumes, future year intersection capacity analysis, field observations, and the crash history at the intersections, several short-term improvements are proposed to address and mitigate the safety, operational, and capacity deficiencies at the 20 traffic evaluation intersections. These short-term improvements range in scope and include repaving, restriping, signage and pavement marking recommendations, intersection lighting, traffic signal phasing updates and changes to intersection lane geometry.
- With the proposed short-term improvements, under the future year (2030) conditions, no intersections are projected to operate at LOS F (three less than without improvements), four intersections are projected to operate at LOS E (three less than without improvements), and the remaining are projected to operate at LOS D or better.
- Future conditions were also analyzed for the 2050 horizon year to identify the needs for any long-term improvements to the roadway network. Based on this analysis, three long term improvements are proposed at the three intersections that projected to operate at LOS F in the 2050 horizon year. These projects include roadway widenings, the installation of bypass lanes and consideration for a Displaced Left-Turn Intersection at the Johnson Ferry Rd at Glenridge Connector intersection.

APPENDICES



APPENDIX A: TRAFFIC COUNT DATA

Project ID: Historical
Location: Peachtree Dunwoody Rd NE & Johnson Ferry Rd NE
City: Atlanta

Day: Tuesday
Date: 12/03/2019

Groups Printed - Cars, PU, Vans - Heavy Trucks																										
	Peachtree Dunwoody Rd NE Northbound						Peachtree Dunwoody Rd NE Southbound						Johnson Ferry Rd NE Eastbound						Johnson Ferry Rd NE Westbound							
Start Time	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Int. Total	
7:00 AM	12	176	32	0	0	220	23	73	81	1	1	178	109	47	6	0	1	162	46	100	73	0	3	219	779	
7:15 AM	9	238	28	0	0	275	20	54	78	1	0	153	96	60	7	0	1	163	52	113	94	0	0	259	850	
7:30 AM	12	247	41	0	0	300	17	62	80	0	0	159	74	57	5	0	0	136	68	153	118	0	4	339	934	
7:45 AM	11	241	53	0	0	305	17	100	113	0	0	230	106	74	6	0	1	186	38	126	79	0	6	243	964	
Total	44	902	154	0	0	1100	77	289	352	2	1	720	385	238	24	0	3	647	204	492	364	0	13	1060	3527	
BREAK																										
5:00 PM	7	170	55	0	0	232	36	268	88	0	1	392	105	96	12	0	1	213	70	62	51	0	3	183	1020	
5:15 PM	5	155	71	0	0	231	55	282	118	0	1	455	97	70	10	0	2	177	59	66	44	0	3	169	1032	
5:30 PM	5	150	80	0	0	235	56	236	117	0	1	409	89	91	8	0	2	188	51	79	39	0	0	169	1001	
5:45 PM	9	179	79	0	1	267	58	208	110	0	0	376	78	87	6	0	0	171	38	66	37	0	3	141	955	
Total	26	654	285	0	1	965	205	994	433	0	3	1632	369	344	36	0	5	749	218	273	171	0	9	662	4008	
Grand Total	70	1556	439	0	1	2065	282	1283	785	2	4	2352	754	582	60	0	8	1396	422	765	535	0	22	1722	7535	
Apprch %	3.4	75.4	21.3	0.0	0.0		12.0	54.5	33.4	0.1	0.2		54.0	41.7	4.3	0.0	0.6		24.5	44.4	31.1	0.0	1.3			
Total %	0.9	20.7	5.8	0.0	0.0	27.4	3.7	17.0	10.4	0.0	0.1	31.2	10.0	7.7	0.8	0.0	0.1	18.5	5.6	10.2	7.1	0.0	0.3	22.9		
Cars, PU, Vans	66	1546	437	0		2049	276	1275	759	2		2312	735	575	51	0		1361	421	753	530	0		1704	7426	
% Cars, PU, Vans	94.3	99.4	99.5	0.0		99.2	97.9	99.4	96.7	100.0		98.3	97.5	98.8	85.0	0.0		97.5	99.8	98.4	99.1	0.0		99.0	98.6	
Heavy Trucks	4	10	2	0		16	6	8	26	0		40	19	7	9	0		35	1	12	5	0		18	109	
%Heavy Trucks	5.7	0.6	0.5	0.0		0.8	2.1	0.6	3.3	0.0		1.7	2.5	1.2	15.0	0.0		2.5	0.2	1.6	0.9	0.0		1.0	1.4	

Project ID: Historical
Location: Dunwoody PI / GA 400 SB Ramp & Northridge Rd
City: Sandy Springs

Day: Thursday
Date: 05/10/2018

Groups Printed - Cars, PU, Vans - Heavy Trucks

	Dunwoody PI / GA 400 SB Ramp Northbound						Dunwoody PI / GA 400 SB Ramp Southbound						Northridge Rd Eastbound						Northridge Rd Westbound						
Start Time	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Int. Total
6:00 AM	36	16	38	0	0	90	35	117	8	0	0	160	5	47	75	0	0	127	16	35	61	0	0	112	489
6:15 AM	34	19	51	0	0	104	47	142	13	0	0	202	7	82	108	0	0	197	16	34	85	0	0	135	638
6:30 AM	55	12	63	0	0	130	66	119	15	0	0	200	8	106	110	0	6	224	17	51	90	0	0	158	712
6:45 AM	41	20	83	0	0	144	75	128	12	0	0	215	8	131	125	0	4	264	11	50	116	0	2	177	800
Total	166	67	235	0	0	468	223	506	48	0	0	777	28	366	418	0	10	812	60	170	352	0	2	582	2639
7:00 AM	43	14	60	0	0	117	87	116	6	0	0	209	8	189	99	0	0	296	26	63	127	0	0	216	838
7:15 AM	69	23	70	0	0	162	95	133	5	0	0	233	7	168	78	0	0	253	30	66	170	0	0	266	914
7:30 AM	55	27	51	0	0	133	67	123	5	0	0	195	10	210	77	0	1	297	38	99	194	0	0	331	956
7:45 AM	59	28	54	1	0	142	82	115	3	0	0	200	6	186	84	0	0	276	30	94	182	0	0	306	924
Total	226	92	235	1	0	554	331	487	19	0	0	837	31	753	338	0	1	1122	124	322	673	0	0	1119	3632
8:00 AM	64	28	72	0	0	164	50	120	4	0	0	174	19	169	81	0	1	269	34	78	178	0	0	290	897
8:15 AM	63	26	70	0	0	159	49	114	7	0	0	170	20	204	82	0	1	306	29	55	143	0	0	227	862
8:30 AM	58	31	78	0	0	167	88	126	6	0	0	220	16	173	73	0	1	262	17	58	169	0	0	244	893
8:45 AM	79	25	84	0	0	188	73	117	6	0	0	196	12	227	99	0	2	338	22	83	172	0	0	277	999
Total	264	110	304	0	0	678	260	477	23	0	0	760	67	773	335	0	5	1175	102	274	662	0	0	1038	3651
9:00 AM	81	27	71	0	1	179	70	119	12	0	0	201	15	156	97	0	1	268	21	58	153	1	0	233	881
9:15 AM	58	20	90	0	0	168	74	102	10	0	0	186	8	130	102	0	1	240	17	90	145	0	0	252	846
9:30 AM	73	37	87	0	0	197	80	123	9	0	0	212	8	139	84	0	1	231	28	88	130	0	0	246	886
9:45 AM	107	27	95	0	0	229	81	115	24	0	0	220	10	148	94	0	0	252	20	78	156	0	0	254	955
Total	319	111	343	0	1	773	305	459	55	0	0	819	41	573	377	0	3	991	86	314	584	1	0	985	3568
BREAK																									
10:00 AM	80	35	87	0	2	202	54	104	32	0	0	190	20	119	88	0	2	227	27	50	149	1	0	227	846
10:15 AM	96	24	101	0	0	221	60	111	26	0	0	197	10	104	104	0	1	218	16	71	142	0	0	229	865
10:30 AM	68	25	84	0	0	177	51	109	28	0	0	188	13	106	92	0	0	211	23	89	146	0	0	258	834
10:45 AM	82	32	93	0	2	207	47	115	19	0	0	181	9	97	88	0	2	194	20	64	143	0	0	227	809
Total	326	116	365	0	4	807	212	439	105	0	0	756	52	426	372	0	5	850	86	274	580	1	0	941	3354
11:00 AM	60	22	58	0	0	140	60	102	20	0	0	182	5	92	86	0	0	183	29	80	156	0	0	265	770
11:15 AM	49	27	70	0	2	146	66	154	26	0	0	246	10	99	125	0	1	234	31	76	142	0	0	249	875
11:30 AM	68	33	65	0	0	166	68	122	21	0	0	211	10	99	137	0	1	246	36	93	199	0	0	328	951
11:45 AM	78	38	60	0	0	176	50	105	35	0	0	190	12	95	106	0	0	213	27	82	205	0	0	314	893
Total	255	120	253	0	2	628	244	483	102	0	0	829	37	385	454	0	2	876	123	331	702	0	0	1156	3489
12:00 PM	68	36	70	0	1	174	74	146	32	0	0	252	16	100	134	0	1	250	31	76	170	0	0	277	953
12:15 PM	68	39	61	0	0	168	62	96	43	0	0	201	20	105	136	0	0	261	40	105	179	0	0	324	954
12:30 PM	66	35	73	0	0	174	74	135	29	0	0	238	21	100	130	0	0	251	46	74	200	0	0	320	983
12:45 PM	76	28	67	0	1	171	65	125	28	0	0	218	14	118	148	0	0	280	37	90	211	0	1	338	1007
Total	278	138	271	0	2	687	275	502	132	0	0	909	71	423	548	0	1	1042	154	345	760	0	1	1259	3897
1:00 PM	71	57	94	1	0	223	49	119	36	0	0	204	19	107	125	0	0	251	34	82	216	0	0	332	1010
1:15 PM	78	32	60	0	0	170	64	120	31	0	0	215	18	125	125	0	0	268	28	84	213	0	0	325	978
1:30 PM	64	33	88	0	0	185	66	112	31	0	0	209	18	105	116	0	0	239	40	87	248	0	0	375	1008
1:45 PM	74	41	60	0	0	175	71	105	27	0	0	203	17	100	120	0	0	237	26	85	226	0	0	337	952
Total	287	163	302	1	0	753	250	456	125	0	0	831	72	437	486	0	0	995	128	338	903	0	0	1369	3948
BREAK																									
2:00 PM	81	33	82	0	1	196	54	109	36	0	0	199	35	108	128	0	0	271	35	103	228	0	0	366	1032
2:15 PM	83	25	84	0	0	192	67	113	41	0	0	221	21	88	106	0	0	215	32	83	216	0	0	331	959
2:30 PM	95	39	81	0	0	215	72	100	25	0	0	197	22	114	107	0	0	243	38	69	261	0	0	368	1023
2:45 PM	77	48	75	2	0	202	56	112	26	0	0	194	28	123	91	0	0	242	34	63	210	0	0	307	945
Total	336	145	322	2	1	805	249	434	128	0	0	811	106	433	432	0	0	971	139	318	915	0	0	1372	3959
3:00 PM	93	43	83	0	0	219	73	87	30	0	0	190	19	136	90	0	0	245	46	62	233	0	0	341	995
3:15 PM	101	54	107	0	0	262	59	89	42	0	0	190	23	122	100	0	0	245	26	50	211	0	0	287	984
3:30 PM	129	47	75	0	0	251	96	100	38	0	0	234	26	168	81	0	0	275	34	49	231	0	0	314	1074
3:45 PM	119	59	78	0	0	256	53	89	48	0	0	190	46	192	66	0	0	304	24	77	236	0	0	337	1087
Total	442	203	343	0	0	988	281	365	158	0	0	804	114	618	337	0	0	1069	130	238	911	0	0	1279	4140
4:00 PM	161	64	106	0	0	331	116	89	43	0	0	248	34	180	71	0	0	285	353						

7:00 PM	103	59	81	0	0	243	63	109	39	0	0	211	33	123	87	0	0	243	34	71	284	0	0	389	1086
7:15 PM	111	53	67	0	0	231	46	94	37	0	0	177	31	69	109	0	1	209	11	63	275	0	0	349	966
7:30 PM	73	53	49	0	0	175	45	85	42	0	0	172	24	74	91	0	0	189	19	65	213	0	0	297	833
7:45 PM	88	52	33	0	0	173	62	88	66	0	0	216	22	60	88	0	0	170	13	57	207	0	0	277	836
Total	375	217	230	0	0	822	216	376	184	0	0	776	110	326	375	0	1	811	77	256	979	0	0	1312	3721
8:00 PM	78	39	37	0	0	154	53	80	24	0	0	157	15	55	69	0	0	139	8	75	223	0	0	306	756
8:15 PM	76	37	63	0	0	176	34	71	23	0	0	128	13	49	74	0	0	136	15	56	156	0	0	227	667
8:30 PM	64	29	59	0	0	152	32	67	11	0	0	110	12	54	63	0	0	129	13	70	183	0	0	266	657
8:45 PM	47	28	37	0	0	112	34	57	28	0	0	119	21	51	63	0	0	135	13	75	157	0	0	245	611
Total	265	133	196	0	0	594	153	275	86	0	0	514	61	209	269	0	0	539	49	276	719	0	0	1044	2691
Grand Total	5528	2509	4460	5	10	12502	3963	6237	1660	0	0	11860	1275	8101	5585	0	34	14961	1502	4142	12149	2	3	17795	57118
Apprch %	44.2	20.1	35.7	0.0	0.1		33.4	52.6	14.0	0.0	0.0		8.5	54.1	37.3	0.0	0.2		8.4	23.3	68.3	0.0	0.0		
Total %	9.7	4.4	7.8	0.0	0.0	21.9	6.9	10.9	2.9	0.0	0.0	20.8	2.2	14.2	9.8	0.0	0.1	26.2	2.6	7.3	21.3	0.0	0.0	31.2	
Cars, PU, Vans	5518	2478	4424	5	10	12425	3946	6196	1656		0	11798	1272	8078	5565	0		14915	1482	4124	12085		3	17693	56831
% Cars, PU, Vans	99.8	98.8	99.2	100.0	100.0	99.4	99.6	99.3	99.8	0.0	0.0	99.5	99.8	99.7	99.6	0.0	0.0	99.7	98.7	99.6	99.5	0.0	100.0	99.4	99.5
Heavy Trucks	10	31	36	0		77	17	41	4	0		62	3	23	20	0		46	20	18	64	0		102	287
%Heavy Trucks	0.2	1.2	0.8	0.0	0.0	0.6	0.4	0.7	0.2	0.0	0.0	0.5	0.2	0.3	0.4	0.0	0.0	0.3	1.3	0.4	0.5	0.0	0.0	0.6	0.5

Greater Traffic Company

File Name : 26j
 Site Code : 00000026
 Start Date : 3/4/2014
 Page No : 1

Groups Printed- Vehicles - Trucks - Buses

	NORTHSIDE DR Southbound					POWERS FERRY RD Westbound					NORTHSIDE DR Northbound					POWERS FERRY RD Eastbound					
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	86	95	25	0	206	7	29	0	0	36	0	0	0	0	0	0	111	66	0	177	419
07:15 AM	93	122	34	0	249	3	36	0	0	39	0	0	0	0	0	0	192	94	0	286	574
07:30 AM	101	163	33	0	297	12	47	0	0	59	0	0	0	0	0	0	219	113	0	332	688
07:45 AM	137	149	52	0	338	10	59	0	0	69	0	0	0	0	0	0	241	118	0	359	766
Total	417	529	144	0	1090	32	171	0	0	203	0	0	0	0	0	0	763	391	0	1154	2447
08:00 AM	126	122	42	0	290	14	63	0	0	77	0	0	0	0	0	0	214	89	0	303	670
08:15 AM	113	108	50	0	271	13	57	0	0	70	0	0	0	0	0	0	266	102	0	368	709
08:30 AM	110	90	48	1	249	12	45	0	0	57	1	0	0	0	1	0	198	93	0	291	598
08:45 AM	116	104	51	0	271	9	53	0	0	62	0	0	0	0	0	0	181	78	0	259	592
Total	465	424	191	1	1081	48	218	0	0	266	1	0	0	0	1	0	859	362	0	1221	2569

*** BREAK ***

04:30 PM	48	49	59	0	156	11	174	0	2	187	0	0	0	0	0	0	111	40	0	151	494
04:45 PM	55	64	56	0	175	14	171	0	0	185	0	0	0	1	1	0	98	36	1	135	496
Total	103	113	115	0	331	25	345	0	2	372	0	0	0	1	1	0	209	76	1	286	990
05:00 PM	47	56	66	0	169	10	224	0	0	234	0	0	0	0	0	0	151	48	0	199	602
05:15 PM	71	86	76	0	233	12	208	0	0	220	0	0	0	0	0	0	125	59	0	184	637
05:30 PM	71	84	95	0	250	7	227	0	0	234	0	0	0	0	0	0	146	50	0	196	680
05:45 PM	62	70	108	0	240	10	229	0	1	240	0	0	0	0	0	0	136	49	0	185	665
Total	251	296	345	0	892	39	888	0	1	928	0	0	0	0	0	0	558	206	0	764	2584
06:00 PM	71	61	69	4	205	8	196	0	4	208	0	0	1	0	1	0	124	47	0	171	585
06:15 PM	64	68	72	1	205	8	220	0	1	229	0	0	0	0	0	0	114	56	0	170	604
Grand Total	1371	1491	936	6	3804	160	2038	0	8	2206	1	0	1	1	3	0	2627	1138	1	3766	9779
Apprch %	36	39.2	24.6	0.2		7.3	92.4	0	0.4		33.3	0	33.3	33.3		0	69.8	30.2	0		
Total %	14	15.2	9.6	0.1	38.9	1.6	20.8	0	0.1	22.6	0	0	0	0	0	0	26.9	11.6	0	38.5	
Vehicles	1365	1485	932	1	3783	160	2023	0	0	2183	1	0	1	0	2	0	2620	1138	0	3758	9726
% Vehicles	99.6	99.6	99.6	16.7	99.4	100	99.3	0	0	99	100	0	100	0	66.7	0	99.7	100	0	99.8	99.5
Trucks	6	3	4	5	18	0	5	0	8	13	0	0	0	1	1	0	3	0	1	4	36
% Trucks	0.4	0.2	0.4	83.3	0.5	0	0.2	0	100	0.6	0	0	0	100	33.3	0	0.1	0	100	0.1	0.4
Buses	0	3	0	0	3	0	10	0	0	10	0	0	0	0	0	0	4	0	0	4	17
% Buses	0	0.2	0	0	0.1	0	0.5	0	0	0.5	0	0	0	0	0	0	0.2	0	0	0.1	0.2

Project ID: Historical
Location: Roswell Rd & Dunwoody PI_Hannover Park Rd
City: Sandy Springs

Day: Tuesday
Date: 9/13/2016

Peak Start Times	
AM	7:00 AM
MD	12:00 AM
PM	4:15 PM

Groups Printed - Cars, PU, Vans - Heavy Trucks

	Roswell Rd Northbound					Roswell Rd Southbound					Dunwoody PI_Hannover Park Rd Eastbound					Dunwoody PI_Hannover Park Rd Westbound					
Start Time	Left	Thru	Rgt	Peds	App. Total	Left	Thru	Rgt	Peds	App. Total	Left	Thru	Rgt	Peds	App. Total	Left	Thru	Rgt	Peds	App. Total	Int. Total
7:00 AM	6	60	8	2	74	146	467	7	0	620	5	13	9	0	27	19	7	39	0	65	786
7:15 AM	8	133	12	0	153	121	492	7	0	620	4	4	27	1	35	25	6	66	1	97	905
7:30 AM	10	121	8	0	139	115	516	4	1	635	6	8	15	1	29	15	7	92	0	114	917
7:45 AM	15	140	21	0	176	120	452	7	2	579	7	7	15	0	29	26	11	76	1	113	897
Total	39	454	49	2	542	502	1927	25	3	2454	22	32	66	2	120	85	31	273	2	389	3505
8:00 AM	7	130	9	4	146	80	441	13	3	534	9	5	16	1	30	19	6	71	0	96	806
8:15 AM	1	120	16	1	137	123	492	9	1	624	9	7	7	0	23	23	11	65	0	99	883
8:30 AM	11	90	14	0	115	115	434	15	1	564	7	4	15	0	26	34	11	83	1	128	833
8:45 AM	5	128	15	3	148	99	475	15	2	589	3	8	5	0	16	19	5	69	2	93	846
Total	24	468	54	8	546	417	1842	52	7	2311	28	24	43	1	95	95	33	288	3	416	3368
BREAK																					
4:15 PM	7	351	23	1	381	52	149	2	0	203	7	3	5	0	15	15	9	207	0	231	830
4:30 PM	5	287	19	2	311	58	143	6	0	207	8	3	10	0	21	20	16	224	0	260	799
4:45 PM	8	292	20	0	320	61	146	2	1	209	8	4	10	1	22	30	14	216	0	260	811
5:00 PM	10	231	15	0	256	60	128	2	1	190	7	11	23	0	41	34	9	210	1	253	740
Total	30	1161	77	3	1268	231	566	12	2	809	30	21	48	1	99	99	48	857	1	1004	3180
5:15 PM	7	244	13	3	264	53	135	0	0	188	4	8	5	0	17	16	19	215	1	250	719
5:30 PM	4	227	12	1	243	47	122	4	1	173	13	8	14	0	35	29	17	208	0	254	705
5:45 PM	13	269	22	0	304	57	139	2	0	198	2	4	12	1	18	27	12	198	1	237	757
6:00 PM	16	232	24	3	272	53	142	3	2	198	9	10	21	1	40	25	20	205	2	250	760
Total	40	972	71	7	1083	210	538	9	3	757	28	30	52	2	110	97	68	826	4	991	2941
Grand Total	133	3055	251	20	3439	1360	4873	98	15	6331	108	107	209	6	424	376	180	2244	10	2800	12994
Apprch %	3.9	88.8	7.3	0.6		21.5	77.0	1.5	0.2		25.5	25.2	49.3	1.4		13.4	6.4	80.1	0.4		
Total %	1.0	23.5	1.9	0.2	26.5	10.5	37.5	0.8	0.1	48.7	0.8	0.8	1.6	0.0	3.3	2.9	1.4	17.3	0.1	21.5	
Cars, PU, Vans	133	3050	250	20	3433	1358	4867	98	15	6323	108	107	209	6	424	374	180	2240	10	2794	12974
% Cars, PU, Vans	100.0	99.8	99.6	100.0	99.8	99.9	99.9	100.0	100.0	99.9	100.0	100.0	100.0	100.0	100.0	99.5	100.0	99.8	100.0	99.8	99.8
Heavy Trucks	0	5	1		6	2	6	0		8	0	0	0		0	2	0	4		6	20
%Heavy Trucks	0.0	0.2	0.4	0.0	0.2	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.2	0.0	0.2	0.2

Project ID: Historical
Location: Roswell Rd & Northridge Rd
City: Sandy Springs

Day: Thursday
Date: 5/19/2016

Peak Start Times	
AM	7:00 AM
MD	12:00 AM
PM	4:00 PM

Groups Printed - Cars, PU, Vans - Heavy Trucks

	Roswell Rd Northbound					Roswell Rd Southbound					Northridge Rd Eastbound					Northridge Rd Westbound					
Start Time	Left	Thru	Rgt	Peds	App. Total	Left	Thru	Rgt	Peds	App. Total	Left	Thru	Rgt	Peds	App. Total	Left	Thru	Rgt	Peds	App. Total	Int. Total
7:00 AM	11	113	125	0	249	177	310	17	2	504	4	12	10	0	26	90	5	47	1	142	921
7:15 AM	11	151	171	1	333	221	388	20	0	629	4	13	12	0	29	89	6	35	0	130	1121
7:30 AM	9	165	198	0	372	222	337	8	1	567	6	17	10	1	33	78	6	30	0	114	1086
7:45 AM	7	182	172	4	361	201	363	17	2	581	6	11	12	3	29	81	7	48	0	136	1107
Total	38	611	666	5	1315	821	1398	62	5	2281	20	53	44	4	117	338	24	160	1	522	4235
8:00 AM	8	185	184	0	377	191	316	14	0	521	1	12	16	0	29	56	10	32	1	98	1025
8:15 AM	7	158	176	0	341	214	338	16	1	568	6	7	22	0	35	68	12	41	0	121	1065
8:30 AM	6	117	125	0	248	194	326	13	1	533	8	10	10	1	28	79	7	46	2	132	941
8:45 AM	14	148	137	1	299	158	295	17	1	470	6	7	13	2	26	62	7	36	1	105	900
Total	35	608	622	1	1265	757	1275	60	3	2092	21	36	61	3	118	265	36	155	4	456	3931
BREAK																					
4:00 PM	4	321	124	1	449	95	136	4	1	235	2	7	4	1	13	115	6	59	2	180	877
4:15 PM	4	298	132	0	434	98	157	7	1	262	3	6	1	0	10	170	2	54	2	226	932
4:30 PM	0	288	101	0	389	95	164	7	0	266	6	5	4	0	15	171	4	57	2	232	902
4:45 PM	7	304	129	1	440	85	169	8	0	262	6	4	6	0	16	186	5	54	1	245	963
Total	15	1211	486	2	1712	373	626	26	2	1025	17	22	15	1	54	642	17	224	7	883	3674
5:00 PM	9	317	132	0	458	115	206	4	2	325	9	5	12	2	26	169	8	55	0	232	1041
5:15 PM	5	249	128	0	382	123	179	7	0	309	6	11	6	2	23	216	4	63	4	283	997
5:30 PM	7	321	157	1	485	80	144	6	2	230	2	5	6	4	13	175	0	50	1	225	953
5:45 PM	8	263	139	0	410	88	165	2	0	255	6	3	7	2	16	167	3	57	2	227	908
Total	29	1150	556	1	1735	406	694	19	4	1119	23	24	31	10	78	727	15	225	7	967	3899
Grand Total	117	3580	2330	9	6027	2357	3993	167	14	6517	81	135	151	18	367	1972	92	764	19	2828	15739
Apprch %	1.9	59.4	38.7	0.1		36.2	61.3	2.6	0.2		22.1	36.8	41.1	4.9		69.7	3.3	27.0	0.7		
Total %	0.7	22.7	14.8	0.1	38.3	15.0	25.4	1.1	0.1	41.4	0.5	0.9	1.0	0.1	2.3	12.5	0.6	4.9	0.1	18.0	
Cars, PU, Vans	117	3575	2327	9	6019	2347	3985	166	14	6498	81	135	151	18	367	1968	92	758	19	2818	15702
% Cars, PU, Vans	100.0	99.9	99.9	100.0	99.9	99.6	99.8	99.4	100.0	99.7	100.0	100.0	100.0	100.0	100.0	99.8	100.0	99.2	100.0	99.6	99.8
Heavy Trucks	0	5	3		8	10	8	1		19	0	0	0		0	4	0	6		10	37
%Heavy Trucks	0.0	0.1	0.1	0.0	0.1	0.4	0.2	0.6	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.8	0.0	0.4	0.2

Project ID: Historical
Location: Northside Dr NW & Interstate N Pkwy_New Northside Dr
City: Atlanta

Day: Thursday
Date: 3/2/2017

Peak Start Times	
AM	7:30 AM
MD	12:00 AM
PM	4:30 PM

Groups Printed - Cars, PU, Vans - Heavy Trucks

	Northside Dr NW Northbound					Northside Dr NW Southbound					Interstate N Pkwy_New Northside Dr Eastbound					Interstate N Pkwy_New Northside Dr Westbound					
Start Time	Left	Thru	Rgt	Peds	App. Total	Left	Thru	Rgt	Peds	App. Total	Left	Thru	Rgt	Peds	App. Total	Left	Thru	Rgt	Peds	App. Total	Int. Total
7:30 AM	0	0	0	0	0	2	47	9	0	58	44	22	210	0	276	17	194	59	0	270	604
7:45 AM	0	0	0	0	0	1	33	11	0	45	42	35	192	0	269	20	224	78	0	322	636
8:00 AM	0	0	0	0	0	5	46	18	0	69	32	33	212	0	277	22	240	75	0	337	683
8:15 AM	0	0	0	0	0	4	34	18	0	56	26	34	199	0	259	21	238	59	0	318	633
Total	0	0	0	0	0	12	160	56	0	228	144	124	813	0	1081	80	896	271	0	1247	2556
8:30 AM	0	0	0	1	0	3	33	9	0	45	39	38	204	0	281	19	214	60	1	293	619
8:45 AM	0	0	0	0	0	1	31	13	0	45	22	34	146	0	202	26	238	79	0	343	590
9:00 AM	0	0	0	0	0	2	23	17	0	42	28	19	115	0	162	29	211	58	1	298	502
9:15 AM	0	0	0	0	0	1	30	10	0	41	23	14	111	0	148	22	168	48	0	238	427
Total	0	0	0	1	0	7	117	49	0	173	112	105	576	0	793	96	831	245	2	1172	2138
BREAK																					
4:30 PM	0	0	0	0	0	0	107	51	0	158	21	3	99	0	123	51	196	42	0	289	570
4:45 PM	0	0	0	0	0	1	87	36	0	124	26	3	95	0	124	47	214	44	0	305	553
5:00 PM	0	0	0	0	0	0	126	44	0	170	27	2	143	0	172	55	207	44	0	306	648
5:15 PM	0	0	0	0	0	0	81	53	0	134	28	1	144	0	173	34	213	44	0	291	598
Total	0	0	0	0	0	1	401	184	0	586	102	9	481	0	592	187	830	174	0	1191	2369
5:30 PM	0	0	0	0	0	0	107	49	0	156	27	2	140	0	169	37	250	40	0	327	652
5:45 PM	0	0	0	0	0	1	91	38	0	130	26	8	116	0	150	41	254	49	0	344	624
6:00 PM	0	0	0	0	0	0	124	57	0	181	27	3	126	0	156	32	206	34	0	272	609
6:15 PM	0	0	0	0	0	0	78	45	0	123	20	2	134	0	156	30	193	38	0	261	540
Total	0	0	0	0	0	1	400	189	0	590	100	15	516	0	631	140	903	161	0	1204	2425
Grand Total	0	0	0	1	0	21	1078	478	0	1577	458	253	2386	0	3097	503	3460	851	2	4814	9488
Apprch %	0.0	0.0	0.0	0.0		1.3	68.4	30.3	0.0		14.8	8.2	77.0	0.0		10.4	71.9	17.7	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.2	11.4	5.0	0.0	16.6	4.8	2.7	25.1	0.0	32.6	5.3	36.5	9.0	0.0	50.7	
Cars, PU, Vans	0	0	0	1	0	21	1075	478	0	1574	457	253	2386	0	3096	503	3456	850	2	4809	9479
% Cars, PU, Vans	0.0	0.0	0.0	100.0	0.0	100.0	99.7	100.0	0.0	99.8	99.8	100.0	100.0	0.0	100.0	100.0	99.9	99.9	100.0	99.9	99.9
Heavy Trucks	0	0	0	0	0	0	3	0	0	3	1	0	0	0	1	0	4	1	0	5	9
%Heavy Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.1

Project ID: Historical
Location: Riverside Dr & Heards Ferry Rd
City: Sandy Springs

Day: Thursday
Date: 10/22/2015

Peak Start Times	
AM	7:00 AM
MD	12:00 AM
PM	4:30 PM

Groups Printed - Cars, PU, Vans - Heavy Trucks

Start Time	Riverside Dr Northbound					Riverside Dr Southbound					Heards Ferry Rd Eastbound					Heards Ferry Rd Westbound					Int. Total
	Left	Thru	Rgt	Peds	App. Total	Left	Thru	Rgt	Peds	App. Total	Left	Thru	Rgt	Peds	App. Total	Left	Thru	Rgt	Peds	App. Total	
7:00 AM	10	67	22	0	99	7	216	31	0	254	16	14	24	0	54	3	9	3	0	15	422
7:15 AM	20	80	27	0	127	5	181	40	0	226	36	55	24	0	115	16	20	8	0	44	512
7:30 AM	40	95	23	0	158	13	171	27	0	211	41	61	26	0	128	19	34	12	0	65	562
7:45 AM	41	84	35	0	160	11	170	28	0	209	21	58	32	0	111	18	70	13	0	101	581
Total	111	326	107	0	544	36	738	126	0	900	114	188	106	0	408	56	133	36	0	225	2077
8:00 AM	33	92	37	0	162	15	204	31	0	250	20	40	27	0	87	10	52	6	0	68	567
8:15 AM	21	70	22	0	113	22	154	30	0	206	28	68	34	0	130	17	20	6	0	43	492
8:30 AM	16	82	24	0	122	9	222	21	0	252	16	30	11	0	57	24	19	4	0	47	478
8:45 AM	17	92	15	0	124	11	189	33	0	233	19	49	17	0	85	20	15	8	0	43	485
Total	87	336	98	0	521	57	769	115	0	941	83	187	89	0	359	71	106	24	0	201	2022
BREAK																					
4:30 PM	20	206	5	0	231	13	108	32	0	153	41	18	11	0	70	26	58	33	0	117	571
4:45 PM	19	205	8	0	232	12	96	42	0	150	66	24	10	0	100	23	47	39	0	109	591
5:00 PM	13	222	6	0	241	13	120	49	0	182	60	27	9	0	96	19	40	30	0	89	608
5:15 PM	15	225	7	0	247	14	119	45	0	178	47	16	13	0	76	9	60	27	0	96	597
Total	67	858	26	0	951	52	443	168	0	663	214	85	43	0	342	77	205	129	0	411	2367
5:30 PM	14	199	8	0	221	7	85	42	0	134	58	35	13	0	106	14	39	39	0	92	553
5:45 PM	21	212	8	0	241	6	102	60	0	168	53	28	8	0	89	13	35	34	0	82	580
6:00 PM	21	202	8	0	231	7	99	41	0	147	50	20	12	0	82	14	36	43	0	93	553
6:15 PM	13	226	7	0	246	7	110	42	0	159	55	27	7	0	89	17	36	31	0	84	578
Total	69	839	31	0	939	27	396	185	0	608	216	110	40	0	366	58	146	147	0	351	2264
Grand Total	334	2359	262	0	2955	172	2346	594	0	3112	627	570	278	0	1475	262	590	336	0	1188	8730
Apprch %	11.3	79.8	8.9	0.0		5.5	75.4	19.1	0.0		42.5	38.6	18.8	0.0		22.1	49.7	28.3	0.0		
Total %	3.8	27.0	3.0	0.0	33.8	2.0	26.9	6.8	0.0	35.6	7.2	6.5	3.2	0.0	16.9	3.0	6.8	3.8	0.0	13.6	
Cars, PU, Vans	334	2359	262	0	2955	172	2346	594	0	3112	627	570	278	0	1475	262	590	336	0	1188	8730
% Cars, PU, Vans	####	####	####	0.0	100.0	####	####	100.0	0.0	100.0	####	100.0	####	0.0	100.0	100.0	100.0	####	0.0	100.0	100.0
Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
%Heavy Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Project ID: Historical
Location: New Northside Dr & Powers Ferry Rd
City: Atlanta

Day: Thursday
Date: 5/18/2017

Peak Start Times	
AM	7:15 AM
MD	12:00 AM
PM	4:30 PM

Groups Printed - Cars, PU, Vans - Heavy Trucks

	New Northside Dr Northbound					New Northside Dr Southbound					Powers Ferry Rd Eastbound					Powers Ferry Rd Westbound					
Start Time	Left	Thru	Rgt	Peds	App. Total	Left	Thru	Rgt	Peds	App. Total	Left	Thru	Rgt	Peds	App. Total	Left	Thru	Rgt	Peds	App. Total	Int. Total
7:15 AM	21	62	17	0	100	0	0	0	4	0	93	190	0	4	283	0	26	42	0	68	451
7:30 AM	29	56	22	0	107	0	0	0	0	0	127	197	0	0	324	0	40	53	1	93	524
7:45 AM	27	75	17	0	119	0	0	0	0	0	109	194	0	1	303	0	33	31	0	64	486
8:00 AM	23	70	18	0	111	0	0	0	0	0	100	170	0	0	270	0	26	35	0	61	442
Total	100	263	74	0	437	0	0	0	4	0	429	751	0	5	1180	0	125	161	1	286	1903
8:15 AM	34	46	6	6	86	0	0	0	0	0	123	168	0	2	291	0	30	35	3	65	442
8:30 AM	30	55	9	0	94	0	0	0	0	0	101	174	0	1	275	0	15	22	0	37	406
8:45 AM	33	53	9	0	95	0	0	0	0	0	102	178	0	2	280	0	23	28	0	51	426
9:00 AM	21	41	8	0	70	0	0	0	0	0	92	131	0	2	223	0	24	31	0	55	348
Total	118	195	32	6	345	0	0	0	0	0	418	651	0	7	1069	0	92	116	3	208	1622
BREAK																					
4:30 PM	123	102	4	0	229	0	0	0	0	0	72	85	0	0	157	0	114	78	0	192	578
4:45 PM	129	105	1	0	235	0	0	0	0	0	77	79	0	0	156	0	123	68	1	191	582
5:00 PM	128	128	3	1	259	0	0	0	1	0	67	105	0	0	172	0	124	97	1	221	652
5:15 PM	118	95	2	0	215	0	0	0	1	0	92	99	0	0	191	0	115	66	1	181	587
Total	498	430	10	1	938	0	0	0	2	0	308	368	0	0	676	0	476	309	3	785	2399
5:30 PM	85	115	10	0	210	0	0	0	0	0	76	100	0	2	176	0	137	73	0	210	596
5:45 PM	121	131	9	1	261	0	0	0	0	0	68	105	0	0	173	0	119	50	0	169	603
6:00 PM	131	108	6	0	245	0	0	0	0	0	60	106	0	0	166	0	117	70	0	187	598
6:15 PM	119	80	12	0	211	0	0	0	0	0	71	68	0	5	139	0	91	37	0	128	478
Total	456	434	37	1	927	0	0	0	0	0	275	379	0	7	654	0	464	230	0	694	2275
Grand Total	1172	1322	153	8	2647	0	0	0	6	0	1430	2149	0	19	3579	0	1157	816	7	1973	8199
Apprch %	44.3	49.9	5.8	0.3		0.0	0.0	0.0	0.0		40.0	60.0	0.0	0.5		0.0	58.6	41.4	0.4		
Total %	14.3	16.1	1.9	0.1	32.3	0.0	0.0	0.0	0.1	0.0	17.4	26.2	0.0	0.2	43.7	0.0	14.1	10.0	0.1	24.1	
Cars, PU, Vans	1172	1319	153	8	2644	0	0	0	6	0	1424	2145	0	19	3569	0	1154	816	7	1970	8183
% Cars, PU, Vans	100.0	99.8	100.0	100.0	99.9	0.0	0.0	0.0	100.0	0.0	99.6	99.8	0.0	100.0	99.7	0.0	99.7	100.0	100.0	99.8	99.8
Heavy Trucks	0	3	0		3	0	0	0		0	6	4	0		10	0	3	0		3	16
%Heavy Trucks	0.0	0.2	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.4	0.2	0.0	0.0	0.3	0.0	0.3	0.0	0.0	0.2	0.2

Project ID: Historical
Location: Mt Vernon Hwy NE & Abernathy Rd
City: Atlanta

Day: Tuesday
Date: 4/26/2016

Peak Start Times	
AM	7:15 AM
MD	12:00 AM
PM	3:30 PM

Groups Printed - Cars, PU, Vans - Heavy Trucks

	Mt Vernon Hwy NE Northbound					Mt Vernon Hwy NE Southbound					Abernathy Rd Eastbound					Abernathy Rd Westbound					
Start Time	Left	Thru	Rgt	Peds	App. Total	Left	Thru	Rgt	Peds	App. Total	Left	Thru	Rgt	Peds	App. Total	Left	Thru	Rgt	Peds	App. Total	Int. Total
7:15 AM	2	23	16	0	41	30	131	115	1	276	52	292	7	0	351	8	125	11	2	144	812
7:30 AM	6	57	23	0	86	36	154	146	1	336	60	285	4	0	349	13	175	22	0	210	981
7:45 AM	6	74	14	1	94	49	116	141	6	306	62	346	5	0	413	14	152	11	4	177	990
8:00 AM	4	60	28	1	92	47	99	121	2	267	66	307	5	1	378	7	181	11	0	199	936
Total	18	214	81	2	313	162	500	523	10	1185	240	1230	21	1	1491	42	633	55	6	730	3719
8:15 AM	8	50	22	0	80	57	118	119	3	294	73	327	6	1	406	11	164	20	0	195	975
8:30 AM	10	69	23	1	102	52	138	112	2	302	63	325	10	0	398	10	149	27	0	186	988
8:45 AM	8	69	25	0	102	54	122	103	6	279	86	356	5	0	447	15	159	14	0	188	1016
9:00 AM	6	47	25	1	78	55	100	114	3	269	66	371	6	2	443	11	140	18	0	169	959
Total	32	235	95	2	362	218	478	448	14	1144	288	1379	27	3	1694	47	612	79	0	738	3938
BREAK																					
3:30 PM	8	90	30	2	128	29	69	82	2	180	69	171	2	1	242	20	332	26	0	378	928
3:45 PM	9	113	19	1	141	16	67	95	1	178	70	181	7	0	258	22	346	22	1	390	967
4:00 PM	25	115	24	2	164	22	73	126	0	221	51	181	3	0	235	20	418	24	0	462	1082
4:15 PM	27	103	31	2	161	33	81	115	0	229	73	177	5	3	255	20	424	22	1	466	1111
Total	69	421	104	7	594	100	290	418	3	808	263	710	17	4	990	82	1520	94	2	1696	4088
4:30 PM	24	115	32	1	171	25	84	90	3	199	49	164	8	0	221	19	413	25	4	457	1048
4:45 PM	26	113	36	2	175	21	85	108	7	214	67	204	4	2	275	13	370	16	3	399	1063
5:00 PM	15	122	29	0	166	22	71	121	6	214	51	209	7	0	267	14	410	30	0	454	1101
5:15 PM	24	124	39	4	187	28	82	125	8	235	72	217	4	4	293	22	400	26	4	448	1163
Total	89	474	136	7	699	96	322	444	24	862	239	794	23	6	1056	68	1593	97	11	1758	4375
Grand Total	208	1344	416	18	1968	576	1590	1833	51	3999	1030	4113	88	14	5231	239	4358	325	19	4922	16120
Apprch %	10.6	68.3	21.1	0.9		14.4	39.8	45.8	1.3		19.7	78.6	1.7	0.3		4.9	88.5	6.6	0.4		
Total %	1.3	8.3	2.6	0.1	12.2	3.6	9.9	11.4	0.3	24.8	6.4	25.5	0.5	0.1	32.5	1.5	27.0	2.0	0.1	30.5	
Cars, PU, Vans	208	1342	415	18	1965	575	1589	1828	51	3992	1026	4106	88	14	5220	238	4348	325	19	4911	16088
% Cars, PU, Vans	100.0	99.9	99.8	100.0	99.8	99.8	99.9	99.7	100.0	99.8	99.6	99.8	100.0	100.0	99.8	99.6	99.8	100.0	100.0	99.8	99.8
Heavy Trucks	0	2	1		3	1	1	5		7	4	7	0		11	1	10	0		11	32
%Heavy Trucks	0.0	0.1	0.2	0.0	0.2	0.2	0.1	0.3	0.0	0.2	0.4	0.2	0.0	0.0	0.2	0.4	0.2	0.0	0.0	0.2	0.2

Project ID: Historical
Location: Brandon Mill Rd & Abernathy Rd_Johnson Ferry Rd
City: Sandy Springs

Day: Thursday
Date: 10/22/2015

Peak Start Times	
AM	7:00 AM
MD	12:00 AM
PM	4:30 PM

Groups Printed - Cars, PU, Vans - Heavy Trucks

Start Time	Brandon Mill Rd Northbound					Brandon Mill Rd Southbound					Abernathy Rd_Johnson Ferry Rd Eastbound					Abernathy Rd_Johnson Ferry Rd Westbound					Int. Total
	Left	Thru	Rgt	Peds	App. Total	Left	Thru	Rgt	Peds	App. Total	Left	Thru	Rgt	Peds	App. Total	Left	Thru	Rgt	Peds	App. Total	
7:00 AM	12	3	1	0	16	16	16	16	0	48	7	451	222	0	680	3	67	13	0	83	827
7:15 AM	23	7	2	0	32	33	39	22	0	94	6	407	229	0	642	2	82	20	0	104	872
7:30 AM	31	7	6	0	44	43	59	35	0	137	7	404	228	0	639	3	94	4	0	101	921
7:45 AM	46	7	3	0	56	28	43	26	0	97	16	432	222	0	670	0	104	3	0	107	930
Total	112	24	12	0	148	120	157	99	0	376	36	1694	901	0	2631	8	347	40	0	395	3550
8:00 AM	30	8	4	0	42	17	41	34	0	92	16	409	198	0	623	4	97	5	0	106	863
8:15 AM	58	2	3	0	63	32	42	30	0	104	11	375	231	0	617	3	63	5	0	71	855
8:30 AM	54	6	2	0	62	24	24	23	0	71	9	377	239	0	625	4	97	7	0	108	866
8:45 AM	47	4	0	0	51	16	31	29	0	76	13	417	238	0	668	5	102	6	0	113	908
Total	189	20	9	0	218	89	138	116	0	343	49	1578	906	0	2533	16	359	23	0	398	3492
BREAK																					
4:30 PM	133	11	1	0	145	5	11	13	0	29	31	151	66	0	248	10	426	18	0	454	876
4:45 PM	190	15	3	0	208	8	25	22	0	55	36	137	72	0	245	13	342	17	0	372	880
5:00 PM	138	21	3	0	162	6	8	17	0	31	34	167	74	0	275	6	397	19	0	422	890
5:15 PM	108	15	3	0	126	8	15	13	0	36	44	155	79	0	278	9	359	16	0	384	824
Total	569	62	10	0	641	27	59	65	0	151	145	610	291	0	1046	38	1524	70	0	1632	3470
5:30 PM	122	13	4	0	139	9	21	15	0	45	38	173	100	0	311	6	362	27	0	395	890
5:45 PM	115	12	4	0	131	7	21	13	0	41	35	167	69	0	271	14	390	22	0	426	869
6:00 PM	131	19	5	0	155	18	24	19	0	61	29	150	74	0	253	10	349	38	0	397	866
6:15 PM	135	17	1	0	153	10	18	21	0	49	30	193	86	0	309	15	377	25	0	417	928
Total	503	61	14	0	578	44	84	68	0	196	132	683	329	0	1144	45	1478	112	0	1635	3553
Grand Total	1373	167	45	0	1585	280	438	348	0	1066	362	4565	2427	0	7354	107	3708	245	0	4060	14065
Apprch %	86.6	10.5	2.8	0.0		26.3	41.1	32.6	0.0		4.9	62.1	33.0	0.0		2.6	91.3	6.0	0.0		
Total %	9.8	1.2	0.3	0.0	11.3	2.0	3.1	2.5	0.0	7.6	2.6	32.5	17.3	0.0	52.3	0.8	26.4	1.7	0.0	28.9	
Cars, PU, Vans	1373	167	45	0	1585	280	438	348	0	1066	362	4565	2427	0	7354	107	3708	245	0	4060	14065
% Cars, PU, Vans	####	####	####	0.0	100.0	####	####	100.0	0.0	100.0	####	100.0	####	0.0	100.0	100.0	100.0	####	0.0	100.0	100.0
Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
%Heavy Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Project ID: Historical
Location: Peachtree Dunwoody Rd NE & Abernathy Rd NE
City: Sandy Springs

Day: Thursday
Date: 04/11/2019

Groups Printed - Cars, PU, Vans - Heavy Trucks																									
	Peachtree Dunwoody Rd NE Northbound						Peachtree Dunwoody Rd NE Southbound						Abernathy Rd NE Eastbound						Abernathy Rd NE Westbound						
Start Time	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Int. Total
7:15 AM	25	41	1	0	0	67	33	94	86	0	8	213	137	269	162	0	1	568	11	213	38	0	0	262	1110
7:30 AM	29	48	1	1	0	79	33	96	74	0	8	203	115	215	143	0	0	473	1	303	51	0	0	355	1110
7:45 AM	31	76	3	0	0	110	35	101	90	0	10	226	131	253	158	0	0	542	1	267	81	0	1	349	1227
Total	85	165	5	1	0	256	101	291	250	0	26	642	383	737	463	0	1	1583	13	783	170	0	1	966	3447
8:00 AM	54	86	1	0	0	141	36	101	102	0	13	239	140	295	152	0	2	587	1	245	63	0	0	309	1276
8:15 AM	36	68	1	0	0	105	41	82	93	0	5	216	147	343	168	0	1	658	3	289	56	0	1	348	1327
8:30 AM	26	74	3	0	2	103	45	83	108	0	11	236	170	306	183	0	3	659	2	237	51	0	0	290	1288
8:45 AM	55	104	1	0	2	160	39	77	94	0	18	210	151	294	179	0	3	624	1	245	58	0	1	304	1298
Total	171	332	6	0	4	509	161	343	397	0	47	901	608	1238	682	0	9	2528	7	1016	228	0	2	1251	5189
9:00 AM	40	71	3	0	0	114	55	109	79	0	7	243	163	330	172	0	1	665	2	235	52	0	0	289	1311
Total	40	71	3	0	0	114	55	109	79	0	7	243	163	330	172	0	1	665	2	235	52	0	0	289	1311
BREAK																									
4:30 PM	221	107	5	0	1	333	38	29	147	0	8	214	40	202	49	0	1	291	0	326	31	0	1	357	1195
4:45 PM	224	112	8	0	0	344	38	47	152	0	7	237	65	217	32	0	1	314	1	316	26	0	1	343	1238
Total	445	219	13	0	1	677	76	76	299	0	15	451	105	419	81	0	2	605	1	642	57	0	2	700	2433
5:00 PM	191	111	0	0	2	302	31	39	144	0	14	214	37	208	36	0	1	281	0	340	50	0	1	390	1187
5:15 PM	190	126	1	0	0	317	31	44	176	0	9	251	54	221	27	0	1	302	0	372	42	0	2	414	1284
5:30 PM	180	143	0	0	0	323	51	46	157	0	10	254	42	236	41	0	1	319	1	365	31	0	1	397	1293
5:45 PM	166	120	0	0	0	286	46	49	126	0	15	221	57	239	53	0	2	349	1	302	33	0	1	336	1192
Total	727	500	1	0	2	1228	159	178	603	0	48	940	190	904	157	0	5	1251	2	1379	156	0	5	1537	4956
6:00 PM	187	114	5	0	1	306	46	56	157	0	2	259	55	252	39	0	3	346	0	356	59	0	0	415	1326
6:15 PM	167	110	3	0	0	280	36	54	113	0	5	203	55	248	51	0	0	354	1	420	85	0	0	506	1343
Total	354	224	8	0	1	586	82	110	270	0	7	462	110	500	90	0	3	700	1	776	144	0	0	921	2669
Grand Total	1822	1511	36	1	8	3370	634	1107	1898	0	150	3639	1559	4128	1645	0	21	7332	26	4831	807	0	10	5664	20005
Apprch %	54.1	44.8	1.1	0.0	0.2		17.4	30.4	52.2	0.0	4.1		21.3	56.3	22.4	0.0	0.3		0.5	85.3	14.2	0.0	0.2		
Total %	9.1	7.6	0.2	0.0	0.0	16.8	3.2	5.5	9.5	0.0	0.7	18.2	7.8	20.6	8.2	0.0	0.1	36.7	0.1	24.1	4.0	0.0	0.0	28.3	
Cars, PU, Vans	1803	1489	35	1	8	3328	627	1090	1884		150	3601	1553	4086	1623	0		7262	26	4769	800		10	5595	19786
% Cars, PU, Vans	99.0	98.5	97.2	100.0	100.0	98.8	98.9	98.5	99.3	0.0	100.0	99.0	99.6	99.0	98.7	0.0	0.0	99.0	100.0	98.7	99.1	0.0	100.0	98.8	98.9
Heavy Trucks	19	22	1	0		42	7	17	14	0		38	6	42	22	0		70	0	62	7	0		69	219
%Heavy Trucks	1.0	1.5	2.8	0.0	0.0	1.2	1.1	1.5	0.7	0.0	0.0	1.0	0.4	1.0	1.3	0.0	0.0	1.0	0.0	1.3	0.9	0.0	0.0	1.2	1.1

Project ID: Historical
Location: Peachtree Dunwoody Rd & Hollis Cobb Cir
City: Atlanta

Day: Thursday
Date: 09/20/2018

Groups Printed - Cars, PU, Vans - Heavy Trucks

	Peachtree Dunwoody Rd Northbound						Peachtree Dunwoody Rd Southbound						Hollis Cobb Cir Eastbound						Hollis Cobb Cir Westbound						Int. Total
Start Time	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	
6:45 AM	18	144	26	0	0	188	24	296	76	0	16	396	13	0	4	0	9	17	9	0	5	0	1	14	615
Total	18	144	26	0	0	188	24	296	76	0	16	396	13	0	4	0	9	17	9	0	5	0	1	14	615
7:00 AM	11	208	21	0	3	240	23	273	52	0	22	348	21	0	2	0	2	23	10	0	7	0	10	17	628
7:15 AM	15	262	23	0	5	300	26	281	61	0	25	368	16	3	5	0	15	24	8	2	7	0	8	17	709
7:30 AM	16	333	29	0	4	378	31	286	51	0	19	368	57	2	10	0	2	69	9	0	7	0	7	16	831
7:45 AM	14	309	31	0	0	354	26	307	56	0	8	389	36	2	14	0	1	52	4	0	9	0	0	13	808
Total	56	1112	104	0	12	1272	106	1147	220	0	74	1473	130	7	31	0	20	168	31	2	30	0	25	63	2976
8:00 AM	10	327	32	0	10	369	50	294	43	0	33	387	37	1	8	0	13	46	18	1	7	0	18	26	828
8:15 AM	9	316	36	2	7	363	20	281	37	0	37	338	26	2	7	0	7	35	17	1	10	0	18	28	764
Total	19	643	68	2	17	732	70	575	80	0	70	725	63	3	15	0	20	81	35	2	17	0	36	54	1592
BREAK																									
11:45 AM	10	314	16	1	0	341	6	277	33	0	8	316	39	0	33	0	2	72	18	0	27	0	4	45	774
Total	10	314	16	1	0	341	6	277	33	0	8	316	39	0	33	0	2	72	18	0	27	0	4	45	774
12:00 PM	10	295	11	1	1	317	9	284	27	0	8	320	35	1	25	0	3	61	15	1	28	0	2	44	742
12:15 PM	16	312	9	2	2	339	14	285	38	0	8	337	35	2	23	0	4	60	8	1	25	0	1	34	770
12:30 PM	18	293	17	1	0	329	16	295	42	0	7	353	25	1	17	0	3	43	13	1	25	0	1	39	764
12:45 PM	13	284	12	0	0	309	20	336	40	1	3	397	25	1	17	0	0	43	12	1	15	0	4	28	777
Total	57	1184	49	4	3	1294	59	1200	147	1	26	1407	120	5	82	0	10	207	48	4	93	0	8	145	3053
1:00 PM	16	274	20	0	4	310	17	271	32	0	2	320	25	1	15	0	3	41	10	0	18	0	4	28	699
Total	16	274	20	0	4	310	17	271	32	0	2	320	25	1	15	0	3	41	10	0	18	0	4	28	699
BREAK																									
2:45 PM	11	318	17	1	2	347	10	284	31	0	16	325	42	1	17	0	6	60	20	1	22	0	8	43	775
Total	11	318	17	1	2	347	10	284	31	0	16	325	42	1	17	0	6	60	20	1	22	0	8	43	775
3:00 PM	11	275	13	0	1	299	8	287	13	0	17	308	50	2	23	0	3	75	24	0	30	0	1	54	736
3:15 PM	11	308	7	0	2	326	15	300	21	0	25	336	48	3	23	0	2	74	19	2	20	0	10	41	777
3:30 PM	4	313	15	0	1	332	14	277	14	0	24	305	46	4	24	0	4	74	22	0	31	0	3	53	764
3:45 PM	6	238	8	0	4	252	14	254	22	0	20	290	52	2	28	0	5	82	24	2	20	0	8	46	670
Total	32	1134	43	0	8	1209	51	1118	70	0	86	1239	196	11	98	0	14	305	89	4	101	0	22	194	2947
4:00 PM	4	225	13	0	0	242	7	374	18	0	18	399	49	0	20	0	2	69	25	0	26	0	5	51	761
4:15 PM	5	317	14	0	1	336	20	337	15	0	21	372	53	2	28	0	7	83	28	2	24	0	3	54	845
4:30 PM	5	313	12	0	2	330	8	343	16	0	33	367	47	0	21	0	5	68	28	0	40	0	4	68	833
4:45 PM	4	358	12	0	2	374	5	312	27	0	31	344	44	1	27	0	6	72	28	0	21	0	5	49	839
Total	18	1213	51	0	5	1282	40	1366	76	0	103	1482	193	3	96	0	20	292	109	2	111	0	17	222	3278
5:00 PM	2	272	7	0	0	281	7	376	17	0	43	400	43	1	25	0	3	69	28	0	33	0	4	61	811
5:15 PM	8	343	10	0	5	361	6	344	10	0	32	360	38	0	11	0	3	49	27	1	21	0	7	49	819
Total	10	615	17	0	5	642	13	720	27	0	75	760	81	1	36	0	6	118	55	1	54	0	11	110	1630
Grand Total	247	6951	411	8	56	7617	396	7254	792	1	476	8443	902	32	427	0	110	1361	424	16	478	0	136	918	18339
Apprch %	3.2	91.3	5.4	0.1	0.7		4.7	85.9	9.4	0.0	5.6		66.3	2.4	31.4	0.0	8.1		46.2	1.7	52.1	0.0	14.8		
Total %	1.3	37.9	2.2	0.0	0.3	41.5	2.2	39.6	4.3	0.0	2.6	46.0	4.9	0.2	2.3	0.0	0.6	7.4	2.3	0.1	2.6	0.0	0.7	5.0	
Cars, PU, Vans	247	6936	407	8	56	7598	381	7204	792		476	8378	900	32	426	0		1358	421	16	463		136	900	18234
% Cars, PU, Vans	100.0	99.8	99.0	100.0	100.0	99.8	96.2	99.3	100.0	0.0	100.0	99.2	99.8	100.0	99.8	0.0	0.0	99.8	99.3	100.0	96.9	0.0	100.0	98.0	99.4
Heavy Trucks	0	15	4	0		19	15	50	0	0		65	2	0	1	0		3	3	0	15	0		18	105
%Heavy Trucks	0.0	0.2	1.0	0.0	0.0	0.2	3.8	0.7	0.0	0.0	0.0	0.8	0.2	0.0	0.2	0.0	0.0	0.2	0.7	0.0	3.1	0.0	0.0	2.0	0.6

Project ID: Historical
Location: River Valley Rd & Johnson Ferry Rd
City: Sandy Springs

Day: Thursday
Date: 10/22/2015

Peak Start Times	
AM	7:00 AM
MD	12:00 AM
PM	4:30 PM

Groups Printed - Cars, PU, Vans - Heavy Trucks

	River Valley Rd Northbound					River Valley Rd Southbound					Johnson Ferry Rd Eastbound					Johnson Ferry Rd Westbound					
Start Time	Left	Thru	Rgt	Peds	App. Total	Left	Thru	Rgt	Peds	App. Total	Left	Thru	Rgt	Peds	App. Total	Left	Thru	Rgt	Peds	App. Total	Int. Total
7:00 AM	3	0	33	0	36	0	0	0	0	0	0	644	48	0	692	22	63	0	0	85	813
7:15 AM	7	0	44	0	51	0	0	0	0	0	0	610	75	0	685	61	69	0	0	130	866
7:30 AM	18	0	65	0	83	0	0	0	0	0	1	568	74	0	643	57	101	0	0	158	884
7:45 AM	15	0	71	0	86	0	0	0	0	0	1	606	68	0	675	72	111	0	0	183	944
Total	43	0	213	0	256	0	0	0	0	0	2	2428	265	0	2695	212	344	0	0	556	3507
8:00 AM	10	0	75	0	85	0	0	0	0	0	2	542	45	0	589	66	93	1	0	160	834
8:15 AM	5	3	41	0	49	0	1	0	0	1	3	582	27	0	612	40	111	1	0	152	814
8:30 AM	1	11	48	0	60	1	2	0	0	3	5	565	34	0	604	52	105	3	0	160	827
8:45 AM	8	5	45	0	58	0	1	0	0	1	9	633	24	0	666	42	132	8	0	182	907
Total	24	19	209	0	252	1	4	0	0	5	19	2322	130	0	2471	200	441	13	0	654	3382
BREAK																					
4:30 PM	78	0	95	0	173	0	0	0	0	0	0	152	8	0	160	55	514	0	0	569	902
4:45 PM	69	0	84	0	153	0	1	0	0	1	0	168	10	0	178	81	478	1	0	560	892
5:00 PM	86	0	92	0	178	1	2	0	0	3	0	176	9	0	185	84	460	1	0	545	911
5:15 PM	86	0	113	0	199	0	0	0	0	0	1	171	11	0	183	72	415	0	0	487	869
Total	319	0	384	0	703	1	3	0	0	4	1	667	38	0	706	292	1867	2	0	2161	3574
5:30 PM	109	0	114	0	223	0	0	0	0	0	0	193	7	0	200	70	423	0	0	493	916
5:45 PM	98	0	102	0	200	1	0	2	0	3	0	171	10	0	181	63	460	1	0	524	908
6:00 PM	82	1	84	0	167	0	0	1	0	1	0	164	15	0	179	63	429	0	0	492	839
6:15 PM	99	0	109	0	208	0	0	0	0	0	0	204	12	0	216	88	453	0	0	541	965
Total	388	1	409	0	798	1	0	3	0	4	0	732	44	0	776	284	1765	1	0	2050	3628
Grand Total	774	20	1215	0	2009	3	7	3	0	13	22	6149	477	0	6648	988	4417	16	0	5421	14091
Apprch %	38.5	1.0	60.5	0.0		23.1	53.8	23.1	0.0		0.3	92.5	7.2	0.0		18.2	81.5	0.3	0.0		
Total %	5.5	0.1	8.6	0.0	14.3	0.0	0.0	0.0	0.0	0.1	0.2	43.6	3.4	0.0	47.2	7.0	31.3	0.1	0.0	38.5	
Cars, PU, Vans	774	20	1215	0	2009	3	7	3	0	13	22	6149	477	0	6648	988	4417	16	0	5421	14091
% Cars, PU, Vans	####	####	####	0.0	100.0	####	####	100.0	0.0	100.0	####	100.0	####	0.0	100.0	100.0	100.0	####	0.0	100.0	100.0
Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
%Heavy Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

All Traffic Data Services, Inc

1336 Farmer Road
Conyers, Ga 30012
404-374-1283

File Name : #10 NorthsideDr@MtVernonHwyAM

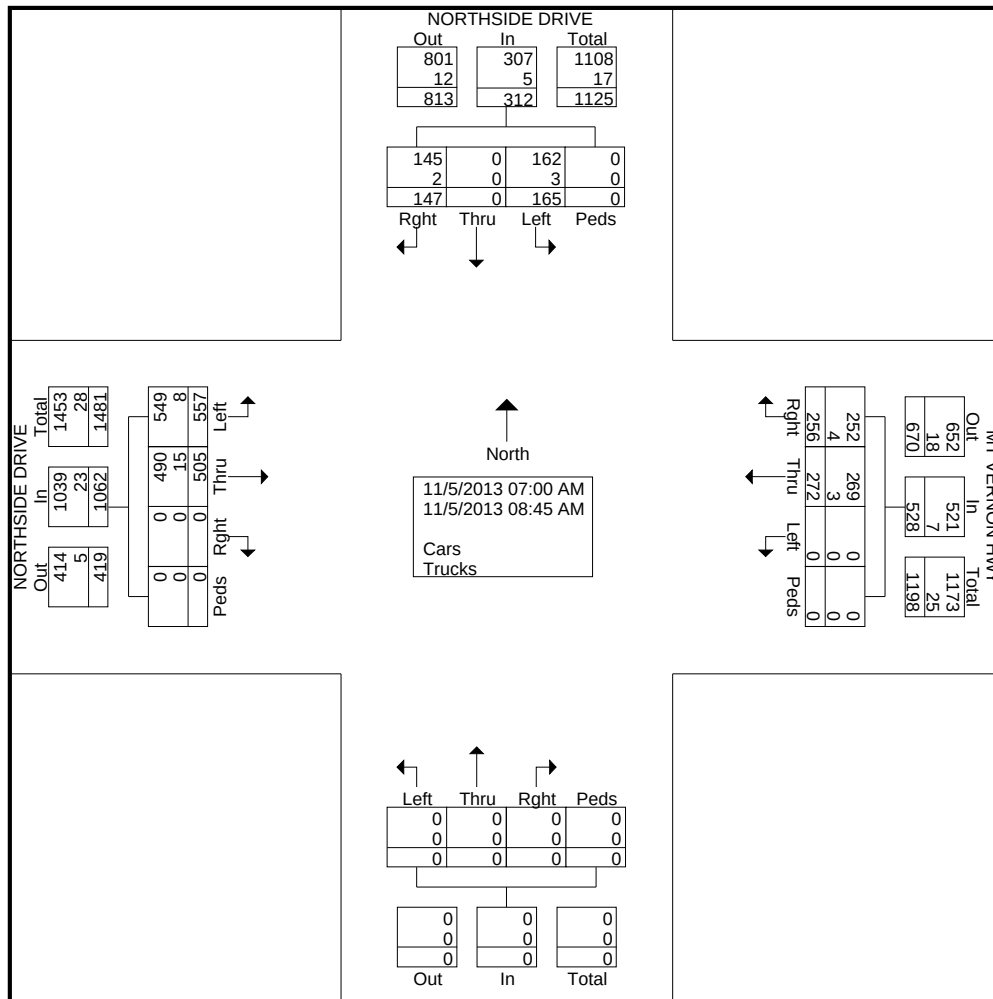
Site Code :

Start Date : 11/5/2013

Page No : 1

Groups Printed- Cars - Trucks

	NORTHSIDE DRIVE Southbound					MT VERNON HWY Westbound					Northbound					NORTHSIDE DRIVE Eastbound					
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	7	0	14	0	21	0	12	12	0	24	0	0	0	0	0	49	50	0	0	99	144
07:15 AM	22	0	15	0	37	0	31	31	0	62	0	0	0	0	0	74	79	0	0	153	252
07:30 AM	31	0	16	0	47	0	29	49	0	78	0	0	0	0	0	107	75	0	0	182	307
07:45 AM	31	0	28	0	59	0	50	44	0	94	0	0	0	0	0	96	84	0	0	180	333
Total	91	0	73	0	164	0	122	136	0	258	0	0	0	0	0	326	288	0	0	614	1036
08:00 AM	27	0	27	0	54	0	43	35	0	78	0	0	0	0	0	66	54	0	0	120	252
08:15 AM	12	0	22	0	34	0	31	30	0	61	0	0	0	0	0	53	59	0	0	112	207
08:30 AM	8	0	8	0	16	0	40	33	0	73	0	0	0	0	0	55	56	0	0	111	200
08:45 AM	27	0	17	0	44	0	36	22	0	58	0	0	0	0	0	57	48	0	0	105	207
Total	74	0	74	0	148	0	150	120	0	270	0	0	0	0	0	231	217	0	0	448	866
Grand Total	165	0	147	0	312	0	272	256	0	528	0	0	0	0	0	557	505	0	0	1062	1902
Apprch %	52.9	0	47.1	0		0	51.5	48.5	0		0	0	0	0		52.4	47.6	0	0		
Total %	8.7	0	7.7	0	16.4	0	14.3	13.5	0	27.8	0	0	0	0	0	29.3	26.6	0	0	55.8	
Cars	162	0	145	0	307	0	269	252	0	521	0	0	0	0	0	549	490	0	0	1039	1867
% Cars	98.2	0	98.6	0	98.4	0	98.9	98.4	0	98.7	0	0	0	0	0	98.6	97	0	0	97.8	98.2
Trucks	3	0	2	0	5	0	3	4	0	7	0	0	0	0	0	8	15	0	0	23	35
% Trucks	1.8	0	1.4	0	1.6	0	1.1	1.6	0	1.3	0	0	0	0	0	1.4	3	0	0	2.2	1.8



All Traffic Data Services, Inc

1336 Farmer Road
Conyers, Ga 30012
404-374-1283

File Name : #10 NorthsideDr@MtVernonHwyPM

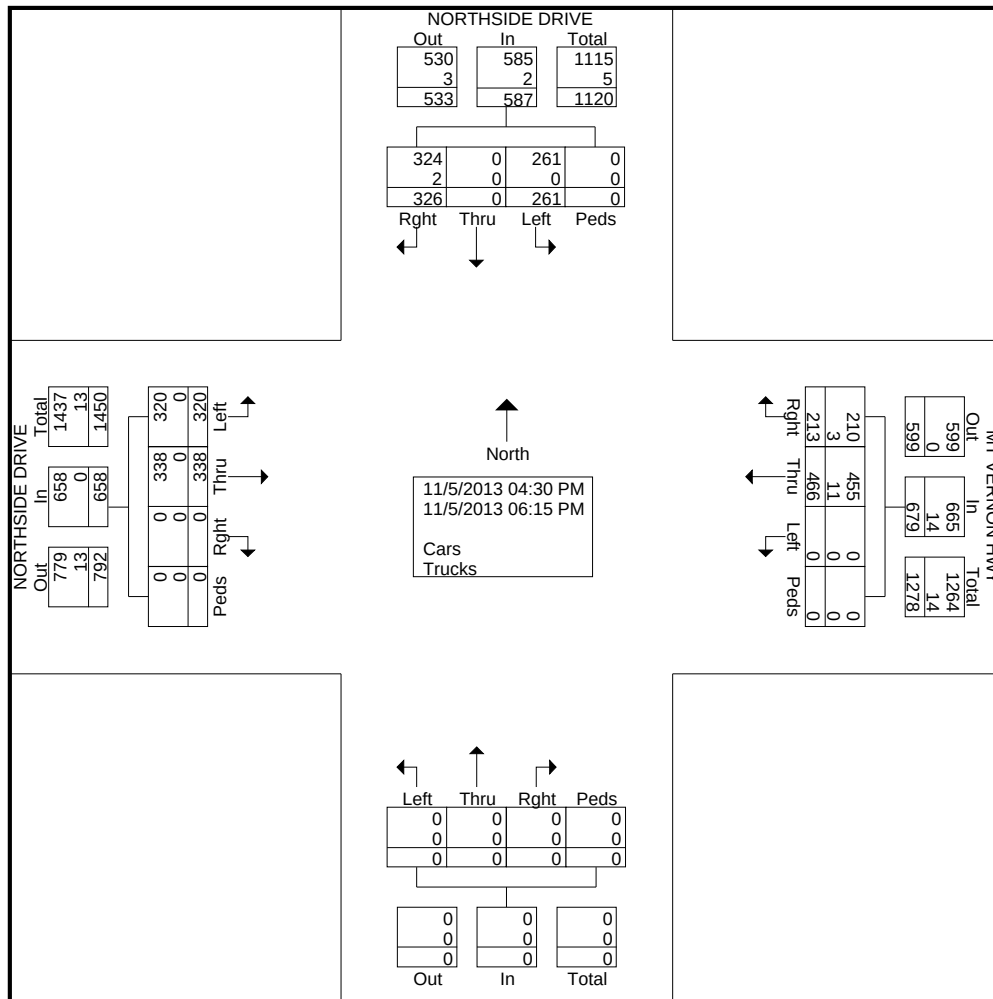
Site Code :

Start Date : 11/5/2013

Page No : 1

Groups Printed- Cars - Trucks

	NORTHSIDE DRIVE Southbound					MT VERNON HWY Westbound					Northbound					NORTHSIDE DRIVE Eastbound					
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
04:30 PM	42	0	24	0	66	0	45	17	0	62	0	0	0	0	0	22	37	0	0	59	187
04:45 PM	15	0	46	0	61	0	67	28	0	95	0	0	0	0	0	23	36	0	0	59	215
Total	57	0	70	0	127	0	112	45	0	157	0	0	0	0	0	45	73	0	0	118	402
05:00 PM	27	0	46	0	73	0	57	25	0	82	0	0	0	0	0	39	36	0	0	75	230
05:15 PM	32	0	40	0	72	0	63	35	0	98	0	0	0	0	0	51	48	0	0	99	269
05:30 PM	39	0	52	0	91	0	66	26	0	92	0	0	0	0	0	60	47	0	0	107	290
05:45 PM	45	0	49	0	94	0	56	29	0	85	0	0	0	0	0	48	52	0	0	100	279
Total	143	0	187	0	330	0	242	115	0	357	0	0	0	0	0	198	183	0	0	381	1068
06:00 PM	43	0	34	0	77	0	61	19	0	80	0	0	0	0	0	39	47	0	0	86	243
06:15 PM	18	0	35	0	53	0	51	34	0	85	0	0	0	0	0	38	35	0	0	73	211
Grand Total	261	0	326	0	587	0	466	213	0	679	0	0	0	0	0	320	338	0	0	658	1924
Apprch %	44.5	0	55.5	0		0	68.6	31.4	0		0	0	0	0	0	48.6	51.4	0	0		
Total %	13.6	0	16.9	0	30.5	0	24.2	11.1	0	35.3	0	0	0	0	0	16.6	17.6	0	0	34.2	
Cars	261	0	324	0	585	0	455	210	0	665	0	0	0	0	0	320	338	0	0	658	1908
% Cars	100	0	99.4	0	99.7	0	97.6	98.6	0	97.9	0	0	0	0	0	100	100	0	0	100	99.2
Trucks	0	0	2	0	2	0	11	3	0	14	0	0	0	0	0	0	0	0	0	0	16
% Trucks	0	0	0.6	0	0.3	0	2.4	1.4	0	2.1	0	0	0	0	0	0	0	0	0	0	0.8



Project ID: Historical
Location: Roswell Rd & Spalding Dr
City: Sandy Springs

Day: Wednesday
Date: 11/18/2015

Peak Start Times	
AM	9:00 AM
MD	12:00 PM
PM	12:00 AM

Groups Printed - Cars, PU, Vans - Heavy Trucks

Start Time	Roswell Rd Northbound					Roswell Rd Southbound					Spalding Dr Eastbound					Spalding Dr Westbound					Int. Total
	Left	Thru	Rgt	Peds	App. Total	Left	Thru	Rgt	Peds	App. Total	Left	Thru	Rgt	Peds	App. Total	Left	Thru	Rgt	Peds	App. Total	
9:00 AM	2	127	21	0	150	39	313	4	0	356	3	1	1	0	5	15	0	2	0	17	528
9:15 AM	2	177	18	0	197	21	304	1	0	326	1	1	5	0	7	7	0	5	0	12	542
9:30 AM	3	149	10	0	162	20	264	1	0	285	1	1	15	0	17	9	0	4	0	13	477
9:45 AM	2	177	11	0	190	9	251	2	0	262	1	0	7	0	8	12	0	1	0	13	473
Total	9	630	60	0	699	89	1132	8	0	1229	6	3	28	0	37	43	0	12	0	55	2020
10:00 AM	2	170	7	0	179	3	213	0	0	216	2	3	6	0	11	7	1	1	0	9	415
10:15 AM	1	153	9	0	163	3	216	1	0	220	0	2	5	0	7	7	0	7	0	14	404
10:30 AM	2	150	14	0	166	3	199	1	0	203	3	1	6	0	10	8	0	3	0	11	390
10:45 AM	5	166	16	0	187	2	197	1	0	200	1	3	3	0	7	4	0	3	0	7	401
Total	10	639	46	0	695	11	825	3	0	839	6	9	20	0	35	26	1	14	0	41	1610
11:00 AM	4	162	11	0	177	5	169	3	0	177	4	0	3	0	7	13	1	2	0	16	377
11:15 AM	4	165	13	0	182	2	207	6	0	215	2	1	7	0	10	11	1	4	0	16	423
11:30 AM	9	179	10	0	198	2	232	5	0	239	5	1	8	0	14	14	0	5	0	19	470
11:45 AM	2	182	16	0	200	4	220	1	0	225	4	0	3	0	7	15	0	5	0	20	452
Total	19	688	50	0	757	13	828	15	0	856	15	2	21	0	38	53	2	16	0	71	1722

BREAK

12:00 PM	8	180	18	0	206	2	205	1	0	208	1	0	9	0	10	9	0	3	0	12	436
12:15 PM	3	210	17	0	230	10	231	4	0	245	2	0	3	0	5	12	1	8	0	21	501
12:30 PM	7	212	20	0	239	6	211	2	0	219	2	1	8	0	11	18	0	6	0	24	493
12:45 PM	7	230	15	0	252	4	237	1	0	242	1	2	5	0	8	16	1	3	0	20	522
Total	25	832	70	0	927	22	884	8	0	914	6	3	25	0	34	55	2	20	0	77	1952
1:00 PM	12	205	15	0	232	2	233	6	0	241	1	0	8	0	9	12	0	4	0	16	498
1:15 PM	7	230	15	0	252	6	239	3	0	248	3	0	6	0	9	6	1	2	0	9	518
1:30 PM	4	224	22	0	250	5	208	3	0	216	2	1	13	0	16	12	1	2	0	15	497
1:45 PM	4	243	21	0	268	3	199	3	0	205	2	1	2	0	5	6	0	6	0	12	490
Total	27	902	73	0	1002	16	879	15	0	910	8	2	29	0	39	36	2	14	0	52	2003
2:00 PM	6	221	17	0	244	5	221	3	0	229	2	1	5	0	8	2	2	4	0	8	489
2:15 PM	8	263	16	0	287	7	215	3	0	225	1	0	7	0	8	8	0	4	0	12	532
2:30 PM	17	240	16	0	273	6	184	7	0	197	2	3	11	0	16	31	0	14	0	45	531
2:45 PM	9	218	16	0	243	3	221	0	0	224	3	0	4	0	7	9	2	9	0	20	494
Total	40	942	65	0	1047	21	841	13	0	875	8	4	27	0	39	50	4	31	0	85	2046

BREAK

Apprch %	2.5	90.4	7.1	0.0		3.1	95.8	1.1	0.0		22.1	10.4	67.6	0.0		69.0	2.9	28.1	0.0		
Total %	1.1	40.8	3.2	0.0	45.2	1.5	47.5	0.5	0.0	49.5	0.4	0.2	1.3	0.0	2.0	2.3	0.1	0.9	0.0	3.4	
Cars, PU, Vans	130	4633	364	0	5127	172	5389	62	0	5623	49	23	150	0	222	263	11	107	0	381	11353
% Cars, PU, Vans	####	####	####	0.0	100.0	####	####	100.0	0.0	100.0	####	100.0	####	0.0	100.0	100.0	100.0	####	0.0	100.0	100.0
Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
%Heavy Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Project ID: Historical
Location: Roberts Dr & Spalding Dr
City: Sandy Springs

Day: Wednesday
Date: 08/15/2018

Groups Printed - Cars, PU, Vans - Heavy Trucks

	Roberts Dr Northbound						Roberts Dr Southbound						Spalding Dr Eastbound						Spalding Dr Westbound						
Start Time	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Int. Total
6:00 AM	4	6	0	0	0	10	6	32	3	0	0	41	5	15	0	0	0	20	4	8	17	0	0	29	100
6:15 AM	1	11	0	0	0	12	23	48	20	0	0	91	4	9	0	0	1	13	3	15	24	0	0	42	158
6:30 AM	0	19	1	0	0	20	28	63	24	0	0	115	14	16	1	0	0	31	4	26	35	0	1	65	231
6:45 AM	4	37	2	0	0	43	26	82	23	0	0	131	8	20	1	0	0	29	14	46	54	0	1	114	317
Total	9	73	3	0	0	85	83	225	70	0	0	378	31	60	2	0	1	93	25	95	130	0	2	250	806
7:00 AM	3	38	5	0	0	46	45	62	13	0	0	120	16	24	2	0	0	42	10	66	74	0	0	150	358
7:15 AM	8	52	6	0	0	66	58	57	28	0	1	143	21	35	3	0	0	59	11	83	119	0	1	213	481
7:30 AM	10	44	11	0	0	65	60	48	26	0	0	134	32	50	6	0	0	88	19	97	146	0	1	262	549
7:45 AM	7	79	7	0	1	93	66	86	29	0	0	181	33	54	2	0	1	89	8	85	122	0	1	215	578
Total	28	213	29	0	1	270	229	253	96	0	1	578	102	163	13	0	1	278	48	331	461	0	3	840	1966
8:00 AM	2	59	5	0	0	66	60	53	29	0	0	142	37	70	7	0	0	114	18	89	110	0	0	217	539
8:15 AM	4	69	10	0	0	83	54	71	18	0	0	143	41	47	2	0	0	90	17	67	100	0	1	184	500
8:30 AM	4	90	7	0	0	101	59	80	16	0	0	155	34	62	3	0	0	99	8	61	97	0	0	166	521
8:45 AM	1	57	1	0	0	59	70	79	23	0	0	172	31	57	5	0	0	93	16	70	126	0	0	212	536
Total	11	275	23	0	0	309	243	283	86	0	0	612	143	236	17	0	0	396	59	287	433	0	1	779	2096
9:00 AM	3	60	3	0	0	66	43	56	19	0	0	118	27	33	3	0	0	63	10	63	90	0	0	163	410
9:15 AM	4	74	8	0	0	86	70	97	28	0	0	195	16	36	2	0	0	54	11	50	90	0	0	151	486
9:30 AM	1	48	6	0	0	55	44	90	24	0	0	158	18	29	3	0	0	50	13	54	87	0	0	154	417
9:45 AM	2	34	12	0	0	48	40	113	19	0	0	172	23	46	4	0	0	73	18	46	61	0	0	125	418
Total	10	216	29	0	0	255	197	356	90	0	0	643	84	144	12	0	0	240	52	213	328	0	0	593	1731
BREAK																									
10:00 AM	4	40	7	0	0	51	45	78	27	0	0	150	15	30	6	0	0	51	17	46	73	0	1	136	388
10:15 AM	0	44	9	0	1	53	51	58	20	0	0	129	14	30	3	0	0	47	15	40	50	0	0	105	334
10:30 AM	5	45	11	0	0	61	50	77	16	0	0	143	5	26	1	0	0	32	15	35	58	0	0	108	344
10:45 AM	5	48	7	0	0	60	56	77	11	0	0	144	13	24	0	0	0	37	5	33	62	0	0	100	341
Total	14	177	34	0	1	225	202	290	74	0	0	566	47	110	10	0	0	167	52	154	243	0	1	449	1407
11:00 AM	3	55	11	0	0	69	68	74	23	0	0	165	12	34	0	0	0	46	10	23	50	0	0	83	363
11:15 AM	2	47	17	0	0	66	64	48	19	0	0	131	11	27	7	0	0	45	8	26	67	0	0	101	343
11:30 AM	8	62	15	0	0	85	50	54	11	0	1	115	17	31	2	0	0	50	13	28	56	0	1	97	347
11:45 AM	0	49	18	0	1	67	61	62	12	0	0	135	12	37	2	0	0	51	10	33	63	0	1	106	359
Total	13	213	61	0	1	287	243	238	65	0	1	546	52	129	11	0	0	192	41	110	236	0	2	387	1412
12:00 PM	4	58	19	0	0	81	56	67	19	0	0	142	16	35	2	0	0	53	13	25	57	0	0	95	371
12:15 PM	4	58	12	0	0	74	60	55	20	0	0	135	9	26	4	0	0	39	12	31	61	0	0	104	352
12:30 PM	3	59	12	0	0	74	60	58	10	0	0	128	21	39	4	0	0	64	16	30	54	0	0	100	366
12:45 PM	2	52	11	0	0	65	41	31	10	0	1	82	18	47	3	0	0	68	9	34	74	0	1	117	332
Total	13	227	54	0	0	294	217	211	59	0	1	487	64	147	13	0	0	224	50	120	246	0	1	416	1421
1:00 PM	2	59	16	0	0	77	66	51	14	0	0	131	12	29	2	0	0	43	9	37	51	0	0	97	348
1:15 PM	4	58	14	0	0	76	70	39	14	0	0	123	17	38	3	0	0	58	11	39	63	0	0	113	370
1:30 PM	4	69	12	0	0	85	75	66	12	0	0	153	11	33	5	0	0	49	20	38	79	0	0	137	424
1:45 PM	7	74	17	0	2	98	62	53	22	0	0	137	14	37	3	0	2	54	14	44	84	0	0	142	431
Total	17	260	59	0	2	336	273	209	62	0	0	544	54	137	13	0	2	204	54	158	277	0	0	489	1573
BREAK																									
2:00 PM	8	75	10	0	0	93	65	51	18	0	0	134	10	32	4	0	0	46	12	48	64	0	0	124	397
2:15 PM	3	70	13	0	0	86	44	45	23	0	0	112	16	49	4	0	0	69	14	48	57	0	0	119	386
2:30 PM	6	69	11	0	0	86	92	56	20	0	0	168	18	50	2	0	0	70	4	23	67	0	0	94	418
2:45 PM	5	63	21	0	0	89	64	40	14	0	1	118	15	63	6	0	0	84	10	31	64	0	1	105	396
Total	22	277	55	0	0	354	265	192	75	0	1	532	59	194	16	0	0	269	40	150	252	0	1	442	1597
3:00 PM	4	71	15	0	0	90	67	50	15	0	0	132	25	54	8	0	0	87	12	37	84	0	0	133	442
3:15 PM	3	70	15	0	0	88	88	63	27	0	0	178	21	75	5	0	0	101	11	28	46	0	0	85	452
3:30 PM	1	79	15	0	0	95	64	55	15	0	1	134	30	53	4	0	0	87	16	47	79	0	0	142	458
3:45 PM	5	79	19	0	0	103	81	89	23	0	0	193	39	71	7	0	0	117	14	39	77	0	0	130	543
Total	13	299	64	0	0	376	300	257	80	0	1	637	115	253	24	0	0	392	53	151	286	0	0	490	1895
4:00 PM	2	79	17	0	0	98	75	64	16	0	0	155	50	75	7	0	0	132	19	32	78	0	1	129	514
4:15 PM	3	75	9	0	0	87	86	60	14	0	0	160	54	73	2	0	1	129	9	47	103	0	0	159	535
4:30 PM	3	101	7	0	0	111	60	61	19	0	0	140	49	52	4	0	0	105	16	43	1				

7:00 PM	2	69	15	0	0	86	52	44	9	0	1	105	30	49	9	0	0	88	15	29	58	0	1	102	381
7:15 PM	1	64	13	0	0	78	62	43	12	0	0	117	16	30	2	0	0	48	13	17	50	0	0	80	323
7:30 PM	4	57	10	0	0	71	27	37	11	0	0	75	10	31	5	0	0	46	6	19	43	0	0	68	260
7:45 PM	5	40	11	0	0	56	39	40	8	0	0	87	16	31	4	0	0	51	8	19	36	0	0	63	257
Total	12	230	49	0	0	291	180	164	40	0	1	384	72	141	20	0	0	233	42	84	187	0	1	313	1221
8:00 PM	5	49	12	0	0	66	51	34	10	0	0	95	5	24	4	0	0	33	11	24	34	0	0	69	263
8:15 PM	9	50	17	0	0	76	45	37	15	0	0	97	12	22	4	0	0	38	3	24	33	0	0	60	271
8:30 PM	5	45	13	0	0	63	48	29	12	0	0	89	9	25	2	0	0	36	7	21	22	0	0	50	238
8:45 PM	5	38	16	0	0	59	40	23	7	0	0	70	15	17	0	0	0	32	3	16	26	0	0	45	206
Total	24	182	58	0	0	264	184	123	44	0	0	351	41	88	10	0	0	139	24	85	115	0	0	224	978
Grand Total	239	3634	648	0	5	4521	3494	3645	1033	0	7	8172	1554	2558	235	0	5	4347	674	2473	4378	0	14	7525	24565
Apprch %	5.3	80.4	14.3	0.0	0.1		42.8	44.6	12.6	0.0	0.1		35.7	58.8	5.4	0.0	0.1		9.0	32.9	58.2	0.0	0.2		
Total %	1.0	14.8	2.6	0.0	0.0	18.4	14.2	14.8	4.2	0.0	0.0	33.3	6.3	10.4	1.0	0.0	0.0	17.7	2.7	10.1	17.8	0.0	0.1	30.6	
Cars, PU, Vans	237	3596	648	0	5	4481	3477	3605	1030		7	8112	1548	2538	231	0		4317	674	2457	4360		14	7491	24401
% Cars, PU, Vans	99.2	99.0	100.0	0.0	100.0	99.1	99.5	98.9	99.7	0.0	100.0	99.3	99.6	99.2	98.3	0.0	0.0	99.3	100.0	99.4	99.6	0.0	100.0	99.5	99.3
Heavy Trucks	2	38	0	0		40	17	40	3	0		60	6	20	4	0		30	0	16	18	0		34	164
%Heavy Trucks	0.8	1.0	0.0	0.0	0.0	0.9	0.5	1.1	0.3	0.0	0.0	0.7	0.4	0.8	1.7	0.0	0.0	0.7	0.0	0.6	0.4	0.0	0.0	0.5	0.7

Project ID: Historical
Location: Dunwoody Club Dr & Spalding Dr
City: Sandy Springs

Day: Wednesday
Date: 08/15/2018

Groups Printed - Cars, PU, Vans - Heavy Trucks

	Dunwoody Club Dr Northbound							Dunwoody Club Dr Southbound							Spalding Dr Eastbound						Spalding Dr Westbound							
Start Time	Left	Thru	Rgt	Uturn	Peds	App. Total		Left	Thru	Rgt	Uturn	Peds	App. Total		Left	Thru	Rgt	Uturn	Peds	App. Total		Left	Thru	Rgt	Uturn	Peds	App. Total	Int. Total
6:00 AM	18	0	0	0	0	18		0	0	0	0	0	0		0	3	18	0	0	21		0	11	0	0	0	11	50
6:15 AM	27	0	0	0	0	27		0	0	0	0	0	0		0	9	23	0	0	32		0	15	0	0	0	15	74
6:30 AM	45	0	0	0	0	45		0	0	0	0	0	0		0	11	34	0	0	45		0	20	0	0	0	20	110
6:45 AM	58	0	2	0	0	60		0	0	0	0	0	0		0	11	37	0	0	48		1	56	0	0	0	57	165
Total	148	0	2	0	0	150		0	0	0	0	0	0		0	34	112	0	0	146		1	102	0	0	0	103	399
7:00 AM	77	0	1	0	0	78		0	0	0	0	0	0		0	33	41	0	0	74		1	73	0	0	0	74	226
7:15 AM	106	0	0	0	0	106		0	0	0	0	0	0		0	53	46	0	0	99		1	107	0	0	0	108	313
7:30 AM	113	0	4	0	0	117		0	0	0	0	0	0		0	75	46	0	0	121		3	149	0	0	0	152	390
7:45 AM	88	0	1	0	0	89		0	0	0	0	0	0		0	50	77	0	0	127		2	127	0	0	0	129	345
Total	384	0	6	0	0	390		0	0	0	0	0	0		0	211	210	0	0	421		7	456	0	0	0	463	1274
8:00 AM	97	0	0	0	0	97		0	0	0	0	0	0		0	48	87	0	0	135		1	120	0	0	0	121	353
8:15 AM	82	0	0	0	0	82		0	0	0	0	0	0		0	44	67	0	0	111		1	102	0	0	0	103	296
8:30 AM	82	0	1	0	0	83		0	0	0	0	0	0		0	40	88	0	0	128		1	84	0	0	0	85	296
8:45 AM	89	0	2	0	0	91		0	0	0	0	0	0		0	32	96	0	0	128		0	123	0	0	0	123	342
Total	350	0	3	0	0	353		0	0	0	0	0	0		0	164	338	0	0	502		3	429	0	0	0	432	1287
9:00 AM	82	0	1	0	0	83		0	0	0	0	0	0		0	25	54	0	0	79		1	81	0	0	0	82	244
9:15 AM	80	0	0	0	0	80		0	0	0	0	0	0		0	42	72	0	0	114		4	71	0	0	0	75	269
9:30 AM	83	0	0	0	0	83		0	0	0	0	0	0		0	20	59	0	0	79		1	71	0	0	0	72	234
9:45 AM	64	0	0	0	0	64		0	0	0	0	0	0		0	39	59	0	0	98		1	61	0	0	0	62	224
Total	309	0	1	0	0	310		0	0	0	0	0	0		0	126	244	0	0	370		7	284	0	0	0	291	971
BREAK																												
10:00 AM	67	0	1	0	0	68		0	0	0	0	0	0		0	29	53	0	0	82		1	69	0	0	0	70	220
10:15 AM	54	0	2	0	0	56		0	0	0	0	0	0		0	32	58	0	0	90		1	51	0	0	0	52	198
10:30 AM	54	0	1	0	0	55		0	0	0	0	0	0		0	31	56	0	0	87		2	54	0	0	0	56	198
10:45 AM	53	0	0	0	0	53		0	0	0	0	0	0		0	33	54	0	0	87		2	47	0	0	0	49	189
Total	228	0	4	0	0	232		0	0	0	0	0	0		0	125	221	0	0	346		6	221	0	0	0	227	805
11:00 AM	43	0	0	0	0	43		0	0	0	0	0	0		0	41	72	0	0	113		2	40	0	0	0	42	198
11:15 AM	60	0	1	0	0	61		0	0	0	0	0	0		0	44	64	0	0	108		1	41	0	0	0	42	211
11:30 AM	54	0	1	0	0	55		0	0	0	0	0	0		0	44	52	0	0	96		1	43	0	0	0	44	195
11:45 AM	59	0	3	0	0	62		0	0	0	0	0	0		0	51	65	0	0	116		1	47	0	0	0	48	226
Total	216	0	5	0	0	221		0	0	0	0	0	0		0	180	253	0	0	433		5	171	0	0	0	176	830
12:00 PM	49	0	2	0	0	51		0	0	0	0	0	0		0	43	67	0	0	110		1	46	0	0	0	47	208
12:15 PM	52	0	1	0	0	53		0	0	0	0	0	0		0	38	60	0	0	98		3	52	0	0	0	55	206
12:30 PM	68	0	0	0	0	68		0	0	0	0	0	0		0	43	68	0	0	111		2	32	0	0	0	34	213
12:45 PM	57	0	0	0	0	57		0	0	0	0	0	0		0	36	63	0	0	99		0	60	0	0	0	60	216
Total	226	0	3	0	0	229		0	0	0	0	0	0		0	160	258	0	0	418		6	190	0	0	0	196	843
1:00 PM	58	0	2	0	0	60		0	0	0	0	0	0		0	51	60	0	0	111		1	39	0	0	0	40	211
1:15 PM	58	0	1	0	0	59		0	0	0	0	0	0		0	55	67	0	0	122		1	55	0	0	0	56	237
1:30 PM	72	0	1	0	0	73		0	0	0	0	0	0		0	47	73	0	0	120		4	65	0	0	0	69	262
1:45 PM	76	0	0	0	0	76		0	0	0	0	0	0		0	49	67	0	0	116		2	66	0	0	0	68	260
Total	264	0	4	0	0	268		0	0	0	0	0	0		0	202	267	0	0	469		8	225	0	0	0	233	970
BREAK																												
2:00 PM	61	0	2	0	0	63		0	0	0	0	0	0		0	45	62	0	0	107		0	63	0	0	0	63	233
2:15 PM	55	0	1	0	0	56		0	0	0	0	0	0		0	58	48	0	0	106		0	64	0	0	0	64	226
2:30 PM	45	0	1	0	0	46		0	0	0	0	0	0		0	48	105	0	0	153		0	49	0	0	0	49	248
2:45 PM	59	0	0	0	0	59		0	0	0	0	0	0		0	57	91	0	0	148		0	46	0	0	0	46	253
Total	220	0	4	0	0	224		0	0	0	0	0	0		0	208	306	0	0	514		0	222	0	0	0	222	960
3:00 PM	69	0	1	0	0	70		0	0	0	0	0	0		0	69	67	0	0	136		1	64	0	0	0	65	271
3:15 PM	41	0	2	0	0	43		0	0	0	0	0	0		0	75	103	0	0	178		0	44	0	0	0	44	265
3:30 PM	60	0	1	0	0	61		0	0	0	0	0	0		0	60	72	0	0	132		9	82	0	0	0	91	284
3:45 PM	46	0	1	0	0	47		0	0	0	0	0	0		0	79	92	0	0	171		2	84	0	0	0	86	304
Total	216	0	5	0	0	221		0	0	0	0	0	0		0	283	334	0	0	617		12	274	0	0	0	286	1124
4:00 PM	63	0	0	0	0	63		0	0	0	0	0	0		0	74	93	0	0	167		2	66	0	0	0	68	298
4:15 PM	62	0	2	0	0	64		0	0	0	0	0	0		0	60	108	0	0	168								

7:00 PM	49	0	0	0	0	49	0	0	0	0	0	0	0	47	69	0	0	116	0	53	0	0	0	53	218	
7:15 PM	42	0	1	0	0	43	0	0	0	0	0	0	0	0	38	67	0	0	105	0	38	0	0	0	38	186
7:30 PM	45	0	0	0	0	45	0	0	0	0	0	0	0	0	31	37	0	0	68	3	23	0	0	0	26	139
7:45 PM	33	0	0	0	0	33	0	0	0	0	0	0	0	0	35	46	0	0	81	1	30	0	0	0	31	145
Total	169	0	1	0	0	170	0	0	0	0	0	0	0	0	151	219	0	0	370	4	144	0	0	0	148	688
8:00 PM	40	0	2	0	0	42	0	0	0	0	0	0	0	0	33	54	0	0	87	1	29	0	0	0	30	159
8:15 PM	34	0	1	0	0	35	0	0	0	0	0	0	0	0	34	50	0	0	84	0	26	0	0	0	26	145
8:30 PM	39	0	1	0	0	40	0	0	0	0	0	0	0	0	20	66	0	0	86	1	11	0	0	0	12	138
8:45 PM	33	0	0	0	0	33	0	0	0	0	0	0	0	0	33	40	0	0	73	0	12	0	0	0	12	118
Total	146	0	4	0	0	150	0	0	0	0	0	0	0	0	120	210	0	0	330	2	78	0	0	0	80	560
Grand Total	3601	0	57	0	0	3658	0	0	0	0	0	0	0	0	2649	4051	0	0	6700	84	3924	0	0	0	4008	14366
Apprch %	98.4	0.0	1.6	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	39.5	60.5	0.0	0.0		2.1	97.9	0.0	0.0	0.0		
Total %	25.1	0.0	0.4	0.0	0.0	25.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.4	28.2	0.0	0.0	46.6	0.6	27.3	0.0	0.0	0.0	27.9	
Cars, PU, Vans	3579	0	57	0	0	3636	0	0	0	0	0	0	0	0	2639	4024	0	0	6663	84	3912	0	0	0	3996	14295
% Cars, PU, Vans	99.4	0.0	100.0	0.0	0.0	99.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	99.6	99.3	0.0	0.0	99.4	100.0	99.7	0.0	0.0	0.0	99.7	99.5
Heavy Trucks	22	0	0	0		22	0	0	0	0	0	0	0	0	10	27	0		37	0	12	0	0		12	71
%Heavy Trucks	0.6	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.7	0.0	0.0	0.6	0.0	0.3	0.0	0.0	0.0	0.3	0.5

Greater Traffic Company

Groups Printed- Vehicles - Trucks - Buses

	Barfield Rd Northbound					Barfield Rd Southbound					Mt Vernon Hwy Eastbound					Mt Vernon Hwy 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	10	7	0	20	18	20	7	0	45	20	36	5	0	61	12	49	9	0	70	196
07:15 AM	3	29	10	0	42	22	34	11	0	67	24	57	7	0	88	19	71	15	0	105	302
07:30 AM	5	21	7	0	33	22	41	8	0	71	30	118	9	0	157	19	73	9	0	101	362
07:45 AM	6	20	13	0	39	16	38	14	0	68	27	127	7	0	161	29	89	12	0	130	398
Total	17	80	37	0	134	78	133	40	0	251	101	338	28	0	467	79	282	45	0	406	1258
08:00 AM	9	20	11	0	40	38	40	7	0	85	41	143	11	0	195	21	67	13	0	101	421
08:15 AM	7	28	13	0	48	24	41	9	0	74	41	179	12	0	232	29	65	18	0	112	466
08:30 AM	6	22	13	0	41	24	51	10	0	85	41	196	19	0	256	26	52	21	0	99	481
08:45 AM	5	30	14	0	49	25	42	9	0	76	32	179	24	0	235	20	58	13	0	91	451
Total	27	100	51	0	178	111	174	35	0	320	155	697	66	0	918	96	242	65	0	403	1819
*** BREAK ***																					
04:00 PM	33	78	28	0	139	13	16	23	0	52	25	99	7	0	131	10	144	31	0	185	507
04:15 PM	30	87	27	0	144	22	24	32	0	78	23	83	5	0	111	13	150	48	0	211	544
04:30 PM	38	71	33	0	142	23	29	28	0	80	16	107	6	0	129	13	160	40	0	213	564
04:45 PM	28	73	24	0	125	22	29	33	0	84	25	98	3	0	126	6	162	36	0	204	539
Total	129	309	112	0	550	80	98	116	0	294	89	387	21	0	497	42	616	155	0	813	2154
05:00 PM	35	78	26	0	139	40	31	30	0	101	16	96	4	0	116	7	151	43	0	201	557
05:15 PM	31	72	37	0	140	30	38	31	0	99	21	127	2	0	150	7	142	63	0	212	601
05:30 PM	42	78	28	0	148	34	37	33	0	104	30	110	6	0	146	8	156	39	0	203	601
05:45 PM	24	65	39	0	128	37	28	27	0	92	17	91	2	0	110	16	120	54	0	190	520
Total	132	293	130	0	555	141	134	121	0	396	84	424	14	0	522	38	569	199	0	806	2279
Grand Total	305	782	330	0	1417	410	539	312	0	1261	429	1846	129	0	2404	255	1709	464	0	2428	7510
Apprch %	21.5	55.2	23.3	0		32.5	42.7	24.7	0		17.8	76.8	5.4	0		10.5	70.4	19.1	0		
Total %	4.1	10.4	4.4	0	18.9	5.5	7.2	4.2	0	16.8	5.7	24.6	1.7	0	32	3.4	22.8	6.2	0	32.3	
Vehicles	301	774	321	0	1396	406	527	305	0	1238	421	1821	122	0	2364	251	1692	463	0	2406	7404
% Vehicles	98.7	99	97.3	0	98.5	99	97.8	97.8	0	98.2	98.1	98.6	94.6	0	98.3	98.4	99	99.8	0	99.1	98.6
Trucks	3	5	8	0	16	3	9	1	0	13	3	15	2	0	20	4	11	1	0	16	65
% Trucks	1	0.6	2.4	0	1.1	0.7	1.7	0.3	0	1	0.7	0.8	1.6	0	0.8	1.6	0.6	0.2	0	0.7	0.9
Buses	1	3	1	0	5	1	3	6	0	10	5	10	5	0	20	0	6	0	0	6	41
% Buses	0.3	0.4	0.3	0	0.4	0.2	0.6	1.9	0	0.8	1.2	0.5	3.9	0	0.8	0	0.4	0	0	0.2	0.5

Greater Traffic Company

Groups Printed- Vehicles - Trucks - Buses

	Peachtree Dunwoody Northbound					Peachtree Dunwoody Southbound					Mt Vernon Hwy Eastbound					Mt Vernon Hwy Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	4	52	6	0	62	4	224	25	0	253	14	17	13	0	44	45	39	1	0	85	444
07:15 AM	6	51	9	0	66	3	175	38	0	216	19	21	24	0	64	58	63	5	0	126	472
07:30 AM	3	65	13	0	81	0	197	28	0	225	32	55	23	0	110	40	71	3	0	114	530
07:45 AM	10	89	15	0	114	1	263	29	0	293	35	55	22	0	112	46	93	2	0	141	660
Total	23	257	43	0	323	8	859	120	0	987	100	148	82	0	330	189	266	11	0	466	2106
08:00 AM	10	67	20	0	97	1	235	33	0	269	43	55	43	0	141	44	59	2	0	105	612
08:15 AM	8	78	17	0	103	2	213	32	0	247	54	74	54	0	182	75	77	6	0	158	690
08:30 AM	17	87	19	0	123	1	223	22	0	246	59	72	50	0	181	63	49	6	0	118	668
08:45 AM	7	73	30	0	110	0	265	25	0	290	46	70	50	0	166	58	66	4	0	128	694
Total	42	305	86	0	433	4	936	112	0	1052	202	271	197	0	670	240	251	18	0	509	2664
*** BREAK ***																					
04:00 PM	22	258	47	0	327	0	78	20	0	98	36	79	23	0	138	35	73	3	0	111	674
04:15 PM	13	206	51	0	270	5	66	20	0	91	34	103	20	0	157	28	74	4	0	106	624
04:30 PM	12	218	54	0	284	4	75	21	0	100	52	138	19	0	209	19	64	3	0	86	679
04:45 PM	18	251	56	0	325	1	70	22	0	93	34	100	19	0	153	23	64	0	0	87	658
Total	65	933	208	0	1206	10	289	83	0	382	156	420	81	0	657	105	275	10	0	390	2635
05:00 PM	13	208	66	0	287	2	67	25	0	94	32	104	19	0	155	24	81	4	0	109	645
05:15 PM	19	200	78	0	297	2	86	22	0	110	46	136	18	0	200	25	69	3	0	97	704
05:30 PM	14	235	52	0	301	1	74	16	0	91	56	111	16	0	183	22	59	5	0	86	661
05:45 PM	14	236	64	0	314	2	69	14	0	85	43	107	17	0	167	16	61	0	0	77	643
Total	60	879	260	0	1199	7	296	77	0	380	177	458	70	0	705	87	270	12	0	369	2653
Grand Total	190	2374	597	0	3161	29	2380	392	0	2801	635	1297	430	0	2362	621	1062	51	0	1734	10058
Apprch %	6	75.1	18.9	0		1	85	14	0		26.9	54.9	18.2	0		35.8	61.2	2.9	0		
Total %	1.9	23.6	5.9	0	31.4	0.3	23.7	3.9	0	27.8	6.3	12.9	4.3	0	23.5	6.2	10.6	0.5	0	17.2	
Vehicles	184	2357	596	0	3137	26	2363	382	0	2771	627	1277	425	0	2329	619	1048	40	0	1707	9944
% Vehicles	96.8	99.3	99.8	0	99.2	89.7	99.3	97.4	0	98.9	98.7	98.5	98.8	0	98.6	99.7	98.7	78.4	0	98.4	98.9
Trucks	4	13	1	0	18	3	14	9	0	26	3	12	5	0	20	2	10	1	0	13	77
% Trucks	2.1	0.5	0.2	0	0.6	10.3	0.6	2.3	0	0.9	0.5	0.9	1.2	0	0.8	0.3	0.9	2	0	0.7	0.8
Buses	2	4	0	0	6	0	3	1	0	4	5	8	0	0	13	0	4	10	0	14	37
% Buses	1.1	0.2	0	0	0.2	0	0.1	0.3	0	0.1	0.8	0.6	0	0	0.6	0	0.4	19.6	0	0.8	0.4

All Traffic Data Service, Inc

1336 Farmer Road

Conyers, Ga 30012

404-374-1283

File Name : #4 PeachtreeDunwoodyRd@PerimeterSummitAM

Site Code :

Start Date : 5/21/2014

Page No : 1

Groups Printed- Cars - Trucks

	PEACHTREE DUNWOODY RD Southbound					PERIMETER SUMMIT Westbound					PEACHTREE DUNWOODY RD Northbound					PERIMETER SUMMIT Eastbound					
Start Time	Rght	Thru	Left	Peds	App. Total	Rght	Thru	Left	Peds	App. Total	Rght	Thru	Left	Peds	App. Total	Rght	Thru	Left	Peds	App. Total	Int. Total
06:30 AM	98	386	20	0	504	6	6	22	0	34	5	94	2	0	101	1	1	0	0	2	641
06:45 AM	73	408	30	0	511	12	4	25	0	41	18	152	2	0	172	3	0	0	3	6	730
Total	171	794	50	0	1015	18	10	47	0	75	23	246	4	0	273	4	1	0	3	8	1371
07:00 AM	37	356	33	0	426	18	4	17	0	39	34	161	5	0	200	1	0	1	0	2	667
07:15 AM	38	378	32	1	449	12	0	31	0	43	33	236	9	0	278	1	1	4	3	9	779
07:30 AM	34	328	49	2	413	14	2	29	0	45	49	300	16	0	365	4	0	20	3	27	850
07:45 AM	17	382	54	0	453	27	4	40	0	71	58	292	16	0	366	5	0	21	0	26	916
Total	126	1444	168	3	1741	71	10	117	0	198	174	989	46	0	1209	11	1	46	6	64	3212
08:00 AM	32	335	45	0	412	19	4	29	0	52	49	306	10	0	365	2	0	8	2	12	841
08:15 AM	30	362	45	3	440	31	1	33	1	66	62	325	16	2	405	3	2	3	12	20	931
08:30 AM	28	340	40	1	409	20	4	19	0	43	68	284	18	0	370	3	1	7	0	11	833
08:45 AM	28	314	56	0	398	17	2	24	0	43	67	351	12	0	430	9	0	2	3	14	885
Total	118	1351	186	4	1659	87	11	105	1	204	246	1266	56	2	1570	17	3	20	17	57	3490
09:00 AM	22	287	35	0	344	21	4	33	0	58	47	272	15	0	334	6	0	5	1	12	748
09:15 AM	23	307	36	0	366	20	3	23	0	46	45	281	19	0	345	11	0	11	0	22	779
Grand Total	460	4183	475	7	5125	217	38	325	1	581	535	3054	140	2	3731	49	5	82	27	163	9600
Apprch %	9	81.6	9.3	0.1		37.3	6.5	55.9	0.2		14.3	81.9	3.8	0.1		30.1	3.1	50.3	16.6		
Total %	4.8	43.6	4.9	0.1	53.4	2.3	0.4	3.4	0	6.1	5.6	31.8	1.5	0	38.9	0.5	0.1	0.9	0.3	1.7	
Cars	458	4117	470	7	5052	209	38	304	1	552	506	3009	140	2	3657	48	4	81	27	160	9421
% Cars	99.6	98.4	98.9	100	98.6	96.3	100	93.5	100	95	94.6	98.5	100	100	98	98	80	98.8	100	98.2	98.1
Trucks	2	66	5	0	73	8	0	21	0	29	29	45	0	0	74	1	1	1	0	3	179
% Trucks	0.4	1.6	1.1	0	1.4	3.7	0	6.5	0	5	5.4	1.5	0	0	2	2	20	1.2	0	1.8	1.9

All Traffic Data Service, Inc

1336 Farmer Road

Conyers, Ga 30012

404-374-1283

File Name : #4 PeachtreeDunwoodyRd@PerimeterSummitPM

Site Code :

Start Date : 5/21/2014

Page No : 1

Groups Printed- Cars - Trucks

	PEACHTREE DUNWOODY RD Southbound					PERIMETER SUMMIT Westbound					PEACHTREE DUNWOODY RD Northbound					PERIMETER SUMMIT Eastbound					
Start Time	Rght	Thru	Left	Peds	App. Total	Rght	Thru	Left	Peds	App. Total	Rght	Thru	Left	Peds	App. Total	Rght	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	2	206	25	0	233	69	0	89	1	159	15	360	3	0	378	9	2	39	0	50	820
04:15 PM	1	236	25	0	262	43	0	72	0	115	18	353	1	0	372	5	5	21	0	31	780
04:30 PM	2	242	16	0	260	57	0	89	0	146	11	265	0	0	276	6	5	26	0	37	719
04:45 PM	4	250	18	1	273	30	0	92	1	123	21	328	1	0	350	7	4	22	0	33	779
Total	9	934	84	1	1028	199	0	342	2	543	65	1306	5	0	1376	27	16	108	0	151	3098
05:00 PM	0	269	19	0	288	37	0	101	0	138	17	257	0	0	274	11	5	35	5	56	756
05:15 PM	0	246	15	0	261	26	0	85	0	111	24	251	0	0	275	4	3	18	9	34	681
05:30 PM	0	251	18	0	269	39	0	82	0	121	19	233	0	0	252	3	1	11	4	19	661
05:45 PM	0	292	16	0	308	44	0	81	0	125	25	258	0	0	283	2	0	10	2	14	730
Total	0	1058	68	0	1126	146	0	349	0	495	85	999	0	0	1084	20	9	74	20	123	2828
06:00 PM	3	251	15	0	269	52	2	73	0	127	31	240	3	0	274	8	4	5	6	23	693
06:15 PM	14	281	30	0	325	41	0	69	0	110	31	231	3	0	265	3	1	11	2	17	717
06:30 PM	37	285	22	0	344	25	3	51	0	79	28	237	4	0	269	9	0	9	1	19	711
06:45 PM	17	258	9	0	284	26	0	34	0	60	24	209	1	0	234	4	0	8	1	13	591
Total	71	1075	76	0	1222	144	5	227	0	376	114	917	11	0	1042	24	5	33	10	72	2712
Grand Total	80	3067	228	1	3376	489	5	918	2	1414	264	3222	16	0	3502	71	30	215	30	346	8638
Apprch %	2.4	90.8	6.8	0		34.6	0.4	64.9	0.1		7.5	92	0.5	0		20.5	8.7	62.1	8.7		
Total %	0.9	35.5	2.6	0	39.1	5.7	0.1	10.6	0	16.4	3.1	37.3	0.2	0	40.5	0.8	0.3	2.5	0.3	4	
Cars	80	3039	228	1	3348	485	5	902	2	1394	249	3194	15	0	3458	71	29	215	30	345	8545
% Cars	100	99.1	100	100	99.2	99.2	100	98.3	100	98.6	94.3	99.1	93.8	0	98.7	100	96.7	100	100	99.7	98.9
Trucks	0	28	0	0	28	4	0	16	0	20	15	28	1	0	44	0	1	0	0	1	93
% Trucks	0	0.9	0	0	0.8	0.8	0	1.7	0	1.4	5.7	0.9	6.2	0	1.3	0	3.3	0	0	0.3	1.1

National Data & Surveying Services

Intersection Turning Movement Count

Location: Glenridge Connector & Johnson Ferry Rd
City: Atlanta
Control: Signalized

Project ID: Historical
Date: 2/7/2019

Total

NS/EW Streets:	Glenridge Connector				Glenridge Connector				Johnson Ferry Rd				Johnson Ferry Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	3 NT	1 NR	0 NU	2 SL	2 ST	0 SR	0 SU	1 EL	2 ET	1 ER	0 EU	1 WL	1 WT	1 WR	0 WU	
7:00 AM	30	61	12	0	137	121	4	2	28	75	113	0	27	29	63	0	702
7:15 AM	39	79	13	0	175	135	4	2	40	110	159	0	34	41	103	1	935
7:30 AM	37	97	12	0	121	172	6	3	79	110	202	0	39	57	150	0	1085
7:45 AM	44	106	13	1	141	172	4	0	72	168	199	0	37	41	111	0	1109
8:00 AM	35	88	14	0	142	183	5	2	61	117	169	0	25	51	111	0	1003
8:15 AM	41	97	22	0	113	171	15	1	87	144	172	0	40	58	88	0	1049
8:30 AM	52	111	32	0	128	161	5	1	82	135	158	0	30	57	117	0	1069
8:45 AM	53	113	31	0	128	174	16	1	75	129	147	0	25	71	84	0	1047
9:00 AM	53	109	26	0	152	144	5	4	81	99	144	0	36	54	99	0	1006
9:15 AM	50	102	28	1	122	110	11	0	57	100	132	0	34	70	103	0	920
9:30 AM	61	96	22	2	137	108	11	0	52	61	105	0	37	51	80	0	823
9:45 AM	57	75	15	1	173	93	9	1	35	59	84	0	30	47	75	0	754
TOTAL VOLUMES :	552	1134	240	5	1669	1744	95	17	749	1307	1784	0	394	627	1184	1	11502
APPROACH %'s :	28.59%	58.73%	12.43%	0.26%	47.35%	49.48%	2.70%	0.48%	19.51%	34.04%	46.46%	0.00%	17.86%	28.42%	53.67%	0.05%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	157	388	61	1	517	698	30	6	299	539	742	0	141	207	460	0	4246
PEAK HR FACTOR :	0.892	0.915	0.693	0.250	0.910	0.954	0.500	0.500	0.859	0.802	0.918	0.000	0.881	0.892	0.767	0.000	0.957
	0.925				0.942				0.900				0.821				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	3 NT	1 NR	0 NU	2 SL	2 ST	0 SR	0 SU	1 EL	2 ET	1 ER	0 EU	1 WL	1 WT	1 WR	0 WU	
2:00 PM	55	95	16	1	97	113	12	2	62	44	89	0	45	57	160	0	848
2:15 PM	56	84	12	1	76	81	5	2	58	64	92	0	61	72	152	0	816
2:30 PM	54	138	14	0	73	92	11	4	39	56	104	0	60	63	154	0	862
2:45 PM	57	112	13	1	80	90	4	1	74	66	117	0	61	71	160	0	907
3:00 PM	61	122	10	3	57	101	5	0	63	57	123	0	69	93	148	0	912
3:15 PM	66	125	10	2	65	123	5	3	61	60	103	0	38	86	162	0	909
3:30 PM	68	137	6	0	39	79	7	0	47	47	104	0	51	110	166	0	861
3:45 PM	81	176	13	0	60	121	7	3	56	62	103	0	56	113	159	0	1010
4:00 PM	85	178	8	2	46	104	3	1	67	76	122	0	49	105	132	0	978
4:15 PM	90	215	5	0	43	121	6	3	51	53	73	0	43	129	130	0	962
4:30 PM	91	203	6	3	34	116	6	0	45	68	84	0	43	140	135	0	974
4:45 PM	94	186	8	5	45	96	6	0	51	59	79	0	59	145	154	0	987
5:00 PM	98	208	8	0	61	146	10	0	45	55	99	0	36	152	133	0	1051
5:15 PM	108	240	7	0	44	117	7	4	57	64	95	0	30	124	119	0	1016
5:30 PM	94	242	9	0	50	103	9	3	45	100	94	0	24	165	103	0	1041
5:45 PM	108	223	11	3	76	98	12	0	60	74	69	0	32	129	123	0	1018
6:00 PM	100	195	8	0	60	89	10	0	28	92	82	0	30	152	97	0	943
6:15 PM	93	160	6	1	75	141	13	1	54	70	73	0	39	105	87	0	918
6:30 PM	69	154	10	0	86	113	10	2	49	49	59	0	25	87	98	0	811
6:45 PM	73	132	9	0	67	70	3	1	53	76	57	0	20	58	101	0	720
TOTAL VOLUMES :	1601	3325	189	22	1234	2114	151	30	1065	1292	1821	0	871	2156	2673	0	18544
APPROACH %'s :	31.17%	64.73%	3.68%	0.43%	34.97%	59.90%	4.28%	0.85%	25.49%	30.92%	43.59%	0.00%	15.28%	37.82%	46.89%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	408	913	35	3	231	464	38	7	207	293	357	0	122	570	478	0	4126
PEAK HR FACTOR :	0.944	0.943	0.795	0.250	0.760	0.795	0.792	0.438	0.863	0.733	0.902	0.000	0.847	0.864	0.898	0.000	0.981
	0.957				0.853				0.896				0.911				

APPENDIX B: GROWTH RATE CALCULATIONS



Intersection Name	Applicable GDOT TADA Location	Growth Rate								5-year Average Growth Rate		Proposed
1 - Johnson Ferry Rd @ Peachtree Dunwoody Rd	121-5644,121-5646,121-6372		N/A	N/A	-0.80%						-0.80%	0.50%
2 - Northridge Rd @ SR 400 SB/Dunwoody Pl	121-6374, 121-r681, 121-r081, 121-0862		N/A	2.80%	0.70%	0.60%					1.37%	1.50%
3 - Northside Dr @ Powers Ferry Rd	121-5663, 121-r121, 121-r122, 121-r721, 121-r722, 121-5546		0.90%	22.70%	5.80%	21.30%	0.50%	-1.70%			1.38%	1.50%
4 - Dunwoody Pl/Hannover Park Rd @ Roswell Rd (SR 9)	121-0128,121-0862,121-0126		-0.10%	0.60%	-1.40%						-0.30%	0.50%
5 - Northridge Rd @ Roswell Rd (SR 9)	121-6374,121-0126		N/A	-1.40%							-1.40%	0.50%
6 - Interstate North Pkwy/New Northside Dr @ Northside Dr	121-5663, 121-6054, 121-r121, 121-r122, 121-r721, 121-r722, 121-5546		0.90%	3.50%	22.70%	5.80%	21.30%	0.50%	-1.70%		1.80%	1.75%
7 - Heards Ferry Rd @ Riverside Dr	121-r724,121-r723, 121-r124, 121-r123		4.90%	-6.60%	4.70%	3.00%					1.50%	1.50%
8 - New Northside Dr @ Powers Ferry Rd	121-5663, 121-r121, 121-r122, 121-r721, 121-r722, 121-5546		0.90%	22.70%	5.80%	21.30%	0.50%	-1.70%			1.38%	1.50%
9 - Abernathy Rd @ Mt Vernon Hwy	121-5659,121-5645,121-6376,121-5670		0.90%	15.80%	-3.70%	3.70%					0.30%	0.50%
10 - Johnson Ferry Rd/Abernathy Rd @ Brandon Mill Rd/Johnson Ferry Rd	121-5665,121-6062, 121-6044		4.80%	2.90%	10.30%						3.85%	3.75%
11 - Abernathy Rd @ Peachtree Dunwoody Rd	121-5659,121-5645,121-6376,121-5670,121-r079,121-r080		0.90%	15.80%	-3.70%	3.70%	0.80%	3.40%			0.85%	0.50%
12 - Hollis Cobb Cir/Medical Center MARTA @ Peachtree Dunwoody Rd	121-5643, 121-r136, 121-r130		N/A	1.50%	3.80%						2.65%	2.50%
13 - Johnson Ferry Rd @ River Valley Rd	121-6014,121-6062,121-5665		11.70%	2.90%	4.80%						3.85%	3.75%
14 - Mt Vernon Hwy @ Northside Dr	121-5655, 121-5663		8.10%	0.90%							0.90%	1.00%
15 - Roswell Rd (SR 9) @ Spalding Dr	121-5122,121-6011		-3.40%	-2.30%							-2.85%	0.50%
16 - Spalding Dr @ Dunwoody Club / Roberts Dr	121-7233,121-0860,121-0861		-1.30%	N/A	N/A						-1.30%	0.50%
17 - Mount Vernon Hwy @ Barfield Rd	121-0221, 121-r077,121-r678,121-5658,121-5659		N/A	0.10%	4.80%	-9.30%	0.90%				1.93%	2.00%
18 - Mount Vernon Hwy @ Peachtree Dunwoody Rd	121-5659,121-5645,121-6376,121-5670		0.90%	15.80%	-3.70%	3.70%					0.30%	0.50%
19 - Lake Hearn Dr @ Peachtree Dunwoody Rd	121-5643, 121-r136, 121-r130		N/A	1.50%	3.80%						2.65%	2.50%
20 - Johnson Ferry Rd @ Glenridge Conn (south of I-285)	121-0656, 121-0125, 121-5646, 121-0653		1.00%	N/A	N/A	2.90%					1.95%	2.00%

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

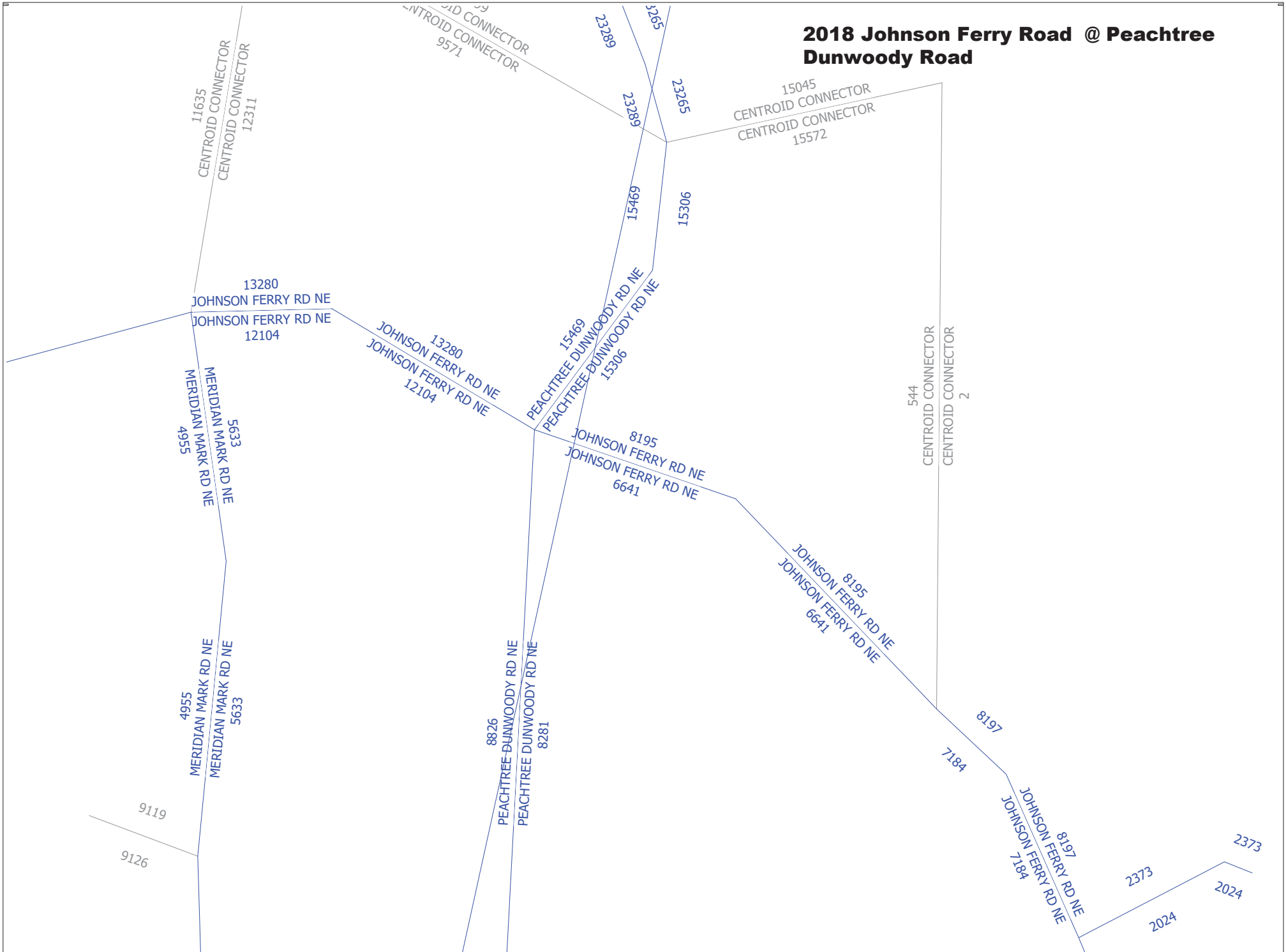
ID#	Intersection	Total Existing Traffic Volume (2018)				Total Future Traffic Volume (2050)				Growth Rate			Proposed
		W	N	E	S	W	N	E	S	Overall	E/W	N/S	
1	Johnson Ferry Rd @ Peachtree Dunwoody Rd	25384	30775	14836	17107	34334	39674	19701	21088	0.8%	0.9%	0.7%	0.75%
2	Northridge Rd @ SR 400 SB/Dunwoody Pl	23748	40254	45508	36735	28388	36109	49481	44663	0.3%	0.4%	0.2%	0.25%
3	Northside Dr @ Powers Ferry Rd	13931	6726	12736	5230	16418	9129	14456	8808	0.7%	0.5%	1.3%	0.75%
4	Dunwoody Pl/Hannover Park Rd @ Roswell Rd (SR 9)	N/A	34851	20790	18555	N/A	39474	21380	22905	0.4%	0.1%	0.5%	0.50%
5	Northridge Rd @ Roswell Rd (SR 9)		29086	20020	26027		35549	24182	31949	0.6%	0.6%	0.6%	0.50%
6	Interstate North Pkwy/New Northside Dr @ Northside Dr	9655	8842	14259	8232	12695	12870	17181	12598	0.9%	0.7%	1.3%	1.00%
7	Heards Ferry Rd @ Riverside Dr	6594	32047	4253	37295	8384	35627	5741	41563	0.4%	0.8%	0.3%	0.50%
8	New Northside Dr @ Powers Ferry Rd	12736	9299	5384	4248	14456	9939	6866	7039	0.6%	0.5%	0.7%	0.50%
9	Abernathy Rd @ Mt Vernon Hwy	42724	19346	32925	7742	47977	26973	35850	12894	0.6%	0.3%	1.2%	0.50%
10	Johnson Ferry Rd/Abernathy Rd @ Brandon Mill Rd/Johnson Ferry Rd	42294	4124	29959	15042	53204	5047	40460	14960	0.7%	0.8%	0.1%	0.75%
11	Abernathy Rd @ Peachtree Dunwoody Rd	57004	31192	42724	15278	72176	37172	47977	18255	0.6%	0.6%	0.6%	0.50%
12	Hollis Cobb Cir/Medical Center MARTA @ Peachtree Dunwoody Rd	N/A	46554	N/A	46554	N/A	58820	N/A	58820	0.7%	N/A	0.7%	0.75%
13	Johnson Ferry Rd @ River Valley Rd	31683		42294	12685	42000		53204	14171	0.7%	0.8%	0.3%	0.75%
14	Mt Vernon Hwy @ Northside Dr		8410	9812	5576		15008	15941	8645	1.6%	1.5%	1.7%	1.50%
15	Roswell Rd (SR 9) @ Spalding Dr		28877	355	28960		33969	736	34275	0.5%	2.3%	0.5%	0.50%
16	Spalding Dr @ Dunwoody Club Dr	27737		4446	23292	32378		5646	26735	0.5%	0.5%	0.4%	0.50%
17	Mount Vernon Hwy @ Barfield Rd	9067	5538	11814	4416	10687	17491	26929	8511	2.3%	1.9%	3.0%	2.25%
18	Mount Vernon Hwy @ Peachtree Dunwoody Rd	9677	14898	7742	16979	20976	17798	12894	20404	1.2%	2.1%	0.6%	1.25%
19	Lake Hearn Dr @ Peachtree Dunwoody Rd		45847	5234	46554		51051	12712	58820	0.7%	2.8%	0.5%	0.75%
20	Johnson Ferry Rd @ Glenridge Conn/Glenridge Dr	22614	37900	37573	22067	29554	49746	45314	28981	0.8%	0.7%	0.9%	0.75%
21	Spalding Dr @ Roberts Dr	13088	29540	27737	12277	16459	32178	32378	12846	0.4%	0.6%	0.2%	0.50%

Notes

Data from the ARC Travel Demad Model, provided to Gresham Smith by Kimley-Horn

N/A = Leg exists, but no data available

2018 Johnson Ferry Road @ Peachtree Dunwoody Road



[illegible]

The map displays a complex road network in the Atlanta area. Key features include:

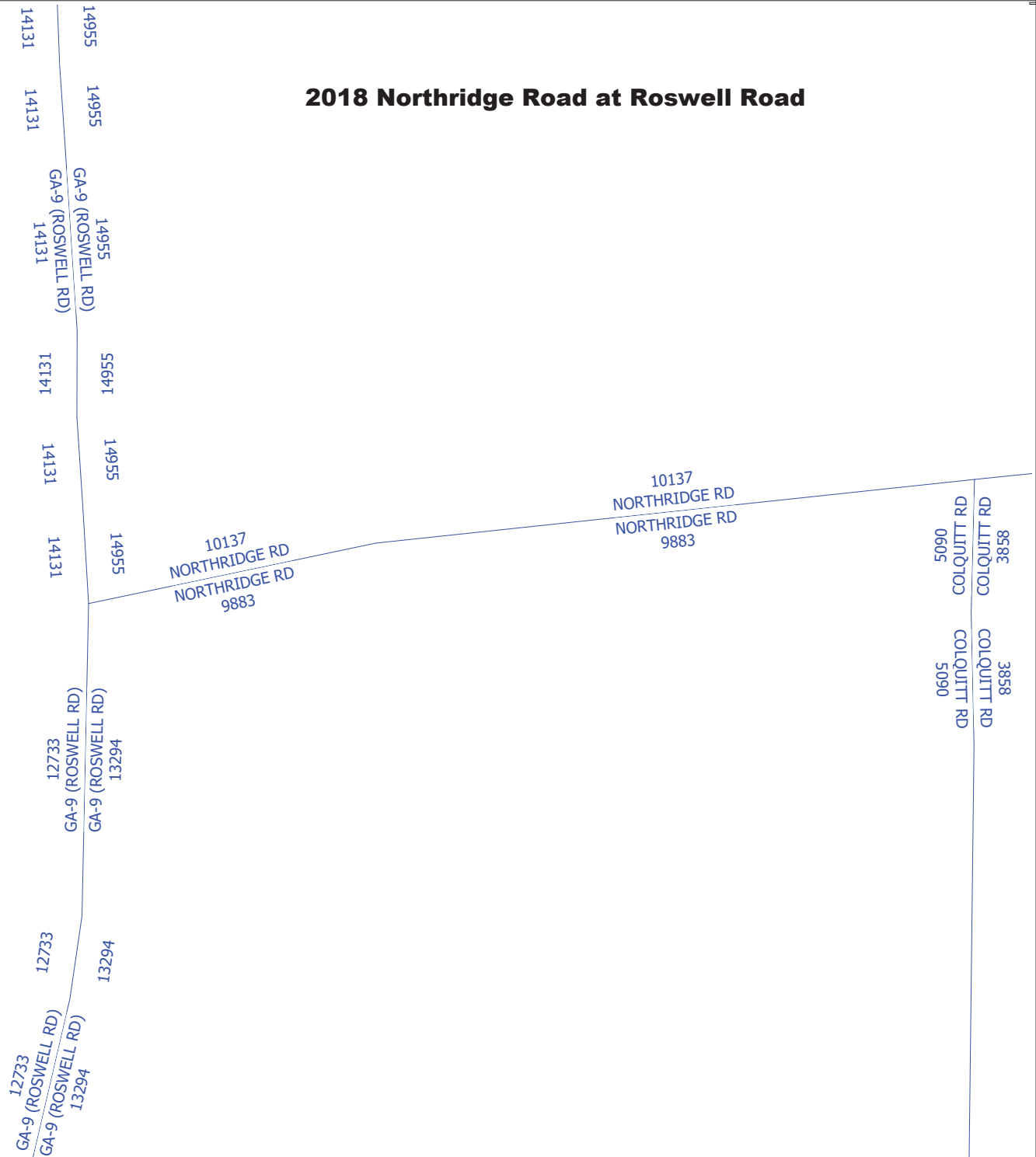
- Major Highways:**
 - I-285 / GA-407:** Running diagonally from the top left to the bottom right. It includes segments for Westbound Entrance 22, Eastbound Exit 22, and Northside Rd NW to New Northside Rd NW.
 - I-405:** Running diagonally from the top left to the bottom right, parallel to I-285.
- Local Roads:**
 - Northside Dr NW:** Multiple segments running diagonally across the map.
 - New Northside Dr NW:** Running diagonally from the top right to the bottom right.
 - Northside Rd NW:** Running diagonally from the top right to the bottom right.
- Interchanges and Exits:**
 - Exit 22:** Connecting I-285 / GA-407 to I-405.
 - Exit 2385:** Connecting I-285 / GA-407 to Northside Dr NW.
 - Exit 2999:** Connecting I-285 / GA-407 to New Northside Dr NW.
- Mile Markers and Distances:**
 - 2401, 8232, 6405, 1103:** Mile markers on I-285 / GA-407.
 - 111116, 6631, 5468, 7891, 6726, 4884, 9047, 5230, 4248, 5230, 4248:** Distances between various points along the roads.

2018 Roswell Road at Dunwoody Place

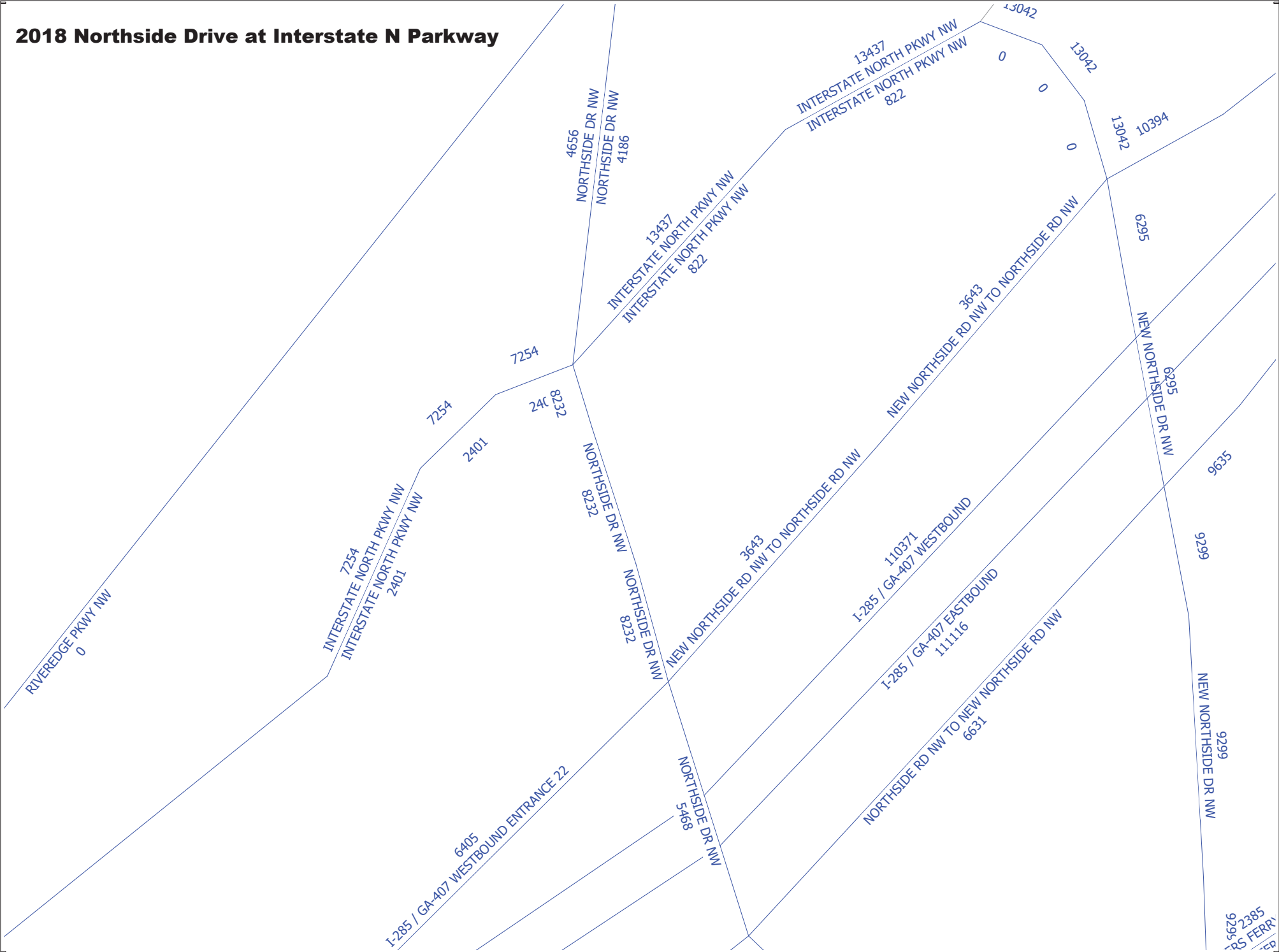
The map displays the following roads and landmarks:

- Roads:** Dunwoody Pl, Dunwoody Rd, Roswell Rd, GA-9 (Roswell Rd), Dunwoody Pl, Dunwoody Rd, Roswell Rd, GA-9 (Roswell Rd).
- Highways:** I-285, I-75.
- Landmarks:** Atlanta-Fulton County Stadium, Atlanta-Fulton County Stadium, Atlanta-Fulton County Stadium.

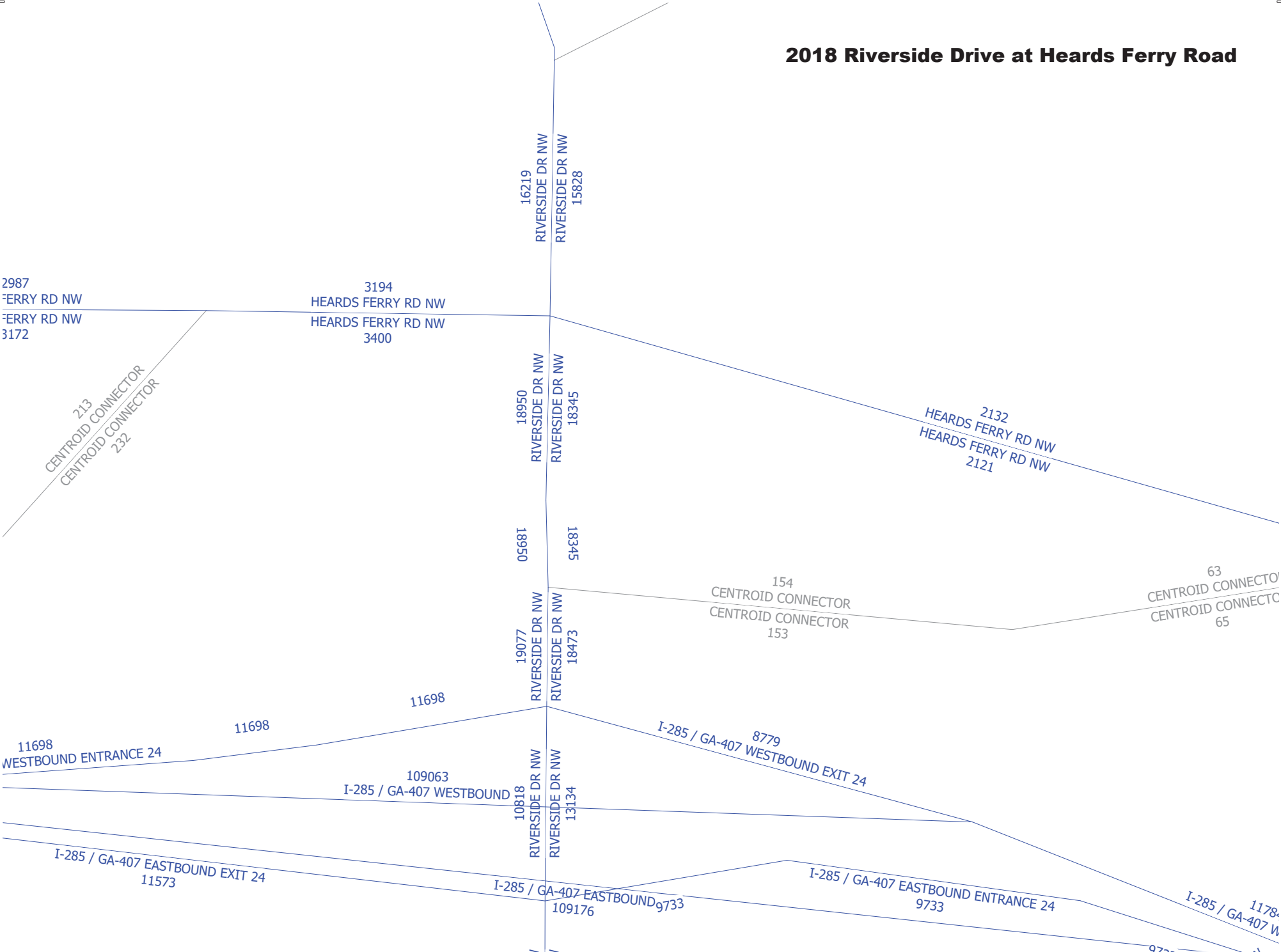
2018 Northridge Road at Roswell Road



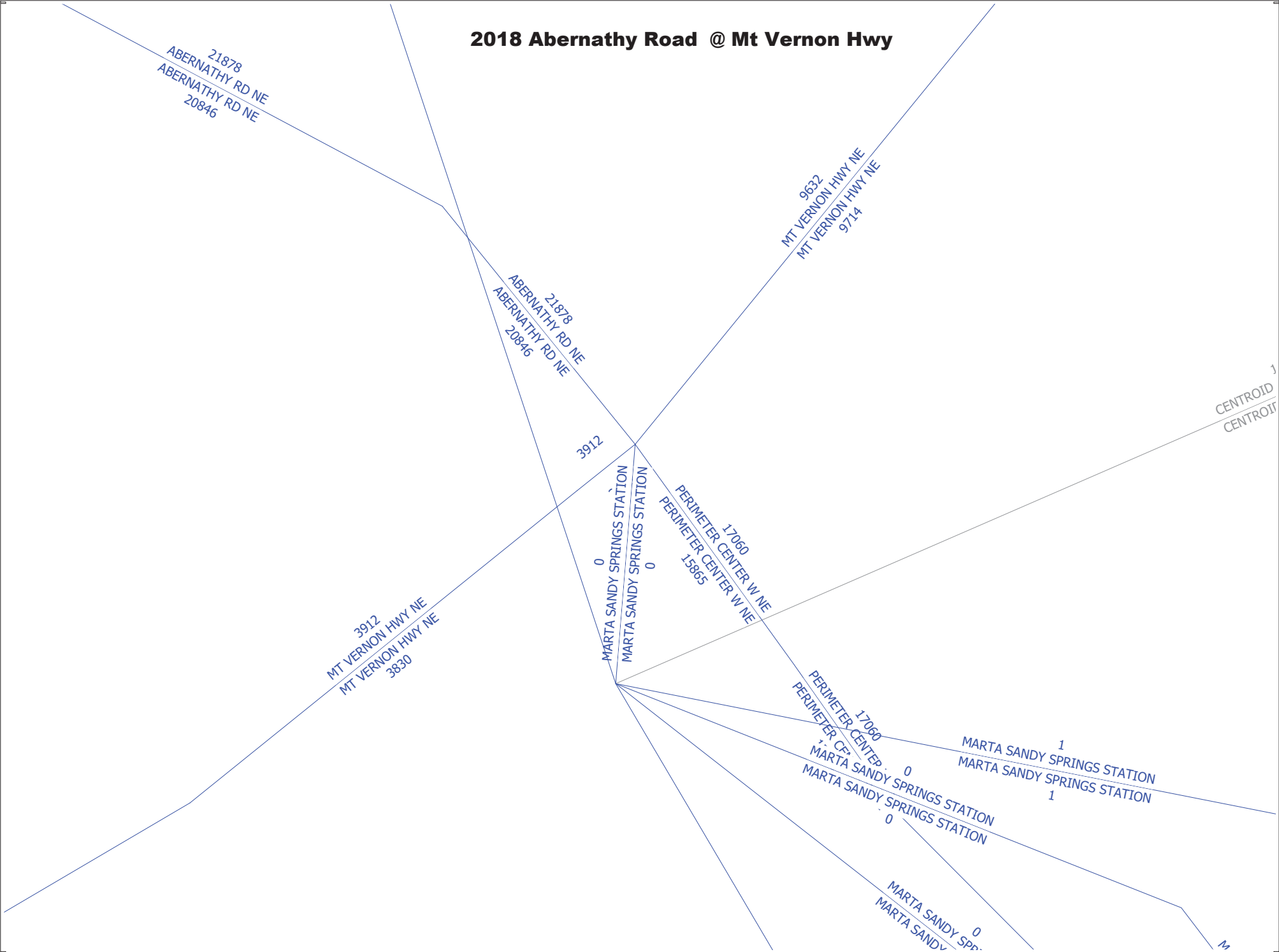
2018 Northside Drive at Interstate N Parkway



2018 Riverside Drive at Heards Ferry Road



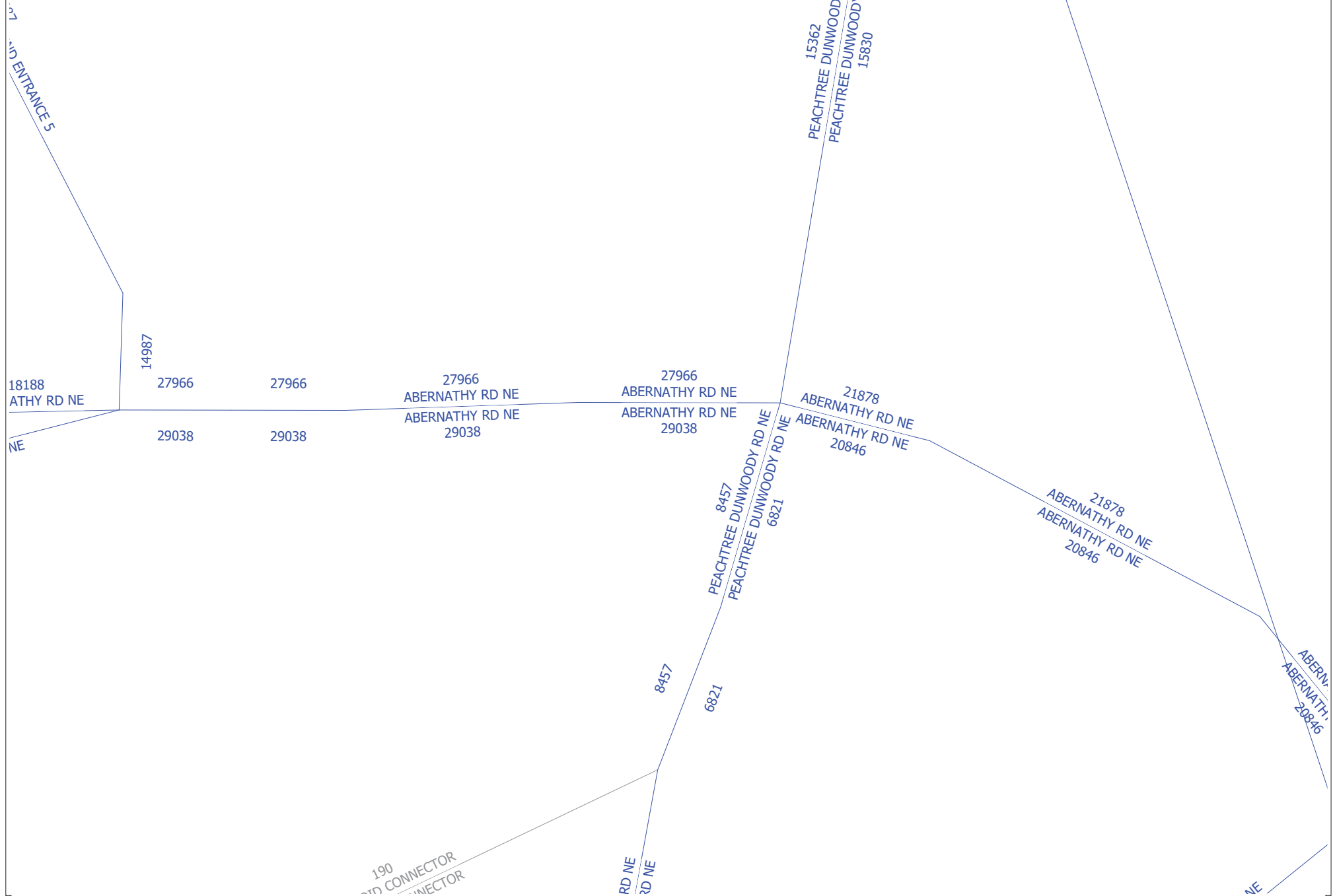
2018 Abernathy Road @ Mt Vernon Hwy



2018 Johnson Ferry Road @ River Valley Road, Brandon Mill Road

14496
15122
15503
JOHNSON FERRY RD NW
16180
JOHNSON FERRY RD NW
6127
RIVER VALLEY RD NW
6558
RIVER VALLEY RD NW
6558
21701
20593
JOHNSON FERRY RD NW
20593
JOHNSON FERRY RD NW
21701
7425
7617
7617
JOHNSON FERRY RD NW
7425
JOHNSON FERRY RD NW
7617
14140
15819
2253
BRANDON MILL RD NW
1871
BRANDON MILL RD NW
13746
ABERNATHY RD NW
15433
ABERNATHY RD NW
15433
13746
ABERNATHY RD NW
15433
402
CENTROID CONNECTOR
398
CENTROID CONNECTOR
7617
JOHNSON FERRY RD NW
7425
JOHNSON FERRY RD NW
7425

2018 Abernathy Road @ Peachtree Dunwoody Road



[illegible]

2018 Northside Dr @ Mt Vernon Road

1132
CENTROID CONNECTOR
946

3116
NORTHSIDE DR NW
2460

3807
NORTHSIDE DR NW
4603

3116

4837

4975

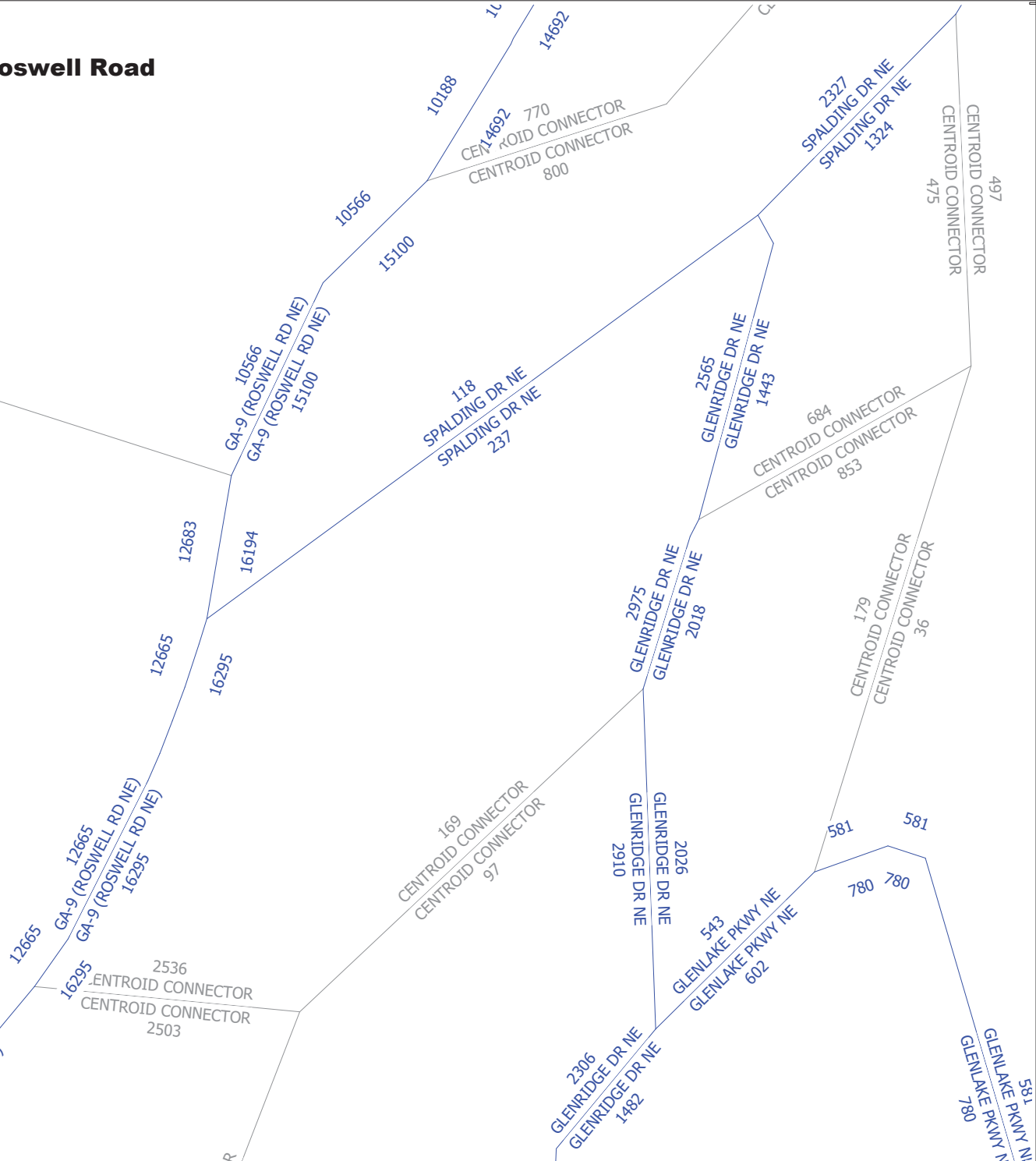
323
CENTROID CONNECTOR
324

4837
MT VERNON HWY NW
4975

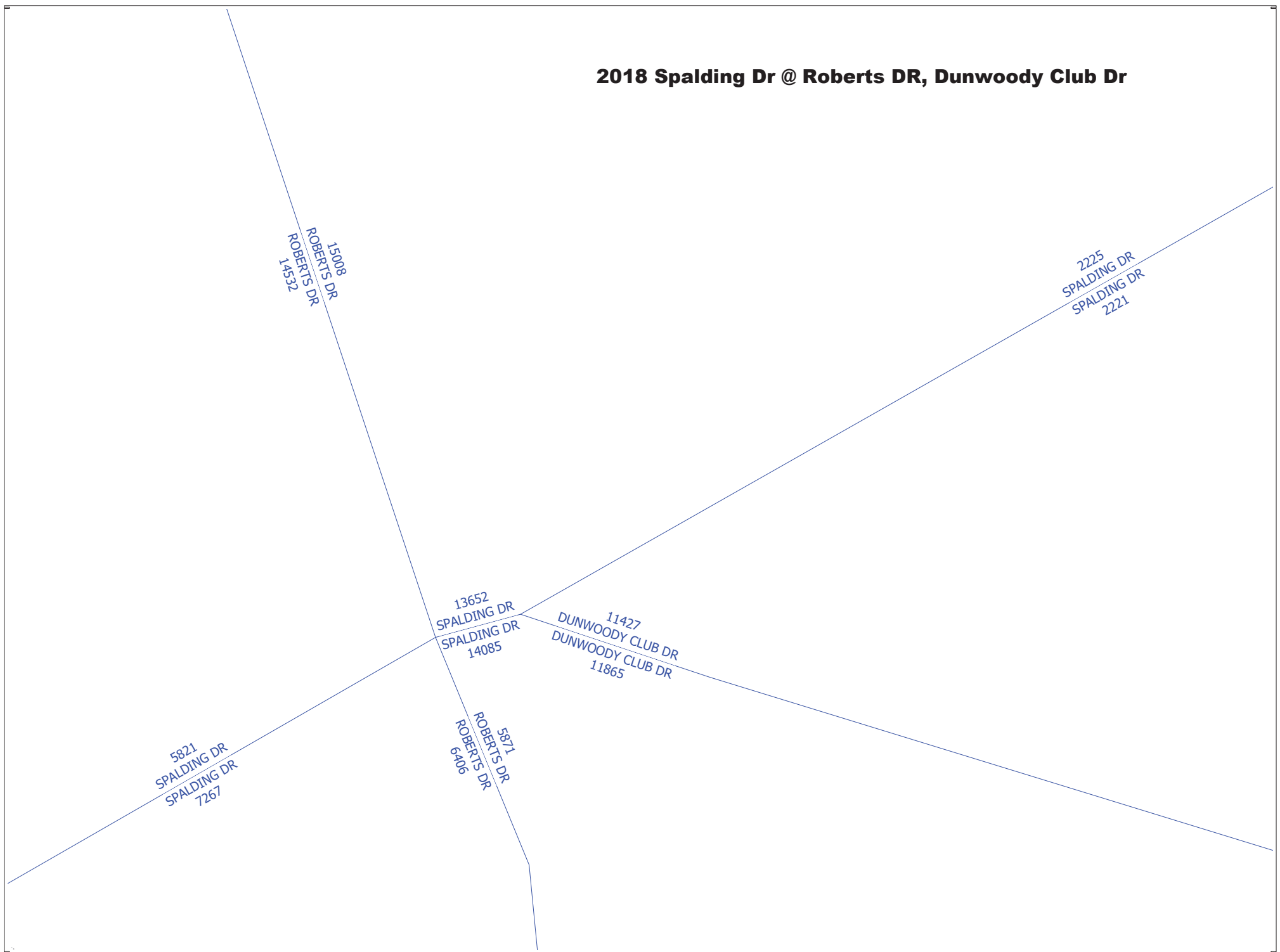
427
CENTROID CONNECTOR
430

MT VERNON HWY NW
530

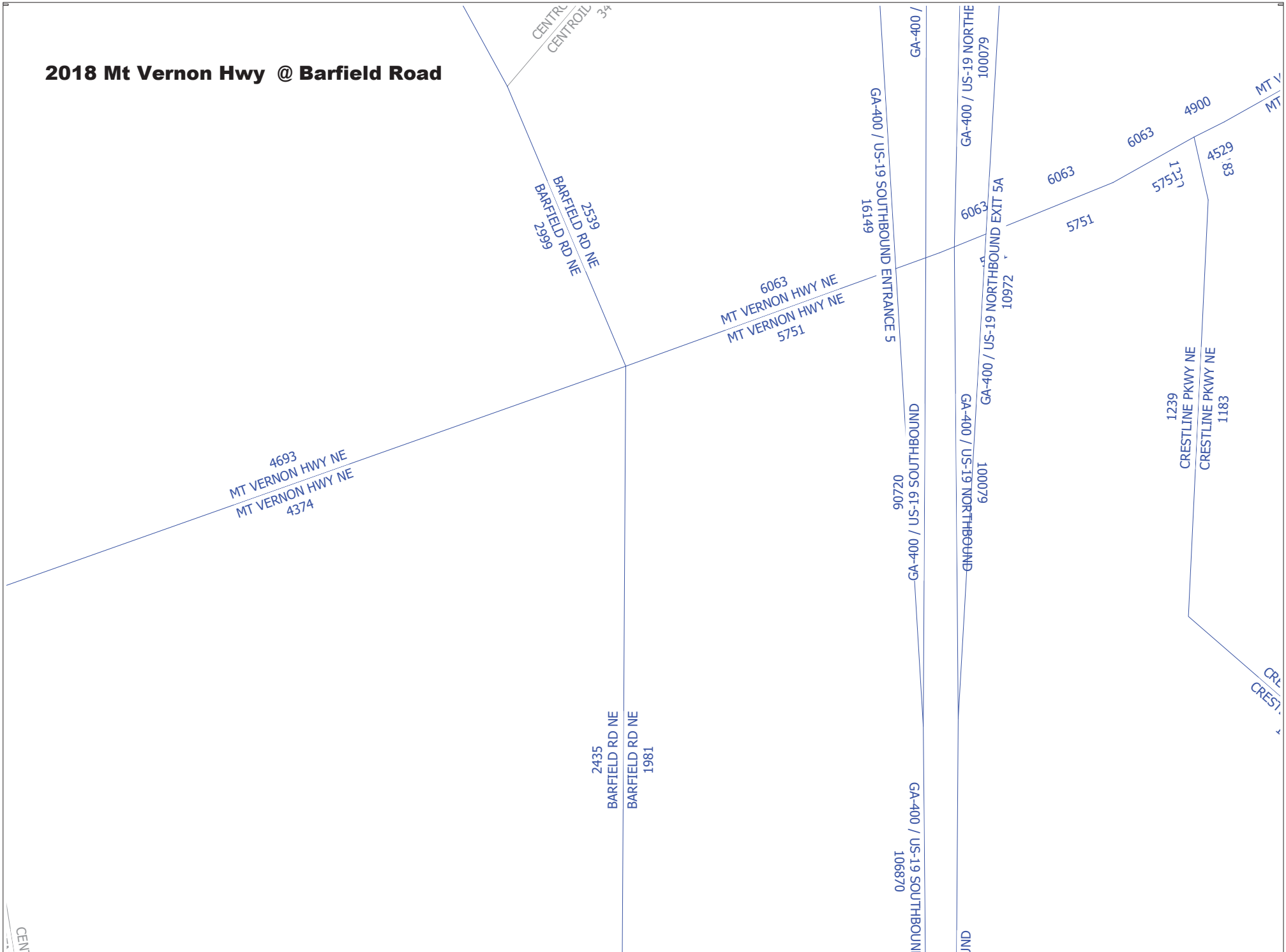
CENTROIL
CENTROIL



2018 Spalding Dr @ Roberts DR, Dunwoody Club Dr



2018 Mt Vernon Hwy @ Barfield Road



CEN

cube

cube

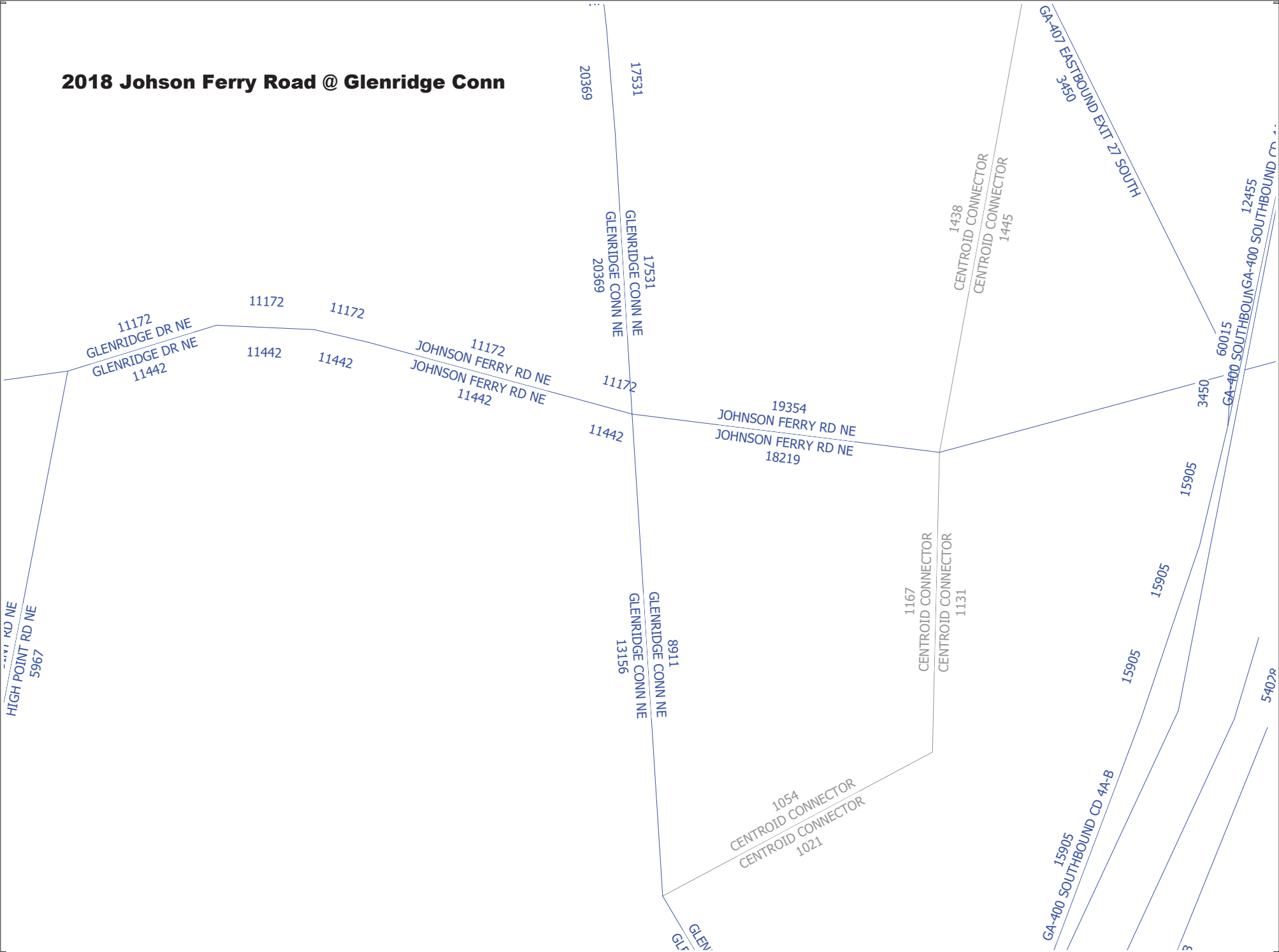


2018 Lake Hearn Road @ Peachtree Dunwoody Road

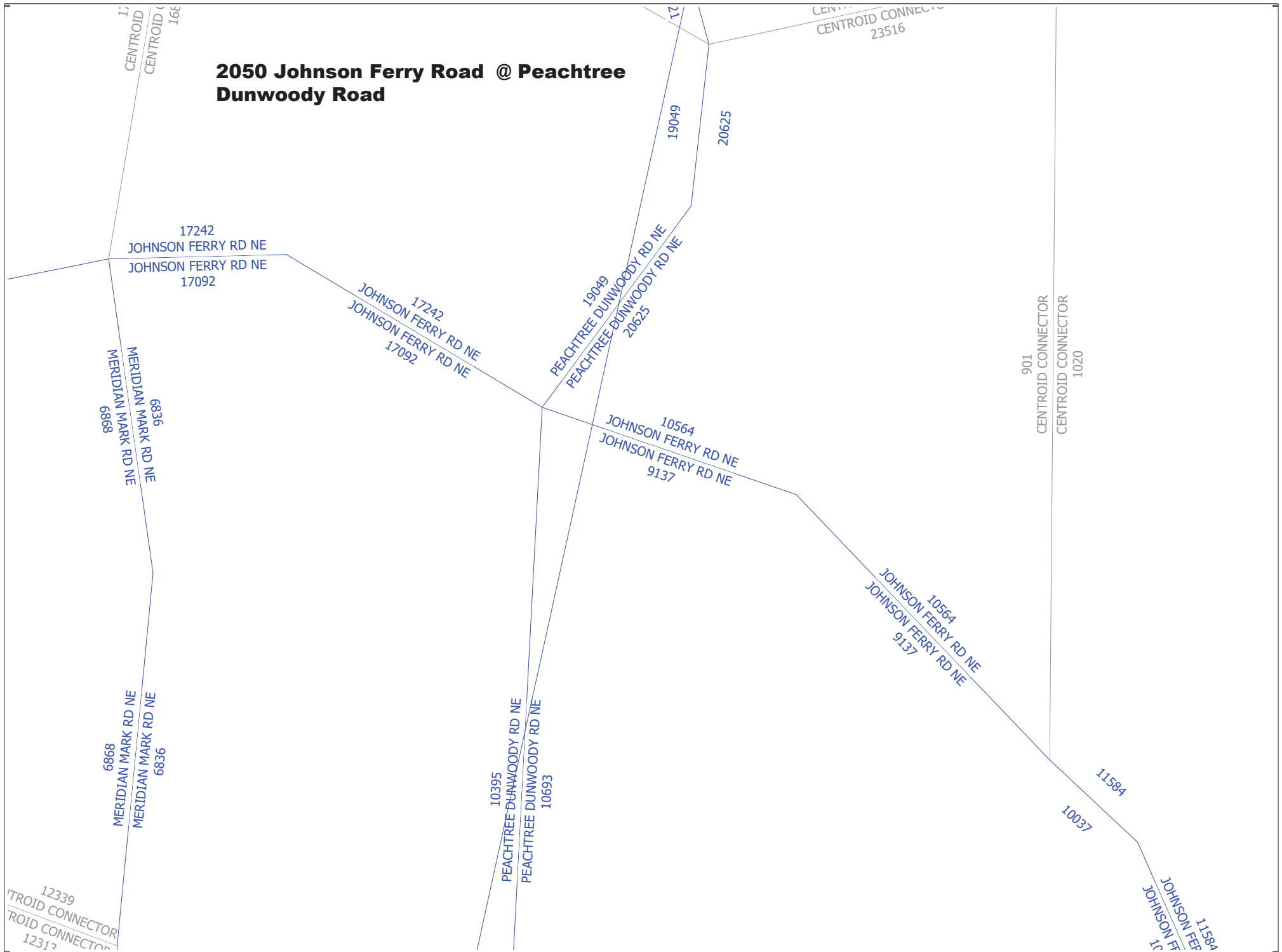
The map displays the following road segments and labels:

- I-285 / GA-407 WESTBOUND**: Labeled with 85025, 119054, 118319, 15551.
- I-285 / GA-407 EASTBOUND**: Labeled with 103404, 14917.
- GA-400 NORTHBOUND EXIT 4B**: Labeled with 13003.
- PEACHTREE DUNWOODY RD NE**: Labeled with 34028, 30043, 15367, 22535, 23312, 23289, 23265, 23265, 23289.
- LAKE HEARN DR NE**: Labeled with 3017, 2217.
- CENTROID CONNECTOR**: Labeled with 1884, 1875.
- MARTA MEDICAL CENTER STATION**: Multiple instances labeled with 0.

2018 Johson Ferry Road @ Glenridge Conn



2050 Johnson Ferry Road @ Peachtree Dunwoody Road



[illegible]

[illegible]

2802
N River Pkwy
N River Pkwy
2607



2050 Northridge Road at Roswell Road

2050 Northridge Road at Roswell Road

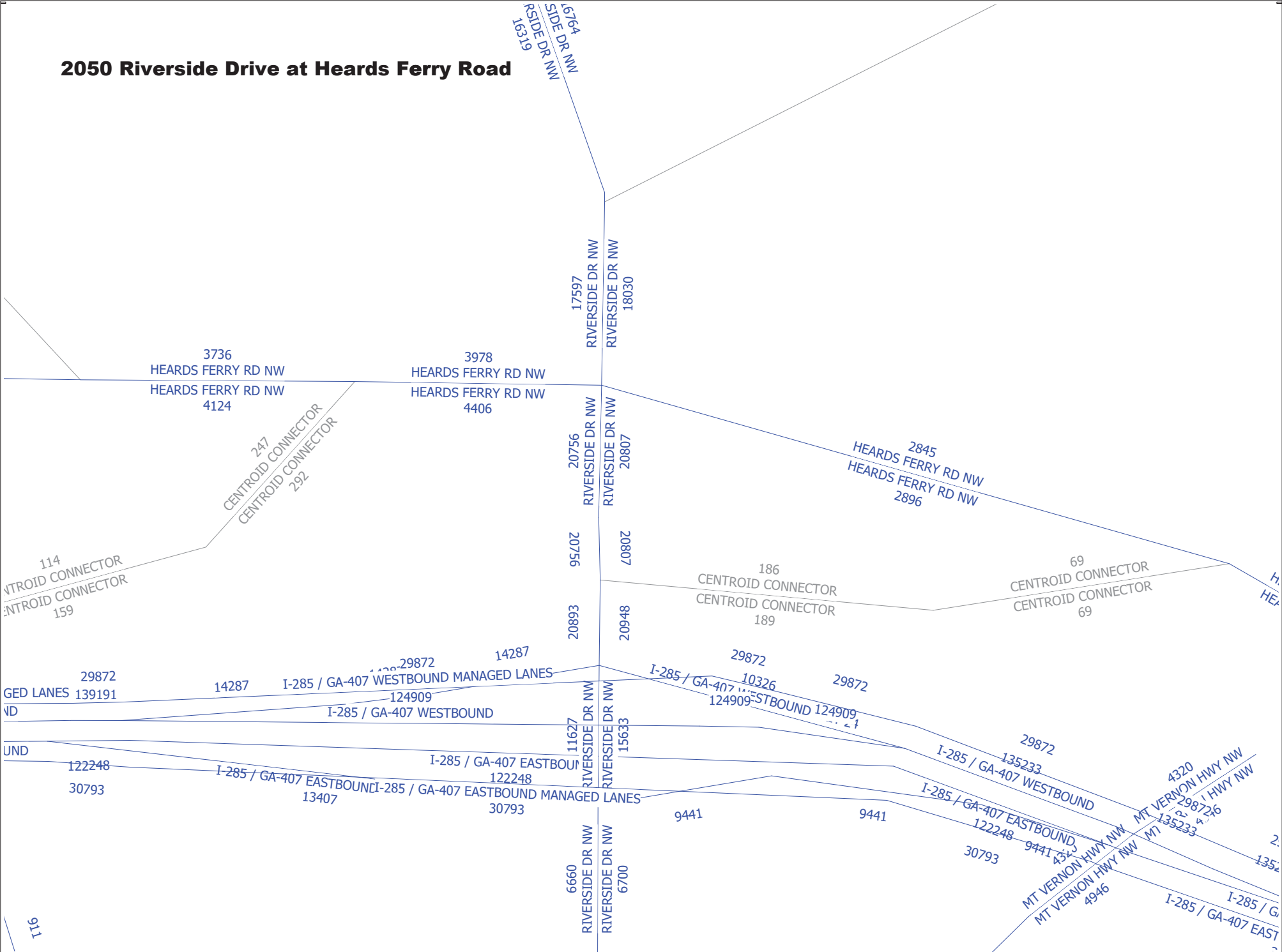
The map illustrates the intersection of Northridge Road and Roswell Road. Key features include:

- Northridge Road:** Labeled with addresses 12090, 14931, and 14931 Northridge Rd.
- Roswell Road:** Labeled with addresses 1094, 8709, 6078, 16119, and 15830 Roswell Rd.
- GA-9 (Roswell Rd):** Labeled with addresses 16119 and 15830.
- GA-9 (Northridge Rd):** Labeled with addresses 16119 and 15830.
- GA-9 (Roswell Rd):** Labeled with addresses 16119 and 15830.
- GA-9 (Northridge Rd):** Labeled with addresses 16119 and 15830.

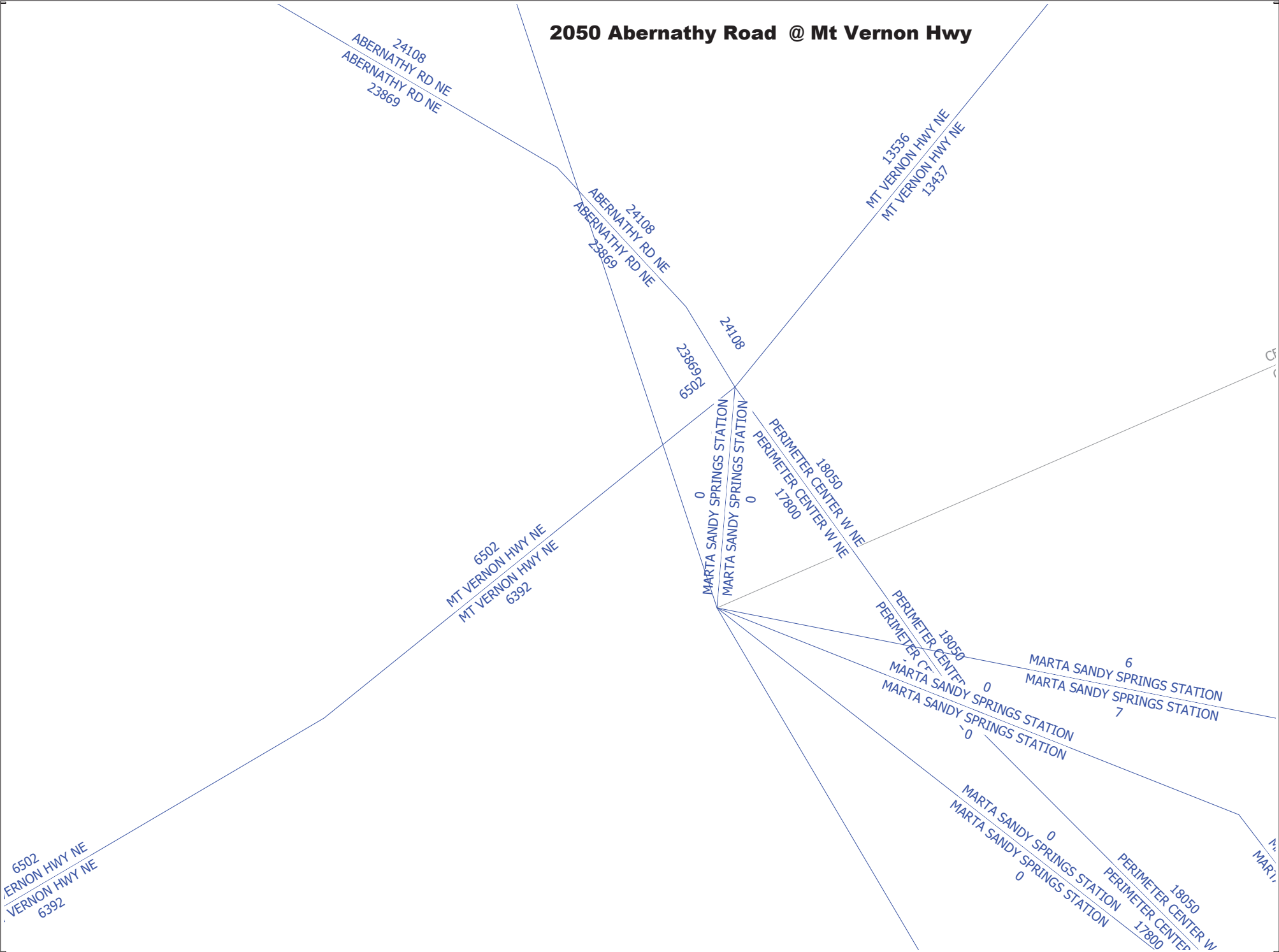
The map also includes a scale bar and a north arrow.



2050 Riverside Drive at Heards Ferry Road



2050 Abernathy Road @ Mt Vernon Hwy



[illegible]

[illegible]

GA-400 NORTHBOUND
15631

2050 Medical Center @ Peachtree Dunwoody Road

28721

30099

PEACHTREE DUNWOODY RD NE
28721

30099
PEACHTREE DUNWOODY RD NE

MARTA MEDICAL CENTER STATION
MARTA MEDICAL CENTER STATION
MARTA MEDICAL CENTER STATION
MARTA MEDICAL CENTER STATION

MARTA MEDICAL CENTER STATION
MARTA MEDICAL CENTER STATION

MARTA MEDICAL CENTER STATION
MARTA MEDICAL CENTER STATION

30099
28721

30099
28721

30099
28721

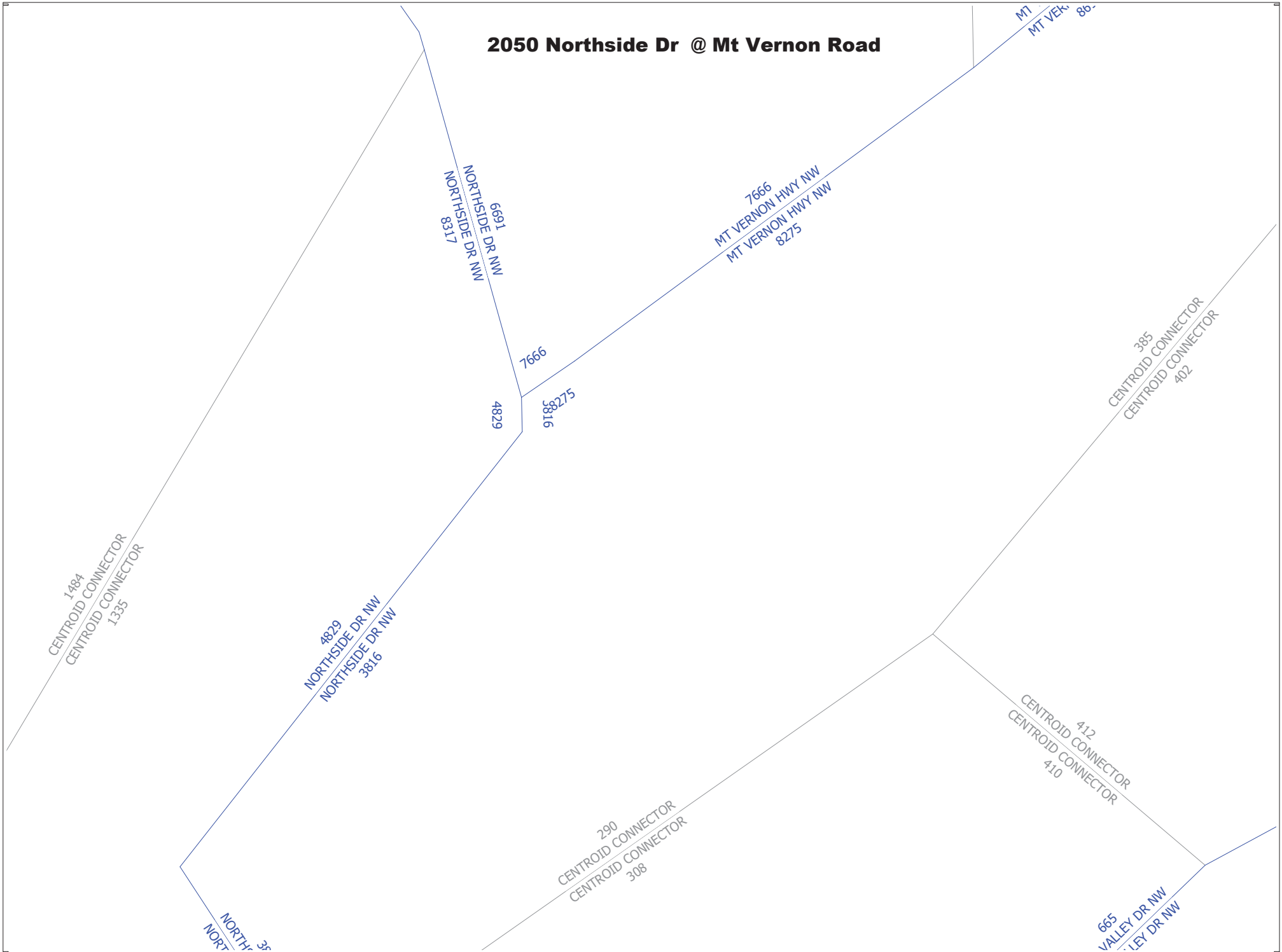
11127
CENTROID CONNECTOR
CENTROID CONNECTOR
10760

30099
28721

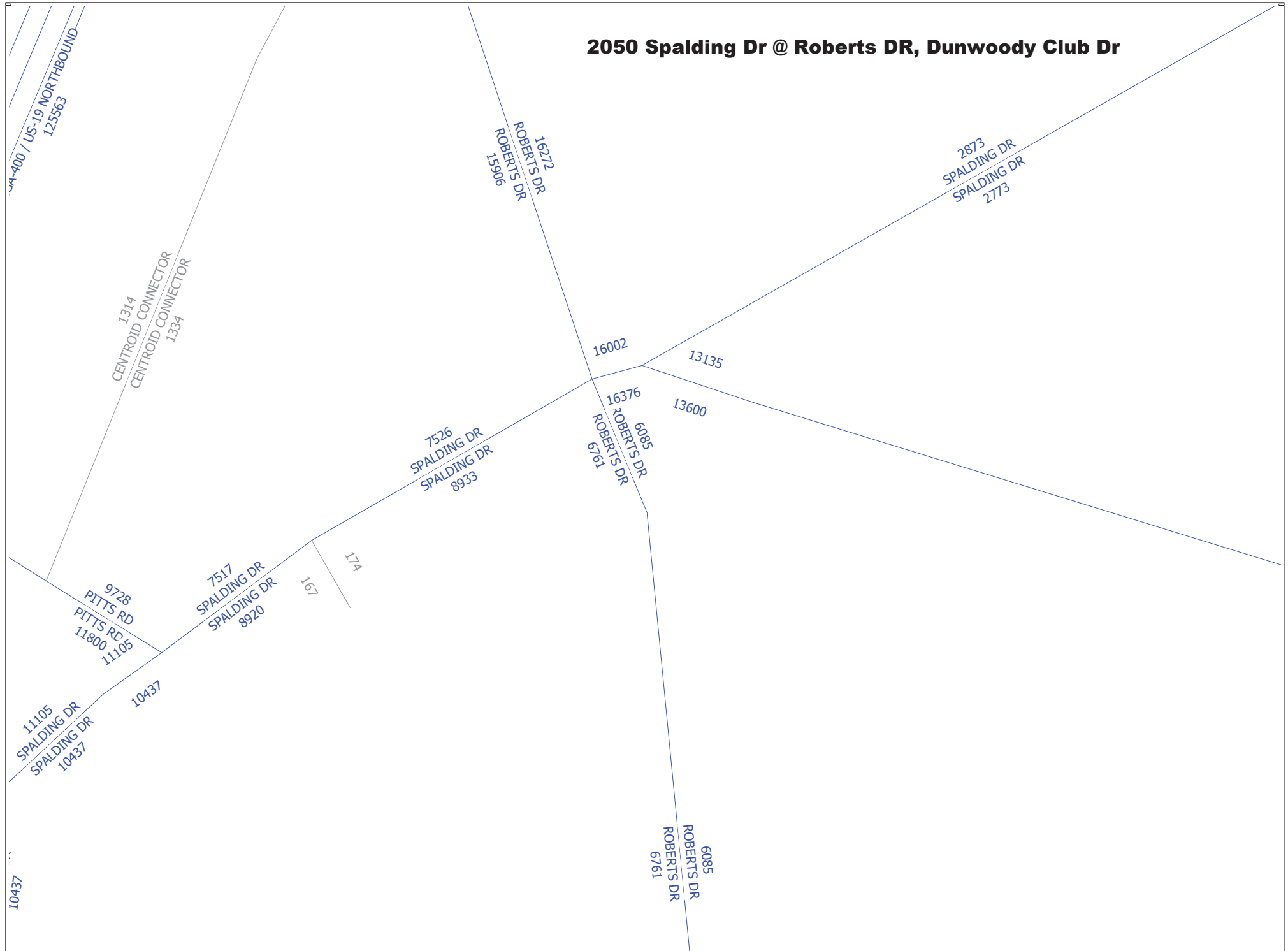
23686
CENTROID CONNECTOR
CENTROID CONNECTOR
23516

PEACHTREE DUNWOODY RD NE
19046
PEACHTREE DUNWOODY RD NE
20625

2050 Northside Dr @ Mt Vernon Road



2050 Spalding Dr @ Roberts DR, Dunwoody Club Dr



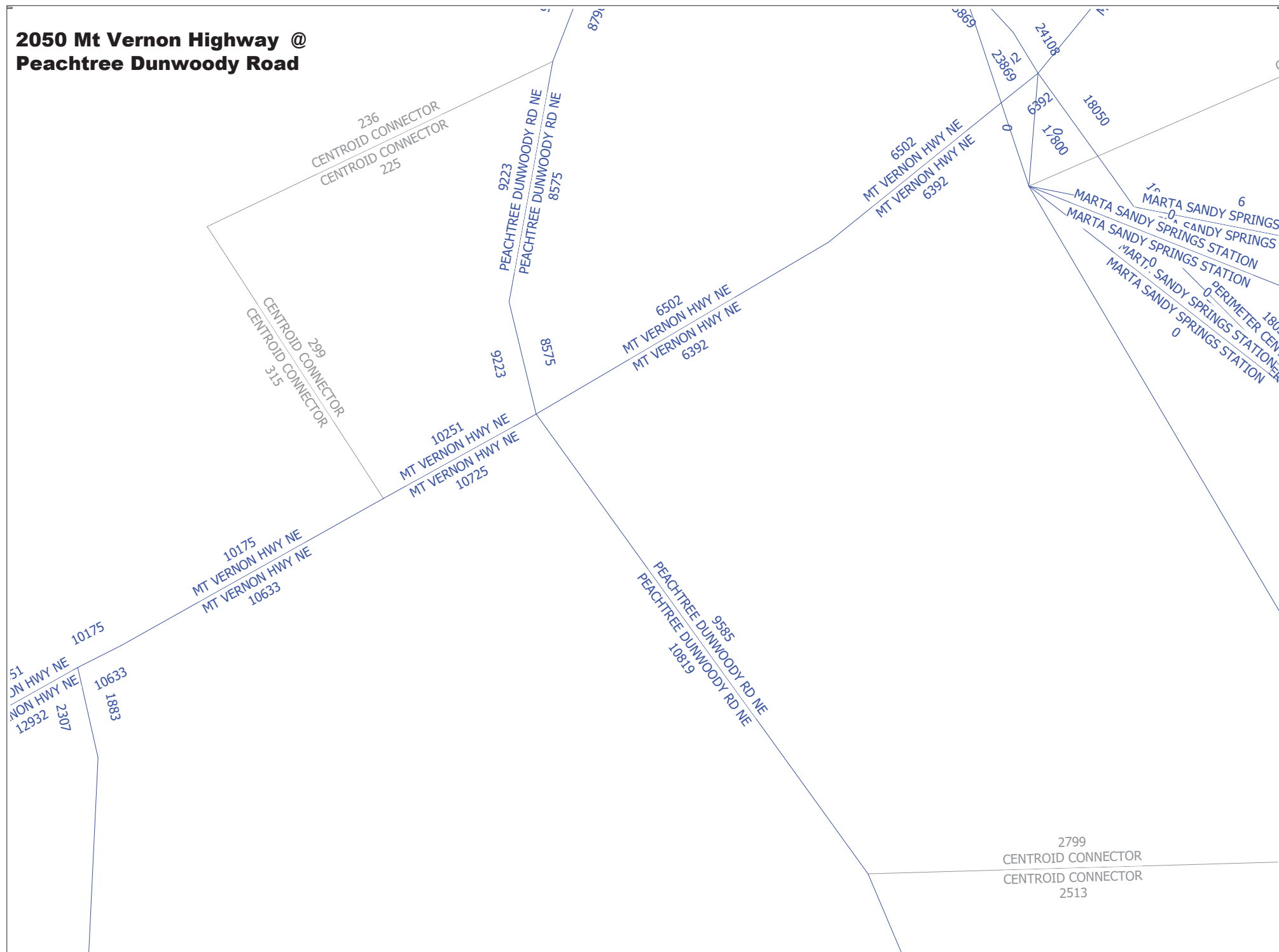
2050 Mt Vernon Hwy @ Barfield Road

Map showing the intersection of 2050 Mt Vernon Hwy and Barfield Road. The map includes various road segments, lane configurations, and addresses.

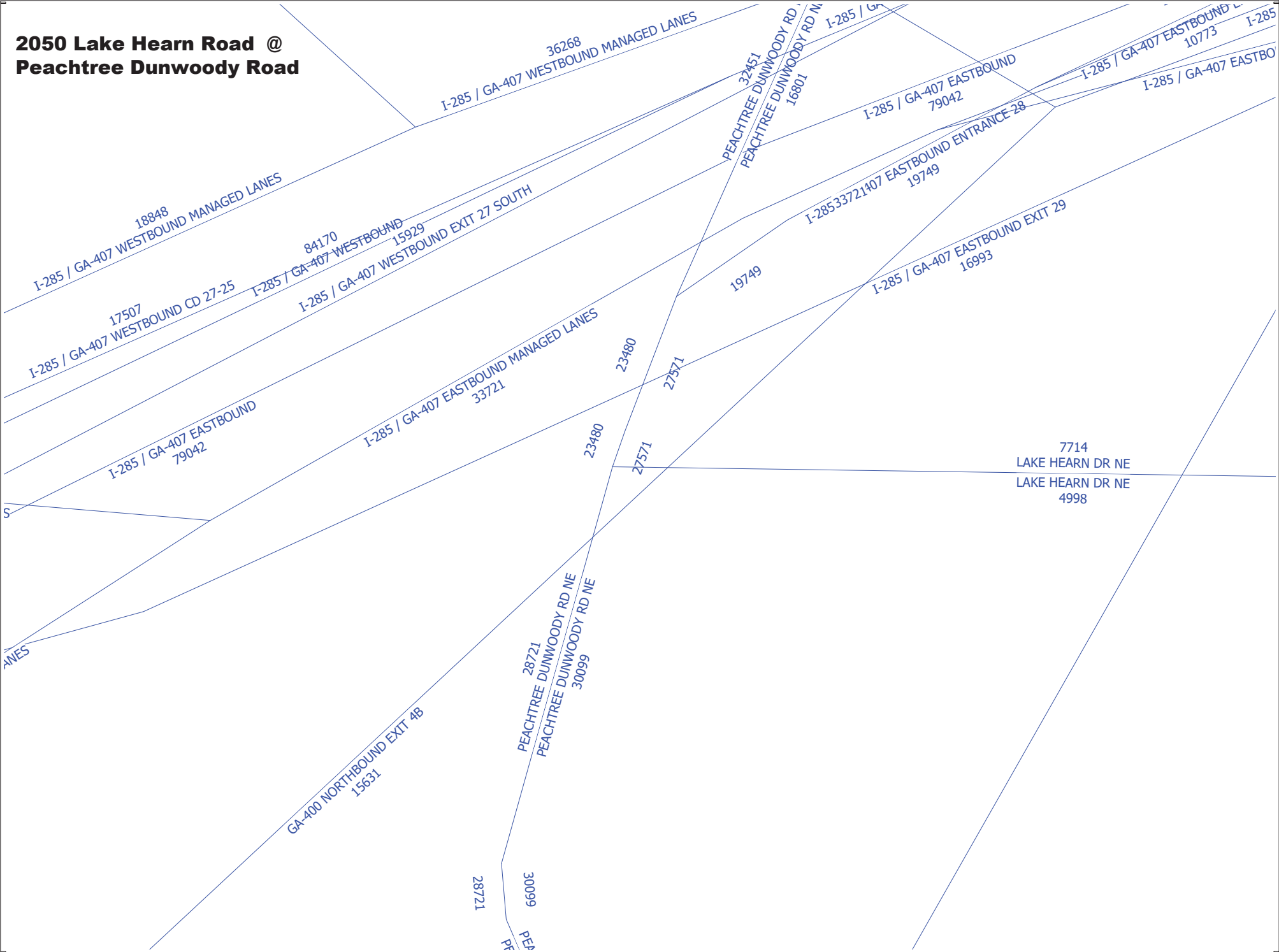
Key Road Segments and Labels:

- Barfield Rd NE:** 8700, 8791, 4384, 4127
- Mt Vernon Hwy NE:** 5284, 5403, 13488, 13441, 14918
- Crestline Pkwy NE:** 1883, 2307, 1883, 2307
- GA-400 / US-19 Northbound:** 60007, 11562, 70009
- GA-400 / US-19 Southbound:** 60007, 11562, 70009
- GA-400 / US-19 Northbound El Exit:** 11562
- GA-400 / US-19 Southbound Entrance 3:** 30142
- GA-400 / US-19 Southbound Entrance 5:** 50161
- GA-400 / US-19 Southbound Entrance 6:** 60142
- GA-400 / US-19 Southbound Entrance 7:** 70009
- GA-400 / US-19 Southbound Entrance 8:** 80009
- GA-400 / US-19 Southbound Entrance 9:** 90009
- GA-400 / US-19 Southbound Entrance 10:** 10009
- GA-400 / US-19 Southbound Entrance 11:** 11009
- GA-400 / US-19 Southbound Entrance 12:** 12009
- GA-400 / US-19 Southbound Entrance 13:** 13009
- GA-400 / US-19 Southbound Entrance 14:** 14009
- GA-400 / US-19 Southbound Entrance 15:** 15009
- GA-400 / US-19 Southbound Entrance 16:** 16009
- GA-400 / US-19 Southbound Entrance 17:** 17009
- GA-400 / US-19 Southbound Entrance 18:** 18009
- GA-400 / US-19 Southbound Entrance 19:** 19009
- GA-400 / US-19 Southbound Entrance 20:** 20009
- GA-400 / US-19 Southbound Entrance 21:** 21009
- GA-400 / US-19 Southbound Entrance 22:** 22009
- GA-400 / US-19 Southbound Entrance 23:** 23009
- GA-400 / US-19 Southbound Entrance 24:** 24009
- GA-400 / US-19 Southbound Entrance 25:** 25009
- GA-400 / US-19 Southbound Entrance 26:** 26009
- GA-400 / US-19 Southbound Entrance 27:** 27009
- GA-400 / US-19 Southbound Entrance 28:** 28009
- GA-400 / US-19 Southbound Entrance 29:** 29009
- GA-400 / US-19 Southbound Entrance 30:** 30009
- GA-400 / US-19 Southbound Entrance 31:** 31009
- GA-400 / US-19 Southbound Entrance 32:** 32009
- GA-400 / US-19 Southbound Entrance 33:** 33009
- GA-400 / US-19 Southbound Entrance 34:** 34009
- GA-400 / US-19 Southbound Entrance 35:** 35009
- GA-400 / US-19 Southbound Entrance 36:** 36009
- GA-400 / US-19 Southbound Entrance 37:** 37009
- GA-400 / US-19 Southbound Entrance 38:** 38009
- GA-400 / US-19 Southbound Entrance 39:** 39009
- GA-400 / US-19 Southbound Entrance 40:** 40009
- GA-400 / US-19 Southbound Entrance 41:** 41009
- GA-400 / US-19 Southbound Entrance 42:** 42009
- GA-400 / US-19 Southbound Entrance 43:** 43009
- GA-400 / US-19 Southbound Entrance 44:** 44009
- GA-400 / US-19 Southbound Entrance 45:** 45009
- GA-400 / US-19 Southbound Entrance 46:** 46009
- GA-400 / US-19 Southbound Entrance 47:** 47009
- GA-400 / US-19 Southbound Entrance 48:** 48009
- GA-400 / US-19 Southbound Entrance 49:** 49009
- GA-400 / US-19 Southbound Entrance 50:** 50009
- GA-400 / US-19 Southbound Entrance 51:** 51009
- GA-400 / US-19 Southbound Entrance 52:** 52009
- GA-400 / US-19 Southbound Entrance 53:** 53009
- GA-400 / US-19 Southbound Entrance 54:** 54009
- GA-400 / US-19 Southbound Entrance 55:** 55009
- GA-400 / US-19 Southbound Entrance 56:** 56009
- GA-400 / US-19 Southbound Entrance 57:** 57009
- GA-400 / US-19 Southbound Entrance 58:** 58009
- GA-400 / US-19 Southbound Entrance 59:** 59009
- GA-400 / US-19 Southbound Entrance 60:** 60009
- GA-400 / US-19 Southbound Entrance 61:** 61009
- GA-400 / US-19 Southbound Entrance 62:** 62009
- GA-400 / US-19 Southbound Entrance 63:** 63009
- GA-400 / US-19 Southbound Entrance 64:** 64009
- GA-400 / US-19 Southbound Entrance 65:** 65009
- GA-400 / US-19 Southbound Entrance 66:** 66009
- GA-400 / US-19 Southbound Entrance 67:** 67009
- GA-400 / US-19 Southbound Entrance 68:** 68009
- GA-400 / US-19 Southbound Entrance 69:** 69009
- GA-400 / US-19 Southbound Entrance 70:** 70009
- GA-400 / US-19 Southbound Entrance 71:** 71009
- GA-400 / US-19 Southbound Entrance 72:** 72009
- GA-400 / US-19 Southbound Entrance 73:** 73009
- GA-400 / US-19 Southbound Entrance 74:** 74009
- GA-400 / US-19 Southbound Entrance 75:** 75009
- GA-400 / US-19 Southbound Entrance 76:** 76009
- GA-400 / US-19 Southbound Entrance 77:** 77009
- GA-400 / US-19 Southbound Entrance 78:** 78009
- GA-400 / US-19 Southbound Entrance 79:** 79009
- GA-400 / US-19 Southbound Entrance 80:** 80009
- GA-400 / US-19 Southbound Entrance 81:** 81009
- GA-400 / US-19 Southbound Entrance 82:** 82009
- GA-400 / US-19 Southbound Entrance 83:** 83009
- GA-400 / US-19 Southbound Entrance 84:** 84009
- GA-400 / US-19 Southbound Entrance 85:** 85009
- GA-400 / US-19 Southbound Entrance 86:** 86009
- GA-400 / US-19 Southbound Entrance 87:** 87009
- GA-400 / US-19 Southbound Entrance 88:** 88009
- GA-400 / US-19 Southbound Entrance 89:** 89009
- GA-400 / US-19 Southbound Entrance 90:** 90009
- GA-400 / US-19 Southbound Entrance 91:** 91009
- GA-400 / US-19 Southbound Entrance 92:** 92009
- GA-400 / US-19 Southbound Entrance 93:** 93009
- GA-400 / US-19 Southbound Entrance 94:** 94009
- GA-400 / US-19 Southbound Entrance 95:** 95009
- GA-400 / US-19 Southbound Entrance 96:** 96009
- GA-400 / US-19 Southbound Entrance 97:** 97009
- GA-400 / US-19 Southbound Entrance 98:** 98009
- GA-400 / US-19 Southbound Entrance 99:** 99009
- GA-400 / US-19 Southbound Entrance 100:** 10009

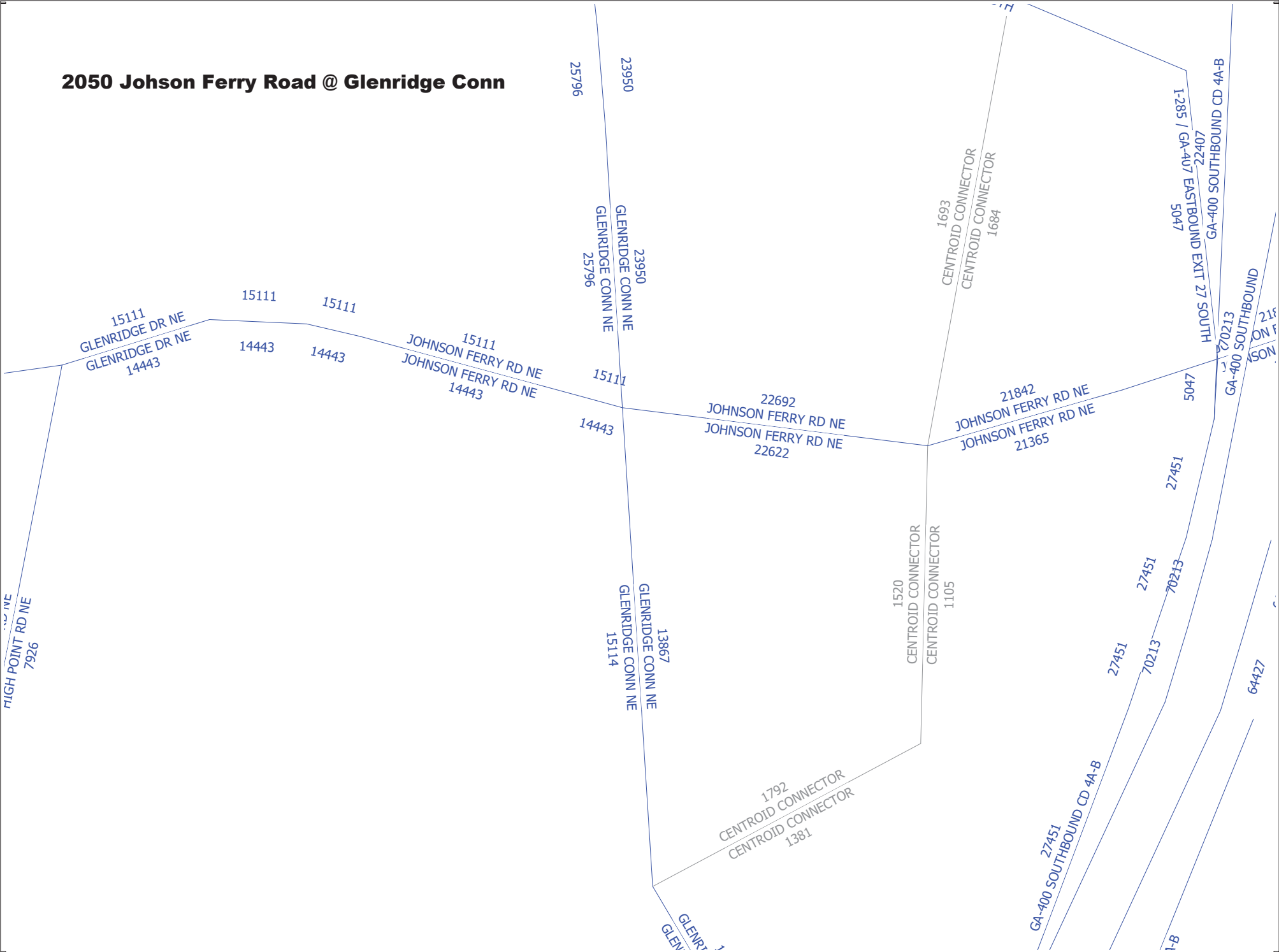
**2050 Mt Vernon Highway @
Peachtree Dunwoody Road**



**2050 Lake Hearn Road @
Peachtree Dunwoody Road**



2050 Johson Ferry Road @ Glenridge Conn



APPENDIX C: CRASH DATA



**Sandy Springs Transportation Master Plan
Johnson Ferry Rd @ Peachtree Dunwoody Rd
Years 2015 to 2019**

Year	Crash Type							Total Crashes
	Angle	Head On	Rear End	Sideswipe-Same Direction	Sideswipe-Opposite Direction	Not A Collision With Motor Vehicle	Not Specified	
2015	8	1	17	19	0	2	0	47
2016	12	1	11	19	1	1	0	45
2017	14	0	25	9	1	0	0	49
2018	12	0	16	9	0	1	0	38
2019	10	0	21	9	0	1	0	41
Total	56	2	90	65	2	5	0	220
	25.5%	0.9%	40.9%	29.5%	0.9%	2.3%	0.0%	100.0%

Year	Severity			Total Crashes
	PDO	Injury	Fatal	
2015	38	9	0	47
2016	37	8	0	45
2017	38	11	0	49
2018	33	5	0	38
2019	37	4	0	41
Total	183	37	0	220
	83%	17%	0%	100.0%

Year	Road Surface				Total Crashes
	Dry	Wet	Icy	Other	
2015	42	5	0	0	47
2016	43	2	0	0	45
2017	39	10	0	0	49
2018	28	10	0	0	38
2019	35	6	0	0	41
Total	187	33	0	0	220
	85%	15%	0%	0%	100.0%

Year	Lighting						Total Crashes
	Dawn	Daylight	Dusk	Dark-Lighted	Dark-Not Lighted	Not Specified	
2015	0	44	0	0	0	3	47
2016	0	42	0	0	0	3	45
2017	1	43	0	0	0	5	49
2018	1	32	2	0	0	3	38
2019	1	35	0	0	0	5	41
Total	3	196	2	0	0	19	220
	1%	89%	1%	0%	0%	9%	100.0%

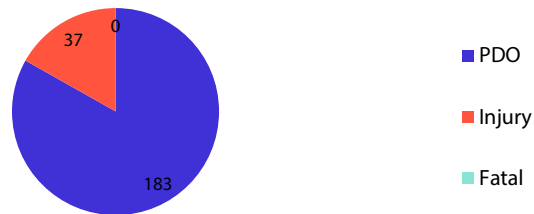


Sandy Springs Transportation Master Plan
Johnson Ferry Rd @ Peachtree Dunwoody Rd
Years 2015 to 2019

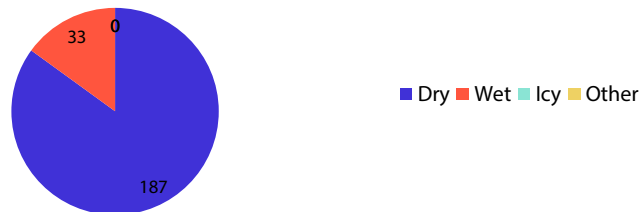
Crash Type



Severity



Road Surface



Lighting



Sandy Springs Transportation Master Plan
Northridge Rd @ SR 400
Years 2015 to 2019

Year	Crash Type							Total Crashes
	Angle	Head On	Rear End	Sideswipe-Same Direction	Sideswipe-Opposite Direction	Not A Collision With Motor Vehicle	Not Specified	
2015	26	2	65	34	2	3	0	132
2016	31	4	98	21	0	1	0	155
2017	41	4	78	21	0	7	0	151
2018	22	3	51	18	1	0	0	95
2019	29	0	44	15	1	3	0	92
Total	149	13	336	109	4	14	0	625
	23.8%	2.1%	53.8%	17.4%	0.6%	2.2%	0.0%	100.0%

Year	Severity			Total Crashes
	PDO	Injury	Fatal	
2015	110	22	0	132
2016	115	40	0	155
2017	122	29	0	151
2018	78	16	1	95
2019	74	18	0	92
Total	499	125	1	625
	80%	20%	0%	100.0%

Year	Road Surface				Total Crashes
	Dry	Wet	Icy	Other	
2015	98	34	0	0	132
2016	140	15	0	0	155
2017	135	16	0	0	151
2018	81	14	0	0	95
2019	76	15	0	1	92
Total	530	94	0	1	625
	85%	15%	0%	0%	100.0%

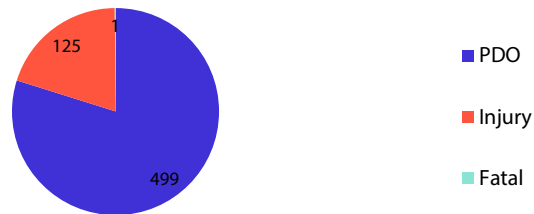
Year	Lighting						Total Crashes
	Dawn	Daylight	Dusk	DarkLighted	DarkNot Lighted	Not Specified	
2015	3	98	1	25	5	0	132
2016	1	115	4	34	1	0	155
2017	3	109	5	32	2	0	151
2018	1	76	4	13	1	0	95
2019	1	65	1	21	4	0	92
Total	9	463	15	125	13	0	625
	1%	74%	2%	20%	2%	0%	100.0%

Sandy Springs Transportation Master Plan
Northridge Rd @ SR 400
Years 2015 to 2019

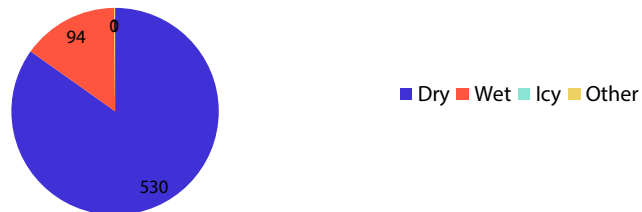
Crash Type



Severity



Road Surface



Lighting



**Sandy Springs Transportation Master Plan
Northside Dr @ Powers Ferry Rd
Years 2015 to 2019**

Year	Crash Type							Total Crashes
	Angle	Head On	Rear End	Sideswipe-Same Direction	Sideswipe-Opposite Direction	Not A Collision With Motor Vehicle	Not Specified	
2015	5	0	11	6	1	1	0	24
2016	13	1	10	8	0	0	0	32
2017	14	1	14	8	0	0	0	37
2018	17	0	2	8	2	1	0	30
2019	11	1	8	8	0	3	0	31
Total	60	3	45	38	3	5	0	154
	39.0%	1.9%	29.2%	24.7%	1.9%	3.2%	0.0%	100.0%

Year	Severity			Total Crashes
	PDO	Injury	Fatal	
2015	15	9	0	24
2016	25	7	0	32
2017	30	7	0	37
2018	24	6	0	30
2019	23	8	0	31
Total	117	37	0	154
	76%	24%	0%	100.0%

Year	Road Surface				Total Crashes
	Dry	Wet	Icy	Other	
2015	22	2	0	0	24
2016	31	1	0	0	32
2017	29	8	0	0	37
2018	24	5	0	1	30
2019	26	4	0	1	31
Total	132	20	0	2	154
	86%	13%	0%	1%	100.0%

Year	Lighting						Total Crashes
	Dawn	Daylight	Dusk	DarkLighted	DarkNot Lighted	Not Specified	
2015	0	22	0	0	2	0	24
2016	0	26	0	4	2	0	32
2017	2	27	1	5	2	0	37
2018	0	25	0	4	1	0	30
2019	0	26	0	3	2	0	31
Total	2	126	1	16	9	0	154
	1%	82%	1%	10%	6%	0%	100.0%

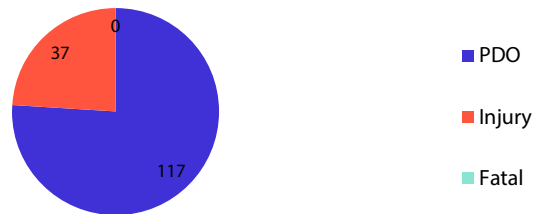


Sandy Springs Transportation Master Plan
Northside Dr @ Powers Ferry Rd
Years 2015 to 2019

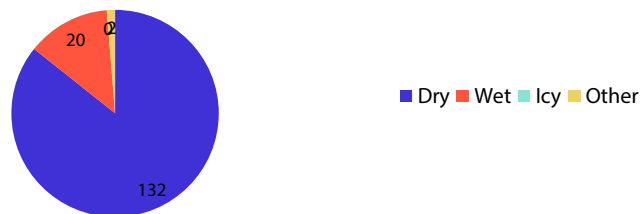
Crash Type



Severity



Road Surface



Lighting



**Sandy Springs Transportation Master Plan
Dunwoody Place @ Roswell Rd
Years 2015 to 2019**

Year	Crash Type							Total Crashes
	Angle	Head On	Rear End	Sideswipe-Same Direction	Sideswipe-Opposite Direction	Not A Collision With Motor Vehicle	Not Specified	
2015	15	0	34	3	0	2	0	54
2016	20	2	34	14	1	3	0	74
2017	23	0	39	5	0	1	0	68
2018	11	0	22	2	0	1	0	36
2019	17	0	34	3	0	4	0	58
Total	86	2	163	27	1	11	0	290
	29.7%	0.7%	56.2%	9.3%	0.3%	3.8%	0.0%	100.0%

Year	Severity			Total Crashes
	PDO	Injury	Fatal	
2015	39	15	0	54
2016	60	14	0	74
2017	53	15	0	68
2018	27	9	0	36
2019	44	14	0	58
Total	223	67	0	290
	77%	23%	0%	100.0%

Year	Road Surface				Total Crashes
	Dry	Wet	Icy	Other	
2015	44	10	0	0	54
2016	63	11	0	0	74
2017	62	6	0	0	68
2018	25	11	0	0	36
2019	48	9	0	1	58
Total	242	47	0	1	290
	83%	16%	0%	0%	100.0%

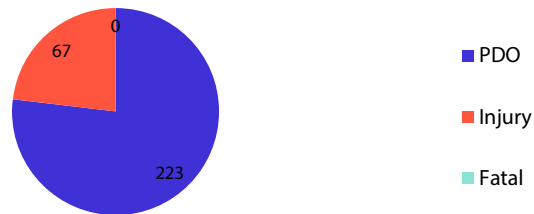
Year	Lighting						Total Crashes
	Dawn	Daylight	Dusk	DarkLighted	DarkNot Lighted	Not Specified	
2015	2	42	2	7	1	0	54
2016	0	58	4	11	1	0	74
2017	1	60	1	5	1	0	68
2018	1	30	0	5	0	0	36
2019	2	39	2	9	6	0	58
Total	6	229	9	37	9	0	290
	2%	79%	3%	13%	3%	0%	100.0%

Sandy Springs Transportation Master Plan
Dunwoody Place @ Roswell Rd
Years 2015 to 2019

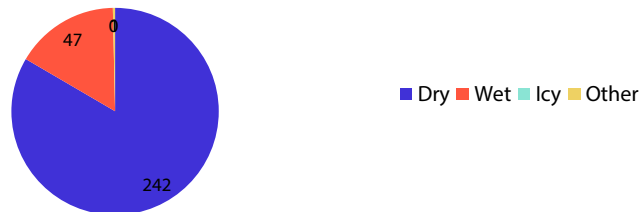
Crash Type



Severity



Road Surface



Lighting



Sandy Springs Transportation Master Plan
Northridge Rd @ Roswell Rd
Years 2015 to 2019

Year	Crash Type							Total Crashes
	Angle	Head On	Rear End	Sideswipe-Same Direction	Sideswipe-Opposite Direction	Not A Collision With Motor Vehicle	Not Specified	
2015	13	2	44	5	1	1	0	66
2016	10	0	40	10	2	1	0	63
2017	15	0	36	10	0	2	0	63
2018	11	1	26	6	1	2	0	47
2019	15	1	28	5	0	1	0	50
Total	64	4	174	36	4	7	0	289
	22.1%	1.4%	60.2%	12.5%	1.4%	2.4%	0.0%	100.0%

Year	Severity			Total Crashes
	PDO	Injury	Fatal	
2015	55	11	0	66
2016	47	16	0	63
2017	47	16	0	63
2018	40	7	0	47
2019	42	8	0	50
Total	231	58	0	289
	80%	20%	0%	100.0%

Year	Road Surface				Total Crashes
	Dry	Wet	Icy	Other	
2015	53	13	0	0	66
2016	55	8	0	0	63
2017	52	10	0	1	63
2018	37	10	0	0	47
2019	45	5	0	0	50
Total	242	46	0	1	289
	84%	16%	0%	0%	100.0%

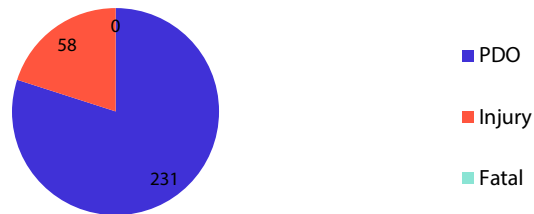
Year	Lighting						Total Crashes
	Dawn	Daylight	Dusk	DarkLighted	DarkNot Lighted	Not Specified	
2015	0	57	1	8	0	0	66
2016	3	44	0	15	1	0	63
2017	1	50	2	10	0	0	63
2018	2	32	1	8	4	0	47
2019	0	34	0	13	3	0	50
Total	6	217	4	54	8	0	289
	2%	75%	1%	19%	3%	0%	100.0%

Sandy Springs Transportation Master Plan
Northridge Rd @ Roswell Rd
Years 2015 to 2019

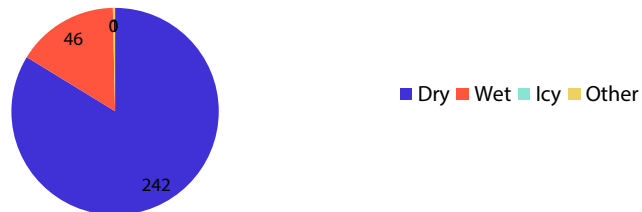
Crash Type



Severity



Road Surface



Lighting



**Sandy Springs Transportation Master Plan
Interstate North Pkwy @ Northside Dr
Years 2015 to 2019**

Year	Crash Type							Total Crashes
	Angle	Head On	Rear End	Sideswipe-Same Direction	Sideswipe-Opposite Direction	Not A Collision With Motor Vehicle	Not Specified	
2015	6	1	13	2	0	0	0	22
2016	7	0	13	2	0	1	0	23
2017	4	1	17	2	1	0	0	25
2018	7	0	11	4	0	0	0	22
2019	9	0	12	5	0	1	0	27
Total	33	2	66	15	1	2	0	119
	27.7%	1.7%	55.5%	12.6%	0.8%	1.7%	0.0%	100.0%

Year	Severity			Total Crashes
	PDO	Injury	Fatal	
2015	15	7	0	22
2016	18	5	0	23
2017	24	1	0	25
2018	18	4	0	22
2019	20	7	0	27
Total	95	24	0	119
	80%	20%	0%	100.0%

Year	Road Surface				Total Crashes
	Dry	Wet	Icy	Other	
2015	16	6	0	0	22
2016	21	2	0	0	23
2017	23	2	0	0	25
2018	18	4	0	0	22
2019	23	4	0	0	27
Total	101	18	0	0	119
	85%	15%	0%	0%	100.0%

Year	Lighting						Total Crashes
	Dawn	Daylight	Dusk	DarkLighted	DarkNot Lighted	Not Specified	
2015	0	20	0	2	0	0	22
2016	0	18	1	3	1	0	23
2017	0	20	0	3	2	0	25
2018	0	16	3	3	0	0	22
2019	0	25	0	1	1	0	27
Total	0	99	4	12	4	0	119
	0%	83%	3%	10%	3%	0%	100.0%

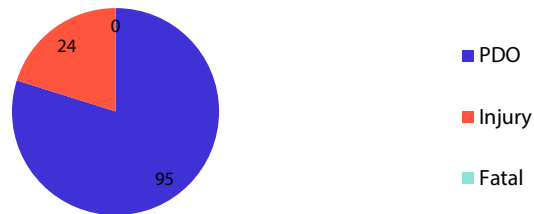


Sandy Springs Transportation Master Plan
Interstate North Pkwy @ Northside Dr
Years 2015 to 2019

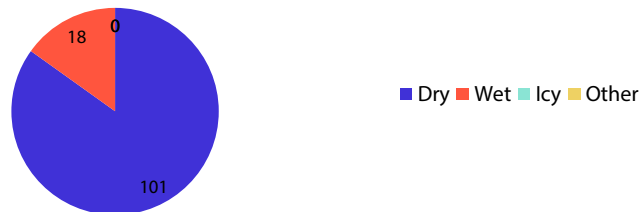
Crash Type



Severity



Road Surface



Lighting



**Sandy Springs Transportation Master Plan
Heards Ferry Rd @ Riverside Dr
Years 2015 to 2019**

Year	Crash Type							Total Crashes
	Angle	Head On	Rear End	Sideswipe-Same Direction	Sideswipe-Opposite Direction	Not A Collision With Motor Vehicle	Not Specified	
2015	1	0	11	4	2	0	0	18
2016	2	1	18	5	0	0	0	26
2017	3	0	13	4	0	0	1	21
2018	2	1	9	3	0	0	0	15
2019	1	0	14	2	1	0	0	18
Total	9	2	65	18	3	0	1	98
	9.2%	2.0%	66.3%	18.4%	3.1%	0.0%	1.0%	100.0%

Year	Severity			Total Crashes
	PDO	Injury	Fatal	
2015	15	3	0	18
2016	23	3	0	26
2017	19	2	0	21
2018	13	2	0	15
2019	12	6	0	18
Total	82	16	0	98
	84%	16%	0%	100.0%

Year	Road Surface				Total Crashes
	Dry	Wet	Icy	Other	
2015	12	6	0	0	18
2016	24	2	0	0	26
2017	16	4	0	1	21
2018	13	2	0	0	15
2019	13	5	0	0	18
Total	78	19	0	1	98
	80%	19%	0%	1%	100.0%

Year	Lighting						Total Crashes
	Dawn	Daylight	Dusk	DarkLighted	DarkNot Lighted	Not Specified	
2015	0	15	0	3	0	0	18
2016	0	26	0	0	0	0	26
2017	0	19	1	0	0	1	21
2018	0	14	0	0	1	0	15
2019	0	16	0	0	2	0	18
Total	0	90	1	3	3	1	98
	0%	92%	1%	3%	3%	1%	100.0%

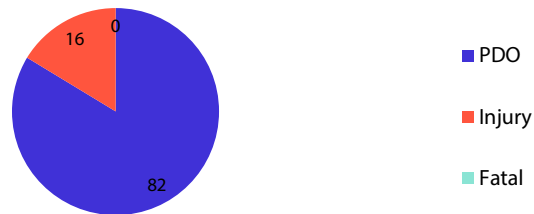


Sandy Springs Transportation Master Plan
 Heards Ferry Rd @ Riverside Dr
 Years 2015 to 2019

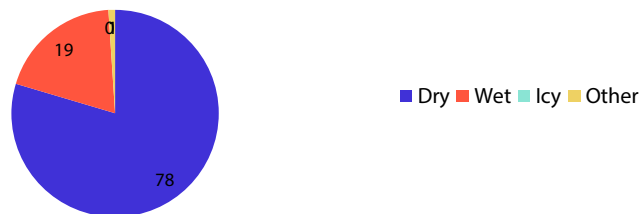
Crash Type



Severity



Road Surface



Lighting



**Sandy Springs Transportation Master Plan
New Northside Dr @ Powers Ferry Rd
Years 2015 to 2019**

Year	Crash Type							Total Crashes
	Angle	Head On	Rear End	Sideswipe-Same Direction	Sideswipe-Opposite Direction	Not A Collision With Motor Vehicle	Not Specified	
2015	11	1	9	7	0	0	0	28
2016	11	1	6	10	1	1	0	30
2017	10	1	4	8	0	0	0	23
2018	6	0	5	3	0	0	0	14
2019	6	0	4	5	0	0	0	15
Total	44	3	28	33	1	1	0	110
	40.0%	2.7%	25.5%	30.0%	0.9%	0.9%	0.0%	100.0%

Year	Severity			Total Crashes
	PDO	Injury	Fatal	
2015	24	4	0	28
2016	27	3	0	30
2017	18	5	0	23
2018	10	4	0	14
2019	14	1	0	15
Total	93	17	0	110
	85%	15%	0%	100.0%

Year	Road Surface				Total Crashes
	Dry	Wet	Icy	Other	
2015	26	2	0	0	28
2016	29	1	0	0	30
2017	14	9	0	0	23
2018	12	2	0	0	14
2019	15	0	0	0	15
Total	96	14	0	0	110
	87%	13%	0%	0%	100.0%

Year	Lighting						Total Crashes
	Dawn	Daylight	Dusk	DarkLighted	DarkNot Lighted	Not Specified	
2015	0	22	0	2	4	0	28
2016	0	24	0	5	1	0	30
2017	0	16	0	5	2	0	23
2018	0	10	0	4	0	0	14
2019	0	13	0	2	0	0	15
Total	0	85	0	18	7	0	110
	0%	77%	0%	16%	6%	0%	100.0%

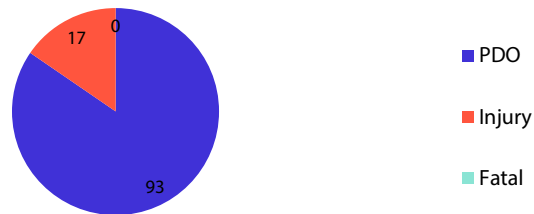


Sandy Springs Transportation Master Plan
New Northside Dr @ Powers Ferry Rd
Years 2015 to 2019

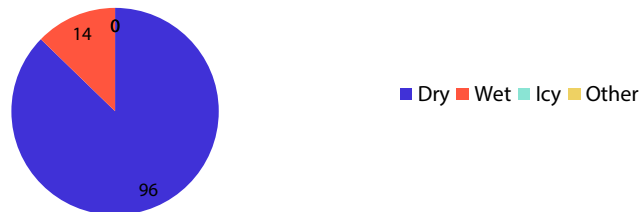
Crash Type



Severity



Road Surface



Lighting



**Sandy Springs Transportation Master Plan
Abernathy Rd @ Mt Vernon Hwy
Years 2015 to 2019**

Year	Crash Type							Total Crashes
	Angle	Head On	Rear End	Sideswipe-Same Direction	Sideswipe-Opposite Direction	Not A Collision With Motor Vehicle	Not Specified	
2015	9	1	38	6	3	0	2	59
2016	5	0	47	6	1	0	0	59
2017	9	0	41	6	0	0	0	56
2018	8	0	17	7	0	0	0	32
2019	7	0	41	7	0	1	0	56
Total	38	1	184	32	4	1	2	262
	14.5%	0.4%	70.2%	12.2%	1.5%	0.4%	0.8%	100.0%

Year	Severity			Total Crashes
	PDO	Injury	Fatal	
2015	51	8	0	59
2016	49	10	0	59
2017	46	10	0	56
2018	26	6	0	32
2019	46	10	0	56
Total	218	44	0	262
	83%	17%	0%	100.0%

Year	Road Surface				Total Crashes
	Dry	Wet	Icy	Other	
2015	47	12	0	0	59
2016	51	8	0	0	59
2017	50	6	0	0	56
2018	26	6	0	0	32
2019	54	2	0	0	56
Total	228	34	0	0	262
	87%	13%	0%	0%	100.0%

Year	Lighting						Total Crashes
	Dawn	Daylight	Dusk	DarkLighted	DarkNot Lighted	Not Specified	
2015	0	50	0	8	1	0	59
2016	0	51	0	8	0	0	59
2017	0	44	3	9	0	0	56
2018	0	29	0	3	0	0	32
2019	0	50	0	6	0	0	56
Total	0	224	3	34	1	0	262
	0%	85%	1%	13%	0%	0%	100.0%

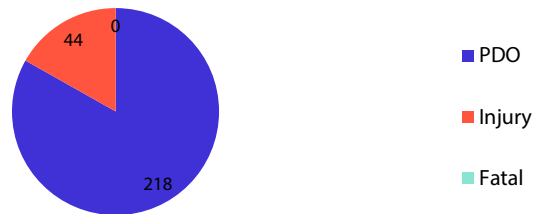


Sandy Springs Transportation Master Plan
Abernathy Rd @ Mt Vernon Hwy
Years 2015 to 2019

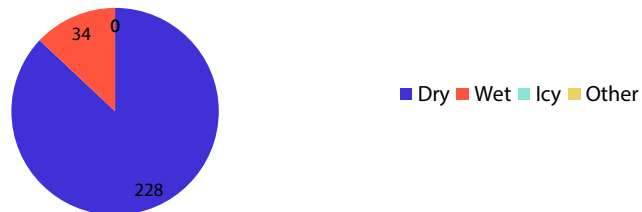
Crash Type



Severity



Road Surface



Lighting



**Sandy Springs Transportation Master Plan
Abernathy Rd @ Johnson Ferry Rd
Years 2015 to 2019**

Year	Crash Type							Total Crashes
	Angle	Head On	Rear End	Sideswipe-Same Direction	Sideswipe-Opposite Direction	Not A Collision With Motor Vehicle	Not Specified	
2015	4	0	15	4	0	0	0	23
2016	11	0	13	3	0	0	0	27
2017	8	0	21	2	1	1	0	33
2018	5	0	7	2	0	0	0	14
2019	5	1	7	0	0	2	0	15
Total	33	1	63	11	1	3	0	112
	29.5%	0.9%	56.3%	9.8%	0.9%	2.7%	0.0%	100.0%

Year	Severity			Total Crashes
	PDO	Injury	Fatal	
2015	16	7	0	23
2016	22	5	0	27
2017	24	9	0	33
2018	13	1	0	14
2019	9	6	0	15
Total	84	28	0	112
	75%	25%	0%	100.0%

Year	Road Surface				Total Crashes
	Dry	Wet	Icy	Other	
2015	22	1	0	0	23
2016	26	1	0	0	27
2017	30	3	0	0	33
2018	12	2	0	0	14
2019	12	3	0	0	15
Total	102	10	0	0	112
	91%	9%	0%	0%	100.0%

Year	Lighting						Total Crashes
	Dawn	Daylight	Dusk	DarkLighted	DarkNot Lighted	Not Specified	
2015	0	18	0	4	1	0	23
2016	0	23	0	3	1	0	27
2017	0	27	1	5	0	0	33
2018	0	12	0	1	1	0	14
2019	0	12	0	1	2	0	15
Total	0	92	1	14	5	0	112
	0%	82%	1%	13%	4%	0%	100.0%

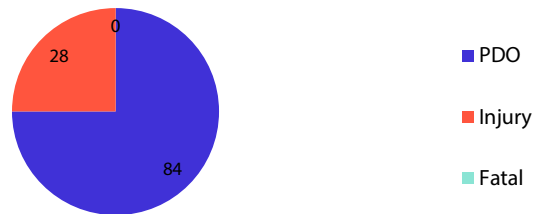


Sandy Springs Transportation Master Plan
Abernathy Rd @ Johnson Ferry Rd
Years 2015 to 2019

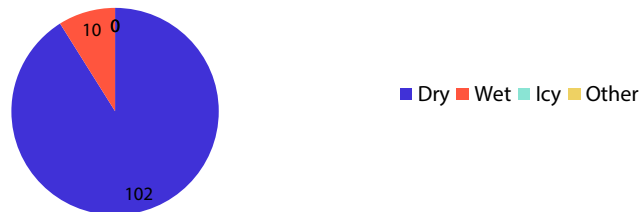
Crash Type



Severity



Road Surface



Lighting



**Sandy Springs Transportation Master Plan
Abernathy Rd @ Peachtree Dunwoody Rd
Years 2015 to 2019**

Year	Crash Type							Total Crashes
	Angle	Head On	Rear End	Sideswipe-Same Direction	Sideswipe-Opposite Direction	Not A Collision With Motor Vehicle	Not Specified	
2015	15	0	36	15	0	0	1	67
2016	13	0	34	17	2	2	0	68
2017	19	1	25	11	1	3	0	60
2018	19	0	37	12	0	0	0	68
2019	18	0	38	13	0	1	0	70
Total	84	1	170	68	3	6	1	333
	25.2%	0.3%	51.1%	20.4%	0.9%	1.8%	0.3%	100.0%

Year	Severity			Total Crashes
	PDO	Injury	Fatal	
2015	55	12	0	67
2016	57	11	0	68
2017	50	10	0	60
2018	55	13	0	68
2019	58	12	0	70
Total	275	58	0	333
	83%	17%	0%	100.0%

Year	Road Surface				Total Crashes
	Dry	Wet	Icy	Other	
2015	52	14	0	1	67
2016	63	5	0	0	68
2017	55	5	0	0	60
2018	56	12	0	0	68
2019	60	10	0	0	70
Total	286	46	0	1	333
	86%	14%	0%	0%	100.0%

Year	Lighting						Total Crashes
	Dawn	Daylight	Dusk	DarkLighted	DarkNot Lighted	Not Specified	
2015	1	58	2	4	1	1	67
2016	0	61	0	6	1	0	68
2017	1	51	1	7	0	0	60
2018	1	55	0	10	2	0	68
2019	1	54	0	13	2	0	70
Total	4	279	3	40	6	1	333
	1%	84%	1%	12%	2%	0%	100.0%

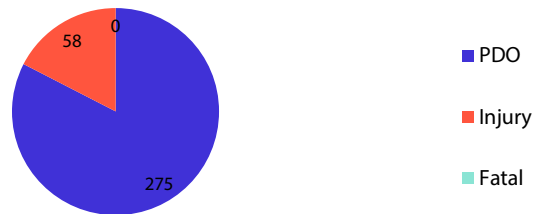


Sandy Springs Transportation Master Plan
Abernathy Rd @ Peachtree Dunwoody Rd
Years 2015 to 2019

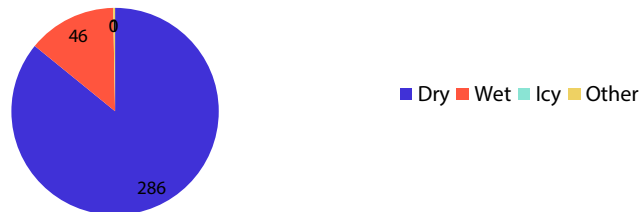
Crash Type



Severity



Road Surface



Lighting



**Sandy Springs Transportation Master Plan
Hollis Cobb Cir @ Peachtree Dunwoody Rd
Years 2015 to 2019**

Year	Crash Type							Total Crashes
	Angle	Head On	Rear End	Sideswipe-Same Direction	Sideswipe-Opposite Direction	Not A Collision With Motor Vehicle	Not Specified	
2015	0	0	0	1	0	2	0	3
2016	3	0	2	1	0	1	0	7
2017	3	0	1	0	0	1	0	5
2018	5	0	3	1	1	0	1	11
2019	3	0	1	1	0	0	0	5
Total	14	0	7	4	1	4	1	31
	45.2%	0.0%	22.6%	12.9%	3.2%	12.9%	3.2%	100.0%

Year	Severity			Total Crashes
	PDO	Injury	Fatal	
2015	2	1	0	3
2016	4	3	0	7
2017	5	0	0	5
2018	9	2	0	11
2019	5	0	0	5
Total	25	6	0	31
	81%	19%	0%	100.0%

Year	Road Surface				Total Crashes
	Dry	Wet	Icy	Other	
2015	3	0	0	0	3
2016	7	0	0	0	7
2017	5	0	0	0	5
2018	7	3	0	1	11
2019	5	0	0	0	5
Total	27	3	0	1	31
	87%	10%	0%	3%	100.0%

Year	Lighting						Total Crashes
	Dawn	Daylight	Dusk	DarkLighted	DarkNot Lighted	Not Specified	
2015	0	3	0	0	0	0	3
2016	0	7	0	0	0	0	7
2017	0	5	0	0	0	0	5
2018	0	10	0	0	0	1	11
2019	0	4	0	0	1	0	5
Total	0	29	0	0	1	1	31
	0%	94%	0%	0%	3%	3%	100.0%

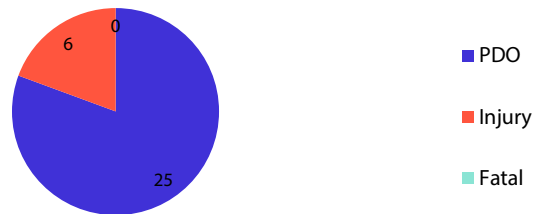


Sandy Springs Transportation Master Plan
Hollis Cobb Cir @ Peachtree Dunwoody Rd
Years 2015 to 2019

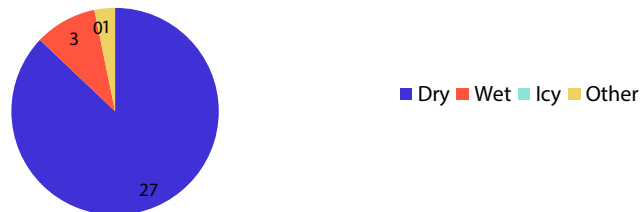
Crash Type



Severity



Road Surface



Lighting



Sandy Springs Transportation Master Plan
Johnson Ferry Rd @ River Valley Rd
Years 2015 to 2019

Year	Crash Type							Total Crashes
	Angle	Head On	Rear End	Sideswipe-Same Direction	Sideswipe-Opposite Direction	Not A Collision With Motor Vehicle	Not Specified	
2015	4	0	9	2	0	0	0	15
2016	6	0	21	1	0	1	0	29
2017	2	0	15	1	0	0	0	18
2018	3	1	8	1	0	2	0	15
2019	2	0	7	0	1	0	0	10
Total	17	1	60	5	1	3	0	87
	19.5%	1.1%	69.0%	5.7%	1.1%	3.4%	0.0%	100.0%

Year	Severity			Total Crashes
	PDO	Injury	Fatal	
2015	12	3	0	15
2016	21	8	0	29
2017	16	2	0	18
2018	11	4	0	15
2019	7	3	0	10
Total	67	20	0	87
	77%	23%	0%	100.0%

Year	Road Surface				Total Crashes
	Dry	Wet	Icy	Other	
2015	14	1	0	0	15
2016	26	3	0	0	29
2017	14	4	0	0	18
2018	12	2	0	1	15
2019	10	0	0	0	10
Total	76	10	0	1	87
	87%	11%	0%	1%	100.0%

Year	Lighting						Total Crashes
	Dawn	Daylight	Dusk	DarkLighted	DarkNot Lighted	Not Specified	
2015	0	15	0	0	0	0	15
2016	1	25	0	2	1	0	29
2017	0	14	0	3	1	0	18
2018	0	12	0	3	0	0	15
2019	0	10	0	0	0	0	10
Total	1	76	0	8	2	0	87
	1%	87%	0%	9%	2%	0%	100.0%

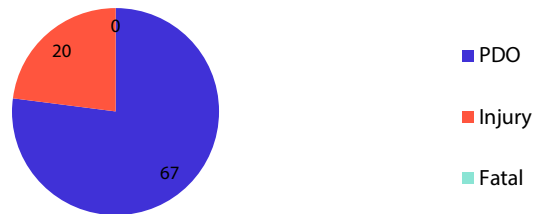


Sandy Springs Transportation Master Plan
Johnson Ferry Rd @ River Valley Rd
Years 2015 to 2019

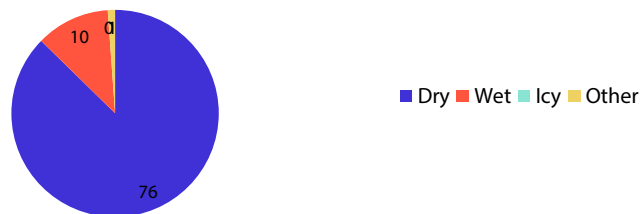
Crash Type



Severity



Road Surface



Lighting



**Sandy Springs Transportation Master Plan
Mt Vernon Hwy @ Northside Dr
Years 2015 to 2019**

Year	Crash Type							Total Crashes
	Angle	Head On	Rear End	Sideswipe-Same Direction	Sideswipe-Opposite Direction	Not A Collision With Motor Vehicle	Not Specified	
2015	0	0	0	0	0	0	0	0
2016	1	0	0	0	0	0	0	1
2017	3	0	0	0	1	1	0	5
2018	4	0	1	0	0	1	0	6
2019	6	0	2	0	0	0	0	8
Total	14	0	3	0	1	2	0	20
	70.0%	0.0%	15.0%	0.0%	5.0%	10.0%	0.0%	100.0%

Year	Severity			Total Crashes
	PDO	Injury	Fatal	
2015	0	0	0	0
2016	0	1	0	1
2017	4	1	0	5
2018	3	3	0	6
2019	6	2	0	8
Total	13	7	0	20
	65%	35%	0%	100.0%

Year	Road Surface				Total Crashes
	Dry	Wet	Icy	Other	
2015	0	0	0	0	0
2016	1	0	0	0	1
2017	4	1	0	0	5
2018	4	2	0	0	6
2019	6	2	0	0	8
Total	15	5	0	0	20
	75%	25%	0%	0%	100.0%

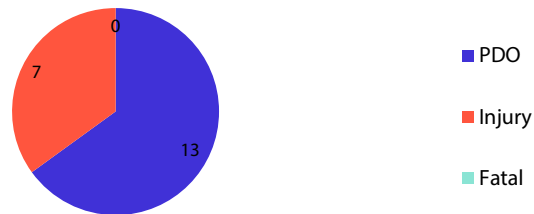
Year	Lighting						Total Crashes
	Dawn	Daylight	Dusk	DarkLighted	DarkNot Lighted	Not Specified	
2015	0	0	0	0	0	0	0
2016	0	1	0	0	0	0	1
2017	0	5	0	0	0	0	5
2018	0	3	1	1	1	0	6
2019	0	8	0	0	0	0	8
Total	0	17	1	1	1	0	20
	0%	85%	5%	5%	5%	0%	100.0%

Sandy Springs Transportation Master Plan
Mt Vernon Hwy @ Northside Dr
Years 2015 to 2019

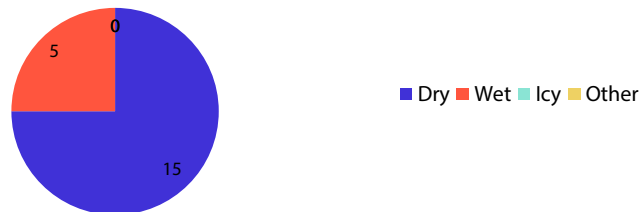
Crash Type



Severity



Road Surface



Lighting



**Sandy Springs Transportation Master Plan
Roswell Rd @ Spalding Dr
Years 2015 to 2019**

Year	Crash Type							Total Crashes
	Angle	Head On	Rear End	Sideswipe-Same Direction	Sideswipe-Opposite Direction	Not A Collision With Motor Vehicle	Not Specified	
2015	8	1	16	6	1	1	0	33
2016	9	1	13	2	0	2	0	27
2017	5	0	8	2	0	0	0	15
2018	5	1	9	5	0	2	0	22
2019	14	1	15	2	0	3	0	35
Total	41	4	61	17	1	8	0	132
	31.1%	3.0%	46.2%	12.9%	0.8%	6.1%	0.0%	100.0%

Year	Severity			Total Crashes
	PDO	Injury	Fatal	
2015	26	7	0	33
2016	20	7	0	27
2017	10	5	0	15
2018	16	6	0	22
2019	23	12	0	35
Total	95	37	0	132
	72%	28%	0%	100.0%

Year	Road Surface				Total Crashes
	Dry	Wet	Icy	Other	
2015	23	10	0	0	33
2016	24	3	0	0	27
2017	13	2	0	0	15
2018	17	5	0	0	22
2019	29	6	0	0	35
Total	106	26	0	0	132
	80%	20%	0%	0%	100.0%

Year	Lighting						Total Crashes
	Dawn	Daylight	Dusk	DarkLighted	DarkNot Lighted	Not Specified	
2015	0	26	0	5	2	0	33
2016	1	21	0	3	2	0	27
2017	1	10	0	2	2	0	15
2018	0	19	0	2	1	0	22
2019	0	25	1	7	2	0	35
Total	2	101	1	19	9	0	132
	2%	77%	1%	14%	7%	0%	100.0%

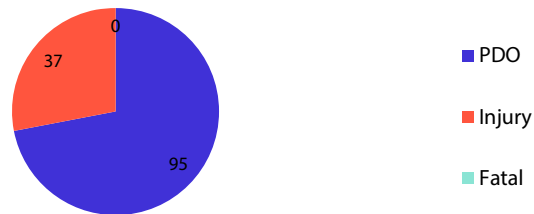


Sandy Springs Transportation Master Plan
Roswell Rd @ Spalding Dr
Years 2015 to 2019

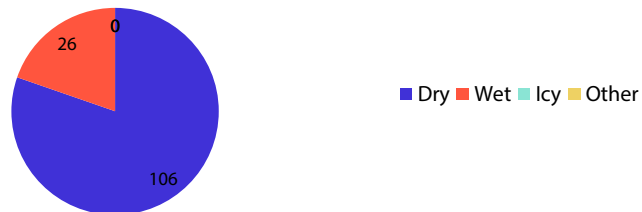
Crash Type



Severity



Road Surface



Lighting



**Sandy Springs Transportation Master Plan
Spalding Dr @ Dunwoody Club / Roberts Dr
Years 2015 to 2019**

Year	Crash Type							Total Crashes
	Angle	Head On	Rear End	Sideswipe-Same Direction	Sideswipe-Opposite Direction	Not A Collision With Motor Vehicle	Not Specified	
2015	2	1	8	0	0	1	0	12
2016	3	0	6	1	1	1	0	12
2017	6	2	9	2	0	1	0	20
2018	2	0	9	1	1	0	0	13
2019	2	0	5	0	0	0	0	7
Total	15	3	37	4	2	3	0	64
	23.4%	4.7%	57.8%	6.3%	3.1%	4.7%	0.0%	100.0%

Year	Severity			Total Crashes
	PDO	Injury	Fatal	
2015	9	3	0	12
2016	8	4	0	12
2017	15	5	0	20
2018	12	1	0	13
2019	6	1	0	7
Total	50	14	0	64
	78%	22%	0%	100.0%

Year	Road Surface				Total Crashes
	Dry	Wet	Icy	Other	
2015	10	2	0	0	12
2016	9	3	0	0	12
2017	18	2	0	0	20
2018	10	2	0	1	13
2019	7	0	0	0	7
Total	54	9	0	1	64
	84%	14%	0%	2%	100.0%

Year	Lighting						Total Crashes
	Dawn	Daylight	Dusk	DarkLighted	DarkNot Lighted	Not Specified	
2015	0	7	0	2	3	0	12
2016	0	10	1	1	0	0	12
2017	0	18	0	2	0	0	20
2018	0	12	1	0	0	0	13
2019	0	6	0	1	0	0	7
Total	0	53	2	6	3	0	64
	0%	83%	3%	9%	5%	0%	100.0%

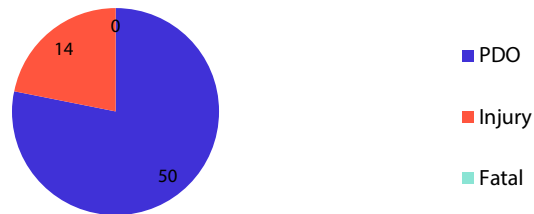


Sandy Springs Transportation Master Plan
Spalding Dr @ Dunwoody Club / Roberts Dr
Years 2015 to 2019

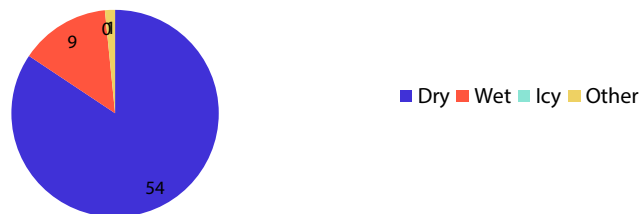
Crash Type



Severity



Road Surface



Lighting



**Sandy Springs Transportation Master Plan
Mt Vernon Hwy @ Barfield Rd
Years 2015 to 2019**

Year	Crash Type							Total Crashes
	Angle	Head On	Rear End	Sideswipe-Same Direction	Sideswipe-Opposite Direction	Not A Collision With Motor Vehicle	Not Specified	
2015	5	0	9	0	0	0	0	14
2016	5	0	6	3	0	0	0	14
2017	2	0	3	1	0	1	0	7
2018	6	0	8	0	0	1	0	15
2019	3	1	7	3	1	0	0	15
Total	21	1	33	7	1	2	0	65
	32.3%	1.5%	50.8%	10.8%	1.5%	3.1%	0.0%	100.0%

Year	Severity			Total Crashes
	PDO	Injury	Fatal	
2015	11	3	0	14
2016	13	1	0	14
2017	7	0	0	7
2018	13	2	0	15
2019	10	5	0	15
Total	54	11	0	65
	83%	17%	0%	100.0%

Year	Road Surface				Total Crashes
	Dry	Wet	Icy	Other	
2015	11	3	0	0	14
2016	13	1	0	0	14
2017	6	1	0	0	7
2018	11	4	0	0	15
2019	14	1	0	0	15
Total	55	10	0	0	65
	85%	15%	0%	0%	100.0%

Year	Lighting						Total Crashes
	Dawn	Daylight	Dusk	DarkLighted	DarkNot Lighted	Not Specified	
2015	0	10	2	2	0	0	14
2016	0	14	0	0	0	0	14
2017	0	5	1	1	0	0	7
2018	0	13	0	1	1	0	15
2019	0	12	0	1	2	0	15
Total	0	54	3	5	3	0	65
	0%	83%	5%	8%	5%	0%	100.0%

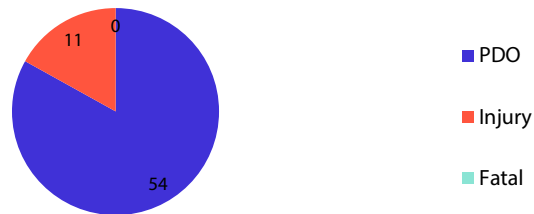


Sandy Springs Transportation Master Plan
Mt Vernon Hwy @ Barfield Rd
Years 2015 to 2019

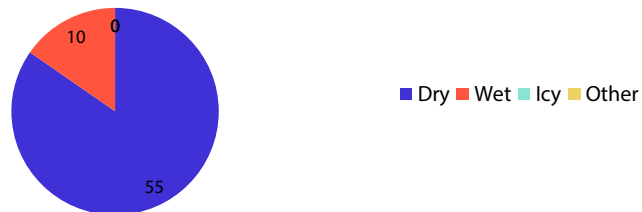
Crash Type



Severity



Road Surface



Lighting



**Sandy Springs Transportation Master Plan
Mt Vernon Hwy @ Peachtree Dunwoody Rd
Years 2015 to 2019**

Year	Crash Type							Total Crashes
	Angle	Head On	Rear End	Sideswipe-Same Direction	Sideswipe-Opposite Direction	Not A Collision With Motor Vehicle	Not Specified	
2015	4	0	6	1	1	1	0	13
2016	7	1	14	3	0	2	0	27
2017	4	0	8	3	0	0	0	15
2018	6	0	10	4	0	0	0	20
2019	9	1	10	2	0	1	1	24
Total	30	2	48	13	1	4	1	99
	30.3%	2.0%	48.5%	13.1%	1.0%	4.0%	1.0%	100.0%

Year	Severity			Total Crashes
	PDO	Injury	Fatal	
2015	12	1	0	13
2016	22	5	0	27
2017	13	2	0	15
2018	18	2	0	20
2019	20	4	0	24
Total	85	14	0	99
	86%	14%	0%	100.0%

Year	Road Surface				Total Crashes
	Dry	Wet	Icy	Other	
2015	11	2	0	0	13
2016	21	6	0	0	27
2017	12	3	0	0	15
2018	18	2	0	0	20
2019	21	2	0	1	24
Total	83	15	0	1	99
	84%	15%	0%	1%	100.0%

Year	Lighting						Total Crashes
	Dawn	Daylight	Dusk	DarkLighted	DarkNot Lighted	Not Specified	
2015	0	9	0	3	1	0	13
2016	0	24	0	3	0	0	27
2017	0	15	0	0	0	0	15
2018	0	17	0	3	0	0	20
2019	0	22	0	0	1	1	24
Total	0	87	0	9	2	1	99
	0%	88%	0%	9%	2%	1%	100.0%

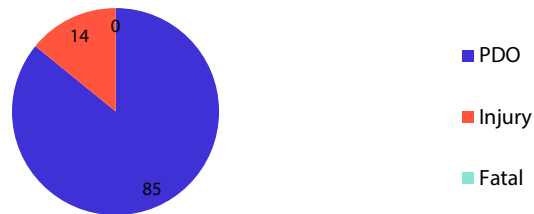


Sandy Springs Transportation Master Plan
Mt Vernon Hwy @ Peachtree Dunwoody Rd
Years 2015 to 2019

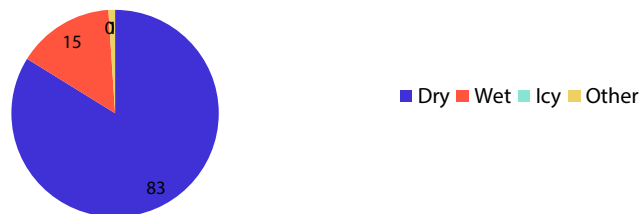
Crash Type



Severity



Road Surface



Lighting



**Sandy Springs Transportation Master Plan
Lake Hearn Dr @ Peachtree Dunwoody Rd
Years 2015 to 2019**

Year	Crash Type							Total Crashes
	Angle	Head On	Rear End	Sideswipe-Same Direction	Sideswipe-Opposite Direction	Not A Collision With Motor Vehicle	Not Specified	
2015	5	0	10	1	0	2	0	18
2016	3	0	8	6	0	0	0	17
2017	7	0	17	5	0	0	0	29
2018	11	0	13	1	0	0	0	25
2019	8	0	12	7	0	1	0	28
Total	34	0	60	20	0	3	0	117
	29.1%	0.0%	51.3%	17.1%	0.0%	2.6%	0.0%	100.0%

Year	Severity			Total Crashes
	PDO	Injury	Fatal	
2015	12	6	0	18
2016	14	3	0	17
2017	26	3	0	29
2018	21	4	0	25
2019	24	4	0	28
Total	97	20	0	117
	83%	17%	0%	100.0%

Year	Road Surface				Total Crashes
	Dry	Wet	Icy	Other	
2015	15	3	0	0	18
2016	14	3	0	0	17
2017	27	2	0	0	29
2018	22	3	0	0	25
2019	24	4	0	0	28
Total	102	15	0	0	117
	87%	13%	0%	0%	100.0%

Year	Lighting						Total Crashes
	Dawn	Daylight	Dusk	DarkLighted	DarkNot Lighted	Not Specified	
2015	0	14	0	3	1	0	18
2016	0	15	0	2	0	0	17
2017	0	25	1	3	0	0	29
2018	0	23	0	2	0	0	25
2019	2	24	1	1	0	0	28
Total	2	101	2	11	1	0	117
	2%	86%	2%	9%	1%	0%	100.0%



Sandy Springs Transportation Master Plan
Lake Hearn Dr @ Peachtree Dunwoody Rd
Years 2015 to 2019

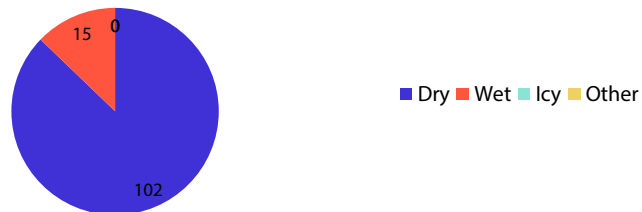
Crash Type



Severity



Road Surface



Lighting



Sandy Springs Transportation Master Plan
Johnson Ferry Rd @ Glenridge Conn/Drive (south of I-285)
Years 2015 to 2019

Year	Crash Type							Total Crashes
	Angle	Head On	Rear End	Sideswipe-Same Direction	Sideswipe-Opposite Direction	Not A Collision With Motor Vehicle	Not Specified	
2015	7	1	11	5	1	0	0	25
2016	12	1	15	2	0	0	0	30
2017	11	0	20	2	1	0	0	34
2018	12	0	19	5	0	1	0	37
2019	9	0	22	5	0	0	0	36
Total	51	2	87	19	2	1	0	162
	31.5%	1.2%	53.7%	11.7%	1.2%	0.6%	0.0%	100.0%

Year	Severity			Total Crashes
	PDO	Injury	Fatal	
2015	17	8	0	25
2016	23	7	0	30
2017	28	6	0	34
2018	28	9	0	37
2019	29	7	0	36
Total	125	37	0	162
	77%	23%	0%	100.0%

Year	Road Surface				Total Crashes
	Dry	Wet	Icy	Other	
2015	22	3	0	0	25
2016	28	2	0	0	30
2017	28	6	0	0	34
2018	29	8	0	0	37
2019	31	5	0	0	36
Total	138	24	0	0	162
	85%	15%	0%	0%	100.0%

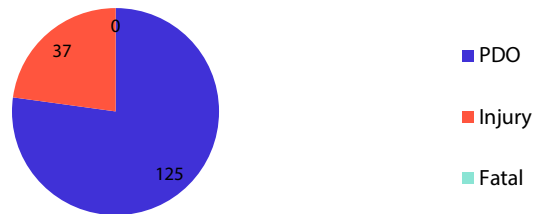
Year	Lighting						Total Crashes
	Dawn	Daylight	Dusk	DarkLighted	DarkNot Lighted	Not Specified	
2015	1	20	0	3	1	0	25
2016	0	25	0	2	3	0	30
2017	2	28	1	2	1	0	34
2018	0	33	0	3	1	0	37
2019	1	32	0	3	0	0	36
Total	4	138	1	13	6	0	162
	2%	85%	1%	8%	4%	0%	100.0%

Sandy Springs Transportation Master Plan
Johnson Ferry Rd @ Glenridge Conn/Drive (south of I-285)
Years 2015 to 2019

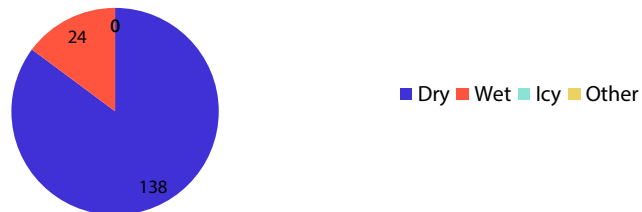
Crash Type



Severity



Road Surface



Lighting



APPENDIX D: FIELD OBSERVATIONS



Field Visit Summary of Findings – June 11 & 17, 2020

1. Johnson Ferry Road at Peachtree Dunwoody Road



Figure 1: View of Johnson Ferry Road at Peachtree Dunwoody Road Looking West

- Date of Visit: June 11, 2020
- There is extra pavement present on the southwest corner of the intersection along Peachtree Dunwoody Road.
- A hill and curve on the south leg of Peachtree Dunwoody Road presents potential sight distance issues for vehicles and pedestrians.
- Sidewalks are present on all sides and corners of the intersection; however, there is a gap present in the southeast corner and the crosswalk pavers in the intersection are damaged due to potholes.
- No bike lane is present in the uphill, southbound direction of Peachtree Dunwoody Road north of this intersection.

2. Northridge Road at SR 400 Southbound/Dunwoody Place



Figure 2: Looking East Towards SR 400 Overpass From Northridge Road at SR 400 Southbound/Dunwoody Place

- Date of Visit: June 17, 2020
- Queuing observed at this intersection, particularly during the morning peak hour.
- A car was observed making a U-turn from the south leg of the intersection (SR 400 southbound exit ramp) to get back onto SR 400 southbound towards I-285. There is no signage here prohibiting U-turns.
- No sidewalks are present on the north side of the east leg of the intersection due to the channelized turn lane from SR 400 northbound exit ramp to Dunwoody Place northbound; crosswalks are present only on the south and west legs only with “No Crossing” signage present on the north and east legs.
- Bicycle lanes are present only along the SR 400 overpass. There is a MARTA bus shelter along southbound Dunwoody Place, north of the intersection.

3. Northside Drive at Powers Ferry Road



Figure 3: Looking West From Northside Drive at Powers Ferry Road

- Date of Visit: June 11, 2020
- There is a hill on the south leg of this intersection, but it does not present sight distance issues.
- Vehicles that wait at the stop bar in the right-turn lane from Powers Ferry Road eastbound to southbound Northside Drive have difficulty seeing oncoming traffic.
- Sidewalks are present on both sides of Northside Drive south of the intersection; there are no sidewalks along the north leg of Northside Drive. Along Powers Ferry Road, there are sidewalks present only on the south side of the roadway.
- There are some worn pavement markings on Powers Ferry Road; otherwise, markings are in good condition.

4. Dunwoody Place/Hannover Park Road at Roswell Road (SR 9)



Figure 4: Looking North from Roswell Road at Dunwoody Place/Hannover Park Road

- Date of Visit: June 17, 2020
- There is a skew angle, particularly along the east leg of Dunwoody Place.
- The “State Law: Stop for Pedestrians in Crosswalk” sign on the northeast corner is placed too far forward.
- In addition to the horizontal curve on the east leg of Dunwoody Place, there is a vertical curve along the north leg of Roswell Road.

5. Northridge Road at Roswell Road (SR 9)



Figure 5: Looking North from Roswell Rd at Northridge Rd

- Date of Visit: June 17, 2020
- Queuing was observed on northbound Roswell Road, especially for vehicles attempting to turn onto Northridge Road.
- A vertical curve is present on the east leg of the intersection (Northridge Road).
- Each leg of the intersection has protected-only left-turn movements.
- Each intersection leg has sidewalks on both sides of the road.
- MARTA bus stops are present along southbound Roswell Road (on the south leg) and northbound Roswell Road (on the north leg).

6. Interstate North Parkway/New Northside Drive at Northside Drive



Figure 6: View of Interstate North Parkway/New Northside Drive at Northside Drive From Southwest Corner of Intersection

- Date of Visit: June 11, 2020
- Road curves are present on the north, east, and west legs of this intersection, potentially making it difficult for left-turning vehicles to judge clearance.
- Sidewalks are only present along the south side of Interstate Parkway (west leg) and north side of New Northside Drive (east leg).
- It is dangerous for pedestrians to cross the west leg at the southwest corner; due to the hill and curvature along the leg, vehicles along eastbound Interstate North Parkway that are turning right may not see pedestrians in the crosswalk.
- Curb condition is poor along the northeast corner, and there are worn pavement markings at the intersection.

7. Heards Ferry Road at Riverside Drive



Figure 7: Looking South Towards I-285 from Heards Ferry Rd at Riverside Dr

- Date of Visit: June 11, 2020
- Queuing was observed at this intersection from all directions and extended to the roundabout at I-285, several blocks to the south.
- There is “Do Not Block” intersection signage and pavement markings at the intersection.
- A hill in the middle of the intersection may make it difficult for vehicles turning left from the north leg to judge clearance.
- Sidewalks are missing on the southwest quadrant of the intersection and the south side of Heards Ferry Road and west side of Riverside Drive (south leg). Crosswalks are only present along the north and east legs of the intersection.

8. New Northside Drive at Powers Ferry Road



Figure 8: Looking West Along Powers Ferry Road Towards Intersection at New Northside Drive

- Date of Visit: June 11, 2020
- Cars were observed weaving between lanes, indicating the need for directional markings and/or signage.
- There was roadside signage prohibiting right turns from the west leg, but no overhead signage.
- Sidewalks gaps are present at this intersection, particularly on the east side of the north leg; the northeast corner has a curb ramp only. Additionally, the east leg has no sidewalks, and the sidewalk on the east side of the south leg dead-ends south of the Starbucks restaurant.
- There are multiple driveways adjacent to the intersection.
- There is a raised pedestrian island in the northeast corner of the intersection.

9. Abernathy Road at Mt Vernon Highway



Figure 9: Traffic Observed Along Abernathy Road Looking West Towards SR 400

- Date of Visit: June 11, 2020
- There is "Do Not Block" signage present, but no accompanying pavement markings at the intersection.
- Flashing yellow arrow signals are present only on the Mount Vernon Highway legs of the intersection.
- Horizontal curves are present along Abernathy Road, and no U-turns are permitted along the Abernathy Road legs.
- There are no skip lines through the center of the intersection to guide vehicles through the double turn-lane movements.
- Only one signal head has a backplate.

10. Johnson Ferry Road/Abernathy Road at Brandon Mill Road



Figure 10: Looking East On Abernathy Road from Intersection with Johnson Ferry Road

- Date of Visit: June 11, 2020
- Queuing was observed along all legs of this intersection.
- The south and west legs have horizontal curves and the north leg has a vertical curve.
- Sidewalks are present on both sides of each leg and bicycle lanes are present on the east and west legs of the intersection. Multiple pedestrians and cyclists were observed.
- Some vehicles appeared to be speeding through the intersection.

11. Abernathy Road at Peachtree Dunwoody Road



Figure 11: View of Abernathy Road at Peachtree Dunwoody Road Intersection from Southwest Corner of Intersection

- Date of Visit: June 11, 2020
- There is "Do Not Block" signage and pavement markings at this intersection.
- No U-turns are permitted on each of the Abernathy Road approaches as well as the north leg of Peachtree Dunwoody Road.
- Southbound traffic turning right on red towards SR 400 must cross the stop bar and block the crosswalk to judge clearance.
- The intersection is missing signage that right turns on red are permitted at this approach.
- Pavement markings are worn at the intersection.

12. Hollis Cobb Circle at Peachtree Dunwoody Road



Figure 12: View of Peachtree Dunwoody Road at Hollis Cobb Circle from Medical Center MARTA Entrance

- Date of Visit: June 11, 2020
- A hill along Peachtree Dunwoody Road with a curve on the north leg could make it difficult for left-turning vehicles to judge clearance. There is also a hill on Hollis Cobb Circle, which may create sight distance issues for vehicles turning left from Hollis Cobb Circle and the MARTA station.
- There is a bike lane along northbound Peachtree Dunwoody Road (towards I-285) but not on southbound Peachtree Dunwoody Road (towards Johnson Ferry Road); in the southbound direction, there is a sharrow and "Share the Road" signage.
- Sidewalks are only present on the north side of the east and west legs of this intersection. There is a high pedestrian activity due to proximity to Northside Hospital and the MARTA station.
- The crosswalk markings are worn; otherwise, pavement markings are in good condition.
- The intersection is lacking pedestrian furniture to serve the high volume of pedestrians.

13. Johnson Ferry Rd at River Valley Rd



Figure 13: Queuing along Johnson Ferry Road Westbound Towards the Chattahoochee River

- Date of Visit: June 11, 2020
- There is "Do Not Block" signage present at the intersection.
- There is a horizontal curve present on the east leg of Johnson Ferry Road.
- Both sides of Johnson Ferry Road have sidewalks and bike lanes at this intersection.

14. Mt Vernon Highway at Northside Drive



Figure 14: Looking South from Intersection of Mt Vernon Hwy at Northside Dr

- Date of Visit: June 11, 2020
- Skew present at this intersection, especially along the Mount Vernon Highway leg and the south leg of Northside Drive.
- The curve on the south leg makes it difficult for southbound vehicles on Northside Drive to judge clearance while turning left onto Mt Vernon Highway.
- No bicycle or pedestrian facilities are present at this location; however, Northside Drive has wide shoulders.
- The curb condition on Northside Drive is poor and the yield markings in the channelized islands are worn.

15. Roswell Road (SR 9) at Spalding Drive



Figure 15: Looking North along Roswell Rd from Spalding Dr

- Date of Visit: June 11, 2020
- The east leg has a skew angle making it difficult for vehicles turning left to judge clearance. The north leg has a horizontal curve.
- Sidewalks along Roswell Road are narrow.
- A vehicle observed turning left out of the apartment complex to the immediate west of this intersection almost did not yield to a pedestrian walking across the north leg of Roswell Road.
- The southwest curb ramp at this intersection is heavily damaged, likely due to narrow curb radii and the high volume of right-turning vehicles out of the apartment complex.
- Bus stops are present on both legs of Roswell Road (on the southbound approach of the north leg and the northbound approach of the south leg).

16. Spalding Drive at Dunwoody Club Drive/ Roberts Drive



Figure 16: Looking East Along Spalding Drive Towards Roberts Drive



Figure 17: View of Skewed Intersection of Spalding Drive with Dunwoody Club Drive

- Date of Visit: June 11, 2020
- The traffic signals at Spalding Drive at Roberts Drive and Spalding Drive at Dunwoody Club Drive are clustered and the timing is coordinated.
- The Dunwoody Club Drive approach is at a skew angle.
- There is no left-turn lane in the east leg of Spalding Drive approaching Dunwoody Club; however, two vehicles were observed making this movement, and there is no signage to accompany the pavement markings.
- There are no sidewalks on the south side of Spalding Drive, nor on either side of Dunwoody Club Drive.

17. Mt Vernon Highway at Barfield Road



Figure 18: Looking North from Intersection of Mt Vernon Hwy and Barfield Rd

- Date of Visit: June 11, 2020
- There is a slight skew angle present at this intersection. There is a horizontal curve present on the north leg of Barfield Road.
- There is currently a raised pedestrian island in the northeast corner of the intersection, but this is likely to change with the widening of Mount Vernon Highway east towards this intersection.
- There are bike lanes along the south leg of Barfield Road, but these abruptly dead-end and Barfield Road becomes a five-lane road north of this intersection.
- A MARTA bus stop was present in the southwest corner of the intersection but was closed due to the COVID-19 pandemic at the time of the field visit.

18. Mt Vernon Highway at Peachtree Dunwoody Road



Figure 19: Looking North from Intersection of Mt Vernon Hwy and Peachtree Dunwoody Rd

- Date of Visit: June 11, 2020
- While there is no dedicated left-turn lane on the north leg, there is no signage specifically prohibiting left turns from southbound Peachtree Dunwoody Road to eastbound Mt Vernon Highway. Sight distance issues at the north leg of the intersection may make left-turn attempts onto Mount Vernon Highway unsafe.
- A vehicle turning right on red from the north leg was observed not yielding to vehicles turning left from northbound Peachtree Dunwoody Road.
- The wide distance across this intersection as well as the hill at the intersection may cause right-turning drivers to not perceive and yield to opposing left-turning traffic.
- Pedestrians were observed crossing this intersection and walking to and from the nearby Sandy Springs MARTA Station.

19. Lake Hearn Drive at Peachtree Dunwoody Road



Figure 20: View of Peachtree Dunwoody Rd at Lake Hearn Dr with Construction Along I-285 Overhead

- Date of Visit: June 11, 2020
- This intersection has a temporary set-up for traffic signals; there is a missing mast arm for northbound signal heads due to construction along I-285 as part of the larger interchange project at SR 400.
- There is a hill on Lake Hearn Drive which could present sight distance issues. There is also a skew angle along the east leg, and trucks were observed having difficulty maneuvering right turns from Lake Hearn Drive.
- Sidewalk is present on both sides of Peachtree Dunwoody Road but only on the south side of Lake Hearn Drive.
- The northbound bike lane on Peachtree Dunwoody Road ends at I-285.
- Pavement markings at this intersection are worn and in poor condition.

20. Johnson Ferry Road at Glenridge Connector



Figure 21: View of Johnson Ferry Rd at Glenridge Conn from Southeast Corner of Intersection

- Date of Visit: June 11, 2020
- Glenridge Connector has medians, and U-turns are permitted along this road at the intersection.
- There is missing sidewalk on the south leg, the south side of the west leg, and the east side of the north leg at the intersection.
- The crosswalk at the north leg of the intersection has some minor wear.
- Some queuing was observed during the mid-day hours.

APPENDIX E: OPERATIONAL ANALYSES



HCM 6th Signalized Intersection Summary

1: Peachtree Dunwoody Rd & Johnson Ferry Rd

08/30/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	387	239	24	205	494	366	44	907	155	79	290	355
Future Volume (veh/h)	387	239	24	205	494	366	44	907	155	79	290	355
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1900	1885	1885	1767	1885	1885	1826	1885	1826
Adj Flow Rate, veh/h	425	263	26	225	543	402	48	997	60	87	319	170
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	3	3	3	0	1	1	9	1	1	5	1	5
Cap, veh/h	469	579	57	269	565	419	77	1337	596	105	1469	635
Arrive On Green	0.14	0.35	0.35	0.08	0.29	0.29	0.02	0.37	0.37	0.06	0.41	0.41
Sat Flow, veh/h	3428	1662	164	3510	1962	1452	3264	3582	1598	1739	3582	1547
Grp Volume(v), veh/h	425	0	289	225	496	449	48	997	60	87	319	170
Grp Sat Flow(s),veh/h/ln	1714	0	1826	1755	1791	1624	1632	1791	1598	1739	1791	1547
Q Serve(g_s), s	20.8	0.0	20.8	10.8	46.3	46.3	2.5	41.1	4.2	8.4	9.8	12.4
Cycle Q Clear(g_c), s	20.8	0.0	20.8	10.8	46.3	46.3	2.5	41.1	4.2	8.4	9.8	12.4
Prop In Lane	1.00		0.09	1.00		0.89	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	469	0	636	269	516	468	77	1337	596	105	1469	635
V/C Ratio(X)	0.91	0.00	0.45	0.84	0.96	0.96	0.62	0.75	0.10	0.83	0.22	0.27
Avail Cap(c_a), veh/h	524	0	636	351	527	478	115	1337	596	123	1469	635
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	72.3	0.0	42.9	77.4	59.5	59.6	82.2	46.3	34.7	79.0	32.5	33.2
Incr Delay (d2), s/veh	18.1	0.0	0.5	12.8	29.1	30.9	7.9	3.8	0.3	31.9	0.3	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	15.5	0.0	14.6	9.1	33.1	30.7	2.0	26.2	3.0	8.3	7.8	8.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	90.4	0.0	43.4	90.2	88.7	90.5	90.1	50.1	35.0	110.9	32.8	34.3
LnGrp LOS	F	A	D	F	F	F	F	D	D	F	C	C
Approach Vol, veh/h		714			1170			1105			576	
Approach Delay, s/veh		71.3			89.7			51.0			45.0	
Approach LOS		E			F			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.3	69.5	19.0	65.2	10.0	75.7	29.3	55.0				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	12.0	58.0	17.0	59.0	6.0	64.0	26.0	50.0				
Max Q Clear Time (g_c+I1), s	10.4	43.1	12.8	22.8	4.5	11.8	22.8	48.3				
Green Ext Time (p_c), s	0.0	5.8	0.3	0.8	0.0	1.3	0.5	0.7				
Intersection Summary												
HCM 6th Ctrl Delay			66.8									
HCM 6th LOS			E									

HCM 6th Signalized Intersection Summary

2: SR 400 Exit 6/Dunwoody PI & Northridge Rd

08/30/2020

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (veh/h)	43	755	330	136	347	746	255	109	254	303	506	18	
Future Volume (veh/h)	43	755	330	136	347	746	255	109	254	303	506	18	
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach	No			No			No			No			
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1885	1900	1885	1885	1885	1885	1885	
Adj Flow Rate, veh/h	44	778	211	140	484	221	263	112	133	312	522	0	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	
Percent Heavy Veh, %	0	0	0	0	0	1	0	1	1	1	1	1	
Cap, veh/h	232	852	380	196	1067	448	316	625	530	340	1544		
Arrive On Green	0.03	0.24	0.24	0.07	0.28	0.28	0.09	0.33	0.33	0.19	0.43	0.00	
Sat Flow, veh/h	1810	3610	1610	1810	3800	1598	3510	1885	1598	1795	3582	1598	
Grp Volume(v), veh/h	44	778	211	140	484	221	263	112	133	312	522	0	
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1810	1900	1598	1755	1885	1598	1795	1791	1598	
Q Serve(g_s), s	2.6	29.4	16.1	8.0	14.7	16.2	10.3	5.9	8.5	23.9	13.6	0.0	
Cycle Q Clear(g_c), s	2.6	29.4	16.1	8.0	14.7	16.2	10.3	5.9	8.5	23.9	13.6	0.0	
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Lane Grp Cap(c), veh/h	232	852	380	196	1067	448	316	625	530	340	1544		
V/C Ratio(X)	0.19	0.91	0.56	0.71	0.45	0.49	0.83	0.18	0.25	0.92	0.34		
Avail Cap(c_a), veh/h	249	1031	460	235	1303	548	401	625	530	462	1544		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	
Uniform Delay (d), s/veh	39.3	52.1	47.0	39.1	41.5	42.0	62.6	33.2	34.1	55.6	26.5	0.0	
Incr Delay (d2), s/veh	0.4	10.7	1.3	8.0	0.3	0.8	11.2	0.6	1.1	19.0	0.6	0.0	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(95%),veh/ln	2.1	20.7	10.8	7.1	11.3	10.7	8.8	5.1	6.3	18.3	9.9	0.0	
Unsig. Movement Delay, s/veh													
LnGrp Delay(d),s/veh	39.7	62.8	48.3	47.1	41.8	42.9	73.8	33.9	35.2	74.7	27.1	0.0	
LnGrp LOS	D	E	D	D	D	D	E	C	D	E	C		
Approach Vol, veh/h	1033			845			508			834			A
Approach Delay, s/veh	58.9			43.0			54.9			44.9			
Approach LOS	E			D			D			D			
Timer - Assigned Phs	1	2	3	4	5	6	7	8					
Phs Duration (G+Y+Rc), s	32.5	52.4	16.0	39.0	18.6	66.3	9.7	45.3					
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0					
Max Green Setting (Gmax), s	36.0	27.0	13.0	40.0	16.0	47.0	5.0	48.0					
Max Q Clear Time (g_c+I1), s	25.9	7.9	10.0	31.4	12.3	15.6	4.6	16.7					
Green Ext Time (p_c), s	0.7	0.2	0.1	1.6	0.3	3.7	0.0	1.0					

Intersection Summary

HCM 6th Ctrl Delay 50.5

HCM 6th LOS D

Notes

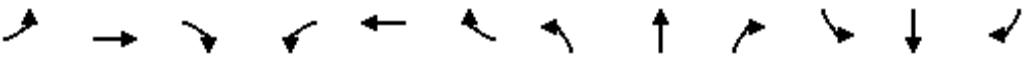
User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

3: Northside Dr & Powers Ferry Rd

08/30/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑		↑	↑						↑↑	↑
Traffic Volume (veh/h)	0	1028	461	54	247	0	0	0	0	522	593	194
Future Volume (veh/h)	0	1028	461	54	247	0	0	0	0	522	593	194
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1900	1900	1900	1885	0				1900	1900	1900
Adj Flow Rate, veh/h	0	1117	501	59	268	0				567	645	211
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	1	0				0	0	0
Cap, veh/h	0	1219	546	137	819	0				826	824	735
Arrive On Green	0.00	0.35	0.35	0.03	0.43	0.00				0.46	0.46	0.46
Sat Flow, veh/h	0	3677	1570	1810	1885	0				1810	1805	1610
Grp Volume(v), veh/h	0	1102	516	59	268	0				567	645	211
Grp Sat Flow(s),veh/h/ln	0	1729	1617	1810	1885	0				1810	1805	1610
Q Serve(g_s), s	0.0	33.6	33.6	2.2	10.3	0.0				27.3	33.2	9.0
Cycle Q Clear(g_c), s	0.0	33.6	33.6	2.2	10.3	0.0				27.3	33.2	9.0
Prop In Lane	0.00		0.97	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1202	562	137	819	0				826	824	735
V/C Ratio(X)	0.00	0.92	0.92	0.43	0.33	0.00				0.69	0.78	0.29
Avail Cap(c_a), veh/h	0	1257	588	145	857	0				826	824	735
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.99	0.99	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	34.3	34.4	27.4	20.5	0.0				23.7	25.3	18.7
Incr Delay (d2), s/veh	0.0	10.4	19.1	2.1	0.2	0.0				4.6	7.3	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	21.8	22.3	1.8	7.9	0.0				17.9	21.6	6.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	44.7	53.5	29.6	20.7	0.0				28.3	32.6	19.7
LnGrp LOS	A	D	D	C	C	A				C	C	B
Approach Vol, veh/h		1618			327						1423	
Approach Delay, s/veh		47.5			22.3						29.0	
Approach LOS		D			C						C	
Timer - Assigned Phs		2		4			7	8				
Phs Duration (G+Y+Rc), s		56.2		53.8			9.5	44.2				
Change Period (Y+Rc), s		6.0		6.0			6.0	6.0				
Max Green Setting (Gmax), s		48.0		50.0			4.0	40.0				
Max Q Clear Time (g_c+l1), s		35.2		12.3			4.2	35.6				
Green Ext Time (p_c), s		5.8		0.7			0.0	2.6				
Intersection Summary												
HCM 6th Ctrl Delay				37.2								
HCM 6th LOS				D								

HCM 6th Signalized Intersection Summary

4: Roswell Rd & Hannover Park Rd/Dunwoody PI

08/30/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	27	24	74	87	31	311	41	535	51	445	1939	32
Future Volume (veh/h)	27	24	74	87	31	311	41	535	51	445	1939	32
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	1900	1900	1885	1900	1885	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	28	25	25	91	32	324	43	557	0	464	2020	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	1	0	1	0	0	0	0	0	0
Cap, veh/h	36	84	71	128	116	585	56	2306		515	2725	
Arrive On Green	0.02	0.04	0.04	0.04	0.06	0.06	0.03	0.64	0.00	0.15	0.75	0.00
Sat Flow, veh/h	1810	1900	1610	3483	1900	2812	1810	3610	1610	3510	3610	1610
Grp Volume(v), veh/h	28	25	25	91	32	324	43	557	0	464	2020	0
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1742	1900	1406	1810	1805	1610	1755	1805	1610
Q Serve(g_s), s	2.8	2.3	2.7	4.7	2.9	11.0	4.2	11.9	0.0	23.4	56.1	0.0
Cycle Q Clear(g_c), s	2.8	2.3	2.7	4.7	2.9	11.0	4.2	11.9	0.0	23.4	56.1	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	36	84	71	128	116	585	56	2306		515	2725	
V/C Ratio(X)	0.77	0.30	0.35	0.71	0.28	0.55	0.77	0.24		0.90	0.74	
Avail Cap(c_a), veh/h	70	95	81	174	116	585	90	2306		644	2725	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	87.8	83.3	83.5	85.7	80.7	63.8	86.6	13.9	0.0	75.5	12.3	0.0
Incr Delay (d2), s/veh	28.7	1.9	2.9	8.1	1.3	1.1	20.0	0.2	0.0	13.6	1.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.9	2.1	2.1	4.0	2.6	11.0	4.1	8.5	0.0	17.0	28.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	116.5	85.2	86.4	93.9	82.0	65.0	106.6	14.1	0.0	89.1	14.1	0.0
LnGrp LOS	F	F	F	F	F	E	F	B		F	B	
Approach Vol, veh/h	78			447			600			A		
Approach Delay, s/veh	96.8			72.1			20.8			28.1		
Approach LOS	F			E			C			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	32.4	121.0	12.6	14.0	11.5	141.9	9.6	17.0				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	33.0	105.0	9.0	9.0	9.0	129.0	7.0	11.0				
Max Q Clear Time (g_c+I1), s	25.4	13.9	6.7	4.3	6.2	58.1	4.8	13.0				
Green Ext Time (p_c), s	1.0	3.8	0.0	0.0	0.0	30.8	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay	33.8											
HCM 6th LOS	C											

HCM 6th Signalized Intersection Summary

5: Roswell Rd & Northridge Rd

08/30/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	17	54	51	310	30	148	36	697	740	852	1432	60
Future Volume (veh/h)	17	54	51	310	30	148	36	697	740	852	1432	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1870	1900	1900	1900	1900	1900	1885
Adj Flow Rate, veh/h	18	56	27	342	0	24	37	719	608	878	1476	10
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	2	0	0	0	0	0	1
Cap, veh/h	23	71	80	387	0	169	48	1609	718	927	2467	1092
Arrive On Green	0.05	0.05	0.05	0.11	0.00	0.11	0.03	0.45	0.45	0.26	0.68	0.68
Sat Flow, veh/h	457	1421	1610	3619	0	1585	1810	3610	1610	3510	3610	1598
Grp Volume(v), veh/h	74	0	27	342	0	24	37	719	608	878	1476	10
Grp Sat Flow(s),veh/h/ln	1877	0	1610	1810	0	1585	1810	1805	1610	1755	1805	1598
Q Serve(g_s), s	7.0	0.0	2.9	16.8	0.0	2.5	3.7	24.8	60.5	44.2	39.4	0.4
Cycle Q Clear(g_c), s	7.0	0.0	2.9	16.8	0.0	2.5	3.7	24.8	60.5	44.2	39.4	0.4
Prop In Lane	0.24		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	94	0	80	387	0	169	48	1609	718	927	2467	1092
V/C Ratio(X)	0.79	0.00	0.34	0.88	0.00	0.14	0.77	0.45	0.85	0.95	0.60	0.01
Avail Cap(c_a), veh/h	104	0	89	462	0	203	90	1609	718	975	2467	1092
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	84.6	0.0	82.6	79.3	0.0	72.9	87.1	34.5	44.4	65.0	15.3	9.1
Incr Delay (d2), s/veh	30.1	0.0	2.4	16.0	0.0	0.4	22.3	0.9	11.8	17.1	1.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.6	0.0	2.3	13.5	0.0	1.9	3.6	16.5	34.3	29.3	22.2	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	114.6	0.0	85.1	95.3	0.0	73.3	109.4	35.4	56.3	82.1	16.3	9.1
LnGrp LOS	F	A	F	F	A	E	F	D	E	F	B	A
Approach Vol, veh/h	101		366			1364				2364		
Approach Delay, s/veh	106.7		93.9			46.7				40.7		
Approach LOS	F		F			D				D		
Timer - Assigned Phs	1	2	4		5	6	8					
Phs Duration (G+Y+Rc), s	53.5	86.2	15.0		10.8	129.0	25.2					
Change Period (Y+Rc), s	6.0	6.0	6.0		6.0	6.0	6.0					
Max Green Setting (Gmax), s	50.0	73.0	10.0		9.0	114.0	23.0					
Max Q Clear Time (g_c+I1), s	46.2	26.8	9.0		5.7	41.4	18.8					
Green Ext Time (p_c), s	1.4	2.0	0.0		0.0	15.8	0.5					
Intersection Summary												
HCM 6th Ctrl Delay	48.9											
HCM 6th LOS	D											

HCM 6th Signalized Intersection Summary

6: Northside Dr & Interstate N Pkwy/New Northside Dr

08/30/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	146	147	850	86	965	287	0	0	0	14	154	59
Future Volume (veh/h)	146	147	850	86	965	287	0	0	0	14	154	59
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900				1885	1885	1885
Adj Flow Rate, veh/h	155	156	904	91	1027	199				15	164	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94				0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0				1	1	1
Cap, veh/h	265	162	938	164	1246	1056				39	454	
Arrive On Green	0.05	0.67	0.67	0.03	0.66	0.66				0.13	0.13	0.00
Sat Flow, veh/h	1810	242	1405	1810	1900	1610				293	3463	0
Grp Volume(v), veh/h	155	0	1060	91	1027	199				96	83	0
Grp Sat Flow(s),veh/h/ln	1810	0	1647	1810	1900	1610				1871	1791	0
Q Serve(g_s), s	3.1	0.0	66.0	1.8	44.6	5.3				5.1	4.6	0.0
Cycle Q Clear(g_c), s	3.1	0.0	66.0	1.8	44.6	5.3				5.1	4.6	0.0
Prop In Lane	1.00		0.85	1.00		1.00				0.16		0.00
Lane Grp Cap(c), veh/h	265	0	1100	164	1246	1056				252	241	
V/C Ratio(X)	0.59	0.00	0.96	0.56	0.82	0.19				0.38	0.34	
Avail Cap(c_a), veh/h	280	0	1153	168	1295	1098				252	241	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00				1.00	1.00	0.00
Uniform Delay (d), s/veh	18.9	0.0	17.0	27.7	14.2	7.4				43.4	43.2	0.0
Incr Delay (d2), s/veh	2.8	0.0	18.1	3.8	4.3	0.1				4.3	3.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.2	0.0	34.1	3.1	25.0	3.1				4.8	4.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.8	0.0	35.1	31.5	18.5	7.5				47.7	47.1	0.0
LnGrp LOS	C	A	D	C	B	A				D	D	
Approach Vol, veh/h		1215			1317						179	A
Approach Delay, s/veh		33.4			17.8						47.4	
Approach LOS		C			B						D	
Timer - Assigned Phs		2	3	4			7	8				
Phs Duration (G+Y+Rc), s		20.8	9.8	79.4			11.1	78.1				
Change Period (Y+Rc), s		6.0	6.0	6.0			6.0	6.0				
Max Green Setting (Gmax), s		11.0	4.0	77.0			6.0	75.0				
Max Q Clear Time (g_c+I1), s		7.1	3.8	68.0			5.1	46.6				
Green Ext Time (p_c), s		0.3	0.0	5.4			0.0	11.5				
Intersection Summary												
HCM 6th Ctrl Delay			26.7									
HCM 6th LOS			C									
Notes												
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary

7: Riverside Dr & Heards Ferry Rd

08/30/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	127	231	117	68	190	42	144	378	131	47	782	136
Future Volume (veh/h)	127	231	117	68	190	42	144	378	131	47	782	136
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	132	241	122	71	198	44	150	394	136	49	815	142
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	204	232	118	102	242	54	173	759	262	437	825	144
Arrive On Green	0.06	0.20	0.20	0.03	0.16	0.16	0.06	0.58	0.58	0.02	0.54	0.54
Sat Flow, veh/h	1767	1162	588	1767	1470	327	1767	1319	455	1767	1539	268
Grp Volume(v), veh/h	132	0	363	71	0	242	150	0	530	49	0	957
Grp Sat Flow(s),veh/h/ln	1767	0	1750	1767	0	1797	1767	0	1774	1767	0	1807
Q Serve(g_s), s	8.6	0.0	28.0	4.0	0.0	18.2	7.0	0.0	25.3	1.8	0.0	73.1
Cycle Q Clear(g_c), s	8.6	0.0	28.0	4.0	0.0	18.2	7.0	0.0	25.3	1.8	0.0	73.1
Prop In Lane	1.00		0.34	1.00		0.18	1.00		0.26	1.00		0.15
Lane Grp Cap(c), veh/h	204	0	350	102	0	295	173	0	1021	437	0	969
V/C Ratio(X)	0.65	0.00	1.04	0.70	0.00	0.82	0.87	0.00	0.52	0.11	0.00	0.99
Avail Cap(c_a), veh/h	204	0	350	102	0	295	173	0	1021	444	0	969
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	45.7	0.0	56.0	52.2	0.0	56.5	41.6	0.0	18.0	15.4	0.0	32.0
Incr Delay (d2), s/veh	7.0	0.0	58.1	18.7	0.0	16.5	34.5	0.0	1.9	0.1	0.0	26.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.5	0.0	25.3	2.0	0.0	14.6	11.2	0.0	16.0	1.3	0.0	47.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.7	0.0	114.1	70.9	0.0	73.0	76.1	0.0	19.9	15.5	0.0	58.2
LnGrp LOS	D	A	F	E	A	E	E	A	B	B	A	E
Approach Vol, veh/h	495			313			680			1006		
Approach Delay, s/veh	97.7			72.6			32.3			56.2		
Approach LOS	F			E			C			E		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.4	86.6	10.0	34.0	15.0	81.0	15.0	29.0				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	4.0	80.0	4.0	28.0	9.0	75.0	9.0	23.0				
Max Q Clear Time (g_c+I1), s	3.8	27.3	6.0	30.0	9.0	75.1	10.6	20.2				
Green Ext Time (p_c), s	0.0	3.9	0.0	0.0	0.0	0.0	0.0	0.3				
Intersection Summary												
HCM 6th Ctrl Delay	60.0											
HCM 6th LOS	E											

HCM 6th Signalized Intersection Summary

8: New Northside Dr & Powers Ferry Rd

08/30/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 							  				
Traffic Volume (veh/h)	449	785	0	0	131	168	105	275	77	0	0	0
Future Volume (veh/h)	449	785	0	0	131	168	105	275	77	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach	No			No			No					
Adj Sat Flow, veh/h/ln	1885	1900	0	0	1885	1900	1900	1900	1900			
Adj Flow Rate, veh/h	493	863	0	0	144	0	115	302	85			
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91			
Percent Heavy Veh, %	1	0	0	0	1	0	0	0	0			
Cap, veh/h	583	951	0	0	525		448	1268	355			
Arrive On Green	0.17	0.50	0.00	0.00	0.28	0.00	0.39	0.39	0.39			
Sat Flow, veh/h	3483	1900	0	0	1885	1610	1149	3249	910			
Grp Volume(v), veh/h	493	863	0	0	144	0	184	155	162			
Grp Sat Flow(s),veh/h/ln	1742	1900	0	0	1885	1610	1843	1729	1736			
Q Serve(g_s), s	15.1	45.7	0.0	0.0	6.6	0.0	7.5	6.6	6.9			
Cycle Q Clear(g_c), s	15.1	45.7	0.0	0.0	6.6	0.0	7.5	6.6	6.9			
Prop In Lane	1.00		0.00	0.00		1.00	0.62		0.52			
Lane Grp Cap(c), veh/h	583	951	0	0	525		719	675	678			
V/C Ratio(X)	0.84	0.91	0.00	0.00	0.27		0.26	0.23	0.24			
Avail Cap(c_a), veh/h	855	1347	0	0	771		719	675	678			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.34	0.34	0.00	0.00	1.00	0.00	1.00	1.00	1.00			
Uniform Delay (d), s/veh	44.4	25.1	0.0	0.0	31.0	0.0	22.7	22.5	22.5			
Incr Delay (d2), s/veh	1.9	2.6	0.0	0.0	0.3	0.0	0.9	0.8	0.8			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	9.0	24.2	0.0	0.0	5.4	0.0	6.0	5.0	5.3			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.3	27.7	0.0	0.0	31.3	0.0	23.6	23.3	23.4			
LnGrp LOS	D	C	A	A	C		C	C	C			
Approach Vol, veh/h	1356			144			A			502		
Approach Delay, s/veh	34.5			31.3			23.4					
Approach LOS	C			C			C					
Timer - Assigned Phs	2			4			7			8		
Phs Duration (G+Y+Rc), s	48.9			61.1			24.4			36.6		
Change Period (Y+Rc), s	6.0			6.0			6.0			6.0		
Max Green Setting (Gmax), s	20.0			78.0			27.0			45.0		
Max Q Clear Time (g_c+I1), s	9.5			47.7			17.1			8.6		
Green Ext Time (p_c), s	2.1			7.3			1.3			0.8		
Intersection Summary												
HCM 6th Ctrl Delay			31.5									
HCM 6th LOS			C									
Notes												

HCM 6th Signalized Intersection Summary

9: Mt Vernon Hwy & Abernathy Rd/Perimeter Center

08/30/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	294	1407	28	48	624	81	33	240	97	222	488	457
Future Volume (veh/h)	294	1407	28	48	624	81	33	240	97	222	488	457
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1885	1900	1900	1885
Adj Flow Rate, veh/h	303	1451	0	49	643	0	34	247	0	229	503	316
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	1	0	0	1
Cap, veh/h	345	2227		112	1987		127	313		288	657	291
Arrive On Green	0.20	1.00	0.00	0.03	0.55	0.00	0.03	0.09	0.00	0.12	0.18	0.18
Sat Flow, veh/h	3510	3610	1610	3510	3610	1610	1810	3610	1598	1810	3610	1598
Grp Volume(v), veh/h	303	1451	0	49	643	0	34	247	0	229	503	316
Grp Sat Flow(s),veh/h/ln	1755	1805	1610	1755	1805	1610	1810	1805	1598	1810	1805	1598
Q Serve(g_s), s	14.3	0.0	0.0	2.3	16.6	0.0	2.9	11.4	0.0	19.2	22.5	30.9
Cycle Q Clear(g_c), s	14.3	0.0	0.0	2.3	16.6	0.0	2.9	11.4	0.0	19.2	22.5	30.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	345	2227		112	1987		127	313		288	657	291
V/C Ratio(X)	0.88	0.65		0.44	0.32		0.27	0.79		0.79	0.77	1.09
Avail Cap(c_a), veh/h	434	2227		124	1987		140	658		288	977	432
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.89	0.89	0.00	1.00	1.00	0.00	0.98	0.98	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	67.3	0.0	0.0	80.8	20.9	0.0	68.0	76.1	0.0	59.6	66.1	69.5
Incr Delay (d2), s/veh	14.1	1.3	0.0	2.7	0.4	0.0	1.1	4.4	0.0	14.2	2.1	65.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	10.3	0.7	0.0	2.0	11.4	0.0	2.5	9.3	0.0	15.1	15.9	26.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	81.5	1.3	0.0	83.5	21.3	0.0	69.1	80.5	0.0	73.7	68.2	135.4
LnGrp LOS	F	A		F	C		E	F		E	E	F
Approach Vol, veh/h	1754		A	692		A	281		A	1048		
Approach Delay, s/veh	15.2			25.7			79.1			89.7		
Approach LOS	B			C			E			F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	22.7	99.6	27.0	20.7	11.4	110.9	10.8	36.9				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	21.0	73.0	21.0	31.0	6.0	88.0	6.0	46.0				
Max Q Clear Time (g_c+I1), s	16.3	18.6	21.2	13.4	4.3	2.0	4.9	24.5				
Green Ext Time (p_c), s	0.4	4.5	0.0	1.3	0.0	15.6	0.0	1.8				

Intersection Summary

HCM 6th Ctrl Delay	42.6
HCM 6th LOS	D

Notes

Unsignalized Delay for [NBR, EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

10: Johnson Ferry Rd & Abernathy Rd & Brandon Mill Rd NW

08/30/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	1986	1054	11	453	38	156	35	18	145	219	141
Future Volume (veh/h)	54	1986	1054	11	453	38	156	35	18	145	219	141
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1900
Adj Flow Rate, veh/h	56	2069	1020	11	472	0	162	36	19	151	228	95
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	0
Cap, veh/h	573	2167	967	61	2123		171	201	106	357	357	310
Arrive On Green	0.02	0.61	0.61	0.01	0.60	0.00	0.05	0.18	0.18	0.07	0.19	0.19
Sat Flow, veh/h	1767	3526	1572	1767	3526	1572	3428	1143	603	1767	1856	1610
Grp Volume(v), veh/h	56	2069	1020	11	472	0	162	0	55	151	228	95
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1767	1763	1572	1714	0	1747	1767	1856	1610
Q Serve(g_s), s	2.2	98.5	110.6	0.4	11.1	0.0	8.5	0.0	4.8	12.0	20.4	9.1
Cycle Q Clear(g_c), s	2.2	98.5	110.6	0.4	11.1	0.0	8.5	0.0	4.8	12.0	20.4	9.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.35	1.00		1.00
Lane Grp Cap(c), veh/h	573	2167	967	61	2123		171	0	307	357	357	310
V/C Ratio(X)	0.10	0.95	1.06	0.18	0.22		0.95	0.00	0.18	0.42	0.64	0.31
Avail Cap(c_a), veh/h	574	2252	1005	84	2252		171	0	307	357	357	310
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	1.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.5	32.3	34.7	43.6	16.5	0.0	85.3	0.0	63.1	56.8	66.9	62.4
Incr Delay (d2), s/veh	0.0	1.3	27.7	1.4	0.1	0.0	52.7	0.0	1.3	0.8	8.4	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.4	44.0	54.2	0.6	8.1	0.0	8.7	0.0	4.1	9.8	15.8	7.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.5	33.6	62.4	45.0	16.5	0.0	138.0	0.0	64.4	57.6	75.3	64.9
LnGrp LOS	B	C	F	D	B		F	A	E	E	E	E
Approach Vol, veh/h	3145				483		A		217		474	
Approach Delay, s/veh	42.6				17.2				119.3		67.6	
Approach LOS	D				B				F		E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.0	37.7	7.7	116.6	15.0	40.7	10.0	114.4				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	12.0	25.0	4.0	115.0	9.0	28.0	4.0	115.0				
Max Q Clear Time (g_c+I1), s	14.0	6.8	2.4	100.5	10.5	22.4	4.2	13.1				
Green Ext Time (p_c), s	0.0	0.2	0.0	10.1	0.0	0.4	0.0	3.4				

Intersection Summary

HCM 6th Ctrl Delay 46.4

HCM 6th LOS D

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

11: Peachtree Dunwoody Rd & Abernathy Rd

08/30/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	634	1279	706	8	1011	218	158	319	8	181	353	376
Future Volume (veh/h)	634	1279	706	8	1011	218	158	319	8	181	353	376
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	1885	1885	1900	1870	1885	1870	1870	1900	1870	1870	1870
Adj Flow Rate, veh/h	647	1305	643	8	1032	43	161	326	0	185	360	78
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	1	1	0	2	1	2	2	0	2	2	2
Cap, veh/h	711	3213	997	17	2201	689	204	387		207	622	585
Arrive On Green	0.20	0.62	0.62	0.01	0.43	0.43	0.02	0.04	0.00	0.12	0.17	0.17
Sat Flow, veh/h	3510	5147	1598	1810	5106	1598	3456	3554	1610	1781	3741	1585
Grp Volume(v), veh/h	647	1305	643	8	1032	43	161	326	0	185	360	78
Grp Sat Flow(s),veh/h/ln	1755	1716	1598	1810	1702	1598	1728	1777	1610	1781	1870	1585
Q Serve(g_s), s	30.6	21.7	43.0	0.7	24.5	1.8	7.9	15.5	0.0	17.4	15.1	5.6
Cycle Q Clear(g_c), s	30.6	21.7	43.0	0.7	24.5	1.8	7.9	15.5	0.0	17.4	15.1	5.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	711	3213	997	17	2201	689	204	387		207	622	585
V/C Ratio(X)	0.91	0.41	0.64	0.48	0.47	0.06	0.79	0.84		0.89	0.58	0.13
Avail Cap(c_a), veh/h	888	3213	997	53	2201	689	264	502		314	902	703
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.84	0.84	0.84	0.96	0.96	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.3	16.1	20.1	83.8	34.5	12.8	82.3	80.5	0.0	74.1	65.4	35.6
Incr Delay (d2), s/veh	11.4	0.4	3.2	16.7	0.6	0.1	11.1	9.4	0.0	18.7	0.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	20.9	13.1	23.3	0.8	15.0	1.9	7.1	12.5	0.0	14.0	11.7	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	77.7	16.5	23.3	100.5	35.1	12.9	93.4	89.9	0.0	92.7	66.2	35.7
LnGrp LOS	E	B	C	F	D	B	F	F		F	E	D
Approach Vol, veh/h	2595			1083			487			A		
Approach Delay, s/veh	33.4			34.7			91.1			70.3		
Approach LOS	C			C			F			E		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.6	112.1	16.0	34.3	40.4	79.3	25.8	24.5				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	5.0	87.0	13.0	41.0	43.0	49.0	30.0	24.0				
Max Q Clear Time (g_c+I1), s	2.7	23.7	9.9	17.1	32.6	26.5	19.4	17.5				
Green Ext Time (p_c), s	0.0	6.5	0.1	1.9	1.8	6.7	0.3	1.0				

Intersection Summary

HCM 6th Ctrl Delay	44.4
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

12: Peachtree Dunwoody Rd & Hollis Cobb Cir/Medical Center MARTA

08/30/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	164	7	41	50	2	35	54	1350	134	133	1227	196
Future Volume (veh/h)	164	7	41	50	2	35	54	1350	134	133	1227	196
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1885	1856	1885	1900
Adj Flow Rate, veh/h	169	7	42	52	2	36	56	1392	0	137	1265	202
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	1	3	1	0
Cap, veh/h	230	36	219	220	13	238	340	2537		305	2569	1155
Arrive On Green	0.16	0.16	0.16	0.16	0.16	0.16	0.02	0.70	0.00	0.07	1.00	1.00
Sat Flow, veh/h	1391	235	1411	1378	85	1538	1810	3610	1598	1767	3582	1610
Grp Volume(v), veh/h	169	0	49	52	0	38	56	1392	0	137	1265	202
Grp Sat Flow(s),veh/h/ln	1391	0	1646	1378	0	1623	1810	1805	1598	1767	1791	1610
Q Serve(g_s), s	20.3	0.0	4.4	5.8	0.0	3.4	1.5	31.7	0.0	3.9	0.0	0.0
Cycle Q Clear(g_c), s	23.8	0.0	4.4	10.2	0.0	3.4	1.5	31.7	0.0	3.9	0.0	0.0
Prop In Lane	1.00		0.86	1.00		0.95	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	230	0	255	220	0	252	340	2537		305	2569	1155
V/C Ratio(X)	0.74	0.00	0.19	0.24	0.00	0.15	0.16	0.55		0.45	0.49	0.17
Avail Cap(c_a), veh/h	325	0	368	315	0	363	375	2537		418	2569	1155
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	0.51	0.51	0.51
Uniform Delay (d), s/veh	72.4	0.0	62.5	67.0	0.0	62.1	6.6	12.2	0.0	10.4	0.0	0.0
Incr Delay (d2), s/veh	5.1	0.0	0.4	0.5	0.0	0.3	0.2	0.9	0.0	0.5	0.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	12.2	0.0	3.4	3.8	0.0	2.6	1.1	18.5	0.0	2.4	0.2	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	77.6	0.0	62.9	67.5	0.0	62.4	6.9	13.1	0.0	10.9	0.3	0.2
LnGrp LOS	E	A	E	E	A	E	A	B		B	A	A
Approach Vol, veh/h	218			90			1448			1604		
Approach Delay, s/veh	74.3			65.4			12.8			1.2		
Approach LOS	E			E			B			A		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.1	125.5		32.4	9.7	127.9		32.4				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	17.0	97.0		38.0	7.0	107.0		38.0				
Max Q Clear Time (g_c+I1), s	5.9	33.7		25.8	3.5	2.0		12.2				
Green Ext Time (p_c), s	0.2	15.6		0.6	0.0	11.1		0.3				

Intersection Summary

HCM 6th Ctrl Delay	12.7
HCM 6th LOS	B

Notes

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

13: River Valley Rd & Johnson Ferry Rd

08/30/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	2796	315	308	450	1	60	1	307	1	1	1
Future Volume (veh/h)	5	2796	315	308	450	1	60	1	307	1	1	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	5	3006	0	331	484	1	65	1	0	1	1	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	674	2442		246	2904	6	117	1		157	77	77
Arrive On Green	0.00	0.69	0.00	0.23	1.00	1.00	0.06	0.06	0.00	0.00	0.09	0.09
Sat Flow, veh/h	1767	3526	1572	1767	3610	7	1388	21	1572	1767	851	851
Grp Volume(v), veh/h	5	3006	0	331	236	249	66	0	0	1	0	2
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1767	1763	1854	1409	0	1572	1767	0	1702
Q Serve(g_s), s	0.2	124.7	0.0	21.0	0.0	0.0	8.4	0.0	0.0	0.1	0.0	0.2
Cycle Q Clear(g_c), s	0.2	124.7	0.0	21.0	0.0	0.0	8.4	0.0	0.0	0.1	0.0	0.2
Prop In Lane	1.00		1.00	1.00		0.00	0.98		1.00	1.00		0.50
Lane Grp Cap(c), veh/h	674	2442		246	1418	1492	118	0		157	0	154
V/C Ratio(X)	0.01	1.23		1.34	0.17	0.17	0.56	0.00		0.01	0.00	0.01
Avail Cap(c_a), veh/h	705	2442		246	1418	1492	149	0		204	0	236
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.92	0.92	0.92	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.3	27.7	0.0	62.0	0.0	0.0	84.2	0.0	0.0	78.2	0.0	74.5
Incr Delay (d2), s/veh	0.0	107.7	0.0	177.9	0.2	0.2	4.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.1	119.3	0.0	33.5	0.2	0.2	5.7	0.0	0.0	0.1	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.3	135.3	0.0	240.0	0.2	0.2	88.2	0.0	0.0	78.2	0.0	74.6
LnGrp LOS	A	F		F	A	A	F	A		E	A	E
Approach Vol, veh/h	3011			A			816			66		
Approach Delay, s/veh	135.1						97.5			88.2		
Approach LOS	F						F			E		
Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	27.0	130.7		22.3	6.9	150.8	6.2	16.1				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	21.0	116.0		25.0	4.0	133.0	5.0	14.0				
Max Q Clear Time (g_c+I1), s	23.0	126.7		2.2	2.2	2.0	2.1	10.4				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	3.1	0.0	0.1				

Intersection Summary

HCM 6th Ctrl Delay 126.4

HCM 6th LOS F

Notes

Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

Intersection						
Int Delay, s/veh	11.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	164	170	368	313	119	92
Future Vol, veh/h	164	170	368	313	119	92
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	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	1	2	1	3	2	1
Mvmt Flow	191	198	428	364	138	107
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	993	610	0	0	428	0
Stage 1	610	-	-	-	-	-
Stage 2	383	-	-	-	-	-
Critical Hdwy	6.41	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	273	494	-	-	1131	-
Stage 1	544	-	-	-	-	-
Stage 2	691	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	238	494	-	-	1131	-
Mov Cap-2 Maneuver	238	-	-	-	-	-
Stage 1	544	-	-	-	-	-
Stage 2	601	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	39	0	4.9			
HCM LOS	E					
Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT		
Capacity (veh/h)	-	- 238 494 1131	-	-		
HCM Lane V/C Ratio	-	- 0.801 0.4 0.122	-	-		
HCM Control Delay (s)	-	- 61.7 17.1 8.6	0			
HCM Lane LOS	-	- F C A A				
HCM 95th %tile Q(veh)	-	- 6 1.9 0.4	-			

HCM 6th Signalized Intersection Summary

15: Roswell Rd & Spalding Dr

08/30/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	3	29	44	0	12	9	646	62	91	1161	8
Future Volume (veh/h)	6	3	29	44	0	12	9	646	62	91	1161	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	6	3	31	47	0	0	10	695	67	98	1248	9
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	84	36	78	102	0		389	2673	257	630	3011	22
Arrive On Green	0.05	0.05	0.05	0.05	0.00	0.00	0.01	0.82	0.82	0.03	0.84	0.84
Sat Flow, veh/h	1025	718	1572	1237	0	0	1767	3249	313	1767	3588	26
Grp Volume(v), veh/h	9	0	31	47	0	0	10	377	385	98	613	644
Grp Sat Flow(s),veh/h/ln	1743	0	1572	1237	0	0	1767	1763	1799	1767	1763	1851
Q Serve(g_s), s	0.0	0.0	3.4	6.1	0.0	0.0	0.2	8.7	8.7	1.6	15.4	15.4
Cycle Q Clear(g_c), s	0.8	0.0	3.4	7.0	0.0	0.0	0.2	8.7	8.7	1.6	15.4	15.4
Prop In Lane	0.67		1.00	1.00		0.00	1.00		0.17	1.00		0.01
Lane Grp Cap(c), veh/h	120	0	78	102	0		389	1450	1480	630	1479	1553
V/C Ratio(X)	0.07	0.00	0.40	0.46	0.00		0.03	0.26	0.26	0.16	0.41	0.41
Avail Cap(c_a), veh/h	231	0	192	200	0		458	1450	1480	748	1479	1553
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	81.7	0.0	82.9	85.0	0.0	0.0	2.9	3.6	3.6	2.4	3.6	3.6
Incr Delay (d2), s/veh	0.3	0.0	3.2	3.3	0.0	0.0	0.0	0.4	0.4	0.1	0.9	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.7	0.0	2.7	4.1	0.0	0.0	0.1	4.9	5.0	0.8	8.1	8.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	81.9	0.0	86.1	88.2	0.0	0.0	3.0	4.0	4.0	2.5	4.4	4.4
LnGrp LOS	F	A	F	F	A		A	A	A	A	A	A
Approach Vol, veh/h	40			47			A			772		
Approach Delay, s/veh	85.2			88.2			4.0			4.3		
Approach LOS	F			F			A			A		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.0	154.1		15.0	8.0	157.1		15.0				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	17.0	123.0		22.0	9.0	131.0		22.0				
Max Q Clear Time (g_c+I1), s	3.6	10.7		2.8	2.2	17.4		9.0				
Green Ext Time (p_c), s	0.2	4.9		0.0	0.0	10.4		0.1				

Intersection Summary

HCM 6th Ctrl Delay	7.4
HCM 6th LOS	A

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

HCM Signalized Intersection Capacity Analysis

16: Roberts Dr & Spalding Dr

08/30/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	144	223	17	63	341	483	23	254	33	242	261	103
Future Volume (vph)	144	223	17	63	341	483	23	254	33	242	261	103
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.98		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1805	1873		1805	1900	1615	1805	1851		1787	1806	
Flt Permitted	0.95	1.00		0.51	1.00	1.00	0.31	1.00		0.23	1.00	
Satd. Flow (perm)	1805	1873		968	1900	1615	595	1851		437	1806	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	153	237	18	67	363	514	24	270	35	257	278	110
RTOR Reduction (vph)	0	3	0	0	0	230	0	5	0	0	16	0
Lane Group Flow (vph)	153	252	0	67	363	284	24	300	0	257	372	0
Heavy Vehicles (%)	0%	0%	5%	0%	0%	0%	0%	1%	0%	1%	1%	0%
Turn Type	Split	NA		Perm	NA	custom	pm+pt	NA		pm+pt	NA	
Protected Phases	4!	4			3 7 8!		5	2		1	6	
Permitted Phases				3 7 8		8	2			6		
Actuated Green, G (s)	13.0	13.0		44.0	44.0	33.0	23.0	18.0		33.0	23.0	
Effective Green, g (s)	13.0	13.0		44.0	44.0	33.0	23.0	18.0		33.0	23.0	
Actuated g/C Ratio	0.14	0.14		0.49	0.49	0.37	0.26	0.20		0.37	0.26	
Clearance Time (s)	6.0	6.0				6.0	6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0				3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	260	270		473	928	592	219	370		310	461	
v/s Ratio Prot	0.08	c0.13			0.19		0.01	0.16		c0.09	c0.21	
v/s Ratio Perm				0.07		c0.18	0.02			c0.21		
v/c Ratio	0.59	0.93		0.14	0.39	0.48	0.11	0.81		0.83	0.81	
Uniform Delay, d1	36.0	38.1		12.6	14.5	21.9	25.6	34.4		22.4	31.4	
Progression Factor	1.00	1.00		1.26	1.20	1.57	1.00	1.00		1.00	1.00	
Incremental Delay, d2	9.4	39.7		0.1	0.2	0.5	1.0	17.4		21.9	14.1	
Delay (s)	45.4	77.8		16.0	17.7	34.8	26.6	51.7		44.4	45.5	
Level of Service	D	E		B	B	C	C	D		D	D	
Approach Delay (s)		65.6			26.9			49.9			45.1	
Approach LOS		E			C			D			D	

Intersection Summary

HCM 2000 Control Delay	42.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	74.7%	ICU Level of Service	D
Analysis Period (min)	15		

! Phase conflict between lane groups.

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis

21: Dunwoody Club Dr & Spalding Dr

08/30/2020

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	👉			👈👈	👈👈	
Traffic Volume (vph)	228	259	7	508	408	5
Future Volume (vph)	228	259	7	508	408	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0			6.0	6.0	
Lane Util. Factor	1.00			0.95	1.00	
Frt	0.93			1.00	1.00	
Flt Protected	1.00			1.00	0.95	
Satd. Flow (prot)	1754			3607	1790	
Flt Permitted	1.00			0.95	0.95	
Satd. Flow (perm)	1754			3420	1790	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	253	288	8	564	453	6
RTOR Reduction (vph)	46	0	0	0	1	0
Lane Group Flow (vph)	495	0	0	572	458	0
Heavy Vehicles (%)	0%	1%	0%	0%	1%	0%
Turn Type	NA		custom	NA	Prot	
Protected Phases	1 2 4			1 6 7!	3!	
Permitted Phases			7!			
Actuated Green, G (s)	53.0			44.0	25.0	
Effective Green, g (s)	53.0			44.0	25.0	
Actuated g/C Ratio	0.59			0.49	0.28	
Clearance Time (s)					6.0	
Vehicle Extension (s)					3.0	
Lane Grp Cap (vph)	1032			1672	497	
v/s Ratio Prot	c0.28				c0.26	
v/s Ratio Perm				0.17		
v/c Ratio	0.48			0.34	0.92	
Uniform Delay, d1	10.6			14.1	31.6	
Progression Factor	0.39			1.00	1.00	
Incremental Delay, d2	0.8			0.1	25.0	
Delay (s)	4.9			14.2	56.6	
Level of Service	A			B	E	
Approach Delay (s)	4.9			14.2	56.6	
Approach LOS	A			B	E	
Intersection Summary						
HCM 2000 Control Delay			23.4		HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.73			
Actuated Cycle Length (s)			90.0		Sum of lost time (s)	24.0
Intersection Capacity Utilization			60.8%		ICU Level of Service	B
Analysis Period (min)			15			
! Phase conflict between lane groups.						
c Critical Lane Group						

HCM 6th Signalized Intersection Summary

17: Barfield Rd & Mt Vernon Hwy

08/30/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	158	711	67	98	247	66	28	102	52	113	177	36
Future Volume (veh/h)	158	711	67	98	247	66	28	102	52	113	177	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1885	1885	1885	1870	1870	1796	1870	1870	1870	1870	1796
Adj Flow Rate, veh/h	166	748	71	103	260	0	29	107	55	119	186	12
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	1	1	1	2	2	7	2	2	2	2	7
Cap, veh/h	773	1106	105	354	1197		146	122	63	184	289	235
Arrive On Green	0.04	0.65	0.65	0.03	0.64	0.00	0.02	0.10	0.10	0.07	0.15	0.15
Sat Flow, veh/h	1781	1695	161	1795	1870	0	1711	1164	598	1781	1870	1522
Grp Volume(v), veh/h	166	0	819	103	260	0	29	0	162	119	186	12
Grp Sat Flow(s),veh/h/ln	1781	0	1856	1795	1870	0	1711	0	1763	1781	1870	1522
Q Serve(g_s), s	5.5	0.0	46.7	3.4	9.9	0.0	2.6	0.0	15.4	9.9	15.9	1.1
Cycle Q Clear(g_c), s	5.5	0.0	46.7	3.4	9.9	0.0	2.6	0.0	15.4	9.9	15.9	1.1
Prop In Lane	1.00		0.09	1.00		0.00	1.00		0.34	1.00		1.00
Lane Grp Cap(c), veh/h	773	0	1211	354	1197		146	0	185	184	289	235
V/C Ratio(X)	0.21	0.00	0.68	0.29	0.22		0.20	0.00	0.88	0.65	0.64	0.05
Avail Cap(c_a), veh/h	788	0	1211	402	1197		152	0	249	185	352	287
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.7	0.0	18.4	16.6	12.8	0.0	66.4	0.0	75.0	61.3	67.5	61.3
Incr Delay (d2), s/veh	0.1	0.0	3.0	0.4	0.4	0.0	0.7	0.0	22.5	7.5	2.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.9	0.0	27.9	2.5	7.7	0.0	2.1	0.0	12.8	8.5	12.4	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.8	0.0	21.4	17.0	13.2	0.0	67.1	0.0	97.6	68.8	70.4	61.3
LnGrp LOS	A	A	C	B	B		E	A	F	E	E	E
Approach Vol, veh/h		985			363	A		191			317	
Approach Delay, s/veh		19.5			14.3			92.9			69.4	
Approach LOS		B			B			F			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.4	116.9	9.4	32.3	13.6	114.8	17.9	23.8				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	10.0	100.0	4.0	32.0	9.0	101.0	12.0	24.0				
Max Q Clear Time (g_c+I1), s	5.4	48.7	4.6	17.9	7.5	11.9	11.9	17.4				
Green Ext Time (p_c), s	0.1	7.4	0.0	0.7	0.1	1.6	0.0	0.4				
Intersection Summary												
HCM 6th Ctrl Delay			34.6									
HCM 6th LOS			C									
Notes												
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary

18: Peachtree Dunwoody Rd & Mt Vernon Hwy/Mt Vernon Hwy

08/30/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	203	272	198	241	252	18	42	307	86	4	941	113
Future Volume (veh/h)	203	272	198	241	252	18	42	307	86	4	941	113
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1870	1885	1900	1885	1693	1811	1870	1870	1900	1900	1856
Adj Flow Rate, veh/h	211	283	154	251	262	0	44	320	90	4	980	118
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	2	1	0	1	14	6	2	2	0	0	3
Cap, veh/h	639	1547	695	582	1605		56	1010	279	23	1059	471
Arrive On Green	0.08	0.44	0.44	0.09	0.45	0.00	0.03	0.37	0.37	0.60	0.60	0.60
Sat Flow, veh/h	1795	3554	1598	1810	3582	1434	1725	2749	761	4	3535	1572
Grp Volume(v), veh/h	211	283	154	251	262	0	44	205	205	527	457	118
Grp Sat Flow(s),veh/h/ln	1795	1777	1598	1810	1791	1434	1725	1777	1733	1896	1643	1572
Q Serve(g_s), s	11.0	8.3	10.2	13.0	7.4	0.0	4.3	14.0	14.4	5.7	42.7	6.0
Cycle Q Clear(g_c), s	11.0	8.3	10.2	13.0	7.4	0.0	4.3	14.0	14.4	42.6	42.7	6.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.44	0.01		1.00
Lane Grp Cap(c), veh/h	639	1547	695	582	1605		56	653	637	589	492	471
V/C Ratio(X)	0.33	0.18	0.22	0.43	0.16		0.78	0.31	0.32	0.90	0.93	0.25
Avail Cap(c_a), veh/h	741	1547	695	746	1605		112	951	928	846	715	684
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	0.76	0.76	0.00	1.00	1.00	1.00	0.66	0.66	0.66
Uniform Delay (d), s/veh	22.8	29.5	30.0	22.4	27.9	0.0	81.6	38.5	38.6	32.4	32.5	25.1
Incr Delay (d2), s/veh	0.3	0.3	0.7	0.4	0.2	0.0	20.7	0.3	0.3	6.2	10.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.4	6.6	7.5	9.1	5.9	0.0	4.0	10.4	10.4	21.4	19.5	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.1	29.7	30.7	22.8	28.1	0.0	102.3	38.7	38.9	38.7	42.7	25.3
LnGrp LOS	C	C	C	C	C		F	D	D	D	D	C
Approach Vol, veh/h		648			513	A		454			1102	
Approach Delay, s/veh		27.8			25.5			45.0			38.9	
Approach LOS		C			C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6		8				
Phs Duration (G+Y+Rc), s	21.6	80.0	11.5	56.9	19.4	82.2		68.4				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	31.0	30.0	11.0	74.0	23.0	38.0		91.0				
Max Q Clear Time (g_c+I1), s	15.0	10.3	6.3	44.7	13.0	9.4		16.4				
Green Ext Time (p_c), s	0.6	1.0	0.0	6.2	0.4	1.7		2.6				

Intersection Summary

HCM 6th Ctrl Delay	34.7
HCM 6th LOS	C

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

19: Peachtree Dunwoody Rd & Lake Hearn Drive

08/30/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	2	12	152	15	112	67	1418	253	213	1646	124
Future Volume (veh/h)	60	2	12	152	15	112	67	1418	253	213	1646	124
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1604	1604	1870	1811	1900	1900	1900	1885	1826	1885	1870	1870
Adj Flow Rate, veh/h	62	2	0	158	16	117	70	1477	264	222	1715	129
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	20	20	2	6	0	0	0	1	5	1	2	2
Cap, veh/h	116	2		342	39	288	168	2284	987	323	2245	167
Arrive On Green	0.07	0.07	0.00	0.09	0.20	0.20	0.05	1.00	1.00	0.06	0.67	0.67
Sat Flow, veh/h	1055	34	1585	1725	197	1443	1810	3582	1547	1795	3353	250
Grp Volume(v), veh/h	64	0	0	158	0	133	70	1477	264	222	901	943
Grp Sat Flow(s),veh/h/ln	1089	0	1585	1725	0	1640	1810	1791	1547	1795	1777	1825
Q Serve(g_s), s	9.9	0.0	0.0	14.1	0.0	12.0	2.3	0.0	0.0	7.1	57.7	60.1
Cycle Q Clear(g_c), s	9.9	0.0	0.0	14.1	0.0	12.0	2.3	0.0	0.0	7.1	57.7	60.1
Prop In Lane	0.97		1.00	1.00		0.88	1.00		1.00	1.00		0.14
Lane Grp Cap(c), veh/h	118	0		342	0	328	168	2284	987	323	1190	1222
V/C Ratio(X)	0.54	0.00		0.46	0.00	0.41	0.42	0.65	0.27	0.69	0.76	0.77
Avail Cap(c_a), veh/h	151	0		342	0	376	208	2284	987	485	1190	1222
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.78	0.78	0.78	1.00	1.00	1.00
Uniform Delay (d), s/veh	78.1	0.0	0.0	63.5	0.0	59.2	21.5	0.0	0.0	8.6	18.8	19.2
Incr Delay (d2), s/veh	3.8	0.0	0.0	1.0	0.0	0.8	1.3	1.1	0.5	2.6	4.5	4.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.2	0.0	0.0	10.4	0.0	8.8	2.1	0.6	0.3	5.4	32.4	34.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	81.9	0.0	0.0	64.5	0.0	60.0	22.8	1.1	0.5	11.2	23.3	24.0
LnGrp LOS	F	A		E	A	E	C	A	A	B	C	C
Approach Vol, veh/h		64	A		291			1811			2066	
Approach Delay, s/veh		81.9			62.4			1.9			22.3	
Approach LOS		F			E			A			C	
Timer - Assigned Phs	1	2	3	4	5	6		8				
Phs Duration (G+Y+Rc), s	15.7	114.4	22.0	18.0	10.2	119.8		40.0				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	25.0	88.0	16.0	17.0	8.0	105.0		39.0				
Max Q Clear Time (g_c+I1), s	9.1	2.0	16.1	11.9	4.3	62.1		14.0				
Green Ext Time (p_c), s	0.5	14.7	0.0	0.1	0.0	22.1		0.7				
Intersection Summary												
HCM 6th Ctrl Delay			17.2									
HCM 6th LOS			B									
Notes												
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary

1: Peachtree Dunwoody Rd & Johnson Ferry Rd

08/30/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	371	346	36	219	274	172	26	657	286	206	999	435
Future Volume (veh/h)	371	346	36	219	274	172	26	657	286	206	999	435
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1900	1900	1900	1870	1870	1900	1900	1900	1885	1885	1870
Adj Flow Rate, veh/h	382	357	37	226	282	177	27	677	192	212	1030	242
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	0	0	0	2	2	0	0	0	1	1	2
Cap, veh/h	434	382	40	272	377	230	61	1501	670	235	1897	839
Arrive On Green	0.13	0.23	0.23	0.08	0.18	0.18	0.02	0.42	0.42	0.13	0.53	0.53
Sat Flow, veh/h	3456	1693	175	3510	2122	1293	3510	3610	1610	1795	3582	1585
Grp Volume(v), veh/h	382	0	394	226	235	224	27	677	192	212	1030	242
Grp Sat Flow(s),veh/h/ln	1728	0	1868	1755	1777	1638	1755	1805	1610	1795	1791	1585
Q Serve(g_s), s	17.4	0.0	33.1	10.2	20.0	20.9	1.2	21.6	12.7	18.6	30.4	13.6
Cycle Q Clear(g_c), s	17.4	0.0	33.1	10.2	20.0	20.9	1.2	21.6	12.7	18.6	30.4	13.6
Prop In Lane	1.00		0.09	1.00		0.79	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	434	0	421	272	315	291	61	1501	670	235	1897	839
V/C Ratio(X)	0.88	0.00	0.94	0.83	0.74	0.77	0.44	0.45	0.29	0.90	0.54	0.29
Avail Cap(c_a), veh/h	540	0	561	351	433	399	88	1501	670	325	1897	839
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	68.8	0.0	60.8	72.8	62.4	62.7	77.8	33.6	31.0	68.5	24.9	20.9
Incr Delay (d2), s/veh	13.3	0.0	19.7	12.3	4.5	6.2	4.9	1.0	1.1	21.3	1.1	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	13.2	0.0	24.7	8.7	14.4	14.1	1.1	14.8	8.8	15.1	19.1	9.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	82.1	0.0	80.5	85.0	66.9	68.9	82.7	34.6	32.1	89.8	26.0	21.8
LnGrp LOS	F	A	F	F	E	E	F	C	C	F	C	C
Approach Vol, veh/h	776			685			896			1484		
Approach Delay, s/veh	81.3			73.5			35.5			34.4		
Approach LOS	F			E			D			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	27.0	72.5	18.4	42.1	8.8	90.7	26.1	34.4				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	29.0	43.0	16.0	48.0	4.0	68.0	25.0	39.0				
Max Q Clear Time (g_c+I1), s	20.6	23.6	12.2	35.1	3.2	32.4	19.4	22.9				
Green Ext Time (p_c), s	0.4	3.4	0.3	1.0	0.0	6.9	0.7	1.2				
Intersection Summary												
HCM 6th Ctrl Delay	51.1											
HCM 6th LOS	D											

HCM 6th Signalized Intersection Summary

2: SR 400 Exit 6/Dunwoody PI & Northridge Rd

08/30/2020

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (veh/h)	176	845	284	60	263	1276	709	334	369	332	346	175	
Future Volume (veh/h)	176	845	284	60	263	1276	709	334	369	332	346	175	
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach	No			No			No			No			
Adj Sat Flow, veh/h/ln	1900	1900	1900	1885	1900	1900	1900	1885	1900	1900	1885	1900	
Adj Flow Rate, veh/h	178	854	9	61	266	557	716	337	322	335	349	0	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	
Percent Heavy Veh, %	0	0	0	1	0	0	0	1	0	0	1	0	
Cap, veh/h	258	935	417	130	393	667	785	672	574	358	1184		
Arrive On Green	0.09	0.26	0.26	0.04	0.21	0.21	0.22	0.36	0.36	0.20	0.33	0.00	
Sat Flow, veh/h	1810	3610	1610	1795	1900	3220	3510	1885	1610	1810	3582	1610	
Grp Volume(v), veh/h	178	854	9	61	266	557	716	337	322	335	349	0	
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1795	1900	1610	1755	1885	1610	1810	1791	1610	
Q Serve(g_s), s	12.1	36.7	0.7	4.3	20.7	26.5	31.8	22.4	25.7	29.2	11.6	0.0	
Cycle Q Clear(g_c), s	12.1	36.7	0.7	4.3	20.7	26.5	31.8	22.4	25.7	29.2	11.6	0.0	
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Lane Grp Cap(c), veh/h	258	935	417	130	393	667	785	672	574	358	1184		
V/C Ratio(X)	0.69	0.91	0.02	0.47	0.68	0.84	0.91	0.50	0.56	0.93	0.29		
Avail Cap(c_a), veh/h	279	1173	523	131	499	845	943	672	574	418	1184		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	
Uniform Delay (d), s/veh	44.7	57.5	44.2	50.2	58.5	60.8	60.6	40.3	41.4	63.1	39.7	0.0	
Incr Delay (d2), s/veh	6.5	9.4	0.0	2.6	2.5	5.9	11.4	2.7	3.9	26.2	0.6	0.0	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(95%),veh/ln	9.9	24.8	0.5	3.6	15.5	16.9	21.8	16.4	16.3	22.5	9.0	0.0	
Unsig. Movement Delay, s/veh													
LnGrp Delay(d),s/veh	51.1	66.9	44.2	52.8	61.0	66.7	72.0	43.0	45.4	89.3	40.3	0.0	
LnGrp LOS	D	E	D	D	E	E	E	D	D	F	D		
Approach Vol, veh/h	1041			884			1375			684			A
Approach Delay, s/veh	64.0			64.0			58.6			64.3			
Approach LOS	E			E			E			E			
Timer - Assigned Phs	1	2	3	4	5	6	7	8					
Phs Duration (G+Y+Rc), s	37.7	63.0	11.8	47.5	41.8	58.9	20.2	39.1					
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0					
Max Green Setting (Gmax), s	37.0	41.0	6.0	52.0	43.0	35.0	16.0	42.0					
Max Q Clear Time (g_c+I1), s	31.2	24.4	6.3	38.7	33.8	13.6	14.1	22.7					
Green Ext Time (p_c), s	0.5	0.8	0.0	2.7	2.0	2.1	0.1	0.2					

Intersection Summary

HCM 6th Ctrl Delay 62.2

HCM 6th LOS E

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

3: Northside Dr & Powers Ferry Rd

08/30/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑		↑	↑						↑↑↑	↑
Traffic Volume (veh/h)	0	610	225	43	971	0	0	0	0	274	324	377
Future Volume (veh/h)	0	610	225	43	971	0	0	0	0	274	324	377
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1900	1900	1900	1885	0				1900	1900	1900
Adj Flow Rate, veh/h	0	642	237	45	1022	0				288	341	397
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	1	0				0	0	0
Cap, veh/h	0	1809	655	354	1063	0				519	667	527
Arrive On Green	0.00	0.48	0.48	0.03	0.56	0.00				0.33	0.33	0.33
Sat Flow, veh/h	0	3925	1360	1810	1885	0				1586	2040	1610
Grp Volume(v), veh/h	0	590	289	45	1022	0				331	298	397
Grp Sat Flow(s),veh/h/ln	0	1729	1655	1810	1885	0				1821	1805	1610
Q Serve(g_s), s	0.0	11.7	12.0	1.3	56.8	0.0				16.4	14.7	24.2
Cycle Q Clear(g_c), s	0.0	11.7	12.0	1.3	56.8	0.0				16.4	14.7	24.2
Prop In Lane	0.00		0.82	1.00		0.00				0.87		1.00
Lane Grp Cap(c), veh/h	0	1667	798	354	1063	0				596	591	527
V/C Ratio(X)	0.00	0.35	0.36	0.13	0.96	0.00				0.56	0.51	0.75
Avail Cap(c_a), veh/h	0	1855	888	370	1183	0				596	591	527
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.40	0.40	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	17.8	17.9	13.6	22.9	0.0				30.4	29.8	33.0
Incr Delay (d2), s/veh	0.0	0.1	0.3	0.1	8.8	0.0				3.7	3.1	9.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	8.1	8.0	0.9	30.6	0.0				12.2	11.0	15.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	17.9	18.1	13.6	31.7	0.0				34.1	32.9	42.7
LnGrp LOS	A	B	B	B	C	A				C	C	D
Approach Vol, veh/h		879			1067						1026	
Approach Delay, s/veh		18.0			30.9						37.1	
Approach LOS		B			C						D	
Timer - Assigned Phs		2		4			7	8				
Phs Duration (G+Y+Rc), s		42.0		68.0			9.0	59.0				
Change Period (Y+Rc), s		6.0		6.0			6.0	6.0				
Max Green Setting (Gmax), s		29.0		69.0			4.0	59.0				
Max Q Clear Time (g_c+I1), s		18.4		58.8			3.3	14.0				
Green Ext Time (p_c), s		1.8		3.2			0.0	3.2				
Intersection Summary												
HCM 6th Ctrl Delay				29.2								
HCM 6th LOS				C								

HCM 6th Signalized Intersection Summary

4: Roswell Rd & Hannover Park Rd/Dunwoody PI

08/30/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	21	49	101	49	874	31	1184	79	236	577	12
Future Volume (veh/h)	31	21	49	101	49	874	31	1184	79	236	577	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1885	1900	1900	1900
Adj Flow Rate, veh/h	32	22	25	105	51	910	32	1233	0	246	601	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	1	0	0	0
Cap, veh/h	42	462	392	143	496	973	42	1807		288	2020	
Arrive On Green	0.02	0.24	0.24	0.04	0.26	0.26	0.02	0.50	0.00	0.08	0.56	0.00
Sat Flow, veh/h	1810	1900	1610	3510	1900	2834	1810	3610	1598	3510	3610	1610
Grp Volume(v), veh/h	32	22	25	105	51	910	32	1233	0	246	601	0
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1755	1900	1417	1810	1805	1598	1755	1805	1610
Q Serve(g_s), s	3.2	1.6	2.1	5.3	3.7	47.0	3.2	46.6	0.0	12.5	15.8	0.0
Cycle Q Clear(g_c), s	3.2	1.6	2.1	5.3	3.7	47.0	3.2	46.6	0.0	12.5	15.8	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	42	462	392	143	496	973	42	1807		288	2020	
V/C Ratio(X)	0.77	0.05	0.06	0.73	0.10	0.94	0.77	0.68		0.85	0.30	
Avail Cap(c_a), veh/h	80	475	403	195	496	973	80	1807		371	2020	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	87.5	52.1	52.4	85.4	50.5	57.2	87.5	34.1	0.0	81.5	20.9	0.0
Incr Delay (d2), s/veh	25.3	0.0	0.1	8.9	0.1	15.7	25.3	2.1	0.0	14.2	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.2	1.4	1.6	4.7	3.2	29.7	3.2	28.0	0.0	10.2	11.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	112.8	52.2	52.4	94.2	50.6	72.9	112.8	36.2	0.0	95.7	21.3	0.0
LnGrp LOS	F	D	D	F	D	E	F	D		F	C	
Approach Vol, veh/h		79			1066			1265	A		847	A
Approach Delay, s/veh		76.8			73.9			38.1			42.9	
Approach LOS		E			E			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.8	96.1	13.3	49.8	10.1	106.7	10.1	53.0				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	19.0	82.0	10.0	45.0	8.0	93.0	8.0	47.0				
Max Q Clear Time (g_c+I1), s	14.5	48.6	7.3	3.6	5.2	17.8	5.2	49.0				
Green Ext Time (p_c), s	0.3	10.2	0.1	0.0	0.0	4.1	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	52.0
HCM 6th LOS	D

Notes

Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

5: Roswell Rd & Northridge Rd

08/30/2020

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (veh/h)	23	26	31	761	17	226	29	1215	557	411	712	26	
Future Volume (veh/h)	23	26	31	761	17	226	29	1215	557	411	712	26	
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach	No			No			No			No			
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adj Flow Rate, veh/h	24	27	7	814	0	27	31	1279	165	433	749	1	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0	
Cap, veh/h	32	36	58	879	0	391	40	1635	729	473	2041	910	
Arrive On Green	0.04	0.04	0.04	0.24	0.00	0.24	0.02	0.45	0.45	0.13	0.57	0.57	
Sat Flow, veh/h	874	983	1610	3619	0	1610	1810	3610	1610	3510	3610	1610	
Grp Volume(v), veh/h	51	0	7	814	0	27	31	1279	165	433	749	1	
Grp Sat Flow(s),veh/h/ln	1856	0	1610	1810	0	1610	1810	1805	1610	1755	1805	1610	
Q Serve(g_s), s	4.9	0.0	0.8	39.6	0.0	2.3	3.1	54.0	11.2	21.9	20.5	0.0	
Cycle Q Clear(g_c), s	4.9	0.0	0.8	39.6	0.0	2.3	3.1	54.0	11.2	21.9	20.5	0.0	
Prop In Lane	0.47		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Lane Grp Cap(c), veh/h	67	0	58	879	0	391	40	1635	729	473	2041	910	
V/C Ratio(X)	0.76	0.00	0.12	0.93	0.00	0.07	0.77	0.78	0.23	0.91	0.37	0.00	
Avail Cap(c_a), veh/h	72	0	63	1005	0	447	80	1635	729	507	2041	910	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	86.0	0.0	84.0	66.6	0.0	52.5	87.5	41.7	30.0	76.8	21.4	17.0	
Incr Delay (d2), s/veh	34.4	0.0	0.9	13.0	0.0	0.1	26.0	3.8	0.7	20.5	0.5	0.0	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(95%),veh/ln	5.4	0.0	0.6	27.2	0.0	1.7	3.1	32.5	8.0	16.6	13.6	0.0	
Unsig. Movement Delay, s/veh													
LnGrp Delay(d),s/veh	120.4	0.0	84.9	79.6	0.0	52.6	113.6	45.5	30.7	97.4	22.0	17.0	
LnGrp LOS	F	A	F	E	A	D	F	D	C	F	C	B	
Approach Vol, veh/h	58			841				1475				1183	
Approach Delay, s/veh	116.1			78.7				45.3				49.5	
Approach LOS	F			E				D				D	
Timer - Assigned Phs	1	2	4		5	6	8						
Phs Duration (G+Y+Rc), s	30.3	87.5	12.5		10.0	107.8	49.7						
Change Period (Y+Rc), s	6.0	6.0	6.0		6.0	6.0	6.0						
Max Green Setting (Gmax), s	26.0	73.0	7.0		8.0	91.0	50.0						
Max Q Clear Time (g_c+I1), s	23.9	56.0	6.9		5.1	22.5	41.6						
Green Ext Time (p_c), s	0.4	7.4	0.0		0.0	5.4	2.1						
Intersection Summary													
HCM 6th Ctrl Delay			55.8										
HCM 6th LOS			E										
Notes													

HCM 6th Signalized Intersection Summary

6: Northside Dr & Interstate N Pkwy/New Northside Dr

08/30/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	114	14	572	176	973	186	0	0	0	1	427	194
Future Volume (veh/h)	114	14	572	176	973	186	0	0	0	1	427	194
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900				1900	1900	1900
Adj Flow Rate, veh/h	118	14	590	181	1003	12				1	440	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97				0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	183	20	852	399	1058	896				2	864	
Arrive On Green	0.05	0.54	0.54	0.06	0.56	0.56				0.23	0.23	0.00
Sat Flow, veh/h	1810	37	1578	1810	1900	1610				8	3792	0
Grp Volume(v), veh/h	118	0	604	181	1003	12				237	204	0
Grp Sat Flow(s),veh/h/ln	1810	0	1616	1810	1900	1610				1900	1805	0
Q Serve(g_s), s	3.2	0.0	30.2	4.9	54.5	0.4				12.0	10.8	0.0
Cycle Q Clear(g_c), s	3.2	0.0	30.2	4.9	54.5	0.4				12.0	10.8	0.0
Prop In Lane	1.00		0.98	1.00		1.00				0.00		0.00
Lane Grp Cap(c), veh/h	183	0	873	399	1058	896				444	422	
V/C Ratio(X)	0.65	0.00	0.69	0.45	0.95	0.01				0.53	0.48	
Avail Cap(c_a), veh/h	198	0	925	417	1123	951				444	422	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00				1.00	1.00	0.00
Uniform Delay (d), s/veh	25.2	0.0	18.6	15.0	22.9	10.9				36.9	36.4	0.0
Incr Delay (d2), s/veh	6.3	0.0	2.1	0.8	15.6	0.0				4.5	3.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.4	0.0	16.3	3.4	35.2	0.2				10.1	8.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.4	0.0	20.7	15.8	38.5	10.9				41.4	40.4	0.0
LnGrp LOS	C	A	C	B	D	B				D	D	
Approach Vol, veh/h		722			1196						441	A
Approach Delay, s/veh		22.4			34.8						40.9	
Approach LOS		C			C						D	
Timer - Assigned Phs		2	3	4			7	8				
Phs Duration (G+Y+Rc), s		31.7	12.9	65.4			11.1	67.2				
Change Period (Y+Rc), s		6.0	6.0	6.0			6.0	6.0				
Max Green Setting (Gmax), s		21.0	8.0	63.0			6.0	65.0				
Max Q Clear Time (g_c+l1), s		14.0	6.9	32.2			5.2	56.5				
Green Ext Time (p_c), s		1.4	0.1	4.7			0.0	4.7				
Intersection Summary												
HCM 6th Ctrl Delay			32.1									
HCM 6th LOS			C									
Notes												
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary

7: Riverside Dr & Heards Ferry Rd

08/30/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	231	92	46	83	221	139	72	924	28	56	477	181
Future Volume (veh/h)	231	92	46	83	221	139	72	924	28	56	477	181
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	238	95	47	86	228	143	74	953	29	58	492	187
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	228	285	141	345	198	124	264	924	28	99	654	249
Arrive On Green	0.10	0.24	0.24	0.04	0.19	0.19	0.03	0.52	0.52	0.03	0.51	0.51
Sat Flow, veh/h	1767	1172	580	1767	1066	669	1767	1791	55	1767	1281	487
Grp Volume(v), veh/h	238	0	142	86	0	371	74	0	982	58	0	679
Grp Sat Flow(s),veh/h/ln	1767	0	1751	1767	0	1735	1767	0	1846	1767	0	1768
Q Serve(g_s), s	14.0	0.0	9.4	5.5	0.0	26.0	2.8	0.0	72.2	2.2	0.0	42.7
Cycle Q Clear(g_c), s	14.0	0.0	9.4	5.5	0.0	26.0	2.8	0.0	72.2	2.2	0.0	42.7
Prop In Lane	1.00		0.33	1.00		0.39	1.00		0.03	1.00		0.28
Lane Grp Cap(c), veh/h	228	0	425	345	0	322	264	0	952	99	0	903
V/C Ratio(X)	1.04	0.00	0.33	0.25	0.00	1.15	0.28	0.00	1.03	0.59	0.00	0.75
Avail Cap(c_a), veh/h	228	0	425	345	0	322	269	0	952	102	0	903
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	42.9	0.0	43.7	43.8	0.0	57.0	22.5	0.0	33.9	33.7	0.0	27.2
Incr Delay (d2), s/veh	71.3	0.0	0.5	0.4	0.0	97.7	0.6	0.0	37.4	8.0	0.0	5.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	16.5	0.0	7.4	4.4	0.0	29.4	2.1	0.0	52.6	2.1	0.0	26.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	114.2	0.0	44.1	44.2	0.0	154.7	23.1	0.0	71.3	41.8	0.0	33.0
LnGrp LOS	F	A	D	D	A	F	C	A	F	D	A	C
Approach Vol, veh/h		380			457			1056			737	
Approach Delay, s/veh		88.0			133.9			67.9			33.7	
Approach LOS		F			F			E			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.8	78.2	12.0	40.0	10.5	77.5	20.0	32.0				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	4.0	72.0	6.0	34.0	5.0	71.0	14.0	26.0				
Max Q Clear Time (g_c+I1), s	4.2	74.2	7.5	11.4	4.8	44.7	16.0	28.0				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.7	0.0	5.1	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay				72.7								
HCM 6th LOS				E								

HCM 6th Signalized Intersection Summary

8: New Northside Dr & Powers Ferry Rd

08/30/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	317	428	0	0	518	299	473	490	25	0	0	0
Future Volume (veh/h)	317	428	0	0	518	299	473	490	25	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach	No			No			No					
Adj Sat Flow, veh/h/ln	1900	1900	0	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	341	460	0	0	557	0	509	527	27			
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	413	943	0	0	615		714	1351	69			
Arrive On Green	0.12	0.50	0.00	0.00	0.32	0.00	0.39	0.39	0.39			
Sat Flow, veh/h	3510	1900	0	0	1900	1610	1810	3422	175			
Grp Volume(v), veh/h	341	460	0	0	557	0	509	266	288			
Grp Sat Flow(s),veh/h/ln	1755	1900	0	0	1900	1610	1810	1729	1868			
Q Serve(g_s), s	10.4	17.7	0.0	0.0	30.8	0.0	26.1	12.1	12.1			
Cycle Q Clear(g_c), s	10.4	17.7	0.0	0.0	30.8	0.0	26.1	12.1	12.1			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		0.09			
Lane Grp Cap(c), veh/h	413	943	0	0	615		714	682	737			
V/C Ratio(X)	0.82	0.49	0.00	0.00	0.91		0.71	0.39	0.39			
Avail Cap(c_a), veh/h	543	1175	0	0	777		714	682	737			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.96	0.96	0.00	0.00	1.00	0.00	1.00	1.00	1.00			
Uniform Delay (d), s/veh	47.4	18.4	0.0	0.0	35.6	0.0	28.0	23.8	23.8			
Incr Delay (d2), s/veh	7.5	0.4	0.0	0.0	12.1	0.0	6.0	1.7	1.6			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	8.5	12.0	0.0	0.0	22.4	0.0	17.8	8.9	9.4			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.9	18.8	0.0	0.0	47.6	0.0	34.0	25.5	25.4			
LnGrp LOS	D	B	A	A	D		C	C	C			
Approach Vol, veh/h	801			557			1063					
Approach Delay, s/veh	34.2			47.6			29.5					
Approach LOS	C			D			C					
Timer - Assigned Phs	2			4			7			8		
Phs Duration (G+Y+Rc), s	49.4			60.6			19.0			41.6		
Change Period (Y+Rc), s	6.0			6.0			6.0			6.0		
Max Green Setting (Gmax), s	30.0			68.0			17.0			45.0		
Max Q Clear Time (g_c+l1), s	28.1			19.7			12.4			32.8		
Green Ext Time (p_c), s	1.2			3.1			0.5			2.8		
Intersection Summary												
HCM 6th Ctrl Delay	35.2											
HCM 6th LOS	D											
Notes												

HCM 6th Signalized Intersection Summary

9: Mt Vernon Hwy & Abernathy Rd/Perimeter Center

08/30/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	 		 	 			 			 	
Traffic Volume (veh/h)	244	810	23	69	1625	99	91	484	139	98	328	453
Future Volume (veh/h)	244	810	23	69	1625	99	91	484	139	98	328	453
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	1900	1900	1885	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	260	862	0	73	1729	0	97	515	0	104	349	349
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	1	0	0	0	0	0	0	0	0
Cap, veh/h	273	2206		113	2043		179	596		169	685	306
Arrive On Green	0.08	0.61	0.00	0.03	0.57	0.00	0.03	0.17	0.00	0.06	0.19	0.19
Sat Flow, veh/h	3510	3610	1610	3483	3610	1610	1810	3610	1610	1810	3610	1610
Grp Volume(v), veh/h	260	862	0	73	1729	0	97	515	0	104	349	349
Grp Sat Flow(s),veh/h/ln	1755	1805	1610	1742	1805	1610	1810	1805	1610	1810	1805	1610
Q Serve(g_s), s	13.3	22.0	0.0	3.7	71.8	0.0	6.0	25.0	0.0	8.5	15.6	34.2
Cycle Q Clear(g_c), s	13.3	22.0	0.0	3.7	71.8	0.0	6.0	25.0	0.0	8.5	15.6	34.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	273	2206		113	2043		179	596		169	685	306
V/C Ratio(X)	0.95	0.39		0.65	0.85		0.54	0.86		0.62	0.51	1.14
Avail Cap(c_a), veh/h	273	2206		155	2043		179	802		174	903	403
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.92	0.92	0.00	1.00	1.00	0.00	0.95	0.95	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	82.7	17.9	0.0	86.1	32.6	0.0	64.6	73.2	0.0	59.3	65.4	72.9
Incr Delay (d2), s/veh	39.5	0.5	0.0	6.0	4.6	0.0	3.2	7.2	0.0	6.1	0.6	90.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	11.8	13.9	0.0	3.2	40.6	0.0	2.4	17.8	0.0	7.6	11.7	31.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	122.1	18.4	0.0	92.1	37.1	0.0	67.8	80.4	0.0	65.4	66.0	163.4
LnGrp LOS	F	B		F	D		E	F		E	E	F
Approach Vol, veh/h	1122		A	1802		A	612		A	802		
Approach Delay, s/veh	42.4			39.3			78.4			108.3		
Approach LOS	D			D			E			F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.0	107.8	16.5	35.7	11.8	116.0	12.0	40.2				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	14.0	91.0	11.0	40.0	8.0	97.0	6.0	45.0				
Max Q Clear Time (g_c+I1), s	15.3	73.8	10.5	27.0	5.7	24.0	8.0	17.6				
Green Ext Time (p_c), s	0.0	11.2	0.0	2.7	0.0	6.6	0.0	0.9				

Intersection Summary

HCM 6th Ctrl Delay 58.4

HCM 6th LOS E

Notes

Unsignalized Delay for [NBR, EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

10: Johnson Ferry Rd & Abernathy Rd & Brandon Mill Rd NW

08/30/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	159	821	395	54	1777	135	605	73	17	53	101	82
Future Volume (veh/h)	159	821	395	54	1777	135	605	73	17	53	101	82
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	166	855	99	56	1851	0	630	76	18	55	105	7
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	162	2035	908	337	1878		648	339	80	200	145	123
Arrive On Green	0.07	0.58	0.58	0.02	0.53	0.00	0.19	0.23	0.23	0.03	0.08	0.08
Sat Flow, veh/h	1767	3526	1572	1767	3526	1572	3428	1450	343	1767	1856	1572
Grp Volume(v), veh/h	166	855	99	56	1851	0	630	0	94	55	105	7
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1767	1763	1572	1714	0	1794	1767	1856	1572
Q Serve(g_s), s	12.0	24.4	5.1	2.6	93.0	0.0	32.9	0.0	7.6	5.1	10.0	0.7
Cycle Q Clear(g_c), s	12.0	24.4	5.1	2.6	93.0	0.0	32.9	0.0	7.6	5.1	10.0	0.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.19	1.00		1.00
Lane Grp Cap(c), veh/h	162	2035	908	337	1878		648	0	419	200	145	123
V/C Ratio(X)	1.03	0.42	0.11	0.17	0.99		0.97	0.00	0.22	0.27	0.72	0.06
Avail Cap(c_a), veh/h	162	2037	909	337	1880		648	0	419	200	145	123
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.65	0.65	0.65	1.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.3	21.2	17.2	19.2	41.4	0.0	72.5	0.0	55.7	73.3	81.0	76.8
Incr Delay (d2), s/veh	63.8	0.1	0.0	0.2	17.3	0.0	28.6	0.0	1.2	0.7	26.6	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	14.8	14.4	3.4	2.0	54.8	0.0	23.8	0.0	6.5	4.3	9.8	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	127.1	21.3	17.2	19.5	58.7	0.0	101.1	0.0	57.0	74.0	107.6	77.7
LnGrp LOS	F	C	B	B	E		F	A	E	E	F	E
Approach Vol, veh/h		1120			1907	A		724			167	
Approach Delay, s/veh		36.6			57.5			95.4			95.3	
Approach LOS		D			E			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.0	48.1	10.0	109.9	40.0	20.1	18.0	101.9				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	6.0	42.0	4.0	104.0	34.0	14.0	12.0	96.0				
Max Q Clear Time (g_c+I1), s	7.1	9.6	4.6	26.4	34.9	12.0	14.0	95.0				
Green Ext Time (p_c), s	0.0	0.5	0.0	6.3	0.0	0.1	0.0	0.9				

Intersection Summary

HCM 6th Ctrl Delay 60.2

HCM 6th LOS E

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

11: Peachtree Dunwoody Rd & Abernathy Rd

08/30/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	210	980	185	3	1450	209	704	489	8	180	206	556
Future Volume (veh/h)	210	980	185	3	1450	209	704	489	8	180	206	556
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1885	1885	1856	1900	1900	1885	1885	1885	1826	1885	1885	1900
Adj Flow Rate, veh/h	219	1021	11	3	1510	36	733	509	0	188	215	475
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	1	3	0	0	1	1	1	5	1	1	0
Cap, veh/h	263	2589	791	7	2237	689	788	596		333	237	648
Arrive On Green	0.08	0.50	0.50	0.00	0.43	0.43	0.23	0.17	0.00	0.19	0.13	0.13
Sat Flow, veh/h	3483	5147	1572	1810	5187	1598	3483	3582	1547	1795	1885	3220
Grp Volume(v), veh/h	219	1021	11	3	1510	36	733	509	0	188	215	475
Grp Sat Flow(s),veh/h/ln	1742	1716	1572	1810	1729	1598	1742	1791	1547	1795	1885	1610
Q Serve(g_s), s	10.5	20.9	0.6	0.3	39.7	1.2	35.1	23.5	0.0	16.2	19.1	21.4
Cycle Q Clear(g_c), s	10.5	20.9	0.6	0.3	39.7	1.2	35.1	23.5	0.0	16.2	19.1	21.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	263	2589	791	7	2237	689	788	596		333	237	648
V/C Ratio(X)	0.83	0.39	0.01	0.43	0.67	0.05	0.93	0.85		0.56	0.91	0.73
Avail Cap(c_a), veh/h	369	2589	791	53	2237	689	861	843		333	288	736
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.25	0.25	0.25	0.61	0.61	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	77.5	26.2	21.1	84.5	38.8	8.5	64.5	68.9	0.0	63.0	73.3	63.6
Incr Delay (d2), s/veh	10.7	0.5	0.0	9.9	0.4	0.0	10.7	3.9	0.0	2.2	27.1	3.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.8	13.4	0.4	0.3	20.0	1.6	21.9	15.3	0.0	12.2	16.5	15.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	88.2	26.6	21.2	94.4	39.2	8.5	75.1	72.7	0.0	65.2	100.4	66.9
LnGrp LOS	F	C	C	F	D	A	E	E		E	F	E
Approach Vol, veh/h	1251			1549			1242			A		
Approach Delay, s/veh	37.4			38.6			74.2			74.7		
Approach LOS	D			D			E			E		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.7	91.5	44.4	27.4	18.9	79.3	37.5	34.3				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	5.0	73.0	42.0	26.0	18.0	60.0	28.0	40.0				
Max Q Clear Time (g_c+I1), s	2.3	22.9	37.1	21.1	12.5	41.7	18.2	25.5				
Green Ext Time (p_c), s	0.0	8.0	1.4	0.2	0.3	9.6	0.3	2.8				

Intersection Summary

HCM 6th Ctrl Delay 53.7

HCM 6th LOS D

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

12: Peachtree Dunwoody Rd & Hollis Cobb Cir/Medical Center MARTA

08/30/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	196	4	106	118	2	124	17	1324	47	42	1437	79
Future Volume (veh/h)	196	4	106	118	2	124	17	1324	47	42	1437	79
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	1900	1900	1885	1900	1900	1900	1900	1885	1752	1900	1900
Adj Flow Rate, veh/h	200	4	108	120	2	127	17	1351	0	43	1466	81
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	1	0	0	0	0	1	10	0	0
Cap, veh/h	265	14	371	279	6	378	282	2268		234	2297	1025
Arrive On Green	0.24	0.24	0.24	0.24	0.24	0.24	0.01	0.63	0.00	0.04	1.00	1.00
Sat Flow, veh/h	1281	58	1561	1291	25	1589	1810	3610	1598	1668	3610	1610
Grp Volume(v), veh/h	200	0	112	120	0	129	17	1351	0	43	1466	81
Grp Sat Flow(s),veh/h/ln	1281	0	1619	1291	0	1614	1810	1805	1598	1668	1805	1610
Q Serve(g_s), s	24.5	0.0	9.1	13.4	0.0	10.6	0.5	35.6	0.0	1.5	0.0	0.0
Cycle Q Clear(g_c), s	35.1	0.0	9.1	22.5	0.0	10.6	0.5	35.6	0.0	1.5	0.0	0.0
Prop In Lane	1.00		0.96	1.00		0.98	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	265	0	385	279	0	384	282	2268		234	2297	1025
V/C Ratio(X)	0.75	0.00	0.29	0.43	0.00	0.34	0.06	0.60		0.18	0.64	0.08
Avail Cap(c_a), veh/h	337	0	476	351	0	474	304	2268		261	2297	1025
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	0.68	0.68	0.68
Uniform Delay (d), s/veh	65.0	0.0	49.9	59.1	0.0	50.5	10.4	17.7	0.0	14.2	0.0	0.0
Incr Delay (d2), s/veh	7.1	0.0	0.4	1.0	0.0	0.5	0.1	1.2	0.0	0.3	0.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	13.4	0.0	6.8	8.0	0.0	7.9	0.4	21.1	0.0	1.0	0.5	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	72.2	0.0	50.3	60.2	0.0	51.0	10.5	18.8	0.0	14.5	0.9	0.1
LnGrp LOS	E	A	D	E	A	D	B	B		B	A	A
Approach Vol, veh/h	312			249			1368			1590		
Approach Delay, s/veh	64.3			55.4			18.7			1.3		
Approach LOS	E			E			B			A		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.4	106.5		44.1	8.1	107.8		44.1				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	6.0	89.0		47.0	4.0	91.0		47.0				
Max Q Clear Time (g_c+I1), s	3.5	37.6		37.1	2.5	2.0		24.5				
Green Ext Time (p_c), s	0.0	14.3		1.0	0.0	16.7		1.2				

Intersection Summary

HCM 6th Ctrl Delay 17.5

HCM 6th LOS B

Notes

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

13: River Valley Rd & Johnson Ferry Rd

08/30/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	880	53	341	2122	1	466	1	492	1	0	4
Future Volume (veh/h)	0	880	53	341	2122	1	466	1	492	1	0	4
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	0	936	0	363	2257	1	496	1	0	1	0	4
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	41	1585		413	2205	1	444	1		573	0	509
Arrive On Green	0.00	0.45	0.00	0.17	0.81	0.81	0.29	0.29	0.00	0.00	0.00	0.32
Sat Flow, veh/h	1767	3526	1572	1767	3616	2	1399	3	1572	1767	0	1572
Grp Volume(v), veh/h	0	936	0	363	1100	1158	497	0	0	1	0	4
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1767	1763	1855	1402	0	1572	1767	0	1572
Q Serve(g_s), s	0.0	35.8	0.0	20.0	109.8	109.8	52.0	0.0	0.0	0.1	0.0	0.3
Cycle Q Clear(g_c), s	0.0	35.8	0.0	20.0	109.8	109.8	52.0	0.0	0.0	0.1	0.0	0.3
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	41	1585		413	1075	1131	445	0		573	0	509
V/C Ratio(X)	0.00	0.59		0.88	1.02	1.02	1.12	0.00		0.00	0.00	0.01
Avail Cap(c_a), veh/h	79	1585		513	1075	1131	445	0		619	0	550
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.17	0.17	0.17	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	37.1	0.0	27.4	17.0	17.0	66.3	0.0	0.0	44.0	0.0	41.3
Incr Delay (d2), s/veh	0.0	1.6	0.0	2.8	17.9	17.7	78.5	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	22.4	0.0	10.0	40.5	42.5	42.5	0.0	0.0	0.1	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	38.7	0.0	30.2	34.9	34.7	144.9	0.0	0.0	44.0	0.0	41.3
LnGrp LOS	A	D		C	F	F	F	A		D	A	D
Approach Vol, veh/h	936		A	2621			497		A	5		
Approach Delay, s/veh	38.7			34.2			144.9			41.8		
Approach LOS	D			C			F			D		
Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	28.8	86.9		64.2	0.0	115.8	6.2	58.0				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	33.0	66.0		63.0	4.0	95.0	5.0	52.0				
Max Q Clear Time (g_c+I1), s	22.0	37.8		2.3	0.0	111.8	2.1	54.0				
Green Ext Time (p_c), s	0.9	7.3		0.0	0.0	0.0	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay 48.8

HCM 6th LOS D

Notes

Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th TWSC
14: Northside Dr & Mt Vernon Hwy

08/30/2020

Intersection						
Int Delay, s/veh	31.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	261	118	214	219	174	189
Future Vol, veh/h	261	118	214	219	174	189
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	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	1	0	0	0	1
Mvmt Flow	281	127	230	235	187	203
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	925	348	0	0	230	0
Stage 1	348	-	-	-	-	-
Stage 2	577	-	-	-	-	-
Critical Hdwy	6.42	6.21	-	-	4.1	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.309	-	-	2.2	-
Pot Cap-1 Maneuver	299	697	-	-	1350	-
Stage 1	715	-	-	-	-	-
Stage 2	562	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 252	697	-	-	1350	-
Mov Cap-2 Maneuver	~ 252	-	-	-	-	-
Stage 1	715	-	-	-	-	-
Stage 2	474	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	95.3	0		3.9		
HCM LOS	F					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	252	697	1350	-
HCM Lane V/C Ratio	-	-	1.114	0.182	0.139	-
HCM Control Delay (s)	-	-	133.3	11.3	8.1	0
HCM Lane LOS	-	-	F	B	A	A
HCM 95th %tile Q(veh)	-	-	12.2	0.7	0.5	-
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

HCM 6th Signalized Intersection Summary

15: Roswell Rd & Spalding Dr

08/30/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	4	28	51	4	32	41	966	67	22	862	13
Future Volume (veh/h)	8	4	28	51	4	32	41	966	67	22	862	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	8	4	29	53	4	0	43	1006	70	23	898	14
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	93	40	90	105	6		543	2754	192	462	2906	45
Arrive On Green	0.06	0.06	0.06	0.06	0.06	0.00	0.02	0.82	0.82	0.02	0.82	0.82
Sat Flow, veh/h	1034	696	1572	1155	108	0	1767	3344	233	1767	3553	55
Grp Volume(v), veh/h	12	0	29	57	0	0	43	530	546	23	446	466
Grp Sat Flow(s),veh/h/ln	1730	0	1572	1263	0	0	1767	1763	1814	1767	1763	1846
Q Serve(g_s), s	0.0	0.0	3.2	7.1	0.0	0.0	0.7	13.7	13.7	0.4	11.1	11.1
Cycle Q Clear(g_c), s	1.1	0.0	3.2	8.2	0.0	0.0	0.7	13.7	13.7	0.4	11.1	11.1
Prop In Lane	0.67		1.00	0.93		0.00	1.00		0.13	1.00		0.03
Lane Grp Cap(c), veh/h	133	0	90	111	0		543	1452	1494	462	1442	1510
V/C Ratio(X)	0.09	0.00	0.32	0.51	0.00		0.08	0.37	0.37	0.05	0.31	0.31
Avail Cap(c_a), veh/h	291	0	253	255	0		588	1452	1494	556	1442	1510
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	80.5	0.0	81.4	84.3	0.0	0.0	2.7	4.0	4.0	2.9	4.0	4.0
Incr Delay (d2), s/veh	0.3	0.0	2.0	3.6	0.0	0.0	0.1	0.7	0.7	0.0	0.6	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.0	0.0	2.4	4.9	0.0	0.0	0.4	7.7	7.8	0.2	6.3	6.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	80.8	0.0	83.5	87.9	0.0	0.0	2.7	4.7	4.7	2.9	4.5	4.5
LnGrp LOS	F	A	F	F	A		A	A	A	A	A	A
Approach Vol, veh/h	41		57			A		1119		935		
Approach Delay, s/veh	82.7		87.9					4.6		4.5		
Approach LOS	F		F					A		A		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.4	154.2		16.4	10.4	153.2		16.4				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	13.0	120.0		29.0	9.0	124.0		29.0				
Max Q Clear Time (g_c+I1), s	2.4	15.7		3.1	2.7	13.1		10.2				
Green Ext Time (p_c), s	0.0	8.0		0.0	0.0	6.2		0.2				
Intersection Summary												
HCM 6th Ctrl Delay	8.3											
HCM 6th LOS	A											

HCM Signalized Intersection Capacity Analysis

16: Roberts Dr & Spalding Dr

08/30/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	301	267	22	31	214	482	18	323	29	320	283	61
Future Volume (vph)	301	267	22	31	214	482	18	323	29	320	283	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1805	1861		1805	1881	1615	1770	1859		1805	1831	
Flt Permitted	0.95	1.00		0.43	1.00	1.00	0.54	1.00		0.19	1.00	
Satd. Flow (perm)	1805	1861		817	1881	1615	1009	1859		369	1831	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	320	284	23	33	228	513	19	344	31	340	301	65
RTOR Reduction (vph)	0	3	0	0	0	270	0	4	0	0	9	0
Lane Group Flow (vph)	320	304	0	33	228	243	19	371	0	340	357	0
Heavy Vehicles (%)	0%	1%	0%	0%	1%	0%	2%	1%	0%	0%	1%	1%
Turn Type	Split	NA		Perm	NA	custom	pm+pt	NA		pm+pt	NA	
Protected Phases	4!	4			3 7 8!		5	2		1	6	
Permitted Phases				3 7 8		8	2			6		
Actuated Green, G (s)	17.0	17.0		36.0	36.0	25.0	27.0	22.0		42.0	31.0	
Effective Green, g (s)	17.0	17.0		36.0	36.0	25.0	27.0	22.0		42.0	31.0	
Actuated g/C Ratio	0.19	0.19		0.40	0.40	0.28	0.30	0.24		0.47	0.34	
Clearance Time (s)	6.0	6.0				6.0	6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0				3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	340	351		326	752	448	344	454		395	630	
v/s Ratio Prot	c0.18	0.16			0.12		0.00	0.20		c0.13	0.20	
v/s Ratio Perm				0.04		c0.15	0.01			c0.27		
v/c Ratio	0.94	0.87		0.10	0.30	0.54	0.06	0.82		0.86	0.57	
Uniform Delay, d1	36.0	35.4		16.9	18.4	27.6	22.3	32.1		18.4	24.0	
Progression Factor	1.00	1.00		1.40	1.35	1.84	1.00	1.00		1.00	1.00	
Incremental Delay, d2	35.9	23.7		0.1	0.2	1.2	0.3	15.0		21.1	3.7	
Delay (s)	71.9	59.1		23.8	25.0	52.0	22.6	47.1		39.5	27.7	
Level of Service	E	E		C	C	D	C	D		D	C	
Approach Delay (s)		65.6			42.9			46.0			33.4	
Approach LOS		E			D			D			C	

Intersection Summary

HCM 2000 Control Delay	46.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	84.4%	ICU Level of Service	E
Analysis Period (min)	15		

! Phase conflict between lane groups.

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis

21: Dunwoody Club Dr & Spalding Dr

08/30/2020

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	EB	EB	WB	WB	NB	NB
Traffic Volume (vph)	257	360	12	489	238	5
Future Volume (vph)	257	360	12	489	238	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0			6.0	6.0	
Lane Util. Factor	1.00			0.95	1.00	
Frt	0.92			1.00	1.00	
Flt Protected	1.00			1.00	0.95	
Satd. Flow (prot)	1750			3606	1789	
Flt Permitted	1.00			0.94	0.95	
Satd. Flow (perm)	1750			3381	1789	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	268	375	12	509	248	5
RTOR Reduction (vph)	56	0	0	0	1	0
Lane Group Flow (vph)	587	0	0	522	252	0
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%
Turn Type	NA		custom	NA	Prot	
Protected Phases	1 2 4			1 6 7!	3!	
Permitted Phases			7!			
Actuated Green, G (s)	65.0			53.0	13.0	
Effective Green, g (s)	65.0			53.0	13.0	
Actuated g/C Ratio	0.72			0.59	0.14	
Clearance Time (s)					6.0	
Vehicle Extension (s)					3.0	
Lane Grp Cap (vph)	1263			1991	258	
v/s Ratio Prot	c0.34				c0.14	
v/s Ratio Perm				0.15		
v/c Ratio	0.46			0.26	0.98	
Uniform Delay, d1	5.2			9.0	38.4	
Progression Factor	0.32			1.00	1.00	
Incremental Delay, d2	0.6			0.1	50.5	
Delay (s)	2.3			9.1	88.9	
Level of Service	A			A	F	
Approach Delay (s)	2.3			9.1	88.9	
Approach LOS	A			A	F	
Intersection Summary						
HCM 2000 Control Delay			20.2		HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.65			
Actuated Cycle Length (s)			90.0		Sum of lost time (s)	24.0
Intersection Capacity Utilization			59.1%		ICU Level of Service	B
Analysis Period (min)			15			
! Phase conflict between lane groups.						
c Critical Lane Group						

HCM 6th Signalized Intersection Summary

17: Barfield Rd & Mt Vernon Hwy

08/30/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	94	440	15	29	623	185	139	307	117	129	138	130
Future Volume (veh/h)	94	440	15	29	623	185	139	307	117	129	138	130
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1885	1885	1885	1841	1885	1885	1900	1885	1885	1900	1856	1885
Adj Flow Rate, veh/h	98	458	16	30	649	0	145	320	122	134	144	31
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	1	1	4	1	1	0	1	1	0	3	1
Cap, veh/h	309	964	34	409	966		386	333	127	163	485	418
Arrive On Green	0.04	0.53	0.53	0.02	0.51	0.00	0.06	0.26	0.26	0.06	0.26	0.26
Sat Flow, veh/h	1795	1811	63	1753	1885	0	1810	1300	496	1810	1856	1598
Grp Volume(v), veh/h	98	0	474	30	649	0	145	0	442	134	144	31
Grp Sat Flow(s),veh/h/ln	1795	0	1874	1753	1885	0	1810	0	1796	1810	1856	1598
Q Serve(g_s), s	4.7	0.0	28.5	1.5	46.1	0.0	10.0	0.0	43.7	9.8	11.2	2.6
Cycle Q Clear(g_c), s	4.7	0.0	28.5	1.5	46.1	0.0	10.0	0.0	43.7	9.8	11.2	2.6
Prop In Lane	1.00		0.03	1.00		0.00	1.00		0.28	1.00		1.00
Lane Grp Cap(c), veh/h	309	0	997	409	966		386	0	460	163	485	418
V/C Ratio(X)	0.32	0.00	0.48	0.07	0.67		0.38	0.00	0.96	0.82	0.30	0.07
Avail Cap(c_a), veh/h	322	0	997	417	966		386	0	469	163	495	426
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.0	0.0	26.4	22.0	32.6	0.0	47.3	0.0	66.1	51.1	53.2	50.0
Incr Delay (d2), s/veh	0.6	0.0	1.6	0.1	3.7	0.0	0.6	0.0	31.5	27.2	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.7	0.0	19.3	1.1	29.8	0.0	8.7	0.0	32.0	9.6	9.1	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.6	0.0	28.0	22.1	36.3	0.0	47.9	0.0	97.6	78.3	53.5	50.1
LnGrp LOS	C	A	C	C	D		D	A	F	E	D	D
Approach Vol, veh/h	572			679			A			587		
Approach Delay, s/veh	27.7			35.7			85.3			63.9		
Approach LOS	C			D			F			E		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.1	101.8	16.0	53.1	12.7	98.3	17.0	52.1				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	4.0	94.0	10.0	48.0	8.0	90.0	11.0	47.0				
Max Q Clear Time (g_c+I1), s	3.5	30.5	12.0	13.2	6.7	48.1	11.8	45.7				
Green Ext Time (p_c), s	0.0	3.3	0.0	0.6	0.0	4.9	0.0	0.4				

Intersection Summary

HCM 6th Ctrl Delay	51.2
HCM 6th LOS	D

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

18: Peachtree Dunwoody Rd & Mt Vernon Hwy/Mt Vernon Hwy

08/30/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	163	477	75	91	273	4	61	880	255	8	292	89
Future Volume (veh/h)	163	477	75	91	273	4	61	880	255	8	292	89
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1885	1885	1900	1870	1203	1870	1900	1900	1870	1870	1870
Adj Flow Rate, veh/h	172	502	26	96	287	0	64	926	268	8	307	94
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	1	1	0	2	47	2	0	0	2	2	2
Cap, veh/h	598	1714	765	462	1613		80	1055	305	27	868	481
Arrive On Green	0.06	0.48	0.48	0.04	0.45	0.00	0.05	0.38	0.38	0.30	0.30	0.30
Sat Flow, veh/h	1781	3582	1598	1810	3554	1020	1781	2764	798	21	2862	1585
Grp Volume(v), veh/h	172	502	26	96	287	0	64	604	590	140	175	94
Grp Sat Flow(s),veh/h/ln	1781	1791	1598	1810	1777	1020	1781	1805	1756	1266	1617	1585
Q Serve(g_s), s	9.2	15.3	1.6	5.1	8.6	0.0	6.4	56.0	56.3	1.5	15.2	7.9
Cycle Q Clear(g_c), s	9.2	15.3	1.6	5.1	8.6	0.0	6.4	56.0	56.3	43.7	15.2	7.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.45	0.06		1.00
Lane Grp Cap(c), veh/h	598	1714	765	462	1613		80	689	671	405	490	481
V/C Ratio(X)	0.29	0.29	0.03	0.21	0.18		0.80	0.88	0.88	0.34	0.36	0.20
Avail Cap(c_a), veh/h	721	1714	765	511	1613		178	1023	995	613	701	687
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.93	0.93	0.00	1.00	1.00	1.00	0.64	0.64	0.64
Uniform Delay (d), s/veh	23.2	28.5	24.9	24.7	29.2	0.0	85.1	51.7	51.8	48.0	49.0	46.4
Incr Delay (d2), s/veh	0.3	0.4	0.1	0.2	0.2	0.0	16.0	6.0	6.4	0.3	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.2	11.1	1.1	4.1	6.9	0.0	6.0	34.8	34.2	7.7	9.6	5.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.4	28.9	25.0	25.0	29.4	0.0	101.1	57.7	58.2	48.3	49.3	46.6
LnGrp LOS	C	C	C	C	C		F	E	E	D	D	D
Approach Vol, veh/h		700			383	A		1258			409	
Approach Delay, s/veh		27.4			28.3			60.1			48.3	
Approach LOS		C			C			E			D	
Timer - Assigned Phs	1	2	3	4	5	6		8				
Phs Duration (G+Y+Rc), s	13.1	92.2	14.1	60.6	17.6	87.7		74.7				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	12.0	48.0	18.0	78.0	24.0	36.0		102.0				
Max Q Clear Time (g_c+I1), s	7.1	17.3	8.4	45.7	11.2	10.6		58.3				
Green Ext Time (p_c), s	0.1	3.3	0.1	1.4	0.3	1.8		10.4				

Intersection Summary

HCM 6th Ctrl Delay 45.6

HCM 6th LOS D

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

19: Peachtree Dunwoody Rd & Lake Hearn Drive

08/30/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	125	19	31	397	0	231	6	1515	75	97	1083	10
Future Volume (veh/h)	125	19	31	397	0	231	6	1515	75	97	1083	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1900	1870	1900	1900	1811	1885	1811	1900	1885	1885
Adj Flow Rate, veh/h	133	20	0	422	0	246	6	1612	80	103	1152	11
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	0	2	0	0	6	1	6	0	1	1
Cap, veh/h	184	21		609	0	574	198	1769	758	242	1910	18
Arrive On Green	0.14	0.14	0.00	0.18	0.00	0.36	0.01	0.99	0.99	0.04	0.53	0.53
Sat Flow, veh/h	1031	155	1610	1781	0	1610	1725	3582	1535	1810	3635	35
Grp Volume(v), veh/h	153	0	0	422	0	246	6	1612	80	103	568	595
Grp Sat Flow(s),veh/h/ln	1186	0	1610	1781	0	1610	1725	1791	1535	1810	1791	1879
Q Serve(g_s), s	20.4	0.0	0.0	29.0	0.0	18.6	0.3	9.0	0.1	4.5	35.2	35.2
Cycle Q Clear(g_c), s	20.4	0.0	0.0	29.0	0.0	18.6	0.3	9.0	0.1	4.5	35.2	35.2
Prop In Lane	0.87		1.00	1.00		1.00	1.00		1.00	1.00		0.02
Lane Grp Cap(c), veh/h	205	0		609	0	574	198	1769	758	242	941	987
V/C Ratio(X)	0.75	0.00		0.69	0.00	0.43	0.03	0.91	0.11	0.43	0.60	0.60
Avail Cap(c_a), veh/h	205	0		609	0	574	231	1769	758	242	941	987
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.76	0.76	0.76	1.00	1.00	1.00
Uniform Delay (d), s/veh	68.3	0.0	0.0	46.9	0.0	39.1	22.8	0.6	0.5	18.6	26.4	26.4
Incr Delay (d2), s/veh	13.8	0.0	0.0	3.4	0.0	0.5	0.0	6.8	0.2	1.2	2.9	2.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	11.3	0.0	0.0	21.7	0.0	12.0	0.2	3.7	0.1	3.6	22.2	23.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	82.2	0.0	0.0	50.3	0.0	39.6	22.9	7.4	0.7	19.8	29.2	29.1
LnGrp LOS	F	A		D	A	D	C	A	A	B	C	C
Approach Vol, veh/h		153	A		668			1698			1266	
Approach Delay, s/veh		82.2			46.4			7.1			28.4	
Approach LOS		F			D			A			C	
Timer - Assigned Phs	1	2	3	4	5	6		8				
Phs Duration (G+Y+Rc), s	12.0	85.0	35.0	28.0	6.9	90.1		63.0				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	6.0	79.0	29.0	22.0	4.0	81.0		57.0				
Max Q Clear Time (g_c+I1), s	6.5	11.0	31.0	22.4	2.3	37.2		20.6				
Green Ext Time (p_c), s	0.0	20.0	0.0	0.0	0.0	9.7		1.7				
Intersection Summary												
HCM 6th Ctrl Delay			24.2									
HCM 6th LOS			C									
Notes												
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary

1: Peachtree Dunwoody Rd & Johnson Ferry Rd

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	417	258	26	221	532	394	47	977	167	85	312	383
Future Volume (veh/h)	417	258	26	221	532	394	47	977	167	85	312	383
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1900	1885	1885	1767	1885	1885	1826	1885	1826
Adj Flow Rate, veh/h	458	284	29	243	585	433	52	1074	74	93	343	201
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	3	3	3	0	1	1	9	1	1	5	1	5
Cap, veh/h	501	603	62	287	589	436	82	1249	557	111	1388	599
Arrive On Green	0.15	0.36	0.36	0.08	0.30	0.30	0.03	0.35	0.35	0.06	0.39	0.39
Sat Flow, veh/h	3428	1656	169	3510	1963	1452	3264	3582	1598	1739	3582	1547
Grp Volume(v), veh/h	458	0	313	243	534	484	52	1074	74	93	343	201
Grp Sat Flow(s),veh/h/ln	1714	0	1825	1755	1791	1624	1632	1791	1598	1739	1791	1547
Q Serve(g_s), s	22.4	0.0	22.4	11.6	50.5	50.6	2.7	47.4	5.4	9.0	11.0	15.5
Cycle Q Clear(g_c), s	22.4	0.0	22.4	11.6	50.5	50.6	2.7	47.4	5.4	9.0	11.0	15.5
Prop In Lane	1.00		0.09	1.00		0.89	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	501	0	665	287	537	487	82	1249	557	111	1388	599
V/C Ratio(X)	0.91	0.00	0.47	0.85	0.99	0.99	0.63	0.86	0.13	0.84	0.25	0.34
Avail Cap(c_a), veh/h	544	0	665	372	537	487	115	1249	557	123	1388	599
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	71.5	0.0	41.5	77.0	59.3	59.3	82.1	51.5	37.8	78.7	35.3	36.7
Incr Delay (d2), s/veh	19.1	0.0	0.5	13.2	37.1	39.1	7.7	7.9	0.5	34.8	0.4	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	16.6	0.0	15.4	9.7	36.8	34.1	2.2	30.4	4.0	8.8	8.6	10.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	90.6	0.0	42.0	90.1	96.4	98.5	89.8	59.4	38.3	113.5	35.7	38.2
LnGrp LOS	F	A	D	F	F	F	F	E	D	F	D	D
Approach Vol, veh/h		771			1261			1200			637	
Approach Delay, s/veh		70.9			96.0			59.4			47.8	
Approach LOS		E			F			E			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.9	65.3	19.9	67.9	10.3	71.9	30.9	57.0				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	12.0	56.0	18.0	60.0	6.0	62.0	27.0	51.0				
Max Q Clear Time (g_c+I1), s	11.0	49.4	13.6	24.4	4.7	13.0	24.4	52.6				
Green Ext Time (p_c), s	0.0	3.6	0.3	0.9	0.0	1.3	0.5	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			71.7									
HCM 6th LOS			E									

HCM 6th Signalized Intersection Summary

2: SR 400 Exit 6/Dunwoody PI & Northridge Rd

08/31/2020

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (veh/h)	45	794	347	143	365	784	268	115	267	318	532	19	
Future Volume (veh/h)	45	794	347	143	365	784	268	115	267	318	532	19	
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach	No			No			No			No			
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1885	1900	1885	1885	1885	1885	1885	
Adj Flow Rate, veh/h	46	819	229	147	506	231	276	119	146	328	548	0	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	
Percent Heavy Veh, %	0	0	0	0	0	1	0	1	1	1	1	1	
Cap, veh/h	236	890	397	198	1112	467	331	585	495	356	1484		
Arrive On Green	0.03	0.25	0.25	0.07	0.29	0.29	0.09	0.31	0.31	0.20	0.41	0.00	
Sat Flow, veh/h	1810	3610	1610	1810	3800	1598	3510	1885	1598	1795	3582	1598	
Grp Volume(v), veh/h	46	819	229	147	506	231	276	119	146	328	548	0	
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1810	1900	1598	1755	1885	1598	1795	1791	1598	
Q Serve(g_s), s	2.7	30.9	17.5	8.2	15.2	16.7	10.8	6.5	9.7	25.1	14.8	0.0	
Cycle Q Clear(g_c), s	2.7	30.9	17.5	8.2	15.2	16.7	10.8	6.5	9.7	25.1	14.8	0.0	
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Lane Grp Cap(c), veh/h	236	890	397	198	1112	467	331	585	495	356	1484		
V/C Ratio(X)	0.19	0.92	0.58	0.74	0.46	0.49	0.83	0.20	0.29	0.92	0.37		
Avail Cap(c_a), veh/h	251	1031	460	233	1303	548	426	585	495	462	1484		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	
Uniform Delay (d), s/veh	38.1	51.4	46.3	38.3	40.4	41.0	62.3	35.6	36.7	55.0	28.4	0.0	
Incr Delay (d2), s/veh	0.4	11.8	1.3	10.0	0.3	0.8	10.8	0.8	1.5	20.5	0.7	0.0	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(95%),veh/ln	2.2	21.7	11.5	7.5	11.6	10.9	9.1	5.7	7.2	19.3	10.7	0.0	
Unsig. Movement Delay, s/veh													
LnGrp Delay(d),s/veh	38.5	63.2	47.6	48.3	40.7	41.8	73.1	36.3	38.2	75.5	29.1	0.0	
LnGrp LOS	D	E	D	D	D	D	E	D	D	E	C		
Approach Vol, veh/h	1094			884			541			876			A
Approach Delay, s/veh	58.9			42.3			55.6			46.5			
Approach LOS	E			D			E			D			
Timer - Assigned Phs	1	2	3	4	5	6	7	8					
Phs Duration (G+Y+Rc), s	33.8	49.4	16.3	40.5	19.2	64.0	9.9	47.0					
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0					
Max Green Setting (Gmax), s	36.0	27.0	13.0	40.0	17.0	46.0	5.0	48.0					
Max Q Clear Time (g_c+I1), s	27.1	8.5	10.2	32.9	12.8	16.8	4.7	17.2					
Green Ext Time (p_c), s	0.7	0.2	0.1	1.6	0.4	3.8	0.0	1.0					

Intersection Summary

HCM 6th Ctrl Delay 50.8

HCM 6th LOS D

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

3: Northside Dr & Powers Ferry Rd

08/31/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑		↑	↑						↑↑↑	↑
Traffic Volume (veh/h)	0	1108	497	58	266	0	0	0	0	562	639	209
Future Volume (veh/h)	0	1108	497	58	266	0	0	0	0	562	639	209
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1900	1900	1900	1885	0				1900	1900	1900
Adj Flow Rate, veh/h	0	1204	540	63	289	0				611	695	227
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	1	0				0	0	0
Cap, veh/h	0	1268	566	133	847	0				799	797	711
Arrive On Green	0.00	0.36	0.36	0.03	0.45	0.00				0.44	0.44	0.44
Sat Flow, veh/h	0	3681	1566	1810	1885	0				1810	1805	1610
Grp Volume(v), veh/h	0	1186	558	63	289	0				611	695	227
Grp Sat Flow(s),veh/h/ln	0	1729	1618	1810	1885	0				1810	1805	1610
Q Serve(g_s), s	0.0	36.7	37.0	2.3	11.0	0.0				31.3	38.5	10.1
Cycle Q Clear(g_c), s	0.0	36.7	37.0	2.3	11.0	0.0				31.3	38.5	10.1
Prop In Lane	0.00		0.97	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1249	584	133	847	0				799	797	711
V/C Ratio(X)	0.00	0.95	0.95	0.47	0.34	0.00				0.76	0.87	0.32
Avail Cap(c_a), veh/h	0	1257	588	138	857	0				799	797	711
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.99	0.99	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	34.2	34.3	27.4	19.7	0.0				25.9	27.9	20.0
Incr Delay (d2), s/veh	0.0	14.9	26.2	2.6	0.2	0.0				6.9	12.6	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	24.2	25.2	1.9	8.3	0.0				20.6	25.6	7.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	49.1	60.4	30.0	19.9	0.0				32.8	40.5	21.1
LnGrp LOS	A	D	E	C	B	A				C	D	C
Approach Vol, veh/h		1744			352						1533	
Approach Delay, s/veh		52.7			21.7						34.6	
Approach LOS		D			C						C	
Timer - Assigned Phs		2		4			7	8				
Phs Duration (G+Y+Rc), s		54.6		55.4			9.7	45.7				
Change Period (Y+Rc), s		6.0		6.0			6.0	6.0				
Max Green Setting (Gmax), s		48.0		50.0			4.0	40.0				
Max Q Clear Time (g_c+I1), s		40.5		13.0			4.3	39.0				
Green Ext Time (p_c), s		4.4		0.8			0.0	0.7				
Intersection Summary												
HCM 6th Ctrl Delay				42.0								
HCM 6th LOS				D								

HCM 6th Signalized Intersection Summary

4: Roswell Rd & Hannover Park Rd/Dunwoody PI

08/31/2020

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (veh/h)	28	25	78	91	33	327	43	562	54	468	2038	34	
Future Volume (veh/h)	28	25	78	91	33	327	43	562	54	468	2038	34	
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach	No			No			No			No			
Adj Sat Flow, veh/h/ln	1900	1900	1900	1885	1900	1885	1900	1900	1900	1900	1900	1900	
Adj Flow Rate, veh/h	29	26	29	95	34	341	45	585	0	488	2123	0	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	
Percent Heavy Veh, %	0	0	0	1	0	1	0	0	0	0	0	0	
Cap, veh/h	38	83	71	132	116	604	58	2278		540	2717		
Arrive On Green	0.02	0.04	0.04	0.04	0.06	0.06	0.03	0.63	0.00	0.15	0.75	0.00	
Sat Flow, veh/h	1810	1900	1610	3483	1900	2812	1810	3610	1610	3510	3610	1610	
Grp Volume(v), veh/h	29	26	29	95	34	341	45	585	0	488	2123	0	
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1742	1900	1406	1810	1805	1610	1755	1805	1610	
Q Serve(g_s), s	2.9	2.4	3.2	4.9	3.1	11.0	4.4	12.8	0.0	24.6	63.5	0.0	
Cycle Q Clear(g_c), s	2.9	2.4	3.2	4.9	3.1	11.0	4.4	12.8	0.0	24.6	63.5	0.0	
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Lane Grp Cap(c), veh/h	38	83	71	132	116	604	58	2278		540	2717		
V/C Ratio(X)	0.77	0.31	0.41	0.72	0.29	0.56	0.77	0.26		0.90	0.78		
Avail Cap(c_a), veh/h	70	95	81	174	116	604	101	2278		663	2717		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	
Uniform Delay (d), s/veh	87.7	83.4	83.8	85.6	80.8	63.1	86.5	14.6	0.0	74.9	13.4	0.0	
Incr Delay (d2), s/veh	27.7	2.1	3.8	9.3	1.4	1.2	19.3	0.3	0.0	13.9	2.3	0.0	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(95%),veh/ln	3.0	2.2	2.5	4.3	2.8	11.5	4.3	9.1	0.0	17.7	31.6	0.0	
Unsig. Movement Delay, s/veh													
LnGrp Delay(d),s/veh	115.5	85.5	87.6	94.9	82.2	64.4	105.8	14.9	0.0	88.8	15.7	0.0	
LnGrp LOS	F	F	F	F	F	E	F	B		F	B		
Approach Vol, veh/h	84			470				630		A		2611	A
Approach Delay, s/veh	96.6			71.8				21.4		29.3			
Approach LOS	F			E				C		C			
Timer - Assigned Phs	1	2	3	4	5	6	7	8					
Phs Duration (G+Y+Rc), s	33.7	119.6	12.8	13.9	11.8	141.5	9.7	17.0					
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0					
Max Green Setting (Gmax), s	34.0	104.0	9.0	9.0	10.0	128.0	7.0	11.0					
Max Q Clear Time (g_c+I1), s	26.6	14.8	6.9	4.4	6.4	65.5	4.9	13.0					
Green Ext Time (p_c), s	1.1	4.0	0.0	0.0	0.0	32.3	0.0	0.0					
Intersection Summary													
HCM 6th Ctrl Delay	34.8												
HCM 6th LOS	C												

HCM 6th Signalized Intersection Summary

5: Roswell Rd /Roswell Rd & Northridge Rd

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	57	54	326	32	156	38	733	778	896	1505	63
Future Volume (veh/h)	18	57	54	326	32	156	38	733	778	896	1505	63
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1870	1900	1900	1900	1900	1900	1885
Adj Flow Rate, veh/h	19	59	30	360	0	6	39	756	647	924	1552	13
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	2	0	0	0	0	0	1
Cap, veh/h	23	71	81	404	0	177	51	1551	692	967	2444	1082
Arrive On Green	0.05	0.05	0.05	0.11	0.00	0.11	0.03	0.43	0.43	0.28	0.68	0.68
Sat Flow, veh/h	457	1420	1610	3619	0	1585	1810	3610	1610	3510	3610	1598
Grp Volume(v), veh/h	78	0	30	360	0	6	39	756	647	924	1552	13
Grp Sat Flow(s),veh/h/ln	1877	0	1610	1810	0	1585	1810	1805	1610	1755	1805	1598
Q Serve(g_s), s	7.4	0.0	3.2	17.7	0.0	0.6	3.9	27.2	69.0	46.6	43.8	0.5
Cycle Q Clear(g_c), s	7.4	0.0	3.2	17.7	0.0	0.6	3.9	27.2	69.0	46.6	43.8	0.5
Prop In Lane	0.24		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	94	0	81	404	0	177	51	1551	692	967	2444	1082
V/C Ratio(X)	0.83	0.00	0.37	0.89	0.00	0.03	0.77	0.49	0.94	0.96	0.63	0.01
Avail Cap(c_a), veh/h	94	0	81	462	0	203	90	1551	692	995	2444	1082
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	84.7	0.0	82.8	78.9	0.0	71.3	86.9	37.0	48.9	64.1	16.5	9.5
Incr Delay (d2), s/veh	43.9	0.0	2.8	17.5	0.0	0.1	21.4	1.1	21.6	18.5	1.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.3	0.0	2.6	14.2	0.0	0.5	3.8	17.9	40.3	30.8	24.5	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	128.7	0.0	85.6	96.4	0.0	71.4	108.4	38.1	70.5	82.6	17.7	9.5
LnGrp LOS	F	A	F	F	A	E	F	D	E	F	B	A
Approach Vol, veh/h	108			366			1442			2489		
Approach Delay, s/veh	116.7			96.0			54.6			41.8		
Approach LOS	F			F			D			D		
Timer - Assigned Phs	1	2	4		5	6	8					
Phs Duration (G+Y+Rc), s	55.6	83.3	15.0		11.0	127.9	26.1					
Change Period (Y+Rc), s	6.0	6.0	6.0		6.0	6.0	6.0					
Max Green Setting (Gmax), s	51.0	73.0	9.0		9.0	115.0	23.0					
Max Q Clear Time (g_c+I1), s	48.6	29.2	9.4		5.9	45.8	19.7					
Green Ext Time (p_c), s	1.0	2.1	0.0		0.0	17.3	0.4					
Intersection Summary												
HCM 6th Ctrl Delay	52.3											
HCM 6th LOS	D											

HCM 6th Signalized Intersection Summary

6: Northside Dr & Interstate N Pkwy/New Northside Dr

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	157	158	916	93	1040	309	0	0	0	15	166	64
Future Volume (veh/h)	157	158	916	93	1040	309	0	0	0	15	166	64
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900				1885	1885	1885
Adj Flow Rate, veh/h	167	168	974	99	1106	223				16	177	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94				0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0				1	1	1
Cap, veh/h	259	171	989	145	1316	1115				28	330	
Arrive On Green	0.05	0.70	0.70	0.03	0.69	0.69				0.10	0.10	0.00
Sat Flow, veh/h	1810	242	1405	1810	1900	1610				290	3466	0
Grp Volume(v), veh/h	167	0	1142	99	1106	223				103	90	0
Grp Sat Flow(s),veh/h/ln	1810	0	1647	1810	1900	1610				1871	1791	0
Q Serve(g_s), s	2.9	0.0	73.6	1.7	47.1	5.4				5.8	5.2	0.0
Cycle Q Clear(g_c), s	2.9	0.0	73.6	1.7	47.1	5.4				5.8	5.2	0.0
Prop In Lane	1.00		0.85	1.00		1.00				0.15		0.00
Lane Grp Cap(c), veh/h	259	0	1160	145	1316	1115				183	175	
V/C Ratio(X)	0.64	0.00	0.98	0.68	0.84	0.20				0.57	0.51	
Avail Cap(c_a), veh/h	324	0	1168	149	1316	1115				183	175	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00				1.00	1.00	0.00
Uniform Delay (d), s/veh	20.9	0.0	15.7	30.4	12.4	6.0				47.4	47.1	0.0
Incr Delay (d2), s/veh	3.0	0.0	22.6	11.6	5.0	0.1				12.0	10.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.2	0.0	37.3	4.1	25.6	3.0				5.9	5.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.8	0.0	38.3	42.0	17.5	6.1				59.4	57.4	0.0
LnGrp LOS	C	A	D	D	B	A				E	E	
Approach Vol, veh/h		1309			1428						193	A
Approach Delay, s/veh		36.5			17.4						58.5	
Approach LOS		D			B						E	
Timer - Assigned Phs		2	3	4			7	8				
Phs Duration (G+Y+Rc), s		16.8	9.8	83.4			11.0	82.2				
Change Period (Y+Rc), s		6.0	6.0	6.0			6.0	6.0				
Max Green Setting (Gmax), s		10.0	4.0	78.0			9.0	73.0				
Max Q Clear Time (g_c+I1), s		7.8	3.7	75.6			4.9	49.1				
Green Ext Time (p_c), s		0.2	0.0	1.8			0.1	12.0				
Intersection Summary												
HCM 6th Ctrl Delay			28.6									
HCM 6th LOS			C									
Notes												
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary

7: Riverside Dr & Heards Ferry Rd

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	133	243	123	71	200	44	151	397	138	49	822	143
Future Volume (veh/h)	133	243	123	71	200	44	151	397	138	49	822	143
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	139	253	128	74	208	46	157	414	144	51	856	149
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	192	232	118	102	252	56	165	757	263	416	825	144
Arrive On Green	0.06	0.20	0.20	0.03	0.17	0.17	0.06	0.58	0.58	0.02	0.54	0.54
Sat Flow, veh/h	1767	1162	588	1767	1472	325	1767	1316	458	1767	1539	268
Grp Volume(v), veh/h	139	0	381	74	0	254	157	0	558	51	0	1005
Grp Sat Flow(s),veh/h/ln	1767	0	1750	1767	0	1797	1767	0	1773	1767	0	1807
Q Serve(g_s), s	8.0	0.0	28.0	4.0	0.0	19.1	8.3	0.0	27.3	1.8	0.0	75.0
Cycle Q Clear(g_c), s	8.0	0.0	28.0	4.0	0.0	19.1	8.3	0.0	27.3	1.8	0.0	75.0
Prop In Lane	1.00		0.34	1.00		0.18	1.00		0.26	1.00		0.15
Lane Grp Cap(c), veh/h	192	0	350	102	0	308	165	0	1020	416	0	968
V/C Ratio(X)	0.73	0.00	1.09	0.73	0.00	0.82	0.95	0.00	0.55	0.12	0.00	1.04
Avail Cap(c_a), veh/h	192	0	350	102	0	308	165	0	1020	423	0	968
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	49.0	0.0	56.0	52.3	0.0	56.0	46.0	0.0	18.4	15.7	0.0	32.5
Incr Delay (d2), s/veh	12.8	0.0	74.0	22.6	0.0	16.5	55.6	0.0	2.1	0.1	0.0	39.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.0	0.0	27.9	2.4	0.0	15.2	12.8	0.0	17.1	1.3	0.0	54.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.8	0.0	130.0	74.8	0.0	72.4	101.6	0.0	20.5	15.9	0.0	71.7
LnGrp LOS	E	A	F	E	A	E	F	A	C	B	A	F
Approach Vol, veh/h	520			328			715			1056		
Approach Delay, s/veh	111.8			73.0			38.3			69.0		
Approach LOS	F			E			D			E		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.4	86.6	10.0	34.0	15.0	81.0	14.0	30.0				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	4.0	80.0	4.0	28.0	9.0	75.0	8.0	24.0				
Max Q Clear Time (g_c+I1), s	3.8	29.3	6.0	30.0	10.3	77.0	10.0	21.1				
Green Ext Time (p_c), s	0.0	4.2	0.0	0.0	0.0	0.0	0.0	0.4				
Intersection Summary												
HCM 6th Ctrl Delay	69.6											
HCM 6th LOS	E											

HCM 6th Signalized Intersection Summary 8: New Northside Dr & Powers Ferry Rd

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 							  				
Traffic Volume (veh/h)	484	846	0	0	141	181	113	296	83	0	0	0
Future Volume (veh/h)	484	846	0	0	141	181	113	296	83	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach	No			No			No					
Adj Sat Flow, veh/h/ln	1885	1900	0	0	1885	1900	1900	1900	1900			
Adj Flow Rate, veh/h	532	930	0	0	155	0	124	325	91			
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91			
Percent Heavy Veh, %	1	0	0	0	1	0	0	0	0			
Cap, veh/h	622	1019	0	0	571		408	1153	322			
Arrive On Green	0.18	0.54	0.00	0.00	0.30	0.00	0.35	0.35	0.35			
Sat Flow, veh/h	3483	1900	0	0	1885	1610	1151	3249	908			
Grp Volume(v), veh/h	532	930	0	0	155	0	198	167	174			
Grp Sat Flow(s),veh/h/ln	1742	1900	0	0	1885	1610	1842	1729	1737			
Q Serve(g_s), s	16.3	48.9	0.0	0.0	6.9	0.0	8.6	7.6	7.9			
Cycle Q Clear(g_c), s	16.3	48.9	0.0	0.0	6.9	0.0	8.6	7.6	7.9			
Prop In Lane	1.00		0.00	0.00		1.00	0.62		0.52			
Lane Grp Cap(c), veh/h	622	1019	0	0	571		654	613	616			
V/C Ratio(X)	0.86	0.91	0.00	0.00	0.27		0.30	0.27	0.28			
Avail Cap(c_a), veh/h	855	1347	0	0	771		654	613	616			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.23	0.23	0.00	0.00	1.00	0.00	1.00	1.00	1.00			
Uniform Delay (d), s/veh	43.8	23.2	0.0	0.0	29.1	0.0	25.7	25.4	25.5			
Incr Delay (d2), s/veh	1.6	2.1	0.0	0.0	0.3	0.0	1.2	1.1	1.1			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	9.1	24.3	0.0	0.0	5.6	0.0	7.0	5.9	6.1			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.4	25.3	0.0	0.0	29.4	0.0	26.9	26.5	26.6			
LnGrp LOS	D	C	A	A	C		C	C	C			
Approach Vol, veh/h	1462			155			540					
Approach Delay, s/veh	32.6			29.4			26.7					
Approach LOS	C			C			C					
Timer - Assigned Phs	2			4			7			8		
Phs Duration (G+Y+Rc), s	45.0			65.0			25.6			39.3		
Change Period (Y+Rc), s	6.0			6.0			6.0			6.0		
Max Green Setting (Gmax), s	20.0			78.0			27.0			45.0		
Max Q Clear Time (g_c+I1), s	10.6			50.9			18.3			8.9		
Green Ext Time (p_c), s	2.1			8.1			1.4			0.9		
Intersection Summary												
HCM 6th Ctrl Delay			30.9									
HCM 6th LOS			C									
Notes												

HCM 6th Signalized Intersection Summary 9: Mt Vernon Hwy & Abernathy Rd/Perimeter Center

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	309	1479	29	50	656	85	35	252	102	233	513	480
Future Volume (veh/h)	309	1479	29	50	656	85	35	252	102	233	513	480
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1885	1900	1900	1885
Adj Flow Rate, veh/h	319	1525	0	52	676	0	36	260	0	240	529	340
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	1	0	0	1
Cap, veh/h	362	2191		113	1935		128	326		299	688	305
Arrive On Green	0.21	1.00	0.00	0.03	0.54	0.00	0.03	0.09	0.00	0.13	0.19	0.19
Sat Flow, veh/h	3510	3610	1610	3510	3610	1610	1810	3610	1598	1810	3610	1598
Grp Volume(v), veh/h	319	1525	0	52	676	0	36	260	0	240	529	340
Grp Sat Flow(s),veh/h/ln	1755	1805	1610	1755	1805	1610	1810	1805	1598	1810	1805	1598
Q Serve(g_s), s	15.0	0.0	0.0	2.5	18.2	0.0	3.0	12.0	0.0	20.0	23.6	32.4
Cycle Q Clear(g_c), s	15.0	0.0	0.0	2.5	18.2	0.0	3.0	12.0	0.0	20.0	23.6	32.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	362	2191		113	1935		128	326		299	688	305
V/C Ratio(X)	0.88	0.70		0.46	0.35		0.28	0.80		0.80	0.77	1.12
Avail Cap(c_a), veh/h	475	2191		124	1935		140	637		299	977	432
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.88	0.88	0.00	1.00	1.00	0.00	0.96	0.96	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.4	0.0	0.0	80.8	22.5	0.0	67.4	75.8	0.0	58.6	65.2	68.8
Incr Delay (d2), s/veh	12.7	1.6	0.0	2.9	0.5	0.0	1.1	4.3	0.0	14.6	2.4	77.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	10.5	0.9	0.0	2.1	12.3	0.0	2.6	9.6	0.0	15.7	16.6	28.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	79.1	1.6	0.0	83.7	23.0	0.0	68.6	80.1	0.0	73.2	67.6	146.4
LnGrp LOS	E	A		F	C		E	F		E	E	F
Approach Vol, veh/h	1844		A	728		A	296		A	1109		
Approach Delay, s/veh	15.0			27.3			78.7			93.0		
Approach LOS	B			C			E			F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	23.5	97.1	28.0	21.3	11.5	109.2	10.9	38.4				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	23.0	71.0	22.0	30.0	6.0	88.0	6.0	46.0				
Max Q Clear Time (g_c+I1), s	17.0	20.2	22.0	14.0	4.5	2.0	5.0	25.6				
Green Ext Time (p_c), s	0.6	4.8	0.0	1.3	0.0	17.2	0.0	1.9				

Intersection Summary

HCM 6th Ctrl Delay	43.8
HCM 6th LOS	D

Notes

Unsignalized Delay for [NBR, EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

10: Johnson Ferry Rd & Abernathy Rd & Brandon Mill Rd NW

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	58	2140	1136	12	488	41	168	38	19	156	236	152
Future Volume (veh/h)	58	2140	1136	12	488	41	168	38	19	156	236	152
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	60	2229	1105	12	508	0	175	40	20	162	246	106
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	582	2265	1010	59	2222		190	153	76	320	294	249
Arrive On Green	0.02	0.64	0.64	0.01	0.63	0.00	0.06	0.13	0.13	0.08	0.16	0.16
Sat Flow, veh/h	1767	3526	1572	1767	3526	1572	3428	1167	584	1767	1856	1572
Grp Volume(v), veh/h	60	2229	1105	12	508	0	175	0	60	162	246	106
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1767	1763	1572	1714	0	1751	1767	1856	1572
Q Serve(g_s), s	2.2	110.6	115.6	0.4	11.2	0.0	9.1	0.0	5.6	14.2	23.1	10.9
Cycle Q Clear(g_c), s	2.2	110.6	115.6	0.4	11.2	0.0	9.1	0.0	5.6	14.2	23.1	10.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.33	1.00		1.00
Lane Grp Cap(c), veh/h	582	2265	1010	59	2222		190	0	229	320	294	249
V/C Ratio(X)	0.10	0.98	1.09	0.20	0.23		0.92	0.00	0.26	0.51	0.84	0.43
Avail Cap(c_a), veh/h	582	2272	1013	81	2272		190	0	229	320	294	249
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	1.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.6	31.3	32.2	47.2	14.4	0.0	84.6	0.0	70.4	60.5	73.5	68.3
Incr Delay (d2), s/veh	0.0	3.0	44.0	1.7	0.1	0.0	42.9	0.0	2.8	1.3	23.6	5.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.3	49.0	63.1	0.7	8.1	0.0	8.9	0.0	4.8	10.7	18.9	8.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.6	34.3	76.2	48.8	14.4	0.0	127.5	0.0	73.2	61.7	97.1	73.6
LnGrp LOS	B	C	F	D	B		F	A	E	E	F	E
Approach Vol, veh/h	3394				520		A		235		514	
Approach Delay, s/veh	47.5				15.2				113.6		81.1	
Approach LOS	D				B				F		F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	21.0	29.5	7.8	121.6	16.0	34.5	10.0	119.5				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	15.0	21.0	4.0	116.0	10.0	26.0	4.0	116.0				
Max Q Clear Time (g_c+I1), s	16.2	7.6	2.4	112.6	11.1	25.1	4.2	13.2				
Green Ext Time (p_c), s	0.0	0.2	0.0	3.0	0.0	0.1	0.0	3.7				

Intersection Summary

HCM 6th Ctrl Delay 51.0

HCM 6th LOS D

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

11: Peachtree Dunwoody Rd & Abernathy Rd

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	666	1344	742	8	1063	229	166	335	8	190	371	395
Future Volume (veh/h)	666	1344	742	8	1063	229	166	335	8	190	371	395
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	1885	1885	1900	1870	1885	1870	1870	1900	1870	1870	1870
Adj Flow Rate, veh/h	680	1371	680	8	1085	55	169	342	0	194	379	97
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	1	1	0	2	1	2	2	0	2	2	2
Cap, veh/h	743	3398	1055	128	2111	660	212	401		216	646	609
Arrive On Green	0.21	0.66	0.66	0.41	0.41	0.41	0.04	0.08	0.00	0.12	0.17	0.17
Sat Flow, veh/h	3510	5147	1598	208	5106	1598	3456	3554	1610	1781	3741	1585
Grp Volume(v), veh/h	680	1371	680	8	1085	55	169	342	0	194	379	97
Grp Sat Flow(s),veh/h/ln	1755	1716	1598	208	1702	1598	1728	1777	1610	1781	1870	1585
Q Serve(g_s), s	32.2	21.0	42.8	4.0	26.9	2.4	8.2	16.2	0.0	18.3	15.9	6.8
Cycle Q Clear(g_c), s	32.2	21.0	42.8	4.0	26.9	2.4	8.2	16.2	0.0	18.3	15.9	6.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	743	3398	1055	128	2111	660	212	401		216	646	609
V/C Ratio(X)	0.92	0.40	0.64	0.06	0.51	0.08	0.80	0.85		0.90	0.59	0.16
Avail Cap(c_a), veh/h	888	3398	1055	128	2111	660	285	502		304	858	699
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.82	0.82	0.82	0.95	0.95	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	65.5	13.4	17.1	30.4	37.1	13.7	80.5	77.2	0.0	73.7	64.7	34.3
Incr Delay (d2), s/veh	12.5	0.4	3.0	0.8	0.7	0.2	10.5	10.7	0.0	21.8	0.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	21.9	12.5	22.8	0.4	16.2	2.6	7.3	12.8	0.0	14.8	12.2	4.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	78.0	13.7	20.1	31.2	37.9	13.9	90.9	87.9	0.0	95.5	65.6	34.5
LnGrp LOS	E	B	C	C	D	B	F	F		F	E	C
Approach Vol, veh/h	2731				1148				511			
Approach Delay, s/veh	31.3				36.7				88.9			
Approach LOS	C				D				F			
Timer - Assigned Phs	2 3 4 5 6 7 8											
Phs Duration (G+Y+Rc), s	118.2 16.4 35.4 42.0 76.3 26.6 25.2											
Change Period (Y+Rc), s	6.0 6.0 6.0 6.0 6.0 6.0 6.0											
Max Green Setting (Gmax), s	99.0 14.0 39.0 43.0 50.0 29.0 24.0											
Max Q Clear Time (g_c+I1), s	23.0 10.2 17.9 34.2 28.9 20.3 18.2											
Green Ext Time (p_c), s	7.0 0.2 1.8 1.8 7.2 0.3 1.0											
Intersection Summary												
HCM 6th Ctrl Delay	43.4											
HCM 6th LOS	D											
Notes												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary

12: Peachtree Dunwoody Rd & Hollis Cobb Cir/Medical Center MARTA

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	177	8	44	54	2	38	58	1455	144	143	1322	211
Future Volume (veh/h)	177	8	44	54	2	38	58	1455	144	143	1322	211
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1885	1856	1885	1900
Adj Flow Rate, veh/h	182	8	45	56	2	39	60	1500	0	147	1363	218
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	1	3	1	0
Cap, veh/h	243	41	232	232	13	256	309	2486		274	2529	1137
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.02	0.69	0.00	0.08	1.00	1.00
Sat Flow, veh/h	1388	249	1399	1373	79	1543	1810	3610	1598	1767	3582	1610
Grp Volume(v), veh/h	182	0	53	56	0	41	60	1500	0	147	1363	218
Grp Sat Flow(s),veh/h/ln	1388	0	1648	1373	0	1622	1810	1805	1598	1767	1791	1610
Q Serve(g_s), s	22.0	0.0	4.7	6.2	0.0	3.7	1.7	37.6	0.0	4.4	0.0	0.0
Cycle Q Clear(g_c), s	25.6	0.0	4.7	10.9	0.0	3.7	1.7	37.6	0.0	4.4	0.0	0.0
Prop In Lane	1.00		0.85	1.00		0.95	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	243	0	274	232	0	269	309	2486		274	2529	1137
V/C Ratio(X)	0.75	0.00	0.19	0.24	0.00	0.15	0.19	0.60		0.54	0.54	0.19
Avail Cap(c_a), veh/h	323	0	368	311	0	363	322	2486		402	2529	1137
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	0.42	0.42	0.42
Uniform Delay (d), s/veh	71.6	0.0	61.1	65.8	0.0	60.7	7.4	14.1	0.0	13.3	0.0	0.0
Incr Delay (d2), s/veh	6.7	0.0	0.3	0.5	0.0	0.3	0.3	1.1	0.0	0.7	0.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	13.1	0.0	3.7	4.1	0.0	2.8	1.2	21.7	0.0	3.2	0.2	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	78.3	0.0	61.4	66.3	0.0	60.9	7.7	15.2	0.0	14.0	0.3	0.2
LnGrp LOS	E	A	E	E	A	E	A	B		B	A	A
Approach Vol, veh/h	235			97			1560			A	1728	
Approach Delay, s/veh	74.5			64.0			14.9			1.5		
Approach LOS	E			E			B			A		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.7	123.1		34.2	9.8	126.0		34.2				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	19.0	95.0		38.0	5.0	109.0		38.0				
Max Q Clear Time (g_c+I1), s	6.4	39.6		27.6	3.7	2.0		12.9				
Green Ext Time (p_c), s	0.3	17.5		0.6	0.0	12.8		0.3				

Intersection Summary

HCM 6th Ctrl Delay 13.7

HCM 6th LOS B

Notes

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

13: River Valley Rd & Johnson Ferry Rd

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	3013	339	332	485	1	65	0	331	0	0	0
Future Volume (veh/h)	5	3013	339	332	485	1	65	0	331	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	5	3240	0	357	522	1	70	0	0	0	0	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	681	2554		246	3019	6	123	0		161	109	0
Arrive On Green	0.00	0.72	0.00	0.23	1.00	1.00	0.06	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	1767	3526	1572	1767	3610	7	1406	0	1572	1767	1856	0
Grp Volume(v), veh/h	5	3240	0	357	255	268	70	0	0	0	0	0
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1767	1763	1854	1406	0	1572	1767	1856	0
Q Serve(g_s), s	0.1	130.4	0.0	21.0	0.0	0.0	8.9	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.1	130.4	0.0	21.0	0.0	0.0	8.9	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	681	2554		246	1474	1551	123	0		161	109	0
V/C Ratio(X)	0.01	1.27		1.45	0.17	0.17	0.57	0.00		0.00	0.00	0.00
Avail Cap(c_a), veh/h	711	2554		246	1474	1551	149	0		209	258	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.91	0.91	0.91	1.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	6.6	24.8	0.0	63.0	0.0	0.0	83.9	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	124.1	0.0	222.1	0.2	0.2	4.1	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.1	133.1	0.0	38.3	0.2	0.2	6.1	0.0	0.0	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	6.6	148.9	0.0	285.1	0.2	0.2	88.0	0.0	0.0	0.0	0.0	0.0
LnGrp LOS	A	F		F	A	A	F	A		A	A	A
Approach Vol, veh/h	3245		A	880			70		A	0		
Approach Delay, s/veh	148.7			115.8			88.0			0.0		
Approach LOS	F			F			F					
Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	27.0	136.4		16.6	6.9	156.5	0.0	16.6				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	21.0	116.0		25.0	4.0	133.0	5.0	14.0				
Max Q Clear Time (g_c+I1), s	23.0	132.4		0.0	2.1	2.0	0.0	10.9				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	3.3	0.0	0.1				

Intersection Summary

HCM 6th Ctrl Delay 140.8

HCM 6th LOS F

Notes

Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th TWSC
14: Northside Dr & Mt Vernon Hwy

08/31/2020

Intersection						
Int Delay, s/veh	27.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	190	197	427	363	138	107
Future Vol, veh/h	190	197	427	363	138	107
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	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	1	2	1	3	2	1
Mvmt Flow	221	229	497	422	160	124
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	1152	708	0	0	497	0
Stage 1	708	-	-	-	-	-
Stage 2	444	-	-	-	-	-
Critical Hdwy	6.41	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	~ 220	435	-	-	1067	-
Stage 1	490	-	-	-	-	-
Stage 2	649	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 185	435	-	-	1067	-
Mov Cap-2 Maneuver	~ 185	-	-	-	-	-
Stage 1	490	-	-	-	-	-
Stage 2	545	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	99.3	0		5.1		
HCM LOS	F					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	185	435	1067	-
HCM Lane V/C Ratio	-	-	1.194	0.527	0.15	-
HCM Control Delay (s)	-	-	179.4	22.1	9	0
HCM Lane LOS	-	-	F	C	A	A
HCM 95th %tile Q(veh)	-	-	11.6	3	0.5	-
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

HCM 6th Signalized Intersection Summary

15: Roswell Rd & Spalding Dr

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	3	30	46	0	13	9	679	65	96	1220	8
Future Volume (veh/h)	6	3	30	46	0	13	9	679	65	96	1220	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	6	3	32	49	0	0	10	730	70	103	1312	9
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	86	37	81	104	0		366	2669	256	607	3007	21
Arrive On Green	0.05	0.05	0.05	0.05	0.00	0.00	0.01	0.82	0.82	0.03	0.84	0.84
Sat Flow, veh/h	1030	714	1572	1240	0	0	1767	3251	312	1767	3589	25
Grp Volume(v), veh/h	9	0	32	49	0	0	10	396	404	103	644	677
Grp Sat Flow(s),veh/h/ln	1744	0	1572	1240	0	0	1767	1763	1799	1767	1763	1851
Q Serve(g_s), s	0.0	0.0	3.5	6.4	0.0	0.0	0.2	9.3	9.3	1.7	16.8	16.8
Cycle Q Clear(g_c), s	0.8	0.0	3.5	7.2	0.0	0.0	0.2	9.3	9.3	1.7	16.8	16.8
Prop In Lane	0.67		1.00	1.00		0.00	1.00		0.17	1.00		0.01
Lane Grp Cap(c), veh/h	123	0	81	104	0		366	1447	1477	607	1477	1551
V/C Ratio(X)	0.07	0.00	0.40	0.47	0.00		0.03	0.27	0.27	0.17	0.44	0.44
Avail Cap(c_a), veh/h	231	0	192	200	0		435	1447	1477	735	1477	1551
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	81.4	0.0	82.7	84.8	0.0	0.0	3.1	3.7	3.7	2.5	3.7	3.7
Incr Delay (d2), s/veh	0.2	0.0	3.1	3.3	0.0	0.0	0.0	0.5	0.5	0.1	0.9	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.7	0.0	2.7	4.2	0.0	0.0	0.1	5.3	5.4	0.8	8.7	9.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	81.6	0.0	85.8	88.2	0.0	0.0	3.1	4.2	4.2	2.6	4.7	4.6
LnGrp LOS	F	A	F	F	A		A	A	A	A	A	A
Approach Vol, veh/h	41			49			A			1424		
Approach Delay, s/veh	84.9			88.2			4.2			4.5		
Approach LOS	F			F			A			A		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.0	153.8		15.2	8.0	156.8		15.2				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	18.0	122.0		22.0	9.0	131.0		22.0				
Max Q Clear Time (g_c+I1), s	3.7	11.3		2.8	2.2	18.8		9.2				
Green Ext Time (p_c), s	0.2	5.2		0.0	0.0	11.4		0.1				
Intersection Summary												
HCM 6th Ctrl Delay	7.6											
HCM 6th LOS	A											

HCM Signalized Intersection Capacity Analysis

16: Roberts Dr & Spalding Dr

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	151	234	18	66	358	508	24	267	35	254	274	108
Future Volume (vph)	151	234	18	66	358	508	24	267	35	254	274	108
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.98		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1805	1873		1805	1900	1615	1805	1851		1787	1806	
Flt Permitted	0.95	1.00		0.49	1.00	1.00	0.31	1.00		0.20	1.00	
Satd. Flow (perm)	1805	1873		933	1900	1615	596	1851		372	1806	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	161	249	19	70	381	540	26	284	37	270	291	115
RTOR Reduction (vph)	0	3	0	0	0	225	0	6	0	0	16	0
Lane Group Flow (vph)	161	265	0	70	381	315	26	315	0	270	390	0
Heavy Vehicles (%)	0%	0%	5%	0%	0%	0%	0%	1%	0%	1%	1%	0%
Turn Type	Split	NA		Perm	NA	custom	pm+pt	NA		pm+pt	NA	
Protected Phases	4!	4			3 7 8!		5	2		1	6	
Permitted Phases				3 7 8		8	2			6		
Actuated Green, G (s)	13.0	13.0		43.0	43.0	32.0	23.0	18.0		35.0	24.0	
Effective Green, g (s)	13.0	13.0		43.0	43.0	32.0	23.0	18.0		35.0	24.0	
Actuated g/C Ratio	0.14	0.14		0.48	0.48	0.36	0.26	0.20		0.39	0.27	
Clearance Time (s)	6.0	6.0				6.0	6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0				3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	260	270		445	907	574	219	370		317	481	
v/s Ratio Prot	0.09	c0.14			0.20		0.01	0.17		c0.10	c0.22	
v/s Ratio Perm				0.08		c0.20	0.02			c0.23		
v/c Ratio	0.62	0.98		0.16	0.42	0.55	0.12	0.85		0.85	0.81	
Uniform Delay, d1	36.2	38.4		13.3	15.4	23.2	25.6	34.7		21.6	30.9	
Progression Factor	1.00	1.00		1.27	1.20	1.40	1.00	1.00		1.00	1.00	
Incremental Delay, d2	10.6	49.9		0.1	0.2	0.8	1.1	21.3		24.0	13.8	
Delay (s)	46.8	88.3		16.9	18.7	33.3	26.7	56.0		45.6	44.7	
Level of Service	D	F		B	B	C	C	E		D	D	
Approach Delay (s)		72.7			26.5			53.8			45.0	
Approach LOS		E			C			D			D	

Intersection Summary

HCM 2000 Control Delay	43.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	77.5%	ICU Level of Service	D
Analysis Period (min)	15		

! Phase conflict between lane groups.

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis

21: Dunwoody Club Dr & Spalding Dr

08/31/2020

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	👉			👈👈	👈👈	
Traffic Volume (vph)	240	272	7	534	429	5
Future Volume (vph)	240	272	7	534	429	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0			6.0	6.0	
Lane Util. Factor	1.00			0.95	1.00	
Frt	0.93			1.00	1.00	
Flt Protected	1.00			1.00	0.95	
Satd. Flow (prot)	1755			3608	1790	
Flt Permitted	1.00			0.95	0.95	
Satd. Flow (perm)	1755			3421	1790	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	267	302	8	593	477	6
RTOR Reduction (vph)	45	0	0	0	1	0
Lane Group Flow (vph)	524	0	0	601	482	0
Heavy Vehicles (%)	0%	1%	0%	0%	1%	0%
Turn Type	NA		custom	NA	Prot	
Protected Phases	1 2 4			1 6 7!	3!	
Permitted Phases			7!			
Actuated Green, G (s)	54.0			46.0	24.0	
Effective Green, g (s)	54.0			46.0	24.0	
Actuated g/C Ratio	0.60			0.51	0.27	
Clearance Time (s)					6.0	
Vehicle Extension (s)					3.0	
Lane Grp Cap (vph)	1053			1748	477	
v/s Ratio Prot	c0.30				c0.27	
v/s Ratio Perm				0.18		
v/c Ratio	0.50			0.34	1.01	
Uniform Delay, d1	10.3			13.0	33.0	
Progression Factor	0.47			1.00	1.00	
Incremental Delay, d2	0.7			0.1	44.0	
Delay (s)	5.5			13.2	77.0	
Level of Service	A			B	E	
Approach Delay (s)	5.5			13.2	77.0	
Approach LOS	A			B	E	
Intersection Summary						
HCM 2000 Control Delay			29.2		HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.77			
Actuated Cycle Length (s)			90.0		Sum of lost time (s)	24.0
Intersection Capacity Utilization			63.4%		ICU Level of Service	B
Analysis Period (min)			15			
! Phase conflict between lane groups.						
c Critical Lane Group						

HCM 6th Signalized Intersection Summary

17: Barfield Rd & Mt Vernon Hwy

10/07/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	197	888	84	122	309	82	35	127	65	141	221	45
Future Volume (veh/h)	197	888	84	122	309	82	35	127	65	141	221	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1885	1885	1885	1870	1885	1796	1870	1826	1870	1870	1796
Adj Flow Rate, veh/h	207	935	0	128	325	0	37	134	0	148	233	21
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	1	1	1	2	1	7	2	5	2	2	7
Cap, veh/h	739	1248		307	1210		97	198		187	255	208
Arrive On Green	0.05	0.66	0.00	0.04	0.65	0.00	0.02	0.11	0.00	0.05	0.14	0.14
Sat Flow, veh/h	1781	1885	0	1795	1870	1598	1711	1870	1547	3456	1870	1522
Grp Volume(v), veh/h	207	935	0	128	325	0	37	134	0	148	233	21
Grp Sat Flow(s),veh/h/ln	1781	1885	0	1795	1870	1598	1711	1870	1547	1728	1870	1522
Q Serve(g_s), s	6.7	56.5	0.0	4.1	12.6	0.0	3.3	11.7	0.0	7.2	20.9	2.1
Cycle Q Clear(g_c), s	6.7	56.5	0.0	4.1	12.6	0.0	3.3	11.7	0.0	7.2	20.9	2.1
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	739	1248		307	1210		97	198		187	255	208
V/C Ratio(X)	0.28	0.75		0.42	0.27		0.38	0.68		0.79	0.91	0.10
Avail Cap(c_a), veh/h	751	1248		357	1210		97	220		203	286	233
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.3	19.3	0.0	20.0	12.8	0.0	66.6	73.2	0.0	79.4	72.4	64.3
Incr Delay (d2), s/veh	0.2	4.2	0.0	0.9	0.5	0.0	2.4	7.0	0.0	17.5	29.7	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.7	33.5	0.0	3.6	9.4	0.0	2.7	10.1	0.0	6.6	17.8	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.5	23.4	0.0	20.9	13.4	0.0	69.0	80.2	0.0	96.9	102.0	64.5
LnGrp LOS	A	C		C	B		E	F		F	F	E
Approach Vol, veh/h		1142	A		453	A		171	A		402	
Approach Delay, s/veh		20.9			15.5			77.8			98.2	
Approach LOS		C			B			E			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.2	118.6	10.0	29.2	14.8	116.0	15.2	24.0				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	11.0	105.0	4.0	26.0	10.0	106.0	10.0	20.0				
Max Q Clear Time (g_c+I1), s	6.1	58.5	5.3	22.9	8.7	14.6	9.2	13.7				
Green Ext Time (p_c), s	0.1	9.2	0.0	0.3	0.1	2.1	0.0	0.3				
Intersection Summary												
HCM 6th Ctrl Delay			38.6									
HCM 6th LOS			D									
Notes												
Unsignalized Delay for [NBR, EBR, WBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary

18: Peachtree Dunwoody Rd & Mt Vernon Hwy/Mt Vernon Hwy

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	230	308	224	273	285	20	48	348	97	5	1065	128
Future Volume (veh/h)	230	308	224	273	285	20	48	348	97	5	1065	128
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1885	1870	1885	1900	1885	1693	1811	1870	1870	1900	1900	1856
Adj Flow Rate, veh/h	240	321	181	284	297	0	50	362	101	5	1109	133
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	2	1	0	1	14	6	2	2	0	0	3
Cap, veh/h	581	1337	601	529	1403		63	1120	308	23	1183	526
Arrive On Green	0.10	0.38	0.38	0.11	0.39	0.00	0.04	0.41	0.41	0.67	0.67	0.67
Sat Flow, veh/h	1795	3554	1598	1810	3582	1434	1725	2753	758	5	3533	1572
Grp Volume(v), veh/h	240	321	181	284	297	0	50	232	231	597	517	133
Grp Sat Flow(s),veh/h/ln	1795	1777	1598	1810	1791	1434	1725	1777	1734	1895	1643	1572
Q Serve(g_s), s	13.9	10.5	13.5	16.2	9.3	0.0	4.9	15.1	15.5	8.1	47.8	5.7
Cycle Q Clear(g_c), s	13.9	10.5	13.5	16.2	9.3	0.0	4.9	15.1	15.5	47.7	47.8	5.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.44	0.01		1.00
Lane Grp Cap(c), veh/h	581	1337	601	529	1403		63	723	705	656	550	526
V/C Ratio(X)	0.41	0.24	0.30	0.54	0.21		0.79	0.32	0.33	0.91	0.94	0.25
Avail Cap(c_a), veh/h	653	1337	601	648	1403		91	941	918	856	725	694
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	0.75	0.75	0.00	1.00	1.00	1.00	0.61	0.61	0.61
Uniform Delay (d), s/veh	27.5	36.3	37.3	27.0	34.3	0.0	81.2	34.4	34.5	26.5	26.6	19.6
Incr Delay (d2), s/veh	0.5	0.4	1.3	0.6	0.3	0.0	24.5	0.3	0.3	7.5	12.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	10.2	8.3	9.5	11.0	7.1	0.0	4.7	10.9	10.9	21.6	19.9	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.0	36.8	38.6	27.6	34.5	0.0	105.7	34.7	34.8	34.1	38.6	19.8
LnGrp LOS	C	D	D	C	C		F	C	C	C	D	B
Approach Vol, veh/h	742			581			A			513		
Approach Delay, s/veh	34.4			31.2			41.6			34.4		
Approach LOS	C			C			D			C		
Timer - Assigned Phs	1	2	3	4	5	6	8					
Phs Duration (G+Y+Rc), s	24.9	70.0	12.3	62.9	22.2	72.6	75.2					
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0					
Max Green Setting (Gmax), s	30.0	32.0	9.0	75.0	23.0	39.0	90.0					
Max Q Clear Time (g_c+I1), s	18.2	12.5	6.9	49.8	15.9	11.3	17.5					
Green Ext Time (p_c), s	0.6	1.2	0.0	7.2	0.4	1.9	3.0					
Intersection Summary												
HCM 6th Ctrl Delay	35.0											
HCM 6th LOS	C											

HCM 6th Signalized Intersection Summary

19: Peachtree Dunwoody Rd & Lake Hearn Drive

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	2	13	164	16	121	72	1528	273	230	1774	134
Future Volume (veh/h)	65	2	13	164	16	121	72	1528	273	230	1774	134
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1604	1604	1870	1811	1900	1900	1900	1885	1826	1885	1870	1870
Adj Flow Rate, veh/h	68	2	0	171	17	126	75	1592	284	240	1848	140
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	20	20	2	6	0	0	0	1	5	1	2	2
Cap, veh/h	122	2		332	38	280	147	2294	991	307	2260	169
Arrive On Green	0.08	0.08	0.00	0.08	0.19	0.19	0.05	1.00	1.00	0.06	0.67	0.67
Sat Flow, veh/h	1047	31	1585	1725	195	1445	1810	3582	1547	1795	3351	251
Grp Volume(v), veh/h	70	0	0	171	0	143	75	1592	284	240	969	1019
Grp Sat Flow(s),veh/h/ln	1078	0	1585	1725	0	1640	1810	1791	1547	1795	1777	1825
Q Serve(g_s), s	10.9	0.0	0.0	14.0	0.0	13.1	2.5	0.0	0.0	7.6	66.3	70.0
Cycle Q Clear(g_c), s	10.9	0.0	0.0	14.0	0.0	13.1	2.5	0.0	0.0	7.6	66.3	70.0
Prop In Lane	0.97		1.00	1.00		0.88	1.00		1.00	1.00		0.14
Lane Grp Cap(c), veh/h	124	0		332	0	318	147	2294	991	307	1198	1231
V/C Ratio(X)	0.57	0.00		0.52	0.00	0.45	0.51	0.69	0.29	0.78	0.81	0.83
Avail Cap(c_a), veh/h	137	0		332	0	338	175	2294	991	453	1198	1231
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.72	0.72	0.72	1.00	1.00	1.00
Uniform Delay (d), s/veh	77.6	0.0	0.0	65.0	0.0	60.5	27.3	0.0	0.0	8.7	19.8	20.4
Incr Delay (d2), s/veh	4.3	0.0	0.0	1.4	0.0	1.0	2.0	1.3	0.5	5.3	5.9	6.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.7	0.0	0.0	11.3	0.0	9.4	3.0	0.7	0.3	6.1	36.8	39.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	81.9	0.0	0.0	66.3	0.0	61.5	29.2	1.3	0.5	14.0	25.7	26.9
LnGrp LOS	F	A		E	A	E	C	A	A	B	C	C
Approach Vol, veh/h	70		A		314		1951				2228	
Approach Delay, s/veh	81.9				64.1		2.2				25.0	
Approach LOS	F				E		A				C	
Timer - Assigned Phs	1	2	3	4	5	6	8					
Phs Duration (G+Y+Rc), s	16.2	114.9	20.0	18.9	10.4	120.7	38.9					
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0					
Max Green Setting (Gmax), s	24.0	93.0	14.0	15.0	7.0	110.0	35.0					
Max Q Clear Time (g_c+I1), s	9.6	2.0	16.0	12.9	4.5	72.0	15.1					
Green Ext Time (p_c), s	0.6	17.3	0.0	0.0	0.0	23.5	0.7					
Intersection Summary												
HCM 6th Ctrl Delay	18.8											
HCM 6th LOS	B											

HCM 6th Signalized Intersection Summary

20: Glenridge Conn & Johnson Ferry Rd

09/11/2020

														
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR		
Lane Configurations														
Traffic Volume (veh/h)	329	593	816	155	227	505	173	427	67	574	767	33		
Future Volume (veh/h)	329	593	816	155	227	505	173	427	67	574	767	33		
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Work Zone On Approach	No			No			No			No				
Adj Sat Flow, veh/h/ln	1885	1870	1885	1870	1856	1870	1856	1885	1900	1885	1885	1885		
Adj Flow Rate, veh/h	343	618	668	161	236	526	180	445	0	598	799	0		
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96		
Percent Heavy Veh, %	1	2	1	2	3	2	3	1	0	1	1	1		
Cap, veh/h	432	1276	574	216	433	677	206	1099		676	1042			
Arrive On Green	0.16	0.36	0.36	0.03	0.23	0.23	0.12	0.21	0.00	0.19	0.29	0.00		
Sat Flow, veh/h	1795	3554	1598	1781	1856	1585	1767	5147	1610	3483	3676	0		
Grp Volume(v), veh/h	343	618	668	161	236	526	180	445	0	598	799	0		
Grp Sat Flow(s),veh/h/ln	1795	1777	1598	1781	1856	1585	1767	1716	1610	1742	1791	0		
Q Serve(g_s), s	16.7	16.2	43.1	4.0	13.4	28.0	12.0	8.9	0.0	20.0	24.4	0.0		
Cycle Q Clear(g_c), s	16.7	16.2	43.1	4.0	13.4	28.0	12.0	8.9	0.0	20.0	24.4	0.0		
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.00		
Lane Grp Cap(c), veh/h	432	1276	574	216	433	677	206	1099		676	1042			
V/C Ratio(X)	0.79	0.48	1.16	0.75	0.55	0.78	0.87	0.41		0.88	0.77			
Avail Cap(c_a), veh/h	475	1362	612	216	433	677	206	1099		813	1042			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00		
Uniform Delay (d), s/veh	27.8	29.8	38.5	40.9	40.4	29.4	52.1	40.6	0.0	47.0	38.8	0.0		
Incr Delay (d2), s/veh	8.3	0.3	91.8	13.3	1.4	5.7	31.3	1.1	0.0	10.0	5.4	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(95%),veh/ln	12.7	11.2	44.3	6.3	10.3	19.7	11.3	6.8	0.0	14.6	16.9	0.0		
Unsig. Movement Delay, s/veh														
LnGrp Delay(d),s/veh	36.1	30.1	130.3	54.1	41.8	35.1	83.4	41.7	0.0	57.1	44.2	0.0		
LnGrp LOS	D	C	F	D	D	D	F	D		E	D			
Approach Vol, veh/h	1629			923			625			A			1397	A
Approach Delay, s/veh	72.4			40.2			53.7			49.7				
Approach LOS	E			D			D			D				
Timer - Assigned Phs	1	2	3	4	5	6	7	8						
Phs Duration (G+Y+Rc), s	29.3	31.6	10.0	49.1	20.0	40.9	25.1	34.0						
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0						
Max Green Setting (Gmax), s	28.0	18.0	4.0	46.0	14.0	32.0	22.0	28.0						
Max Q Clear Time (g_c+I1), s	22.0	10.9	6.0	18.2	14.0	26.4	18.7	30.0						
Green Ext Time (p_c), s	1.2	1.5	0.0	1.5	0.0	2.5	0.4	0.0						

Intersection Summary

HCM 6th Ctrl Delay	56.4
HCM 6th LOS	E

Notes

Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

1: Peachtree Dunwoody Rd & Johnson Ferry Rd

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	417	258	26	221	532	394	47	977	167	85	312	383
Future Volume (veh/h)	417	258	26	221	532	394	47	977	167	85	312	383
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1856	1856	1856	1900	1885	1885	1767	1885	1885	1826	1885	1826
Adj Flow Rate, veh/h	458	284	29	243	585	433	52	1074	74	93	343	201
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	3	3	3	0	1	1	9	1	1	5	1	5
Cap, veh/h	504	402	41	287	637	387	82	1681	750	112	1822	787
Arrive On Green	0.15	0.24	0.24	0.08	0.18	0.18	0.03	0.47	0.47	0.06	0.51	0.51
Sat Flow, veh/h	3428	1656	169	3510	3582	1598	3264	3582	1598	1739	3582	1547
Grp Volume(v), veh/h	458	0	313	243	585	433	52	1074	74	93	343	201
Grp Sat Flow(s),veh/h/ln	1714	0	1825	1755	1791	1598	1632	1791	1598	1739	1791	1547
Q Serve(g_s), s	22.4	0.0	26.6	11.6	27.3	30.2	2.7	38.6	4.4	9.0	8.8	12.5
Cycle Q Clear(g_c), s	22.4	0.0	26.6	11.6	27.3	30.2	2.7	38.6	4.4	9.0	8.8	12.5
Prop In Lane	1.00		0.09	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	504	0	443	287	637	387	82	1681	750	112	1822	787
V/C Ratio(X)	0.91	0.00	0.71	0.85	0.92	1.12	0.63	0.64	0.10	0.83	0.19	0.26
Avail Cap(c_a), veh/h	565	0	462	372	695	413	115	1681	750	225	1822	787
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	71.4	0.0	58.8	77.0	68.7	64.4	82.1	34.2	25.1	78.6	22.7	23.6
Incr Delay (d2), s/veh	17.6	0.0	4.7	13.2	16.5	81.6	7.7	1.9	0.3	14.1	0.2	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	16.4	0.0	18.7	9.7	20.0	35.7	2.2	24.1	3.1	7.9	7.0	8.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	89.0	0.0	63.5	90.1	85.1	146.0	89.8	36.1	25.4	92.6	22.9	24.4
LnGrp LOS	F	A	E	F	F	F	F	D	C	F	C	C
Approach Vol, veh/h	771		1261				1200				637	
Approach Delay, s/veh	78.6		107.0				37.7				33.5	
Approach LOS	E		F				D				C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.0	85.8	19.9	47.3	10.3	92.5	31.0	36.2				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	22.0	63.0	18.0	43.0	6.0	79.0	28.0	33.0				
Max Q Clear Time (g_c+I1), s	11.0	40.6	13.6	28.6	4.7	10.8	24.4	29.3				
Green Ext Time (p_c), s	0.1	7.6	0.3	1.4	0.0	1.3	0.6	1.0				
Intersection Summary												
HCM 6th Ctrl Delay	67.8											
HCM 6th LOS	E											

HCM 6th Signalized Intersection Summary

2: SR 400 Exit 6/Dunwoody PI & Northridge Rd

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	794	347	143	365	784	268	115	267	318	532	19
Future Volume (veh/h)	45	794	347	143	365	784	268	115	267	318	532	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1885	1900	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	46	819	229	147	309	414	276	119	146	328	548	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	1	0	1	1	1	1	1
Cap, veh/h	217	890	397	198	556	935	331	743	630	398	1484	
Arrive On Green	0.03	0.25	0.25	0.07	0.29	0.29	0.09	0.39	0.39	0.11	0.41	0.00
Sat Flow, veh/h	1810	3610	1610	1810	1900	3195	3510	1885	1598	3483	3582	1598
Grp Volume(v), veh/h	46	819	229	147	309	414	276	119	146	328	548	0
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1810	1900	1598	1755	1885	1598	1742	1791	1598
Q Serve(g_s), s	2.7	30.9	17.5	8.2	19.2	14.7	10.8	5.7	8.5	12.9	14.8	0.0
Cycle Q Clear(g_c), s	2.7	30.9	17.5	8.2	19.2	14.7	10.8	5.7	8.5	12.9	14.8	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	217	890	397	198	556	935	331	743	630	398	1484	
V/C Ratio(X)	0.21	0.92	0.58	0.74	0.56	0.44	0.83	0.16	0.23	0.83	0.37	
Avail Cap(c_a), veh/h	231	1031	460	233	651	1096	426	743	630	896	1484	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	38.4	51.4	46.3	38.3	41.8	40.3	62.3	27.4	28.3	60.6	28.4	0.0
Incr Delay (d2), s/veh	0.5	11.8	1.3	10.0	0.9	0.3	10.8	0.5	0.9	4.4	0.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.2	21.7	11.5	7.5	14.1	9.8	9.1	4.8	6.2	9.9	10.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.9	63.2	47.6	48.3	42.7	40.6	73.1	27.9	29.1	65.0	29.1	0.0
LnGrp LOS	D	E	D	D	D	D	E	C	C	E	C	
Approach Vol, veh/h	1094				870				541			
Approach Delay, s/veh	58.9				42.7				51.3			
Approach LOS	E				D				D			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	22.0	61.2	16.3	40.5	19.2	64.0	9.9	47.0				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	36.0	27.0	13.0	40.0	17.0	46.0	5.0	48.0				
Max Q Clear Time (g_c+I1), s	14.9	7.7	10.2	32.9	12.8	16.8	4.7	21.2				
Green Ext Time (p_c), s	1.1	0.2	0.1	1.6	0.4	3.8	0.0	0.3				

Intersection Summary

HCM 6th Ctrl Delay 49.3

HCM 6th LOS D

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

3: Northside Dr & Powers Ferry Rd

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑		↑	↑					↑	↑	↑
Traffic Volume (veh/h)	0	1108	497	58	266	0	0	0	0	562	639	209
Future Volume (veh/h)	0	1108	497	58	266	0	0	0	0	562	639	209
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1900	1900	1900	1885	0				1900	1900	1900
Adj Flow Rate, veh/h	0	1204	540	63	289	0				611	695	227
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	1	0				0	0	0
Cap, veh/h	0	1268	566	133	847	0				799	839	711
Arrive On Green	0.00	0.36	0.36	0.03	0.45	0.00				0.44	0.44	0.44
Sat Flow, veh/h	0	3681	1566	1810	1885	0				1810	1900	1610
Grp Volume(v), veh/h	0	1186	558	63	289	0				611	695	227
Grp Sat Flow(s),veh/h/ln	0	1729	1618	1810	1885	0				1810	1900	1610
Q Serve(g_s), s	0.0	36.7	37.0	2.3	11.0	0.0				31.3	35.4	10.1
Cycle Q Clear(g_c), s	0.0	36.7	37.0	2.3	11.0	0.0				31.3	35.4	10.1
Prop In Lane	0.00		0.97	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1249	584	133	847	0				799	839	711
V/C Ratio(X)	0.00	0.95	0.95	0.47	0.34	0.00				0.76	0.83	0.32
Avail Cap(c_a), veh/h	0	1257	588	138	857	0				799	839	711
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.99	0.99	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	34.2	34.3	27.4	19.7	0.0				25.9	27.0	20.0
Incr Delay (d2), s/veh	0.0	14.9	26.2	2.6	0.2	0.0				6.9	9.2	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	24.2	25.2	1.9	8.3	0.0				20.6	24.3	7.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	49.1	60.4	30.0	19.9	0.0				32.8	36.3	21.1
LnGrp LOS	A	D	E	C	B	A				C	D	C
Approach Vol, veh/h		1744			352						1533	
Approach Delay, s/veh		52.7			21.7						32.6	
Approach LOS		D			C						C	
Timer - Assigned Phs		2		4			7	8				
Phs Duration (G+Y+Rc), s		54.6		55.4			9.7	45.7				
Change Period (Y+Rc), s		6.0		6.0			6.0	6.0				
Max Green Setting (Gmax), s		48.0		50.0			4.0	40.0				
Max Q Clear Time (g_c+I1), s		37.4		13.0			4.3	39.0				
Green Ext Time (p_c), s		5.6		0.8			0.0	0.7				
Intersection Summary												
HCM 6th Ctrl Delay				41.2								
HCM 6th LOS				D								

HCM 6th Signalized Intersection Summary

4: Roswell Rd & Hannover Park Rd/Dunwoody PI

10/07/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	25	78	91	33	327	43	562	54	468	2038	34
Future Volume (veh/h)	28	25	78	91	33	327	43	562	54	468	2038	34
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1885	1900	1885	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	29	26	29	95	34	341	45	585	0	488	2123	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	1	0	1	0	0	0	0	0	0
Cap, veh/h	38	73	61	182	148	651	58	2218		540	2657	
Arrive On Green	0.02	0.04	0.04	0.06	0.08	0.08	0.03	0.61	0.00	0.15	0.74	0.00
Sat Flow, veh/h	1810	1900	1610	1795	1900	2812	1810	3610	1610	3510	3610	1610
Grp Volume(v), veh/h	29	26	29	95	34	341	45	585	0	488	2123	0
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1795	1900	1406	1810	1805	1610	1755	1805	1610
Q Serve(g_s), s	2.9	2.4	3.2	9.0	3.0	14.0	4.4	13.4	0.0	24.6	67.8	0.0
Cycle Q Clear(g_c), s	2.9	2.4	3.2	9.0	3.0	14.0	4.4	13.4	0.0	24.6	67.8	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	38	73	61	182	148	651	58	2218		540	2657	
V/C Ratio(X)	0.77	0.36	0.47	0.52	0.23	0.52	0.78	0.26		0.90	0.80	
Avail Cap(c_a), veh/h	60	95	81	183	148	651	90	2218		663	2657	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	87.7	84.4	84.8	75.4	77.9	60.5	86.5	16.0	0.0	74.9	15.2	0.0
Incr Delay (d2), s/veh	27.8	3.0	5.5	2.6	0.8	0.8	19.4	0.3	0.0	13.9	2.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.0	2.2	2.6	7.7	2.7	11.2	4.3	9.5	0.0	17.7	34.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	115.5	87.4	90.3	78.0	78.7	61.2	105.8	16.3	0.0	88.8	17.8	0.0
LnGrp LOS	F	F	F	E	E	E	F	B		F	B	
Approach Vol, veh/h		84			470			630	A		2611	A
Approach Delay, s/veh		98.1			65.9			22.7			31.1	
Approach LOS		F			E			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	33.7	116.6	16.9	12.9	11.8	138.5	9.7	20.0				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	34.0	102.0	11.0	9.0	9.0	127.0	6.0	14.0				
Max Q Clear Time (g_c+I1), s	26.6	15.4	11.0	4.4	6.4	69.8	4.9	16.0				
Green Ext Time (p_c), s	1.1	4.0	0.0	0.0	0.0	31.0	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			35.5									
HCM 6th LOS			D									
Notes												
Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary 5: Roswell Rd /Roswell Rd & Northridge Rd

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	57	54	326	32	156	38	733	778	896	1505	63
Future Volume (veh/h)	18	57	54	326	32	156	38	733	778	896	1505	63
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1870	1900	1900	1900	1900	1900	1885
Adj Flow Rate, veh/h	19	59	30	360	0	6	39	756	647	924	1552	13
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	2	0	0	0	0	0	1
Cap, veh/h	24	74	84	413	0	181	51	1505	1505	995	2428	1074
Arrive On Green	0.05	0.05	0.05	0.11	0.00	0.11	0.03	0.42	0.42	0.28	0.67	0.67
Sat Flow, veh/h	457	1420	1610	3619	0	1585	1810	3610	2834	3510	3610	1598
Grp Volume(v), veh/h	78	0	30	360	0	6	39	756	647	924	1552	13
Grp Sat Flow(s),veh/h/ln	1877	0	1610	1810	0	1585	1810	1805	1417	1755	1805	1598
Q Serve(g_s), s	7.4	0.0	3.2	17.6	0.0	0.6	3.9	27.8	25.0	46.1	44.5	0.5
Cycle Q Clear(g_c), s	7.4	0.0	3.2	17.6	0.0	0.6	3.9	27.8	25.0	46.1	44.5	0.5
Prop In Lane	0.24		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	98	0	84	413	0	181	51	1505	1505	995	2428	1074
V/C Ratio(X)	0.80	0.00	0.36	0.87	0.00	0.03	0.77	0.50	0.43	0.93	0.64	0.01
Avail Cap(c_a), veh/h	146	0	125	603	0	264	90	1505	1505	1170	2428	1074
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	84.4	0.0	82.4	78.4	0.0	70.9	86.9	38.7	25.6	62.7	16.9	9.7
Incr Delay (d2), s/veh	16.4	0.0	2.5	9.4	0.0	0.1	21.4	1.2	0.9	11.6	1.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.3	0.0	2.5	13.6	0.0	0.5	3.8	18.3	16.3	29.5	24.8	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	100.8	0.0	84.9	87.8	0.0	71.0	108.4	39.9	26.5	74.4	18.2	9.8
LnGrp LOS	F	A	F	F	A	E	F	D	C	E	B	A
Approach Vol, veh/h	108		366			1442			2489			
Approach Delay, s/veh	96.4		87.6			35.8			39.0			
Approach LOS	F		F			D			D			
Timer - Assigned Phs	1	2	4		5	6	8					
Phs Duration (G+Y+Rc), s	57.0	81.1	15.4		11.0	127.0	26.5					
Change Period (Y+Rc), s	6.0	6.0	6.0		6.0	6.0	6.0					
Max Green Setting (Gmax), s	60.0	52.0	14.0		9.0	103.0	30.0					
Max Q Clear Time (g_c+I1), s	48.1	29.8	9.4		5.9	46.5	19.6					
Green Ext Time (p_c), s	2.9	8.0	0.0		0.0	16.8	0.9					
Intersection Summary												
HCM 6th Ctrl Delay			43.4									
HCM 6th LOS			D									
Notes												

HCM 6th Signalized Intersection Summary 6: Northside Dr & Interstate N Pkwy/New Northside Dr

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	157	158	916	93	1040	309	0	0	0	15	166	64
Future Volume (veh/h)	157	158	916	93	1040	309	0	0	0	15	166	64
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900				1885	1885	1885
Adj Flow Rate, veh/h	167	168	974	99	1106	223				16	177	68
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94				0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0				1	1	1
Cap, veh/h	259	171	989	145	1316	1115				21	236	94
Arrive On Green	0.05	0.70	0.70	0.03	0.69	0.69				0.10	0.10	0.10
Sat Flow, veh/h	1810	242	1405	1810	1900	1610				215	2414	958
Grp Volume(v), veh/h	167	0	1142	99	1106	223				139	0	122
Grp Sat Flow(s),veh/h/ln	1810	0	1647	1810	1900	1610				1874	0	1713
Q Serve(g_s), s	2.9	0.0	73.6	1.7	47.1	5.4				8.0	0.0	7.6
Cycle Q Clear(g_c), s	2.9	0.0	73.6	1.7	47.1	5.4				8.0	0.0	7.6
Prop In Lane	1.00		0.85	1.00		1.00				0.11		0.56
Lane Grp Cap(c), veh/h	259	0	1160	145	1316	1115				183	0	168
V/C Ratio(X)	0.64	0.00	0.98	0.68	0.84	0.20				0.76	0.00	0.73
Avail Cap(c_a), veh/h	324	0	1168	149	1316	1115				183	0	168
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	20.9	0.0	15.7	30.4	12.4	6.0				48.4	0.0	48.2
Incr Delay (d2), s/veh	3.0	0.0	22.6	11.6	5.0	0.1				25.3	0.0	23.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.2	0.0	37.3	4.1	25.6	3.0				8.6	0.0	7.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.8	0.0	38.3	42.0	17.5	6.1				73.6	0.0	72.0
LnGrp LOS	C	A	D	D	B	A				E	A	E
Approach Vol, veh/h		1309			1428						261	
Approach Delay, s/veh		36.5			17.4						72.9	
Approach LOS		D			B						E	
Timer - Assigned Phs		2	3	4			7	8				
Phs Duration (G+Y+Rc), s		16.8	9.8	83.4			11.0	82.2				
Change Period (Y+Rc), s		6.0	6.0	6.0			6.0	6.0				
Max Green Setting (Gmax), s		10.0	4.0	78.0			9.0	73.0				
Max Q Clear Time (g_c+I1), s		10.0	3.7	75.6			4.9	49.1				
Green Ext Time (p_c), s		0.0	0.0	1.8			0.1	12.0				
Intersection Summary												
HCM 6th Ctrl Delay			30.6									
HCM 6th LOS			C									

HCM 6th Signalized Intersection Summary

7: Riverside Dr & Heards Ferry Rd

09/03/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	133	243	123	71	200	44	151	397	138	49	822	143
Future Volume (veh/h)	133	243	123	71	200	44	151	397	138	49	822	143
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	139	253	128	74	208	46	157	414	144	51	856	149
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	183	301	255	132	235	199	270	1114	944	66	1090	924
Arrive On Green	0.06	0.16	0.16	0.03	0.13	0.13	0.05	0.60	0.60	0.04	0.59	0.59
Sat Flow, veh/h	1767	1856	1572	1767	1856	1572	1767	1856	1572	1767	1856	1572
Grp Volume(v), veh/h	139	253	128	74	208	46	157	414	144	51	856	149
Grp Sat Flow(s),veh/h/ln	1767	1856	1572	1767	1856	1572	1767	1856	1572	1767	1856	1572
Q Serve(g_s), s	9.0	18.5	10.4	4.0	15.4	3.7	4.9	16.1	5.6	4.0	49.5	6.0
Cycle Q Clear(g_c), s	9.0	18.5	10.4	4.0	15.4	3.7	4.9	16.1	5.6	4.0	49.5	6.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	183	301	255	132	235	199	270	1114	944	66	1090	924
V/C Ratio(X)	0.76	0.84	0.50	0.56	0.88	0.23	0.58	0.37	0.15	0.78	0.79	0.16
Avail Cap(c_a), veh/h	183	345	292	132	278	236	295	1114	944	114	1090	924
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.9	56.9	53.5	55.7	60.1	55.0	22.3	14.4	12.3	66.8	22.1	13.2
Incr Delay (d2), s/veh	16.6	15.1	1.5	5.3	24.2	0.6	2.4	1.0	0.3	17.6	5.7	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.8	15.1	7.6	1.5	13.7	2.7	4.5	11.2	3.7	3.8	30.0	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	67.4	71.9	55.0	61.0	84.3	55.6	24.7	15.3	12.6	84.5	27.8	13.5
LnGrp LOS	E	E	D	E	F	E	C	B	B	F	C	B
Approach Vol, veh/h		520			328			715			1056	
Approach Delay, s/veh		66.6			75.0			16.8			28.5	
Approach LOS		E			E			B			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.2	90.1	10.0	28.7	13.0	88.3	15.0	23.7				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	9.0	77.0	4.0	26.0	9.0	77.0	9.0	21.0				
Max Q Clear Time (g_c+I1), s	6.0	18.1	6.0	20.5	6.9	51.5	11.0	17.4				
Green Ext Time (p_c), s	0.0	1.9	0.0	0.5	0.1	5.9	0.0	0.3				
Intersection Summary												
HCM 6th Ctrl Delay			38.7									
HCM 6th LOS			D									

HCM 6th Signalized Intersection Summary

8: New Northside Dr & Powers Ferry Rd

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 							  				
Traffic Volume (veh/h)	484	846	0	0	141	181	113	296	83	0	0	0
Future Volume (veh/h)	484	846	0	0	141	181	113	296	83	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach	No			No			No					
Adj Sat Flow, veh/h/ln	1885	1900	0	0	1885	1900	1900	1900	1900			
Adj Flow Rate, veh/h	532	930	0	0	155	199	124	325	91			
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91			
Percent Heavy Veh, %	1	0	0	0	1	0	0	0	0			
Cap, veh/h	620	1019	0	0	573	489	408	1153	322			
Arrive On Green	0.18	0.54	0.00	0.00	0.30	0.30	0.35	0.35	0.35			
Sat Flow, veh/h	3483	1900	0	0	1885	1610	1151	3249	908			
Grp Volume(v), veh/h	532	930	0	0	155	199	198	167	174			
Grp Sat Flow(s),veh/h/ln	1742	1900	0	0	1885	1610	1842	1729	1737			
Q Serve(g_s), s	16.3	48.9	0.0	0.0	6.9	10.8	8.6	7.6	7.9			
Cycle Q Clear(g_c), s	16.3	48.9	0.0	0.0	6.9	10.8	8.6	7.6	7.9			
Prop In Lane	1.00		0.00	0.00		1.00	0.62		0.52			
Lane Grp Cap(c), veh/h	620	1019	0	0	573	489	654	613	616			
V/C Ratio(X)	0.86	0.91	0.00	0.00	0.27	0.41	0.30	0.27	0.28			
Avail Cap(c_a), veh/h	823	1347	0	0	788	673	654	613	616			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.34	0.34	0.00	0.00	1.00	1.00	1.00	1.00	1.00			
Uniform Delay (d), s/veh	43.9	23.2	0.0	0.0	29.1	30.4	25.7	25.4	25.5			
Incr Delay (d2), s/veh	2.6	3.0	0.0	0.0	0.3	0.5	1.2	1.1	1.1			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	9.7	25.4	0.0	0.0	5.6	7.6	7.0	5.9	6.1			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.4	26.2	0.0	0.0	29.3	31.0	26.9	26.5	26.6			
LnGrp LOS	D	C	A	A	C	C	C	C	C			
Approach Vol, veh/h	1462			354			540					
Approach Delay, s/veh	33.6			30.2			26.7					
Approach LOS	C			C			C					
Timer - Assigned Phs	2			4			7			8		
Phs Duration (G+Y+Rc), s	45.0			65.0			25.6			39.4		
Change Period (Y+Rc), s	6.0			6.0			6.0			6.0		
Max Green Setting (Gmax), s	20.0			78.0			26.0			46.0		
Max Q Clear Time (g_c+I1), s	10.6			50.9			18.3			8.9		
Green Ext Time (p_c), s	2.1			8.1			1.3			0.3		
Intersection Summary												
HCM 6th Ctrl Delay	31.5											
HCM 6th LOS	C											

HCM 6th Signalized Intersection Summary

9: Mt Vernon Hwy & Abernathy Rd/Perimeter Center

08/31/2020

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (veh/h)	309	1479	29	50	656	85	35	252	102	233	513	480	
Future Volume (veh/h)	309	1479	29	50	656	85	35	252	102	233	513	480	
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach	No			No			No			No			
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1885	1900	1900	1885	
Adj Flow Rate, veh/h	319	1525	30	52	676	88	36	260	0	240	529	340	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	1	0	0	1	
Cap, veh/h	369	2199	981	113	1936	863	126	310		297	681	469	
Arrive On Green	0.21	1.00	1.00	0.03	0.54	0.54	0.03	0.09	0.00	0.13	0.19	0.19	
Sat Flow, veh/h	3510	3610	1610	3510	3610	1610	1810	3610	1598	1810	3610	1598	
Grp Volume(v), veh/h	319	1525	30	52	676	88	36	260	0	240	529	340	
Grp Sat Flow(s),veh/h/ln	1755	1805	1610	1755	1805	1610	1810	1805	1598	1810	1805	1598	
Q Serve(g_s), s	14.9	0.0	0.0	2.5	18.2	4.6	3.1	12.1	0.0	20.0	23.7	32.1	
Cycle Q Clear(g_c), s	14.9	0.0	0.0	2.5	18.2	4.6	3.1	12.1	0.0	20.0	23.7	32.1	
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Lane Grp Cap(c), veh/h	369	2199	981	113	1936	863	126	310		297	681	469	
V/C Ratio(X)	0.86	0.69	0.03	0.46	0.35	0.10	0.28	0.84		0.81	0.78	0.72	
Avail Cap(c_a), veh/h	723	2199	981	124	1936	863	138	382		357	849	544	
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	0.88	0.88	0.88	1.00	1.00	1.00	0.97	0.97	0.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	65.9	0.0	0.0	80.8	22.5	19.3	68.1	76.6	0.0	58.9	65.6	53.9	
Incr Delay (d2), s/veh	5.4	1.6	0.1	2.9	0.5	0.2	1.2	12.6	0.0	10.9	3.6	4.0	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(95%),veh/ln	10.0	0.9	0.0	2.1	12.3	3.2	2.6	10.2	0.0	15.3	16.8	19.6	
Unsig. Movement Delay, s/veh													
LnGrp Delay(d),s/veh	71.4	1.6	0.1	83.7	23.0	19.6	69.3	89.1	0.0	69.9	69.2	57.9	
LnGrp LOS	E	A	A	F	C	B	E	F		E	E	E	
Approach Vol, veh/h	1874			816			296			A			1109
Approach Delay, s/veh	13.5			26.5			86.7						65.9
Approach LOS	B			C			F						E
Timer - Assigned Phs	1	2	3	4	5	6	7	8					
Phs Duration (G+Y+Rc), s	23.9	97.2	28.4	20.6	11.5	109.6	10.9	38.1					
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0					
Max Green Setting (Gmax), s	35.0	65.0	28.0	18.0	6.0	94.0	6.0	40.0					
Max Q Clear Time (g_c+I1), s	16.9	20.2	22.0	14.1	4.5	2.0	5.1	25.7					
Green Ext Time (p_c), s	1.0	4.1	0.3	0.5	0.0	16.9	0.0	1.8					
Intersection Summary													
HCM 6th Ctrl Delay	35.5												
HCM 6th LOS	D												

HCM 6th Signalized Intersection Summary

10: Johnson Ferry Rd & Abernathy Rd & Brandon Mill Rd NW

10/07/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	58	2140	1136	12	488	41	168	38	19	156	236	152
Future Volume (veh/h)	58	2140	1136	12	488	41	168	38	19	156	236	152
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	60	2229	1105	12	508	0	175	40	20	162	246	106
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	582	2265	1098	18	2222		190	153	76	320	294	249
Arrive On Green	0.02	0.64	0.64	0.01	0.63	0.00	0.06	0.13	0.13	0.08	0.16	0.16
Sat Flow, veh/h	1767	3526	1572	1767	3526	1572	3428	1167	584	1767	1856	1572
Grp Volume(v), veh/h	60	2229	1105	12	508	0	175	0	60	162	246	106
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1767	1763	1572	1714	0	1751	1767	1856	1572
Q Serve(g_s), s	2.2	110.6	115.6	1.2	11.2	0.0	9.1	0.0	5.6	14.2	23.1	10.9
Cycle Q Clear(g_c), s	2.2	110.6	115.6	1.2	11.2	0.0	9.1	0.0	5.6	14.2	23.1	10.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.33	1.00		1.00
Lane Grp Cap(c), veh/h	582	2265	1098	18	2222		190	0	229	320	294	249
V/C Ratio(X)	0.10	0.98	1.01	0.68	0.23		0.92	0.00	0.26	0.51	0.84	0.43
Avail Cap(c_a), veh/h	582	2272	1101	39	2272		190	0	229	320	294	249
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	1.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.6	31.3	27.2	88.8	14.4	0.0	84.6	0.0	70.4	60.5	73.5	68.3
Incr Delay (d2), s/veh	0.0	3.0	9.8	36.8	0.1	0.0	42.9	0.0	2.8	1.3	23.6	5.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.3	49.0	50.3	1.3	8.1	0.0	8.9	0.0	4.8	10.7	18.9	8.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.6	34.3	37.0	125.6	14.4	0.0	127.5	0.0	73.2	61.7	97.1	73.6
LnGrp LOS	B	C	F	F	B		F	A	E	E	F	E
Approach Vol, veh/h	3394			520			A			235		
Approach Delay, s/veh	34.8			17.0			113.6			81.1		
Approach LOS	C			B			F			F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	21.0	29.5	7.8	121.6	16.0	34.5	10.0	119.5				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	15.0	21.0	4.0	116.0	10.0	26.0	4.0	116.0				
Max Q Clear Time (g_c+I1), s	16.2	7.6	3.2	112.6	11.1	25.1	4.2	13.2				
Green Ext Time (p_c), s	0.0	0.2	0.0	3.0	0.0	0.1	0.0	3.7				

Intersection Summary

HCM 6th Ctrl Delay 41.9

HCM 6th LOS D

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

11: Peachtree Dunwoody Rd & Abernathy Rd

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	666	1344	742	0	1063	229	166	335	8	190	371	395
Future Volume (veh/h)	666	1344	742	0	1063	229	166	335	8	190	371	395
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	1885	1885	0	1870	1885	1870	1870	1900	1870	1870	1870
Adj Flow Rate, veh/h	680	1371	680	0	1085	55	169	342	8	194	379	97
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	1	1	0	2	1	2	2	0	2	2	2
Cap, veh/h	743	3396	1054	0	2108	660	212	402	182	216	647	609
Arrive On Green	0.21	0.66	0.66	0.00	0.41	0.41	0.02	0.04	0.04	0.12	0.17	0.17
Sat Flow, veh/h	3510	5147	1598	0	5274	1598	3456	3554	1610	1781	3741	1585
Grp Volume(v), veh/h	680	1371	680	0	1085	55	169	342	8	194	379	97
Grp Sat Flow(s),veh/h/ln	1755	1716	1598	0	1702	1598	1728	1777	1610	1781	1870	1585
Q Serve(g_s), s	32.2	21.0	42.9	0.0	26.9	2.4	8.3	16.3	0.8	18.3	15.9	6.8
Cycle Q Clear(g_c), s	32.2	21.0	42.9	0.0	26.9	2.4	8.3	16.3	0.8	18.3	15.9	6.8
Prop In Lane	1.00		1.00	0.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	743	3396	1054	0	2108	660	212	402	182	216	647	609
V/C Ratio(X)	0.92	0.40	0.65	0.00	0.51	0.08	0.80	0.85	0.04	0.90	0.59	0.16
Avail Cap(c_a), veh/h	888	3396	1054	0	2108	660	285	502	227	304	858	699
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	0.85	0.85	0.95	0.95	0.95	1.00	1.00	1.00
Uniform Delay (d), s/veh	65.5	13.4	17.1	0.0	37.2	13.8	82.2	80.4	73.0	73.7	64.7	34.3
Incr Delay (d2), s/veh	12.5	0.4	3.0	0.0	0.8	0.2	10.3	10.5	0.1	21.8	0.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	21.9	12.5	22.8	0.0	16.3	2.6	7.4	13.1	0.6	14.8	12.2	4.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	78.0	13.8	20.2	0.0	38.0	14.0	92.5	90.8	73.0	95.5	65.6	34.4
LnGrp LOS	E	B	C	A	D	B	F	F	E	F	E	C
Approach Vol, veh/h	2731			1140			519			670		
Approach Delay, s/veh	31.4			36.8			91.1			69.7		
Approach LOS	C			D			F			E		
Timer - Assigned Phs	2			3			4			5		
Phs Duration (G+Y+Rc), s	118.2			16.4			35.4			42.0		
Change Period (Y+Rc), s	6.0			6.0			6.0			6.0		
Max Green Setting (Gmax), s	99.0			14.0			39.0			43.0		
Max Q Clear Time (g_c+I1), s	23.0			10.3			17.9			34.2		
Green Ext Time (p_c), s	7.0			0.2			1.8			1.8		
Intersection Summary												
HCM 6th Ctrl Delay	43.8											
HCM 6th LOS	D											
Notes												

HCM Signalized Intersection Capacity Analysis

12: Peachtree Dunwoody Rd & Hollis Cobb Cir/Medical Center MARTA

10/07/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	177	8	44	54	2	38	58	1455	144	143	1322	211
Future Volume (vph)	177	8	44	54	2	38	58	1455	144	143	1322	211
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.87		1.00	0.86		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1805	1630		1805	1426		1805	3610	1599	1752	3574	1615
Flt Permitted	0.73	1.00		0.72	1.00		0.18	1.00	1.00	0.10	1.00	1.00
Satd. Flow (perm)	1388	1630		1373	1426		335	3610	1599	187	3574	1615
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	182	8	45	56	2	39	60	1500	148	147	1363	218
RTOR Reduction (vph)	0	39	0	0	33	0	0	0	34	0	0	45
Lane Group Flow (vph)	182	14	0	56	8	0	60	1500	114	147	1363	173
Heavy Vehicles (%)	0%	0%	2%	0%	0%	15%	0%	0%	1%	3%	1%	0%
Turn Type	Perm	NA		Perm	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	24.2	24.2		24.2	24.2		114.6	109.0	109.0	133.8	122.2	122.2
Effective Green, g (s)	24.2	24.2		24.2	24.2		114.6	109.0	109.0	133.8	122.2	122.2
Actuated g/C Ratio	0.14	0.14		0.14	0.14		0.67	0.64	0.64	0.79	0.72	0.72
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	197	232		195	202		274	2314	1025	320	2569	1160
v/s Ratio Prot		0.01			0.01		0.01	c0.42		c0.05	c0.38	
v/s Ratio Perm	c0.13			0.04			0.14		0.07	0.31		0.11
v/c Ratio	0.92	0.06		0.29	0.04		0.22	0.65	0.11	0.46	0.53	0.15
Uniform Delay, d1	72.0	63.1		65.2	62.9		9.9	18.7	11.8	16.6	10.9	7.5
Progression Factor	1.00	1.00		1.00	1.00		1.08	0.94	1.25	2.84	0.57	0.43
Incremental Delay, d2	42.9	0.1		0.8	0.1		0.3	1.0	0.1	0.5	0.4	0.1
Delay (s)	114.9	63.2		66.0	62.9		11.0	18.5	14.9	47.6	6.6	3.4
Level of Service	F	E		E	E		B	B	B	D	A	A
Approach Delay (s)		103.2			64.7			17.9			9.7	
Approach LOS		F			E			B			A	
Intersection Summary												
HCM 2000 Control Delay			20.7				HCM 2000 Level of Service			C		
HCM 2000 Volume to Capacity ratio			0.70									
Actuated Cycle Length (s)			170.0				Sum of lost time (s)			24.0		
Intersection Capacity Utilization			79.6%				ICU Level of Service			D		
Analysis Period (min)			15									
c Critical Lane Group												

HCM 6th Signalized Intersection Summary

13: River Valley Rd & Johnson Ferry Rd

08/31/2020

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (veh/h)	5	3013	339	332	485	1	65	0	331	0	0	0	
Future Volume (veh/h)	5	3013	339	332	485	1	65	0	331	0	0	0	
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach	No			No			No			No			
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	
Adj Flow Rate, veh/h	5	3240	365	357	522	1	70	0	0	0	0	0	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3	
Cap, veh/h	704	3486	379	305	3017	6	124	0		162	110	0	
Arrive On Green	0.00	0.75	0.75	0.12	1.00	1.00	0.06	0.00	0.00	0.00	0.00	0.00	
Sat Flow, veh/h	1767	4638	504	3428	3610	7	1406	0	1572	1767	1856	0	
Grp Volume(v), veh/h	5	2327	1278	357	255	268	70	0	0	0	0	0	
Grp Sat Flow(s),veh/h/ln	1767	1689	1765	1714	1763	1854	1406	0	1572	1767	1856	0	
Q Serve(g_s), s	0.1	99.0	117.4	16.0	0.0	0.0	8.9	0.0	0.0	0.0	0.0	0.0	
Cycle Q Clear(g_c), s	0.1	99.0	117.4	16.0	0.0	0.0	8.9	0.0	0.0	0.0	0.0	0.0	
Prop In Lane	1.00		0.29	1.00		0.00	1.00		1.00	1.00		0.00	
Lane Grp Cap(c), veh/h	704	2539	1327	305	1473	1550	124	0		162	110	0	
V/C Ratio(X)	0.01	0.92	0.96	1.17	0.17	0.17	0.57	0.00		0.00	0.00	0.00	
Avail Cap(c_a), veh/h	735	2539	1327	305	1473	1550	204	0		210	330	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	1.00	0.91	0.91	0.91	1.00	0.00	0.00	0.00	0.00	0.00	
Uniform Delay (d), s/veh	5.3	17.8	20.1	79.4	0.0	0.0	83.8	0.0	0.0	0.0	0.0	0.0	
Incr Delay (d2), s/veh	0.0	6.6	17.4	104.3	0.2	0.2	4.0	0.0	0.0	0.0	0.0	0.0	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(95%),veh/ln	0.1	47.1	61.1	17.6	0.2	0.2	6.1	0.0	0.0	0.0	0.0	0.0	
Unsig. Movement Delay, s/veh													
LnGrp Delay(d),s/veh	5.3	24.5	37.5	183.7	0.2	0.2	87.8	0.0	0.0	0.0	0.0	0.0	
LnGrp LOS	A	C	D	F	A	A	F	A		A	A	A	
Approach Vol, veh/h	3610			880			70			A			0
Approach Delay, s/veh	29.1			74.7			87.8						0.0
Approach LOS	C			E			F						
Timer - Assigned Phs	1	2		4	5	6	7	8					
Phs Duration (G+Y+Rc), s	22.0	141.3		16.7	6.9	156.4	0.0	16.7					
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0	6.0	6.0					
Max Green Setting (Gmax), s	16.0	114.0		32.0	4.0	126.0	5.0	21.0					
Max Q Clear Time (g_c+I1), s	18.0	119.4		0.0	2.1	2.0	0.0	10.9					
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	3.3	0.0	0.2					
Intersection Summary													
HCM 6th Ctrl Delay	38.8												
HCM 6th LOS	D												
Notes													

HCM 6th Roundabout
14: Northside Dr & Mt Vernon Hwy

08/31/2020

Intersection			
Intersection Delay, s/veh	14.7		
Intersection LOS	B		
Approach	WB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	450	919	284
Demand Flow Rate, veh/h	457	937	288
Vehicles Circulating, veh/h	502	163	223
Vehicles Exiting, veh/h	598	348	736
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	12.5	18.4	5.8
Approach LOS	B	C	A
Lane	Left	Left	Left
Designated Moves	LR	TR	LT
Assumed Moves	LR	TR	LT
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	457	937	288
Cap Entry Lane, veh/h	827	1169	1099
Entry HV Adj Factor	0.985	0.981	0.985
Flow Entry, veh/h	450	919	284
Cap Entry, veh/h	814	1146	1083
V/C Ratio	0.553	0.802	0.262
Control Delay, s/veh	12.5	18.4	5.8
LOS	B	C	A
95th %tile Queue, veh	3	9	1

HCM 6th Signalized Intersection Summary 15: Roswell Rd & Spalding Dr

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	3	30	46	0	13	9	679	65	96	1220	8
Future Volume (veh/h)	6	3	30	46	0	13	9	679	65	96	1220	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	6	3	32	49	0	0	10	730	70	103	1312	9
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	86	37	81	104	0		366	2669	256	607	3007	21
Arrive On Green	0.05	0.05	0.05	0.05	0.00	0.00	0.01	0.82	0.82	0.03	0.84	0.84
Sat Flow, veh/h	1030	714	1572	1240	0	0	1767	3251	312	1767	3589	25
Grp Volume(v), veh/h	9	0	32	49	0	0	10	396	404	103	644	677
Grp Sat Flow(s),veh/h/ln	1744	0	1572	1240	0	0	1767	1763	1799	1767	1763	1851
Q Serve(g_s), s	0.0	0.0	3.5	6.4	0.0	0.0	0.2	9.3	9.3	1.7	16.8	16.8
Cycle Q Clear(g_c), s	0.8	0.0	3.5	7.2	0.0	0.0	0.2	9.3	9.3	1.7	16.8	16.8
Prop In Lane	0.67		1.00	1.00		0.00	1.00		0.17	1.00		0.01
Lane Grp Cap(c), veh/h	123	0	81	104	0		366	1447	1477	607	1477	1551
V/C Ratio(X)	0.07	0.00	0.40	0.47	0.00		0.03	0.27	0.27	0.17	0.44	0.44
Avail Cap(c_a), veh/h	231	0	192	200	0		435	1447	1477	735	1477	1551
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	81.4	0.0	82.7	84.8	0.0	0.0	3.1	3.7	3.7	2.5	3.7	3.7
Incr Delay (d2), s/veh	0.2	0.0	3.1	3.3	0.0	0.0	0.0	0.5	0.5	0.1	0.9	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.7	0.0	2.7	4.2	0.0	0.0	0.1	5.3	5.4	0.8	8.7	9.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	81.6	0.0	85.8	88.2	0.0	0.0	3.1	4.2	4.2	2.6	4.7	4.6
LnGrp LOS	F	A	F	F	A		A	A	A	A	A	A
Approach Vol, veh/h	41			49			A			1424		
Approach Delay, s/veh	84.9			88.2			4.2			4.5		
Approach LOS	F			F			A			A		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.0	153.8		15.2	8.0	156.8		15.2				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	18.0	122.0		22.0	9.0	131.0		22.0				
Max Q Clear Time (g_c+I1), s	3.7	11.3		2.8	2.2	18.8		9.2				
Green Ext Time (p_c), s	0.2	5.2		0.0	0.0	11.4		0.1				
Intersection Summary												
HCM 6th Ctrl Delay	7.6											
HCM 6th LOS	A											

HCM Signalized Intersection Capacity Analysis

16: Roberts Dr & Spalding Dr

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	151	234	18	66	358	508	24	267	35	254	274	108
Future Volume (vph)	151	234	18	66	358	508	24	267	35	254	274	108
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.98		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1805	1873		1805	1900	1615	1805	1851		1787	1806	
Flt Permitted	0.95	1.00		0.49	1.00	1.00	0.31	1.00		0.20	1.00	
Satd. Flow (perm)	1805	1873		933	1900	1615	596	1851		372	1806	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	161	249	19	70	381	540	26	284	37	270	291	115
RTOR Reduction (vph)	0	3	0	0	0	68	0	6	0	0	16	0
Lane Group Flow (vph)	161	265	0	70	381	472	26	315	0	270	390	0
Heavy Vehicles (%)	0%	0%	5%	0%	0%	0%	0%	1%	0%	1%	1%	0%
Turn Type	Split	NA		Perm	NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases	4!	4			3 7 8!	1	5	2		1	6	
Permitted Phases				3 7 8		3 7 8	2			6		
Actuated Green, G (s)	13.0	13.0		43.0	43.0	54.0	23.0	18.0		35.0	24.0	
Effective Green, g (s)	13.0	13.0		43.0	43.0	54.0	23.0	18.0		35.0	24.0	
Actuated g/C Ratio	0.14	0.14		0.48	0.48	0.60	0.26	0.20		0.39	0.27	
Clearance Time (s)	6.0	6.0				6.0	6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0				3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	260	270		445	907	1076	219	370		317	481	
v/s Ratio Prot	0.09	c0.14			0.20	c0.05	0.01	0.17		c0.10	c0.22	
v/s Ratio Perm				0.08		0.24	0.02			c0.23		
v/c Ratio	0.62	0.98		0.16	0.42	0.44	0.12	0.85		0.85	0.81	
Uniform Delay, d1	36.2	38.4		13.3	15.4	9.8	25.6	34.7		21.6	30.9	
Progression Factor	1.00	1.00		1.27	1.20	0.84	1.00	1.00		1.00	1.00	
Incremental Delay, d2	10.6	49.9		0.1	0.2	0.2	1.1	21.3		24.0	13.8	
Delay (s)	46.8	88.3		16.9	18.7	8.5	26.7	56.0		45.6	44.7	
Level of Service	D	F		B	B	A	C	E		D	D	
Approach Delay (s)		72.7			13.0			53.8			45.0	
Approach LOS		E			B			D			D	

Intersection Summary

HCM 2000 Control Delay	38.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	77.5%	ICU Level of Service	D
Analysis Period (min)	15		

! Phase conflict between lane groups.

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis

21: Dunwoody Club Dr & Spalding Dr

08/31/2020

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	👉			👈👈	👈👈	
Traffic Volume (vph)	240	272	7	534	429	5
Future Volume (vph)	240	272	7	534	429	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0			6.0	6.0	
Lane Util. Factor	1.00			0.95	1.00	
Frt	0.93			1.00	1.00	
Flt Protected	1.00			1.00	0.95	
Satd. Flow (prot)	1755			3608	1790	
Flt Permitted	1.00			0.95	0.95	
Satd. Flow (perm)	1755			3421	1790	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	267	302	8	593	477	6
RTOR Reduction (vph)	45	0	0	0	1	0
Lane Group Flow (vph)	524	0	0	601	482	0
Heavy Vehicles (%)	0%	1%	0%	0%	1%	0%
Turn Type	NA		custom	NA	Prot	
Protected Phases	1 2 4			1 6 7!	3!	
Permitted Phases			7!			
Actuated Green, G (s)	54.0			46.0	24.0	
Effective Green, g (s)	54.0			46.0	24.0	
Actuated g/C Ratio	0.60			0.51	0.27	
Clearance Time (s)					6.0	
Vehicle Extension (s)					3.0	
Lane Grp Cap (vph)	1053			1748	477	
v/s Ratio Prot	c0.30				c0.27	
v/s Ratio Perm				0.18		
v/c Ratio	0.50			0.34	1.01	
Uniform Delay, d1	10.3			13.0	33.0	
Progression Factor	0.47			1.00	1.00	
Incremental Delay, d2	0.7			0.1	44.0	
Delay (s)	5.5			13.2	77.0	
Level of Service	A			B	E	
Approach Delay (s)	5.5			13.2	77.0	
Approach LOS	A			B	E	
Intersection Summary						
HCM 2000 Control Delay			29.2		HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.77			
Actuated Cycle Length (s)			90.0		Sum of lost time (s)	24.0
Intersection Capacity Utilization			63.4%		ICU Level of Service	B
Analysis Period (min)			15			
! Phase conflict between lane groups.						
c Critical Lane Group						

HCM 6th Signalized Intersection Summary

17: Barfield Rd & Mt Vernon Hwy

10/07/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	197	888	84	122	309	82	35	127	65	141	221	45
Future Volume (veh/h)	197	888	84	122	309	82	35	127	65	141	221	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1885	1885	1885	1870	1885	1796	1870	1826	1870	1870	1796
Adj Flow Rate, veh/h	207	935	0	128	325	0	37	134	0	148	233	21
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	1	1	1	2	1	7	2	5	2	2	7
Cap, veh/h	739	1248		307	1210		97	198		187	255	208
Arrive On Green	0.05	0.66	0.00	0.04	0.65	0.00	0.02	0.11	0.00	0.05	0.14	0.14
Sat Flow, veh/h	1781	1885	0	1795	1870	1598	1711	1870	1547	3456	1870	1522
Grp Volume(v), veh/h	207	935	0	128	325	0	37	134	0	148	233	21
Grp Sat Flow(s),veh/h/ln	1781	1885	0	1795	1870	1598	1711	1870	1547	1728	1870	1522
Q Serve(g_s), s	6.7	56.5	0.0	4.1	12.6	0.0	3.3	11.7	0.0	7.2	20.9	2.1
Cycle Q Clear(g_c), s	6.7	56.5	0.0	4.1	12.6	0.0	3.3	11.7	0.0	7.2	20.9	2.1
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	739	1248		307	1210		97	198		187	255	208
V/C Ratio(X)	0.28	0.75		0.42	0.27		0.38	0.68		0.79	0.91	0.10
Avail Cap(c_a), veh/h	751	1248		357	1210		97	220		203	286	233
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.3	19.3	0.0	20.0	12.8	0.0	66.6	73.2	0.0	79.4	72.4	64.3
Incr Delay (d2), s/veh	0.2	4.2	0.0	0.9	0.5	0.0	2.4	7.0	0.0	17.5	29.7	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.7	33.5	0.0	3.6	9.4	0.0	2.7	10.1	0.0	6.6	17.8	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.5	23.4	0.0	20.9	13.4	0.0	69.0	80.2	0.0	96.9	102.0	64.5
LnGrp LOS	A	C		C	B		E	F		F	F	E
Approach Vol, veh/h		1142	A		453	A		171	A		402	
Approach Delay, s/veh		20.9			15.5			77.8			98.2	
Approach LOS		C			B			E			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.2	118.6	10.0	29.2	14.8	116.0	15.2	24.0				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	11.0	105.0	4.0	26.0	10.0	106.0	10.0	20.0				
Max Q Clear Time (g_c+I1), s	6.1	58.5	5.3	22.9	8.7	14.6	9.2	13.7				
Green Ext Time (p_c), s	0.1	9.2	0.0	0.3	0.1	2.1	0.0	0.3				

Intersection Summary

HCM 6th Ctrl Delay	38.6
HCM 6th LOS	D

Notes

Unsignalized Delay for [NBR, EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

18: Peachtree Dunwoody Rd & Mt Vernon Hwy/Mt Vernon Hwy

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	230	308	224	273	285	20	48	348	97	0	1065	128
Future Volume (veh/h)	230	308	224	273	285	20	48	348	97	0	1065	128
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1870	1885	1900	1885	1693	1811	1870	1870	0	1900	1856
Adj Flow Rate, veh/h	240	321	181	284	297	0	50	362	101	0	1109	133
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	2	1	0	1	14	6	2	2	0	0	3
Cap, veh/h	587	1359	611	534	1425		64	1105	304	0	1189	518
Arrive On Green	0.09	0.38	0.38	0.11	0.40	0.00	0.04	0.40	0.40	0.00	0.66	0.66
Sat Flow, veh/h	1795	3554	1598	1810	3582	1434	1725	2753	758	0	3705	1572
Grp Volume(v), veh/h	240	321	181	284	297	0	50	232	231	0	1109	133
Grp Sat Flow(s),veh/h/ln	1795	1777	1598	1810	1791	1434	1725	1777	1734	0	1805	1572
Q Serve(g_s), s	13.7	10.4	13.4	16.1	9.3	0.0	4.9	15.3	15.6	0.0	46.2	5.9
Cycle Q Clear(g_c), s	13.7	10.4	13.4	16.1	9.3	0.0	4.9	15.3	15.6	0.0	46.2	5.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.44	0.00		1.00
Lane Grp Cap(c), veh/h	587	1359	611	534	1425		64	713	696	0	1189	518
V/C Ratio(X)	0.41	0.24	0.30	0.53	0.21		0.79	0.33	0.33	0.00	0.93	0.26
Avail Cap(c_a), veh/h	660	1359	611	675	1425		112	930	908	0	1529	666
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	0.75	0.75	0.00	1.00	1.00	1.00	0.00	0.61	0.61
Uniform Delay (d), s/veh	27.0	35.6	36.6	26.4	33.6	0.0	81.2	35.0	35.1	0.0	27.3	20.5
Incr Delay (d2), s/veh	0.5	0.4	1.2	0.6	0.2	0.0	18.9	0.3	0.3	0.0	6.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	10.1	8.2	9.4	10.9	7.0	0.0	4.5	11.0	11.0	0.0	20.2	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.4	36.1	37.8	27.0	33.9	0.0	100.1	35.3	35.4	0.0	33.4	20.6
LnGrp LOS	C	D	D	C	C		F	D	D	A	C	C
Approach Vol, veh/h		742			581	A		513			1242	
Approach Delay, s/veh		33.7			30.5			41.7			32.0	
Approach LOS		C			C			D			C	
Timer - Assigned Phs	1	2	3	4	5	6		8				
Phs Duration (G+Y+Rc), s	24.7	71.0	12.3	62.0	22.1	73.6		74.3				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	32.0	31.0	11.0	72.0	23.0	40.0		89.0				
Max Q Clear Time (g_c+I1), s	18.1	12.4	6.9	48.2	15.7	11.3		17.6				
Green Ext Time (p_c), s	0.7	1.2	0.0	7.8	0.4	1.9		3.0				

Intersection Summary

HCM 6th Ctrl Delay 33.8

HCM 6th LOS C

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

19: Peachtree Dunwoody Rd & Lake Hearn Drive

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	2	13	164	16	121	72	1528	273	230	1774	134
Future Volume (veh/h)	65	2	13	164	16	121	72	1528	273	230	1774	134
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1604	1604	1870	1811	1900	1900	1900	1885	1826	1885	1870	1870
Adj Flow Rate, veh/h	68	2	0	171	17	126	75	1592	284	240	1848	140
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	20	20	2	6	0	0	0	1	5	1	2	2
Cap, veh/h	122	2		332	38	280	147	2294	991	307	2260	169
Arrive On Green	0.08	0.08	0.00	0.08	0.19	0.19	0.05	1.00	1.00	0.06	0.67	0.67
Sat Flow, veh/h	1047	31	1585	1725	195	1445	1810	3582	1547	1795	3351	251
Grp Volume(v), veh/h	70	0	0	171	0	143	75	1592	284	240	969	1019
Grp Sat Flow(s),veh/h/ln	1078	0	1585	1725	0	1640	1810	1791	1547	1795	1777	1825
Q Serve(g_s), s	10.9	0.0	0.0	14.0	0.0	13.1	2.5	0.0	0.0	7.6	66.3	70.0
Cycle Q Clear(g_c), s	10.9	0.0	0.0	14.0	0.0	13.1	2.5	0.0	0.0	7.6	66.3	70.0
Prop In Lane	0.97		1.00	1.00		0.88	1.00		1.00	1.00		0.14
Lane Grp Cap(c), veh/h	124	0		332	0	318	147	2294	991	307	1198	1231
V/C Ratio(X)	0.57	0.00		0.52	0.00	0.45	0.51	0.69	0.29	0.78	0.81	0.83
Avail Cap(c_a), veh/h	137	0		332	0	338	175	2294	991	453	1198	1231
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.72	0.72	0.72	1.00	1.00	1.00
Uniform Delay (d), s/veh	77.6	0.0	0.0	65.0	0.0	60.5	27.3	0.0	0.0	8.7	19.8	20.4
Incr Delay (d2), s/veh	4.3	0.0	0.0	1.4	0.0	1.0	2.0	1.3	0.5	5.3	5.9	6.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.7	0.0	0.0	11.3	0.0	9.4	3.0	0.7	0.3	6.1	36.8	39.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	81.9	0.0	0.0	66.3	0.0	61.5	29.2	1.3	0.5	14.0	25.7	26.9
LnGrp LOS	F	A		E	A	E	C	A	A	B	C	C
Approach Vol, veh/h		70	A		314			1951			2228	
Approach Delay, s/veh		81.9			64.1			2.2			25.0	
Approach LOS		F			E			A			C	
Timer - Assigned Phs	1	2	3	4	5	6		8				
Phs Duration (G+Y+Rc), s	16.2	114.9	20.0	18.9	10.4	120.7		38.9				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	24.0	93.0	14.0	15.0	7.0	110.0		35.0				
Max Q Clear Time (g_c+I1), s	9.6	2.0	16.0	12.9	4.5	72.0		15.1				
Green Ext Time (p_c), s	0.6	17.3	0.0	0.0	0.0	23.5		0.7				
Intersection Summary												
HCM 6th Ctrl Delay			18.8									
HCM 6th LOS			B									
Notes												
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary

20: Glenridge Conn & Johnson Ferry Rd

09/11/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 					 	  		 	 	
Traffic Volume (veh/h)	329	593	816	155	227	505	173	427	67	574	767	33
Future Volume (veh/h)	329	593	816	155	227	505	173	427	67	574	767	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1870	1885	1870	1856	1870	1856	1885	1900	1885	1885	1885
Adj Flow Rate, veh/h	343	618	0	161	236	526	180	445	0	598	799	34
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	2	1	2	3	2	3	1	0	1	1	1
Cap, veh/h	418	990		318	371	626	236	1229		679	1277	54
Arrive On Green	0.17	0.28	0.00	0.09	0.20	0.20	0.07	0.24	0.00	0.19	0.36	0.36
Sat Flow, veh/h	1795	3554	1598	1781	1856	1585	3428	5147	1610	3483	3500	149
Grp Volume(v), veh/h	343	618	0	161	236	526	180	445	0	598	409	424
Grp Sat Flow(s),veh/h/ln	1795	1777	1598	1781	1856	1585	1714	1716	1610	1742	1791	1858
Q Serve(g_s), s	17.5	18.2	0.0	8.5	14.0	24.0	6.2	8.6	0.0	20.0	22.5	22.5
Cycle Q Clear(g_c), s	17.5	18.2	0.0	8.5	14.0	24.0	6.2	8.6	0.0	20.0	22.5	22.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.08
Lane Grp Cap(c), veh/h	418	990		318	371	626	236	1229		679	654	678
V/C Ratio(X)	0.82	0.62		0.51	0.64	0.84	0.76	0.36		0.88	0.63	0.63
Avail Cap(c_a), veh/h	478	1066		340	371	626	286	1229		842	654	678
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.2	37.8	0.0	33.9	44.0	32.9	54.9	38.1	0.0	46.9	31.4	31.4
Incr Delay (d2), s/veh	9.8	1.0	0.0	1.2	3.6	9.9	9.4	0.8	0.0	9.1	4.5	4.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	13.3	12.6	0.0	6.8	11.0	21.5	5.3	6.5	0.0	14.5	15.7	16.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.0	38.8	0.0	35.1	47.6	42.8	64.3	38.9	0.0	56.1	35.8	35.7
LnGrp LOS	D	D		D	D	D	E	D		E	D	D
Approach Vol, veh/h		961	A		923			625	A		1431	
Approach Delay, s/veh		39.2			42.7			46.2			44.2	
Approach LOS		D			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	29.4	34.7	16.5	39.4	14.3	49.8	25.9	30.0				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	29.0	19.0	12.0	36.0	10.0	38.0	24.0	24.0				
Max Q Clear Time (g_c+I1), s	22.0	10.6	10.5	20.2	8.2	24.5	19.5	26.0				
Green Ext Time (p_c), s	1.4	1.7	0.1	3.6	0.1	4.3	0.5	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			43.0									
HCM 6th LOS			D									
Notes												
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary

1: Peachtree Dunwoody Rd & Johnson Ferry Rd

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	400	373	39	236	295	185	28	708	308	222	1077	469
Future Volume (veh/h)	400	373	39	236	295	185	28	708	308	222	1077	469
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1900	1900	1900	1870	1870	1900	1900	1900	1885	1885	1870
Adj Flow Rate, veh/h	412	385	40	243	304	191	29	730	215	229	1110	278
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	0	0	0	2	2	0	0	0	1	1	2
Cap, veh/h	465	409	43	287	400	245	64	1394	622	252	1821	806
Arrive On Green	0.13	0.24	0.24	0.08	0.19	0.19	0.02	0.39	0.39	0.14	0.51	0.51
Sat Flow, veh/h	3456	1693	176	3510	2117	1297	3510	3610	1610	1795	3582	1585
Grp Volume(v), veh/h	412	0	425	243	254	241	29	730	215	229	1110	278
Grp Sat Flow(s),veh/h/ln	1728	0	1868	1755	1777	1637	1755	1805	1610	1795	1791	1585
Q Serve(g_s), s	18.7	0.0	35.7	10.9	21.6	22.4	1.3	24.9	15.1	20.1	35.3	16.7
Cycle Q Clear(g_c), s	18.7	0.0	35.7	10.9	21.6	22.4	1.3	24.9	15.1	20.1	35.3	16.7
Prop In Lane	1.00		0.09	1.00		0.79	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	465	0	452	287	336	309	64	1394	622	252	1821	806
V/C Ratio(X)	0.89	0.00	0.94	0.85	0.76	0.78	0.46	0.52	0.35	0.91	0.61	0.35
Avail Cap(c_a), veh/h	583	0	561	329	400	368	88	1394	622	325	1821	806
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	68.0	0.0	59.5	72.5	61.4	61.7	77.8	37.8	34.8	67.8	28.0	23.5
Incr Delay (d2), s/veh	12.9	0.0	21.7	16.4	6.7	8.7	5.0	1.4	1.5	24.0	1.5	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	14.0	0.0	26.7	9.4	15.6	15.2	1.1	16.9	10.3	16.3	21.9	10.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	80.9	0.0	81.3	88.9	68.1	70.4	82.8	39.2	36.3	91.8	29.6	24.6
LnGrp LOS	F	A	F	F	E	E	F	D	D	F	C	C
Approach Vol, veh/h	837			738			974			1617		
Approach Delay, s/veh	81.1			75.7			39.9			37.5		
Approach LOS	F			E			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	28.5	67.8	19.1	44.7	8.9	87.3	27.5	36.2				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	29.0	44.0	15.0	48.0	4.0	69.0	27.0	36.0				
Max Q Clear Time (g_c+I1), s	22.1	26.9	12.9	37.7	3.3	37.3	20.7	24.4				
Green Ext Time (p_c), s	0.4	3.6	0.2	1.0	0.0	7.5	0.8	1.2				
Intersection Summary												
HCM 6th Ctrl Delay	53.6											
HCM 6th LOS	D											

HCM 6th Signalized Intersection Summary

2: SR 400 Exit 6/Dunwoody PI & Northridge Rd

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	185	888	299	63	276	1341	745	351	388	349	364	184
Future Volume (veh/h)	185	888	299	63	276	1341	745	351	388	349	364	184
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1885	1900	1900	1900	1885	1900	1900	1885	1900
Adj Flow Rate, veh/h	187	897	24	64	279	597	753	355	341	353	368	0
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	0	0	0	1	0	0	0	1	0	0	1	0
Cap, veh/h	263	976	435	131	413	700	822	630	538	376	1102	
Arrive On Green	0.09	0.27	0.27	0.04	0.22	0.22	0.23	0.33	0.33	0.21	0.31	0.00
Sat Flow, veh/h	1810	3610	1610	1795	1900	3220	3510	1885	1610	1810	3582	1610
Grp Volume(v), veh/h	187	897	24	64	279	597	753	355	341	353	368	0
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1795	1900	1610	1755	1885	1610	1810	1791	1610
Q Serve(g_s), s	12.5	38.6	1.8	4.4	21.6	28.5	33.5	24.7	28.6	30.7	12.7	0.0
Cycle Q Clear(g_c), s	12.5	38.6	1.8	4.4	21.6	28.5	33.5	24.7	28.6	30.7	12.7	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	263	976	435	131	413	700	822	630	538	376	1102	
V/C Ratio(X)	0.71	0.92	0.06	0.49	0.68	0.85	0.92	0.56	0.63	0.94	0.33	
Avail Cap(c_a), veh/h	268	1173	523	141	523	886	965	630	538	430	1102	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	43.6	56.7	43.2	49.2	57.5	60.2	59.7	43.7	45.0	62.4	42.7	0.0
Incr Delay (d2), s/veh	8.4	10.3	0.1	2.8	2.4	6.7	11.9	3.6	5.6	26.8	0.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	10.4	26.0	1.3	3.8	16.0	18.0	22.8	18.0	18.0	23.6	9.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.0	66.9	43.3	52.0	59.9	66.8	71.6	47.3	50.6	89.2	43.6	0.0
LnGrp LOS	D	E	D	D	E	E	E	D	D	F	D	
Approach Vol, veh/h		1108			940			1449			721	A
Approach Delay, s/veh		63.9			63.8			60.7			65.9	
Approach LOS		E			E			E			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	39.2	59.4	12.0	49.3	43.5	55.2	20.5	40.8				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	38.0	39.0	7.0	52.0	44.0	33.0	15.0	44.0				
Max Q Clear Time (g_c+I1), s	32.7	26.7	6.4	40.6	35.5	14.7	14.5	23.6				
Green Ext Time (p_c), s	0.5	0.8	0.0	2.7	2.0	2.1	0.0	0.2				

Intersection Summary

HCM 6th Ctrl Delay 63.1

HCM 6th LOS E

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

3: Northside Dr & Powers Ferry Rd

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	657	242	46	1046	0	0	0	0	295	349	406
Future Volume (veh/h)	0	657	242	46	1046	0	0	0	0	295	349	406
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1900	1900	1900	1885	0				1900	1900	1900
Adj Flow Rate, veh/h	0	692	255	48	1101	0				311	367	427
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	1	0				0	0	0
Cap, veh/h	0	1948	707	362	1135	0				459	589	465
Arrive On Green	0.00	0.52	0.52	0.03	0.60	0.00				0.29	0.29	0.29
Sat Flow, veh/h	0	3922	1362	1810	1885	0				1588	2038	1610
Grp Volume(v), veh/h	0	637	310	48	1101	0				357	321	427
Grp Sat Flow(s),veh/h/ln	0	1729	1655	1810	1885	0				1821	1805	1610
Q Serve(g_s), s	0.0	11.9	12.2	1.3	61.5	0.0				19.0	16.9	28.2
Cycle Q Clear(g_c), s	0.0	11.9	12.2	1.3	61.5	0.0				19.0	16.9	28.2
Prop In Lane	0.00		0.82	1.00		0.00				0.87		1.00
Lane Grp Cap(c), veh/h	0	1796	859	362	1135	0				526	522	465
V/C Ratio(X)	0.00	0.35	0.36	0.13	0.97	0.00				0.68	0.62	0.92
Avail Cap(c_a), veh/h	0	1886	903	377	1200	0				526	522	465
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.36	0.36	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	15.6	15.6	11.7	21.0	0.0				34.6	33.8	37.8
Incr Delay (d2), s/veh	0.0	0.1	0.3	0.1	9.5	0.0				6.9	5.4	25.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	8.1	7.9	0.9	32.0	0.0				14.3	12.7	20.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	15.7	15.9	11.7	30.5	0.0				41.4	39.2	63.3
LnGrp LOS	A	B	B	B	C	A				D	D	E
Approach Vol, veh/h		947			1149						1105	
Approach Delay, s/veh		15.8			29.7						49.3	
Approach LOS		B			C						D	
Timer - Assigned Phs		2		4			7	8				
Phs Duration (G+Y+Rc), s		37.8		72.2			9.1	63.1				
Change Period (Y+Rc), s		6.0		6.0			6.0	6.0				
Max Green Setting (Gmax), s		28.0		70.0			4.0	60.0				
Max Q Clear Time (g_c+I1), s		21.0		63.5			3.3	14.2				
Green Ext Time (p_c), s		1.6		2.7			0.0	3.6				
Intersection Summary												
HCM 6th Ctrl Delay				32.3								
HCM 6th LOS				C								

HCM 6th Signalized Intersection Summary

4: Roswell Rd & Hannover Park Rd/Dunwoody PI

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	22	52	106	52	919	33	1245	83	248	607	13
Future Volume (veh/h)	33	22	52	106	52	919	33	1245	83	248	607	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1885	1900	1900	1900
Adj Flow Rate, veh/h	34	23	28	110	54	957	34	1297	0	258	632	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	1	0	0	0
Cap, veh/h	44	494	419	148	528	1030	44	1729		301	1950	
Arrive On Green	0.02	0.26	0.26	0.04	0.28	0.28	0.02	0.48	0.00	0.09	0.54	0.00
Sat Flow, veh/h	1810	1900	1610	3510	1900	2834	1810	3610	1598	3510	3610	1610
Grp Volume(v), veh/h	34	23	28	110	54	957	34	1297	0	258	632	0
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1755	1900	1417	1810	1805	1598	1755	1805	1610
Q Serve(g_s), s	3.4	1.6	2.4	5.6	3.8	50.0	3.4	52.6	0.0	13.1	17.6	0.0
Cycle Q Clear(g_c), s	3.4	1.6	2.4	5.6	3.8	50.0	3.4	52.6	0.0	13.1	17.6	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	44	494	419	148	528	1030	44	1729		301	1950	
V/C Ratio(X)	0.77	0.05	0.07	0.74	0.10	0.93	0.77	0.75		0.86	0.32	
Avail Cap(c_a), veh/h	80	507	429	195	528	1030	80	1729		390	1950	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	87.3	49.9	50.2	85.2	48.3	55.1	87.3	38.2	0.0	81.2	23.1	0.0
Incr Delay (d2), s/veh	24.0	0.0	0.1	10.1	0.1	14.1	24.0	3.0	0.0	13.9	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.4	1.4	1.8	5.0	3.3	30.6	3.4	31.5	0.0	10.6	12.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	111.3	49.9	50.2	95.4	48.4	69.2	111.3	41.2	0.0	95.1	23.5	0.0
LnGrp LOS	F	D	D	F	D	E	F	D		F	C	
Approach Vol, veh/h		85			1121			1331	A		890	A
Approach Delay, s/veh		74.6			70.8			43.0			44.3	
Approach LOS		E			E			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	21.4	92.2	13.6	52.8	10.4	103.2	10.4	56.0				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	20.0	78.0	10.0	48.0	8.0	90.0	8.0	50.0				
Max Q Clear Time (g_c+I1), s	15.1	54.6	7.6	3.6	5.4	19.6	5.4	52.0				
Green Ext Time (p_c), s	0.4	9.6	0.1	0.0	0.0	4.4	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			53.2									
HCM 6th LOS			D									
Notes												
Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary

5: Roswell Rd /Roswell Rd & Northridge Rd

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	27	33	800	18	238	30	1277	585	432	748	27
Future Volume (veh/h)	24	27	33	800	18	238	30	1277	585	432	748	27
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	25	28	9	856	0	40	32	1344	195	455	787	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	29	33	54	916	0	407	42	1593	711	488	2012	897
Arrive On Green	0.03	0.03	0.03	0.25	0.00	0.25	0.02	0.44	0.44	0.14	0.56	0.56
Sat Flow, veh/h	876	981	1610	3619	0	1610	1810	3610	1610	3510	3610	1610
Grp Volume(v), veh/h	53	0	9	856	0	40	32	1344	195	455	787	2
Grp Sat Flow(s),veh/h/ln	1856	0	1610	1810	0	1610	1810	1805	1610	1755	1805	1610
Q Serve(g_s), s	5.1	0.0	1.0	41.7	0.0	3.4	3.2	59.6	13.9	23.1	22.2	0.1
Cycle Q Clear(g_c), s	5.1	0.0	1.0	41.7	0.0	3.4	3.2	59.6	13.9	23.1	22.2	0.1
Prop In Lane	0.47		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	62	0	54	916	0	407	42	1593	711	488	2012	897
V/C Ratio(X)	0.86	0.00	0.17	0.93	0.00	0.10	0.77	0.84	0.27	0.93	0.39	0.00
Avail Cap(c_a), veh/h	62	0	54	1005	0	447	80	1593	711	488	2012	897
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	86.6	0.0	84.6	65.8	0.0	51.5	87.5	44.7	32.0	76.7	22.6	17.7
Incr Delay (d2), s/veh	66.4	0.0	1.5	14.5	0.0	0.1	25.3	5.6	1.0	25.1	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.5	0.0	0.8	28.5	0.0	2.5	3.2	35.9	9.5	17.7	14.6	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	153.0	0.0	86.0	80.2	0.0	51.6	112.8	50.4	32.9	101.8	23.1	17.7
LnGrp LOS	F	A	F	F	A	D	F	D	C	F	C	B
Approach Vol, veh/h	62			896			1571			1244		
Approach Delay, s/veh	143.2			78.9			49.5			51.9		
Approach LOS	F			E			D			D		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	31.0	85.4		12.0	10.1	106.3		51.6				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	25.0	75.0		6.0	8.0	92.0		50.0				
Max Q Clear Time (g_c+I1), s	25.1	61.6		7.1	5.2	24.2		43.7				
Green Ext Time (p_c), s	0.0	6.8		0.0	0.0	5.8		1.9				
Intersection Summary												
HCM 6th Ctrl Delay	58.8											
HCM 6th LOS	E											
Notes												
User approved volume balancing among the lanes for turning movement.												

HCM 6th Signalized Intersection Summary

6: Northside Dr & Interstate N Pkwy/New Northside Dr

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	123	15	616	190	1048	200	0	0	0	1	460	209
Future Volume (veh/h)	123	15	616	190	1048	200	0	0	0	1	460	209
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900				1900	1900	1900
Adj Flow Rate, veh/h	127	15	635	196	1080	26				1	474	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97				0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	166	21	892	398	1109	940				2	766	
Arrive On Green	0.05	0.57	0.57	0.06	0.58	0.58				0.21	0.21	0.00
Sat Flow, veh/h	1810	37	1579	1810	1900	1610				7	3792	0
Grp Volume(v), veh/h	127	0	650	196	1080	26				255	220	0
Grp Sat Flow(s),veh/h/ln	1810	0	1616	1810	1900	1610				1900	1805	0
Q Serve(g_s), s	3.2	0.0	32.2	5.0	60.3	0.8				13.5	12.1	0.0
Cycle Q Clear(g_c), s	3.2	0.0	32.2	5.0	60.3	0.8				13.5	12.1	0.0
Prop In Lane	1.00		0.98	1.00		1.00				0.00		0.00
Lane Grp Cap(c), veh/h	166	0	913	398	1109	940				393	374	
V/C Ratio(X)	0.76	0.00	0.71	0.49	0.97	0.03				0.65	0.59	
Avail Cap(c_a), veh/h	166	0	913	430	1123	951				393	374	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00				1.00	1.00	0.00
Uniform Delay (d), s/veh	26.3	0.0	17.4	14.7	22.1	9.7				39.9	39.4	0.0
Incr Delay (d2), s/veh	18.8	0.0	2.6	0.9	20.6	0.0				8.0	6.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.8	0.0	17.1	3.4	39.4	0.5				11.5	10.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.1	0.0	20.0	15.7	42.7	9.7				47.9	46.0	0.0
LnGrp LOS	D	A	C	B	D	A				D	D	
Approach Vol, veh/h		777			1302						475	A
Approach Delay, s/veh		24.1			38.0						47.1	
Approach LOS		C			D						D	
Timer - Assigned Phs		2	3	4			7	8				
Phs Duration (G+Y+Rc), s		28.8	13.0	68.2			11.0	70.2				
Change Period (Y+Rc), s		6.0	6.0	6.0			6.0	6.0				
Max Green Setting (Gmax), s		22.0	9.0	61.0			5.0	65.0				
Max Q Clear Time (g_c+I1), s		15.5	7.0	34.2			5.2	62.3				
Green Ext Time (p_c), s		1.4	0.1	5.1			0.0	1.9				
Intersection Summary												
HCM 6th Ctrl Delay			35.4									
HCM 6th LOS			D									
Notes												
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary

7: Riverside Dr & Heards Ferry Rd

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	243	97	48	87	232	146	76	971	29	59	501	190
Future Volume (veh/h)	243	97	48	87	232	146	76	971	29	59	501	190
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	251	100	49	90	239	151	78	1001	30	61	516	196
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	241	302	148	358	205	130	221	897	27	101	641	243
Arrive On Green	0.11	0.26	0.26	0.04	0.19	0.19	0.03	0.50	0.50	0.03	0.50	0.50
Sat Flow, veh/h	1767	1176	576	1767	1063	672	1767	1792	54	1767	1281	487
Grp Volume(v), veh/h	251	0	149	90	0	390	78	0	1031	61	0	712
Grp Sat Flow(s),veh/h/ln	1767	0	1752	1767	0	1735	1767	0	1846	1767	0	1768
Q Serve(g_s), s	15.0	0.0	9.7	5.7	0.0	27.0	3.0	0.0	70.0	2.4	0.0	47.2
Cycle Q Clear(g_c), s	15.0	0.0	9.7	5.7	0.0	27.0	3.0	0.0	70.0	2.4	0.0	47.2
Prop In Lane	1.00		0.33	1.00		0.39	1.00		0.03	1.00		0.28
Lane Grp Cap(c), veh/h	241	0	450	358	0	335	221	0	924	101	0	884
V/C Ratio(X)	1.04	0.00	0.33	0.25	0.00	1.17	0.35	0.00	1.12	0.60	0.00	0.81
Avail Cap(c_a), veh/h	241	0	450	358	0	335	221	0	924	102	0	884
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	41.3	0.0	42.2	43.1	0.0	56.5	25.2	0.0	35.0	33.6	0.0	29.3
Incr Delay (d2), s/veh	69.5	0.0	0.4	0.4	0.0	102.2	1.0	0.0	67.0	9.5	0.0	7.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	17.0	0.0	7.6	4.6	0.0	31.1	2.3	0.0	63.9	2.3	0.0	28.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	110.8	0.0	42.6	43.4	0.0	158.7	26.1	0.0	102.0	43.1	0.0	37.0
LnGrp LOS	F	A	D	D	A	F	C	A	F	D	A	D
Approach Vol, veh/h	400			480			1109			773		
Approach Delay, s/veh	85.4			137.1			96.6			37.5		
Approach LOS	F			F			F			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.0	76.0	12.0	42.0	10.0	76.0	21.0	33.0				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	4.0	70.0	6.0	36.0	4.0	70.0	15.0	27.0				
Max Q Clear Time (g_c+I1), s	4.4	72.0	7.7	11.7	5.0	49.2	17.0	29.0				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.8	0.0	5.1	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay	85.5											
HCM 6th LOS	F											

HCM 6th Signalized Intersection Summary

8: New Northside Dr & Powers Ferry Rd

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 							  				
Traffic Volume (veh/h)	342	461	0	0	558	322	510	528	27	0	0	0
Future Volume (veh/h)	342	461	0	0	558	322	510	528	27	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach	No			No			No					
Adj Sat Flow, veh/h/ln	1900	1900	0	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	368	496	0	0	600	0	548	568	29			
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	436	995	0	0	656		664	1257	64			
Arrive On Green	0.12	0.52	0.00	0.00	0.35	0.00	0.37	0.37	0.37			
Sat Flow, veh/h	3510	1900	0	0	1900	1610	1810	3423	175			
Grp Volume(v), veh/h	368	496	0	0	600	0	548	287	310			
Grp Sat Flow(s),veh/h/ln	1755	1900	0	0	1900	1610	1810	1729	1869			
Q Serve(g_s), s	11.3	18.5	0.0	0.0	33.3	0.0	30.2	13.8	13.9			
Cycle Q Clear(g_c), s	11.3	18.5	0.0	0.0	33.3	0.0	30.2	13.8	13.9			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		0.09			
Lane Grp Cap(c), veh/h	436	995	0	0	656		664	635	686			
V/C Ratio(X)	0.84	0.50	0.00	0.00	0.92		0.82	0.45	0.45			
Avail Cap(c_a), veh/h	511	1157	0	0	777		664	635	686			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.95	0.95	0.00	0.00	1.00	0.00	1.00	1.00	1.00			
Uniform Delay (d), s/veh	47.1	16.9	0.0	0.0	34.5	0.0	31.6	26.4	26.4			
Incr Delay (d2), s/veh	10.4	0.4	0.0	0.0	14.0	0.0	11.2	2.3	2.1			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	9.2	12.2	0.0	0.0	24.2	0.0	21.1	10.0	10.6			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.6	17.3	0.0	0.0	48.4	0.0	42.8	28.7	28.6			
LnGrp LOS	E	B	A	A	D		D	C	C			
Approach Vol, veh/h	864			600			1145					
Approach Delay, s/veh	34.4			48.4			35.4					
Approach LOS	C			D			D					
Timer - Assigned Phs	2			4			7			8		
Phs Duration (G+Y+Rc), s	46.4			63.6			19.7			44.0		
Change Period (Y+Rc), s	6.0			6.0			6.0			6.0		
Max Green Setting (Gmax), s	31.0			67.0			16.0			45.0		
Max Q Clear Time (g_c+l1), s	32.2			20.5			13.3			35.3		
Green Ext Time (p_c), s	0.0			3.4			0.4			2.7		
Intersection Summary												
HCM 6th Ctrl Delay			38.1									
HCM 6th LOS			D									
Notes												

HCM 6th Signalized Intersection Summary

9: Mt Vernon Hwy & Abernathy Rd/Perimeter Center

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	256	851	24	73	1708	104	96	509	146	103	345	476
Future Volume (veh/h)	256	851	24	73	1708	104	96	509	146	103	345	476
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	1900	1900	1885	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	272	905	0	78	1817	0	102	541	0	110	367	373
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	1	0	0	0	0	0	0	0	0
Cap, veh/h	293	2176		114	1993		178	616		171	714	319
Arrive On Green	0.08	0.60	0.00	0.03	0.55	0.00	0.03	0.17	0.00	0.06	0.20	0.20
Sat Flow, veh/h	3510	3610	1610	3483	3610	1610	1810	3610	1610	1810	3610	1610
Grp Volume(v), veh/h	272	905	0	78	1817	0	102	541	0	110	367	373
Grp Sat Flow(s),veh/h/ln	1755	1805	1610	1742	1805	1610	1810	1805	1610	1810	1805	1610
Q Serve(g_s), s	13.9	23.9	0.0	4.0	81.7	0.0	6.0	26.3	0.0	8.9	16.3	35.6
Cycle Q Clear(g_c), s	13.9	23.9	0.0	4.0	81.7	0.0	6.0	26.3	0.0	8.9	16.3	35.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	293	2176		114	1993		178	616		171	714	319
V/C Ratio(X)	0.93	0.42		0.68	0.91		0.57	0.88		0.64	0.51	1.17
Avail Cap(c_a), veh/h	293	2176		155	1993		178	762		182	882	394
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.90	0.90	0.00	1.00	1.00	0.00	0.89	0.89	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	82.0	19.0	0.0	86.1	36.3	0.0	64.5	72.8	0.0	58.3	64.5	72.2
Incr Delay (d2), s/veh	32.3	0.5	0.0	7.2	7.8	0.0	3.9	8.8	0.0	6.9	0.6	103.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	11.8	14.9	0.0	3.4	46.6	0.0	2.9	18.5	0.0	7.9	12.1	34.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	114.3	19.5	0.0	93.3	44.1	0.0	68.4	81.6	0.0	65.2	65.0	175.6
LnGrp LOS	F	B		F	D		E	F		E	E	F
Approach Vol, veh/h	1177		A	1895		A	643		A	850		
Approach Delay, s/veh	41.4			46.1			79.5			113.6		
Approach LOS	D			D			E			F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	21.0	105.4	16.9	36.7	11.9	114.5	12.0	41.6				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	15.0	91.0	12.0	38.0	8.0	98.0	6.0	44.0				
Max Q Clear Time (g_c+I1), s	15.9	83.7	10.9	28.3	6.0	25.9	8.0	18.3				
Green Ext Time (p_c), s	0.0	5.9	0.0	2.4	0.0	7.1	0.0	0.9				

Intersection Summary

HCM 6th Ctrl Delay	62.2
HCM 6th LOS	E

Notes

Unsignalized Delay for [NBR, EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

10: Johnson Ferry Rd & Abernathy Rd & Brandon Mill Rd NW

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	171	885	426	58	1915	145	652	79	18	57	109	88
Future Volume (veh/h)	171	885	426	58	1915	145	652	79	18	57	109	88
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	178	922	132	60	1995	0	679	82	19	59	114	14
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	158	2057	917	311	1900		648	324	75	201	134	114
Arrive On Green	0.07	0.58	0.58	0.02	0.54	0.00	0.19	0.22	0.22	0.04	0.07	0.07
Sat Flow, veh/h	1767	3526	1572	1767	3526	1572	3428	1457	338	1767	1856	1572
Grp Volume(v), veh/h	178	922	132	60	1995	0	679	0	101	59	114	14
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1767	1763	1572	1714	0	1795	1767	1856	1572
Q Serve(g_s), s	12.0	26.6	6.9	2.8	97.0	0.0	34.0	0.0	8.3	5.5	10.9	1.5
Cycle Q Clear(g_c), s	12.0	26.6	6.9	2.8	97.0	0.0	34.0	0.0	8.3	5.5	10.9	1.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.19	1.00		1.00
Lane Grp Cap(c), veh/h	158	2057	917	311	1900		648	0	399	201	134	114
V/C Ratio(X)	1.13	0.45	0.14	0.19	1.05		1.05	0.00	0.25	0.29	0.85	0.12
Avail Cap(c_a), veh/h	158	2057	917	311	1900		648	0	399	201	134	114
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.49	0.49	0.49	1.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	65.0	21.2	17.1	19.0	41.5	0.0	73.0	0.0	57.7	73.6	82.5	78.2
Incr Delay (d2), s/veh	89.3	0.1	0.0	0.3	35.2	0.0	48.7	0.0	1.5	0.8	45.6	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	11.5	14.9	4.4	2.1	64.7	0.0	27.2	0.0	7.2	4.6	11.3	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	154.3	21.2	17.1	19.3	76.7	0.0	121.7	0.0	59.2	74.4	128.1	80.4
LnGrp LOS	F	C	B	B	F		F	A	E	E	F	F
Approach Vol, veh/h	1232			2055			A			780		
Approach Delay, s/veh	40.0			75.1			113.6			107.6		
Approach LOS	D			E			F			F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.0	46.0	10.0	111.0	40.0	19.0	18.0	103.0				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	7.0	40.0	4.0	105.0	34.0	13.0	12.0	97.0				
Max Q Clear Time (g_c+I1), s	7.5	10.3	4.8	28.6	36.0	12.9	14.0	99.0				
Green Ext Time (p_c), s	0.0	0.5	0.0	6.8	0.0	0.0	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay 73.4

HCM 6th LOS E

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

11: Peachtree Dunwoody Rd & Abernathy Rd

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  			  		 	 		 	  	
Traffic Volume (veh/h)	221	1030	194	3	1524	220	740	514	8	189	217	584
Future Volume (veh/h)	221	1030	194	3	1524	220	740	514	8	189	217	584
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1885	1885	1856	1900	1900	1885	1885	1885	1826	1885	1885	1900
Adj Flow Rate, veh/h	230	1073	20	3	1588	47	771	535	0	197	226	504
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	1	3	0	0	1	1	1	5	1	1	0
Cap, veh/h	274	2507	766	7	2139	659	823	624		348	248	677
Arrive On Green	0.08	0.49	0.49	0.00	0.41	0.41	0.24	0.17	0.00	0.19	0.13	0.13
Sat Flow, veh/h	3483	5147	1572	1810	5187	1598	3483	3582	1547	1795	1885	3220
Grp Volume(v), veh/h	230	1073	20	3	1588	47	771	535	0	197	226	504
Grp Sat Flow(s),veh/h/ln	1742	1716	1572	1810	1729	1598	1742	1791	1547	1795	1885	1610
Q Serve(g_s), s	11.1	23.0	1.1	0.3	44.1	1.7	36.9	24.7	0.0	16.9	20.1	22.3
Cycle Q Clear(g_c), s	11.1	23.0	1.1	0.3	44.1	1.7	36.9	24.7	0.0	16.9	20.1	22.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	274	2507	766	7	2139	659	823	624		348	248	677
V/C Ratio(X)	0.84	0.43	0.03	0.43	0.74	0.07	0.94	0.86		0.57	0.91	0.74
Avail Cap(c_a), veh/h	369	2507	766	53	2139	659	881	864		348	288	746
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.14	0.14	0.14	0.59	0.59	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	77.2	28.2	22.6	84.5	42.3	9.2	63.7	68.2	0.0	62.1	72.9	62.9
Incr Delay (d2), s/veh	12.0	0.5	0.1	5.6	0.3	0.0	11.0	3.9	0.0	2.1	28.9	3.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	9.2	14.5	0.8	0.3	21.2	1.8	22.9	15.9	0.0	12.6	17.3	15.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	89.2	28.8	22.7	90.1	42.6	9.2	74.7	72.0	0.0	64.2	101.7	66.6
LnGrp LOS	F	C	C	F	D	A	E	E		E	F	E
Approach Vol, veh/h	1323			1638			1306			A		
Approach Delay, s/veh	39.2			41.8			73.6			74.6		
Approach LOS	D			D			E			E		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.7	88.8	46.2	28.3	19.4	76.1	38.9	35.6				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	5.0	72.0	43.0	26.0	18.0	59.0	28.0	41.0				
Max Q Clear Time (g_c+I1), s	2.3	25.0	38.9	22.1	13.1	46.1	18.9	26.7				
Green Ext Time (p_c), s	0.0	8.5	1.3	0.2	0.3	8.0	0.3	3.0				

Intersection Summary

HCM 6th Ctrl Delay 55.0

HCM 6th LOS D

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

12: Peachtree Dunwoody Rd & Hollis Cobb Cir/Medical Center MARTA

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	211	4	114	127	2	134	18	1427	51	45	1548	85
Future Volume (veh/h)	211	4	114	127	2	134	18	1427	51	45	1548	85
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	1900	1900	1885	1900	1900	1900	1900	1885	1752	1900	1900
Adj Flow Rate, veh/h	215	4	116	130	2	137	18	1456	0	46	1580	87
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	1	0	0	0	0	1	10	0	0
Cap, veh/h	279	14	398	295	6	405	255	2207		200	2235	997
Arrive On Green	0.25	0.25	0.25	0.25	0.25	0.25	0.01	0.61	0.00	0.04	1.00	1.00
Sat Flow, veh/h	1270	54	1564	1282	23	1590	1810	3610	1598	1668	3610	1610
Grp Volume(v), veh/h	215	0	120	130	0	139	18	1456	0	46	1580	87
Grp Sat Flow(s),veh/h/ln	1270	0	1618	1282	0	1614	1810	1805	1598	1668	1805	1610
Q Serve(g_s), s	26.6	0.0	9.6	14.5	0.0	11.2	0.6	42.0	0.0	1.7	0.0	0.0
Cycle Q Clear(g_c), s	37.9	0.0	9.6	24.1	0.0	11.2	0.6	42.0	0.0	1.7	0.0	0.0
Prop In Lane	1.00		0.97	1.00		0.99	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	279	0	412	295	0	411	255	2207		200	2235	997
V/C Ratio(X)	0.77	0.00	0.29	0.44	0.00	0.34	0.07	0.66		0.23	0.71	0.09
Avail Cap(c_a), veh/h	329	0	475	345	0	474	275	2207		227	2235	997
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	0.60	0.60	0.60
Uniform Delay (d), s/veh	64.1	0.0	48.0	57.7	0.0	48.7	11.4	20.3	0.0	17.1	0.0	0.0
Incr Delay (d2), s/veh	9.1	0.0	0.4	1.0	0.0	0.5	0.1	1.6	0.0	0.3	1.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	14.4	0.0	7.2	8.5	0.0	8.2	0.5	24.7	0.0	1.1	0.6	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	73.2	0.0	48.4	58.8	0.0	49.1	11.5	21.8	0.0	17.4	1.2	0.1
LnGrp LOS	E	A	D	E	A	D	B	C		B	A	A
Approach Vol, veh/h	335			269			1474			A	1713	
Approach Delay, s/veh	64.3			53.8			21.7				1.5	
Approach LOS	E			D			C				A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.5	103.8		46.7	8.2	105.1		46.7				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	6.0	89.0		47.0	4.0	91.0		47.0				
Max Q Clear Time (g_c+I1), s	3.7	44.0		39.9	2.6	2.0		26.1				
Green Ext Time (p_c), s	0.0	15.7		0.9	0.0	19.6		1.3				

Intersection Summary

HCM 6th Ctrl Delay 18.6

HCM 6th LOS B

Notes

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

13: River Valley Rd & Johnson Ferry Rd

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	948	57	367	2287	1	502	1	530	1	0	4
Future Volume (veh/h)	0	948	57	367	2287	1	502	1	530	1	0	4
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	0	1009	0	390	2433	1	534	1	0	1	0	4
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	41	1515		411	2205	1	444	1		573	0	509
Arrive On Green	0.00	0.43	0.00	0.20	0.81	0.81	0.29	0.29	0.00	0.00	0.00	0.32
Sat Flow, veh/h	1767	3526	1572	1767	3617	1	1399	3	1572	1767	0	1572
Grp Volume(v), veh/h	0	1009	0	390	1186	1248	535	0	0	1	0	4
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1767	1763	1855	1402	0	1572	1767	0	1572
Q Serve(g_s), s	0.0	41.2	0.0	23.4	109.8	109.8	52.0	0.0	0.0	0.1	0.0	0.3
Cycle Q Clear(g_c), s	0.0	41.2	0.0	23.4	109.8	109.8	52.0	0.0	0.0	0.1	0.0	0.3
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	41	1515		411	1075	1131	445	0		573	0	509
V/C Ratio(X)	0.00	0.67		0.95	1.10	1.10	1.20	0.00		0.00	0.00	0.01
Avail Cap(c_a), veh/h	79	1515		524	1075	1131	445	0		619	0	550
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.09	0.09	0.09	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	41.0	0.0	32.7	17.0	17.0	66.3	0.0	0.0	44.0	0.0	41.3
Incr Delay (d2), s/veh	0.0	2.3	0.0	3.8	48.0	48.0	110.8	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	25.5	0.0	11.2	52.6	55.3	49.4	0.0	0.0	0.1	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	43.4	0.0	36.5	65.0	65.0	177.2	0.0	0.0	44.0	0.0	41.3
LnGrp LOS	A	D		D	F	F	F	A		D	A	D
Approach Vol, veh/h	1009		A	2824			535		A	5		
Approach Delay, s/veh	43.4			61.1			177.2			41.8		
Approach LOS	D			E			F			D		
Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	32.4	83.3		64.2	0.0	115.8	6.2	58.0				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	38.0	61.0		63.0	4.0	95.0	5.0	52.0				
Max Q Clear Time (g_c+I1), s	25.4	43.2		2.3	0.0	111.8	2.1	54.0				
Green Ext Time (p_c), s	1.0	6.7		0.0	0.0	0.0	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay 71.2

HCM 6th LOS E

Notes

Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th TWSC
14: Northside Dr & Mt Vernon Hwy

08/31/2020

Intersection						
Int Delay, s/veh	82.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	303	137	248	254	202	219
Future Vol, veh/h	303	137	248	254	202	219
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	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	1	0	0	0	1
Mvmt Flow	326	147	267	273	217	235
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	1073	404	0	0	267	0
Stage 1	404	-	-	-	-	-
Stage 2	669	-	-	-	-	-
Critical Hdwy	6.42	6.21	-	-	4.1	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.309	-	-	2.2	-
Pot Cap-1 Maneuver	~ 244	649	-	-	1308	-
Stage 1	674	-	-	-	-	-
Stage 2	509	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 197	649	-	-	1308	-
Mov Cap-2 Maneuver	~ 197	-	-	-	-	-
Stage 1	674	-	-	-	-	-
Stage 2	412	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	250.4	0		4		
HCM LOS	F					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	197	649	1308	-
HCM Lane V/C Ratio	-	-	1.654	0.227	0.166	-
HCM Control Delay (s)	-	-	\$ 358.1	12.2	8.3	0
HCM Lane LOS	-	-	F	B	A	A
HCM 95th %tile Q(veh)	-	-	21.7	0.9	0.6	-
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

HCM 6th Signalized Intersection Summary

15: Roswell Rd & Spalding Dr

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	4	29	54	4	34	43	1015	70	23	906	14
Future Volume (veh/h)	8	4	29	54	4	34	43	1015	70	23	906	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	8	4	30	56	4	0	45	1057	73	24	944	15
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	96	42	95	109	6		518	2745	190	439	2894	46
Arrive On Green	0.06	0.06	0.06	0.06	0.06	0.00	0.02	0.82	0.82	0.02	0.81	0.81
Sat Flow, veh/h	1041	691	1572	1164	99	0	1767	3346	231	1767	3552	56
Grp Volume(v), veh/h	12	0	30	60	0	0	45	557	573	24	469	490
Grp Sat Flow(s),veh/h/ln	1732	0	1572	1263	0	0	1767	1763	1814	1767	1763	1845
Q Serve(g_s), s	0.0	0.0	3.3	7.6	0.0	0.0	0.8	14.9	14.9	0.4	12.1	12.1
Cycle Q Clear(g_c), s	1.1	0.0	3.3	8.7	0.0	0.0	0.8	14.9	14.9	0.4	12.1	12.1
Prop In Lane	0.67		1.00	0.93		0.00	1.00		0.13	1.00		0.03
Lane Grp Cap(c), veh/h	138	0	95	115	0		518	1446	1488	439	1437	1504
V/C Ratio(X)	0.09	0.00	0.32	0.52	0.00		0.09	0.38	0.39	0.05	0.33	0.33
Avail Cap(c_a), veh/h	351	0	314	309	0		582	1446	1488	503	1437	1504
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	80.0	0.0	81.0	84.0	0.0	0.0	2.8	4.2	4.2	3.1	4.2	4.2
Incr Delay (d2), s/veh	0.3	0.0	1.9	3.7	0.0	0.0	0.1	0.8	0.8	0.1	0.6	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.0	0.0	2.5	5.2	0.0	0.0	0.4	8.3	8.5	0.2	7.0	7.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	80.3	0.0	82.9	87.7	0.0	0.0	2.9	5.0	5.0	3.1	4.8	4.8
LnGrp LOS	F	A	F	F	A		A	A	A	A	A	A
Approach Vol, veh/h	42			60			1175			983		
Approach Delay, s/veh	82.2			87.7			4.9			4.7		
Approach LOS	F			F			A			A		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.5	153.7		16.8	10.5	152.7		16.8				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	10.0	116.0		36.0	11.0	115.0		36.0				
Max Q Clear Time (g_c+I1), s	2.4	16.9		3.1	2.8	14.1		10.7				
Green Ext Time (p_c), s	0.0	8.7		0.0	0.0	6.6		0.2				
Intersection Summary												
HCM 6th Ctrl Delay	8.5											
HCM 6th LOS	A											

HCM Signalized Intersection Capacity Analysis

16: Roberts Dr & Spalding Dr

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	316	281	23	33	225	507	19	340	30	336	297	64
Future Volume (vph)	316	281	23	33	225	507	19	340	30	336	297	64
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1805	1862		1805	1881	1615	1770	1860		1805	1831	
Flt Permitted	0.95	1.00		0.41	1.00	1.00	0.51	1.00		0.17	1.00	
Satd. Flow (perm)	1805	1862		776	1881	1615	950	1860		321	1831	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	336	299	24	35	239	539	20	362	32	357	316	68
RTOR Reduction (vph)	0	3	0	0	0	261	0	4	0	0	9	0
Lane Group Flow (vph)	336	320	0	35	239	278	20	390	0	357	375	0
Heavy Vehicles (%)	0%	1%	0%	0%	1%	0%	2%	1%	0%	0%	1%	1%
Turn Type	Split	NA		Perm	NA	custom	pm+pt	NA		pm+pt	NA	
Protected Phases	4!	4			3 7 8!		5	2		1	6	
Permitted Phases				3 7 8		8	2			6		
Actuated Green, G (s)	17.0	17.0		36.0	36.0	25.0	27.0	22.0		42.0	31.0	
Effective Green, g (s)	17.0	17.0		36.0	36.0	25.0	27.0	22.0		42.0	31.0	
Actuated g/C Ratio	0.19	0.19		0.40	0.40	0.28	0.30	0.24		0.47	0.34	
Clearance Time (s)	6.0	6.0				6.0	6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0				3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	340	351		310	752	448	330	454		380	630	
v/s Ratio Prot	c0.19	0.17			0.13		0.00	0.21		c0.15	0.21	
v/s Ratio Perm				0.05		c0.17	0.01			c0.29		
v/c Ratio	0.99	0.91		0.11	0.32	0.62	0.06	0.86		0.94	0.60	
Uniform Delay, d1	36.4	35.8		17.0	18.6	28.4	22.3	32.5		20.9	24.3	
Progression Factor	1.00	1.00		1.40	1.35	1.73	1.00	1.00		1.00	1.00	
Incremental Delay, d2	45.9	30.0		0.1	0.2	2.2	0.4	18.7		33.2	4.1	
Delay (s)	82.3	65.8		23.9	25.3	51.2	22.7	51.2		54.1	28.5	
Level of Service	F	E		C	C	D	C	D		D	C	
Approach Delay (s)		74.2			42.4			49.9			40.8	
Approach LOS		E			D			D			D	

Intersection Summary

HCM 2000 Control Delay	51.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	87.7%	ICU Level of Service	E
Analysis Period (min)	15		

! Phase conflict between lane groups.

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis

21: Dunwoody Club Dr & Spalding Dr

08/31/2020

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	👉			👈👈	👈👈	
Traffic Volume (vph)	270	378	13	514	250	5
Future Volume (vph)	270	378	13	514	250	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0			6.0	6.0	
Lane Util. Factor	1.00			0.95	1.00	
Frt	0.92			1.00	1.00	
Flt Protected	1.00			1.00	0.95	
Satd. Flow (prot)	1750			3605	1789	
Flt Permitted	1.00			0.93	0.95	
Satd. Flow (perm)	1750			3373	1789	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	281	394	14	535	260	5
RTOR Reduction (vph)	56	0	0	0	1	0
Lane Group Flow (vph)	619	0	0	549	264	0
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%
Turn Type	NA		custom	NA	Prot	
Protected Phases	1 2 4			1 6 7!	3!	
Permitted Phases			7!			
Actuated Green, G (s)	65.0			53.0	13.0	
Effective Green, g (s)	65.0			53.0	13.0	
Actuated g/C Ratio	0.72			0.59	0.14	
Clearance Time (s)					6.0	
Vehicle Extension (s)					3.0	
Lane Grp Cap (vph)	1263			1986	258	
v/s Ratio Prot	c0.35				c0.15	
v/s Ratio Perm				0.16		
v/c Ratio	0.49			0.28	1.02	
Uniform Delay, d1	5.4			9.1	38.5	
Progression Factor	0.39			1.00	1.00	
Incremental Delay, d2	0.5			0.1	62.3	
Delay (s)	2.6			9.2	100.8	
Level of Service	A			A	F	
Approach Delay (s)	2.6			9.2	100.8	
Approach LOS	A			A	F	
Intersection Summary						
HCM 2000 Control Delay			22.5		HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.68			
Actuated Cycle Length (s)			90.0		Sum of lost time (s)	24.0
Intersection Capacity Utilization			61.5%		ICU Level of Service	B
Analysis Period (min)			15			
! Phase conflict between lane groups.						
c Critical Lane Group						

HCM 6th Signalized Intersection Summary

17: Barfield Rd & Mt Vernon Hwy

10/07/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	117	550	19	36	778	231	174	384	146	161	172	162
Future Volume (veh/h)	117	550	19	36	778	231	174	384	146	161	172	162
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1885	1885	1885	1841	1885	1900	1900	1885	1870	1900	1856	1885
Adj Flow Rate, veh/h	122	573	0	38	810	0	181	400	0	168	179	65
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	1	1	4	1	0	0	1	2	0	3	1
Cap, veh/h	246	1061		380	1018		319	427		206	395	340
Arrive On Green	0.04	0.56	0.00	0.02	0.54	0.00	0.07	0.23	0.00	0.06	0.21	0.21
Sat Flow, veh/h	1795	1885	0	1753	1885	1610	1810	1885	1585	3510	1856	1598
Grp Volume(v), veh/h	122	573	0	38	810	0	181	400	0	168	179	65
Grp Sat Flow(s),veh/h/ln	1795	1885	0	1753	1885	1610	1810	1885	1585	1755	1856	1598
Q Serve(g_s), s	5.5	34.4	0.0	1.8	62.4	0.0	13.0	37.5	0.0	8.5	15.1	6.0
Cycle Q Clear(g_c), s	5.5	34.4	0.0	1.8	62.4	0.0	13.0	37.5	0.0	8.5	15.1	6.0
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	246	1061		380	1018		319	427		206	395	340
V/C Ratio(X)	0.50	0.54		0.10	0.80		0.57	0.94		0.82	0.45	0.19
Avail Cap(c_a), veh/h	261	1061		386	1018		319	482		215	454	391
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.1	24.7	0.0	20.6	33.4	0.0	53.1	68.4	0.0	83.8	61.7	58.2
Incr Delay (d2), s/veh	1.5	2.0	0.0	0.1	6.4	0.0	2.3	24.7	0.0	20.7	0.8	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.4	22.6	0.0	1.3	39.0	0.0	2.1	28.5	0.0	7.9	11.7	4.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.6	26.7	0.0	20.7	39.8	0.0	55.4	93.1	0.0	104.4	62.6	58.4
LnGrp LOS	C	C		C	D		E	F		F	E	E
Approach Vol, veh/h	695		A	848		A	581		A	412		
Approach Delay, s/veh	27.5			39.0			81.3			79.0		
Approach LOS	C			D			F			E		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.4	107.3	19.0	44.3	13.5	103.2	16.5	46.7				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	4.0	95.0	13.0	44.0	9.0	90.0	11.0	46.0				
Max Q Clear Time (g_c+I1), s	3.8	36.4	15.0	17.1	7.5	64.4	10.5	39.5				
Green Ext Time (p_c), s	0.0	4.2	0.0	0.7	0.0	6.3	0.0	1.2				
Intersection Summary												
HCM 6th Ctrl Delay	52.0											
HCM 6th LOS	D											

HCM 6th Signalized Intersection Summary

18: Peachtree Dunwoody Rd & Mt Vernon Hwy/Mt Vernon Hwy

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	185	540	85	103	309	5	69	996	289	9	331	101
Future Volume (veh/h)	185	540	85	103	309	5	69	996	289	9	331	101
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1885	1885	1900	1870	1203	1870	1900	1900	1870	1870	1870
Adj Flow Rate, veh/h	195	568	36	108	325	0	73	1048	304	9	348	106
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	1	1	0	2	47	2	0	0	2	2	2
Cap, veh/h	526	1512	675	384	1393		90	1192	343	28	954	550
Arrive On Green	0.08	0.42	0.42	0.05	0.39	0.00	0.05	0.43	0.43	0.35	0.35	0.35
Sat Flow, veh/h	1781	3582	1598	1810	3554	1020	1781	2765	796	21	2752	1585
Grp Volume(v), veh/h	195	568	36	108	325	0	73	681	671	150	207	106
Grp Sat Flow(s),veh/h/ln	1781	1791	1598	1810	1777	1020	1781	1805	1757	1156	1617	1585
Q Serve(g_s), s	11.6	19.6	2.4	6.4	11.0	0.0	7.3	62.1	63.3	2.3	17.2	8.4
Cycle Q Clear(g_c), s	11.6	19.6	2.4	6.4	11.0	0.0	7.3	62.1	63.3	50.4	17.2	8.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.45	0.06		1.00
Lane Grp Cap(c), veh/h	526	1512	675	384	1393		90	778	757	422	561	550
V/C Ratio(X)	0.37	0.38	0.05	0.28	0.23		0.81	0.88	0.89	0.36	0.37	0.19
Avail Cap(c_a), veh/h	597	1512	675	420	1393		178	1023	995	555	701	687
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.92	0.92	0.00	1.00	1.00	1.00	0.61	0.61	0.61
Uniform Delay (d), s/veh	28.2	35.7	30.7	30.8	36.6	0.0	84.6	46.8	47.2	43.2	44.0	41.2
Incr Delay (d2), s/veh	0.4	0.7	0.2	0.4	0.4	0.0	15.3	6.9	7.8	0.3	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.8	13.7	1.8	5.2	8.4	0.0	6.8	38.1	38.0	7.7	10.4	5.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.6	36.4	30.9	31.1	37.0	0.0	99.9	53.7	55.0	43.5	44.3	41.3
LnGrp LOS	C	D	C	C	D		F	D	D	D	D	D
Approach Vol, veh/h		799			433	A		1425			463	
Approach Delay, s/veh		34.3			35.5			56.7			43.3	
Approach LOS		C			D			E			D	
Timer - Assigned Phs	1	2	3	4	5	6		8				
Phs Duration (G+Y+Rc), s	14.4	82.0	15.1	68.4	19.9	76.6		83.6				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	12.0	48.0	18.0	78.0	21.0	39.0		102.0				
Max Q Clear Time (g_c+I1), s	8.4	21.6	9.3	52.4	13.6	13.0		65.3				
Green Ext Time (p_c), s	0.1	3.7	0.1	1.6	0.3	2.1		12.3				

Intersection Summary

HCM 6th Ctrl Delay 46.0

HCM 6th LOS D

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

19: Peachtree Dunwoody Rd & Lake Hearn Drive

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	135	20	33	428	0	249	6	1633	81	105	1167	11
Future Volume (veh/h)	135	20	33	428	0	249	6	1633	81	105	1167	11
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1900	1870	1900	1900	1811	1885	1811	1900	1885	1885
Adj Flow Rate, veh/h	144	21	0	455	0	265	6	1737	86	112	1241	12
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	0	2	0	0	6	1	6	0	1	1
Cap, veh/h	182	20		613	0	574	175	1769	758	189	1910	18
Arrive On Green	0.14	0.14	0.00	0.18	0.00	0.36	0.01	0.99	0.99	0.04	0.53	0.53
Sat Flow, veh/h	1017	148	1610	1781	0	1610	1725	3582	1535	1810	3635	35
Grp Volume(v), veh/h	165	0	0	455	0	265	6	1737	86	112	611	642
Grp Sat Flow(s),veh/h/ln	1165	0	1610	1781	0	1610	1725	1791	1535	1810	1791	1879
Q Serve(g_s), s	22.0	0.0	0.0	29.0	0.0	20.3	0.3	32.2	0.1	4.9	39.4	39.4
Cycle Q Clear(g_c), s	22.0	0.0	0.0	29.0	0.0	20.3	0.3	32.2	0.1	4.9	39.4	39.4
Prop In Lane	0.87		1.00	1.00		1.00	1.00		1.00	1.00		0.02
Lane Grp Cap(c), veh/h	202	0		613	0	574	175	1769	758	189	941	987
V/C Ratio(X)	0.82	0.00		0.74	0.00	0.46	0.03	0.98	0.11	0.59	0.65	0.65
Avail Cap(c_a), veh/h	202	0		613	0	574	208	1769	758	189	941	987
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.70	0.70	0.70	1.00	1.00	1.00
Uniform Delay (d), s/veh	69.3	0.0	0.0	48.1	0.0	39.7	23.7	0.7	0.5	24.3	27.4	27.4
Incr Delay (d2), s/veh	22.0	0.0	0.0	4.9	0.0	0.6	0.1	14.2	0.2	4.9	3.5	3.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	12.6	0.0	0.0	23.9	0.0	12.9	0.2	6.6	0.2	4.2	24.5	25.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	91.4	0.0	0.0	53.0	0.0	40.3	23.7	14.9	0.7	29.2	30.8	30.7
LnGrp LOS	F	A		D	A	D	C	B	A	C	C	C
Approach Vol, veh/h		165	A		720			1829			1365	
Approach Delay, s/veh		91.4			48.3			14.3			30.6	
Approach LOS		F			D			B			C	
Timer - Assigned Phs	1	2	3	4	5	6		8				
Phs Duration (G+Y+Rc), s	12.0	85.0	35.0	28.0	6.9	90.1		63.0				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	6.0	79.0	29.0	22.0	4.0	81.0		57.0				
Max Q Clear Time (g_c+I1), s	6.9	34.2	31.0	24.0	2.3	41.4		22.3				
Green Ext Time (p_c), s	0.0	20.4	0.0	0.0	0.0	10.7		1.8				
Intersection Summary												
HCM 6th Ctrl Delay			28.9									
HCM 6th LOS			C									
Notes												
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary

20: Glenridge Conn & Johnson Ferry Rd

09/11/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	227	322	392	134	626	526	452	1003	39	262	510	42
Future Volume (veh/h)	227	322	392	134	626	526	452	1003	39	262	510	42
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1870	1885	1885	1885	1885	1885	1900	1900	1885	1885	1885
Adj Flow Rate, veh/h	232	329	17	137	639	537	461	1023	0	267	520	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	1	2	1	1	1	1	1	0	0	1	1	1
Cap, veh/h	210	1244	559	446	597	657	434	1584		330	567	
Arrive On Green	0.08	0.35	0.35	0.05	0.32	0.32	0.24	0.31	0.00	0.09	0.16	0.00
Sat Flow, veh/h	1795	3554	1598	1795	1885	1598	1795	5187	1610	3483	3676	0
Grp Volume(v), veh/h	232	329	17	137	639	537	461	1023	0	267	520	0
Grp Sat Flow(s),veh/h/ln	1795	1777	1598	1795	1885	1598	1795	1729	1610	1742	1791	0
Q Serve(g_s), s	10.0	8.0	0.8	6.0	38.0	35.8	29.0	20.5	0.0	9.0	17.2	0.0
Cycle Q Clear(g_c), s	10.0	8.0	0.8	6.0	38.0	35.8	29.0	20.5	0.0	9.0	17.2	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	210	1244	559	446	597	657	434	1584		330	567	
V/C Ratio(X)	1.11	0.26	0.03	0.31	1.07	0.82	1.06	0.65		0.81	0.92	
Avail Cap(c_a), veh/h	210	1244	559	446	597	657	434	1584		435	567	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	33.0	27.9	25.6	26.3	41.0	31.3	45.5	36.1	0.0	53.3	49.7	0.0
Incr Delay (d2), s/veh	93.7	0.1	0.0	0.4	57.1	8.0	60.8	2.0	0.0	8.4	22.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	15.0	6.1	0.6	4.9	36.7	21.1	28.0	13.4	0.0	7.7	14.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	126.7	28.0	25.6	26.6	98.1	39.3	106.3	38.1	0.0	61.6	71.8	0.0
LnGrp LOS	F	C	C	C	F	D	F	D		E	E	
Approach Vol, veh/h		578			1313			1484	A		787	A
Approach Delay, s/veh		67.6			66.6			59.3			68.3	
Approach LOS		E			E			E			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.4	42.6	12.0	48.0	35.0	25.0	16.0	44.0				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	15.0	33.0	6.0	42.0	29.0	19.0	10.0	38.0				
Max Q Clear Time (g_c+I1), s	11.0	22.5	8.0	10.0	31.0	19.2	12.0	40.0				
Green Ext Time (p_c), s	0.3	4.7	0.0	2.1	0.0	0.0	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	64.4
HCM 6th LOS	E

Notes

Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

1: Peachtree Dunwoody Rd & Johnson Ferry Rd

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	400	373	39	236	295	185	28	708	308	222	1077	469
Future Volume (veh/h)	400	373	39	236	295	185	28	708	308	222	1077	469
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1900	1900	1900	1870	1885	1900	1900	1900	1885	1885	1870
Adj Flow Rate, veh/h	412	385	40	243	304	191	29	730	215	229	1110	278
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	0	0	0	2	1	0	0	0	1	1	2
Cap, veh/h	465	416	43	287	685	532	64	1379	615	252	1807	799
Arrive On Green	0.13	0.25	0.25	0.08	0.19	0.19	0.02	0.38	0.38	0.14	0.50	0.50
Sat Flow, veh/h	3456	1693	176	3510	3554	1598	3510	3610	1610	1795	3582	1585
Grp Volume(v), veh/h	412	0	425	243	304	191	29	730	215	229	1110	278
Grp Sat Flow(s),veh/h/ln	1728	0	1868	1755	1777	1598	1755	1805	1610	1795	1791	1585
Q Serve(g_s), s	18.7	0.0	35.5	10.9	12.1	14.5	1.3	25.1	15.2	20.1	35.6	16.9
Cycle Q Clear(g_c), s	18.7	0.0	35.5	10.9	12.1	14.5	1.3	25.1	15.2	20.1	35.6	16.9
Prop In Lane	1.00		0.09	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	465	0	459	287	685	532	64	1379	615	252	1807	799
V/C Ratio(X)	0.89	0.00	0.93	0.85	0.44	0.36	0.46	0.53	0.35	0.91	0.61	0.35
Avail Cap(c_a), veh/h	583	0	561	329	800	584	88	1379	615	325	1807	799
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	68.0	0.0	58.9	72.5	57.0	40.4	77.8	38.3	35.3	67.8	28.5	23.8
Incr Delay (d2), s/veh	12.9	0.0	19.3	16.4	0.5	0.4	5.0	1.5	1.6	24.0	1.6	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	14.0	0.0	26.2	9.4	9.3	9.7	1.1	17.0	10.3	16.3	22.1	10.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	80.9	0.0	78.2	88.9	57.4	40.8	82.8	39.7	36.8	91.8	30.1	25.0
LnGrp LOS	F	A	E	F	E	D	F	D	D	F	C	C
Approach Vol, veh/h	837			738			974			1617		
Approach Delay, s/veh	79.5			63.5			40.4			37.9		
Approach LOS	E			E			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	28.5	67.1	19.1	45.3	8.9	86.7	27.5	36.9				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	29.0	44.0	15.0	48.0	4.0	69.0	27.0	36.0				
Max Q Clear Time (g_c+I1), s	22.1	27.1	12.9	37.5	3.3	37.6	20.7	14.1				
Green Ext Time (p_c), s	0.4	3.6	0.2	1.8	0.0	7.5	0.8	1.0				
Intersection Summary												
HCM 6th Ctrl Delay	51.4											
HCM 6th LOS	D											

HCM 6th Signalized Intersection Summary

2: SR 400 Exit 6/Dunwoody PI & Northridge Rd

08/31/2020

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (veh/h)	185	888	299	63	276	1341	745	351	388	349	364	184	
Future Volume (veh/h)	185	888	299	63	276	1341	745	351	388	349	364	184	
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach	No			No			No			No			
Adj Sat Flow, veh/h/ln	1900	1900	1900	1885	1900	1900	1900	1885	1900	1900	1885	1900	
Adj Flow Rate, veh/h	187	897	24	64	279	597	753	355	341	353	368	0	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	
Percent Heavy Veh, %	0	0	0	1	0	0	0	1	0	0	1	0	
Cap, veh/h	274	996	444	142	423	717	815	754	644	402	1011		
Arrive On Green	0.09	0.28	0.28	0.04	0.22	0.22	0.23	0.40	0.40	0.11	0.28	0.00	
Sat Flow, veh/h	1810	3610	1610	1795	1900	3220	3510	1885	1610	3510	3582	1610	
Grp Volume(v), veh/h	187	897	24	64	279	597	753	355	341	353	368	0	
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1795	1900	1610	1755	1885	1610	1755	1791	1610	
Q Serve(g_s), s	10.8	33.5	1.5	3.8	18.7	24.8	29.4	19.5	22.6	13.9	11.5	0.0	
Cycle Q Clear(g_c), s	10.8	33.5	1.5	3.8	18.7	24.8	29.4	19.5	22.6	13.9	11.5	0.0	
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Lane Grp Cap(c), veh/h	274	996	444	142	423	717	815	754	644	402	1011		
V/C Ratio(X)	0.68	0.90	0.05	0.45	0.66	0.83	0.92	0.47	0.53	0.88	0.36		
Avail Cap(c_a), veh/h	276	1392	621	151	638	1081	878	754	644	426	1011		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	
Uniform Delay (d), s/veh	37.4	48.8	37.2	42.4	49.6	51.9	52.6	31.1	32.0	61.0	40.2	0.0	
Incr Delay (d2), s/veh	6.6	6.3	0.0	2.2	1.8	3.6	14.7	2.1	3.1	17.9	1.0	0.0	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(95%),veh/ln	9.1	22.3	1.1	3.2	14.0	15.6	20.7	14.3	14.3	11.5	9.0	0.0	
Unsig. Movement Delay, s/veh													
LnGrp Delay(d),s/veh	44.0	55.1	37.3	44.6	51.4	55.5	67.2	33.2	35.1	78.9	41.2	0.0	
LnGrp LOS	D	E	D	D	D	E	E	C	D	E	D		
Approach Vol, veh/h	1108			940			1449			721			A
Approach Delay, s/veh	52.9			53.5			51.3			59.7			
Approach LOS	D			D			D			E			
Timer - Assigned Phs	1	2	3	4	5	6	7	8					
Phs Duration (G+Y+Rc), s	22.0	62.0	11.3	44.6	38.5	45.5	18.8	37.2					
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0					
Max Green Setting (Gmax), s	17.0	39.0	6.0	54.0	35.0	21.0	13.0	47.0					
Max Q Clear Time (g_c+I1), s	15.9	21.5	5.8	35.5	31.4	13.5	12.8	20.7					
Green Ext Time (p_c), s	0.2	0.8	0.0	3.1	1.1	1.3	0.0	0.2					

Intersection Summary

HCM 6th Ctrl Delay 53.6

HCM 6th LOS D

Notes

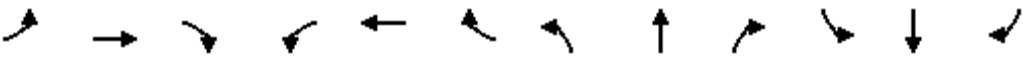
User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

3: Northside Dr & Powers Ferry Rd

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑		↑	↑					↑	↑	↑
Traffic Volume (veh/h)	0	657	242	46	1046	0	0	0	0	295	349	406
Future Volume (veh/h)	0	657	242	46	1046	0	0	0	0	295	349	406
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1900	1900	1900	1885	0				1900	1900	1900
Adj Flow Rate, veh/h	0	692	255	48	1101	0				311	367	427
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	1	0				0	0	0
Cap, veh/h	0	1948	707	362	1135	0				523	549	465
Arrive On Green	0.00	0.52	0.52	0.03	0.60	0.00				0.29	0.29	0.29
Sat Flow, veh/h	0	3922	1362	1810	1885	0				1810	1900	1610
Grp Volume(v), veh/h	0	637	310	48	1101	0				311	367	427
Grp Sat Flow(s),veh/h/ln	0	1729	1655	1810	1885	0				1810	1900	1610
Q Serve(g_s), s	0.0	11.9	12.2	1.3	61.5	0.0				16.2	18.7	28.2
Cycle Q Clear(g_c), s	0.0	11.9	12.2	1.3	61.5	0.0				16.2	18.7	28.2
Prop In Lane	0.00		0.82	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1796	859	362	1135	0				523	549	465
V/C Ratio(X)	0.00	0.35	0.36	0.13	0.97	0.00				0.59	0.67	0.92
Avail Cap(c_a), veh/h	0	1886	903	377	1200	0				523	549	465
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.38	0.38	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	15.6	15.6	11.7	21.0	0.0				33.6	34.5	37.8
Incr Delay (d2), s/veh	0.0	0.1	0.3	0.1	9.9	0.0				4.9	6.3	25.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	8.1	7.9	0.9	32.3	0.0				12.3	14.5	20.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	15.7	15.9	11.7	30.8	0.0				38.5	40.8	63.3
LnGrp LOS	A	B	B	B	C	A				D	D	E
Approach Vol, veh/h		947			1149						1105	
Approach Delay, s/veh		15.8			30.0						48.9	
Approach LOS		B			C						D	
Timer - Assigned Phs		2		4			7	8				
Phs Duration (G+Y+Rc), s		37.8		72.2			9.1	63.1				
Change Period (Y+Rc), s		6.0		6.0			6.0	6.0				
Max Green Setting (Gmax), s		28.0		70.0			4.0	60.0				
Max Q Clear Time (g_c+I1), s		20.7		63.5			3.3	14.2				
Green Ext Time (p_c), s		1.7		2.7			0.0	3.6				
Intersection Summary												
HCM 6th Ctrl Delay				32.3								
HCM 6th LOS				C								

HCM 6th Signalized Intersection Summary

4: Roswell Rd & Hannover Park Rd/Dunwoody PI

10/07/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	22	52	106	52	919	33	1245	83	248	607	13
Future Volume (veh/h)	33	22	52	106	52	919	33	1245	83	248	607	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1885	1900	1900	1900
Adj Flow Rate, veh/h	34	23	28	110	54	957	34	1297	0	258	632	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	1	0	0	0
Cap, veh/h	60	528	447	470	528	1030	44	1696		301	1918	
Arrive On Green	0.03	0.28	0.28	0.03	0.28	0.28	0.02	0.47	0.00	0.09	0.53	0.00
Sat Flow, veh/h	1810	1900	1610	1810	1900	2834	1810	3610	1598	3510	3610	1610
Grp Volume(v), veh/h	34	23	28	110	54	957	34	1297	0	258	632	0
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	1900	1417	1810	1805	1598	1755	1805	1610
Q Serve(g_s), s	3.3	1.6	2.3	6.0	3.8	50.0	3.4	53.5	0.0	13.1	17.9	0.0
Cycle Q Clear(g_c), s	3.3	1.6	2.3	6.0	3.8	50.0	3.4	53.5	0.0	13.1	17.9	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	60	528	447	470	528	1030	44	1696		301	1918	
V/C Ratio(X)	0.56	0.04	0.06	0.23	0.10	0.93	0.77	0.76		0.86	0.33	
Avail Cap(c_a), veh/h	80	549	465	470	528	1030	80	1696		390	1918	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	85.7	47.5	47.8	45.8	48.3	55.1	87.3	39.5	0.0	81.2	24.0	0.0
Incr Delay (d2), s/veh	8.0	0.0	0.1	0.3	0.1	14.1	24.0	3.3	0.0	13.9	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.1	1.4	1.7	6.8	3.3	30.6	3.4	32.0	0.0	10.6	12.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	93.7	47.6	47.8	46.1	48.4	69.2	111.3	42.8	0.0	95.1	24.4	0.0
LnGrp LOS	F	D	D	D	D	E	F	D		F	C	
Approach Vol, veh/h		85			1121			1331	A		890	A
Approach Delay, s/veh		66.1			65.9			44.6			44.9	
Approach LOS		E			E			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	21.4	90.6	12.0	56.0	10.4	101.6	12.0	56.0				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	20.0	78.0	6.0	52.0	8.0	90.0	8.0	50.0				
Max Q Clear Time (g_c+I1), s	15.1	55.5	8.0	3.6	5.4	19.9	5.3	52.0				
Green Ext Time (p_c), s	0.4	9.4	0.0	0.0	0.0	4.4	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			52.2									
HCM 6th LOS			D									
Notes												
Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary

5: Roswell Rd /Roswell Rd & Northridge Rd

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	27	33	800	18	238	30	1277	585	432	748	27
Future Volume (veh/h)	24	27	33	800	18	238	30	1277	585	432	748	27
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	25	28	9	856	0	40	32	1344	195	455	787	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	27	31	50	919	0	409	41	1543	1931	483	1957	873
Arrive On Green	0.03	0.03	0.03	0.25	0.00	0.25	0.02	0.43	0.43	0.14	0.54	0.54
Sat Flow, veh/h	876	981	1610	3619	0	1610	1810	3610	2834	3510	3610	1610
Grp Volume(v), veh/h	53	0	9	856	0	40	32	1344	195	455	787	2
Grp Sat Flow(s),veh/h/ln	1856	0	1610	1810	0	1610	1810	1805	1417	1755	1805	1610
Q Serve(g_s), s	4.6	0.0	0.9	37.0	0.0	3.0	2.8	54.3	3.8	20.5	20.4	0.1
Cycle Q Clear(g_c), s	4.6	0.0	0.9	37.0	0.0	3.0	2.8	54.3	3.8	20.5	20.4	0.1
Prop In Lane	0.47		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	58	0	50	919	0	409	41	1543	1931	483	1957	873
V/C Ratio(X)	0.91	0.00	0.18	0.93	0.00	0.10	0.77	0.87	0.10	0.94	0.40	0.00
Avail Cap(c_a), veh/h	58	0	50	995	0	443	79	1543	1931	483	1957	873
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	77.3	0.0	75.5	58.3	0.0	45.7	77.8	41.8	8.7	68.4	21.5	16.8
Incr Delay (d2), s/veh	87.4	0.0	1.7	14.3	0.0	0.1	25.7	7.0	0.1	27.2	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.5	0.0	0.7	25.8	0.0	2.2	2.9	33.1	4.2	16.3	13.4	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	164.7	0.0	77.2	72.6	0.0	45.8	103.4	48.8	8.8	95.5	22.1	16.8
LnGrp LOS	F	A	E	E	A	D	F	D	A	F	C	B
Approach Vol, veh/h	62			896			1571			1244		
Approach Delay, s/veh	152.0			71.4			45.0			48.9		
Approach LOS	F			E			D			D		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	28.0	74.4		11.0	9.7	92.7		46.6				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	22.0	65.0		5.0	7.0	80.0		44.0				
Max Q Clear Time (g_c+I1), s	22.5	56.3		6.6	4.8	22.4		39.0				
Green Ext Time (p_c), s	0.0	5.7		0.0	0.0	5.8		1.6				
Intersection Summary												
HCM 6th Ctrl Delay	54.3											
HCM 6th LOS	D											
Notes												

HCM 6th Signalized Intersection Summary

6: Northside Dr & Interstate N Pkwy/New Northside Dr

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	123	15	616	190	1048	200	0	0	0	1	460	209
Future Volume (veh/h)	123	15	616	190	1048	200	0	0	0	1	460	209
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900				1900	1900	1900
Adj Flow Rate, veh/h	127	15	635	196	1080	26				1	474	215
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97				0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	166	21	892	398	1109	940				1	500	243
Arrive On Green	0.05	0.57	0.57	0.06	0.58	0.58				0.21	0.21	0.21
Sat Flow, veh/h	1810	37	1579	1810	1900	1610				5	2413	1171
Grp Volume(v), veh/h	127	0	650	196	1080	26				380	0	310
Grp Sat Flow(s),veh/h/ln	1810	0	1616	1810	1900	1610				1900	0	1689
Q Serve(g_s), s	3.2	0.0	32.2	5.0	60.3	0.8				21.8	0.0	19.6
Cycle Q Clear(g_c), s	3.2	0.0	32.2	5.0	60.3	0.8				21.8	0.0	19.6
Prop In Lane	1.00		0.98	1.00		1.00				0.00		0.69
Lane Grp Cap(c), veh/h	166	0	913	398	1109	940				393	0	350
V/C Ratio(X)	0.76	0.00	0.71	0.49	0.97	0.03				0.97	0.00	0.89
Avail Cap(c_a), veh/h	166	0	913	430	1123	951				393	0	350
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	26.3	0.0	17.4	14.7	22.1	9.7				43.2	0.0	42.4
Incr Delay (d2), s/veh	18.8	0.0	2.6	0.9	20.6	0.0				37.4	0.0	26.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.8	0.0	17.1	3.4	39.4	0.5				20.3	0.0	15.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.1	0.0	20.0	15.7	42.7	9.7				80.6	0.0	68.8
LnGrp LOS	D	A	C	B	D	A				F	A	E
Approach Vol, veh/h		777			1302						690	
Approach Delay, s/veh		24.1			38.0						75.3	
Approach LOS		C			D						E	
Timer - Assigned Phs		2	3	4			7	8				
Phs Duration (G+Y+Rc), s		28.8	13.0	68.2			11.0	70.2				
Change Period (Y+Rc), s		6.0	6.0	6.0			6.0	6.0				
Max Green Setting (Gmax), s		22.0	9.0	61.0			5.0	65.0				
Max Q Clear Time (g_c+l1), s		23.8	7.0	34.2			5.2	62.3				
Green Ext Time (p_c), s		0.0	0.1	5.1			0.0	1.9				
Intersection Summary												
HCM 6th Ctrl Delay			43.4									
HCM 6th LOS			D									

HCM 6th Signalized Intersection Summary

7: Riverside Dr & Heards Ferry Rd

09/03/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	243	97	48	87	232	146	76	971	29	59	501	190
Future Volume (veh/h)	243	97	48	87	232	146	76	971	29	59	501	190
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	251	100	49	90	239	151	78	1001	30	61	516	196
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	249	371	314	294	252	213	385	1021	865	63	1034	876
Arrive On Green	0.11	0.20	0.20	0.04	0.14	0.14	0.03	0.55	0.55	0.04	0.56	0.56
Sat Flow, veh/h	1767	1856	1572	1767	1856	1572	1767	1856	1572	1767	1856	1572
Grp Volume(v), veh/h	251	100	49	90	239	151	78	1001	30	61	516	196
Grp Sat Flow(s),veh/h/ln	1767	1856	1572	1767	1856	1572	1767	1856	1572	1767	1856	1572
Q Serve(g_s), s	15.0	6.4	3.6	6.0	17.9	12.9	2.7	73.8	1.2	4.8	23.9	8.8
Cycle Q Clear(g_c), s	15.0	6.4	3.6	6.0	17.9	12.9	2.7	73.8	1.2	4.8	23.9	8.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	249	371	314	294	252	213	385	1021	865	63	1034	876
V/C Ratio(X)	1.01	0.27	0.16	0.31	0.95	0.71	0.20	0.98	0.03	0.97	0.50	0.22
Avail Cap(c_a), veh/h	249	371	314	294	252	213	385	1021	865	63	1034	876
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.3	47.4	46.2	49.8	60.0	57.8	15.1	30.8	14.5	67.4	19.0	15.7
Incr Delay (d2), s/veh	59.6	0.4	0.2	0.6	42.8	10.3	0.3	23.9	0.1	101.1	1.7	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	9.6	5.4	2.6	5.0	16.9	9.6	2.0	48.1	0.8	7.1	15.9	5.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	107.9	47.7	46.5	50.4	102.8	68.1	15.4	54.7	14.5	168.6	20.7	16.3
LnGrp LOS	F	D	D	D	F	E	B	D	B	F	C	B
Approach Vol, veh/h	400			480			1109			773		
Approach Delay, s/veh	85.3			82.0			50.8			31.3		
Approach LOS	F			F			D			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.0	83.0	12.0	34.0	10.0	84.0	21.0	25.0				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	5.0	77.0	6.0	28.0	4.0	78.0	15.0	19.0				
Max Q Clear Time (g_c+I1), s	6.8	75.8	8.0	8.4	4.7	25.9	17.0	19.9				
Green Ext Time (p_c), s	0.0	0.8	0.0	0.3	0.0	2.4	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay	55.8											
HCM 6th LOS	E											

HCM 6th Signalized Intersection Summary

8: New Northside Dr & Powers Ferry Rd

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 							  				
Traffic Volume (veh/h)	342	461	0	0	558	322	510	528	27	0	0	0
Future Volume (veh/h)	342	461	0	0	558	322	510	528	27	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach	No			No			No					
Adj Sat Flow, veh/h/ln	1900	1900	0	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	368	496	0	0	600	346	548	568	29			
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	436	985	0	0	646	547	674	1274	65			
Arrive On Green	0.12	0.52	0.00	0.00	0.34	0.34	0.37	0.37	0.37			
Sat Flow, veh/h	3510	1900	0	0	1900	1610	1810	3423	175			
Grp Volume(v), veh/h	368	496	0	0	600	346	548	287	310			
Grp Sat Flow(s),veh/h/ln	1755	1900	0	0	1900	1610	1810	1729	1869			
Q Serve(g_s), s	11.3	18.7	0.0	0.0	33.5	19.9	30.0	13.7	13.7			
Cycle Q Clear(g_c), s	11.3	18.7	0.0	0.0	33.5	19.9	30.0	13.7	13.7			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		0.09			
Lane Grp Cap(c), veh/h	436	985	0	0	646	547	674	644	696			
V/C Ratio(X)	0.84	0.50	0.00	0.00	0.93	0.63	0.81	0.45	0.45			
Avail Cap(c_a), veh/h	511	1157	0	0	777	659	674	644	696			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.91	0.91	0.00	0.00	1.00	1.00	1.00	1.00	1.00			
Uniform Delay (d), s/veh	47.1	17.2	0.0	0.0	35.0	30.5	31.1	26.0	26.0			
Incr Delay (d2), s/veh	10.0	0.4	0.0	0.0	15.7	1.4	10.4	2.2	2.1			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	9.1	12.3	0.0	0.0	24.7	12.3	20.8	9.9	10.5			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.2	17.6	0.0	0.0	50.7	32.0	41.4	28.2	28.0			
LnGrp LOS	E	B	A	A	D	C	D	C	C			
Approach Vol, veh/h	864			946			1145					
Approach Delay, s/veh	34.5			43.9			34.5					
Approach LOS	C			D			C					
Timer - Assigned Phs	2			4			7			8		
Phs Duration (G+Y+Rc), s	47.0			63.0			19.7			43.4		
Change Period (Y+Rc), s	6.0			6.0			6.0			6.0		
Max Green Setting (Gmax), s	31.0			67.0			16.0			45.0		
Max Q Clear Time (g_c+I1), s	32.0			20.7			13.3			35.5		
Green Ext Time (p_c), s	0.0			3.4			0.4			1.9		
Intersection Summary												
HCM 6th Ctrl Delay	37.5											
HCM 6th LOS	D											

HCM 6th Signalized Intersection Summary

9: Mt Vernon Hwy & Abernathy Rd/Perimeter Center

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	256	851	24	73	1708	104	96	509	146	103	345	476
Future Volume (veh/h)	256	851	24	73	1708	104	96	509	146	103	345	476
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	1900	1900	1885	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	272	905	26	78	1817	111	102	541	0	110	367	373
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	1	0	0	0	0	0	0	0	0
Cap, veh/h	317	2297	1024	120	2095	935	160	552		109	510	373
Arrive On Green	0.18	1.00	1.00	0.03	0.58	0.58	0.05	0.15	0.00	0.04	0.14	0.14
Sat Flow, veh/h	3510	3610	1610	3483	3610	1610	1810	3610	1610	1810	3610	1610
Grp Volume(v), veh/h	272	905	26	78	1817	111	102	541	0	110	367	373
Grp Sat Flow(s),veh/h/ln	1755	1805	1610	1742	1805	1610	1810	1805	1610	1810	1805	1610
Q Serve(g_s), s	12.8	0.0	0.0	3.8	72.3	5.3	8.0	25.4	0.0	6.0	16.5	24.0
Cycle Q Clear(g_c), s	12.8	0.0	0.0	3.8	72.3	5.3	8.0	25.4	0.0	6.0	16.5	24.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	317	2297	1024	120	2095	935	160	552		109	510	373
V/C Ratio(X)	0.86	0.39	0.03	0.65	0.87	0.12	0.64	0.98		1.01	0.72	1.00
Avail Cap(c_a), veh/h	475	2297	1024	164	2095	935	160	552		109	510	373
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.91	0.91	0.91	1.00	1.00	1.00	0.90	0.90	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	68.6	0.0	0.0	81.1	30.1	16.1	60.8	71.7	0.0	69.2	69.8	65.3
Incr Delay (d2), s/veh	9.1	0.5	0.0	5.8	5.2	0.3	7.5	31.2	0.0	87.5	4.9	46.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	9.3	0.3	0.0	3.2	40.4	3.7	7.3	20.0	0.0	7.9	12.6	28.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	77.7	0.5	0.0	86.9	35.3	16.3	68.2	102.9	0.0	156.8	74.7	112.3
LnGrp LOS	E	A	A	F	D	B	E	F		F	E	F
Approach Vol, veh/h	1203			2006			643			A		
Approach Delay, s/veh	17.9			36.3			97.4			101.8		
Approach LOS	B			D			F			F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	21.3	104.7	12.0	32.0	11.8	114.2	14.0	30.0				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	23.0	91.0	6.0	26.0	8.0	106.0	8.0	24.0				
Max Q Clear Time (g_c+I1), s	14.8	74.3	8.0	27.4	5.8	2.0	10.0	18.5				
Green Ext Time (p_c), s	0.6	11.3	0.0	0.0	0.0	6.8	0.0	0.6				

Intersection Summary

HCM 6th Ctrl Delay	51.8
HCM 6th LOS	D

Notes

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

10: Johnson Ferry Rd & Abernathy Rd & Brandon Mill Rd NW

10/07/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	171	885	426	58	1915	145	652	79	18	57	109	88
Future Volume (veh/h)	171	885	426	58	1915	145	652	79	18	57	109	88
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	178	922	132	60	1995	0	679	82	19	59	114	14
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	158	1984	1182	75	1900		648	332	77	192	134	114
Arrive On Green	0.07	0.56	0.56	0.04	0.54	0.00	0.19	0.23	0.23	0.03	0.07	0.07
Sat Flow, veh/h	1767	3526	1572	1767	3526	1572	3428	1457	338	1767	1856	1572
Grp Volume(v), veh/h	178	922	132	60	1995	0	679	0	101	59	114	14
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1767	1763	1572	1714	0	1795	1767	1856	1572
Q Serve(g_s), s	12.0	27.9	4.1	6.1	97.0	0.0	34.0	0.0	8.3	5.6	10.9	1.5
Cycle Q Clear(g_c), s	12.0	27.9	4.1	6.1	97.0	0.0	34.0	0.0	8.3	5.6	10.9	1.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.19	1.00		1.00
Lane Grp Cap(c), veh/h	158	1984	1182	75	1900		648	0	409	192	134	114
V/C Ratio(X)	1.13	0.46	0.11	0.80	1.05		1.05	0.00	0.25	0.31	0.85	0.12
Avail Cap(c_a), veh/h	158	1984	1182	118	1900		648	0	409	192	134	114
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.78	0.78	0.78	1.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	64.6	23.3	6.1	85.4	41.5	0.0	73.0	0.0	56.9	74.5	82.5	78.2
Incr Delay (d2), s/veh	101.9	0.1	0.0	17.9	35.2	0.0	48.7	0.0	1.4	0.9	45.6	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	17.5	16.7	2.4	5.7	64.7	0.0	27.2	0.0	7.1	4.7	11.3	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	166.4	23.4	6.1	103.3	76.7	0.0	121.7	0.0	58.3	75.4	128.1	80.4
LnGrp LOS	F	C	A	F	F		F	A	E	E	F	F
Approach Vol, veh/h	1232			2055			A			780		
Approach Delay, s/veh	42.2			77.5			113.5			107.9		
Approach LOS	D			E			F			F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.0	47.0	13.7	107.3	40.0	19.0	18.0	103.0				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	6.0	41.0	12.0	97.0	34.0	13.0	12.0	97.0				
Max Q Clear Time (g_c+I1), s	7.6	10.3	8.1	29.9	36.0	12.9	14.0	99.0				
Green Ext Time (p_c), s	0.0	0.5	0.0	6.8	0.0	0.0	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay 75.2

HCM 6th LOS E

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

11: Peachtree Dunwoody Rd & Abernathy Rd

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	221	1030	194	0	1524	220	740	514	8	189	217	584
Future Volume (veh/h)	221	1030	194	0	1524	220	740	514	8	189	217	584
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1885	1885	1856	0	1900	1885	1885	1885	1826	1885	1885	1900
Adj Flow Rate, veh/h	230	1073	20	0	1588	47	771	535	8	197	226	504
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	1	3	0	0	1	1	1	5	1	1	0
Cap, veh/h	274	2710	828	0	2140	659	823	621	268	348	247	676
Arrive On Green	0.08	0.53	0.53	0.00	0.41	0.41	0.24	0.17	0.17	0.19	0.13	0.13
Sat Flow, veh/h	3483	5147	1572	0	5358	1598	3483	3582	1547	1795	1885	3220
Grp Volume(v), veh/h	230	1073	20	0	1588	47	771	535	8	197	226	504
Grp Sat Flow(s),veh/h/ln	1742	1716	1572	0	1729	1598	1742	1791	1547	1795	1885	1610
Q Serve(g_s), s	11.1	21.2	1.0	0.0	44.1	1.7	36.9	24.7	0.7	16.9	20.1	22.3
Cycle Q Clear(g_c), s	11.1	21.2	1.0	0.0	44.1	1.7	36.9	24.7	0.7	16.9	20.1	22.3
Prop In Lane	1.00		1.00	0.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	274	2710	828	0	2140	659	823	621	268	348	247	676
V/C Ratio(X)	0.84	0.40	0.02	0.00	0.74	0.07	0.94	0.86	0.03	0.57	0.91	0.75
Avail Cap(c_a), veh/h	369	2710	828	0	2140	659	881	843	364	348	277	727
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	0.28	0.28	0.56	0.56	0.56	1.00	1.00	1.00
Uniform Delay (d), s/veh	77.2	24.1	19.3	0.0	42.3	9.1	63.7	68.3	58.4	62.0	72.9	62.9
Incr Delay (d2), s/veh	12.0	0.4	0.1	0.0	0.7	0.1	10.6	4.0	0.0	2.1	30.6	3.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	9.2	13.4	0.7	0.0	22.3	2.1	22.7	15.8	0.5	12.6	17.5	15.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	89.2	24.5	19.4	0.0	43.0	9.2	74.3	72.3	58.4	64.1	103.5	66.8
LnGrp LOS	F	C	B	A	D	A	E	E	E	E	F	E
Approach Vol, veh/h	1323			1635			1314			927		
Approach Delay, s/veh	35.7			42.0			73.4			75.2		
Approach LOS	D			D			E			E		
Timer - Assigned Phs	2			3			4			5		
Phs Duration (G+Y+Rc), s	95.5			46.2			28.3			19.4		
Change Period (Y+Rc), s	6.0			6.0			6.0			6.0		
Max Green Setting (Gmax), s	84.0			43.0			25.0			18.0		
Max Q Clear Time (g_c+I1), s	23.2			38.9			22.1			13.1		
Green Ext Time (p_c), s	8.6			1.3			0.2			0.3		
Intersection Summary												
HCM 6th Ctrl Delay	54.2											
HCM 6th LOS	D											
Notes												

HCM Signalized Intersection Capacity Analysis

12: Peachtree Dunwoody Rd & Hollis Cobb Cir/Medical Center MARTA

10/07/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	211	4	114	127	2	134	18	1427	51	45	1548	85
Future Volume (vph)	211	4	114	127	2	134	18	1427	51	45	1548	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.85		1.00	0.85		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1805	1624		1787	1573		1805	3610	1599	1641	3610	1615
Flt Permitted	0.56	1.00		0.61	1.00		0.11	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)	1063	1624		1139	1573		200	3610	1599	208	3610	1615
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	215	4	116	130	2	137	18	1456	52	46	1580	87
RTOR Reduction (vph)	0	94	0	0	111	0	0	0	18	0	0	28
Lane Group Flow (vph)	215	26	0	130	28	0	18	1456	34	46	1580	59
Heavy Vehicles (%)	0%	0%	0%	1%	0%	3%	0%	0%	1%	10%	0%	0%
Turn Type	Perm	NA		Perm	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	30.0	30.0		30.0	30.0		109.7	106.0	106.0	114.3	108.3	108.3
Effective Green, g (s)	30.0	30.0		30.0	30.0		109.7	106.0	106.0	114.3	108.3	108.3
Actuated g/C Ratio	0.19	0.19		0.19	0.19		0.69	0.66	0.66	0.71	0.68	0.68
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	199	304		213	294		174	2391	1059	202	2443	1093
v/s Ratio Prot		0.02			0.02		0.00	0.40		c0.01	c0.44	
v/s Ratio Perm	c0.20			0.11			0.07		0.02	0.15		0.04
v/c Ratio	1.08	0.08		0.61	0.09		0.10	0.61	0.03	0.23	0.65	0.05
Uniform Delay, d1	65.0	53.7		59.6	53.8		12.3	15.3	9.3	11.6	14.9	8.7
Progression Factor	1.00	1.00		1.00	1.00		1.50	1.41	1.00	0.72	0.65	0.53
Incremental Delay, d2	86.8	0.1		5.1	0.1		0.2	1.0	0.1	0.4	0.9	0.1
Delay (s)	151.8	53.8		64.7	53.9		18.7	22.5	9.4	8.7	10.5	4.7
Level of Service	F	D		E	D		B	C	A	A	B	A
Approach Delay (s)		116.7			59.1			22.1			10.1	
Approach LOS		F			E			C			B	
Intersection Summary												
HCM 2000 Control Delay			27.6			HCM 2000 Level of Service				C		
HCM 2000 Volume to Capacity ratio			0.76									
Actuated Cycle Length (s)			160.0			Sum of lost time (s)			24.0			
Intersection Capacity Utilization			77.9%			ICU Level of Service			D			
Analysis Period (min)			15									
c Critical Lane Group												

HCM 6th Signalized Intersection Summary

13: River Valley Rd & Johnson Ferry Rd

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	948	57	367	2287	1	502	1	530	1	0	4
Future Volume (veh/h)	0	948	57	367	2287	1	502	1	530	1	0	4
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	0	1009	61	390	2433	1	534	1	0	1	0	4
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	41	2485	150	698	2205	1	444	1		573	0	509
Arrive On Green	0.00	0.51	0.51	0.09	0.81	0.81	0.29	0.29	0.00	0.00	0.00	0.32
Sat Flow, veh/h	1767	4885	295	3428	3617	1	1399	3	1572	1767	0	1572
Grp Volume(v), veh/h	0	697	373	390	1186	1248	535	0	0	1	0	4
Grp Sat Flow(s),veh/h/ln	1767	1689	1802	1714	1763	1855	1402	0	1572	1767	0	1572
Q Serve(g_s), s	0.0	23.0	23.1	9.7	109.8	109.8	52.0	0.0	0.0	0.1	0.0	0.3
Cycle Q Clear(g_c), s	0.0	23.0	23.1	9.7	109.8	109.8	52.0	0.0	0.0	0.1	0.0	0.3
Prop In Lane	1.00		0.16	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	41	1718	917	698	1075	1131	445	0		573	0	509
V/C Ratio(X)	0.00	0.41	0.41	0.56	1.10	1.10	1.20	0.00		0.00	0.00	0.01
Avail Cap(c_a), veh/h	79	1718	917	752	1075	1131	445	0		619	0	550
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.09	0.09	0.09	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	27.4	27.4	19.6	17.0	17.0	66.3	0.0	0.0	44.0	0.0	41.3
Incr Delay (d2), s/veh	0.0	0.7	1.3	0.1	48.0	48.0	110.8	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	14.7	15.7	4.7	52.6	55.3	49.4	0.0	0.0	0.1	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	28.1	28.7	19.7	65.0	65.0	177.2	0.0	0.0	44.0	0.0	41.3
LnGrp LOS	A	C	C	B	F	F	F	A		D	A	D
Approach Vol, veh/h	1070			2824			535			A		
Approach Delay, s/veh	28.3			58.8			177.2			41.8		
Approach LOS	C			E			F			D		
Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.2	97.6		64.2	0.0	115.8	6.2	58.0				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	15.0	84.0		63.0	4.0	95.0	5.0	52.0				
Max Q Clear Time (g_c+I1), s	11.7	25.1		2.3	0.0	111.8	2.1	54.0				
Green Ext Time (p_c), s	0.5	8.9		0.0	0.0	0.0	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			65.7									
HCM 6th LOS			E									
Notes												

Intersection			
Intersection Delay, s/veh	8.8		
Intersection LOS	A		
Approach	WB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	473	540	452
Demand Flow Rate, veh/h	481	540	454
Vehicles Circulating, veh/h	267	217	333
Vehicles Exiting, veh/h	490	570	415
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	8.7	8.8	9.1
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LR	TR	LT
Assumed Moves	LR	TR	LT
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	481	540	454
Cap Entry Lane, veh/h	1051	1106	983
Entry HV Adj Factor	0.983	1.000	0.995
Flow Entry, veh/h	473	540	452
Cap Entry, veh/h	1033	1106	977
V/C Ratio	0.458	0.488	0.462
Control Delay, s/veh	8.7	8.8	9.1
LOS	A	A	A
95th %tile Queue, veh	2	3	2

HCM 6th Signalized Intersection Summary

15: Roswell Rd & Spalding Dr

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	4	29	54	4	34	43	1015	70	23	906	14
Future Volume (veh/h)	8	4	29	54	4	34	43	1015	70	23	906	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	8	4	30	56	4	0	45	1057	73	24	944	15
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	96	42	95	109	6		518	2745	190	439	2894	46
Arrive On Green	0.06	0.06	0.06	0.06	0.06	0.00	0.02	0.82	0.82	0.02	0.81	0.81
Sat Flow, veh/h	1041	691	1572	1164	99	0	1767	3346	231	1767	3552	56
Grp Volume(v), veh/h	12	0	30	60	0	0	45	557	573	24	469	490
Grp Sat Flow(s),veh/h/ln	1732	0	1572	1263	0	0	1767	1763	1814	1767	1763	1845
Q Serve(g_s), s	0.0	0.0	3.3	7.6	0.0	0.0	0.8	14.9	14.9	0.4	12.1	12.1
Cycle Q Clear(g_c), s	1.1	0.0	3.3	8.7	0.0	0.0	0.8	14.9	14.9	0.4	12.1	12.1
Prop In Lane	0.67		1.00	0.93		0.00	1.00		0.13	1.00		0.03
Lane Grp Cap(c), veh/h	138	0	95	115	0		518	1446	1488	439	1437	1504
V/C Ratio(X)	0.09	0.00	0.32	0.52	0.00		0.09	0.38	0.39	0.05	0.33	0.33
Avail Cap(c_a), veh/h	351	0	314	309	0		582	1446	1488	503	1437	1504
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	80.0	0.0	81.0	84.0	0.0	0.0	2.8	4.2	4.2	3.1	4.2	4.2
Incr Delay (d2), s/veh	0.3	0.0	1.9	3.7	0.0	0.0	0.1	0.8	0.8	0.1	0.6	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.0	0.0	2.5	5.2	0.0	0.0	0.4	8.3	8.5	0.2	7.0	7.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	80.3	0.0	82.9	87.7	0.0	0.0	2.9	5.0	5.0	3.1	4.8	4.8
LnGrp LOS	F	A	F	F	A		A	A	A	A	A	A
Approach Vol, veh/h	42			60			1175			983		
Approach Delay, s/veh	82.2			87.7			4.9			4.7		
Approach LOS	F			F			A			A		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.5	153.7		16.8	10.5	152.7		16.8				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	10.0	116.0		36.0	11.0	115.0		36.0				
Max Q Clear Time (g_c+I1), s	2.4	16.9		3.1	2.8	14.1		10.7				
Green Ext Time (p_c), s	0.0	8.7		0.0	0.0	6.6		0.2				
Intersection Summary												
HCM 6th Ctrl Delay	8.5											
HCM 6th LOS	A											

HCM Signalized Intersection Capacity Analysis

16: Roberts Dr & Spalding Dr

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	316	281	23	33	225	507	19	340	30	336	297	64
Future Volume (vph)	316	281	23	33	225	507	19	340	30	336	297	64
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1805	1862		1805	1881	1615	1770	1860		1805	1831	
Flt Permitted	0.95	1.00		0.41	1.00	1.00	0.51	1.00		0.17	1.00	
Satd. Flow (perm)	1805	1862		776	1881	1615	950	1860		321	1831	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	336	299	24	35	239	539	20	362	32	357	316	68
RTOR Reduction (vph)	0	3	0	0	0	69	0	4	0	0	9	0
Lane Group Flow (vph)	336	320	0	35	239	470	20	390	0	357	375	0
Heavy Vehicles (%)	0%	1%	0%	0%	1%	0%	2%	1%	0%	0%	1%	1%
Turn Type	Split	NA		Perm	NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases	4!	4			3 7 8!	1	5	2		1	6	
Permitted Phases				3 7 8		3 7 8	2			6		
Actuated Green, G (s)	17.0	17.0		36.0	36.0	50.0	27.0	22.0		42.0	31.0	
Effective Green, g (s)	17.0	17.0		36.0	36.0	50.0	27.0	22.0		42.0	31.0	
Actuated g/C Ratio	0.19	0.19		0.40	0.40	0.56	0.30	0.24		0.47	0.34	
Clearance Time (s)	6.0	6.0				6.0	6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0				3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	340	351		310	752	1004	330	454		380	630	
v/s Ratio Prot	c0.19	0.17			0.13	c0.07	0.00	0.21		c0.15	0.21	
v/s Ratio Perm				0.05		0.22	0.01			c0.29		
v/c Ratio	0.99	0.91		0.11	0.32	0.47	0.06	0.86		0.94	0.60	
Uniform Delay, d1	36.4	35.8		17.0	18.6	12.0	22.3	32.5		20.9	24.3	
Progression Factor	1.00	1.00		1.40	1.35	0.77	1.00	1.00		1.00	1.00	
Incremental Delay, d2	45.9	30.0		0.1	0.2	0.3	0.4	18.7		33.2	4.1	
Delay (s)	82.3	65.8		23.9	25.3	9.6	22.7	51.2		54.1	28.5	
Level of Service	F	E		C	C	A	C	D		D	C	
Approach Delay (s)		74.2			14.8			49.9			40.8	
Approach LOS		E			B			D			D	

Intersection Summary

HCM 2000 Control Delay	42.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	87.7%	ICU Level of Service	E
Analysis Period (min)	15		

! Phase conflict between lane groups.

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis

21: Dunwoody Club Dr & Spalding Dr

08/31/2020

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations				 	 	
Traffic Volume (vph)	270	378	13	514	250	5
Future Volume (vph)	270	378	13	514	250	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0			6.0	6.0	
Lane Util. Factor	1.00			0.95	1.00	
Frt	0.92			1.00	1.00	
Flt Protected	1.00			1.00	0.95	
Satd. Flow (prot)	1750			3605	1789	
Flt Permitted	1.00			0.93	0.95	
Satd. Flow (perm)	1750			3373	1789	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	281	394	14	535	260	5
RTOR Reduction (vph)	56	0	0	0	1	0
Lane Group Flow (vph)	619	0	0	549	264	0
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%
Turn Type	NA		custom	NA	Prot	
Protected Phases	1 2 4			1 6 7!	3!	
Permitted Phases			7!			
Actuated Green, G (s)	65.0			53.0	13.0	
Effective Green, g (s)	65.0			53.0	13.0	
Actuated g/C Ratio	0.72			0.59	0.14	
Clearance Time (s)					6.0	
Vehicle Extension (s)					3.0	
Lane Grp Cap (vph)	1263			1986	258	
v/s Ratio Prot	c0.35				c0.15	
v/s Ratio Perm				0.16		
v/c Ratio	0.49			0.28	1.02	
Uniform Delay, d1	5.4			9.1	38.5	
Progression Factor	0.39			1.00	1.00	
Incremental Delay, d2	0.5			0.1	62.3	
Delay (s)	2.6			9.2	100.8	
Level of Service	A			A	F	
Approach Delay (s)	2.6			9.2	100.8	
Approach LOS	A			A	F	
Intersection Summary						
HCM 2000 Control Delay			22.5		HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.68			
Actuated Cycle Length (s)			90.0		Sum of lost time (s)	24.0
Intersection Capacity Utilization			61.5%		ICU Level of Service	B
Analysis Period (min)			15			
! Phase conflict between lane groups.						
c Critical Lane Group						

HCM 6th Signalized Intersection Summary

17: Barfield Rd & Mt Vernon Hwy

10/07/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										 		
Traffic Volume (veh/h)	117	550	19	36	778	231	174	384	146	161	172	162
Future Volume (veh/h)	117	550	19	36	778	231	174	384	146	161	172	162
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1885	1885	1885	1841	1885	1900	1900	1885	1870	1900	1856	1885
Adj Flow Rate, veh/h	122	573	0	38	810	0	181	400	0	168	179	65
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	1	1	4	1	0	0	1	2	0	3	1
Cap, veh/h	246	1061		380	1018		319	427		206	395	340
Arrive On Green	0.04	0.56	0.00	0.02	0.54	0.00	0.07	0.23	0.00	0.06	0.21	0.21
Sat Flow, veh/h	1795	1885	0	1753	1885	1610	1810	1885	1585	3510	1856	1598
Grp Volume(v), veh/h	122	573	0	38	810	0	181	400	0	168	179	65
Grp Sat Flow(s),veh/h/ln	1795	1885	0	1753	1885	1610	1810	1885	1585	1755	1856	1598
Q Serve(g_s), s	5.5	34.4	0.0	1.8	62.4	0.0	13.0	37.5	0.0	8.5	15.1	6.0
Cycle Q Clear(g_c), s	5.5	34.4	0.0	1.8	62.4	0.0	13.0	37.5	0.0	8.5	15.1	6.0
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	246	1061		380	1018		319	427		206	395	340
V/C Ratio(X)	0.50	0.54		0.10	0.80		0.57	0.94		0.82	0.45	0.19
Avail Cap(c_a), veh/h	261	1061		386	1018		319	482		215	454	391
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.1	24.7	0.0	20.6	33.4	0.0	53.1	68.4	0.0	83.8	61.7	58.2
Incr Delay (d2), s/veh	1.5	2.0	0.0	0.1	6.4	0.0	2.3	24.7	0.0	20.7	0.8	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.4	22.6	0.0	1.3	39.0	0.0	2.1	28.5	0.0	7.9	11.7	4.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.6	26.7	0.0	20.7	39.8	0.0	55.4	93.1	0.0	104.4	62.6	58.4
LnGrp LOS	C	C		C	D		E	F		F	E	E
Approach Vol, veh/h	695		A	848		A	581		A	412		
Approach Delay, s/veh	27.5			39.0			81.3			79.0		
Approach LOS	C			D			F			E		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.4	107.3	19.0	44.3	13.5	103.2	16.5	46.7				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	4.0	95.0	13.0	44.0	9.0	90.0	11.0	46.0				
Max Q Clear Time (g_c+I1), s	3.8	36.4	15.0	17.1	7.5	64.4	10.5	39.5				
Green Ext Time (p_c), s	0.0	4.2	0.0	0.7	0.0	6.3	0.0	1.2				

Intersection Summary

HCM 6th Ctrl Delay	52.0
HCM 6th LOS	D

Notes

Unsignalized Delay for [NBR, EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

18: Peachtree Dunwoody Rd & Mt Vernon Hwy/Mt Vernon Hwy

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	185	540	85	103	309	5	69	996	289	0	331	101
Future Volume (veh/h)	185	540	85	103	309	5	69	996	289	0	331	101
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1885	1885	1900	1870	1203	1870	1900	1900	0	1870	1870
Adj Flow Rate, veh/h	195	568	36	108	325	0	73	1048	304	0	348	106
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	1	1	0	2	47	2	0	0	0	2	2
Cap, veh/h	528	1518	677	386	1399		90	1187	342	0	1227	547
Arrive On Green	0.08	0.42	0.42	0.05	0.39	0.00	0.05	0.43	0.43	0.00	0.35	0.35
Sat Flow, veh/h	1781	3582	1598	1810	3554	1020	1781	2765	796	0	3647	1585
Grp Volume(v), veh/h	195	568	36	108	325	0	73	681	671	0	348	106
Grp Sat Flow(s),veh/h/ln	1781	1791	1598	1810	1777	1020	1781	1805	1757	0	1777	1585
Q Serve(g_s), s	11.5	19.5	2.4	6.4	11.0	0.0	7.3	62.3	63.4	0.0	12.8	8.4
Cycle Q Clear(g_c), s	11.5	19.5	2.4	6.4	11.0	0.0	7.3	62.3	63.4	0.0	12.8	8.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.45	0.00		1.00
Lane Grp Cap(c), veh/h	528	1518	677	386	1399		90	775	754	0	1227	547
V/C Ratio(X)	0.37	0.37	0.05	0.28	0.23		0.81	0.88	0.89	0.00	0.28	0.19
Avail Cap(c_a), veh/h	609	1518	677	432	1399		188	983	956	0	1441	643
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.73	0.73	0.00	1.00	1.00	1.00	0.00	0.62	0.62
Uniform Delay (d), s/veh	28.0	35.5	30.6	30.6	36.4	0.0	84.6	47.1	47.4	0.0	42.8	41.4
Incr Delay (d2), s/veh	0.4	0.7	0.1	0.3	0.3	0.0	15.3	7.7	8.7	0.0	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.8	13.7	1.8	5.2	8.0	0.0	6.8	38.4	38.3	0.0	8.8	5.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.4	36.2	30.7	30.9	36.7	0.0	99.8	54.8	56.1	0.0	42.9	41.5
LnGrp LOS	C	D	C	C	D		F	D	E	A	D	D
Approach Vol, veh/h		799			433	A		1425			454	
Approach Delay, s/veh		34.1			35.2			57.7			42.5	
Approach LOS		C			D			E			D	
Timer - Assigned Phs	1	2	3	4	5	6		8				
Phs Duration (G+Y+Rc), s	14.4	82.3	15.1	68.1	19.9	76.9		83.3				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	13.0	51.0	19.0	73.0	22.0	42.0		98.0				
Max Q Clear Time (g_c+I1), s	8.4	21.5	9.3	14.8	13.5	13.0		65.4				
Green Ext Time (p_c), s	0.1	3.7	0.1	1.7	0.3	2.1		11.8				

Intersection Summary

HCM 6th Ctrl Delay 46.3

HCM 6th LOS D

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

19: Peachtree Dunwoody Rd & Lake Hearn Drive

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	135	20	33	428	0	249	6	1633	81	105	1167	11
Future Volume (veh/h)	135	20	33	428	0	249	6	1633	81	105	1167	11
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1900	1870	1900	1900	1811	1885	1811	1900	1885	1885
Adj Flow Rate, veh/h	144	21	0	455	0	265	6	1737	86	112	1241	12
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	0	2	0	0	6	1	6	0	1	1
Cap, veh/h	182	20		613	0	574	175	1769	758	189	1910	18
Arrive On Green	0.14	0.14	0.00	0.18	0.00	0.36	0.01	0.99	0.99	0.04	0.53	0.53
Sat Flow, veh/h	1017	148	1610	1781	0	1610	1725	3582	1535	1810	3635	35
Grp Volume(v), veh/h	165	0	0	455	0	265	6	1737	86	112	611	642
Grp Sat Flow(s),veh/h/ln	1165	0	1610	1781	0	1610	1725	1791	1535	1810	1791	1879
Q Serve(g_s), s	22.0	0.0	0.0	29.0	0.0	20.3	0.3	32.2	0.1	4.9	39.4	39.4
Cycle Q Clear(g_c), s	22.0	0.0	0.0	29.0	0.0	20.3	0.3	32.2	0.1	4.9	39.4	39.4
Prop In Lane	0.87		1.00	1.00		1.00	1.00		1.00	1.00		0.02
Lane Grp Cap(c), veh/h	202	0		613	0	574	175	1769	758	189	941	987
V/C Ratio(X)	0.82	0.00		0.74	0.00	0.46	0.03	0.98	0.11	0.59	0.65	0.65
Avail Cap(c_a), veh/h	202	0		613	0	574	208	1769	758	189	941	987
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.70	0.70	0.70	1.00	1.00	1.00
Uniform Delay (d), s/veh	69.3	0.0	0.0	48.1	0.0	39.7	23.7	0.7	0.5	24.3	27.4	27.4
Incr Delay (d2), s/veh	22.0	0.0	0.0	4.9	0.0	0.6	0.1	14.2	0.2	4.9	3.5	3.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	12.6	0.0	0.0	23.9	0.0	12.9	0.2	6.6	0.2	4.2	24.5	25.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	91.4	0.0	0.0	53.0	0.0	40.3	23.7	14.9	0.7	29.2	30.8	30.7
LnGrp LOS	F	A		D	A	D	C	B	A	C	C	C
Approach Vol, veh/h		165	A		720			1829			1365	
Approach Delay, s/veh		91.4			48.3			14.3			30.6	
Approach LOS		F			D			B			C	
Timer - Assigned Phs	1	2	3	4	5	6		8				
Phs Duration (G+Y+Rc), s	12.0	85.0	35.0	28.0	6.9	90.1		63.0				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	6.0	79.0	29.0	22.0	4.0	81.0		57.0				
Max Q Clear Time (g_c+I1), s	6.9	34.2	31.0	24.0	2.3	41.4		22.3				
Green Ext Time (p_c), s	0.0	20.4	0.0	0.0	0.0	10.7		1.8				
Intersection Summary												
HCM 6th Ctrl Delay			28.9									
HCM 6th LOS			C									
Notes												
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary

20: Glenridge Conn & Johnson Ferry Rd

09/11/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 					 	  		 	 	
Traffic Volume (veh/h)	227	322	392	134	626	526	452	1003	39	262	510	42
Future Volume (veh/h)	227	322	392	134	626	526	452	1003	39	262	510	42
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1870	1885	1885	1885	1885	1885	1900	1900	1885	1885	1885
Adj Flow Rate, veh/h	232	329	0	137	639	537	461	1023	0	267	520	43
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	1	2	1	1	1	1	1	0	0	1	1	1
Cap, veh/h	251	1437		514	668	713	493	1317		319	683	56
Arrive On Green	0.10	0.40	0.00	0.05	0.35	0.35	0.14	0.25	0.00	0.09	0.20	0.20
Sat Flow, veh/h	1795	3554	1598	1795	1885	1598	3483	5187	1610	3483	3350	276
Grp Volume(v), veh/h	232	329	0	137	639	537	461	1023	0	267	277	286
Grp Sat Flow(s),veh/h/ln	1795	1777	1598	1795	1885	1598	1742	1729	1610	1742	1791	1835
Q Serve(g_s), s	10.6	7.3	0.0	5.9	39.7	33.7	15.7	22.0	0.0	9.0	17.5	17.6
Cycle Q Clear(g_c), s	10.6	7.3	0.0	5.9	39.7	33.7	15.7	22.0	0.0	9.0	17.5	17.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.15
Lane Grp Cap(c), veh/h	251	1437		514	668	713	493	1317		319	365	374
V/C Ratio(X)	0.93	0.23		0.27	0.96	0.75	0.93	0.78		0.84	0.76	0.76
Avail Cap(c_a), veh/h	251	1451		514	676	719	493	1317		319	365	374
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.2	23.5	0.0	23.0	37.8	27.7	50.9	41.6	0.0	53.6	45.0	45.0
Incr Delay (d2), s/veh	37.2	0.1	0.0	0.3	24.2	4.5	25.1	4.6	0.0	17.3	13.8	13.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	11.4	5.5	0.0	4.5	30.0	19.3	13.1	14.7	0.0	8.2	14.0	14.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	69.3	23.5	0.0	23.3	62.0	32.2	76.1	46.2	0.0	70.9	58.8	58.8
LnGrp LOS	E	C		C	E	C	E	D		E	E	E
Approach Vol, veh/h		561	A		1313			1484	A		830	
Approach Delay, s/veh		42.5			45.8			55.5			62.7	
Approach LOS		D			D			E			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.0	36.5	12.0	54.5	23.0	30.5	18.0	48.5				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	11.0	30.0	6.0	49.0	17.0	24.0	12.0	43.0				
Max Q Clear Time (g_c+I1), s	11.0	24.0	7.9	9.3	17.7	19.6	12.6	41.7				
Green Ext Time (p_c), s	0.0	3.1	0.0	2.2	0.0	1.3	0.0	0.8				

Intersection Summary

HCM 6th Ctrl Delay	52.1
HCM 6th LOS	D

Notes

Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

1: Peachtree Dunwoody Rd & Johnson Ferry Rd

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	484	299	30	257	618	458	55	1135	194	99	363	444
Future Volume (veh/h)	484	299	30	257	618	458	55	1135	194	99	363	444
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1856	1856	1856	1900	1885	1885	1767	1885	1885	1826	1885	1826
Adj Flow Rate, veh/h	532	329	33	282	679	503	60	1247	76	109	399	213
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	3	3	3	0	1	1	9	1	1	5	1	5
Cap, veh/h	565	442	44	325	695	429	92	1525	680	129	1690	730
Arrive On Green	0.16	0.27	0.27	0.09	0.19	0.19	0.03	0.43	0.43	0.07	0.47	0.47
Sat Flow, veh/h	3428	1659	166	3510	3582	1598	3264	3582	1598	1739	3582	1547
Grp Volume(v), veh/h	532	0	362	282	679	503	60	1247	76	109	399	213
Grp Sat Flow(s),veh/h/ln	1714	0	1826	1755	1791	1598	1632	1791	1598	1739	1791	1547
Q Serve(g_s), s	26.1	0.0	30.8	13.5	32.0	33.0	3.1	52.1	4.9	10.5	11.3	14.3
Cycle Q Clear(g_c), s	26.1	0.0	30.8	13.5	32.0	33.0	3.1	52.1	4.9	10.5	11.3	14.3
Prop In Lane	1.00		0.09	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	565	0	486	325	695	429	92	1525	680	129	1690	730
V/C Ratio(X)	0.94	0.00	0.74	0.87	0.98	1.17	0.65	0.82	0.11	0.85	0.24	0.29
Avail Cap(c_a), veh/h	565	0	486	372	695	429	115	1525	680	225	1690	730
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	70.2	0.0	57.1	76.1	68.1	62.2	81.8	43.0	29.4	77.7	26.7	27.5
Incr Delay (d2), s/veh	24.4	0.0	6.1	17.6	28.2	100.2	8.6	5.0	0.3	13.8	0.3	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	19.3	0.0	21.3	11.1	24.1	42.7	2.5	32.1	3.5	9.0	8.6	9.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	94.6	0.0	63.2	93.7	96.4	162.4	90.3	48.0	29.8	91.5	27.0	28.5
LnGrp LOS	F	A	E	F	F	F	F	D	C	F	C	C
Approach Vol, veh/h	894		1464				1383		721			
Approach Delay, s/veh	81.9		118.6				48.8		37.2			
Approach LOS	F		F				D		D			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.6	78.4	21.7	51.3	10.8	86.2	34.0	39.0				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	22.0	63.0	18.0	43.0	6.0	79.0	28.0	33.0				
Max Q Clear Time (g_c+I1), s	12.5	54.1	15.5	32.8	5.1	13.3	28.1	34.0				
Green Ext Time (p_c), s	0.2	5.2	0.2	1.4	0.0	1.6	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay	76.4											
HCM 6th LOS	E											

HCM 6th Signalized Intersection Summary 2: SR 400 Exit 6/Dunwoody PI & Northridge Rd

08/31/2020

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (veh/h)	50	877	383	158	403	866	296	127	295	352	588	21	
Future Volume (veh/h)	50	877	383	158	403	866	296	127	295	352	588	21	
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach	No			No			No			No			
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1885	1900	1885	1885	1885	1885	1885	
Adj Flow Rate, veh/h	52	904	240	163	355	469	305	131	149	363	606	0	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	
Percent Heavy Veh, %	0	0	0	0	0	1	0	1	1	1	1	1	
Cap, veh/h	213	966	431	204	599	1007	358	675	572	434	1364		
Arrive On Green	0.03	0.27	0.27	0.08	0.32	0.32	0.10	0.36	0.36	0.12	0.38	0.00	
Sat Flow, veh/h	1810	3610	1610	1810	1900	3195	3510	1885	1598	3483	3582	1598	
Grp Volume(v), veh/h	52	904	240	163	355	469	305	131	149	363	606	0	
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1810	1900	1598	1755	1885	1598	1742	1791	1598	
Q Serve(g_s), s	2.9	34.3	18.0	8.9	22.0	16.5	12.0	6.7	9.2	14.3	17.7	0.0	
Cycle Q Clear(g_c), s	2.9	34.3	18.0	8.9	22.0	16.5	12.0	6.7	9.2	14.3	17.7	0.0	
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Lane Grp Cap(c), veh/h	213	966	431	204	599	1007	358	675	572	434	1364		
V/C Ratio(X)	0.24	0.94	0.56	0.80	0.59	0.47	0.85	0.19	0.26	0.84	0.44		
Avail Cap(c_a), veh/h	223	1031	460	231	651	1096	426	675	572	896	1364		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	
Uniform Delay (d), s/veh	36.4	50.1	44.1	37.0	40.4	38.5	61.8	31.0	31.8	59.9	32.3	0.0	
Incr Delay (d2), s/veh	0.6	14.6	1.3	16.0	1.2	0.3	13.3	0.6	1.1	4.3	1.1	0.0	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(95%),veh/ln	2.4	24.1	11.7	8.4	15.8	10.7	10.0	5.8	6.8	10.7	12.4	0.0	
Unsig. Movement Delay, s/veh													
LnGrp Delay(d),s/veh	37.0	64.6	45.4	52.9	41.6	38.8	75.1	31.6	32.9	64.2	33.3	0.0	
LnGrp LOS	D	E	D	D	D	D	E	C	C	E	C		
Approach Vol, veh/h	1196			987			585			969			A
Approach Delay, s/veh	59.6			42.1			54.6			44.9			
Approach LOS	E			D			D			D			
Timer - Assigned Phs	1	2	3	4	5	6	7	8					
Phs Duration (G+Y+Rc), s	23.5	56.1	16.9	43.5	20.3	59.3	10.3	50.1					
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0					
Max Green Setting (Gmax), s	36.0	27.0	13.0	40.0	17.0	46.0	5.0	48.0					
Max Q Clear Time (g_c+I1), s	16.3	8.7	10.9	36.3	14.0	19.7	4.9	24.0					
Green Ext Time (p_c), s	1.2	0.2	0.1	1.2	0.3	4.2	0.0	0.4					

Intersection Summary

HCM 6th Ctrl Delay 50.4

HCM 6th LOS D

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

3: Northside Dr & Powers Ferry Rd

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑		↑	↑					↑	↑	↑
Traffic Volume (veh/h)	0	1286	577	68	309	0	0	0	0	653	742	243
Future Volume (veh/h)	0	1286	577	68	309	0	0	0	0	653	742	243
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1900	1900	1900	1885	0				1900	1900	1900
Adj Flow Rate, veh/h	0	1398	627	74	336	0				710	807	264
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	1	0				0	0	0
Cap, veh/h	0	1284	563	131	857	0				790	829	703
Arrive On Green	0.00	0.36	0.36	0.04	0.45	0.00				0.44	0.44	0.44
Sat Flow, veh/h	0	3701	1549	1810	1885	0				1810	1900	1610
Grp Volume(v), veh/h	0	1369	656	74	336	0				710	807	264
Grp Sat Flow(s),veh/h/ln	0	1729	1621	1810	1885	0				1810	1900	1610
Q Serve(g_s), s	0.0	40.0	40.0	2.7	13.0	0.0				40.0	45.8	12.2
Cycle Q Clear(g_c), s	0.0	40.0	40.0	2.7	13.0	0.0				40.0	45.8	12.2
Prop In Lane	0.00		0.96	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1257	590	131	857	0				790	829	703
V/C Ratio(X)	0.00	1.09	1.11	0.56	0.39	0.00				0.90	0.97	0.38
Avail Cap(c_a), veh/h	0	1257	590	131	857	0				790	829	703
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.98	0.98	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	35.0	35.0	27.4	19.9	0.0				28.8	30.4	20.9
Incr Delay (d2), s/veh	0.0	53.1	72.1	5.3	0.3	0.0				15.2	25.4	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	35.7	38.1	2.4	9.4	0.0				27.1	34.0	8.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	88.1	107.1	32.8	20.2	0.0				44.0	55.8	22.4
LnGrp LOS	A	F	F	C	C	A				D	E	C
Approach Vol, veh/h		2025			410						1781	
Approach Delay, s/veh		94.2			22.5						46.1	
Approach LOS		F			C						D	
Timer - Assigned Phs		2		4			7	8				
Phs Duration (G+Y+Rc), s		54.0		56.0			10.0	46.0				
Change Period (Y+Rc), s		6.0		6.0			6.0	6.0				
Max Green Setting (Gmax), s		48.0		50.0			4.0	40.0				
Max Q Clear Time (g_c+I1), s		47.8		15.0			4.7	42.0				
Green Ext Time (p_c), s		0.2		1.0			0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay				66.9								
HCM 6th LOS				E								

HCM 6th Signalized Intersection Summary

4: Roswell Rd & Hannover Park Rd/Dunwoody PI

10/07/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	28	86	101	36	361	48	621	59	517	2252	37
Future Volume (veh/h)	31	28	86	101	36	361	48	621	59	517	2252	37
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	1900	1900	1885	1900	1885	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	32	29	38	105	38	376	50	647	0	539	2346	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	1	0	1	0	0	0	0	0	0
Cap, veh/h	41	63	54	154	115	645	64	2218		593	2700	
Arrive On Green	0.02	0.03	0.03	0.05	0.06	0.06	0.04	0.61	0.00	0.17	0.75	0.00
Sat Flow, veh/h	1810	1900	1610	1795	1900	2812	1810	3610	1610	3510	3610	1610
Grp Volume(v), veh/h	32	29	38	105	38	376	50	647	0	539	2346	0
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1795	1900	1406	1810	1805	1610	1755	1805	1610
Q Serve(g_s), s	3.2	2.7	4.2	9.0	3.5	10.9	4.9	15.2	0.0	27.1	84.2	0.0
Cycle Q Clear(g_c), s	3.2	2.7	4.2	9.0	3.5	10.9	4.9	15.2	0.0	27.1	84.2	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	41	63	54	154	115	645	64	2218		593	2700	
V/C Ratio(X)	0.77	0.46	0.71	0.68	0.33	0.58	0.78	0.29		0.91	0.87	
Avail Cap(c_a), veh/h	70	74	63	154	115	645	80	2218		722	2700	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	87.5	85.4	86.1	80.0	81.1	61.7	86.1	16.3	0.0	73.4	16.3	0.0
Incr Delay (d2), s/veh	25.4	5.1	26.0	11.4	1.7	1.3	31.0	0.3	0.0	13.7	4.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.2	2.6	3.9	9.1	3.2	12.4	5.1	10.4	0.0	19.2	41.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	112.8	90.5	112.2	91.4	82.7	63.1	117.1	16.6	0.0	87.2	20.5	0.0
LnGrp LOS	F	F	F	F	F	E	F	B		F	C	
Approach Vol, veh/h	99				519				697			
Approach Delay, s/veh	106.0				70.2				23.8			
Approach LOS	F				E				C			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	36.4	116.6	15.0	12.0	12.4	140.6	10.1	16.9				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	37.0	103.0	9.0	7.0	8.0	132.0	7.0	9.0				
Max Q Clear Time (g_c+I1), s	29.1	17.2	11.0	4.7	6.9	86.2	5.2	12.9				
Green Ext Time (p_c), s	1.3	4.5	0.0	0.0	0.0	31.9	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	37.7
HCM 6th LOS	D

Notes

Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

5: Roswell Rd /Roswell Rd & Northridge Rd

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	63	59	360	35	172	42	809	859	990	1663	70
Future Volume (veh/h)	20	63	59	360	35	172	42	809	859	990	1663	70
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1870	1900	1900	1900	1900	1900	1885
Adj Flow Rate, veh/h	21	65	9	397	0	22	43	834	706	1021	1714	20
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	2	0	0	0	0	0	1
Cap, veh/h	26	80	90	449	0	197	56	1365	1423	1083	2367	1047
Arrive On Green	0.06	0.06	0.06	0.12	0.00	0.12	0.03	0.38	0.38	0.31	0.66	0.66
Sat Flow, veh/h	458	1419	1610	3619	0	1585	1810	3610	2834	3510	3610	1598
Grp Volume(v), veh/h	86	0	9	397	0	22	43	834	706	1021	1714	20
Grp Sat Flow(s),veh/h/ln	1877	0	1610	1810	0	1585	1810	1805	1417	1755	1805	1598
Q Serve(g_s), s	8.2	0.0	1.0	19.4	0.0	2.2	4.2	33.6	29.7	51.1	56.0	0.8
Cycle Q Clear(g_c), s	8.2	0.0	1.0	19.4	0.0	2.2	4.2	33.6	29.7	51.1	56.0	0.8
Prop In Lane	0.24		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	105	0	90	449	0	197	56	1365	1423	1083	2367	1047
V/C Ratio(X)	0.82	0.00	0.10	0.88	0.00	0.11	0.77	0.61	0.50	0.94	0.72	0.02
Avail Cap(c_a), veh/h	146	0	125	603	0	264	90	1365	1423	1170	2367	1047
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	84.0	0.0	80.6	77.6	0.0	70.0	86.6	45.3	29.7	60.7	20.3	10.8
Incr Delay (d2), s/veh	21.3	0.0	0.5	11.6	0.0	0.2	20.0	2.0	1.2	14.2	2.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.1	0.0	0.7	14.9	0.0	1.7	4.1	21.7	19.2	32.6	30.8	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	105.3	0.0	81.1	89.2	0.0	70.3	106.6	47.3	31.0	74.9	22.3	10.8
LnGrp LOS	F	A	F	F	A	E	F	D	C	E	C	B
Approach Vol, veh/h		95			419			1583			2755	
Approach Delay, s/veh		103.0			88.2			41.6			41.7	
Approach LOS		F			F			D			D	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	61.5	74.0		16.1	11.5	124.0		28.3				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	60.0	52.0		14.0	9.0	103.0		30.0				
Max Q Clear Time (g_c+I1), s	53.1	35.6		10.2	6.2	58.0		21.4				
Green Ext Time (p_c), s	2.4	7.7		0.0	0.0	18.8		0.9				
Intersection Summary												
HCM 6th Ctrl Delay				46.9								
HCM 6th LOS				D								
Notes												
User approved volume balancing among the lanes for turning movement.												

HCM 6th Signalized Intersection Summary 6: Northside Dr & Interstate N Pkwy/New Northside Dr

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	183	184	1064	108	1207	359	0	0	0	18	193	74
Future Volume (veh/h)	183	184	1064	108	1207	359	0	0	0	18	193	74
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900				1885	1885	1885
Adj Flow Rate, veh/h	195	196	1132	115	1284	276				19	205	79
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94				0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0				1	1	1
Cap, veh/h	214	172	996	131	1261	1069				20	219	87
Arrive On Green	0.08	0.71	0.71	0.04	0.66	0.66				0.09	0.09	0.09
Sat Flow, veh/h	1810	243	1404	1810	1900	1610				219	2406	961
Grp Volume(v), veh/h	195	0	1328	115	1284	276				162	0	141
Grp Sat Flow(s),veh/h/ln	1810	0	1647	1810	1900	1610				1874	0	1712
Q Serve(g_s), s	7.7	0.0	78.0	2.9	73.0	7.7				9.5	0.0	9.0
Cycle Q Clear(g_c), s	7.7	0.0	78.0	2.9	73.0	7.7				9.5	0.0	9.0
Prop In Lane	1.00		0.85	1.00		1.00				0.12		0.56
Lane Grp Cap(c), veh/h	214	0	1168	131	1261	1069				170	0	156
V/C Ratio(X)	0.91	0.00	1.14	0.88	1.02	0.26				0.95	0.00	0.90
Avail Cap(c_a), veh/h	214	0	1168	131	1261	1069				170	0	156
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	39.6	0.0	16.0	32.9	18.5	7.5				49.8	0.0	49.5
Incr Delay (d2), s/veh	38.6	0.0	72.5	43.8	30.0	0.1				57.5	0.0	50.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	9.6	0.0	63.5	6.4	48.2	4.4				11.5	0.0	10.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	78.1	0.0	88.5	76.7	48.5	7.6				107.2	0.0	99.8
LnGrp LOS	E	A	F	E	F	A				F	A	F
Approach Vol, veh/h		1523			1675						303	
Approach Delay, s/veh		87.2			43.7						103.8	
Approach LOS		F			D						F	
Timer - Assigned Phs		2	3	4			7	8				
Phs Duration (G+Y+Rc), s		16.0	10.0	84.0			15.0	79.0				
Change Period (Y+Rc), s		6.0	6.0	6.0			6.0	6.0				
Max Green Setting (Gmax), s		10.0	4.0	78.0			9.0	73.0				
Max Q Clear Time (g_c+I1), s		11.5	4.9	80.0			9.7	75.0				
Green Ext Time (p_c), s		0.0	0.0	0.0			0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			67.8									
HCM 6th LOS			E									

HCM 6th Signalized Intersection Summary

7: Riverside Dr & Heards Ferry Rd

09/03/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	147	268	136	79	221	49	167	439	152	55	908	158
Future Volume (veh/h)	147	268	136	79	221	49	167	439	152	55	908	158
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	153	279	142	82	230	51	174	457	158	57	946	165
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	169	308	261	119	255	216	219	1100	932	73	1075	911
Arrive On Green	0.06	0.17	0.17	0.03	0.14	0.14	0.05	0.59	0.59	0.04	0.58	0.58
Sat Flow, veh/h	1767	1856	1572	1767	1856	1572	1767	1856	1572	1767	1856	1572
Grp Volume(v), veh/h	153	279	142	82	230	51	174	457	158	57	946	165
Grp Sat Flow(s),veh/h/ln	1767	1856	1572	1767	1856	1572	1767	1856	1572	1767	1856	1572
Q Serve(g_s), s	8.0	20.7	11.6	4.0	17.1	4.0	5.6	18.6	6.4	4.5	61.2	6.9
Cycle Q Clear(g_c), s	8.0	20.7	11.6	4.0	17.1	4.0	5.6	18.6	6.4	4.5	61.2	6.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	169	308	261	119	255	216	219	1100	932	73	1075	911
V/C Ratio(X)	0.90	0.91	0.54	0.69	0.90	0.24	0.79	0.42	0.17	0.78	0.88	0.18
Avail Cap(c_a), veh/h	169	318	270	119	265	225	237	1100	932	126	1075	911
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.6	57.3	53.5	56.7	59.5	53.8	29.8	15.4	12.9	66.5	25.3	13.8
Incr Delay (d2), s/veh	43.0	27.6	2.1	15.1	30.5	0.6	15.7	1.2	0.4	16.2	10.3	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.4	17.7	8.3	2.7	15.4	2.9	7.8	12.7	4.2	4.2	37.4	4.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	97.6	84.9	55.6	71.8	90.0	54.4	45.5	16.6	13.3	82.7	35.6	14.3
LnGrp LOS	F	F	E	E	F	D	D	B	B	F	D	B
Approach Vol, veh/h	574			363			789			1168		
Approach Delay, s/veh	81.0			80.9			22.3			34.8		
Approach LOS	F			F			C			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.8	89.0	10.0	29.2	13.6	87.1	14.0	25.2				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	10.0	78.0	4.0	24.0	9.0	79.0	8.0	20.0				
Max Q Clear Time (g_c+I1), s	6.5	20.6	6.0	22.7	7.6	63.2	10.0	19.1				
Green Ext Time (p_c), s	0.0	4.3	0.0	0.3	0.1	7.4	0.0	0.1				
Intersection Summary												
HCM 6th Ctrl Delay	46.4											
HCM 6th LOS	D											

HCM 6th Signalized Intersection Summary

8: New Northside Dr & Powers Ferry Rd

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	562	982	0	0	164	210	131	344	96	0	0	0
Future Volume (veh/h)	562	982	0	0	164	210	131	344	96	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach	No			No			No					
Adj Sat Flow, veh/h/ln	1885	1900	0	0	1885	1900	1900	1900	1900			
Adj Flow Rate, veh/h	618	1079	0	0	180	231	144	378	105			
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91			
Percent Heavy Veh, %	1	0	0	0	1	0	0	0	0			
Cap, veh/h	700	1161	0	0	670	573	322	910	253			
Arrive On Green	0.20	0.61	0.00	0.00	0.36	0.36	0.28	0.28	0.28			
Sat Flow, veh/h	3483	1900	0	0	1885	1610	1151	3253	905			
Grp Volume(v), veh/h	618	1079	0	0	180	231	231	195	201			
Grp Sat Flow(s),veh/h/ln	1742	1900	0	0	1885	1610	1842	1729	1737			
Q Serve(g_s), s	19.0	56.2	0.0	0.0	7.5	11.9	11.3	10.1	10.4			
Cycle Q Clear(g_c), s	19.0	56.2	0.0	0.0	7.5	11.9	11.3	10.1	10.4			
Prop In Lane	1.00		0.00	0.00		1.00	0.62		0.52			
Lane Grp Cap(c), veh/h	700	1161	0	0	670	573	515	484	486			
V/C Ratio(X)	0.88	0.93	0.00	0.00	0.27	0.40	0.45	0.40	0.41			
Avail Cap(c_a), veh/h	823	1347	0	0	788	673	515	484	486			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.09	0.09	0.00	0.00	1.00	1.00	1.00	1.00	1.00			
Uniform Delay (d), s/veh	42.7	19.2	0.0	0.0	25.2	26.7	32.6	32.2	32.3			
Incr Delay (d2), s/veh	1.0	1.2	0.0	0.0	0.2	0.5	2.8	2.5	2.6			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	9.5	24.6	0.0	0.0	6.0	8.0	9.2	8.0	8.2			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.7	20.5	0.0	0.0	25.5	27.1	35.4	34.7	34.9			
LnGrp LOS	D	C	A	A	C	C	D	C	C			
Approach Vol, veh/h	1697			411			627					
Approach Delay, s/veh	28.9			26.4			35.0					
Approach LOS	C			C			D					
Timer - Assigned Phs	2			4			7			8		
Phs Duration (G+Y+Rc), s	36.8			73.2			28.1			45.1		
Change Period (Y+Rc), s	6.0			6.0			6.0			6.0		
Max Green Setting (Gmax), s	20.0			78.0			26.0			46.0		
Max Q Clear Time (g_c+I1), s	13.3			58.2			21.0			9.5		
Green Ext Time (p_c), s	2.0			9.0			1.2			0.3		
Intersection Summary												
HCM 6th Ctrl Delay	29.9											
HCM 6th LOS	C											

HCM 6th Signalized Intersection Summary

9: Mt Vernon Hwy & Abernathy Rd/Perimeter Center

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	341	1634	33	56	725	94	38	279	113	258	567	531
Future Volume (veh/h)	341	1634	33	56	725	94	38	279	113	258	567	531
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1885	1900	1900	1885
Adj Flow Rate, veh/h	352	1685	34	58	747	97	39	288	0	266	585	367
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	1	0	0	1
Cap, veh/h	403	2129	950	116	1835	818	128	335		317	745	513
Arrive On Green	0.23	1.00	1.00	0.03	0.51	0.51	0.03	0.09	0.00	0.14	0.21	0.21
Sat Flow, veh/h	3510	3610	1610	3510	3610	1610	1810	3610	1598	1810	3610	1598
Grp Volume(v), veh/h	352	1685	34	58	747	97	39	288	0	266	585	367
Grp Sat Flow(s),veh/h/ln	1755	1805	1610	1755	1805	1610	1810	1805	1598	1810	1805	1598
Q Serve(g_s), s	16.4	0.0	0.0	2.8	21.8	5.4	3.3	13.4	0.0	22.0	26.1	34.4
Cycle Q Clear(g_c), s	16.4	0.0	0.0	2.8	21.8	5.4	3.3	13.4	0.0	22.0	26.1	34.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	403	2129	950	116	1835	818	128	335		317	745	513
V/C Ratio(X)	0.87	0.79	0.04	0.50	0.41	0.12	0.31	0.86		0.84	0.79	0.72
Avail Cap(c_a), veh/h	723	2129	950	124	1835	818	138	382		356	849	559
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.84	0.84	0.84	1.00	1.00	1.00	0.79	0.79	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	64.3	0.0	0.0	80.8	25.9	21.9	67.0	76.0	0.0	57.3	63.9	50.9
Incr Delay (d2), s/veh	5.2	2.6	0.1	3.3	0.7	0.3	1.1	13.1	0.0	14.8	4.3	4.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	10.6	1.4	0.0	2.3	14.5	3.9	2.8	10.6	0.0	16.9	18.2	20.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	69.5	2.6	0.1	84.1	26.6	22.2	68.1	89.2	0.0	72.1	68.2	54.8
LnGrp LOS	E	A	A	F	C	C	E	F		E	E	D
Approach Vol, veh/h	2071				902				327			
Approach Delay, s/veh	13.9				29.8				86.6			
Approach LOS	B				C				F			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	25.5	92.4	30.3	21.8	11.6	106.3	11.0	41.1				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	35.0	65.0	28.0	18.0	6.0	94.0	6.0	40.0				
Max Q Clear Time (g_c+I1), s	18.4	23.8	24.0	15.4	4.8	2.0	5.3	28.1				
Green Ext Time (p_c), s	1.1	4.6	0.3	0.4	0.0	21.0	0.0	1.9				

Intersection Summary

HCM 6th Ctrl Delay	36.2
HCM 6th LOS	D

Notes

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

10: Johnson Ferry Rd & Abernathy Rd & Brandon Mill Rd NW

10/07/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	68	2485	1319	14	567	48	195	44	23	181	274	176
Future Volume (veh/h)	68	2485	1319	14	567	48	195	44	23	181	274	176
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	71	2589	1270	15	591	0	203	46	24	189	285	131
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	544	2292	1092	21	2255		152	121	63	306	298	252
Arrive On Green	0.02	0.65	0.65	0.01	0.64	0.00	0.04	0.10	0.10	0.10	0.16	0.16
Sat Flow, veh/h	1767	3526	1572	1767	3526	1572	3428	1148	599	1767	1856	1572
Grp Volume(v), veh/h	71	2589	1270	15	591	0	203	0	70	189	285	131
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1767	1763	1572	1714	0	1748	1767	1856	1572
Q Serve(g_s), s	2.5	117.0	117.0	1.5	13.1	0.0	8.0	0.0	6.7	16.9	27.4	13.7
Cycle Q Clear(g_c), s	2.5	117.0	117.0	1.5	13.1	0.0	8.0	0.0	6.7	16.9	27.4	13.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.34	1.00		1.00
Lane Grp Cap(c), veh/h	544	2292	1092	21	2255		152	0	183	306	298	252
V/C Ratio(X)	0.13	1.13	1.16	0.72	0.26		1.33	0.00	0.38	0.62	0.96	0.52
Avail Cap(c_a), veh/h	544	2292	1092	39	2292		152	0	183	306	298	252
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	1.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.2	31.5	27.5	88.7	14.1	0.0	86.0	0.0	75.1	62.2	74.9	69.2
Incr Delay (d2), s/veh	0.0	59.0	74.4	37.7	0.1	0.0	187.3	0.0	5.9	3.7	42.3	7.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.5	78.7	80.8	1.7	9.1	0.0	12.9	0.0	6.0	12.6	23.3	10.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.3	90.5	101.9	126.4	14.1	0.0	273.3	0.0	81.0	65.9	117.2	76.6
LnGrp LOS	B	F	F	F	B		F	A	F	E	F	E
Approach Vol, veh/h	3930			606			A			273		
Approach Delay, s/veh	92.8			16.9			224.0			92.4		
Approach LOS	F			B			F			F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	24.0	24.9	8.1	123.0	14.0	34.9	10.0	121.1				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	18.0	17.0	4.0	117.0	8.0	27.0	4.0	117.0				
Max Q Clear Time (g_c+I1), s	18.9	8.7	3.5	119.0	10.0	29.4	4.5	15.1				
Green Ext Time (p_c), s	0.0	0.1	0.0	0.0	0.0	0.0	0.0	4.5				

Intersection Summary

HCM 6th Ctrl Delay 90.8

HCM 6th LOS F

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

11: Peachtree Dunwoody Rd & Abernathy Rd

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  			  		 	 		 	 	
Traffic Volume (veh/h)	736	1485	820	9	1174	253	184	370	9	210	410	437
Future Volume (veh/h)	736	1485	820	9	1174	253	184	370	9	210	410	437
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	1885	1885	1870	1870	1885	1870	1870	1900	1870	1870	1870
Adj Flow Rate, veh/h	751	1515	735	9	1198	54	188	378	9	214	418	89
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	1	1	2	2	1	2	2	0	2	2	2
Cap, veh/h	807	3291	1022	27	1804	598	231	435	197	235	702	662
Arrive On Green	0.23	0.64	0.64	0.37	0.37	0.37	0.02	0.04	0.04	0.13	0.19	0.19
Sat Flow, veh/h	3510	5147	1598	13	4822	1598	3456	3554	1610	1781	3741	1585
Grp Volume(v), veh/h	751	1515	735	434	773	54	188	378	9	214	418	89
Grp Sat Flow(s),veh/h/ln	1755	1716	1598	1737	1549	1598	1728	1777	1610	1781	1870	1585
Q Serve(g_s), s	35.6	25.6	52.2	0.0	35.4	2.5	9.2	18.0	0.9	20.1	17.4	5.9
Cycle Q Clear(g_c), s	35.6	25.6	52.2	32.2	35.4	2.5	9.2	18.0	0.9	20.1	17.4	5.9
Prop In Lane	1.00		1.00	0.02		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	807	3291	1022	672	1159	598	231	435	197	235	702	662
V/C Ratio(X)	0.93	0.46	0.72	0.65	0.67	0.09	0.81	0.87	0.05	0.91	0.60	0.13
Avail Cap(c_a), veh/h	888	3291	1022	672	1159	598	285	502	227	304	858	728
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.80	0.80	0.80	0.89	0.89	0.89	1.00	1.00	1.00
Uniform Delay (d), s/veh	64.1	15.7	20.5	43.3	44.3	15.7	82.1	80.2	72.0	72.8	63.1	30.5
Incr Delay (d2), s/veh	15.2	0.5	4.4	3.8	2.4	0.2	12.4	12.3	0.1	25.3	0.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	24.2	14.9	27.5	21.1	19.2	2.7	8.0	14.2	0.7	16.3	13.1	4.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	79.3	16.1	24.8	47.2	46.8	16.0	94.5	92.5	72.1	98.1	63.9	30.6
LnGrp LOS	E	B	C	D	D	B	F	F	E	F	E	C
Approach Vol, veh/h	3001			1261			575			721		
Approach Delay, s/veh	34.1			45.6			92.9			70.0		
Approach LOS	C			D			F			E		
Timer - Assigned Phs	2			3			4			5		
Phs Duration (G+Y+Rc), s	114.7			17.4			37.9			45.1		
Change Period (Y+Rc), s	6.0			6.0			6.0			6.0		
Max Green Setting (Gmax), s	99.0			14.0			39.0			43.0		
Max Q Clear Time (g_c+l1), s	27.6			11.2			19.4			37.6		
Green Ext Time (p_c), s	8.4			0.2			2.1			1.5		
Intersection Summary												
HCM 6th Ctrl Delay	47.4											
HCM 6th LOS	D											

HCM Signalized Intersection Capacity Analysis

12: Peachtree Dunwoody Rd & Hollis Cobb Cir/Medical Center MARTA

10/07/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	205	9	51	63	3	44	68	1689	168	166	1535	245
Future Volume (vph)	205	9	51	63	3	44	68	1689	168	166	1535	245
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.87		1.00	0.86		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1805	1629		1805	1432		1805	3610	1599	1752	3574	1615
Flt Permitted	0.73	1.00		0.72	1.00		0.13	1.00	1.00	0.05	1.00	1.00
Satd. Flow (perm)	1379	1629		1362	1432		245	3610	1599	99	3574	1615
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	211	9	53	65	3	45	70	1741	173	171	1582	253
RTOR Reduction (vph)	0	46	0	0	39	0	0	0	37	0	0	48
Lane Group Flow (vph)	211	16	0	65	9	0	70	1741	136	171	1582	205
Heavy Vehicles (%)	0%	0%	2%	0%	0%	15%	0%	0%	1%	3%	1%	0%
Turn Type	Perm	NA		Perm	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	23.0	23.0		23.0	23.0		113.1	105.1	105.1	135.0	121.0	121.0
Effective Green, g (s)	23.0	23.0		23.0	23.0		113.1	105.1	105.1	135.0	121.0	121.0
Actuated g/C Ratio	0.14	0.14		0.14	0.14		0.67	0.62	0.62	0.79	0.71	0.71
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	186	220		184	193		236	2231	988	311	2543	1149
v/s Ratio Prot		0.01			0.01		0.01	c0.48		c0.08	c0.44	
v/s Ratio Perm	c0.15			0.05			0.18		0.09	0.36		0.13
v/c Ratio	1.13	0.07		0.35	0.05		0.30	0.78	0.14	0.55	0.62	0.18
Uniform Delay, d1	73.5	64.2		66.7	64.0		11.5	23.9	13.5	43.5	12.7	8.1
Progression Factor	1.00	1.00		1.00	1.00		1.26	1.03	1.53	1.46	0.62	0.78
Incremental Delay, d2	106.8	0.1		1.2	0.1		0.3	1.3	0.1	0.5	0.3	0.1
Delay (s)	180.3	64.3		67.9	64.1		14.8	25.9	20.8	63.8	8.2	6.4
Level of Service	F	E		E	E		B	C	C	E	A	A
Approach Delay (s)		153.9			66.3			25.1			12.7	
Approach LOS		F			E			C			B	
Intersection Summary												
HCM 2000 Control Delay			28.5				HCM 2000 Level of Service			C		
HCM 2000 Volume to Capacity ratio			0.84									
Actuated Cycle Length (s)			170.0				Sum of lost time (s)			24.0		
Intersection Capacity Utilization			88.9%				ICU Level of Service			E		
Analysis Period (min)			15									
c Critical Lane Group												

HCM 6th Signalized Intersection Summary

13: River Valley Rd & Johnson Ferry Rd

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	3499	394	385	563	1	75	0	384	0	0	0
Future Volume (veh/h)	6	3499	394	385	563	1	75	0	384	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	6	3762	424	414	605	1	81	0	0	0	0	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	651	3447	375	305	2984	5	135	0		177	126	0
Arrive On Green	0.01	0.74	0.74	0.18	1.00	1.00	0.07	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	1767	4638	504	3428	3611	6	1406	0	1572	1767	1856	0
Grp Volume(v), veh/h	6	2702	1484	414	295	311	81	0	0	0	0	0
Grp Sat Flow(s),veh/h/ln	1767	1689	1765	1714	1763	1854	1406	0	1572	1767	1856	0
Q Serve(g_s), s	0.2	133.8	133.8	16.0	0.0	0.0	10.3	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.2	133.8	133.8	16.0	0.0	0.0	10.3	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.29	1.00		0.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	651	2510	1312	305	1457	1533	135	0		177	126	0
V/C Ratio(X)	0.01	1.08	1.13	1.36	0.20	0.20	0.60	0.00		0.00	0.00	0.00
Avail Cap(c_a), veh/h	680	2510	1312	305	1457	1533	204	0		225	330	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.86	0.86	0.86	1.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	5.7	23.1	23.1	74.0	0.0	0.0	83.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	42.5	69.3	178.7	0.3	0.3	4.2	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.1	80.9	99.9	21.9	0.2	0.2	7.0	0.0	0.0	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	5.7	65.6	92.4	252.7	0.3	0.3	87.2	0.0	0.0	0.0	0.0	0.0
LnGrp LOS	A	F	F	F	A	A	F	A		A	A	A
Approach Vol, veh/h	4192				1020				81		A	
Approach Delay, s/veh	75.0				102.7				87.2		0.0	
Approach LOS	E				F				F			
Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	22.0	139.8		18.2	7.0	154.8	0.0	18.2				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	16.0	114.0		32.0	4.0	126.0	5.0	21.0				
Max Q Clear Time (g_c+I1), s	18.0	135.8		0.0	2.2	2.0	0.0	12.3				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	4.0	0.0	0.2				
Intersection Summary												
HCM 6th Ctrl Delay	80.5											
HCM 6th LOS	F											
Notes												

HCM 6th Roundabout
14: Northside Dr & Mt Vernon Hwy

08/31/2020

Intersection			
Intersection Delay, s/veh	63.4		
Intersection LOS	F		
Approach	WB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	607	1238	383
Demand Flow Rate, veh/h	616	1262	389
Vehicles Circulating, veh/h	676	220	301
Vehicles Exiting, veh/h	806	470	991
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	37.1	93.5	7.7
Approach LOS	E	F	A
Lane	Left	Left	Left
Designated Moves	LR	TR	LT
Assumed Moves	LR	TR	LT
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	616	1262	389
Cap Entry Lane, veh/h	692	1103	1015
Entry HV Adj Factor	0.985	0.981	0.985
Flow Entry, veh/h	607	1238	383
Cap Entry, veh/h	682	1082	1000
V/C Ratio	0.890	1.145	0.383
Control Delay, s/veh	37.1	93.5	7.7
LOS	E	F	A
95th %tile Queue, veh	11	33	2

HCM 6th Signalized Intersection Summary

15: Roswell Rd & Spalding Dr

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	3	34	51	0	14	10	750	72	106	1348	9
Future Volume (veh/h)	7	3	34	51	0	14	10	750	72	106	1348	9
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	8	3	37	55	0	0	11	806	77	114	1449	10
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	101	33	90	110	0		320	2650	253	559	2983	21
Arrive On Green	0.06	0.06	0.06	0.06	0.00	0.00	0.01	0.82	0.82	0.03	0.83	0.83
Sat Flow, veh/h	1166	572	1572	1222	0	0	1767	3252	311	1767	3589	25
Grp Volume(v), veh/h	11	0	37	55	0	0	11	437	446	114	711	748
Grp Sat Flow(s),veh/h/ln	1738	0	1572	1222	0	0	1767	1763	1800	1767	1763	1851
Q Serve(g_s), s	0.0	0.0	4.1	7.2	0.0	0.0	0.2	11.0	11.0	2.0	20.6	20.6
Cycle Q Clear(g_c), s	1.0	0.0	4.1	8.2	0.0	0.0	0.2	11.0	11.0	2.0	20.6	20.6
Prop In Lane	0.73		1.00	1.00		0.00	1.00		0.17	1.00		0.01
Lane Grp Cap(c), veh/h	134	0	90	110	0		320	1437	1467	559	1465	1538
V/C Ratio(X)	0.08	0.00	0.41	0.50	0.00		0.03	0.30	0.30	0.20	0.49	0.49
Avail Cap(c_a), veh/h	232	0	192	198	0		387	1437	1467	687	1465	1538
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	80.5	0.0	81.9	84.4	0.0	0.0	3.6	4.1	4.1	2.8	4.3	4.3
Incr Delay (d2), s/veh	0.3	0.0	3.0	3.5	0.0	0.0	0.0	0.5	0.5	0.2	1.2	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.9	0.0	3.1	4.8	0.0	0.0	0.1	6.3	6.4	1.0	10.4	10.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	80.7	0.0	84.9	87.9	0.0	0.0	3.7	4.6	4.6	3.0	5.5	5.4
LnGrp LOS	F	A	F	F	A		A	A	A	A	A	A
Approach Vol, veh/h	48			55			A			1573		
Approach Delay, s/veh	83.9			87.9			4.6			5.3		
Approach LOS	F			F			A			A		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.0	152.7		16.3	8.1	155.6		16.3				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	18.0	122.0		22.0	9.0	131.0		22.0				
Max Q Clear Time (g_c+I1), s	4.0	13.0		3.0	2.2	22.6		10.2				
Green Ext Time (p_c), s	0.2	6.0		0.0	0.0	13.9		0.1				
Intersection Summary												
HCM 6th Ctrl Delay	8.3											
HCM 6th LOS	A											
Notes												

HCM Signalized Intersection Capacity Analysis

16: Roberts Dr & Spalding Dr

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	167	259	20	73	396	561	27	295	38	281	303	120
Future Volume (vph)	167	259	20	73	396	561	27	295	38	281	303	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.98		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1805	1873		1805	1900	1615	1805	1851		1787	1806	
Flt Permitted	0.95	1.00		0.45	1.00	1.00	0.22	1.00		0.17	1.00	
Satd. Flow (perm)	1805	1873		864	1900	1615	425	1851		314	1806	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	178	276	21	78	421	597	29	314	40	299	322	128
RTOR Reduction (vph)	0	3	0	0	0	55	0	5	0	0	16	0
Lane Group Flow (vph)	178	294	0	78	421	542	29	349	0	299	434	0
Heavy Vehicles (%)	0%	0%	5%	0%	0%	0%	0%	1%	0%	1%	1%	0%
Turn Type	Split	NA		Perm	NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases	4!	4			3 7 8!	1	5	2		1	6	
Permitted Phases				3 7 8		3 7 8	2			6		
Actuated Green, G (s)	13.0	13.0		43.0	43.0	54.0	23.0	18.0		35.0	24.0	
Effective Green, g (s)	13.0	13.0		43.0	43.0	54.0	23.0	18.0		35.0	24.0	
Actuated g/C Ratio	0.14	0.14		0.48	0.48	0.60	0.26	0.20		0.39	0.27	
Clearance Time (s)	6.0	6.0				6.0	6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0				3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	260	270		412	907	1076	185	370		302	481	
v/s Ratio Prot	0.10	c0.16			0.22	c0.06	0.01	0.19		c0.12	c0.24	
v/s Ratio Perm				0.09		0.27	0.03			c0.26		
v/c Ratio	0.68	1.09		0.19	0.46	0.50	0.16	0.94		0.99	0.90	
Uniform Delay, d1	36.6	38.5		13.5	15.8	10.3	25.9	35.5		22.6	31.9	
Progression Factor	1.00	1.00		1.26	1.19	0.92	1.00	1.00		1.00	1.00	
Incremental Delay, d2	13.7	80.0		0.2	0.3	0.3	1.8	34.5		49.3	22.7	
Delay (s)	50.3	118.5		17.2	19.1	9.7	27.7	70.0		71.9	54.6	
Level of Service	D	F		B	B	A	C	E		E	D	
Approach Delay (s)		93.0			13.8			66.8			61.5	
Approach LOS		F			B			E			E	

Intersection Summary

HCM 2000 Control Delay	48.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	83.5%	ICU Level of Service	E
Analysis Period (min)	15		

! Phase conflict between lane groups.

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis

21: Dunwoody Club Dr & Spalding Dr

08/31/2020

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↰			↱↱	↘↘	
Traffic Volume (vph)	265	301	8	590	474	6
Future Volume (vph)	265	301	8	590	474	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0			6.0	6.0	
Lane Util. Factor	1.00			0.95	1.00	
Frt	0.93			1.00	1.00	
Flt Protected	1.00			1.00	0.95	
Satd. Flow (prot)	1754			3608	1790	
Flt Permitted	1.00			0.95	0.95	
Satd. Flow (perm)	1754			3416	1790	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	294	334	9	656	527	7
RTOR Reduction (vph)	46	0	0	0	1	0
Lane Group Flow (vph)	582	0	0	665	533	0
Heavy Vehicles (%)	0%	1%	0%	0%	1%	0%
Turn Type	NA		custom	NA	Prot	
Protected Phases	1 2 4			1 6 7!	3!	
Permitted Phases			7!			
Actuated Green, G (s)	54.0			46.0	24.0	
Effective Green, g (s)	54.0			46.0	24.0	
Actuated g/C Ratio	0.60			0.51	0.27	
Clearance Time (s)					6.0	
Vehicle Extension (s)					3.0	
Lane Grp Cap (vph)	1052			1745	477	
v/s Ratio Prot	c0.33				c0.30	
v/s Ratio Perm				0.19		
v/c Ratio	0.55			0.38	1.12	
Uniform Delay, d1	10.8			13.4	33.0	
Progression Factor	0.61			1.00	1.00	
Incremental Delay, d2	0.2			0.1	77.6	
Delay (s)	6.7			13.5	110.6	
Level of Service	A			B	F	
Approach Delay (s)	6.7			13.5	110.6	
Approach LOS	A			B	F	
Intersection Summary						
HCM 2000 Control Delay			39.5		HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio			0.86			
Actuated Cycle Length (s)			90.0		Sum of lost time (s)	24.0
Intersection Capacity Utilization			69.0%		ICU Level of Service	C
Analysis Period (min)			15			
! Phase conflict between lane groups.						
c Critical Lane Group						

HCM 6th Signalized Intersection Summary

17: Barfield Rd & Mt Vernon Hwy

10/07/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	308	1386	131	191	482	129	55	199	101	220	345	70
Future Volume (veh/h)	308	1386	131	191	482	129	55	199	101	220	345	70
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1885	1885	1885	1870	1885	1796	1870	1826	1870	1870	1796
Adj Flow Rate, veh/h	324	1459	0	201	507	0	58	209	0	232	363	21
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	1	1	1	2	1	7	2	5	2	2	7
Cap, veh/h	607	1187		159	1143		83	198		203	264	215
Arrive On Green	0.08	0.63	0.00	0.06	0.61	0.00	0.02	0.11	0.00	0.06	0.14	0.14
Sat Flow, veh/h	1781	1885	0	1795	1870	1598	1711	1870	1547	3456	1870	1522
Grp Volume(v), veh/h	324	1459	0	201	507	0	58	209	0	232	363	21
Grp Sat Flow(s),veh/h/ln	1781	1885	0	1795	1870	1598	1711	1870	1547	1728	1870	1522
Q Serve(g_s), s	11.6	107.0	0.0	11.0	24.6	0.0	4.0	18.0	0.0	10.0	24.0	2.0
Cycle Q Clear(g_c), s	11.6	107.0	0.0	11.0	24.6	0.0	4.0	18.0	0.0	10.0	24.0	2.0
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	607	1187		159	1143		83	198		203	264	215
V/C Ratio(X)	0.53	1.23		1.27	0.44		0.70	1.06		1.14	1.37	0.10
Avail Cap(c_a), veh/h	678	1187		159	1143		83	198		203	264	215
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.5	31.5	0.0	63.3	17.7	0.0	71.1	76.0	0.0	80.0	73.0	63.6
Incr Delay (d2), s/veh	0.7	110.9	0.0	160.8	1.3	0.0	23.3	79.3	0.0	106.3	190.7	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.1	115.1	0.0	21.8	16.5	0.0	2.1	19.4	0.0	12.4	38.5	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.2	142.4	0.0	224.1	18.9	0.0	94.4	155.3	0.0	186.3	263.7	63.8
LnGrp LOS	B	F		F	B		F	F		F	F	E
Approach Vol, veh/h	1783		A	708		A	267		A	616		
Approach Delay, s/veh	118.9			77.2			142.1			227.8		
Approach LOS	F			E			F			F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.0	113.0	10.0	30.0	20.2	109.8	16.0	24.0				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	11.0	107.0	4.0	24.0	21.0	97.0	10.0	18.0				
Max Q Clear Time (g_c+I1), s	13.0	109.0	6.0	26.0	13.6	26.6	12.0	20.0				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.6	3.6	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	131.9
HCM 6th LOS	F

Notes

Unsignalized Delay for [NBR, EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

18: Peachtree Dunwoody Rd & Mt Vernon Hwy/Mt Vernon Hwy

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	295	395	287	350	366	26	61	446	125	6	1366	164
Future Volume (veh/h)	295	395	287	350	366	26	61	446	125	6	1366	164
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1870	1885	1900	1885	1693	1811	1870	1870	1900	1900	1856
Adj Flow Rate, veh/h	307	411	247	365	381	0	64	465	130	6	1423	171
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	2	1	0	1	14	6	2	2	0	0	3
Cap, veh/h	466	842	378	448	953		80	1354	376	23	1452	647
Arrive On Green	0.14	0.24	0.24	0.16	0.27	0.00	0.05	0.49	0.49	0.82	0.82	0.82
Sat Flow, veh/h	1795	3554	1598	1810	3582	1434	1725	2747	763	5	3532	1572
Grp Volume(v), veh/h	307	411	247	365	381	0	64	300	295	766	663	171
Grp Sat Flow(s),veh/h/ln	1795	1777	1598	1810	1791	1434	1725	1777	1733	1894	1643	1572
Q Serve(g_s), s	22.0	17.0	23.7	25.5	14.9	0.0	6.2	17.5	17.7	16.7	63.3	4.2
Cycle Q Clear(g_c), s	22.0	17.0	23.7	25.5	14.9	0.0	6.2	17.5	17.7	63.6	63.3	4.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.44	0.01		1.00
Lane Grp Cap(c), veh/h	466	842	378	448	953		80	876	854	800	675	647
V/C Ratio(X)	0.66	0.49	0.65	0.81	0.40		0.80	0.34	0.35	0.96	0.98	0.26
Avail Cap(c_a), veh/h	466	842	378	491	953		112	930	907	823	696	666
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	0.71	0.71	0.00	1.00	1.00	1.00	0.51	0.51	0.51
Uniform Delay (d), s/veh	40.8	56.0	58.6	39.2	51.2	0.0	80.3	26.3	26.4	14.5	14.5	9.3
Incr Delay (d2), s/veh	3.4	2.0	8.5	6.9	0.9	0.0	23.8	0.2	0.2	13.5	19.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	15.5	12.5	15.8	17.1	10.5	0.0	6.0	12.1	12.0	15.5	15.1	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.2	58.0	67.0	46.1	52.1	0.0	104.1	26.5	26.6	27.9	34.4	9.4
LnGrp LOS	D	E	E	D	D		F	C	C	C	C	A
Approach Vol, veh/h		965			746	A		659			1600	
Approach Delay, s/veh		55.9			49.2			34.1			28.6	
Approach LOS		E			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6		8				
Phs Duration (G+Y+Rc), s	34.0	46.3	13.9	75.9	29.0	51.2		89.8				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	32.0	31.0	11.0	72.0	23.0	40.0		89.0				
Max Q Clear Time (g_c+I1), s	27.5	19.0	8.2	65.6	24.0	16.9		19.7				
Green Ext Time (p_c), s	0.5	1.3	0.0	4.3	0.0	2.4		4.0				

Intersection Summary

HCM 6th Ctrl Delay 40.0

HCM 6th LOS D

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

19: Peachtree Dunwoody Rd & Lake Hearn Drive

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	75	3	15	190	19	140	84	1774	317	267	2060	155
Future Volume (veh/h)	75	3	15	190	19	140	84	1774	317	267	2060	155
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1604	1604	1870	1811	1900	1900	1900	1885	1826	1885	1870	1870
Adj Flow Rate, veh/h	78	3	0	198	20	146	88	1848	330	278	2146	161
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	20	20	2	6	0	0	0	1	5	1	2	2
Cap, veh/h	131	3		351	41	296	107	2172	938	301	2199	163
Arrive On Green	0.09	0.09	0.00	0.08	0.21	0.21	0.07	1.00	1.00	0.08	0.66	0.66
Sat Flow, veh/h	1020	39	1585	1725	198	1443	1810	3582	1547	1795	3354	248
Grp Volume(v), veh/h	81	0	0	198	0	166	88	1848	330	278	1124	1183
Grp Sat Flow(s),veh/h/ln	1059	0	1585	1725	0	1640	1810	1791	1547	1795	1777	1826
Q Serve(g_s), s	12.8	0.0	0.0	14.0	0.0	15.2	3.8	0.0	0.0	11.5	100.8	107.8
Cycle Q Clear(g_c), s	12.8	0.0	0.0	14.0	0.0	15.2	3.8	0.0	0.0	11.5	100.8	107.8
Prop In Lane	0.96		1.00	1.00		0.88	1.00		1.00	1.00		0.14
Lane Grp Cap(c), veh/h	134	0		351	0	336	107	2172	938	301	1165	1197
V/C Ratio(X)	0.60	0.00		0.56	0.00	0.49	0.83	0.85	0.35	0.92	0.96	0.99
Avail Cap(c_a), veh/h	135	0		351	0	338	120	2172	938	406	1165	1197
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.52	0.52	0.52	1.00	1.00	1.00
Uniform Delay (d), s/veh	76.7	0.0	0.0	64.3	0.0	59.8	45.5	0.0	0.0	25.2	27.4	28.7
Incr Delay (d2), s/veh	7.3	0.0	0.0	2.1	0.0	1.1	19.4	2.4	0.5	22.1	19.2	23.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.8	0.0	0.0	12.8	0.0	10.6	6.7	1.3	0.3	18.2	57.6	63.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	84.0	0.0	0.0	66.4	0.0	60.9	64.9	2.4	0.5	47.3	46.6	52.1
LnGrp LOS	F	A		E	A	E	E	A	A	D	D	D
Approach Vol, veh/h		81	A		364			2266			2585	
Approach Delay, s/veh		84.0			63.9			4.5			49.2	
Approach LOS		F			E			A			D	
Timer - Assigned Phs	1	2	3	4	5	6		8				
Phs Duration (G+Y+Rc), s	20.0	109.1	20.0	20.9	11.7	117.4		40.9				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	24.0	93.0	14.0	15.0	7.0	110.0		35.0				
Max Q Clear Time (g_c+I1), s	13.5	2.0	16.0	14.8	5.8	109.8		17.2				
Green Ext Time (p_c), s	0.6	24.8	0.0	0.0	0.0	0.2		0.8				
Intersection Summary												
HCM 6th Ctrl Delay			31.6									
HCM 6th LOS			C									
Notes												
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary

20: Glenridge Conn & Johnson Ferry Rd

09/11/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	382	688	947	180	264	587	201	496	78	667	891	39
Future Volume (veh/h)	382	688	947	180	264	587	201	496	78	667	891	39
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1870	1885	1870	1856	1870	1856	1885	1900	1885	1885	1885
Adj Flow Rate, veh/h	398	717	0	188	275	611	209	517	0	695	928	41
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	2	1	2	3	2	3	1	0	1	1	1
Cap, veh/h	365	1333		294	588	740	229	1201		522	1106	49
Arrive On Green	0.10	0.38	0.00	0.04	0.32	0.32	0.07	0.23	0.00	0.15	0.32	0.32
Sat Flow, veh/h	1795	3554	1598	1781	1856	1585	3428	5147	1610	3483	3494	154
Grp Volume(v), veh/h	398	717	0	188	275	611	209	517	0	695	476	493
Grp Sat Flow(s),veh/h/ln	1795	1777	1598	1781	1856	1585	1714	1716	1610	1742	1791	1857
Q Serve(g_s), s	12.0	19.0	0.0	5.0	14.3	38.0	7.3	10.3	0.0	18.0	29.7	29.7
Cycle Q Clear(g_c), s	12.0	19.0	0.0	5.0	14.3	38.0	7.3	10.3	0.0	18.0	29.7	29.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.08
Lane Grp Cap(c), veh/h	365	1333		294	588	740	229	1201		522	567	588
V/C Ratio(X)	1.09	0.54		0.64	0.47	0.83	0.91	0.43		1.33	0.84	0.84
Avail Cap(c_a), veh/h	365	1333		294	588	740	229	1201		522	567	588
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.3	29.4	0.0	34.2	32.9	27.8	55.7	39.2	0.0	51.0	38.1	38.1
Incr Delay (d2), s/veh	74.1	0.4	0.0	4.6	0.6	7.7	37.1	1.1	0.0	161.4	13.9	13.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	19.0	12.7	0.0	5.1	10.6	22.7	7.6	7.7	0.0	30.1	21.3	21.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	107.3	29.8	0.0	38.8	33.5	35.4	92.8	40.3	0.0	212.4	52.0	51.6
LnGrp LOS	F	C		D	C	D	F	D		F	D	D
Approach Vol, veh/h		1115	A		1074			726	A		1664	
Approach Delay, s/veh		57.5			35.5			55.4			118.9	
Approach LOS		E			D			E			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	24.0	34.0	11.0	51.0	14.0	44.0	18.0	44.0				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	18.0	28.0	5.0	45.0	8.0	38.0	12.0	38.0				
Max Q Clear Time (g_c+I1), s	20.0	12.3	7.0	21.0	9.3	31.7	14.0	40.0				
Green Ext Time (p_c), s	0.0	2.8	0.0	5.0	0.0	3.1	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	74.3
HCM 6th LOS	E

Notes

Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

1: Peachtree Dunwoody Rd & Johnson Ferry Rd

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	464	433	45	274	343	215	33	822	358	258	1250	544
Future Volume (veh/h)	464	433	45	274	343	215	33	822	358	258	1250	544
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1900	1900	1900	1870	1885	1900	1900	1900	1885	1885	1870
Adj Flow Rate, veh/h	478	446	46	282	354	222	34	847	240	266	1289	329
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	0	0	0	2	1	0	0	0	1	1	2
Cap, veh/h	526	471	49	323	774	604	68	1154	514	288	1649	730
Arrive On Green	0.15	0.28	0.28	0.09	0.22	0.22	0.02	0.32	0.32	0.16	0.46	0.46
Sat Flow, veh/h	3456	1694	175	3510	3554	1598	3510	3610	1610	1795	3582	1585
Grp Volume(v), veh/h	478	0	492	282	354	222	34	847	240	266	1289	329
Grp Sat Flow(s),veh/h/ln	1728	0	1869	1755	1777	1598	1755	1805	1610	1795	1791	1585
Q Serve(g_s), s	21.8	0.0	41.3	12.7	13.8	16.1	1.5	33.4	19.1	23.4	48.5	22.6
Cycle Q Clear(g_c), s	21.8	0.0	41.3	12.7	13.8	16.1	1.5	33.4	19.1	23.4	48.5	22.6
Prop In Lane	1.00		0.09	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	526	0	520	323	774	604	68	1154	514	288	1649	730
V/C Ratio(X)	0.91	0.00	0.95	0.87	0.46	0.37	0.50	0.73	0.47	0.92	0.78	0.45
Avail Cap(c_a), veh/h	583	0	561	329	800	615	88	1154	514	325	1649	730
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.7	0.0	56.6	71.7	54.3	35.9	77.7	48.4	43.5	66.2	36.4	29.4
Incr Delay (d2), s/veh	17.2	0.0	24.5	21.6	0.4	0.4	5.5	4.2	3.0	29.4	3.8	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	16.2	0.0	30.5	10.9	10.3	10.5	1.3	22.2	12.7	19.0	29.6	13.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	83.9	0.0	81.1	93.3	54.8	36.3	83.2	52.6	46.6	95.6	40.2	31.4
LnGrp LOS	F	A	F	F	D	D	F	D	D	F	D	C
Approach Vol, veh/h	970			858			1121			1884		
Approach Delay, s/veh	82.5			62.6			52.2			46.5		
Approach LOS	F			E			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	31.6	57.1	20.7	50.5	9.1	79.6	30.4	40.9				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	29.0	44.0	15.0	48.0	4.0	69.0	27.0	36.0				
Max Q Clear Time (g_c+I1), s	25.4	35.4	14.7	43.3	3.5	50.5	23.8	15.8				
Green Ext Time (p_c), s	0.3	3.2	0.0	1.2	0.0	7.7	0.6	1.2				
Intersection Summary												
HCM 6th Ctrl Delay	57.9											
HCM 6th LOS	E											

HCM 6th Signalized Intersection Summary

2: SR 400 Exit 6/Dunwoody PI & Northridge Rd

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	204	981	330	70	305	1482	823	388	429	386	402	203
Future Volume (veh/h)	204	981	330	70	305	1482	823	388	429	386	402	203
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	1900	1900	1885	1900	1900	1900	1885	1900	1900	1885	1900
Adj Flow Rate, veh/h	206	991	30	71	308	689	831	392	382	390	406	0
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	0	0	0	1	0	0	0	1	0	0	1	0
Cap, veh/h	273	1083	483	132	458	777	869	742	634	417	949	
Arrive On Green	0.10	0.30	0.30	0.04	0.24	0.24	0.25	0.39	0.39	0.12	0.26	0.00
Sat Flow, veh/h	1810	3610	1610	1795	1900	3220	3510	1885	1610	3510	3582	1610
Grp Volume(v), veh/h	206	991	30	71	308	689	831	392	382	390	406	0
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1795	1900	1610	1755	1885	1610	1755	1791	1610
Q Serve(g_s), s	13.4	42.4	2.1	4.8	23.5	33.0	37.3	25.5	30.2	17.6	15.0	0.0
Cycle Q Clear(g_c), s	13.4	42.4	2.1	4.8	23.5	33.0	37.3	25.5	30.2	17.6	15.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	273	1083	483	132	458	777	869	742	634	417	949	
V/C Ratio(X)	0.75	0.92	0.06	0.54	0.67	0.89	0.96	0.53	0.60	0.94	0.43	
Avail Cap(c_a), veh/h	280	1467	654	132	653	1107	878	742	634	417	949	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	41.3	54.0	39.9	47.2	55.0	58.6	59.3	37.1	38.5	69.9	48.8	0.0
Incr Delay (d2), s/veh	10.7	7.4	0.1	4.3	1.7	6.6	20.4	2.7	4.2	28.4	1.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	11.1	27.6	1.6	4.1	17.0	20.3	26.1	18.1	18.5	14.6	11.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.1	61.4	40.0	51.5	56.7	65.2	79.7	39.8	42.8	98.3	50.2	0.0
LnGrp LOS	D	E	D	D	E	E	E	D	D	F	D	
Approach Vol, veh/h	1227				1068				1605			
Approach Delay, s/veh	59.3				61.8				61.2			
Approach LOS	E				E				E			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	25.0	69.0	12.0	54.0	45.6	48.4	21.4	44.6				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	19.0	46.0	6.0	65.0	40.0	25.0	16.0	55.0				
Max Q Clear Time (g_c+I1), s	19.6	27.5	6.8	44.4	39.3	17.0	15.4	25.5				
Green Ext Time (p_c), s	0.0	0.9	0.0	3.6	0.3	1.5	0.0	0.2				

Intersection Summary

HCM 6th Ctrl Delay 63.0

HCM 6th LOS E

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

3: Northside Dr & Powers Ferry Rd

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑		↑	↑					↑	↑	↑
Traffic Volume (veh/h)	0	763	282	54	1215	0	0	0	0	343	405	472
Future Volume (veh/h)	0	763	282	54	1215	0	0	0	0	343	405	472
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1900	1900	1900	1885	0				1900	1900	1900
Adj Flow Rate, veh/h	0	803	297	57	1279	0				361	426	497
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	1	0				0	0	0
Cap, veh/h	0	2063	757	343	1200	0				461	484	410
Arrive On Green	0.00	0.55	0.55	0.03	0.64	0.00				0.25	0.25	0.25
Sat Flow, veh/h	0	3909	1373	1810	1885	0				1810	1900	1610
Grp Volume(v), veh/h	0	742	358	57	1279	0				361	426	497
Grp Sat Flow(s),veh/h/ln	0	1729	1653	1810	1885	0				1810	1900	1610
Q Serve(g_s), s	0.0	13.5	13.6	1.4	70.0	0.0				20.4	23.7	28.0
Cycle Q Clear(g_c), s	0.0	13.5	13.6	1.4	70.0	0.0				20.4	23.7	28.0
Prop In Lane	0.00		0.83	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1908	912	343	1200	0				461	484	410
V/C Ratio(X)	0.00	0.39	0.39	0.17	1.07	0.00				0.78	0.88	1.21
Avail Cap(c_a), veh/h	0	1908	912	354	1200	0				461	484	410
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.26	0.26	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	14.1	14.1	10.3	20.0	0.0				38.2	39.4	41.0
Incr Delay (d2), s/veh	0.0	0.1	0.3	0.1	35.1	0.0				12.5	20.0	116.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	8.7	8.5	1.0	46.0	0.0				15.8	19.5	35.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	14.2	14.4	10.4	55.1	0.0				50.7	59.4	157.3
LnGrp LOS	A	B	B	B	F	A				D	E	F
Approach Vol, veh/h		1100			1336						1284	
Approach Delay, s/veh		14.3			53.2						94.9	
Approach LOS		B			D						F	
Timer - Assigned Phs		2		4			7	8				
Phs Duration (G+Y+Rc), s		34.0		76.0			9.3	66.7				
Change Period (Y+Rc), s		6.0		6.0			6.0	6.0				
Max Green Setting (Gmax), s		28.0		70.0			4.0	60.0				
Max Q Clear Time (g_c+I1), s		25.7		72.0			3.4	15.6				
Green Ext Time (p_c), s		0.9		0.0			0.0	4.3				
Intersection Summary												
HCM 6th Ctrl Delay				56.1								
HCM 6th LOS				E								

HCM 6th Signalized Intersection Summary

4: Roswell Rd & Hannover Park Rd/Dunwoody PI

10/07/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	24	57	117	57	1015	36	1375	92	274	670	14
Future Volume (veh/h)	36	24	57	117	57	1015	36	1375	92	274	670	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1885	1900	1900	1900
Adj Flow Rate, veh/h	38	25	33	122	59	1057	38	1432	0	285	698	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	1	0	0	0
Cap, veh/h	60	528	447	467	528	1048	49	1673		324	1907	
Arrive On Green	0.03	0.28	0.28	0.03	0.28	0.28	0.03	0.46	0.00	0.09	0.53	0.00
Sat Flow, veh/h	1810	1900	1610	1810	1900	2834	1810	3610	1598	3510	3610	1610
Grp Volume(v), veh/h	38	25	33	122	59	1057	38	1432	0	285	698	0
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	1900	1417	1810	1805	1598	1755	1805	1610
Q Serve(g_s), s	3.7	1.7	2.7	6.0	4.2	50.0	3.8	63.5	0.0	14.4	20.4	0.0
Cycle Q Clear(g_c), s	3.7	1.7	2.7	6.0	4.2	50.0	3.8	63.5	0.0	14.4	20.4	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	60	528	447	467	528	1048	49	1673		324	1907	
V/C Ratio(X)	0.63	0.05	0.07	0.26	0.11	1.01	0.77	0.86		0.88	0.37	
Avail Cap(c_a), veh/h	60	528	447	467	528	1048	90	1673		351	1907	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	85.9	47.6	47.9	46.4	48.4	56.7	87.0	43.0	0.0	80.7	24.8	0.0
Incr Delay (d2), s/veh	19.1	0.0	0.1	0.3	0.1	29.8	21.9	5.9	0.0	20.8	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.7	1.5	2.0	7.6	3.6	36.8	3.7	37.8	0.0	11.9	13.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	105.0	47.6	48.0	46.7	48.5	86.5	108.9	48.8	0.0	101.6	25.4	0.0
LnGrp LOS	F	D	D	D	D	F	F	D		F	C	
Approach Vol, veh/h		96			1238			1470	A		983	A
Approach Delay, s/veh		70.5			80.8			50.4			47.5	
Approach LOS		E			F			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	22.6	89.4	12.0	56.0	10.9	101.1	12.0	56.0				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	18.0	82.0	6.0	50.0	9.0	91.0	6.0	50.0				
Max Q Clear Time (g_c+I1), s	16.4	65.5	8.0	3.7	5.8	22.4	5.7	52.0				
Green Ext Time (p_c), s	0.2	9.0	0.0	0.0	0.0	5.0	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	60.1
HCM 6th LOS	E

Notes

Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

5: Roswell Rd /Roswell Rd & Northridge Rd

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	27	30	36	884	20	262	34	1411	647	477	827	30
Future Volume (veh/h)	27	30	36	884	20	262	34	1411	647	477	827	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	28	32	12	946	0	39	36	1485	234	502	871	6
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	29	33	54	987	0	439	47	1523	1968	488	1931	861
Arrive On Green	0.03	0.03	0.03	0.27	0.00	0.27	0.03	0.42	0.42	0.14	0.53	0.53
Sat Flow, veh/h	866	990	1610	3619	0	1610	1810	3610	2834	3510	3610	1610
Grp Volume(v), veh/h	60	0	12	946	0	39	36	1485	234	502	871	6
Grp Sat Flow(s),veh/h/ln	1857	0	1610	1810	0	1610	1810	1805	1417	1755	1805	1610
Q Serve(g_s), s	5.8	0.0	1.3	46.3	0.0	3.2	3.6	72.7	5.0	25.0	26.6	0.3
Cycle Q Clear(g_c), s	5.8	0.0	1.3	46.3	0.0	3.2	3.6	72.7	5.0	25.0	26.6	0.3
Prop In Lane	0.47		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	62	0	54	987	0	439	47	1523	1968	488	1931	861
V/C Ratio(X)	0.97	0.00	0.22	0.96	0.00	0.09	0.77	0.98	0.12	1.03	0.45	0.01
Avail Cap(c_a), veh/h	62	0	54	1005	0	447	80	1523	1968	488	1931	861
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	86.9	0.0	84.7	64.5	0.0	48.8	87.1	51.1	9.2	77.5	25.7	19.5
Incr Delay (d2), s/veh	103.3	0.0	2.1	19.0	0.0	0.1	22.9	17.9	0.1	48.6	0.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.1	0.0	1.0	31.9	0.0	2.4	3.5	45.6	5.9	21.0	17.1	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	190.2	0.0	86.8	83.5	0.0	48.9	110.0	69.0	9.3	126.1	26.4	19.6
LnGrp LOS	F	A	F	F	A	D	F	E	A	F	C	B
Approach Vol, veh/h	72			985			1755			1379		
Approach Delay, s/veh	172.9			82.1			61.9			62.7		
Approach LOS	F			F			E			E		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	31.0	81.9		12.0	10.6	102.3		55.1				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	25.0	75.0		6.0	8.0	92.0		50.0				
Max Q Clear Time (g_c+I1), s	27.0	74.7		7.8	5.6	28.6		48.3				
Green Ext Time (p_c), s	0.0	0.2		0.0	0.0	6.6		0.7				
Intersection Summary												
HCM 6th Ctrl Delay	68.8											
HCM 6th LOS	E											
Notes												

HCM 6th Signalized Intersection Summary

6: Northside Dr & Interstate N Pkwy/New Northside Dr

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	143	18	716	220	1217	233	0	0	0	1	534	243
Future Volume (veh/h)	143	18	716	220	1217	233	0	0	0	1	534	243
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900				1900	1900	1900
Adj Flow Rate, veh/h	147	19	738	227	1255	34				1	551	251
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97				0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	148	23	891	325	1123	951				1	481	236
Arrive On Green	0.05	0.57	0.57	0.07	0.59	0.59				0.20	0.20	0.20
Sat Flow, veh/h	1810	41	1576	1810	1900	1610				4	2406	1178
Grp Volume(v), veh/h	147	0	757	227	1255	34				443	0	360
Grp Sat Flow(s),veh/h/ln	1810	0	1616	1810	1900	1610				1900	0	1688
Q Serve(g_s), s	5.0	0.0	42.1	5.7	65.0	1.0				22.0	0.0	22.0
Cycle Q Clear(g_c), s	5.0	0.0	42.1	5.7	65.0	1.0				22.0	0.0	22.0
Prop In Lane	1.00		0.97	1.00		1.00				0.00		0.70
Lane Grp Cap(c), veh/h	148	0	914	325	1123	951				380	0	338
V/C Ratio(X)	1.00	0.00	0.83	0.70	1.12	0.04				1.17	0.00	1.07
Avail Cap(c_a), veh/h	148	0	914	345	1123	951				380	0	338
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	32.3	0.0	19.5	20.1	22.5	9.4				44.0	0.0	44.0
Incr Delay (d2), s/veh	72.5	0.0	6.4	5.7	65.4	0.0				99.9	0.0	67.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	11.2	0.0	22.3	6.1	62.8	0.6				30.5	0.0	22.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	104.8	0.0	26.0	25.8	87.9	9.4				143.9	0.0	111.4
LnGrp LOS	F	A	C	C	F	A				F	A	F
Approach Vol, veh/h		904			1516						803	
Approach Delay, s/veh		38.8			76.8						129.4	
Approach LOS		D			E						F	
Timer - Assigned Phs		2	3	4			7	8				
Phs Duration (G+Y+Rc), s		28.0	13.8	68.2			11.0	71.0				
Change Period (Y+Rc), s		6.0	6.0	6.0			6.0	6.0				
Max Green Setting (Gmax), s		22.0	9.0	61.0			5.0	65.0				
Max Q Clear Time (g_c+l1), s		24.0	7.7	44.1			7.0	67.0				
Green Ext Time (p_c), s		0.0	0.1	5.3			0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			79.2									
HCM 6th LOS			E									

HCM 6th Signalized Intersection Summary

7: Riverside Dr & Heards Ferry Rd

09/03/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	268	107	53	96	257	161	84	1073	33	65	554	210
Future Volume (veh/h)	268	107	53	96	257	161	84	1073	33	65	554	210
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	276	110	55	99	265	166	87	1106	34	67	571	216
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	241	358	303	304	252	213	353	1021	865	63	1023	867
Arrive On Green	0.11	0.19	0.19	0.05	0.14	0.14	0.03	0.55	0.55	0.04	0.55	0.55
Sat Flow, veh/h	1767	1856	1572	1767	1856	1572	1767	1856	1572	1767	1856	1572
Grp Volume(v), veh/h	276	110	55	99	265	166	87	1106	34	67	571	216
Grp Sat Flow(s),veh/h/ln	1767	1856	1572	1767	1856	1572	1767	1856	1572	1767	1856	1572
Q Serve(g_s), s	15.0	7.1	4.1	6.8	19.0	14.3	3.0	77.0	1.4	5.0	27.9	10.0
Cycle Q Clear(g_c), s	15.0	7.1	4.1	6.8	19.0	14.3	3.0	77.0	1.4	5.0	27.9	10.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	241	358	303	304	252	213	353	1021	865	63	1023	867
V/C Ratio(X)	1.15	0.31	0.18	0.33	1.05	0.78	0.25	1.08	0.04	1.06	0.56	0.25
Avail Cap(c_a), veh/h	241	358	303	304	252	213	355	1021	865	63	1023	867
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.6	48.5	47.3	49.2	60.5	58.5	15.9	31.5	14.5	67.5	20.4	16.3
Incr Delay (d2), s/veh	103.2	0.5	0.3	0.6	71.1	16.5	0.4	53.7	0.1	131.4	2.2	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	21.4	6.0	2.9	5.5	20.4	10.9	2.2	63.3	0.9	8.2	18.2	6.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	150.8	49.0	47.5	49.8	131.6	75.0	16.2	85.2	14.6	198.9	22.6	17.0
LnGrp LOS	F	D	D	D	F	E	B	F	B	F	C	B
Approach Vol, veh/h	441			530			1227			854		
Approach Delay, s/veh	112.5			98.6			78.4			35.0		
Approach LOS	F			F			E			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.0	83.0	13.0	33.0	10.8	83.2	21.0	25.0				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	5.0	77.0	7.0	27.0	5.0	77.0	15.0	19.0				
Max Q Clear Time (g_c+I1), s	7.0	79.0	8.8	9.1	5.0	29.9	17.0	21.0				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.7	0.0	6.0	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay	74.7											
HCM 6th LOS	E											

HCM 6th Signalized Intersection Summary

8: New Northside Dr & Powers Ferry Rd

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 							  				
Traffic Volume (veh/h)	397	536	0	0	648	374	592	613	31	0	0	0
Future Volume (veh/h)	397	536	0	0	648	374	592	613	31	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach	No			No			No					
Adj Sat Flow, veh/h/ln	1900	1900	0	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	427	576	0	0	697	402	637	659	33			
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	488	1101	0	0	734	622	563	1067	53			
Arrive On Green	0.14	0.58	0.00	0.00	0.39	0.39	0.31	0.31	0.31			
Sat Flow, veh/h	3510	1900	0	0	1900	1610	1810	3427	172			
Grp Volume(v), veh/h	427	576	0	0	697	402	637	333	359			
Grp Sat Flow(s),veh/h/ln	1755	1900	0	0	1900	1610	1810	1729	1869			
Q Serve(g_s), s	13.1	20.1	0.0	0.0	39.1	22.5	34.2	18.0	18.0			
Cycle Q Clear(g_c), s	13.1	20.1	0.0	0.0	39.1	22.5	34.2	18.0	18.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		0.09			
Lane Grp Cap(c), veh/h	488	1101	0	0	734	622	563	538	582			
V/C Ratio(X)	0.88	0.52	0.00	0.00	0.95	0.65	1.13	0.62	0.62			
Avail Cap(c_a), veh/h	511	1157	0	0	777	659	563	538	582			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.87	0.87	0.00	0.00	1.00	1.00	1.00	1.00	1.00			
Uniform Delay (d), s/veh	46.4	14.0	0.0	0.0	32.7	27.6	37.9	32.3	32.3			
Incr Delay (d2), s/veh	13.5	0.3	0.0	0.0	20.5	2.0	79.3	5.2	4.9			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	10.5	12.5	0.0	0.0	29.0	13.6	38.5	12.8	13.6			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.0	14.3	0.0	0.0	53.2	29.7	117.2	37.5	37.2			
LnGrp LOS	E	B	A	A	D	C	F	D	D			
Approach Vol, veh/h	1003			1099			1329					
Approach Delay, s/veh	33.7			44.6			75.6					
Approach LOS	C			D			E					
Timer - Assigned Phs	2			4			7			8		
Phs Duration (G+Y+Rc), s	40.2			69.8			21.3			48.5		
Change Period (Y+Rc), s	6.0			6.0			6.0			6.0		
Max Green Setting (Gmax), s	31.0			67.0			16.0			45.0		
Max Q Clear Time (g_c+I1), s	36.2			22.1			15.1			41.1		
Green Ext Time (p_c), s	0.0			4.2			0.2			1.3		
Intersection Summary												
HCM 6th Ctrl Delay	53.4											
HCM 6th LOS	D											

HCM 6th Signalized Intersection Summary

9: Mt Vernon Hwy & Abernathy Rd/Perimeter Center

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	283	941	27	80	1887	115	106	562	161	114	381	526
Future Volume (veh/h)	283	941	27	80	1887	115	106	562	161	114	381	526
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	1900	1900	1885	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	301	1001	29	85	2007	122	113	598	0	121	405	400
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	1	0	0	0	0	0	0	0	0
Cap, veh/h	348	2321	1035	122	2088	932	145	562		100	521	392
Arrive On Green	0.10	0.64	0.64	0.03	0.58	0.58	0.04	0.16	0.00	0.03	0.14	0.14
Sat Flow, veh/h	3510	3610	1610	3483	3610	1610	1810	3610	1610	1810	3610	1610
Grp Volume(v), veh/h	301	1001	29	85	2007	122	113	598	0	121	405	400
Grp Sat Flow(s),veh/h/ln	1755	1805	1610	1742	1805	1610	1810	1805	1610	1810	1805	1610
Q Serve(g_s), s	15.2	24.7	1.2	4.3	95.0	6.2	8.0	28.0	0.0	6.0	19.5	26.0
Cycle Q Clear(g_c), s	15.2	24.7	1.2	4.3	95.0	6.2	8.0	28.0	0.0	6.0	19.5	26.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	348	2321	1035	122	2088	932	145	562		100	521	392
V/C Ratio(X)	0.86	0.43	0.03	0.70	0.96	0.13	0.78	1.06		1.21	0.78	1.02
Avail Cap(c_a), veh/h	507	2321	1035	155	2088	932	145	562		100	521	392
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.87	0.87	0.87	1.00	1.00	1.00	0.66	0.66	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	79.9	15.9	11.7	85.9	36.0	17.3	67.9	76.0	0.0	72.6	74.2	68.1
Incr Delay (d2), s/veh	9.0	0.5	0.0	9.4	12.4	0.3	16.0	49.6	0.0	155.4	7.3	50.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	11.4	14.9	0.8	3.8	54.0	4.4	3.5	23.1	0.0	10.5	14.6	31.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	88.9	16.4	11.7	95.4	48.4	17.6	83.9	125.6	0.0	228.0	81.5	118.5
LnGrp LOS	F	B	B	F	D	B	F	F		F	F	F
Approach Vol, veh/h	1331			2214			711			A		
Approach Delay, s/veh	32.7			48.5			119.0			116.6		
Approach LOS	C			D			F			F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	23.9	110.1	12.0	34.0	12.3	121.7	14.0	32.0				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	26.0	96.0	6.0	28.0	8.0	114.0	8.0	26.0				
Max Q Clear Time (g_c+I1), s	17.2	97.0	8.0	30.0	6.3	26.7	10.0	21.5				
Green Ext Time (p_c), s	0.7	0.0	0.0	0.0	0.0	7.9	0.0	0.7				

Intersection Summary

HCM 6th Ctrl Delay 66.3

HCM 6th LOS E

Notes

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

10: Johnson Ferry Rd & Abernathy Rd & Brandon Mill Rd NW

10/07/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	199	1027	494	68	2224	169	757	91	21	66	126	103
Future Volume (veh/h)	199	1027	494	68	2224	169	757	91	21	66	126	103
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	207	1070	124	71	2317	0	789	95	22	69	131	3
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	148	1940	1162	88	1900		648	323	75	218	144	122
Arrive On Green	0.06	0.55	0.55	0.05	0.54	0.00	0.19	0.22	0.22	0.05	0.08	0.08
Sat Flow, veh/h	1767	3526	1572	1767	3526	1572	3428	1457	337	1767	1856	1572
Grp Volume(v), veh/h	207	1070	124	71	2317	0	789	0	117	69	131	3
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1767	1763	1572	1714	0	1795	1767	1856	1572
Q Serve(g_s), s	11.0	35.3	4.0	7.2	97.0	0.0	34.0	0.0	9.8	6.4	12.6	0.3
Cycle Q Clear(g_c), s	11.0	35.3	4.0	7.2	97.0	0.0	34.0	0.0	9.8	6.4	12.6	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.19	1.00		1.00
Lane Grp Cap(c), veh/h	148	1940	1162	88	1900		648	0	397	218	144	122
V/C Ratio(X)	1.40	0.55	0.11	0.81	1.22		1.22	0.00	0.29	0.32	0.91	0.02
Avail Cap(c_a), veh/h	148	1940	1162	137	1900		648	0	397	227	144	122
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.66	0.66	0.66	1.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.6	26.1	6.6	84.7	41.5	0.0	73.0	0.0	58.4	72.0	82.4	76.7
Incr Delay (d2), s/veh	204.2	0.2	0.0	17.4	103.8	0.0	111.9	0.0	1.9	0.8	53.6	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	18.3	20.1	2.4	6.7	95.5	0.0	36.7	0.0	8.2	5.4	12.9	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	267.7	26.4	6.7	102.1	145.3	0.0	184.9	0.0	60.2	72.8	135.9	77.1
LnGrp LOS	F	C	A	F	F		F	A	E	E	F	E
Approach Vol, veh/h	1401			2388			906			203		
Approach Delay, s/veh	60.3			144.0			168.8			113.6		
Approach LOS	E			F			F			F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.2	45.8	14.9	105.1	40.0	20.0	17.0	103.0				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	9.0	39.0	14.0	94.0	34.0	14.0	11.0	97.0				
Max Q Clear Time (g_c+I1), s	8.4	11.8	9.2	37.3	36.0	14.6	13.0	99.0				
Green Ext Time (p_c), s	0.0	0.6	0.0	8.7	0.0	0.0	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay 123.4

HCM 6th LOS F

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

11: Peachtree Dunwoody Rd & Abernathy Rd

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	244	1138	215	3	1684	243	818	568	9	209	239	646
Future Volume (veh/h)	244	1138	215	3	1684	243	818	568	9	209	239	646
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1885	1885	1856	1900	1900	1885	1885	1885	1826	1885	1885	1900
Adj Flow Rate, veh/h	254	1185	16	3	1754	45	852	592	9	218	249	543
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	1	3	0	0	1	1	1	5	1	1	0
Cap, veh/h	297	2565	784	22	1904	604	881	677	292	371	269	735
Arrive On Green	0.09	0.50	0.50	0.38	0.38	0.38	0.25	0.19	0.19	0.21	0.14	0.14
Sat Flow, veh/h	3483	5147	1572	2	5039	1598	3483	3582	1547	1795	1885	3220
Grp Volume(v), veh/h	254	1185	16	660	1097	45	852	592	9	218	249	543
Grp Sat Flow(s),veh/h/ln	1742	1716	1572	1894	1573	1598	1742	1791	1547	1795	1885	1610
Q Serve(g_s), s	12.2	25.5	0.9	6.8	56.6	1.7	41.1	27.3	0.8	18.6	22.2	24.3
Cycle Q Clear(g_c), s	12.2	25.5	0.9	56.5	56.6	1.7	41.1	27.3	0.8	18.6	22.2	24.3
Prop In Lane	1.00		1.00	0.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	297	2565	784	737	1189	604	881	677	292	371	269	735
V/C Ratio(X)	0.85	0.46	0.02	0.90	0.92	0.07	0.97	0.87	0.03	0.59	0.93	0.74
Avail Cap(c_a), veh/h	369	2565	784	737	1189	604	881	843	364	371	277	749
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.09	0.09	0.09	0.35	0.35	0.35	1.00	1.00	1.00
Uniform Delay (d), s/veh	76.7	27.8	21.6	50.4	50.5	10.4	62.8	67.0	56.2	60.9	72.0	60.9
Incr Delay (d2), s/veh	14.8	0.6	0.0	1.8	1.6	0.0	11.3	3.3	0.0	2.4	34.5	3.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	10.1	15.8	0.6	29.0	24.3	1.7	23.8	16.3	0.6	13.6	19.3	16.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	91.5	28.4	21.6	52.3	52.1	10.4	74.1	70.3	56.3	63.3	106.4	64.7
LnGrp LOS	F	C	C	D	D	B	E	E	E	E	F	E
Approach Vol, veh/h	1455			1802			1453			1010		
Approach Delay, s/veh	39.3			51.1			72.4			74.7		
Approach LOS	D			D			E			E		
Timer - Assigned Phs	2			3			4			5		
Phs Duration (G+Y+Rc), s	90.7			49.0			30.3			20.5		
Change Period (Y+Rc), s	6.0			6.0			6.0			6.0		
Max Green Setting (Gmax), s	84.0			43.0			25.0			18.0		
Max Q Clear Time (g_c+I1), s	27.5			43.1			24.2			14.2		
Green Ext Time (p_c), s	10.0			0.0			0.1			0.3		
Intersection Summary												
HCM 6th Ctrl Delay			57.7									
HCM 6th LOS			E									
Notes												

HCM Signalized Intersection Capacity Analysis

12: Peachtree Dunwoody Rd & Hollis Cobb Cir/Medical Center MARTA

10/07/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	245	5	133	148	3	155	21	1657	59	53	1798	99
Future Volume (vph)	245	5	133	148	3	155	21	1657	59	53	1798	99
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.86		1.00	0.85		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1805	1625		1787	1574		1805	3610	1599	1641	3610	1615
Flt Permitted	0.52	1.00		0.57	1.00		0.06	1.00	1.00	0.07	1.00	1.00
Satd. Flow (perm)	989	1625		1064	1574		113	3610	1599	125	3610	1615
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	250	5	136	151	3	158	21	1691	60	54	1835	101
RTOR Reduction (vph)	0	109	0	0	126	0	0	0	21	0	0	34
Lane Group Flow (vph)	250	32	0	151	35	0	21	1691	39	54	1835	67
Heavy Vehicles (%)	0%	0%	0%	1%	0%	3%	0%	0%	1%	10%	0%	0%
Turn Type	Perm	NA		Perm	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	32.0	32.0		32.0	32.0		107.1	103.3	103.3	112.9	106.2	106.2
Effective Green, g (s)	32.0	32.0		32.0	32.0		107.1	103.3	103.3	112.9	106.2	106.2
Actuated g/C Ratio	0.20	0.20		0.20	0.20		0.67	0.65	0.65	0.71	0.66	0.66
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	197	325		212	314		115	2330	1032	151	2396	1071
v/s Ratio Prot		0.02			0.02		0.00	0.47		c0.01	c0.51	
v/s Ratio Perm	c0.25			0.14			0.12		0.02	0.24		0.04
v/c Ratio	1.27	0.10		0.71	0.11		0.18	0.73	0.04	0.36	0.77	0.06
Uniform Delay, d1	64.0	52.2		59.7	52.4		18.6	18.9	10.3	18.1	18.4	9.4
Progression Factor	1.00	1.00		1.00	1.00		1.75	1.63	24.56	1.34	0.63	0.86
Incremental Delay, d2	154.8	0.1		10.8	0.2		0.6	1.6	0.1	0.6	1.1	0.0
Delay (s)	218.8	52.4		70.5	52.5		33.2	32.3	252.9	25.0	12.7	8.2
Level of Service	F	D		E	D		C	C	F	C	B	A
Approach Delay (s)		158.8			61.2			39.8			12.8	
Approach LOS		F			E			D			B	
Intersection Summary												
HCM 2000 Control Delay			39.7			HCM 2000 Level of Service				D		
HCM 2000 Volume to Capacity ratio			0.91									
Actuated Cycle Length (s)			160.0			Sum of lost time (s)			24.0			
Intersection Capacity Utilization			88.0%			ICU Level of Service			E			
Analysis Period (min)			15									
c Critical Lane Group												

HCM 6th Signalized Intersection Summary

13: River Valley Rd & Johnson Ferry Rd

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  		 	 				 			
Traffic Volume (veh/h)	0	1101	66	427	2655	1	583	1	616	1	0	5
Future Volume (veh/h)	0	1101	66	427	2655	1	583	1	616	1	0	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	0	1171	70	454	2824	1	620	1	0	1	0	5
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	41	2441	146	639	2205	1	444	1		573	0	509
Arrive On Green	0.00	0.50	0.50	0.10	0.81	0.81	0.29	0.29	0.00	0.00	0.00	0.32
Sat Flow, veh/h	1767	4888	292	3428	3617	1	1398	2	1572	1767	0	1572
Grp Volume(v), veh/h	0	809	432	454	1376	1449	621	0	0	1	0	5
Grp Sat Flow(s),veh/h/ln	1767	1689	1803	1714	1763	1855	1401	0	1572	1767	0	1572
Q Serve(g_s), s	0.0	28.4	28.4	11.6	109.8	109.8	52.0	0.0	0.0	0.1	0.0	0.4
Cycle Q Clear(g_c), s	0.0	28.4	28.4	11.6	109.8	109.8	52.0	0.0	0.0	0.1	0.0	0.4
Prop In Lane	1.00		0.16	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	41	1686	900	639	1075	1131	445	0		573	0	509
V/C Ratio(X)	0.00	0.48	0.48	0.71	1.28	1.28	1.40	0.00		0.00	0.00	0.01
Avail Cap(c_a), veh/h	79	1686	900	660	1075	1131	445	0		619	0	550
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.09	0.09	0.09	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	29.7	29.7	22.3	17.0	17.0	66.3	0.0	0.0	44.0	0.0	41.3
Incr Delay (d2), s/veh	0.0	1.0	1.8	0.3	126.9	126.9	191.9	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	17.5	18.8	5.5	88.9	93.5	66.4	0.0	0.0	0.1	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	30.6	31.5	22.6	143.9	143.9	258.2	0.0	0.0	44.0	0.0	41.3
LnGrp LOS	A	C	C	C	F	F	F	A		D	A	D
Approach Vol, veh/h	1241					3279	621		A	6		
Approach Delay, s/veh	30.9					127.1	258.2			41.8		
Approach LOS	C					F	F			D		
Timer - Assigned Phs	1	2	4		5	6	7	8				
Phs Duration (G+Y+Rc), s	19.9	95.9	64.2		0.0	115.8	6.2	58.0				
Change Period (Y+Rc), s	6.0	6.0	6.0		6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	15.0	84.0	63.0		4.0	95.0	5.0	52.0				
Max Q Clear Time (g_c+I1), s	13.6	30.4	2.4		0.0	111.8	2.1	54.0				
Green Ext Time (p_c), s	0.3	11.1	0.0		0.0	0.0	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay 119.6

HCM 6th LOS F

Notes

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Roundabout
14: Northside Dr & Mt Vernon Hwy

08/31/2020

Intersection			
Intersection Delay, s/veh	15.5		
Intersection LOS	C		
Approach	WB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	637	727	609
Demand Flow Rate, veh/h	648	727	612
Vehicles Circulating, veh/h	359	292	448
Vehicles Exiting, veh/h	660	768	559
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	14.8	15.1	16.7
Approach LOS	B	C	C
Lane	Left	Left	Left
Designated Moves	LR	TR	LT
Assumed Moves	LR	TR	LT
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	648	727	612
Cap Entry Lane, veh/h	957	1024	874
Entry HV Adj Factor	0.983	1.000	0.995
Flow Entry, veh/h	637	727	609
Cap Entry, veh/h	941	1024	869
V/C Ratio	0.677	0.710	0.700
Control Delay, s/veh	14.8	15.1	16.7
LOS	B	C	C
95th %tile Queue, veh	5	6	6

HCM 6th Signalized Intersection Summary 15: Roswell Rd & Spalding Dr

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	5	33	59	5	37	48	1122	78	26	1001	15
Future Volume (veh/h)	9	5	33	59	5	37	48	1122	78	26	1001	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	9	5	34	61	5	0	50	1169	81	27	1043	16
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	99	48	104	114	7		470	2721	188	391	2874	44
Arrive On Green	0.07	0.07	0.07	0.07	0.07	0.00	0.03	0.81	0.81	0.02	0.81	0.81
Sat Flow, veh/h	1001	730	1572	1142	108	0	1767	3345	232	1767	3554	55
Grp Volume(v), veh/h	14	0	34	66	0	0	50	616	634	27	517	542
Grp Sat Flow(s),veh/h/ln	1730	0	1572	1250	0	0	1767	1763	1814	1767	1763	1846
Q Serve(g_s), s	0.0	0.0	3.7	8.3	0.0	0.0	0.9	18.0	18.1	0.5	14.3	14.3
Cycle Q Clear(g_c), s	1.3	0.0	3.7	9.6	0.0	0.0	0.9	18.0	18.1	0.5	14.3	14.3
Prop In Lane	0.64		1.00	0.92		0.00	1.00		0.13	1.00		0.03
Lane Grp Cap(c), veh/h	147	0	104	121	0		470	1434	1476	391	1425	1493
V/C Ratio(X)	0.10	0.00	0.33	0.55	0.00		0.11	0.43	0.43	0.07	0.36	0.36
Avail Cap(c_a), veh/h	353	0	314	307	0		533	1434	1476	453	1425	1493
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	79.1	0.0	80.3	83.6	0.0	0.0	3.2	4.8	4.8	3.5	4.7	4.7
Incr Delay (d2), s/veh	0.3	0.0	1.8	3.8	0.0	0.0	0.1	0.9	0.9	0.1	0.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.1	0.0	2.8	5.7	0.0	0.0	0.5	9.8	10.0	0.3	8.2	8.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	79.4	0.0	82.1	87.4	0.0	0.0	3.3	5.7	5.7	3.6	5.4	5.4
LnGrp LOS	E	A	F	F	A		A	A	A	A	A	A
Approach Vol, veh/h	48			66			1300			1086		
Approach Delay, s/veh	81.3			87.4			5.6			5.3		
Approach LOS	F			F			A			A		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.7	152.4		17.9	10.6	151.6		17.9				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	10.0	116.0		36.0	11.0	115.0		36.0				
Max Q Clear Time (g_c+I1), s	2.5	20.1		3.3	2.9	16.3		11.6				
Green Ext Time (p_c), s	0.0	10.4		0.0	0.0	7.7		0.3				
Intersection Summary												
HCM 6th Ctrl Delay	9.1											
HCM 6th LOS	A											

HCM Signalized Intersection Capacity Analysis

16: Roberts Dr & Spalding Dr

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	350	310	26	36	249	560	21	375	34	372	329	71
Future Volume (vph)	350	310	26	36	249	560	21	375	34	372	329	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1805	1861		1805	1881	1615	1770	1859		1805	1831	
Flt Permitted	0.95	1.00		0.36	1.00	1.00	0.44	1.00		0.14	1.00	
Satd. Flow (perm)	1805	1861		690	1881	1615	814	1859		271	1831	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	372	330	28	38	265	596	22	399	36	396	350	76
RTOR Reduction (vph)	0	3	0	0	0	56	0	4	0	0	9	0
Lane Group Flow (vph)	372	355	0	38	265	540	22	431	0	396	417	0
Heavy Vehicles (%)	0%	1%	0%	0%	1%	0%	2%	1%	0%	0%	1%	1%
Turn Type	Split	NA		Perm	NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases	4!	4			3 7 8!	1	5	2		1	6	
Permitted Phases				3 7 8		3 7 8	2			6		
Actuated Green, G (s)	17.0	17.0		36.0	36.0	50.0	27.0	22.0		42.0	31.0	
Effective Green, g (s)	17.0	17.0		36.0	36.0	50.0	27.0	22.0		42.0	31.0	
Actuated g/C Ratio	0.19	0.19		0.40	0.40	0.56	0.30	0.24		0.47	0.34	
Clearance Time (s)	6.0	6.0				6.0	6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0				3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	340	351		276	752	1004	297	454		365	630	
v/s Ratio Prot	c0.21	0.19			0.14	c0.08	0.00	0.23		c0.17	0.23	
v/s Ratio Perm				0.06		0.25	0.02			c0.34		
v/c Ratio	1.09	1.01		0.14	0.35	0.54	0.07	0.95		1.08	0.66	
Uniform Delay, d1	36.5	36.5		17.1	18.9	12.7	22.4	33.5		24.5	25.1	
Progression Factor	1.00	1.00		1.40	1.35	0.87	1.00	1.00		1.00	1.00	
Incremental Delay, d2	76.4	50.8		0.2	0.2	0.5	0.5	31.4		71.8	5.4	
Delay (s)	112.9	87.3		24.2	25.8	11.5	22.9	64.9		96.3	30.5	
Level of Service	F	F		C	C	B	C	E		F	C	
Approach Delay (s)		100.4			16.2			62.8			62.2	
Approach LOS		F			B			E			E	

Intersection Summary

HCM 2000 Control Delay	57.7	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	94.9%	ICU Level of Service	F
Analysis Period (min)	15		

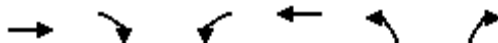
! Phase conflict between lane groups.

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis

21: Dunwoody Club Dr & Spalding Dr

08/31/2020



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	→	↘	↙	→	↙	↘
Traffic Volume (vph)	298	418	14	568	276	6
Future Volume (vph)	298	418	14	568	276	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0			6.0	6.0	
Lane Util. Factor	1.00			0.95	1.00	
Frt	0.92			1.00	1.00	
Flt Protected	1.00			1.00	0.95	
Satd. Flow (prot)	1750			3606	1789	
Flt Permitted	1.00			0.93	0.95	
Satd. Flow (perm)	1750			3365	1789	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	310	435	15	592	288	6
RTOR Reduction (vph)	56	0	0	0	1	0
Lane Group Flow (vph)	689	0	0	607	293	0
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%
Turn Type	NA		custom	NA	Prot	
Protected Phases	1 2 4			1 6 7!	3!	
Permitted Phases			7!			
Actuated Green, G (s)	65.0			53.0	13.0	
Effective Green, g (s)	65.0			53.0	13.0	
Actuated g/C Ratio	0.72			0.59	0.14	
Clearance Time (s)					6.0	
Vehicle Extension (s)					3.0	
Lane Grp Cap (vph)	1263			1981	258	
v/s Ratio Prot	c0.39				c0.16	
v/s Ratio Perm				0.18		
v/c Ratio	0.55			0.31	1.14	
Uniform Delay, d1	5.7			9.3	38.5	
Progression Factor	0.61			1.00	1.00	
Incremental Delay, d2	0.2			0.1	97.8	
Delay (s)	3.7			9.4	136.3	
Level of Service	A			A	F	
Approach Delay (s)	3.7			9.4	136.3	
Approach LOS	A			A	F	

Intersection Summary

HCM 2000 Control Delay	29.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	67.0%	ICU Level of Service	C
Analysis Period (min)	15		

! Phase conflict between lane groups.

c Critical Lane Group

HCM 6th Signalized Intersection Summary

17: Barfield Rd & Mt Vernon Hwy

10/07/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	183	858	29	57	1214	361	271	598	228	251	269	253
Future Volume (veh/h)	183	858	29	57	1214	361	271	598	228	251	269	253
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1885	1885	1885	1841	1885	1900	1900	1885	1870	1900	1856	1885
Adj Flow Rate, veh/h	191	894	0	59	1265	0	282	623	0	261	280	82
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	1	1	4	1	0	0	1	2	0	3	1
Cap, veh/h	130	1016		154	964		301	461		215	340	293
Arrive On Green	0.05	0.54	0.00	0.02	0.51	0.00	0.12	0.24	0.00	0.06	0.18	0.18
Sat Flow, veh/h	1795	1885	0	1753	1885	1610	1810	1885	1585	3510	1856	1598
Grp Volume(v), veh/h	191	894	0	59	1265	0	282	623	0	261	280	82
Grp Sat Flow(s),veh/h/ln	1795	1885	0	1753	1885	1610	1810	1885	1585	1755	1856	1598
Q Serve(g_s), s	9.0	74.9	0.0	2.9	92.0	0.0	22.0	44.0	0.0	11.0	26.1	8.0
Cycle Q Clear(g_c), s	9.0	74.9	0.0	2.9	92.0	0.0	22.0	44.0	0.0	11.0	26.1	8.0
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	130	1016		154	964		301	461		215	340	293
V/C Ratio(X)	1.47	0.88		0.38	1.31		0.94	1.35		1.22	0.82	0.28
Avail Cap(c_a), veh/h	130	1016		154	964		301	461		215	340	293
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	60.1	36.4	0.0	35.3	44.0	0.0	53.4	68.0	0.0	84.5	70.7	63.3
Incr Delay (d2), s/veh	249.2	10.8	0.0	1.6	148.2	0.0	35.7	172.2	0.0	132.2	15.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	19.4	46.9	0.0	2.3	117.1	0.0	19.3	63.2	0.0	14.7	20.0	5.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	309.3	47.2	0.0	36.8	192.2	0.0	89.2	240.2	0.0	216.7	85.7	63.8
LnGrp LOS	F	D		D	F		F	F		F	F	E
Approach Vol, veh/h	1085			A	1324			A	905			A
Approach Delay, s/veh	93.3				185.3				193.1			
Approach LOS	F				F				F			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.0	103.0	28.0	39.0	15.0	98.0	17.0	50.0				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	4.0	97.0	22.0	33.0	9.0	92.0	11.0	44.0				
Max Q Clear Time (g_c+I1), s	4.9	76.9	24.0	28.1	11.0	94.0	13.0	46.0				
Green Ext Time (p_c), s	0.0	6.8	0.0	0.6	0.0	0.0	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	154.2
HCM 6th LOS	F

Notes

Unsignalized Delay for [NBR, EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

18: Peachtree Dunwoody Rd & Mt Vernon Hwy/Mt Vernon Hwy

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	237	692	109	132	396	6	89	1277	370	12	424	129
Future Volume (veh/h)	237	692	109	132	396	6	89	1277	370	12	424	129
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1885	1885	1900	1870	1203	1870	1900	1900	1870	1870	1870
Adj Flow Rate, veh/h	249	728	36	139	417	0	94	1344	389	13	446	136
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	1	1	0	2	47	2	0	0	2	2	2
Cap, veh/h	397	1094	488	253	926		113	1467	412	30	923	683
Arrive On Green	0.11	0.31	0.31	0.07	0.26	0.00	0.06	0.53	0.53	0.43	0.43	0.43
Sat Flow, veh/h	1781	3582	1598	1810	3554	1020	1781	2783	782	17	2142	1585
Grp Volume(v), veh/h	249	728	36	139	417	0	94	858	875	118	341	136
Grp Sat Flow(s),veh/h/ln	1781	1791	1598	1810	1777	1020	1781	1805	1759	542	1617	1585
Q Serve(g_s), s	18.0	31.9	2.9	10.1	17.7	0.0	9.4	77.0	84.3	5.8	27.4	9.6
Cycle Q Clear(g_c), s	18.0	31.9	2.9	10.1	17.7	0.0	9.4	77.0	84.3	72.7	27.4	9.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.44	0.11		1.00
Lane Grp Cap(c), veh/h	397	1094	488	253	926		113	952	928	256	696	683
V/C Ratio(X)	0.63	0.67	0.07	0.55	0.45		0.83	0.90	0.94	0.46	0.49	0.20
Avail Cap(c_a), veh/h	415	1094	488	262	926		188	983	958	256	696	683
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.65	0.65	0.00	1.00	1.00	1.00	0.55	0.55	0.55
Uniform Delay (d), s/veh	41.2	54.5	44.4	46.0	55.7	0.0	83.4	38.3	40.0	39.2	37.0	31.9
Incr Delay (d2), s/veh	2.8	3.2	0.3	1.5	1.0	0.0	14.5	11.0	16.9	0.7	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	13.0	21.3	2.2	7.6	11.9	0.0	8.4	46.3	50.5	5.4	15.1	6.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.0	57.7	44.7	47.5	56.8	0.0	97.8	49.3	56.9	39.9	37.3	32.0
LnGrp LOS	D	E	D	D	E		F	D	E	D	D	C
Approach Vol, veh/h	1013			556			A			1827		
Approach Delay, s/veh	53.9			54.5			55.5			36.6		
Approach LOS	D			D			E			D		
Timer - Assigned Phs	1	2	3	4	5	6	8					
Phs Duration (G+Y+Rc), s	18.1	61.0	17.4	83.5	26.2	52.9	100.9					
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0					
Max Green Setting (Gmax), s	13.0	51.0	19.0	73.0	22.0	42.0	98.0					
Max Q Clear Time (g_c+I1), s	12.1	33.9	11.4	74.7	20.0	19.7	86.3					
Green Ext Time (p_c), s	0.0	4.4	0.1	0.0	0.1	2.6	8.7					

Intersection Summary

HCM 6th Ctrl Delay 52.1

HCM 6th LOS D

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

19: Peachtree Dunwoody Rd & Lake Hearn Drive

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	156	24	39	497	0	289	8	1896	94	121	1355	13
Future Volume (veh/h)	156	24	39	497	0	289	8	1896	94	121	1355	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1900	1870	1900	1900	1811	1885	1811	1900	1885	1885
Adj Flow Rate, veh/h	166	26	0	529	0	307	9	2017	100	129	1441	14
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	0	2	0	0	6	1	6	0	1	1
Cap, veh/h	176	21		610	0	574	133	1769	758	113	1901	18
Arrive On Green	0.14	0.14	0.00	0.18	0.00	0.36	0.02	0.99	0.99	0.04	0.52	0.52
Sat Flow, veh/h	976	153	1610	1781	0	1610	1725	3582	1535	1810	3634	35
Grp Volume(v), veh/h	192	0	0	529	0	307	9	2017	100	129	710	745
Grp Sat Flow(s),veh/h/ln	1129	0	1610	1781	0	1610	1725	1791	1535	1810	1791	1879
Q Serve(g_s), s	22.0	0.0	0.0	29.0	0.0	24.3	0.4	79.0	0.1	6.0	50.1	50.2
Cycle Q Clear(g_c), s	22.0	0.0	0.0	29.0	0.0	24.3	0.4	79.0	0.1	6.0	50.1	50.2
Prop In Lane	0.86		1.00	1.00		1.00	1.00		1.00	1.00		0.02
Lane Grp Cap(c), veh/h	197	0		610	0	574	133	1769	758	113	937	983
V/C Ratio(X)	0.97	0.00		0.87	0.00	0.54	0.07	1.14	0.13	1.14	0.76	0.76
Avail Cap(c_a), veh/h	197	0		610	0	574	162	1769	758	113	937	983
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.52	0.52	0.52	1.00	1.00	1.00
Uniform Delay (d), s/veh	71.1	0.0	0.0	51.2	0.0	41.0	26.4	1.0	0.5	46.2	30.2	30.2
Incr Delay (d2), s/veh	56.3	0.0	0.0	12.5	0.0	1.0	0.1	67.3	0.2	128.3	5.7	5.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	16.5	0.0	0.0	12.7	0.0	15.0	0.3	24.0	0.2	14.0	30.6	31.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	127.4	0.0	0.0	63.7	0.0	41.9	26.5	68.3	0.7	174.5	35.9	35.6
LnGrp LOS	F	A		E	A	D	C	F	A	F	D	D
Approach Vol, veh/h		192	A		836			2126			1584	
Approach Delay, s/veh		127.4			55.7			64.9			47.0	
Approach LOS		F			E			E			D	
Timer - Assigned Phs	1	2	3	4	5	6		8				
Phs Duration (G+Y+Rc), s	12.0	85.0	35.0	28.0	7.3	89.7		63.0				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	6.0	79.0	29.0	22.0	4.0	81.0		57.0				
Max Q Clear Time (g_c+I1), s	8.0	81.0	31.0	24.0	2.4	52.2		26.3				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	12.3		2.1				
Intersection Summary												
HCM 6th Ctrl Delay			59.8									
HCM 6th LOS			E									
Notes												
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary

20: Glenridge Conn & Johnson Ferry Rd

09/11/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 					 	  		 	 	
Traffic Volume (veh/h)	264	374	455	155	727	611	524	1165	45	304	592	49
Future Volume (veh/h)	264	374	455	155	727	611	524	1165	45	304	592	49
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1870	1885	1885	1885	1885	1885	1900	1900	1885	1885	1885
Adj Flow Rate, veh/h	269	382	0	158	742	623	535	1189	0	310	604	50
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	1	2	1	1	1	1	1	0	0	1	1	1
Cap, veh/h	165	1333		437	676	732	290	1470		348	1005	83
Arrive On Green	0.06	0.38	0.00	0.04	0.36	0.36	0.08	0.28	0.00	0.10	0.30	0.30
Sat Flow, veh/h	1795	3554	1598	1795	1885	1598	3483	5187	1610	3483	3349	277
Grp Volume(v), veh/h	269	382	0	158	742	623	535	1189	0	310	323	331
Grp Sat Flow(s),veh/h/ln	1795	1777	1598	1795	1885	1598	1742	1729	1610	1742	1791	1835
Q Serve(g_s), s	7.0	9.0	0.0	5.0	43.0	41.5	10.0	25.6	0.0	10.6	18.5	18.5
Cycle Q Clear(g_c), s	7.0	9.0	0.0	5.0	43.0	41.5	10.0	25.6	0.0	10.6	18.5	18.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.15
Lane Grp Cap(c), veh/h	165	1333		437	676	732	290	1470		348	537	551
V/C Ratio(X)	1.63	0.29		0.36	1.10	0.85	1.84	0.81		0.89	0.60	0.60
Avail Cap(c_a), veh/h	165	1333		437	676	732	290	1470		348	537	551
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.4	26.3	0.0	25.5	38.5	28.9	55.0	40.0	0.0	53.3	35.9	35.9
Incr Delay (d2), s/veh	310.7	0.1	0.0	0.5	64.7	9.4	392.5	4.9	0.0	23.5	4.9	4.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	27.2	6.9	0.0	1.6	43.2	24.0	32.3	16.6	0.0	9.6	13.5	13.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	341.1	26.4	0.0	26.0	103.2	38.3	447.5	44.9	0.0	76.8	40.8	40.7
LnGrp LOS	F	C		C	F	D	F	D		E	D	D
Approach Vol, veh/h		651	A		1523			1724	A		964	
Approach Delay, s/veh		156.4			68.6			169.8			52.3	
Approach LOS		F			E			F			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.0	40.0	11.0	51.0	16.0	42.0	13.0	49.0				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	12.0	34.0	5.0	45.0	10.0	36.0	7.0	43.0				
Max Q Clear Time (g_c+I1), s	12.6	27.6	7.0	11.0	12.0	20.5	9.0	45.0				
Green Ext Time (p_c), s	0.0	3.8	0.0	2.6	0.0	3.5	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	113.0
HCM 6th LOS	F

Notes

Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

APPENDIX F: ROUDABOUT ANALYSES



SITE LAYOUT

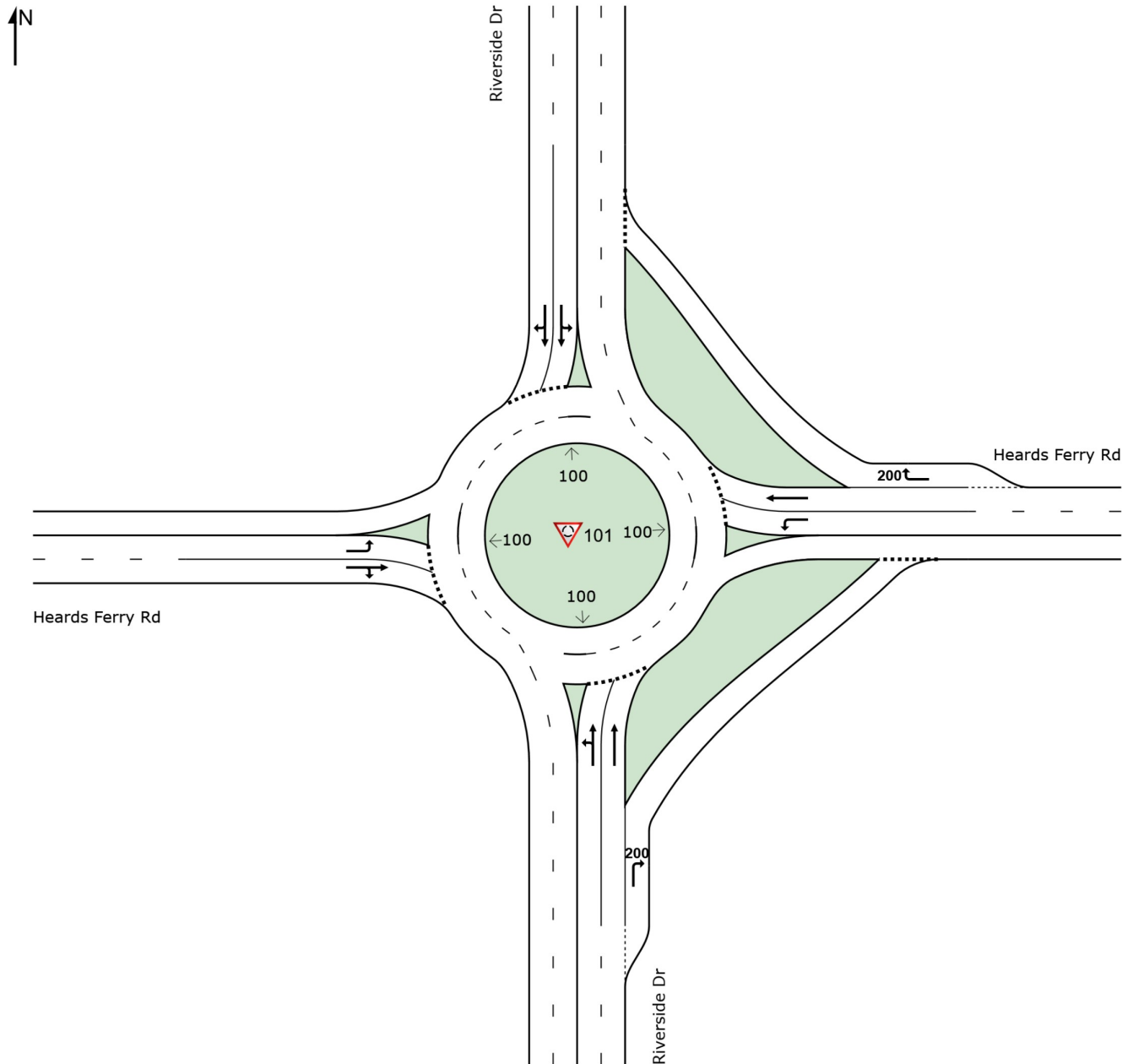
Site: 101 [2030 AM Multi-lane (Site Folder: General)]

Riverside Dr @ Heards Ferry Rd

Site Category: (None)

Roundabout

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



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Project: \\global.gsp\data\flat_nf02\4458700\01Work\03Tech\TR\Traffic\Analysis\SIDRA\101- Riverside Dr @ Heards Ferry Rd\Riverside Dr @ Heards Ferry Rd.sip9

MOVEMENT SUMMARY

 **Site: 101 [2030 AM Multi-lane (Site Folder: General)]**

Riverside Dr @ Heards Ferry Rd

Site Category: (None)

Roundabout

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %				[Veh. veh	Dist] ft				
South: Riverside Dr														
3	L2	151	3.0	157	3.0	0.263	6.2	LOS A	1.3	33.8	0.54	0.45	0.54	30.4
8	T1	397	3.0	414	3.0	0.263	5.7	LOS A	1.4	35.3	0.53	0.43	0.53	31.5
18	R2	138	3.0	144	3.0	0.116	3.9	LOS A	0.6	15.7	0.44	0.28	0.44	31.4
Approach		686	3.0	715	3.0	0.263	5.4	LOS A	1.4	35.3	0.51	0.40	0.51	31.2
East: Heards Ferry Rd														
1	L2	71	3.0	74	3.0	0.097	5.7	LOS A	0.4	10.0	0.55	0.50	0.55	29.8
6	T1	200	3.0	208	3.0	0.192	5.1	LOS A	0.9	22.5	0.55	0.49	0.55	32.1
16	R2	44	3.0	46	3.0	0.040	3.4	LOS A	0.2	4.1	0.45	0.32	0.45	31.6
Approach		315	3.0	328	3.0	0.192	5.0	LOS A	0.9	22.5	0.54	0.47	0.54	31.5
North: Riverside Dr														
7	L2	49	3.0	51	3.0	0.558	11.5	LOS B	4.8	122.7	0.67	0.73	0.91	29.5
4	T1	822	3.0	856	3.0	0.558	11.3	LOS B	4.8	123.0	0.66	0.72	0.91	29.4
14	R2	143	3.0	149	3.0	0.558	11.1	LOS B	4.8	123.0	0.66	0.71	0.90	28.7
Approach		1014	3.0	1056	3.0	0.558	11.3	LOS B	4.8	123.0	0.66	0.72	0.90	29.3
West: Heards Ferry Rd														
5	L2	133	3.0	139	3.0	0.300	12.7	LOS B	1.3	34.2	0.72	0.73	0.76	27.3
2	T1	243	3.0	253	3.0	0.549	14.1	LOS B	4.1	104.5	0.80	0.95	1.20	28.4
12	R2	123	3.0	128	3.0	0.549	14.1	LOS B	4.1	104.5	0.80	0.95	1.20	27.6
Approach		499	3.0	520	3.0	0.549	13.7	LOS B	4.1	104.5	0.78	0.89	1.08	27.9
All Vehicles		2514	3.0	2619	3.0	0.558	9.4	LOS A	4.8	123.0	0.63	0.63	0.79	29.8

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).

Roundabout Capacity Model: SIDRA Standard.

Delay Model: HCM Delay Formula (Geometric Delay is not included).

Queue Model: HCM Queue Formula.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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Project: \\global.gsp\data\nflat_nf02\4458700\01Work\03Tech\TR\Traffic\Analysis\SIDRA\101- Riverside Dr @ Heards Ferry Rd\Riverside Dr @ Heards Ferry Rd.sip9

MOVEMENT SUMMARY

 **Site: 101 [2030 PM Multi-lane (Site Folder: General)]**

Riverside Dr @ Heards Ferry Rd

Site Category: (None)

Roundabout

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] %	[Total veh/h	HV] %				[Veh. veh	Dist] ft				
South: Riverside Dr														
3	L2	76	3.0	78	3.0	0.480	9.1	LOS A	3.1	79.4	0.60	0.56	0.67	30.3
8	T1	971	3.0	1001	3.0	0.480	8.5	LOS A	3.1	79.4	0.59	0.51	0.62	30.5
18	R2	29	3.0	30	3.0	0.022	2.8	LOS A	0.1	2.4	0.27	0.12	0.27	31.9
Approach		1076	3.0	1109	3.0	0.480	8.4	LOS A	3.1	79.4	0.58	0.51	0.61	30.5
East: Heards Ferry Rd														
1	L2	87	3.0	90	3.0	0.154	8.1	LOS A	0.7	17.7	0.72	0.72	0.72	28.9
6	T1	232	3.0	239	3.0	0.289	7.6	LOS A	1.5	39.2	0.75	0.75	0.75	31.0
16	R2	146	3.0	151	3.0	0.173	5.9	LOS A	0.9	21.8	0.70	0.67	0.70	30.6
Approach		465	3.0	479	3.0	0.289	7.2	LOS A	1.5	39.2	0.73	0.72	0.73	30.5
North: Riverside Dr														
7	L2	59	3.0	61	3.0	0.408	8.6	LOS A	2.3	57.9	0.59	0.52	0.59	30.5
4	T1	501	3.0	516	3.0	0.408	8.5	LOS A	2.3	58.4	0.59	0.51	0.59	30.4
14	R2	190	3.0	196	3.0	0.408	8.3	LOS A	2.3	58.4	0.59	0.51	0.59	29.7
Approach		750	3.0	773	3.0	0.408	8.4	LOS A	2.3	58.4	0.59	0.51	0.59	30.2
West: Heards Ferry Rd														
5	L2	243	3.0	251	3.0	0.299	7.6	LOS A	1.5	37.3	0.62	0.59	0.62	29.1
2	T1	97	3.0	100	3.0	0.216	7.7	LOS A	1.0	24.5	0.61	0.59	0.61	30.9
12	R2	48	3.0	49	3.0	0.216	7.7	LOS A	1.0	24.5	0.61	0.59	0.61	30.0
Approach		388	3.0	400	3.0	0.299	7.7	LOS A	1.5	37.3	0.62	0.59	0.62	29.6
All Vehicles		2679	3.0	2762	3.0	0.480	8.1	LOS A	3.1	79.4	0.61	0.56	0.63	30.3

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).

Roundabout Capacity Model: SIDRA Standard.

Delay Model: HCM Delay Formula (Geometric Delay is not included).

Queue Model: HCM Queue Formula.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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Project: \\global.gsp\data\flat_nf02\4458700\01Work\03Tech\TR\TrafficAnalysis\SIDRA\101- Riverside Dr @ Heards Ferry Rd\Riverside Dr @ Heards Ferry Rd.sip9

MOVEMENT SUMMARY

 **Site: 101 [2050 AM Multi-lane (Site Folder: General)]**

Riverside Dr @ Heards Ferry Rd

Site Category: (None)

Roundabout

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] %	[Total veh/h	HV] %				[Veh. veh	Dist] ft				
South: Riverside Dr														
3	L2	167	3.0	174	3.0	0.286	6.5	LOS A	1.5	37.8	0.57	0.49	0.57	30.3
8	T1	439	3.0	457	3.0	0.286	5.8	LOS A	1.6	40.0	0.56	0.46	0.56	31.4
18	R2	152	3.0	158	3.0	0.123	3.8	LOS A	0.7	17.6	0.46	0.30	0.46	31.5
Approach		758	3.0	790	3.0	0.286	5.6	LOS A	1.6	40.0	0.54	0.43	0.54	31.2
East: Heards Ferry Rd														
1	L2	79	3.0	82	3.0	0.103	5.5	LOS A	0.4	10.9	0.57	0.52	0.57	29.8
6	T1	221	3.0	230	3.0	0.205	5.1	LOS A	1.0	24.9	0.58	0.52	0.58	32.1
16	R2	49	3.0	51	3.0	0.042	3.3	LOS A	0.2	4.6	0.47	0.34	0.47	31.7
Approach		349	3.0	364	3.0	0.205	4.9	LOS A	1.0	24.9	0.56	0.49	0.56	31.5
North: Riverside Dr														
7	L2	55	3.0	57	3.0	0.608	12.8	LOS B	6.0	154.6	0.72	0.84	1.09	28.9
4	T1	908	3.0	946	3.0	0.608	12.5	LOS B	6.1	157.1	0.71	0.83	1.07	28.9
14	R2	158	3.0	165	3.0	0.608	12.1	LOS B	6.1	157.1	0.71	0.81	1.05	28.4
Approach		1121	3.0	1168	3.0	0.608	12.4	LOS B	6.1	157.1	0.71	0.83	1.07	28.9
West: Heards Ferry Rd														
5	L2	147	3.0	153	3.0	0.325	13.0	LOS B	1.6	39.7	0.75	0.78	0.83	27.3
2	T1	268	3.0	279	3.0	0.601	15.6	LOS C	5.0	127.2	0.84	1.04	1.35	27.9
12	R2	136	3.0	142	3.0	0.601	15.6	LOS C	5.0	127.2	0.84	1.04	1.35	27.1
Approach		551	3.0	574	3.0	0.601	14.9	LOS B	5.0	127.2	0.82	0.97	1.21	27.5
All Vehicles		2779	3.0	2895	3.0	0.608	10.1	LOS B	6.1	157.1	0.67	0.71	0.89	29.5

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).

Roundabout Capacity Model: SIDRA Standard.

Delay Model: HCM Delay Formula (Geometric Delay is not included).

Queue Model: HCM Queue Formula.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

 **Site: 101 [2050 PM Multi-lane (Site Folder: General)]**

Riverside Dr @ Heards Ferry Rd

Site Category: (None)

Roundabout

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] %	[Total veh/h	HV] %				[Veh. veh	Dist] ft				
South: Riverside Dr														
3	L2	84	3.0	87	3.0	0.519	9.8	LOS A	3.9	100.9	0.64	0.65	0.80	30.0
8	T1	1073	3.0	1106	3.0	0.519	9.0	LOS A	3.9	100.9	0.62	0.60	0.74	30.3
18	R2	33	3.0	34	3.0	0.024	2.7	LOS A	0.1	2.7	0.28	0.13	0.28	32.0
Approach		1190	3.0	1227	3.0	0.519	8.9	LOS A	3.9	100.9	0.61	0.59	0.73	30.3
East: Heards Ferry Rd														
1	L2	96	3.0	99	3.0	0.163	8.0	LOS A	0.8	19.9	0.75	0.75	0.75	28.9
6	T1	257	3.0	265	3.0	0.313	7.8	LOS A	1.8	45.4	0.80	0.80	0.80	31.0
16	R2	161	3.0	166	3.0	0.186	5.9	LOS A	1.0	24.8	0.73	0.71	0.73	30.6
Approach		514	3.0	530	3.0	0.313	7.2	LOS A	1.8	45.4	0.77	0.76	0.77	30.4
North: Riverside Dr														
7	L2	65	3.0	67	3.0	0.446	9.3	LOS A	2.7	70.1	0.63	0.59	0.68	30.2
4	T1	554	3.0	571	3.0	0.446	9.0	LOS A	2.7	70.1	0.63	0.58	0.66	30.2
14	R2	210	3.0	216	3.0	0.446	8.7	LOS A	2.7	68.9	0.62	0.56	0.64	29.5
Approach		829	3.0	855	3.0	0.446	9.0	LOS A	2.7	70.1	0.63	0.57	0.66	30.0
West: Heards Ferry Rd														
5	L2	268	3.0	276	3.0	0.320	7.8	LOS A	1.6	41.6	0.65	0.63	0.65	29.0
2	T1	107	3.0	110	3.0	0.237	8.0	LOS A	1.1	27.7	0.64	0.63	0.64	30.8
12	R2	53	3.0	55	3.0	0.237	8.0	LOS A	1.1	27.7	0.64	0.63	0.64	29.9
Approach		428	3.0	441	3.0	0.320	7.8	LOS A	1.6	41.6	0.65	0.63	0.65	29.5
All Vehicles		2961	3.0	3053	3.0	0.519	8.5	LOS A	3.9	100.9	0.65	0.62	0.71	30.1

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).

Roundabout Capacity Model: SIDRA Standard.

Delay Model: HCM Delay Formula (Geometric Delay is not included).

Queue Model: HCM Queue Formula.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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SITE LAYOUT

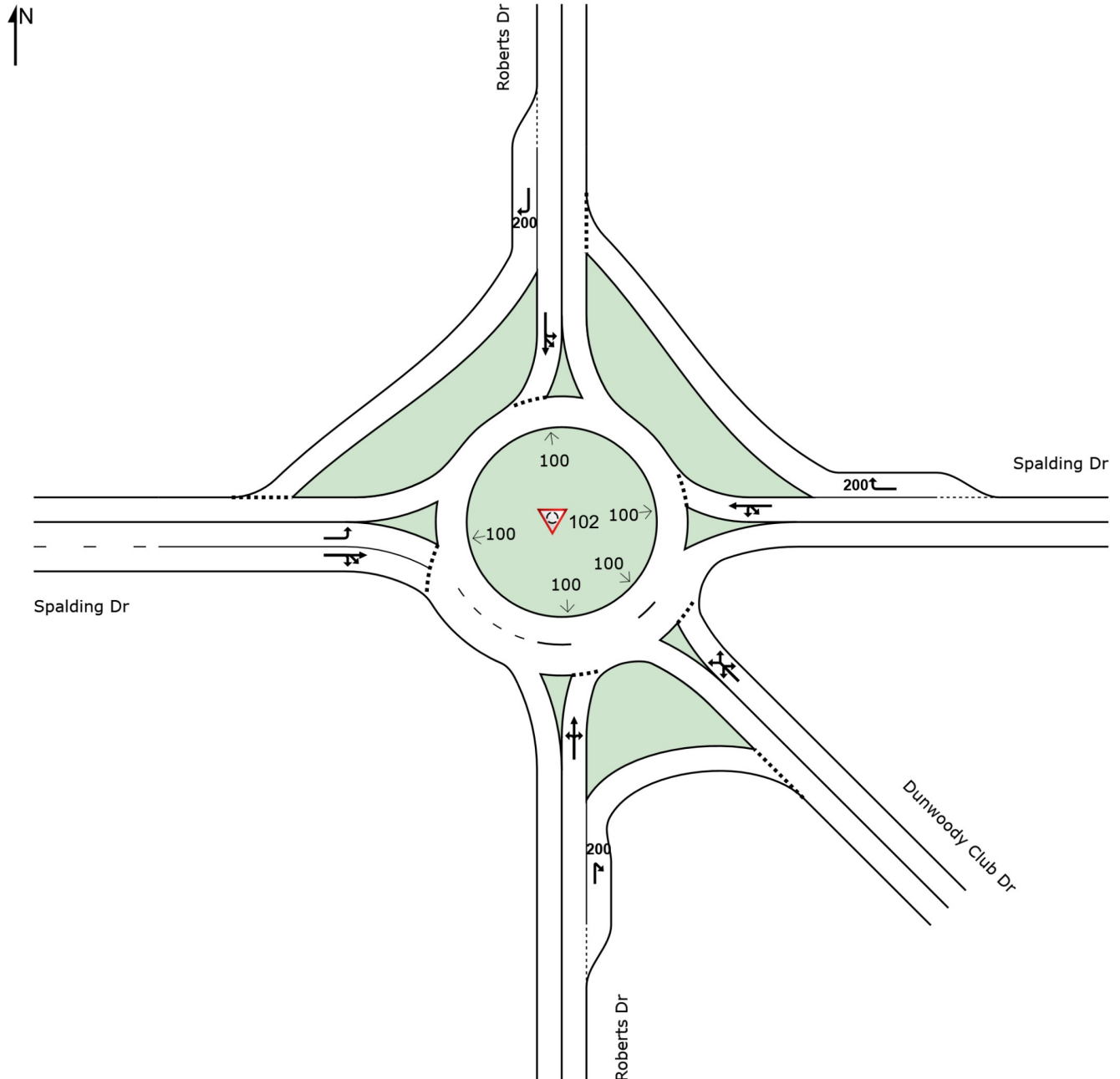
Site: 102 [2030 AM Multi-Lane (Site Folder: General)]

Roberts Dr @ Spalding Dr @ Dunwoody Club Dr

Site Category: (None)

Roundabout

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



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MOVEMENT SUMMARY

 Site: 102 [2030 AM Multi-Lane (Site Folder: General)]

Roberts Dr @ Spalding Dr @ Dunwoody Club Dr

Site Category: (None)

Roundabout

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] %	[Total veh/h	HV] %				[Veh. veh	Dist] ft				
South: Roberts Dr														
3	L2	24	0.0	28	0.0	0.434	10.0	LOS A	2.7	68.7	0.70	0.76	0.84	30.1
8	T1	267	1.0	307	1.0	0.434	10.0	LOS B	2.7	68.7	0.70	0.76	0.84	29.9
18	R2	15	0.0	17	0.0	0.434	10.0	LOS A	2.7	68.7	0.70	0.76	0.84	29.1
18b	R3	20	0.0	22	0.0	0.020	3.6	LOS A	0.1	2.3	0.39	0.22	0.39	34.5
Approach		326	0.8	373	0.8	0.434	9.6	LOS A	2.7	68.7	0.69	0.73	0.81	30.1
SouthEast: Dunwoody Club Dr														
3bx	L3	30	0.0	34	0.0	0.773	25.7	LOS D	9.4	236.0	0.88	1.26	1.88	24.7
3ax	L1	165	1.0	190	1.0	0.773	25.8	LOS D	9.4	236.0	0.88	1.26	1.88	24.3
18ax	R1	235	0.0	270	0.0	0.773	25.7	LOS D	9.4	236.0	0.88	1.26	1.88	24.2
18bx	R3	5	0.0	6	0.0	0.773	25.7	LOS D	9.4	236.0	0.88	1.26	1.88	23.6
Approach		435	0.4	500	0.4	0.773	25.7	LOS D	9.4	236.0	0.88	1.26	1.88	24.2
East: Spalding Dr														
1b	L3	7	0.0	8	0.0	0.451	12.5	LOS B	4.0	99.7	0.98	0.99	1.10	30.3
1	L2	40	0.0	46	0.0	0.451	12.5	LOS B	4.0	99.7	0.98	0.99	1.10	29.0
6	T1	205	0.0	236	0.0	0.451	12.5	LOS B	4.0	99.7	0.98	0.99	1.10	28.8
16	R2	295	0.0	339	0.0	0.390	8.7	LOS A	2.9	71.4	0.82	0.74	0.82	29.6
Approach		547	0.0	628	0.0	0.451	10.4	LOS B	4.0	99.7	0.89	0.85	0.95	29.2
North: Roberts Dr														
7	L2	120	0.0	138	0.0	0.602	11.9	LOS B	7.0	176.6	0.86	0.88	1.13	28.9
7a	L1	135	0.0	147	0.0	0.602	11.9	LOS B	7.0	176.6	0.86	0.88	1.13	29.7
4	T1	274	1.0	315	1.0	0.602	12.0	LOS B	7.0	176.6	0.86	0.88	1.13	28.7
14	R2	108	1.0	124	1.0	0.116	4.4	LOS A	0.7	17.6	0.58	0.41	0.58	31.4
Approach		637	0.6	724	0.6	0.602	10.7	LOS B	7.0	176.6	0.81	0.80	1.04	29.4
West: Spalding Dr														
5	L2	151	0.0	174	0.0	0.266	8.9	LOS A	1.8	45.0	0.81	0.73	0.81	28.7
2	T1	110	0.0	126	0.0	0.343	8.4	LOS A	2.7	66.4	0.85	0.74	0.85	31.4
12a	R1	125	0.0	136	0.0	0.343	8.4	LOS A	2.7	66.4	0.85	0.74	0.85	32.5
12	R2	18	5.0	21	5.0	0.343	8.7	LOS A	2.7	66.4	0.85	0.74	0.85	30.4
Approach		404	0.2	457	0.2	0.343	8.6	LOS A	2.7	66.4	0.83	0.74	0.83	30.5
All Vehicles		2349	0.4	2682	0.4	0.773	12.9	LOS B	9.4	236.0	0.83	0.88	1.11	28.5

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).

Roundabout Capacity Model: SIDRA Standard.

Delay Model: HCM Delay Formula (Geometric Delay is not included).

MOVEMENT SUMMARY

 **Site: 102 [2030 PM Multi-Lane (Site Folder: General)]**

Roberts Dr @ Spalding Dr @ Dunwoody Club Dr

Site Category: (None)

Roundabout

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] %	[Total veh/h	HV] %				[Veh. veh	Dist] ft				
South: Roberts Dr														
3	L2	19	2.0	20	2.0	0.578	15.3	LOS C	4.6	116.6	0.83	1.00	1.28	28.2
8	T1	340	1.0	358	1.0	0.578	15.2	LOS C	4.6	116.6	0.83	1.00	1.28	28.0
18	R2	15	0.0	16	0.0	0.578	15.1	LOS C	4.6	116.6	0.83	1.00	1.28	27.3
18b	R3	15	0.0	16	0.0	0.016	3.8	LOS A	0.1	1.8	0.45	0.27	0.45	34.4
Approach		389	1.0	409	1.0	0.578	14.7	LOS B	4.6	116.6	0.81	0.97	1.25	28.2
SouthEast: Dunwoody Club Dr														
3bx	L3	10	0.0	11	0.0	0.476	14.4	LOS B	2.9	73.2	0.77	0.88	1.07	28.4
3ax	L1	75	1.0	79	1.0	0.476	14.5	LOS B	2.9	73.2	0.77	0.88	1.07	27.7
18ax	R1	165	0.0	174	0.0	0.476	14.4	LOS B	2.9	73.2	0.77	0.88	1.07	27.6
18bx	R3	5	0.0	5	0.0	0.476	14.4	LOS B	2.9	73.2	0.77	0.88	1.07	26.9
Approach		255	0.3	268	0.3	0.476	14.5	LOS B	2.9	73.2	0.77	0.88	1.07	27.7
East: Spalding Dr														
1b	L3	13	0.0	14	0.0	0.285	8.7	LOS A	2.1	52.9	0.89	0.81	0.89	32.0
1	L2	20	0.0	21	0.0	0.285	8.7	LOS A	2.1	52.9	0.89	0.81	0.89	30.5
6	T1	155	0.0	163	0.0	0.285	8.7	LOS A	2.1	52.9	0.89	0.81	0.89	30.3
16	R2	340	0.0	358	0.0	0.462	10.9	LOS B	4.0	99.5	0.91	0.90	1.02	28.7
Approach		528	0.0	556	0.0	0.462	10.1	LOS B	4.0	99.5	0.90	0.87	0.98	29.3
North: Roberts Dr														
7	L2	145	0.0	153	0.0	0.561	9.6	LOS A	4.8	120.9	0.69	0.52	0.69	29.8
7a	L1	195	0.0	205	0.0	0.561	9.6	LOS A	4.8	120.9	0.69	0.52	0.69	30.6
4	T1	297	1.0	313	1.0	0.561	9.6	LOS A	4.8	120.9	0.69	0.52	0.69	29.6
14	R2	64	1.0	67	1.0	0.055	3.4	LOS A	0.3	7.7	0.43	0.24	0.43	31.8
Approach		701	0.5	738	0.5	0.561	9.0	LOS A	4.8	120.9	0.67	0.50	0.67	30.1
West: Spalding Dr														
5	L2	316	0.0	333	0.0	0.403	9.3	LOS A	3.2	79.3	0.87	0.78	0.87	28.5
2	T1	120	1.0	126	1.0	0.476	12.4	LOS B	4.1	103.0	0.89	0.91	1.05	29.8
12a	R1	165	1.0	174	1.0	0.476	12.4	LOS B	4.1	103.0	0.89	0.91	1.05	30.8
12	R2	23	0.0	24	0.0	0.476	12.4	LOS B	4.1	103.0	0.89	0.91	1.05	29.0
Approach		624	0.5	657	0.5	0.476	10.9	LOS B	4.1	103.0	0.88	0.84	0.96	29.3
All Vehicles		2497	0.4	2628	0.4	0.578	11.2	LOS B	4.8	120.9	0.80	0.77	0.94	29.2

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).

Roundabout Capacity Model: SIDRA Standard.

Delay Model: HCM Delay Formula (Geometric Delay is not included).

MOVEMENT SUMMARY

 Site: 102 [2050 AM Multi-Lane (Site Folder: General)]

Roberts Dr @ Spalding Dr @ Dunwoody Club Dr

Site Category: (None)

Roundabout

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] %	[Total veh/h	HV] %				[Veh. veh	Dist] ft				
South: Roberts Dr														
3	L2	27	0.0	31	0.0	0.486	11.0	LOS B	3.5	88.7	0.76	0.86	1.00	29.7
8	T1	295	1.0	339	1.0	0.486	11.1	LOS B	3.5	88.7	0.76	0.86	1.00	29.5
18	R2	20	0.0	23	0.0	0.486	11.0	LOS B	3.5	88.7	0.76	0.86	1.00	28.7
18b	R3	20	0.0	23	0.0	0.021	3.5	LOS A	0.1	2.4	0.42	0.24	0.42	34.5
Approach		362	0.8	416	0.8	0.486	10.6	LOS B	3.5	88.7	0.74	0.82	0.96	29.7
SouthEast: Dunwoody Club Dr														
3bx	L3	35	0.0	40	0.0	0.844	32.3	LOS D	12.6	315.7	0.94	1.46	2.31	23.1
3ax	L1	180	1.0	207	1.0	0.844	32.3	LOS D	12.6	315.7	0.94	1.46	2.31	22.7
18ax	R1	260	0.0	299	0.0	0.844	32.3	LOS D	12.6	315.7	0.94	1.46	2.31	22.6
18bx	R3	6	0.0	7	0.0	0.844	32.3	LOS D	12.6	315.7	0.94	1.46	2.31	22.1
Approach		481	0.4	553	0.4	0.844	32.3	LOS D	12.6	315.7	0.94	1.46	2.31	22.7
East: Spalding Dr														
1b	L3	8	0.0	9	0.0	0.534	15.4	LOS C	5.6	140.2	1.00	1.08	1.27	29.2
1	L2	45	0.0	52	0.0	0.534	15.4	LOS C	5.6	140.2	1.00	1.08	1.27	27.9
6	T1	225	0.0	259	0.0	0.534	15.4	LOS C	5.6	140.2	1.00	1.08	1.27	27.7
16	R2	325	0.0	374	0.0	0.432	9.5	LOS A	3.5	87.8	0.88	0.81	0.92	29.3
Approach		603	0.0	693	0.0	0.534	12.2	LOS B	5.6	140.2	0.94	0.94	1.08	28.6
North: Roberts Dr														
7	L2	135	0.0	155	0.0	0.668	13.7	LOS B	9.4	236.6	0.92	1.02	1.35	28.3
7a	L1	150	0.0	172	0.0	0.668	13.7	LOS B	9.4	236.6	0.92	1.02	1.35	29.0
4	T1	303	1.0	348	1.0	0.668	13.8	LOS B	9.4	236.6	0.92	1.02	1.35	28.1
14	R2	120	1.0	138	1.0	0.126	4.4	LOS A	0.8	19.9	0.61	0.44	0.61	31.4
Approach		708	0.6	814	0.6	0.668	12.2	LOS B	9.4	236.6	0.87	0.92	1.22	28.8
West: Spalding Dr														
5	L2	167	0.0	192	0.0	0.320	10.5	LOS B	2.3	58.1	0.88	0.82	0.88	28.1
2	T1	120	0.0	138	0.0	0.410	9.8	LOS A	3.5	87.6	0.93	0.83	0.93	30.8
12a	R1	140	0.0	161	0.0	0.410	9.8	LOS A	3.5	87.6	0.93	0.83	0.93	31.9
12	R2	20	5.0	23	5.0	0.410	10.1	LOS B	3.5	87.6	0.93	0.83	0.93	29.9
Approach		447	0.2	514	0.2	0.410	10.1	LOS B	3.5	87.6	0.92	0.83	0.92	30.0
All Vehicles		2601	0.4	2990	0.4	0.844	15.3	LOS C	12.6	315.7	0.89	1.00	1.30	27.7

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).

Roundabout Capacity Model: SIDRA Standard.

Delay Model: HCM Delay Formula (Geometric Delay is not included).

MOVEMENT SUMMARY

 **Site: 102 [2050 PM Multi-Lane (Site Folder: General)]**

Roberts Dr @ Spalding Dr @ Dunwoody Club Dr

Site Category: (None)

Roundabout

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] %	[Total veh/h	HV] %				[Veh. veh	Dist] ft				
South: Roberts Dr														
3	L2	21	2.0	22	2.0	0.695	21.5	LOS C	6.7	169.9	0.90	1.17	1.63	26.2
8	T1	375	1.0	395	1.0	0.695	21.4	LOS C	6.7	169.9	0.90	1.17	1.63	26.0
18	R2	15	0.0	16	0.0	0.695	21.3	LOS C	6.7	169.9	0.90	1.17	1.63	25.5
18b	R3	20	0.0	21	0.0	0.022	4.0	LOS A	0.1	2.6	0.48	0.30	0.48	34.3
Approach		431	1.0	454	1.0	0.695	20.6	LOS C	6.7	169.9	0.88	1.13	1.58	26.3
SouthEast: Dunwoody Club Dr														
3bx	L3	15	0.0	16	0.0	0.580	19.0	LOS C	4.1	103.2	0.82	1.00	1.33	26.8
3ax	L1	80	1.0	84	1.0	0.580	19.1	LOS C	4.1	103.2	0.82	1.00	1.33	26.3
18ax	R1	185	0.0	195	0.0	0.580	19.0	LOS C	4.1	103.2	0.82	1.00	1.33	26.2
18bx	R3	6	0.0	6	0.0	0.580	19.0	LOS C	4.1	103.2	0.82	1.00	1.33	25.5
Approach		286	0.3	301	0.3	0.580	19.0	LOS C	4.1	103.2	0.82	1.00	1.33	26.2
East: Spalding Dr														
1b	L3	14	0.0	15	0.0	0.364	11.2	LOS B	2.9	71.6	0.97	0.91	0.97	30.8
1	L2	30	0.0	32	0.0	0.364	11.2	LOS B	2.9	71.6	0.97	0.91	0.97	29.4
6	T1	165	0.0	174	0.0	0.364	11.2	LOS B	2.9	71.6	0.97	0.91	0.97	29.2
16	R2	375	0.0	395	0.0	0.570	14.7	LOS B	6.0	150.7	0.99	1.11	1.32	27.4
Approach		584	0.0	615	0.0	0.570	13.5	LOS B	6.0	150.7	0.98	1.04	1.20	28.1
North: Roberts Dr														
7	L2	160	0.0	168	0.0	0.641	11.7	LOS B	8.2	205.6	0.78	0.72	0.98	29.0
7a	L1	215	0.0	226	0.0	0.641	11.7	LOS B	8.2	205.6	0.78	0.72	0.98	29.7
4	T1	329	1.0	346	1.0	0.641	11.7	LOS B	8.2	205.6	0.78	0.72	0.98	28.8
14	R2	71	1.0	75	1.0	0.062	3.5	LOS A	0.3	8.8	0.45	0.26	0.45	31.8
Approach		775	0.5	816	0.5	0.641	10.9	LOS B	8.2	205.6	0.75	0.68	0.93	29.3
West: Spalding Dr														
5	L2	350	0.0	368	0.0	0.508	12.5	LOS B	5.0	124.5	0.96	0.98	1.15	27.4
2	T1	130	1.0	137	1.0	0.600	17.9	LOS C	6.4	161.8	0.98	1.15	1.40	27.8
12a	R1	180	1.0	189	1.0	0.600	17.9	LOS C	6.4	161.8	0.98	1.15	1.40	28.7
12	R2	26	0.0	27	0.0	0.600	17.8	LOS C	6.4	161.8	0.98	1.15	1.40	27.1
Approach		686	0.5	722	0.5	0.600	15.1	LOS C	6.4	161.8	0.97	1.06	1.27	27.8
All Vehicles		2762	0.4	2907	0.4	0.695	14.9	LOS B	8.2	205.6	0.88	0.95	1.21	27.8

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).

Roundabout Capacity Model: SIDRA Standard.

Delay Model: HCM Delay Formula (Geometric Delay is not included).

Travel Time Index and Bottleneck Analysis

Regional Integrated Transportation Information System (RITIS) is a platform that compiles travel time and speed data collected from roadway sensors and probe data. RITIS offers various visualization tools to assist users in evaluating data trends in traffic operations along segments of the road network. A RITIS road network was created to include available road segments within the Sandy Springs city boundary, then the RITIS travel time index and bottleneck metrics were used to identify major congestion points within the study area.

Travel Time Index

Travel time is the amount of time required to travel a segment of roadway. Travel time index is the ratio of travel time during a peak congestion period to the time required to travel the same segment of roadway during free-flow or no congestion conditions. A travel time index of 2.0 indicates that a trip during that peak period would take twice as long as it would during free flow conditions. RITIS travel time index data for the Sandy Springs network was evaluated for October 2019 using HERE probe data, which is a probe data vendor that aggregates real time and archived data on speed, reference speed (free-flow speed), and travel time.

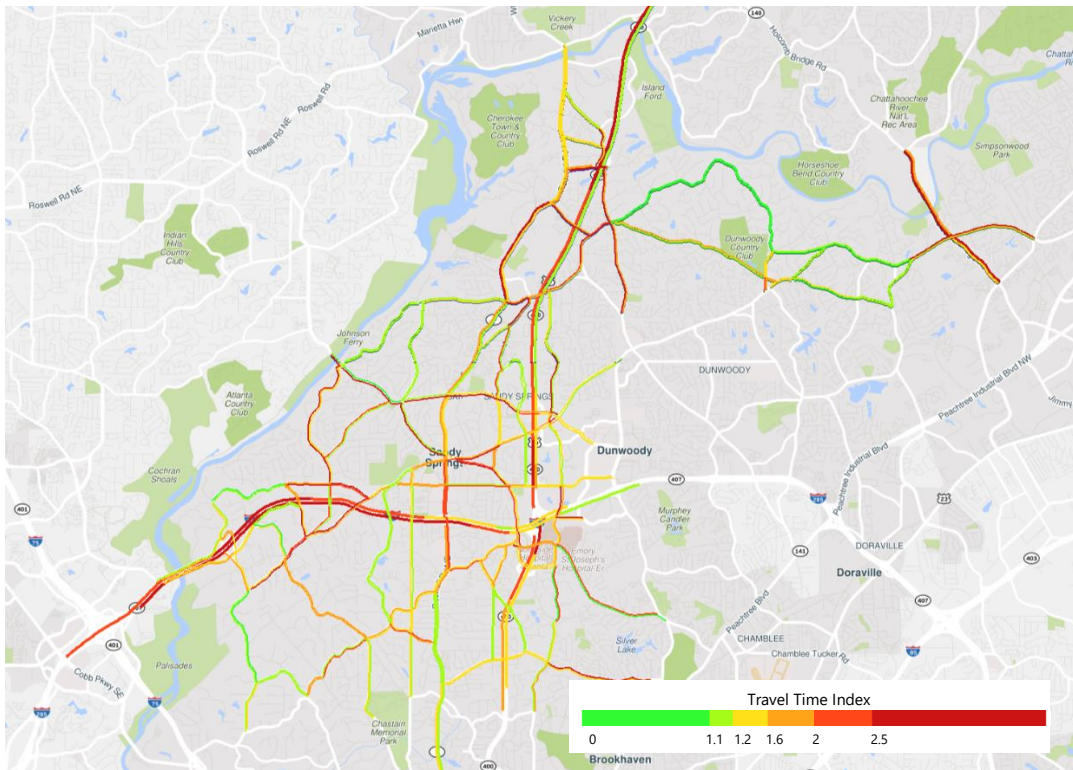
During the AM peak period, corridors with the highest travel time index have the worst congestion and the highest increase in travel time during peak periods compared to free-flow conditions. The following major thoroughfare corridors have a travel time of 2.5 or higher, meaning it takes 2.5 times as long to traverse the same roadway segment during this peak period as it does during free-flow conditions:

- Riverside Drive SB between Johnson Ferry Road to I-285
- Johnson Ferry Road SB towards Sandy Springs city center and I-285 and SR 400
- Powers Ferry Road SB south of I-285
- Abernathy Road EB towards SR 400
- Heard's Ferry Road converging towards Riverside Drive
- Mount Vernon Highway near I-285 and Sandy Springs city center
- Peachtree Dunwoody Road SB near Abernathy Road
- Glenridge Drive and Peachtree Dunwoody Road near the I-285 on ramp
- Roswell Road SB near Dalrymple Road
- Roberts Drive SB towards Dunwoody
- Pitts Road and Northridge Road EB across I-285
- Spalding Drive SB near SR 400 and EB at the intersection of Holcomb Bridge Road.

Note: SR 400 and I-285 are excluded from this list.

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These high travel time index corridors mostly converge towards I-285 or SR 400, but some corridors such as Roberts Drive or Roswell Road may be used as alternative commuting corridors.

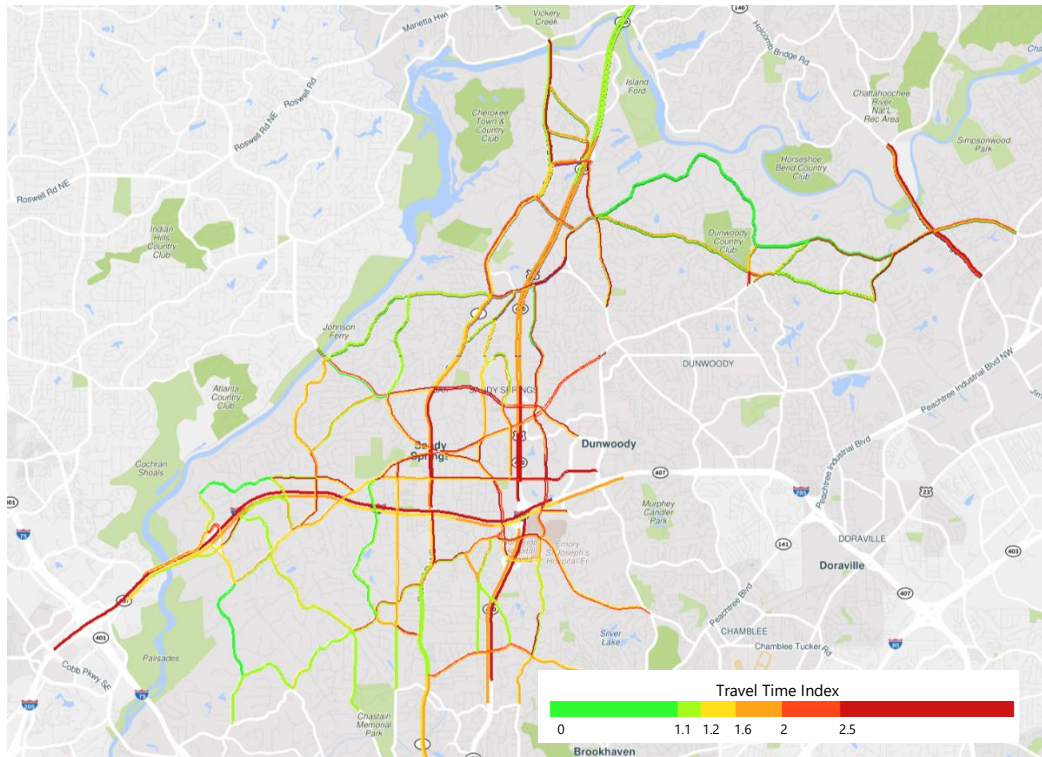
During the PM peak period, the following major thoroughfare corridors have a travel time of 2.5 or higher:

- Heard's Ferry Road converging towards Riverside Drive
- Mount Vernon Highway near Sandy Springs city center
- Riverside Drive NB near I-285
- Roswell Road NB between Glenridge Drive and Abernathy Road
- Abernathy Road between Roswell Road and SR 400
- Glenridge Drive and Peachtree Dunwoody Road near the I-285 on ramp
- Johnson's Ferry Road towards Glenridge Drive and I-285 on ramp
- Peachtree Dunwoody Road between Abernathy Road
- Hammond Drive between Sandy Springs city center and Peachtree Dunwoody Road
- Roberts Drive converging at Spalding Drive
- Jett Ferry Road NB at Dunwoody Club Drive
- Winters Chapel Road NB towards Spalding Drive
- Spalding Drive NB between Roswell Road and Pitts Road and at the intersection of Holcomb Bridge Road.

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Note: SR 400 and I-285 are excluded from this list.



Many of these high travel time index corridors show commuter traffic patterns with congestion reversing direction in the AM vs PM peak. However, Heard's Ferry Road, Glenridge Drive NB and Peachtree Dunwoody Road SB towards I-285 on-ramps show consistently high travel time indices in the same direction for both the AM and PM peak, indicating these roadway segments have particularly high levels of congestion throughout the day.

Bottleneck

A traffic bottleneck occurs when a roadway section experiences delays or decreased speeds due to congestion or excess traffic volume demand. The RITIS Bottleneck Ranking tool identifies and ranks bottleneck data by intersection approach using HERE probe data. The Bottleneck Ranking tool identifies bottlenecks when reported probe data speed for a roadway segment falls below 60% of the free-flow speed over an extended period. This data determines intersection approaches where bottlenecks are located, their duration, their average length, and their frequency. As bottlenecks propagate upstream along consecutive roadway segments, the bottleneck tool combines these segments to identify the extent of the bottleneck impact.

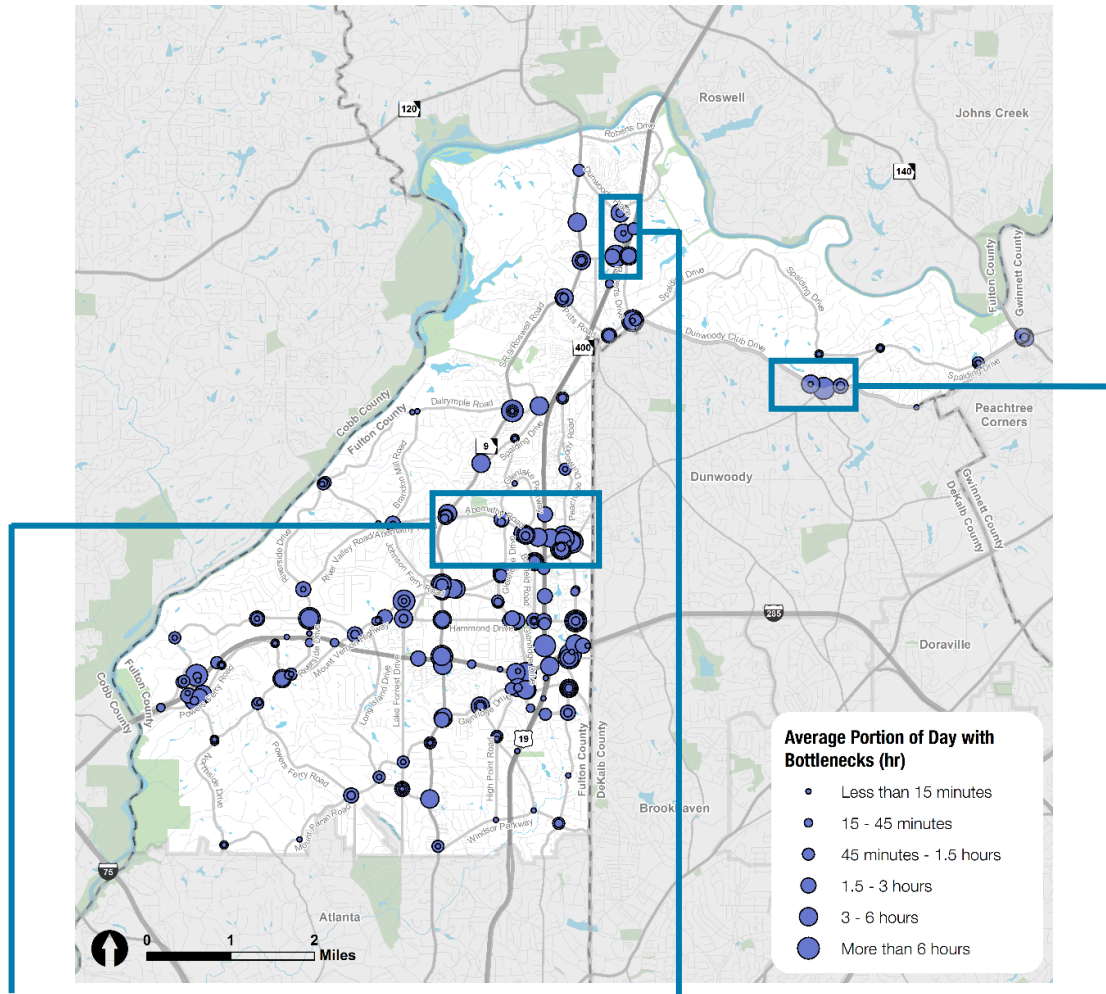
The Bottleneck Ranking tool was used to identify and rank bottlenecks at intersection approaches within the Sandy Springs network in October 2019 using the HERE probe data source.

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Average Time at Bottlenecked Intersections

The intersection approaches in Sandy Spring that have a bottleneck for a length of time during the day are shown below. The average time is shown in a range from less than 15-minute to greater than six hours.



Abernathy Road

Abernathy Road experiences a cluster of bottlenecks between Roswell Road and Mount Vernon Highway, particularly concentrated among the closely spaced intersections between Glenlake Parkway and Mount Vernon Highway. This would indicate overcapacity or a need for signal timing coordination.

Dunwoody Place

There are 7 bottlenecked approaches along Dunwoody Place between Northridge Road and Roberts Drive. This could be a factor of the geometry of the roadway as well as the number of access points through this corridor. Due to the mixed use of business parks and restaurants in this area, there is a preference for bicycle facilities along this roadway.

Dunwoody Club Drive

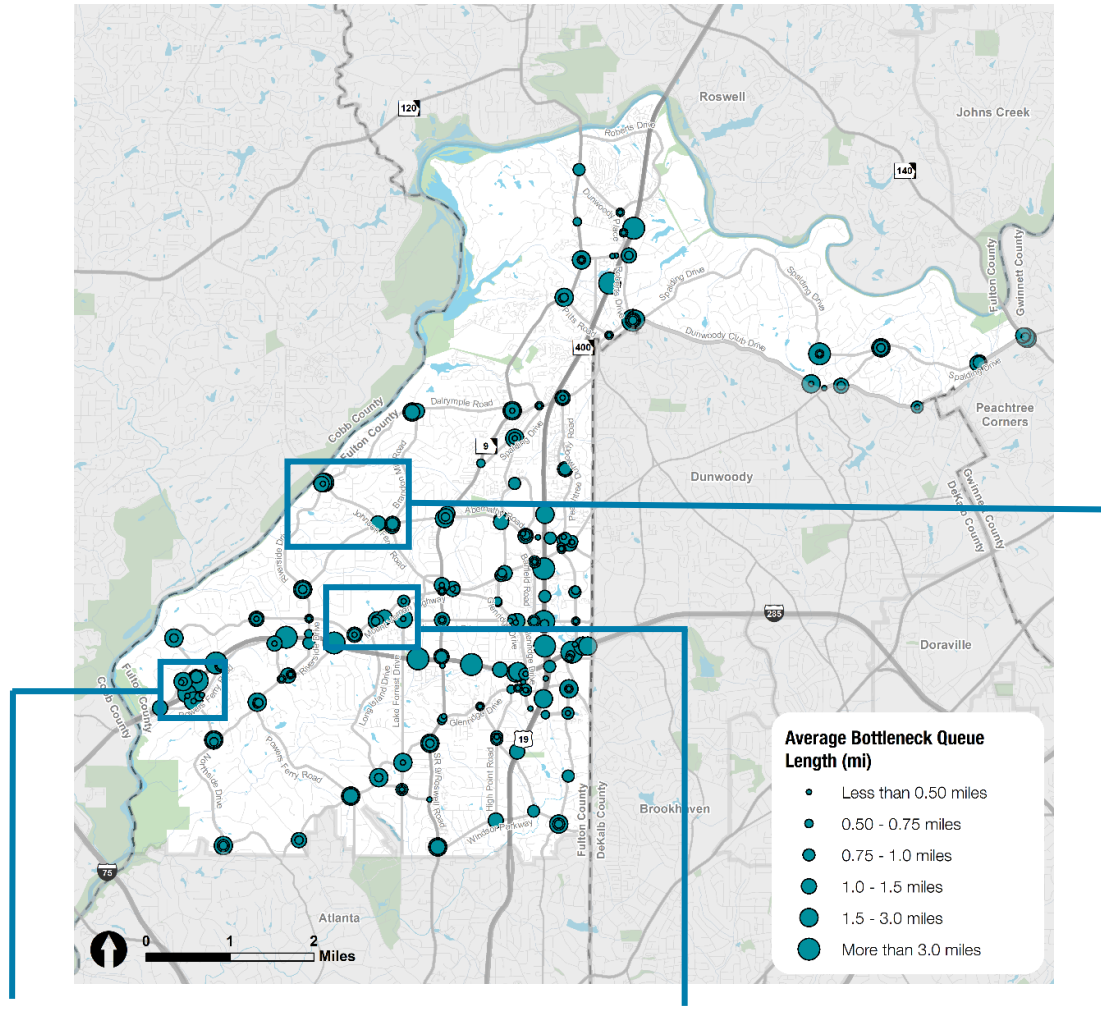
Along Dunwoody Club Drive, there are 8 bottlenecked approaches from Jett Ferry Road to Mount Vernon Road. The geometry of the triangle intersections and skewed alignment of Mount Vernon Road could be contributing to this bottlenecking. Signal timing coordination needs to be addressed to reduce the number of bottlenecks in this area.

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Average Length of Bottlenecked Intersections

The average bottleneck queue length at intersection approaches in Sandy Springs is shown below. Queue lengths range from less than 0.5 miles to over three miles.



Northside Drive

Along Northside Drive NW and New Northside Drive between Powers Ferry Road and Interstate N Parkway, there are 12 bottlenecked approaches. This is likely caused by the tightly spaced intersections and possible driver confusion over the one-way pair bridges leading to the interstate ramps.

Mount Vernon Highway

There are 10 bottlenecked approaches along Mount Vernon Highway from Heards Ferry Road to Lake Forest Drive. Signal timing coordination could be a cause of this delay, or congestion from vehicles using the local roads to travel to the Medical District.

Johnson Ferry

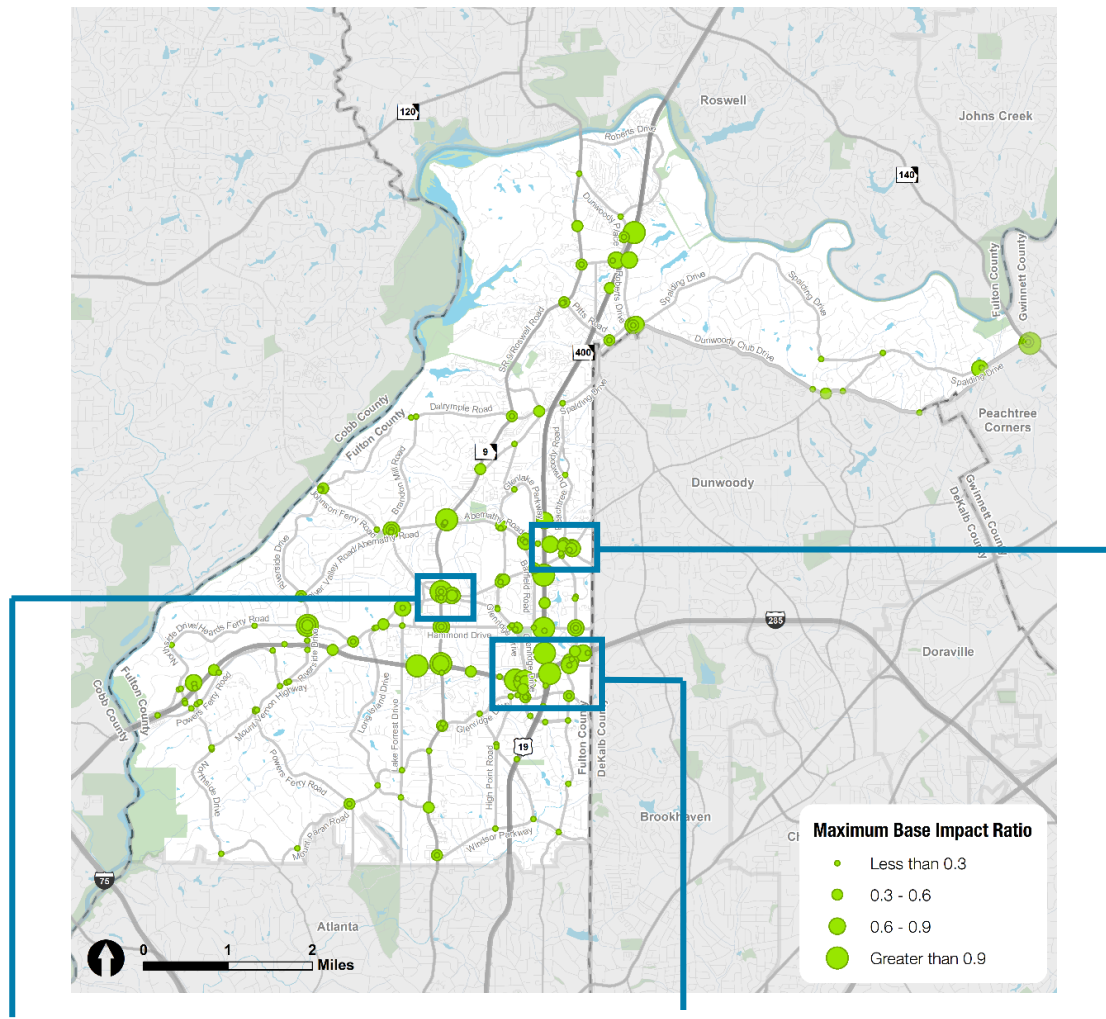
Along Johnson Ferry Road at the intersection of Riverside Drive, there are 4 bottlenecked approaches. Between the intersections of River Valley Road and Abernathy Road there are 5 bottlenecked intersection, likely caused by the poor lane utilization.

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Maximum Base Impact Ratio of Bottlenecked Intersections

The base impact ratio is the sum of the bottleneck queue lengths over the span of the data collection period, which shows the cumulative effect of the bottleneck over the time period. The base impact ratio was indexed on a 0 to 1 scale.



Mount Vernon Highway

Along Mount Vernon Highway between the intersections of Roswell Road and Johnson Ferry Road, there are 6 bottlenecked approaches. At the nearby intersection of Roswell Road and Johnson Ferry Road there are 4 bottlenecked approaches, likely caused by the geometry of these three major roads intersecting.

Medical Center

A cluster of bottlenecks occur along Glenridge Drive from the I-285 off-ramp to Johnson Ferry Road, likely caused by tight intersection spacing and off-ramp right turns. Bottlenecking also occurs along Peachtree Dunwoody Road from Hammond Drive to Lake Hearn Drive, most likely caused by vehicles entering and exiting I-285.

Abernathy Road

Abernathy Road experiences a cluster of bottlenecks between Glenlake Parkway and Mount Vernon Highway, particularly concentrated at the triangular intersection configuration between Peachtree Dunwoody Road and Mount Vernon Highway likely due to the short intersection spacing in that area.

New Location Roadway Analysis

The City of Sandy Springs has a roadway network that includes a variety of facility types. These roadways are designed to fulfill different purposes, from facilitating regional mobility to providing local neighborhood access. Most roadways within Sandy Springs were constructed prior to the City's incorporation in 2005, and the development of the street network was largely dictated by transportation and land use/development guidelines following a typically suburban pattern. This has resulted in a somewhat disconnected street network, the qualities of which can contribute to traffic congestion and inefficient travel.

Since its formation, the City has worked to improve its street network, investing in operational and safety improvements that leverage technology in conjunction with physical infrastructure improvements. Despite these improvements, and plans for additional improvements to the roadway network, the future year (2050) travel demand model indicates that several roadways, or portions of roadways, within the City will experience deficient level-of-service (LOS) in the afternoon and morning peak periods by 2050. In areas that are largely built-out, like Sandy Springs, there can be limited opportunities to build in redundancy in the network. As such, this new location roadway analysis aims to identify recommendations and strategies that can improve mobility and connectivity in the long-term through future capacity expansions; roadway extensions; and changes to the City's traffic calming and development/redevelopment policies.

Potential Future Roadway Capacity Expansions

Table 1 and Figure 1 display Sandy Springs roadways (non-interstate and non-expressway) that are projected to operate at LOS F in 2050, in either the morning or afternoon peak periods, or during both peak periods.¹ These are roadways where the City may consider capacity expansions in the future, with consideration for logical termini and coordination with adjacent counties, adjacent cities, and the Georgia Department of Transportation (GDOT). It should also be noted that capacity expansion may be difficult where there are property impacts, particularly when the roadways are adjacent to residential land uses.

¹ Only roadway segments that are LOS F for approximately ½ mile or greater were captured for this analysis.

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Table 1. Roadways with LOS F in 2050 (AM and/or PM Peak Period)

Roadway	From	To	Functional Class	Number of Lanes (2050)
Abernathy Rd	Williamson Dr	Glenlake Pkwy	Principal Arterial	4
Dunwoody Club Dr	Grapevine Run	Spalding Dr	Minor Arterial	2
Dunwoody Pl	Northridge Rd	Hightower Tr	Minor Arterial	4
Holcomb Bridge Rd NW (SR 140)	Spalding Dr	Johns Creek Env Campus	Principal Arterial	4
Roswell Rd (SR 9)	Chattahoochee River	Dunwoody Pl	Principal Arterial	4
Johnson Ferry Rd NE	Bonnie Lane	Sandy Springs Cir	Minor Arterial	2-4
Johnson Ferry Rd NW	Cobb County	Wright Rd	Minor Arterial	2-4
Johnson Ferry Rd	Glenridge Conn	Hollis Cobb Cir/Meridian Mark Rd	Minor Arterial	4
Johnson Ferry Rd	Peachtree Dunwoody Rd	Old Johnson Ferry Rd	Minor Arterial	3
Northridge Rd	Dunwoody Pl	Roberts Dr	Minor Arterial	4
Peachtree Dunwoody Rd	Spalding Dr	Northpark Pl	Minor Arterial	2-3
Peachtree Dunwoody Rd	Springwood Conn	Hollis Cobb Cir	Minor Arterial	4-7
Peachtree Dunwoody Rd	Glenridge Conn	Evergreen Dr	Minor Arterial	2
Pitts Rd	Colquitt Rd	Spalding Dr	Major Collector	2
Riverside Dr	I-285	River Valley Rd	Minor Arterial	2
Roberts Dr	Spalding Dr	Northridge Rd		
Spalding Dr	Holcomb Bridge Rd	Winters Chapel Rd	Minor Arterial	4
Spalding Dr	Pitts Rd	DeKalb County	Minor Arterial	2
Spalding Dr	Nesbitt Ferry Rd	Happy Hollow Rd	Minor Arterial	4
Windsor Pkwy	Peachtree Dunwoody Rd	DeKalb County	Major Collector	2
Winters Chapel Rd	Spalding Dr	Spalding Ln	Minor Arterial	2

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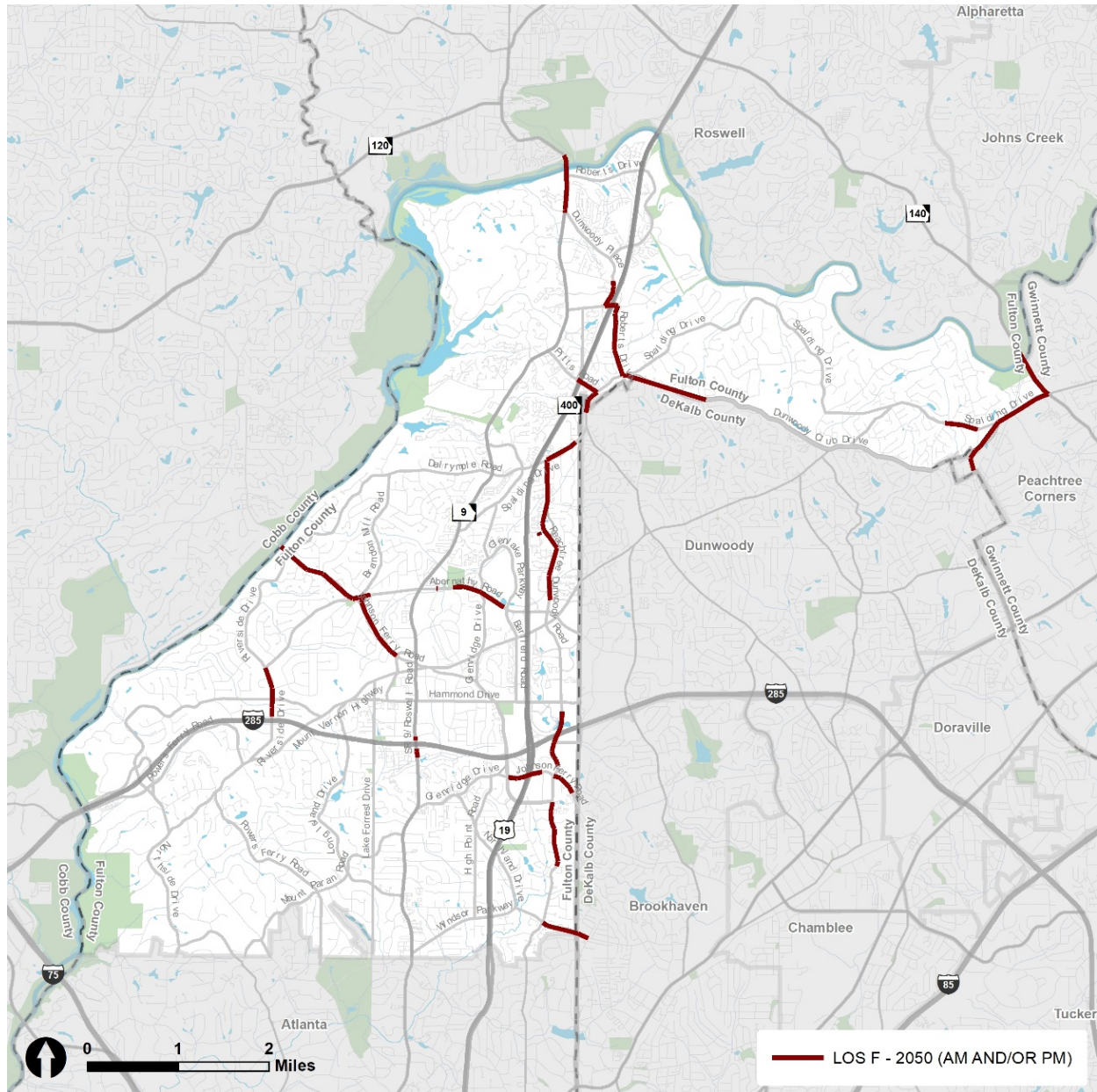


Figure 1. Roadways with LOS in 2050 (AM and/or PM Peak Periods)

Non-Capacity Improvements

In the case that capacity projects are not feasible, the City may consider undertaking the following improvements along these roadways to improve traffic mobility.

Access Management

Access management is the systematic control of entrances onto a roadway, including driveways, median openings, and intersections, to help preserve traffic efficiency and safety along the roadway.

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- For roadways with two-way left turn lanes or non-traversable (flush) medians, the City should consider installing raised medians. Raised medians are most appropriate for multi-lane arterial roadways with traffic volume in the range of 24,000 to 28,000 vehicles per day. Raised medians permit left-turn movements at specific locations only, which reduces the number of conflict points and reduces delay for left-turning vehicles.²
- For roadways with raised medians, the City should consider the frequency of median openings as needed. Along roadways with higher traffic volumes, vehicles entering the roadway at unsignalized points of access can interrupt the flow of traffic; if median openings are too frequent, then entering vehicles may cause traffic on the mainline roadway to slow. The same principle applies to roadways with a frequent number of driveways and/or right-in/right-out entrances. In determining the optimal spacing for entrance points onto a roadway, factors such as safety, stopping sight distance, intersection sight distance, functional area, right-turn conflict overlap, influence distance, and egress capacity should be considered.³
- There may be opportunities to increase interparcel access between non-residential uses along roadways. Interparcel access allows vehicles to make short trips between adjacent uses without entering the mainline roadway, which keeps entering vehicles from interrupting traffic flow and reduces overall volume on the roadway. This can also be done with walking or bicycling trips.
- The spacing between driveways and between driveways and adjacent intersections should be considered; driveways that are too closely spaced together, or located in close proximity to intersections, can contribute to traffic congestion and increase the risk of crashes. The TRB Access Management Manual and the GDOT Regulations for Driveway and Encroachment Control are both excellent resources that discuss spacing with respect to AADT and speed limit, particularly for state routes. Among the roadway segments that are projected to operate at LOS F in 2050, as shown in Table 1, corridors where these strategies may be applicable include Roswell Road (SR 9) near the Chattahoochee River, Johnson Ferry Road in close proximity to Northside Hospital, and Holcomb Bridge Road (SR 140). The City has plans to explore access management strategies along Roswell Road (SR 9) during an upcoming Access Management Study.

Intelligent Transportation System (ITS)

There are a variety of Intelligent Transportation System (ITS) strategies that can be deployed along roadways to help improve traffic mobility. The timing of traffic signals, for example, can be

² TRB Access Management Manual, Second Edition. Transportation Research Board. p. 202

³ TRB Access Management Manual, Second Edition. Transportation Research Board. p. 150

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adjusted to optimize traffic flow on the mainline roadway. Traffic signals can also be actively managed and adjusted in real-time in response to traffic incidents or other unanticipated congestion.

Of the 132 traffic signals in Sandy Springs, nearly 40% of signals in Sandy Springs use an advanced new adaptive timing system called Split Cycle –Offset Optimization Technique (SCOOT). The City is in the process of rolling out the SCOOT system to an additional 50 signals. Once this project is complete, nearly 75% of traffic signals in Sandy Springs will feature SCOOT adaptive timing. The SCOOT system presents an opportunity to employ adaptive signal timing to help move traffic more efficiently along heavily congested roadways. Of the roadway segments that are projected to operate at LOS F in 2050, as shown in Table 1, the following segments either currently operate with SCOOT-equipped traffic signals or have signals that have been proposed for upcoming SCOOT upgrades:

- Riverside Drive from I-285 to River Valley Road (current)
- Johnson Ferry Rd NE from Bonnie Lane to Sandy Springs Circle (current)
- Roswell Road (SR 9) from the Chattahoochee River to Dunwoody Place (current)
- Peachtree Dunwoody Road from Glenridge Connector to Evergreen Drive (proposed)
- Johnson Ferry Road from Glenridge Connector to Hollis Cobb Circle/Meridian Mark Road (proposed)
- Johnson Ferry Road from Peachtree Dunwoody Road to Old Johnson Ferry Road (proposed)

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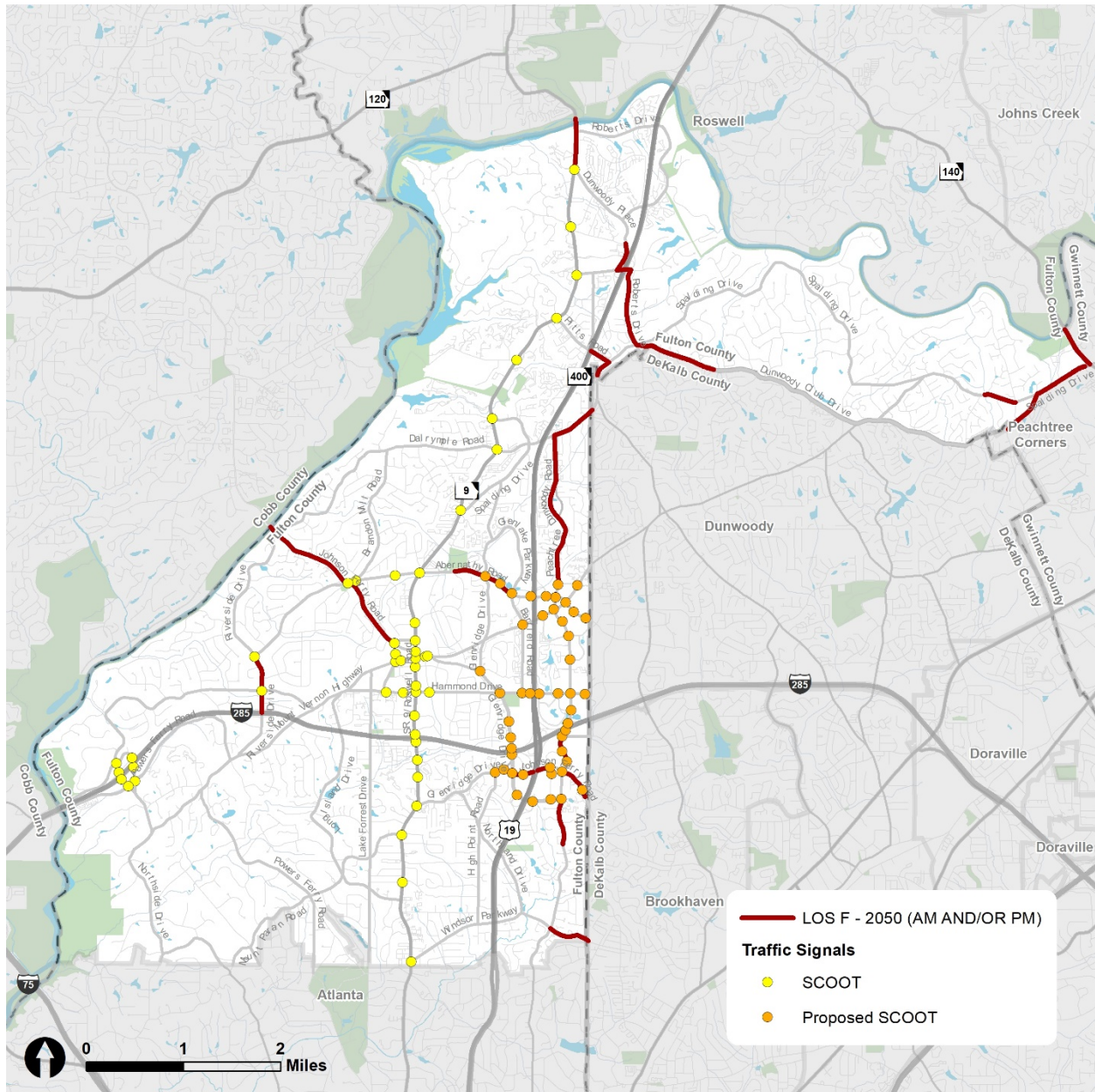


Figure 2. SCOOT Signals and Roadways with LOS in 2050 (AM and/or PM Peak Periods)

Intersection Design

Although capacity expansions may not be feasible corridor-wide, there may be opportunities to target capacity-enhancing improvements at key intersections. The addition of turn lanes or changes to signal phasing can help to increase vehicle throughput at strategic locations where there are traffic “bottlenecks.” The City may also consider innovative intersection designs, such as continuous flow intersections or quadrant roads, to enhance vehicle throughput on a larger scale.

Multimodal Infrastructure

As the City continues to invest in multimodal infrastructure, there will more opportunity for travelers to shift from using vehicles to using sidewalks or multi-use paths, particularly for shorter trips. While most travelers will likely remain in their vehicles, even a slight shift in modes can help to improve traffic mobility. Likewise, the City may consider working with transit providers and private developers to implement transit solutions along these roadways, such as bus rapid transit or shuttle buses, which have the potential to take a significant number of vehicles off the road. These non-vehicular modes have been studied in detail and associated recommendations can be found in the Transit Network Analysis and the Bicycle and Pedestrian/20-Minute Neighborhoods Memoranda.

Among the roadway segments in Table 1 with projected LOS F in 2050, Roswell Road (SR 9) from Dunwoody Place to the Chattahoochee River is included in recommendations for transit improvements in the Transit Network Analysis Memorandum. These recommendations consist of coordinating with MARTA to promote existing service improvements, and new Arterial rapid transit (ART) service as outlined in the MARTA Comprehensive Operations Analysis (COA) and Fulton County Transit Master Plan.

Among the roadway segments in Table 1 with project LOS in 2050, the following corridors are included in recommendations for bicycle and pedestrian improvements in the Bicycle and Pedestrian/20-Minute Neighborhoods Memorandum.

- Proposed Context Sensitive Traffic Speed Studies
 - Spalding Drive between Roberts Drive and Holcomb Bridge Road
- Proposed Sharrows
 - Spalding Drive between Happy Hollow Road and Nesbitt Ferry Road
 - Spalding Drive between Spalding Lane and Holcomb Bridge Road (SR 140)
 - Winters Chapel Road between the City Limits and Spalding Drive
- Proposed Sidepaths
 - Abernathy Road between Williamson Drive and Glenridge Drive
 - Dunwoody Place between Northridge Road and Hightower Trail
 - Holcomb Bridge Road (SR 140) between the Chattahoochee River and Spalding Drive
 - Johnson Ferry Road between Glenridge Connector and Hollis Cobb Circle/Meridian Mark Road
 - Johnson Ferry Road between Bonnie Lane/Wright Road and Sandy Springs Circle
 - Peachtree Dunwoody Road between Spalding Drive and Northpark Lane
 - Pitts Road between Colquitt Road and Spalding Drive
 - Roberts Drive between Spalding Drive and Northridge Road
 - Roswell Road (SR 9) between Dunwoody Place and the Chattahoochee River

- Spalding Drive between Spalding Lane and Holcomb Bridge Road (SR 140)
- Proposed Trails
 - Peachtree Dunwoody Road between Springfield Connector and Hollis Cobb Circle/Medical Center MARTA Station

New Location Roadways

The Perimeter Community Improvement District's (PCID) *2018 Consolidated Plan* has identified a project (see Project 2.15 in Figure 2) that would extend Perimeter Center Parkway to the south, creating a new roadway alignment to connect Old Johnson Ferry Road to Lake Hearn Drive⁴; this new roadway would increase connectivity and improve mobility in the fast-growing activity center. The new alignment would traverse a creek and require the construction of a bridge over the MARTA rail line. A potential alternative alignment for this roadway extension would be to upgrade the existing Old Balloon Road, which follows the back of the Emory St. Joseph's Hospital property, and construct a new roadway alignment from the terminus of the road (at the hospital's parking deck) towards the northwest to connect to Perimeter Summit Parkway in Brookhaven. This alignment would avoid the construction of a bridge over the MARTA rail line. If this project were to be advanced, coordination would be required between PCIDs, City of Sandy Springs, and the City of Brookhaven to identify and finalize the optimal alignment, with consideration for available right-of-way, property impacts, and environmental considerations. The general location for this potential new roadway alignment is shown in Figure 3.

⁴ 2018 Consolidated Plan. Perimeter Community Improvement Districts. <https://perimetercid.org/wp-content/uploads/2019/02/PCIDs-Final-Plan.pdf>

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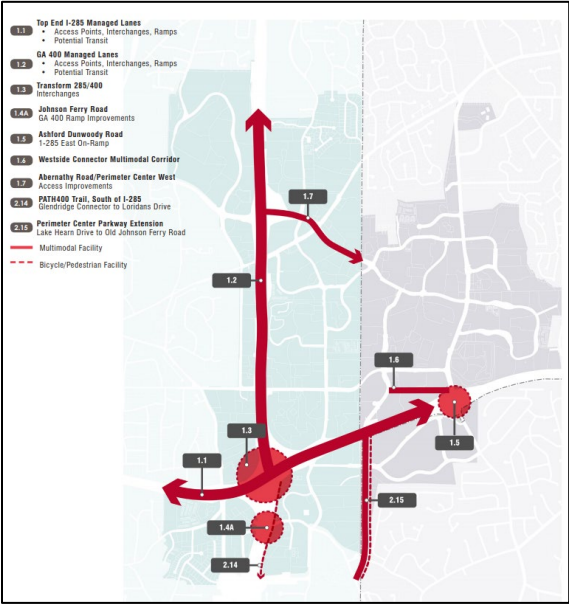


Figure 3. Future PCIDs Projects

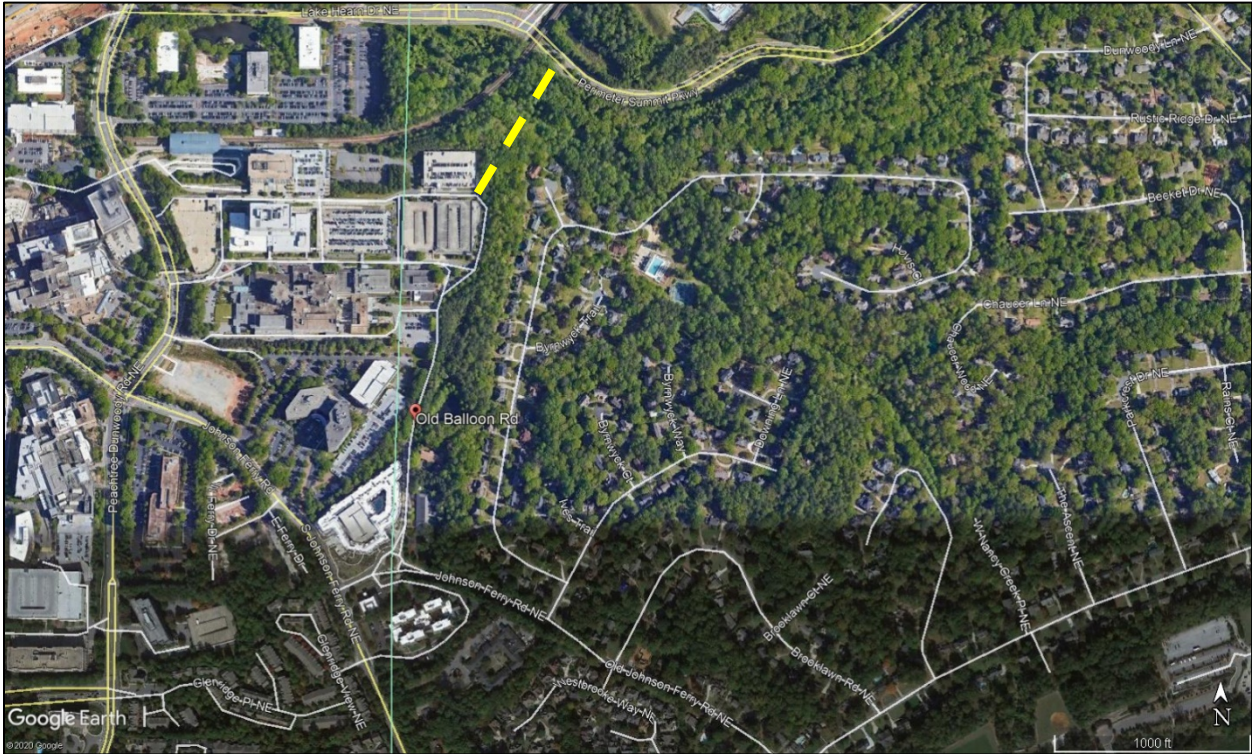


Figure 4. Location for Potential New Roadway

Enhancing Street Connectivity

Adaptations to Street Requirements

A GIS-based analysis of the Sandy Springs roadway network shows that of the approximately 4,200 roadway intersections in the City, nearly 1,900 intersections, or 45 percent of all intersections, consist of a cul-de-sac, or dead-end roadway. Most of these cul-de-sacs are in residential communities. Traditionally, residential communities included cul-de-sac roadways in order to fit more houses into unconventional-shaped tracts or to accommodate the development of lots up to the edge of property lines. Cul-de-sac lots are attractive to homebuyers because they carry a limited amount of traffic.

The result of this development pattern, however, is that hundreds of households often rely on a limited number of access points for major roadways, making travel inefficient and not walkable. On a broader scale, the lack of connectivity between residential neighborhoods creates missed opportunities for more direct routes between destinations, resulting in greater vehicle miles of travel within the City and associated negative externalities, including longer travel times, increased vehicle emissions, and congested collector and arterial roadways. This development pattern also makes it difficult for households to reasonably access destinations by foot, creating a greater reliance on vehicle travel.

Apartment Complexes

Due to the permanence of single-family residential communities in Sandy Springs, it is anticipated that there would be very few opportunities to improve street connectivity within and across these communities, without major property impacts to homes. Within larger renter-occupied housing communities (apartment complexes) or commercial properties, however, there may be opportunities to retrofit existing minor streets in the City, by developing a more connected street grid or creating connections between adjacent cul-de-sacs.

As non-single-family residential parcels redevelop in the future, there is an opportunity to establish a more connected street network within and across these developments and create additional access points to adjacent collector or arterial roads. Section 10.3.1 of the Sandy Springs Development Code states that, during development or redevelopment, when a newly created street results in a block face that exceeds established standards by zoning district, then additional streets intersecting the block are required. If no new streets are required per the standards established in Section 10.3.1, then development that is at least three acres in size, 100,000 square feet in gross floor area, or 25 residential units (whichever is less) must provide a street through the site. These regulations facilitate additional street connectivity for new development and redevelopment, alleviating traffic congestion and improving access for public safety officials.

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As these properties redevelop, it is recommended that the City continue to explore and enhance regulations that contribute to the development of a more connected street network, for streets that are within the development and for street connections to the nearest local collector or arterial roadway. Figure 4 highlights parcels within Sandy Springs that are three acres or larger in size, excluding parcels that fall within the Protected Neighborhood zoning district. Within these highlighted areas, the City should seek to develop a more connected street network. Examples of potential street segments that would enhance connectivity are included in Appendix A.

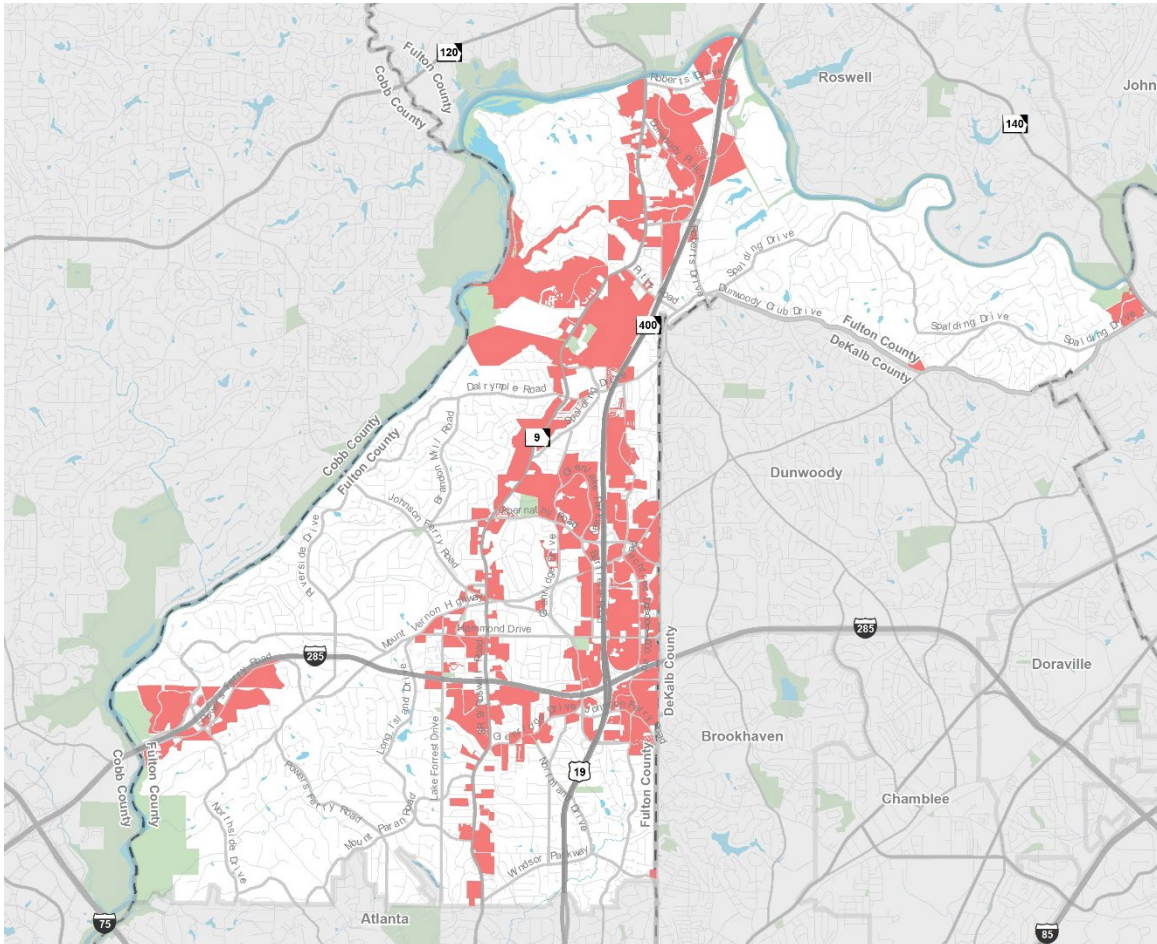


Figure 5. Areas of Focus for Enhancing Minor Street Connectivity

Single-Family Communities

The *Neighborhood Traffic Calming Manual*, adopted by the Sandy Springs City Council in 2013, specifies traffic calming measures that may be applied to minor streets upon request of the neighborhood. In order to be eligible for traffic calming treatments, the minor street must meet safety and operational warrant criteria regarding length, grade, and centerline radius, among other criteria. Any potential traffic calming treatments must preserve bicycle and pedestrian access and must not divert traffic to other minor streets in the area.

The guidance recognizes that some minor streets may meet all the operational warrants but may not meet all safety criteria. In these cases, residents may choose to pursue treatments under the Neighborhood Self Improvement Program, which allows for the application of traffic control devices that are not warranted by the City but do not violate the safety of pedestrians and motorists. Under the Neighborhood Self Improvement Program, "Alternative Measures may be considered...including cul-de-sac terminations of minor streets...The City shall consider all measures that comply with the appropriate safety guidelines as determined by the Director of Public Works and are supported by the City Public Safety Officials."⁵ It is recommended that retrofitted cul-de-sacs be a "last resort" traffic calming measure.

- It is recommended that the City add additional guidance and standards to the *Neighborhood Traffic Calming Manual* regarding residential street design in order to be consistent with the City's *Technical Manual for Development and Construction* (2017). For example, the *Technical Manual* establishes guidance for the development of new streets or existing streets considered for improvement, within subdivisions or developments. There are a number of standards pertaining to cul-de-sac streets, including maximum design length: "Cul-de-sac streets may be no more than 600 feet in length."⁶

Street Connectivity Toolbox

The City should be equipped with a "toolbox" on street connectivity, to educate the community on the benefits of more connected street networks and address concerns that residents may have regarding connected streets. This toolbox would provide the City with the justification needed to enforce the City Code to improve street connectivity during the development process. In addition, educating residents on the benefits of street connectivity will allow the City to be more transparent regarding decisions not to approve cul-de-sac retrofit requests, and will allow the City to work

⁵ Section 3C (Roadway Design and Pavement – General Layout Requirements). Development and Construction Technical Manual. 2018. Department of Community Development - City of Sandy Springs. https://library.municode.com/ga/sandy_springs/codes/technical_manuals?nodeId=S3RODEPA

⁶ *Neighborhood Traffic Calming Manual*. 2013. Public Works Department – City of Sandy Springs. <http://www.sandyspringsga.gov/home/showdocument?id=379>

more closely with communities to identify alternate and more appropriate traffic calming strategies to address residents' concerns.

Safety

- Grid street networks create a **safer road system** and **reduce traffic injuries and fatalities** compared to more "dendritic" road patterns where cul-de-sacs are abundant.^{7 8} The risk of severe injury related to vehicle crashes significantly decreases as the density and connectivity of roads increase. Less than two percent of crashes on roadway networks with higher street connectivity and density result in a fatality or severe injury; this percentage exceeds two percent on roadway networks with less connectivity and density.⁹
- Connectivity leads to **decreased travel speeds, making roads safer for all users**, including vehicles, bicyclists, and pedestrians. This is due to an increased number of stops required at a greater number of intersections. The connected streets that help to slow vehicular traffic also create a safer environment for pedestrians and bicyclists. A case study simulating more connected street networks in three cities found that greater connectivity resulted in reduction of travel speeds by 2 to 6 percent.¹⁰

Mobility

- Connected local streets **help redistribute traffic** across a street network, **reduce the number of congestion hotspots**, and **reduce traffic volumes** on arterial streets by as much as 51 percent, depending upon the speed limit.¹¹
- Connected streets **reduce the amount of distance traveled** and **makes trips more direct**, especially short-distance trips such as between home and the local grocery store.¹²
- Better street connectivity makes trips more direct and reduces trip length, which both help reduce vehicle miles traveled (VMT). A case study simulating traffic in more

⁷ National Complete Streets Coalition (n.d.). Networks of Complete Streets. *Smart Growth America*. <https://www.smartgrowthamerica.org/app/legacy/documents/cs/factsheets/cs-networks.pdf>

⁸ Wallwork, L. (2018). Urban design gone wrong: Cul-de-sacs. <https://exclusive.multibriefs.com/content/urban-design-gone-wrong-cul-de-sacs/construction-building-materials>

⁹ Marshall, Wesley & Garrick, Norman. (2010). Street Network Types and Road Safety: A Study of 24 California Cities. *Urban Design International*. 15. 10.1057/udi.2009.31.

¹⁰ Zlatkovic et al. (2019). Assessment of effects of street connectivity on traffic performance and sustainability within communities and neighborhoods through traffic simulation. *Sustainable Cities and Society*, 46(2019). <https://doi.org/10.1016/j.scs.2018.12.037>

¹¹ Alba & Beimbom (2005). Analysis of the Effects of Local Street Connectivity on Arterial Traffic. https://www.researchgate.net/publication/228931445_Analysis_of_the_effects_of_local_street_connectivity_on_arterial_traffic

¹² Idaho Smart Growth (2014). Zoning Module 4 – Connectivity Standards. <https://www.idahosmartgrowth.org/app/uploads/2014/10/Z4-Connectivity-Standards-final.pdf>

connected urban and suburban networks found that **VMT were reduced** between 9 and 24 percent in areas with more connected street networks.¹³

Emergency Response

- Better connectivity creates **shorter paths** as well as **more redundancy** in a city's transportation network, which can benefit emergency vehicles by **reducing emergency response times**. Communities with a more connected street network have more direct routes and a larger effective service area, which help to reduce delay in emergency response time.¹⁴

Walking, Biking and Transit

- Street layout affects the **ability for children to walk or bike to school**. Neighborhoods with cul-de-sacs reduce connectivity and increase travel distance between homes and schools.¹⁵
- Street connectivity is a factor of walking distance to transit stops for public transit users. Travelers typically have **shorter walking trips to transit stops** in areas with more connected street networks.¹⁶ When people have a shorter walking trip to a transit stop, they are more likely to be willing to choose transit as a mode. For those who do not own a vehicle, particularly for low-income households, having a short walking trip to a transit stop is critical for access to jobs, healthcare, and other vital needs.

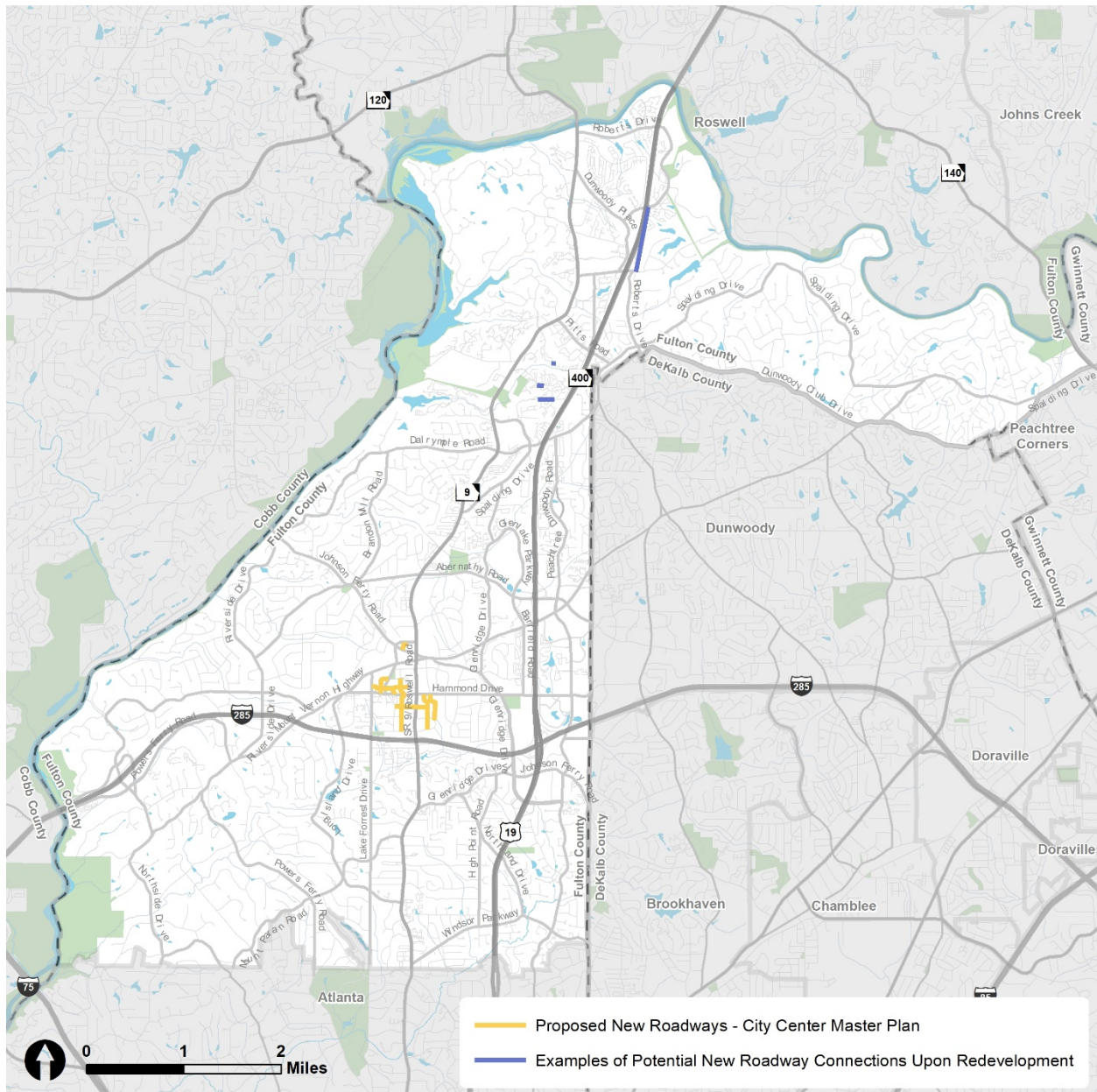
¹³ Zlatkovic et al. (2019). Assessment of effects of street connectivity on traffic performance and sustainability within communities and neighborhoods through traffic simulation. *Sustainable Cities and Society*, 46(2019). <https://doi.org/10.1016/j.scs.2018.12.037>

¹⁴ Pleasant, D. (2008). Sustainable Street Network Emergency Responder Perspective. City of Charlotte (NC), Department of Transportation. Presentation Given at the Congress for New Urbanism Transportation Summit 2008. https://www.cnu.org/sites/default/files/Emergency_Responder_Perspective_Pleasant.pdf

¹⁵ Safe Routes to School Guide (n.d.). Connectivity. <http://guide.saferoutesinfo.org/engineering/connectivity.cfm>

¹⁶ Transportation Research Board (2008). Multimodal Level of Service Analysis for Urban Streets. Washington, DC: The National Academies Press. <https://doi.org/10.17226/14175>.

Appendix A – New Roadway Connections



Safety Needs

The City has an opportunity to reduce fatal and serious injury crashes on its roadways by using data-driven approaches to focus its safety efforts and funding. Building upon the safety component of the TMP's Existing Conditions analysis, safety needs were identified by completing a supplemental evaluation of the identified high-crash corridors and by completing a citywide evaluation of crash trends compared to Fulton County and GDOT District 7 (which includes Fulton, Cobb, Douglas, Clayton, DeKalb, and Rockdale counties). Safety needs are best addressed through a plan that involves a multidisciplinary partnership of the four Es of safety: Education, Engineering, Enforcement, and Emergency Medical Services.

High-Crash Roadways

The ten highest-crash corridors identified in the TMP's Existing Conditions analysis, and displayed in **Figure 1**, were reviewed further to understand how the roadways rank when prioritized by crashes/mile and crash rate. **Table 1** summarizes and ranks each roadway by the analyzed metrics (number of crashes, crashes/mile, and crash rate). Roadway lengths were measured using Google maps and Annual Average Daily Traffic (AADT) was obtained from the GDOT Traffic Analysis & Data Application (TADA!).

Table 1: Corridor Ranking by Number of Crashes, Crashes/Mile, and Crash Rate (2015 – 2019)

Corridor	Length (miles)	AADT	Crashes	Rank by Crashes	Crashes /Mile	Rank by Crash/ Mile	Crash Rate	Average Crash Rate ¹	Rank by Crash Rate
Roswell Road	9.39	33,500	5,140	1	109.5	1	895	615	4
Peachtree Dunwoody Road	5.78	21,200	1,457	2	50.4	6	652	623	7
Abernathy Road	2.56	40,600	1,263	3	98.7	3	666	615	6
Hammond Drive	2.5	19,800	965	4	77.2	5	1,068	623	2
Johnson Ferry Road	3.81	29,200	861	5	45.2	7	424	623	9
Northridge Road	1.33	26,300	674	6	101.4	2	1,056	623	3
Glenridge Drive	4.4	21,800	651	7	29.6	8	548	623	8
Mount Vernon Highway	5.46	14,900	622	8	22.8	9	419	623	10
Dunwoody Place	1.27	19,900	563	9	88.7	4	1,221	623	1
Riverside Drive	4.07	5,800	385	10	18.9	10	894	623	5

1 – Statewide average crash rate for the roadway classification based on the GDOT Statewide Mileage, Travel & Crash Data report for 2017.

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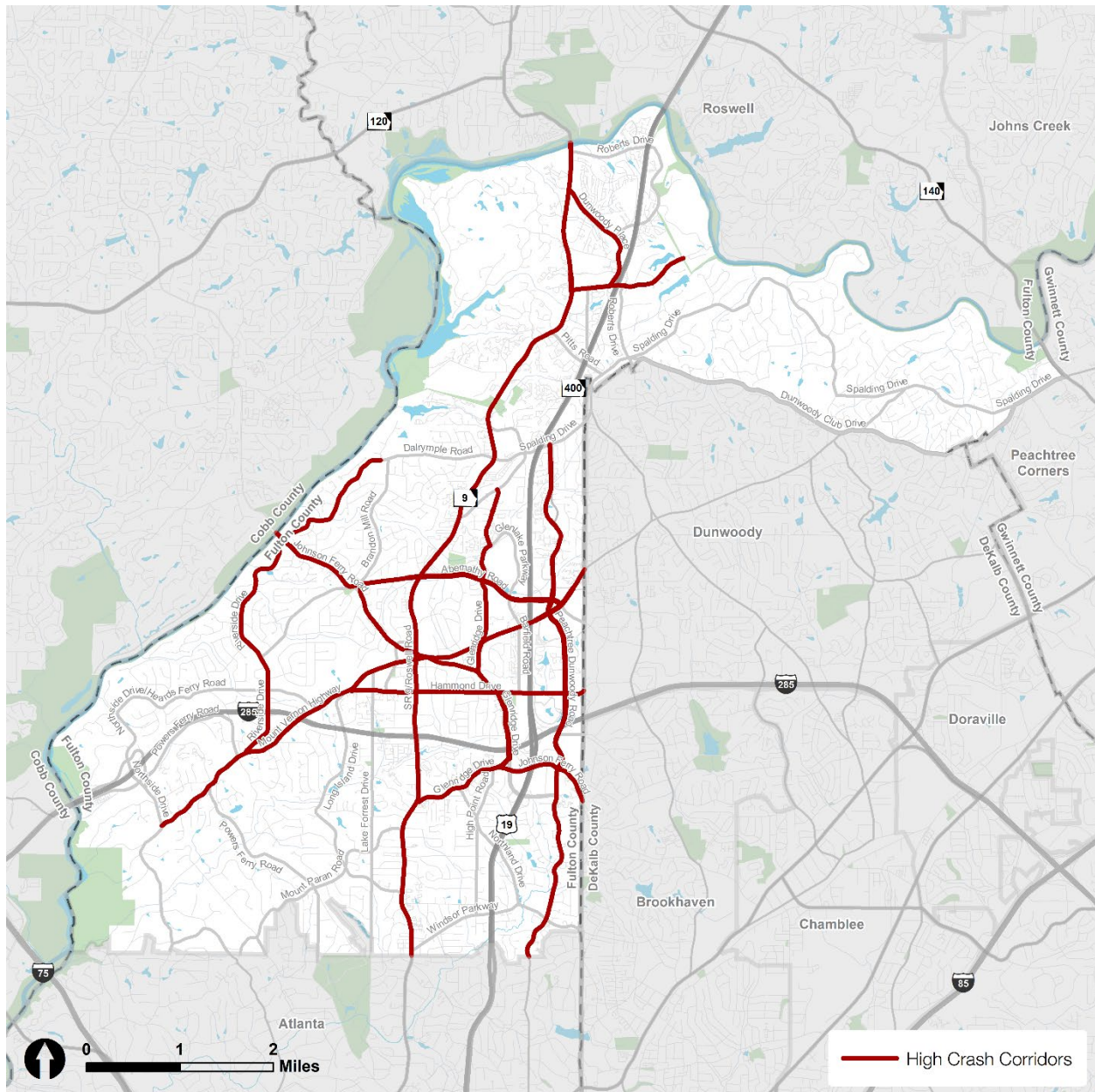


Figure 1: High Crash Corridors

As shown in **Table 1**, each ranking methodology ranks the corridors in different orders. For reference, an average of 62.6 crashes/mile occurred in the City (excluding interstates and GA 400) during the five-year study period. Five of the top ten high-crash corridors have more crashes/mile than the average for roadways in the City. With regard to crash rates, the GDOT Statewide Mileage, Travel & Crash Data report for 2017, shows that the average crash rate for roadways classified as principal arterials, non-freeway, urbanized is 615 crashes/100 million VMT and the average crash rate for minor arterials, urbanized is 623 crashes/100 million VMT. Seven of the ten high-crash

corridors have crash rates higher than the 2017 average crash rates for their roadway classification. Roswell Road, which ranks 1st by number of crashes and crashes/mile, ranks 4th when reviewed by crash rate. Although Northridge Road is ranked 6th when reviewed by number of crashes, it ranks 2nd when reviewed by number of crashes/mile and 3rd when reviewed by crash rate. Conversely, Peachtree Dunwoody Road ranks 2nd when reviewed by number of crashes, and it ranked 6th and 7th when reviewed by number of crashes/mile and crash rate, respectively. Dunwoody Place ranks 9th when reviewed by number of crashes, 4th and 1st when reviewed by number of crashes/mile and crash rate, respectively. Based on the three ranking types, Roswell Road, Northridge Road, Dunwoody Place, and Hammond Drive stand out as high-priority corridors appropriate for further analysis, potentially through conducting a Road Safety Assessment.

Citywide Evaluation

A citywide evaluation was performed to further understand crash trends. The data analysis was primarily performed using the new Georgia Department of Transportation (GDOT) crash analysis tool, *Numetric*. Since a full year of crash data was not yet available for 2019, it is not included in the *Numetric* platform. As a result, the analysis completed in *Numetric* was completed using five years of crash data from January 1, 2014 to December 31, 2018. During this period, the *Numetric* dataset shows a total of 15,684 crashes while the GEARs dataset for the five-year period from 2015 to 2019 shows a total of 18,056 crashes. While the total number of crashes differs during the two analysis periods, overall crash trends are assumed to remain similar across the region. Consistent with the TMP's Existing Conditions analysis, the datasets exclude interstates and GA 400.

GDOT SHSP Focus Areas

The *Numetric* tool includes fifteen emphasis areas defined by GDOT, which are similar to the eleven emphasis areas included in the State's SHSP. The GDOT emphasis areas breaks older driver (55-64 and 65+) and distracted driver (suspected and confirmed) crashes into two groups, removes the occupant protection emphasis area, and adds hit and run, aggressive driving, and secondary crash emphasis areas. Each GDOT emphasis area was ranked based upon the total number of crashes that occurred during the study period for the City, Fulton County, and GDOT District 7, excluding crashes on interstates and GA 400. The ranking of each emphasis area as well as a summary of crashes is included in **Table 2**. Since a single crash may be associated with multiple emphasis areas, column totals for percentages and crashes may add up to greater than 100 percent and/or the total number of crashes.

Table 2: GDOT Emphasis Area Ranking from *Numetric* (2014–2018)

City Rank	GDOT Emphasis Area	Total Crashes	% of Total Crashes	Fatal and Serious Injury Crashes	% of Fatal and Serious Injury Crashes	County Rank	District 7 Rank
1	Intersection	11,328	72%	59	68%	1	1
2	Distracted Driver (Suspected)	6,554	42%	14	16%	2	2
3	Older Driver (55-64)	3,038	19%	12	14%	3	3
4	Older Driver (65+)	2,392	15%	20	23%	5	5
5	Hit & Run	2,358	15%	7	8%	4	4
6	Young Driver	1,432	9%	5	6%	6	6
7	Roadway Departure	1,395	9%	12	14%	7	7
8	Distracted Driver (Confirmed)	555	4%	3	3%	8	8
9	Impaired Driving (Confirmed)	288	2%	13	15%	12	12
10	Commercial Motor Vehicle (CMV) Related	252	2%	1	1%	9	9
11	Aggressive Driving	232	1%	4	5%	10	10
12	Pedestrian	161	1%	12	14%	13	13
13	Secondary Crash	106	1%	0	0%	14	15
14	Motorcycle	81	1%	8	9%	15	14
15	Bicycle	30	<1%	2	2%	16	16

The top 8 emphasis areas are consistent for the City, County and District except for Older Driver (65+) and Hit & Run, which are flip-flopped in the Fulton County and District 7 rankings. Intersection-related crashes account for a larger percentage of fatal and serious injury crashes in Sandy Springs (68 percent) compared to the Fulton County (54 percent) and District 7 (60 percent). Suggesting that the City should continue to place an emphasis on reducing fatal and serious injury crashes at intersections.

The percentage of older drivers (65+) involved in fatal and serious injury crashes in Sandy Springs (23 percent) is nearly double that of Fulton County (11 percent) and District 7 (12 percent). The City should consider additional outreach/educational efforts aimed at reducing crashes involving older drivers. This could include promoting alternate travel modes available to older drivers within the City and hosting a CarFit event, which focuses on assisting older drivers on how to correctly and safely fit in their vehicle (more information is available at car-fit.org).

Similarly, the percentage of confirmed impaired drivers that are involved in fatal and serious injury crashes (15 percent) is nearly double that of Fulton County (8 percent) and District 7 (8 percent). When combined with suspected impaired driving crashes the percentage of fatal and serious injury crashes is consistent for the three study areas (within 5 percent of one another). This could suggest that law enforcement in the City completes more impairment tests at the crash scene and/or has a better process for ensuring the data is added to the crash reports, as opposed to suggesting that more fatal and serious injury crashes in the City occur as a result of confirmed impaired drivers than in the County and District. Additional data would be needed to draw a formal conclusion.

Based on the *Numetric* data, intersection-related crashes account for 72 percent of the total crashes that occurred during the study period and nearly 70 percent of all fatal and serious injury crashes within Sandy Springs. Since intersection-related crashes account for such a large percentage of fatal and serious injury crashes and these crashes are a GDOT emphasis area, the City should continue to use data-driven, network screening approaches to identify locations where low-cost, safety countermeasures, aimed at reducing fatal and serious crashes, can be implemented. Road Safety Assessments and Intersection Control Evaluations can be used as tools to identify contributing factors for intersections identified through the network screening process.

Distracted driving (suspected and confirmed) contributed to 46 percent of crashes and resulted in 19 percent of fatal and serious injury crashes during the study period. It is likely that distracted driving crashes are under reported. To increase data available for distracted driving, the City could partner with law enforcement to provide additional training on how to code distracted-driving crashes in their incident reports as a casual crash factor. Educational campaigns within the City (including schools) can be used to raise awareness of the Georgia Hands Free law as well as the negative effects of distracted driving.

Crashes involving older drivers (55+) accounted for 35 percent of crashes and 37 percent of fatal and serious injury crashes during the study period. As previously discussed, the percentage of fatal and serious injury crashes involving older drivers is higher in the City than in the surrounding areas.

While crashes involving pedestrians and bicycles account for less than 2 percent of crashes (1 percent and 0.2 percent, respectively), they account for a disproportionate percentage of fatal and serious injury crashes (16 percent). Based on the TMP's Existing Conditions analysis, concentrations of bicycle and pedestrian crashes are seen near the Sandy Springs and Medical Center Marta Stations, along Roswell Road near I-285, which has some of the highest population density in the City, and along Roswell Road near Ison Springs Elementary School. Since crashes are linked to driver behavior and roadway characteristics, the City should review other areas with

high pedestrian generators (such as transit stations, bus stops, schools, hospitals, libraries, parks, etc.) in addition to the specific areas identified by the hot-spot analysis. Existing and anticipated studies near pedestrian generators should include an assessment of pedestrian and bicycle facilities within the project's study area. The City should evaluate the possibility of reducing posted speed limits in areas with higher pedestrian-vehicle interaction and/or bicycle-vehicle interaction. This could be paired with enforcement and design modifications to encourage vehicles to reduce their travel speed by altering the driver's perception of the road's design.

Aggressive driving is noted in only 1 percent of crashes and resulted in 5 percent of fatal and serious injury crashes. Similarly, motorcycles account for 9 percent of fatal and serious injury crashes and less than 1 percent of total crashes. Georgia law requires motorcycle riders to wear a DOT-approved helmet.

Contributing Factors

Contributing factors were also reviewed in *Numetric* to understand trends in driver behavior. Contributing factors that are attributed to more than 5 percent of the total crashes are summarized in **Table 3**. Column totals for percentages and crash totals may add up to greater than 100 percent of the total number of crashes as one crash may be associated with multiple contributing factors.

Table 3: Summary of Contributing Factors (>5% Total Crashes) from *Numetric* (2014 – 2018)

Contributing Factor	Total Crashes	Percent of Total Crashes	Fatal and Serious Injury Crashes	% of Fatal and Serious Injury Crashes	%Intersection-Related
No contributing factors	13,213	87%	45	52%	74%
Following too close	5,398	38%	8	9%	80%
Failure to yield	2,185	15%	12	14%	77%
Changed lanes improperly	1,429	10%	2	2%	76%
None	1,051	7%	27	31%	38%
Other	903	6%	9	10%	74%

Intersection-related crashes make up approximately 75-80 percent of crashes for the top four contributing factors whereas intersection-related crashes only make up 72 percent of total crashes in the City during the study period. 87 percent of crashes were coded as having no contributing factors, and 7 percent of crashes were coded as none. No contributing factors is likely the highest factor as it is often assigned to at least one of the vehicles involved in a two-vehicle crash (i.e. the

vehicle not at fault). The City could further explore this assertion through discussions with law enforcement to better understand how they assign this category on crash reports.

Following too closely is listed as a contributing factor for nearly 40 percent of crashes, consistent with the percentage of rear end crashes found in the existing condition analysis (44 percent). Failure to yield was identified in 15 percent of crashes, while changing lanes improperly was identified as a contributing factor in 10 percent of crashes. Contributing factors listed as other account for 6 percent of the total crashes, while various contributing factors (not shown) are assigned to less than 5 percent of the total crashes.

This data reinforces the observation that congestion, and specifically congestion at intersections, contributes greatly to the total number of crashes within the City.

Recommendations

The following recommendations were developed based upon the citywide evaluation.

- Screening
 - Partner with GDOT to develop *Numetric* dashboards specific safety metrics the City is interested in monitoring
 - Conduct data-driven network screening to identify locations for low-cost, safety countermeasures aimed at reducing fatal and serious crashes
 - Perform before-and-after studies once safety improvement projects are completed to track the benefits of improvements
 - Develop calibrated safety performance functions (SPFs) for the City to use in network screening applications for intersections and roadway segments
 - Conduct network screening based upon calibrated SPFs
- Studies
 - Continue planned/ongoing intersection screening and studies
 - Develop a data-driven plan for safety improvements, such as a Local Road Safety Plan, and place an emphasis on reducing fatal and serious injury crashes at intersections
 - Conduct Road Safety Audits for high-crash corridors and intersections, including along Roswell Road, Northridge Road, Dunwoody Place, and Hammond Drive.
 - Conduct Bicycle/Pedestrian-specific Road Safety Assessments near high pedestrian generators (such as transit stations, bus stops, schools, hospitals, libraries, parks, etc.), including Sandy Springs and Medical Center Marta Stations, along Roswell Road near I-285, and along Roswell Road near Ison Springs Elementary School, and regularly assess/audit bicycle and pedestrian facilities to ensure quality of travel conditions.

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- Policy
 - Include an assessment of pedestrian and bicycle facilities, safe crossings, and safe speeds as part of existing and anticipated studies and projects near pedestrian generators. This assessment should be conducted as part of traffic studies, design of new City facilities/parks, and transportation infrastructure projects.
 - Review opportunities to reduce speeds in areas with pedestrian and bicycle generators during the City's triannual speed enforcement review.
- Education
 - Conduct outreach/educational efforts aimed at reducing crashes involving older drivers
 - Partner with law enforcement to conduct educational campaigns to raise awareness of the negative effects of distracted driving and the Georgia Hands Free law, to educate drivers and raise awareness for bicycle and pedestrian safety, and to educate bicyclists and pedestrians on safe practices.
- Enforcement
 - Partner with law enforcement to enforce the GA Hands Free Law and track distracted driving crashes
 - Conduct highly-publicized pedestrian crossing enforcement campaign that focuses on all users where pedestrian and vehicles in violation are being cited.

Intersection Safety Analysis

Transportation safety is a multifaceted issue that can be addressed by analyzing a transportation system from both a proactive, systemic approach and from a historical, hot-spot analysis approach. To support the Sandy Springs Transportation Master Plan's (TMP) vision for the City of enabling a livable and vibrant community, a review of City crash trends and systemwide safety efforts was completed as part of the TMP's Existing Conditions analysis and as part of the citywide Safety Needs assessment. To supplement this effort, an additional hot-spot review was completed for five of the City's high-crash intersections. This review included historical crash analyses, as well as identification of short- and long-term safety improvements.

Five-year crash data provided by the City of Sandy Springs was reviewed to identify a subset of high-crash intersections, based on the frequency of fatal and injury crashes. Neither intersections that are currently being evaluated by the City in ongoing traffic engineering/safety study efforts were considered, nor were intersections included in recently completed or scoped efforts. Intersections included in the Traffic Evaluation analysis task of the TMP also were not considered. The City selected the final five study intersections for this review:

- Hammond Drive at Peachtree Dunwoody Road
- SR 9 (Roswell Road) at Lake Placid Drive
- SR 9 (Roswell Road) at Trowbridge Road
- SR 9 (Roswell Road) at I-285 Eastbound
- SR 9 (Roswell Road) at I-285 Westbound

Table 1 summarizes the five-year crash data for each of the study intersections.

Table 1: Summary of Crashes by Intersection (2015 – 2019)

Intersection	Total Crashes	Fatal Crashes	Injury Crashes	Bike/Ped Crashes
Hammond Dr at Peachtree Dunwoody Rd	270	0	48	0
SR 9 at Lake Placid Dr	198	1	41	11
SR 9 at Trowbridge Rd	155	1	52	2
SR 9 at I-285 EB	401	0	106	0
SR 9 at I-285 WB	342	0	86	0

Methodology

Five years of crash data was extracted for each study intersection from the Georgia Department of Transportation's (GDOT) Georgia Electronic Accident Reporting System (GEARS) online crash database. Data was extracted for the time period from January 1, 2015 to December 31, 2019 (for

consistency with the five-year crash data provided by the City of Sandy Springs) and included a 250-foot influence area along each leg of each intersection. The data coded for each crash was individually reviewed to determine the appropriate crash type. In instances where the coded data was unclear, or where an accurate determination of the appropriate crash type could not be made, the crash reports were obtained and reviewed.

For each of the study intersections, historical crash data were analyzed to identify any potentially correctable crash trends that may be related to, but not limited to, geometric configurations, lighting conditions, pavement conditions, signage, or access management. Several recommendations were made for each of the study intersections, including striping and signing improvements, maintenance or repairs, repaving projects, signal equipment upgrades, access management, pedestrian improvements, lighting upgrades, and improvements to roadway and geometric features. These recommendations are based on a high-level review of crash data, as such, some of the recommendations will need further analysis. Furthermore, while this evaluation is engineering focused, there are education and enforcement initiatives that can have positive impacts to crash trends on City of Sandy Springs Streets. These elements are explored further in the Safety Needs assessment.

Hammond Drive at Peachtree Dunwoody Road

The intersection of Hammond Drive at Peachtree Dunwoody Road is located in eastern Sandy Springs, directly northeast of the I-285 at SR 400 interchange. Both roadways are minor arterials with posted speed limits of 35 mph. The intersection is controlled by a signal of mast arm design, and both left-turn and right-turn auxiliary lanes are present at all four approaches. All the approaches, except for the northbound approach, currently operate with protected-permissive left-turn phasing and have existing R10-27 "Left Turn Yield on Flashing Yellow Arrow After Stop" sign panels mounted adjacent to the signal heads. The intersection is in a highly developed area of the City, with commercial, office, and multi-family residential land uses located adjacent to the intersection.

Historical Crash Data Summary

From January 1, 2015 to December 31, 2019, a total of 270 crashes were reported at the intersection. This included 48 injury crashes, resulting in 58 injuries, and no fatal crashes. The number of crashes per year remained relatively constant, with 52 crashes reported in 2015, 51 crashes in 2016, 60 crashes in 2017, 53 crashes in 2018, and 54 crashes reported in 2019. The five-year crash history is summarized in **Table 3**. Detailed crash data tables are included in **Appendix A**.

Table 2: Five-Year Crash History Summary – Hammond Drive at Peachtree Dunwoody Road (2015 – 2019)

Year	Total Crashes	Fatal Crashes	Injury Crashes	Dark Crashes	Wet Crashes
2015	52	0	17	4	7
2016	51	0	11	7	7
2017	60	0	5	4	0
2018 ¹	53	0	7	9	11
2019	54	0	8	10	6
Total	270	0	48	34	31
<i>Average</i>	<i>54.0</i>	<i>0.0</i>	<i>19.6</i>	<i>6.8</i>	<i>6.2</i>
Percent		0.0%	17.8%	12.6%	11.5%

¹In 2018, the intersection was modified to create dual left-turn lanes at the northbound approach, operating with protected-only left-turn phasing. Flashing Yellow Arrows were installed for left-turn operations at the other three approaches.

The crash data were manipulated to determine any significant trends in the circumstances surrounding each crash, and the following observations were made:

- Approximately 12 percent of the crashes occurred on wet or snowy pavement, compared to 16 percent citywide.
- Nearly 13 percent of the crashes reported occurred during dark conditions. An additional 4 percent of the crashes occurred during dawn or dusk conditions. Street lighting is provided along all four approaches of the intersection.
 - Citywide, approximately 17 percent of the crashes reported occurred during dark conditions, and an additional 3 percent occurred during dawn/dusk conditions.
- The at-fault direction of travel of crashes reported at the intersection was relatively consistent across all four directions, with 53 percent of the crashes occurring at-fault along Peachtree Dunwoody Road and 47 percent occurring at-fault along Hammond Drive. The predominant at-fault direction of travel was westbound (29 percent).
- Seven crashes involved a truck (3 percent), which is consistent with the percent of crashes citywide that involved a truck (3 percent).
- Two crashes involved a driver under the influence of alcohol or drugs. 296 crashes involving a driver under the influence of alcohol or drugs were reported citywide.
- The peak period in crash frequency occurred from 4:00 PM to 6:00 PM, as depicted in **Figure 1**.
- Using the National Safety Council's (NSC) "KABCO" injury severity scale, 15 percent of the crashes were coded as "complaint of injury" (KABCO "C" rating) crashes, 2 percent were coded as "visible injury" ("B" rating), and less than 0.5 percent were coded as "severe injury"

("A" rating). Approximately 82 percent of the crashes were property-damage-only crashes ("O" rating).

- Of the seven A- and B-rated injury crashes, three were angle crashes and two were rear-end crashes. The single A-rated injury crash was a same-direction sideswipe crash involving a passenger vehicle and a westbound motorcyclist who lost control of the vehicle when changing lanes while approaching the intersection.
- Four of the A- and B-rated injury crashes were attributed to a motorist's failure to yield at the intersection. Three of these crashes were reported before the 2018 intersection improvements were installed.

Fatal Crashes

No fatal crashes occurred at this intersection within the five-year crash review period.

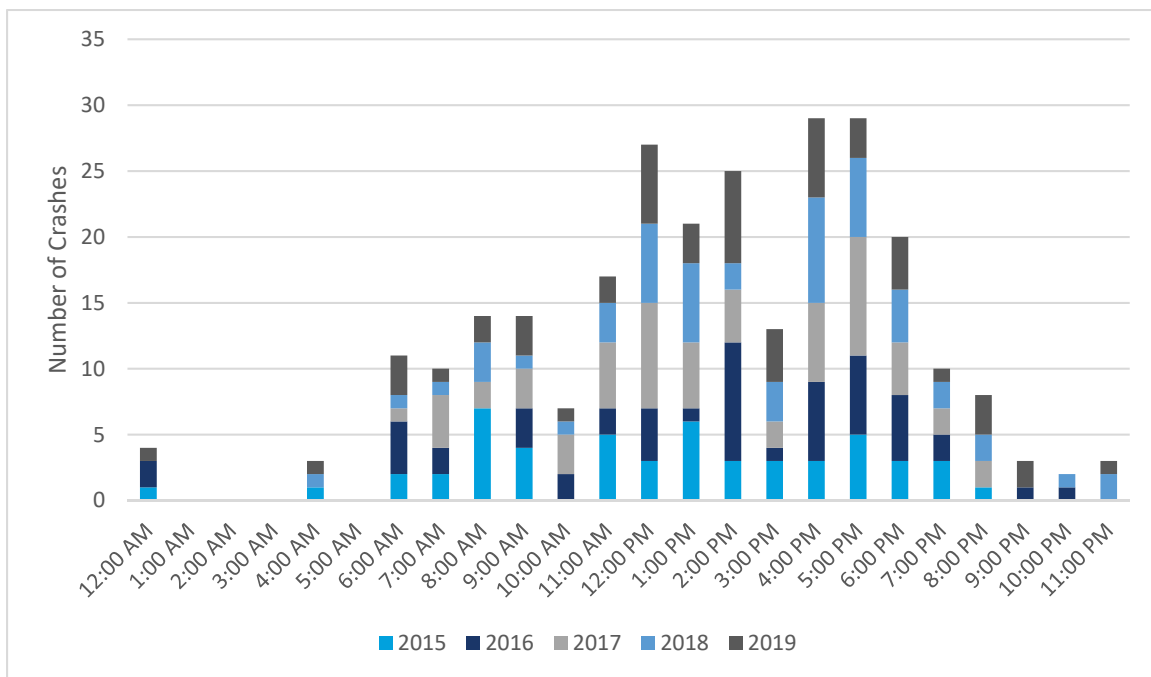


Figure 1: Crashes by Time of Day - Hammond Drive at Peachtree Dunwoody Road

Crash Type Analysis

The crashes were analyzed by type, as summarized in **Table 3**. The predominant crash types at the intersection were rear-end crashes (46 percent) and sideswipe crashes (29 percent), indicating congestion-related crash trends. An additional 10 percent of the crashes reported were left-turn crashes, and an additional 9 percent were angle crashes.

Table 3: Summary of Crashes by Type – Hammond Drive at Peachtree Dunwoody Road (2015 – 2019)

Crash Type	2015	2016	2017	2018	2019	Total
Rear End	28	21	28	25	21	123
Sideswipe	9	13	18	17	21	78
Left Turn	4	7	5	6	5	27
Angle	5	7	4	3	5	24
Right Turn	3	1	3	1	1	9
U-Turn	2	1	1	1	1	6
Backed Into	1	1	1	0	0	3
Total	52	51	60	53	54	270

Of the 123 rear-end crashes and 78 sideswipe crashes reported, 33 percent occurred at-fault in the westbound direction and 27 percent occurred at-fault in the southbound direction. These crash types peaked from 5:00 PM to 6:00 PM, during the evening peak period for travel. Of the reported rear-end and sideswipe crashes, one was coded as a serious injury and two were coded as a visible injury, while 24 were coded as complaint-of-injury crashes (12 percent) and 174 were coded as property damage only (87 percent). Of the sideswipe crashes, 86 percent were coded to be the result of changing lanes improperly at the time of the crash, of which 39 percent occurred at-fault in the westbound direction.

Of the 27 left-turn crashes reported, 13 occurred at-fault in the eastbound direction and 7 occurred at-fault northbound. Nearly 26 percent of the left-turn crashes occurred during dark conditions and 22 percent occurred on wet pavement. The southbound, eastbound, and westbound approaches operate with protected-permissive left-turn phasing controlled by four-section signal heads with flashing yellow arrows. The northbound approach operates with protected-only left-turn phasing. Of the 24 angle crashes reported, 8 occurred at-fault in the eastbound direction and 7 occurred at-fault in the westbound direction.

The single A-rated injury crash was a same-direction sideswipe crash involving a passenger vehicle and a westbound motorcyclist who lost control of the vehicle when changing lanes while approaching the intersection. Of the six B-rated injury crashes, three were angle crashes, two were rear-end crashes, one was a left-turn crash. Of the angle and left-turn crashes, four occurred before the signal improvements were installed in 2018. Both rear-end crashes occurred at the northbound approach.

Bicycle and Pedestrian Crashes

No bicycle or pedestrian crashes were reported at this intersection within the five-year crash review period.

Recommendations

Based on a review of five-year historical crash trends at the study intersection, the following recommendations were identified:

- **Install signal head backplates with retroreflective borders.** The existing signal heads do not have backplates. The Federal Highway Administration (FHWA) Crash Modification Factors Clearinghouse attributes a 15 percent reduction in total crashes to the installation of backplates with retroreflective borders.
- **Review yellow and all-red times.** Providing longer yellow times may have a positive impact on rear-end and angle crash trends by reducing quick stopping maneuvers and instances of motorists entering the intersection during the red phase. Longer all-red times provide more time to clear the intersection to reduce more severe angle-type crashes.
- **Review corridor signal timing.** Due to the frequency of congestion-related crashes along both streets, retiming both corridors to provide better progression may reduce rear-end and sideswipe crashes by better addressing driver expectancy and reducing instances of aggressive driving. A more thorough operational analysis of the study intersection or of the Hammond Drive and Peachtree Dunwoody Road corridors may be more appropriate to address congestion and the associated crash trends. The City of Sandy Springs' Split Cycle Offset Optimization Technique (SCOOT) adaptive control system parameters may be able to address corridor progression.
- **Review left-turn phasing operations.** Because more than five left-turn crashes were reported at the study intersection over the crash review period, it is recommended to conduct a full safety analysis to determine the need and feasibility of converting the protected-permissive left-turn movements at this intersection into protected-only movements.
- **Install additional signal heads.** Providing an additional signal head over the through lanes for all approaches improves signal visibility, addressing rear-end and angle crash trends. This recommendation will require further review.
- **Install directional and lane change signage.** Placing directional and lane change signs overhead, prior to the intersection, provides more advanced warning, allowing motorists to make decisions sooner and reducing last-minute maneuvers at the intersection. This recommendation will require further review.

SR 9 (Roswell Road) at Lake Placid Drive

The intersection of SR 9 (Roswell Road) at Lake Placid Drive is located in southern Sandy Springs, approximately one-quarter mile south of the I-285 at SR 9 interchange. SR 9 is an urban minor arterial with a posted speed limit of 35 mph. Lake Placid Drive is an urban local road with a posted speed limit of 35 mph which provides access to several commercial and residential developments.

The intersection is controlled by a signal of box span wire design, with exclusive left-turn lanes controlled by five-section signal heads for the northbound and southbound approaches. Street lighting is currently provided along the eastern side of SR 9, with an additional luminaire mounted on the southeastern strain pole of the signalized intersection. The roadway recently underwent a resurfacing project in 2019. The intersection is in a highly developed area of the City, with multiple commercial developments and private driveways located along SR 9 adjacent to the intersection. The intersection and surrounding areas experience higher levels of pedestrian activity, with high transit ridership at the bus stops near this intersection.

Historical Crash Data Summary

From January 1, 2015 to December 31, 2019, a total of 198 crashes were reported at the intersection. This included 41 injury crashes, resulting in 53 injuries, and 1 fatal crash, resulting in 1 fatality. The number of crashes per year slightly increased over the five-year crash review period, with 31 crashes reported in 2015, 39 crashes in 2016, 46 crashes in 2017, 40 crashes in 2018, and 42 crashes reported in 2019. The five-year crash history is summarized in **Table 4**. Detailed crash data tables are included in **Appendix B**.

Table 4: Five-Year Crash History Summary – SR 9 at Lake Placid Drive (2015 – 2019)

Year	Total Crashes	Fatal Crashes	Injury Crashes	Dark Crashes	Wet Crashes
2015	31	0	7	6	5
2016	39	0	7	12	1
2017	46	0	8	16	7
2018	40	1	12	10	5
2019	42	0	7	10	8
Total	198	1	41	54	26
<i>Average</i>	<i>39.6</i>	<i>0.2</i>	<i>8.2</i>	<i>10.8</i>	<i>5.2</i>
Percent		0.5%	20.7%	27.3%	13.1%

The crash data were manipulated to determine any significant trends in the circumstances surrounding each crash, and the following observations were made:

- Approximately 27 percent of the crashes occurred during dark conditions, compared to 17 percent citywide. An additional 4 percent occurred during dawn or dusk conditions. Over half of the left-turn crashes reported at the intersection occurred during dark conditions.
- Approximately 13 percent of the crashes occurred on wet pavement, compared to 16 percent citywide.
- Nearly 37 percent of the crashes occurred at-fault in the northbound direction, while an additional 31 percent occurred at-fault in the southbound direction.

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- Eight crashes involved a truck (4 percent), which is slightly higher than the citywide trend of 3 percent.
- Five crashes involved a driver under the influence of alcohol or drugs (3 percent). Nearly 2 percent of the citywide crashes reported involved a driver under the influence.
- The peak period in crash frequency occurred from 5:00 PM to 6:00 PM, as depicted in **Figure 2**.
- Approximately 11 percent of the crashes involved a motorist entering/leaving a driveway or parking. Citywide, only 6 percent of the crashes reported involved a motorist entering/leaving a driveway or parking.
- On the KABCO injury severity scale, 16 percent of the crashes were coded as “complaint of injury” (“C” rating) crashes, 3 percent were coded as “visible injury” (“B” rating), and 2 percent were coded as “severe injury” (“A” rating). Approximately 80 percent of the crashes were property-damage-only crashes (“O” rating).
 - Of the three A-rated injury crashes, one was a left-turn crash at-fault in the southbound direction (which operates with protected-permissive left-turn phasing), one was a right-turn crash at-fault in the westbound direction, and the other was a bicycle crash. The left-turn crash occurred on wet pavement during dark conditions and resulted in two injuries. The right-turn crash involved three vehicles and results in two injuries. Visibility for westbound right-turning motorists attempted a right-turn on-red maneuver may be impacted by vegetation and signage in the southeast corner of the intersection.
 - Of the five B-rated injury crashes, three were pedestrian crashes, one was a rear-end crash, and the other was an angle crash. One of the pedestrian crashes occurred during dusk conditions. The rear-end crash occurred during dark conditions, and the angle crash occurred during dusk conditions.
 - The B-rated injury, angle crash involved a driver under the influence of drugs or alcohol. This crash occurred at-fault in the westbound direction with a northbound motorist.

Fatal Crashes

One fatal crash was reported in November 2018. The crash occurred on dry pavement under daylight conditions when a pedestrian who was crossing SR 9 eastbound, within the marked crosswalk across the north leg of the intersection, was struck by an eastbound motorist turning left onto northbound SR 9.

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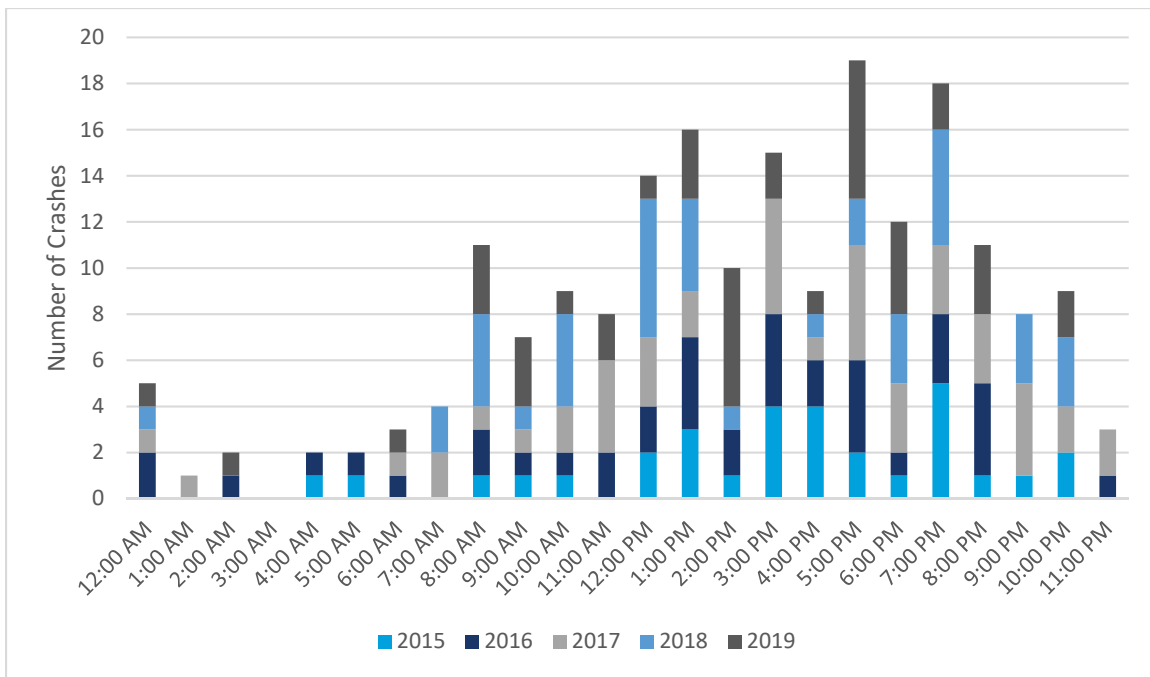


Figure 2: Crashes by Time of Day – SR 9 at Lake Placid Drive

Crash Type Analysis

The crashes were analyzed by type, as summarized in **Table 5**. The predominant crash types at the intersection were rear-end crashes (36 percent), sideswipe crashes (18 percent), angle crashes (16 percent), and left-turn crashes (15 percent). Additionally, 10 pedestrian crashes and 1 bicycle crash were reported at the intersection.

Table 5: Summary of Crashes by Type – SR 9 at Lake Placid Drive (2015 – 2019)

Crash Type	2015	2016	2017	2018	2019	Total
Rear End	8	18	20	12	13	71
Sideswipe	6	8	8	5	9	36
Angle	6	5	5	11	4	31
Left Turn	4	2	8	6	9	29
Pedestrian ¹	2	1	2	3	2	10
Right Turn	3	1	2	1	2	9
Bicycle	0	0	0	1	0	1
Other	2	4	1	1	3	11
Total	31	39	46	40	42	198

¹Five-year crash data provided by the City of Sandy Springs included 13 pedestrian crashes associated with this intersection, while data provided by GDOT only included 10. This discrepancy may be due to incomplete datasets for 2019 and discrepancies in georeferencing between the two datasets. Pedestrian crashes from both datasets are reviewed in this section.

Of the 71 rear-end crashes reported, nearly 85 percent occurred along Roswell Road with 58 percent at-fault in the northbound direction and 27 percent at-fault in the southbound direction. Of the 36 sideswipe crashes reported, approximately 86 percent occurred along Roswell Road with 36 percent at-fault in the northbound direction and 50 percent at-fault in the southbound direction. Nearly 28 percent of the sideswipe crashes occurred during dark conditions and 64 percent were coded to be the result of changing lanes improperly or passing improperly at the time of the crash.

Of the 31 angle crashes reported, 77 percent occurred at-fault along Lake Placid Drive, with 45 percent at-fault in the westbound direction and 32 percent at-fault in the eastbound direction. 58 percent of the reported angle crashes were coded as the result of the at-fault motorist entering/leaving a driveway or parking lot. Of the 29 left-turn crashes reported, nearly 83 percent occurred along Roswell Road with 38 percent at-fault in the northbound direction and 45 percent at-fault in the southbound direction. 52 percent of the reported left-turn crashes occurred during dark lighting conditions. 27 of the 29 left-turn crashes were coded with a motorist driving straight through the intersection on a red signal.

Bicycle and Pedestrian Crashes

From January 1, 2015 to December 31, 2019, between the datasets provided by GDOT and the City of Sandy Springs, 14 vulnerable user crashes were reported at the study intersection, resulting in 13 injuries and 1 fatality. For each vulnerable crash, the corresponding crash report was obtained and reviewed. The following observations were made:

- Two vulnerable user crashes occurred on wet pavement.
- Two vulnerable user crashes occurred during dark lighting conditions and one occurred during dusk conditions.
- The contributing cause in all the vulnerable user crashes was a failure to yield the right-of-way. The motorist was the at-fault user who failed to yield in 11 of the crashes.
 - Five of the crashes involved an eastbound motorist attempting a turn and failing to yield to a pedestrian who was crossing in the crosswalk, with the pedestrian signal (four were attempting a left turn and one was attempting a right-turn-on-red maneuver).
 - Five of the crashes involved a westbound motorist attempting a turn and failing to yield to a pedestrian who was crossing in the crosswalk, with the pedestrian signal (three were attempting a left turn and two were attempting a right turn).
 - One involved a northbound motorist failing to yield to the pedestrian while attempting a left turn.
- In the three crashes where the pedestrian was at fault:

- One involved a pedestrian crossing during the southbound motorist's protected left-turn phase.
- One involved a pedestrian crossing in the crosswalk, during the pedestrian "Don't Walk" phase, in an attempt to catch the bus.
- One involved a child pedestrian stepping into traffic without looking for oncoming traffic.
- The bicycle crash resulted from a northbound motorist attempting a left-turn movement on the permissive phase, failing to yield to a southbound bicyclist.

Due to the magnitude of vulnerable user crashes, supplemental crash data for the period of January 1, 2020 to June 30, 2020 was obtained. One additional vulnerable user crash was observed. The crash occurred outside of a marked crosswalk when a pedestrian who was fleeing from police attempted to cross the northbound lanes of SR 9 and was struck by a passing vehicle. The pedestrian suffered minor injuries.

Recommendations

Based on a review of five-year historical crash trends at the study intersection, the following recommendations were identified:

- **Install signal head backplates with retroreflective borders.** The existing signal heads do not have backplates. The Federal Highway Administration (FHWA) attributes a 15 percent reduction in total crashes to the installation of backplates with retroreflective borders.
- **Review yellow and all-red times.** Providing longer yellow times may have a positive impact on rear-end and angle crash trends by reducing quick stopping maneuvers and instances of motorists entering the intersection during the red phase. Longer all-red times provide more time to clear the intersection to reduce more severe angle-type crashes.
- **Implement Leading Pedestrian Intervals.** Of the 12 non-motorist crashes reported, the predominant contributing cause was a failure of the motorist to yield to the pedestrian in the crosswalk while attempting a turning movement. Installing a Leading Pedestrian Interval (LPI) provides for pedestrians to enter the crosswalk prior to the conflicting vehicular movement receiving a green indication, enhancing visibility of crossing pedestrians.
- **Relocate the northbound bus stop on SR 9.** Relocating the northbound bus stop on the east side of SR 9 further south, closer to the intersection, may reduce the frequency of mid-block crossings. Providing a bus stop closer to the intersection will encourage more pedestrians to use the designated crosswalk to make their crossing, as the current location requires bus riders to walk approximately 200 feet to use the crosswalk.

- **Install wider crosswalks across SR 9.** Because this intersection has higher pedestrian volumes, wider crosswalks should be provided to accommodate higher crossing volumes. Wider crosswalks provide more comfort and protection to pedestrians, allowing pedestrians crossing in opposite directions to pass one another comfortably.
- **Widen the sidewalks along SR 9.** Narrow sidewalks impede pedestrians from moving safely and comfortably along a corridor. Wider sidewalks will accommodate higher pedestrian volumes while providing space for groups of pedestrians to walk together and providing more distance between pedestrians and vehicular traffic.
- **Upgrade regulatory signage.** R10-15L “Left Turning Vehicles Yield to Pedestrian” signs with fluorescent yellow-green backgrounds are currently provided for all approaches, with an additional orange R10-15R “Right Turning Vehicles Yield to Pedestrian” sign provided for the eastbound approach of Lake Placid Drive. It is recommended to upgrade the existing orange R10-15R sign panel to one with a fluorescent yellow-green background to enhance uniformity at the intersection.
- **Install additional signal heads.** Providing an additional signal head over the through lanes for all approaches will improve signal visibility, addressing rear-end and angle crash trends.
- **Conduct a lighting evaluation.** Although street lighting is currently provided along the eastern side of SR 9, with an additional luminaire mounted on the southeastern strain pole of the signalized intersection, 27 percent of the crashes occurred during dark conditions. Additionally, over half of the left-turn crashes occurred during dark conditions. It is recommended to conduct a lighting evaluation along SR 9 to study the sufficiency of the provided lighting and the potential need for additional or upgraded street lighting.
- **Update left-turn phasing operations and equipment.** Because more than five left-turn crashes were reported at the study intersection over the crash review period, it is recommended to conduct a full safety analysis, including a road safety audit, to determine the need and feasibility of converting the protected-permissive left-turn movements at this intersection into protected-only movements.
 - Additionally, the intersection is currently controlled by a signal of span wire design, with five-section signal heads shared between the left-turn lanes and the middle through lanes. It is recommended that the signal be rebuilt to one of mast arm design which provides four-section signal heads with flashing yellow arrows for the left-turn movements and exclusive signal heads for each thru-lane. This would help to alleviate left-turn crashes at the intersection without modifying operations to protected-only. Additionally, the signal rebuild would provide uniformity with the mast arm signals at the adjacent signalized intersections to the north and south of

Lake Placid Drive. The magnitude of rear-end, sideswipe, and left-turn crashes reported at this intersection would likely be sufficient to justify a signal rebuild.

- **Review access management.** Due to the frequency of crashes involving a motorist entering/leaving a driveway/parking and the close proximity of multiple driveways along Roswell Road, it is recommended to review access management along Roswell Road. Closing redundant driveways would limit conflict points within the intersection influence area, reducing angle, left-turn, and right-turn crashes near the study intersection.

SR 9 (Roswell Road) at Trowbridge Road

The intersection of SR 9 (Roswell Road) at Trowbridge Road is located in northern Sandy Springs, approximately two miles southwest of the interchange of SR 400 at Northridge Road. SR 9 is an urban minor arterial with a posted speed limit of 45 mph and a continuous two-way left-turn lane. Trowbridge Road is an urban local road with a posted speed limit of 30 mph which provides access to a residential neighborhood to the west of SR 9 and to several commercial developments and multi-family residential developments to the east of SR 9. The intersection is controlled by a signal of box span wire design, with the northbound and southbound left-turn movements controlled by exclusive 3-section signal heads with a flashing yellow arrow indication. The intersection recently underwent a resurfacing and signal rebuild project, which included installing retroreflective backplates on all signal heads as well as the exclusive left-turn signal heads with Flashing Yellow Arrows. The northbound and westbound approaches provide yield-controlled channelized right-turn lanes with no additional receiving lanes for turning vehicles. Street lighting is currently provided along the eastern side of SR 9. The intersection is in a moderately developed area of the City, with multiple commercial and residential developments adjacent to SR 9. North Springs High School is located approximately one-quarter mile south of the Trowbridge Road intersection.

Historical Crash Data Summary

From January 1, 2015 to December 31, 2019, a total of 155 crashes were reported at the intersection. This included 52 injury crashes, resulting in 67 injuries, and 1 fatal crash. The number of crashes per year increased slightly over the five-year crash review period, with a dip in 2018: 27 crashes reported in 2015 and 2016, 34 crashes in 2017, 27 crashes in 2018, and 40 crashes were reported in 2019. The five-year crash history is summarized in **Table 6**. Detailed crash data tables are included in **Appendix C**.

Table 6: Five-Year Crash History Summary – SR 9 at Trowbridge Road (2015 – 2019)

Year	Total Crashes	Fatal Crashes	Injury Crashes	Dark Crashes	Wet Crashes
2015	27	0	10	4	4
2016	27	0	10	4	2
2017	34	0	11	4	2
2018	27	0	9	6	8
2019	40	1	12	5	4
Total	155	1	52	23	20
<i>Average</i>	<i>31.0</i>	<i>0.2</i>	<i>10.4</i>	<i>4.6</i>	<i>4.0</i>
Percent		0.6%	33.5%	14.8%	12.9%

The crash data were manipulated to determine any significant trends in the circumstances surrounding each crash, and the following observations were made:

- Nearly 15 percent of the crashes occurred during dark conditions, compared to 17 percent citywide. An additional 3 percent occurred during dawn or dusk conditions.
- Approximately 13 percent of the crashes occurred on wet pavement, compared to 16 percent citywide.
- Nearly 39 percent of the crashes occurred at-fault in the westbound direction, while 33 percent occurred at-fault in the southbound direction.
- One crash involved a truck (less than 1 percent).
- Five crashes involved a driver under the influence of alcohol or drugs (3 percent). Nearly 2 percent of the citywide crashes reported involved a driver under the influence.
- The peak period in crash frequency occurred from 4:00 PM to 5:00 PM, with a secondary peak that occurred from 7:00 AM to 8:00 AM, as shown in **Figure 3**.
- On the KABCO injury severity scale, 27 percent of the crashes were coded as “complaint of injury” (“C” rating) crashes, 6 percent were coded as “visible injury” (“B” rating), and 1 percent were coded as “severe injury” (“A” rating). Approximately 67 percent of the crashes were property-damage-only crashes (“O” rating).
 - Of the two A-rated injury crashes, one was an angle crash and one was a left-turn crash. Both occurred at-fault in the southbound direction. The angle crash occurred during dark conditions and involved a motorist under the influence of drugs or alcohol. The left-turn crash occurred during dark conditions and resulted in four injuries. Both crashes occurred prior to installation of the signal improvements at the intersection, which included installing retroreflective backplates on all signal heads as well as the exclusive left-turn signal heads with Flashing Yellow Arrows at the southbound approach.

- Of the nine B-rated injury crashes, five were rear-end crashes and four were left-turn crashes. Three of the rear-end crashes and two of the left-turn crashes occurred at-fault in the southbound direction, while two of the rear-end crashes and the remaining two left-turn crashes occurred at-fault in the northbound direction. The remaining rear-end crash occurred at-fault in the eastbound direction on wet pavement.
 - One of the rear-end crashes and one of the left-turn crashes occurred during dark conditions, both at-fault in the northbound direction. Both of these crashes involved a driver under the influence of drugs or alcohol.
 - All of the B-rated injury crashes occurred prior to installation of the signal improvements at the intersection.

Fatal Crashes

One fatal crash was reported in July 2019. The crash occurred on dry pavement under dark lighting conditions when a bicyclist who was traveling southbound in the outside southbound lane of SR 9 was struck from the rear by a vehicle within the intersection at Trowbridge Road. The bicyclist expired due to injuries sustained in the crash and the at-fault driver was subsequently found to have been under the influence of alcohol.

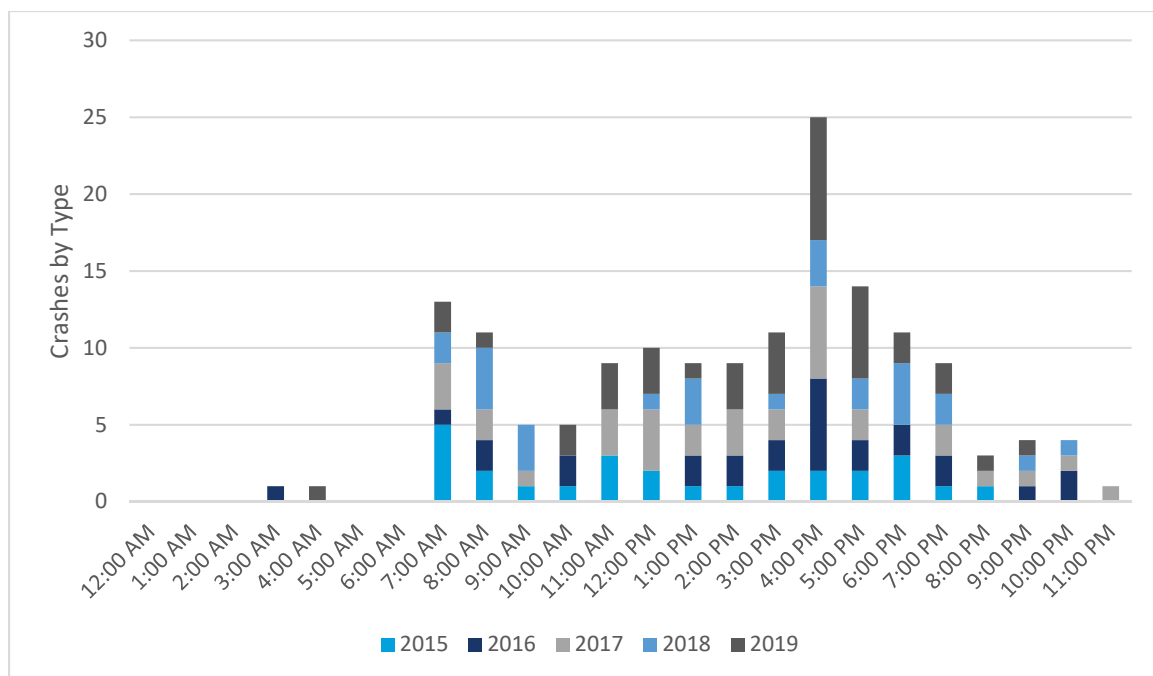


Figure 3: Crashes by Time of Day – SR 9 at Trowbridge Road

Crash Type Analysis

The crashes were analyzed by type, as summarized in **Table 7**. The predominant crash type reported at the intersection was a rear-end crash (64 percent). Additionally, 14 percent of the crashes reported were left-turn crashes. Two bicycle crashes, one of which resulted in a fatality, were also reported.

Table 7: Summary of Crashes by Type – SR 9 at Trowbridge Road (2015 – 2019)

Crash Type	2015	2016	2017	2018	2019	Total
Rear End	20	16	25	14	24	99
Left Turn	3	6	4	6	2	21
Angle	2	3	2	3	4	14
Sideswipe	1	2	3	2	6	14
Bicycle	1	0	0	0	1	2
Other	0	0	0	2	3	5
Total	27	27	34	27	40	155

Of the 99 rear-end crashes reported, 51 occurred at-fault in the westbound direction (52 percent) and 23 occurred at-fault in the northbound direction (23 percent). Of these rear-end crashes, there were 29 instances where the vehicle maneuvers leading to the crash were coded as turning right, 26 in the westbound direction and 3 in the northbound direction. The right-turn movements for the northbound and westbound approaches are currently yield-controlled channelized approaches.

14 of the 21 left-turn crashes were reported to have occurred at-fault in the southbound direction, with 5 occurring at-fault in the northbound direction and 2 in the westbound direction. Seven of the left-turn crashes occurred during dark conditions. Of the 14 angle crashes reported, seven were coded as the result of a motorist entering or leaving a driveway.

Bicycle and Pedestrian Crashes

One non-fatal bicycle crash occurred in November 2015. The crash occurred on dry pavement under daylight conditions when a bicyclist who was traveling northbound within the center two-way left-turn lane was struck from the rear by a northbound vehicle. The bicyclist was transported to the hospital for minor injuries sustained in the crash.

Recommendations

Based on a review of five-year historical crash trends at the study intersection, the following recommendations were identified:

- **Review yellow and all-red times.** Providing longer yellow times may have a positive impact on rear-end and angle crash trends by reducing quick stopping maneuvers and instances of motorists entering the intersection during the red phase.
- **Install an auxiliary westbound signal head.** Over half of the reported rear-end crashes occurred at-fault in the westbound direction. Additionally, the east leg meets the intersection along a horizontal curve, along which it may be difficult to see a red indication or queued vehicles. Providing an auxiliary head further upstream provides motorists with an earlier indication of the approach's phase in the signal cycle.
- **Address westbound right-turning rear-end crashes.** This historical crash data indicates a trend in rear-end crashes at the westbound right-turn movement, which is most likely occurring when westbound motorists are attempting a right-turn-on-red movement, waiting for a gap in northbound traffic. It is likely that vehicles are colliding as motorists turn their heads and look over their shoulder to observe oncoming traffic. This crash trend could be addressed in various projects:
 - **Install an additional receiving lane.** Currently there is a striped gore along the eastern shoulder of Roswell Road, north of the intersection, that separates the westbound channelized right-turn lane from the northbound right-turn lane into the Trowbridge Crossing Shopping Center. Removing the gore to install an exclusive receiving lane would allow for the westbound right-turn lane to operate freely, removing the yield control. To implement this, the westbound right-turn lane would need to be realigned to merge into the new receiving lane. Additionally, W4-3 (the "Added Lane" sign) sign panels would need to be installed along SR 9 and Trowbridge Road to warn drivers of the new, added lane.
 - Constructing the additional receiving lane would create a short weaving zone between westbound right-turn motorists entering the SR 9 receiving lanes and SR 9 traffic maneuvering into the outside lane to make a right turn into the Trowbridge Crossing Shopping Center, requiring additional signage.
 - **Reconstruct the westbound right-turn lane.** Due to the skew of the channelization, it is likely that right-turning motorists are looking over their shoulders to observe approaching traffic and are failing to observe stopped vehicles in front of the queue. Reconstructing the westbound right-turn lane so that the skew is less severe would provide better sight distance for motorists turning their heads to observe oncoming northbound traffic. The approach could be reconstructed to either remove the island and channelization or to redesign the channelization with a 30-60-90-degree island.

- Reconstructing this lane would likely require additional construction to reduce the size of the northeastern raised concrete median as well as to extend the northeastern shoulder into the existing lane to reduce the radius of the turning lane. Additionally, the painted pedestrian crosswalk that crosses the westbound right-turn lane would likely have to be realigned to connect to newly constructed curb ramps.
- **Signalize the westbound right-turn lane.** Signalizing the movement would allow westbound right-turning motorists to only make the turn during the westbound green phase and the southbound left-turn green phase. This may reduce crashes, as drivers would not have to look for oncoming northbound traffic before making the turn during a westbound red phase.

SR 9 (Roswell Road) at I-285 Eastbound

The intersection of SR 9 (Roswell Road) at I-285 Eastbound is located in southern Sandy Springs. SR 9 is an urban minor arterial with a posted speed limit of 45 mph, and the I-285 ramp is a one-way, metered access ramp to/from Eastbound I-285. The intersection is controlled by a signal of mast arm design, with the southbound approach providing an exclusive left-turn lane, which is controlled by a 5-section signal head. The entrance ramp for I-285 eastbound is accessed via the southbound left-turn lane or a channelized northbound right-turn lane. The eastbound approach of the I-285 ramp provides dual left-turn lanes for motorists to turn onto northbound SR 9 as well as an additional channelized yield-controlled right-turn lane for vehicles to turn onto southbound SR 9. Street lighting is currently provided along the eastern side of SR 9 south of the I-285 interchange, with one additional luminaire provided on the northwestern corner of the intersection. The intersection is in a highly developed area of the City, with multiple commercial and residential developments adjacent to SR 9.

While the I-285 at SR 9 interchange was included in the scope of the I-285 Top End Express Lanes project (P.I. Number 0001758), it is no longer was at the time of this analysis.

In 2017, the City completed a citywide intersection analysis that reviewed crash rates by intersection throughout the city. Both intersections of the I-285 at SR 9 interchange were in the top 10 intersections with highest crash rates. Because both intersections at the interchange operate together and have higher crash trends, wholistic operational and safety improvements are an emphasis for this area.

Historical Crash Data Summary

From January 1, 2015 to December 31, 2019, a total of 401 crashes were reported at the intersection. This included 106 injury crashes, resulting in 138 injuries, and no fatal crashes. The number of crashes per year experienced peaked in 2016, but remained consistent otherwise, with

73 crashes reported in 2015, 104 crashes in 2016, 87 crashes in 2017, 62 crashes in 2018, and 75 crashes reported in 2019. The five-year crash history is summarized in **Table 8**. Detailed crash data tables are included in **Appendix D**.

Table 8: Five-Year Crash History Summary – SR 9 at I-285 Eastbound (2015 – 2019)

Year	Total Crashes	Fatal Crashes	Injury Crashes	Dark Crashes	Wet Crashes
2015	73	0	17	14	9
2016	104	0	31	26	8
2017	87	0	22	22	9
2018	62	0	14	12	14
2019	75	0	22	19	11
Total	401	0	106	93	51
<i>Average</i>	<i>80.2</i>	<i>0.0</i>	<i>21.2</i>	<i>18.6</i>	<i>10.2</i>
Percent		0.0%	26.4%	23.2%	12.7%

The crash data were manipulated to determine any significant trends in the circumstances surrounding each crash, and the following observations were made:

- Approximately 23 percent of the crashes occurred during dark conditions, which is higher than the citywide trend of 17 percent. An additional 3 percent occurred during dawn or dusk conditions.
- Nearly 13 percent of the crashes occurred on wet pavement, compared to 16 percent citywide.
- Approximately 55 percent of the crashes occurred at-fault in the eastbound direction, while an additional 28 percent occurred at-fault in the southbound direction. Of the 332 crashes reported that occurred at-fault in the eastbound or southbound directions, over 74 percent were rear-end crashes.
- 19 crashes involved a truck (5 percent), which is higher than the citywide trend of 3 percent.
- Four crashes involved a driver under the influence of alcohol or drugs (1 percent). Nearly 2 percent of the citywide crashes reported involved a driver under the influence.
- The peak period in crash frequency occurred from 3:00 PM to 5:00 PM, as depicted in **Figure 4**.
- Approximately 11 percent of the crashes involved a motorist entering/leaving a driveway or parking. Citywide, only 6 percent of the crashes reported involved a motorist entering/leaving a driveway or parking.
- On the KABCO injury severity scale, 22 percent of the crashes were coded as “complaint of injury” (“C” rating) crashes, 4 percent were coded as “visible injury” (“B” rating), and less

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than 1 percent were coded as "severe injury" ("A" rating). Approximately 74 percent of the crashes were property-damage-only crashes ("O" rating).

- One of the A-rated injury crashes reported was a left-turn crash that occurred at-fault in the southbound direction during daylight conditions on dry pavement. The crash resulted in two injuries.
- Two of the A-rated injury crashes were pedestrian crashes.
- Of the 15 B-rated injury crashes report, 10 were rear-end crashes and 5 were left-turn crashes. All of the left-turn crashes occurred at-fault in the southbound direction; one occurred during dark conditions and on wet pavement. Seven of the rear-end crashes occurred at-fault in the eastbound direction on the exit ramp, all on dry pavement during daylight conditions. Two of the rear-end crashes occurred at-fault in the southbound direction and one occurred at-fault northbound along SR 9. All three of the rear-end crashes along SR 9 occurred during dark conditions, and one involved a motorist under the influence of drugs and/or alcohol.
- None of the A- or B-rated injury crashes involved a truck.

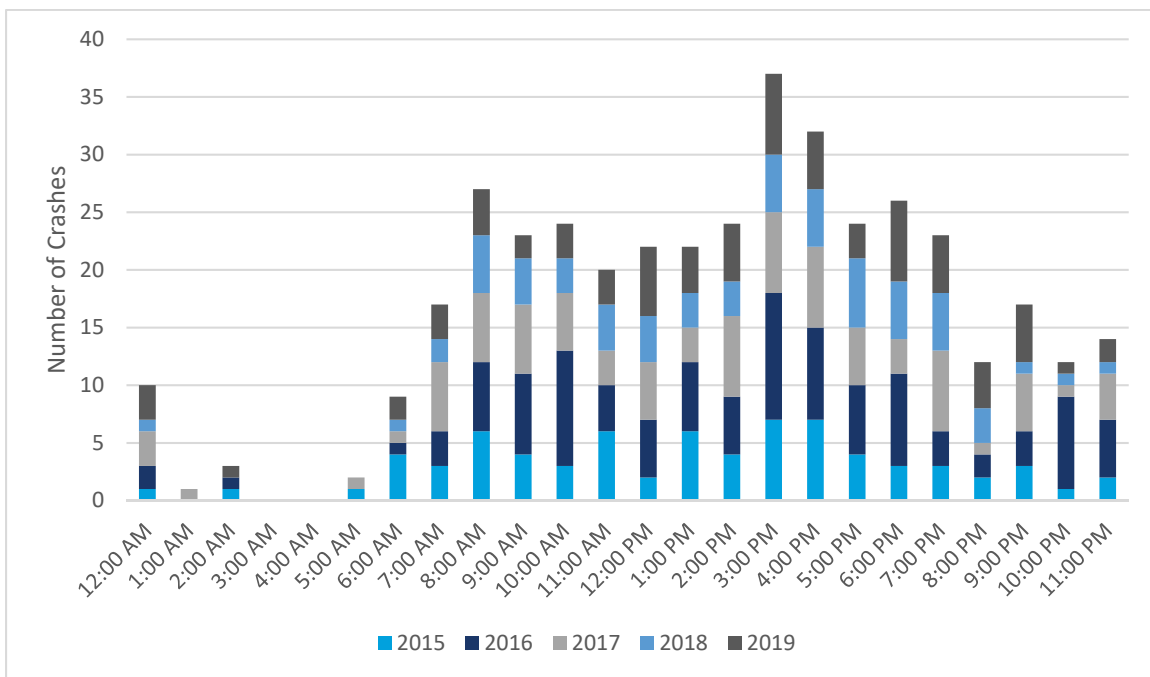


Figure 4: Crashes by Time of Day – SR 9 at I-285 Eastbound

Fatal Crashes

No fatal crashes occurred at this intersection within the five-year crash review period.

Crash Type Analysis

The crashes were analyzed by type, as summarized in **Table 9**. The predominant crash type reported at the intersection was a rear-end crash (71 percent). An additional 13 percent of the crashes reported were left-turn crashes and 12 percent reported were sideswipe crashes.

Table 9: Summary of Crashes by Type – SR 9 at I-285 Eastbound (2015 – 2019)

Crash Type	2015	2016	2017	2018	2019	Total
Rear End	55	71	66	45	47	284
Left-Turn	6	13	11	7	13	50
Sideswipe	7	15	6	8	11	47
Angle	2	3	3	1	1	10
Pedestrian	0	1	1	0	0	2
Other	3	2	1	1	3	10
Total	73	104	87	62	75	401

Over 71 percent of the 284 reported rear-end crashes occurred at-fault in the eastbound direction, along the exit ramp from I-285 Eastbound onto Roswell Road. Of those rear-end crashes, 105 were instances in which the at-fault vehicle was coded as turning right (37 percent) and 92 were instances where the at-fault vehicle was traveling straight (32 percent). The eastbound approach of the I-285 ramp provides a yield-controlled channelized right-turn lane.

Approximately 88 percent of the left-turn crashes occurred at-fault in the southbound direction, indicating that left-turn crashes are most likely occurring because southbound motorists are making risky left-turn maneuvers during the permissive phase, rather than because northbound motorists are violating the red indication. Additionally, 44 percent of the left-turn crashes occurred during dark conditions.

Bicycle and Pedestrian Crashes

Two pedestrian crashes were reported at this intersection within the five-year crash review period. Both occurred during dark conditions, and one occurred on wet pavement. Both crashes involved a northbound motorist. One crash resulted from the pedestrian crossing SR 9 outside of a marked crossing. The other resulted from a motorist failing to yield to a pedestrian crossing the northbound channelized right-turn lane, within the crosswalk.

Recommendations

Based on a review of five-year historical crash trends at the study intersection, the following recommendations were identified:

- **Install retroreflective borders to the existing backplates.** Providing retroreflective borders on the signal head backplates enhances visibility and conspicuity of the signal heads.
- **Install warning signage along the exit ramp.** Installing W3-2 (advance traffic control “Yield Ahead” warning sign) and W4-5 (“Entering Roadway Merge” warning sign) sign panels with supplemental W4-5P (“No Merge Area” warning sign) plaques on the I-285 exit ramp in advance of the channelized right-turn lane will provide additional warning to oncoming motorists that they will encounter an abrupt merging situation without a downstream acceleration lane. The use of these signs may help alleviate the rear-end crash trends at this approach of the intersection.
- **Review yellow and all-red times.** Providing longer yellow times may have a positive impact on rear-end and angle crash trends by reducing quick stopping maneuvers and instances of motorists entering the intersection during the red phase. Longer all-red times provide more time to clear the intersection to reduce more severe angle-type crashes.
- **Install a four-section signal head with flashing yellow arrow operation.** The southbound mast arm may be long enough to support the conversion of the existing five-section signal head to a four-section signal head with flashing yellow arrow operations, which would help to alleviate southbound left-turn crashes. An additional three-section signal head would have to be installed over the southbound through lanes. If the existing mast arm structure cannot support this conversion, the magnitude of crashes reported at this intersection may be sufficient to justify rebuilding the existing traffic signal.
- **Review left-turn phasing operations.** Because an average of 10 left-turn crashes per year are reported at the study intersection over the crash review period, it is recommended to conduct a full safety analysis to determine the need and feasibility of converting the southbound protected-permissive left-turn movement at this intersection into a protected-only movement.
- **Conduct a lighting evaluation.** Although street lighting is currently provided along the eastern side of SR 9 south of the I-285 interchange, with one additional luminaire provided on the northwestern corner of the intersection, 23 percent of the crashes occurred during dark conditions. Additionally, 44 percent of the left-turn crashes occurred during dark conditions. It is recommended to conduct a lighting evaluation along SR 9 to study the sufficiency of the provided lighting and the potential need for additional or upgraded street lighting, especially on the north side of the intersection.
- **Innovative Interchange Design.** Because both intersections at the I-285/SR 9 interchange operate together and have higher crash trends, wholistic operational and safety improvements should be considered for the interchange. A concept study should be

completed to explore different innovative interchange designs and evaluate their feasibility to address safety and operational concerns.

SR 9 (Roswell Road) at I-285 Westbound

The intersection of SR 9 (Roswell Road) at I-285 Westbound is located in southern Sandy Springs. SR 9 is an urban minor arterial with a posted speed limit of 35 mph. The I-285 ramp is a one-way, ramp-metered, access ramp to/from Westbound I-285. The intersection is controlled by a signal of mast arm design, with the northbound approach providing an exclusive left-turn lane controlled by a 5-section signal head. The entrance ramp for I-285 Westbound is accessed via the northbound left-turn lane or a channelized southbound right-turn lane. The westbound approach of the I-285 ramp provides dual left-turn lanes for vehicles to turn onto southbound SR 9 as well as an additional channelized yield-controlled right-turn lane for motorists to turn onto northbound SR 9. Street lighting is currently provided along the eastern side of SR 9, with one additional luminaire provided on the southwestern corner of the intersection. The intersection is in a highly developed area of the City, with multiple commercial and residential developments adjacent to SR 9.

While the I-285 at SR 9 interchange was included in the scope of the I-285 Top End Express Lanes project (P.I. Number 0001758), it is no longer was at the time of this analysis.

In 2017, the City completed a citywide intersection analysis that reviewed crash rates by intersection throughout the city. Both intersections of the I-285 at SR 9 interchange were in the top 10 intersections with highest crash rates. Because both intersections at the interchange operate together and have higher crash trends, wholistic operational and safety improvements are an emphasis for this area.

Historical Crash Data Summary

From January 1, 2015 to December 31, 2019, a total of 342 crashes were reported at the intersection. This included 86 injury crashes, resulting in 110 injuries, and no fatal crashes. The number of crashes per year experienced an increasing trend, with 61 crashes reported in 2015, 58 crashes in 2016, 75 crashes in 2017, 66 crashes in 2018, and 82 crashes reported in 2019. The five-year crash history is summarized in **Table 10**. Detailed crash data tables are included in **Appendix E**.

The crash data were manipulated to determine any significant trends in the circumstances surrounding each crash, and the following observations were made:

- Approximately 21 percent of the crashes occurred during dark conditions, compared to 17 percent citywide. An additional 4 percent occurred during dawn or dusk conditions.

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- Approximately 14 percent of the crashes occurred on wet pavement, compared to 16 percent citywide.
- Nearly 55 percent of the crashes occurred at-fault in the westbound direction, while an additional 29 percent occurred at-fault in the northbound direction. Of the 285 crashes reported that occurred at-fault in the westbound or northbound directions, approximately 62 percent were rear-end crashes.
- 15 crashes involved a truck (4 percent), which is slightly higher than the citywide trend of 3 percent.
- Three crashes involved a driver under the influence of alcohol or drugs (less than one percent). 296 crashes involving a driver under the influence of alcohol or drugs were reported citywide.
- The peak period in crash frequency occurred from 1:00 PM to 2:00 PM, as depicted in **Figure 5**.
- On the KABCO injury severity scale, 22 percent of the crashes were coded as “complaint of injury” (“C” rating) crashes and 3 percent were coded as “visible injury” (“B” rating). Approximately 75 percent of the crashes were property-damage-only crashes (“O” rating).
 - Of the 11 B-rated injury crashes reported, 7 were left-turn crashes, 3 were rear-end crashes, and 1 was a sideswipe crash. All the B-rated injury crashes, with the exception of two westbound rear-end crashes, occurred at-fault in the northbound direction. Two occurred on wet pavement, and four occurred during dark conditions.
 - None of the B-rated injury crashes involved a truck or a driver under the influence of drugs and/or alcohol.

Table 10: Five-Year Crash History Summary – SR 9 at I-285 Westbound (2015 – 2019)

Year	Total Crashes	Fatal Crashes	Injury Crashes	Dark Crashes	Wet Crashes
2015	61	0	17	13	8
2016	58	0	16	10	4
2017	75	0	19	9	7
2018	66	0	13	14	13
2019	82	0	21	24	17
Total	342	0	86	70	49
<i>Average</i>	<i>68.4</i>	<i>0.0</i>	<i>17.2</i>	<i>14.0</i>	<i>9.8</i>
Percent		0.0%	25.1%	20.5%	14.3%

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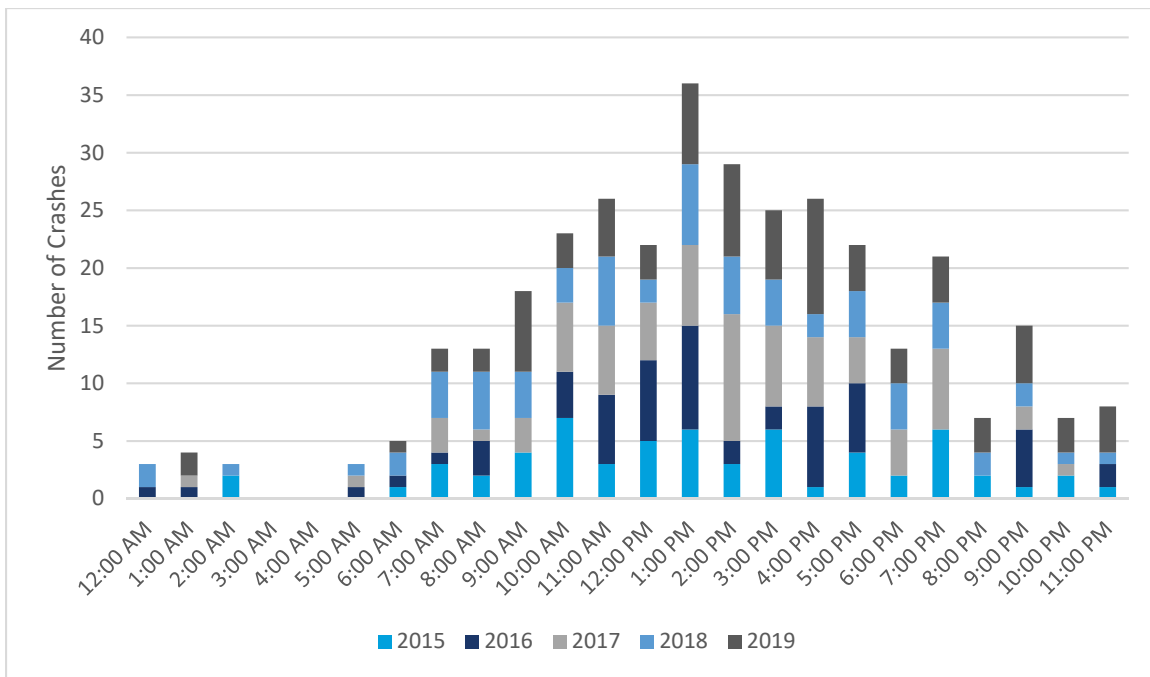


Figure 5: Crashes by Time of Day – SR 9 at I-285 Westbound

Fatal Crashes

No fatal crashes occurred at this intersection within the five-year crash review period.

Crash Type Analysis

The crashes were analyzed by type, as summarized in **Table 11**. The predominant crash types reported at the intersection were rear-end crashes (64 percent), sideswipe crashes (17 percent), and left-turn crashes (15 percent).

Table 11: Summary of Crashes by Type – SR 9 at I-285 Westbound (2015 – 2019)

Crash Type	2015	2016	2017	2018	2019	Total
Rear End	42	42	42	42	49	217
Sideswipe	6	11	17	13	12	59
Left-Turn	8	5	12	9	18	52
Other	5	0	4	2	3	14
Total	61	58	75	66	82	342

Nearly 89 percent of the 177 reported rear-end crashes occurred at-fault in the westbound direction, along the exit ramp from I-285 Westbound onto Roswell Road. Approximately 23 percent of the rear-end crashes occurred during dark conditions, and all three of the crashes reported with a motorist driving under the influence of alcohol or drugs were rear-end crashes. Of the 52 left-turn crashes reported, 50 occurred at-fault in the northbound direction (96 percent), and 19 occurred during dark lighting conditions (37 percent).

Bicycle and Pedestrian Crashes

No bicycle or pedestrian crashes were reported at this intersection within the five-year crash review period.

Recommendations

Based on a review of five-year historical crash trends at the study intersection, the following recommendations were identified:

- **Install retroreflective borders to the existing backplates.** Providing retroreflective borders on the signal head backplates enhances visibility and conspicuity of the signal heads.
- **Install warning signage along the exit ramp.** Installing W3-2 (advance traffic control "Yield Ahead" warning sign) and W4-5 ("Entering Roadway Merge" warning sign) sign panels on the I-285 exit ramp in advance of the channelized right-turn lane will provide additional warning to oncoming motorists that they will encounter an abrupt merging situation without a downstream acceleration lane. The use of these signs may help alleviate the rear-end crash trends at this approach of the intersection.
- **Review yellow and all-red times.** Providing longer yellow times may have a positive impact on rear-end and angle crash trends by reducing quick stopping maneuvers and instances of motorists entering the intersection during the red phase. Longer all-red times provide more time to clear the intersection to reduce more severe angle-type crashes.
- **Rebuild the traffic signal to provide a four-section signal head with flashing yellow arrow operation.** Rebuilding the traffic signal to support the conversion of the existing northbound five-section signal head to a four-section signal head with flashing yellow arrow operations would help to alleviate northbound left-turn crashes. An additional three-section signal head would have to be installed over the southbound through lanes. The magnitude of crashes reported at this intersection may be sufficient to justify rebuilding the existing traffic signal.
- **Review left-turn phasing operations.** Because an average of over 10 left-turn crashes per year as reported at the study intersection over the crash review period, it is recommended to conduct a full safety analysis to determine the need and feasibility of converting the northbound protected-permissive left-turn movement at this intersection into a protected-only movement.
- **Conduct a lighting evaluation.** Although street lighting is currently along the eastern side of SR 9, with one additional luminaire provided on the southwestern corner of the intersection, 21 percent of the crashes occurred during dark conditions. Additionally, 37 percent of the left-turn crashes occurred during dark conditions. It is recommended to

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conduct a lighting evaluation along SR 9 to study the sufficiency of the provided lighting and the potential need for additional or upgraded street lighting.

- **Innovative Interchange Design.** Because both intersections at the I-285/SR 9 interchange operate together and have higher crash trends, wholistic operational and safety improvements should be considered for the interchange. A concept study should be completed to explore different innovative interchange designs and evaluate their feasibility to address safety and operational concerns.



**APPENDIX A: HAMMOND DRIVE AT PEACHTREE
DUNWOODY ROAD – CRASH DATA TABLE**



Appendix A: Hammond Drive at Peachtree Dunwoody Road - Crash Data Table

No.	Crash No.	Date	Time	Location	Severity	Injuries	Fatalities	Crash Type	Lighting	Surface	Dir. 1	Dir. 2	No. Veh.	Truck	Drugs/Alcohol
1	5136979	1/21/2015	5:45 PM	Hammond Dr at Peachtree Dunwoody Rd	C	1	0	Rear End	Daylight	Dry	East	East	2	Yes	Yes
2	5177815	2/15/2015	2:40 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Sideswipe - Same Direction	Daylight	Dry	East	East	2	Yes	Yes
3	5184186	2/18/2015	1:18 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Sideswipe - Same Direction	Daylight	Dry	South	South	2	Yes	No
4	5188720	2/19/2015	9:08 AM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Sideswipe - Same Direction	Daylight	Dry	West	East	2	Yes	No
5	5192934	2/22/2015	6:09 PM	Hammond Dr at Peachtree Dunwoody Rd	C	1	0	Left Turn	Daylight	Dry	East	West	2	Yes	No
6	5200965	2/27/2015	11:56 AM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Sideswipe - Same Direction	Dark-Lit	Dry	West	West	2	Yes	No
7	5205694	3/4/2015	8:01 AM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Dry	North	North	2	Yes	No
8	5215731	3/13/2015	12:43 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Sideswipe - Same Direction	Dusk	Dry	North	North	2	No	No
9	5215940	3/13/2015	3:41 PM	Hammond Dr at Peachtree Dunwoody Rd	C	1	0	Angle	Daylight	Dry	East	South	3	No	No
10	5280993	3/24/2015	9:43 AM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Sideswipe - Same Direction	Daylight	Dry	South	South	2	No	No
11	5281031	3/26/2015	8:49 AM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
12	5281061	3/27/2015	4:54 PM	Hammond Dr at Peachtree Dunwoody Rd	B	1	0	Rear End	Daylight	Dry	North	North	2	No	No
13	5281151	4/1/2015	5:11 PM	Hammond Dr at Peachtree Dunwoody Rd	C	1	0	Right Turn	Daylight	Dry	North	East	2	No	No
14	5281225	4/9/2015	12:42 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Left Turn	Daylight	Wet	West	East	3	No	No
15	5341576	6/9/2015	1:15 PM	Hammond Dr at Peachtree Dunwoody Rd	B	1	0	Angle	Daylight	Wet	East	North	2	No	No
16	5405634	8/27/2015	1:18 PM	Hammond Dr at Peachtree Dunwoody Rd	C	2	0	Rear End	Daylight	Dry	South	South	2	No	No
17	5429478	9/17/2015	11:25 AM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Sideswipe - Same Direction	Daylight	Dry	East	East	2	No	No
18	5434905	5/22/2015	6:54 AM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Dry	South	South	2	No	No
19	5434919	5/23/2015	5:43 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Sideswipe - Same Direction	Daylight	Dry	South	South	2	No	No
20	5434933	5/26/2015	8:39 AM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Dry	North	North	2	No	No
21	5435073	6/10/2015	4:49 PM	Hammond Dr at Peachtree Dunwoody Rd	C	1	0	Rear End	Daylight	Dry	East	East	2	No	No
22	5435091	6/13/2015	1:47 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Sideswipe - Same Direction	Daylight	Dry	West	West	2	No	No
23	5435092	6/12/2015	5:55 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
24	5435124	6/17/2015	6:46 AM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	U-Turn	Daylight	Dry	South	North	2	No	No
25	5435535	7/7/2015	8:54 AM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Sideswipe - Same Direction	Daylight	Dry	South	South	2	No	No
26	5436012	7/16/2015	8:05 AM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	U-Turn	Daylight	Dry	South	North	2	No	No
27	5436023	7/17/2015	2:34 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
28	5437194	8/9/2015	2:55 PM	Hammond Dr at Peachtree Dunwoody Rd	C	1	0	Rear End	Daylight	Dry	West	West	2	No	No
29	5437466	8/14/2015	9:48 AM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
30	5437939	8/24/2015	3:15 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
31	5438097	8/25/2015	6:21 PM	Hammond Dr at Peachtree Dunwoody Rd	C	1	0	Rear End	Daylight	Dry	West	West	3	No	No
32	5438677	9/8/2015	7:51 AM	Hammond Dr at Peachtree Dunwoody Rd	C	1	0	Rear End	Daylight	Dry	West	West	2	No	No
33	5439103	9/15/2015	6:34 PM	Hammond Dr at Peachtree Dunwoody Rd	C	1	0	Left Turn	Daylight	Dry	North	South	2	No	No
34	5440095	9/23/2015	4:09 AM	Hammond Dr at Peachtree Dunwoody Rd	C	2	0	Left Turn	Daylight	Dry	North	South	2	No	No
35	5440474	9/23/2015	8:03 AM	Hammond Dr at Peachtree Dunwoody Rd	C	2	0	Rear End	Daylight	Dry	East	East	3	No	No
36	5442852	9/19/2015	11:16 AM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Sideswipe - Same Direction	Daylight	Dry	West	West	2	No	No
37	5446269	9/25/2015	7:09 PM	Hammond Dr at Peachtree Dunwoody Rd	C	1	0	Rear End	Daylight	Dry	North	North	2	No	No
38	5457131	10/1/2015	11:36 AM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Right Turn	Daylight	Dry	North	East	2	No	No
39	5462898	10/9/2015	1:02 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Dry	North	North	2	No	No
40	5466153	10/12/2015	7:02 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Sideswipe - Same Direction	Daylight	Dry	South	South	2	No	No
41	5490458	10/29/2015	12:26 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
42	5494723	10/30/2015	7:22 PM	Hammond Dr at Peachtree Dunwoody Rd	C	1	0	Angle	Dark-Lit	Dry	East	North	2	No	No
43	5494724	10/30/2015	3:58 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
44	5496159	11/3/2015	1:42 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Dusk	Wet	South	South	2	No	No
45	5504566	11/8/2015	4:08 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Sideswipe - Same Direction	Daylight	Dry	South	South	2	No	No
46	5504597	11/6/2015	8:20 PM	Hammond Dr at Peachtree Dunwoody Rd	C	1	0	Right Turn	Daylight	Dry	North	East	2	No	No
47	5516845	11/16/2015	9:05 AM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Angle	Daylight	Dry	East	North	2	No	No
48	5522335	11/23/2015	8:17 AM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Dry	South	South	2	No	No

Appendix A: Hammond Drive at Peachtree Dunwoody Road - Crash Data Table

No.	Crash No.	Date	Time	Location	Severity	Injuries	Fatalities	Crash Type	Lighting	Surface	Dir. 1	Dir. 2	No. Veh.	Truck	Drugs/Alcohol
49	5533872	12/2/2015	7:17 AM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Angle	Dark-Lit	Dry	West	South	2	No	No
50	5561405	12/20/2015	12:38 AM	Hammond Dr at Peachtree Dunwoody Rd	C	1	0	Rear End	Daylight	Dry	South	South	2	No	No
51	5562110	12/16/2015	5:07 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Dry	South	South	3	No	No
52	5562111	12/17/2015	11:44 AM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Backed Into	Dark-Lit	Wet	South	South	2	No	No
53	5584137	1/6/2016	7:45 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Wet	South	South	2	No	No
54	5587227	1/5/2016	3:48 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Dry	South	South	2	No	No
55	5597956	1/13/2016	4:18 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
56	5613819	1/28/2016	7:31 AM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Wet	East	East	2	No	No
57	5615302	1/28/2016	6:19 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Wet	West	West	2	No	No
58	5617207	1/28/2016	2:19 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
59	5632701	2/2/2016	4:16 PM	Hammond Dr at Peachtree Dunwoody Rd	C	2	0	Left Turn	Dark-Lit	Dry	North	South	2	No	No
60	5635717	2/3/2016	2:20 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Sideswipe - Same Direction	Daylight	Dry	West	West	2	No	No
61	5643595	2/19/2016	2:24 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Angle	Dark-Lit	Dry	West	North	2	No	No
62	5674431	3/15/2016	9:03 AM	Hammond Dr at Peachtree Dunwoody Rd	C	1	0	Rear End	Daylight	Dry	South	South	2	No	No
63	5678711	3/16/2016	4:44 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Sideswipe - Same Direction	Daylight	Dry	North	North	2	No	No
64	5702601	4/5/2016	12:43 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Sideswipe - Same Direction	Daylight	Dry	South	South	2	No	No
65	5708182	4/10/2016	12:15 AM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Sideswipe - Same Direction	Daylight	Dry	North	North	2	No	No
66	5712718	4/13/2016	7:46 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Left Turn	Daylight	Dry	West	East	2	No	No
67	5714963	4/13/2016	5:16 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Wet	South	South	2	No	No
68	5725359	4/22/2016	6:39 AM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Sideswipe - Same Direction	Daylight	Dry	West	West	2	No	No
69	5740712	5/3/2016	4:18 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Angle	Daylight	Dry	West	North	2	No	No
70	5741148	5/3/2016	6:57 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Sideswipe - Same Direction	Daylight	Dry	West	West	2	No	No
71	5761196	5/18/2016	5:26 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Dry	South	South	2	No	No
72	5761565	5/19/2016	6:53 AM	Hammond Dr at Peachtree Dunwoody Rd	C	1	0	Left Turn	Dark-Lit	Dry	South	North	2	No	No
73	5762744	5/20/2016	6:58 AM	Hammond Dr at Peachtree Dunwoody Rd	C	1	0	Sideswipe - Same Direction	Daylight	Dry	South	South	2	No	No
74	5765216	5/21/2016	9:23 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Left Turn	Dusk	Dry	East	West	2	No	No
75	5772070	5/25/2016	5:18 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Wet	East	East	2	No	No
76	5774934	5/27/2016	5:56 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Left Turn	Daylight	Dry	North	South	2	No	No
77	5776513	5/30/2016	12:09 AM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Dry	South	South	2	No	No
78	5791581	6/12/2016	5:16 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Sideswipe - Same Direction	Daylight	Dry	North	North	2	No	No
79	5849293	7/7/2016	2:07 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Angle	Daylight	Wet	North	West	2	No	No
80	5849378	7/12/2016	4:31 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Left Turn	Daylight	Wet	East	West	2	No	No
81	5849401	7/13/2016	2:34 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Dark-Lit	Dry	East	East	2	No	No
82	5856270	7/29/2016	6:46 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Dry	South	South	2	No	No
83	5863528	8/1/2016	11:33 AM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Dry	North	North	2	No	No
84	5868661	8/8/2016	10:24 AM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Angle	Dark-Lit	Dry	West	South	2	No	No
85	5874452	8/12/2016	12:18 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
86	5896457	8/29/2016	1:33 PM	Hammond Dr at Peachtree Dunwoody Rd	C	1	0	Left Turn	Daylight	Dry	East	West	2	No	No
87	5905886	9/5/2016	10:05 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Sideswipe - Same Direction	Daylight	Dry	West	West	2	No	No
88	5911683	9/9/2016	2:46 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
89	5918640	9/14/2016	11:23 AM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Dry	South	South	2	No	No
90	5918895	9/12/2016	6:15 PM	Hammond Dr at Peachtree Dunwoody Rd	B	2	0	Angle	Daylight	Dry	West	South	2	No	No
91	5943238	9/19/2016	6:59 AM	Hammond Dr at Peachtree Dunwoody Rd	C	1	0	Rear End	Daylight	Dry	North	North	3	No	No
92	5943298	9/16/2016	12:47 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Angle	Daylight	Dry	East	South	2	No	No
93	5943352	9/19/2016	2:23 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
94	5943362	9/19/2016	5:45 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Sideswipe - Same Direction	Dark-Lit	Dry	West	West	2	No	No
95	5943387	9/19/2016	12:11 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Sideswipe - Same Direction	Daylight	Dry	North	North	2	No	No
96	5984139	11/2/2016	2:01 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Wet	South	South	2	No	No

Appendix A: Hammond Drive at Peachtree Dunwoody Road - Crash Data Table

No.	Crash No.	Date	Time	Location	Severity	Injuries	Fatalities	Crash Type	Lighting	Surface	Dir. 1	Dir. 2	No. Veh.	Truck	Drugs/Alcohol
97	5987635	11/4/2016	4:06 PM	Hammond Dr at Peachtree Dunwoody Rd	C	1	0	U-Turn	Daylight	Dry	East	East	2	No	No
98	5990232	11/5/2016	6:41 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
99	6012223	11/23/2016	10:00 AM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Backed Into	Daylight	Dry	East	West	2	No	No
100	6018514	11/29/2016	9:29 AM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Dark-Lit	Dry	South	South	2	No	No
101	6038419	12/12/2016	9:04 AM	Hammond Dr at Peachtree Dunwoody Rd	C	1	0	Rear End	Daylight	Dry	North	North	2	No	No
102	6038813	12/12/2016	7:13 AM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Angle	Daylight	Dry	North	West	2	No	No
103	6046957	12/19/2016	2:04 PM	Hammond Dr at Peachtree Dunwoody Rd	B	1	0	Rear End	Daylight	Dry	North	North	2	No	No
104	6066533	1/3/2017	4:45 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Sideswipe - Same Direction	Daylight	Dry	North	North	2	No	No
105	6094932	1/17/2017	7:25 AM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Dry	North	North	2	No	No
106	6095016	1/20/2017	7:13 AM	Hammond Dr at Peachtree Dunwoody Rd	C	1	0	Rear End	Daylight	Dry	East	East	2	No	No
107	6095052	1/23/2017	7:37 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Sideswipe - Same Direction	Daylight	Wet	South	South	2	No	No
108	6095857	1/27/2017	12:24 PM	Hammond Dr at Peachtree Dunwoody Rd	B	2	0	Left Turn	Daylight	Wet	East	West	2	No	No
109	6099829	1/31/2017	1:03 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Dark-Lit	Dry	South	South	2	No	No
110	6111620	2/9/2017	10:51 AM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Right Turn	Daylight	Dry	East	South	2	No	No
111	6117857	2/14/2017	12:42 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Dusk	Dry	South	South	2	No	No
112	6119571	2/14/2017	11:03 AM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	U-Turn	Dark-Unlit	Dry	North	North	2	No	No
113	6119953	2/15/2017	12:25 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Sideswipe - Same Direction	Daylight	Dry	East	East	3	No	No
114	6121729	2/17/2017	10:09 AM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Dark-Lit	Dry	North	North	2	No	No
115	6125557	2/20/2017	6:06 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
116	6150578	3/14/2017	12:35 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Right Turn	Daylight	Dry	East	South	2	No	No
117	6154554	3/17/2017	1:26 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Dry	West	West	3	No	No
118	6167628	3/25/2017	5:41 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Sideswipe - Same Direction	Daylight	Dry	East	East	2	No	No
119	6173291	3/31/2017	12:11 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Angle	Daylight	Dry	East	South	2	No	No
120	6173310	3/31/2017	3:06 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Sideswipe - Same Direction	Daylight	Dry	North	North	2	No	No
121	6183777	4/7/2017	2:24 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Backed Into	Daylight	Dry	North	North	2	No	No
122	6193626	4/14/2017	11:19 AM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Dry	North	North	2	No	No
123	6194132	4/13/2017	4:27 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
124	6201209	4/20/2017	1:07 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Left Turn	Daylight	Dry	East	West	2	No	No
125	6209403	4/26/2017	8:14 AM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
126	6214588	4/28/2017	2:55 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Sideswipe - Same Direction	Daylight	Dry	West	West	2	No	No
127	6219030	5/3/2017	5:13 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Sideswipe - Same Direction	Daylight	Dry	North	North	2	No	No
128	6244243	5/19/2017	2:51 PM	Hammond Dr at Peachtree Dunwoody Rd	C	1	0	Angle	Daylight	Dry	East	North	2	No	No
129	6265902	6/7/2017	11:57 AM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Angle	Daylight	Dry	South	West	2	No	No
130	6271663	6/9/2017	8:08 PM	Hammond Dr at Peachtree Dunwoody Rd	C	1	0	Rear End	Daylight	Dry	South	South	3	No	No
131	6282688	6/21/2017	12:23 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Dry	South	South	2	No	No
132	6290795	6/27/2017	9:17 AM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Dry	South	South	2	No	No
133	6291156	6/28/2017	1:20 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
134	6307268	7/11/2017	12:05 PM	Hammond Dr at Peachtree Dunwoody Rd	C	1	0	Sideswipe - Same Direction	Daylight	Dry	West	West	2	No	No
135	6309695	7/13/2017	6:35 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
136	6322615	7/22/2017	5:53 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
137	6322624	7/21/2017	4:28 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Sideswipe - Same Direction	Daylight	Dry	North	North	2	No	No
138	6326171	7/25/2017	5:29 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Dry	North	North	2	No	No
139	6333157	7/28/2017	7:11 AM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Sideswipe - Same Direction	Daylight	Dry	West	West	2	No	No
140	6344032	8/7/2017	11:56 AM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Right Turn	Daylight	Dry	East	South	2	No	No
141	6344693	8/4/2017	6:26 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Sideswipe - Same Direction	Daylight	Dry	West	West	2	No	No
142	6358835	8/17/2017	4:44 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Sideswipe - Same Direction	Daylight	Dry	West	West	2	No	No
143	6360981	8/19/2017	5:13 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Sideswipe - Same Direction	Daylight	Dry	West	West	2	No	No
144	6362073	8/21/2017	8:11 AM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Dry	South	South	2	No	No

Appendix A: Hammond Drive at Peachtree Dunwoody Road - Crash Data Table

No.	Crash No.	Date	Time	Location	Severity	Injuries	Fatalities	Crash Type	Lighting	Surface	Dir. 1	Dir. 2	No. Veh.	Truck	Drugs/Alcohol
145	6364754	8/23/2017	11:20 AM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
146	6383016	9/5/2017	5:48 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Sideswipe - Same Direction	Daylight	Dry	South	South	2	No	No
147	6383822	9/7/2017	9:50 AM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Sideswipe - Same Direction	Daylight	Dry	South	South	2	No	No
148	6399967	9/20/2017	6:22 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
149	6407858	9/27/2017	9:55 AM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Angle	Daylight	Dry	South	West	2	No	No
150	6409557	9/27/2017	4:29 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Dry	South	South	2	No	No
151	6413705	9/30/2017	7:02 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Dry	North	North	2	No	No
152	6444786	10/25/2017	2:31 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
153	6444941	10/24/2017	5:19 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Dry	North	North	2	No	No
154	6445288	10/25/2017	4:23 PM	Hammond Dr at Peachtree Dunwoody Rd	C	2	0	Left Turn	Daylight	Dry	South	North	2	No	No
155	6446214	10/25/2017	8:58 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Right Turn	Daylight	Dry	North	East	2	No	No
156	6457759	11/3/2017	1:01 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
157	6462898	11/7/2017	12:58 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Sideswipe - Same Direction	Daylight	Dry	West	West	2	No	No
158	6472832	11/14/2017	10:02 AM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
159	6494487	11/29/2017	5:08 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Sideswipe - Same Direction	Daylight	Dry	East	East	2	No	No
160	6499433	12/1/2017	5:39 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Left Turn	Dark-Lit	Dry	West	East	2	No	No
161	6523678	12/12/2017	3:40 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Sideswipe - Same Direction	Daylight	Dry	West	West	2	No	No
162	6523815	12/19/2017	6:28 AM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Sideswipe - Same Direction	Daylight	Dry	West	West	2	No	No
163	6531409	12/28/2017	7:39 AM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
164	6544435	1/9/2018	8:03 AM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Dry	South	South	2	No	No
165	6548080	1/11/2018	1:17 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
166	6548464	1/10/2018	4:06 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Dusk	Dry	West	West	2	No	No
167	6557192	1/16/2018	8:00 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Sideswipe - Same Direction	Daylight	Dry	North	North	2	No	No
168	6557430	1/16/2018	11:04 AM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Left Turn	Dark-Lit	Dry	North	South	2	No	No
169	6562266	1/16/2018	7:46 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Left Turn	Daylight	Dry	North	South	2	No	No
170	6562292	1/19/2018	6:17 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Sideswipe - Same Direction	Daylight	Wet	South	South	2	No	No
171	6601237	2/15/2018	11:46 AM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Sideswipe - Same Direction	Daylight	Dry	South	South	2	No	No
172	6611720	2/23/2018	12:26 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Wet	South	South	2	No	No
173	6621338	3/3/2018	1:02 PM	Hammond Dr at Peachtree Dunwoody Rd	C	1	0	Left Turn	Daylight	Dry	East	West	2	No	No
174	6621355	3/3/2018	1:50 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Angle	Dark-Lit	Snow	North	West	2	No	No
175	6660057	4/3/2018	4:30 PM	Hammond Dr at Peachtree Dunwoody Rd	C	1	0	Rear End	Dark-Lit	Wet	South	South	2	No	No
176	6671952	4/10/2018	6:05 AM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Left Turn	Dusk	Dry	East	West	2	No	No
177	6689831	4/30/2018	1:42 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Sideswipe - Same Direction	Daylight	Dry	North	North	2	No	No
178	6690261	4/25/2018	7:04 AM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Left Turn	Daylight	Dry	North	South	3	No	No
179	6690263	4/27/2018	11:38 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Dry	North	North	2	No	No
180	6690271	4/28/2018	10:57 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Sideswipe - Same Direction	Daylight	Dry	West	West	2	No	No
181	6694845	5/3/2018	2:44 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Right Turn	Daylight	Dry	South	West	2	No	No
182	6698833	5/4/2018	4:40 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Left Turn	Dark-Lit	Dry	East	West	2	No	No
183	6704859	5/9/2018	6:20 PM	Hammond Dr at Peachtree Dunwoody Rd	C	1	0	Left Turn	Daylight	Dry	East	West	2	No	No
184	6712415	5/16/2018	12:15 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Dark-Lit	Dry	West	West	2	No	No
185	6714507	5/16/2018	8:13 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	U-Turn	Dark-Lit	Dry	East	East	2	No	No
186	6746521	6/12/2018	5:40 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
187	6748375	6/15/2018	1:12 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Dry	South	South	2	No	No
188	6764154	6/20/2018	9:16 AM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
189	6774015	6/27/2018	5:15 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Dry	South	South	2	No	No
190	6777857	7/2/2018	4:10 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Wet	East	East	3	No	No
191	6790863	7/11/2018	8:25 AM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Dry	South	South	2	No	No
192	6807334	7/26/2018	5:24 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No

Appendix A: Hammond Drive at Peachtree Dunwoody Road - Crash Data Table

No.	Crash No.	Date	Time	Location	Severity	Injuries	Fatalities	Crash Type	Lighting	Surface	Dir. 1	Dir. 2	No. Veh.	Truck	Drugs/Alcohol
193	6813816	8/1/2018	12:12 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
194	6833816	8/14/2018	12:06 PM	Hammond Dr at Peachtree Dunwoody Rd	C	1	0	Rear End	Daylight	Dry	South	South	2	No	No
195	6846263	8/24/2018	4:15 PM	Hammond Dr at Peachtree Dunwoody Rd	C	1	0	Rear End	Daylight	Dry	North	North	2	No	No
196	6851589	8/28/2018	3:30 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Dry	South	South	2	No	No
197	6868098	9/7/2018	2:30 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Sideswipe - Same Direction	Daylight	Dry	West	West	3	No	No
198	6883377	9/20/2018	5:58 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Wet	West	West	3	No	No
199	6909209	10/9/2018	5:03 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Sideswipe - Same Direction	Daylight	Dry	North	North	2	No	No
200	6921252	10/19/2018	3:21 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
201	6925367	10/19/2018	4:32 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Sideswipe - Same Direction	Daylight	Dry	North	North	2	No	No
202	6944919	10/30/2018	1:57 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Dry	North	North	2	No	No
203	6946096	10/31/2018	4:42 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Sideswipe - Same Direction	Daylight	Dry	West	West	2	No	No
204	6952805	11/8/2018	7:35 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Sideswipe - Same Direction	Daylight	Dry	West	West	2	No	No
205	6966399	11/13/2018	10:01 AM	Hammond Dr at Peachtree Dunwoody Rd	B	2	0	Angle	Daylight	Dry	South	East	2	No	No
206	6968298	11/12/2018	12:06 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Dry	North	North	2	No	No
207	6968300	11/16/2018	11:07 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
208	6971961	11/20/2018	3:37 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Angle	Daylight	Dry	South	East	2	No	No
209	6971962	11/20/2018	4:18 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Left Turn	Dusk	Wet	East	West	2	No	No
210	6975715	11/26/2018	8:00 AM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Wet	West	West	2	No	No
211	6981458	11/28/2018	5:26 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Sideswipe - Same Direction	Daylight	Wet	West	West	2	No	No
212	7001236	12/12/2018	6:48 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Dark-Lit	Dry	North	North	2	No	No
213	7001246	12/12/2018	6:06 PM	Hammond Dr at Peachtree Dunwoody Rd	C	1	0	Sideswipe - Same Direction	Daylight	Dry	West	West	2	No	No
214	7009635	12/15/2018	11:07 AM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Sideswipe - Same Direction	Daylight	Dry	West	West	2	No	No
215	7022213	12/29/2018	4:45 AM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
216	7022749	12/28/2018	12:12 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Sideswipe - Same Direction	Dark-Lit	Dry	East	East	2	No	No
217	7027020	1/3/2019	4:58 AM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Sideswipe - Same Direction	Dusk	Dry	South	South	2	No	No
218	7029108	1/3/2019	7:54 AM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Dark-Lit	Dry	West	West	2	No	No
219	7033841	1/3/2019	8:41 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Sideswipe - Same Direction	Daylight	Dry	West	West	2	No	No
220	7056580	1/23/2019	2:44 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Sideswipe - Same Direction	Daylight	Wet	East	East	2	No	No
221	7062833	1/25/2019	6:37 AM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Dark-Lit	Wet	South	South	2	No	No
222	7065154	1/26/2019	2:35 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Left Turn	Dark-Unlit	Wet	East	West	2	No	No
223	7068427	1/31/2019	9:01 AM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Sideswipe - Same Direction	Daylight	Wet	East	East	2	No	No
224	7082231	2/12/2019	7:00 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Dark-Lit	Wet	East	East	2	No	No
225	7113008	3/6/2019	2:14 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
226	7138866	3/22/2019	3:00 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Angle	Dawn	Dry	West	South	2	No	No
227	7140331	3/25/2019	12:11 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Sideswipe - Same Direction	Daylight	Dry	East	East	2	No	No
228	7148119	3/29/2019	1:45 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Sideswipe - Same Direction	Daylight	Dry	East	East	2	No	No
229	7148121	3/29/2019	2:04 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Left Turn	Dark-Lit	Wet	East	West	2	No	No
230	7148122	3/29/2019	12:58 PM	Hammond Dr at Peachtree Dunwoody Rd	C	1	0	Sideswipe - Same Direction	Daylight	Dry	North	North	2	No	No
231	7156572	4/5/2019	4:05 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Dry	North	North	2	No	No
232	7176434	4/23/2019	6:05 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
233	7190485	5/1/2019	12:21 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Sideswipe - Same Direction	Daylight	Dry	South	South	2	No	No
234	7207950	5/14/2019	6:16 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Dry	South	South	2	No	No
235	7209294	5/16/2019	10:42 AM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Right Turn	Daylight	Dry	West	East	2	No	No
236	7209572	5/15/2019	12:42 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Sideswipe - Same Direction	Daylight	Dry	South	South	2	No	No
237	7224384	5/23/2019	6:20 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Sideswipe - Same Direction	Daylight	Dry	North	North	2	No	No
238	7227988	5/29/2019	11:21 AM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
239	7242346	6/9/2019	2:55 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
240	7247299	6/14/2019	9:43 AM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Sideswipe - Same Direction	Daylight	Dry	North	North	2	No	No

Appendix A: Hammond Drive at Peachtree Dunwoody Road - Crash Data Table

No.	Crash No.	Date	Time	Location	Severity	Injuries	Fatalities	Crash Type	Lighting	Surface	Dir. 1	Dir. 2	No. Veh.	Truck	Drugs/Alcohol
241	7247993	6/13/2019	6:55 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Sideswipe - Same Direction	Daylight	Dry	North	North	2	No	No
242	7254030	6/18/2019	4:35 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	U-Turn	Daylight	Dry	West	East	2	No	No
243	7260090	6/20/2019	2:43 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Sideswipe - Same Direction	Daylight	Dry	West	West	2	No	No
244	7262310	6/20/2019	1:10 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
245	7277184	7/8/2019	5:46 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Dry	South	South	2	No	No
246	7289174	7/14/2019	11:37 PM	Hammond Dr at Peachtree Dunwoody Rd	C	1	0	Left Turn	Daylight	Dry	South	North	2	No	No
247	7294971	7/21/2019	3:12 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Sideswipe - Same Direction	Daylight	Dry	West	West	2	No	No
248	7305273	8/1/2019	9:52 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Dry	South	South	2	No	No
249	7305297	8/1/2019	9:57 PM	Hammond Dr at Peachtree Dunwoody Rd	A	1	0	Sideswipe - Same Direction	Daylight	Dry	West	West	2	No	No
250	7317037	8/12/2019	12:00 AM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Dry	North	North	2	No	No
251	7317412	8/11/2019	2:07 PM	Hammond Dr at Peachtree Dunwoody Rd	C	1	0	Rear End	Dark-Lit	Water (s	West	West	2	No	No
252	7320689	8/13/2019	8:26 AM	Hammond Dr at Peachtree Dunwoody Rd	C	1	0	Rear End	Dark-Lit	Wet	East	East	3	No	No
253	7345283	9/4/2019	4:33 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Angle	Daylight	Dry	North	West	2	No	No
254	7368051	9/23/2019	12:35 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Angle	Daylight	Dry	West	North	2	No	No
255	7368327	9/24/2019	8:53 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Left Turn	Daylight	Dry	South	North	2	No	No
256	7370516	9/25/2019	4:08 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Dark-Lit	Dry	North	North	2	No	No
257	7374044	9/30/2019	9:34 AM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Sideswipe - Same Direction	Daylight	Dry	West	West	2	No	No
258	7374559	9/28/2019	12:30 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Dry	South	South	2	No	No
259	7392198	10/8/2019	1:58 PM	Hammond Dr at Peachtree Dunwoody Rd	C	2	0	Rear End	Daylight	Dry	West	West	3	No	No
260	7394597	10/17/2019	6:16 AM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Dry	South	South	2	No	No
261	7401357	10/22/2019	3:06 PM	Hammond Dr at Peachtree Dunwoody Rd	C	2	0	Angle	Dawn	Dry	South	East	3	No	No
262	7404075	10/23/2019	4:57 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Angle	Daylight	Dry	East	South	2	No	No
263	7425518	11/6/2019	4:17 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Sideswipe - Same Direction	Daylight	Dry	North	North	2	No	No
264	7429784	11/8/2019	5:54 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Sideswipe - Same Direction	Daylight	Dry	West	West	2	No	No
265	7434991	11/13/2019	11:34 AM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Dark-Lit	Dry	East	East	2	No	No
266	7444972	11/20/2019	3:50 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Dry	South	South	2	No	No
267	7449445	11/22/2019	8:17 AM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
268	7455041	11/26/2019	8:02 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Sideswipe - Same Direction	Dark-Lit	Dry	North	North	2	No	No
269	7464208	12/5/2019	6:00 AM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Sideswipe - Same Direction	Dark-Lit	Dry	South	South	2	No	No
270	7471370	12/5/2019	5:00 PM	Hammond Dr at Peachtree Dunwoody Rd	O	0	0	Sideswipe - Same Direction	Daylight	Dry	East	East	2	No	No

**APPENDIX B: SR 9 AT LAKE PLACID DRIVE –
CRASH DATA TABLE**

Appendix B: SR 9 at Lake Placid Drive - Crash Data Table

No.	Crash No.	Date	Time	Location	Severity	Injuries	Fatalities	Crash Type	Lighting	Surface	Dir. 1	Dir. 2	No. Veh.	Truck	Drugs/Alcohol
1	5130728	1/15/2015	8:29 PM	SR 9 at Lake Placid Dr	C	1	0	Right Turn	Dark-Lit	Dry	South	West	2	No	No
2	5151637	1/28/2015	7:30 PM	SR 9 at Lake Placid Dr	C	1	0	Rear End	Dusk	Dry	East	East	2	No	No
3	5166202	2/3/2015	2:32 PM	SR 9 at Lake Placid Dr	O	0	0	Backed Into	Daylight	Dry	South	North	2	No	No
4	5166218	2/2/2015	3:45 PM	SR 9 at Lake Placid Dr	O	0	0	Sideswipe - Opposite Direction	Daylight	Dry	North	South	2	No	No
5	5186459	2/20/2015	12:34 PM	SR 9 at Lake Placid Dr	O	0	0	Angle	Daylight	Dry	East	South	2	No	No
6	5198414	2/26/2015	4:26 PM	SR 9 at Lake Placid Dr	O	0	0	Left Turn	Daylight	Dry	North	South	2	No	No
7	5280996	3/24/2015	10:46 PM	SR 9 at Lake Placid Dr	O	0	0	Left Turn	Dark-Lit	Dry	South	North	2	No	No
8	5281226	4/9/2015	3:20 PM	SR 9 at Lake Placid Dr	O	0	0	Right Turn	Daylight	Dry	West	North	2	No	No
9	5281518	4/28/2015	10:21 AM	SR 9 at Lake Placid Dr	O	0	0	Left Turn	Daylight	Dry	North	South	2	No	No
10	5341348	5/13/2015	9:39 AM	SR 9 at Lake Placid Dr	O	0	0	Angle	Daylight	Dry	East	South	2	No	No
11	5341609	6/12/2015	1:37 PM	SR 9 at Lake Placid Dr	O	0	0	Rear End	Daylight	Dry	North	North	2	No	No
12	5341933	6/29/2015	5:00 PM	SR 9 at Lake Placid Dr	O	0	0	Sideswipe - Same Direction	Daylight	Dry	North	North	2	No	No
13	5434812	5/11/2015	10:33 PM	SR 9 at Lake Placid Dr	O	0	0	Right Turn	Daylight	Dry	West	North	2	No	No
14	5434989	6/2/2015	5:47 AM	SR 9 at Lake Placid Dr	B	1	0	Pedestrian	Dusk	Dry	East	N/A	1	No	No
15	5435019	5/27/2015	7:18 PM	SR 9 at Lake Placid Dr	C	2	0	Rear End	Daylight	Dry	North	North	3	No	No
16	5435305	7/1/2015	6:00 PM	SR 9 at Lake Placid Dr	O	0	0	Rear End	Daylight	Wet	North	North	3	No	No
17	5436015	7/15/2015	12:38 PM	SR 9 at Lake Placid Dr	O	0	0	Rear End	Daylight	Dry	South	South	3	Yes	No
18	5446565	9/25/2015	7:08 PM	SR 9 at Lake Placid Dr	C	1	0	Angle	Daylight	Wet	West	North	2	No	No
19	5446586	9/25/2015	4:59 PM	SR 9 at Lake Placid Dr	O	0	0	Angle	Daylight	Wet	West	North	2	No	No
20	5458455	10/5/2015	3:39 PM	SR 9 at Lake Placid Dr	O	0	0	Left Turn	Daylight	Dry	South	North	2	No	No
21	5474495	10/18/2015	3:34 PM	SR 9 at Lake Placid Dr	O	0	0	Angle	Daylight	Dry	East	South	2	No	No
22	5500099	11/5/2015	9:38 PM	SR 9 at Lake Placid Dr	O	0	0	Rear End	Dark-Unlit	Wet	North	North	2	No	No
23	5508776	11/13/2015	4:15 AM	SR 9 at Lake Placid Dr	O	0	0	Sideswipe - Same Direction	Dark-Lit	Dry	South	South	2	No	No
24	5510473	10/7/2015	4:35 PM	SR 9 at Lake Placid Dr	O	0	0	Sideswipe - Same Direction	Daylight	Dry	North	North	2	No	No
25	5531034	11/25/2015	1:34 PM	SR 9 at Lake Placid Dr	C	2	0	Rear End	Daylight	Dry	South	South	2	No	No
26	5531054	11/26/2015	7:37 PM	SR 9 at Lake Placid Dr	O	0	0	Sideswipe - Same Direction	Dark-Lit	Dry	South	South	2	No	No
27	5531221	11/30/2015	7:09 PM	SR 9 at Lake Placid Dr	O	0	0	Sideswipe - Same Direction	Dark-Lit	Dry	North	North	2	No	No
28	5561876	12/7/2015	4:16 PM	SR 9 at Lake Placid Dr	B	1	0	Pedestrian	Daylight	Dry	West	N/A	1	No	No
29	5561995	12/12/2015	1:30 PM	SR 9 at Lake Placid Dr	O	0	0	Sideswipe - Same Direction	Daylight	Dry	South	South	2	Yes	No
30	5562163	12/17/2015	5:17 PM	SR 9 at Lake Placid Dr	O	0	0	Angle	Daylight	Dry	West	North	2	No	No
31	5563146	12/22/2015	8:49 AM	SR 9 at Lake Placid Dr	O	0	0	Rear End	Daylight	Wet	North	North	2	No	No
32	5592505	1/8/2016	7:52 PM	SR 9 at Lake Placid Dr	O	0	0	Rear End	Dark-Unlit	Wet	North	North	2	No	No
33	5616971	1/29/2016	3:19 PM	SR 9 at Lake Placid Dr	O	0	0	Rear End	Daylight	Dry	North	North	2	No	No
34	5636793	2/14/2016	1:12 PM	SR 9 at Lake Placid Dr	O	0	0	Left Turn	Daylight	Dry	South	North	2	No	No
35	5645783	2/21/2016	2:45 PM	SR 9 at Lake Placid Dr	O	0	0	Sideswipe - Same Direction	Daylight	Dry	North	North	2	No	No
36	5651243	2/25/2016	8:23 PM	SR 9 at Lake Placid Dr	C	2	0	Rear End	Dark-Lit	Dry	East	East	2	No	No
37	5664624	3/7/2016	3:29 PM	SR 9 at Lake Placid Dr	C	1	0	Rear End	Daylight	Dry	North	North	2	No	No
38	5698535	3/29/2016	4:51 PM	SR 9 at Lake Placid Dr	O	0	0	Rear End	Daylight	Dry	North	North	2	No	No
39	5699828	4/3/2016	12:28 AM	SR 9 at Lake Placid Dr	C	1	0	Head On	Dark-Lit	Dry	North	South	4	No	Yes
40	5716113	4/17/2016	12:27 AM	SR 9 at Lake Placid Dr	O	0	0	Sideswipe - Same Direction	Dark-Lit	Dry	South	South	2	No	No
41	5737460	5/1/2016	10:51 AM	SR 9 at Lake Placid Dr	O	0	0	Left Turn	Daylight	Dry	West	East	2	No	No
42	5744389	5/5/2016	4:45 PM	SR 9 at Lake Placid Dr	C	1	0	Rear End	Daylight	Dry	North	North	2	No	No
43	5759664	5/15/2016	5:37 PM	SR 9 at Lake Placid Dr	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
44	5759691	5/16/2016	5:30 PM	SR 9 at Lake Placid Dr	O	0	0	Rear End	Daylight	Dry	South	South	2	No	No
45	5764995	5/21/2016	3:21 PM	SR 9 at Lake Placid Dr	O	0	0	Sideswipe - Same Direction	Daylight	Dry	North	North	2	No	No

Appendix B: SR 9 at Lake Placid Drive - Crash Data Table

No.	Crash No.	Date	Time	Location	Severity	Injuries	Fatalities	Crash Type	Lighting	Surface	Dir. 1	Dir. 2	No. Veh.	Truck	Drugs/Alcohol
46	5769877	5/24/2016	1:18 PM	SR 9 at Lake Placid Dr	O	0	0	Angle	Daylight	Dry	North	West	2	Yes	No
47	5786443	6/7/2016	4:30 AM	SR 9 at Lake Placid Dr	O	0	0	Rear End	Dark-Lit	Dry	North	North	2	No	No
48	5790225	6/10/2016	2:12 PM	SR 9 at Lake Placid Dr	O	0	0	Rear End	Daylight	Dry	Unknown	North	2	No	No
49	5798236	6/17/2016	8:16 AM	SR 9 at Lake Placid Dr	C	1	0	Angle	Daylight	Dry	West	North	2	No	No
50	5862563	8/2/2016	5:55 PM	SR 9 at Lake Placid Dr	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
51	5863737	8/4/2016	7:48 PM	SR 9 at Lake Placid Dr	O	0	0	Sideswipe - Same Direction	Daylight	Dry	East	East	2	No	No
52	5886042	8/20/2016	1:45 PM	SR 9 at Lake Placid Dr	O	0	0	Right Turn	Daylight	Dry	East	South	2	No	No
53	5904879	9/3/2016	8:03 PM	SR 9 at Lake Placid Dr	O	0	0	Rear End	Dusk	Dry	North	North	2	No	No
54	5943376	9/20/2016	11:13 AM	SR 9 at Lake Placid Dr	O	0	0	Head On	Daylight	Dry	West	East	2	No	No
55	5943438	9/22/2016	5:20 PM	SR 9 at Lake Placid Dr	O	0	0	Angle	Daylight	Dry	West	North	2	No	No
56	5943561	9/28/2016	8:24 AM	SR 9 at Lake Placid Dr	O	0	0	Rear End	Daylight	Dry	South	South	2	No	No
57	5943621	9/30/2016	6:44 AM	SR 9 at Lake Placid Dr	C	1	0	Pedestrian	Dark-Lit	Dry	North	N/A	1	No	No
58	5943644	10/2/2016	9:55 AM	SR 9 at Lake Placid Dr	O	0	0	Angle	Daylight	Dry	West	North	2	No	No
59	5977368	10/28/2016	8:32 PM	SR 9 at Lake Placid Dr	O	0	0	Rear End	Dark-Lit	Dry	North	North	2	No	No
60	5983976	11/2/2016	11:41 AM	SR 9 at Lake Placid Dr	O	0	0	Backed Into	Daylight	Dry	West	West	2	No	No
61	5991408	11/8/2016	5:52 AM	SR 9 at Lake Placid Dr	O	0	0	Rear End	Dark-Lit	Dry	East	East	2	No	No
62	5993151	11/8/2016	8:57 PM	SR 9 at Lake Placid Dr	C	1	0	U-Turn	Dark-Lit	Dry	South	North	2	No	No
63	6006937	11/20/2016	3:07 PM	SR 9 at Lake Placid Dr	O	0	0	Rear End	Daylight	Dry	North	North	2	No	No
64	6013317	11/26/2016	2:29 AM	SR 9 at Lake Placid Dr	O	0	0	Rear End	Dark-Lit	Dry	North	North	2	No	No
65	6023286	12/2/2016	6:15 PM	SR 9 at Lake Placid Dr	O	0	0	Sideswipe - Same Direction	Dark-Lit	Dry	North	North	2	No	No
66	6023606	12/3/2016	12:28 PM	SR 9 at Lake Placid Dr	O	0	0	Sideswipe - Same Direction	Daylight	Dry	South	South	2	No	No
67	6033631	12/7/2016	7:52 PM	SR 9 at Lake Placid Dr	O	0	0	Sideswipe - Same Direction	Dawn	Dry	South	South	2	No	No
68	6043315	12/16/2016	12:12 PM	SR 9 at Lake Placid Dr	O	0	0	Sideswipe - Same Direction	Daylight	Dry	North	North	2	No	No
69	6048536	12/19/2016	1:26 PM	SR 9 at Lake Placid Dr	O	0	0	Angle	Daylight	Dry	East	South	2	No	No
70	6054216	12/25/2016	11:05 PM	SR 9 at Lake Placid Dr	O	0	0	Rear End	Dark-Lit	Dry	South	South	2	No	No
71	6063104	1/2/2017	12:05 AM	SR 9 at Lake Placid Dr	O	0	0	Left Turn	Dark-Lit	Wet	East	West	2	No	No
72	6099827	1/31/2017	10:44 AM	SR 9 at Lake Placid Dr	O	0	0	Rear End	Daylight	Dry	North	North	2	No	No
73	6107981	2/4/2017	12:41 PM	SR 9 at Lake Placid Dr	O	0	0	Rear End	Daylight	Dry	North	North	2	No	No
74	6125734	2/18/2017	1:49 PM	SR 9 at Lake Placid Dr	O	0	0	Angle	Daylight	Dry	East	South	2	No	No
75	6127821	2/23/2017	12:40 PM	SR 9 at Lake Placid Dr	O	0	0	Sideswipe - Same Direction	Daylight	Dry	South	South	2	Yes	No
76	6129384	2/23/2017	3:50 PM	SR 9 at Lake Placid Dr	O	0	0	Right Turn	Daylight	Dry	West	East	2	No	No
77	6145187	3/8/2017	5:39 PM	SR 9 at Lake Placid Dr	O	0	0	Sideswipe - Same Direction	Daylight	Dry	South	South	2	No	No
78	6167613	3/26/2017	1:01 AM	SR 9 at Lake Placid Dr	O	0	0	Left Turn	Dark-Lit	Wet	North	South	2	No	No
79	6183784	4/7/2017	9:51 AM	SR 9 at Lake Placid Dr	O	0	0	Rear End	Daylight	Dry	South	South	2	No	No
80	6224077	5/6/2017	9:05 PM	SR 9 at Lake Placid Dr	C	1	0	Rear End	Dark-Lit	Dry	South	South	2	No	No
81	6234787	5/12/2017	11:08 AM	SR 9 at Lake Placid Dr	O	0	0	Sideswipe - Same Direction	Daylight	Dry	South	South	2	No	No
82	6254242	5/30/2017	11:04 AM	SR 9 at Lake Placid Dr	C	1	0	Pedestrian	Daylight	Wet	East	N/A	1	No	No
83	6259207	5/30/2017	7:14 PM	SR 9 at Lake Placid Dr	A	2	0	Right Turn	Daylight	Dry	West	North	3	No	Yes
84	6260153	6/2/2017	11:41 AM	SR 9 at Lake Placid Dr	O	0	0	Rear End	Daylight	Dry	North	North	2	No	No
85	6266198	6/6/2017	1:17 PM	SR 9 at Lake Placid Dr	O	0	0	Sideswipe - Same Direction	Daylight	Dry	North	North	2	Yes	No
86	6275675	6/15/2017	6:35 PM	SR 9 at Lake Placid Dr	O	0	0	Angle	Daylight	Wet	West	North	2	No	No
87	6301869	7/5/2017	5:16 PM	SR 9 at Lake Placid Dr	O	0	0	Angle	Daylight	Dry	South	East	2	No	No
88	6308019	7/13/2017	3:09 PM	SR 9 at Lake Placid Dr	O	0	0	Rear End	Daylight	Dry	North	North	2	No	No
89	6316719	7/19/2017	8:59 PM	SR 9 at Lake Placid Dr	C	3	0	Rear End	Dark-Lit	Dry	North	North	3	No	No
90	6327843	7/26/2017	3:01 PM	SR 9 at Lake Placid Dr	O	0	0	Rear End	Daylight	Dry	South	South	2	No	No

Appendix B: SR 9 at Lake Placid Drive - Crash Data Table

No.	Crash No.	Date	Time	Location	Severity	Injuries	Fatalities	Crash Type	Lighting	Surface	Dir. 1	Dir. 2	No. Veh.	Truck	Drugs/Alcohol
91	6339013	8/3/2017	10:16 AM	SR 9 at Lake Placid Dr	C	1	0	Angle	Daylight	Dry	East	South	2	No	No
92	6340055	8/2/2017	11:23 PM	SR 9 at Lake Placid Dr	O	0	0	Rear End	Dark-Unlit	Dry	North	North	2	No	No
93	6344059	8/7/2017	7:59 AM	SR 9 at Lake Placid Dr	O	0	0	Sideswipe - Same Direction	Daylight	Dry	North	North	2	No	No
94	6363759	8/18/2017	8:45 PM	SR 9 at Lake Placid Dr	O	0	0	Angle	Dark-Lit	Dry	West	North	2	No	No
95	6379972	9/4/2017	10:48 PM	SR 9 at Lake Placid Dr	O	0	0	Rear End	Dark-Unlit	Dry	West	West	2	No	No
96	6396751	9/18/2017	3:11 PM	SR 9 at Lake Placid Dr	O	0	0	Rear End	Daylight	Dry	North	North	2	No	No
97	6398768	9/18/2017	7:27 PM	SR 9 at Lake Placid Dr	C	2	0	Left Turn	Daylight	Dry	North	South	2	No	No
98	6399793	9/19/2017	4:05 PM	SR 9 at Lake Placid Dr	O	0	0	Rear End	Daylight	Dry	South	South	2	No	No
99	6413712	10/1/2017	11:45 AM	SR 9 at Lake Placid Dr	B	1	0	Pedestrian	Daylight	Dry	South	N/A	1	No	No
100	6419550	10/5/2017	9:16 PM	SR 9 at Lake Placid Dr	O	0	0	Left Turn	Dark-Lit	Dry	East	West	2	No	No
101	6424076	10/7/2017	12:46 PM	SR 9 at Lake Placid Dr	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
102	6427335	10/11/2017	6:37 PM	SR 9 at Lake Placid Dr	O	0	0	Sideswipe - Opposite Direction	Daylight	Dry	South	North	2	No	No
103	6431480	10/16/2017	8:04 AM	SR 9 at Lake Placid Dr	O	0	0	Rear End	Daylight	Dry	North	North	2	No	No
104	6443205	10/23/2017	3:17 PM	SR 9 at Lake Placid Dr	O	0	0	Rear End	Daylight	Dry	North	North	2	No	No
105	6444601	10/25/2017	6:58 AM	SR 9 at Lake Placid Dr	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
106	6450007	10/29/2017	11:54 PM	SR 9 at Lake Placid Dr	O	0	0	Left Turn	Dark-Lit	Dry	North	South	2	No	No
107	6464825	11/7/2017	5:37 PM	SR 9 at Lake Placid Dr	O	0	0	Rear End	Dusk	Dry	North	North	2	No	No
108	6465309	11/9/2017	7:19 AM	SR 9 at Lake Placid Dr	O	0	0	Rear End	Daylight	Wet	North	North	2	No	No
109	6481533	11/20/2017	9:45 PM	SR 9 at Lake Placid Dr	O	0	0	Left Turn	Dark-Lit	Dry	South	North	2	No	No
110	6481537	11/20/2017	6:34 PM	SR 9 at Lake Placid Dr	B	1	0	Rear End	Dark-Lit	Dry	North	North	3	No	No
111	6483140	11/21/2017	5:39 PM	SR 9 at Lake Placid Dr	O	0	0	Sideswipe - Same Direction	Dark-Unlit	Dry	West	West	2	No	No
112	6523773	12/17/2017	7:42 PM	SR 9 at Lake Placid Dr	O	0	0	Rear End	Dark-Lit	Dry	South	South	2	No	No
113	6523824	12/19/2017	5:48 PM	SR 9 at Lake Placid Dr	O	0	0	Sideswipe - Same Direction	Daylight	Dry	North	North	2	No	No
114	6523828	12/19/2017	9:49 PM	SR 9 at Lake Placid Dr	O	0	0	Left Turn	Dark-Unlit	Wet	South	North	2	No	No
115	6523839	12/19/2017	10:05 PM	SR 9 at Lake Placid Dr	O	0	0	Sideswipe - Same Direction	Dark-Lit	Wet	East	East	2	No	No
116	6535973	1/2/2018	8:33 AM	SR 9 at Lake Placid Dr	O	0	0	Sideswipe - Same Direction	Daylight	Dry	South	South	2	No	No
117	6536075	1/1/2018	12:21 AM	SR 9 at Lake Placid Dr	O	0	0	Head On	Dark-Lit	Dry	East	West	2	No	Yes
118	6536474	1/1/2018	8:25 AM	SR 9 at Lake Placid Dr	O	0	0	Angle	Daylight	Dry	South	West	2	No	No
119	6536486	12/29/2017	8:59 PM	SR 9 at Lake Placid Dr	O	0	0	Left Turn	Dark-Lit	Dry	East	West	2	No	No
120	6600142	2/12/2018	6:10 PM	SR 9 at Lake Placid Dr	B	1	0	Angle	Dusk	Dry	West	North	2	No	Yes
121	6614608	2/27/2018	7:30 PM	SR 9 at Lake Placid Dr	O	0	0	Right Turn	Dark-Lit	Dry	North	East	2	No	No
122	6621352	3/3/2018	1:20 PM	SR 9 at Lake Placid Dr	O	0	0	Sideswipe - Same Direction	Daylight	Dry	West	West	2	No	No
123	6631784	3/13/2018	10:17 AM	SR 9 at Lake Placid Dr	C	1	0	Rear End	Daylight	Dry	South	South	3	No	No
124	6631819	3/13/2018	10:17 AM	SR 9 at Lake Placid Dr	C	2	0	Rear End	Daylight	Dry	South	South	3	No	No
125	6634906	3/14/2018	4:02 PM	SR 9 at Lake Placid Dr	C	1	0	Rear End	Daylight	Dry	North	North	2	No	No
126	6648057	3/20/2018	6:38 PM	SR 9 at Lake Placid Dr	O	0	0	Sideswipe - Same Direction	Daylight	Dry	South	South	2	No	No
127	6663983	4/9/2018	1:22 PM	SR 9 at Lake Placid Dr	C	1	0	Pedestrian	Daylight	Dry	East	North	1	No	No
128	6669757	4/8/2018	12:32 PM	SR 9 at Lake Placid Dr	O	0	0	Rear End	Daylight	Dry	North	North	2	No	No
129	6671592	4/12/2018	7:07 PM	SR 9 at Lake Placid Dr	O	0	0	Rear End	Dusk	Dry	East	East	2	No	No
130	6690273	4/29/2018	9:12 AM	SR 9 at Lake Placid Dr	O	0	0	Angle	Daylight	Dry	South	East	2	No	No
131	6690281	4/27/2018	1:41 PM	SR 9 at Lake Placid Dr	O	0	0	Sideswipe - Same Direction	Daylight	Dry	South	South	2	No	No
132	6732750	5/26/2018	2:15 PM	SR 9 at Lake Placid Dr	O	0	0	Angle	Daylight	Dry	East	South	2	No	No
133	6740760	6/5/2018	5:25 PM	SR 9 at Lake Placid Dr	O	0	0	Angle	Daylight	Dry	West	North	2	No	No
134	6767669	6/20/2018	10:25 AM	SR 9 at Lake Placid Dr	O	0	0	Angle	Daylight	Dry	North	East	2	No	No
135	6781259	7/1/2018	12:04 PM	SR 9 at Lake Placid Dr	O	0	0	Angle	Daylight	Dry	East	South	2	No	No

Appendix B: SR 9 at Lake Placid Drive - Crash Data Table

No.	Crash No.	Date	Time	Location	Severity	Injuries	Fatalities	Crash Type	Lighting	Surface	Dir. 1	Dir. 2	No. Veh.	Truck	Drugs/Alcohol
136	6789670	7/8/2018	12:53 PM	SR 9 at Lake Placid Dr	O	0	0	Rear End	Daylight	Dry	North	North	2	No	No
137	6798852	7/19/2018	12:54 PM	SR 9 at Lake Placid Dr	C	1	0	Pedestrian	Daylight	Dry	East	West	1	No	No
138	6810463	7/28/2018	6:52 PM	SR 9 at Lake Placid Dr	O	0	0	Rear End	Daylight	Dry	South	South	2	No	No
139	6815310	8/1/2018	7:52 PM	SR 9 at Lake Placid Dr	O	0	0	Left Turn	Dusk	Wet	North	South	2	No	No
140	6815779	8/2/2018	10:06 PM	SR 9 at Lake Placid Dr	O	0	0	Rear End	Dark-Lit	Wet	North	North	2	No	No
141	6827837	8/10/2018	10:38 AM	SR 9 at Lake Placid Dr	O	0	0	Sideswipe - Same Direction	Daylight	Dry	North	North	2	No	No
142	6830912	8/11/2018	10:38 PM	SR 9 at Lake Placid Dr	C	1	0	Rear End	Dark-Lit	Dry	North	North	2	No	Yes
143	6859858	8/31/2018	7:31 AM	SR 9 at Lake Placid Dr	O	0	0	Rear End	Daylight	Dry	South	South	2	Yes	No
144	6868042	9/7/2018	9:55 PM	SR 9 at Lake Placid Dr	O	0	0	Left Turn	Dark-Lit	Dry	South	North	2	No	No
145	6877436	9/14/2018	1:48 PM	SR 9 at Lake Placid Dr	O	0	0	Rear End	Daylight	Dry	South	South	2	No	No
146	6911239	10/11/2018	10:06 PM	SR 9 at Lake Placid Dr	O	0	0	Left Turn	Dark-Lit	Dry	North	South	2	No	No
147	6918708	10/15/2018	8:47 AM	SR 9 at Lake Placid Dr	O	0	0	Angle	Daylight	Dry	East	South	2	No	No
148	6925361	10/21/2018	12:30 PM	SR 9 at Lake Placid Dr	A	1	0	Bicycle	Daylight	Dry	North	South	2	No	No
149	6944932	10/30/2018	5:03 PM	SR 9 at Lake Placid Dr	C	1	0	Rear End	Daylight	Dry	North	North	4	No	No
150	6963592	11/15/2018	8:00 AM	SR 9 at Lake Placid Dr	K	1	1	Pedestrian	Daylight	Dry	East	East	1	No	No
151	6989936	12/4/2018	7:09 PM	SR 9 at Lake Placid Dr	C	1	0	Left Turn	Dark-Lit	Dry	South	North	2	No	No
152	6990343	12/5/2018	9:48 PM	SR 9 at Lake Placid Dr	O	0	0	Angle	Dark-Lit	Dry	East	South	2	No	No
153	6991339	12/5/2018	12:19 PM	SR 9 at Lake Placid Dr	C	3	0	Left Turn	Daylight	Dry	South	North	2	No	No
154	6998826	12/10/2018	7:57 PM	SR 9 at Lake Placid Dr	O	0	0	Angle	Dark-Lit	Wet	South	West	2	No	No
155	7007819	12/15/2018	9:05 PM	SR 9 at Lake Placid Dr	O	0	0	Angle	Dark-Unlit	Wet	West	North	2	No	No
156	7014128	12/21/2018	7:56 AM	SR 9 at Lake Placid Dr	O	0	0	Left Turn	Daylight	Wet	South	North	2	No	No
157	7033142	1/3/2019	10:16 AM	SR 9 at Lake Placid Dr	O	0	0	Left Turn	Daylight	Wet	North	South	2	No	No
158	7046916	1/15/2019	3:56 PM	SR 9 at Lake Placid Dr	O	0	0	Rear End	Daylight	Dry	South	South	2	No	No
159	7049921	1/17/2019	5:11 PM	SR 9 at Lake Placid Dr	O	0	0	Right Turn	Daylight	Wet	West	East	2	No	No
160	7054919	1/19/2019	2:14 PM	SR 9 at Lake Placid Dr	O	0	0	Rear End	Daylight	Wet	North	North	2	No	No
161	7065157	1/28/2019	2:46 PM	SR 9 at Lake Placid Dr	O	0	0	Rear End	Daylight	Dry	North	North	2	No	No
162	7076785	2/8/2019	2:21 PM	SR 9 at Lake Placid Dr	O	0	0	Rear End	Daylight	Dry	North	North	2	No	No
163	7100333	2/21/2019	4:06 PM	SR 9 at Lake Placid Dr	O	0	0	Angle	Daylight	Wet	West	North	2	No	No
164	7108742	3/2/2019	9:00 AM	SR 9 at Lake Placid Dr	O	0	0	Left Turn	Daylight	Dry	West	East	2	No	No
165	7112997	3/6/2019	5:29 PM	SR 9 at Lake Placid Dr	O	0	0	Rear End	Daylight	Dry	North	North	2	No	No
166	7138836	3/22/2019	6:27 PM	SR 9 at Lake Placid Dr	O	0	0	Rear End	Daylight	Dry	South	South	2	No	No
167	7157773	4/8/2019	9:41 AM	SR 9 at Lake Placid Dr	O	0	0	Left Turn	Daylight	Dry	South	North	2	No	No
168	7159043	4/9/2019	2:59 PM	SR 9 at Lake Placid Dr	O	0	0	Sideswipe - Same Direction	Daylight	Dry	South	South	2	No	No
169	7182379	4/27/2019	12:01 AM	SR 9 at Lake Placid Dr	O	0	0	Rear End	Dark-Lit	Dry	North	North	2	No	No
170	7199323	4/20/2019	1:21 PM	SR 9 at Lake Placid Dr	O	0	0	Sideswipe - Same Direction	Daylight	Wet	South	South	2	No	No
171	7214405	5/17/2019	9:57 AM	SR 9 at Lake Placid Dr	O	0	0	Sideswipe - Same Direction	Daylight	Dry	North	North	2	No	No
172	7233215	5/18/2019	2:07 PM	SR 9 at Lake Placid Dr	O	0	0	Angle	Daylight	Dry	West	North	2	No	No
173	7278006	7/8/2019	8:10 PM	SR 9 at Lake Placid Dr	O	0	0	Backed Into	Daylight	Dry	South	South	2	No	No
174	7285203	7/12/2019	12:37 PM	SR 9 at Lake Placid Dr	O	0	0	Sideswipe - Same Direction	Daylight	Dry	North	North	2	Yes	No
175	7294964	7/22/2019	8:31 PM	SR 9 at Lake Placid Dr	O	1	0	Pedestrian	Daylight	Dry	West	N/A	1	No	No
176	7295896	7/24/2019	1:59 PM	SR 9 at Lake Placid Dr	O	0	0	Rear End	Daylight	Dry	North	North	3	No	No
177	7311096	8/6/2019	6:42 PM	SR 9 at Lake Placid Dr	C	1	0	Rear End	Daylight	Dry	South	South	3	No	No
178	7313917	8/9/2019	2:25 PM	SR 9 at Lake Placid Dr	O	0	0	Left Turn	Daylight	Dry	North	South	2	No	No
179	7316978	8/11/2019	8:56 PM	SR 9 at Lake Placid Dr	O	0	0	Sideswipe - Same Direction	Dark-Lit	Dry	South	South	2	No	No
180	7321939	8/14/2019	11:33 AM	SR 9 at Lake Placid Dr	O	0	0	Left Turn	Daylight	Dry	North	South	2	No	No

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No.	Crash No.	Date	Time	Location	Severity	Injuries	Fatalities	Crash Type	Lighting	Surface	Dir. 1	Dir. 2	No. Veh.	Truck	Drugs/Alcohol
181	7323038	8/14/2019	7:09 PM	SR 9 at Lake Placid Dr	O	0	0	Backed Into	Daylight	Wet	East	East	2	Yes	No
182	7324950	8/14/2019	3:27 PM	SR 9 at Lake Placid Dr	C	1	0	Rear End	Daylight	Dry	North	North	2	No	No
183	7336563	8/27/2019	5:29 PM	SR 9 at Lake Placid Dr	O	0	0	Backed Into	Daylight	Dry	South	South	2	No	No
184	7342701	8/31/2019	5:15 PM	SR 9 at Lake Placid Dr	O	0	0	Right Turn	Daylight	Dry	East	South	2	No	No
185	7353202	9/11/2019	6:29 AM	SR 9 at Lake Placid Dr	C	2	0	Left Turn	Dark-Lit	Dry	South	North	2	No	No
186	7361092	9/18/2019	5:11 PM	SR 9 at Lake Placid Dr	O	0	0	Angle	Daylight	Dry	North	West	2	No	No
187	7365326	9/21/2019	2:26 AM	SR 9 at Lake Placid Dr	O	0	0	Left Turn	Dark-Lit	Dry	South	North	2	No	No
188	7378036	10/3/2019	8:23 AM	SR 9 at Lake Placid Dr	O	0	0	Sideswipe - Same Direction	Daylight	Dry	South	South	2	No	No
189	7378551	10/2/2019	8:09 AM	SR 9 at Lake Placid Dr	O	0	0	Rear End	Daylight	Dry	North	North	2	No	No
190	7387657	10/11/2019	11:17 AM	SR 9 at Lake Placid Dr	O	0	0	Rear End	Daylight	Dry	South	South	2	No	No
191	7402352	10/23/2019	8:01 AM	SR 9 at Lake Placid Dr	C	1	0	Rear End	Daylight	Dry	East	East	2	No	No
192	7429454	11/7/2019	10:22 PM	SR 9 at Lake Placid Dr	A	2	0	Left Turn	Dark-Unlit	Wet	South	North	2	No	No
193	7429805	11/8/2019	1:44 PM	SR 9 at Lake Placid Dr	O	0	0	Sideswipe - Same Direction	Daylight	Dry	South	South	2	No	No
194	7436973	11/14/2019	6:46 PM	SR 9 at Lake Placid Dr	O	0	0	Angle	Dark-Lit	Dry	West	North	2	No	No
195	7458629	11/27/2019	5:57 PM	SR 9 at Lake Placid Dr	O	0	0	Left Turn	Dark-Lit	Dry	North	South	2	No	No
196	7459936	11/29/2019	10:24 PM	SR 9 at Lake Placid Dr	O	0	0	Sideswipe - Same Direction	Dark-Unlit	Dry	South	South	2	No	No
197	7463209	12/3/2019	7:01 PM	SR 9 at Lake Placid Dr	O	0	0	Sideswipe - Same Direction	Dark-Lit	Dry	West	West	2	No	No
198	7491011	12/23/2019	6:14 PM	SR 9 at Lake Placid Dr	C	1	0	Pedestrian	Dark-Lit	Wet	West	West	1	No	No

**APPENDIX C: SR 9 AT TROWBRIDGE ROAD –
CRASH DATA TABLE**



Appendix C: SR 9 at Trowbridge Road - Crash Data Table

No.	Crash No.	Date	Time	Location	Severity	Injuries	Fatalities	Crash Type	Lighting	Surface	Dir. 1	Dir. 2	No. Veh.	Truck	Drugs/Alcohol
1	5127315	1/13/2015	12:10 PM	SR 9 at Trowbridge Rd	O	0	0	Rear End	Daylight	Wet	North	North	2	No	No
2	5136508	1/21/2015	6:00 PM	SR 9 at Trowbridge Rd	O	0	0	Rear End	Dark-Lit	Dry	West	West	2	No	No
3	5166200	2/3/2015	7:45 AM	SR 9 at Trowbridge Rd	O	0	0	Rear End	Daylight	Dry	South	South	2	No	No
4	5170188	2/7/2015	8:25 PM	SR 9 at Trowbridge Rd	O	0	0	Rear End	Dark-Lit	Dry	North	North	2	No	No
5	5174672	2/11/2015	6:54 PM	SR 9 at Trowbridge Rd	O	0	0	Rear End	Dark-Lit	Dry	South	South	2	No	No
6	5188719	2/19/2015	7:54 AM	SR 9 at Trowbridge Rd	C	1	0	Rear End	Daylight	Dry	West	West	2	No	No
7	5215096	3/12/2015	5:19 PM	SR 9 at Trowbridge Rd	C	1	0	Rear End	Daylight	Dry	South	South	3	No	No
8	5281437	4/21/2015	5:48 PM	SR 9 at Trowbridge Rd	O	0	0	Rear End	Daylight	Dry	South	South	2	No	No
9	5341475	5/29/2015	1:18 PM	SR 9 at Trowbridge Rd	O	0	0	Rear End	Daylight	Dry	North	North	2	No	No
10	5364906	7/22/2015	9:49 AM	SR 9 at Trowbridge Rd	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
11	5366903	7/22/2015	4:21 PM	SR 9 at Trowbridge Rd	C	1	0	Rear End	Daylight	Dry	West	West	2	No	No
12	5389017	8/10/2015	11:14 AM	SR 9 at Trowbridge Rd	O	0	0	Angle	Daylight	Dry	North	West	2	No	No
13	5396693	8/19/2015	3:42 PM	SR 9 at Trowbridge Rd	O	0	0	Angle	Daylight	Dry	East	North	2	No	No
14	5434838	5/14/2015	7:09 AM	SR 9 at Trowbridge Rd	O	0	0	Rear End	Daylight	Dry	South	South	2	No	No
15	5436021	7/17/2015	12:05 PM	SR 9 at Trowbridge Rd	C	1	0	Rear End	Daylight	Dry	South	South	2	No	No
16	5436158	7/20/2015	7:52 PM	SR 9 at Trowbridge Rd	C	2	0	Left Turn	Daylight	Dry	South	North	2	No	No
17	5436185	7/21/2015	11:13 AM	SR 9 at Trowbridge Rd	B	1	0	Left Turn	Daylight	Dry	North	South	2	No	No
18	5436766	8/2/2015	4:50 PM	SR 9 at Trowbridge Rd	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
19	5438040	8/25/2015	10:31 AM	SR 9 at Trowbridge Rd	B	1	0	Rear End	Daylight	Dry	South	South	2	No	No
20	5438191	8/28/2015	7:59 AM	SR 9 at Trowbridge Rd	O	0	0	Sideswipe	Daylight	Dry	South	South	2	No	No
21	5442347	9/25/2015	8:36 AM	SR 9 at Trowbridge Rd	C	1	0	Rear End	Daylight	Wet	West	West	2	No	No
22	5474522	10/17/2015	2:06 PM	SR 9 at Trowbridge Rd	O	0	0	Rear End	Daylight	Dry	North	North	2	No	No
23	5494315	11/2/2015	3:01 PM	SR 9 at Trowbridge Rd	O	0	0	Rear End	Daylight	Wet	North	North	2	No	No
24	5499693	11/4/2015	7:47 AM	SR 9 at Trowbridge Rd	C	1	0	Left Turn	Daylight	Wet	South	North	2	No	No
25	5513730	11/17/2015	11:56 AM	SR 9 at Trowbridge Rd	C	1	0	Bicycle	Daylight	Dry	North	North	2	No	No
26	5562013	12/11/2015	6:02 PM	SR 9 at Trowbridge Rd	O	0	0	Rear End	Dark-Lit	Dry	West	West	2	No	No
27	5617803	1/29/2016	5:18 PM	SR 9 at Trowbridge Rd	C	1	0	Rear End	Daylight	Dry	North	North	2	No	No
28	5632398	2/1/2016	2:30 PM	SR 9 at Trowbridge Rd	O	0	0	Sideswipe	Daylight	Dry	North	North	2	Yes	No
29	5642731	2/19/2016	10:15 AM	SR 9 at Trowbridge Rd	O	0	0	Angle	Daylight	Dry	West	North	2	No	No
30	5660173	3/2/2016	3:45 PM	SR 9 at Trowbridge Rd	C	1	0	Rear End	Daylight	Dry	North	North	2	No	No
31	5663510	3/4/2016	9:58 PM	SR 9 at Trowbridge Rd	B	2	0	Left Turn	Dark-Lit	Dry	South	North	2	No	Yes
32	5727073	4/22/2016	4:26 PM	SR 9 at Trowbridge Rd	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
33	5753566	5/12/2016	7:38 PM	SR 9 at Trowbridge Rd	C	1	0	Rear End	Daylight	Dry	West	West	2	No	No
34	5754836	5/13/2016	10:10 PM	SR 9 at Trowbridge Rd	O	0	0	Rear End	Dark-Lit	Dry	West	West	2	No	No
35	5765945	5/21/2016	2:14 PM	SR 9 at Trowbridge Rd	O	0	0	Left Turn	Daylight	Dry	West	East	2	No	No
36	5774443	5/6/2015	8:33 AM	SR 9 at Trowbridge Rd	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
37	5795736	6/14/2016	4:48 PM	SR 9 at Trowbridge Rd	O	0	0	Rear End	Daylight	Wet	South	South	2	No	No
38	5800480	6/19/2016	3:54 AM	SR 9 at Trowbridge Rd	B	1	0	Rear End	Dark-Lit	Dry	South	South	2	No	Yes
39	5849389	7/12/2016	7:22 PM	SR 9 at Trowbridge Rd	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
40	5849640	7/22/2016	4:44 PM	SR 9 at Trowbridge Rd	O	0	0	Rear End	Daylight	Dry	North	North	2	No	No
41	5855861	7/29/2016	8:23 AM	SR 9 at Trowbridge Rd	C	1	0	Rear End	Daylight	Dry	West	West	2	No	No
42	5860866	8/1/2016	6:20 PM	SR 9 at Trowbridge Rd	C	1	0	Left Turn	Daylight	Dry	South	North	2	No	No

Appendix C: SR 9 at Trowbridge Road - Crash Data Table

No.	Crash No.	Date	Time	Location	Severity	Injuries	Fatalities	Crash Type	Lighting	Surface	Dir. 1	Dir. 2	No. Veh.	Truck	Drugs/Alcohol
43	5864839	8/5/2016	1:20 PM	SR 9 at Trowbridge Rd	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
44	5873728	8/10/2016	4:46 PM	SR 9 at Trowbridge Rd	O	0	0	Rear End	Daylight	Wet	West	West	2	No	No
45	5882242	8/18/2016	10:40 AM	SR 9 at Trowbridge Rd	O	0	0	Angle	Daylight	Dry	North	West	2	No	No
46	5888082	8/21/2016	4:11 PM	SR 9 at Trowbridge Rd	O	0	0	Left Turn	Daylight	Dry	South	North	2	No	No
47	5893724	8/26/2016	5:03 PM	SR 9 at Trowbridge Rd	B	3	0	Left Turn	Daylight	Dry	South	North	2	No	No
48	5943368	9/18/2016	10:01 PM	SR 9 at Trowbridge Rd	A	2	0	Angle	Dawn	Dry	South	East	2	No	Yes
49	5953285	10/11/2016	8:58 AM	SR 9 at Trowbridge Rd	O	0	0	Left Turn	Daylight	Dry	South	North	2	No	No
50	5954540	10/11/2016	4:14 PM	SR 9 at Trowbridge Rd	O	0	0	Rear End	Daylight	Dry	North	North	2	No	No
51	5970634	10/24/2016	7:32 AM	SR 9 at Trowbridge Rd	O	0	0	Sideswipe	Dawn	Dry	South	South	2	No	No
52	6007015	11/20/2016	1:43 PM	SR 9 at Trowbridge Rd	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
53	6012233	11/23/2016	3:07 PM	SR 9 at Trowbridge Rd	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
54	6023206	11/22/2016	6:04 PM	SR 9 at Trowbridge Rd	C	1	0	Rear End	Dark-Lit	Dry	South	South	3	No	No
55	6068689	1/5/2017	11:12 AM	SR 9 at Trowbridge Rd	C	1	0	Rear End	Daylight	Dry	West	West	2	No	No
56	6094831	1/11/2017	7:30 AM	SR 9 at Trowbridge Rd	C	1	0	Left Turn	Daylight	Dry	North	South	2	No	No
57	6118842	2/15/2017	7:50 AM	SR 9 at Trowbridge Rd	O	0	0	Rear End	Daylight	Wet	South	South	2	No	No
58	6136780	3/3/2017	8:06 AM	SR 9 at Trowbridge Rd	C	1	0	Rear End	Daylight	Dry	West	West	2	No	No
59	6145186	3/8/2017	8:30 PM	SR 9 at Trowbridge Rd	O	0	0	Rear End	Dawn	Dry	West	West	2	No	No
60	6150354	3/14/2017	9:30 AM	SR 9 at Trowbridge Rd	C	1	0	Rear End	Daylight	Wet	South	South	2	No	No
61	6160107	3/22/2017	12:38 PM	SR 9 at Trowbridge Rd	C	1	0	Rear End	Daylight	Dry	South	South	2	No	No
62	6176845	3/31/2017	7:18 PM	SR 9 at Trowbridge Rd	C	1	0	Rear End	Daylight	Dry	West	West	2	No	No
63	6196959	4/4/2017	11:53 AM	SR 9 at Trowbridge Rd	O	0	0	Angle	Daylight	Dry	West	North	2	No	No
64	6202717	4/20/2017	4:40 PM	SR 9 at Trowbridge Rd	O	0	0	Sideswipe	Daylight	Dry	South	South	2	No	No
65	6214334	4/28/2017	7:48 AM	SR 9 at Trowbridge Rd	O	0	0	Sideswipe	Daylight	Dry	South	South	2	No	No
66	6231101	5/12/2017	8:13 AM	SR 9 at Trowbridge Rd	O	0	0	Rear End	Daylight	Dry	South	South	2	No	No
67	6239037	5/18/2017	1:25 PM	SR 9 at Trowbridge Rd	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
68	6240732	5/19/2017	3:58 PM	SR 9 at Trowbridge Rd	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
69	6248065	5/24/2017	2:36 PM	SR 9 at Trowbridge Rd	O	0	0	Angle	Daylight	Dry	West	North	2	No	No
70	6254679	5/27/2017	10:19 PM	SR 9 at Trowbridge Rd	C	2	0	Left Turn	Dark-Unlit	Dry	South	North	2	No	No
71	6288734	6/23/2017	12:23 PM	SR 9 at Trowbridge Rd	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
72	6304259	7/10/2017	3:02 PM	SR 9 at Trowbridge Rd	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
73	6370467	8/27/2017	2:56 PM	SR 9 at Trowbridge Rd	C	1	0	Rear End	Daylight	Dry	West	West	2	No	No
74	6388605	9/9/2017	1:25 PM	SR 9 at Trowbridge Rd	O	0	0	Rear End	Daylight	Dry	North	North	2	No	No
75	6391190	9/13/2017	11:17 AM	SR 9 at Trowbridge Rd	C	2	0	Left Turn	Daylight	Dry	South	North	2	No	No
76	6399987	9/20/2017	12:59 PM	SR 9 at Trowbridge Rd	O	0	0	Rear End	Daylight	Dry	North	North	2	No	No
77	6405652	9/23/2017	7:35 PM	SR 9 at Trowbridge Rd	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
78	6426257	10/10/2017	4:42 PM	SR 9 at Trowbridge Rd	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
79	6429511	10/12/2017	4:49 PM	SR 9 at Trowbridge Rd	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
80	6446747	10/24/2017	4:36 PM	SR 9 at Trowbridge Rd	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
81	6447605	10/26/2017	5:36 PM	SR 9 at Trowbridge Rd	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
82	6461794	11/3/2017	4:42 PM	SR 9 at Trowbridge Rd	O	0	0	Rear End	Daylight	Dry	North	North	2	No	No
83	6461802	11/5/2017	2:19 PM	SR 9 at Trowbridge Rd	O	0	0	Rear End	Daylight	Dry	North	North	2	No	No
84	6471551	11/12/2017	9:28 PM	SR 9 at Trowbridge Rd	O	0	0	Sideswipe	Dark-Lit	Dry	North	North	2	No	Yes

Appendix C: SR 9 at Trowbridge Road - Crash Data Table

No.	Crash No.	Date	Time	Location	Severity	Injuries	Fatalities	Crash Type	Lighting	Surface	Dir. 1	Dir. 2	No. Veh.	Truck	Drugs/Alcohol
85	6488027	11/24/2017	11:54 PM	SR 9 at Trowbridge Rd	C	1	0	Left Turn	Dark-Lit	Dry	North	South	2	No	No
86	6489372	11/27/2017	5:21 PM	SR 9 at Trowbridge Rd	O	0	0	Rear End	Dark-Unlit	Dry	West	West	2	No	No
87	6523697	12/13/2017	4:39 PM	SR 9 at Trowbridge Rd	B	1	0	Rear End	Daylight	Dry	South	South	2	No	No
88	6525707	12/22/2017	12:00 PM	SR 9 at Trowbridge Rd	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
89	6548002	1/11/2018	8:14 AM	SR 9 at Trowbridge Rd	O	0	0	Rear End	Daylight	Wet	South	South	2	No	No
90	6571319	1/28/2018	4:48 PM	SR 9 at Trowbridge Rd	C	3	0	Rear End	Daylight	Wet	North	North	2	No	No
91	6580546	2/4/2018	10:50 PM	SR 9 at Trowbridge Rd	O	0	0	Sideswipe	Dark-Lit	Dry	South	South	2	No	No
92	6591209	2/12/2018	8:19 AM	SR 9 at Trowbridge Rd	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
93	6611240	2/26/2018	8:06 AM	SR 9 at Trowbridge Rd	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
94	6614596	2/26/2018	7:01 PM	SR 9 at Trowbridge Rd	O	0	0	Left Turn	Dark-Lit	Dry	South	North	2	No	No
95	6621331	3/4/2018	7:19 PM	SR 9 at Trowbridge Rd	O	0	0	Left Turn	Dark-Lit	Dry	South	North	2	No	No
96	6621903	3/5/2018	1:38 PM	SR 9 at Trowbridge Rd	C	2	0	Left Turn	Daylight	Dry	South	North	3	No	No
97	6648040	3/23/2018	5:04 PM	SR 9 at Trowbridge Rd	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
98	6651528	3/28/2018	4:59 PM	SR 9 at Trowbridge Rd	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
99	6682349	4/23/2018	7:40 AM	SR 9 at Trowbridge Rd	C	1	0	Angle	Daylight	Wet	East	South	2	No	No
100	6684424	4/23/2018	6:08 PM	SR 9 at Trowbridge Rd	O	0	0	Rear End	Daylight	Wet	West	West	2	No	No
101	6687724	4/26/2018	4:53 PM	SR 9 at Trowbridge Rd	O	0	0	Rear End	Daylight	Wet	South	South	2	No	No
102	6710511	5/15/2018	9:44 AM	SR 9 at Trowbridge Rd	O	0	0	Angle	Daylight	Dry	East	North	2	No	No
103	6731214	5/31/2018	1:50 PM	SR 9 at Trowbridge Rd	O	0	0	Backed Into	Daylight	Dry	South	South	2	No	No
104	6736425	6/2/2018	5:15 PM	SR 9 at Trowbridge Rd	B	1	0	Rear End	Daylight	Dry	North	North	2	No	No
105	6743468	6/10/2018	9:29 PM	SR 9 at Trowbridge Rd	A	4	0	Left Turn	Dark-Lit	Dry	South	North	2	No	No
106	6771379	6/27/2018	9:38 AM	SR 9 at Trowbridge Rd	O	0	0	Angle	Daylight	Dry	East	South	2	No	No
107	6793766	7/13/2018	12:35 PM	SR 9 at Trowbridge Rd	C	1	0	Rear End	Daylight	Dry	North	North	2	No	No
108	6793767	7/13/2018	9:35 AM	SR 9 at Trowbridge Rd	B	1	0	Left Turn	Daylight	Dry	North	South	2	No	No
109	6869448	9/10/2018	6:28 PM	SR 9 at Trowbridge Rd	B	1	0	Rear End	Daylight	Wet	East	East	2	No	No
110	6892711	9/28/2018	8:02 AM	SR 9 at Trowbridge Rd	O	0	0	Sideswipe	Daylight	Dry	South	South	2	No	No
111	6907221	10/5/2018	3:47 PM	SR 9 at Trowbridge Rd	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
112	6910334	10/11/2018	1:00 PM	SR 9 at Trowbridge Rd	C	2	0	Rear End	Daylight	Dry	North	North	5	No	No
113	6910668	10/10/2018	6:49 PM	SR 9 at Trowbridge Rd	O	0	0	Backed Into	Dark-Lit	Wet	South	South	2	No	No
114	6919641	10/18/2018	7:32 AM	SR 9 at Trowbridge Rd	O	0	0	Rear End	Daylight	Dry	South	South	2	No	No
115	7007853	12/14/2018	6:20 PM	SR 9 at Trowbridge Rd	O	0	0	Left Turn	Dark-Lit	Wet	West	East	2	No	No
116	7034546	1/8/2019	1:21 PM	SR 9 at Trowbridge Rd	O	0	0	Angle	Daylight	Dry	South	West	2	No	No
117	7037724	1/9/2019	3:46 PM	SR 9 at Trowbridge Rd	O	0	0	Sideswipe	Daylight	Dry	West	West	2	No	No
118	7075705	2/6/2019	2:27 PM	SR 9 at Trowbridge Rd	O	0	0	Rear End	Daylight	Dry	North	North	2	No	No
119	7076123	2/7/2019	7:05 PM	SR 9 at Trowbridge Rd	C	1	0	Rear End	Dark-Lit	Dry	East	Unknown	2	No	No
120	7086765	2/14/2019	8:25 PM	SR 9 at Trowbridge Rd	C	1	0	Rear End	Dark-Lit	Dry	West	West	2	No	No
121	7100361	2/23/2019	4:16 PM	SR 9 at Trowbridge Rd	C	1	0	Rear End	Daylight	Dry	West	West	2	No	No
122	7115082	3/7/2019	12:40 PM	SR 9 at Trowbridge Rd	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
123	7122355	3/13/2019	4:06 PM	SR 9 at Trowbridge Rd	O	0	0	Right Turn	Daylight	Dry	East	South	2	No	No
124	7141743	3/26/2019	12:16 PM	SR 9 at Trowbridge Rd	O	0	0	Rear End	Daylight	Dry	North	North	2	No	No
125	7144883	3/29/2019	3:48 PM	SR 9 at Trowbridge Rd	O	0	0	Angle	Daylight	Dry	West	North	2	No	No
126	7153553	4/4/2019	3:00 PM	SR 9 at Trowbridge Rd	O	0	0	Rear End	Daylight	Dry	South	South	2	No	No

Appendix C: SR 9 at Trowbridge Road - Crash Data Table

No.	Crash No.	Date	Time	Location	Severity	Injuries	Fatalities	Crash Type	Lighting	Surface	Dir. 1	Dir. 2	No. Veh.	Truck	Drugs/Alcohol
127	7164903	4/12/2019	6:53 PM	SR 9 at Trowbridge Rd	O	0	0	Rear End	Dark-Lit	Dry	West	West	2	No	No
128	7166804	4/16/2019	5:55 PM	SR 9 at Trowbridge Rd	C	1	0	Rear End	Daylight	Dry	East	East	2	No	No
129	7182357	4/26/2019	7:44 AM	SR 9 at Trowbridge Rd	C	1	0	Rear End	Daylight	Wet	West	West	2	No	No
130	7196572	4/19/2019	3:13 PM	SR 9 at Trowbridge Rd	O	0	0	Rear End	Daylight	Wet	North	North	2	No	No
131	7234008	6/4/2019	8:46 AM	SR 9 at Trowbridge Rd	O	0	0	U-Turn	Daylight	Dry	South	South	2	No	No
132	7236210	6/4/2019	9:40 PM	SR 9 at Trowbridge Rd	O	0	0	Rear End	Dark-Lit	Dry	West	West	2	No	No
133	7242345	6/8/2019	11:15 AM	SR 9 at Trowbridge Rd	O	0	0	Rear End	Daylight	Wet	West	West	3	No	No
134	7268673	6/29/2019	2:20 PM	SR 9 at Trowbridge Rd	C	1	0	Rear End	Daylight	Dry	West	West	2	No	No
135	7280407	7/10/2019	7:07 PM	SR 9 at Trowbridge Rd	O	0	0	Sideswipe	Daylight	Dry	South	South	2	No	No
136	7290076	7/17/2019	4:49 AM	SR 9 at Trowbridge Rd	C	1	1	Bicycle	Dark-Unlit	Dry	South	South	2	No	Yes
137	7316991	8/9/2019	11:30 AM	SR 9 at Trowbridge Rd	O	0	0	Rear End	Daylight	Dry	North	North	2	No	No
138	7317042	8/12/2019	5:03 PM	SR 9 at Trowbridge Rd	O	0	0	Left Turn	Daylight	Dry	South	North	2	No	No
139	7325746	8/18/2019	2:32 PM	SR 9 at Trowbridge Rd	C	2	0	Left Turn	Daylight	Dry	North	South	2	No	No
140	7330949	8/22/2019	5:42 PM	SR 9 at Trowbridge Rd	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
141	7334076	8/23/2019	6:32 PM	SR 9 at Trowbridge Rd	O	0	0	Sideswipe	Daylight	Dry	West	West	2	No	No
142	7334172	8/26/2019	4:58 PM	SR 9 at Trowbridge Rd	O	0	0	Rear End	Daylight	Wet	North	North	2	No	No
143	7342677	8/31/2019	11:48 AM	SR 9 at Trowbridge Rd	O	0	0	Sideswipe	Daylight	Dry	South	South	2	No	No
144	7349550	9/6/2019	4:27 PM	SR 9 at Trowbridge Rd	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
145	7357449	9/13/2019	12:14 PM	SR 9 at Trowbridge Rd	O	0	0	Rear End	Daylight	Dry	South	South	2	No	No
146	7361091	9/18/2019	5:45 PM	SR 9 at Trowbridge Rd	C	1	0	Sideswipe	Daylight	Dry	North	North	2	No	No
147	7362226	9/20/2019	4:50 PM	SR 9 at Trowbridge Rd	O	0	0	Rear End	Daylight	Dry	South	South	2	No	No
148	7396368	10/10/2019	10:42 AM	SR 9 at Trowbridge Rd	O	0	0	Sideswipe	Daylight	Dry	South	South	2	No	No
149	7399714	10/18/2019	5:08 PM	SR 9 at Trowbridge Rd	C	1	0	Rear End	Daylight	Dry	North	North	2	No	No
150	7401904	10/22/2019	4:49 PM	SR 9 at Trowbridge Rd	O	0	0	Right Turn	Daylight	Dry	West	North	2	No	No
151	7426168	11/5/2019	4:22 PM	SR 9 at Trowbridge Rd	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
152	7434989	11/13/2019	7:29 AM	SR 9 at Trowbridge Rd	C	1	0	Rear End	Daylight	Dry	West	West	2	No	No
153	7440382	11/17/2019	5:00 PM	SR 9 at Trowbridge Rd	O	0	0	Angle	Dusk	Dry	South	East	2	No	No
154	7449443	11/22/2019	10:30 AM	SR 9 at Trowbridge Rd	C	1	0	Rear End	Daylight	Dry	West	West	2	No	No
155	7474769	12/11/2019	4:51 PM	SR 9 at Trowbridge Rd	O	0	0	Angle	Daylight	Dry	East	South	2	No	No

**APPENDIX D: SR 9 AT I-285 EASTBOUND –
CRASH DATA TABLE**



Appendix D: SR9 at I-285 Eastbound - Crash Data Table

No.	Crash No.	Date	Time	Location	Severity	Injuries	Fatalities	Crash Type	Lighting	Surface	Dir. 1	Dir. 2	No. Veh.	Truck	Drugs/Alcohol
1	5118146	1/5/2015	1:38 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
2	5119604	1/6/2015	9:19 AM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
3	5119722	1/6/2015	5:16 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
4	5120727	1/7/2015	1:44 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
5	5144224	1/27/2015	11:00 AM	SR 9 at I-285 EB	C	1	0	Angle	Daylight	Dry	South	East	2	Yes	No
6	5155845	2/2/2015	8:55 AM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
7	5166201	2/3/2015	2:05 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
8	5185922	2/20/2015	5:27 AM	SR 9 at I-285 EB	O	0	0	Right Turn	Dark-Unlit	Dry	East	South	2	No	No
9	5201382	3/1/2015	3:10 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	South	South	2	No	No
10	5203239	3/2/2015	4:59 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
11	5204636	3/3/2015	7:28 PM	SR 9 at I-285 EB	O	0	0	Sideswipe - Same Direction	Dark-Unlit	Wet	North	North	2	Yes	No
12	5204637	3/3/2015	6:04 PM	SR 9 at I-285 EB	O	0	0	Sideswipe - Same Direction	Daylight	Wet	North	North	2	No	No
13	5209425	3/7/2015	2:05 PM	SR 9 at I-285 EB	C	1	0	Rear End	Daylight	Dry	East	East	2	No	No
14	5281021	3/25/2015	8:49 PM	SR 9 at I-285 EB	O	0	0	Rear End	Dusk	Dry	North	North	2	No	No
15	5281259	4/11/2015	9:03 PM	SR 9 at I-285 EB	O	0	0	Left Turn	Dark-Lit	Dry	South	North	2	No	No
16	5281285	4/13/2015	8:22 PM	SR 9 at I-285 EB	O	0	0	Rear End	Dark-Lit	Wet	South	Unknown	2	No	No
17	5281529	4/27/2015	3:38 PM	SR 9 at I-285 EB	O	0	0	Left Turn	Daylight	Dry	North	South	2	No	No
18	5281552	4/30/2015	6:46 AM	SR 9 at I-285 EB	O	0	0	Rear End	Dawn	Dry	East	East	2	No	No
19	5281579	5/1/2015	8:07 AM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
20	5341331	5/11/2015	2:17 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
21	5341336	5/11/2015	4:52 PM	SR 9 at I-285 EB	O	0	0	Angle	Daylight	Dry	South	North	2	No	No
22	5341492	5/30/2015	1:10 PM	SR 9 at I-285 EB	O	0	0	Sideswipe - Same Direction	Daylight	Dry	East	East	2	Yes	No
23	5341571	6/5/2015	11:13 PM	SR 9 at I-285 EB	C	1	0	Rear End	Dark-Unlit	Dry	East	East	2	No	No
24	5341598	6/10/2015	9:39 PM	SR 9 at I-285 EB	O	0	0	Rear End	Dark-Lit	Dry	North	North	3	No	No
25	5341647	6/17/2015	1:56 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
26	5352210	7/9/2015	4:20 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
27	5356297	7/14/2015	8:38 AM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
28	5362557	7/19/2015	11:20 AM	SR 9 at I-285 EB	C	1	0	Rear End	Daylight	Dry	North	North	2	No	No
29	5370608	7/26/2015	2:26 AM	SR 9 at I-285 EB	B	3	0	Rear End	Dark-Lit	Dry	North	North	2	No	Yes
30	5372662	7/29/2015	9:27 AM	SR 9 at I-285 EB	C	1	0	Rear End	Daylight	Dry	East	East	2	No	No
31	5374400	7/30/2015	9:21 PM	SR 9 at I-285 EB	O	1	0	Left Turn	Dark-Unlit	Dry	South	North	2	No	No
32	5396023	8/18/2015	4:52 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
33	5396024	8/15/2015	1:47 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	North	North	2	No	No
34	5434860	5/16/2015	6:52 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
35	5435165	6/22/2015	5:34 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
36	5435706	7/10/2015	4:10 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
37	5435798	7/10/2015	9:59 AM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
38	5435813	7/10/2015	11:21 PM	SR 9 at I-285 EB	O	0	0	Sideswipe - Same Direction	Dark-Unlit	Dry	East	East	2	No	No
39	5436133	7/18/2015	6:11 AM	SR 9 at I-285 EB	O	0	0	Left Turn	Daylight	Dry	South	North	2	No	No
40	5436138	7/19/2015	6:14 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Wet	South	South	2	No	No
41	5436862	8/4/2015	10:04 AM	SR 9 at I-285 EB	C	1	0	Rear End	Daylight	Dry	North	North	3	No	No

Appendix D: SR9 at I-285 Eastbound - Crash Data Table

No.	Crash No.	Date	Time	Location	Severity	Injuries	Fatalities	Crash Type	Lighting	Surface	Dir. 1	Dir. 2	No. Veh.	Truck	Drugs/Alcohol
42	5437057	8/7/2015	3:49 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
43	5437450	8/13/2015	4:54 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Wet	East	East	2	No	No
44	5438304	8/31/2015	3:21 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
45	5438800	9/8/2015	11:41 AM	SR 9 at I-285 EB	O	0	0	Right Turn	Daylight	Dry	South	South	2	No	No
46	5439186	9/17/2015	8:05 AM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
47	5447902	9/29/2015	11:14 AM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Wet	East	East	2	No	No
48	5451972	10/2/2015	8:05 AM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
49	5451975	10/2/2015	8:24 AM	SR 9 at I-285 EB	C	1	0	Rear End	Daylight	Dry	East	East	2	No	No
50	5461145	10/7/2015	10:57 PM	SR 9 at I-285 EB	O	0	0	Sideswipe - Same Direction	Dark-Lit	Dry	East	East	2	No	No
51	5461824	10/8/2015	11:10 AM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
52	5462774	10/8/2015	4:38 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
53	5465930	10/10/2015	1:53 PM	SR 9 at I-285 EB	O	0	0	Left Turn	Daylight	Dry	South	North	2	No	No
54	5468628	10/13/2015	3:52 PM	SR 9 at I-285 EB	C	1	0	Rear End	Daylight	Dry	North	North	2	No	No
55	5473489	10/19/2015	6:32 AM	SR 9 at I-285 EB	C	1	0	Rear End	Dark-Lit	Dry	East	East	2	No	No
56	5486206	10/26/2015	5:00 PM	SR 9 at I-285 EB	C	1	0	Rear End	Daylight	Wet	East	East	2	No	No
57	5494727	10/31/2015	12:59 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
58	5499063	11/5/2015	7:45 AM	SR 9 at I-285 EB	O	0	0	Sideswipe - Same Direction	Daylight	Wet	North	North	2	No	No
59	5501152	11/4/2015	7:02 PM	SR 9 at I-285 EB	O	0	0	Rear End	Dark-Unlit	Dry	East	East	2	No	No
60	5504572	11/8/2015	2:24 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Wet	East	East	2	No	No
61	5507344	11/11/2015	10:46 AM	SR 9 at I-285 EB	C	1	0	Rear End	Daylight	Dry	East	East	2	No	No
62	5509464	11/13/2015	10:29 AM	SR 9 at I-285 EB	B	1	0	Rear End	Daylight	Dry	East	East	2	No	No
63	5512735	11/15/2015	3:18 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	North	North	2	No	No
64	5516001	11/19/2015	9:20 AM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
65	5517782	11/20/2015	7:48 AM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
66	5521038	11/21/2015	12:50 PM	SR 9 at I-285 EB	C	1	0	Rear End	Daylight	Dry	North	North	2	No	No
67	5529309	11/30/2015	7:10 AM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	South	South	2	No	No
68	5529349	11/30/2015	6:37 AM	SR 9 at I-285 EB	O	2	0	Left Turn	Daylight	Dry	South	North	2	No	No
69	5533941	12/2/2015	11:55 AM	SR 9 at I-285 EB	O	0	0	Sideswipe - Same Direction	Daylight	Dry	North	North	2	No	No
70	5564862	12/22/2015	3:55 PM	SR 9 at I-285 EB	B	1	0	Rear End	Daylight	Dry	East	East	2	No	No
71	5571718	12/28/2015	12:32 AM	SR 9 at I-285 EB	O	0	0	Backed Into	Dark-Unlit	Dry	South	South	2	No	No
72	5571729	12/26/2015	7:15 PM	SR 9 at I-285 EB	O	0	0	Rear End	Dark-Lit	Dry	East	East	2	No	No
73	5580456	1/4/2016	6:39 PM	SR 9 at I-285 EB	C	2	0	Left Turn	Dark-Lit	Dry	South	North	2	No	No
74	5580457	1/4/2016	11:10 PM	SR 9 at I-285 EB	C	3	0	Left Turn	Dark-Lit	Dry	South	North	2	No	No
75	5587460	1/5/2016	3:53 PM	SR 9 at I-285 EB	C	1	0	Sideswipe - Same Direction	Daylight	Dry	South	South	2	No	No
76	5597045	1/13/2016	9:14 AM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
77	5604967	1/18/2016	7:35 PM	SR 9 at I-285 EB	O	0	0	Rear End	Dark-Unlit	Dry	East	East	2	No	No
78	5608506	1/22/2016	1:23 PM	SR 9 at I-285 EB	O	0	0	Sideswipe - Same Direction	Daylight	Wet	North	North	2	Yes	No
79	5632460	2/6/2016	1:44 PM	SR 9 at I-285 EB	C	1	0	Rear End	Daylight	Dry	East	East	2	No	No
80	5632489	2/8/2016	10:08 PM	SR 9 at I-285 EB	C	2	0	Left Turn	Dark-Lit	Dry	South	North	2	No	No
81	5637983	2/14/2016	5:50 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
82	5644282	2/20/2016	10:23 PM	SR 9 at I-285 EB	O	0	0	Rear End	Dark-Lit	Dry	North	North	2	No	No

Appendix D: SR9 at I-285 Eastbound - Crash Data Table

No.	Crash No.	Date	Time	Location	Severity	Injuries	Fatalities	Crash Type	Lighting	Surface	Dir. 1	Dir. 2	No. Veh.	Truck	Drugs/Alcohol
83	5659855	3/3/2016	3:21 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Wet	East	East	2	No	No
84	5677260	3/16/2016	1:06 PM	SR 9 at I-285 EB	C	1	0	Angle	Daylight	Dry	West	North	2	No	No
85	5677742	3/16/2016	10:42 PM	SR 9 at I-285 EB	O	0	0	Left Turn	Dark-Lit	Dry	South	North	2	No	No
86	5684957	3/22/2016	9:58 AM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	North	North	2	No	No
87	5688691	3/25/2016	3:45 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	North	North	2	No	No
88	5691343	3/28/2016	11:41 AM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	South	South	2	No	No
89	5698082	4/1/2016	7:04 AM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Wet	East	East	2	No	No
90	5698088	4/1/2016	11:02 AM	SR 9 at I-285 EB	C	1	0	Rear End	Daylight	Dry	North	North	2	No	No
91	5710456	4/11/2016	9:17 PM	SR 9 at I-285 EB	O	0	0	Rear End	Dark-Lit	Wet	South	South	2	No	No
92	5727952	4/24/2016	11:25 PM	SR 9 at I-285 EB	O	0	0	Right Turn	Dark-Lit	Dry	East	South	2	No	No
93	5729571	4/22/2016	8:10 AM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
94	5733448	4/27/2016	9:06 AM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
95	5736397	4/29/2016	4:48 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
96	5750465	5/9/2016	4:53 PM	SR 9 at I-285 EB	C	1	0	Rear End	Daylight	Dry	East	East	2	No	No
97	5754817	5/13/2016	11:13 PM	SR 9 at I-285 EB	C	2	0	Rear End	Dark-Lit	Dry	East	East	2	No	No
98	5759578	5/17/2016	4:44 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
99	5759673	5/16/2016	8:47 AM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
100	5759688	5/16/2016	9:27 PM	SR 9 at I-285 EB	O	0	0	Rear End	Dark-Lit	Dry	East	East	2	No	No
101	5761647	5/19/2016	9:37 AM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
102	5765861	5/21/2016	10:56 PM	SR 9 at I-285 EB	O	0	0	Rear End	Dark-Lit	Dry	South	South	2	No	No
103	5768753	5/23/2016	5:22 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
104	5771130	5/24/2016	4:19 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
105	5771170	5/25/2016	2:46 PM	SR 9 at I-285 EB	O	0	0	Backed Into	Daylight	Dry	North	North	2	No	No
106	5772075	5/25/2016	1:13 PM	SR 9 at I-285 EB	O	0	0	Angle	Daylight	Dry	East	North	2	Yes	No
107	5774434	5/5/2015	5:40 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
108	5775555	5/28/2016	10:31 AM	SR 9 at I-285 EB	O	0	0	Left Turn	Daylight	Dry	South	North	2	No	No
109	5777749	5/30/2016	10:48 PM	SR 9 at I-285 EB	C	4	0	Left Turn	Dark-Lit	Dry	South	North	2	No	No
110	5778800	5/30/2016	10:44 AM	SR 9 at I-285 EB	O	0	0	Sideswipe - Same Direction	Daylight	Dry	South	South	2	No	No
111	5779126	5/31/2016	10:25 PM	SR 9 at I-285 EB	O	0	0	Rear End	Dark-Lit	Dry	East	East	2	No	No
112	5781968	6/3/2016	8:10 AM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
113	5807383	6/22/2016	3:37 PM	SR 9 at I-285 EB	C	1	0	Sideswipe - Same Direction	Daylight	Dry	South	South	2	No	No
114	5808542	6/23/2016	10:34 AM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	South	South	2	No	No
115	5809040	6/22/2016	10:04 PM	SR 9 at I-285 EB	O	0	0	Left Turn	Dusk	Dry	South	North	2	No	No
116	5809742	6/24/2016	3:14 PM	SR 9 at I-285 EB	O	0	0	Angle	Daylight	Dry	West	North	2	No	No
117	5816228	6/29/2016	5:23 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
118	5817807	6/29/2016	11:03 PM	SR 9 at I-285 EB	O	0	0	Rear End	Dark-Lit	Dry	South	South	3	No	No
119	5849182	7/25/2016	12:33 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
120	5849265	7/6/2016	12:29 PM	SR 9 at I-285 EB	O	0	0	Sideswipe - Same Direction	Daylight	Wet	North	North	2	No	No
121	5850633	7/25/2016	6:42 PM	SR 9 at I-285 EB	A	2	0	Left Turn	Daylight	Dry	South	North	2	No	No
122	5850883	7/26/2016	8:10 AM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	Yes	No
123	5852478	7/27/2016	8:28 AM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No

Appendix D: SR9 at I-285 Eastbound - Crash Data Table

No.	Crash No.	Date	Time	Location	Severity	Injuries	Fatalities	Crash Type	Lighting	Surface	Dir. 1	Dir. 2	No. Veh.	Truck	Drugs/Alcohol
124	5853172	7/27/2016	2:38 PM	SR 9 at I-285 EB	C	2	0	Rear End	Daylight	Dry	East	East	2	No	No
125	5863738	8/4/2016	5:37 PM	SR 9 at I-285 EB	O	0	0	Sideswipe - Same Direction	Daylight	Dry	East	East	2	No	No
126	5866799	8/6/2016	6:33 PM	SR 9 at I-285 EB	O	0	0	Sideswipe - Same Direction	Daylight	Dry	South	South	2	No	No
127	5868659	8/8/2016	11:53 AM	SR 9 at I-285 EB	O	0	0	Sideswipe - Same Direction	Daylight	Dry	North	North	2	Yes	No
128	5872171	8/10/2016	10:06 AM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	North	North	2	No	No
129	5873319	8/11/2016	9:46 AM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
130	5874823	8/12/2016	3:08 PM	SR 9 at I-285 EB	O	0	0	Sideswipe - Same Direction	Daylight	Dry	North	North	2	No	No
131	5875510	8/13/2016	6:27 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
132	5882533	8/18/2016	3:14 PM	SR 9 at I-285 EB	O	0	0	Sideswipe - Same Direction	Daylight	Dry	South	South	2	No	No
133	5884268	8/19/2016	6:30 PM	SR 9 at I-285 EB	C	1	0	Rear End	Daylight	Dry	South	South	2	No	No
134	5893152	8/26/2016	10:58 AM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
135	5906677	9/5/2016	3:11 PM	SR 9 at I-285 EB	C	3	0	Left Turn	Daylight	Dry	North	South	3	No	No
136	5943244	9/18/2016	2:25 AM	SR 9 at I-285 EB	O	0	0	Sideswipe - Same Direction	Dark-Lit	Dry	South	South	2	No	Yes
137	5943317	9/16/2016	3:09 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
138	5943363	9/19/2016	6:20 PM	SR 9 at I-285 EB	B	1	0	Rear End	Daylight	Dry	East	East	2	No	No
139	5943372	9/19/2016	10:53 AM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
140	5943401	9/21/2016	10:16 AM	SR 9 at I-285 EB	C	2	0	Rear End	Daylight	Dry	East	East	2	No	No
141	5943593	9/29/2016	2:14 PM	SR 9 at I-285 EB	C	1	0	Rear End	Daylight	Dry	East	East	2	No	No
142	5952905	10/11/2016	9:33 AM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
143	5955641	10/13/2016	11:43 AM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
144	5956934	10/14/2016	6:23 AM	SR 9 at I-285 EB	O	0	0	Rear End	Dark-Lit	Dry	East	East	2	No	No
145	5964587	10/18/2016	5:29 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
146	5967962	10/20/2016	6:07 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
147	5971466	10/24/2016	11:53 PM	SR 9 at I-285 EB	B	3	0	Rear End	Dark-Lit	Dry	South	South	2	No	No
148	5977350	10/26/2016	7:27 PM	SR 9 at I-285 EB	C	1	0	Rear End	Dark-Unlit	Dry	South	South	2	No	No
149	5977374	10/28/2016	10:39 PM	SR 9 at I-285 EB	O	0	0	Rear End	Dark-Lit	Dry	East	East	2	No	No
150	5977378	10/29/2016	12:53 AM	SR 9 at I-285 EB	O	0	0	Left Turn	Dark-Lit	Dry	South	North	2	No	No
151	5977836	10/29/2016	12:20 PM	SR 9 at I-285 EB	C	1	0	Rear End	Daylight	Dry	East	East	2	No	No
152	5986638	11/4/2016	3:15 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
153	5986883	11/3/2016	8:54 PM	SR 9 at I-285 EB	C	2	0	Left Turn	Dark-Lit	Dry	North	South	2	No	No
154	5991813	11/7/2016	5:07 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	North	North	2	No	No
155	5993157	11/8/2016	4:01 PM	SR 9 at I-285 EB	C	1	0	Sideswipe - Same Direction	Daylight	Dry	East	East	2	Yes	No
156	5995412	11/11/2016	10:50 AM	SR 9 at I-285 EB	O	0	0	Left Turn	Daylight	Dry	South	North	2	No	No
157	5995473	11/11/2016	7:53 PM	SR 9 at I-285 EB	B	1	0	Rear End	Dark-Lit	Dry	East	East	2	No	No
158	5995904	11/12/2016	2:32 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	South	South	2	No	No
159	5996587	11/13/2016	9:41 AM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
160	6002909	11/16/2016	7:56 AM	SR 9 at I-285 EB	C	1	0	Left Turn	Daylight	Dry	South	North	2	No	No
161	6006195	11/19/2016	10:50 AM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
162	6008747	11/21/2016	4:04 PM	SR 9 at I-285 EB	C	1	0	Rear End	Daylight	Dry	East	East	2	No	No
163	6009265	11/21/2016	4:57 PM	SR 9 at I-285 EB	C	1	0	Rear End	Daylight	Dry	East	East	2	No	No
164	6012221	11/23/2016	3:13 PM	SR 9 at I-285 EB	O	0	0	Sideswipe - Same Direction	Daylight	Dry	North	North	2	No	No

Appendix D: SR9 at I-285 Eastbound - Crash Data Table

No.	Crash No.	Date	Time	Location	Severity	Injuries	Fatalities	Crash Type	Lighting	Surface	Dir. 1	Dir. 2	No. Veh.	Truck	Drugs/Alcohol
165	6012744	11/25/2016	12:33 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	South	South	2	No	No
166	6018946	11/27/2016	4:01 PM	SR 9 at I-285 EB	C	1	0	Rear End	Daylight	Dry	East	East	2	No	No
167	6020723	11/29/2016	1:23 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Wet	North	North	2	No	No
168	6021246	12/1/2016	8:04 AM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
169	6021247	12/1/2016	7:04 AM	SR 9 at I-285 EB	C	1	0	Rear End	Daylight	Dry	East	East	2	No	No
170	6036104	12/11/2016	12:24 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
171	6043431	12/17/2016	12:05 AM	SR 9 at I-285 EB	O	0	0	Sideswipe - Same Direction	Dark-Lit	Dry	South	South	3	No	Yes
172	6044054	12/17/2016	10:19 AM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Wet	East	East	2	No	No
173	6049443	12/20/2016	6:37 PM	SR 9 at I-285 EB	O	0	0	Rear End	Dark-Lit	Dry	East	East	2	No	No
174	6052695	12/22/2016	9:03 PM	SR 9 at I-285 EB	C	1	0	Rear End	Dark-Lit	Dry	East	East	2	No	No
175	6053987	12/15/2016	1:31 PM	SR 9 at I-285 EB	C	1	0	Rear End	Daylight	Dry	North	North	2	No	No
176	6061171	12/30/2016	2:40 PM	SR 9 at I-285 EB	O	0	0	Sideswipe - Same Direction	Daylight	Dry	East	East	2	No	No
177	6063601	12/31/2016	8:50 PM	SR 9 at I-285 EB	O	0	0	Rear End	Dark-Unlit	Wet	East	East	2	No	No
178	6094829	1/12/2017	4:30 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	North	North	2	No	No
179	6094856	1/13/2017	12:36 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
180	6094860	1/14/2017	9:41 AM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
181	6094874	1/16/2017	6:32 AM	SR 9 at I-285 EB	O	0	0	Rear End	Dark-Lit	Dry	South	South	2	No	No
182	6095854	1/27/2017	12:59 PM	SR 9 at I-285 EB	O	0	0	Sideswipe - Same Direction	Daylight	Dry	South	South	2	Yes	No
183	6101529	2/1/2017	1:15 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
184	6108175	2/6/2017	5:34 PM	SR 9 at I-285 EB	O	0	0	Rear End	Dusk	Dry	East	East	2	No	No
185	6110480	2/8/2017	3:03 PM	SR 9 at I-285 EB	B	2	0	Left Turn	Daylight	Dry	South	North	2	No	No
186	6116675	2/13/2017	10:33 AM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
187	6119567	2/14/2017	7:27 PM	SR 9 at I-285 EB	C	1	0	Rear End	Dark-Lit	Dry	North	North	2	No	No
188	6119574	2/14/2017	4:58 PM	SR 9 at I-285 EB	O	0	0	Angle	Daylight	Dry	North	East	2	No	No
189	6126443	2/22/2017	7:44 AM	SR 9 at I-285 EB	C	1	0	Rear End	Dark-Lit	Wet	East	East	2	No	No
190	6131885	2/27/2017	12:44 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
191	6135153	3/2/2017	12:27 AM	SR 9 at I-285 EB	O	0	0	Sideswipe - Same Direction	Dark-Lit	Dry	South	South	2	No	No
192	6135428	3/1/2017	3:59 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
193	6138012	3/3/2017	3:16 PM	SR 9 at I-285 EB	O	0	0	Angle	Daylight	Dry	East	North	2	No	No
194	6140960	3/6/2017	11:56 PM	SR 9 at I-285 EB	O	0	0	Rear End	Dark-Lit	Dry	North	North	2	No	No
195	6141448	3/7/2017	9:38 AM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	North	North	2	No	No
196	6141450	3/7/2017	8:20 AM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
197	6149604	3/10/2017	8:46 PM	SR 9 at I-285 EB	C	2	0	Left Turn	Dark-Lit	Dry	South	North	2	No	No
198	6152317	3/12/2017	4:48 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
199	6153175	3/16/2017	7:11 AM	SR 9 at I-285 EB	B	1	0	Rear End	Daylight	Dry	East	East	4	No	No
200	6153388	3/16/2017	2:50 PM	SR 9 at I-285 EB	O	0	0	Sideswipe - Same Direction	Daylight	Dry	East	East	2	Yes	No
201	6154440	3/17/2017	10:31 AM	SR 9 at I-285 EB	C	1	0	Rear End	Daylight	Dry	East	East	2	No	No
202	6157555	3/18/2017	2:36 PM	SR 9 at I-285 EB	O	0	0	Left Turn	Daylight	Dry	South	North	2	No	No
203	6157563	3/17/2017	7:22 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	South	South	2	No	No
204	6158458	3/21/2017	10:09 AM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
205	6158459	3/21/2017	7:58 AM	SR 9 at I-285 EB	C	1	0	Rear End	Daylight	Dry	East	East	2	No	No

Appendix D: SR9 at I-285 Eastbound - Crash Data Table

No.	Crash No.	Date	Time	Location	Severity	Injuries	Fatalities	Crash Type	Lighting	Surface	Dir. 1	Dir. 2	No. Veh.	Truck	Drugs/Alcohol
206	6158577	3/21/2017	7:11 AM	SR 9 at I-285 EB	B	1	0	Rear End	Daylight	Dry	East	East	4	No	No
207	6163158	3/22/2017	7:59 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	South	South	3	No	No
208	6187789	4/10/2017	8:45 AM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
209	6197550	4/14/2017	9:23 PM	SR 9 at I-285 EB	O	0	0	Rear End	Dark-Lit	Dry	East	East	2	No	No
210	6197594	4/15/2017	6:22 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
211	6199843	4/19/2017	8:04 AM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
212	6200208	4/17/2017	11:22 PM	SR 9 at I-285 EB	O	0	0	Rear End	Dark-Unlit	Dry	East	East	2	No	No
213	6202129	4/18/2017	4:08 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
214	6214318	4/30/2017	11:01 PM	SR 9 at I-285 EB	O	0	0	Left Turn	Dark-Lit	Dry	South	North	2	No	No
215	6217570	5/2/2017	7:36 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
216	6220118	5/5/2017	8:00 AM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Wet	East	East	2	No	No
217	6224110	5/6/2017	12:23 AM	SR 9 at I-285 EB	C	1	0	Rear End	Dark-Lit	Dry	North	North	2	No	No
218	6226594	5/9/2017	2:49 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	South	South	2	No	No
219	6226760	5/9/2017	4:20 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
220	6244242	5/19/2017	2:23 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
221	6253497	5/29/2017	9:08 PM	SR 9 at I-285 EB	O	0	0	Rear End	Dark-Lit	Dry	South	South	2	No	No
222	6263574	6/4/2017	5:04 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
223	6267975	6/9/2017	8:37 AM	SR 9 at I-285 EB	O	0	0	Left Turn	Daylight	Dry	South	North	2	No	No
224	6271682	6/11/2017	2:53 PM	SR 9 at I-285 EB	C	1	0	Rear End	Daylight	Dry	East	East	2	No	No
225	6275025	6/15/2017	11:53 AM	SR 9 at I-285 EB	C	1	0	Rear End	Daylight	Dry	North	North	2	No	No
226	6284562	6/22/2017	6:21 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Wet	East	East	2	No	No
227	6285415	6/23/2017	9:27 AM	SR 9 at I-285 EB	B	1	0	Left Turn	Daylight	Dry	South	North	2	No	No
228	6288727	6/24/2017	3:56 PM	SR 9 at I-285 EB	C	1	0	Rear End	Daylight	Dry	East	East	2	No	No
229	6288740	6/23/2017	5:40 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
230	6291453	6/27/2017	1:37 PM	SR 9 at I-285 EB	C	2	0	Rear End	Daylight	Dry	North	North	2	No	No
231	6309901	7/14/2017	12:18 AM	SR 9 at I-285 EB	O	0	0	Rear End	Dark-Lit	Dry	South	South	2	No	No
232	6312866	7/16/2017	12:28 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
233	6333158	7/28/2017	4:57 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
234	6341361	8/3/2017	2:49 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
235	6344933	8/7/2017	5:31 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	South	South	2	No	No
236	6347784	8/9/2017	10:42 AM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Wet	East	East	2	No	No
237	6348064	8/8/2017	9:08 PM	SR 9 at I-285 EB	O	0	0	Rear End	Dark-Unlit	Dry	East	East	2	No	No
238	6355836	8/15/2017	10:27 PM	SR 9 at I-285 EB	C	1	0	Left Turn	Dark-Lit	Dry	South	North	2	No	No
239	6379961	9/1/2017	4:21 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	North	North	3	No	No
240	6379966	9/4/2017	11:45 PM	SR 9 at I-285 EB	O	0	0	Rear End	Dark-Lit	Dry	North	North	2	No	No
241	6381683	9/5/2017	9:30 PM	SR 9 at I-285 EB	O	0	0	Sideswipe - Same Direction	Dark-Unlit	Wet	South	South	2	No	No
242	6399129	9/20/2017	7:08 AM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
243	6402354	9/21/2017	5:45 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	South	South	2	No	No
244	6412287	10/1/2017	7:04 PM	SR 9 at I-285 EB	C	1	0	Rear End	Daylight	Dry	East	East	2	No	No
245	6416431	10/4/2017	3:56 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
246	6423554	10/10/2017	7:59 AM	SR 9 at I-285 EB	O	0	0	Sideswipe - Same Direction	Daylight	Wet	East	East	2	No	No

Appendix D: SR9 at I-285 Eastbound - Crash Data Table

No.	Crash No.	Date	Time	Location	Severity	Injuries	Fatalities	Crash Type	Lighting	Surface	Dir. 1	Dir. 2	No. Veh.	Truck	Drugs/Alcohol
247	6434794	10/17/2017	9:21 AM	SR 9 at I-285 EB	C	2	0	Left Turn	Daylight	Dry	South	North	2	No	No
248	6465220	11/8/2017	7:01 PM	SR 9 at I-285 EB	O	0	0	Rear End	Dark-Lit	Wet	North	North	3	No	No
249	6465261	11/8/2017	7:48 PM	SR 9 at I-285 EB	O	0	0	Left Turn	Dark-Lit	Wet	South	North	2	No	No
250	6480839	11/20/2017	11:39 AM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
251	6481183	11/17/2017	5:52 AM	SR 9 at I-285 EB	C	1	0	Left Turn	Dark-Unlit	Dry	South	North	2	No	No
252	6482300	11/21/2017	2:50 PM	SR 9 at I-285 EB	C	1	0	Rear End	Daylight	Dry	East	East	2	No	No
253	6488904	11/27/2017	3:53 PM	SR 9 at I-285 EB	O	0	0	Sideswipe - Same Direction	Daylight	Dry	South	South	2	No	No
254	6499423	12/2/2017	1:36 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
255	6499446	12/3/2017	12:48 PM	SR 9 at I-285 EB	C	1	0	Rear End	Daylight	Dry	East	East	2	No	No
256	6501464	12/4/2017	6:50 PM	SR 9 at I-285 EB	C	1	0	Rear End	Dark-Unlit	Dry	North	North	2	No	No
257	6504321	12/7/2017	8:16 AM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
258	6509419	12/9/2017	9:16 PM	SR 9 at I-285 EB	O	0	0	Rear End	Dark-Lit	Wet	East	East	2	No	No
259	6523720	12/14/2017	9:12 AM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
260	6523744	12/12/2017	11:40 AM	SR 9 at I-285 EB	O	0	0	Angle	Daylight	Dry	South	North	2	No	No
261	6523768	12/16/2017	1:39 AM	SR 9 at I-285 EB	C	4	0	Rear End	Dark-Unlit	Dry	South	South	2	No	No
262	6523818	12/18/2017	10:57 AM	SR 9 at I-285 EB	O	0	0	Left Turn	Daylight	Dry	South	North	2	No	No
263	6525497	12/22/2017	9:53 AM	SR 9 at I-285 EB	O	0	0	Right Turn	Daylight	Dry	East	South	2	No	No
264	6529371	12/25/2017	3:47 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
265	6550335	1/11/2018	11:30 AM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Wet	East	East	2	No	No
266	6554881	1/13/2018	9:58 AM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
267	6566485	1/25/2018	9:24 AM	SR 9 at I-285 EB	O	0	0	Sideswipe - Same Direction	Daylight	Dry	North	North	2	No	No
268	6571308	1/28/2018	12:20 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Wet	East	East	3	No	No
269	6580499	2/1/2018	2:41 PM	SR 9 at I-285 EB	C	1	0	Rear End	Daylight	Dry	East	South	2	No	No
270	6580547	2/2/2018	7:07 PM	SR 9 at I-285 EB	C	1	0	Left Turn	Dark-Lit	Dry	South	North	2	No	No
271	6589344	2/11/2018	7:05 PM	SR 9 at I-285 EB	O	0	0	Rear End	Dark-Lit	Wet	East	East	2	No	No
272	6589352	2/8/2018	6:30 AM	SR 9 at I-285 EB	O	0	0	Left Turn	Dark-Lit	Dry	South	North	2	No	No
273	6589629	2/13/2018	12:03 AM	SR 9 at I-285 EB	C	2	0	Angle	Dark-Lit	Dry	North	West	2	No	No
274	6601208	2/17/2018	3:13 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
275	6601239	2/18/2018	1:10 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	South	South	2	No	No
276	6611709	2/24/2018	11:59 AM	SR 9 at I-285 EB	B	1	0	Rear End	Daylight	Dry	East	East	2	No	No
277	6617979	3/1/2018	8:38 PM	SR 9 at I-285 EB	C	2	0	Rear End	Dark-Lit	Wet	East	East	2	No	No
278	6617987	3/1/2018	7:20 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	North	North	2	No	No
279	6623036	3/6/2018	6:55 PM	SR 9 at I-285 EB	O	0	0	Rear End	Dusk	Dry	South	South	2	No	No
280	6625769	3/7/2018	7:18 PM	SR 9 at I-285 EB	O	0	0	Rear End	Dark-Unlit	Dry	East	East	4	No	No
281	6643376	1/12/2018	8:45 AM	SR 9 at I-285 EB	O	0	0	Sideswipe - Same Direction	Daylight	Wet	South	South	2	No	No
282	6660892	4/6/2018	10:59 AM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
283	6665769	4/7/2018	10:15 PM	SR 9 at I-285 EB	C	1	0	Sideswipe - Same Direction	Dark-Unlit	Wet	East	East	2	No	No
284	6679956	4/20/2018	12:45 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
285	6680181	4/17/2018	4:53 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
286	6681815	4/19/2018	3:54 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
287	6689639	4/30/2018	8:58 AM	SR 9 at I-285 EB	C	1	0	Rear End	Daylight	Dry	East	East	2	No	No

Appendix D: SR9 at I-285 Eastbound - Crash Data Table

No.	Crash No.	Date	Time	Location	Severity	Injuries	Fatalities	Crash Type	Lighting	Surface	Dir. 1	Dir. 2	No. Veh.	Truck	Drugs/Alcohol
288	6691116	5/1/2018	8:31 AM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
289	6704878	5/10/2018	6:15 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	South	2	No	No
290	6712407	5/16/2018	11:21 AM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Wet	South	South	2	No	No
291	6715719	5/15/2018	8:55 AM	SR 9 at I-285 EB	O	0	0	Sideswipe - Same Direction	Daylight	Dry	North	North	2	No	No
292	6719324	5/18/2018	6:07 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
293	6719332	5/19/2018	2:36 PM	SR 9 at I-285 EB	C	1	0	Left Turn	Daylight	Dry	South	North	2	No	No
294	6728963	5/27/2018	3:46 PM	SR 9 at I-285 EB	C	1	0	Rear End	Daylight	Dry	East	East	2	No	No
295	6731925	5/31/2018	6:13 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	South	South	3	No	No
296	6736434	6/1/2018	4:11 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Wet	East	East	2	No	No
297	6740737	6/5/2018	11:22 AM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
298	6740759	6/5/2018	7:29 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
299	6774282	6/28/2018	9:16 PM	SR 9 at I-285 EB	O	0	0	Rear End	Dark-Lit	Dry	North	North	2	No	No
300	6774842	6/29/2018	10:47 AM	SR 9 at I-285 EB	C	1	0	Rear End	Daylight	Dry	East	East	2	No	No
301	6788282	7/11/2018	3:49 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
302	6788956	7/12/2018	10:28 AM	SR 9 at I-285 EB	O	0	0	Left Turn	Daylight	Dry	South	North	2	No	No
303	6793510	7/16/2018	1:28 PM	SR 9 at I-285 EB	O	0	0	Sideswipe - Same Direction	Daylight	Dry	South	South	2	Yes	No
304	6804573	7/25/2018	12:59 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
305	6831176	8/10/2018	4:24 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	North	North	2	No	No
306	6831185	8/13/2018	9:01 AM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
307	6834468	8/9/2018	5:30 PM	SR 9 at I-285 EB	O	0	0	Sideswipe - Same Direction	Daylight	Dry	North	North	2	No	No
308	6835202	8/11/2018	6:13 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
309	6841696	8/8/2018	4:46 PM	SR 9 at I-285 EB	C	1	0	Backed Into	Daylight	Dry	East	East	2	No	No
310	6842202	8/20/2018	5:04 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	North	North	2	Yes	No
311	6845971	8/21/2018	5:14 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
312	6872982	9/13/2018	5:35 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
313	6877430	9/15/2018	8:51 PM	SR 9 at I-285 EB	O	0	0	Rear End	Dark-Lit	Dry	East	East	2	No	No
314	6896586	9/29/2018	12:51 PM	SR 9 at I-285 EB	C	1	0	Left Turn	Daylight	Dry	North	South	2	No	No
315	6915753	10/13/2018	2:27 PM	SR 9 at I-285 EB	O	0	0	Left Turn	Daylight	Dry	South	North	2	No	No
316	6919995	10/17/2018	11:53 PM	SR 9 at I-285 EB	O	0	0	Sideswipe - Same Direction	Dark-Lit	Dry	East	East	2	Yes	No
317	6925970	10/23/2018	1:18 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	North	North	2	No	No
318	6946076	11/1/2018	3:36 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Wet	North	North	2	No	No
319	6960055	11/14/2018	8:36 PM	SR 9 at I-285 EB	O	0	0	Rear End	Dark-Lit	Wet	East	East	2	No	No
320	6980727	11/27/2018	5:26 PM	SR 9 at I-285 EB	C	1	0	Left Turn	Dusk	Dry	South	North	2	No	No
321	6982842	11/28/2018	5:12 PM	SR 9 at I-285 EB	O	0	0	Sideswipe - Same Direction	Daylight	Dry	North	South	2	Yes	No
322	6985841	11/29/2018	8:00 AM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
323	6996885	12/10/2018	7:17 AM	SR 9 at I-285 EB	O	0	0	Rear End	Dark-Unlit	Wet	East	East	2	No	No
324	6998828	12/10/2018	4:51 PM	SR 9 at I-285 EB	C	1	0	Rear End	Dusk	Wet	East	East	2	No	No
325	7009777	12/16/2018	9:43 AM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Wet	South	South	2	No	No
326	7019750	12/20/2018	7:41 AM	SR 9 at I-285 EB	O	0	0	Rear End	Dawn	Wet	North	North	2	No	No
327	7033443	1/6/2019	1:44 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
328	7033447	1/5/2019	2:52 PM	SR 9 at I-285 EB	C	2	0	Rear End	Daylight	Dry	North	North	2	No	No

Appendix D: SR9 at I-285 Eastbound - Crash Data Table

No.	Crash No.	Date	Time	Location	Severity	Injuries	Fatalities	Crash Type	Lighting	Surface	Dir. 1	Dir. 2	No. Veh.	Truck	Drugs/Alcohol
329	7033455	1/6/2019	8:42 PM	SR 9 at I-285 EB	O	0	0	Rear End	Dark-Lit	Dry	East	East	2	No	No
330	7043822	1/14/2019	9:53 AM	SR 9 at I-285 EB	O	0	0	Left Turn	Daylight	Dry	South	North	2	No	No
331	7048662	1/16/2019	7:50 AM	SR 9 at I-285 EB	C	1	0	Rear End	Daylight	Dry	East	East	2	No	No
332	7049383	1/16/2019	8:39 AM	SR 9 at I-285 EB	O	0	0	Left Turn	Daylight	Dry	North	South	2	No	No
333	7054928	1/19/2019	6:22 PM	SR 9 at I-285 EB	O	0	0	Left Turn	Dusk	Wet	South	North	2	No	No
334	7065477	1/30/2019	5:24 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
335	7065979	1/31/2019	11:04 AM	SR 9 at I-285 EB	C	1	0	Rear End	Daylight	Dry	East	East	2	No	No
336	7067569	2/1/2019	2:37 AM	SR 9 at I-285 EB	O	0	0	Rear End	Dark-Lit	Dry	East	East	2	No	No
337	7080536	2/8/2019	12:47 PM	SR 9 at I-285 EB	O	0	0	Sideswipe - Same Direction	Daylight	Dry	South	South	2	No	No
338	7086403	2/15/2019	12:57 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
339	7089493	2/15/2019	9:48 PM	SR 9 at I-285 EB	B	1	0	Left Turn	Dark-Lit	Wet	South	North	2	No	No
340	7100306	2/20/2019	7:29 PM	SR 9 at I-285 EB	O	0	0	Rear End	Dark-Lit	Wet	South	South	2	No	No
341	7100401	2/19/2019	4:54 PM	SR 9 at I-285 EB	O	0	0	Backed Into	Daylight	Wet	North	North	2	No	No
342	7115074	3/5/2019	12:33 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	North	North	2	No	No
343	7124006	3/14/2019	6:51 PM	SR 9 at I-285 EB	O	0	0	Sideswipe - Same Direction	Dawn	Dry	South	South	2	No	No
344	7129224	3/15/2019	6:00 PM	SR 9 at I-285 EB	O	0	0	Backed Into	Daylight	Dry	North	North	2	No	No
345	7148135	3/25/2019	9:03 PM	SR 9 at I-285 EB	B	1	0	Rear End	Dark-Lit	Dry	South	South	2	No	No
346	7153537	4/3/2019	2:31 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
347	7156550	4/6/2019	8:44 PM	SR 9 at I-285 EB	C	1	0	Left Turn	Dark-Unlit	Dry	North	East	2	No	No
348	7164006	4/13/2019	9:57 PM	SR 9 at I-285 EB	C	1	0	Rear End	Dark-Unlit	Dry	East	East	3	No	Yes
349	7164884	4/13/2019	3:07 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	South	South	3	No	No
350	7169363	4/18/2019	5:44 PM	SR 9 at I-285 EB	O	0	0	Sideswipe - Same Direction	Daylight	Dry	North	North	2	No	No
351	7170066	4/19/2019	6:38 AM	SR 9 at I-285 EB	O	0	0	Rear End	Dark-Lit	Wet	South	South	2	No	No
352	7170143	4/19/2019	2:40 PM	SR 9 at I-285 EB	C	1	0	Rear End	Daylight	Wet	East	East	2	No	No
353	7172397	4/18/2019	3:38 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	Yes	No
354	7175357	4/23/2019	7:22 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	South	South	2	No	No
355	7177936	4/25/2019	6:46 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Wet	East	East	2	No	No
356	7179556	4/25/2019	3:16 PM	SR 9 at I-285 EB	C	1	0	Rear End	Daylight	Dry	East	East	2	No	No
357	7196378	5/7/2019	6:58 AM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	South	South	2	No	No
358	7200110	5/4/2019	9:53 PM	SR 9 at I-285 EB	O	0	0	Angle	Dark-Lit	Wet	East	North	2	No	No
359	7204741	5/10/2019	3:57 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
360	7204754	5/9/2019	4:47 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
361	7208510	5/16/2019	7:07 AM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
362	7209305	5/16/2019	7:53 AM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
363	7214684	5/20/2019	1:39 PM	SR 9 at I-285 EB	C	1	0	Rear End	Daylight	Dry	East	East	2	Yes	No
364	7218747	5/21/2019	12:09 PM	SR 9 at I-285 EB	C	1	0	Rear End	Daylight	Dry	East	East	2	No	No
365	7234595	6/3/2019	5:15 PM	SR 9 at I-285 EB	C	1	0	Rear End	Daylight	Dry	East	East	2	No	No
366	7251361	6/15/2019	8:32 AM	SR 9 at I-285 EB	C	2	0	Rear End	Daylight	Dry	East	East	2	No	No
367	7252729	6/17/2019	7:45 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Wet	East	East	2	No	No
368	7261602	6/22/2019	11:51 PM	SR 9 at I-285 EB	O	0	0	Sideswipe - Same Direction	Dark-Unlit	Dry	South	South	2	No	No
369	7261850	6/25/2019	6:59 PM	SR 9 at I-285 EB	C	1	0	Rear End	Daylight	Dry	East	East	2	No	No

Appendix D: SR9 at I-285 Eastbound - Crash Data Table

No.	Crash No.	Date	Time	Location	Severity	Injuries	Fatalities	Crash Type	Lighting	Surface	Dir. 1	Dir. 2	No. Veh.	Truck	Drugs/Alcohol
370	7267734	6/24/2019	4:49 PM	SR 9 at I-285 EB	O	0	0	Sideswipe - Same Direction	Daylight	Dry	North	North	2	No	No
371	7268350	7/1/2019	12:40 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
372	7268667	6/28/2019	10:15 PM	SR 9 at I-285 EB	O	0	0	Sideswipe - Same Direction	Dark-Unlit	Dry	South	South	2	No	No
373	7279154	7/9/2019	12:15 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	South	South	2	Yes	No
374	7285221	7/13/2019	7:27 PM	SR 9 at I-285 EB	O	0	0	Rear End	Dark-Lit	Wet	East	East	2	No	No
375	7301136	7/28/2019	8:57 AM	SR 9 at I-285 EB	O	0	0	Left Turn	Daylight	Dry	South	North	2	No	No
376	7303061	7/29/2019	12:20 AM	SR 9 at I-285 EB	O	0	0	Left Turn	Dark-Lit	Dry	South	North	2	No	No
377	7304487	8/1/2019	1:12 PM	SR 9 at I-285 EB	C	1	0	Rear End	Daylight	Dry	East	East	2	No	No
378	7325729	8/18/2019	12:48 AM	SR 9 at I-285 EB	O	0	0	Left Turn	Dark-Lit	Dry	South	North	2	No	No
379	7328238	8/21/2019	12:05 AM	SR 9 at I-285 EB	O	0	0	Rear End	Dark-Lit	Dry	South	East	2	Yes	No
380	7333699	8/26/2019	9:44 AM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
381	7336087	8/28/2019	8:04 AM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	South	South	2	No	No
382	7336564	8/27/2019	8:13 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	North	North	3	No	No
383	7338856	8/29/2019	6:13 PM	SR 9 at I-285 EB	C	1	0	Rear End	Daylight	Dry	North	North	3	No	No
384	7342665	8/29/2019	3:36 PM	SR 9 at I-285 EB	B	1	0	Left Turn	Daylight	Dry	South	North	2	No	No
385	7342672	8/30/2019	4:06 PM	SR 9 at I-285 EB	C	1	0	Rear End	Daylight	Dry	North	North	2	No	No
386	7357425	9/13/2019	10:15 AM	SR 9 at I-285 EB	O	0	0	Sideswipe - Same Direction	Daylight	Dry	South	South	2	Yes	No
387	7357435	9/15/2019	6:21 PM	SR 9 at I-285 EB	O	0	0	Sideswipe - Same Direction	Daylight	Dry	South	South	2	No	No
388	7365330	9/20/2019	11:12 PM	SR 9 at I-285 EB	O	0	0	Sideswipe - Same Direction	Dark-Lit	Dry	South	South	2	No	No
389	7374550	9/28/2019	10:45 AM	SR 9 at I-285 EB	O	0	0	Sideswipe - Same Direction	Daylight	Dry	East	East	2	No	No
390	7375352	10/1/2019	11:53 AM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	South	South	2	No	No
391	7392188	10/12/2019	3:23 PM	SR 9 at I-285 EB	B	3	0	Left Turn	Daylight	Dry	South	North	2	No	No
392	7392203	10/14/2019	11:21 AM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	South	South	2	No	No
393	7396356	10/17/2019	10:07 AM	SR 9 at I-285 EB	O	0	0	Backed Into	Daylight	Dry	South	North	2	No	No
394	7429781	11/9/2019	9:44 PM	SR 9 at I-285 EB	C	1	0	Rear End	Dark-Lit	Dry	South	South	2	No	No
395	7459924	11/30/2019	7:26 PM	SR 9 at I-285 EB	C	1	0	Left Turn	Dark-Lit	Dry	South	North	2	No	No
396	7474777	12/10/2019	2:32 PM	SR 9 at I-285 EB	O	0	0	Sideswipe - Same Direction	Daylight	Wet	North	North	2	No	No
397	7479640	12/14/2019	1:47 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
398	7494328	12/26/2019	4:48 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	South	South	2	No	No
399	7496645	12/29/2019	8:56 PM	SR 9 at I-285 EB	O	0	0	Left Turn	Dark-Unlit	Dry	South	North	2	No	No
400	7498642	12/27/2019	2:51 PM	SR 9 at I-285 EB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
401	7501602	12/31/2019	3:31 PM	SR 9 at I-285 EB	C	1	0	Left Turn	Daylight	Dry	South	North	2	No	No

**APPENDIX E: SR 9 AT I-285 WESTBOUND –
CRASH DATA TABLE**



Appendix E: SR 9 at I-285 Westbound - Crash Data Table

No.	Crash No.	Date	Time	Location	Severity	Injuries	Fatalities	Crash Type	Lighting	Surface	Dir. 1	Dir. 2	No. Veh.	Truck	Drugs/Alcohol
1	5117202	1/4/2015	1:13 PM	SR 9 at I-285 WB	C	1	0	Rear End	Daylight	Wet	South	South	2	No	No
2	5124836	1/10/2015	10:30 PM	SR 9 at I-285 WB	C	1	0	Left Turn	Dark-Unlit	Dry	North	South	2	No	No
3	5135712	1/21/2015	3:40 PM	SR 9 at I-285 WB	O	0	0	Left Turn	Daylight	Dry	North	South	2	No	No
4	5137754	1/23/2015	10:54 AM	SR 9 at I-285 WB	C	1	0	Rear End	Daylight	Wet	West	West	2	No	No
5	5138832	1/23/2015	5:16 PM	SR 9 at I-285 WB	B	2	0	Left Turn	Dusk	Wet	North	South	2	No	No
6	5139467	1/25/2015	10:01 AM	SR 9 at I-285 WB	C	1	0	Rear End	Daylight	Dry	West	West	2	No	No
7	5140047	1/26/2015	7:15 AM	SR 9 at I-285 WB	C	1	0	Rear End	Dawn	Dry	West	West	2	No	No
8	5154011	1/31/2015	11:54 AM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	3	No	No
9	5179362	2/16/2015	7:13 PM	SR 9 at I-285 WB	O	0	0	Rear End	Dark-Unlit	Wet	North	North	2	No	No
10	5185710	2/19/2015	7:38 PM	SR 9 at I-285 WB	O	0	0	Rear End	Dark-Lit	Dry	West	West	2	No	No
11	5188717	2/19/2015	12:45 PM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
12	5209424	3/5/2015	3:44 PM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	North	North	2	No	No
13	5209453	3/6/2015	7:30 PM	SR 9 at I-285 WB	C	1	0	U-Turn	Dark-Unlit	Dry	West	West	2	No	No
14	5281091	3/29/2015	3:54 PM	SR 9 at I-285 WB	C	1	0	Rear End	Daylight	Dry	West	West	2	No	No
15	5281246	4/10/2015	5:11 PM	SR 9 at I-285 WB	C	3	0	Rear End	Daylight	Wet	South	South	4	No	No
16	5281251	4/11/2015	9:46 AM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
17	5281345	4/17/2015	7:31 AM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
18	5281403	4/21/2015	10:32 AM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
19	5281404	4/21/2015	10:55 AM	SR 9 at I-285 WB	C	1	0	Rear End	Daylight	Dry	West	West	2	No	No
20	5281423	4/21/2015	9:26 PM	SR 9 at I-285 WB	C	1	0	Rear End	Dark-Lit	Dry	West	West	2	No	No
21	5281430	4/22/2015	1:39 PM	SR 9 at I-285 WB	O	0	0	Left Turn	Daylight	Dry	North	South	2	No	No
22	5341489	5/29/2015	8:04 PM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
23	5341671	6/19/2015	11:22 AM	SR 9 at I-285 WB	O	0	0	U-Turn	Daylight	Dry	North	North	2	No	No
24	5341677	6/19/2015	1:39 PM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
25	5341755	6/26/2015	6:39 PM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
26	5341762	6/29/2015	1:04 PM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
27	5351343	7/9/2015	10:30 PM	SR 9 at I-285 WB	O	0	0	Left Turn	Dark-Lit	Dry	North	South	2	No	No
28	5354805	7/10/2015	11:41 AM	SR 9 at I-285 WB	O	0	0	Sideswipe	Daylight	Dry	North	West	2	Yes	No
29	5356132	7/12/2015	8:01 PM	SR 9 at I-285 WB	O	0	0	Sideswipe	Daylight	Dry	North	North	2	No	No
30	5362546	7/18/2015	2:15 AM	SR 9 at I-285 WB	O	0	0	Head On	Dark-Lit	Dry	North	North	2	No	No
31	5364905	7/22/2015	12:35 PM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
32	5365547	7/22/2015	1:45 PM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
33	5401503	8/24/2015	10:58 AM	SR 9 at I-285 WB	C	2	0	Rear End	Daylight	Dry	West	West	2	No	No
34	5425455	9/15/2015	8:14 AM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	South	South	2	Yes	No
35	5426780	9/16/2015	1:56 PM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
36	5434793	5/9/2015	11:23 PM	SR 9 at I-285 WB	O	0	0	Rear End	Dark-Lit	Dry	South	South	2	No	No

Appendix E: SR 9 at I-285 Westbound - Crash Data Table

No.	Crash No.	Date	Time	Location	Severity	Injuries	Fatalities	Crash Type	Lighting	Surface	Dir. 1	Dir. 2	No. Veh.	Truck	Drugs/Alcohol
37	5434828	5/13/2015	9:00 AM	SR 9 at I-285 WB	O	0	0	Right Turn	Daylight	Dry	East	South	2	Yes	No
38	5434855	5/16/2015	12:42 PM	SR 9 at I-285 WB	C	1	0	Left Turn	Daylight	Dry	North	South	2	No	No
39	5435025	6/5/2015	12:07 PM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
40	5435047	6/8/2015	3:42 PM	SR 9 at I-285 WB	C	1	0	Rear End	Daylight	Dry	West	West	2	No	No
41	5435126	6/18/2015	9:21 AM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	South	South	2	No	No
42	5435166	6/22/2015	6:34 PM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	South	South	2	No	No
43	5435810	7/12/2015	10:33 AM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	North	North	2	No	No
44	5436186	7/21/2015	2:44 PM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	North	North	2	No	No
45	5436324	7/24/2015	2:10 AM	SR 9 at I-285 WB	O	0	0	Left Turn	Dark-Lit	Dry	North	South	2	No	No
46	5437428	8/12/2015	3:40 PM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
47	5438089	8/26/2015	2:18 PM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
48	5439835	9/21/2015	5:13 PM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	3	No	No
49	5449742	9/29/2015	10:07 AM	SR 9 at I-285 WB	O	0	0	Sideswipe	Daylight	Wet	West	West	2	Yes	No
50	5468605	10/14/2015	8:36 AM	SR 9 at I-285 WB	O	0	0	Sideswipe	Daylight	Dry	West	West	2	Yes	No
51	5471102	10/15/2015	3:30 PM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
52	5473529	10/19/2015	6:24 AM	SR 9 at I-285 WB	C	1	0	Rear End	Dark-Lit	Dry	West	West	2	No	No
53	5474501	10/16/2015	7:40 PM	SR 9 at I-285 WB	O	0	0	Rear End	Dark-Lit	Dry	West	West	2	No	No
54	5477350	10/20/2015	5:00 PM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	North	North	2	No	No
55	5489391	10/29/2015	7:17 PM	SR 9 at I-285 WB	O	0	0	Left Turn	Dark-Lit	Dry	North	South	2	No	No
56	5490464	10/29/2015	7:36 PM	SR 9 at I-285 WB	O	0	0	Sideswipe	Dark-Unlit	Dry	South	South	2	No	No
57	5504579	11/7/2015	12:39 PM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Wet	West	West	3	No	No
58	5521022	11/22/2015	2:21 PM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
59	5561842	12/5/2015	7:36 AM	SR 9 at I-285 WB	C	3	0	Rear End	Daylight	Dry	West	West	2	No	No
60	5561875	12/7/2015	4:14 PM	SR 9 at I-285 WB	C	1	0	Sideswipe	Daylight	Dry	North	North	2	No	No
61	5568718	12/23/2015	9:04 AM	SR 9 at I-285 WB	O	0	0	Backed Into	Daylight	Wet	North	North	2	No	No
62	5592490	1/8/2016	5:10 PM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	North	North	2	No	No
63	5610645	1/25/2016	3:25 PM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
64	5613290	1/28/2016	8:05 AM	SR 9 at I-285 WB	C	2	0	Rear End	Daylight	Dry	South	South	2	No	No
65	5632388	2/3/2016	12:03 PM	SR 9 at I-285 WB	C	1	0	Sideswipe	Daylight	Wet	South	South	2	No	No
66	5632425	2/2/2016	5:23 PM	SR 9 at I-285 WB	O	0	0	Sideswipe	Daylight	Dry	North	North	2	No	No
67	5635304	2/12/2016	11:23 AM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
68	5635306	2/12/2016	12:39 PM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
69	5647282	2/22/2016	4:03 PM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Wet	South	South	2	No	No
70	5661140	3/4/2016	2:34 PM	SR 9 at I-285 WB	O	0	0	Left Turn	Daylight	Dry	North	South	2	No	No
71	5666580	3/8/2016	1:31 PM	SR 9 at I-285 WB	C	1	0	Rear End	Daylight	Dry	West	West	2	No	No
72	5672040	3/12/2016	7:59 AM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No

Appendix E: SR 9 at I-285 Westbound - Crash Data Table

No.	Crash No.	Date	Time	Location	Severity	Injuries	Fatalities	Crash Type	Lighting	Surface	Dir. 1	Dir. 2	No. Veh.	Truck	Drugs/Alcohol
73	5680092	3/17/2016	9:03 PM	SR 9 at I-285 WB	C	1	0	Rear End	Dark-Lit	Dry	West	West	2	No	No
74	5681964	3/19/2016	1:49 PM	SR 9 at I-285 WB	B	2	0	Rear End	Daylight	Dry	West	West	3	No	No
75	5688608	3/25/2016	10:58 AM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
76	5688900	3/24/2016	8:31 AM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
77	5694086	3/29/2016	9:45 PM	SR 9 at I-285 WB	C	1	0	Rear End	Dark-Unlit	Dry	West	West	2	No	No
78	5698332	3/29/2016	9:57 PM	SR 9 at I-285 WB	O	0	0	Rear End	Dark-Lit	Dry	West	West	3	No	No
79	5721976	4/20/2016	5:19 PM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
80	5732149	4/26/2016	11:31 AM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
81	5743269	5/4/2016	1:35 PM	SR 9 at I-285 WB	O	0	0	Sideswipe	Daylight	Dry	West	West	2	No	No
82	5760862	5/18/2016	12:15 PM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
83	5765943	5/22/2016	12:20 AM	SR 9 at I-285 WB	O	0	0	Rear End	Dark-Lit	Dry	West	West	2	No	No
84	5767749	5/23/2016	10:46 AM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	Yes	No
85	5778978	5/31/2016	5:43 PM	SR 9 at I-285 WB	C	2	0	Rear End	Daylight	Dry	West	West	2	No	No
86	5781969	6/3/2016	6:05 AM	SR 9 at I-285 WB	C	1	0	Rear End	Daylight	Dry	West	West	2	No	No
87	5799199	6/13/2016	5:45 PM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
88	5809692	6/24/2016	1:01 PM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
89	5811546	6/24/2016	11:22 PM	SR 9 at I-285 WB	O	0	0	Rear End	Dark-Lit	Dry	West	West	2	No	No
90	5816226	6/29/2016	12:09 PM	SR 9 at I-285 WB	O	0	0	Left Turn	Daylight	Dry	North	South	2	No	No
91	5851230	7/26/2016	11:44 AM	SR 9 at I-285 WB	O	0	0	Sideswipe	Daylight	Dry	South	South	2	No	No
92	5859217	7/31/2016	11:14 AM	SR 9 at I-285 WB	C	1	0	Rear End	Daylight	Dry	West	West	2	No	No
93	5868418	8/8/2016	5:33 AM	SR 9 at I-285 WB	C	2	0	Rear End	Dawn	Wet	West	West	2	No	No
94	5874459	8/12/2016	2:38 PM	SR 9 at I-285 WB	O	0	0	Sideswipe	Daylight	Dry	North	North	2	No	No
95	5875508	8/13/2016	9:58 PM	SR 9 at I-285 WB	O	0	0	Rear End	Dark-Lit	Dry	West	West	2	No	No
96	5880685	8/17/2016	1:30 PM	SR 9 at I-285 WB	O	0	0	Sideswipe	Daylight	Dry	North	North	2	No	No
97	5887774	8/22/2016	4:17 PM	SR 9 at I-285 WB	C	1	0	Rear End	Daylight	Dry	West	West	2	No	No
98	5889671	8/23/2016	11:20 PM	SR 9 at I-285 WB	C	2	0	Left Turn	Dark-Lit	Dry	North	South	2	No	No
99	5890418	8/24/2016	8:55 AM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
100	5894930	8/27/2016	1:53 PM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	North	North	2	No	No
101	5902863	9/1/2016	11:06 AM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	3	No	No
102	5904376	9/3/2016	4:57 PM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	South	South	2	No	No
103	5911825	9/9/2016	4:19 PM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
104	5920194	9/15/2016	10:31 AM	SR 9 at I-285 WB	O	0	0	Sideswipe	Daylight	Dry	West	West	2	No	No
105	5947714	10/5/2016	4:43 PM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
106	5954611	10/12/2016	4:03 PM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
107	5961771	10/18/2016	12:25 PM	SR 9 at I-285 WB	C	1	0	Rear End	Daylight	Dry	North	North	2	No	No
108	5970637	10/24/2016	11:09 AM	SR 9 at I-285 WB	O	0	0	Sideswipe	Daylight	Dry	South	South	2	No	No

Appendix E: SR 9 at I-285 Westbound - Crash Data Table

No.	Crash No.	Date	Time	Location	Severity	Injuries	Fatalities	Crash Type	Lighting	Surface	Dir. 1	Dir. 2	No. Veh.	Truck	Drugs/Alcohol
109	5973978	10/26/2016	1:38 PM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
110	5976778	10/28/2016	1:04 PM	SR 9 at I-285 WB	C	1	0	Rear End	Daylight	Dry	West	West	2	No	No
111	6002913	11/17/2016	1:09 AM	SR 9 at I-285 WB	O	0	0	Rear End	Dark-Lit	Dry	South	South	2	No	Yes
112	6007014	11/20/2016	12:07 PM	SR 9 at I-285 WB	O	0	0	Sideswipe	Daylight	Dry	North	North	2	No	No
113	6043251	12/15/2016	9:44 PM	SR 9 at I-285 WB	C	1	0	Left Turn	Dark-Lit	Dry	South	North	2	No	No
114	6044038	12/16/2016	3:17 PM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
115	6044043	12/16/2016	10:37 AM	SR 9 at I-285 WB	O	0	0	Sideswipe	Daylight	Dry	West	West	2	Yes	No
116	6044813	12/18/2016	4:57 PM	SR 9 at I-285 WB	C	1	0	Rear End	Dusk	Wet	South	South	3	No	No
117	6052887	12/23/2016	5:29 PM	SR 9 at I-285 WB	O	0	0	Sideswipe	Dark-Lit	Dry	North	North	2	No	No
118	6053463	12/23/2016	1:24 PM	SR 9 at I-285 WB	O	0	0	Left Turn	Daylight	Dry	North	South	2	No	No
119	6061094	12/30/2016	12:56 PM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
120	6072856	1/8/2017	1:10 PM	SR 9 at I-285 WB	B	1	0	Sideswipe	Daylight	Dry	North	North	2	No	No
121	6078167	1/5/2017	7:41 PM	SR 9 at I-285 WB	O	0	0	Left Turn	Dark-Unlit	Dry	North	South	3	No	No
122	6094442	1/26/2017	11:58 AM	SR 9 at I-285 WB	C	1	0	Left Turn	Daylight	Dry	North	South	2	Yes	No
123	6094807	1/10/2017	7:16 PM	SR 9 at I-285 WB	C	1	0	Left Turn	Dark-Unlit	Dry	North	South	2	No	No
124	6094930	1/17/2017	12:56 PM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	North	North	2	No	No
125	6094961	1/18/2017	2:50 PM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
126	6098637	1/27/2017	4:54 PM	SR 9 at I-285 WB	B	2	0	Left Turn	Daylight	Dry	North	South	2	No	No
127	6098648	1/28/2017	3:17 PM	SR 9 at I-285 WB	C	1	0	Left Turn	Daylight	Dry	North	South	2	No	No
128	6101711	2/1/2017	2:47 PM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
129	6107983	2/4/2017	3:28 PM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	South	South	2	No	No
130	6116676	2/13/2017	2:49 PM	SR 9 at I-285 WB	C	2	0	Sideswipe	Daylight	Dry	South	South	2	Yes	No
131	6125752	2/17/2017	5:54 PM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
132	6125765	2/21/2017	11:23 AM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	South	South	2	No	No
133	6127819	2/23/2017	2:26 PM	SR 9 at I-285 WB	O	0	0	Sideswipe	Daylight	Dry	West	West	2	No	No
134	6132235	2/25/2017	10:17 AM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
135	6146257	3/10/2017	2:50 PM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
136	6149608	3/12/2017	1:06 AM	SR 9 at I-285 WB	O	0	0	Rear End	Dark-Unlit	Wet	West	West	2	No	No
137	6153979	3/16/2017	7:12 PM	SR 9 at I-285 WB	C	1	0	Rear End	Daylight	Dry	West	West	2	No	No
138	6157557	3/19/2017	12:10 PM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
139	6157569	3/17/2017	5:15 PM	SR 9 at I-285 WB	O	0	0	Sideswipe	Daylight	Dry	West	West	2	No	No
140	6158710	3/21/2017	2:05 PM	SR 9 at I-285 WB	O	0	0	Sideswipe	Daylight	Dry	South	South	2	No	No
141	6158985	3/20/2017	6:04 PM	SR 9 at I-285 WB	O	0	0	Sideswipe	Dusk	Dry	West	West	2	No	No
142	6158989	3/20/2017	4:57 PM	SR 9 at I-285 WB	O	0	0	Left Turn	Daylight	Dry	North	South	2	No	No
143	6167625	3/24/2017	3:57 PM	SR 9 at I-285 WB	O	0	0	Angle	Daylight	Dry	West	North	2	No	No
144	6170117	3/29/2017	12:06 PM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No

Appendix E: SR 9 at I-285 Westbound - Crash Data Table

No.	Crash No.	Date	Time	Location	Severity	Injuries	Fatalities	Crash Type	Lighting	Surface	Dir. 1	Dir. 2	No. Veh.	Truck	Drugs/Alcohol
145	6173471	3/31/2017	6:54 PM	SR 9 at I-285 WB	O	0	0	Sideswipe	Daylight	Dry	West	West	2	No	No
146	6201512	4/19/2017	7:33 PM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
147	6214337	4/28/2017	11:22 AM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
148	6214465	4/27/2017	9:42 PM	SR 9 at I-285 WB	O	0	0	Rear End	Dark-Lit	Dry	North	North	2	No	No
149	6226376	5/9/2017	12:19 PM	SR 9 at I-285 WB	O	0	0	Sideswipe	Daylight	Dry	North	North	2	No	No
150	6230187	5/10/2017	4:45 PM	SR 9 at I-285 WB	O	0	0	Left Turn	Daylight	Dry	North	South	2	No	No
151	6234972	5/15/2017	2:40 PM	SR 9 at I-285 WB	O	0	0	U-Turn	Daylight	Dry	North	North	2	No	No
152	6258871	6/1/2017	9:02 AM	SR 9 at I-285 WB	C	1	0	Rear End	Daylight	Dry	South	South	2	No	No
153	6271660	6/11/2017	11:15 AM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
154	6273234	6/13/2017	5:28 AM	SR 9 at I-285 WB	O	0	0	Rear End	Dawn	Dry	West	West	2	No	No
155	6299602	7/5/2017	4:04 PM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
156	6306998	7/12/2017	12:57 PM	SR 9 at I-285 WB	O	0	0	Sideswipe	Daylight	Dry	West	West	2	Yes	No
157	6314931	7/19/2017	10:42 AM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	South	South	2	No	No
158	6322021	7/20/2017	5:24 PM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
159	6322868	7/24/2017	2:23 PM	SR 9 at I-285 WB	C	1	0	Rear End	Daylight	Wet	West	West	2	No	No
160	6339009	8/2/2017	1:40 PM	SR 9 at I-285 WB	C	1	0	Rear End	Daylight	Dry	West	West	2	No	No
161	6339832	7/30/2017	7:14 PM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	South	South	2	No	No
162	6344682	8/6/2017	4:01 PM	SR 9 at I-285 WB	O	0	0	Angle	Daylight	Wet	West	South	2	No	No
163	6355557	8/14/2017	2:45 PM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
164	6358238	8/16/2017	1:39 PM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	South	South	2	No	No
165	6364727	8/23/2017	10:40 AM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
166	6364932	8/23/2017	6:33 PM	SR 9 at I-285 WB	O	0	0	Sideswipe	Daylight	Dry	North	North	2	No	No
167	6367550	8/22/2017	2:19 PM	SR 9 at I-285 WB	O	0	0	Sideswipe	Daylight	Dry	South	South	2	No	No
168	6370463	8/25/2017	3:07 PM	SR 9 at I-285 WB	O	0	0	Sideswipe	Daylight	Dry	North	North	2	No	No
169	6384062	9/7/2017	9:02 AM	SR 9 at I-285 WB	O	0	0	Left Turn	Daylight	Dry	North	South	2	No	No
170	6391396	9/10/2017	2:16 PM	SR 9 at I-285 WB	C	1	0	Rear End	Daylight	Dry	West	West	2	No	No
171	6391413	9/12/2017	11:47 AM	SR 9 at I-285 WB	C	1	0	Left Turn	Daylight	Wet	North	South	2	No	No
172	6410359	9/29/2017	8:48 AM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
173	6413718	9/30/2017	10:34 AM	SR 9 at I-285 WB	C	1	0	Rear End	Daylight	Dry	West	West	2	No	No
174	6421017	10/8/2017	1:53 PM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Wet	South	South	2	No	No
175	6424066	10/7/2017	10:55 PM	SR 9 at I-285 WB	C	1	0	Rear End	Dark-Lit	Dry	West	West	2	No	No
176	6430339	10/15/2017	7:19 PM	SR 9 at I-285 WB	O	0	0	Rear End	Dark-Lit	Dry	West	West	2	No	No
177	6430768	10/11/2017	10:52 AM	SR 9 at I-285 WB	O	0	0	Sideswipe	Daylight	Dry	North	North	2	No	No
178	6437750	10/19/2017	9:05 AM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
179	6444159	10/21/2017	1:35 PM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
180	6471547	11/11/2017	11:50 AM	SR 9 at I-285 WB	O	0	0	Sideswipe	Daylight	Dry	North	North	2	No	No

Appendix E: SR 9 at I-285 Westbound - Crash Data Table

No.	Crash No.	Date	Time	Location	Severity	Injuries	Fatalities	Crash Type	Lighting	Surface	Dir. 1	Dir. 2	No. Veh.	Truck	Drugs/Alcohol
181	6474369	11/15/2017	7:48 AM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
182	6477348	11/16/2017	3:31 PM	SR 9 at I-285 WB	B	3	0	Left Turn	Daylight	Dry	North	South	2	No	No
183	6488045	11/24/2017	7:32 PM	SR 9 at I-285 WB	C	2	0	Rear End	Dark-Lit	Dry	North	North	2	No	No
184	6502605	12/6/2017	7:59 AM	SR 9 at I-285 WB	C	1	0	Rear End	Daylight	Dry	West	West	2	No	No
185	6508414	12/11/2017	7:04 AM	SR 9 at I-285 WB	C	1	0	Rear End	Daylight	Dry	West	West	2	No	No
186	6523733	12/14/2017	9:19 PM	SR 9 at I-285 WB	O	0	0	Left Turn	Dark-Lit	Dry	North	South	2	No	No
187	6523741	12/15/2017	3:07 PM	SR 9 at I-285 WB	O	0	0	Sideswipe	Daylight	Dry	West	West	2	No	No
188	6523783	12/17/2017	6:25 PM	SR 9 at I-285 WB	O	0	0	Rear End	Dark-Lit	Wet	West	West	2	No	No
189	6523806	12/18/2017	1:36 PM	SR 9 at I-285 WB	O	0	0	Sideswipe	Daylight	Dry	West	West	2	No	No
190	6523807	12/18/2017	4:57 PM	SR 9 at I-285 WB	C	2	0	Sideswipe	Daylight	Dry	North	North	2	No	No
191	6523822	12/19/2017	10:45 AM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
192	6525057	12/21/2017	5:16 PM	SR 9 at I-285 WB	O	0	0	Right Turn	Daylight	Wet	West	North	2	No	No
193	6530414	12/27/2017	3:20 PM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
194	6536771	1/2/2018	5:09 PM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
195	6538041	1/3/2018	8:31 PM	SR 9 at I-285 WB	O	0	0	Rear End	Dark-Lit	Dry	West	West	2	No	No
196	6547577	1/10/2018	11:11 AM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
197	6571338	1/26/2018	1:43 PM	SR 9 at I-285 WB	O	0	0	Sideswipe	Daylight	Dry	South	South	2	No	No
198	6580548	2/4/2018	6:33 PM	SR 9 at I-285 WB	O	0	0	Rear End	Dark-Lit	Wet	West	West	2	No	No
199	6589360	2/10/2018	12:45 PM	SR 9 at I-285 WB	O	0	0	Sideswipe	Daylight	Wet	South	South	2	No	No
200	6592820	2/13/2018	9:30 AM	SR 9 at I-285 WB	O	0	0	Sideswipe	Daylight	Dry	West	West	2	Yes	No
201	6601219	2/18/2018	3:18 PM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	North	North	2	No	No
202	6611348	2/26/2018	7:47 AM	SR 9 at I-285 WB	O	0	0	Left Turn	Daylight	Wet	North	South	2	No	No
203	6614604	2/27/2018	9:14 AM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
204	6621350	3/2/2018	1:17 PM	SR 9 at I-285 WB	O	0	0	Sideswipe	Daylight	Dry	West	West	2	No	No
205	6627043	3/6/2018	4:25 PM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
206	6638939	10/1/2017	1:11 PM	SR 9 at I-285 WB	O	0	0	Left Turn	Daylight	Dry	North	South	2	No	No
207	6649984	3/28/2018	3:04 PM	SR 9 at I-285 WB	C	1	0	Rear End	Daylight	Dry	West	West	2	No	No
208	6651534	3/24/2018	8:39 PM	SR 9 at I-285 WB	C	1	0	Rear End	Dark-Lit	Dry	West	West	2	No	No
209	6682491	4/23/2018	1:10 PM	SR 9 at I-285 WB	C	2	0	Rear End	Daylight	Wet	West	West	2	No	No
210	6689653	4/30/2018	6:14 AM	SR 9 at I-285 WB	O	0	0	Rear End	Dawn	Dry	North	North	2	No	No
211	6690293	4/29/2018	2:22 PM	SR 9 at I-285 WB	O	0	0	Left Turn	Daylight	Dry	North	South	2	No	No
212	6702326	5/1/2018	2:09 PM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
213	6708446	5/14/2018	2:25 PM	SR 9 at I-285 WB	O	0	0	Sideswipe	Daylight	Dry	South	South	2	No	No
214	6708642	5/13/2018	11:27 AM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
215	6712405	5/16/2018	8:04 AM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Wet	West	West	2	Yes	No
216	6719320	5/19/2018	7:40 PM	SR 9 at I-285 WB	C	1	0	Rear End	Dusk	Dry	West	West	2	No	No

Appendix E: SR 9 at I-285 Westbound - Crash Data Table

No.	Crash No.	Date	Time	Location	Severity	Injuries	Fatalities	Crash Type	Lighting	Surface	Dir. 1	Dir. 2	No. Veh.	Truck	Drugs/Alcohol
217	6736413	6/3/2018	6:43 PM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	South	South	2	No	No
218	6736426	6/2/2018	11:51 PM	SR 9 at I-285 WB	C	2	0	Left Turn	Dark-Lit	Dry	North	South	2	No	No
219	6748377	6/15/2018	8:58 AM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	3	No	No
220	6751061	6/18/2018	10:03 AM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	3	No	No
221	6768092	6/23/2018	12:41 AM	SR 9 at I-285 WB	C	1	0	Left Turn	Dark-Lit	Dry	North	South	2	No	No
222	6782813	7/5/2018	1:01 PM	SR 9 at I-285 WB	C	1	0	Rear End	Daylight	Dry	West	West	2	No	No
223	6788206	7/11/2018	1:47 PM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	South	South	3	No	No
224	6789672	7/6/2018	8:03 AM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
225	6802273	7/23/2018	8:27 AM	SR 9 at I-285 WB	O	0	0	Left Turn	Daylight	Dry	South	North	2	No	No
226	6803410	7/24/2018	11:38 AM	SR 9 at I-285 WB	O	0	0	Right Turn	Daylight	Dry	West	North	2	No	No
227	6810456	7/29/2018	7:46 PM	SR 9 at I-285 WB	O	0	0	Left Turn	Daylight	Dry	North	South	2	No	No
228	6812398	8/1/2018	7:56 AM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
229	6824799	8/8/2018	5:41 AM	SR 9 at I-285 WB	O	0	0	Rear End	Dark-Unlit	Dry	West	West	2	No	No
230	6830909	8/8/2018	9:04 AM	SR 9 at I-285 WB	C	1	0	Rear End	Daylight	Dry	West	West	2	No	No
231	6833509	8/15/2018	8:49 AM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
232	6840773	8/18/2018	10:17 AM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	East	2	No	No
233	6846184	8/24/2018	12:05 PM	SR 9 at I-285 WB	O	0	0	Sideswipe	Daylight	Dry	South	North	2	No	No
234	6853110	8/29/2018	7:21 AM	SR 9 at I-285 WB	O	1	0	Left Turn	Daylight	Dry	North	South	2	No	No
235	6859839	8/30/2018	7:54 PM	SR 9 at I-285 WB	O	0	0	Angle	Dusk	Dry	West	South	2	No	No
236	6860743	8/26/2018	5:58 PM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	South	South	2	No	No
237	6871911	9/8/2018	10:19 AM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
238	6877972	9/15/2018	2:40 AM	SR 9 at I-285 WB	O	0	0	Left Turn	Dark-Lit	Dry	North	South	2	No	No
239	6879129	9/13/2018	9:36 PM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
240	6888128	9/25/2018	11:15 AM	SR 9 at I-285 WB	O	0	0	Sideswipe	Daylight	Dry	South	South	2	Yes	No
241	6889851	9/23/2018	3:27 PM	SR 9 at I-285 WB	C	1	0	Rear End	Daylight	Dry	West	West	2	No	No
242	6902125	10/5/2018	7:24 AM	SR 9 at I-285 WB	O	0	0	Rear End	Dawn	Dry	West	West	2	No	No
243	6911721	10/12/2018	11:53 AM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
244	6944837	10/28/2018	10:47 PM	SR 9 at I-285 WB	O	0	0	Rear End	Dark-Lit	Dry	South	South	2	No	Yes
245	6951881	11/8/2018	6:11 AM	SR 9 at I-285 WB	B	2	0	Left Turn	Dark-Lit	Dry	North	South	2	No	No
246	6957233	11/8/2018	5:30 PM	SR 9 at I-285 WB	O	0	0	Sideswipe	Dusk	Wet	South	South	2	No	No
247	6968270	11/12/2018	6:07 PM	SR 9 at I-285 WB	O	0	0	Sideswipe	Dark-Unlit	Wet	North	North	2	No	No
248	6976709	11/23/2018	9:40 AM	SR 9 at I-285 WB	C	1	0	Rear End	Daylight	Dry	South	South	2	No	No
249	6976744	11/25/2018	6:17 PM	SR 9 at I-285 WB	O	0	0	Rear End	Dark-Lit	Dry	West	West	2	No	No
250	6979737	11/28/2018	2:30 PM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
251	6982577	11/30/2018	1:37 PM	SR 9 at I-285 WB	O	0	0	Sideswipe	Daylight	Dry	North	North	2	No	No
252	6985645	11/28/2018	2:06 PM	SR 9 at I-285 WB	O	0	0	Sideswipe	Daylight	Dry	West	West	2	Yes	No

Appendix E: SR 9 at I-285 Westbound - Crash Data Table

No.	Crash No.	Date	Time	Location	Severity	Injuries	Fatalities	Crash Type	Lighting	Surface	Dir. 1	Dir. 2	No. Veh.	Truck	Drugs/Alcohol
253	6997219	12/7/2018	1:19 PM	SR 9 at I-285 WB	O	0	0	Sideswipe	Daylight	Dry	North	North	2	No	No
254	6997686	12/7/2018	5:50 PM	SR 9 at I-285 WB	O	0	0	Rear End	Dusk	Wet	North	North	2	No	No
255	6997699	12/9/2018	12:22 AM	SR 9 at I-285 WB	O	0	0	Rear End	Dark-Lit	Wet	South	South	2	No	No
256	6997729	12/8/2018	7:35 PM	SR 9 at I-285 WB	O	0	0	Sideswipe	Dark-Lit	Wet	West	West	2	No	No
257	7016736	12/22/2018	11:51 AM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
258	7019733	12/27/2018	9:41 PM	SR 9 at I-285 WB	O	0	0	Rear End	Dark-Lit	Wet	West	West	2	No	No
259	7022746	12/28/2018	3:10 PM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Wet	West	West	2	No	No
260	7022756	12/30/2018	4:30 PM	SR 9 at I-285 WB	C	1	0	Rear End	Daylight	Wet	West	West	2	No	No
261	7045669	1/15/2019	3:06 PM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
262	7054167	1/21/2019	4:05 PM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
263	7062845	1/25/2019	8:46 AM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	North	North	2	No	No
264	7062851	1/28/2019	7:16 AM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
265	7065161	1/29/2019	4:20 PM	SR 9 at I-285 WB	C	1	0	Rear End	Daylight	Dry	West	West	2	No	No
266	7065164	1/29/2019	6:24 PM	SR 9 at I-285 WB	O	0	0	Rear End	Dark-Lit	Dry	West	West	2	No	No
267	7071192	2/4/2019	9:57 AM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
268	7071428	2/2/2019	6:33 AM	SR 9 at I-285 WB	O	0	0	Rear End	Dawn	Dry	West	West	2	No	No
269	7071441	2/2/2019	9:55 AM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
270	7074593	2/6/2019	4:57 PM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	East	East	2	No	No
271	7080477	2/5/2019	7:34 PM	SR 9 at I-285 WB	O	0	0	Sideswipe	Dark-Lit	Dry	South	South	2	No	No
272	7083505	2/12/2019	4:34 PM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Wet	West	West	2	No	No
273	7085288	2/14/2019	11:24 AM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	North	North	2	No	No
274	7085512	2/10/2019	5:32 PM	SR 9 at I-285 WB	O	0	0	Left Turn	Daylight	Dry	North	South	2	No	No
275	7089475	2/17/2019	6:53 PM	SR 9 at I-285 WB	O	0	0	Right Turn	Dark-Lit	Wet	West	North	2	No	No
276	7089512	2/17/2019	8:30 PM	SR 9 at I-285 WB	O	0	0	Left Turn	Dark-Lit	Wet	North	South	2	No	No
277	7100321	2/21/2019	1:02 PM	SR 9 at I-285 WB	C	1	0	Rear End	Daylight	Wet	West	West	2	No	No
278	7100392	2/24/2019	11:10 PM	SR 9 at I-285 WB	C	1	0	Sideswipe	Dark-Unlit	Dry	West	West	2	No	No
279	7100393	2/24/2019	4:40 PM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
280	7101773	2/27/2019	9:20 AM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Wet	West	West	2	No	No
281	7108753	3/3/2019	2:20 PM	SR 9 at I-285 WB	B	1	0	Rear End	Daylight	Wet	North	North	2	No	No
282	7112998	3/6/2019	7:04 PM	SR 9 at I-285 WB	O	0	0	Rear End	Dark-Lit	Dry	North	North	2	No	No
283	7113003	3/3/2019	8:20 PM	SR 9 at I-285 WB	O	0	0	Left Turn	Dark-Lit	Wet	North	South	2	No	No
284	7122627	3/13/2019	1:38 PM	SR 9 at I-285 WB	O	0	0	Left Turn	Daylight	Dry	North	South	2	No	No
285	7125505	3/14/2019	10:16 AM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	Yes	No
286	7135352	3/15/2019	12:12 PM	SR 9 at I-285 WB	C	2	0	Left Turn	Daylight	Wet	North	South	2	No	No
287	7148126	3/29/2019	11:36 PM	SR 9 at I-285 WB	C	1	0	Rear End	Dark-Lit	Dry	West	West	2	No	No
288	7150897	4/2/2019	9:48 PM	SR 9 at I-285 WB	O	0	0	Rear End	Dark-Unlit	Dry	West	West	2	No	No

Appendix E: SR 9 at I-285 Westbound - Crash Data Table

No.	Crash No.	Date	Time	Location	Severity	Injuries	Fatalities	Crash Type	Lighting	Surface	Dir. 1	Dir. 2	No. Veh.	Truck	Drugs/Alcohol
289	7160113	4/11/2019	9:00 AM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
290	7173259	4/20/2019	3:01 PM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Wet	South	South	2	No	No
291	7177937	4/25/2019	10:29 PM	SR 9 at I-285 WB	O	0	0	Rear End	Dark-Unlit	Wet	North	North	2	No	No
292	7182386	4/23/2019	11:46 PM	SR 9 at I-285 WB	B	1	0	Left Turn	Dark-Lit	Dry	North	South	2	No	No
293	7191155	4/30/2019	9:30 AM	SR 9 at I-285 WB	C	2	0	Left Turn	Daylight	Dry	North	South	2	No	No
294	7197842	5/8/2019	9:45 AM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
295	7201148	5/10/2019	7:47 AM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
296	7201429	5/9/2019	8:11 PM	SR 9 at I-285 WB	O	0	0	Rear End	Dark-Lit	Wet	South	South	2	No	No
297	7204737	5/12/2019	4:21 PM	SR 9 at I-285 WB	O	0	0	Left Turn	Daylight	Wet	North	South	2	No	No
298	7209797	5/16/2019	10:03 PM	SR 9 at I-285 WB	O	0	0	Rear End	Dark-Lit	Dry	West	West	2	No	No
299	7233180	5/31/2019	6:33 PM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	South	South	2	No	No
300	7254034	6/18/2019	5:37 PM	SR 9 at I-285 WB	O	0	0	Sideswipe	Daylight	Wet	North	North	2	No	No
301	7261614	6/24/2019	2:16 PM	SR 9 at I-285 WB	C	2	0	Left Turn	Daylight	Dry	North	South	2	No	No
302	7268668	6/29/2019	1:20 PM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	South	South	2	No	No
303	7268678	6/29/2019	11:57 PM	SR 9 at I-285 WB	O	0	0	Sideswipe	Dark-Lit	Dry	North	South	2	No	No
304	7269565	7/2/2019	10:46 AM	SR 9 at I-285 WB	O	0	0	Sideswipe	Daylight	Dry	West	West	2	No	No
305	7282948	7/13/2019	10:55 AM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
306	7286260	7/16/2019	2:27 PM	SR 9 at I-285 WB	O	0	0	Left Turn	Daylight	Dry	North	South	2	No	No
307	7290853	7/20/2019	1:08 PM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	South	South	3	No	No
308	7301116	7/28/2019	12:03 PM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
309	7301124	7/25/2019	1:18 PM	SR 9 at I-285 WB	O	0	0	Sideswipe	Daylight	Dry	North	North	2	No	No
310	7302644	7/30/2019	10:29 PM	SR 9 at I-285 WB	C	1	0	Rear End	Dark-Lit	Wet	South	South	2	No	No
311	7302663	7/30/2019	9:35 PM	SR 9 at I-285 WB	C	1	0	Left Turn	Dark-Lit	Wet	North	South	2	No	No
312	7314190	8/8/2019	3:40 PM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	South	South	3	No	No
313	7316986	8/11/2019	4:26 PM	SR 9 at I-285 WB	C	1	0	Rear End	Daylight	Dry	West	West	2	No	No
314	7325744	8/17/2019	4:23 PM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	North	North	2	No	No
315	7342684	9/2/2019	2:15 PM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	South	South	2	No	No
316	7342692	9/1/2019	2:38 PM	SR 9 at I-285 WB	O	0	0	Sideswipe	Daylight	Dry	West	West	2	No	No
317	7342693	9/1/2019	2:30 PM	SR 9 at I-285 WB	O	0	0	Sideswipe	Daylight	Dry	West	West	2	No	No
318	7350272	9/10/2019	9:56 AM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No
319	7351829	9/11/2019	1:28 PM	SR 9 at I-285 WB	C	1	0	Rear End	Daylight	Dry	West	West	2	No	No
320	7353203	9/11/2019	2:41 PM	SR 9 at I-285 WB	O	0	0	Angle	Daylight	Dry	North	West	2	No	No
321	7357439	9/15/2019	1:57 PM	SR 9 at I-285 WB	O	0	0	Left Turn	Daylight	Dry	North	South	2	No	No
322	7370519	9/25/2019	7:30 PM	SR 9 at I-285 WB	B	1	0	Left Turn	Dark-Lit	Dry	North	South	2	No	No
323	7373569	9/29/2019	1:18 AM	SR 9 at I-285 WB	C	1	0	Rear End	Dark-Lit	Dry	South	South	3	No	Yes
324	7374570	9/29/2019	12:56 PM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	West	West	2	No	No

Appendix E: SR 9 at I-285 Westbound - Crash Data Table

No.	Crash No.	Date	Time	Location	Severity	Injuries	Fatalities	Crash Type	Lighting	Surface	Dir. 1	Dir. 2	No. Veh.	Truck	Drugs/Alcohol
325	7374579	9/28/2019	1:00 AM	SR 9 at I-285 WB	O	0	0	Sideswipe	Daylight	Dry	West	West	2	No	No
326	7374954	9/29/2019	11:14 AM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	South	South	2	No	No
327	7384126	10/4/2019	9:48 PM	SR 9 at I-285 WB	O	0	0	Rear End	Dark-Unlit	Dry	West	West	2	No	No
328	7386674	10/9/2019	2:25 PM	SR 9 at I-285 WB	C	1	0	Left Turn	Daylight	Dry	North	South	2	No	No
329	7386685	10/9/2019	3:29 PM	SR 9 at I-285 WB	O	0	0	Right Turn	Daylight	Dry	West	North	2	No	No
330	7392174	10/11/2019	3:49 PM	SR 9 at I-285 WB	O	0	0	Sideswipe	Daylight	Dry	North	North	2	No	No
331	7392176	10/12/2019	9:20 PM	SR 9 at I-285 WB	B	2	0	Rear End	Dark-Lit	Dry	West	West	2	No	No
332	7392214	10/11/2019	11:45 AM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	South	South	2	No	No
333	7424193	11/5/2019	4:56 PM	SR 9 at I-285 WB	B	1	0	Left Turn	Daylight	Dry	North	South	2	No	No
334	7442999	11/19/2019	8:19 AM	SR 9 at I-285 WB	C	1	0	Left Turn	Daylight	Dry	North	South	2	No	No
335	7459909	11/27/2019	7:05 PM	SR 9 at I-285 WB	O	0	0	Sideswipe	Dark-Unlit	Dry	North	North	2	No	No
336	7459940	11/30/2019	9:46 PM	SR 9 at I-285 WB	O	0	0	Left Turn	Dark-Lit	Dry	North	South	2	No	No
337	7471815	12/10/2019	5:57 PM	SR 9 at I-285 WB	O	0	0	Rear End	Dark-Lit	Wet	South	South	2	No	No
338	7479603	12/13/2019	5:50 PM	SR 9 at I-285 WB	O	0	0	Rear End	Dark-Lit	Wet	West	West	2	No	No
339	7479630	12/14/2019	4:08 PM	SR 9 at I-285 WB	C	1	0	Rear End	Daylight	Dry	West	West	2	No	No
340	7479631	12/15/2019	11:53 AM	SR 9 at I-285 WB	O	0	0	Sideswipe	Daylight	Dry	West	West	2	No	No
341	7485459	12/18/2019	3:08 PM	SR 9 at I-285 WB	C	1	0	Left Turn	Daylight	Dry	North	South	2	No	No
342	7490632	12/20/2019	11:21 AM	SR 9 at I-285 WB	O	0	0	Rear End	Daylight	Dry	South	South	2	No	No

Bicycle and Pedestrian/20-Minute Neighborhoods

Analysis

The City of Sandy Springs Transportation Master Plan included a multimodal review and analysis of pedestrian and bicycle facilities in the City. Specifically, this review and analysis sought to identify:

- Efficient additions to the network that bring the most value to the City and its users
- New connections to facilities in other cities, including low stress parallel routes to connect the network.
- High-level policy overview of potential bicycle and pedestrian amenities, ideal locations, partners, etc.
- Areas where it might be safe for personal transportation devices such as electric scooters or electric skateboards, to use these facilities.

To identify these elements, the following tasks were completed:

- Review of Existing and Proposed Pedestrian and Bicycle Projects (Previous Plans)
- Analysis of Level of Traffic Stress
- Analysis of 20-Minute Neighborhood Activity Center Walk Sheds
- Bicycle and Pedestrian Focus Group Meetings
- Multimodal Recommendations

Following is an overview of these tasks and related findings.

Review of Existing and Proposed Pedestrian and Bicycle Projects

Existing, programmed, and proposed pedestrian and bicycle facilities provided by the City were mapped to develop a baseline understanding. Projects were sourced from previous plans such as the 2014 Bicycle, Pedestrian, and Trail Plan, Sandy Springs Sidewalk Master Plan, 2019 Sandy Springs Trail Master Plan, and the 2017 North Fulton Comprehensive Transportation Plan. Additionally, the mapping included projects from adjacent jurisdictions including the Cities of Atlanta, Dunwoody, and Roswell, as well as Cobb and Gwinnett Counties. Figure 1 illustrates existing and programmed sidewalks. Figure 2 illustrates existing, programmed, and proposed sidewalks from previous planning efforts. Figure 3 illustrates existing, programmed, and proposed bicycle facilities, side paths, and trails.

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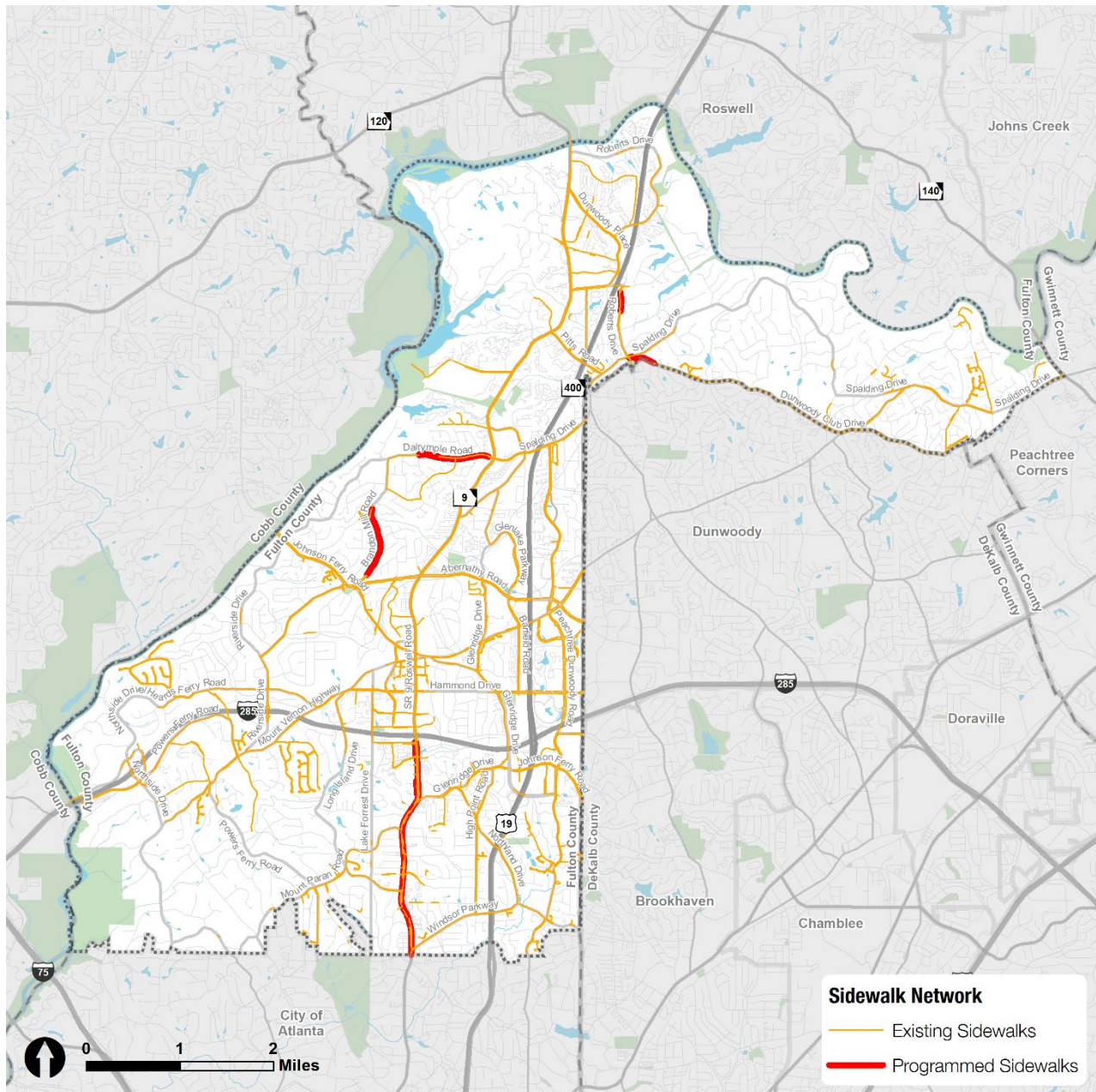


Figure 1 – Existing and Programmed Sidewalks Facilities

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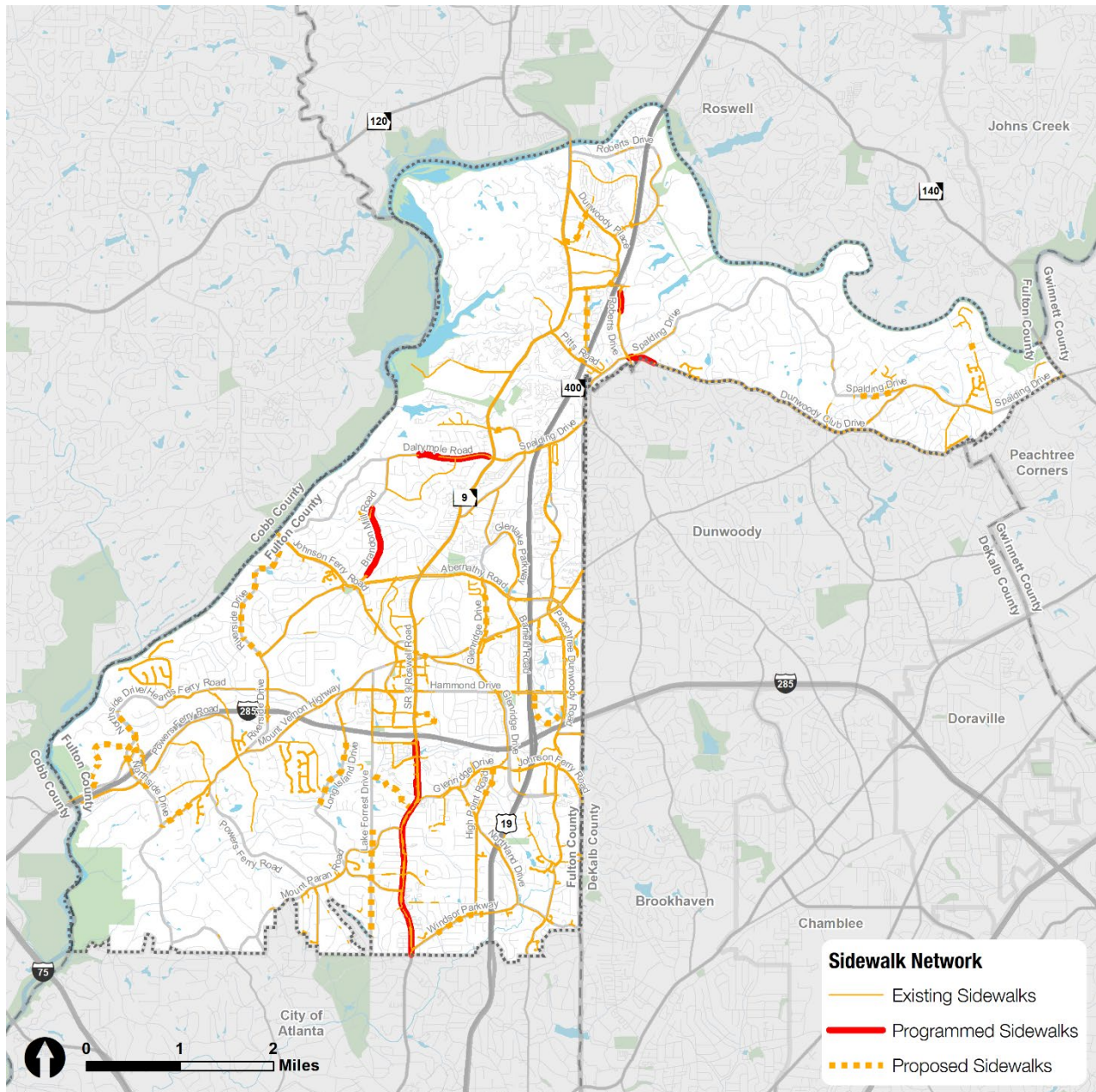


Figure 2 – Existing, Programmed, and Proposed Sidewalks Facilities

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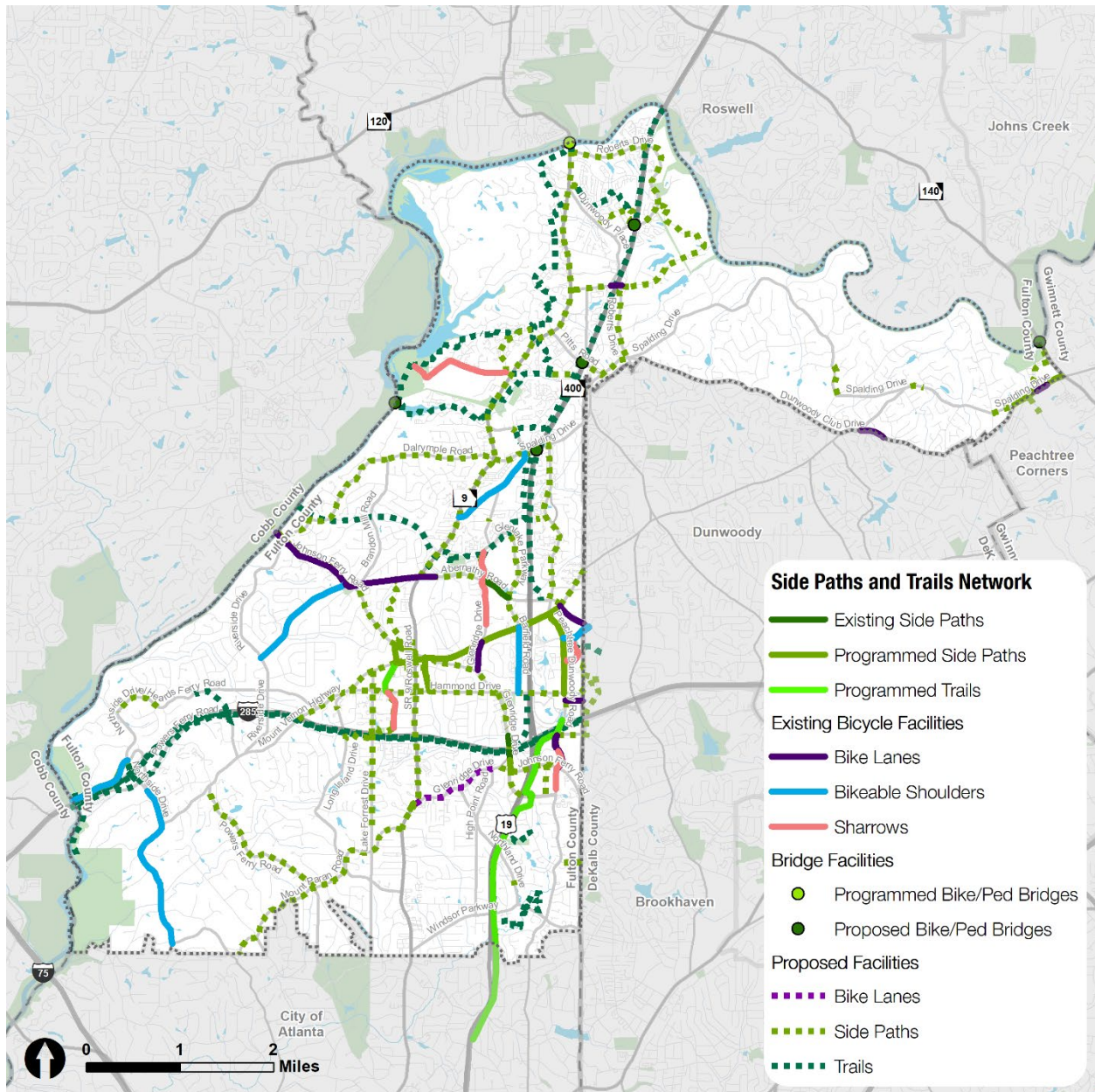


Figure 3 – Existing, Programmed, and Proposed Bicycle Facilities, Side Paths, and Trails

The mapping suggests that most of the City of Sandy Springs' primary and secondary street network would include a multimodal facility such as sidewalks, trails, or bicycle facilities as part of an adopted plan.

Needs Identification

To understand the pedestrian and bicycling needs of the City of Sandy Springs, demographics information was mapped alongside existing, programmed, and proposed facilities. Figure 4 to Figure 7 illustrate these overlays.

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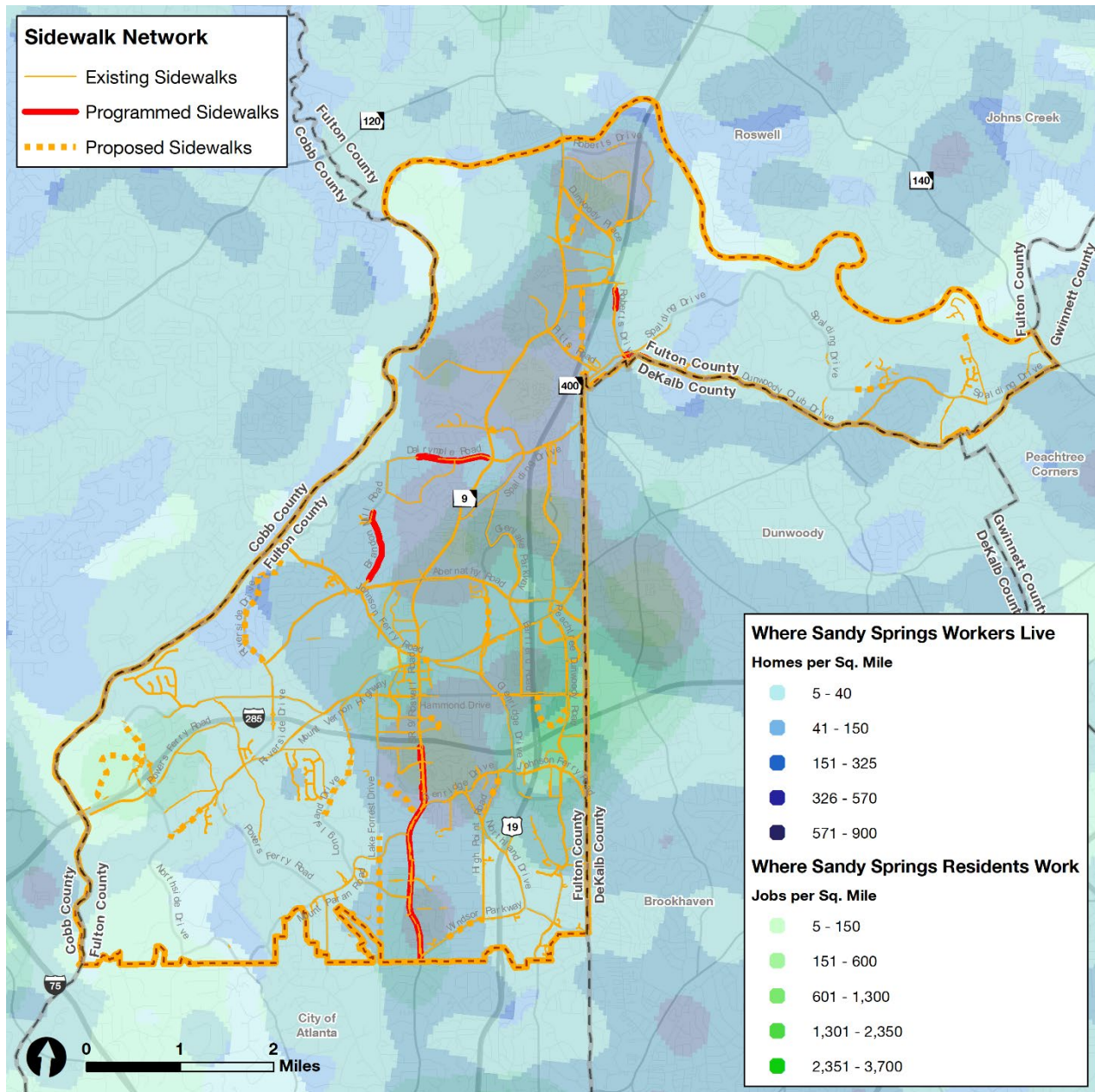


Figure 4 – Existing, Programmed, and Proposed Sidewalks Facilities + Where Sandy Springs Workers Live and Residents Work

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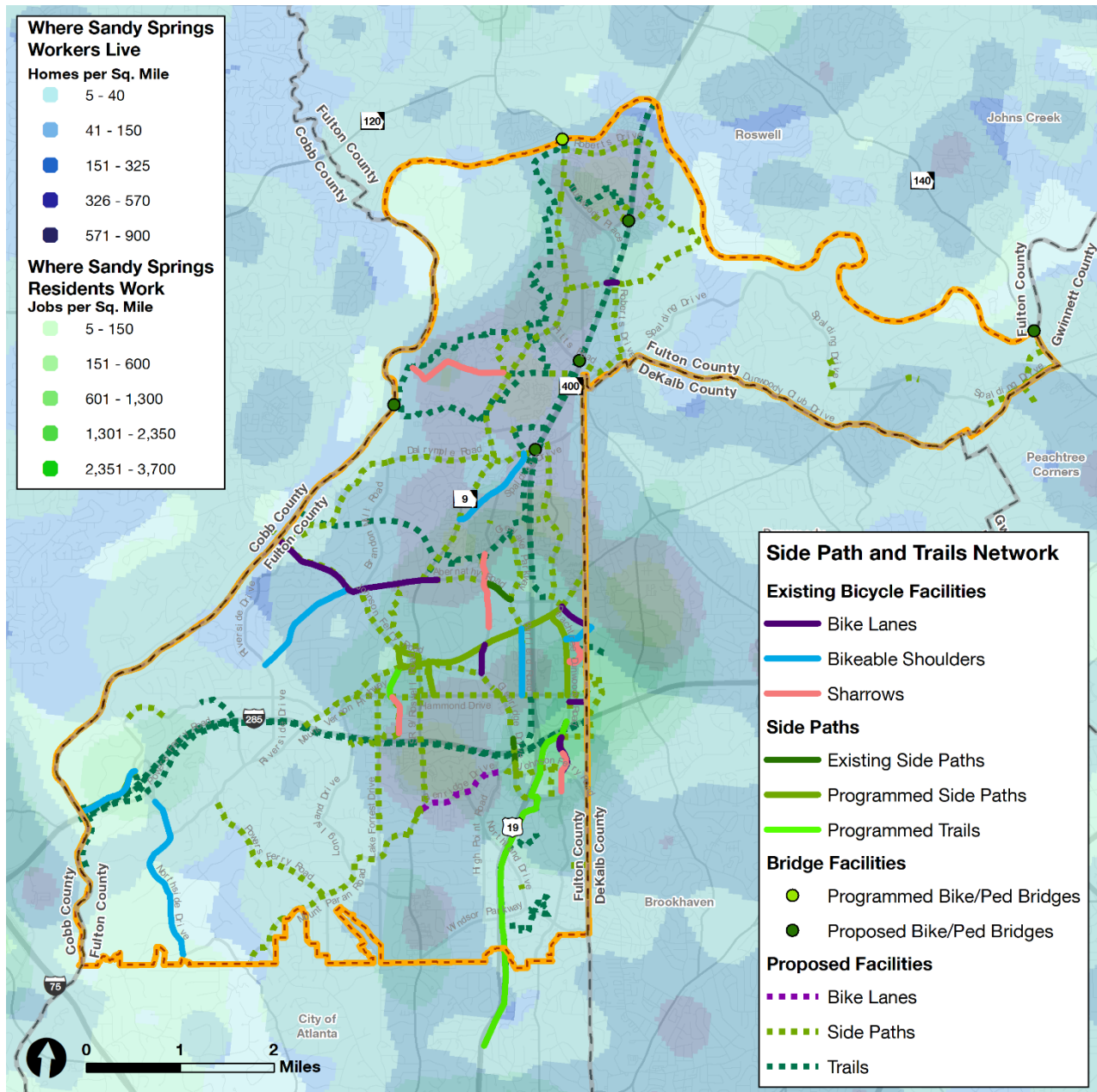


Figure 5 – Existing, Programmed, and Proposed Bicycle Facilities, Side Paths, and Trails + Where Sandy Springs Workers Live and Residents Work

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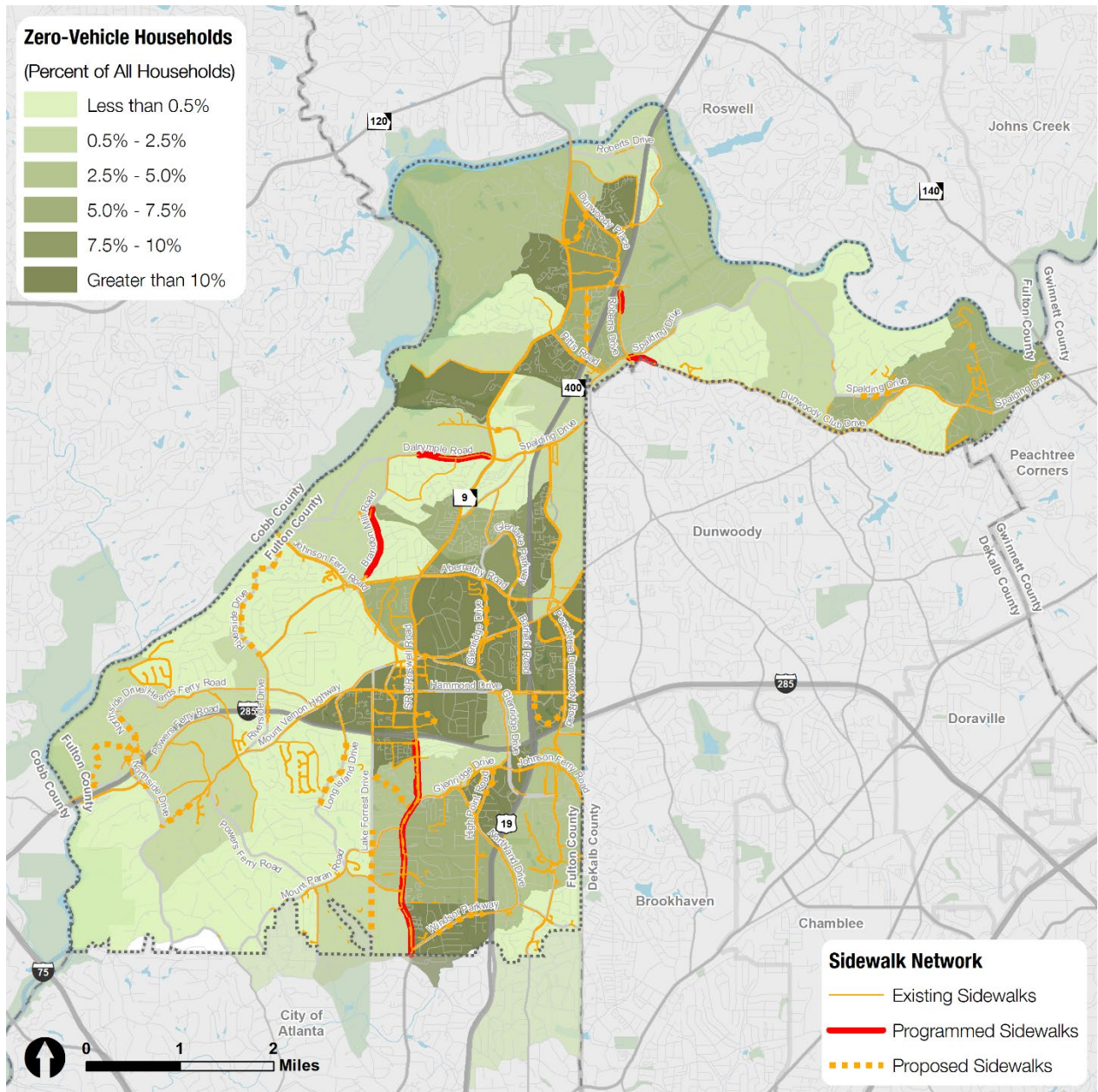


Figure 6 – Existing, Programmed, and Proposed Sidewalks Facilities + Location of Zero-Vehicle Households

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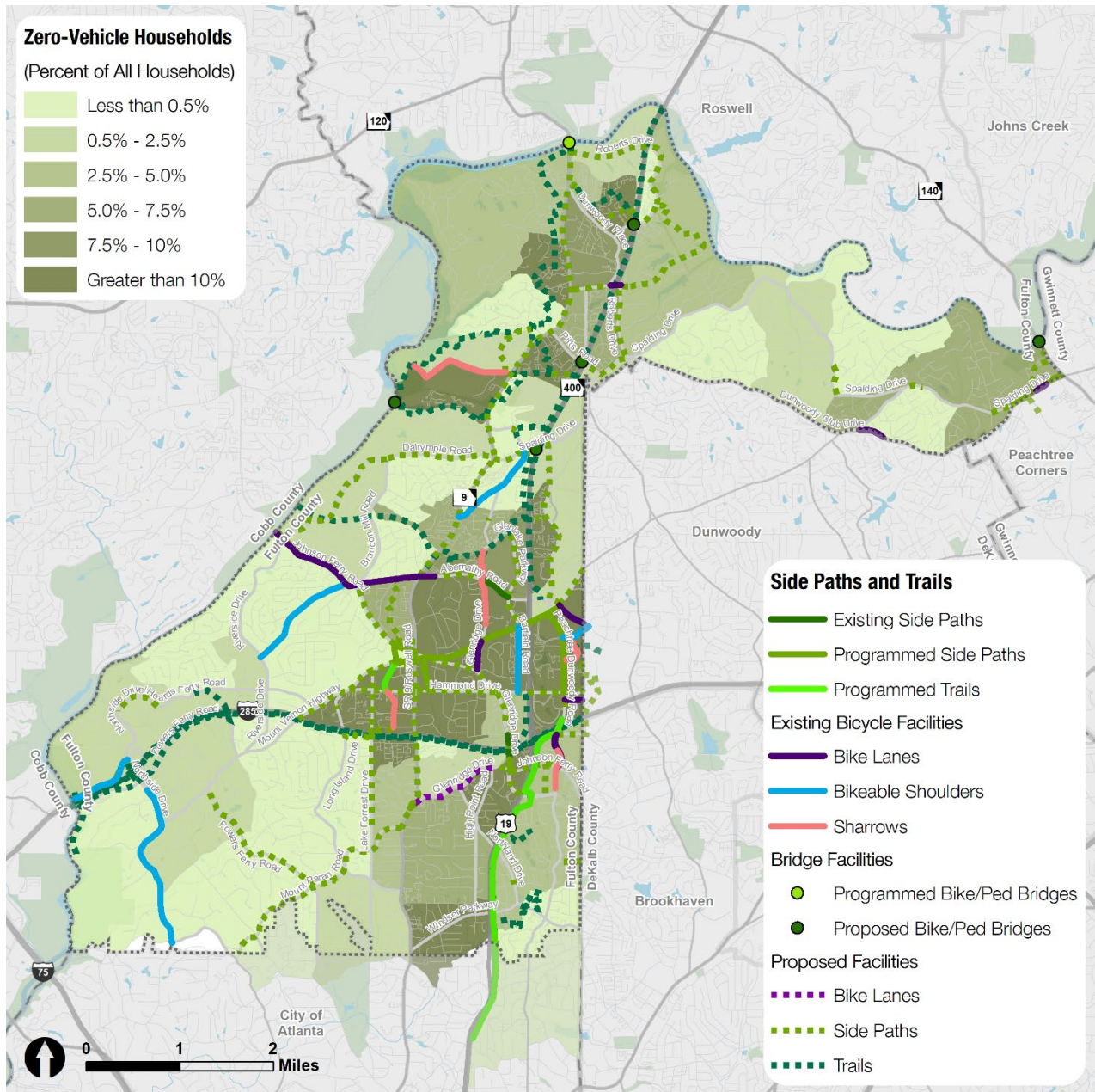


Figure 7 – Existing, Programmed, and Proposed Bicycle Facilities, Side Paths, and Trails + Location of Zero-Vehicle Households

Takeaways

This map series suggest that where higher concentrations of residents live and work, as well as areas with a higher percentage of zero-vehicle households, either have access to existing infrastructure along major roadways or will have access through the City's programmed and/or planned network.

In recent years, the City has been concentrating on filling the gaps of pedestrian and bicycling facilities on major roadways that offer connectivity within the City. However, there is an opportunity for Sandy Springs to identify facilities that connect to its main corridors from the City's neighborhood streets. Many of the streets from the City's neighborhoods do not have existing or planned pedestrian or bicycle projects. It is important to note that due to the City's historic development pattern, not every neighborhood street can serve as a potential access point because of various barriers (e.g., single-family development patterns, environmental constraints, right-of-way constraints, etc.).

Analysis of Level of Traffic Stress

The multimodal assessment also included a Level of Traffic Stress (LTS) analysis. This analysis helps identify streets that are most suitable for bicycling with traffic. On streets where bicycle facilities are needed, LTS Analysis also helps determine the appropriate bicycle facility when planning for users of all ages and abilities. LTS Analysis classifies streets into four categories. These categories range from LTS 1, which suggests streets that are suitable for bicycling by users of all ages and abilities to LTS 4, which suggests streets that are most suitable for only the most experienced and confident riders. Streets classified as LTS 1 have lower traffic volumes, fewer number of through travel lanes and have lower speed limits.

Table 1 shows the LTS criteria used and Figure 8 illustrates the mapping of this criteria based on available data provided by the City. It is important to note that since traffic volume data was not available for neighborhood streets, this criterion was not included in the analysis of these streets. Additional analysis would have to be completed to confirm the results.

Table 1 – Level of Traffic Stress Criteria

	LTS 1	LTS 2	LTS 3	LTS 4
Through lanes per direction	1	1	≤ 2	Any
Traffic Volume (AADT)	≤ 2,000	≤ 6,000	≤ 14,000	Any
Functional Class	Local	Local	Collector (or less)	Arterial
Speed Limit	≤ 25 mph	≤ 30 mph	≤ 55 mph	Any

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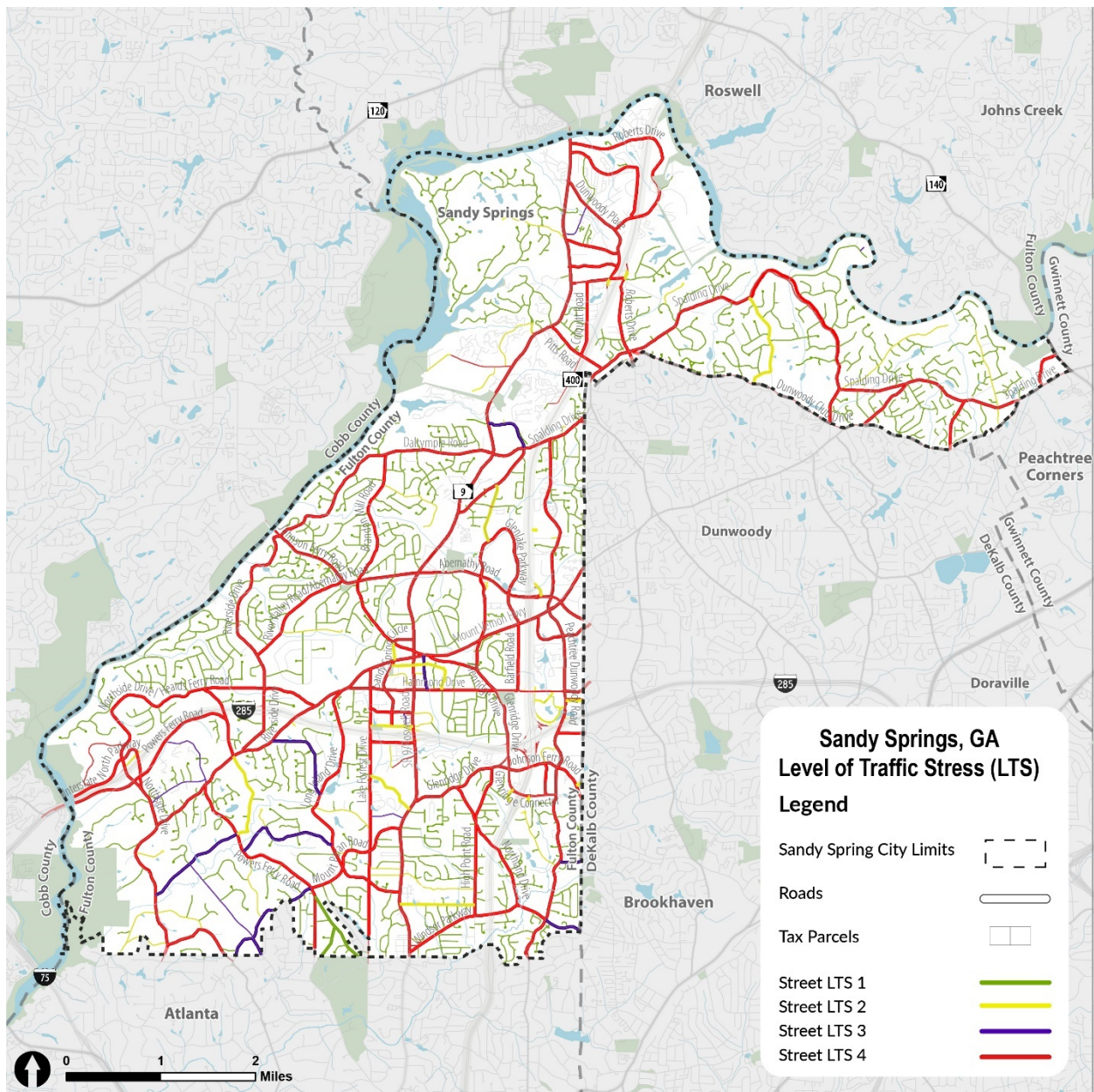


Figure 8 – Level of Traffic Streets (LTS)

Takeaways

The mapping shows that most of the City of Sandy Springs' primary and secondary street networks are classified as LTS 4. This indicates that these streets are currently only suitable for the most experienced and confident riders. These findings also suggest that, to encourage users of all ages to bike along these streets, the City should consider facilities that are separated from vehicles such as side paths or protected cycle tracks along streets classified as LTS 4. Bicycle lanes along LTS 4 roadways are not a preferred facility when looking to provide users of all ages and abilities with a comfortable cycling environment. This takeaway is consistent with the City's previous plans.

The City's neighborhood streets on the other hand, are classified as LTS 1, which suggests that these streets may be suitable for users of all ages and abilities. These findings suggest that these street types could serve as an alternative bicycle network to those on major thoroughfares. If connected, this alternative network could provide an additional level of connectivity throughout the City.

The mapping also shows various streets within the City of Sandy Springs that are classified as LTS 2 and 3. These are a limited number of streets where, depending on the land uses and development along the corridor, buffered bike lanes or traditional bike lanes may be sufficient to provide most users with a comfortable cycling environment.

20-Minute Neighborhood Activity Center Walk Sheds

In collaboration with City staff, the Project Team identified 12 Neighborhood Activity Centers that have the potential to serve as walking destinations for residents living within a 20-minute walk, which is the time it typically takes a person to walk 1-mile. These 12 activity centers were:

- Roswell Road/Long Island Drive
- Powers Ferry Village
- Roswell Road/Lake Placid Drive
- City Springs
- North End Commercial
- North Springs MARTA Station
- Sandy Springs MARTA Station
- Dunwoody MARTA Station
- Medical Center Station
- Morgan Falls Athletic Fields
- Dunwoody Club Shopping Center
- Spalding Drive/Holcomb Bridge Road

One-mile travel sheds from the center of these activity centers were conducted through ArcGIS' Network Analyst tool. The walk sheds were established based on the existing street network and overlaid with existing, programmed, and proposed sidewalks, bicycle facilities, and trails to determine where gaps within these walk sheds may exist. On average, one walk shed is about 3% of the City's total area. Figure 9 shows the walk shed analysis and identifies streets within the walk sheds that do not have facilities within the walk sheds. Figure 10 identifies streets within the walk sheds that have proposed bicycle facilities within the walk sheds. Figure 11 shows the side path and trails and identifies the streets within the walk sheds that have those specific facilities within the walk sheds.

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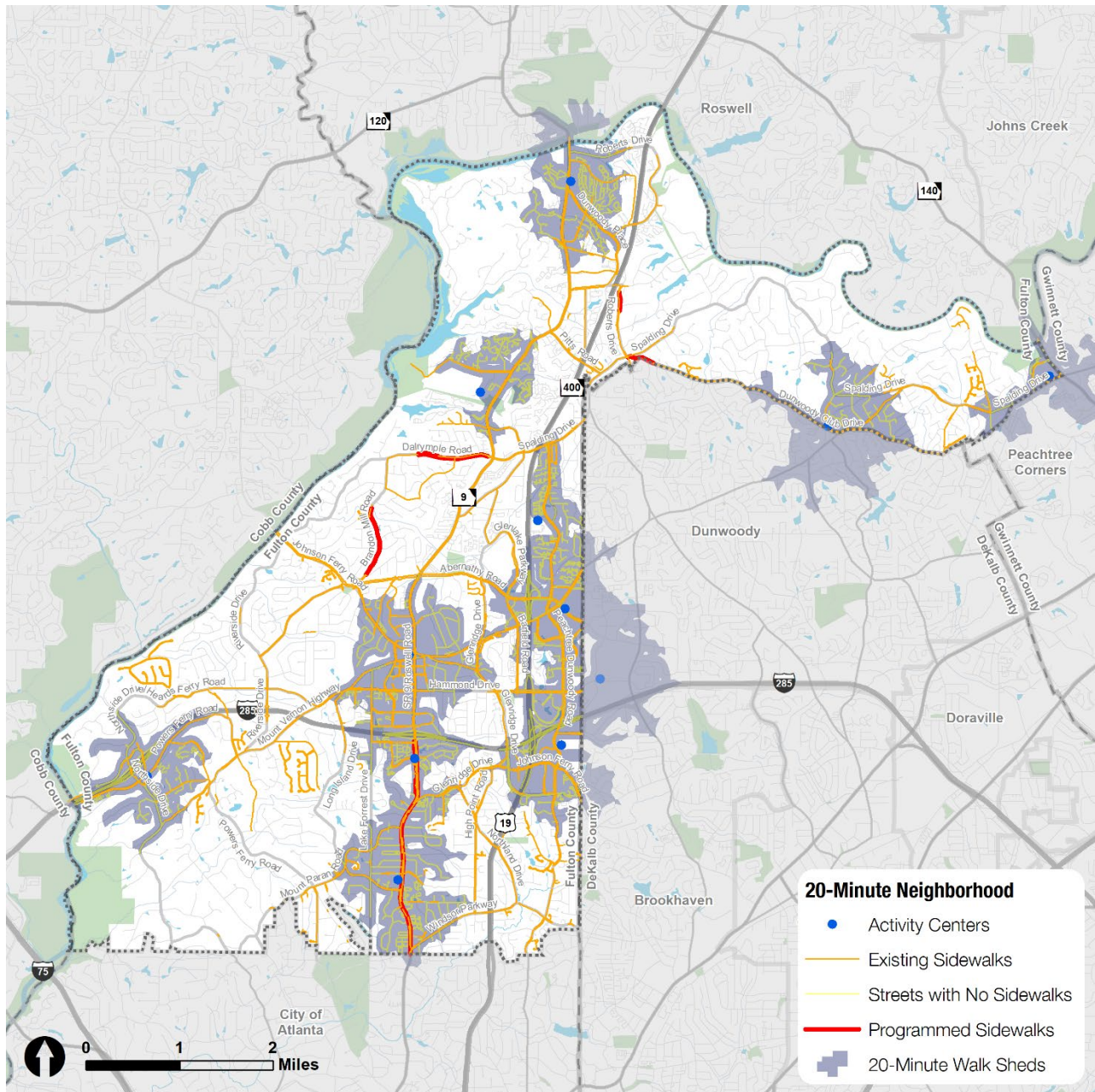


Figure 9 – 20-Minute Neighborhood Activity Center Walk Sheds with Sidewalk Facilities

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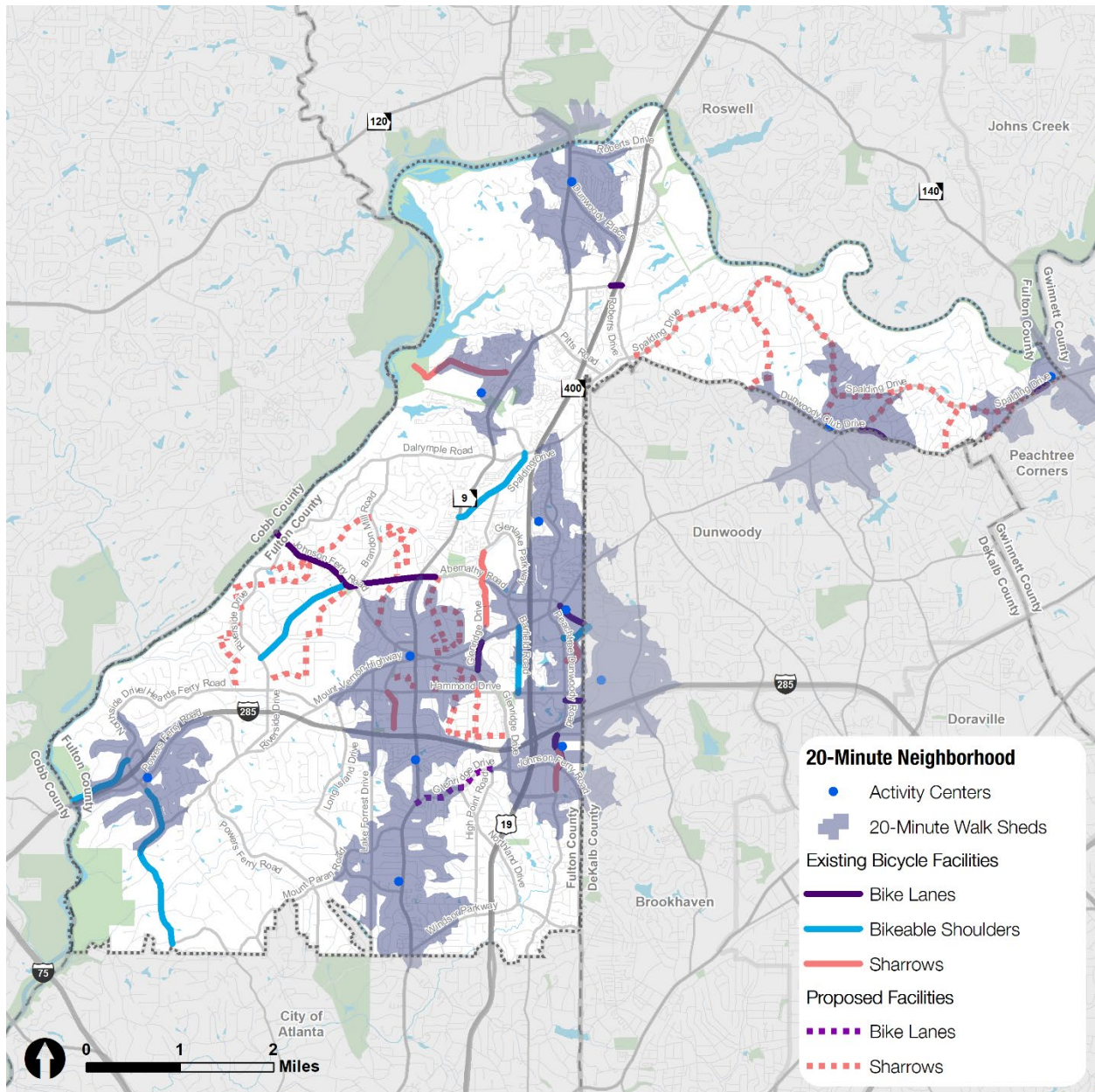


Figure 10 – 20-Minute Neighborhood Activity Center Walk Sheds with Bicycle Facilities

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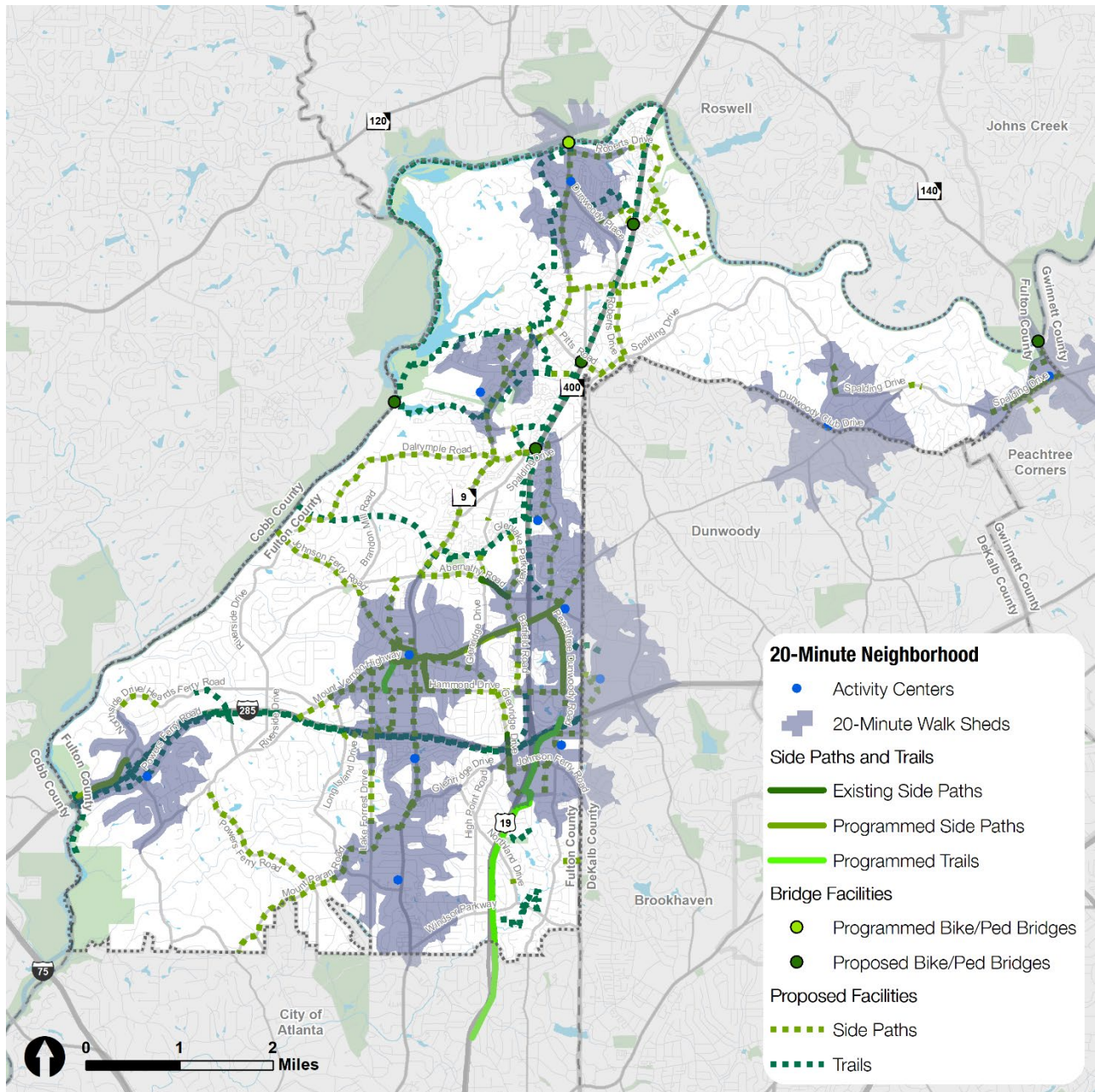


Figure 11– 20-Minute Neighborhood Activity Center Walk Sheds with Side Path and Trail Facilities

Takeaways

This analysis suggests that there are minor pedestrian facility gaps within these walk sheds. These gaps, if filled, can enhance pedestrian coverage and neighborhood access to the activity centers. The proposed sidewalks should be considered as priorities for implementation due to their location within the activity center walk sheds.

It is important to note that some of the walk sheds highlight barriers to walking and biking due to the way the roadway network and development were built out over the years. For example, the North Springs MARTA Station is largely inaccessible by those who live west of the GA 400 corridor because GA 400 serves as a barrier. For those who want to walk or bike to the MARTA station, their only connection is to access Abernathy Road or Dalrymple Road/Spalding Drive and Peachtree Dunwoody Road.

It is also challenging for residents to walk and bike to activity centers when they live in residential neighborhoods with a singular access point or extremely limited access points onto a major roadway. For example, residential homes just west of the North End Commercial Activity Center have limited access points to Roswell Road, which forces residents to walk or bike longer distances to access the North End Commercial activity center. This extra distance takes more time for the user and ultimately can serve as a deterrent to active transportation modes.

It is just as important to address these challenges and barriers as it is to fill gaps in the network.

Multimodal Recommendations

Informed by the findings from analyses in conjunction with the Livable Communities and Bicycle and Pedestrian focus group meetings, the following projects, studies and policies has been identified for the City's consideration. These recommendations are organized into three categories:

- Infrastructure and Future Study Recommendations
- Policy Recommendations
- Best Practices

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Infrastructure and Future Study Project Recommendations

Sidewalk Network

Figure 12 and Figure 13, in conjunction with Table 2, identify new sidewalk projects along streets that are within the 20-minute walk sheds, were not previously considered as candidates for sidewalks, and provide connections to other streets. Streets that lead to dead-ends or cul-de-sacs were not considered as candidates for sidewalks.

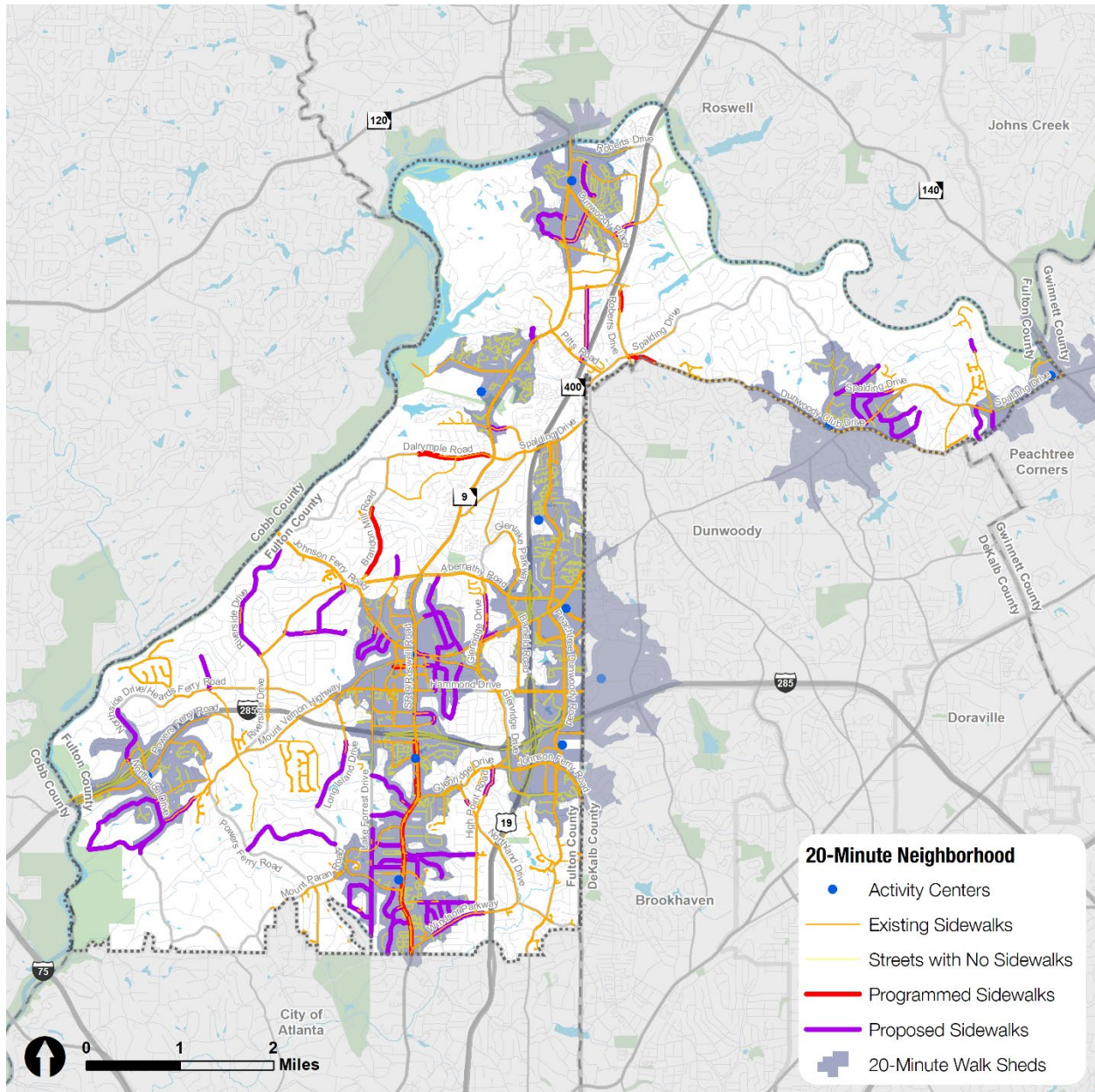


Figure 12– Proposed TMP Sidewalks and 20-Minute Walk Sheds

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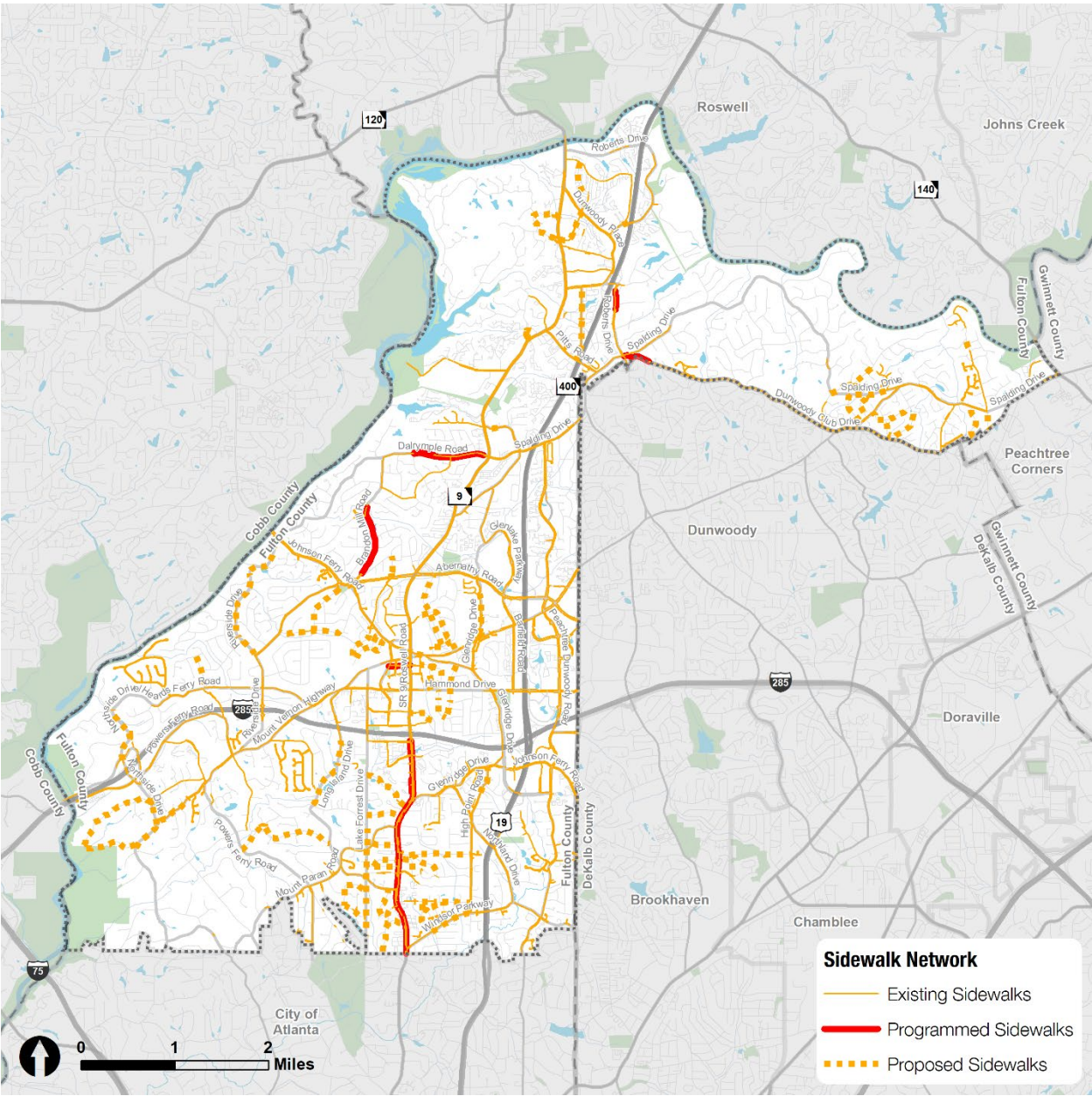


Figure 13 – Proposed TMP Sidewalks

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Table 2 – Transportation Master Plan (TMP) Sidewalk Projects

PROJECT NAME	EXTENTS	PROJECT DESCRIPTION
Winding River Drive Sidewalks	From N River Drive to N River Parkway	This project proposes to improve pedestrian safety by constructing sidewalks along Winding River Drive, extending the existing sidewalk segment on N River Drive north to N River Parkway.
Hightower Trail Sidewalks	From Roswell Road-US 19 to Huntcliff Trace	This project proposes to improve pedestrian safety by constructing sidewalks along Hightower Trail, extending from the existing segment that begins at Roswell Road.
Ferry Drive Sidewalks	From Johnson Ferry Road to Johnson Ferry Road	This project proposes to improve pedestrian safety by constructing sidewalks along Ferry Drive.
Angus Trail Sidewalks	From Bonnie Lane to Ferry Drive	This project proposes to improve pedestrian safety by constructing sidewalks along Angus Trail.
Bonnie Lane Sidewalks	From Johnson Ferry Road to Angus Trail	This project proposes to improve pedestrian safety by constructing sidewalks along Bonnie Lane.
Carriage Drive Sidewalks	From Hunting Creek Road to Vernon Woods Drive	This project proposes to improve pedestrian safety by constructing sidewalks along Carriage Drive.
Hunting Creek Road Sidewalks	From Mt. Vernon Highway to Carriage Drive	This project proposes to improve pedestrian safety by constructing sidewalks along Hunting Creek Road.
Cherry Tree Lane Sidewalks	From Abernathy Road to Carriage Drive	This project proposes to improve pedestrian safety by constructing sidewalks along Cherry Tree Lane.
Vernon Woods Drive Sidewalks	From Cherry Tree Lane to Mt. Vernon Highway	This project proposes to improve pedestrian safety by constructing sidewalks along Vernon Woods Drive.
Harleston Road Sidewalks	From Johnson Ferry Road to Hammond Drive	This project proposes to improve pedestrian safety by constructing sidewalks along Harleston Road.
Kayron Drive Sidewalks	From Johnson Ferry Road to Hilderbrand Drive	This project proposes to improve pedestrian safety by constructing sidewalks along Kayron Drive.

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Hilderbrand Drive Sidewalks	From Boylston Drive to Kayron Drive	This project proposes to improve pedestrian safety by constructing sidewalks along Hilderbrand Drive, extending the existing sidewalk east and south from Boylston Drive to Kayron Drive.
Northside Drive Sidewalks	From Mt. Vernon Highway to Cates Ridge Road	This project proposes to improve pedestrian safety by constructing sidewalks along Northside Drive, extending the proposed sidewalk south from Mt Vernon Highway to Cates Ridge Road.
Riverview Road Sidewalks	From Old Powers Ferry Road to Northside Drive	This project proposes to improve pedestrian safety by constructing sidewalks along Riverview Road.
Old Powers Ferry Road Sidewalk Segment	From Kelson Drive to Northside Drive	This project proposes to improve pedestrian safety by constructing a short (350 foot) sidewalk segment to extend the existing sidewalk along Old Powers Ferry Road from Kelson Drive to Northside Drive, where new sidewalks are also proposed.
Maryeanna Drive Sidewalks	From Roswell Road-US 19 to Lake Forrest Drive	This project proposes to improve pedestrian safety by constructing sidewalks along Maryeanna Drive.
Osner Drive Sidewalks	From Roswell Road-US 19 to Mt. Paran Road	This project proposes to improve pedestrian safety by constructing sidewalks along Osner Drive.
Montevallo Drive Sidewalks	From Forest Hills Drive to Forest Valley Court	This project proposes to improve pedestrian safety by constructing sidewalks along Montevallo Drive.
Pine Lake Drive Sidewalks	From Lake Forrest Drive to Forrest Lake Drive	This project proposes to improve pedestrian safety by constructing sidewalks along Pine Lake Drive.
Forrest Lake Drive Sidewalks	From Lake Forrest Drive to Pine Lake Drive	This project proposes to improve pedestrian safety by constructing sidewalks along Forrest Lake Drive.
Forest Hills Drive Sidewalks	From Roswell Road-US 19 to Highpoint Road	This project proposes to improve pedestrian safety by constructing new sidewalks along Forest Hills Drive, extending the short existing segment at Roswell Road.
Park Avenue Sidewalks	From Roswell Road-US 19 to Belle Isle Road	This project proposes to improve pedestrian safety by constructing sidewalks along Park Avenue.

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Hardeman Road Sidewalks	From Roswell Road-US 19 to Spruell Springs Road	This project proposes to improve pedestrian safety by constructing sidewalks along Hardeman Road.
Spruell Springs Road Sidewalks	From Roswell Road-US 19 to Lake Forrest Drive	This project proposes to improve pedestrian safety by constructing sidewalks along Spruell Springs Road.
Kitty Hawk Drive Sidewalks	From Long Island Drive to Mystic Drive	This project proposes to improve pedestrian safety by constructing sidewalks along Kitty Hawk Drive.
Mystic Place Sidewalks	From Roswell Road-US 19 to Mystic Drive	This project proposes to improve pedestrian safety by constructing sidewalks along Mystic Place.
Mystic Drive Sidewalks	From Roswell Road-US 19 to Meadow Valley Drive	This project proposes to improve pedestrian safety by constructing sidewalks along Mystic Drive.
Westfield Drive Sidewalks	From Windsor Parkway to Franklin Road	This project proposes to improve pedestrian safety by constructing sidewalks along Westfield Drive.
Cherrywood Lane Sidewalks	From Windsor Parkway to Franklin Road	This project proposes to improve pedestrian safety by constructing sidewalks along Cherrywood Lane.
Huntley Drive Sidewalks	From Brinkley Lane to Franklin Road	This project proposes to improve pedestrian safety by constructing sidewalks along Huntley Drive.
Brinkley Lane Sidewalks	From Windsor Parkway to Huntley Drive	This project proposes to improve pedestrian safety by constructing sidewalks along Brinkley Lane.
Franklin Road Sidewalks	From Roswell Road-US 19 to Highpoint Road	This project proposes to improve pedestrian safety by providing sidewalks along Franklin Road, filling numerous gaps in connectivity between existing short, disconnected sections.
Nesbit Ferry Road Sidewalks	From Spalding Drive to Winters Chapel Rd	This project proposes to improve pedestrian connectivity along Nesbit Ferry Road between winters Chapel Road and Spalding Drive and fill a sidewalk gap.
Spalding Lane Sidewalks	From Spalding Drive to City Limits	This project proposes to improve pedestrian connectivity along Spalding Lane between city limits and Spalding Drive.
Ryefield Drive Sidewalks	From Spalding Drive to Mt. Vernon Road	This project proposes to improve pedestrian connectivity along Ryefield Drive between Spalding Drive and Mount Vernon Road.

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Stoneykirk Close Sidewalks	From Spalding Drive to Mt. Vernon Road	This project proposes to improve pedestrian connectivity along Stoneykirk Close between Spalding Drive and Mount Vernon Road.
Jett Ferry Road Sidewalks	From Spalding Drive to River Circle	This project proposes to improve pedestrian opportunity on Jett Ferry Road.
Redbourne Drive Sidewalks	From Mt. Vernon Road to Hunters Woods Drive	This project proposes to improve pedestrian opportunity on Redbourne Drive.
Brigham Drive Sidewalks	From Hunters Woods Drive to Redbourne Drive	This project proposes to improve pedestrian opportunity on Brigham Drive.
Grogans Ferry Road Sidewalks	From Roswell Road to Adair Lane	This project proposes to improve pedestrian opportunity on Grogans Ferry Road and improve connectivity between Roswell Road and Adair Lane.
Bridgewood Valley Road Sidewalks	From River Valley Road to Colewood Way	This project proposes to improve pedestrian connectivity along Bridge Valley Road between River Valley Road and Colewood Way.
Colewood Way Sidewalks	From River Valley Road to Cul-de-Sac	This project proposes to improve pedestrian opportunity on Colewood Way.
Wright Road Sidewalks	From Abernathy Road to Brandon Ridge Drive	This project proposes to improve pedestrian opportunity on Wright Road.
Heards Creek Drive Sidewalks	From Heards Ferry Road to Riverside Trace	This project proposes to improve pedestrian opportunity on Heards Creek Drive.
Londonberry Road Sidewalks	From Powers Ferry Road to Long Island Drive	This project proposes to improve pedestrian connectivity along Londonberry Road between Powers Ferry Road and Long Island Drive.

Bicycle, Side Path and Trails Network

Many of the City's major roadways were identified as candidates for side paths through previous planning efforts. Based on the analysis performed, these roadways are classified LTS 4 and require facilities that are separated from vehicular traffic to provide a comfortable cycling environment for all users. These previously identified projects continue to be priorities for Sandy Springs moving forward and have been brought forward to continue as recommendations. It is important to note that beyond the TMP, these projects will have to be further studied for possible challenges

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such as land ownership and the City's environmental features (Chattahoochee River, topography, etc.)

The TMP has recommended context sensitive traffic speed studies on roadways that may be primed for sharrows. Table 3 below identifies context sensitive traffic speed studies that have the potential to serve as short-term, cost effective, and implementable bicycle projects that parallel some of the long-term bicycle connectivity projects proposed in previous plans. Table 4 below identifies potential sharrow roadways that are low-stress connections, categorized as LTS 1 roadways, and do not need additional infrastructure. The City should consider signage and sharrow striping to provide safety measures and enhance the users experience.

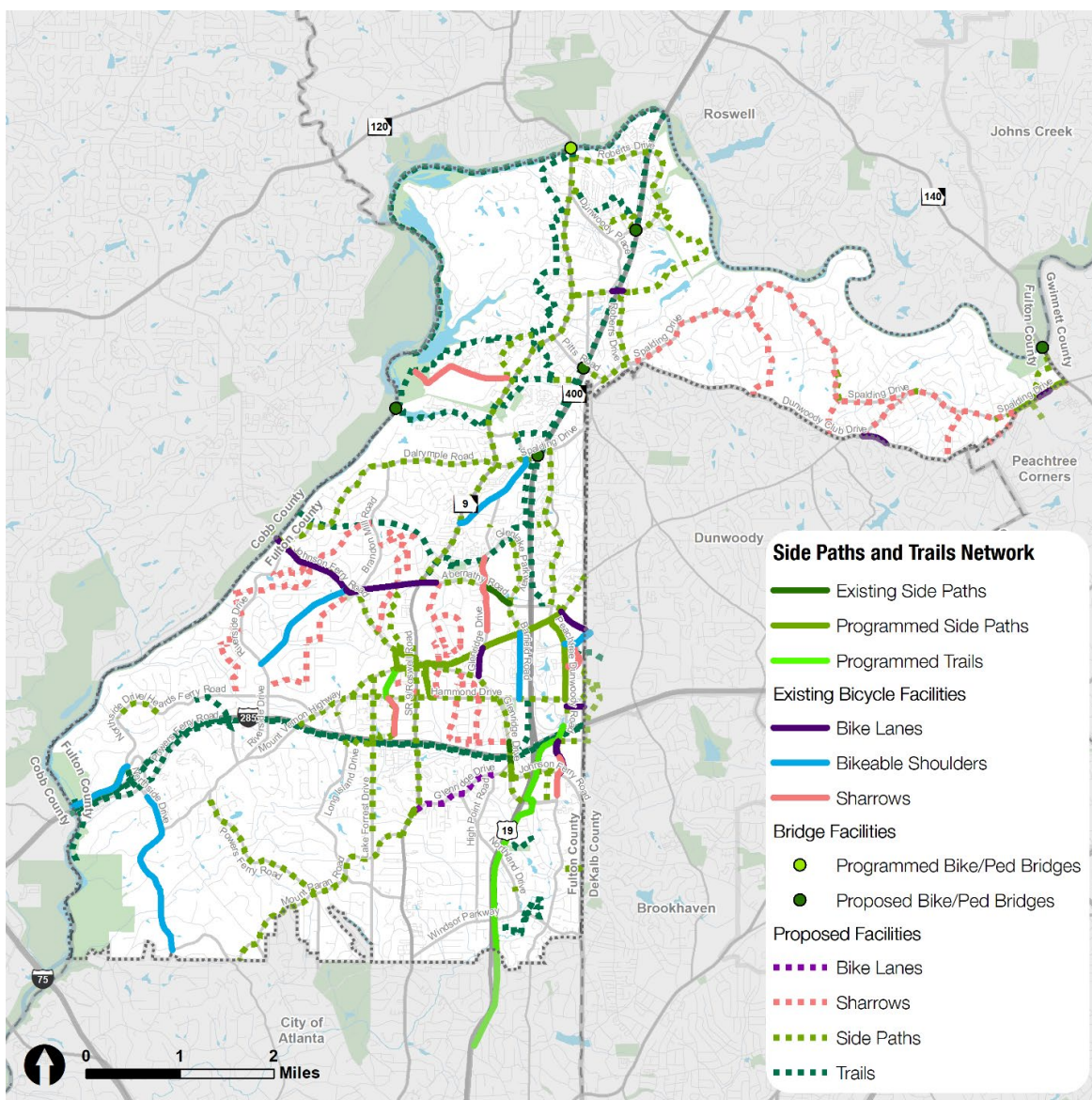


Figure 14– Proposed Bicycle, Side Path, Trails, and TMP Projects

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Table 3 – Context Sensitive Traffic Speed Studies

PROJECT NAME	EXTENTS	PROJECT DESCRIPTION
Spalding Drive Context Sensitivity and Efficiency Study	Roberts Drive to Holcomb Bridge Road	This project proposes to study the feasibility of enhancing the multimodal nature of Spalding Drive by exploring context sensitivity and efficiency strategies along the corridor. Strategies may include, but may not be limited to, elements to facilitate the safe integration of drivers and cyclists along the roadway, intersection safety improvements, and the implementation of traffic circles at key intersections to facilitate efficient mobility along the corridor. Key intersections may include but may not be limited to Spalding Drive at Spalding Lake Court, Spalding Drive at Nesbit Ferry Road, Spalding Drive at Mt. Vernon Road, and Spalding Drive at Jett Ferry Road.
Spalding Drive at Roberts Drive, and at Dunwoody Club Drive Intersection Safety and Efficiency Study	Roberts Drive to Dunwoody Club Drive	This project proposes to study the feasibility of improving the multimodal efficiency and safety of the converging intersections of Spalding Drive at Roberts Drive and Spalding Drive at Dunwoody Club Drive.

Table 4 – Context Sensitive Sharrows

PROJECT NAME	EXTENTS	PROJECT DESCRIPTION
Winters Chapel Road Sharrows and Traffic Calming	City Limits to Spalding Drive	This project proposes to improve bicycle mobility and safety along Winter Chapel Road by installing sharrows, bike boxes, and traffic calming elements.
Happy Hollow Road Sharrows and Traffic Calming	Dunwoody Club Drive to Spalding Drive	This project proposes to improve bicycle mobility and safety along Happy Hollow Road by installing sharrows, bike boxes, and traffic calming elements.
Mt. Vernon Road Sharrows and Traffic Calming	Dunwoody Club Drive to Blanford Place	This project proposes to improve bicycle mobility and safety along Mt. Vernon Road by installing sharrows, bike boxes, and traffic calming elements.
Jett Ferry Road Sharrows and Traffic Calming	Dunwoody Club Drive to Spalding Drive	This project proposes to improve bicycle mobility and safety along Jett Ferry Road by installing sharrows, bike boxes, and traffic calming elements.
Chaparral Place/Ball Mill Road Sharrows and Traffic Calming	Dunwoody Club Drive to Spalding Drive	This project proposes to improve bicycle mobility and safety along Chaparral Place/Ball Mill Road by installing sharrows, bike boxes, and traffic calming elements.

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Weatherly Drive, Mountain Brooke Lane, Mountain Brook Way, Edgewater Drive Sharrows and Wayfinding	Heards Ferry Road to Riverside Drive	This project proposes to provide people riding bikes with a parallel and alternative route of travel and improve bicycle safety by implementing sharrows along neighborhood streets.
Old Riverside Drive Sharrows and Wayfinding	Riverside Drive to Riverside Drive	This project proposes to provide people riding bikes with a parallel and alternative route of travel and improve bicycle safety by implementing sharrows along neighborhood streets.
Blackwater Trail Drive/N. Harbor Drive Sharrows and Wayfinding	Riverside Drive to Johnson Ferry Road	This project proposes to provide people riding bikes with a parallel and alternative route of travel and improve bicycle safety by implementing sharrows along neighborhood streets.
N Mill Road Sharrows and Wayfinding	Johnson Ferry Road to Brandon Mill Road	This project proposes to provide people riding bikes with a parallel and alternative route of travel and improve bicycle safety by implementing sharrows along neighborhood streets.
Riverside Parkway, River Shore Parkway, Colewood Way, Bridgewood Valley Road Sharrows and Wayfinding	Riverside Drive to Johnson Ferry Road	This project proposes to provide people riding bikes with a parallel and alternative route of travel and improve bicycle safety by implementing sharrows along neighborhood streets.
Wright Road, Stone Mill Trail, and Mark Trial Sharrows, Wayfinding, and Intersection Improvements	Johnson Ferry Road to Brown Mill Road	This project proposes to provide people riding bikes with a parallel and alternative route of travel and improve bicycle safety by implementing sharrows along a neighborhood street and improving bicycle and pedestrian crossing at the intersections.
Glenforest Road, Brookgreen Road, Lorell Terrace, and Kayron Drive Sharrows, Wayfinding, and Intersection Improvements	Glenridge Drive to Johnson Ferry Road	This project proposes to provide people riding bikes with a parallel and alternative route of travel and improve bicycle safety by implementing sharrows along a neighborhood street and improving bicycle and pedestrian crossing at the intersections.
Harleston Road, Sandy Springs Public Library, Hunting Creek Road, Carriage Drive, Cherry Tree Lane Sharrows, Wayfinding, and Intersection Improvements	Hammond Drive to Abernathy Road	This project proposes to provide people riding bikes with a parallel and alternative route of travel and improve bicycle safety by implementing sharrows along a neighborhood street and improving bicycle and pedestrian crossing at the intersections.

Transit-Supportive Sidewalk Projects

As a part of this assessment, the analyses looked at sidewalk gaps that exist in proximity to transit routes, bus stops (regardless of transit agency), and MARTA rail stations. These sidewalk projects are vital for transit users who are accessing existing services. These projects have been identified in Table 5 below.

Table 5 - Transportation Master Plan (TMP) Transit Conducive Sidewalk Projects

PROJECT NAME	EXTENTS	PROJECT DESCRIPTION
New Northside Drive Sidewalk Improvements	From Northside Drive to I-285	This project will fill sidewalk gaps on both sides of the road.
New Northside Drive Sidewalk Improvements	From I 285 Bridge to Northside Drive	This project will fill sidewalk gaps on both sides of the road.
Riveredge Parkway Sidewalks	From Interstate North Parkway to Northside Drive	This project will include sidewalks on both sides of the road.

Policy Recommendations

Following are a variety of policy recommendations to enhance bicycle and pedestrian mobility that the City may consider. These are organized into four categories:

- Development Ordinances
- Operations and Management Ordinances
- Business Ordinances
- Programs and Education

Development Ordinances

- **Developer Incentives** - Municipalities can use policy to create incentives – both financial and non-financial - to encourage developers to invest in mixed-use, higher-density development, or to provide bicycle infrastructure (such as bike racks, showers, and lockers) on site or to build bikeways as part of their schemes.
 - **Financial** - Financial incentives can include property tax abatement programs, decreased impact fees, and loans with below-market-rate interest. Commonly, jurisdictions help pay for these incentives through revenues collected from tax increment financing programs, sales taxes, road and parking pricing programs, and vehicle registration fees.

- **Non-Financial** - These incentives require little cost to jurisdictions but can be powerful enticements to developers. Common non-financial incentives include expedited permitting (which can save them time and money) and density bonuses (which allow them to build more, potentially increasing their profits in the long run). Other incentives can include reduced car parking requirements, decreased inspection fees, and expedited reviews.

While the City of Sandy Springs provides some of these incentives, they are focused on projects that create a certain threshold of jobs or are coordinated through the City of Sandy Springs Development Authority.

- **Street Improvement Coordination – Repaving and Utilities** - To help leverage funding, jurisdictions often coordinate implementing bicycle projects with other infrastructure improvements. For example, bikeways can be more easily and efficiently installed when street repaving is being undertaken. Jurisdictions can adopt a policy which requires that bicycling needs be considered whenever major maintenance, utilities, or transportation projects are to be tackled. While the City of Sandy Springs currently achieves some of this coordination, it may be helpful for the City to consider having an internal policy formalizing this practice.

Operations and Management Ordinances

- **Adopt NACTO Bike Guide** - Recognizing the need for more bicycle-friendly roadway designs, the National Association of City Transportation Officials (NACTO) developed an Urban Bikeway Design Guide. Jurisdictions may choose to adopt the Bike Guide to supplement regulations in the AASHTO Green Book or other existing design guidelines to help ensure innovative, safe bikeway designs are implemented. This would be particularly useful for the City of Sandy Springs to consider as it continues to expand its bicycle network.
- **Prohibit Obstruction of Bicycle Lanes** - When vehicles such as taxis and delivery trucks stop or park in bike lanes, significant safety hazards are created for people riding bikes: collisions can occur with the obstructions themselves or from swerving to avoid them. This is something that City of Sandy Springs residents raised as a concern during one of the focus group meetings and that occurs along some of the City's existing bike lanes. Regulations can prohibit stopping or parking in bike lanes, but enforcement can be challenging. One way to enforce this regulation is to actively fine those that obstruct bicycle lanes along with other bicycle-related infringements (e.g. speeding, dooring, harassment, etc.) and use the revenue toward bicycle related infrastructure or programs.

The City can also consider increased fines for speeding or other violations such as running red lights and stop signs, to allocate a portion of the fees toward multimodal projects.

- **Bike Share Program** - Bike share programs offer access to bikes at strategic locations around town. Typically, people can rent a bike using their cell phones or credit cards from one station or kiosk and return it to another in a different location. Bike share is usually used for short trips (one half to three miles). If placed near public transit, these bikes can help complete the first or last leg of people's journeys or commutes. Pricing can be varied, as some systems are paid for by the minute or by the trip while others require a membership fee that includes the first 30 to 60 minutes of each trip free to members. Bikes are designed to stand out – with bright colors and logos – to deter theft. In the event a bike does get stolen or lost, many are equipped with a GPS unit to help locate them. Local jurisdictions or non-profits typically fund and operate the programs. This is a program that the City of Sandy Springs should consider in the future as the City's bicycle network is expanded.
- **Bike Fleets at Government Buildings** - Bike fleets can serve the same purpose as car fleets, often provided by governments for employees who need to use a vehicle as part of their job, if the trips cover short distances. Bike fleets can be ideal for travel to meetings, to monitor projects, patrol visitor areas, or generally to get around during the workday. A primary benefit is cost savings, as maintaining a bike fleet is much less expensive than a car fleet. This is a program that the City of Sandy Springs may consider at City Springs.
- **Bicycle Parking and Amenities** - Over 150 local governments have adopted laws requiring bicycle parking in new development and major remodels in both commercial and residential developments. Many jurisdictions are finding that bike parking is also being provided through LEED certification standard requirements (whereby providing bike parking earns the development some of the necessary points needed to obtain certification). Short and long-term bike parking – and in some instances, showers and lockers - may be put in place by developers in return for incentives, such as the reduction of requiring expensive car parking spaces. Policies should also be considered which require existing parking lots and garages to provide bicycle parking. Existing parking facilities can be required to provide bike racks as a condition of renewing their business licenses. Bicycle commuting can be further encouraged by passing a policy that requires building owners to either provide secure bicycle parking or allow employees to bring their bicycles into office buildings to help ensure their mode of transportation to and from work is safeguarded.

The City of Sandy Springs Development Code contains regulations requiring new development to provide bicycle parking. These requirements are specified as short-term bicycle parking and long-term bicycle parking. However, the requirements are limited to specifying where bicycle racks should be placed and providing limited general statements related to long-term parking requirements. They do not specify the number of parking requirements per development type and size or associated amenities.

- **E-mobility/Micro-mobility Policies** – E-mobility/micro-mobility, which refers to the use of electronic scooters and bikes to travel shorter distances around cities, has become increasingly popular during the last few years. While the provision of these devices took a major hit during the months of March-April 2020 due to the COVID-19 Pandemic, during the months of July-August 2020, they have appeared to rebound. In fact, analysis suggests that over the next five years, the global electric bike market will increase by 10.3 percent to become a \$25 billion market with North American suggested as the fastest-growing market by volume and region. While many cities across the United States have decided to ban e-mobility, others have embraced it. The City of Atlanta and the City of Brookhaven are two cities that have embraced e-mobility and developed policies to help manage them.

While some of these policies apply to the companies that provide and manage e-scooters in the city, many of these policies, such as speed, safety, parking, and operation apply to individuals who own their personal e-scooters.

Business Ordinances

- **Bicycle Friendly Business Districts** - Promotional campaigns in business districts, which highlight the availability of bicycle parking, special discounts or promotions for customers who arrive by bike, and other bike friendly features can help encourage biking as a form of transportation. Employers in the district can also encourage employees to ride by offering incentives. Studies show that districts which encourage bicycling often benefit from higher spending over time by customers who bicycle and greater availability of parking spaces for those arriving by car. Jurisdictions can establish bicycle friendly business districts by passing resolutions and can help such districts through policy development pertaining to bicycle parking and employer incentives. These District would be useful in the City of Sandy Springs when the City expands its bicycle infrastructure.
- **Parking Cash-Out Opportunities** - Parking cash-out policies offer workers the option to take a cash allowance in lieu of a free parking space. Rather than mandate this option, jurisdictions can encourage private employers to implement cash-out laws by providing

tax credits to cover costs for those employees who opt to forgo their parking space. Athens-Clarke County in Georgia offers a similar opportunity, but beneficiaries are required to pay taxes on the cash received.

- **Matching Bicycle to Transit Subsidies** - Jurisdictions which offer public transit subsidies can do the same for commuters who bike to work, matching the subsidy dollar for dollar.
- **Reimbursement for Work Travel by Bicycle** - Most job-related use of government employees' cars is reimbursable, and the reimbursement is tax exempt. On-the-job bike usage, however, is rarely reimbursed, and when it is, it is negligible and considered taxable income. Government policies could encourage greater bike usage, particularly when trips can easily be made by bike rather than car, by equalizing the reimbursable rate, no matter the mode of personal transportation used.
- **Bike Fleets at Private Employers** - Private employers can be encouraged to provide bike fleets for use by their employees during the workday through tax credits or incentives offered by local jurisdictions. Incentives can also be offered to help subsidize employees' use of bike shares where available, or to purchase bikes for commuting purposes. Publicity of employers who participate is another way to entice employers to participate. The Perimeter Community Improvement District (PCID) could be a potential partner for the City to consider for this initiative. If successful, it could be considered for expansion into other areas in the City.

Programs and Education

- **Bicycle and Walking Events** - Many jurisdictions around the world are following the lead of Bogota, Columbia, which first started the concept of "ciclovía" ("bike path" in Spanish), whereby select streets are closed to vehicular traffic on certain days to allow unencumbered use by people walking, jogging, or riding bikes. These events, also known as "open streets" and "Sunday Streets" in the US, also help build community. Potential areas within the City of Sandy Springs that could be good candidates for a bicycle and walking event include Mt. Vernon Highway from the Cemetery to City Springs; Roswell Road between Hammond Drive and Mount Vernon; and the streets directly around City Springs. The event could take place during a Sunday afternoon for a period of a couple of hours and in coordination with a major event at City Springs.
- **Bike Valets in Special Events** - Requiring large civic events to provide monitored bicycle parking not only encourages a healthy, non-polluting form of transport, but it can increase attendance of events, attracting people normally dissuaded by traffic congestion or lack

of secure bike parking. An added benefit is a reduction in traffic itself if more people bike to large events rather than drive.

- **Bike to Workday/Week/Month** - Many state and local governments adopt resolutions adopting a Bike to Workday/Week/Month. Studies have shown these events have been highly successful in encouraging people to try biking to work, and then even converting them to become regular bicycle commuters. (One study showed that one in five people who participated in Bike to Workday for the first time became regular commuters, for example.) The programs are particularly effective when local officials also participate, and when efforts are coordinated with local businesses to offer additional incentives for bicyclists during the events. The City of Sandy Springs may consider partnering with the PCID, Georgia Commutes, and Sandy Springs Perimeter Chamber to implement this initiative.
- **Bicycle Distribution and Maintenance** - When people lack the funds to purchase a bicycle, local jurisdictions or non-profits can facilitate the distribution of abandoned or donated bikes. Bicycle maintenance can be taught as part of these programs as a youth activity or to build skills among adult populations. This program can also be integrated with the expansion of trails in the City and the installation of maintenance amenities along the trails.
- **Stop as Yield Signs for Bicyclists** - If no other traffic is present, these signs allow for bicyclists to continue through an intersection without coming to a complete stop. As bicyclists pose low safety risks to other travelers as compared to cars, these signs help bicyclists maintain momentum rather than stop and start when not necessary, acknowledging the energy exerted to do so is far greater on a bike than in a car. Only one state – Idaho – has adopted such a law, and studies of its impact show that bicycle injuries have not increased since its passage and safety has improved.
- **Police Training on Bicycle Safety** - Officers trained to understand what causes bicycle collisions and which traffic laws promote bicycle safety can better protect cyclists and those around them. Implementing programs that provide training can help officers accomplish this. The National Highway Traffic Safety Administration (NHTSA) has guidelines which encourage training of law enforcement on bicycle safety and has developed training materials for this purpose. This could include instructing police officers to not ticket bicyclists who do not stop at stop signs, as long as they are riding safely.

Priority instead can be placed on enforcing violations by people bicycling or driving who do pose safety risks.

- **Bicycle and Pedestrian Safety in Elementary Schools** - As part of the health and safety or physical education curriculum in elementary schools, bicycling and bicycle safety could be included. Countries such as Germany, Denmark, and the Netherlands teach their children this from a young age as part of the standard curriculum or through safe bicycling courses. While some schools across the country are beginning to embrace lessons on bicycling and bicycling safety, it is mostly provided by non-profit bicycle organizations or health or transportation governmental organizations (such as Safe Routes to School programs). The development of more rigorous state and local standards could help ensure bicycle skills are learned from a young age through the public-school system. The City of Sandy Springs could partner with Safe Routes to School (SRTS) to implement this program.
- **Bicycle and Vocational Training in High Schools, Adult Schools, and Community Colleges** - Likewise, bicycle maintenance and mechanics could be incorporated into adult classes in a variety of educational institutions. "Learn to ride" courses could also be included. Nonprofits sometimes fill this need, but more could be done by government agencies to normalize and encourage bike riding.

In addition to the above policy recommendations, the following are best practices that the City should consider as the City's continues to expand its bicycle and pedestrian network.

- **Street Design Standards** - Jurisdictions at local and state levels can consider these best practices that encourage or mandate road designs that are safe and convenient for bicyclists. Guidelines can cover various design elements such as street width, grade and curvatures of bikeways and sidewalks. To help ensure their implementation, municipalities may choose to officially adopt the National Association of City Transportation Officials (NACTO) Bike Guide.
 - **Block Size** - City block sizes can be established or redeveloped to facilitate and encourage pedestrian or bicycle connectivity. While geographic and political boundaries vary, an ideal block size should be around 240'x360'. This size maximizes the benefits for developers as well as for pedestrian and bicycle connectivity. As the City of Sandy Springs continues to redevelop areas, it should consider achieving this ideal block size to facilitate bicycle and pedestrian connectivity.

- **Right-of-Way Space Allocation** - Right-of-ways should be designed to provide adequate space for pedestrians, bicyclists, and vehicles. As a general rule of thumb, cities should strive to allocate at least 50 percent of right-of-way space to bicyclists and pedestrians in major roads and a maximum of 50 percent to vehicles.
- **Maximize Street Connectivity** - Street networks should be designed to maximize connectivity between streets and minimize dead ends and cul de sacs. This increases directional mobility options for all modes of transportation and minimizes congestion causes by the closing of streets or travel lanes.
- **Intersection Design** - A set of national requirements controls all “traffic control devices,” such as signals, signs, markings, and anything else that controls the flow of traffic. Innovations include separate bike signals at intersections and “bike boxes” which position cyclists ahead of other traffic at intersections. However, the FHWA’s Manual of Uniform Traffic Control Devices (MUTCD) does not allow specific controls that have been shown to increase bicycle safety, as exemplified in many European countries. The MUTCD allows some flexibility, however, in how standards are applied, and some states have taken advantage of this to allow for more bicycle-friendly designs at intersections.
- **Minimize Travel Lane Widths** - Reducing automobile travel lane widths creates multiple benefits for pedestrians and cyclists. Primarily, this allows more space within the right-of-way for pedestrian and cyclist use and helps reduce traffic speeds. Depending on the roadway type, jurisdictions should look to establish automobile lane widths that range between 8’ wide on slow residential roads and 10’ on major corridors.
- **Buffers** - Buffers that provide a physical separation between vehicles and those traveling on foot or on bikes help enhance the overall pedestrian and cyclist experience, especially in roadways with posted speeds greater than 30 miles per hour (MPH) and with Average Annual Daily Traffic (AADT) rates greater than 4,000. Jurisdictions can establish policies that require certain types of roadways to have appropriate buffers to facilitate safe and comfortable pedestrian and cyclist circulation.
- **Shade Trees** - Shade trees located along streets and spaced at appropriate distances can provide multiple benefits, including helping to create comfortable micro-climates, reduce traffic speeds, and increase the overall aesthetic of the street.

- **Public Art** - Along with helping to enhance the physical appearance of the street scene, public art can help create a sense of place, activate the right-of-way for pedestrians and bicyclists, and serve as traffic calming. Public art should be located in areas that are not distracting to vehicles such as intersection corners and bulb-outs, marked or signaled mid-block crossings, and medians near controlled intersections and crosswalks.
- **Bold Street Crossings** - Traditional crosswalks can get lost in a driver's viewshed. Many cities have begun to use bold and painted crosswalks to help alert drivers to potential pedestrian and cyclist crossings. These elements have the added benefit of helping to create a sense of place.
- **Public Access Easement** - Jurisdictions typically have limited access easements along utilities such as sewer lines, water lines, and electrical lines when these utilities traverse private properties. Jurisdictions should adopt policies that require the establishment of public access easements along all utilities for the use of these linear corridors as walking and biking trails.
- **Stream Buffer** - Jurisdictions should establish policies that allow trails to be located within the 50' and 75' stream buffer. This facilitates the implementation of trails along streams while also increasing education about the important ecological role of streams and creeks within the built environment.
- **Trail Corridor and Building Façade Orientation/Setbacks** - Building facades that encourage "eyes on trails and bicycle facilities" are important for creating a safe and comfortable user experience. Jurisdictions should strive to establish policies that require buildings to "face" bicycle and pedestrian facilities and provide sufficient setbacks between the building and the edge of the right-of-way to create quality and comfortable public environments.
- **Bicycle Anti-harassment Ordinance | Model Road User Laws** - In 2011, the City of Los Angeles passed the first ordinance designed to protect people bicycling from harassment by drivers, such as intentionally distracting a bicyclist on the road. The law is unlike traditional assault and battery cases because it does not require proof of actual damages, giving greater protection to bicyclists. Under an anti-harassment ordinance, bicycle riders can sue offending vehicle drivers in civil court, which has a lower burden of proof than criminal charges, making it easier for people biking to be adequately compensated. This is something that City of Sandy Springs residents raised as a concern during one of the

SANDY SPRINGS

Transportation Master Plan

focus group meetings and that occurs along some of the City's existing bike lanes. A handful of other cities across the country have now passed similar ordinances as well.



1 | Introduction

The Transportation Master Plan

Sandy Springs is an established city and major employment center near the heart of the nation's fourth-fastest growing metropolitan area. As the City continues to mature over the coming decades, current transportation issues will only become more pressing.

The Sandy Springs Transportation Master Plan (TMP) establishes a transportation vision for the City that enables a livable and vibrant community. The TMP seeks to integrate transportation and land-use policy while considering the needs of all modes, including driving, biking, walking, transit, and freight transportation. The plan also considers recent mobility options such as bikeshare, e-scooters, and rideshare.

About this Memorandum

This memorandum is part of a larger Multimodal Assessment document, which offers an understanding of the transportation needs that exist in Sandy Springs today based on mode: roadway, bicycle and pedestrian, and transit. This memorandum shall focus on transit, and has the following goals:

- Build on the findings of past City & regional planning efforts
- Document a needs assessment, focusing on specific transit-related needs within the City
- Integrate feedback from stakeholders
- Identify transit-related policies and projects for consideration as part of the TMP

Previous & Ongoing Planning Efforts

Numerous previous planning efforts, both within the City of Sandy Springs and regionally, have identified transit-related needs and proposed transit projects. These findings were identified in the documentation of these planning efforts and compiled. Following is a review of the transit-related recommendations from these efforts.

ATL Regional Transit Plan (2019)

Portions of the City of Sandy Springs are in ATL districts 1, 2, and 3. The ATL compiled proposed transit investments across the 13-county Atlanta region, as identified by local agencies. The following projects listed in the ATL Regional Transit Plan (ARTP) are located in Sandy Springs:

- **GA 400 Transit Initiative Bus Rapid Transit (BRT):** Bus Rapid Transit Lines with expected features such as: defined stations with amenities, signage, transit signal priority, frequent bi-directional service, separate branding, dedicated/managed running way, off-board fare collection, level platform boarding, and increased station spacing.
- **I-285 Top End Transit in Express Lanes:** Rubber wheel rapid transit in GDOT 285 Top End Express Lanes from Northlake Parkway in DeKalb County to Cumberland Parkway in Cobb County with stations in Fulton County at Perimeter Center Parkway, Roswell Road, and New Northside Drive/Northside Drive/Powers Ferry Road. While the system will run within the GDOT Express Lanes, the rapid transit project will include station infrastructure along I-285, pedestrian/bicycle connections between eastbound and westbound stations, and pedestrian connections to surrounding destinations including the Medical Center and Dunwoody MARTA rail stations. The project budget also includes high quality vehicles with Wi-Fi and other contemporary technologies and communications equipment to enhance user comfort and service predictability/reliability.
- **Highway 9/Roswell Road Arterial Rapid Transit (ART):** Rubber wheel rapid transit in existing travel lanes along Highway 9/Roswell Road including raised stations, pedestrian improvements, pull-offs, and signal prioritization with station locations TBD.
- **Holcomb Bridge Road Arterial Rapid Transit (ART):** Rubber wheel rapid transit in existing travel lanes along Holcomb Bridge Road/Highway 92 including raised stations, pedestrian improvements, pull-offs, and signal prioritization with station locations TBD.
- **Fulton County Last Mile/Station Connectivity Improvements:** Pedestrian, bicycle, and accessibility improvements at existing MARTA rail stations in Fulton County, outside of the City of Atlanta, to improve last mile connectivity, accessibility, functionality, and user-experience. Improvements will include ramps, sidewalks, and potential safety/security enhancements to stations and station areas.

- **Fulton County Bus Shelter Enhancements:** Replacement and addition of bus shelters, concrete pads, lighting, trash receptacles, and pedestrian sidewalks at MARTA bus stops throughout Fulton County.

Fulton County Transit Master Plan (2018)

The Fulton County Transit Master Plan analyzed transit needs in Fulton County, outside of the City of Atlanta, and developed a plan for transit investment based on needs and financial constraints. The plan first developed a market-based transit scenario, which identified the most appropriate mode of transit for each potential corridor considered. The market-based scenario, shown in Figure 1, was primarily focused on identifying investment needs based on demand, and not on financial constraints.

The market-based scenario identified the following recommended modes for each of the potential corridors in Sandy Springs:

- Heavy Rail
 - GA 400 (North Springs MARTA Station to Holcomb Bridge)
- Light Rail
 - I-285
- Arterial Rapid Transit
 - Roswell Road
- Frequent Local Bus
 - Johnson Ferry Road

Market Based Plan

HEAVY RAIL

- ◆ GA 400 (North Springs MARTA Station to Holcomb Bridge)
- ◆ Norfolk Southern Railroad (East Point MARTA Station to Clayton County)
- ◆ I-20 Extension (H.E. Holmes MARTA Station to Fulton Industrial Boulevard)

ARTERIAL RAPID TRANSIT

- ◆ Roswell Road
- ◆ Old Milton Parkway
- ◆ Camp Creek Parkway
- ◆ Fulton Industrial Boulevard

FREQUENT LOCAL BUS

- ◆ Johnson Ferry Road

LIGHT RAIL

- ◆ I-285

BUS RAPID TRANSIT

- ◆ GA 400 (Holcomb Bridge Road to Windward Parkway)
- ◆ Holcomb Bridge Road/Highway 92
- ◆ Highway 141
- ◆ Highway 29 (College Park MARTA Station to City of Palmetto)
- ◆ South Fulton Parkway (College Park MARTA Station to Chattahoochee Hills)

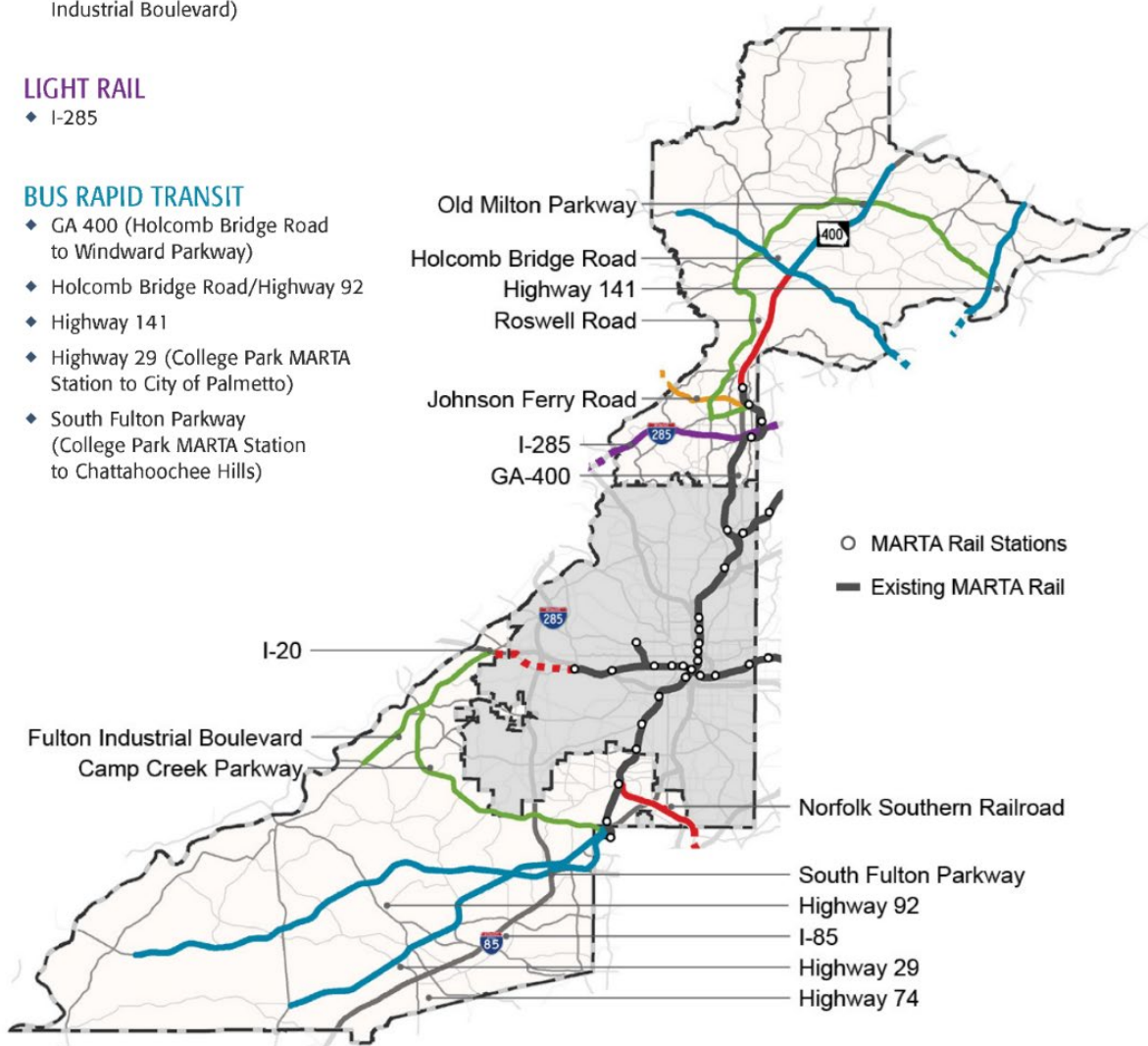


Figure 1 – Fulton County Transit Master Plan – Market Based Plan

The plan also identified a preferred transit investment scenario, which identified an actionable short-term investment plan focused on constructing BRT and ART corridors in the County. The preferred transit investment scenario, shown in Figure 2, identified the following recommended investments for each of the potential corridors in Sandy Springs:

- Bus Rapid Transit
 - GA 400 (North Springs MARTA Station to Old Milton Parkway)
- Arterial Rapid Transit
 - Roswell Road

BRT/ART Scenario

BUS RAPID TRANSIT

- ◆ GA 400 (North Springs MARTA Station to Old Milton Parkway)
- ◆ Holcomb Bridge Road/Highway 92
- ◆ Highway 29 (College Park MARTA Station to City of Palmetto)
- ◆ South Fulton Parkway (College Park MARTA Station to Highway 92)

ARTERIAL RAPID TRANSIT

- ◆ Roswell Road
- ◆ Old Milton Parkway
- ◆ Highway 141
- ◆ Camp Creek Parkway
- ◆ Fulton Industrial Boulevard

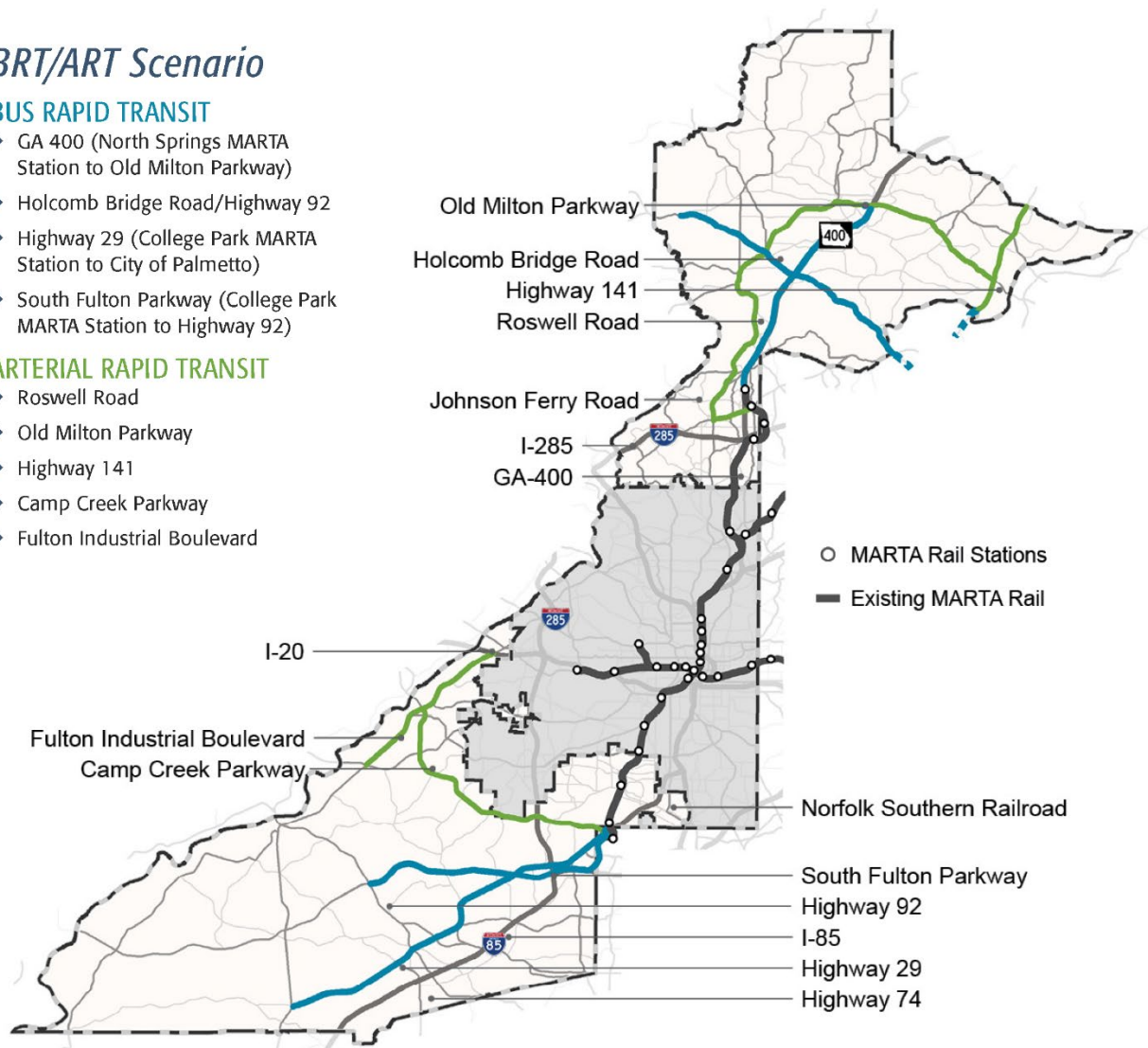


Figure 2 – Fulton County Transit Master Plan – Preferred Transit Investment Scenario

The Next Ten: Comprehensive Plan for Sandy Springs, Georgia (2017)

The Next Ten Comprehensive Plan for Sandy Springs ("Next Ten Plan") is designed to guide the City's future land use and development patterns over the next 20 years as Sandy Springs' population continues to grow, with an emphasis on an immediate ten-year horizon.

The Next Ten Plan included several provisions that affect transit. One of the ten community goals established in the Plan was "Maximize the potential of the city's transit infrastructure by managing transit systems, concentrating development around existing and future MARTA stations, and providing better access to these transit assets."

The following transportation policies and actions in the Next Ten Plan affect or are related to transit:

A. Better Manage Vehicular Traffic Demand to Encourage the Use of Alternative Modes

Policy T-A1: Develop, implement, promote and support Transportation Demand Management programs in major employment and activity centers

- T-A1.1 Prepare PCID parking study to include management area feasibility assessment.

Policy T-A3: Expand the knowledge of and opportunity for non-drive-alone travel

B. Expand Mobility Options

Policy T-B1: Increase access to existing and planned rail transit stations

- T-B1.1 Identify locations, develop cost estimates for, and install three bicycle parking and service hubs (referred to in PCIDs Bicycle Implementation Strategy as 'Spoke-Point Pavillions') in key Perimeter Center locations.
- T-B1.2 Design, prepare cost estimates and secure ROW for MARTA North Springs Station pedestrian bridge across Georgia 400, coordinating with construction schedule for I-285/GA 400 interchange project. [2019: Design; 2020: ROW; 2021: Target construction year]
- T-B1.3 Amend Capital Improvement Program to incorporate priority projects identified in Last Mile Connectivity Study.
- T-B1.4 Work with MARTA to identify a preferred alignment for the PATH 400 trail extension relative to a new rail station location at Northridge Road.

Policy T-B3: Develop and adopt a transit system plan for a family of transit services

- T-B3.1 Prepare east-west transit feasibility and ridership demand study in partnership with Cobb County (*first phase of an overall study approach for management of personal mobility on this corridor; second phase is in Action Item T-C3.1*)

- T-B3.2 Prepare operations and feasibility study for transit service based on recommendations of COSS-led Phase I Last Mile Connectivity Study to be completed in 2016
- T-B3.3 Conduct feasibility study for short-term I-285 transit with stops in the City Springs and Powers Ferry areas. This is intended as a means of promoting mobility options to and from the Cumberland/Galleria area and SunTrust Park.

Policy T-B4: Plan, design and implement key corridors as efficient and complete streets with enhanced person-capacity

- T-B4.1 Develop Citywide Street Design Standards as part of Sandy Springs Development Code to complement Small Area Plan and Next Ten Street Typology framework.
- T-B4.2 Adopt City Complete Streets Policy to accommodate all users with context-sensitive street designs.
- T-B4.3 Conduct a planning study of potential locations for access consolidation, with outreach to community members and property owners.
- T-B4.4 Adopt access management policy based on Roswell Road Small Area Plan.

C. Improve East-West Mobility

Policy T-C1: Enhance connections over and across GA 400

Policy T-C2: Enhance east-west operations of key corridors

- T-C2.1 Begin use of mesoscopic model, originally developed in 2015 to help determine extents of impacts by developments on a localized scale.

Policy T-C3: Pursue a High-Occupancy Managed Lane Strategy for the Johnson Ferry Road-Abernathy Road Corridor

- T-C3.1 Prepare feasibility study for Abernathy-Johnson Ferry Managed Lane corridor (*second phase of an overall study approach for management of personal mobility on this corridor; first phase in Action Item T-B3.1*)

Policy T-C4: Continue to Study Long-Term Enhancements to Hammond Drive and Mount Vernon Highway

- T-C4.1 Complete necessary right-of-way acquisition on Hammond Drive corridor between Roswell Road and Glenridge Drive.

The Next Ten plan recommended a network of transit services in Sandy Springs (Policy TB-3), shown in Figure 3. The plan did not recommend that the City take full responsibility for operating or implementing these services, but did recommend that the City make decisions that “welcome and support” these services. The full proposed transportation network from the plan is shown in Figure 4

FAMILY OF TRANSIT SERVICES

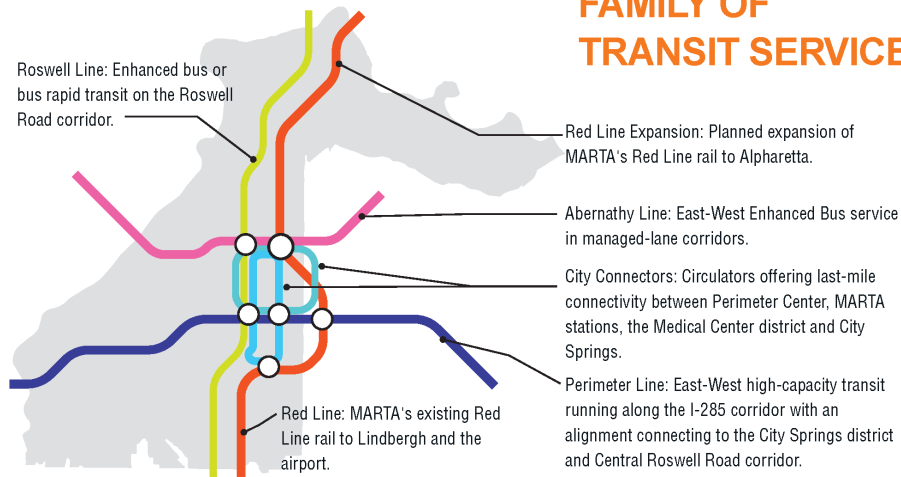


Figure 3 – Next Ten Plan – Family of Transit Services

MULTIMODAL TRANSPORTATION SYSTEM FRAMEWORK

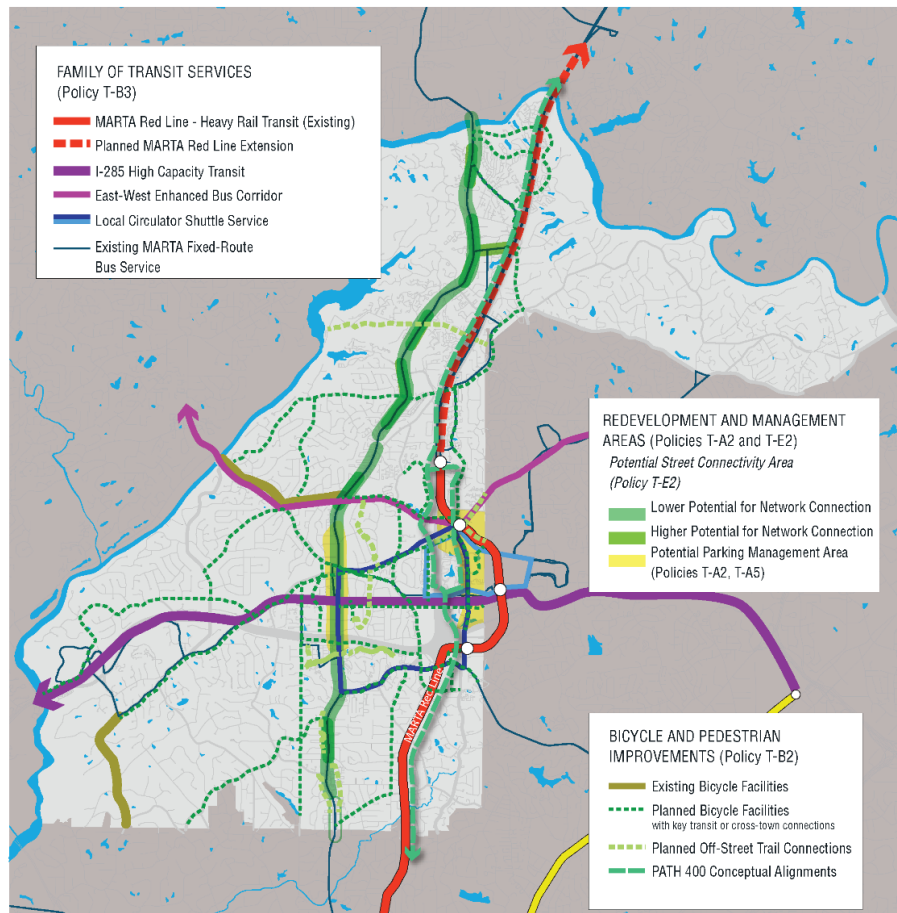


Figure 4 – Next Ten Plan – Proposed Transportation System Framework

Last Mile Connectivity Study (2017)

The Cities of Sandy Springs, Brookhaven, and Dunwoody, in collaboration with the Perimeter Community Improvement Districts (PCIDs), conducted a study of first/last mile connectivity in and around the Perimeter area. The study developed a consolidated project list to guide multimodal investment related to first/last mile connectivity in the Perimeter area; this list included recommendations from previous plans and studies as well as new recommendations produced by the study to fill “gaps” in coverage.

Cross-County Travel Demand Strategies (2018)

As a follow-up study to the Last Mile Connectivity Study, the City studied travel patterns between eastern Cobb County and the Sandy Springs/Perimeter Center area, particularly along the Johnson Ferry Road corridor. The results of this study were summarized in a technical memorandum and evaluated existing travel data to identify strategies to mitigate congestion on the Johnson Ferry Road corridor and provide alternate modes of transportation to meet travel demands.

The study recommended the following strategies for the City to pursue:

- Provide travel incentives to commuters and employers to incentivize commuters to switch from driving alone, assist commuters in finding carpools/vanpools; work with employers to plan telecommuting and flexible work hours programs; and recognize and promote employers that are successful in implementing programs that reduce the use of single occupancy vehicles.
- Work with Cobb County to identify potential park and ride lot locations in Cobb County to serve ridesharing programs, carpools, and vanpools, as well as future potential transit service from Cobb County.
- Continue to engage in regional planning efforts for high-capacity transit solutions for the I-285 top end corridor.
- Work with local agencies to examine the potential for transit service along the Johnson Ferry Road corridor.
- Consider conducting a more detailed origin-destination analysis of the Johnson Ferry Road corridor and conduct a peer review of other jurisdictions with similar geographic barriers to identify best practices for mitigating congestion across those barriers.

Mount Vernon Transit Study (2018)

As a follow-up study to the Last Mile Connectivity Study and the Next Ten Plan, the City studied transit needs along the Mount Vernon Highway corridor between Perimeter Center and City Springs. The study evaluated the possibility of new transit service on this corridor, and considered several different alignment, infrastructure, and service delivery options. The study included a cost-benefit analysis of the options considered and ultimately recommended the following actions:

- A new transit service along the study corridor, if implemented, should operate from 6:30 AM to 8:30 PM Monday through Saturday, at 15-minute headways, in vehicles that seat 15-20 passengers.
- The study did not make a recommendation for a preferred route alignment or whether added infrastructure improvements, such as transit lanes or transit priority treatments, should be implemented. The study recommended that the City revisit these options after the completion of major roadway projects, including the redesign of the I-285/GA 400 interchange, proposed managed lane access on Mount Vernon Highway and GA 400, and yet-to-be-determined improvements to the intersection of Mount Vernon Highway and Johnson Ferry Road with Roswell Road.
- Depending on the alternative chosen, there should be two to three primary stops, which would consist of a stop at City Springs and the Sandy Springs MARTA station in all alternatives, and potentially a third primary stop at Dunwoody MARTA station.
- Between primary stops, there should be no more than two to three intermediate stops, located at secondary nodes of activity.
- Upon implementation of the service, the City should pursue a contract arrangement with a private transportation service provider to deliver the service, as opposed to operating service in-house.

I-285 Transit Study

The I-285 Transit Study was a joint planning of seven cities along the northern arc of I-285 (Smyrna, Sandy Springs, Dunwoody, Brookhaven, Chamblee, Doraville, and Tucker) to evaluate transit options along I-285 between Cumberland Parkway and the Northlake/Tucker area. The study concluded that a high-capacity, rubber-wheeled transit system using the I-285 express lanes would be the most operationally and financially feasible transit option for travel along the I-285 top end. Utilizing the express lanes would ensure shorter travel times (compared to driving in the general purpose lanes) without the right-of-way and infrastructure costs that associated with a heavy rail option. Within Sandy Springs, access is proposed at the Roswell Road/SR 9 and I-285 interchange. Access would be configured as a pair of stations east of Roswell Road/SR 9, one north and one south of I-285. Dedicated access for transit vehicles would be provided from the express lanes. A pedestrian bridge between the two stations would facilitate connectivity across the interstate.

Existing Transit

Sandy Springs is served by a network of rail and bus routes from multiple agencies.

Metropolitan Atlanta Rapid Transit Authority (MARTA)

Rail, local bus, and paratransit service is provided by the Metropolitan Atlanta Rapid Transit Authority (MARTA). Heavy rail service is provided every 20 minutes on the MARTA Red Line, with four stations located in the Perimeter Center area.

Table 1 – MARTA Rail Station Ridership

Station	Average Daily Boardings, 2019
North Springs	6,403
Sandy Springs	2,287
Dunwoody	3,615
Medical Center	1,563

Table 2 - MARTA Bus Service

Route	Name	Service Limits	Peak Period Headway (min)	Off-Peak Headway (min)
5	Piedmont Road / Sandy Springs ²	Dunwoody Station to Lindbergh Center Station	15	20
85*	Roswell / Mansell Road ¹	Mansell Park & Ride to North Springs Station	30	40
87	Roswell Road / Morgan Falls ^{1, 2}	North Springs Station to Dunwoody Station	20	40
132*	Tilly Mill Road	Dunwoody Club Drive to Chamblee Station	30	60
140*	North Point Parkway ¹	Windward Park & Ride to North Springs Station	30	40
141*	Haynes Bridge Road / Milton ¹	Windward Park & Ride to North Springs Station	30	40
142*	East Holcomb Bridge Road	Mansell Park & Ride to Spalding Corners	40	40
143*	Windward Park-and-Ride ¹	Windward Park & Ride to North Springs Station	10	- ⁴
148*	Mount Vernon Highway	Riveredge Office Park to Sandy Springs Station	60	- ⁴
150*	Perimeter Center / Dunwoody Village	Dunwoody Village Shopping Center to Dunwoody Station	40	60
185	Alpharetta / Old Milton Parkway ¹	Brookside Parkway to North Springs Station	30	40
825*	Johnson Ferry Road ³	Chamblee station to Medical Center Station	60	60

¹ Rail connection provided at North Springs Station

² Rail connection provided at Dunwoody Station

³ Circulator service with rail connections at Medical Center and Chamblee Stations

⁴ No off-peak service

* Service currently suspended due to COVID-19 pandemic

Xpress Bus

Sandy Springs status as a growing regional employment hub is supported by four Xpress commuter bus routes. These routes originate at park-and-ride facilities around the Metro Atlanta region and provide direct, high-quality service to commuters travelling to the Perimeter Center area. Once reaching Perimeter Center, routes circulate through a limited number of curbside stops, as well as select MARTA stations. The four routes Xpress routes that currently the Perimeter area are:

- Route 401: Cumming (Forsyth County) to Perimeter Center
- Route 417: Sugarloaf Mills (Gwinnett County) to Perimeter Center
- Route 428: West Conyers / Panola (I-20 East Corridor) to Perimeter Center
- Route 482: Town Center (Cobb County) to Perimeter Center

Routes 401 and 482 provide connections to the Medical Center, Dunwoody, and Sandy Springs MARTA stations. Due to the configuration of access points to and from I-285, routes 417 and 428 serve the Dunwoody and Medical Center MARTA stations only. There are also minimal bus bays at the Sandy Springs MARTA station.

Perimeter Area Shuttles

Sixteen shuttle routes provide last-mile connectivity from the Medical Center, Dunwoody, and Sandy Springs MARTA stations to offices around the Perimeter Center area. Routes operate with varied headways in the morning and afternoon peak periods with leased vehicles from third-party service providers. The shuttles are privately operated.

Paratransit and Senior Services

Paratransit service in Sandy Springs is provided by MARTA Mobility and is available within three-quarters of a mile from any MARTA bus route. Approximately 80% of Sandy Springs residents live within the paratransit service area. Just over 600 MARTA Mobility trips a month originate in the City. This service expands transit accessibility to segments of the population unable to walk to a bus stop. Unlike traditional fixed-route bus service, where vehicles travel along static routes and stop at predetermined locations, paratransit service picks-up and drops-off riders at the beginning and end of their trips. Riders must book trips on the service in advance through MARTA.

Additional senior-focused mobility service is offered by both the Fulton County Office of Aging and Senior Services North Fulton. Through the non-profit group Common Courtesy, the County provides subsidized rideshare services to eligible seniors over the age of 60. Following an initial registration fee of \$15, rides are provided at \$1 each.

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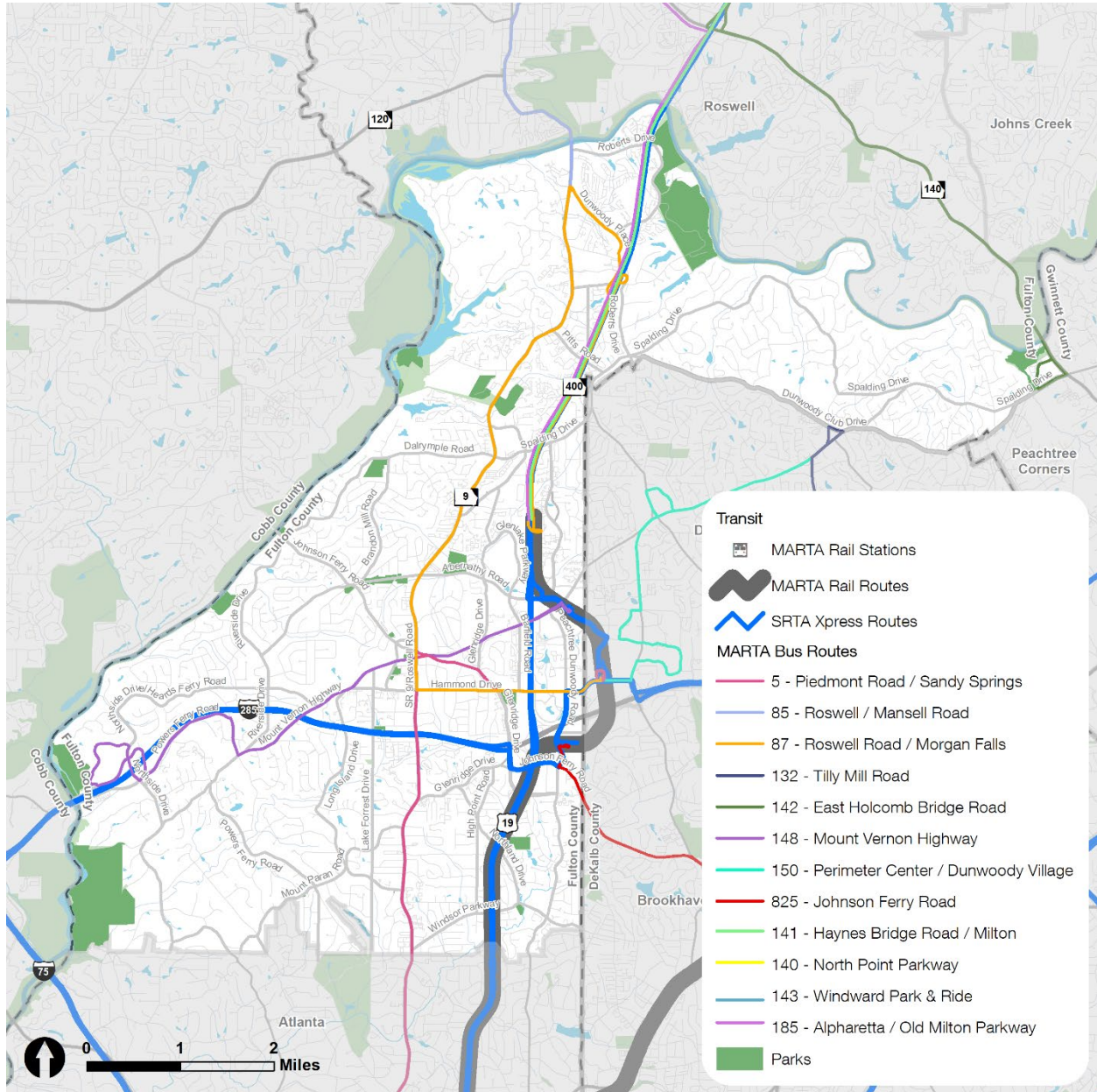


Figure 5—Existing Transit Service

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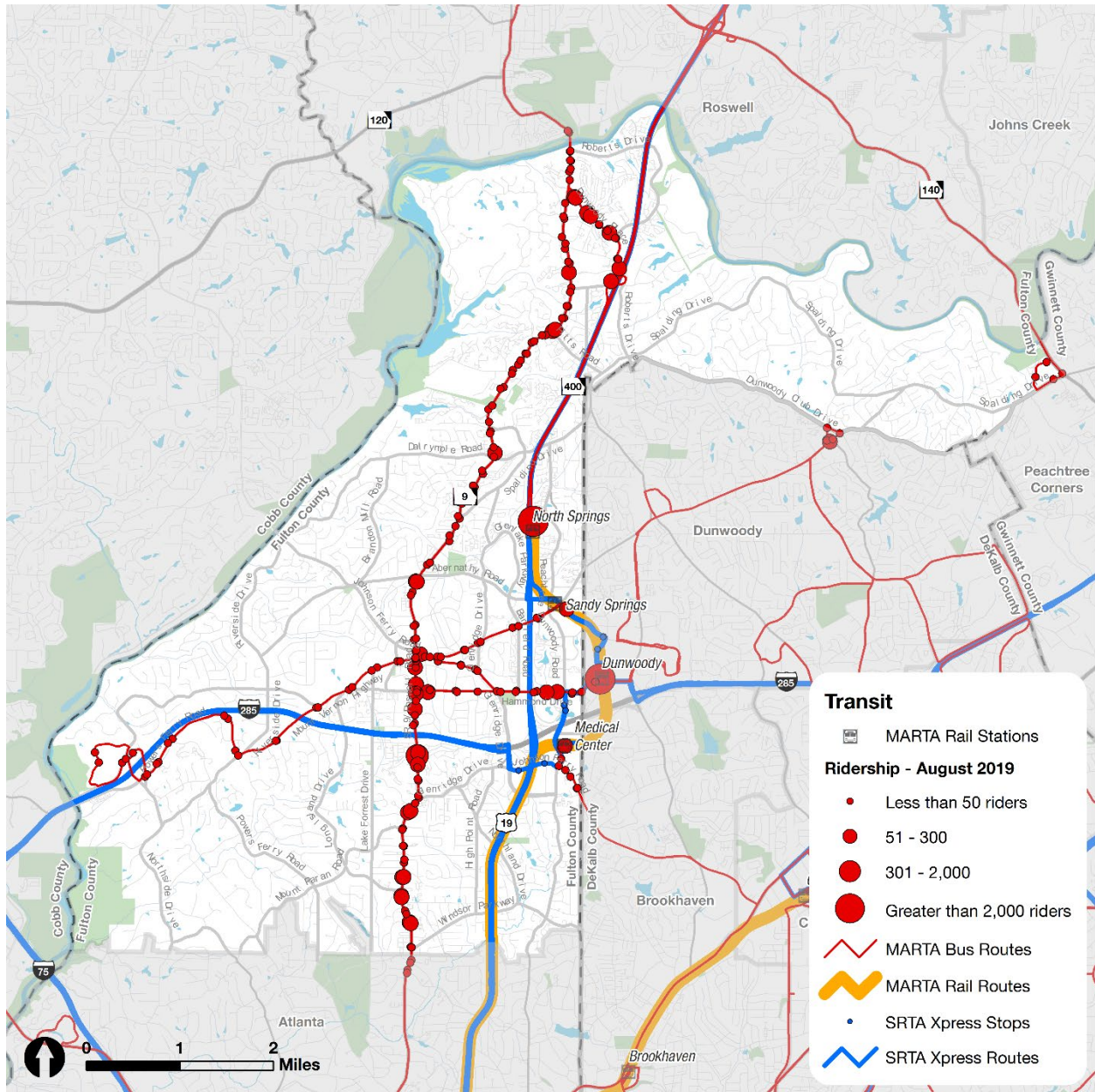


Figure 6 – Existing Bus Ridership

Transit Needs Analysis

The objective of the transit needs analysis performed as part of the TMP effort was to focus on identifying four specific areas of potential need:

- Serving first & last mile connections to transit stops and stations
- Local circulation between major activity centers within Sandy Springs
- Serving travel needs between Sandy Springs and adjacent jurisdictions

Following is an overview of this analysis and related findings

Serving First & Last Mile Connections to Transit

Existing and proposed high-capacity transit stations were mapped and overlaid with ¼-mile and ½-mile buffers. These buffers represent typical walking distances for passengers accessing high-capacity transit stations and represent the areas from which stations could be reasonably expected to capture passengers who can walk between the station and their trip origin or destination. It is noted that buffers were drawn as the crow flies; actual typical walking distances vary based on the local network and the availability of pedestrian infrastructure.

The areas outside of these walking-trip capture areas represent locations where there is an opportunity to connect passengers to stations via transit. Figure 7 and Figure 8 show these buffers overlaid onto 2020 and 2050 population density, respectively, in Sandy Springs. The maps suggest that the City Springs Area, and areas along the Roswell Road corridor north of Abernathy Road are the areas of greatest population density that are outside of walking distance from existing or planned high-capacity transit stations. Figure 9 and Figure 10 show buffers overlaid onto 2015 employment density and projected employment growth from 2015 to 2050, respectively. The maps show that the City Springs Area, in particular, represents an opportunity to provide last-mile connections to high-capacity transit in a location just outside of walking distance from existing and proposed stations.

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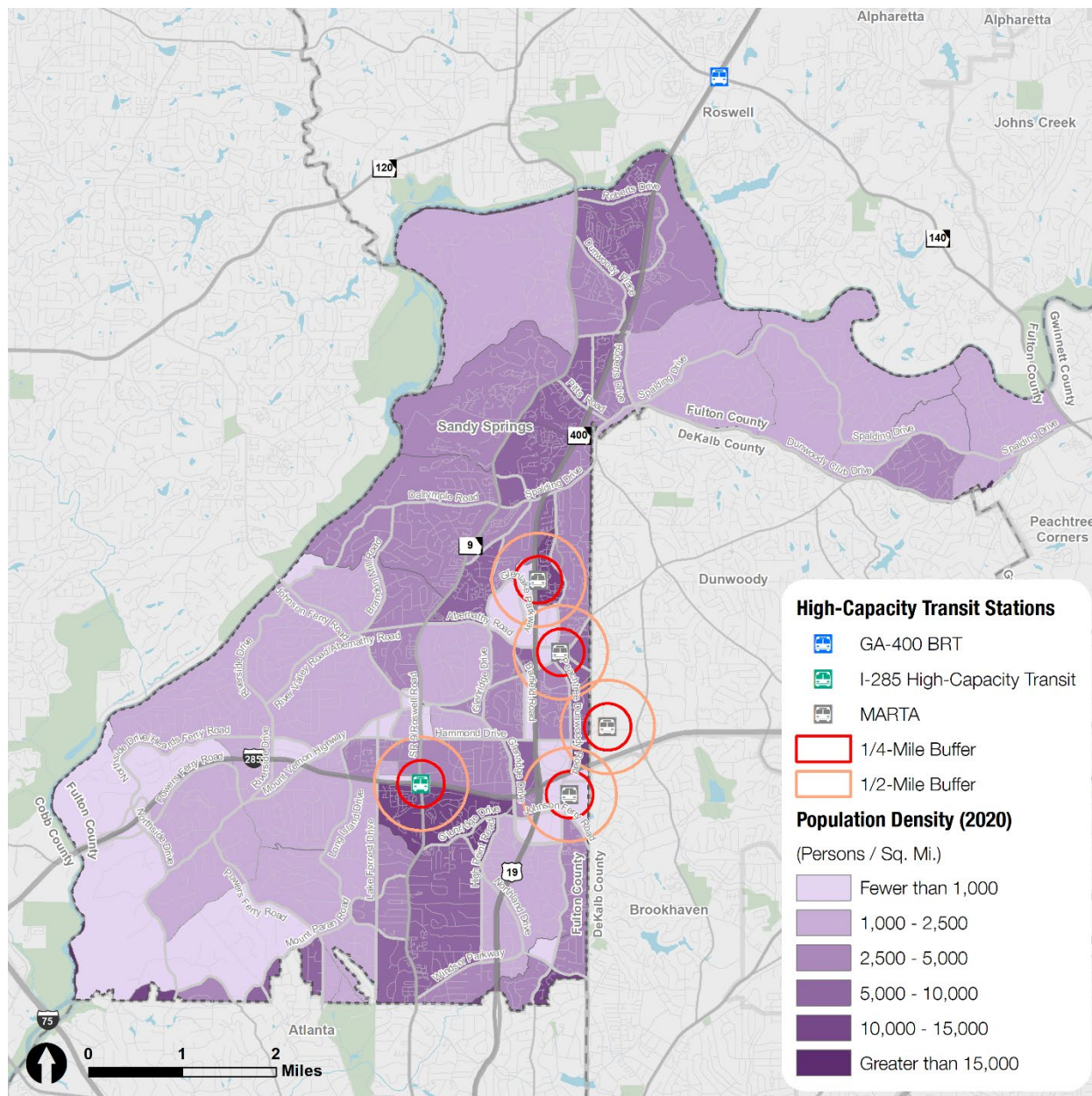


Figure 7 – 1/4-Mile and 1/2-Mile Station Areas vs. 2020 Population Density

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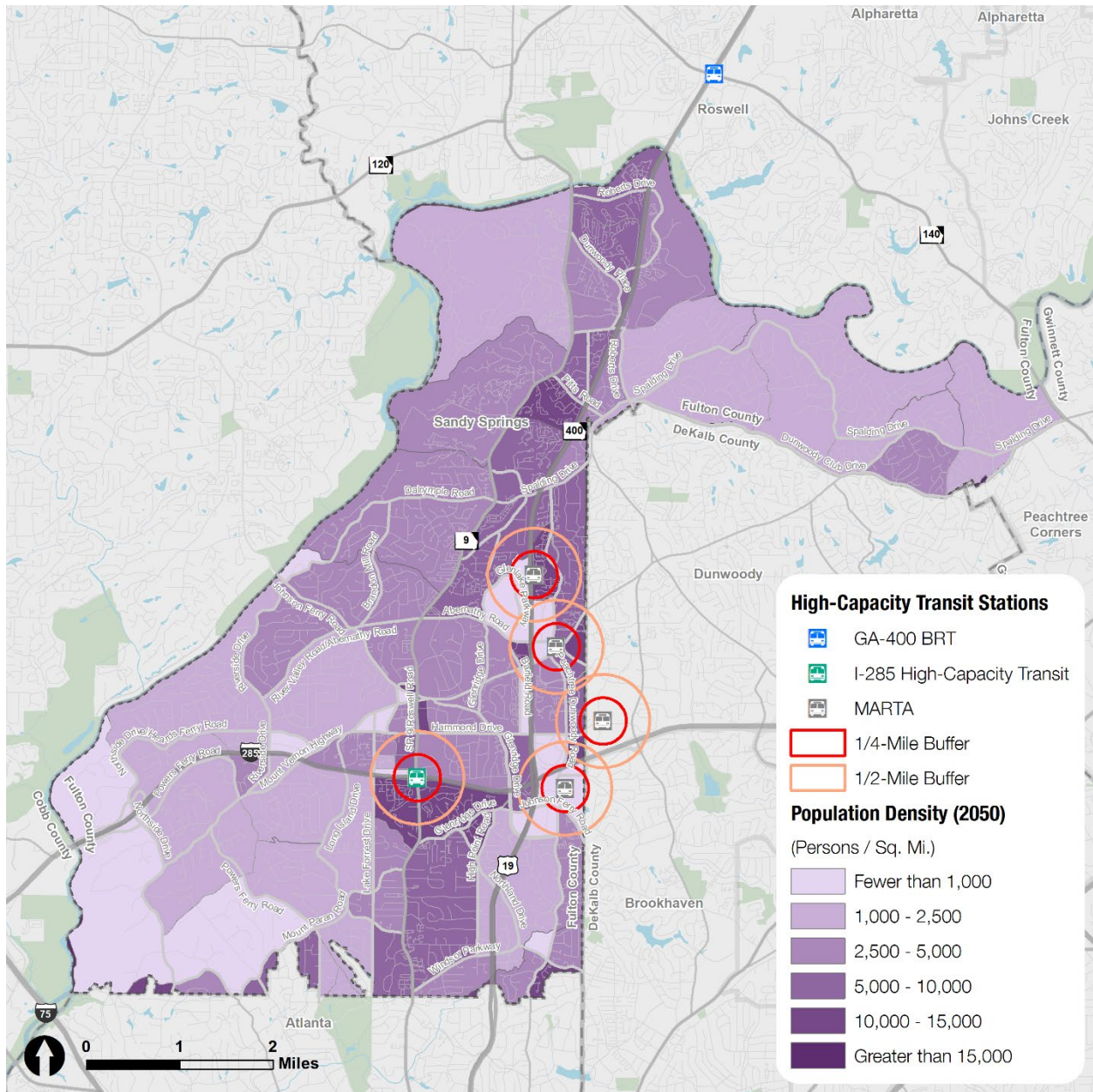


Figure 8 – 1/4-Mile and 1/2-Mile Station Areas vs. 2050 Population Density

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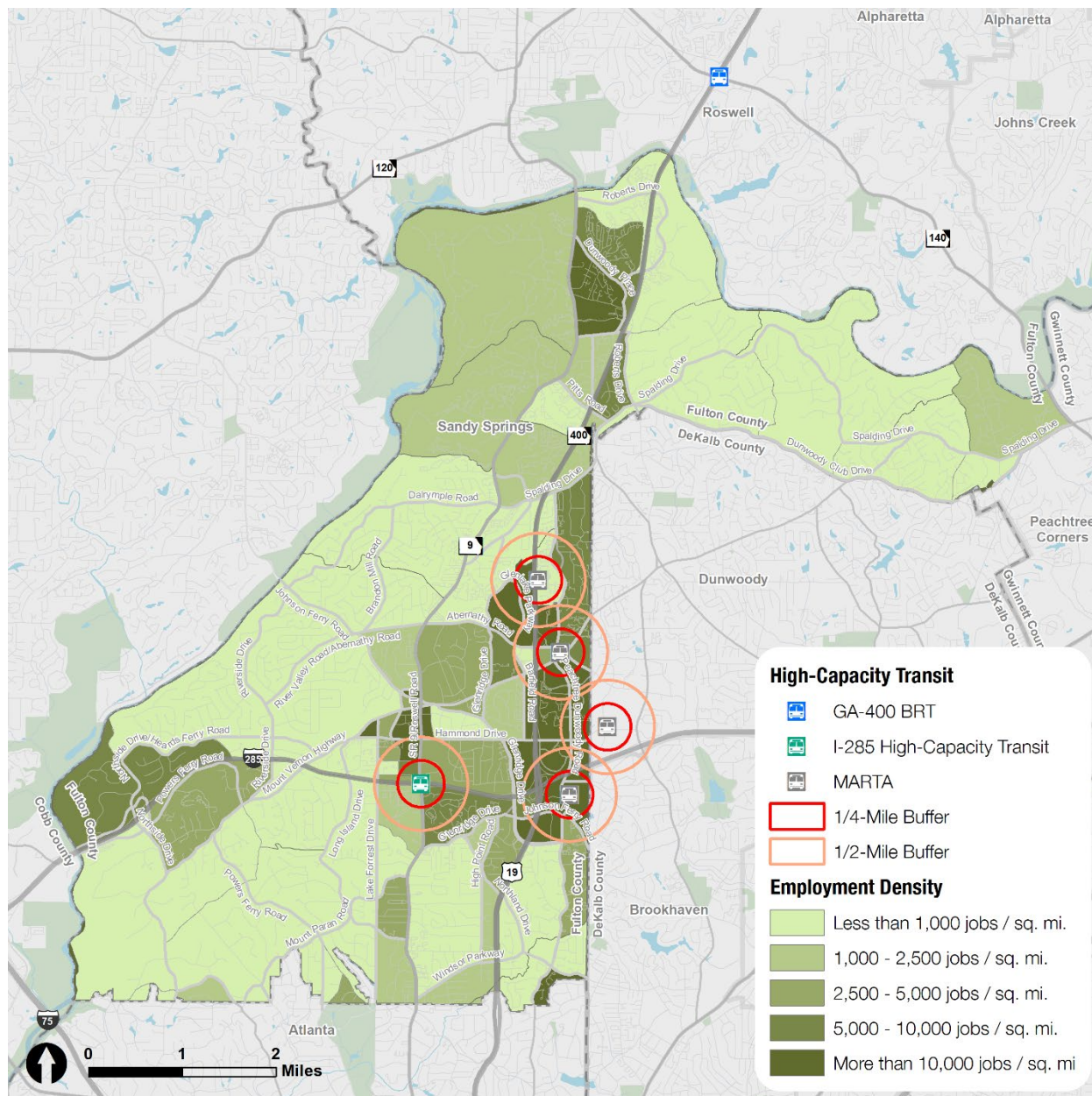


Figure 9 – 1/4-Mile and 1/2-Mile Station Areas vs. 2015 Employment Density

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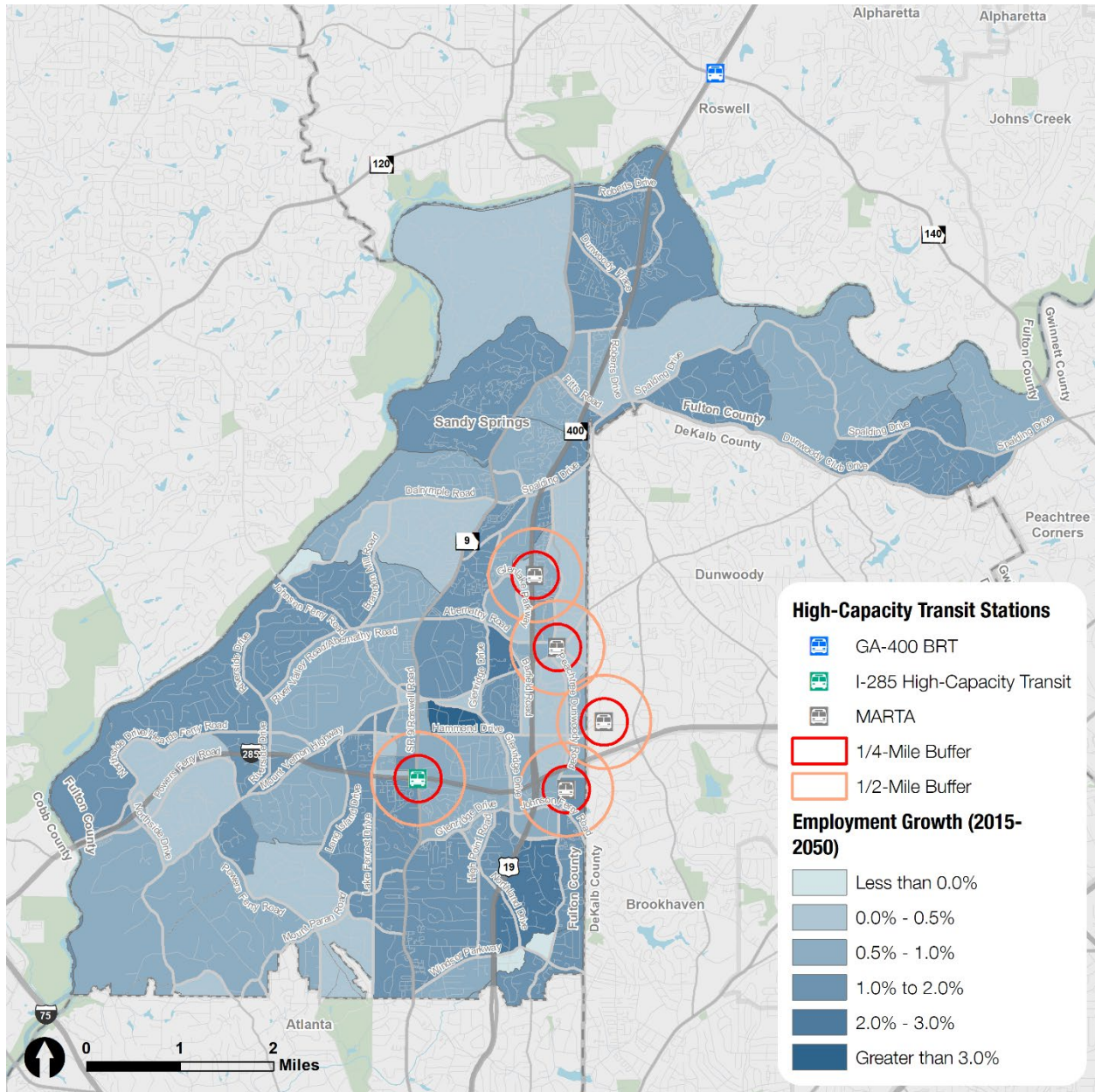


Figure 10 – 1/4-Mile and 1/2-Mile Station Areas vs. Projected Employment Growth (2015-2050)

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Using longitudinal employer-household dynamics (LEHD) data, jobs within a quarter mile of MARTA stations downstream from the four Sandy Springs Stations (i.e. Buckhead, Midtown, and Downtown) were analyzed to determine the home locations of those workers in Sandy Springs. Identifying the home locations of these workers, regardless of whether they commute via transit, helps to identify the home locations of all commuters who could potentially use transit for their commute, and could stand to utilize improved first/last mile connections to MARTA stations. Figure 11 shows the home locations of these workers in Sandy Springs; Figure 12 shows their work locations.

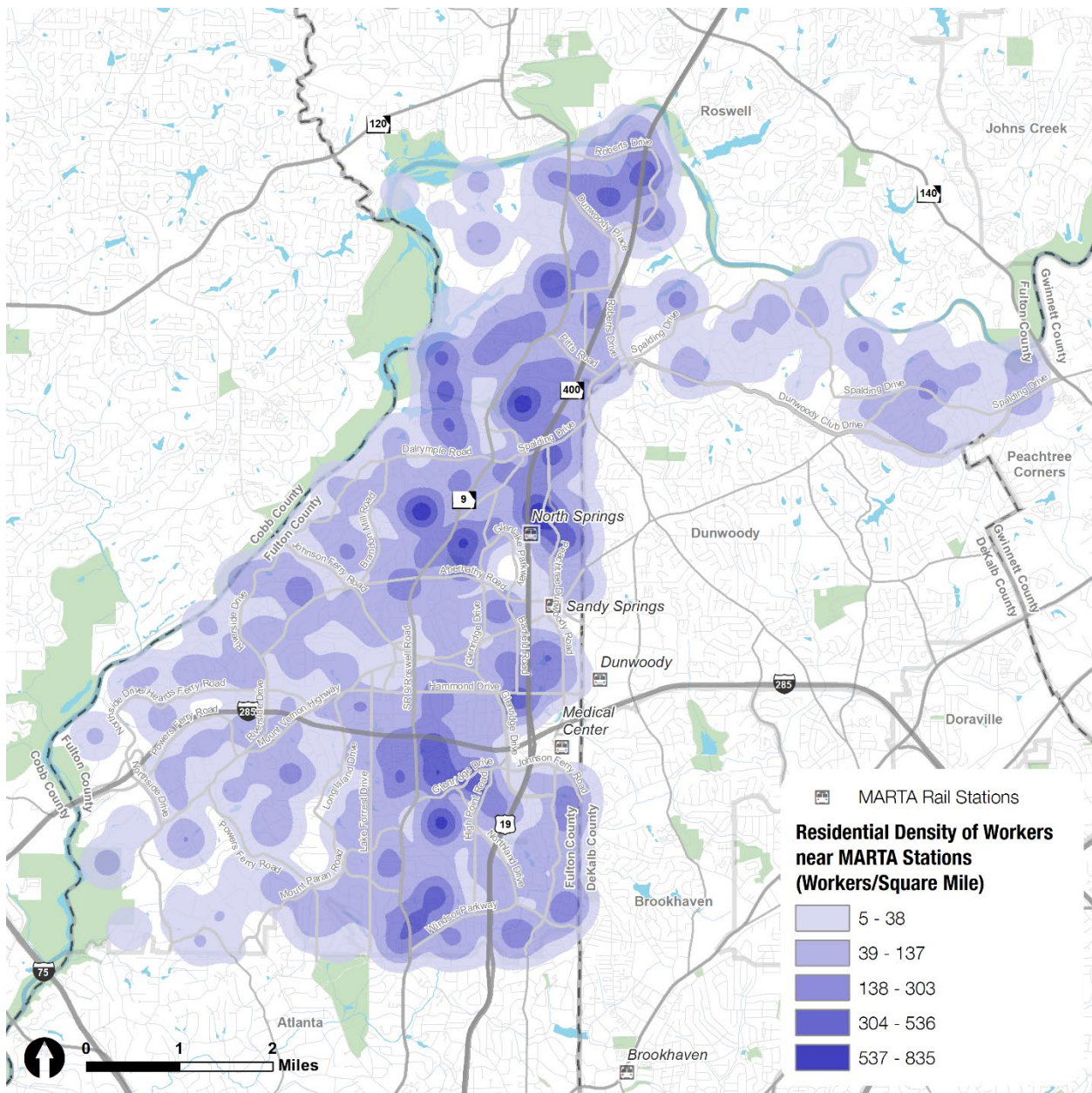


Figure 11 – Residential Density of Workers with Employment near Downstream MARTA Stations

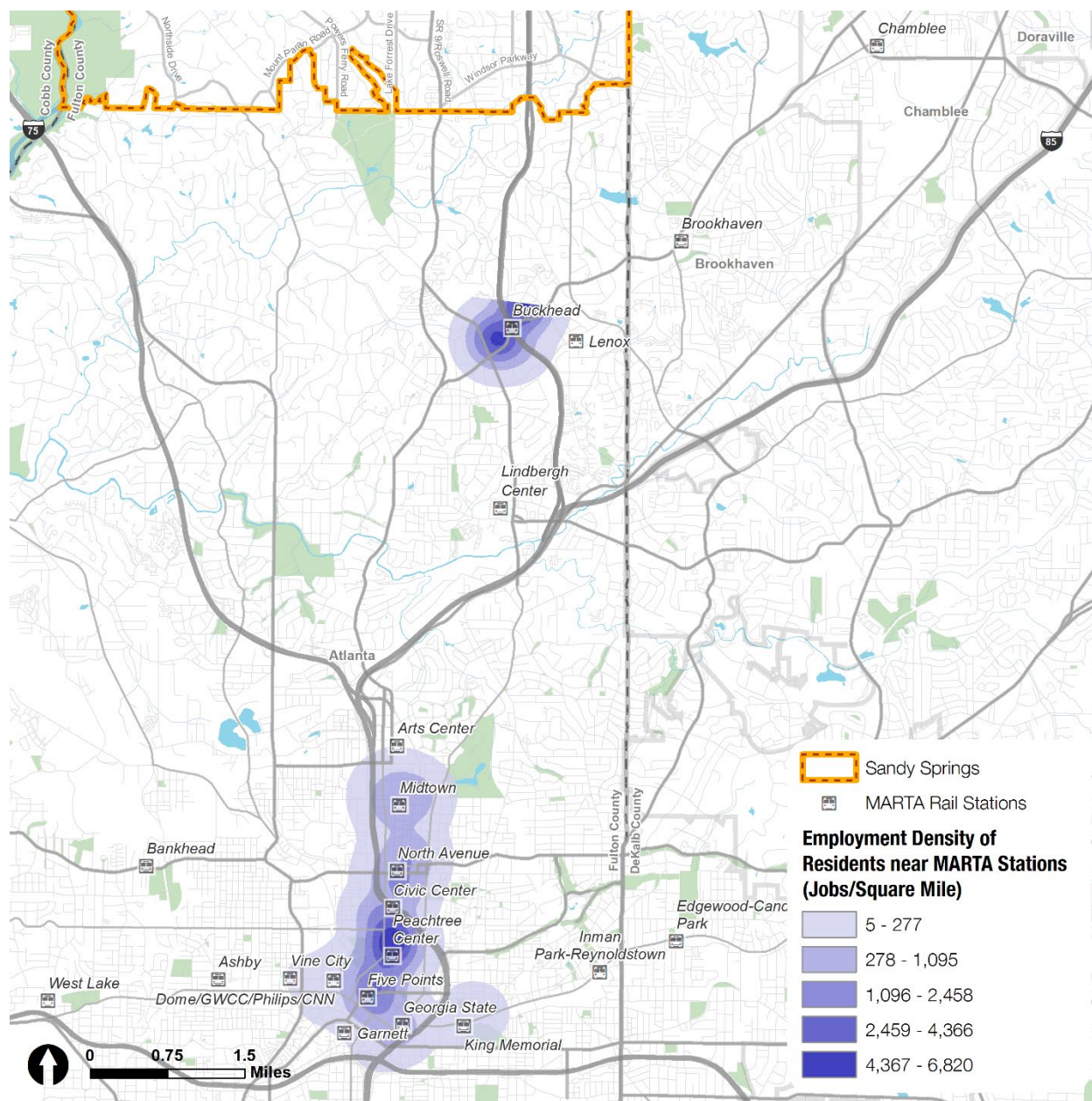


Figure 12 – Employment Density of Residents who Live Near Sandy Springs MARTA Stations

The project team analyzed data from MARTA's rail on-board survey from Fall 2019 to determine the origin and destination locations of passengers at the four Sandy Springs MARTA stations. Figure 11 shows the density of origin locations by transportation analysis zone (TAZ) of all trips accessing one of these MARTA stations on a daily basis.

Figures 12 through 15 show the access and egress mode shares of each individual MARTA station. Medical Center is primarily accessed by walking. At Dunwoody and Sandy Springs, approximately half of all access or egress trips are by walking and a quarter are via transit. At North Springs, most passengers access the station via park & ride or public transit, reflective of its status as the Red Line terminus, abundant feeder transit service, and park & ride facilities at that station.



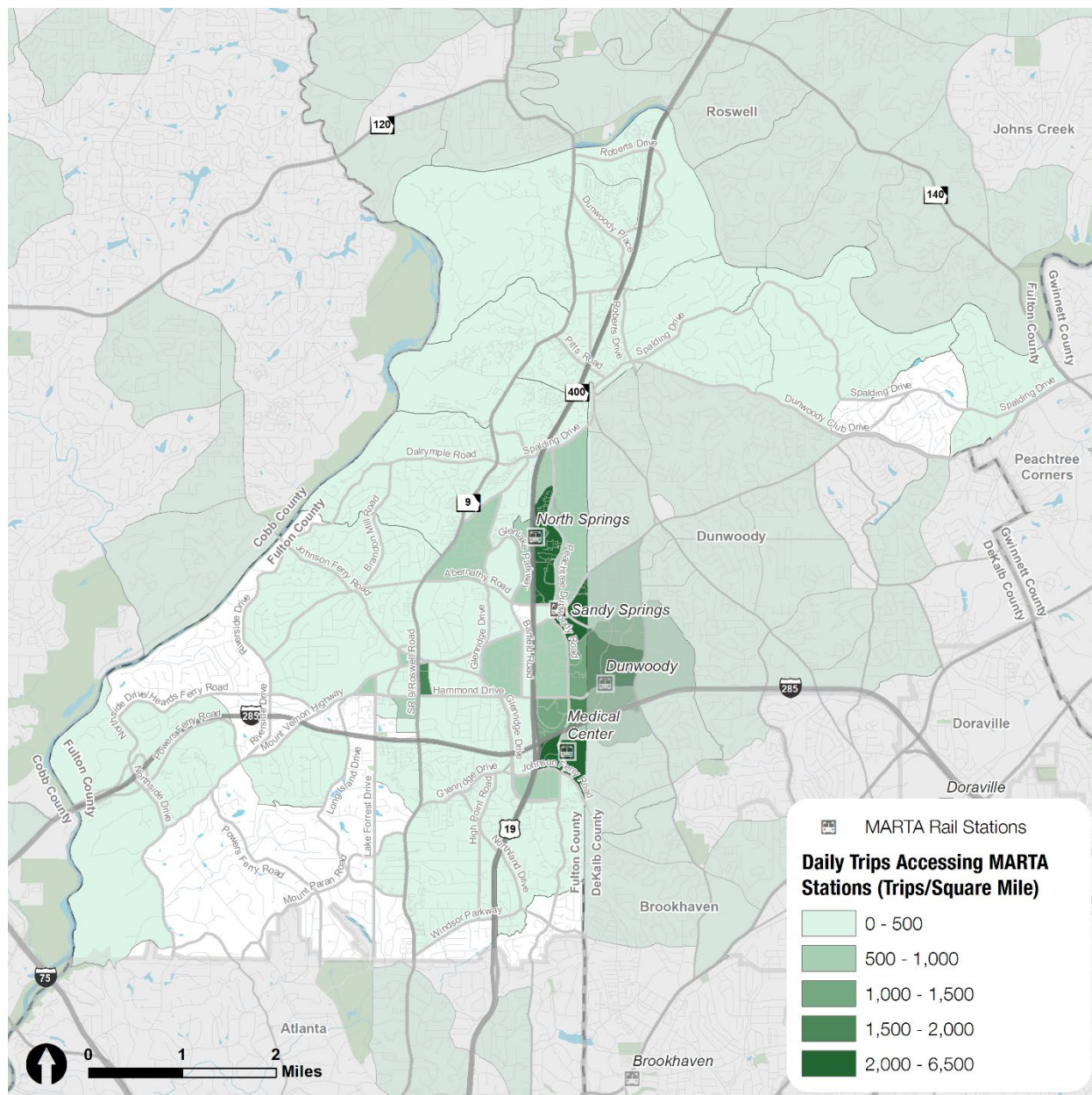


Figure 13– Trip Origin Density of Trips Accessing Sandy Springs MARTA Stations

Figure 14 – Access/Egress Trip Mode Shares – Medical Center Station

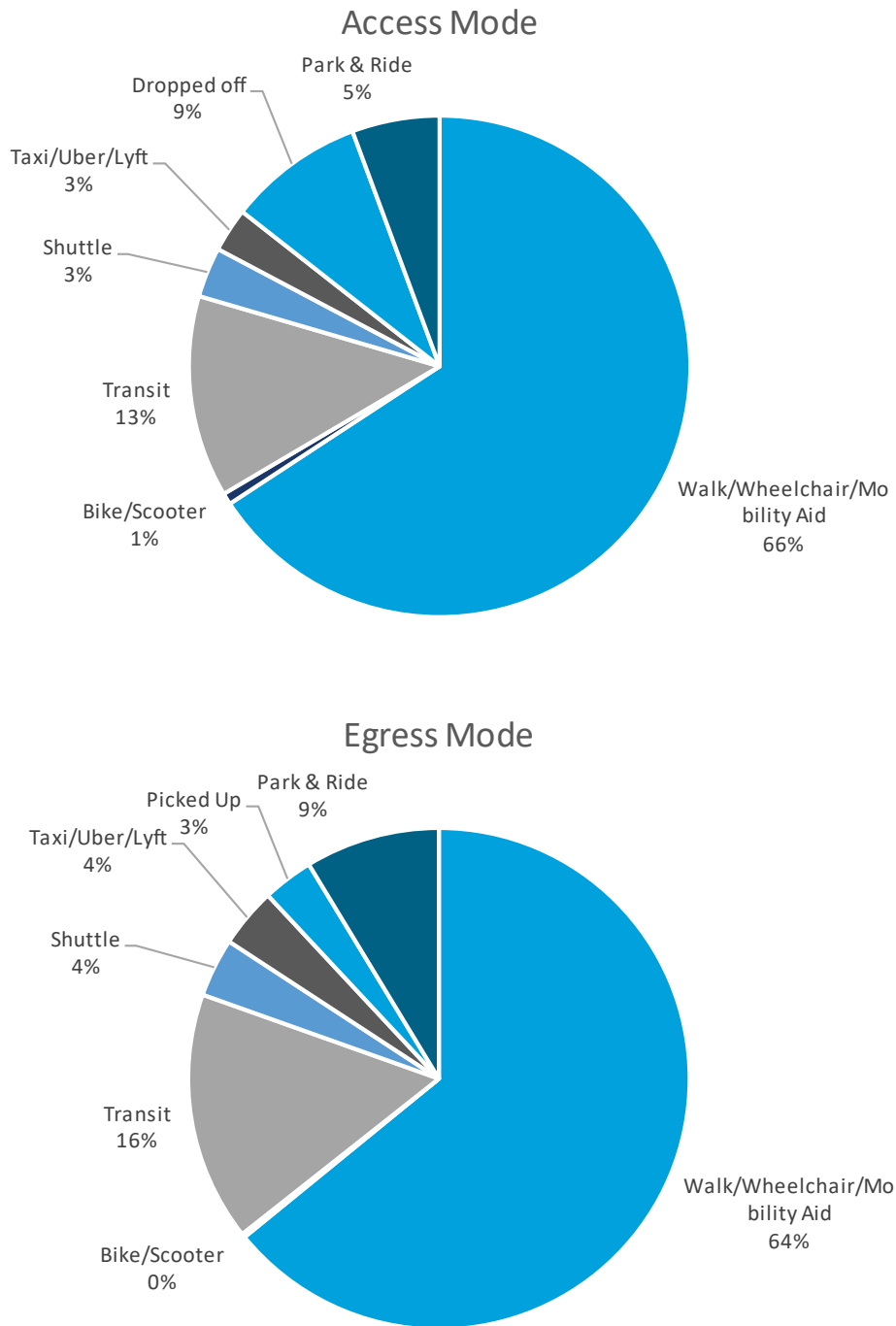


Figure 15 – Access/Egress Trip Mode Shares – Dunwoody Station

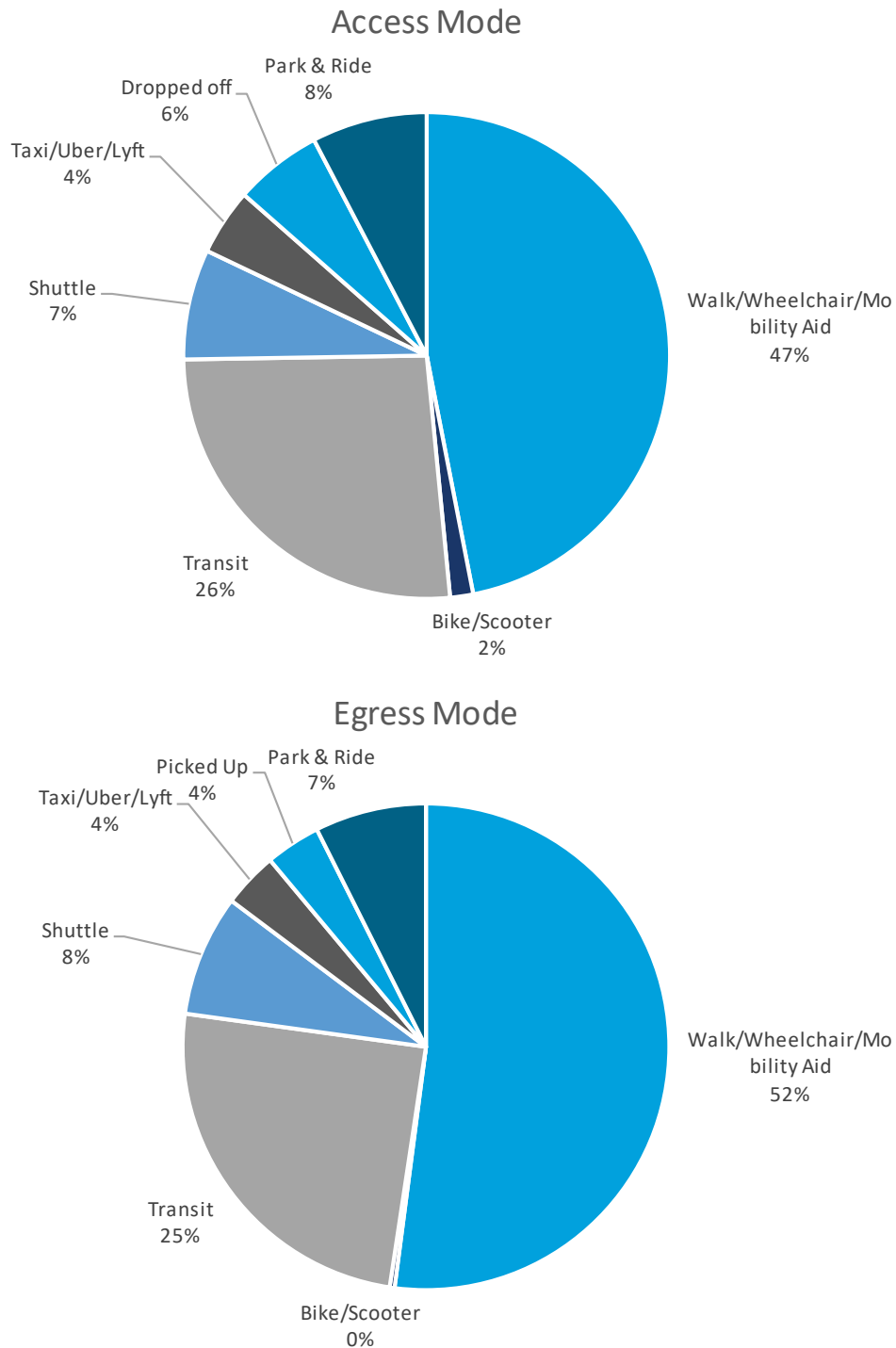


Figure 16 – Access/Egress Trip Mode Shares – Sandy Springs Station

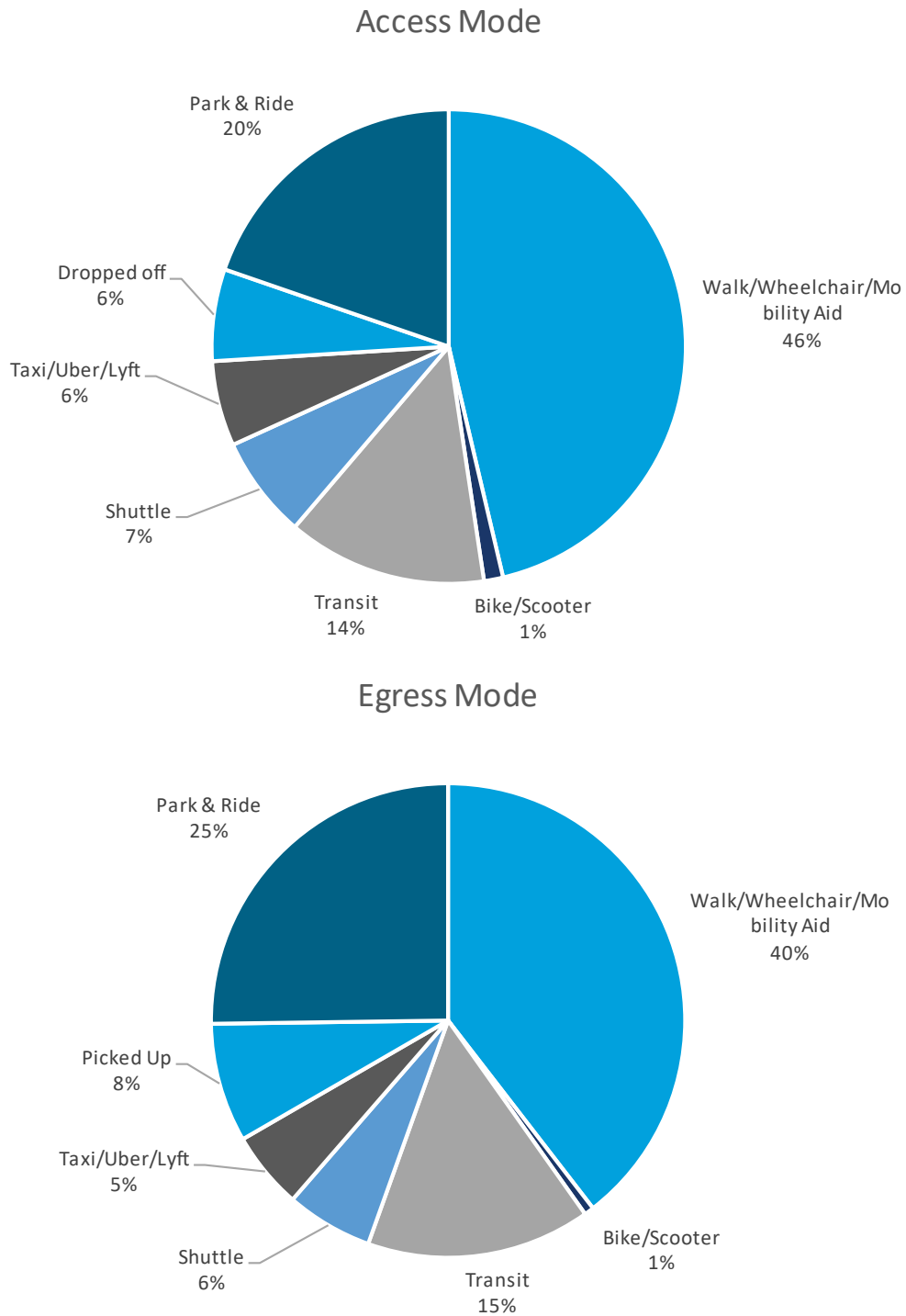


Figure 17 – Access/Egress Trip Mode Shares – North Springs Station

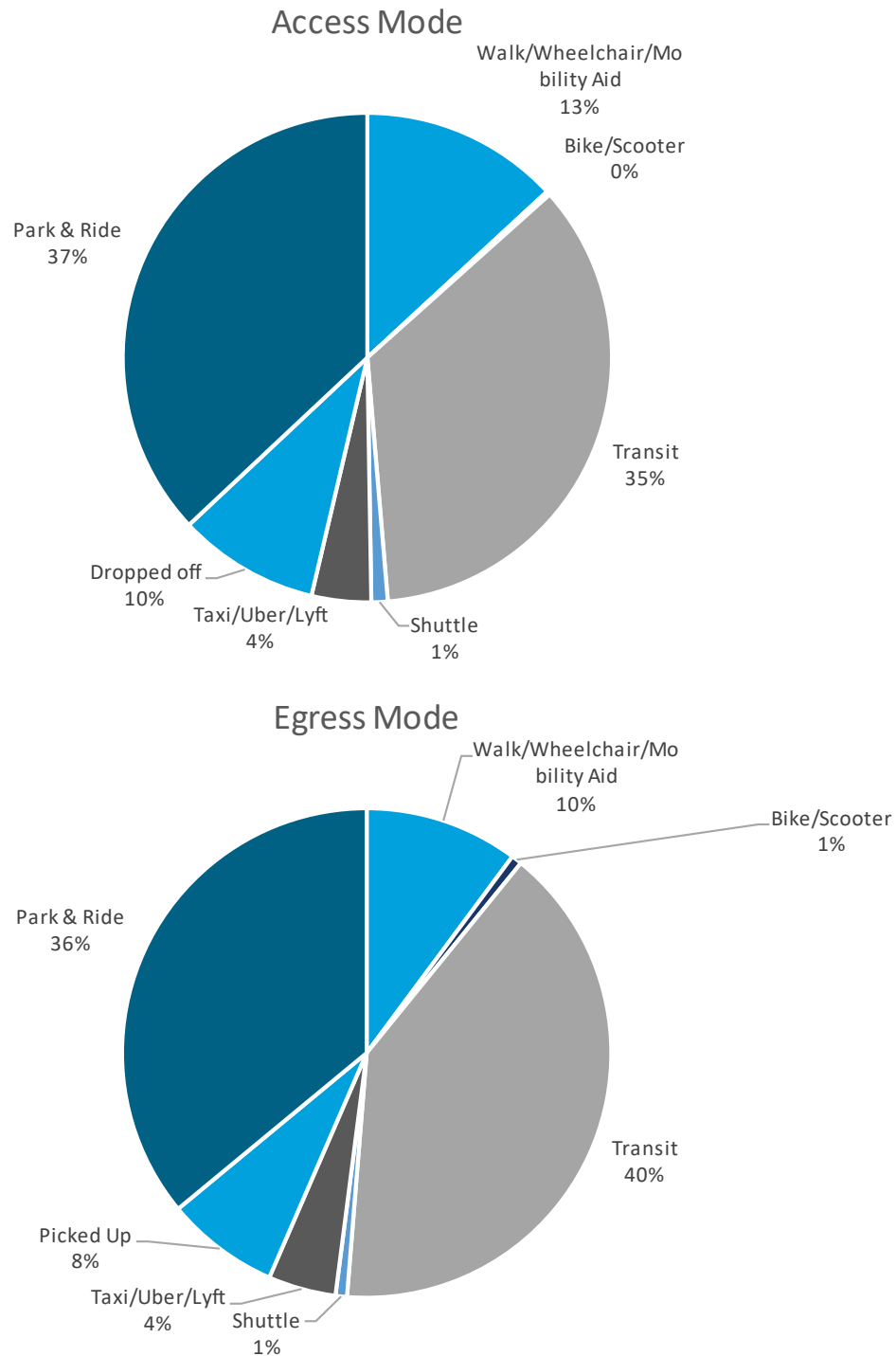


Figure 16 shows density of trip origins (based on MARTA on-board survey data) for passengers who access the MARTA stations via transit, either via public transit or private shuttle. Transit trips are concentrated in areas that are just outside of walking distance from the stations, demonstrating one of the greater opportunities for transit to serve first/last mile trips: serving trips for people going to locations near stations, but locations that are not easily accessed by walking from the station. Notably, there is little Roswell Road south of I-285, despite that being a high-ridership area for buses. This indicates that bus ridership activity in this area is largely capturing trips between that neighborhood and activity centers to the south, rather than drawing station access trips to the north.

Figure 17 shows the density of trip origins (based on MARTA on-board survey data) for passengers who access the MARTA stations via auto modes, either via park & ride, taxi/transportation network company (e.g. Uber or Lyft), or being dropped off. Notably, these trips are concentrated in areas that are a similar distance to the stations as areas with higher transit trip density. Also notable is that these trips are also concentrated in areas with less transit service, or in areas where the bus routes serving them do not provide a straight-shot connection into the nearby MARTA station.

These factors suggest that some of these auto-access trips could be transit-access trips if they had the more direct and frequent service to the station. Figure 18 through Figure 21 delve more in-depth into where auto-access trips into the stations are located (based on MARTA on-board survey data), and thus potential markets for capturing via transit. Takeaways from the trip patterns at each station include the following:

- **North Springs** – Many auto access trips are coming from the Roswell Road corridor north of Abernathy. Currently, the only way to access MARTA via transit along this corridor is route 87, which runs on 20-minute peak headways, and has a circuitous route to access either the North Springs or Dunwoody MARTA stations. Thus, people with the ability to drive are less likely to use a transit option, and transit users find the connection less reliable. Finding ways to improve the transit connections into MARTA from this area, through increased frequencies and/or more direct service into the stations, would encourage more transit access trips from this area. This could either be provided through modified or new MARTA routes, or provided by the City; the provision of a North Springs feeder transit service would require further study.
- **Sandy Springs** – The concentration of auto trips is in locations that are already currently served by route 148 and route 87, which run on headways of 60 and 20 minutes, respectively. Headways of 15 minutes or fewer are more convenient for passengers because the greater frequency means they do not have to plan their trips as carefully to ensure they catch a bus. Headways greater than 15 minutes do not provide this level of

convenience and discourage ridership, meaning there are missed opportunities for existing MARTA routes to connect more riders to rail via bus.

- **Dunwoody** – There is a large concentration of auto access trips in the City Springs area. This represents an opportunity there for an improved direct transit connection from City Springs to MARTA, either through some type of publicly-provided service, improvements to service on MARTA, or through encouraging private residential developments to run shuttle connections.
- **Medical Center** – This station is largely not accessed via auto trips. Notably, there are some auto trips coming from just across the freeway to the west and north, suggesting that this station could benefit from improved first/last mile connections to destinations just across I-285 or GA 400.

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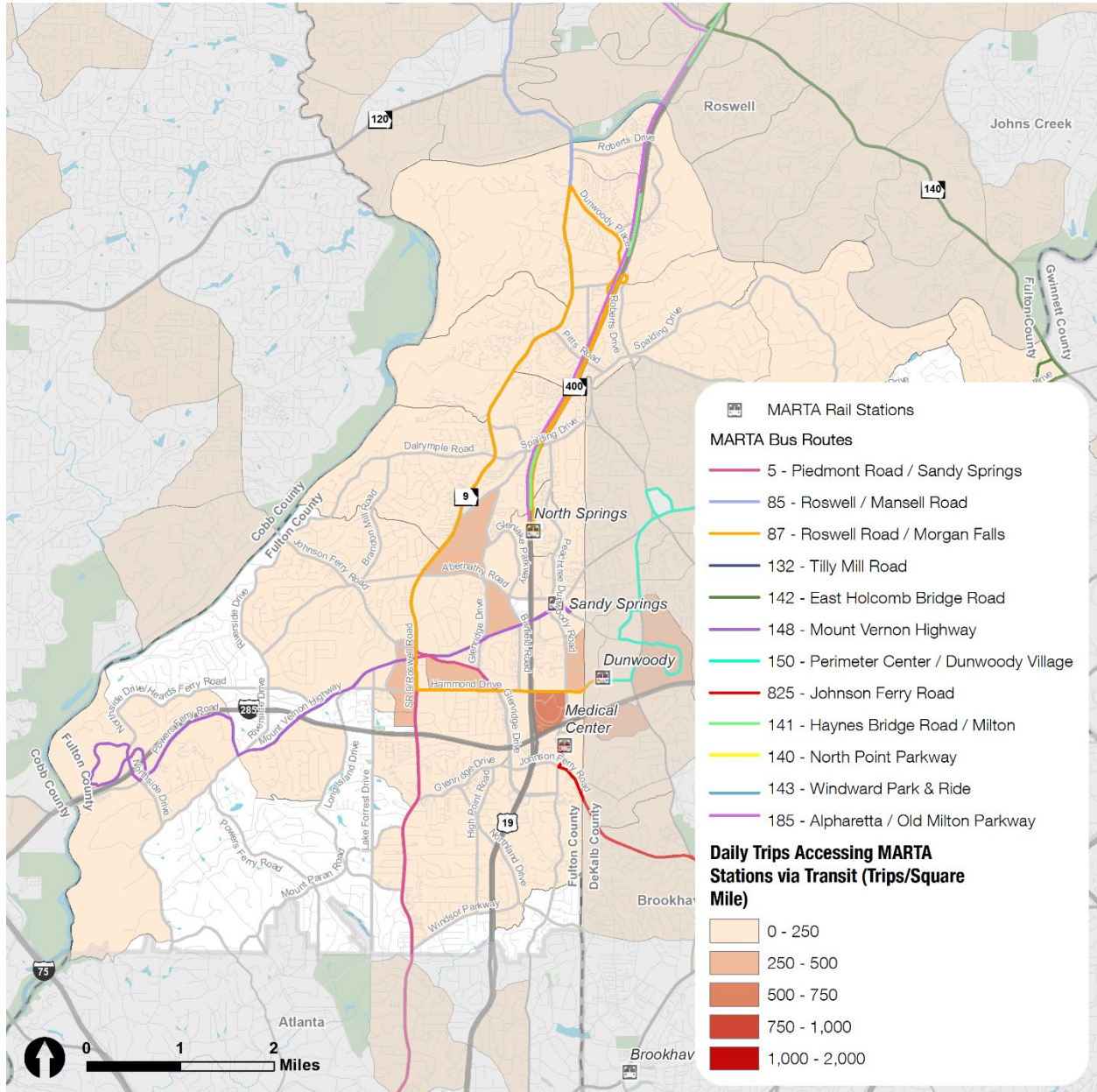


Figure 18 – Trip Origin Density of Trips Accessing Sandy Springs MARTA Stations via Transit

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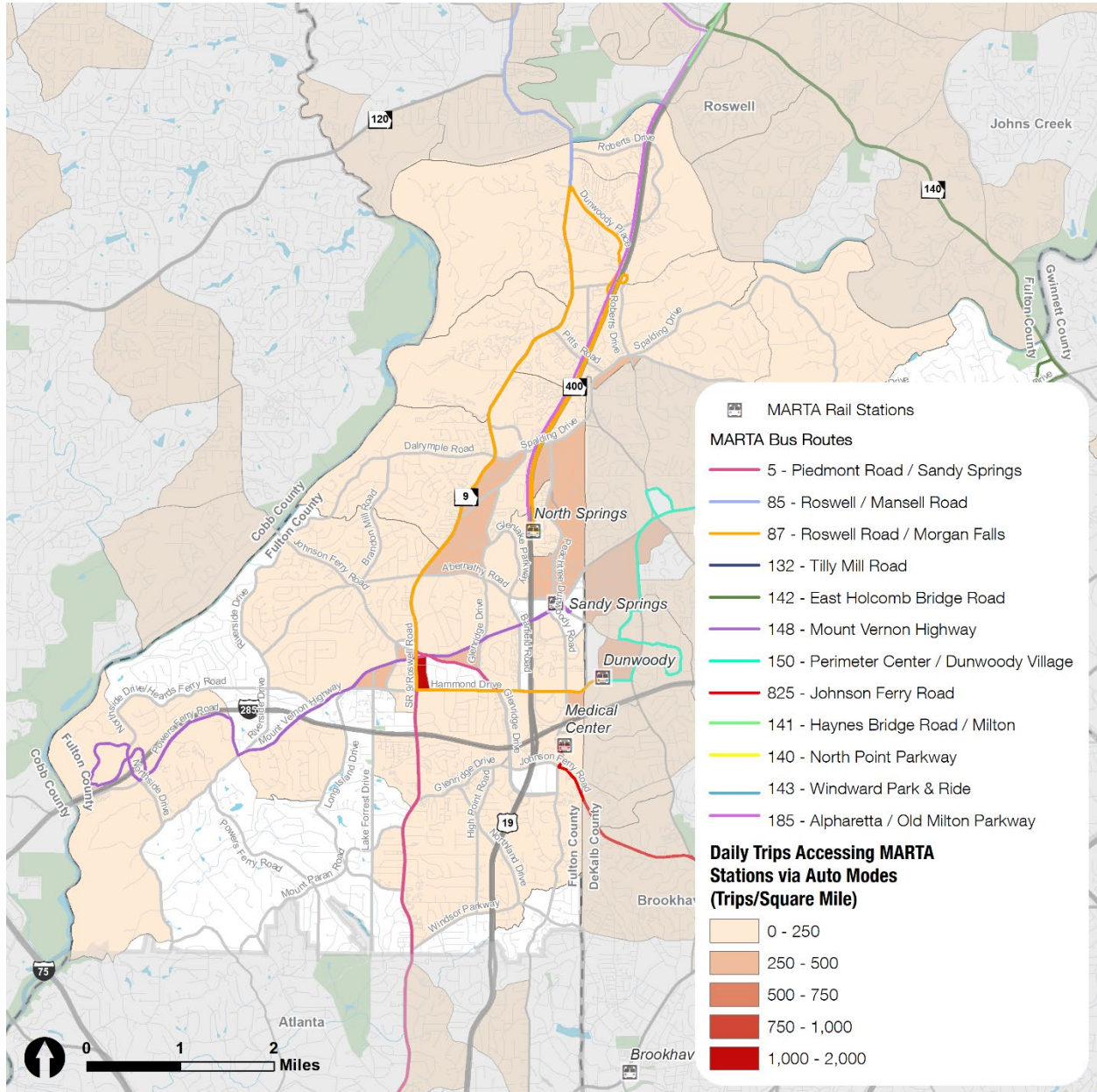


Figure 19 – Trip Origin Density of Trips Accessing Sandy Springs MARTA Stations via Auto Modes

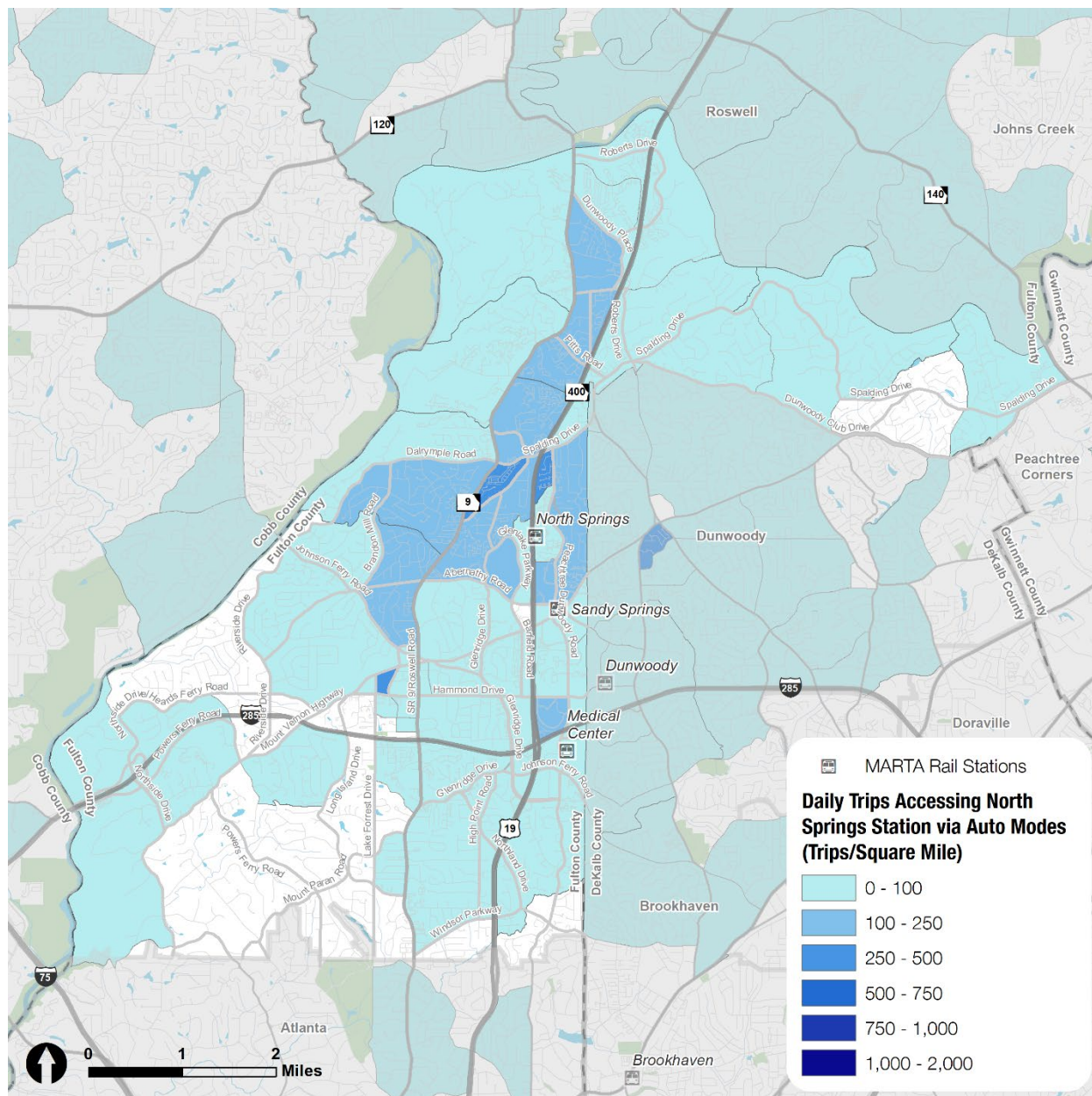


Figure 20 – Trip Origin Density of Trips Accessing North Springs Station via Auto Modes

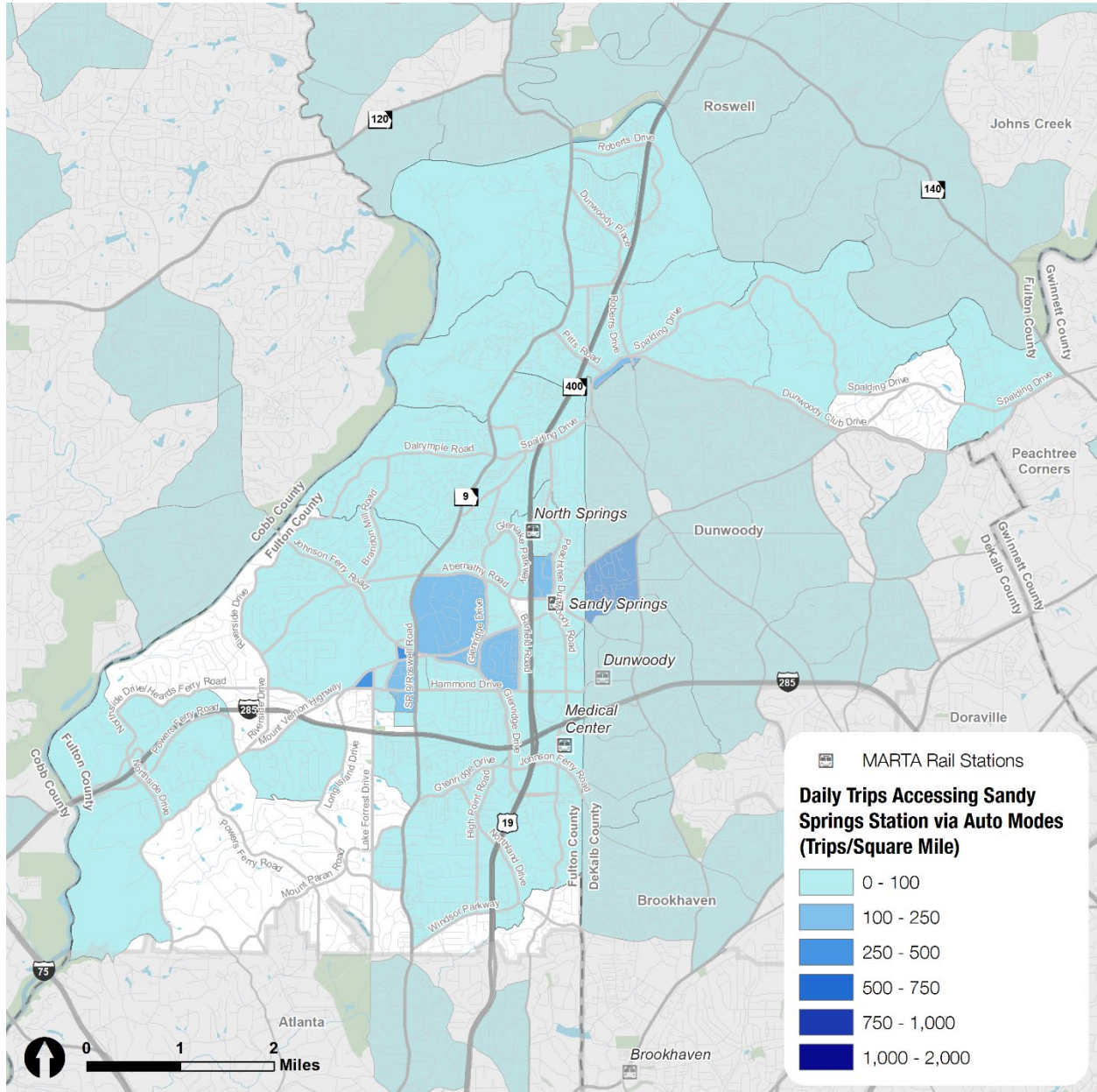


Figure 21 – Trip Origin Density of Trips Accessing Sandy Springs Station via Auto Modes

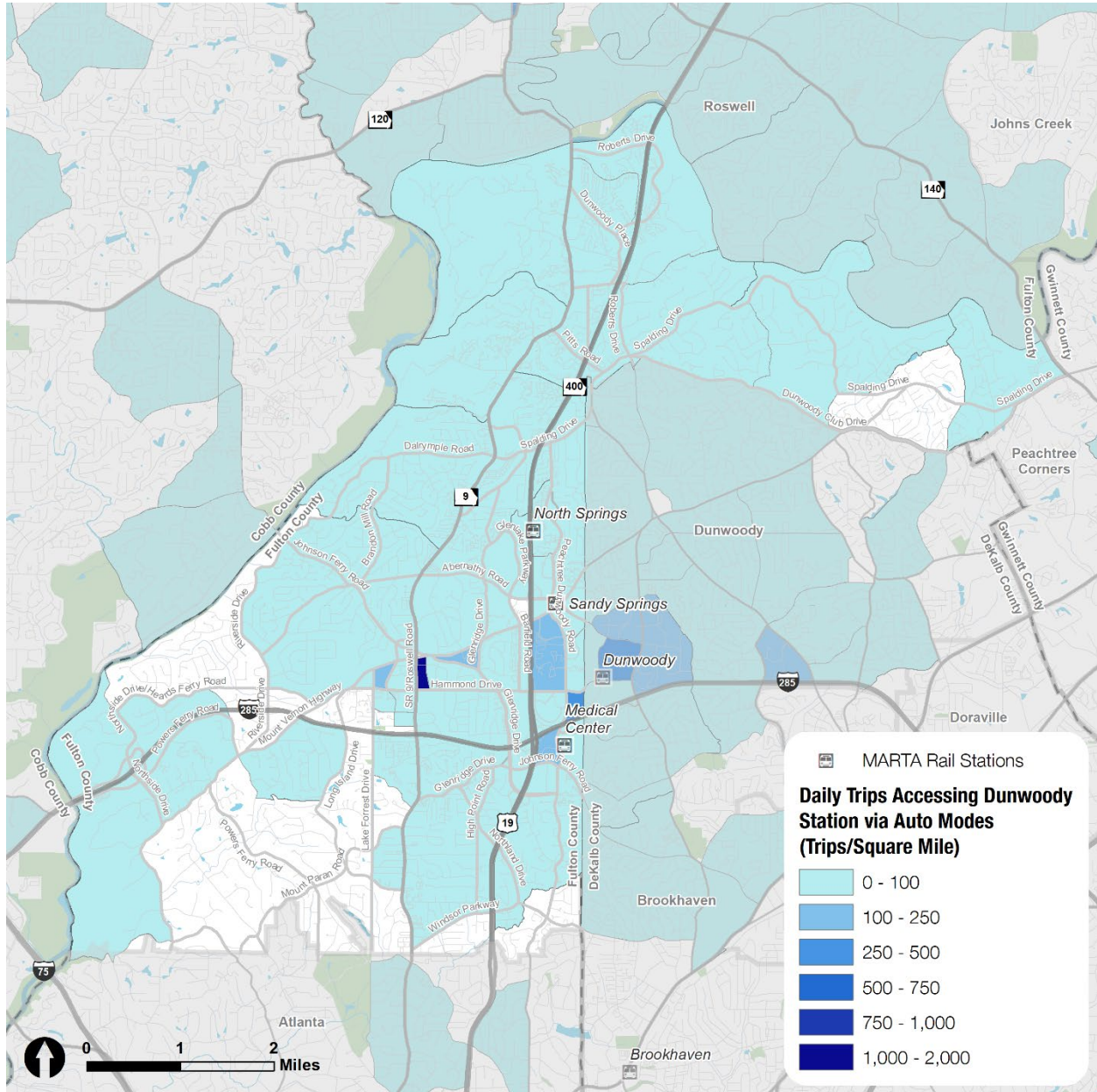


Figure 22 – Trip Origin Density of Trips Accessing Dunwoody Station via Auto Modes

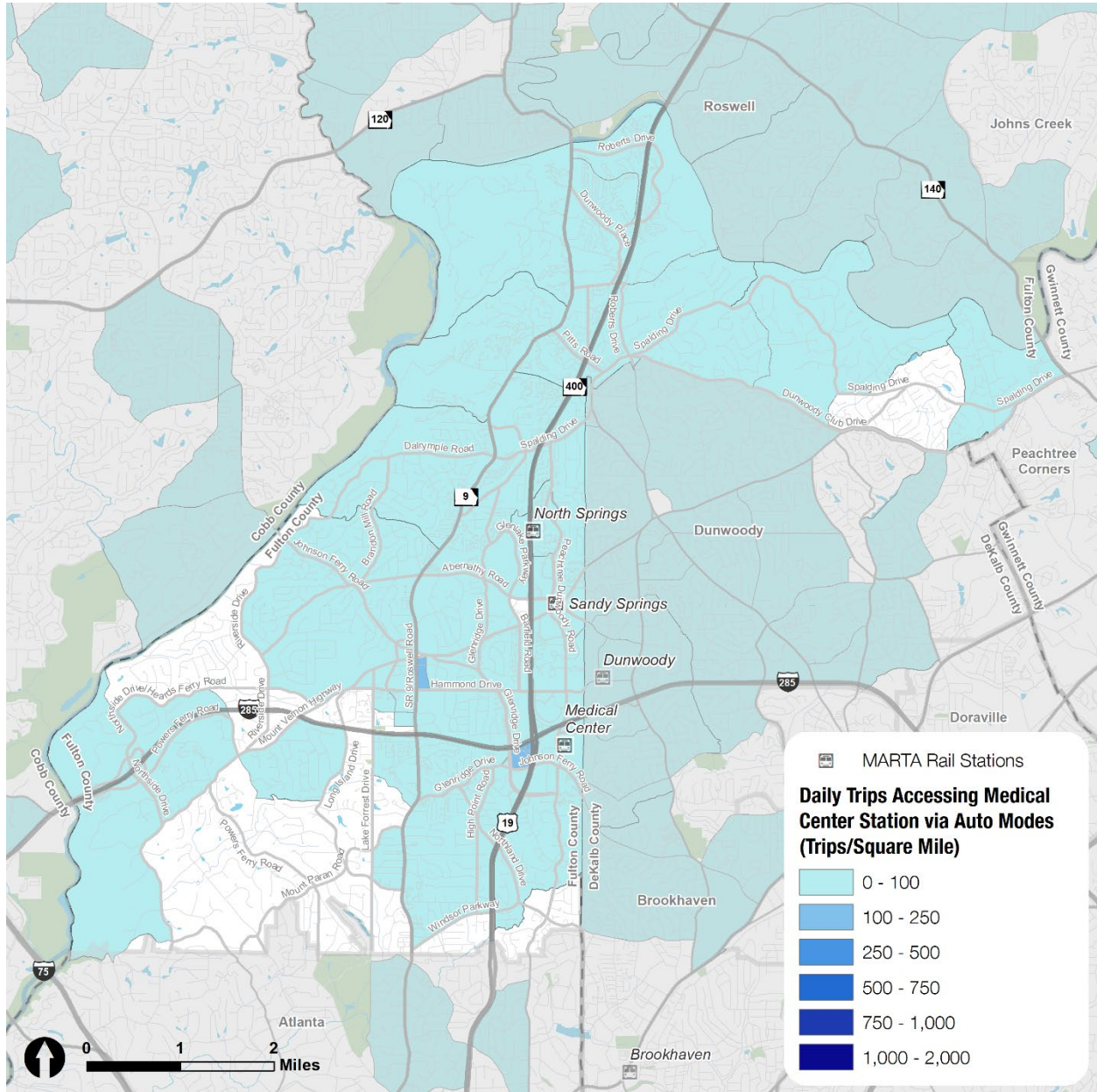


Figure 23 – Trip Origin Density of Trips Accessing Medical Center Station via Auto Modes

Service for Senior Citizens

The needs analysis for senior citizens aimed to understand existing transit services in the City, the usage of these services by senior citizens, and how these correlate with existing demographics information. Figure 22 shows the concentration of people over age 65 with the existing MARTA Mobility (paratransit) service area; paratransit service is provided to residents living within $\frac{3}{4}$ miles of a fixed bus route. Most of the aging population in the City is within the paratransit service area, except for people living in the panhandle area; residents in this area do have access to services provided by the Fulton County Office of Aging and Senior Services North Fulton.

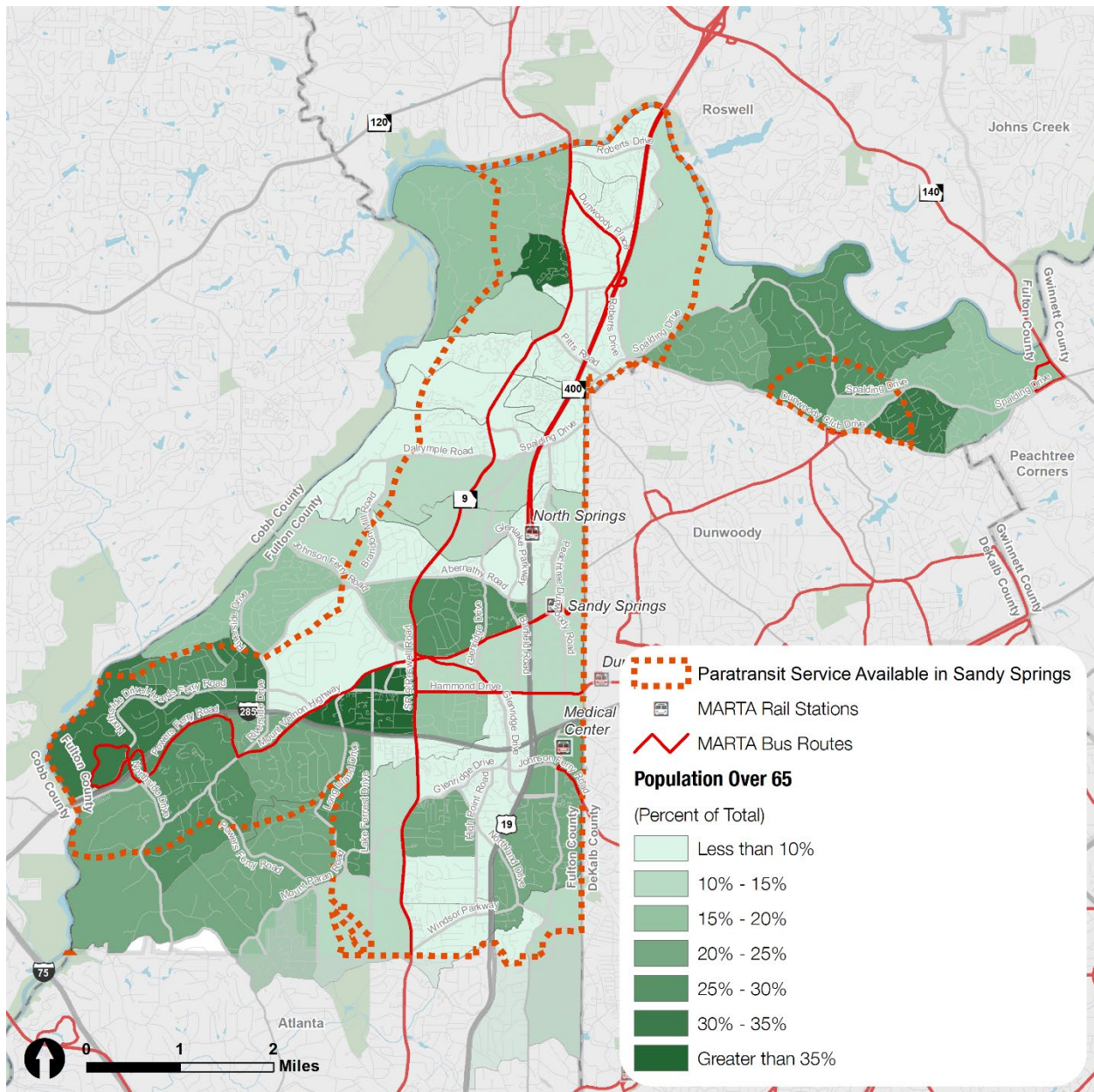


Figure 24 – Population Over 65 vs. Paratransit Service Area

MARTA Mobility trip data from October 2019 was gathered and analyzed to identify the most common trip location for users of the service. Figure 23 and Figure 24 show heat maps of trip origins and destinations for MARTA Mobility trips in Sandy Springs. Origin and destination patterns were not significantly different from each other, indicating many paratransit users are making round trips on the service. The most popular location to access via paratransit was the Medical Center MARTA station and the Perimeter Center area, which have major trip attractors in medical facilities, shopping, and MARTA stations. Outside of the Perimeter area, major activity locations include Kaiser Permanente Glenlake, shopping destinations in City Springs, and residential areas along Roswell Road and GA 400 north of Spalding Drive. That most of the high-activity areas shown on the maps are trip attractors suggests that home origin locations are dispersed throughout the service area.

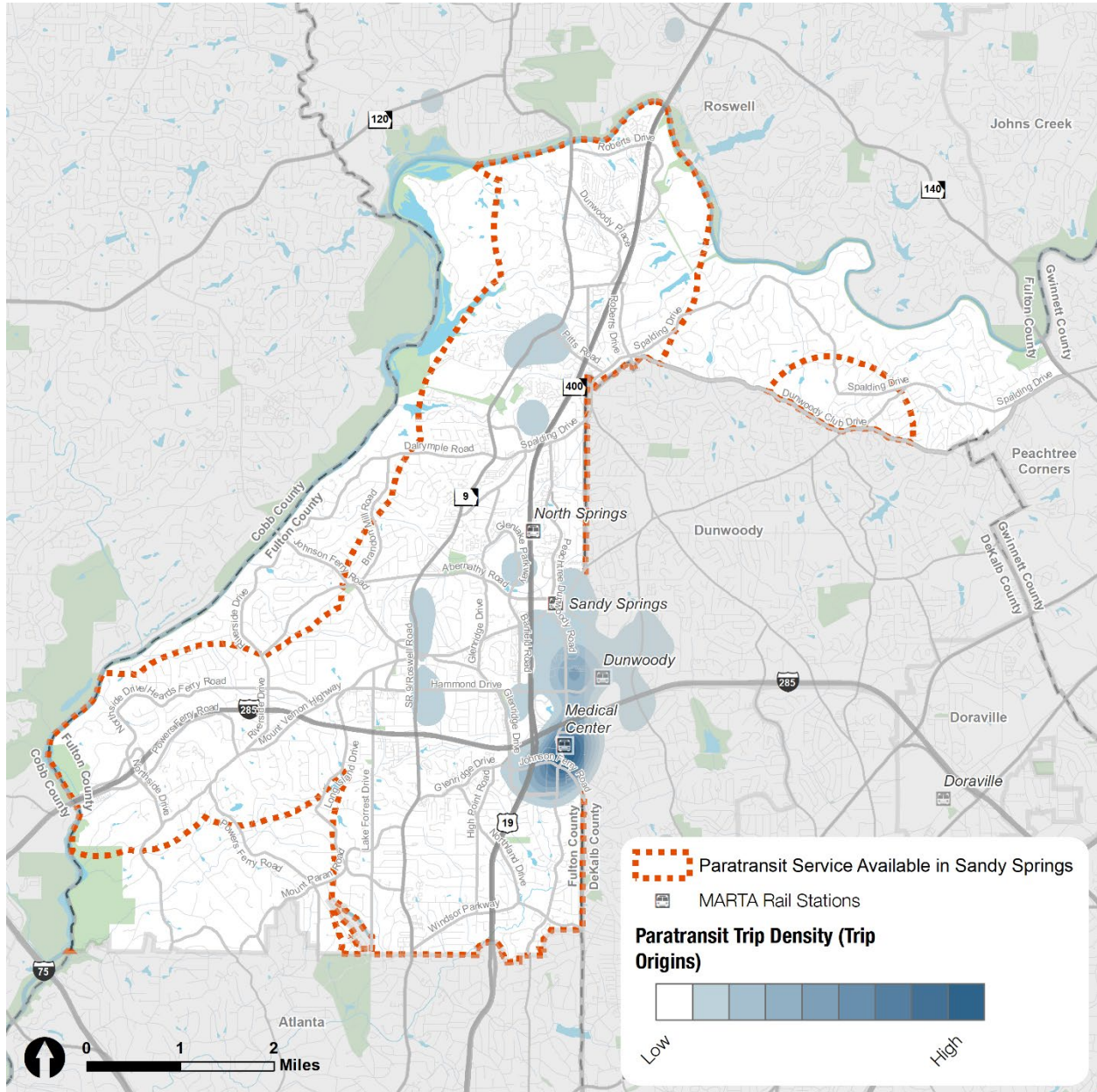


Figure 25 – Paratransit Trip Origin Density

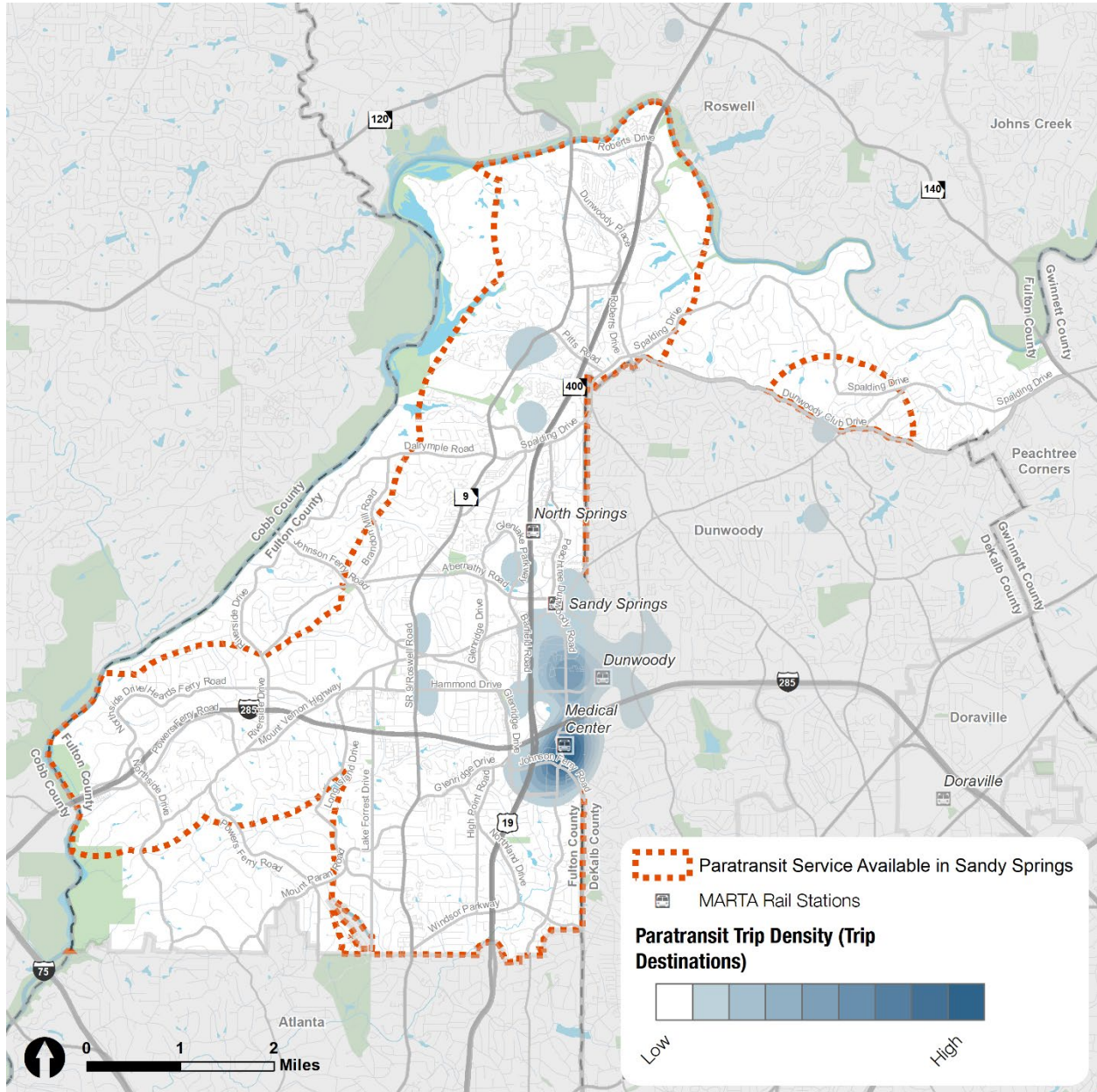


Figure 26 – Paratransit Trip Destination Density

Stakeholder Feedback

In addition to the needs analysis, the project team conducted interviews with service providers for senior citizens in Sandy Springs, including North Fulton Aging Services and Fulton County Senior Services, to understand the transportation needs of Senior Citizens and service options. The project team also conducted interviews with the Community Assistance Center (CAC), a non-profit organization that helps residents of the City meet basic needs of food, shelter, and clothing. Those stakeholders provided the following points of feedback about the current travel patterns and future needs of those who they serve:

- When it comes to living situations and mobility limitations, seniors in Sandy Springs typically fall into one of three categories:
 - Some live in a single-family home and have few or no mobility limitations, and typically get around in the same ways as other residents.
 - Other seniors live in a single-family home, but do have mobility limitations, constraining their ability to make trips on their own.
 - Others live in dedicated care facilities or residential facilities designed for seniors – these dedicated facilities often have some kind of transportation services provided on their own, to varying levels of coverage.
- Housing affordability is increasingly a challenge for seniors in Sandy Springs. This means that those living independently, but with mobility limitations, may elect to stay in their current home despite their mobility challenges. This creates a particular need for point-to-point transportation services for seniors in this situation.
- There are several existing transportation services available to seniors, but many are targeted at or prioritize essential travel, such as medical appointments, social services, and grocery shopping, or the services will only provide trips to a fixed set of locations. This leads mobility-challenged seniors miss out on non-essential trips, such as shopping, church, recreation, and socializing.
- Among current services provided, Common Courtesy has been very popular and well utilized. The service is cheaper on a per-ride basis than other senior-targeted transportation services.
- Among services provided, CAC helps families move into self-sufficiency by providing basic language and technology skills in addition to rent and food assistance.
- For the CAC participants, car accessibility is limited – either a shared vehicle of sorts or dependency on transit services.
- Transit services in Sandy Springs are not always efficient for those trying to access the CAC – whether it is inefficiencies in transfers or infrequent buses
 - Access to MARTA Rail stations are beneficial in Sandy Springs but their interface with bus service in the City is not always convenient

Local Circulation

The needs analysis for local circulation explored the potential for a locally-focused transit service that circulates within a smaller area than typical fixed bus routes, and are usually intended to serve short-hop trips. These services can also meet first/last mile connectivity needs.

Local circulator services are ideal for certain use cases. These mainly include:

- Connecting employment with retail to capture mid-day shopping trips (e.g. enable workers in Perimeter to go to lunch elsewhere in the Perimeter area)
- Connecting essential services and community resources with people using them, particularly those without cars

To understand where potential demand for this type of service might be, population density was overlaid with the locations of community resources, such as social services, government facilities, and medical facilities, shown in Figure 25. The same was overlaid onto the zero-auto household population density, in Figure 26.

Notably, zero-auto households are concentrated in the City Springs, the North End and Perimeter Area. While these areas are technically connected to major community resources by transit, the lack of quality service (i.e. frequency) weakens that connection. Improving frequency and reliability of transit service along Roswell Road, i.e. Route 87, represents an opportunity to better connect major population centers to community resources.

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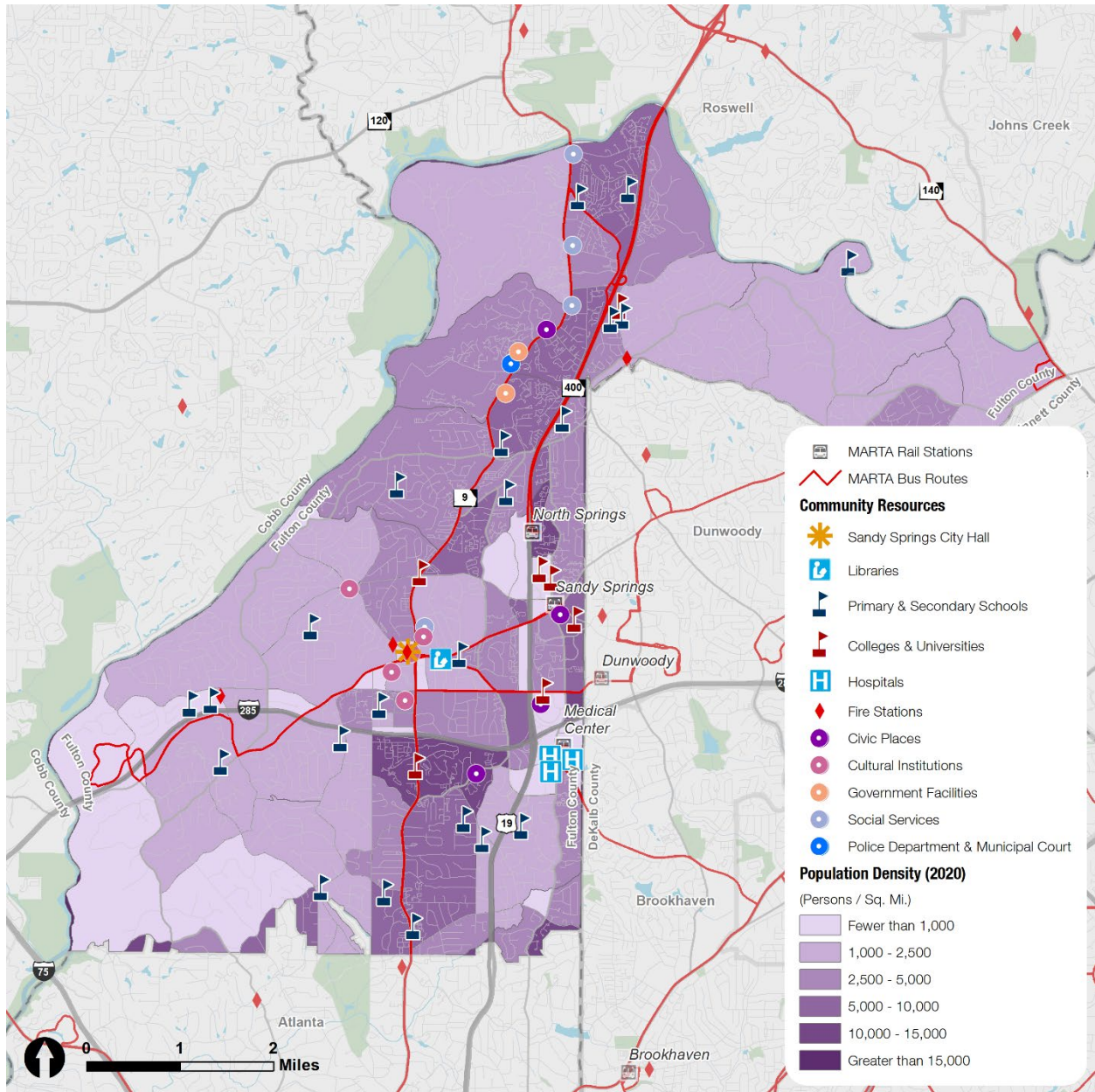


Figure 27 – Transit Service and Community Resources vs. Population Density

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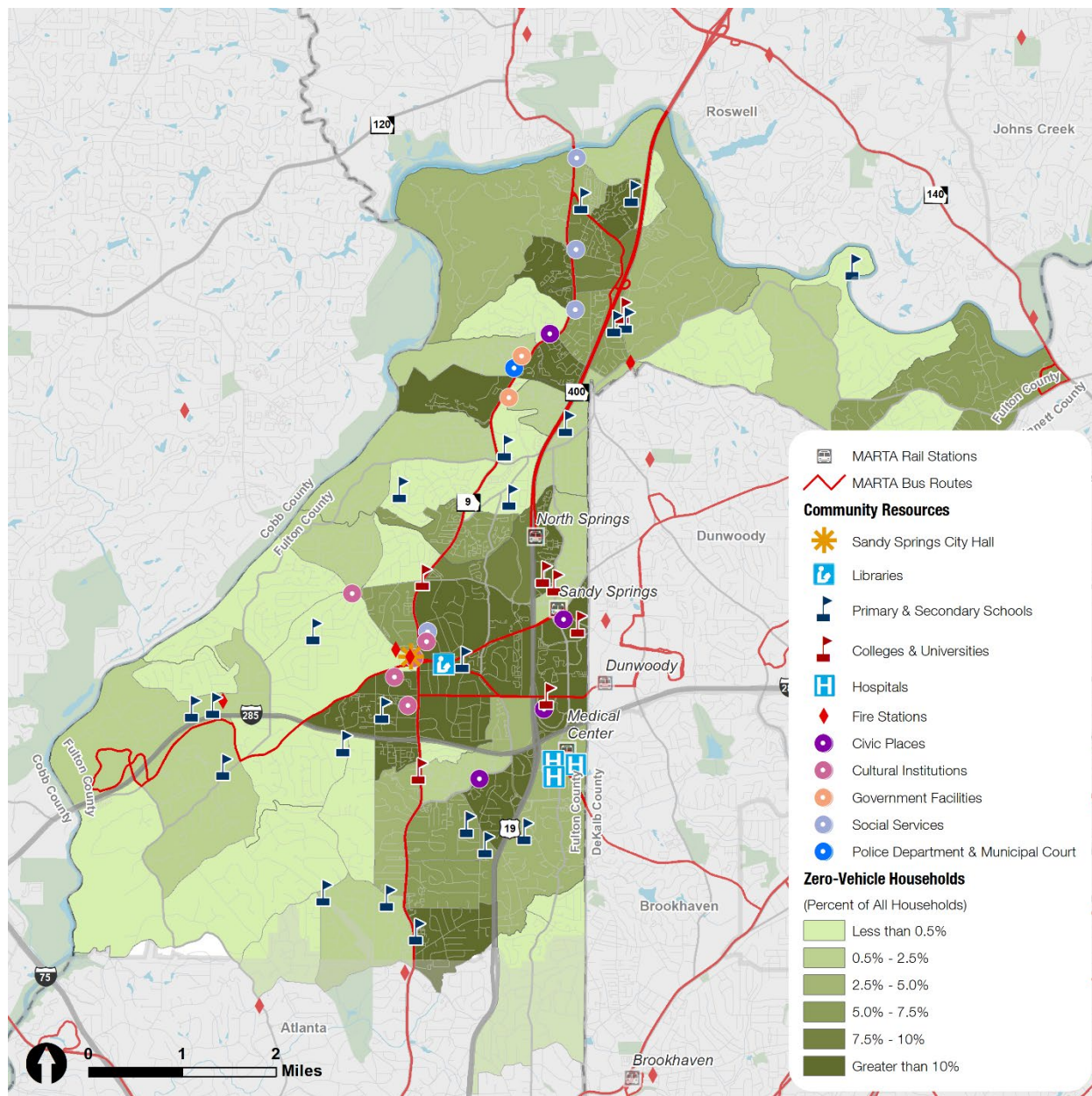


Figure 28 – Transit Service and Community Resources vs. Zero-Vehicle Households

Cobb County Connections/Cross-River Connections

The Chattahoochee River constrains the number of access points into Sandy Springs from the west, creating a need for improved connections across the river. To identify potential areas of transit need, the project team used LEHD data to map the home locations of commuters going between Cobb County and Sandy Springs, shown in Figure 27 through Figure 30.

There are many commuters coming from East Cobb County to Sandy Springs (Perimeter Center). The home locations in East Cobb County of people commuting to Sandy Springs is well spread out, which presents a challenge when considering how to potentially serve these commuters with transit. Because the commuting population is spread out, not all would be captured by transit, which would likely need to run along the Johnson Ferry Road corridor into Sandy Springs, which is currently the only access route from East Cobb to Sandy Springs. East Cobb County is also largely composed of single-family residential neighborhoods, where most households have car access.

Outside of East Cobb County, the Cumberland area represents the greatest source of commuters from Cobb to Sandy Springs and the biggest employment draw for Sandy Springs residents. The I-285 corridor, the focus of ongoing transit planning efforts, represents the best opportunity to serve those trips with transit.

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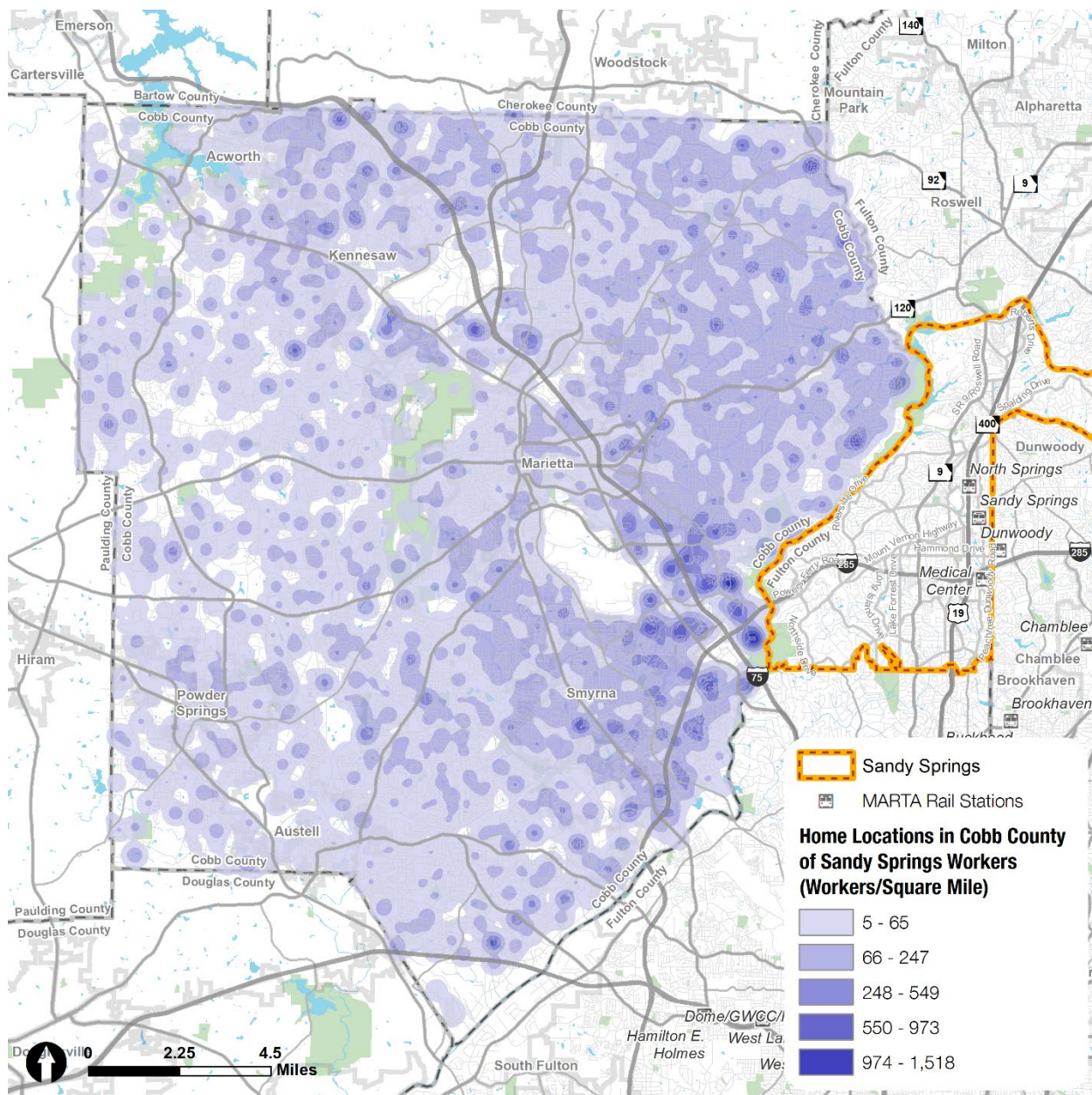


Figure 29 – Home Locations in Cobb County of Workers with Employment in Sandy Springs

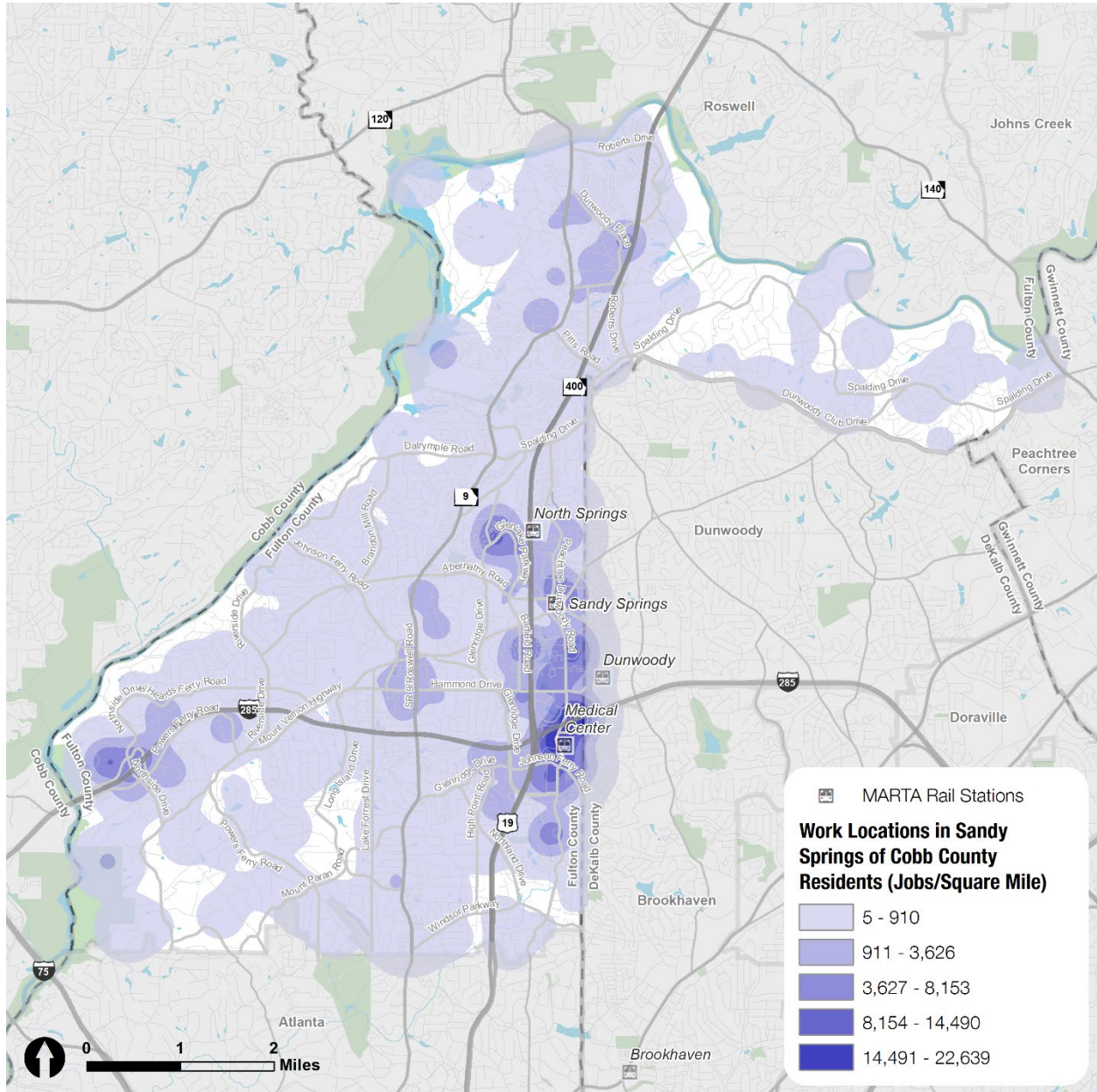


Figure 30 – Work Locations in Sandy Springs of Cobb County Residents

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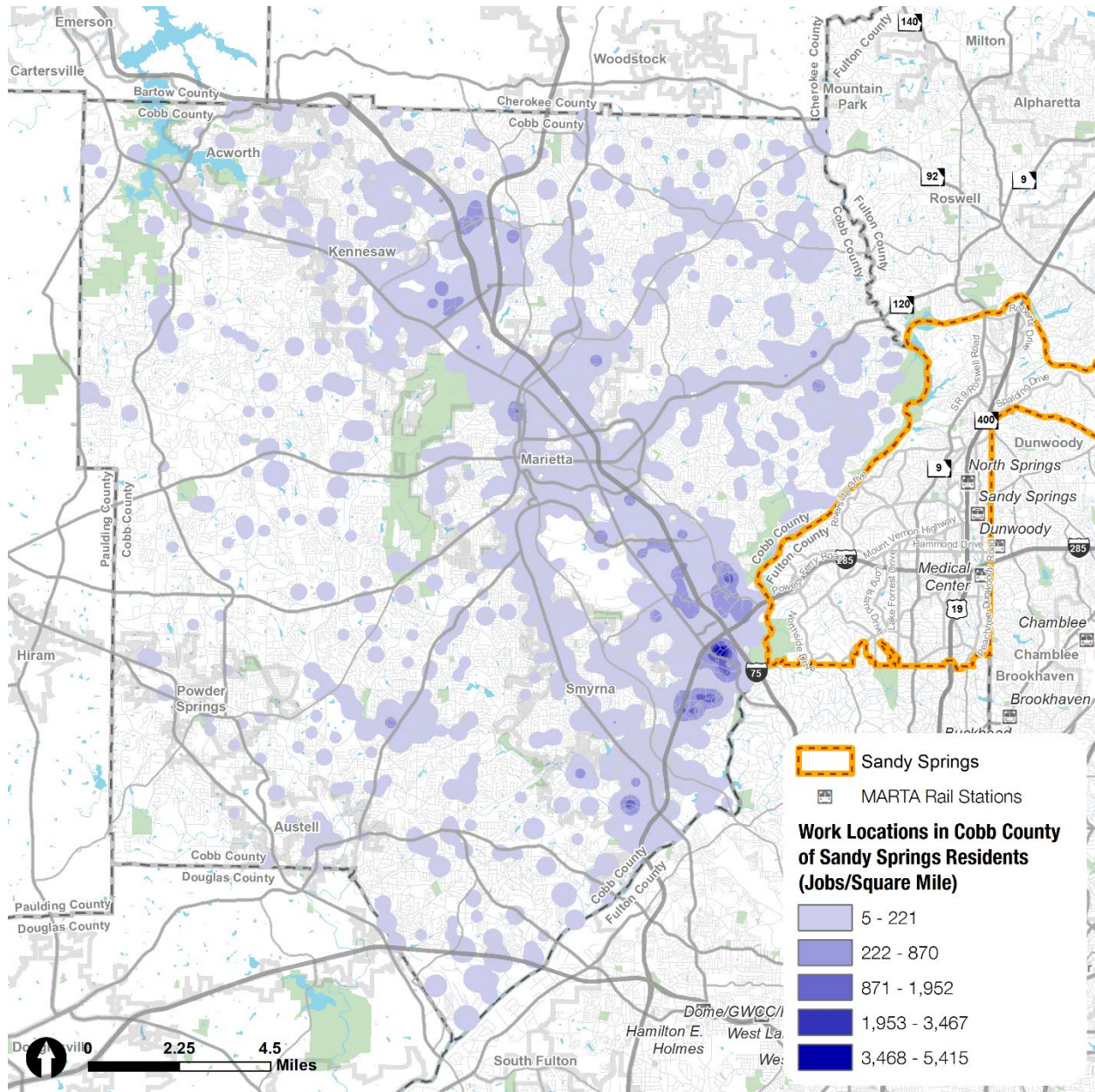


Figure 31 – Work Locations in Cobb County of Sandy Springs Residents

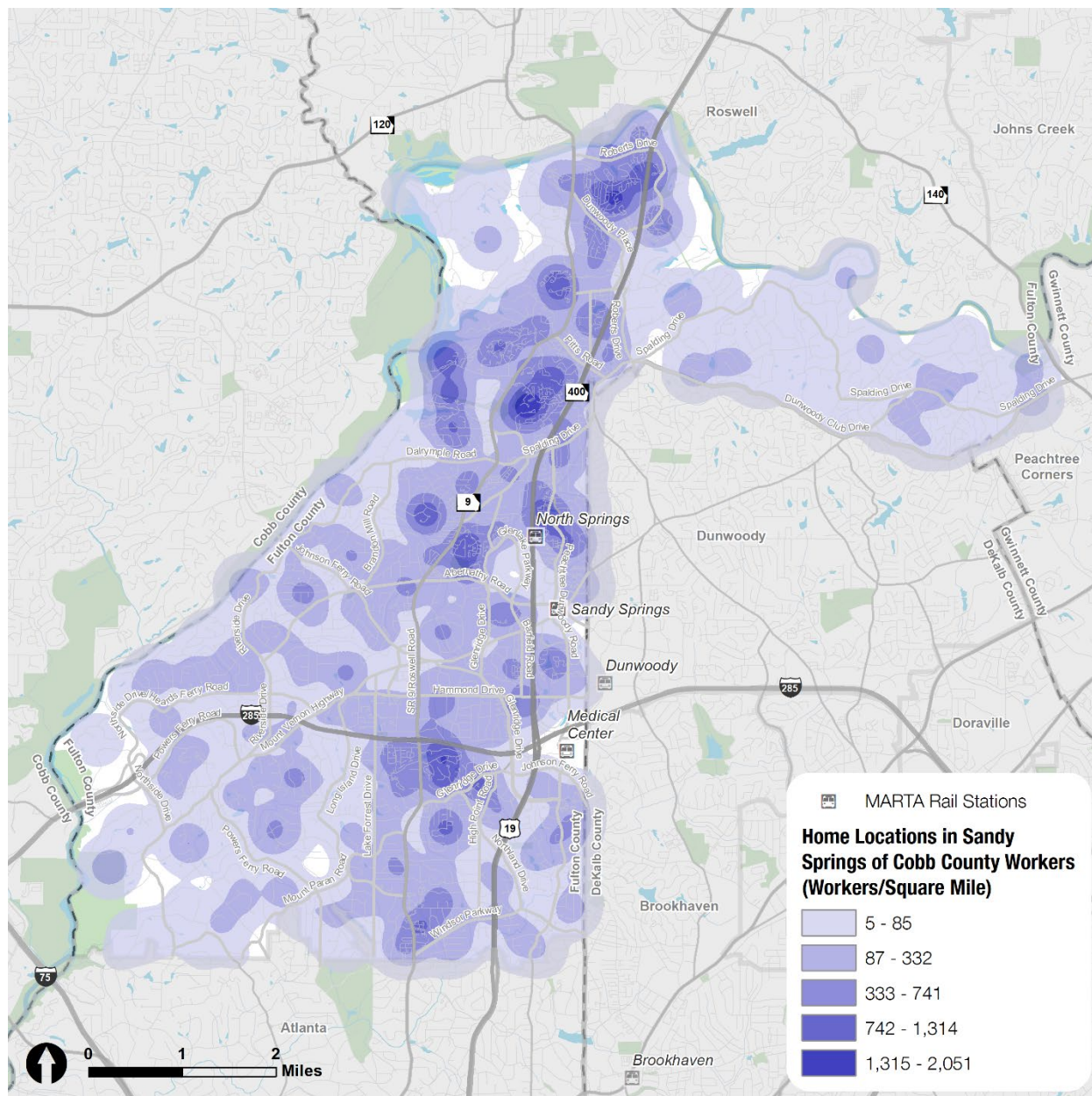


Figure 32 – Home Locations in Sandy Springs of Workers with Employment in Cobb County

The Cross-County Travel Demand Strategies study, completed in 2018, analyzed travel demand between East Cobb and Perimeter Center and identified strategies to meet that demand. The analysis performed for the TMP and described in this memorandum are generally consistent with the findings of the 2018 study; the City should continue to pursue the recommended strategies from that study.

Further analysis, beyond the scope of the TMP and the 2018 Cross-County study, is needed in order to determine the potential market for cross-county transit on the Johnson Ferry Road corridor. Cobb County, as part of its comprehensive transportation plan (CTP), is studying the potential for cross-county transit service; the City should coordinate with Cobb County to support any proposed cross-county service and to implement the strategies proposed in the Cross-County study.



Transit Recommendations

Informed by the findings from the review of past and ongoing planning efforts, the transit needs analysis, and stakeholder feedback, following are transit recommendations for the City's consideration. These recommendations are organized into two categories:

- Policy Recommendations
- Infrastructure and Future Study Recommendations

Policy Recommendations

Following are a variety of policy recommendations to enhance bicycle and pedestrian mobility that the City may consider.

- Coordinate with MARTA to promote service improvements on existing transit services in the City, particularly on Roswell Road and those services feeding into MARTA stations. Four major priorities for MARTA service in the City include:
 - Increasing frequencies on bus routes providing the east-west connection between the Roswell Road corridor and Perimeter Center; primarily, Route 87 and Route 5.
 - Extension of the MARTA rail service span later than 9 p.m.
 - Improved connections between northern and southern portions of Roswell Road, either through better coordination of schedules on Routes 5 and 87 to reduce transfer times, or through the provision of continuous service on Roswell Road.
 - As part of future service planning efforts, consider providing more direct service between North Springs MARTA and the Roswell Road corridor between Abernathy Road and the northern City limit.
- Continue to support, promote, and implement Transportation Demand Management programs in major employment and activity centers. Consider introducing these types of programs to other employment and activity center destinations in the City.
- Work with existing senior transportation service providers to encourage their provision of point-to-point transportation services for senior citizens, including shuttle services and the Common Courtesy ride programs. Consider opportunities to increase funding as demand for senior transportation services increases and identify opportunities to expand services for non-essential trips.
- Increase bicycle and pedestrian access to existing/planned high-capacity transit stations, and high-ridership bus stops through the pursuit of bicycle and pedestrian projects proposed in the TMP and described in the Bicycle and Pedestrian/20-Minute Neighborhoods memorandum.
- Work with major employers, large-scale developments, and campuses to encourage their use of private shuttle services for tenants, employees, and visitors. Consider opportunities

to standardize or streamline certain elements of operation such as hours of service and use of real-time data to make them more consistent and appealing to users.

Infrastructure and Future Study Project Recommendations

The City of Sandy Springs has an extensive list of planned, programmed, and proposed sidewalk, trail, and bicycle facility projects that have been developed through numerous studies including, but not limited to:

- ATL Regional Transit Plan (currently undergoing public comment for the 2020 update*)
- Fulton County Transit Master Plan
- The Next Ten: Comprehensive Plan for Sandy Springs
- PCID Last Mile Connectivity Study
- Mount Vernon Highway Transit Study
- Cross-County Travel Demand Strategies Study

These previously planned, programmed, and proposed projects were reviewed as a part of this analysis. Based on the needs analysis, many of these projects remain relevant and should continue to be planned for implementation. Some projects in previous plans overlap and have been consolidated in the list below. In addition to these projects, the TMP includes additional projects for the City's consideration.

Table 3 – Transportation Master Plan (TMP) Projects

PROJECT NAME	EXTENTS	PROJECT DESCRIPTION
Cross-County Transit Strategies Implementation	Citywide	Pursue the implementation of policies recommended in the 2018 Cross-County commuter strategies study: • Provide travel incentives to commuters and employers to incentivize commuters to switch from driving alone, assist commuters in finding carpools/vanpools; work with employers to plan telecommuting and flexible work hours programs; and recognize and promote employers that are successful in implementing programs that reduce the use of single occupancy vehicles. • Work with Cobb County to identify potential park and ride lot locations in Cobb County to serve ridesharing programs, carpools, and vanpools, as well as future potential transit service from Cobb County.

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		Continue to engage in regional planning efforts for high-capacity transit solutions for the I-285 top end corridor and transit solutions proposed in the Cobb County CTP
Coordinate and Establish Policies Regarding Ridesharing Services	Citywide	Establish policies to guide operation of ridesharing or ride-hailing services (i.e., Lyft, Uber, and taxis). This may include steps such as: formalizing agreements to subsidize a portion of rides that begin, end, or do both using a private rideshare or ride-hailing provider; implement curb control policies to manage where services are able to pick-up and drop-off passengers.
Bus Stop Facilities and Signage Standards	Citywide	Adopt and apply standards for transit shelters, regardless of agency, participate in the regional bus stop signage program to standardize sign design and information, and provide real-time bus information displays at all shelters, rail stations, and via smart phone technology.
Transit Priority Treatments	Citywide	Implement transit signal priority along key transit corridors and identify locations to install queue jumpers at critical intersections to allow transit vehicles to pass personal vehicles. Install as resources become available and through coordination with MARTA and Xpress. *System – 10: Transit Signal Priority (upgrade controllers at signalized intersections) also identified as a part of the Sandy Springs ITS Master Plan (2019)
Real-Time Information	Citywide	City to act as a partner on this project to explore opportunities with MARTA and Xpress to provide real-time information to users (transit arrival times, stop locations, travel options) *System – 13: Traveler Information Kiosks/Transit Curbside Management pilot project (design and installation) included as a

		part of the Sandy Springs ITS Master Plan (2019) *System – 15: Traveler Information coordination with hospitals and Perimeter CID included as a part of the Sandy Springs ITS Master Plan (2019)
Mt. Vernon Highway Transit Service	Mt. Vernon Highway between Sandy Springs MARTA Station and City Springs	Monitor the progress of major roadway projects, including the redesign of the I-285/GA 400 interchange, proposed managed lane access on Mount Vernon Highway and GA 400, and improvements to the intersection of Mount Vernon Highway/Johnson Ferry Road and Roswell Road; consider the feasibility of implementing the transit service as proposed in the 2018 Mount Vernon Highway Transit study as these projects are completed and travel patterns in the City change.
Tier 1 Transit Lanes	Perimeter Center	Provide dedicated transit lanes on key corridor segments within the Perimeter, at least during peak morning and afternoon hours. Tier one focuses on segments that provide connectivity through Perimeter and surrounding the MARTA rail stations, Perimeter Mall, major office campuses, and connections across I-285.
Tier 2 Transit Lanes	Perimeter Center	Expand dedicated transit lanes on key corridor segments within Perimeter to connect south to Johnson Ferry Rd and west along Barfield Rd to expand access to more major employers.
North Springs First/Last Mile Transit Feasibility Study	North Springs MARTA	Prepare a feasibility study for transit service (fixed route or flex) connecting North Springs Station to the Roswell Road corridor between Abernathy Road and the Northern City limit
Highway 9/Roswell Road ART	Roswell Road from Southern City Line to Northern City Line	City to act as a partner on this project from the MARTA COA and Fulton County Transit Master Plan. This project will include ART along Highway 9/Roswell Road.
GA 400 Transit Initiative - Phase 1	GA 400 - North Springs MARTA to Windward Parkway	City to act as a partner on this project from the Fulton County Transit Master Plan and Regional Transportation Plan. This project will provide high capacity premium transit service on the SR 400 corridor between the MARTA

SANDY SPRINGS

Transportation Master Plan

		North Springs heavy rail station and Windward Parkway in Alpharetta.
I-285 North Corridor Bus Rapid Transit	I-285 - West Paces Ferry Road to Northlake Mall Area	City to support project development. This project will provide high capacity premium transit service on the I-285 corridor between the Northlake Mall and West Paces Ferry Road.

**Note: There are several additional systemwide projects (not included in the table above) that are being considered for the ATL's ARTP ongoing update. The City of Sandy Springs is included in the service area of these agencies (e.g., MARTA, Xpress, GCT) and should continue to coordinate with both agencies to understand ongoing systemwide enhancements, such as bus purchases or technology upgrades. Details regarding the potential systemwide enhancements can be found at <https://atltransit.ga.gov/districtdownloads/> (as of October 2020).*

STATE OF GEORGIA
COUNTY OF FULTON

A RESOLUTION TO ADOPT THE TRANSPORTATION MASTER PLAN

WHEREAS, the City of Sandy Springs Public Works Department is charged with developing transportation plans, providing analysis for future transportation needs, and providing a long-term vision for capital investment in the City's transportation infrastructure;

WHEREAS, the City has undergone many changes since the first Transportation Master Plan was adopted in 2008 and will experience new demands on the transportation network as the transportation industry evolves;

WHEREAS, the City has developed planning documents with transportation project recommendations and there is a need to evaluate all recommendations with a similar criteria;

WHEREAS, there has been extensive public engagement in the planning process, and the public feedback received has been taken into consideration for this plan;

WHEREAS, there is a need to identify transportation projects and policies to implement over the next 10 years.

NOW, THEREFORE, BE IT RESOLVED BY THE MAYOR AND CITY COUNCIL OF THE CITY OF SANDY SPRINGS, GEORGIA

That the City of Sandy Springs receive, accept and adopt the Transportation Master Plan presented on April 6, 2021.

RESOLVED this the 6th day of April, 2021.

Approved:

Russell K. Paul, Mayor

Attest:

Raquel Gonzalez, City Clerk
(Seal)



SANDY SPRINGS

CITY CLERK'S OFFICE

TO: Andrea Surratt, City Manager

FROM: William H. Martin Jr., AIA, Public Works Director

DATE: March 11, 2021 Submission for the April 6, 2021 Meeting

ITEM: Request for Mayor and City Council Consideration of Approval to Authorize the City Manager to Execute a Change Order and the Revised Contract for Engineering Design Services with Columbia Engineering for the Roswell Road at Grogans Ferry Road Intersection Improvement Project (TS105)

Recommendation:

Staff recommends that Council authorize the City Manager to execute a Change Order and the Revised Contract for Engineering Design Services with Columbia Engineering for the Roswell Road at Grogans Ferry Road Intersection Improvement Project (TS105).

Background:

As part of the ongoing design and construction of the Roswell Road at Grogans Ferry Road Intersection Improvement Project, Columbia Engineering has been asked to provide additional services that are outside of the original scope of work.

The Recreation and Parks Department brought it to the attention of Public Works that there was a plan to put a trail on Grogans Ferry Road. Because the TSPLOST project encompasses Grogans Ferry Road and the scope includes a sidewalk on Grogans Ferry Road, it was proposed that the design of Grogans Ferry Road be changed to incorporate a sidepath instead of a sidewalk.

Columbia Engineering was asked to provide a scope and fee to alter the design of the sidewalk to a sidepath.

This change order is being presented to Council because it has crossed the \$100,000 cumulative threshold for change orders.

Discussion:

The attached change order is required to provide additional funding to Columbia Engineering for the additional work needed to complete the project design for the sidepath.

Financial Impact:

The total proposed fee for this Change Order is \$13,683. This Change Order will bring the total design and construction services contract value to \$311,673.50 and total change orders to \$217,990.50. Sufficient funds are available in the TSPLOST project TS105 to fund the design.

Alternatives:

Attachments:

1. 4845.00 - Proposal for Grogans MUP
2. TS105 Vicinity Map
3. Columbia Change Order Resolution 4.6.2021

March 1, 2021

Christine Schultz, PE
TSPLOST Project Manager - Public Works Division
City of Sandy Springs
1 Galambos Way
Sandy Springs, GA 30328

Re: Proposal Letter for MUP along Grogans Ferry
CES# 4845.00

Dear Ms. Shultz:

Columbia is pleased to provide the following letter outlining the project understanding and approach for the services requested in your email on February 22nd, 2021. We have detailed the project below.

Scope

Columbia will utilize existing survey data along with the construction plans for Roswell Road at Grogans Ferry Intersection improvement and Access Control Project to provide a concept, 90%, and final design for adding 10-foot multi-use path along Grogans Ferry Road from the intersection to the limits of sidewalk shown on the proposed construction plans along the southern part of the roadway. This will include creating a concept design for approval by the City and creating the design plans to include horizontal layout, cross sections, updated landscape layouts, and erosion control plans. Concepts will be over the previous construction plans with survey data and proposed grades from the previous construction plans. Once a concept layout is created, we will meet with the City for an "Over-the-shoulder" review to discuss the layout, elicit any feedback, and get approval for moving into the plan phase.

Upon approval of the concept by the City, 90% plans will be created that will include cover sheet, general notes, typical section(s), demo/grading, cross sections every 50-feet, utility plans, landscape plans, and erosion and sediment control plans. An easement exhibit will be prepared for the anticipated easement along with an easement description. A 90% deliverables package will be delivered to the City that includes the construction plans and easement exhibits for review and comment.

Once comments are received from the City, work will commence on the final plans. We will address any comments received, finalize plans, and then submit the plans to Community Development for review and comment. Once comments are received, we will address and resubmit for approval. The approval letter will be added into the plans. The final signed/sealed plans along with the signed easement exhibit will then be sent to the City for construction.

Assumptions/Exclusions

- € While plans will generally adhere to the GDOT EDG, it is assumed GDOT plan formatting is not required.
- € Only one concept will be provided based on the typical sections referenced in the email on 2/22/21 and the begin/end limits stated in the above scope. Adjustments will be made for minimizing utility impact and remaining within the right-of-way. It is anticipated that only one round of comments/revisions will be required for the concept.
- € Easements will be avoided when feasible, however, it is anticipated that one easement may be need for the construction of slopes.

- € Based on the size of the project, it is not anticipated that erosion control plans will have to be submitted to EPD for review.
- € Due to the impervious area being increased by less than 5000 square feet, it is not anticipated that an MS4 study or drainage report will be required for the project.
- € It is assumed no coordination with GDOT will be required for the project.

Schedule

can deliver the concept drawings within 20 days of receiving NTP. The 90% deliverable can be delivered within 75 days. Once comments are received on 90% plans, final plans and deliverables will be sent to Community Development within 10 days. Any comments received by Community Development can be addressed and resubmitted for approval within one week. Final plans will be submitted within one week of receiving approval from Community Development.

Fees

The work described above shall be completed for a lump sum fee of \$13,683.00. Invoicing shall be completed as lump sum by phase and submitted monthly as a percentage complete.

Thank you for allowing Columbia Engineering and Services, Inc. to provide engineering services on this project. Our staff looks forward to working closely with the City of Sandy Springs personnel on this project.

Regards,



Randy W. Strunk, P.E.
Vice President

TS105 Roswell Rd at Grogans Ferry Rd Intersection Improvement Vicinity Map



RESOLUTION NO. _____

STATE OF GEORGIA
COUNTY OF FULTON

**A RESOLUTION TO AUTHORIZE THE CITY MANAGER TO EXECUTE A
CHANGE ORDER AND THE REVISED CONTRACT FOR ENGINEERING DESIGN
SERVICES WITH COLUMBIA ENGINEERING FOR THE ROSWELL ROAD
AT GROGANS FERRY ROAD INTERSECTION IMPROVEMENT PROJECT (TS105),
CITY OF SANDY SPRINGS, FULTON COUNTY, GEORGIA**

WHEREAS, it is necessary, from time to time, to establish policies, procedures and guidelines consistent with the administration of a municipal government consistent with the US Constitution, Federal Statutes, alignment with Federal and Georgia's State Constitution, and the Charter for the City of Sandy Springs; and

WHEREAS, the City Manager directed the Department of Public Works to develop standard policies for recurring matters, to establish appropriate internal controls and legal compliance, and to provide for an efficient and effective means to serve constituents, and

WHEREAS, by Resolution adopted, the City of Sandy Springs has agreed to authorize a Contract increase in the amount of \$13,683 with Columbia Engineering for additional engineering design services of the Roswell Road at Grogans Ferry Road Intersection Improvement Project.

WHEREAS, upon adoption of this Resolution, City Sandy Springs Public Works Department staff will manage all applicable phases of the Agreement.

NOW, THEREFORE, BE IT RESOLVED BY THE MAYOR AND CITY COUNCIL OF THE CITY OF SANDY SPRINGS, GEORGIA

That the City Manager execute a Change Order in the amount of \$13,683 for design services required to update the plans within the project limits within the City of Sandy Springs, Fulton County, Georgia.

RESOLVED this the 6th day of April 2021.

Approved:

Russell K. Paul, Mayor

Attest:

Raquel D. Gonzalez, City Clerk
(Seal)



SANDY SPRINGS

CITY CLERK'S OFFICE

TO: Andrea Surratt, City Manager

FROM: William H. Martin Jr., AIA, Public Works Director

DATE: March 11, 2021 Submission for the April 6, 2021 Meeting

ITEM: Request for Mayor and City Council Consideration of Approval to Authorize the City Manager to Execute a Change Order and the Revised Contract for Engineering Design Services with KCI Technologies for the Roswell Road at Dalrymple Road Intersection Improvement Project (TS108)

Recommendation:

Staff recommends that Council authorize the City Manager to execute a Change Order and the Revised Contract for Engineering Design Services with KCI Technologies for the Roswell Road at Dalrymple Road Intersection Improvement Project (TS108).

Background:

As part of the ongoing design of the Roswell Road at Dalrymple Road Intersection Improvement Project, KCI Technologies has been asked to provide additional services that are outside of the original scope of work.

The ongoing right of way discussions have necessitated the need to re-stake two parcels for right of way and easement acquisition. This change order is being presented to Council because it has crossed the \$100,000 cumulative threshold for change orders.

Discussion:

The attached change order is required to provide additional funding to KCI for the additional work needed to complete the project design. The additional scope includes:

- Re-staking the required right of way lines and easement lines parcels 2 and 3 for right of way acquisition

Financial Impact:

The total proposed fee for this Change Order is \$2,840. This Change Order will bring the total design and construction services contract value to \$198,125.60 and total change orders to \$103,424.60. Sufficient funds are available in the TSPLOST project TS108 to fund this work.

Alternatives:

N/A

Attachments:

1. TS108_Supplemental 5 Fee Estimate Letter 03-02-21
2. Location Map
3. KCI Change Order Resolution 4.6.2021



ISO 9001:2015 CERTIFIED

ENGINEERS • PLANNERS • SCIENTISTS • CONSTRUCTION MANAGERS

2160 Satellite Boulevard, Suite 130 • Duluth, GA 30097 • Phone 678-990-6200 • Fax 678-990-6222

March 2, 2021

City of Sandy Springs
Attn: Christine Schultz
1 Galambos Way
Sandy Springs, Georgia 30328

RE: TS108 Roswell Road at Dalrymple Road TSPLOST Project – Supplemental No. 5

REVISED SCOPE OF SERVICES:

KCI Technologies, Inc. (KCI) is pleased to submit the detailed Scope of Services for the additional work to be performed. This proposal is limited exclusively to the Work as described in this Scope of Services section and anything not expressly described shall be considered excluded from the Work. The KCI team is submitting the following scope of work for additional services needed to complete right of way staking as part of final plans for the above project.

Right of Way Staking Scope of Services

PROJECT ASSUMPTIONS: KCI will stake the required RW lines and easement lines as shown on the exhibit in Appendix A. Parcel 1 and 4 will be omitted from staking. We will utilize the GDOT flagging and staking codes when setting the points in the field.

SCOPE OF WORK: Stake the required right-of-way line and easement lines as shown on the exhibit in Appendix A (parcels 1 and 4 are not included). Lines will be staked one time.

FEE: RW Staking One (1) Time.....\$2,840

SCHEDULE: Due to the current workload, the staking should be complete in approximately 2-3 weeks after receiving a notice to proceed weather permitting. Schedule subject to change depending on when we receive a formal notice to proceed.

KCI Technologies, Inc. is pleased to submit the revised following estimate to complete the above referenced project in accordance to the scope of services submitted in a separate document. Please feel free to contact me at (770) 330-9060 or erick.fry@kci.com if you have any questions.

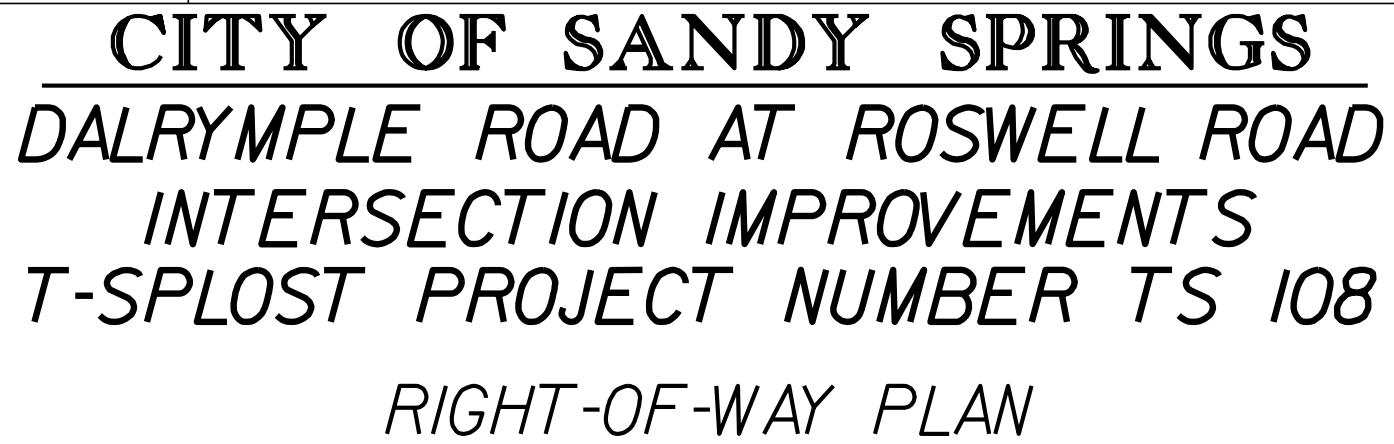
Sincerely,

A handwritten signature in blue ink, appearing to read "Erick Fry", is written over a light blue horizontal line.

Erick Fry, PE
Vice President

Employee-Owned Since 1988

Appendix A



NOTE :
ALL REFERENCES IN THIS DOCUMENT,WHICH INCLUDES ALL PAPERS,WRITINGS,
DOCUMENTS,DRAWINGS,OR PHOTOGRAPHS USED,OR TO BE USED IN CONNECTION
WITH THIS DOCUMENT,TO "STATE HIGHWAY DEPARTMENT OF GEORGIA ","STATE
HIGHWAY DEPARTMENT ","GEORGIA STATE HIGHWAY DEPARTMENT ","HIGHWAY
DEPARTMENT ","OR "DEPARTMENT "WHEN THE CONTEXT THEREOF MEANS THE
STATE HIGHWAY DEPARTMENT OF GEORGIA,AND SHALL BE DEEMED TO MEAN
THE DEPARTMENT OF TRANSPORTATION.



SANDY SPRINGS
GEORGIA

**PROJECT FUNDED BY
T - S P L O S T**

IN COOPERATION WITH FULTON COUNTY

Page 953 of 1061

Curve *1
P.I. STA. 10+95.51
N= 1439049.49
E= 2236023.32
DELTA= 12°23'46.41"
D= 6°30'54.19"
T= 95.51'
L= 190.27'
R= 879.44'
E= 5.17'

N/F
PRINCETON SQUARE SWIM
& RACKET CLUB, INC.
DB 23822 PG 156
17 0075 LL144
O PRINCETON TRCE
SANDY SPRINGS, GA 30328

N/F
ELIZABETH HEIGHTS SUBDIVISION
DB - PG -
17 0032 LLC16
600 DALRYMPLE ROAD
SANDY SPRINGS, GA 30328

N/F
RAYMOND O. BOYD
DB 58501 PG 469
17 0032 LL0585
7350 ROSWELL ROAD
SANDY SPRINGS, GA 30328
SEE DWG 60-0003 & 60-0004

BENCHMARK *50
MAG NAIL SET
N=1439078.70
E=2235798.04
ELEV=1079.91

BEGIN PROJECT TS108
STA. 10+10.00
N=1439059.58
E=2235938.41

BEGIN CONSTRUCTION
STA. 10+94.14
N=1439044.68
E=2236021.19

BEGIN RIGHT OF WAY
ACQUISITION TS108
STA 11+46.00
N 1439031.57
E 2236071.36

N/F
SIMION TERMURE &
CRISTINA GINA TERMURE
DB 590740 PG 603
17 0032 LL0155

605 DALRYMPLE RD NE
SANDY SPRINGS, GA 30328
SEE DWG 60-0004

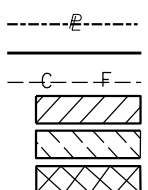
N/F
NORTH SPRINGS ASSOC. LTD
DB 31962 PG 619
17 0032 LL0536

N/F
APEX MK, LLC
DB 36035 PG 533
17 0032 LL0254

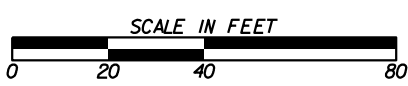
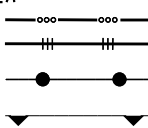
7320 ROSWELL ROAD
SANDY SPRINGS, GA 30328
SEE DWG 60-0003 & 60-0004

PARCEL 1 EXCLUDED FROM
RE-STAKING

PROPERTY AND EXISTING R/W LINE
REQUIRED R/W LINE
CONSTRUCTION LIMITS
EASEMENT FOR CONSTR
& MAINTENANCE OF SLOPES
EASEMENT FOR CONSTR OF SLOPES
EASEMENT FOR CONSTR OF DRIVES

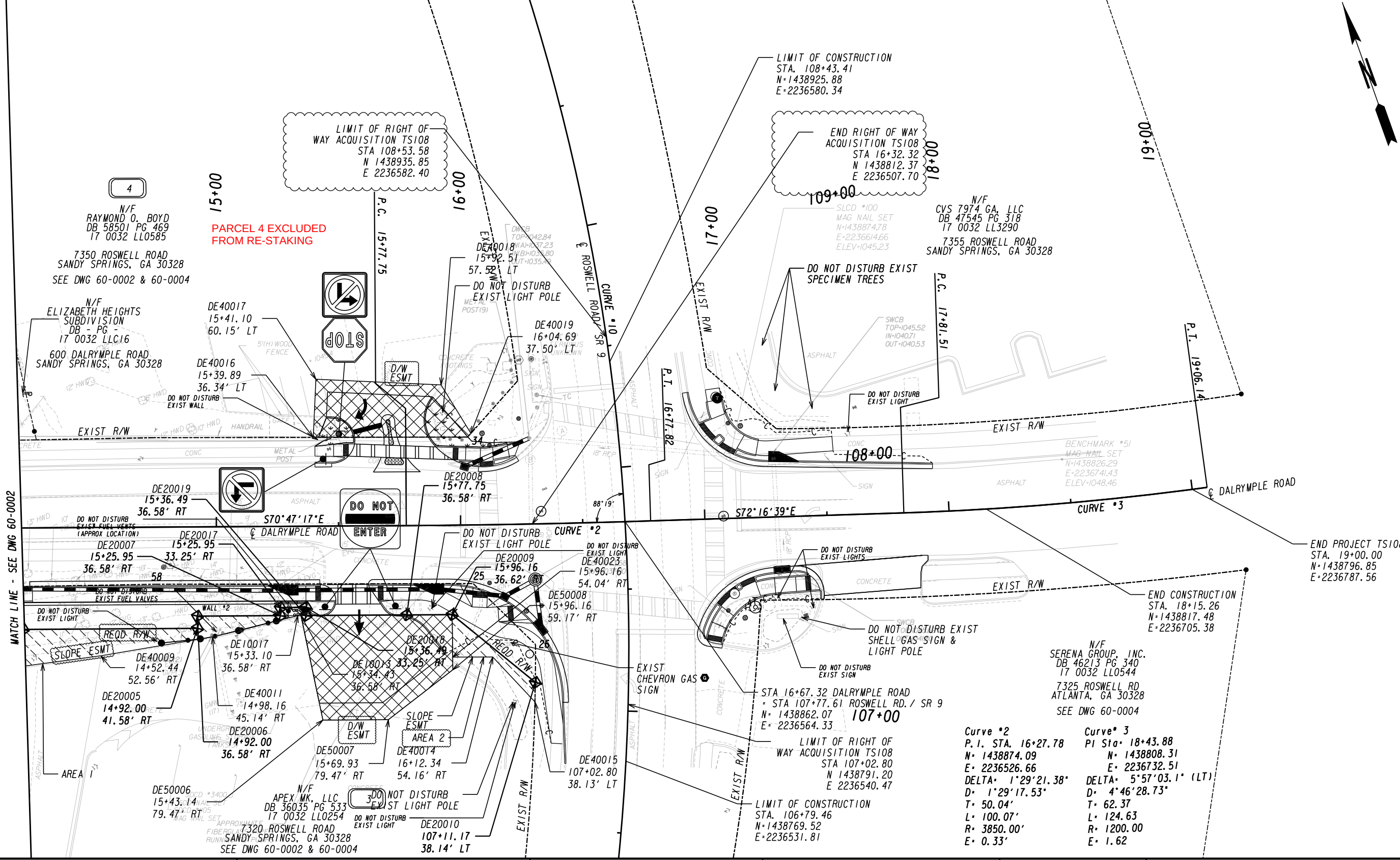


BEGIN LIMIT OF ACCESS.....BLA
END LIMIT OF ACCESS.....ELA
LIMIT OF ACCESS
REQ'D R/W & LIMIT OF ACCESS
ORANGE BARRIER FENCE
ESA - ENV. SENSITIVE AREA
(SEE ERIT TABLE)



REVISION DATES		
7/23/20		
8/6/20		
9/11/20		

RIGHT-OF-WAY PLANS DALRYMPLE ROAD AT ROSWELL ROAD			
CHECKED:		DATE:	
BACKCHECKED:		DATE:	
CORRECTED:		DATE:	
VERIFIED:		DATE:	
DRAWING No.			60-0002



PROPERTY AND EXISTING R/W LINE
REQUIRED R/W LINE
CONSTRUCTION LIMITS
EASEMENT FOR CONSTR
& MAINTENANCE OF SLOPES
EASEMENT FOR CONSTR OF SLOPES
EASEMENT FOR CONSTR OF DRIVES

-----E-----
---C---F---

BEGIN LIMIT OF ACCESS.....BLA
END LIMIT OF ACCESS.....ELA
LIMIT OF ACCESS
REQ'D R/W & LIMIT OF ACCESS
ORANGE BARRIER FENCE
ESA - ENV. SENSITIVE AREA
(SEE ERIT TABLE)

SCALE IN FEET

KCI

SANDY SPRINGS
GEORGIA

REVISION DATES
7/23/20
8/6/20
9/11/20

RIGHT-OF-WAY PLANS
DALRYMPLE ROAD AT ROSWELL ROAD

CHECKED: DATE:
BACKCHECKED: DATE:
CORRECTED: DATE:
VERIFIED: DATE:

DRAWING No.
60-0003

10/23/2015 GPLN

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PAR 1 TESMT - AREA 2 REQ'D TEMP. EASM'T. DE401			
PNT	OFFSET/	STATION/	ALIGNMENT
DE40004	33.45 R	11+80.00	Dalrymple Road
DE40005	40.83 R	11+73.80	Dalrymple Road
ARC LENGTH = 15.71			
CHORD BEAR = S 71°19'29.1° E			
LNTH CHORD = 15.71			
RADIUS = 838.61			
DEGREE = 6°49'56.0"			
DE40022	40.83 R	11+90.27	Dalrymple Road
81	40.83 R	12+36.80	Dalrymple Road
80	30.02 R	12+43.43	Dalrymple Road
ARC LENGTH = 63.13			
CHORD BEAR = N 73°57'15.9° W			
LNTH CHORD = 63.13			
RADIUS = 3264.76			
DEGREE = 1°45'17.9"			
DE40004	33.45 R	11+80.00	Dalrymple Road
REQD EASMT AREA = 563.54 SF			
REMAINDER = +/- 1.055 ACRES			

PAR 1 DWESMT REQ'D DRWY. EASM'T. DE500			
PNT	OFFSET/	STATION/	ALIGNMENT
DE40003	34.72 R	11+46.00	Dalrymple Road
DE50000	51.00 R	11+46.00	Dalrymple Road
DE50001	51.00 R	11+65.00	Dalrymple Road
DE40005	40.83 R	11+73.80	Dalrymple Road
DE40004	33.45 R	11+80.00	Dalrymple Road
ARC LENGTH = 32.71			
CHORD BEAR = N 74°47'43.4° W			
LNTH CHORD = 32.70			
RADIUS = 3264.76			
DEGREE = 1°45'17.9"			
DE10011	34.72 R	11+46.00	Dalrymple Road

PAR 2 REQD REQ'D R/W DE200			
PNT	OFFSET/ DIST	STATION/ BEARING	ALIGNMENT
DE20000	41.65 R	12+48.03	Dalrymple Road
102.13 S 67°59'21.2° E			
DE20001	46.64 R	13+50.04	Dalrymple Road
14.72 S 22°59'21.2° E			
DE20002	57.54 R	13+59.92	Dalrymple Road
45.61 S 71°20'57.8° E			
DE20003	57.09 R	14+05.53	Dalrymple Road
32.87 N 18°54'38.0° E			
59	24.23 R	14+05.35	Dalrymple Road
149.96 N 72°48'01.6° W			
57	29.49 R	12+55.49	Dalrymple Road
12.29 S 50°44'12.7° W			
82	39.97 R	12+49.06	Dalrymple Road
1.97 S 50°44'12.7° W			
DE20000	41.65 R	12+48.03	Dalrymple Road
REQD R/W = 3334.24 SF			
REQD R/W = 0.077 ACRES			
REMAINDER = +/- 8.96 ACRES			

PAR 2 TESMT REQ'D TEMP. EASM'T. DE402			
PNT	OFFSET/	STATION/	ALIGNMENT
DE20000	41.65 R	12+48.03	Dalrymple Road
DE40006	46.51 R	12+45.05	Dalrymple Road
DE40007	50.58 R	13+28.27	Dalrymple Road
DE40012	61.61 R	13+36.16	Dalrymple Road
DE20002	57.54 R	13+59.92	Dalrymple Road
DE20001	46.64 R	13+50.04	Dalrymple Road
DE20000	41.65 R	12+48.03	Dalrymple Road
REQD EASMT AREA = 748.87 SF			

PAR 3 REQD REQ'D R/W DE201			
PNT	OFFSET/ DIST	STATION/ BEARING	ALIGNMENT
DE20003	57.09 R	14+05.53	Dalrymple Road
21.69 N 63°32'38.2° E			
DE20004	41.58 R	14+20.68	Dalrymple Road
71.32 S 70°47'17.2° E			
DE20005	41.58 R	14+92.00	Dalrymple Road
5.00 N 19°12'42.8° E			
DE20006	36.58 R	14+92.00	Dalrymple Road
33.95 S 70°47'17.2° E			
DE20007	36.58 R	15+25.95	Dalrymple Road
3.33 N 19°12'42.8° E			
DE20017	33.25 R	15+25.95	Dalrymple Road
10.54 S 70°47'17.2° E			
DE20018	33.25 R	15+36.49	Dalrymple Road
3.33 S 19°12'42.8° W			
DE20019	36.58 R	15+36.49	Dalrymple Road
41.26 S 70°47'17.2° E			
DE20008	36.58 R	15+77.75	Dalrymple Road
18.58 S 70°47'17.2° E			
DE20009	36.62 R	15+96.16	Dalrymple Road
43.90 S 31°15'05.1° E			
DE20010	38.14 L	107+11.17	Roswell Rd/ SR9
ARC LENGTH = 15.49			
CHORD BEAR = N 19°48'56.1° E			
LNTH CHORD = 15.49			
RADIUS = 839.11			
DEGREE = 6°49'41.4"			
26	38.18 L	107+27.36	Roswell Rd/ SR9
35.70 N 26°03'46.0° W			
25	24.01 R	16+04.82	Dalrymple Road
130.20 N 70°33'46.0° W			
58	23.40 R	14+74.79	Dalrymple Road
69.44 N 71°28'02.0° W			
59	24.23 R	14+05.35	Dalrymple Road
32.87 S 18°54'38.0° W			
DE20003	57.09 R	14+05.53	Dalrymple Road
REQD R/W = 3563.34 SF			
REQD R/W = 0.082 ACRES			
REMAINDER = +/- 1.118 ACRES			

PAR 3 TESMT-AREA 1 REQ'D TEMP. EASM'T. DE403-1			
PNT	OFFSET/	STATION/	ALIGNMENT
DE20003	57.09 R	14+05.53	Dalrymple Road
DE40008	56.97 R	14+18.05	Dalrymple Road
DE40009	52.56 R	14+52.44	Dalrymple Road
DE40011	45.14 R	14+98.16	Dalrymple Road
DE10017	36.58 R	15+33.10	Dalrymple Road
DE20019	36.58 R	15+36.49	Dalrymple Road
DE20018	33.25 R	15+36.49	Dalrymple Road
DE20017	33.25 R	15+25.95	Dalrymple Road
DE20007	36.58 R	15+25.95	Dalrymple Road
DE20006	36.58 R	14+92.00	Dalrymple Road
DE20005	41.58 R	14+92.00	Dalrymple Road
DE20004	41.58 R	14+20.68	Dalrymple Road
DE20003	57.09 R	14+05.53	Dalrymple Road
REQD EASMT AREA 1 = 1077.18 SF			

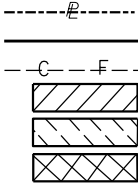
PAR 3 TESMT-AREA 2 REQ'D TEMP. EASM'T. DE403-2			
PNT	OFFSET/	STATION/	ALIGNMENT
DE40023	54.04 R	15+96.16	Dalrymple Road
DE40014	54.16 R	16+12.34	Dalrymple Road
DE40015	72.89 R	16+29.02	Dalrymple Road
ARC LENGTH = 8.01			
CHORD BEAR = N 20°37'04.9° E			
LNTH CHORD = 8.01			
RADIUS = 839.11			
DEGREE = 6°49'41.4"			
DE20010	64.88 R	16+29.32	Dalrymple Road
DE20009	36.62 R	15+96.16	Dalrymple Road
DE40023	54.04 R	15+96.16	Dalrymple Road
REQD EASMT AREA 2 = 277.99 SF			

REQD EASMT AREA 1 = 1077.18 SF
REQD EASMT AREA 2 = 277.99 SF
TOTAL REQD EASMT AREA = 1355.17 SF

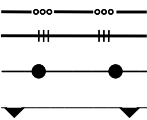
PAR 3 DRIVEWAY ESMT REQ'D DRWY. EASM'T. DE403-3			
PNT	OFFSET/	STATION/	ALIGNMENT
DE10013	36.58 R	15+34.43	Dalrymple Road
DE50006	79.47 R	15+43.14	Dalrymple Road
DE50007	79.47 R	15+69.93	Dalrymple Road
DE50008	59.17 R	15+96.16	Dalrymple Road
DE20009	36.62 R	15+96.16	Dalrymple Road
DE20008	36.58 R	15+77.75	Dalrymple Road
DE10013	36.58 R	15+34.43	Dalrymple Road

PAR 4 DWESMT REQ'D DRWY. EASM'T. DE404-1			
PNT	OFFSET/	STATION/	ALIGNMENT
DE40016	36.34 L	15+39.89	Dalrymple Road
34	36.01 L	16+03.31	Dalrymple Road
DE40019	37.50 L	16+04.69	Dalrymple Road
DE40018	57.52 L	15+92.51	Dalrymple Road
DE40017	60.15 L	15+41.10	Dalrymple Road
DE40016	36.34 L	15+39.89	Dalrymple Road

PROPERTY AND EXISTING R/W LINE
REQUIRED R/W LINE
CONSTRUCTION LIMITS
EASEMENT FOR CONSTR
& MAINTENANCE OF SLOPES
EASEMENT FOR CONSTR OF SLOPES
EASEMENT FOR CONSTR OF DRIVES



BEGIN LIMIT OF ACCESS.....BLA
END LIMIT OF ACCESS.....ELA
LIMIT OF ACCESS
REQ'D R/W & LIMIT OF ACCESS
ORANGE BARRIER FENCE
ESA - ENV. SENSITIVE AREA
(SEE ERIT TABLE)



REVISION DATES		
7/23/20		
8/6/20		
9/11/20		

RIGHT-OF-WAY PLANS
DALRYMPLE ROAD AT ROSWELL ROAD

CHECKED:		DATE:		DRAWING No. 60-0004
BACKCHECKED:		DATE:		
CORRECTED:		DATE:		
VERIFIED:		DATE:		

Location Map

Roswell Rd at Dalrymple Rd

Brighton Point

Roswell Rd

Roswell Rd & Dalrymple Rd

Google Earth

© 2021 Google

400 ft

Page 957 of 1061



RESOLUTION NO. _____

STATE OF GEORGIA
COUNTY OF FULTON

**A RESOLUTION TO AUTHORIZE THE CITY MANAGER TO EXECUTE A
CHANGE ORDER AND THE REVISED CONTRACT FOR ENGINEERING DESIGN
SERVICES WITH KCI TECHNOLOGIES FOR THE ROSWELL ROAD AT
DALRYMPLE ROAD INTERSECTION IMPROVEMENT PROJECT (TS108),
CITY OF SANDY SPRINGS, FULTON COUNTY, GEORGIA**

WHEREAS, it is necessary, from time to time, to establish policies, procedures and guidelines consistent with the administration of a municipal government consistent with the US Constitution, Federal Statutes, alignment with Federal and Georgia's State Constitution, and the Charter for the City of Sandy Springs; and

WHEREAS, the City Manager directed the Department of Public Works to develop standard policies for recurring matters, to establish appropriate internal controls and legal compliance, and to provide for an efficient and effective means to serve constituents, and

WHEREAS, by Resolution adopted, the City of Sandy Springs has agreed to authorize a Contract increase in the amount of \$2,840 with KCI Technologies for additional engineering design services of the Roswell Road at Dalrymple Road Intersection Improvement Project.

WHEREAS, upon adoption of this Resolution, City Sandy Springs Public Works Department staff will manage all applicable phases of the Agreement.

NOW, THEREFORE, BE IT RESOLVED BY THE MAYOR AND CITY COUNCIL OF THE CITY OF SANDY SPRINGS, GEORGIA

That the City Manager execute a Change Order in the amount of \$2,840 for design services required to update the plans within the project limits within the City of Sandy Springs, Fulton County, Georgia.

RESOLVED this the 6th day of April 2021.

Approved:

Russell K. Paul, Mayor

Attest:

Raquel D. Gonzalez, City Clerk
(Seal)



SANDY SPRINGS

GEORGIA

TO: Andrea Surratt, City Manager

FROM: William H. Martin, Jr., AIA, Public Works Director

DATE: March 26, 2021 for Submission onto the Agenda of the April 6, 2021 Mayor and City Council Meeting

ITEM: Request for Mayor and City Council Consideration of Approval of a Contract with CMES, Incorporated to Construct Interstate North Parkway Sidepath Project, TS170, and Authorization for the City Manager to Execute the Contract

Recommendation:

Staff recommends contract award to CMES, Inc., for construction of the Interstate North Parkway Sidepath Project (TS170) ("Project"), pending approval by the City of Sandy Springs Legal and Finance Departments.

Background:

The Project consists of the installation of 3,570 LF of 12-ft sidewalk with 4-ft landscape buffer and associated improvements on the north side of Interstate North Parkway from the City limits to Northside Drive. Proposed improvements included in the Project are:

1. Sidepath with Handrail
2. Commercial Driveway Reconstruction: Two (2) Asphalt and One (1) Concrete
3. Storm Drainage System
4. Retaining Walls
5. Landscaping – 55 Street Trees

To advance the Project, on December 30, 2020 the City issued an Invitation to Bid ("ITB") seeking bids from qualified contractors to construct the Project. Bids from seven (7) contractors were received on February 3, 2021, including the following:

Contractor

Bid

Ryde Grading, Inc	\$1,412,479.00
DAF Concrete, Inc	\$1,465,298.00
CMES, Inc	\$1,657,973.00
Astra Group, LLC	\$1,895,000.00
Ohmshive Construction	\$1,946,026.25
Lewallen Construction	\$1,987,671.33
Tri Scapes, Inc	\$2,265,459.85

Discussion:

The engineer's construction cost estimate for the Project is \$2,189,428. Ryde Grading, Inc. ("Ryde") submitted the lowest bid in the amount of \$1,412,479, but was determined not to be a responsive bidder due to the following reasons:

- Lack of experience: Of the four (4) referenced projects provided by Ryde, only one was similar in cost with TS170. The similar in cost reference project is an intersection improvement project with traffic signal and paving work at two (2) different intersections that is not similar in overall scope to the Project that is the subject of the ITB. The other three (3) reference projects were less than half in scope and in cost of this Project.
- The bid analysis shows deficiency in many line items:
 - Traffic control with less than 10% of the engineer's cost estimate – Based on the cost, the adequate traffic control cannot be provided for the Project for its duration of 200 calendar days.
 - Shoring for the retaining wall is 6% of the engineer's cost estimate and 9% of the average cost of all bids – Based on the cost of the shoring, the staff is unsure if the contractor can provide site specific and appropriate shoring for the retaining wall.
 - Street trees (55) is less than 25% of the engineer's cost estimate and 39% of the average cost of all bids – The contractor is required to provide tree reservation with the name and contact information of the nursery with the bid, but this information was not provided with the bid.
 - Storm drainage is less than 39% of the engineer's cost estimate and 72% of the average cost of all bids.

DAF Concrete, Inc. submitted the next low bid in the amount of \$1,465,298; however, its bid was disqualified since it does not meet the requirements listed in the ITB for GDOT pre-qualification.

Upon administrative review of the bids, staff recommends that award be made to the third low bidder, CMES, Inc., in the amount of \$1,657,973.00.

Alternatives:

Construct the Project as currently bid, or the City may choose to re-advertise the bid for construction.

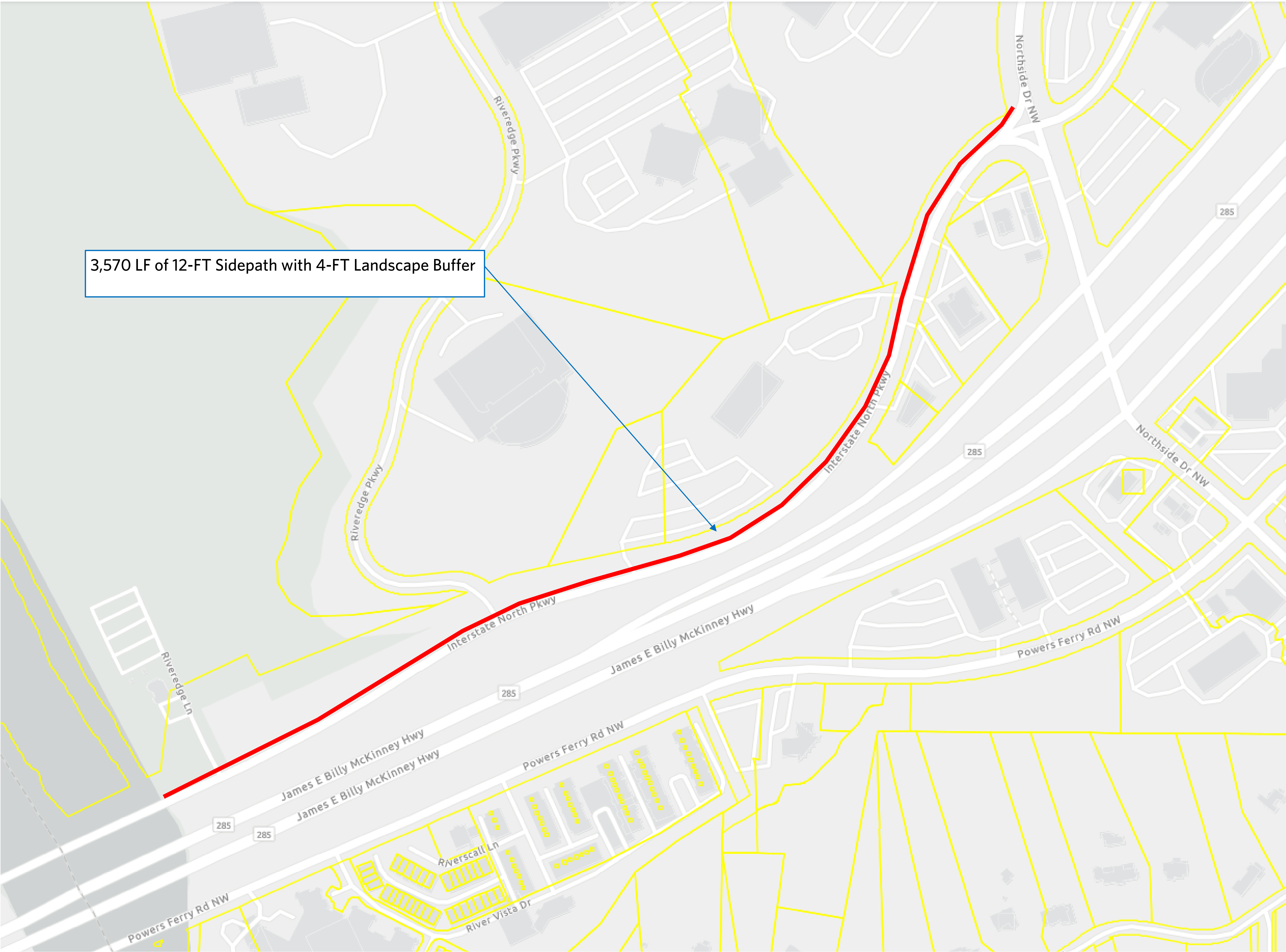
Financial Impact:

There are adequate funds available for this Project.

Attachment:

- I. Vicinity Map
- II. Resolution

TS170 Interstate North Pkwy Sidepath (City Limit to Northside Drive)



STATE OF GEORGIA
COUNTY OF FULTON

**A RESOLUTION TO APPROVE A CONTRACT WITH CMES INCORPORATED
TO CONSTRUCT INTERSTATE NORTH PARKWAY SIDEPATH PROJECT, TS170,
AND AUTHORIZATION FOR THE CITY MANAGER TO EXECUTE THE CONTRACT**

WHEREAS, it is necessary, from time to time, to establish policies, procedures and guidelines consistent with the administration of a municipal government consistent with the US Constitution, Federal Statutes, alignment with Federal and Georgia's State Constitution, and the Charter for the City of Sandy Springs; and

WHEREAS, the Department of Public Works, in response to the guidance provided by the City Manager, has received a bid from CMES Inc. to construct Interstate North Parkway Sidepath Project, TS170, Sandy Springs, Fulton County, Georgia, and

WHEREAS, upon adoption of this Resolution, City of Sandy Springs Public Works Department staff will manage all applicable phases of the construction contract.

NOW, THEREFORE, BE IT RESOLVED BY THE MAYOR AND CITY COUNCIL OF THE CITY OF SANDY SPRINGS, GEORGIA

That the City Manager execute a contract in the amount of \$1,657,973.00 with the selected contractor, CMES, Inc. for Interstate North Parkway Sidepath Project, TS170, Sandy Springs, Fulton County, Georgia.

APPROVED AND ADOPTED on this the 6th day of April, 2021.

Approved:

Russell K. Paul, Mayor

Attest:

Raquel Gonzalez, City Clerk

(Seal)



SANDY SPRINGS

CITY CLERK'S OFFICE

TO: Andrea Surratt, City Manager

FROM: Keith Sanders, Fire Chief

DATE: March 16, 2021 Submission for the April 6, 2021 Meeting

ITEM: Request for Mayor and City Council Consideration of a Resolution to Authorize the Purchase of MSA G1 Self Contained Breathing Apparatus (SCBA) for the City of Sandy Springs Fire Department and Authorizing the City Manager to Execute Documents and Effectuate the Same

Recommendation:

A Resolution to Authorize the Purchase of MSA G1 Self Contained Breathing Apparatus (SCBA) for the City of Sandy Springs Fire Department and Authorizing the City Manager to Execute Documents and Effectuate the Same

Background:

The MSA G1 purchase will replace the Scott X3 5.5 Air Pak equipment. The current equipment is not equipped with bluetooth technology for radio connectivity and firefighter accountability. The Scott Air Paks have a few shortcomings that the MSA G1 paks would resolve: communications continue to be difficult with the current facepiece equipment, continued issues with the battery boards and the current harness model continues to be ergonomically challenging for some personnel to wear.

Discussion:

The Sandy Springs Fire Department formed a committee and conducted field testing of the MSA G1 equipment. The Fire Department also requested a copy of Cobb County Fire & Emergency Services SCBA Replacement Project documents and the Sandy Springs committee performed a thorough review of the Cobb County Fire & Emergency Services findings.

The Sandy Springs Fire Department committee concluded that the MSA G1 Air Pak is superior compared to the Scott X3 5.5 and concurs with the Cobb County Fire findings.

The MSA G1 Air Pak provides seamless Bluetooth radio connectivity for firefighter accountability, unique feature of SCBA-to-SCBA high pressure transfill capability, and a 15 year warranty that includes electronics and the warranty repair program versus a 5 year warranty.

The MSA G1 equipment purchase from Ten-8 Fire & Safety, LLC is in accordance with the competitively bid contract (RFP No. PS20125) awarded to League of Oregon Cities by the National Purchasing Partners (NPP). RFP PS20125 became effective March 26, 2020 and is valid until March 26,

2026.

Financial Impact:

Under the Procurement Code, the City is authorized to utilize competitively procured contracts provided through other governmental entities.

Pricing includes: Air Paks, face masks, and RFID tags for inventory and personnel tracking.

All equipment purchased includes a 15 year warranty.

Alternatives:

The alternative is not to approve the acquisition and to provide the Department with further direction on the purchase of equipment to support fire personnel on emergency scenes.

Attachments:

1. Ten8 Q216996
2. cobb county msa eval
3. SCBA Final Report cobb county
4. Resolution to Purchase Equipment



IN SERVICE TO SERVE YOU

TEN-8 FIRE & SAFETY, LLC
2904 59TH AVENUE DRIVE EAST
BRADENTON, FL 34203
Phone : 800-228-8368
Fax : 941-756-2598

Sales Quote

Page: 1

Sales Quote Number: Q216996

Sales Quote Date: 3/24/2021

Customer ID SANDY SPRINGS

SalesPerson Van Roberts

Email : vroberts@ten8fire.com

Ten-8 Contact KHANH HUYNH

Email : khuyh@ten8fire.com

Sell To :

CITY OF SANDY SPRINGS
ATTN: ACCOUNTS PAYABLE
7840 ROSWELL ROAD, BLDG 500
SANDY SPRINGS, GA 30350

Ship To :

CITY OF SANDY SPRINGS
7840 ROSWELL ROAD, BLDG 500
SANDY SPRINGS, GA 30350

Payment Terms : Due Upon Receipt of
Product Or Service

Ship Via : STANDARD DELIVERY

Item No.	Description	Unit	Quantity	Selling Pric	Total Price
	MSA-G1FS442MD2C0LCR G1 SCBA 4500 PSI SYSTEM CGA QUICK CONNECTION Harness Standard with Chest Strap METAL CYLINDER BAND ADJUSTABLE LUNBAR PAD, SOLID BUCKLE REGULATOR TYPE SOLID COVER REGULATOR HOSE CONTINUOUS UNIVERSAL EBS NONE Speaker Module, Bluetooth PASS WITH TELEMETRY RT SHOULDER RECHARGEABLE BATTERY (N/C) DOES NOT INCLUDE: MASK & CYLINDER LIST PRICE \$8,425.00 Ea. *****	EACH	97	5,480.54	531,612.38
	ADD 3' TRANSFILL HOSE AND POUCH LIST PRICE \$1,023.00 PRICE INCLUDED *****	EACH	97		
MSA-10156459	FACEPIECE,G1,FS,MD MDNC,4PT C-HARNESS LIST PRICE \$456.20	EACH	140	278.17	38,943.80
MSA-10175708-USED	USED CYL,G1 LP RC,4500 PSIG, 45MINS L/QC, (HILLSBOROUGH MFG DATE 03/20 LIST PRICE \$1,703.78	EACH	171	700.00	119,700.00
MSA-10197700	MSA HUB Fireservice - US LIST PRICE \$4,695.30	EACH	1	3,435.59	3,435.59
MSA-10083875	TAG ASSY, ELECTRONIC ID, M7 LIST PRICE \$49.17	EACH	70	35.98	2,518.60
MSA-10158407	G1 RFID READER/WRITER LIST PRICE \$791.37	EACH	2	579.05	1,158.10



IN SERVICE TO SERVE YOU

TEN-8 FIRE & SAFETY, LLC
2904 59TH AVENUE DRIVE EAST
BRADENTON, FL 34203
Phone : 800-228-8368
Fax : 941-756-2598

Sales Quote

Page: 2

Sales Quote Number: Q216996
Sales Quote Date: 3/24/2021

Customer ID SANDY SPRINGS
SalesPerson Van Roberts
Email : vroberts@ten8fire.com
Ten-8 Contact KHANH HUYNH
Email : khuynh@ten8fire.com

Sell To :

CITY OF SANDY SPRINGS
ATTN: ACCOUNTS PAYABLE
7840 ROSWELL ROAD, BLDG 500
SANDY SPRINGS, GA 30350

Ship To :

CITY OF SANDY SPRINGS
7840 ROSWELL ROAD, BLDG 500
SANDY SPRINGS, GA 30350

Payment Terms : Due Upon Receipt of
Product Or Service

Ship Via : STANDARD DELIVERY

Item No.	Description	Unit	Quantity	Selling Pric	Total Price
MSA-10162403	Adapter Assy, QC to 1/4 NPT F, 5000 psig LIST PRICE \$552.51	EACH	6	404.28	2,425.68
SCB-SCV-10457	1/4" MNPT X CGA347, BR FOR ABOVE Adapter	EACH	6	19.50	117.00
MSA-10158385	G1 Lithium Ion Battery charger station LIST PRICE \$843.26	EACH	10	617.02	6,170.20
MSA-10148741-SP	Battery Pack, G1, Rechargeable LIST PRICE \$435.37	EACH	32	318.56	10,193.92
MSA-10144231-SP	KIT, FILTER ADAPTER ASSY, G1 FACEPIECE LIST PRICE \$131.58	EACH	10	96.28	962.80
MSA-10042346	CARTRIDGES, OPTIFILTER XL, TYPE HE, 20/PKG LIST PRICE \$527.78	EACH	1	354.00	354.00

MASKS FITTEST FOR 3 SHIFTS (NO CHARGE) IN SERVICE TRAINING 6 DAYS (NO CHARGE) WE HAVE SOME CYLINDERS BARELY USED RETURNED FROM HILLSBOROUGH COUNTY FL, THE CYLINDERS HAS MFG DATE OF 03/2020, PRICE \$700.00 EA. UNTIL WE RUN OUT. *****					
MSA-10175707	CYL, G1 RC, 4500 PSIG, 30MINS W/QC LIST PRICE \$1,411.84	EACH	11	774.79	8,522.69
MSA-10175710-USED	USED CYL, G1 RC, 4500 PSIG, 60 MINS W/QC LIST PRICE \$2,094.66 (HILLSBOROUGH MFG DATE: 01/20	EACH	8	850.00	6,800.00
	MSA-800391 ADAPTER CGA347 X UAC MALE LIST PRICE \$518.08	EACH	2	374.17	748.34

This Quote is valid until 04/23/21

All returns must be initiated within 30 days of receipt of product and will be charged a restocking fee. Contact your sales representative to receive a Return Materials Authorization (RMA). Special order parts are not returnable. Full terms and conditions for returns can be found on our website at www.ten8fire.com/returns.



IN SERVICE TO SERVE YOU

TEN-8 FIRE & SAFETY, LLC
2904 59TH AVENUE DRIVE EAST
BRADENTON, FL 34203
Phone : 800-228-8368
Fax : 941-756-2598

Sales Quote

Page: 3

Sales Quote Number: Q216996

Sales Quote Date: 3/24/2021

Customer ID SANDY SPRINGS

SalesPerson Van Roberts

Email : vroberts@ten8fire.com

Ten-8 Contact KHANH HUYNH

Email : khuynh@ten8fire.com

Sell To :

CITY OF SANDY SPRINGS
ATTN: ACCOUNTS PAYABLE
7840 ROSWELL ROAD, BLDG 500
SANDY SPRINGS, GA 30350

Ship To :

CITY OF SANDY SPRINGS
7840 ROSWELL ROAD, BLDG 500
SANDY SPRINGS, GA 30350

Payment Terms : Due Upon Receipt of
Product Or Service

Ship Via : STANDARD DELIVERY

Item No.	Description	Unit	Quantity	Selling Pric	Total Price
----------	-------------	------	----------	--------------	-------------

PLEASE NOTE:

THIS PRICE DID NOT INCLUDES ALL TRADE-IN SCOTT
PACKS, MASKS AND BOTTLES.

DOES INCLUDED FIRST YEAR FLOW TEST & MASK FIT
TEST

Amount Subject to Sales Tax 0
Amount Exempt from Sales Tax 733,663.10

Subtotal:	733663.10
Invoice Discount:	0.00
Total Sales Tax:	0.00
Total:	733,663.10

This Quote is valid until 04/23/21

All returns must be initiated within 30 days of receipt of product and will be charged a restocking fee. Contact your sales representative to receive a Return Materials Authorization (RMA). Special order parts are not returnable. Full terms and conditions for returns can be found on our website at www.ten8fire.com/returns.



COBB COUNTY FIRE AND EMERGENCY SERVICES

SCBA REPLACEMENT PROJECT

PROJECT SCOPE

- ✖ Conduct an exhaustive research and testing process to determine the acceptable replacement(s) for the Scott NXG7 SCBA that is currently used by Cobb County Fire and Emergency Services.

MANUFACTURERS

- ✖ Scott
- ✖ MSA
- ✖ Interspiro
- ✖ Draeger
- ✖ Honeywell
- ✖ Avon
- ✖ Manufacturer reps versus vendors

FIRE DEPARTMENT INSTRUCTORS CONFERENCE

- ✘ Largest fire service trade show
- ✘ Typically where new products are revealed
- ✘ Opportunity to see all products in one venue
- ✘ Opportunity to meet all manufacturer representatives

COMMITTEE SELECTION

- ✘ Interest solicited from entire Department
- ✘ Twelve members to be selected
 - + Ranks
 - + Years of service
 - + Body type
- ✘ Must have committed to four dates
 - + Initial Meeting
 - + Three days of product demonstrations

PRODUCT DEMONSTRATION INVITATION

- ✘ May 2018 all six manufacturers invited to present their product in August
- ✘ Provided general parameters for the equipment we wished to review
- ✘ Equipment was requested to be left for Technical Review process
- ✘ All initially accepted invitation
- ✘ Mid July a consolidated list of questions/answers was sent to all manufacturers

INITIAL COMMITTEE MEETING

- ✗ Outlined Process
- ✗ Set ground rules
- ✗ Discussed objective, non-bias process
- ✗ Determined a general specification or requirements
 - + Important to Committee
 - ✗ Ergonomics
 - ✗ Communications
 - ✗ Ease of use
- ✗ Reviewed draft Technical Review score sheets
- ✗ Reviewed draft Field Testing score sheet
- ✗ Established Field Testing course

PRODUCT DEMONSTRATIONS

- ✖ August 14-16
- ✖ Avon declined invitation in writing
- ✖ 4 Hours allotted
- ✖ Relaxed atmosphere to allow for dialogue
- ✖ All brands met the minimum general specifications
- ✖ Honeywell removed from process by Committee vote due to safety concerns

TECHNICAL REVIEW

- ✘ Detailed evaluation of all aspects on each manufacturers product
- ✘ 67 evaluation categories
- ✘ Free flow evaluation process allowing the evaluator to spend as much time as needed with each SCBA
- ✘ Evaluation SCBAs were configured and evaluated with all features

TECHNICAL REVIEW RESULTS

	Scott	MSA	Draeger	Interspiro
Total	2467	2784	1944	1973
Average	205.6	232	162	164
Percentage	77%	87%	60%	61%

- Perfect score 268 points
- MSA: Scott 317 points behind MSA
- If a 13th evaluator was added to the process and they gave MSA zero points and scored Scott perfectly MSA would still be in the lead.

FIELD TESTING

- ✖ January 9-11, 14, 2019
- ✖ Manufacturers were invited back to provide train-the-trainer information
- ✖ SCBA configured as we would order them
 - + Scott SCBA communications were different than technical review due to practicality and safety concern
- ✖ Course validated using our current SCBA
- ✖ Committee members served as proctors
- ✖ Proctors were randomly assigned the SCBA they would proctor each day

FIELD TESTING

- ✖ General parameters were sent to Battalion Chiefs to schedule crews to participate
 - + Good attitude
 - + Ability to complete course four times
 - + Could not be stationed with a committee member
 - + Could not be from 3rd Battalion A-shift

FIELD TESTING

- ✖ 11 Station Course
- ✖ Each evaluator was instructed by a proctor prior to completing course
- ✖ Random order of evaluation
- ✖ Scored after each course completion

FIELD TESTING

- ✘ Draeger did not provide the requested equipment until the second day of testing
- ✘ Once the requested equipment was used both SCBAs failed prior to making it to the first station of the course
- ✘ Removed from process

FIELD TESTING

	Scott	MSA	Interspiro	Draeger
Total	6783	7777	4838	0
Average	114	132	82	0
Percentage	74%	84%	53%	0

- 59 Evaluators
- 156 maximum points per evaluation
- 9,204 points available by all evaluators
- MSA : 994 points ahead of Scott
- If six additional evaluators were added and scored MSA a zero and Scott maximum points MSA would still be in the lead.

Each person was asked: With the information you have available which SCBA would you choose?

55 of the 59 evaluators chose MSA

RECOMMENDATION

- ✘ Technical review: MSA
- ✘ Field Testing Scoring: MSA
- ✘ Field Testing Favorite Vote: MSA
- ✘ Warranty: MSA
- ✘ Ergonomics: MSA
- ✘ Communications: MSA
- ✘ Ease of Use: MSA

Based on the extensive data, both qualitative and quantitative, the only acceptable replacement SCBA is the MSA G1.

Cobb County Fire and Emergency Services



Self-Contained Breathing Apparatus Research and Development Final Report

July 2019

Cobb County Fire and Emergency Services
New Self Contained Breathing Apparatus (SCBA)
Purchase

Fire Chief

Randy Crider

Supervision

Deputy Chief Bill Johnson

SCBA Replacement Committee Chairperson

Battalion Chief Josh Taylor

SCBA Replacement Committee

Lt. Jeff Few

Lt. Michael Hilley

Lt. Rick Long

Lt. Eric Paloski

Lt. Jeff Travis

Eng. Michael Brinkley

Eng. Michael Parrish

Eng. James Pullum

Eng. Kurt Seufert

FF. Kerry Lambert

FF. Mark Mabry

FF. Blair Maxwell

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Section 4-Technical Evaluations	Page 10
Section 5-Field Evaluations	Page 13
Section 6-Conclusions & Recommendation	Page 17
Section 7-Bid Specification	Page 27

Appendices

Appendix A -Initial Manufacturers Invitation (sample)

Appendix B - Manufacturers Letter of Disqualification (sample)

Appendix C - Technical Evaluation Rating Sheet (sample)

Appendix D - Technical Evaluation Results

Appendix E - Field Evaluation Invitation (sample)

Appendix F - Field Evaluation Course Overview

Appendix G - Field Evaluation Rating Sheet

Appendix H - Field Evaluation Results

Appendix I – Technical Review Synopsis of Comments

Appendix J – Field Testing Synopsis of Comments



Cobb County Fire and Emergency Services New SCBA Purchase

July 9, 2019

To the Reader,

The Cobb County Fire and Emergency Services Self Contained Breathing Apparatus (SCBA) Replacement Committee hereby submits this final report on breathing apparatus. This document is offered with full acknowledgment to the Cobb County Fire and Emergency Services Command Staff for their support and the SCBA Replacement Committee members for their dedication to the project.

A special note of thanks is offered to the firefighting crews that participated in the field test. Without their efforts and invaluable input this project and report would not have been possible.

Respectfully,

Joshua S Taylor

Battalion Chief

Cobb County Fire and Emergency Services

-Section 1- Introduction

In 2010, Cobb County Fire and Emergency Services purchased the Scott Safety NxG7 SCBA as a replacement to the ISI Viking SCBA. The NxG7 has served the Department well since it was purchased. The industry standard for SCBA replacement is typically slightly less than ten years. There are two factors that drive the ten year replacement cycle. Factor one, the typical manufacturer's SCBA warranty only covers ten years. Hydrostatic testing of the SCBA cylinder is required every five years. The warranty running out and hydrostatic testing on our current SCBAs intersect in early 2020; financially it would benefit the Department to replace the SCBAs prior to this occurrence.

In February 2018, the decision was made to form a committee to begin the evaluation process to determine which SCBAs would be acceptable replacements to the current SCBAs used by the Department. The evaluation process was delayed until May 2018. This delay was due to the postponement of the NFPA 1981/1982 Standard from November 2017, to September 2018.

In May 2018, a committee of twelve members was selected to research, evaluate and test the SCBAs of the six US manufactures of SCBAs. This process included multiple formal presentations, technical review and field testing. These processes coupled with in depth research serves as the strong foundation of this report and the recommendations that are made.

-Section 2- Research & Development Project Outline

The primary goal of this process was to determine the SCBA model(s) and options most suited to our personnel's needs and desires.

Additional goals included reasonably obtaining the most advanced technology available, assuring that the vendor and manufacturer's support would be adequate and confirming a satisfactory equipment performance history. Information from all of these areas was used to build a complete specification package addressing our current and future needs.

The process included the following phases:

- Initial Manufacturer Introductions
- Equipment Presentations
- Technical Evaluations by the SCBA Committee
- Field Test Evaluations – Fire Ground Simulations

Each phase will be addressed in detail throughout the report.

-Section 3-

Initial Manufacturers Introduction and Equipment Presentation

To begin the research process an invitation was extended on May 18, 2018 to all major SCBA manufacturers. Each was offered a presentation time and date to introduce the SCBA Replacement Committee members to their current 2013 NFPA compliant SCBA and accessories. The letter of invitation requested that they be prepared to discuss how their current SCBA would be modified to meet the 2018 Standard. The invitation also requested equipment and documentation for the technical review process.

Initial Manufacturers Invitation Recipients

- Draeger
- Honeywell
- Mine Safety Appliance (MSA)
- Scott Health and Safety
- Interspiro
- Avon Protection

Equipment Requested for Technical Review

- 2 - SCBAs
- 4 – 45 minute cylinders (4500PSI)
- 2 – SCBA Face Pieces (each size available)
- 1 – Rapid Intervention Crew (RIC) Pack, if available
- Any communication equipment that is compatible with the SCBA
- SCBA Integrated Thermal Imaging Camera Technology
- Electronic copy of warranty, service center process description, and demo copies of associated software

Five of the six manufacturers accepted the invitation. Avon Protection declined the invitation without explanation.

Manufacturer's Presentations

The SCBA Replacement Committee was assembled for each presentation to assess the viability of each SCBA for our needs.

Through the vendor presentations, the panel was able to get a good feel for the advances in SCBA design and performance. The panel was introduced to options that can be tied into the SCBA package such as integrated SCBA tracking, voice amplification, radio Bluetooth connectivity, and many other software options.

During the presentation the Honeywell SCBA failed to function properly. The manufacturer representative was present and aware that the failure had occurred. The failure of the SCBA coupled with the lack of concern from the manufacturer representative led the committee to unanimously vote to remove Honeywell from the process. They were notified by e-mail that they were no longer being considered.

-Section 4- Technical Evaluations

The technical review allowed the twelve members of the SCBA replacement committee to examine the SCBAs under consideration. Each vendor provided the required equipment, and literature as requested in the initial invitation to present letter. All equipment evaluated met the 2018 SCBA standard except for the Buddy Breather. Section 7 will explain in detail the concerns with the 2018 Compliant Buddy Breather.

A great deal of hands-on time was spent by the committee members evaluating the SCBA in detail. The technical review was handled as a free forum allowing each committee member to spend as much time as they wished with each model.

Rating sheets (Appendix D) were provided to the committee members for each model. The sheets were quite extensive and led each rater through a complete look at the equipment. A total of 268 points were available.

Three evaluation points were removed after technical review. These categories were removed due to the fact that the equipment was not requested in this configuration. The decision to remove these items was decided prior to final scoring. Final results are in Appendix E.

The top scoring SCBA was MSA G-1, it received 11 of the 12 committee members votes. MSA was selected as number one for comfort, ease of use, seamless Bluetooth radio connectivity, and simplicity. The fact the SCBA automatically pairs with the radio was a big plus since it required no additional steps. Some evaluators found the radio amp to be too loud which caused distortion. This was later identified as a training issue not an SCBA deficiency. The MSA G1 scored 317 points ahead of the second place SCBA. This margin identifies the MSA G1 a clear overall favorite through technical review.

The Scott X3Pro was rated second highest in the technical review process. Scott received 11/12 second place votes. The changes in the X3 Pro and our current SCBA surround a change in the strap design and the waist plate to back frame moves because of the loose strap design. Since design and function of this SCBA is the same as our current model the evaluators felt as if the learning curve would be lower. The Bluetooth radio connection sound quality was good once the steps were taken to get them paired. It was latter determined that the Bluetooth feature was not going to be tested due to a concern for firefighter safety. Evaluator found that the lens distorted and was described as looking through a fishbowl.

Interspro S-8 finished third in overall scoring, and there was a substantial separation between second place and third place. The unit was rated high in the area of harness comfort and visual clarity of the face piece. There were two distinct reasons for low

ranking. First the second stage regulator configuration on the face piece. This configuration allows the user to breathe ambient air with the face piece/regulator donned, causing the user to potentially be exposed to an IDLH atmosphere. Second, the poor design and configuration of the cylinder connection to the back frame made it difficult to perform cylinder changes.

Draeger PSS 7000 finished fourth in the Technical Review process. Most of the comments surrounding the PSS 7000 cited difficulty in operating the SCBA with gloved hands. Reviewers also expressed concern with the mask hood interface due to the bulk of the voice amplifier. The greatest concern was how easily the purge valve operated. If a firefighter were to collapse and the purge valve was against the ground all of their air would quickly escape the cylinder. There was discussion concerning the required ongoing maintenance required on the o-ring of the mask mounted regulator. Several evaluators rated this SCBA high in comfort.

-Section 5- Field Evaluations

The Field Evaluation would occur at CCFES Fire Training Facility. The course consisted of eleven different stations and was set up to simulate fire ground tasks that would allow the user to manipulate the SCBA in a wide array of ergonomic positions. The voice quality and amplification was tested face-to-face and via radio. The course was validated by field personnel prior to the actual evaluation using the current SCBA. A detailed outline of the Field Evaluation Course is outlined in detail in appendix F.

Each manufacture was sent an invitation to provide direct instruction to the committee members in the proper donning and operation of their product. Even though this information was covered in the August presentations the committee felt that recent training was important. A two hour window was provided for this instruction.

The selection of who would participate from the field was done by the Battalion Chiefs. An e-mail was sent to each Battalion Chief soliciting a three-person crew for their designated time slot. The only criteria that was placed on their selection was physically able to complete four rotations, could not be from the same station as a committee member, and have an open mind towards the

process. The Committee Chair's entire battalion was excluded from participating in the field evaluation process.

When a group arrived to their designated evaluation session the participants were provided an introduction and overview of the evaluation, review of the evaluation form, and a walk-thru of the course. The order that they evaluated the SCBA was random based on their arrival order.

Instruction on each SCBA to field personnel was conducted by committee members. Those that were selected to instruct a particular SCBA had recently been trained by a manufacturer representative. The selection of instructors was random based on the order they signed up for each session. The randomness of instructor was an attempt to minimize any bias towards a particular SCBA. The order in which Field Personnel evaluated each SCBA was decided by the order of which they arrived at the Training Center. Each evaluation group was trained on the SCBA, completed the course, and then completed an evaluation form. The process was repeated until each group had evaluated the three different SCBAs.

The top scoring SCBA was the MSA G1. The field evaluation consisted of a 39 evaluation areas which totaled 156 available points. The evaluators were also asked to answer the question of, "Based on the information you have today which SCBA would you purchase?" The MSA G1 scored an average of 132 points 18 points ahead of Scott SCBA and 50 points ahead of Interspiro. The

MSA was picked by 55 of the 59 evaluators as their choice of SCBA.

The common positive comments on for the MSA G1 were: ease of use, radio/face-to-face communication clarity, ergonomics, and facepiece clarity/comfort. Negative comments were minimal but included: difficulty in fully tightening waist strap, voice box sensitivity, and shoulder strap releases were small to some users.

Scott X3 pro was scored the second highest in field testing. Scoring an average of 114. This was 18 points behind MSA and 32 points ahead of Interspiro. Four of the fifty-nine evaluators chose Scott as the SCBA they would choose based on the information they had available.

The common positive comments on the Scott X3Pro were: voice amp worked well without low air alarm sounding, regulator connection was easy with gloved hand, and console buttons were easy to use. Negative comments outweighed the positive comments. Some of the most common negative comments were: facepiece lens distorted view when looking down, Vibralert made communications difficult once it began sounding, straps were difficult to locate or manipulate with a gloved hand, mask moved around and became loose once the evaluator began sweating, and the helmet bottle interface limited the range of motion in the upwards direction. Some personnel even commented that they felt that our current SCBA was better.

Interspiro ranked third after field testing; scoring an average of 82 points. This was 50 points behind MSA and 32 points behind Scott. The positive common positive comments this SCBA received were: ergonomically sound, lightweight, and ambient air feature allowed for easy transition from pressurized air to ambient air. Some of the negative comments were: heaviness of facepiece, air switch was flimsy, high pressure hose crossed body, and the facepiece fogged up easily.

Draeger did not provide the requested SCBA configuration for the first day of testing. On the second day of testing Draeger was placed into the rotation. Once instruction began one of the SCBAs developed an air leak that was at a rate that did not allow for that particular SCBA to be evaluated. The second SCBA developed a significant air leak while the evaluator was walking to the first station of the evaluation course. Draeger was removed from the process.

-Section 6- Conclusion and Recommendation

The goal of the SCBA Replacement Committee was to present to the Fire Chief information to determine the acceptable replacement(s) for the Scott NxG7 SCBA. The overall process consisted of both qualitative and quantitative data development and research. After over a year long process of evaluating SCBAs from the six major manufactures the MSA G1 was determined to be the only acceptable replacement SCBA.

In both the Technical Review and Field Testing process the MSA G1 scored well ahead of all of the competitors. As cited previously, the total points scored and “favorite” vote by field personnel placed the MSA G1 so far ahead of the competitors that it would be difficult, if not impossible to justify allowing another manufactures SCBA to be a candidate to replace the Scott NxG7.

The factors that further solidified MSA’s position in the process were the 15 year warranty that included electronics, and the warranty repair program. A unique feature of the MSA G1 is the SCBA-to-SCBA high pressure transfill capability. This capability allows for a higher level of firefighter safety and survival and is in line with the research based training program “Project Mayday.”

-Section 7-
Bid Specifications

MSA G1 SCBA

Bid Form shall indicate individual pricing for each of the below configurations. It is expected that more than one option will be selected for the final order. Regardless of which option combinations are selected by the County, the overall quantity of total units should remain the same.

Option 1: MSA G1 4500 psig, CGA Quick Connect Remote Connection, Serviceable Tunnel without Chest Strap, all snaps shall be directional pull, Metal Band Cradle, Adjustable Swiveling Lumbar Pad, Solid Cover left shoulder configuration, Continuous Regulator Hose, hose and pouch, left chest speaker module, PASS Telemetry right shoulder, Closed Waist Buckle, and rechargeable battery.

Option 2: MSA G1 4500 psig, CGA Quick Connect Remote Connection, Serviceable Tunnel without Chest Strap, all snaps shall be directional pull, Metal Band Cradle, Adjustable Swiveling Lumbar Pad, Solid Cover with left shoulder configuration, Quick Connect Regulator Hose, hose and pouch, left chest speaker module, PASS Telemetry right shoulder, Closed Waist Buckle, and rechargeable battery.

Option 3: MSA HAZ-MAT G1 4500 psig, CGA Quick Connect Remote Connection, Serviceable Tunnel without Chest Strap, all snaps shall be directional pull, Metal Band Cradle, Adjustable Swiveling Lumbar Pad, Solid Cover with left shoulder configuration, Continuous Regulator Hose, hose and pouch, left chest speaker module, PASS DELETED,

Telemetry right shoulder, Closed Waist Buckle, and rechargeable battery. **NO PASS DEVICE IS DESIRED ON THIS OPTION.**

MSA six (6) bay battery charger for G1 SCBA Part #10158385 – Quantity 38

MSA G1 SCBA Mask

The face piece shall be the MSA G1 four-point adjustable face piece. The only exception will be if, during fit testing, it is determined that the rubber harness allows for a better fit test. Upon delivery, each face piece shall be permanently marked with the employee ID of each user. Each face piece shall have a decal with employee's last name installed upon delivery or during deployment. Requested sizes are listed on the Bid Form. The balance of the ordered masks, not initially issued, will be supplied at the sizing percentage of the initial deployment (i.e. 10% of ordered masks are small then 10% of masks in reserve shall be small).

Small Mask # 10156458

Medium Mask # 10156459

Large Mask # 10156460

Rapid Intervention System for Ladder Truck

MSA G1 RIT System Part # 10169711

Channel lock Cable Cutter 9 ½" Model 911

Two (2) 11mm non-locking aluminum "D" carabiners

True North L-3 Lite Speed RIT Bag

Rapid Intervention System for Engine

Medium G1 Facepiece

Channel lock Cable Cutter 9 ½" Model 911

Two (2) 11mm non-locking aluminum "D" Carabiners

21-pocket Polyester General Purpose Wide-Mouth Tool Bag Westward
Model Number 32PJ37

G1 PremAire Cadet Escape Respirator (A-PCG) and Hoses

Kevlar, Bag Carrier, Standard, 10- minute carbon cylinder with air,
regulator G1 solid w/ CBRN Hansen Brass, without case Part #A-
PCG41DA1E0

Neoprene airline hose with brass connectors (Hansen/Foster). Airline
must be in fifty (50) foot sections.

Two (2) spare 10-minute cylinders Part #10061367

Air Systems International MACK-NFPA 3

Air Systems International MACK-NFPA 3 air distribution system as
configured by the manufacturer. The respirator couplings shall be
Hansen style connections - Quantity 1.

G1 Power Air Purifying Respirator

MSA Power Air Purifying Respirator (PAPR) shall be compatible with the
G1 facepiece. Type of canister to be determined at time of order.

Breathing Air Fill Stations

Bidders shall include costs to supply and install MSA quick connect adapters to three (3) SCOTT Revolve Air fill stations and one (1) MAKO three-bottle fill station. Bidder shall include an additional two (2) spare quick connect adapters and associated parts in their bid.

Certification and Standards

The breathing apparatus shall be NIOSH 42 CFR, Part 84 certified.

The SCBA shall comply with the NFPA Standards 1981, 2013 Edition Open Circuit Self Contained Breathing Apparatus for the Fire Service and NFPA 1982, 2013 Edition Standard on Personal Alert Safety Systems. The bidder shall upgrade SCBAs to the NFPA 1981 and 1982, 2018 Edition at no additional material or labor cost. This upgrade must occur within 90 calendar days of the final approval by NIOSH of the MSA G1 compliance.

All electronic components shall be approved for Intrinsic Safety under UL 913 Class 1, Groups C, and D, Class 2 Groups E, F, and G, Hazardous locations.

US DOT- Title 49 CFR Part 107.801; Title 49 CFR Part 107.805; Title 49 CFR Part 180.205; Title 49 CFR 180.213; and Title 49 CFR Part 180.215.

Compressed Gas Association- Pamphlets CGA C-1, C-6.1, C-2.6 2.6. All material used on the SCBA shall be of fire resistive material.

Warranty

Bidders shall include documentation of the standard warranty included with the purchase. Bidder shall include length of warranty and the warranty limitation for each of the components that are listed below with their bid response. Bid response must also include how freight charges will be handled on parts and returns during the warranty period.

Second Stage Regulator	Harness
Backpack	Face piece Assembly
Hoses and Fittings	Cylinder & Valve
Head Harness or Head Net	Integrated PASS
Gaskets and "O" Rings	Voice Amplification
Pressure Reducer	Radio Interface
Electronic Displays	Pouch and Hose
Audio/Visual Alarms	First Stage Reducer

Labor hours for warranty service performed "in-house" by MSA-certified Cobb County personnel shall result in a credit with MSA.

Successful bidder will provide all upgrades (software/firmware) for the duration of the warranty at no extra cost. Upgrades must be completed within six months of release.

Training

Unit costs shall include cost to conduct a training program for training County trainers in operation and field preventive maintenance procedures. Training shall consist of up to 10 days of training, lasting approximately eight (8) hours each day.

Unit costs shall also include cost to conduct a training program for training County air technicians for certification in the repair, testing and

maintenance of the SBCAs. This level of certification training shall qualify County technicians to perform warranty work with authorized by the Vendor. All support manuals, training aids and parts information shall be included. Training shall be performed at a Cobb County facility.

Vendor shall train a select group of County employees on the use of the MSA A2 and Asset Inventory Management System (AIMS) software. The cost of this training shall also be included in unit costs.

Face Piece Quantitative Fit Testing

Successful Vendor shall conduct a face piece quantitative fit test for approximately 750 Cobb County Fire personnel utilizing their equipment and personnel. This procedure shall be used to determine the appropriate face piece size, type of skirt material, and head harness that is needed to properly fit these individuals with their personal face piece. Vendor shall provide an electronic database to include employee ID number, face piece size, harness type, nose cup size, need for spectacle kit and results of fit testing.

Fit Testing will be done at the Battalion level on all three (3) shifts. This will require the Vendor's personnel and equipment to travel to a minimum of five (5) different locations for multiple days to complete fit-testing for over 700 personnel. Unit costs shall include cost for all fit testing requirements.

Additional Required Equipment

Bid shall include one (1) new, latest model OHD Quantifit Fit Tester with roll-around hard case, software, keyboard and all necessary adapters to fit the SCBA. Bidders shall also include software and hardware for the Department's inventory of two (2) OHD Quantifit Fit Testers to fit the MSA G1 SCBA.

Bid shall include one (1) Posichек3 USB SCBA Test Bench including all parts, adapters, and software required for use with the MSA G1 SCBA. Bid shall also include any required software, adapters, hoses etc. to allow the Department's current Posichек Test Bench to be used with the MSA G1 SCBA.

Bid shall include the cost of delivery, installation and training for the Posichек3 Test Bench at the Cobb County Fire Air Lab Facility.

Bid shall include the cost to provide AWOGS brand cylinder strap labels and shoulder strap SCBA Identifiers for each SCBA. Exact configuration and colors required shall be determined prior to the AWOGS order placement.

Bid shall include the following:

- Quantity 150 Rescue Technology RED SCBA mask bags Part # 8321014
- Quantity 50 MSA Spectacle Kits Part # 10144230
- Quantity 2 MSA G1 Tool Kit Part #10162400
- Quantity 1 MSA G1 Deluxe Tool Kit Part #10164448
- Quantity 6 MSA Accountability Base Station Kit HUB Part # 10072240
- Quantity 2 MSA AIMS Tag Readers Part #10186214

Replacement Parts

Bidders shall include a cache of spare parts, as outlined in the MSA G1 manual as the recommended spare parts list. In addition, the following parts shall be included in the bid:

- Quantity 10 10144194-SP Lens G1 facepiece
- Quantity 20 10149556-SP Pull Strap
- Quantity 10 10164892 Second stage regulator housing

- Quantity 10 10153639 O-Ring
- Quantity 10 10146238 O-Ring

The successful Vendor must be able to provide parts within two (2) business days of request from Cobb County.

Vendor shall include 190 spare rechargeable batteries in cost of bid.

Delivery

Delivery is desired as soon as possible but must be made within 84 calendar days (12 weeks) after receipt of order (ARO).

The successful Vendor shall, at no additional cost to the County, provide a minimum of two (2) personnel to assist County personnel in receiving, unpacking, labeling, and inspecting the entire order. Any shortage, damage or other discrepancy in the order shall be documented at that time. The successful Vendor shall be responsible for the delivery of a complete and correct order.

Delivery of the SCBAs and associated equipment shall be to the Cobb County Fire and Emergency Services Fire Annex located at 3200 Austell Rd SW Suite 130, Marietta, GA 30008.

The bidder shall provide adequate personnel to assist County personnel in the deployment of the SCBAs within the Department. This shall include assembly, programming, and actual delivery to each work location.

An electronic database shall be provided for all SCBAs and accessories. This database shall include serial numbers and assigned work location.

Function and Flow Test

Each SCBA shall be flow tested per NFPA standards prior to delivery to Cobb County. Written test results shall be provided for each SCBA.

Acceptance

The equipment will be considered acceptable for payment and the commencement of warranty when the order has been delivered in compliance with the specifications, tests have been completed to determine proper operation, and the training specified has been completed. Partial invoices are acceptable due to the size of the total order and the scale of the project.

Cylinder Dates and Construction

All cylinders at the time of delivery shall be within one hundred eighty (180) calendar days of their manufactured date as marked on each cylinder. They shall be 4500 psi, quick connect installed, with locking cylinder knob, filled with breathing air prior to or at delivery by the Vendor. A combination of 45 and 60-minute bottles will be ordered.

Each cylinder shall have an RFID device that identifies the cylinder number.

Proper fit and operation of the SCBA in the brackets of the apparatus in the Cobb Fire fleet is of utmost importance. The successful Vendor must ensure proper cylinder retention in all Cobb County Fire and Emergency Services vehicles to meet current NFPA requirements. This shall include, but not be limited to; surveying all apparatus in the Cobb County Fire fleet for proper fit, ease of removal and damage prevention in the SCBA brackets. Modification or adjustment of SCBA brackets shall be the responsibility of the successful Vendor.

-Appendix A-
Invitation to Presentation of Product



Cobb County Fire & Emergency Services

Randy Crider *Fire Chief*

1595 County Services Pkwy.
Marietta, GA 30008-4021
Chief
Phone: (770) 528-8000 fax: (770) 528-8323
www.cobbcounty.org

Bill Johnson *Deputy Fire Chief*
Kevin Gross *Deputy Fire*

May 18, 2018

Mr. _____,

Cobb County Fire and Emergency Services is currently in the process of purchasing new Self Contained Breathing Apparatus. We would like to formally invite _____ to make a presentation of their 2013 NFPA compliant SCBA on August 14, 2018 from 0800-1100.

The presenter would need to be prepared to demonstrate and speak in regards to how their product will meet the proposed NFPA 2018 standard. We would also like to ask that the following equipment be made available to us through October 31, 2018.

- 2 – SCBAs
- 4 – 45 minute cylinders (4500PSI)
- 2 – SCBA Face Pieces (each size available)
- 1 – RIC Pack, if available
- Any communication equipment that is compatible with the SCBA
- SCBA Integrated Thermal Imaging Camera Technology
- Electronic copy of warranty, service center process description, and demo version of associated software

This equipment availability would allow our department to conduct a thorough technical evaluation of the product. In addition, we would like to request equipment be made available at a later date for field testing to be performed.

If you accept our invitation, please let me know by June 8, 2018, at the latest. Thank you in advance for your time; I look forward to meeting with you.

Best Regards,

Josh Taylor, Battalion Chief

JST/kln

-Appendix 2-

Manufactures Letter of Disqualification



Cobb County Fire & Emergency Services

Randy Crider *Fire Chief*

1595 County Services Pkwy
Marietta, GA 30008-4021
Phone: (770) 528-8000 fax: (770) 528-8323
www.cobbcounty.org

Bill Johnson *Deputy Fire Chief*
Kevin Gross *Deputy Fire Chief*

December 3, 2018

Mr. _____,

This letter is to serve as notice that _____ was not selected to continue in the SCBA review process for Cobb County Fire and Emergency Services.

This decision does not serve to reflect the County's judgment of the position of your firm in this industry. This decision reflects a committee decision after evaluating the product that was provided for technical review.

Thank you for the interest and time you and your company devoted to this process. Please feel free to call me at (770) 528-8000 or e-mail me at joshua.taylor@cobbcounty.org should you have any questions.

Best Regards,

Josh Taylor,

Battalion Chief

JST/klh

-Appendix C-
Technical Review Evaluation Sheets
Sample

2018 SCBA Technical Evaluation	
Kronos Number	
Ranks & Name	
Date	
Current Assignment	
Signature	
TECHNICAL EVALUATION INSTRUCTIONS	
Please use the following rating sheet to perform a technical evaluation of the SCBAs being considered for purchase. Each SCBA will be thoroughly evaluated in multiple areas utilizing a rating scale from 0-4. If a specific area is unacceptable and deserving of a zero, provide a summary of your rationale in the comments section on the bottom of the appropriate page. If you feel that your rating constitutes a reason to eliminate the SCBA from further consideration, provide a detailed explanation in the comments section at the end of the rating form.	

RATING SCALE	<i>Unacceptable</i>	<i>Poor</i>	<i>Satisfactory</i>	<i>Good</i>	<i>Excellent</i>
	0	1	2	3	4
SCBA Make & Model _____ (Total weight of SCBA with 45 minute cylinder) _____ SECTION 1: Hardware A) Harness and Backpack Assembly w/ cylinder					
1) Overall Comfort					
2) Weight Distribution & Balance					
3) Shoulder Strap & Padding					
4) Shoulder Strap Fasteners & Adjustments					
5) Waist Belt Width & Padding					
6) Waist Belt & Adjustment					
7) Back Plate Design & Fit To User					
8) Overall SCBA Back Frame Profile					
9) Low Pressure Hose Quick Connect Fitting Operation					
10) Snag Hazard Potential					
TOTAL SCORE for Section A (total max score 40 points)					
COMMENTS					

RATING SCALE	<i>Unacceptable</i>	<i>Poor</i>	<i>Satisfactory</i>	<i>Good</i>	<i>Excellent</i>
	0	1	2	3	4
SCBA Make & Model					
<u>SECTION 1: Hardware</u>					
B) Cylinder & Valve Assembly					
11) Gauge Can Be Read Easily					
12) Valve Operation and Configuration					
13) Connection to SCBA Back Frame					
<u>SECTION 1: Hardware</u>					
C) First Stage Pressure Reducer					
1) Location (protected from damage)					
2) Size					
3) Design Complexity					
4) Hose Connections: Layout, Design & Quality					
TOTAL SCORE (for Section B & C: 28 points)					
COMMENTS					

RATING SCALE	<i>Unacceptable</i>	<i>Poor</i>	<i>Satisfactory</i>	<i>Good</i>	<i>Excellent</i>
	0	1	2	3	4
SCBA Make & Model					
<u>SECTION 1: Hardware</u>					
D) Second Stage Pressure Reducer					
14) Air Flow Shutoff Switch Location					
15) Air Flow Shutoff Switch Operation					
16) Design Complexity					
17) Purge Valve Operation					
18) Attaches/Detaches Easily & Securely to Face Piece					
19) Size					
<u>SECTION 1: Hardware</u>					
E) SCBA Face Piece					
1) Location (protected from damage)					
2) Overall Comfort					
3) Nose Cup Comfort and Position					
4) General Field of Vision					
5) Visual Distortion					
6) HUD Display; Visibility, Brightness, Easily Read					
7) Ability to Attach Alternative Respirators					
8) Helmet Fit with Face Piece					
9) Speaking Diaphragm Clarity					
10) Breathing Resistance "off air"					
11) Breathing Air Path Eliminates User Contamination					
12) Ability to Achieve Proper Flash Hood Seal					
13) Voice Amp Clarity					
TOTAL SCORE (for Section D & E: 76 points)					
COMMENTS					

RATING SCALE	<i>Unacceptable</i>	<i>Poor</i>	<i>Satisfactory</i>	<i>Good</i>	<i>Excellent</i>
	0	1	2	3	4
SCBA Make & Model					
<u>SECTION 1: Hardware</u>					
F) Remote Gauge Assembly & PASS Device					
20) Easy to Access Gauge					
21) Easy to Read Gauge with Face Piece Donned					
22) Manual PASS Activation Button Access					
23) Reset PASS Button Access					
24) PASS Activation Lights					
25) Low Light /No Light Visibility					
<u>SECTION 1: Hardware</u>					
G) Low Pressure Alarm					
14) Location					
15) Audible Volume					
16) Identifiable to User					
<u>SECTION 1: Hardware</u>					
H) Electronics & Communication					
1) Battery Location(s)					
2) Battery Type					
3) Wires & Connections; Layout, Design & Quality					
4) Software or Firmware Upgrades Available					
5) Bluetooth					
6) Firefighter Accountability Tracking System					
7) Integrated Radio Systems					
TOTAL SCORE (for Section F & G: 64 points)					
COMMENTS					

RATING SCALE	<i>Unacceptable</i>	<i>Poor</i>	<i>Satisfactory</i>	<i>Good</i>	<i>Excellent</i>
	0	1	2	3	4
SCBA Make & Model					
SECTION 2: Procedures					
A) Donning and Doffing					
26) Harness Straps Opens Large Enough for Entry					
27) Shoulder Strap Adjustment					
28) Waist Belt Buckles Easily					
29) Waist Strap Adjustment (forward vs. side pull)					
30) Face Piece Head Net Opens Large Enough For Entry					
31) Face Piece Head Net Adjusts Easily					
32) Regulator Attaches Easily					
33) Air flow Initiation (inhalation effort required)					
34) Bypass Valve Operates Easily					
35) Regulator Detaches Easily					
36) Regulator Stow Easily & Out of the Way					
37) Helmet / SCBA Interface					
TOTAL SCORE (for Section 2A: 48 points)					
COMMENTS					

RATING SCALE	<i>Unacceptable</i>	<i>Poor</i>	<i>Satisfactory</i>	<i>Good</i>	<i>Excellent</i>
	0	1	2	3	4
SCBA Make & Model SECTION 2: Procedures B) Cylinder Operation and Change SCBA on user's back					
1) Cylinder Shutoff					
2) SCBA Disconnection from Cylinder Valve					
3) Removal of Cylinder from Harness					
4) Cylinder easily and securely mounts in harness					
5) SCBA Connection to Cylinder					
6) Users Ability to Operate Cylinder Valve Without Help					
TOTAL SCORE (for Section A & B: 24 points)					
COMMENTS					

RATING SCALE	<i>Unacceptable</i>	<i>Poor</i>	<i>Satisfactory</i>	<i>Good</i>	<i>Excellent</i>
	0	1	2	3	4
SCBA Make & Model SECTION 3: Serviceability A) Design and Workmanship					
1) Complexity of Design					
2) Quality of Design					
3) Number of Parts					
4) Organization of Components					
5) Quality of Components					
6) Assembly of Components					
7) Overall Fit and Finish					
SCBA Make & Model SECTION 3: Serviceability B) Repair and Service					
1) Repair Manual Format					
2) Repair Manual Instructions					
TOTAL SCORE (for Section A & B: 36 points)					
COMMENTS					

SCBA Supplemental Questions					
What cylinder Connection do you prefer?			<i>Check one</i>		
Cylinder WITH Quick Change					
Cylinder WITHOUT Quick Change					
Do we continue to evaluate the integrated TIC?			<i>Check one</i>		
Yes					
No					
Which SCBA do you prefer? (place in order of preference)					
1.					
2.					
3.					
4.					
SCBA Make and Model					
Total Score for all Sections: 320 points					
COMMENTS					

-Appendix D-

Technical Review Results

Scott	MSA	Draeger	Interspiro
197	196	137	126
154	196	126	161
228	238	175	223
169	225	142	130
231	264	201	224
228	262	185	172
178	211	136	150
247	267	246	192
178	186	169	141
254	263	128	143
182	238	153	157
221	238	146	154
2467	2784	1944	1973
205.6	232	162	164
77%	87%	60%	61%

268 Points Available

MSA Ahead: Scott 317 Draeger 840 Interspiro 811 (3)

MSA received 11/12 #1 votes

-Appendix E- Field Evaluation Sample



Cobb County Fire & Emergency Services

Randy Crider *Fire Chief*

1595 County Services Pkwy.
Marietta, GA 30008-4021
Phone: (770) 528-8000 fax: (770) 528-8323
www.cobbcounty.org

Bill Johnson *Deputy Fire Chief*
Kevin Gross *Deputy Fire Chief*

December 3, 2018

Mr. _____,

Congratulations, _____, Inc. is moving forward in the Cobb County Fire and Emergency Services SCBA replacement process. The next phase of the process will be the Field Evaluation; in this phase employees assigned to the Response Division will go through a series of physical tasks that will allow the evaluator to score the SCBA's ergonomics and features.

Prior to field personnel evaluating your product, we would like to invite you back to refresh the Committee's memory on the proper fit and use of your particular SCBA; a maximum of two hours will be allowed to accomplish this. Your presentation is scheduled for January 8, at 1230, please arrive early enough to begin your presentation at the scheduled time. Presentations are being conducted at the Cobb County Department of Public Safety Training Center located at 2109 Valor Drive, Marietta GA 30008.

For field testing we would also like to begin writing a more focused request for equipment to test. If you could provide me with an order form or a similar document I will send a detailed request for evaluation equipment; however, I don't anticipate it being much different than what was provided in August.

Please feel free to contact me at (770) 528-8000 or by email at joshua.taylor@cobbcounty.org if you have any questions. I look forward to seeing you in January.

Best Regards,

Josh Taylor,

Battalion Chief

JST/klh

-Appendix F-

Field Evaluation Course Overview

Field Evaluations

Extensive process comprised of firefighters from many different stations with many different body types to obtain the best cross section of testing candidates.

Equipment used will be the air packs from the manufacturers that have made the cut to the field-testing-round. Each vendor supplied a certain number of air packs to be tested. Additional cylinders as well as face pieces were supplied. Each candidate received training on each pack and each mask to better prepare for the physical testing.

Outline for field testing:

Each candidate, supplied with an air pack, air cylinder charged to 2000 psi, and face piece, went through a task-oriented obstacle course with specific instructions at each station. These tasks were designed to test the comfort and workability for each pack, by each candidate. Vision through the face piece was evaluated as they navigated each obstacle and the general comfort and feel of the face piece

Candidates were also given a passage to read while wearing the facepiece.

The series of tasks are covered over the next few pages and describe how the task is to be performed and what is being tested. Air packs, with an air cylinder, are worn for each station. Some stations are completed on ambient air but with a donned face piece.

Task #1-Ladder Raise-Ambient air

The candidate will remove a ground ladder from a specified location, carry it to the tower and raise it a predetermined location, to the proper climbing angle. Go on air. Once ladder is raised climb and enter window in a headfirst manner using pike pole as support.

Task #2-Attic Crawl-Supplied air

The candidate will ascend the interior stairs to the third floor, go on air, crawl the attic to the D side, check air gauge, crawl back to the stairwell. This will be in cold smoke.

Task #3-Prepared Passage Reading #1-Supplied air

The candidate will read a prepared passage face to face with an evaluator. Voice clarity will be assessed.

Task #4-Hose Hoist-Supplied air

Candidate will ascend the interior stairs and find the C side balcony-second floor. The candidate will hoist 1-50-foot section of 3" hose over the railing and let it back down to the ground.

Task #5-Pike Pole Simulator-Supplied air

Candidate will proceed to the ground level C side of the building to the pike pole simulator. Candidate will push up with a pike pole 3 times and pull down 5 times. Communicate with partner how much air you have

Task #6-Prepared Passage Reading #2-Supplied air

Candidate will read a prepared passage over the radio, separated by the building.

Task #7-Bypass/Purge Valve Operation-Supplied air

Candidate will walk the fireground, opening and closing the bypass/purge valve until the low air alarm sounds. Each person should manually activate PASS and turn then turn it off. If the candidate is already in a low air-alarm state, the bypass/purge valve will be activated for functionality.

Task #8-Wall Breach-Supplied air

Candidate will be stationed at the wall-breach prop. The candidate will doff the SCBA and navigate through the prop and re-don the SCBA.

Task #9-While low air alarm is sounding communicate over radio using designated script.

Task #10-Tire Chop-Supplied or ambient air

Candidate will use an 8# sledge hammer to strike a tire horizontally-5x.

Task #11-Swap partners bottle using gloved hand

The candidates were allowed to position the air packs and masks to a level of working comfort. They donned and doffed each pack as many times as they wanted. Air cylinders were changed out often to assess the level of ease per person and per air pack. Every effort was made to keep the playing field level, so to speak.

Rating sheets were developed so the air packs could be compared after the testing was completed. This comprehensive evaluation tool is critical for the final evaluation and selection. Proctors were assigned to each candidate to observe performance and answer any question. No vendors were allowed on the property for testing days.

-Appendix G-
Field Evaluation Rating Sheet

2018 SCBA Field Evaluation					
Kronos Number					
Ranks & Name					
Date					
Current Assignment					
Signature					
FIELD EVALUATION INSTRUCTIONS Please use the following rating sheets to perform a detailed field evaluation of the Scott, MSA, Interspiro, and Draeger SCBA. Each SCBA will be thoroughly evaluated in multiple areas utilizing a rating scale from 0-4. If a specific area is unacceptable and deserving of a 0*, provide a statement of your rationale in the comments section. If you feel that your rating constitutes a reason to eliminate the SCBA from further consideration, provide a detailed explanation in the comments section. All 4 SCBA's must be evaluated.					
RATING SCALE	Unacceptable	Poor	Satisfactory	Good	Excellent
	0	1	2	3	4
COMMENTS					
Complete the Section					
SCBA Make/Model					
Total Score from all Sections (156 points possible)					
Rate your Preference (only check one)					

--	--	--	--	--	--

RATING SCALE						
Unacceptable	Poor	Satisfactory	Good	Excellent		
0	1	2	3	4		
SCBA Make and Model						
SECTION 1		Unacceptable	Poor	Satisfactory	Good	Excellent
A) Hardware		0	1	2	3	4
1. Overall comfort and profile						
2. Weight distribution & balance						
3. Shoulder strap, fasteners, and adjustments						
4. Waist belt buckle and adjustments						
B) Cylinder & Valve Assembly						
1. Gauge can be read easily						
2. Valve operation & configuration						
3. Connection to SCBA back frame						
C) Second Stage Pressure Reducer						
1. Air flow shutoff switch location/operation						
2. Attaches/detaches easily & securely to face piece						
D) SCBA Face piece						
1. Overall comfort and profile						
2. Ability to communicate: Face to Face & HT						
3. General field of vision						
4. Ability to achieve proper flash hood seal.						
5. HUD display: visibility, brightness, easily read						
E) Remote Gauge Assembly & PASS Device						
1. Easy to read gauge with face piece donned						
2. Manual PASS activation button access						
3. Reset PASS button access						
4. PASS activation lights						
F) Low Pressure Alarm						
1. Audible and sensory alerts						
2. Identifiable to the user						

Total Score (for Sections 1 A-F 80 points)						
RATING SCALE	Unacceptable	Poor	Satisfactory	Good	Excellent	
	0	1	2	3	4	
SCBA Make and Model						
SECTION 2		Unacceptable	Poor	Satisfactory	Good	Excellent
A) Operations		0	1	2	3	4
1. Shoulder/Waist Strap Adjustments						
5. Facepiece Headnet Adjustments						
6. Regulator Attaches Easily						
7. Air Flow Initiation (inhalation effort required)						
8. Purge/Bypass Valve Operates Easily						
9. Regulator Detaches Easily						
10. Regulator Stows Easily & Out of the Way						
B) Cylinder Operation and Change on Users Back						
4. Cylinder Shutoff						
5. SCBA Disconnection From Cylinder Valve						
6. Removal of Cylinder From Harness						
7. Cylinder Easily and Securely Mounts in Frame						
8. SCBA Connection to Cylinder						
9. Cylinder Change Single Person						
C) SCBA Performance						
3. Profile Allows Movement in Confined Areas						
4. SCBA Stays Balanced While Crawling						
5. Comfort During Ladder Evolutions						
6. Comfort During Hose Evolutions						
7. Comfort While Performing Work Overhead/Bent Over						
8. Straps Remained Secure throughout						
Total Score (for Sections 1 A-C 76 points)						

-Appendix H-

Field Evaluation Results

Scott	MSA	Interspiro	Overall
137	139	110	MSA
107	109	93	MSA
135	144	127	MSA
114	135	97	MSA
142	151	97	MSA
120	140	104	MSA
100	137	68	MSA
98	131	66	MSA
142	150	108	MSA
94	123	77	MSA
112	156	86	MSA
131	156	78	MSA
121	145	104	MSA
96	154	122	MSA
72	112	78	MSA
136	156	128	MSA
105	141	105	MSA
92	134	107	MSA
84	119	99	MSA
94	120	103	MSA
92	139	90	MSA
124	138	117	MSA
140	106	58	Scott
156	111	67	Scott
115	139	58	MSA
110	147	69	MSA
107	153	58	MSA
115	119	69	MSA
95	109	108	MSA
129	151	61	MSA
153	96	54	Scott
97	127	68	MSA
127	142	91	MSA
131	150	89	MSA
152	156	40	MSA
153	156	99	MSA
138	147	137	MSA
139	136	80	MSA
128	149	89	MSA
119	140	112	MSA
108	126	118	MSA

102	112	105	MSA
123	137	109	MSA
124	148	105	MSA
104	121	118	MSA
83	140	116	MSA
129	134	105	MSA
119	119	87	MSA
136	145	124	MSA
100	141	95	MSA
110	124	108	MSA
124	148	107	MSA
105	134	78	MSA
134	129	90	Scott
98	149	134	MSA
103	135	77	MSA
80	132	90	MSA
109	140	122	MSA
6783 74%	7777 84%	4838 53 %	

59 evals 9,204 points

MSA Average 132 points

Scott Average 114 points

Interspiro Average 82 points

-Appendix I-

**Technical Review Synopsis of
Comments**

MSA G1 Technical Review Comment Synopsis

- Cylinder doesn't line up easy because hose connection rotates
- Console is long enough to be seen in a neutral head position but when down tucks away nicely
- Handle is small for gloved hands but rotates easy
- Love the regulator simplicity and that the air saver switch has to be pushed to remove it
- Voice amp is quiet and speech is clear
- Rigidity of hose a concern. It could be a snag hazard if regulator is attached with a twisted hose.
- Prefer continuous HUD
- Gauge easiest to read in low light/no light situations
- Console buttons easy to find and push
- One battery a plus
- Two handles on side are nice but would like to see a top handle
- Wires are concealed and protected
- Spring band seems a little weak
- Didn't expect to like this pack the best
- Sizing band easy and quick
- A little heavy
- Like the small valve handle
- Regulator difficult to operate with right hand
- Voice amp quality poor
- Prefer a non rechargeable battery, but like having one source
- Like every pack can donate air
- Like comfort of pack and mask
- Voice amp solid and clear

- Easy to use
- Most comfortable by far
- Voice amp picks up exhalation
- Non locking cylinder valve a negative
- Regulator can only connect one way
- Radio Bluetooth interface doesn't require extra steps
- Felt heaviest until donned
- Not clearest of view when looking up
- Clean design
- Guide system a plus when loading cylinder
- Distributes weight well
- Strap padding is nice
- Low snag potential
- Metal buckles are nice and easy to use
- Upgradable with new software
- In helmet interference
- ¼ turn disconnect is easy to remove
- Bluetooth disconnects with regulator
- This is the Cadillac model
- Like that it can be added to in the future
- Transfill hose works well and would allow for quick donation of air
-

Scott Technical Review Comment Synopsis

- Bluetooth radio clarity good
- Regulator allows for cross contamination
- Lacks torso length adjustability
- First stage regulator same bulky regulator from 20 years ago

- Pack frame is designed around protecting first stage regulator increasing bulk
- Familiar with Scott so I think more of it
- I may be biased but I like the way Scott SCBA works
- Regulator hose stiff and is positioned away from body creating a snag hazard
- Heavy on hips
- Excessive shake needed to reset PASS pre-alarm
- Felt detached from body even when tightened down
- Straps stayed snug
- Face piece would not tighten down enough
- Over time waist belt loosens and shifts weight to shoulders
- Helmet hits bottle
- Large gap between pack and gear to find comfortable position with helmet
- Numbers on console small and light is not very bright
- Since console is limited to just air reading you can quickly glance to get reading
- Valve is difficult to rear when pack is donned, but is easy to turn on
- Face piece has small field of view and presents with distortion
- Voice amp sticks out to far creating snag hazard
- Like constant HUD
- Buttons are easily recognizable and get to with gloved hand
- Bluetooth difficult to connect to radio; once paired it worked great
- Like that bypass has notch to identify on and off

- Cylinder strap holder is a pain and difficult to adjust as well as estimate sizes
- Other packs have more advancements for our evolving needs
- Shoulder straps still absorb water and contaminants despite new covers
- Small improvements to streamline square edges
- 2 action valve to turn on a plus
- Does everything well
- Detaching from face piece can leave user prone to free flowing
- Gauge will get grimy and difficult to read
- Solid fit when donning and doffing
- Regulator difficult to doff with gloved hand
- Shoulder strap adjuster is plastic
- Requires multiple batteries
- Strap adjustment cumbersome
- Must lift bottle for quick connect
- Overall comfort is just ok
- Quick connect requires two hands and doesn't operate as smoothly as other manufactures
- If face piece is dislodged from mask you lose communication
- Mask is lightweight even with voice amp.
- Good field of vision
- One central location in pack for batteries
- Regulator stowing causes the hose to twist and get in the way
-

Drager Technical Review Comment Synopsis

- Like that you can connect regulator in any position

- Do not like the push purge
- Do not like that the HUD requires a battery
- Multiple batteries in multiple locations
- Difficult to operate cylinder valve when donned
- Comfortable
- Purge valve easily activates when it dumped or pressed into something
- Nose cup uncomfortable
- 2 button turn off system confusing
- Regulator stow tricky to use
- Cylinder difficult to remove
- Face piece difficult to breathe through when not on air
- The pack feels like it is pulling you backwards
- Waist strap is too long and cannot be fully tightened
- Cylinder valve easily accessible and easy to turn
- Remote gauge too long and easily gets tangled
- Once straps are tightened the excess gets in the way
- Rotating regulator makes learning landmarks difficult
- Rubber covering on straps is comfortable when standing still;
However it causes a bouncy feel when moving
- First stage regulator seems exposed
- Bypass is the best
- Allows for cross contamination through regulator
- No Bluetooth with radio
- Group Talk feature has limited application
- Cylinder connection is easy but disconnection is difficult
- Voice amp makes hood difficult to get into place

- Difficult to operate regulator with gloved hand
- PASS difficult to locate and activate with gloved hand
- To many battery locations
- Regulator must be aligned perfectly to connect
- Straps difficult to adjust with gloved hand
- Cylinder shut off difficult to operate
- Rubber coating keeps straps in place not allowing the them to adjust as shoulders move
- Cylinder retention strap Velcro could wear out early
- Rubber straps increase level of decon
- Cylinder quick connect tucked away and protected
- Clear field of vision and seal feels great
- Cylinder valve small and difficult to manipulate with gloves
- Voice amp does not seem loud

Interspiro Technical Review Synopsis

- Quick connect difficult to operate with gloved hand
- Gauge protrudes out from cylinder
- Air flow switch difficult to operate with gloved hand
- Mask to heavy
- Purge valve operation difficult with glove hand
- Difficult to get proper seal
- Gauge difficult to operate with gloved hand
- To many battery locations
- Harness difficult to operate with gloved hand
- Difficult to breath when not on air

- Difficult to get to hood around face piece seal with voice amp in place
- Visual distortion in face piece
- Cannot be used as a PAPR
- Could not get voice amp to work
- No Bluetooth
- NO tracking
- Air flow difficult to initiate with inhalation
- Regulator not easy to disconnect from face piece
- Difficult to remove cylinder from lower bracket
- Comfortable pack
- Couldn't get it to ride correctly on lower back
- First stage regulator exposed
- Mask slides down when sweaty
- Bulky gauge assembly
- Like whistle alarm and ability to cove it
- Small fittings in gloves
- Difficult to take bottle out
- Cylinder valve out of reach when donned
- All connections tucked away
- Mask material feels sticky
- Ear piece for voice amp gets annoying and is hard to align with ear
- Small regulator hose difficult to find with gloved hand
- Quick connect separates from cylinder when bumped
- To many moving parts
- Straps difficult to adjust

- 1st stage regulator and connections were bulky
- Low /no light unimpressive
- Regulator hard to connect ; cannot be done with one hand
- Easy breathing while off air
- Easy to turn on
- Red bracket will get broke off
- Difficult to disconnect mask from regulator hose while wearing
- Voice amp very loud
- Batteries in too many locations
- Shoulder strap swivel gets stuck on waist strap
- Felt heavier than anticipated
- Nice simplicity in design and strap design
- Never felt confident in hood seal
- Waist strap rotates with body
- Plastic buckles are not good
- Waist strap height adjustment easy
- Heavy when lifting but comfortable once donned
- Retainer strap for cylinder adjust easy
- Switching to ambient air is awkward with gloves
- PASS ok to activate/reset with gloves

-Appendix I-

**Technical Review Synopsis of
Comments**

MSA Field Evaluation Comment Synopsis

- Radio traffic simple and effective
- Extremely comfortable and maneuverable
- Display clarity and audio quality top notch
- Clean air quality
- Versatility of console and ease of use stellar
- Very comfortable bottle
- A little difficulty attaching regulator but will improve with practice
- Great overall pack
- Gauge easy to read
- Audible low air alarm loud making it difficult to communicate
- Great overall movement
- Great head range of motion
- Awesome pack to work in
- Like that the low air alarm does not vibrate the mask
- I like the time until empty and temperature on console
- Unwanted sound from microphone on exhalation but face-to-face communications is great
- Face piece fit best of all 3
- Love the PASS device and quick connect bottle
- Regulator easy to take on and off the mask
- Liked the height adjustment
- Battery charge feature is useful
- Voice amp is in ear do to my height
- All of the console features are not a necessity
- Mask has comfortable fit and greatest amount of visibility
- Clear favorite

- Well made efficient pack
- Enjoyed Bluetooth pairing
- Cylinder difficult to grip during cylinder swap
- Gauge difficult to read LED only in direct sunlight
- Purge valve stiff slightly difficult to turn
- Bottle valve difficult to grip with gloves on
- Stayed in place well and felt like a backpack
- Couldn't get waist strap tight enough
- The best SCBA ever
- Easy to operate
- Helmet and cylinder do not hit when crawling
- Lumbar adjustment is amazing on back
- Air hose rigid
- Mask not big on sides
- No complaints
- Everything was great
- Seems durable
- Like handles on side
- Metal attachments are nice
- Easy access to DRD
- Loved the low profile
- Pressure gauge swung freely
- Did not like press and hold for PASS activation
- Awesome air pack
- Face piece comfortable and snug even with sweat
- Communication was superior
- Shoulder straps twisted when doffing

Scott Field Evaluation Comment Synopsis

- Pack was least comfortable of those tested
- Mask did not fit well; Once user began sweating seal would leak
- Pack profile doesn't allow user to look up ladder
- Heaviest of the three tested
- Waist strap hard to get to
- Vibra-alert stronger-vibrates face
- Straps cumbersome with gloved hands
- Lost hood coverage under chin multiple times
- Straps twisted in buckle after diminished clearance
- Ring on straps difficult to use with gloved hand
- Mask heavy with voice amp
- Voice amp clear easy to hear
- Pack did not stay secured
- Sturdy pack
- Liked quick connect
- Like regulator disconnect
- Nose cup tight on nose
- Communication not clear with radio traffic
- Preferred click of MSA versus twist and turn of Scott
- Radio communication extremely poor would not recommend for field use
- Face piece straps loosened over time
- Lightweight and feels good when working
- Did not exceed expectations
- Overall feels like the same 'ol Scott

- Fit comfortable overall
- Difficult reaching cylinder valve while donned
- Plastic on harness concerning in a flashover
- Gauge assembly could use more hose
- Plastic strap buckles too hard to adjust should be metal
- Decrease in communication compared to current Scott's
- If looking change SCBA's this is not the pack to buy
- This pack is last to me
- Helmet hits pack while crawling
- Twist in regulator hose that I couldn't get out
- Straps loosen as I work
- Face piece felt front heavy and like it was going to fall off
- Regulator vibrated even when not in low air status
- Lacks full lumbar adjustment
- Distorted vision in face piece
- Pack moves around my body instead of with my body
- AMP made sounds even when not speaking
- Drag handle is a nice feature and seems improved
- "Coke" bottle lens
- Air saver switch difficult to press

Drager Technical Review Comment Synopsis

- Like that you can connect regulator in any position
- Do not like the push purge
- Do not like that the HUD requires a battery
- Multiple batteries in multiple locations
- Difficult to operate cylinder valve when donned

- Comfortable
- Purge valve easily activates when it dumped or pressed into something
- Nose cup uncomfortable
- 2 button turn off system confusing
- Regulator stow tricky to use
- Cylinder difficult to remove
- Face piece difficult to breathe through when not on air
- The pack feels like it is pulling you backwards
- Waist strap is too long and cannot be fully tightened
- Cylinder valve easily accessible and easy to turn
- Remote gauge too long and easily gets tangled
- Once straps are tightened the excess gets in the way
- Rotating regulator makes learning landmarks difficult
- Rubber covering on straps is comfortable when standing still; However it causes a bouncy feel when moving
- First stage regulator seems exposed
- Bypass is the best
- Allows for cross contamination through regulator
- No Bluetooth with radio
- Group Talk feature has limited application
- Cylinder connection is easy but disconnection is difficult
- Voice amp makes hood difficult to get into place
- Difficult to operate regulator with gloved hand
- PASS difficult to locate and activate with gloved hand
- Too many battery locations
- Regulator must be aligned perfectly to connect

- Straps difficult to adjust with gloved hand
- Cylinder shut off difficult to operate
- Rubber coating keeps straps in place not allowing the them to adjust as shoulders move
- Cylinder retention strap Velcro could wear out early
- Rubber straps increase level of decon
- Cylinder quick connect tucked away and protected
- Clear field of vision and seal feels great
- Cylinder valve small and difficult to manipulate with gloves
- Voice amp does not seem loud

Interspiro Field Testing Summation of Comments

- Did not like anything other than it is lightweight
- Felt Cheap
- Threaded connections not good
- Comfortable
- Whistle was unbearable
- Face piece fogged quickly
- PASS alarm not as loud as whistle
- Felt loose on shoulders even when tightened on shoulders
- Console light was great
- Bottle height great for mobility
- Console swings while working
- Clear communications
- Mask uncomfortable
- Pack stayed in place while working

- Heavy Mask/Regulator Combo
- Nice Fit/Seal
- Poor disconnect of regulator to face piece
- Difficult to connect via radio
- Air valve activated when bending over
- Cylinder connect bent
- Shoulder straps difficult with gloves
- Love ease of use/ LED read out
- Adjustment of bottle good
- HUD difficult to read
- Did not like regulator hose crossing body
- Regulator hose is opposite of what is common
- Buddy breather hard to find with gloves
- Bottle turns off easy when bumped
- Needs metal hinges versus plastic
- Line to remote gauge to short
- Regulator tab felt cheap
- Comfortable when crawling
- PASS hard to activate
- Liked ambient air option
- Liked hinged waist band

A RESOLUTION TO AUTHORIZE THE PURCHASE OF NEW EQUIPMENT FOR THE CITY OF SANDY SPRINGS FIRE DEPARTMENT AND TO AUTHORIZE CITY MANAGER TO EXECUTE DOCUMENTATION TO EFFECTUATE SAME

WHEREAS, the City of Sandy Springs ("City") is a political subdivision of the State of Georgia ("State") and is duly organized and existing pursuant to the Constitution and laws of the State; and

WHEREAS, the Mayor and City Council of the City of Sandy Springs ("City Council") are charged with the protection of the public health, safety, and welfare of the citizens of the City; and

WHEREAS, Section 1.03(b)(25) of the City Charter grants the City the power to operate a fire-fighting agency; and

WHEREAS, pursuant to applicable law, the City Council is authorized to acquire, dispose of, and encumber real and personal property, including, without limitation, rights and interest in property, leases, and easements necessary to the functions or operations of the City; and

WHEREAS, in order to provide for the highest level of public health, safety, and welfare for the citizens of the City, the Sandy Springs Fire Department ("Department") desires to purchase new equipment from Ten-8 Fire & Safety, LLC ("Ten-8"), including all items described on the Sales Quote dated March 24, 2021 attached hereto as Exhibit "A" and incorporated herein by reference ("SCBA Equipment"), in an amount not to exceed \$733,663.10; and

WHEREAS, the City Council hereby finds and determines that the acquisition of the SCBA Equipment was previously considered during the January 26, 2021 City Council Retreat and the principal amount not exceeding \$733,663.10 is appropriate and necessary to the functions and operations of the Department and the City.

WHEREAS, the City and the Department have sufficient appropriations in the FY21 general fund for the purchase of the SCBA Equipment.

NOW THEREFORE, BE IT RESOLVED by the City Council of the City of Sandy Springs, Georgia while in regular session on April 6, 2021, at 6:00 p.m. as follows:

1. The City Manager is hereby authorized to execute the documents with Ten-8 for the purchase of the SCBA Equipment for the Department; and
2. The City Manager and the City Attorney are hereby authorized to take such further action as may be deemed necessary to effectuate the intent of this resolution; and
3. The City and the Department shall utilize the appropriations from the FY21 general fund for the purchase of the SCBA Equipment.

RESOLVED, this 6th day of April, 2021.

Approved:

RUSSELL K. PAUL, Mayor

Attest:

RAQUEL GONZALEZ, City Clerk
(SEAL)

EXHIBIT "A"

Sales Quote

Page: 1



IN SERVICE TO SERVE YOU

TEN-8 FIRE & SAFETY, LLC
 2904 59TH AVENUE DRIVE EAST
 BRADENTON, FL 34203
 Phone : 800-228-8368
 Fax : 941-756-2598

Sales Quote Number: Q216996
 Sales Quote Date: 3/24/2021
 Customer ID: SANDY SPRINGS
 SalesPerson: Van Roberts
 Email : vroberts@ten8fire.com
 Ten-8 Contact: KHANH HUYNH
 Email : khuyh@ten8fire.com

Sell To :

CITY OF SANDY SPRINGS
 ATTN: ACCOUNTS PAYABLE
 7840 ROSWELL ROAD, BLDG 500
 SANDY SPRINGS, GA 30350

Ship To :

CITY OF SANDY SPRINGS
 7840 ROSWELL ROAD, BLDG 500
 SANDY SPRINGS, GA 30350

Payment Terms : Due Upon Receipt of
 Product Or Service

Ship Via : STANDARD DELIVERY

Item No.	Description	Unit	Quantity	Selling Pric	Total Price
	MSA-G1FS442MD2C0LCR G1 SCBA 4500 PSI SYSTEM CGA QUICK CONNECTION Harness Standard with Chest Strap METAL CYLINDER BAND ADJUSTABLE LUNBAR PAD, SOLID BUCKLE REGULATOR TYPE SOLID COVER REGULATOR HOSE CONTINUOUS UNIVERSAL EBS NONE Speaker Module, Bluetooth PASS WITH TELEMETRY RT SHOULDER RECHARGEABLE BATTERY (N/C) DOES NOT INCLUDE: MASK & CYLINDER LIST PRICE \$8,425.00 Ea. *****	EACH	97	5,480.54	531,612.38
	ADD 3' TRANSFILL HOSE AND POUCH LIST PRICE \$1,023.00 PRICE INCLUDED *****	EACH	97		
MSA-10156459	FACEPIECE,G1,FS,MD MDNC,4PT C-HARNESS LIST PRICE \$456.20	EACH	140	278.17	38,943.80
MSA-10175708-USED	USED CYL,G1 LP RC,4500 PSIG, 45MINS L/QC, (HILLSBOROUGH MFG DATE 03/20 LIST PRICE \$1,703.78	EACH	171	700.00	119,700.00
MSA-10197700	MSA HUB Fireservice - US LIST PRICE \$4,695.30	EACH	1	3,435.59	3,435.59
MSA-10083875	TAG ASSY, ELECTRONIC ID, M7 LIST PRICE \$49.17	EACH	70	35.98	2,518.60
MSA-10158407	G1 RFID READER/WRITER LIST PRICE \$791.37	EACH	2	579.05	1,158.10



IN SERVICE TO SERVE YOU

TEN-8 FIRE & SAFETY, LLC
2904 59TH AVENUE DRIVE EAST
BRADENTON, FL 34203
Phone : 800-228-8368
Fax : 941-756-2598

Sales Quote

Page: 2

Sales Quote Number: Q216996

Sales Quote Date: 3/24/2021

Customer ID SANDY SPRINGS

SalesPerson Van Roberts

Email : vroberts@ten8fire.com

Ten-8 Contact KHANH HUYNH

Email : khuynh@ten8fire.com

Sell To :

CITY OF SANDY SPRINGS
ATTN: ACCOUNTS PAYABLE
7840 ROSWELL ROAD, BLDG 500
SANDY SPRINGS, GA 30350

Ship To :

CITY OF SANDY SPRINGS
7840 ROSWELL ROAD, BLDG 500
SANDY SPRINGS, GA 30350

Payment Terms : Due Upon Receipt of
Product Or Service

Ship Via : STANDARD DELIVERY

Item No.	Description	Unit	Quantity	Selling Pric	Total Price
MSA-10162403	Adapter Assy, QC to 1/4 NPT F, 5000 psig LIST PRICE \$552.51	EACH	6	404.28	2,425.68
SCB-SCV-10457	1/4" MNPT X CGA347, BR FOR ABOVE Adapter	EACH	6	19.50	117.00
MSA-10158385	G1 Lithium Ion Battery charger station LIST PRICE \$843.26	EACH	10	617.02	6,170.20
MSA-10148741-SP	Battery Pack, G1, Rechargeable LIST PRICE \$435.37	EACH	32	318.56	10,193.92
MSA-10144231-SP	KIT, FILTER ADAPTER ASSY, G1 FACEPIECE LIST PRICE \$131.58	EACH	10	96.28	962.80
MSA-10042346	CARTRIDGES, OPTIFILTER XL, TYPE HE, 20/PKG LIST PRICE \$527.78	EACH	1	354.00	354.00

MASKS FITTEST FOR 3 SHIFTS (NO CHARGE)					
IN SERVICE TRAINING 6 DAYS (NO CHARGE)					
WE HAVE SOME CYLINDERS BARELY USED					
RETURNED FROM					
HILLSBOROUGH COUNTY FL, THE CYLINDERS HAS					
MFG DATE					
OF 03/2020, PRICE \$700.00 EA.					
UNTIL WE RUN OUT.					

MSA-10175707	CYL, G1 RC, 4500 PSIG, 30MINS W/QC LIST PRICE \$1,411.84	EACH	11	774.79	8,522.69
MSA-10175710-USED	USED CYL, G1 RC, 4500 PSIG, 60 MINS W/QC LIST PRICE \$2,094.66	EACH	8	850.00	6,800.00
	(HILLSBOROUGH MFG DATE: 01/20				
	MSA-800391 ADAPTER CGA347 X UAC MALE LIST PRICE \$518.08	EACH	2	374.17	748.34

This Quote is valid until 04/23/21

All returns must be initiated within 30 days of receipt of product and will be charged a restocking fee. Contact your sales representative to receive a Return Materials Authorization (RMA). Special order parts are not returnable. Full terms and conditions for returns can be found on our website at www.ten8fire.com/returns.



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Ship Via : STANDARD DELIVERY

Item No.	Description	Unit	Quantity	Selling Pric	Total Price
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PLEASE NOTE:

THIS PRICE DID NOT INCLUDES ALL TRADE-IN SCOTT
PACKS, MASKS AND BOTTLES.

DOES INCLUDED FIRST YEAR FLOW TEST & MASK FIT
TEST

Amount Subject to Sales Tax 0
Amount Exempt from Sales Tax 733,663.10

Subtotal:	733663.10
Invoice Discount:	0.00
Total Sales Tax:	0.00
Total:	733,663.10

This Quote is valid until 04/23/21

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**EVALUATION MEMORANDUM
Request for Proposals #21-043
Financial Audit Services**

General

The City of Sandy Springs (“City”) conducted a qualifications based solicitation (“Solicitation”) to select a financial audit firm with the capacity and demonstrated experience to provide financial audit services for the City. On February 2, 2021, the City issued its Request for Proposals #21-043 (“RFP”) seeking proposals (“Proposals”) from highly qualified and experienced firms to perform financial and compliance auditing services in accordance with generally accepted auditing standards (GAAS), as set forth by the American Institute of Certified Public Accountants (AICPA) and as more fully described in the RFP (“Services”). Proposals were due on February 23, 2021, no later than 2:00 PM E.S.T.

Proposals Received

The City received Proposals from the following seven (7) firms (“Offerors”):

1. Bates, Carter & Co, LLP
2. Jaramillo Accounting Group LLC
3. Mauldin & Jenkins
4. Nichols Cauley & Associates
5. PJC Group LLC
6. Rushton & Company LLC
7. Thompson, Price, Scott, Adams & Co., PA

Proposals were initially examined for administrative compliance with Solicitation submittal instructions. No administrative compliance issues were noted. The Proposals consisted of two (2) components: a Technical Proposal and a Cost Proposal.

Evaluation

The City formed an evaluation committee consisting of the following City personnel (“Evaluation Committee”) to evaluate Proposals using the criteria set forth in the RFP and to recommend a qualified firm to perform the Services:

1. Toni Jo Howard, Finance Director, City of Sandy Springs
2. Toni Carlisle, Deputy Finance Director, City of Sandy Springs
3. Kristin Byars Smith ,Assistant City Manager , City of Sandy Springs

Technical Evaluation Criteria

Section 4 of the RFP identified the criteria on which the City would base the evaluation of Proposals. The Evaluation Committee used the following criteria to review and score Proposals:

CRITERIA	SUMMARY DESCRIPTION	POINTS
Firm Strength, Audit Manager and Audit Team	• Organization strength and stability • Experience and competence of the Audit Manager • Qualifications and Experience of Local Office Staff	30% 30 points possible
Quality Control and Peer Review Process	• Participation in AICPA sponsored or comparable quality control and peer review programs • Firm meets the independence requirements of the GAO Auditing Standards	20% 20 points possible
Relevant Experience and Client References	• Experience with governmental clients similar in size and scope to the City of Sandy Springs • References where the CAFRs have been awarded the GFOA Certificate of Achievement	25 % 25 points possible
Understanding of Scope of Services / Approach	• Ability to instill Committee confidence in the firm's understanding of the Project requirements • Audit program, statistical sampling techniques and analytical procedures in line with the needs of the City's Audit • Timeline and Work Plan that will meet the needs of the City	25% 25 points possible
TOTAL POINTS POSSIBLE		100%

Evaluation

Following individual review and scoring, Evaluation Committee members met to discuss the Proposals, to determine if additional information was required for the evaluation and to determine a ranking. The Evaluation Committee determined that three (3) Offerors clearly demonstrated a superior understanding of the Services required and had past experience very relevant to the needs of the City. The names and consensus scoring for the three (3) Offerors receiving the highest scores in the evaluation are as follows:

COMPANY	CONSENSUS SCORE
Mauldin & Jenkins	96.66
Rushton & Company LLC	84.33
Nichols Cauley & Associates	82.66

Cost Proposals

The Cost Proposals submitted for the top ranked firms were as follows:

COMPANY	ANNUAL AUDIT FEE
Mauldin & Jenkins	\$47,000.00
Rushton & Company LLC	\$79,960.00
Nichols Cauley & Associates	\$62,000.00

Following a review of the Technical Proposals and the Cost Proposals for the above-listed Offerors, the Evaluation Committee deemed Mauldin & Jenkins as the most responsive to the Services requirements and needs, noting the following considerations and factors:

- Mauldin & Jenkins was formed in 1918 and has been actively engaged in governmental auditing since its inception.
- Mauldin & Jenkins serves as the auditor for more governments in Georgia than any other firm. This level of engagement makes them an expert in governmental audits.
- Mauldin & Jenkins is a nationwide award winning professional audit and accounting services firm with over 350 employees
- The proposed team of Mauldin & Jenkins is the most qualified of the submittals received
- A senior member of the firm with over twenty (20) years of governmental auditing experience will be on the City audit team
- The firm provided many references for audits of similar size and scope to that of Sandy Springs
- Mauldin & Jenkins was the highest ranked firm with the lowest price.

Recommendation

Based upon evaluation of Proposals in accordance with the criteria and process described herein and in the RFP, the Evaluation Committee determines that Mauldin & Jenkins represents the best value for financial audit services for the City and therefore recommends that firm for contract award.



Evaluation Committee Chair
Toni Jo Howard, Finance director