

TRAFFIC IMPACT STUDY

Prepared For

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BLACKHALL PHASE 2

DRI# 3214

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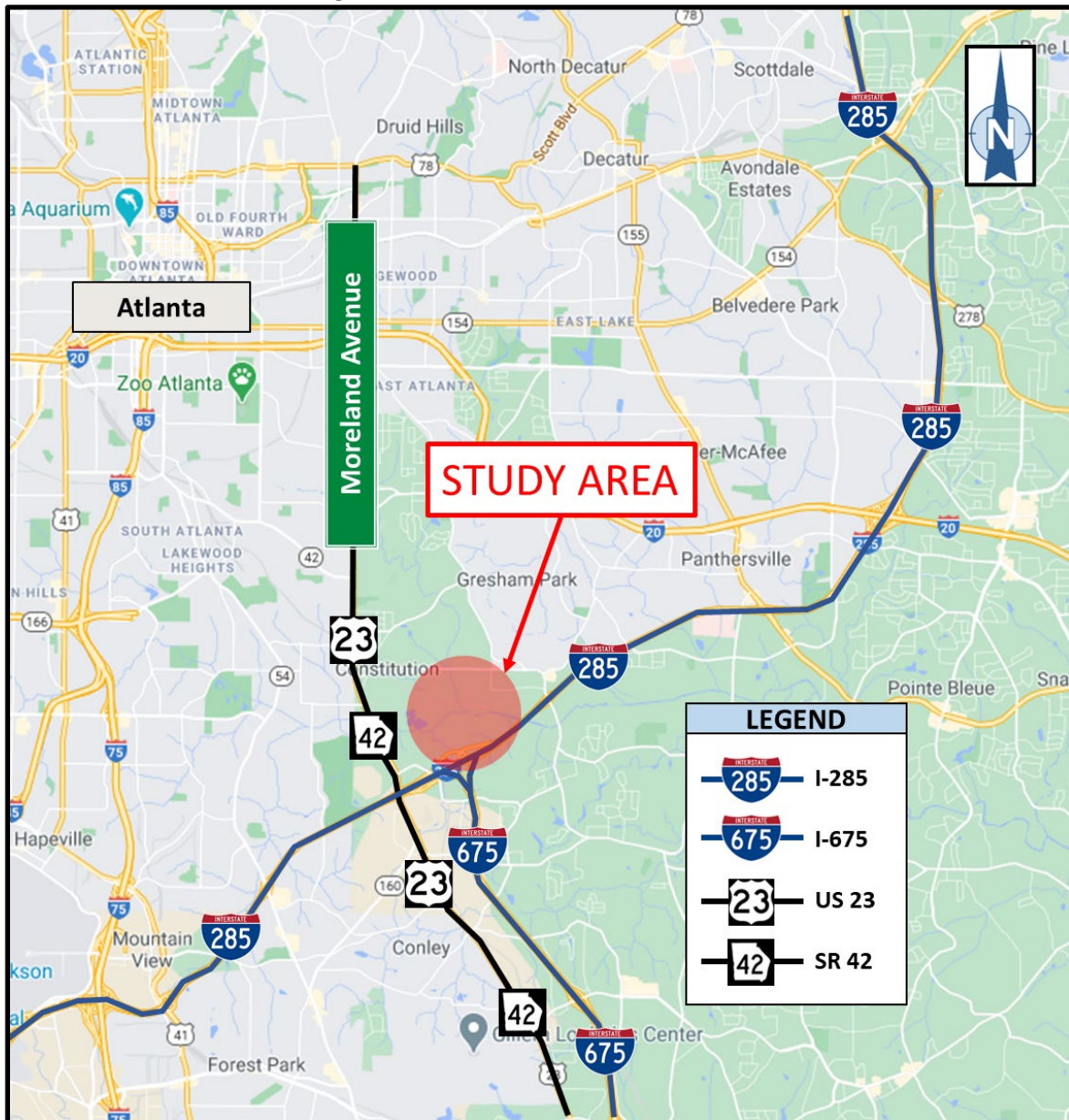
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INTRODUCTION

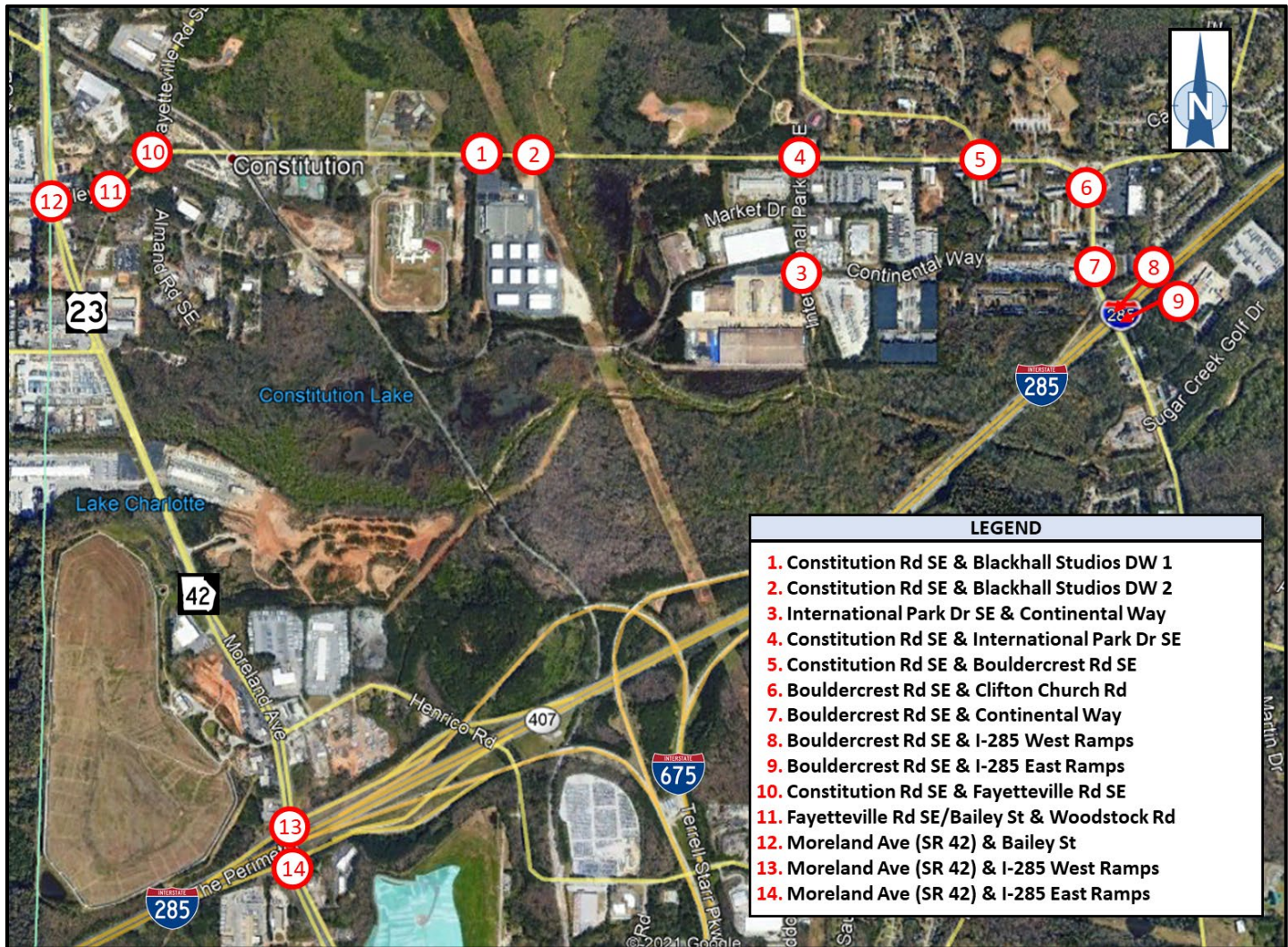
The site is located off Constitution Road SE between Moreland Avenue (SR 42) and Bouldercrest Road SE in Dekalb County, Georgia. The project location is shown in Figure 1. This project serves as an expansion (Phase 2) to the existing Blackhall Studios off Constitution Road SE.

Figure 1: DEVELOPMENT LOCATION MAP



The intersections included in the study are shown in Figure 2.

Figure 2: STUDY INTERSECTIONS MAP



OTHER PLANNED PROJECTS

Information regarding other relevant projects, planned for the near future in the proposed study area, is shown below in Table 1.

A total of two projects were identified. These planned projects were obtained from the following public entities:

- The Statewide Transportation Improvement Program (STIP) located outside Metropolitan Planning Organization (MPO) boundaries showed no projects that would affect the development.
- MPO funded transportation projects in the Transportation Improvement Program (TIP). Transportation projects in the Regional Transportation Program (RTP), funded from local, state, and federal planning partners. The project lists for both were found through the Atlanta Regional Commission (ARC). The two projects identified were both found in the TIP/RTP.
- Transportation projects outlined in Dekalb County's Transportation Plan (DCTP). One of the projects already identified in the TIP/RTP was also found in the DCTP.
- Georgia Department of Transportation's GeoPI website showed the same project identified in the TIP/RTP as well as Dekalb County's Transportation Plan.

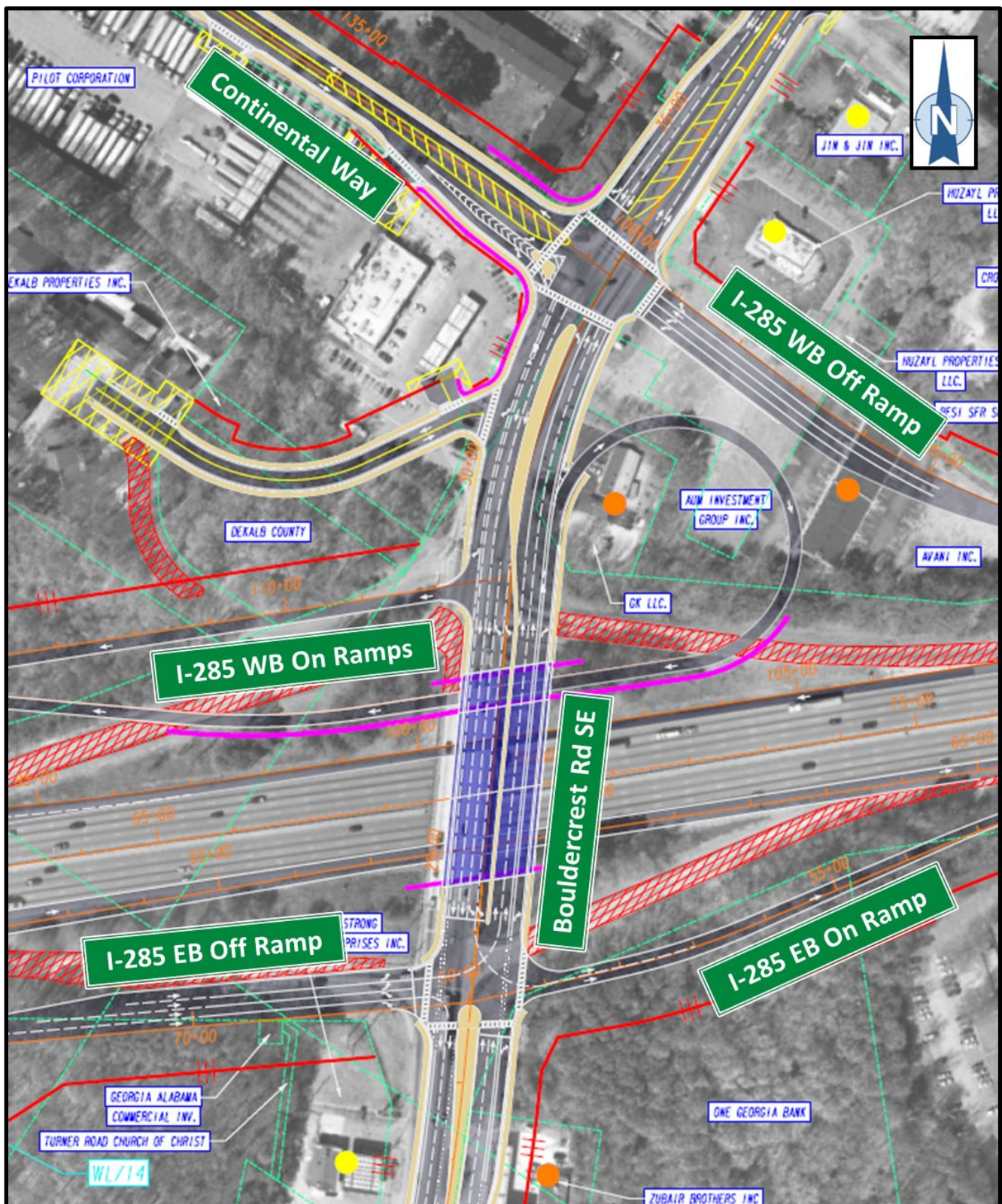
Table 1: OTHER PLANNED PROJECTS

PUBLIC DOMAIN	PROJECT NUMBER	PROJECT TITLE	PROJECT BOUNDARY/INTERSECTION	PRELIMINARY (PE) YEAR	CONSTRUCTION (CST) YEAR
GeoPI, TIP/RTP, & DCTP	PI #713300-(DK-AR-207)	I-285 @ Bouldercrest Road Interchange Modification	Bouldercrest Road Bridge over I-285	2019	2023
TIP/RTP	DK-162	Bouldercrest Road Widening	I-285 to Linecrest Road (2-In to 4-In)	Long Range 2026-2030	

Based on the Letter of Understanding (LOU) issued by GRTA, the Bouldercrest Road Interchange modification project (PI #713300/DK-AR-207) shall be modeled as complete for both no-build and build conditions. This project affects Bouldercrest Road SE's intersections with Continental Way, I-285 WB Ramps, and I-285 EB Ramps. The I-285 WB Off Ramp will be reconstructed to intersect Bouldercrest Road SE opposite of Continental Way, creating a 4-leg signalized intersection. The off ramp will include dual left turn lanes, a through lane, and a right turn lane. The existing intersection of Bouldercrest Road SE and I-285 WB Ramps will be reconstructed as a divided roadway with on ramps on both sides of the road (normal on ramp and a loop on ramp for northbound traffic). The bridge will be upgraded to include two southbound through lanes, dual southbound left turn lanes, two northbound through lanes, and a northbound right turn lane.

The concept layout for the Bouldercrest Interchange modification project is shown below in Figure 3.

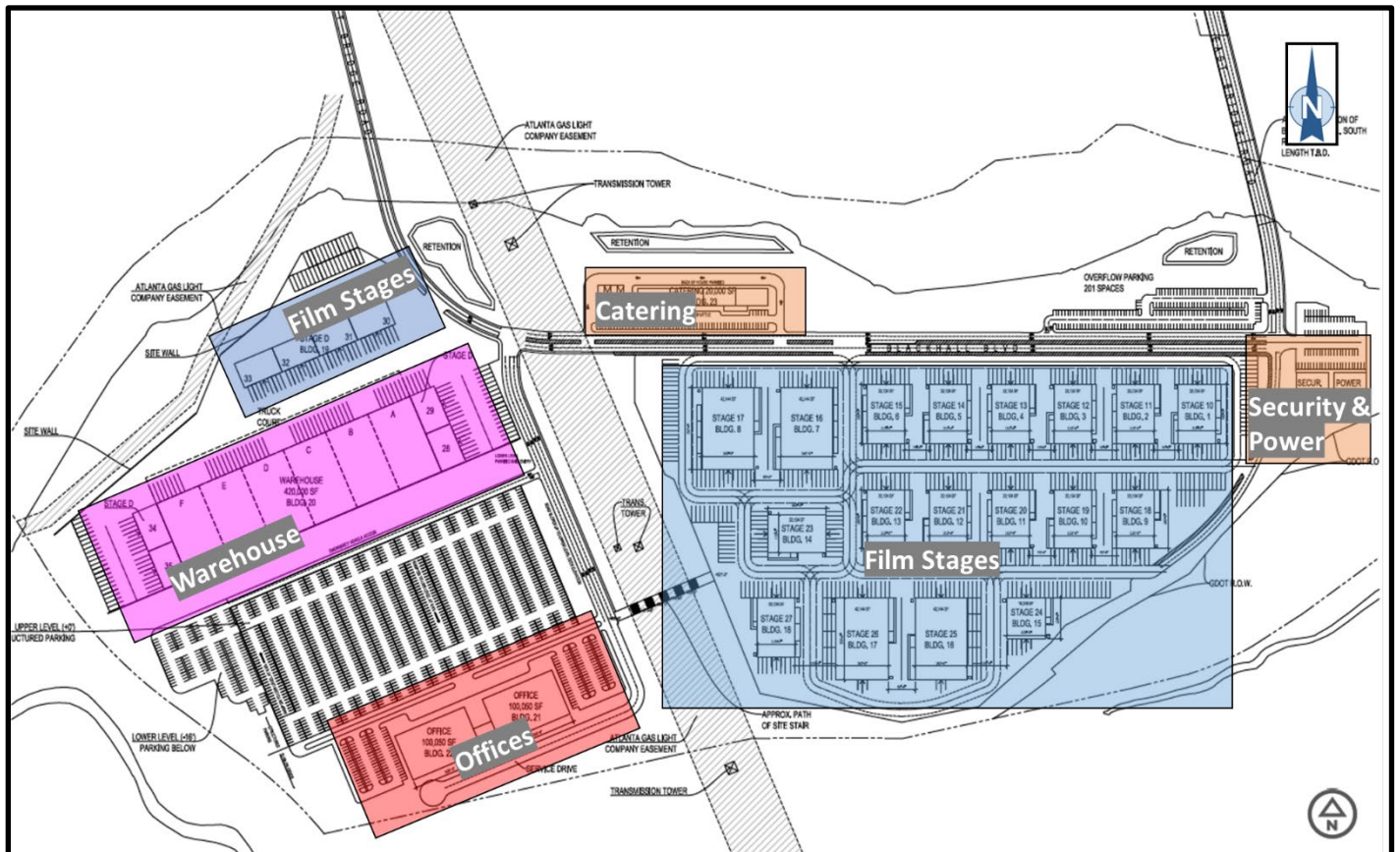
Figure 3: BOULDERCREST ROAD INTERCHANGE MODIFICATION



PROPOSED DEVELOPMENT

The site plan for the proposed Blackhall Phase 2 production studios development has been updated with an increase of 13,936 SF in film stage area and is shown below in Figure 4. The development will consist of film stage, office, and warehouse land uses. The catering along with the security and power are both anticipated to not generate any trips. A large scale site plan can be found in Appendix A.

Figure 4: SITE PLAN



A summary of the proposed land uses, and total square footages associated with the proposed development are:

- **Warehouse** – approximately 420,000 total square feet
- **Office** – approximately 200,100 total square feet
- **Film Stage** – approximately 552,436 total square feet

Figure 5 illustrates the ingress/egress points where the site can be entered/exited from.

Figure 5: INGRESS/EGRESS LOCATIONS



In total, there are four (4) potential points of ingress/egress for the site:

1. Blackhall Studios Driveway 1 on Constitution Road SE
2. Blackhall Studios Driveway 2 on Constitution Road SE
3. From International Park Drive SE to Constitution Road SE
4. From Continental Way to Bouldercrest Road SE

ZONING/FUTURE LAND USE MAP

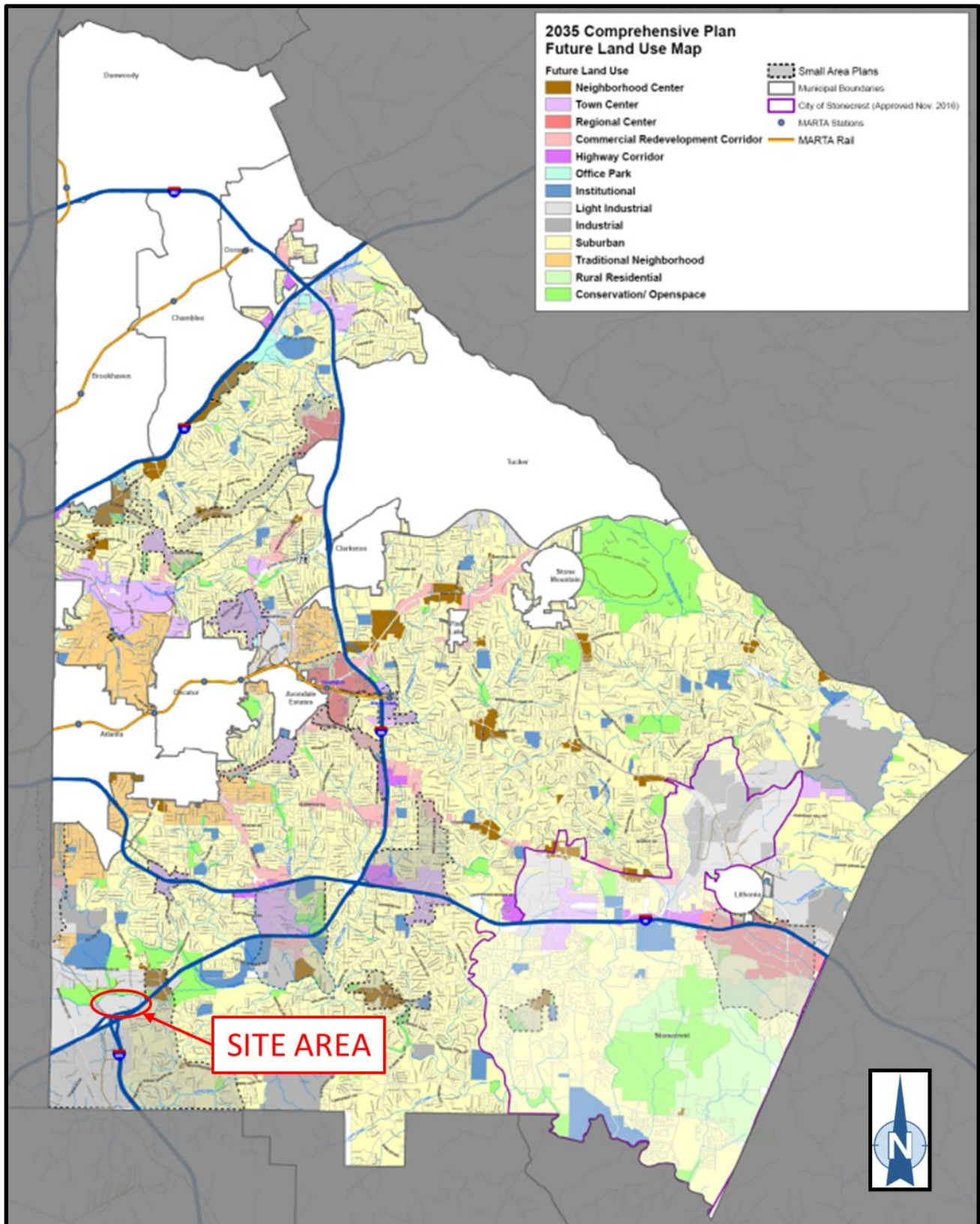
The development area currently has a zoning designation “M” as it is a light industrial district. The outlined land with this zoning is shown below in Figure 6.

Figure 6: ZONING FOR SITE AREA



The future land use map from Dekalb County’s 2035 Comprehensive Plan also shows the development land as being light industrial. The future land use map is shown on the following page in Figure 7.

Figure 7: DEKALB COUNTY 2035 FUTURE LAND USE MAP



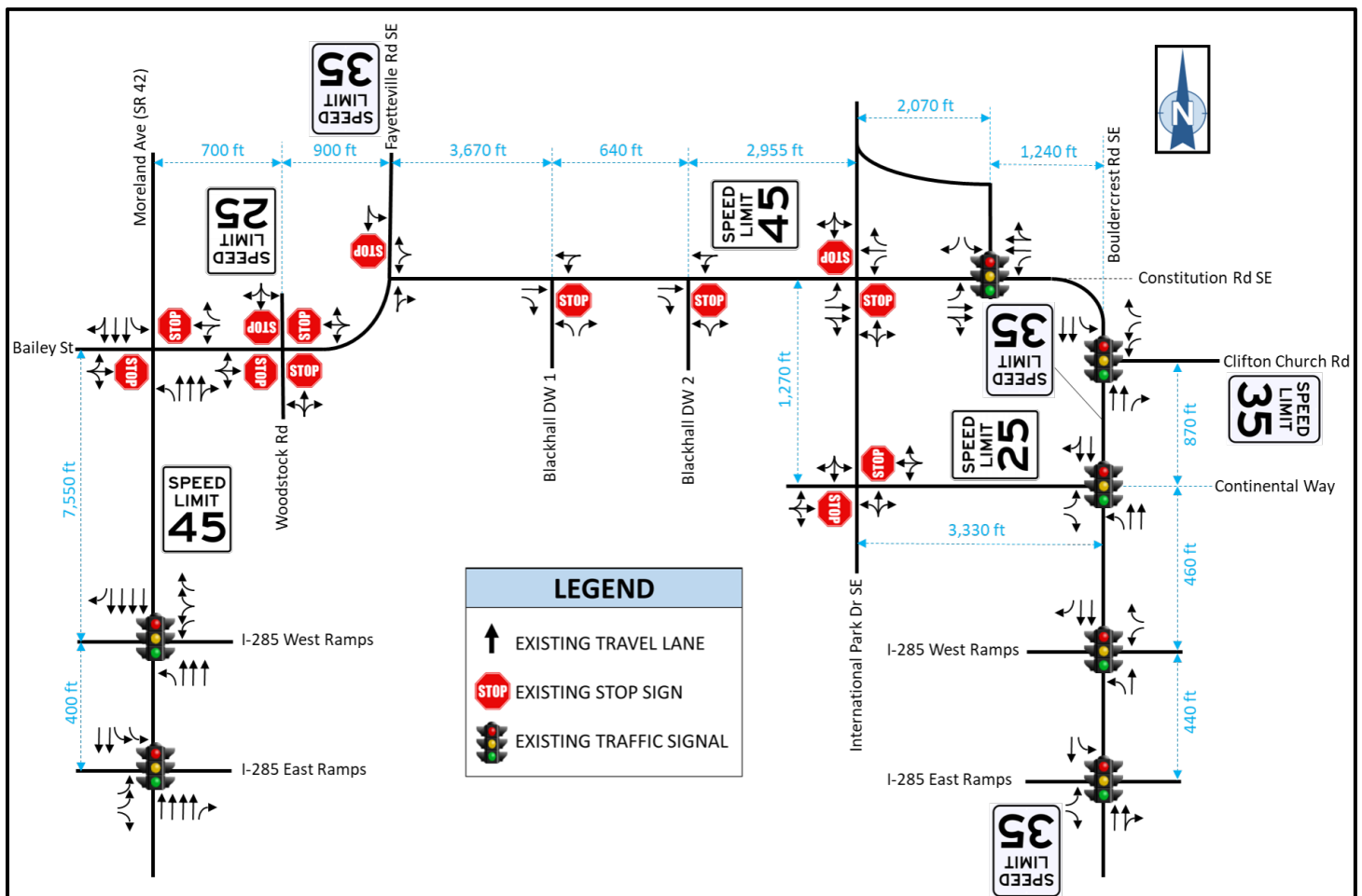
EXISTING CONDITIONS

An existing conditions inventory was conducted of the current conditions at the study intersections, including roadway geometry, traffic control, and traffic volumes. There is a railroad crossing on the west end of Constitution Road SE. The railroad crossing inventory form can be found in Appendix B.

INVENTORY OF EXISTING GEOMETRY AND TRAFFIC CONTROL

The existing roadway geometry and traffic control in the study area are shown in Figure 8 below.

Figure 8: EXISTING CONDITIONS



EXISTING ALTERNATIVE TRANSPORTATION

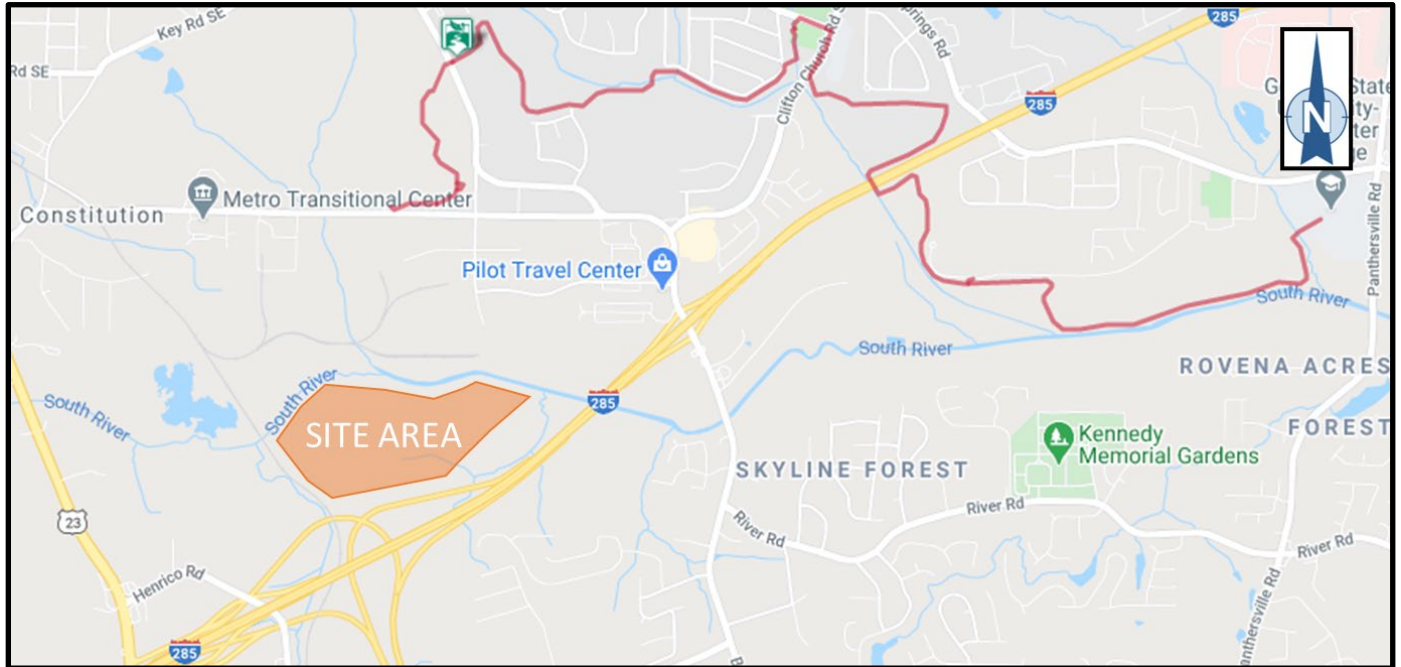
Alternate methods of transportation near the proposed development were identified: MARTA bus routes and a bike route. Two MARTA bus routes come near the site, with Route 49 (Moreland Avenue) having a bus stop on Constitution Road SE approximately 1,120 feet to the west of the existing Blackhall Studios Driveway 1. Route 32 (Bouldercrest Road SE) has a bus stop past the I-285 Interchange. The MARTA bus routes are shown below in Figure 9.

Figure 9: MARTA BUS ROUTES



The bike route identified is the South River Trail. It spans from the Atlanta Radio Control Club on Constitution Road SE to Georgia State University – Perimeter College off Clifton Springs Road. The Atlanta Radio Control Club is located in between the existing Blackhall Studios driveways and International Park Drive SE. The bike route is shown below in Figure 10.

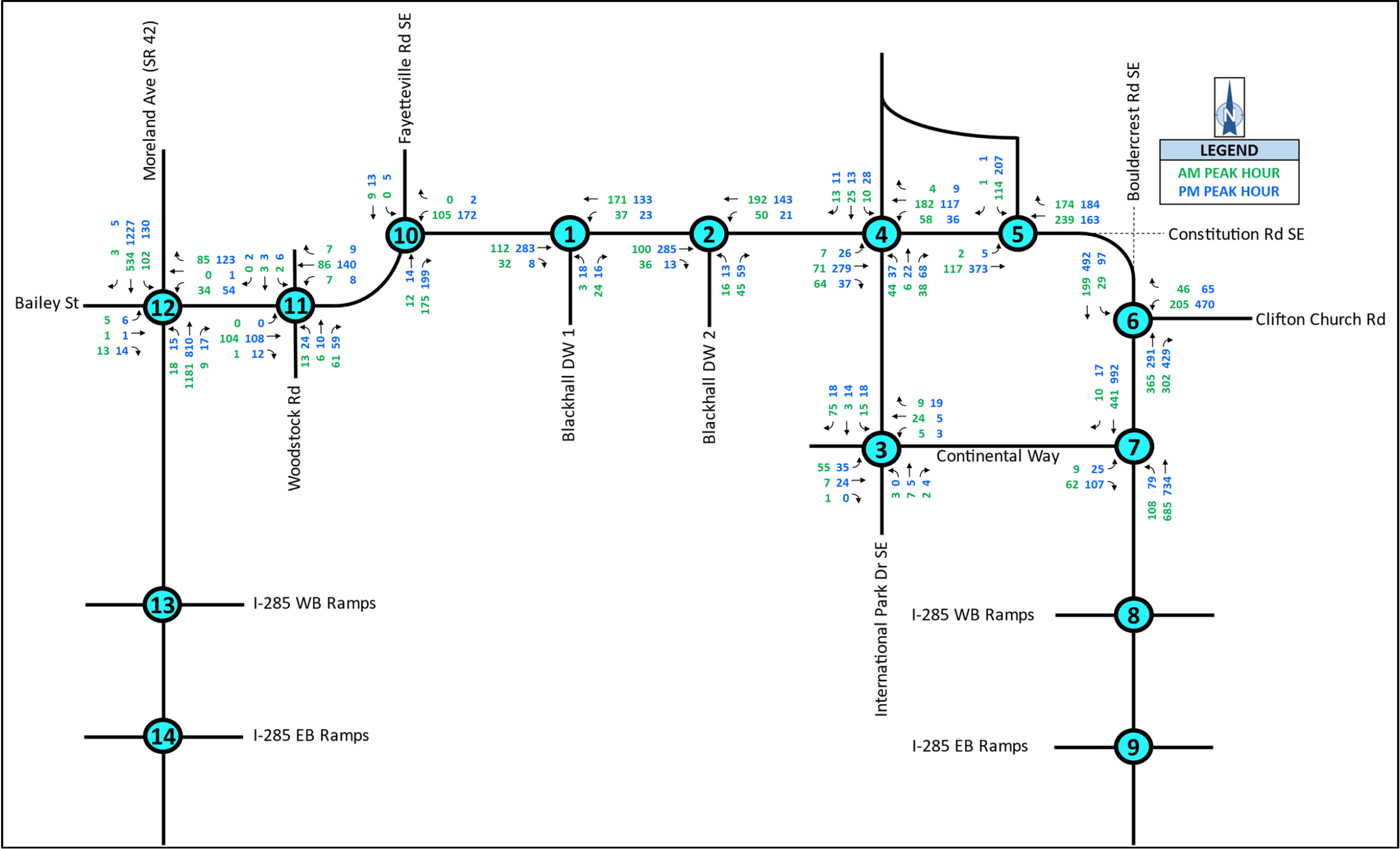
Figure 10: SOUTH RIVER BIKE TRAIL



EXISTING TRAFFIC VOLUMES

Turning Movement Counts (TMCs) were conducted at the study intersections on Wednesday, February 10, 2021 from 6:00 AM to 9:00 AM and 4:00 PM to 7:00 PM. The peak hours were established to be 7:15 to 8:15 AM and 4:00 to 5:00 PM. Existing peak hour turning movement volumes are shown in Figure 11 below. The turning movement data is provided in Appendix C.

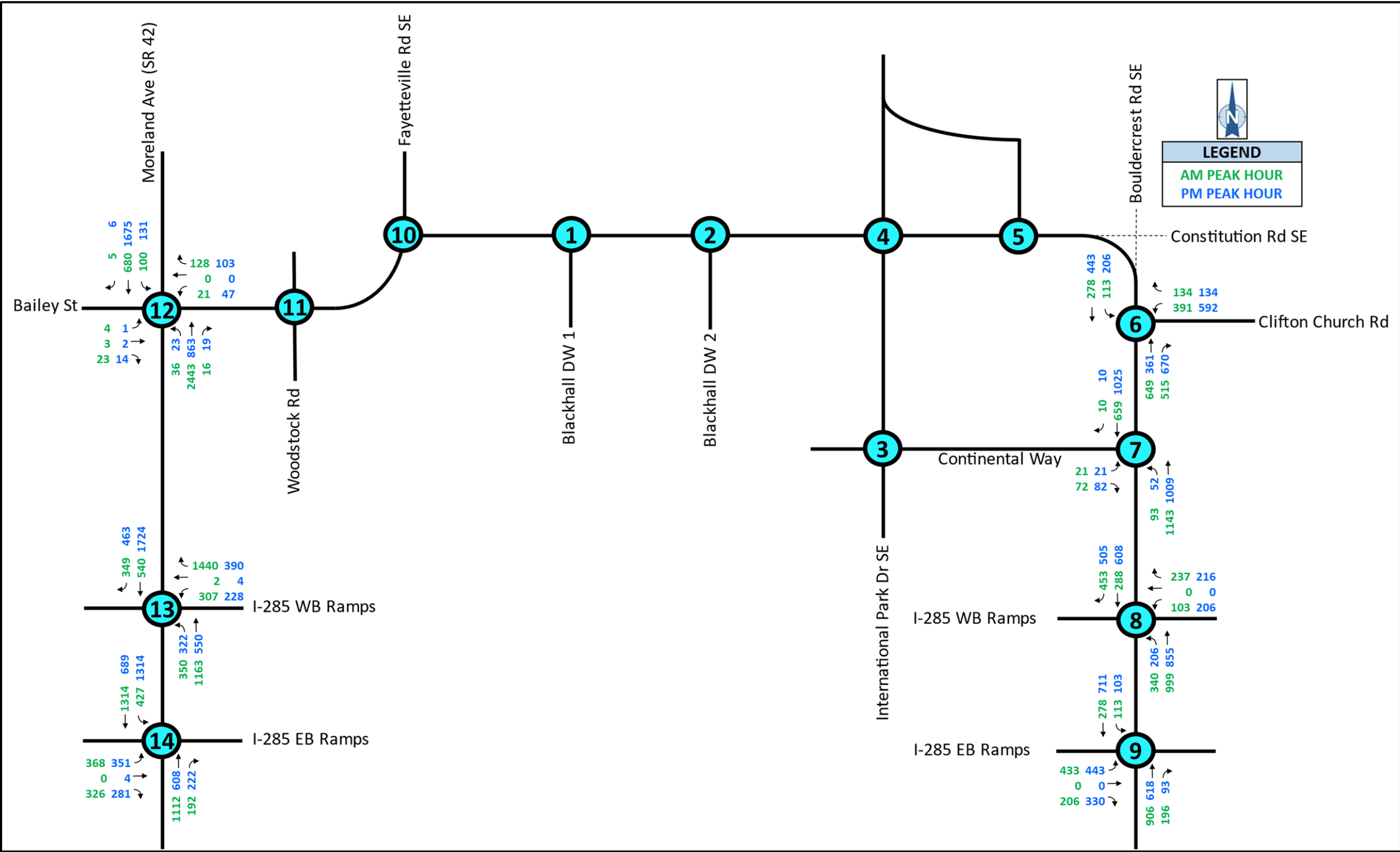
Figure 11: EXISTING TRAFFIC VOLUMES (2021)



PREVIOUSLY COUNTED VOLUMES

Previously collected TMCs were acquired in order to compare to the volumes counted in 2021. The older TMCs are from 2018 and 2019 and have been grown to the existing year of 2021. The grown volumes are shown below in Figure 12.

Figure 12: PREVIOUSLY COUNTED VOLUMES (GROWN TO 2021)



COVID-19 TRAFFIC ADJUSTMENT

Due to the COVID-19 pandemic, GDOT issued guidance (April 2020) on the collection of Turning Movement Counts (TMC's). Examples of guidance provided by the document states the following:

- Confirm if traffic data has been collected within the past three years at any study locations.
- Identify nearby continuous or short-term count stations from GDOT's Traffic Analysis and Data Application (TADA) to compare to newly collected daily volumes.

Multiple sources were contacted to acquire recent traffic data that have been collected within the past few years. Traffic counts collected in 2019 for PI 713300 (Bouldercrest Interchange) were provided by WSP/GDOT and include the following study intersections:

6. Bouldercrest Road SE & Clifton Church Road
7. Bouldercrest Road SE & Continental Way
8. Bouldercrest Road SE & I-285 West Ramps
9. Bouldercrest Road SE & I-285 East Ramps

A traffic study titled "DeKalb County Moreland Avenue (US 23/SR 42) Corridor Scoping Study" completed by Grice Consulting Group, LLC was obtained and contained traffic counts from May of 2018 for the following study intersections:

12. Moreland Avenue (SR 42) & Bailey Street
13. Moreland Avenue (SR 42) & I-285 West Ramps
14. Moreland Avenue (SR 42) & I-285 East Ramps

Study intersections 6, 7, and 12 were counted again to establish controlled count locations. The previous counts from 2018 and 2019 were grown (using a locally determined growth rate) to the existing year of 2021. The newly counted volumes have been compared to the grown volumes:

- Comparison of Newly Counted Volumes and Grown Volumes (Intersections 6, 7, 12)
 - The pre-COVID traffic volumes used the higher volumes between the newly counted and grown counts.
 - The instances where the newly counted volumes were higher than the grown volumes, and used in place of the grown volumes, include the following:
 - Moreland Avenue (SR 42) and Bailey Street (Intersection 12)
 - Southbound left in the AM peak hour.
 - Eastbound and westbound left in both peak hours.
 - Westbound right and through in the PM peak hour.
 - Bouldercrest Road SE and Clifton Church Road (Intersection 6)
 - Southbound through in the PM peak hour.
 - Bouldercrest Road SE and Continental Way (Intersection 7)
 - Southbound right in the PM peak hour.
 - Eastbound left and right in the PM peak hour.
 - Northbound left in both peak hours.

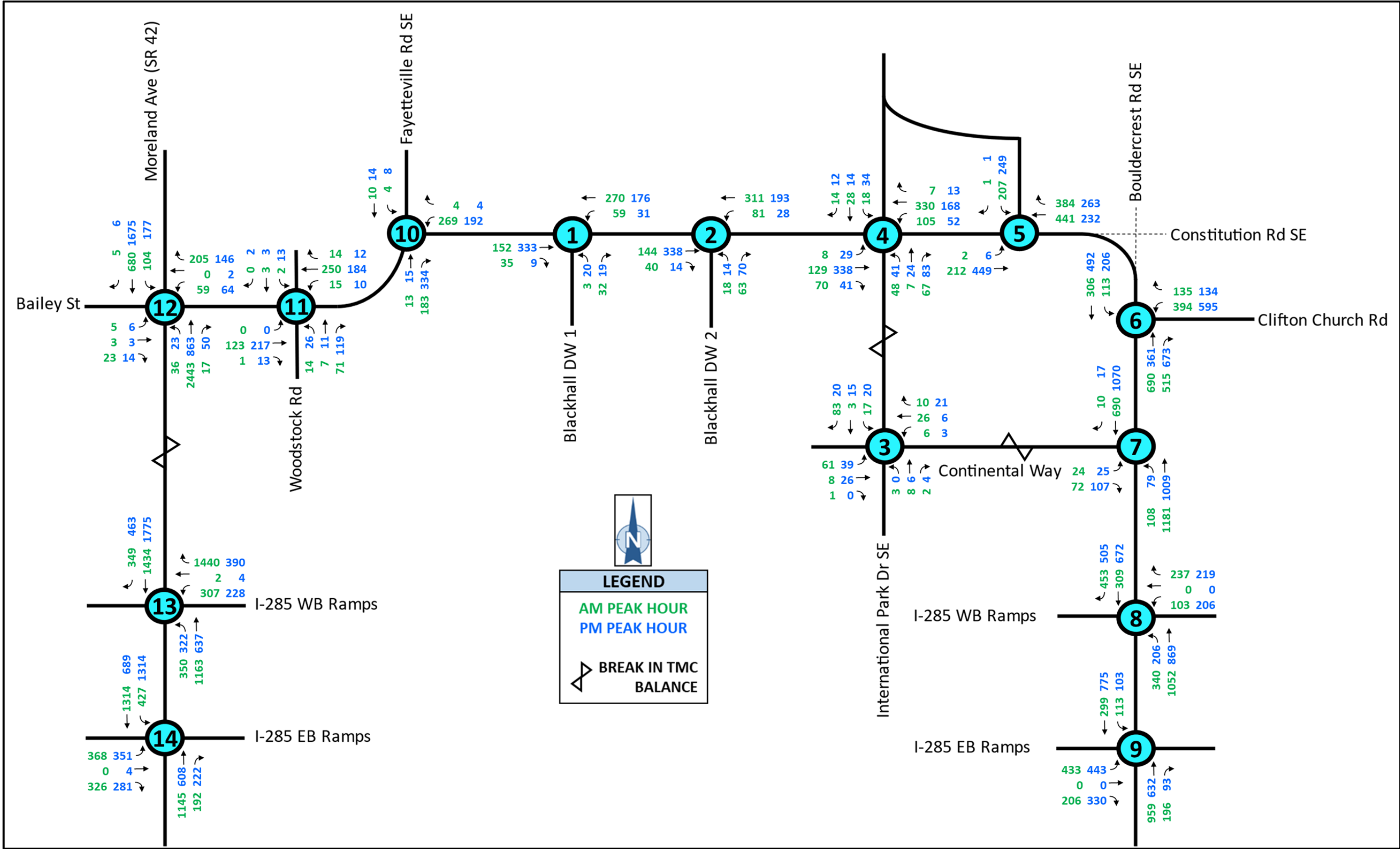
The following includes the methodology used to produce the pre-COVID traffic volumes based on the different roadways/intersections:

- Moreland Avenue (SR 42) (Intersections 12, 13, 14)
 - The grown data from the intersections of Moreland Avenue (SR 42) and I-285 Ramps were used to verify which count was more accurate/higher between the grown and newly counted volumes at the intersection of Moreland Avenue (SR 42) and Bailey Street.
 - The grown volumes for the I-285 Ramps were used and balanced with each other.
 - The larger values between the newly counted and grown volumes were used to establish the adjusted volumes at the intersection of Moreland Avenue (SR 42) and Bailey Street.
- Bouldercrest Road SE (Intersections 6, 7, 8, 9)
 - The grown volumes for the I-285 Ramps were used and balanced with the other intersections on Bouldercrest Road SE.
 - The larger values between the newly counted and grown volumes were used to establish the adjusted volumes at Bouldercrest Road SE's intersections with Clifton Church Road and Continental Way.
- Constitution Road SE/Fayetteville Road SE (Intersections 1, 2, 4, 5, 10, 11)
 - Constitution Road SE and Fayetteville Road SE were balanced proportionately based on the adjusted volumes on Bouldercrest Road SE and the intersection of Moreland Avenue (SR 42) and Bailey Street.
 - The volumes were balanced proportionately, which means that the higher adjusted volumes were distributed to the different movements (left/through/right) based on the newly counted volumes and their weight.
 - For example, the newly counted volumes at Constitution Road SE and Bouldercrest Road SE revealed that in the westbound direction during the PM peak hour, 53% turned right onto Bouldercrest Road SE while the remaining 47% continued through on Constitution Road SE. The adjusted volumes coming from Bouldercrest Road SE and Clifton Church Road were distributed in the same manner.
- International Park Drive SE and Continental Way (Intersection 3)
 - Based on observations of other turning movements in the system affected by COVID, it was determined that all traffic volumes were to be increased by 10%.

- Traffic Volume Balancing Technique
 - Balancing all traffic volumes arriving at an intersection are accounted for at the previous intersection(s).
 - Whenever volumes are balanced, they are balanced from the high point to produce the most conservative results (highest volumes).
 - The I-285 Ramps on Moreland Avenue (SR 42) were balanced together. The volumes were not balanced between Bailey Street and the ramps due to the presence of two intersecting roadways, where larger amounts of traffic can enter/exit, located between them.
 - Once Bouldercrest Road SE and the intersection of Moreland Avenue (SR 42) and Bailey Street were adjusted to pre-COVID traffic, the system was balanced. This includes balancing Constitution Road SE and Fayetteville Road SE proportionately based on the other adjustments.
 - The intersection of International Park Drive SE and Continental Way was not balanced with the rest of the system due to multiple driveways between it and the main roadways.

The newly collected TMCs were adjusted and balanced based on the comparison to the previously collected TMCs grown to the existing year. The pre-COVID adjusted and balanced 2021 volumes are shown below in Figure 13.

Figure 13: PRE-COVID ADJUSTED AND BALANCED 2021 VOLUMES



TRAFFIC PROJECTION METHODOLOGY

Traffic projections consists of background growth and trips generated by the proposed development.

BACKGROUND TRAFFIC GROWTH

Background traffic growth will be estimated for the time between the Existing Year (2021), Base Year (2024), and Design Year (2044). The methodology included in this estimate consists of the examination of historic traffic data and the analysis of historic growth trends.

CENSUS DATA

The census data from the Atlanta Regional Commission (ARC) population forecast for Dekalb County is shown in Table 2.

Table 2: CENSUS DATA			
DEKALB COUNTY			
YEAR	POPULATION	% CHANGE	% CHANGE PER YEAR
2015	718,442	-	-
2050	995,591	38.58%	0.94%

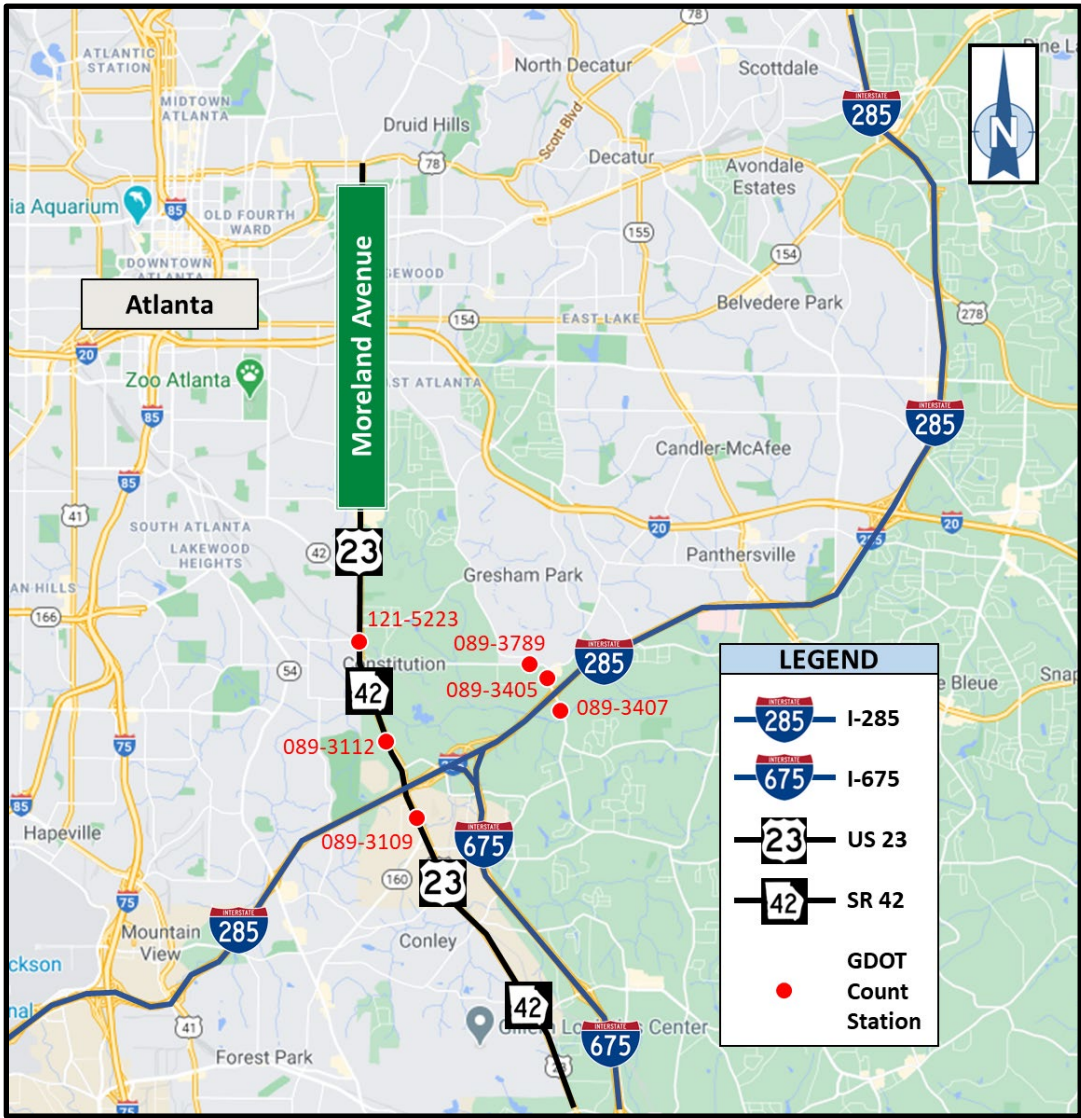
Source: Atlanta Regional Commission (ARC) Dekalb County 2050 Population Forecast

The data shows an increase of the population in Dekalb County of 38.58%, or a yearly rate of 0.94%, between 2015-2050.

HISTORIC TRAFFIC DATA

GDOT maintains multiple annual traffic count stations in the vicinity of the project, six of which were used in the background growth analysis. These stations are shown in Figure 14.

Figure 14: GDOT COUNT STATIONS



TREND ANALYSIS

Five-year and ten-year trend analyses were conducted to establish growth rates around the study area. Table 3 shows the data collected from the GDOT count stations and the resulting trend rates for each count station. Figure 15 on the next page shows graphs of these resultant trend rates for the count stations. Count stations for the area surrounding the development were organized in Table 3 by the roadway on which they are located.

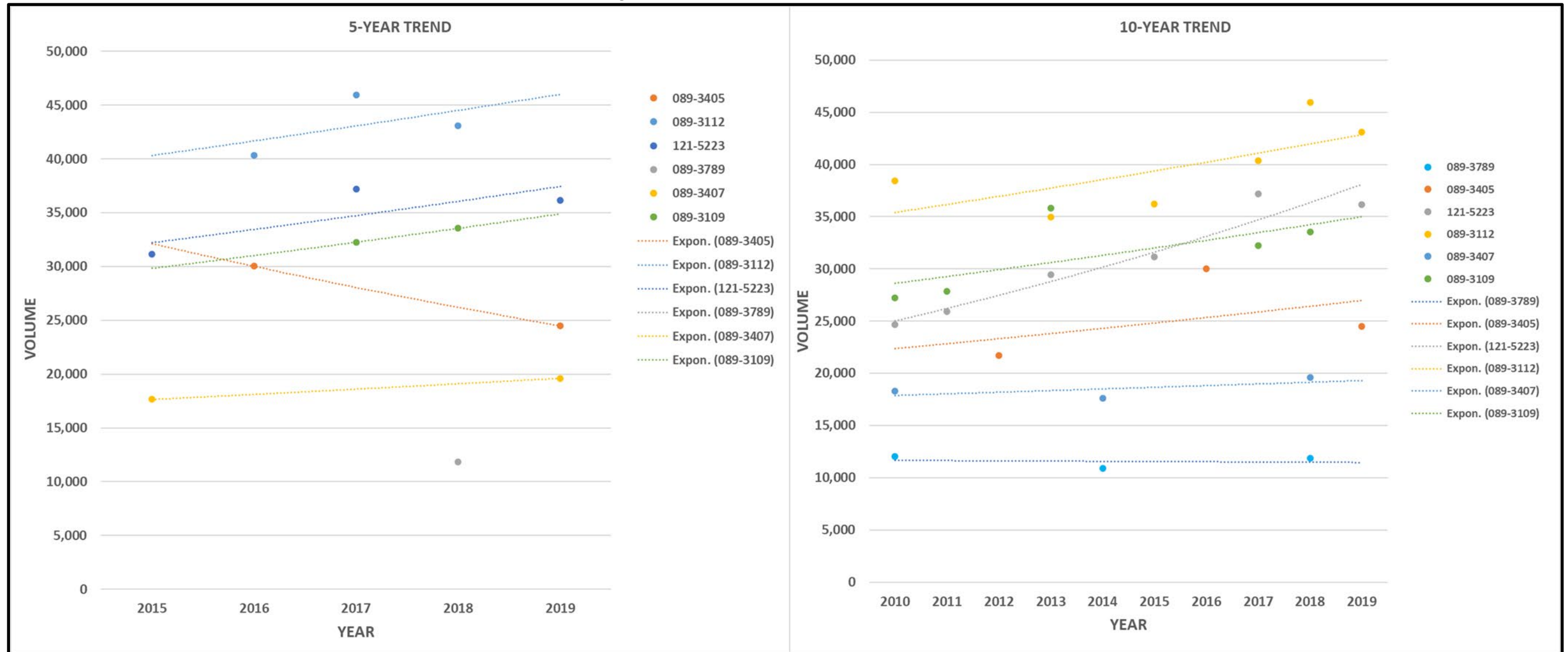
Historic data reported by the GDOT for each of the count stations can be found in Appendix D.

Table 3: TREND ANALYSIS FOR COUNT STATION DATA

ROADWAY	GDOT Count Stations	5-year	10-year
US 23	121-5223	3.05%	3.90%
	089-3112	3.55%	1.15%
	089-3109	0.79%	2.11%
Bouldercrest Road SE	089-3789	1.70%	-0.15%
	089-3405	-3.99%	1.22%
	089-3407	2.14%	0.69%

Note: Rates are calculated based on annual compounding.

Figure 15: TREND LINES FOR GDOT COUNT STATIONS



BACKGROUND GROWTH RATES

Growth rates for the area surrounding the development were established based on the data collected from GDOT count stations.

Individual count station trend rates were compounded together with other count station rates on roadways near the development to determine the growth associated with each corridor, based on their weighted count station volumes.

Table 4 shows the compounded growth rates for the surrounding area of the development from the GDOT count stations.

Table 4: GROWTH RATES	
COMPOUNDED RATES	
5-YEAR	10-YEAR
1.89%	1.94%

For the purpose of this study, an annual background growth rate of 1.50% will be used for the area surrounding the Blackhall development.

BACKGROUND GROWTH FACTORS

Growth factors for the surrounding area of the development were established by applying each respective growth rate to the following equation:

Growth Factor = (1 + r)ⁿ

Where:

r = growth rate

n = number of years

The volumes projections were calculated using the following values as ‘n’, taken as the time period between the Existing, Base, and Design years.

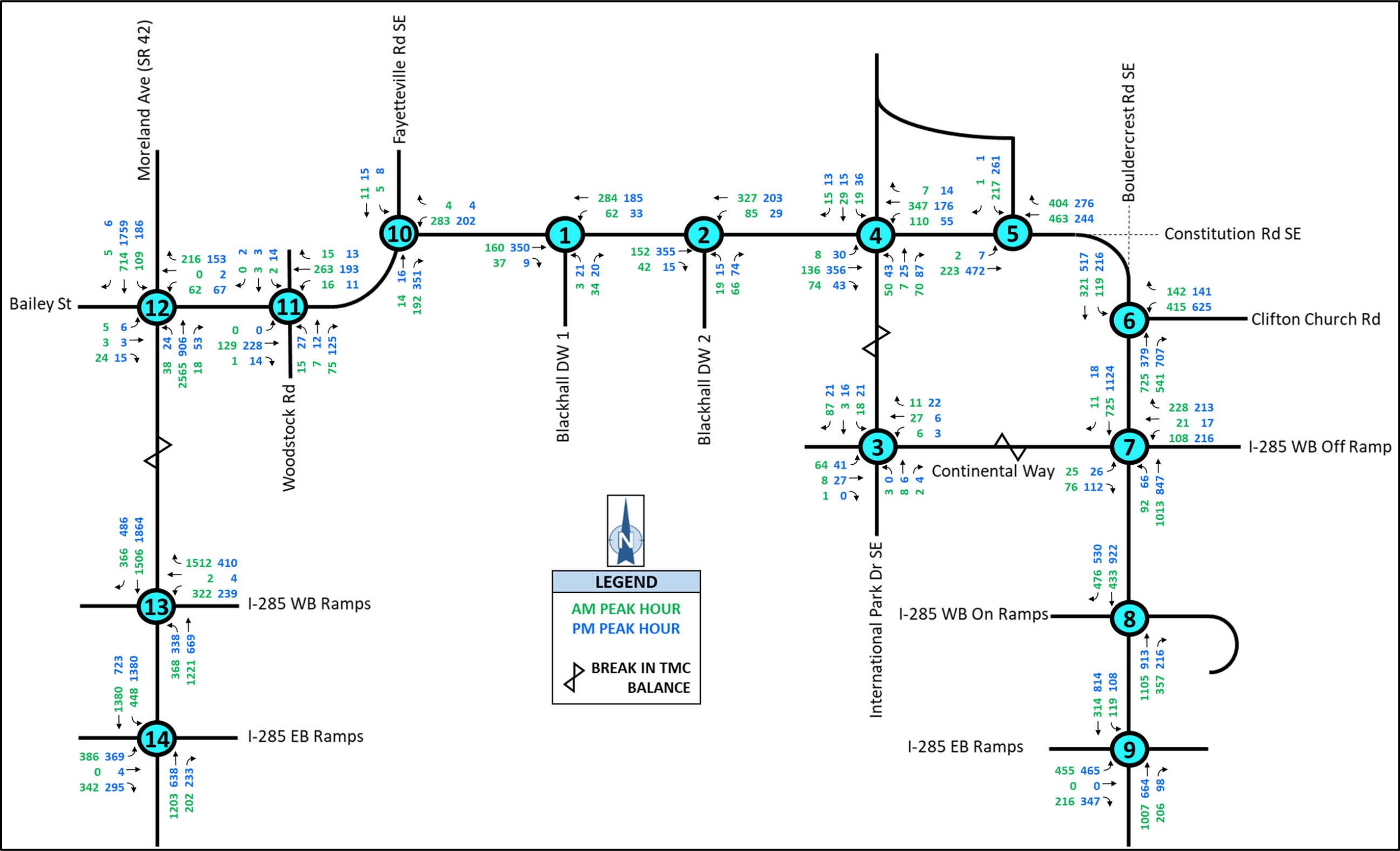
- Existing Year (2021) to Base Year (2024) – n=3
- Base Year (2024) to Design Year (2044) – n=20

The growth factors for the Blackhall Phase 2 development area are provided in Table 5.

Table 5: GROWTH FACTORS	
PROJECTED	
Base (2024)	Design (2044)
1.05	1.35

The Pre-COVID Adjusted and Balanced 2021 Volumes were grown to the build year of 2024 using a growth factor of 1.05. The Projected 2024 No-Build Volumes are shown in Figure 16.

Figure 16: PROJECTED 2024 NO-BUILD VOLUMES



PROJECTED CONDITIONS

TRIP GENERATION

Estimates of traffic volumes expected to be generated by the land uses within the proposed development were obtained using *TripGen 10* software from Trafficware. Trip rates were provided in the ITE publication *Trip Generation*, 10th Edition.

Trip generation for the film studio use was taken from the City of Burbank California's Media District Plan (1991) which provides a scaling factor of 75% to the general office land use (ITE Code 710). This rate provides an estimate of trips generated while a film is in production and the number of staff, cast members and extras are at its most. This factor was applied to the film stages land use, which therefore based the trip generation on 415,000 square feet rather than the 553,000 square feet.

For the purpose of this study, it was assumed that all trips would travel to the site in a car and not use the MARTA bus routes or bicycle trail (0% mode split).

Based on the updated site plan, the trip generation was also updated to include the additional 13,936 SF of film stage area. Table 6 shows the generated trips for the land uses within the proposed development. Trip generation data can be found in Appendix E.

Table 6: TRIP GENERATION

ITE CODE	LAND USE	SIZE	DAILY 2-WAY TRIPS	AM PEAK HOUR			PM PEAK HOUR		
				ENTER	EXIT	TOTAL	ENTER	EXIT	TOTAL
150	Warehouse	420 ksf	731	59	17	76	22	58	80
710	Offices	200 ksf	2078	200	32	232	37	193	230
710 ¹	Film Stages ¹	553 ksf ¹	4219	414	67	481	76	401	477
TOTAL NEW TRIPS			7028	673	116	789	135	652	787

¹ There is no ITE rate for Film Stages, Rates used were taken from City of Burbank, California's Media District Plan which scales ITE Code 710 (Office) by 75%. Rate was based on (0.75 X 553) = 415 ksf of ITE Code 710.

² ksf = thousand square feet

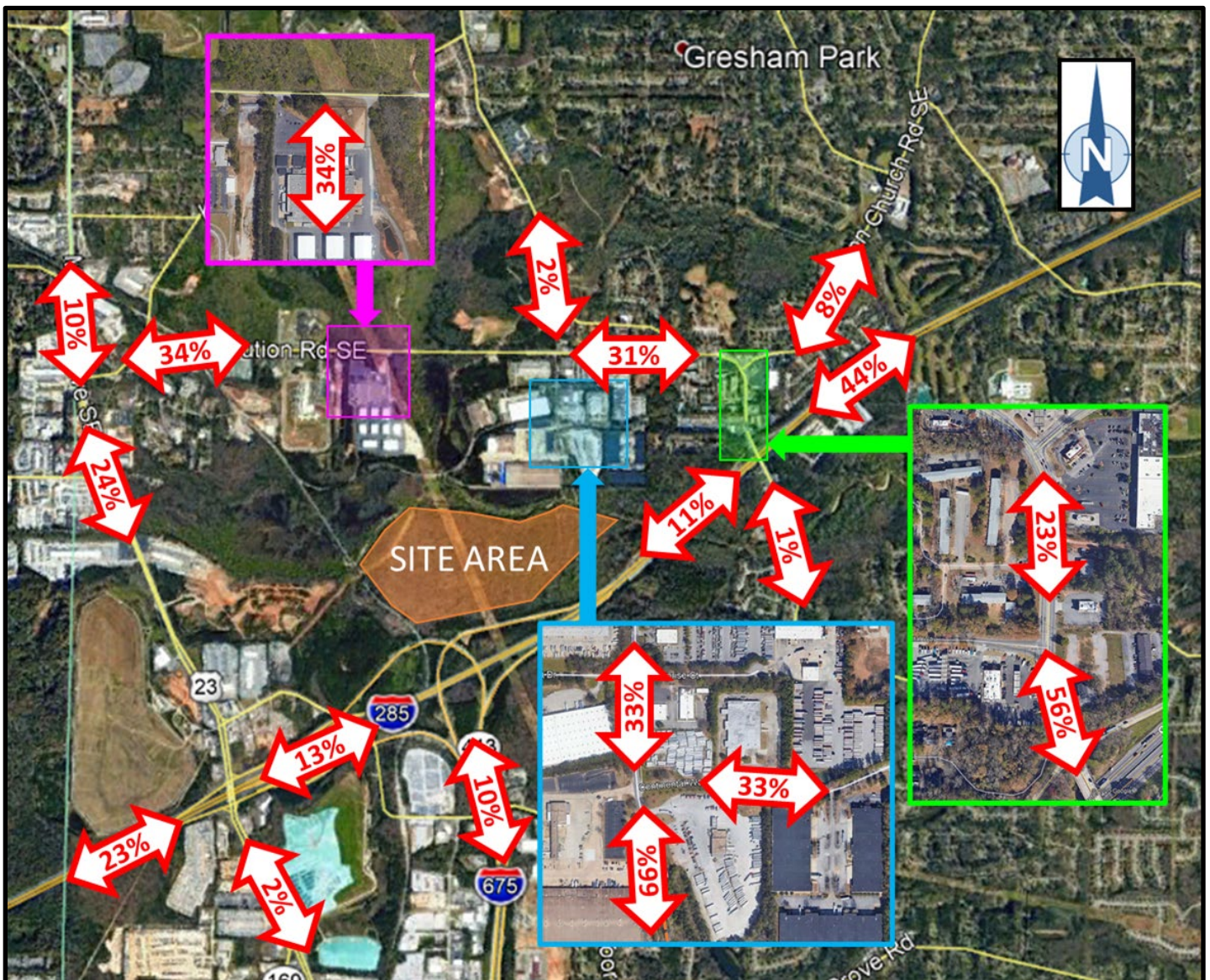
TRIP DISTRIBUTION

Trip distribution percentages were developed for generated external new trips. The GDOT Count Stations around the development area were used to acquire volume counts to develop a gravity model for the new trip distribution.

Due to the Bouldercrest interchange improvement (PI #713300-) planned to begin construction in 2023, a larger percentage of trips have been assigned to Continental Way. The project's concept plan shows that the I-285 WB Off Ramp will be realigned opposite of Continental Way while also incorporating improvements to Continental Way itself.

Figure 17 provides the expected trip distribution for the development.

Figure 17: NEW TRIPS DISTRIBUTION



TRAFFIC ASSIGNMENT

The generated traffic was assigned to the road network based the new trips distribution established using GDOT count stations. Table 7 shows how the assigned trips are expected to reach the development, according to the direction traveled.

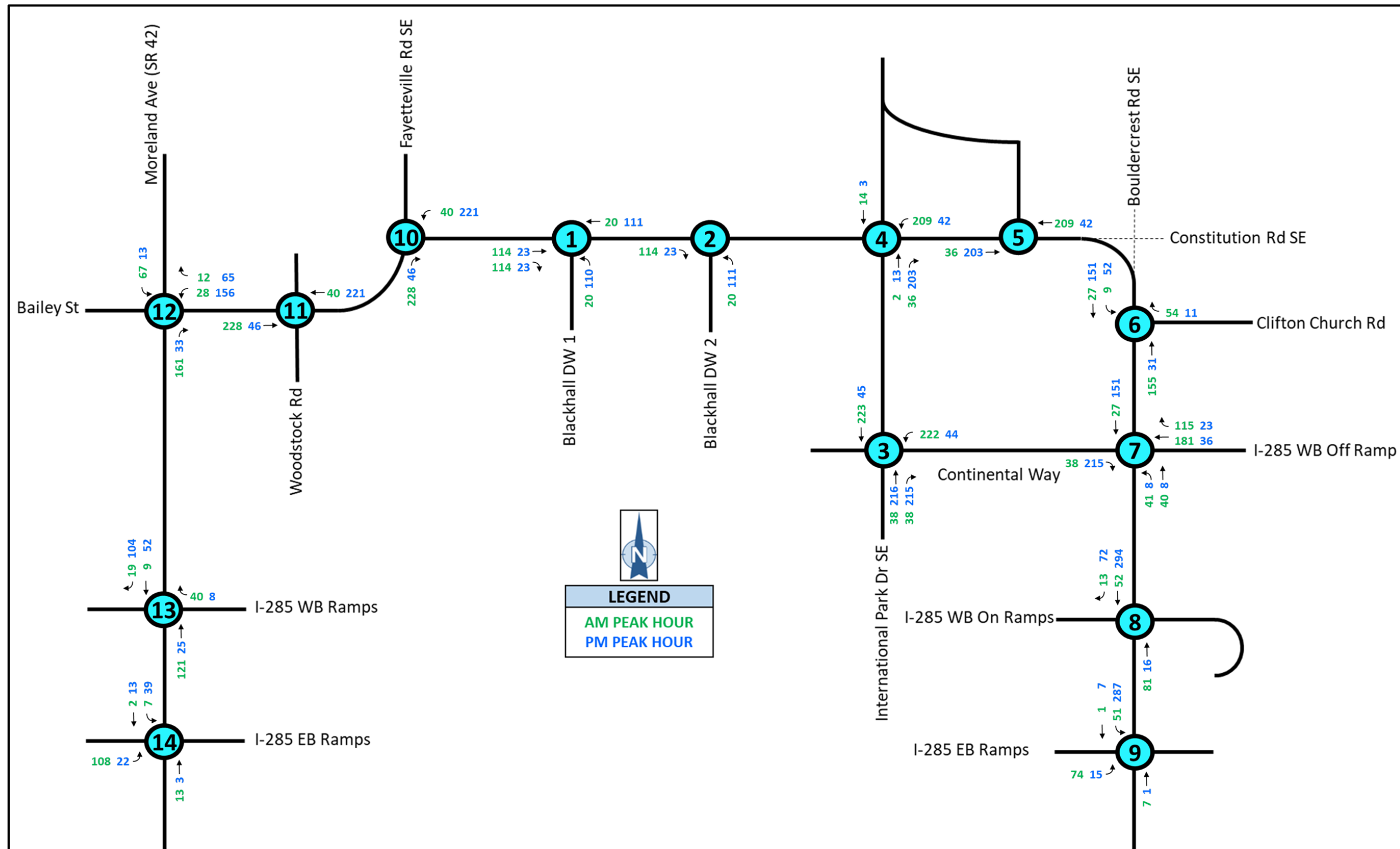
Table 7: NEW TRIPS ASSIGNMENT

To & From	%	AM		PM	
		IN	OUT	IN	OUT
North on Moreland Ave	10%	67	12	13	65
South on Moreland Ave	2%	13	2	3	13
West on I-285 (Moreland Ave)	16%	108	19	22	104
East on I-285 (Moreland Ave)	6%	40	7	8	39
North on International Park Dr SE	2%	14	2	3	13
East on Clifton Church Rd	8%	54	9	11	52
South on Bouldercrest Rd SE	1%	7	1	1	7
West on I-285 (Bouldercrest Rd SE)	11%	74	13	15	72
East on I-285 (Bouldercrest Rd SE)	44%	296	51	59	287
Total Trips	100%	673	116	135	652

New Trips

The generated external trips for each peak are shown in Figure 18. These trips were assigned in accordance with the distribution and assumptions listed on the previous pages.

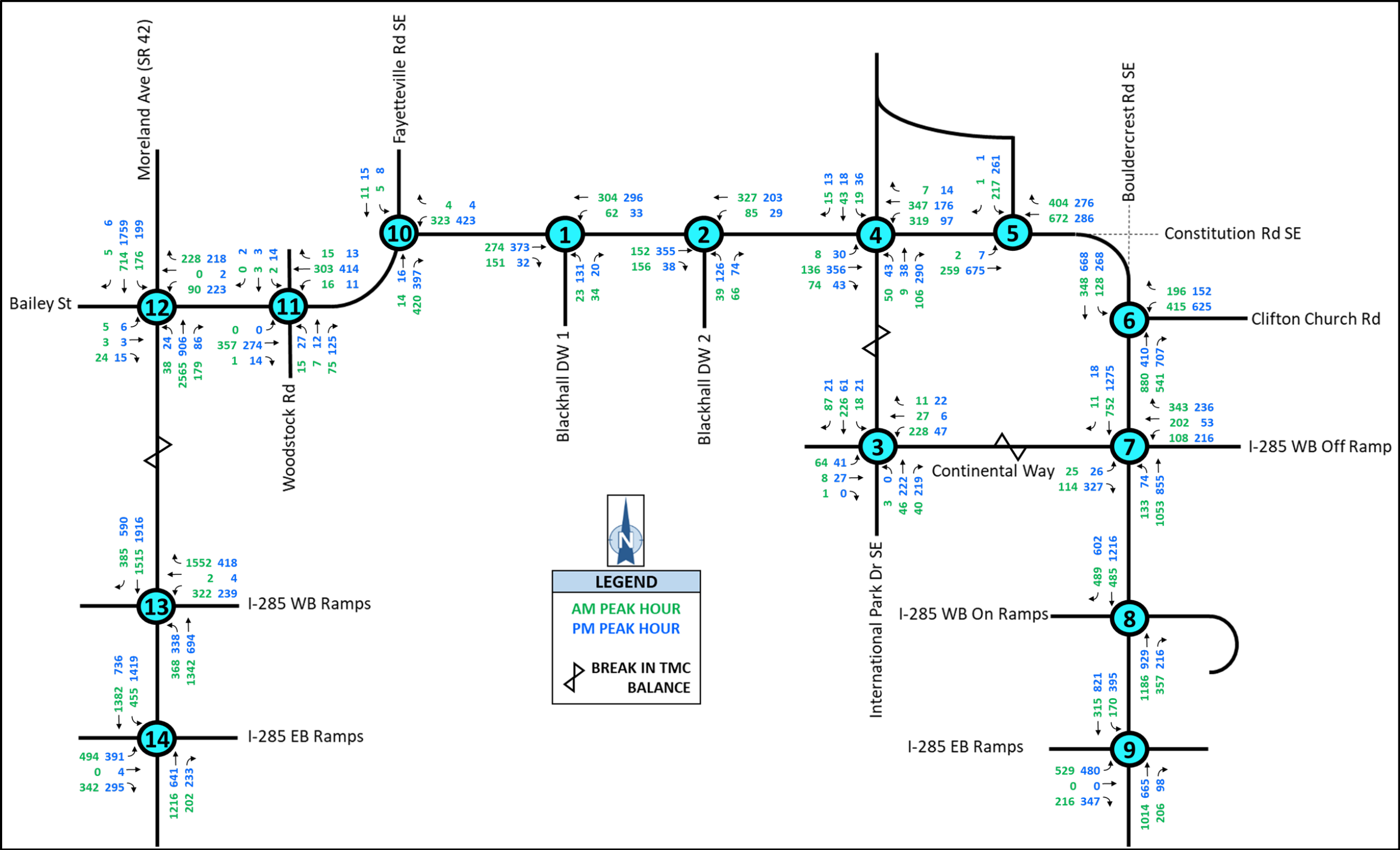
Figure 18: NEW TRIPS



Total Projected Peak Hour Traffic

The Projected 2024 Build Volumes are derived by combining the New Trips (Figure 18) and the Projected 2024 No-Build Volumes (Figure 16). The Projected 2024 Build Volumes are shown in Figure 19.

Figure 19: PROJECTED 2024 BUILD VOLUMES



CRASH HISTORY

Crash data was analyzed to identify collision-prone movements at the study intersections. Data was obtained from the Georgia Electronic Accident Reporting System (GEARS) for the five most recent years of data.

Tables 8 to 21 summarize the crash frequency at the study intersections. Detailed crash data is provided in Appendix F.

Table 8: CRASH DATA SUMMARY, CONSTITUTION RD SE & BLACKHALL STUDIOS DW 1

YEAR	TOTAL CRASHES	INJURY CRASHES/ INJURIES	FATAL -ITIES	COLLISION WITH VEHICLE				COLLISION WITH ANIMAL OR STRUCTURE
				RIGHT- ANGLE	HEAD ON	REAR END	SIDE- SWIPE	
2016	0	0/0	0	0	0	0	0	0
2017	0	0/0	0	0	0	0	0	0
2018	0	0/0	0	0	0	0	0	0
2019	0	0/0	0	0	0	0	0	0
2020	0	0/0	0	0	0	0	0	0
Total	0	0/0	0	0	0	0	0	0

Table 9: CRASH DATA SUMMARY, CONSTITUTION RD SE & BLACKHALL STUDIOS DW 2

YEAR	TOTAL CRASHES	INJURY CRASHES/ INJURIES	FATAL -ITIES	COLLISION WITH VEHICLE				COLLISION WITH ANIMAL OR STRUCTURE
				RIGHT- ANGLE	HEAD ON	REAR END	SIDE- SWIPE	
2016	0	0/0	0	0	0	0	0	0
2017	0	0/0	0	0	0	0	0	0
2018	0	0/0	0	0	0	0	0	0
2019	0	0/0	0	0	0	0	0	0
2020	0	0/0	0	0	0	0	0	0
Total	0	0/0	0	0	0	0	0	0

Table 10: CRASH DATA SUMMARY, INTERNATIONAL PARK DR SE & CONTINENTAL WAY

YEAR	TOTAL CRASHES	INJURY CRASHES/ INJURIES	FATAL -ITIES	COLLISION WITH VEHICLE				COLLISION WITH ANIMAL OR STRUCTURE
				RIGHT- ANGLE	HEAD ON	REAR END	SIDE- SWIPE	
2016	0	0/0	0	0	0	0	0	0
2017	0	0/0	0	0	0	0	0	0
2018	0	0/0	0	0	0	0	0	0
2019	0	0/0	0	0	0	0	0	0
2020	0	0/0	0	0	0	0	0	0
Total	0	0/0	0	0	0	0	0	0

Table 11: CRASH DATA SUMMARY, CONSTITUTION RD SE & INTERNATIONAL PARK DR SE

YEAR	TOTAL CRASHES	INJURY CRASHES/ INJURIES	FATAL -ITIES	COLLISION WITH VEHICLE				COLLISION WITH ANIMAL OR STRUCTURE
				RIGHT- ANGLE	HEAD ON	REAR END	SIDE- SWIPE	
2016	2	0/0	0	0	0	0	1	1
2017	1	0/0	0	0	0	0	0	1
2018	2	1/1	0	2	0	0	0	0
2019	0	0/0	0	0	0	0	0	0
2020	3	1/1	0	3	0	0	0	0
Total	8	2/2	0	5	0	0	1	2

Table 12: CRASH DATA SUMMARY, CONSTITUTION RD SE & BOULDERCREST RD SE

YEAR	TOTAL CRASHES	INJURY CRASHES/ INJURIES	FATAL -ITIES	COLLISION WITH VEHICLE				COLLISION WITH ANIMAL OR STRUCTURE
				RIGHT- ANGLE	HEAD ON	REAR END	SIDE- SWIPE	
2016	7	2/3	0	3	0	2	2	0
2017	3	0/0	0	0	0	0	1	2
2018	4	0/0	0	1	0	0	0	0
2019	1	4/6	0	3	0	1	0	1
2020	2	0/0	0	0	0	1	0	0
Total	17	6/9	0	7	0	4	3	3

Table 13: CRASH DATA SUMMARY, BOULDERCREST RD SE & CLIFTON CHURCH RD

YEAR	TOTAL CRASHES	INJURY CRASHES/ INJURIES	FATAL -ITIES	COLLISION WITH VEHICLE				COLLISION WITH ANIMAL OR STRUCTURE
				RIGHT- ANGLE	HEAD ON	REAR END	SIDE- SWIPE	
2016	12	2/2	0	1	1	2	7	1
2017	9	1/1	0	1	0	5	3	0
2018	14	1/2	0	2	2	2	7	1
2019	3	1/1	0	1	0	2	0	0
2020	7	1/1	0	4	0	0	3	0
Total	45	6/7	0	9	3	11	20	2

Table 14: CRASH DATA SUMMARY, BOULDERCREST RD SE & CONTINENTAL WAY

YEAR	TOTAL CRASHES	INJURY CRASHES/ INJURIES	FATAL -ITIES	COLLISION WITH VEHICLE				COLLISION WITH ANIMAL OR STRUCTURE
				RIGHT- ANGLE	HEAD ON	REAR END	SIDE- SWIPE	
2016	11	3/3	0	3	0	8	0	0
2017	9	2/2	0	3	0	3	3	0
2018	6	2/2	0	3	0	1	0	2
2019	5	2/3	0	1	0	2	2	0
2020	6	2/2	0	0	0	4	1	1
Total	37	11/12	0	10	0	18	6	3

Table 15: CRASH DATA SUMMARY, BOULDERCREST RD SE & I-285 WB RAMPS

YEAR	TOTAL CRASHES	INJURY CRASHES/ INJURIES	FATAL -ITIES	COLLISION WITH VEHICLE				COLLISION WITH ANIMAL OR STRUCTURE
				RIGHT- ANGLE	HEAD ON	REAR END	SIDE- SWIPE	
2016	11	3/4	0	3	0	3	3	2
2017	8	2/4	0	2	1	2	3	0
2018	5	2/5	0	2	0	2	0	1
2019	8	4/4	0	5	0	2	1	0
2020	15	5/12	0	6	0	4	2	3
Total	47	16/29	0	18	1	13	9	6

Table 16: CRASH DATA SUMMARY, BOULDERCREST RD SE & I-285 EB RAMPS

YEAR	TOTAL CRASHES	INJURY CRASHES/ INJURIES	FATAL -ITIES	COLLISION WITH VEHICLE				COLLISION WITH ANIMAL OR STRUCTURE
				RIGHT- ANGLE	HEAD ON	REAR END	SIDE- SWIPE	
2016	26	9/12	0	5	0	14	4	3
2017	19	5/7	0	4	1	9	2	3
2018	22	7/11	1	5	0	13	1	3
2019	20	4/6	0	2	0	10	4	4
2020	18	8/15	0	3	0	12	1	2
Total	105	33/51	1	19	1	58	12	15

The fatality in 2018 occurred due to a pedestrian crossing Bouldercrest Road SE at 10:55 PM without a crosswalk. A car was traveling southbound and struck the pedestrian as they were crossing. The fatality was a result of an illegal maneuver by the pedestrian, therefore it was determined no preventative measures were necessary.

Table 17: CRASH DATA SUMMARY, CONSTITUTION RD SE & FAYETTEVILLE RD SE

YEAR	TOTAL CRASHES	INJURY CRASHES/ INJURIES	FATAL -ITIES	COLLISION WITH VEHICLE				COLLISION WITH ANIMAL OR STRUCTURE
				RIGHT- ANGLE	HEAD ON	REAR END	SIDE- SWIPE	
2016	0	0/0	0	0	0	0	0	0
2017	0	0/0	0	0	0	0	0	0
2018	0	0/0	0	0	0	0	0	0
2019	0	0/0	0	0	0	0	0	0
2020	0	0/0	0	0	0	0	0	0
Total	0	0/0	0	0	0	0	0	0

Table 18: CRASH DATA SUMMARY, FAYETTEVILLE RD SE/BAILEY ST & WOODSTOCK RD

YEAR	TOTAL CRASHES	INJURY CRASHES/ INJURIES	FATAL -ITIES	COLLISION WITH VEHICLE				COLLISION WITH ANIMAL OR STRUCTURE
				RIGHT- ANGLE	HEAD ON	REAR END	SIDE- SWIPE	
2016	1	0/0	0	0	0	1	0	0
2017	0	0/0	0	0	0	0	0	0
2018	0	0/0	0	0	0	0	0	0
2019	0	0/0	0	0	0	0	0	0
2020	2	0/0	0	2	0	0	0	0
Total	3	0/0	0	2	0	1	0	0

Table 19: CRASH DATA SUMMARY, MORELAND AVE (SR 42) & BAILEY ST

YEAR	TOTAL CRASHES	INJURY CRASHES/ INJURIES	FATAL -ITIES	COLLISION WITH VEHICLE				COLLISION WITH ANIMAL OR STRUCTURE
				RIGHT- ANGLE	HEAD ON	REAR END	SIDE- SWIPE	
2016	17	7/16	0	7	1	8	0	1
2017	20	5/8	0	8	0	5	5	2
2018	17	6/16	1	9	0	6	2	0
2019	17	6/14	0	5	0	7	4	1
2020	12	7/15	0	8	0	1	2	1
Total	83	31/69	1	37	1	27	13	5

The fatality in 2018 occurred due to an angle collision, with a car traveling southbound on Moreland Avenue (SR 42) striking a car attempting to exit the UPS driveway in a t-bone manner. This could have been prevented if a traffic signal or some other intersection control that improves safety would have been implemented. Based on Signal Warrant 7, this intersection meets the crash requirements for installing a traffic signal.

Table 20: CRASH DATA SUMMARY, MORELAND AVE (SR 42) & I-285 WB RAMPS

YEAR	TOTAL CRASHES	INJURY CRASHES/ INJURIES	FATAL -ITIES	COLLISION WITH VEHICLE				COLLISION WITH ANIMAL OR STRUCTURE
				RIGHT- ANGLE	HEAD ON	REAR END	SIDE- SWIPE	
2016	33	9/11	0	4	0	26	2	1
2017	41	11/12	0	4	0	27	9	1
2018	70	14/18	0	7	1	50	8	4
2019	56	16/18	0	7	0	30	17	2
2020	36	8/14	0	4	2	17	11	2
Total	236	59/76	0	26	3	150	47	10

Table 21: CRASH DATA SUMMARY, MORELAND AVE (SR 42) & I-285 EB RAMPS

YEAR	TOTAL CRASHES	INJURY CRASHES/ INJURIES	FATAL -ITIES	COLLISION WITH VEHICLE				COLLISION WITH ANIMAL OR STRUCTURE
				RIGHT- ANGLE	HEAD ON	REAR END	SIDE- SWIPE	
2016	31	7/10	0	5	0	19	4	3
2017	27	5/6	0	8	0	10	7	2
2018	30	7/14	0	7	1	16	6	0
2019	24	4/7	0	5	1	11	7	0
2020	26	9/15	0	8	1	9	6	2
Total	138	32/52	0	33	3	65	30	7

During the analysis period (2016 through 2020), the most common crash types were rear end collisions, which account for 46% of all crashes. Two fatalities were recorded over this span, as stated before. One occurred at the intersection of Bouldercrest Road SE and I-285 EB Ramps while the other occurred at Moreland Avenue (SR 42) and Bailey Street.

CAPACITY ANALYSIS

Existing and projected conditions were evaluated using capacity analysis techniques described in the *Highway Capacity Manual, Special Report 209*, published by the Transportation Research Board, 6th Edition, and with the use of *Synchro 10* from Trafficware. HCM Level of Service (LOS) definitions are shown in Table 22.

Table 22: LEVEL OF SERVICE CRITERIA

LEVEL OF SERVICE	DELAY PER VEHICLE (SECONDS)	
	SIGNALIZED INTERSECTIONS	UNSIGNALIZED INTERSECTIONS
A	≤10.0	≤10.0
B	10.1 to 20.0	10.1 to 15.0
C	20.1 to 35.0	15.1 to 25.0
D	35.1 to 55.0	25.1 to 35.0
E	55.1 to 79.9	35.1 to 49.9
F	≥80.0	≥50.0

Source: Highway Capacity Manual, Special Report 209, Transportation Research Board, 6th Edition

EXISTING CONDITIONS

The intersections were evaluated under existing conditions. The results of the capacity analysis are summarized in Table 23 (signalized intersection) and Table 24 (unsignalized intersections) below and on the following page. For each condition, the level of service is shown, followed parenthetically by the average delay per vehicle, in seconds. Capacity analysis reports for existing conditions can be found in Appendix G.

Table 23: CAPACITY ANALYSIS RESULTS, 2021 EXISTING CONDITIONS (SIGNALIZED)

INTERSECTION		2021 EXISTING CONDITIONS	
		AM PEAK HOUR	PM PEAK HOUR
5	Constitution Rd SE & Bouldercrest Rd SE	B (10.3)	A (9.7)
6	Bouldercrest Rd SE & Clifton Church Rd	C (32.3)	D (37.4)
7	Bouldercrest Rd SE & Continental Way	A (1.2)	A (1.3)
8	Bouldercrest Rd SE & I-285 WB Ramps	A (5.4)	C (23.0)
9	Bouldercrest Rd SE & I-285 EB Ramps	C (32.1)	C (22.9)
13	Moreland Ave (SR 42) & I-285 WB Ramps	D (41.7)	C (30.3)
14	Moreland Ave (SR 42) & I-285 EB Ramps	C (24.4)	D (40.7)

Capacity results indicate that all of the signalized intersections operate at LOS D or better in both peak hours under existing conditions.

Table 24: CAPACITY ANALYSIS RESULTS, 2021 EXISTING CONDITIONS (UNSIGNALIZED)

INTERSECTION		MOVEMENT	2021 EXISTING CONDITIONS	
			AM PEAK HOUR	PM PEAK HOUR
1	Constitution Rd SE & Blackhall Studios DW 1	EB-T	A (0.0)	A (0.0)
		EB-R	A (0.0)	A (0.0)
		WB-L/T	A (7.7)	A (8.1)
		NB-L	B (12.9)	B (14.1)
		NB-R	A (9.2)	B (10.7)
2	Constitution Rd SE & Blackhall Studios DW 2	EB-T	A (0.0)	A (0.0)
		EB-R	A (0.0)	A (0.0)
		WB-L/T	A (7.9)	A (8.3)
		NB-L/R	B (11.2)	B (12.5)
3	International Park Dr SE & Continental Way	EB-L/T/R	B (10.7)	A (9.9)
		WB-L/T/R	A (10.0)	A (9.3)
		NB-L/T/R	A (7.4)	A (0.0)
		SB-L/T/R	A (7.6)	A (7.8)
4	Constitution Rd SE & International Park Dr SE	EB-L	A (8.2)	A (7.7)
		EB-T/R	A (0.0)	A (0.0)
		WB-L	A (7.9)	A (9.7)
		WB-T	A (0.0)	A (0.0)
		WB-R	A (0.0)	A (0.0)
		NB-L/T/R	C (18.5)	C (19.2)
		SB-L/T/R	C (17.6)	C (17.4)
10	Constitution Rd SE & Fayetteville Rd SE	WB-L/R	A (0.0)	A (0.0)
		NB-T/R	A (0.0)	A (0.0)
		SB-L/T	A (9.1)	A (9.8)
11	Fayetteville Rd SE/Bailey St & Woodstock Rd	EB-L/T/R	A (9.2)	B (10.1)
		WB-L/T/R	B (11.6)	A (10.0)
		NB-L/T/R	A (9.5)	A (9.1)
		SB-L/T/R	A (8.5)	A (8.6)
12	Moreland Ave (SR 42) & Bailey St	EB-L/T/R	F (*)	F (*)
		WB-L/T	F (*)	F (*)
		WB-R	F (622.8)	C (17.2)
		NB-L	B (14.2)	E (46.6)
		NB-T/R	A (0.0)	A (0.0)
		SB-L	F (848.5)	C (21.2)
		SB-T/R	A (0.0)	A (0.0)

* = Delay time of over 1000 seconds

Capacity results indicate that multiple movements at Moreland Avenue (SR 42) and Bailey Street are operating at LOS E or worse in both peak hours under existing conditions. The eastbound and westbound movements are failing in both peak hours, except for the westbound right in the PM peak hour. The southbound left fails during the AM peak hour while the northbound left fails during the PM peak hour.

PROJECTED NO-BUILD CONDITIONS

The intersections were evaluated under projected no-build conditions, with projected geometry and projected 2024 no-build traffic volumes. The results of the capacity analysis are summarized in Table 25 (signalized intersection) and Table 26 (unsignalized intersections) below. Capacity analysis reports for projected no-build conditions can be found in Appendix H.

The projected geometry includes the interchange modification project on Bouldercrest Road SE (PI #713300) that is expected to be complete in 2023. The I-285 WB Off Ramp will be reconstructed to intersect Bouldercrest Road SE opposite of Continental Way, creating a 4-leg signalized intersection. The off ramp will include dual left turn lanes, a through lane, and a right turn lane. The existing intersection of Bouldercrest Road SE and I-285 WB Ramps will be reconstructed as a divided roadway with on ramps on both sides of the road (normal on ramp and a loop on ramp for northbound traffic). The bridge will be upgraded to include two southbound through lanes, dual southbound left turn lanes, two northbound through lanes, and a northbound right turn lane.

Table 25: CAPACITY ANALYSIS RESULTS, 2024 NO-BUILD CONDITIONS (SIGNALIZED)

INTERSECTION	2024 NO-BUILD CONDITIONS	
	AM PEAK HOUR	PM PEAK HOUR
5 Constitution Rd SE & Bouldercrest Rd SE	B (10.5)	B (10.0)
6 Bouldercrest Rd SE & Clifton Church Rd	C (33.2)	D (39.2)
7 Bouldercrest Rd SE & Continental Way/I-285 WB Off Ramp	B (11.5)	B (11.7)
9 Bouldercrest Rd SE & I-285 EB Ramps	C (22.8)	B (19.6)
13 Moreland Ave (SR 42) & I-285 WB Ramps	D (44.8)	C (31.9)
14 Moreland Ave (SR 42) & I-285 EB Ramps	C (25.1)	D (48.2)

Capacity results indicate that all of the signalized intersections operate at LOS D or better in both peak hours under no-build conditions.

Table 26: CAPACITY ANALYSIS RESULTS, 2024 NO-BUILD CONDITIONS (UNSIGNALIZED)

INTERSECTION		MOVEMENT	2024 NO-BUILD CONDITIONS	
			AM PEAK HOUR	PM PEAK HOUR
1	Constitution Rd SE & Blackhall Studios DW 1	EB-T	A (0.0)	A (0.0)
		EB-R	A (0.0)	A (0.0)
		WB-L/T	A (7.7)	A (8.2)
		NB-L	B (13.3)	B (14.6)
		NB-R	A (9.3)	B (10.8)
2	Constitution Rd SE & Blackhall Studios DW 2	EB-T	A (0.0)	A (0.0)
		EB-R	A (0.0)	A (0.0)
		WB-L/T	A (7.9)	A (8.4)
		NB-L/R	B (11.4)	B (12.9)
3	International Park Dr SE & Continental Way	EB-L/T/R	B (10.8)	A (10.0)
		WB-L/T/R	B (10.1)	A (9.3)
		NB-L/T/R	A (7.4)	A (0.0)
		SB-L/T/R	A (7.6)	A (7.8)
4	Constitution Rd SE & International Park Dr SE	EB-L	A (8.2)	A (7.7)
		EB-T/R	A (0.0)	A (0.0)
		WB-L	A (8.0)	A (9.8)
		WB-T	A (0.0)	A (0.0)
		WB-R	A (0.0)	A (0.0)
		NB-L/T/R	C (19.9)	C (20.9)
		SB-L/T/R	C (18.6)	C (18.5)
8	Bouldercrest Rd SE & I-285 WB On Ramps	NB-T	A (0.0)	A (0.0)
		NB-R	A (0.0)	A (0.0)
		SB-T	A (0.0)	A (0.0)
		SB-R	A (0.0)	A (0.0)
10	Constitution Rd SE & Fayetteville Rd SE	WB-L/R	A (0.0)	A (0.0)
		NB-T/R	A (0.0)	A (0.0)
		SB-L/T	A (9.2)	A (9.9)
11	Fayetteville Rd SE/Bailey St & Woodstock Rd	EB-L/T/R	A (9.3)	B (10.5)
		WB-L/T/R	B (12.1)	B (10.3)
		NB-L/T/R	A (9.7)	A (9.3)
		SB-L/T/R	A (8.6)	A (8.7)
12	Moreland Ave (SR 42) & Bailey St	EB-L/T/R	F (*)	F (*)
		WB-L/T	F (*)	F (*)
		WB-R	F (800.4)	C (18.1)
		NB-L	B (14.7)	F (53.9)
		NB-T/R	A (0.0)	A (0.0)
		SB-L	F (*)	C (23.6)
		SB-T/R	A (0.0)	A (0.0)

* = Delay time of over 1000 seconds

Capacity results indicate that multiple movements at Moreland Avenue (SR 42) and Bailey Street are operating at LOS E or worse in both peak hours under no-build conditions. The eastbound and westbound movements are failing in both peak hours, except for the westbound right in the PM peak hour. The southbound left fails during the AM peak hour while the northbound left fails during the PM peak hour.

PROJECTED BUILD CONDITIONS

The intersections were evaluated under projected build conditions, with projected geometry and projected 2024 build traffic volumes. The results of the capacity analysis are summarized in Table 27 (signalized intersection) and Table 28 (unsignalized intersections) below. Capacity analysis reports for projected no-build conditions can be found in Appendix I.

The projected geometry that includes the Bouldercrest Road SE interchange modification (PI #713300) has also been included in the projected build conditions.

Table 27: CAPACITY ANALYSIS RESULTS, 2024 BUILD CONDITIONS (SIGNALIZED)

INTERSECTION	2024 BUILD CONDITIONS	
	AM PEAK HOUR	PM PEAK HOUR
5 Constitution Rd SE & Bouldercrest Rd SE	B (10.9)	B (10.5)
6 Bouldercrest Rd SE & Clifton Church Rd	C (34.6)	D (37.7)
7 Bouldercrest Rd SE & Continental Way/I-285 WB Off Ramp	C (21.9)	B (12.5)
9 Bouldercrest Rd SE & I-285 EB Ramps	C (24.2)	C (20.0)
13 Moreland Ave (SR 42) & I-285 WB Ramps	D (44.3)	C (32.4)
14 Moreland Ave (SR 42) & I-285 EB Ramps	C (28.4)	D (53.8)

Capacity results indicate that all of the signalized intersections operate at LOS D or better in both peak hours under build conditions.

Table 28: CAPACITY ANALYSIS RESULTS, 2024 BUILD CONDITIONS (UNSIGNALIZED)

INTERSECTION		MOVEMENT	BUILD CONDITIONS	
			AM PEAK HOUR	PM PEAK HOUR
1	Constitution Rd SE & Blackhall Studios DW 1	EB-T	A (0.0)	A (0.0)
		EB-R	A (0.0)	A (0.0)
		WB-L/T	A (8.0)	A (8.3)
		NB-L	C (15.8)	D (25.6)
		NB-R	B (10.0)	B (11.1)
2	Constitution Rd SE & Blackhall Studios DW 2	EB-T	A (0.0)	A (0.0)
		EB-R	A (0.0)	A (0.0)
		WB-L/T	A (8.3)	A (8.4)
		NB-L/R	B (13.0)	C (22.4)
3	International Park Dr SE & Continental Way	EB-L/T/R	C (17.1)	C (16.3)
		WB-L/T/R	D (32.3)	C (16.9)
		NB-L/T/R	A (8.1)	A (0.0)
		SB-L/T/R	A (7.9)	A (9.5)
4	Constitution Rd SE & International Park Dr SE	EB-L	A (8.2)	A (7.7)
		EB-T/R	A (0.0)	A (0.0)
		WB-L	A (8.6)	B (10.1)
		WB-T	A (0.0)	A (0.0)
		WB-R	A (0.0)	A (0.0)
		NB-L/T/R	F (93.6)	E (45.1)
		SB-L/T/R	F (55.1)	D (33.6)
8	Bouldercrest Rd SE & I-285 WB On Ramps	NB-T	A (0.0)	A (0.0)
		NB-R	A (0.0)	A (0.0)
		SB-T	A (0.0)	A (0.0)
		SB-R	A (0.0)	A (0.0)
10	Constitution Rd SE & Fayetteville Rd SE	WB-L/R	A (0.0)	A (0.0)
		NB-T/R	A (0.0)	A (0.0)
		SB-L/T	A (9.9)	A (10.0)
11	Fayetteville Rd SE/Bailey St & Woodstock Rd	EB-L/T/R	C (17.0)	B (12.8)
		WB-L/T/R	C (16.1)	C (18.8)
		NB-L/T/R	B (11.1)	B (10.8)
		SB-L/T/R	A (9.6)	A (9.7)
12	Moreland Ave (SR 42) & Bailey St	EB-L/T/R	F (*)	F (*)
		WB-L/T	F (*)	F (*)
		WB-R	F (*)	C (23.1)
		NB-L	B (14.7)	F (53.9)
		NB-T/R	A (0.0)	A (0.0)
		SB-L	F (*)	D (26.7)
		SB-T/R	A (0.0)	A (0.0)

* = Delay time of over 1000 seconds

Capacity results indicate that multiple movements at Moreland Avenue (SR 42) and Bailey Street are operating at LOS E or worse in both peak hours under existing conditions. The eastbound and westbound movements are failing in both peak hours, except for the westbound right in the PM peak hour. The southbound left fails during the AM peak hour while the northbound left fails during the PM peak hour. The northbound and southbound movements at Constitution Road SE and International Park Drive SE are failing in both peak hours and the AM peak hour, respectively.

SEGMENT ANALYSIS

Capacity analysis was also conducted for each roadway segment using the *Highway Capacity Software* from McTrans. Existing and projected volumes were evaluated. The HCM level-of-service definitions for two lane highways (Class III) and multilane highways are summarized in Table 29.

Table 29: ROADWAY SEGMENT LEVEL OF SERVICE CRITERIA

LEVEL OF SERVICE	TWO LANE HIGHWAYS (CLASS III)	MULTILANE HIGHWAYS
	PERCENT FREE FLOW SPEED (%)	DENSITY (PASSENGER CARS/MILE/LANE)
A	> 91.7	≤ 11
B	> 83.3 – 91.7	> 11 - 18
C	> 75.0 – 83.3	> 18 - 26
D	> 66.7 – 75.0	> 26 - 35
E	≤ 66.7	> 35 – 45
F	Volume/Capacity (V/C) > 1	> 45

Source: Highway Capacity Manual, Transportation Research Board, 6th Edition

The two-lane highway segment analysis defines Level of Service based on Percent Free Flow Speed (PFFS). The LOS for multilane highway segment analysis defines LOS in terms of density (passenger cars/mile/lane (pc/mi/ln). LOS D and above are considered acceptable conditions. Segment analysis reports can be found in Appendix J.

The existing volumes were evaluated under existing conditions. The 2024 no-build and build volumes were evaluated under projected conditions with the other planned roadway improvements that are to be completed.

EXISTING CONDITIONS

Table 30 summarizes the results of the roadway segment analysis for the existing volumes.

Table 30: SEGMENT ANALYSIS – 2021 EXISTING CONDITIONS

ROADWAY	SEGMENT	2021 EXISTING CONDITIONS			
		AM PEAK HOUR		PM PEAK HOUR	
		TWO-LANE	MULTILANE	TWO-LANE	MULTILANE
Moreland Ave (SR 42)	I-285 EB — I-285 WB	N/A	1513 vph (NB) B (12.3) 1741 vph (SB) C (20.2)	N/A	959 vph (NB) A (8.1) 2003 vph (SB) C (23.7)
	I-285 WB— Bailey St	N/A	2603 vph (NB) C (19.5) 762 vph (SB) A (6.5)	N/A	1027 vph (NB) A (8.9) 1753 vph (SB) B (13.5)
Bailey St	Moreland Ave (SR 42) — Woodstock Rd	124 vph (EB) 264 vph (WB) 0.17 (v/c) B (84.3%)	N/A	230 vph (EB) 212 vph (WB) 0.14 (v/c) C (82.2%)	N/A
Fayetteville Rd SE	Woodstock Rd — Constitution Rd SE	196 vph (EB) 279 vph (WB) 0.18 (v/c) C (80.3%)	N/A	349 vph (EB) 206 vph (WB) 0.23 (v/c) C (78.7%)	N/A
Constitution Rd SE	Fayetteville Rd SE — Blackhall DW 1	187 vph (EB) 273 vph (WB) 0.17 (v/c) C (79.5%)	N/A	342 vph (EB) 196 vph (WB) 0.24 (v/c) C (76.9%)	N/A
	Blackhall DW 1 — Blackhall DW 2	184 vph (EB) 329 vph (WB) 0.21 (v/c) C (80.2%)	N/A	342 vph (EB) 207 vph (WB) 0.23 (v/c) C (79.3%)	N/A
	Blackhall DW 2 — International Park Dr SE	207 vph (EB) 392 vph (WB) 0.24 (v/c) C (79.4%)	N/A	408 vph (EB) 221 vph (WB) 0.29 (v/c) C (77.7%)	N/A
	International Park Dr SE — Bouldercrest Rd SE	N/A	214 vph (EB) A (3.0) 442 vph (WB) A (5.4)	N/A	455 vph (EB) A (6.5) 233 vph (WB) A (3.4)
Bouldercrest Rd SE	Constitution Rd SE — Clifton Church Rd	N/A	419 vph (EB) A (6.5) 825 vph (WB) B (11.1)	N/A	698 vph (EB) A (10.3) 495 vph (WB) A (6.8)
	Clifton Church Rd — Continental Way	N/A	1205 vph (NB) B (17.5) 700 vph (SB) A (10.0)	N/A	1034 vph (NB) B (14.7) 1087 vph (SB) B (13.9)
	Continental Way — I-285 WB	N/A	1289 vph (NB) C (19.8) 762 vph (SB) B (12.2)	N/A	1088 vph (NB) B (16.7) 1177 vph (SB) B (16.8)
	I-285 WB — I-285 EB	1392 vph (NB) 412 vph (SB) 0.89 (v/c) E (60.6%)	N/A	1075 vph (NB) 878 vph (SB) 0.69 (v/c) E (60.9%)	N/A
International Park Dr SE	Constitution Rd SE — Continental Way	79 vph (NB) 203 vph (SB) 0.12 (v/c) B (88.0%)	N/A	66 vph (NB) 107 vph (SB) 0.07 (v/c) B (88.7%)	N/A
Continental Way	International Park Dr SE — Bouldercrest Rd SE	27 vph (EB) 118 vph (WB) 0.07 (v/c) B (89.5%)	N/A	50 vph (EB) 96 vph (WB) 0.06 (v/c) B (89.0%)	N/A

Segment analysis indicates that the segment of Bouldercrest Road SE between I-285 WB and I-285 EB operates at LOS E during both peak hours under existing conditions.

PROJECTED NO-BUILD CONDITIONS

Table 31 summarizes the results of the roadway segment analysis for the 2024 no-build volumes.

Table 31: SEGMENT ANALYSIS – 2024 NO-BUILD CONDITIONS

ROADWAY	SEGMENT	2024 NO-BUILD CONDITIONS			
		AM PEAK HOUR		PM PEAK HOUR	
		TWO-LANE	MULTILANE	TWO-LANE	MULTILANE
Moreland Ave (SR 42)	I-285 EB — I-285 WB	N/A	1589 vph (NB) B (12.9) 1828 vph (SB) C (21.2)	N/A	1007 vph (NB) A (8.6) 2103 vph (SB) C (24.9)
	I-285 WB— Bailey St	N/A	2733 vph (NB) C (20.5) 800 vph (SB) A (6.9)	N/A	1079 vph (NB) A (9.3) 1841 vph (SB) B (14.1)
Bailey St	Moreland Ave (SR 42) — Woodstock Rd	130 vph (EB) 278 vph (WB) 0.18 (v/c) B (83.6%)	N/A	242 vph (EB) 222 vph (WB) 0.15 (v/c) C (81.9%)	N/A
Fayetteville Rd SE	Woodstock Rd — Constitution Rd SE	206 vph (EB) 294 vph (WB) 0.19 (v/c) C (79.9%)	N/A	367 vph (EB) 217 vph (WB) 0.24 (v/c) C (78.3%)	N/A
Constitution Rd SE	Fayetteville Rd SE — Blackhall DW 1	197 vph (EB) 287 vph (WB) 0.18 (v/c) C (79.1%)	N/A	359 vph (EB) 206 vph (WB) 0.25 (v/c) C (76.5%)	N/A
	Blackhall DW 1 — Blackhall DW 2	194 vph (EB) 346 vph (WB) 0.22 (v/c) C (79.9%)	N/A	370 vph (EB) 218 vph (WB) 0.25 (v/c) C (78.6%)	N/A
	Blackhall DW 2 — International Park Dr SE	218 vph (EB) 412 vph (WB) 0.25 (v/c) C (78.9%)	N/A	429 vph (EB) 232 vph (WB) 0.30 (v/c) C (77.2%)	N/A
	International Park Dr SE — Bouldercrest Rd SE	N/A	225 vph (EB) A (3.2) 464 vph (WB) A (5.6)	N/A	479 vph (EB) A (6.8) 245 vph (WB) A (3.6)
Bouldercrest Rd SE	Constitution Rd SE — Clifton Church Rd	N/A	440 vph (EB) A (6.9) 867 vph (WB) B (11.7)	N/A	733 vph (EB) A (10.8) 520 vph (WB) A (7.2)
	Clifton Church Rd — Continental Way	N/A	1266 vph (NB) C (18.4) 736 vph (SB) A (10.6)	N/A	1086 vph (NB) B (15.4) 1142 vph (SB) B (14.6)
	Continental Way — I-285 WB	N/A	1105 vph (NB) B (17.0) 909 vph (SB) B (14.6)	N/A	913 vph (NB) B (14.0) 1452 vph (SB) C (20.8)
	I-285 WB — I-285 EB	N/A	1462 vph (NB) C (19.4) 433 vph (SB) A (5.8)	N/A	1129 vph (NB) B (14.4) 922 vph (SB) B (11.6)
International Park Dr SE	Constitution Rd SE — Continental Way	83 vph (NB) 213 vph (SB) 0.13 (v/c) B (87.7%)	N/A	69 vph (NB) 113 vph (SB) 0.07 (v/c) B (88.3%)	N/A
Continental Way	International Park Dr SE — Bouldercrest Rd SE	28 vph (EB) 118 vph (WB) 0.08 (v/c) B (89.4%)	N/A	52 vph (EB) 101 vph (WB) 0.06 (v/c) B (88.8%)	N/A

Segment analysis indicates that all of the roadway segments will operate at LOS C or better during both peak hours under no-build conditions.

PROJECTED BUILD CONDITIONS

Table 32 summarizes the results of the roadway segment analysis for the 2024 build volumes.

Table 32: SEGMENT ANALYSIS – 2024 BUILD CONDITIONS

ROADWAY	SEGMENT	2024 BUILD CONDITIONS			
		AM PEAK HOUR		PM PEAK HOUR	
		TWO-LANE	MULTILANE	TWO-LANE	MULTILANE
Moreland Ave (SR 42)	I-285 EB — I-285 WB	N/A	1710 vph (NB) B (13.9) 1837 vph (SB) C (21.3)	N/A	1032 vph (NB) A (8.8) 2155 vph (SB) C (25.5)
	I-285 WB— Bailey St	N/A	2894 vph (NB) C (21.7) 828 vph (SB) A (7.1)	N/A	1112 vph (NB) A (9.6) 1997 vph (SB) B (15.3)
Bailey St	Moreland Ave (SR 42) — Woodstock Rd	358 vph (EB) 318 vph (WB) 0.23 (v/c) C (78.9%)	N/A	288 vph (EB) 443 vph (WB) 0.29 (v/c) C (77.5%)	N/A
Fayetteville Rd SE	Woodstock Rd — Constitution Rd SE	434 vph (EB) 334 vph (WB) 0.33 (v/c) D (74.8%)	N/A	413 vph (EB) 438 vph (WB) 0.30 (v/c) C (75.2%)	N/A
Constitution Rd SE	Fayetteville Rd SE — Blackhall DW 1	425 vph (EB) 327 vph (WB) 0.27 (v/c) C (75.5%)	N/A	412 vph (EB) 427 vph (WB) 0.29 (v/c) D (73.8%)	N/A
	Blackhall DW 1 — Blackhall DW 2	308 vph (EB) 366 vph (WB) 0.23 (v/c) C (79.1%)	N/A	393 vph (EB) 329 vph (WB) 0.27 (v/c) C (77.8%)	N/A
	Blackhall DW 2 — International Park Dr SE	218 vph (EB) 412 vph (WB) 0.25 (v/c) C (78.9%)	N/A	429 vph (EB) 232 vph (WB) 0.30 (v/c) C (77.2%)	N/A
	International Park Dr SE — Bouldercrest Rd SE	N/A	261 vph (EB) A (3.7) 673 vph (WB) A (8.2)	N/A	682 vph (EB) A (9.8) 287 vph (WB) A (4.2)
Bouldercrest Rd SE	Constitution Rd SE — Clifton Church Rd	N/A	476 vph (EB) A (7.4) 1076 vph (WB) B (14.5)	N/A	936 vph (EB) B (13.8) 562 vph (WB) A (7.7)
	Clifton Church Rd — Continental Way	N/A	1421 vph (NB) C (20.6) 763 vph (SB) A (10.9)	N/A	1421 vph (NB) C (20.2) 1293 vph (SB) B (16.5)
	Continental Way — I-285 WB	N/A	1186 vph (NB) C (18.2) 974 vph (SB) B (15.6)	N/A	1186 vph (NB) C (18.2) 1818 vph (SB) C (26.0)
	I-285 WB — I-285 EB	N/A	1543 vph (NB) C (20.5) 485 vph (SB) A (6.4)	N/A	1145 vph (NB) B (14.7) 1216 vph (SB) B (15.3)
International Park Dr SE	Constitution Rd SE — Continental Way	121 vph (NB) 436 vph (SB) 0.26 (v/c) C (81.0%)	N/A	285 vph (NB) 158 vph (SB) 0.19 (v/c) C (79.0%)	N/A
Continental Way	International Park Dr SE — Bouldercrest Rd SE	66 vph (EB) 346 vph (WB) 0.05 (v/c) C (81.6%)	N/A	267 vph (EB) 145 vph (WB) 0.18 (v/c) C (79.2%)	N/A

Segment analysis indicates that all of the roadway segments will operate at LOS D or better during both peak hours under build conditions.

GDOT INTERSECTION CONTROL EVALUATION (ICE)

The GDOT Intersection Control Evaluation (ICE) tool was used to evaluate potential traffic control alternatives for all study intersections involving a state route.

Intersections mentioned below were waived from the ICE tool evaluation since they maintain acceptable operations in the existing, no-build, and build conditions, therefore not being adversely affected by the development. The following intersections were waived from ICE:

- Moreland Avenue (SR 42) and I-285 WB Ramps
- Moreland Avenue (SR 42) and I-285 EB Ramps

ICE spreadsheets are provided in Appendix K. Capacity analysis reports for the ICE alternatives are provided in Appendix L.

Moreland Avenue (SR 42) and Bailey Street

The ICE tool was used to determine feasible types of controls at the intersection of Moreland Avenue (SR 42) and Bailey Street. The following alternatives were identified in ICE for further analysis:

- Traffic Signal
- Signalized RCUT
- RCUT

In order to determine if a signal would be warranted at the intersection, the 8th highest hour volume was estimated and compared to the volume thresholds of Warrants #1 and #2, which are established in the *MUTCD* handbook. The daily volume was estimated from the highest peak hour volume and a K-factor of 9.0%. The 8th highest hour, which is estimated to be 5.6% of the daily traffic in accordance with the GDOT Design Manual, was then calculated from the daily volume through the intersection.

Further analysis was conducted to check the intersection against Warrant 2 – Four Hour Vehicular Volume. The 4th highest hour was calculated to be 7.5% from the K-factor and the 8th highest hour. This percentage was determined through interpolation between the K-factor of 9.0% and the accepted 8th highest hour percentage of 5.6%.

The derived 8th and 4th highest hour volumes were compared to the warrant requirements contained in the *MUTCD* handbook.

Table 33 below summarizes the results of the signal warrants, using 100% thresholds as required by GDOT for the study intersection of Moreland Avenue (SR 42) and Bailey Street. Signal warrants were evaluated using 2021 existing volumes, the 8th highest hour method, and the 4th highest hour method. The alternative method was used with the existing volumes (i.e. the mainline left turn volume was used for the minor street volume).

Table 33: TRAFFIC SIGNAL WARRANTS, MORELAND AVE (SR 42) & BAILEY ST

HIGHEST PEAK HOUR VOLUMES (MAJOR/MINOR)	ESTIMATED DAILY VOLUME (MAJOR/MINOR)	8 th HIGHEST PEAK HOUR (Warrant 1)	Warrant 1A (100%) 600/150	Warrant 1B (100%) 900/75	4 th HIGHEST PEAK HOUR (Warrant 2)	Warrant 2 (100%) 1400/80
2443/104	27144/1156	1520/65	Y/N	Y/N	2036/87	Y/Y

The intersection meets the 100% thresholds for signal warrants under Warrant 2 using the alternative method. Therefore, a traffic signal was evaluated as an alternative. Moreland Avenue (SR 42) and Bailey Street is experiencing failing operations in the existing conditions while also warranting a traffic signal.

Of the alternatives analyzed, the GDOT ICE tool identified the Traffic Signal as the most suitable method of traffic control at this intersection. Capacity analysis results for each of the ICE alternatives are shown in Table 34.

Table 34: CAPACITY ANALYSIS RESULTS, ICE ALTERNATIVES

ALTERNATIVE INTERSECTION DESIGNS	APPROACH-MOVEMENT	BUILD YEAR (2024)		DESIGN YEAR (2044)	
		AM PEAK HOUR	PM PEAK HOUR	AM PEAK HOUR	PM PEAK HOUR
Traffic Signal	Intersection	B (16.7)	B (10.7)	E (62.2)	B (12.4)
Signalized RCUT	EB-R	A (0.9)	A (1.0)	A (1.3)	A (1.1)
	South U-Turn	C (28.9)	A (1.2)	E (58.9)	A (1.6)
	WB-R	A (7.3)	B (10.5)	F (82.1)	C (32.5)
	North U-Turn	B (11.9)	F (159.6)	C (15.7)	F (825.1)
	NB-L	C (23.1)	B (13.3)	B (12.5)	F (112.1)
	NB-T	B (11.1)	B (17.7)	B (12.7)	C (34.4)
	NB-R	A (7.2)	A (4.5)	A (7.2)	A (8.1)
	SB-L	C (20.0)	B (10.8)	C (24.6)	C (26.6)
	SB-T/R	A (5.6)	C (21.7)	A (3.9)	C (21.3)
RCUT	EB-R	C (16.0)	D (28.2)	C (20.7)	F (54.5)
	South U-Turn	C (28.9)	A (1.2)	E (58.9)	A (1.6)
	WB-R	F (*)	F (81.2)	F (*)	F (293.2)
	North U-Turn	B (11.9)	F (159.6)	C (15.7)	F (825.1)
	NB-L	C (16.1)	F (81.1)	C (23.5)	F (442.4)
	NB-T	A (0.0)	A (0.0)	A (0.0)	A (0.0)
	NB-R	A (0.0)	A (0.0)	A (0.0)	A (0.0)
	SB-L	F (*)	C (22.8)	F (*)	F (91.5)
	SB-T/R	A (0.0)	A (0.0)	A (0.0)	A (0.0)

* =Delay time of over 1000 seconds

Delays for the Signalized RCUT alternative were taken from *SimTraffic* results as HCM 6th analysis would not provide a delay for the side streets.

The traffic signal is projected to operate at LOS B during both peak hours in the Build Year. It is projected to operate at LOS E during the AM peak hour while at LOS B during the PM peak hour. The signal suffers in the Design Year during the AM peak hour due to high northbound through volumes and southbound left turns. Both the signalized and unsignalized RCUT alternatives are projected to experience failing operations in the Build and Design Years due to the high number of mainline through volumes.

OTHER IMPROVEMENTS

The proposed development is projected to cause Constitution Road SE and International Park Drive SE to experience failing operations, therefore alternative methods of control were evaluated at this intersection.

Constitution Road SE and International Park Drive SE

The following alternatives were chosen for further analysis at the intersection of Constitution Road SE and International Park Drive SE.

- Add Northbound and Southbound Right Turn Lanes
- Single Lane Roundabout with a Northbound Right Turn Bypass Lane

Capacity analysis results for each of the alternatives are shown in Table 35. Capacity analysis reports for the alternatives are provided in Appendix M.

Table 35: CAPACITY ANALYSIS RESULTS, OTHER IMPROVEMENTS

ALTERNATIVE INTERSECTION DESIGNS	APPROACH-MOVEMENT	BUILD YEAR (2024)		DESIGN YEAR (2044)	
		AM PEAK HOUR	PM PEAK HOUR	AM PEAK HOUR	PM PEAK HOUR
Add NB/SB Right Turn Lanes	EB-L	A (8.2)	A (7.7)	A (8.6)	A (7.9)
	EB-T/R	A (0.0)	A (0.0)	A (0.0)	A (0.0)
	WB-L	A (8.6)	B (10.1)	A (9.2)	B (11.5)
	WB-T	A (0.0)	A (0.0)	A (0.0)	A (0.0)
	WB-R	A (0.0)	A (0.0)	A (0.0)	A (0.0)
	NB-L/T	F (131.4)	E (35.9)	F (*)	F (155.9)
	NB-R	B (10.5)	B (13.5)	B (11.2)	C (16.6)
	SB-L/T	F (62.3)	E (37.7)	F (233.1)	F (170.2)
	SB-R	B (10.3)	A (9.4)	B (11.3)	A (9.9)
Single Lane Roundabout w/ NB Bypass Lane	EB	A (7.3)	A (8.8)	A (8.8)	B (12.2)
	WB	B (10.2)	A (7.9)	B (13.4)	A (9.3)
	NB	A (1.3)	A (1.1)	A (1.5)	A (1.4)
	SB	A (7.1)	A (5.1)	A (9.7)	A (5.8)

* =Delay time of over 1000 seconds

Capacity analysis results indicate that the northbound and southbound left/through lanes are projected to experience failing levels of service during both peak hours in the Build and Design Years with added right turn lanes. The results indicate that the single lane roundabout with a northbound right turn bypass lane is projected to operate at LOS B or better during both peak hours in the Build and Design Years.

SUMMARY OF FINDINGS

- The proposed Blackhall Phase 2 development is an expansion of the existing Blackhall Studios off Constitution Road SE in Dekalb County, Georgia.
- An interchange modification project (PI #713300) affects the interchange of Bouldercrest Road SE and I-285 and was assumed complete for the projected no-build and build conditions.
- The production studios development will consist of warehouse, office, and film stage land uses:
 - Warehouse: 420,000 total square feet
 - Office: 200,100 total square feet
 - Film Stage: 552,436 total square feet
- There are four points of ingress/egress for the site:
 - Two at Blackhall Studios' current driveways on Constitution Road SE
 - One from International Park Drive SE onto Constitution Road SE
 - One from Continental Way onto Bouldercrest Road SE
- The peak hours were established to be 7:15 to 8:15 AM and 4:00 to 5:00 PM.
- Recent traffic volume counts collected within the past few years were used in comparison with newly counted traffic volumes to establish pre-COVID traffic for the existing year 2021.
- Using data collected from the Atlanta Regional Commission (ARC) and trend analysis from GDOT count stations, the background growth rate was found to be 1.50%.
- The proposed development is projected to generate 7,028 daily trips.
 - 789 in the AM peak hour (673 entering, 116 exiting)
 - 787 in the PM peak hour (135 entering, 652 exiting)
 - The studios are also expected to operate during off-peak hours, reducing the anticipated peak hour impacts.
- Crash history from the past five years was obtained for all fourteen intersections. During this time period, two fatalities were recorded. The most common crash types were rear end collisions, which accounted for 46% of all recorded crashes.
- Capacity analysis results under 2021 existing conditions shows the signalized intersections operating at LOS D or better in both peak hours. Moreland Avenue (SR 42) and Bailey Street is the only unsignalized intersection with failing movements, occurring in both peak hours.

- Capacity analysis results under 2024 no-build conditions shows the signalized intersections operating at LOS D or better in both peak hours. Moreland Avenue (SR 42) and Bailey Street is the only unsignalized intersection with failing movements, occurring in both peak hours.
- Capacity analysis results under 2024 build conditions shows the signalized intersections operating at LOS D or better in both peak hours. As for unsignalized intersections, Moreland Avenue (SR 42) and Bailey Street along with Constitution Road SE and International Park Drive SE are the only intersections with failing movements, occurring in both peak hours.
- Segment analysis results indicate that the only roadway segment to experience failing levels of service is Bouldercrest Road SE from I-285 WB to I-285 EB (interchange bridge) during both peak hours in the existing conditions.
 - Once the interchange modification project (PI #713300) is complete, the interchange is projected to operate at acceptable levels of service during both peak hours in the 2024 no-build and 2024 build conditions.
 - All other roadway segments operate/are projected to operate at LOS D or better during both peak hours in the 2021 existing, 2024 no-build, and 2024 build conditions.
- The GDOT Intersection Control Evaluation (ICE) tool was used to develop possible alternatives at the study intersections involving a state route. The tool identified the most suitable alternatives at the following intersections:
 - Moreland Avenue (SR 42) and Bailey Street
 - Traffic Signal (#1 Ranked Alternative by ICE)
 - Signalized RCUT
 - RCUT
 - The intersections of Moreland Avenue (SR 42) with the I-285 WB Ramps and the I-285 EB Ramps were both waived from the ICE process due to maintaining acceptable operation through build conditions. The proposed development is not projected to adversely affect these intersections.
- Alternatives were also evaluated at the intersection of Constitution Road SE and International Park Drive SE due to the proposed development being projected to cause the intersection to experience failing operation.
 - Add Northbound/Southbound Right Turn Lanes
 - Single Lane Roundabout with a Northbound Right Turn Bypass Lane

RECOMMENDATIONS

Based on the findings from the study, the recommendations are as follows:

- Moreland Avenue (SR 42) and Bailey Street (Illustrated in Figure 20)
 - Install a traffic signal.
 - Implement a left, through/right lane configuration on both side streets.
 - The westbound left turn lane should have approximately 300 feet of full width storage.
 - Extend the southbound left turn lane to be back-to-back with the northbound left turn lane just north of it.
 - Install a northbound right turn lane with a minimum of 175 feet of full width storage.
 - The southbound and westbound lefts should both have a protected/permissive phase.
- Constitution Road SE and International Park Drive SE (Illustrated in Figure 21)
 - Install a single lane roundabout (inscribed diameter of 130 feet) with a northbound right turn bypass lane.
 - The westbound approach on Constitution Road SE will need to be reconfigured/restriped to have the westbound lanes merge into a single lane approach.
 - The northbound right turn bypass lane will merge freely into the right lane of the two eastbound lanes east of the intersection.
- Constitution Road SE and Blackhall Studios Driveway 1 (Illustrated in Figure 22)
 - Extend the eastbound right turn lane to a minimum of 175 feet of full width storage.
 - Install a westbound left turn lane with a minimum of 235 feet of full width storage.
- Constitution Road SE and Blackhall Studios Driveway 2 (Illustrated in Figure 22)
 - Extend the eastbound right turn lane to a minimum of 175 feet of full width storage.
 - Install a westbound left turn lane with a minimum of 235 feet of full width storage if possible due to the bridge crossing over Intrinchment Creek.
 - Implement a right turn radius of 75 feet exiting the driveway for any trucks that may leave the facility.

Figure 20 shows the improvements that are recommended to be made for the intersection of Moreland Avenue (SR 42) and Bailey Street.

Figure 20: MORELAND AVE (SR 42) & BAILEY ST PROPOSED IMPROVEMENTS

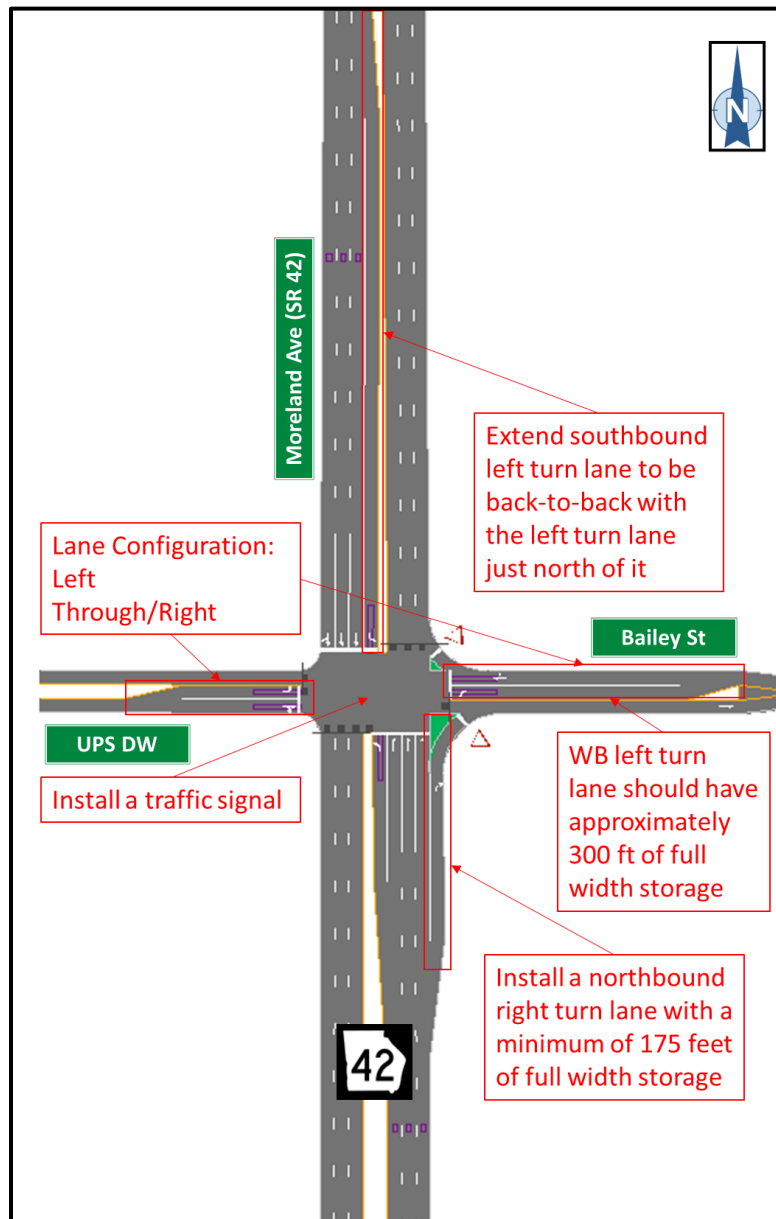


Figure 21 shows the improvements that are recommended to be made for the intersection of Constitution Road SE and International Park Drive SE.

Figure 21: CONSTITUTION RD SE & INTERNATIONAL PARK DR SE PROPOSED IMPROVEMENTS

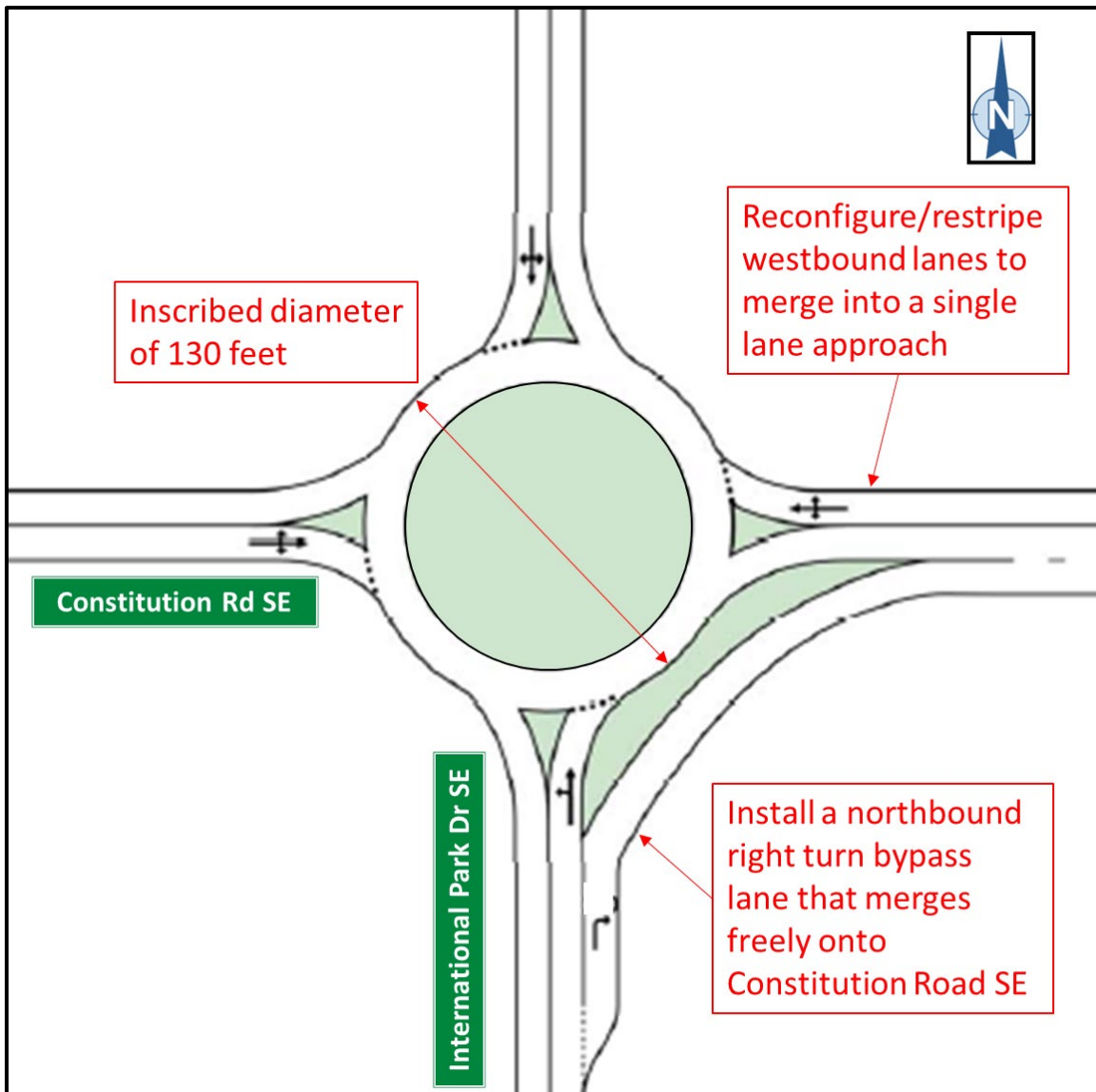
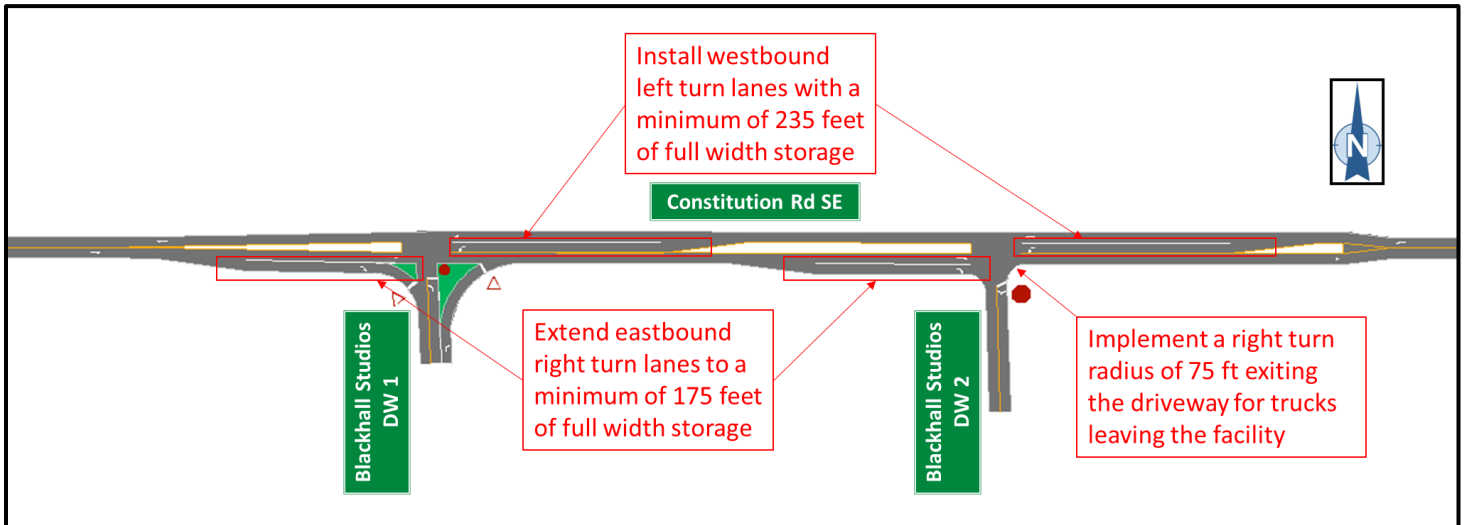


Figure 22 shows the improvements that are recommended to be made at the Blackhall Studios driveways on Constitution Road SE.

Figure 22: BLACKHALL STUDIOS DRIVEWAYS PROPOSED IMPROVEMENTS



APPENDICES

SITE PLAN A

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CAPACITY ANALYSIS REPORTS – NO-BUILD CONDITIONS H

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ICE SPREADSHEETS..... K

CAPACITY ANALYSIS REPORTS – ICE ALTERNATIVES L

CAPACITY ANALYSIS REPORTS – OTHER IMPROVEMENTS..... M

APPENDIX A

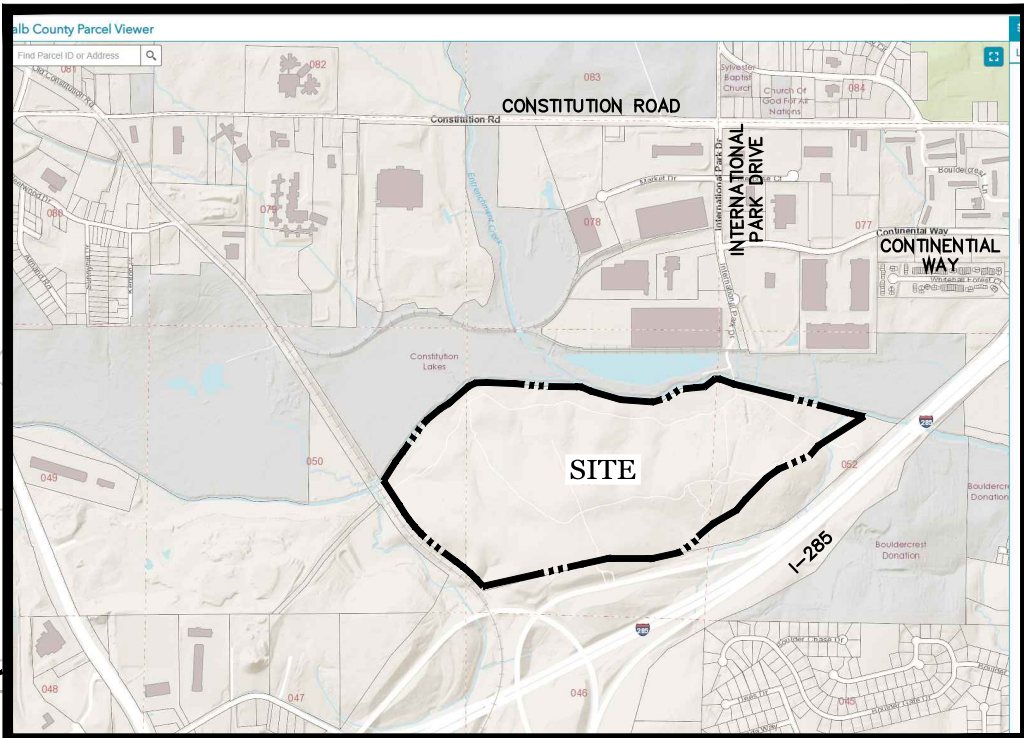
SITE PLAN



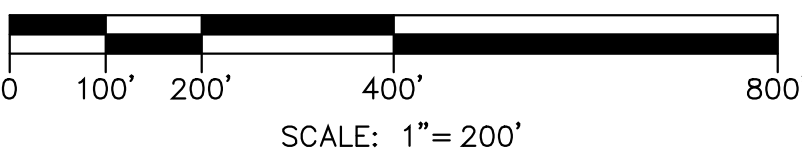
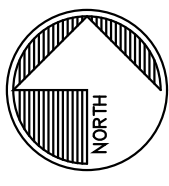
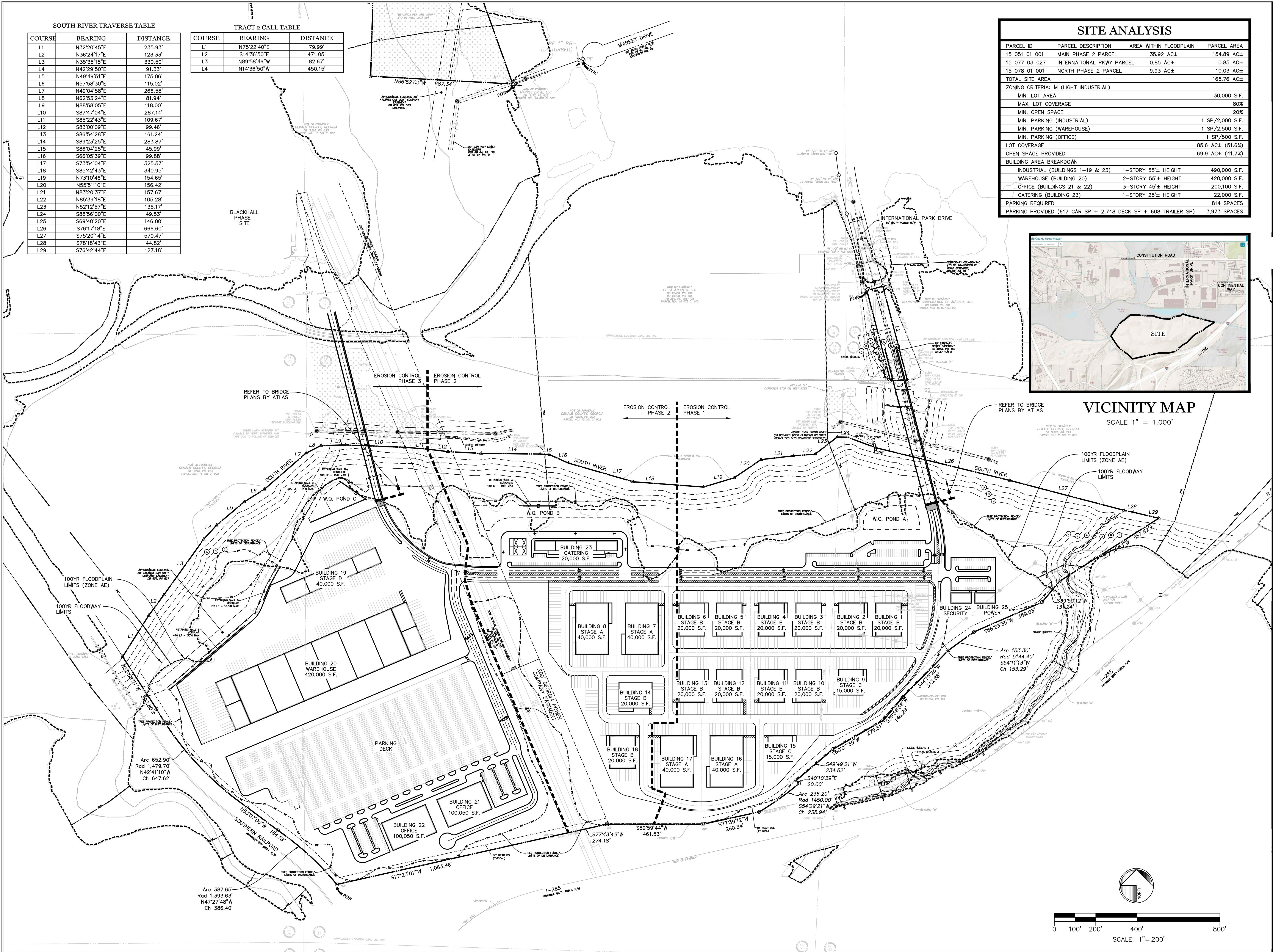
SOUTH RIVER TRAVERSE TABLE		
COURSE	BEARING	DISTANCE
L1	N32°20'45"E	235.93'
L2	N36°24'17"E	123.33'
L3	N35°35'15"E	330.50'
L4	N42°29'50"E	91.33'
L5	N49°49'51"E	175.06'
L6	N57°58'30"E	115.02'
L7	N49°04'58"E	266.58'
L8	N62°53'24"E	81.94'
L9	N88°58'05"E	118.00'
L10	S87°47'04"E	287.14'
L11	S85°22'43"E	109.67'
L12	S83°00'09"E	99.46'
L13	S86°54'28"E	161.24'
L14	S89°23'25"E	283.87'
L15	S86°04'25"E	45.99'
L16	S86°05'39"E	99.88'
L17	S73°54'04"E	325.57'
L18	S85°42'43"E	340.95'
L19	N73°10'46"E	154.65'
L20	N65°51'10"E	156.42'
L21	N63°20'37"E	157.67'
L22	N85°39'18"E	105.28'
L23	N52°12'57"E	135.17'
L24	S88°56'00"E	49.53'
L25	S69°40'20"E	146.00'
L26	S76°17'18"E	666.60'
L27	S75°20'14"E	570.47'
L28	S78°18'43"E	44.82'
L29	S76°42'44"E	127.18'

TRACT 2 CALL TABLE		
COURSE	BEARING	DISTANCE
L1	N75°22'40"E	79.99'
L2	S14°36'50"E	471.05'
L3	N89°58'46"W	82.67'
L4	N14°36'50"W	450.15'

SITE ANALYSIS			
PARCEL ID	PARCEL DESCRIPTION	AREA WITHIN FLOODPLAIN	PARCEL AREA
15 051 01 001	MAIN PHASE 2 PARCEL	35.92 AC±	154.89 AC±
15 077 03 027	INTERNATIONAL PKWY PARCEL	0.85 AC±	0.85 AC±
15 078 01 001	NORTH PHASE 2 PARCEL	9.93 AC±	10.03 AC±
TOTAL SITE AREA			165.76 AC±
ZONING CRITERIA: M (LIGHT INDUSTRIAL)			
MIN. LOT AREA			30,000 S.F.
MAX. LOT COVERAGE			80%
MIN. OPEN SPACE			20%
MIN. PARKING (INDUSTRIAL)			1 SP/2,000 S.F.
MIN. PARKING (WAREHOUSE)			1 SP/2,500 S.F.
MIN. PARKING (OFFICE)			1 SP/500 S.F.
LOT COVERAGE			85.6 AC± (51.6%)
OPEN SPACE PROVIDED			69.9 AC± (41.7%)
BUILDING AREA BREAKDOWN			
INDUSTRIAL (BUILDINGS 1-19 & 23)		1-STORY 55'± HEIGHT	490,000 S.F.
WAREHOUSE (BUILDING 20)		2-STORY 55'± HEIGHT	420,000 S.F.
OFFICE (BUILDINGS 21 & 22)		3-STORY 45'± HEIGHT	200,100 S.F.
CATERING (BUILDING 23)		1-STORY 25'± HEIGHT	22,000 S.F.
PARKING REQUIRED			814 SPACES
PARKING PROVIDED (617 CAR SP + 2,748 DECK SP + 608 TRAILER SP)			3,973 SPACES



VICINITY MAP
SCALE 1" = 1,000'



CP&E

CHRISTOPHER PLANNING
& ENGINEERING



GSWCC LEVEL II CERTIFIED
DESIGN PROFESSIONAL #05744
(EXP. 02.17.2021)

12460 CRABAPPLE ROAD, SUITE 202-612
ALPHARETTA, GA 3004
PHONE 770.331.7303

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CONSTRUCTION PLANS
FOR:

BLACKHALL
STUDIOS

ATLANTA PHASE 2
CONSTITUTION ROAD SOUTH PHASE

LAND LOTS 50-52 & 77-78
5TH DISTRICT
DEKALB COUNTY, GEORGIA

DRI# 3214

FOR:

BLACKHALL
STUDIOS

HENRICO 183, LLC
1415 CONSTITUTION ROAD SE
ATLANTA, GA 30316

CONTACT: MR. CHET MIRABAL
770.480.5343

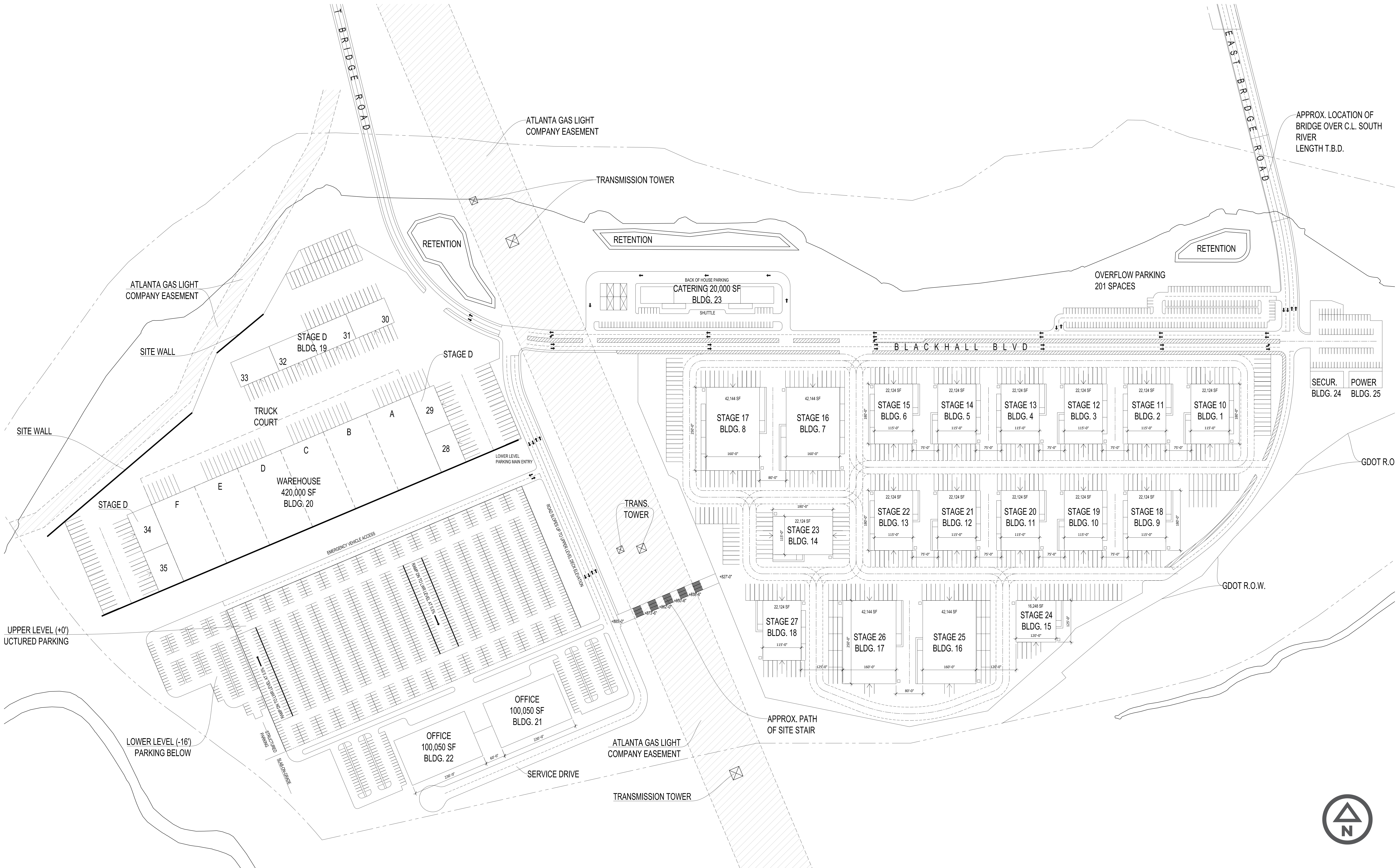
REVISIONS

03.07.2021 SUBMITTAL TO COUNTY

DATE: JANUARY 20, 2021 CP&E DRAWING NO: 2020114.10c.dwg

OVERALL
SITE PLAN

SHEET NO. 3 OF 42



STAGES:
STAGE A - 4 BLDGS x (42,144 SF) = 168,576 SF
STAGE B - 13 BLDGS x (22,124 SF) = 287,612 SF
STAGE C - 1 BLDGS x (16,248 SF) = 16,248 SF
STAGE D - 8 BLDGS x (10,000 SF) = 80,000 SF
TOTAL STAGE SF - 552,436 SF

OFFICE BLDGS - 2 BLDGS x 100,050 SF = 200,100 SF

WAREHOUSE BLDG - 420,000 SF

CATERING BLDG:
CATERING - 20,000 SF
RESTROOM - 2,272 SF
TOTAL - 22,272 SF

PARKING SPACES:
CAR PARKING SPACES (9'-0" x 18'-0")
GENERAL - 3,060
CATERING - 70
SECURITY + OVERFLOW - 285
TOTAL CAR PARKING - 3,415

DOCK DOORS / LOADING SPACES (13'-6" x 60'-0") - 42
STAGE / BASECAMP PARKING (13'-6" x 60'-0") - 585

TOTAL ACREAGE (INCLUDING TRACTS 1 + 2): 165.8
TOTAL PAVED/DEVELOPED ACREAGE: 84.1 (50.7%)
TOTAL LANDSCAPED ACREAGE: 81.7 (49.3%)



APPENDIX B

RAILROAD CROSSING INVENTORY FORM



U. S. DOT CROSSING INVENTORY FORM

DEPARTMENT OF TRANSPORTATION

FEDERAL RAILROAD ADMINISTRATION

OMB No. 2130-0017

Instructions for the initial reporting of the following types of new or previously unreported crossings: For public highway-rail grade crossings, complete the entire inventory Form. For private highway-rail grade crossings, complete the Header, Parts I and II, and the Submission Information section. For public pathway grade crossings (including pedestrian station grade crossings), complete the Header, Parts I and II, and the Submission Information section. For Private pathway grade crossings, complete the Header, Parts I and II, and the Submission Information section. For grade-separated highway-rail or pathway crossings (including pedestrian station crossings), complete the Header, Part I, and the Submission Information section. For changes to existing data, complete the Header, Part I Items 1-3, and the Submission Information section, in addition to the updated data fields. Note: For private crossings only, Part I Item 20 and Part III Item 2.K. are required unless otherwise noted. An asterisk * denotes an optional field.

A. Revision Date (MM/DD/YYYY) 03 / 31 / 2021	B. Reporting Agency ☒ Railroad ☐ Transit ☐ State ☐ Other	C. Reason for Update (Select only one) ☒ Change in Data ☐ Re-Open ☐ New Crossing ☐ Date Change Only ☐ Closed ☐ Change in Primary Operating RR ☐ No Train Traffic ☐ Quiet Zone Update ☐ Admin. Correction	D. DOT Crossing Inventory Number 718383S
---	--	--	--

Part I: Location and Classification Information

1. Primary Operating Railroad Norfolk Southern Railway Company [NS]		2. State GEORGIA		3. County DE KALB	
4. City / Municipality ☐ In ☒ Near DECATUR		5. Street/Road Name & Block Number CONSTITUTION RD (Street/Road Name) * (Block Number)		6. Highway Type & No. CR5149	
7. Do Other Railroads Operate a Separate Track at Crossing? ☐ Yes ☒ No If Yes, Specify RR			8. Do Other Railroads Operate Over Your Track at Crossing? ☐ Yes ☒ No If Yes, Specify RR		
9. Railroad Division or Region ☐ None COASTAL		10. Railroad Subdivision or District ☐ None ATLANTA TERMINAL		11. Branch or Line Name ☒ None	
12. RR Milepost 0158.960 H (prefix) (nnnn.nnn) (suffix)					
13. Line Segment *		14. Nearest RR Timetable Station *		15. Parent RR (if applicable) ☒ N/A	
16. Crossing Owner (if applicable) ☒ N/A					
17. Crossing Type ☒ Public ☐ Private	18. Crossing Purpose ☒ Highway ☐ Pathway, Ped. ☐ Station, Ped.	19. Crossing Position ☒ At Grade ☐ RR Under ☐ RR Over	20. Public Access (if Private Crossing) ☐ Yes ☐ No	21. Type of Train ☒ Freight ☐ Intercity Passenger ☐ Commuter ☐ Transit ☐ Shared Use Transit ☐ Tourist/Other	22. Average Passenger Train Count Per Day ☐ Less Than One Per Day ☐ Number Per Day 0
23. Type of Land Use ☐ Open Space ☐ Farm ☐ Residential ☐ Commercial ☒ Industrial ☐ Institutional ☐ Recreational ☐ RR Yard					
24. Is there an Adjacent Crossing with a Separate Number? ☐ Yes ☒ No If Yes, Provide Crossing Number			25. Quiet Zone (FRA provided) ☒ No ☐ 24 Hr ☐ Partial ☐ Chicago Excused Date Established		
26. HSR Corridor ID ☒ N/A	27. Latitude in decimal degrees (WGS84 std: nn.nnnnnnn) 33.689058		28. Longitude in decimal degrees (WGS84 std: -nnn.nnnnnnn) -84.342538		29. Lat/Long Source ☐ Actual ☒ Estimated
30.A. Railroad Use *			31.A. State Use *		
30.B. Railroad Use *			31.B. State Use *		
30.C. Railroad Use *			31.C. State Use *		
30.D. Railroad Use *			31.D. State Use *		
32.A. Narrative (Railroad Use) *			32.B. Narrative (State Use) *		
33. Emergency Notification Telephone No. (posted) 800-946-4744		34. Railroad Contact (Telephone No.) 800-946-4744		35. State Contact (Telephone No.) 404-631-1375	

Part II: Railroad Information

1. Estimated Number of Daily Train Movements				
1.A. Total Day Thru Trains (6 AM to 6 PM) 11	1.B. Total Night Thru Trains (6 PM to 6 AM) 11	1.C. Total Switching Trains 2	1.D. Total Transit Trains 0	1.E. Check if Less Than One Movement Per Day ☐ How many trains per week? _____
2. Year of Train Count Data (YYYY) 2021		3. Speed of Train at Crossing 3.A. Maximum Timetable Speed (mph) 60 3.B. Typical Speed Range Over Crossing (mph) From 30 to 40		
4. Type and Count of Tracks Main 1 Siding 0 Yard 0 Transit 0 Industry 0				
5. Train Detection (Main Track only) ☒ Constant Warning Time ☐ Motion Detection ☐ AFO ☐ PTC ☐ DC ☐ Other ☐ None				
6. Is Track Signaled? ☐ Yes ☒ No		7.A. Event Recorder ☒ Yes ☐ No		7.B. Remote Health Monitoring ☐ Yes ☒ No

U. S. DOT CROSSING INVENTORY FORM

A. Revision Date (MM/DD/YYYY) 03/31/2021		PAGE 2		D. Crossing Inventory Number (7 char.) 718383S	
Part III: Highway or Pathway Traffic Control Device Information					
1. Are there Signs or Signals? ☒ Yes ☐ No		2. Types of Passive Traffic Control Devices associated with the Crossing			
2.A. Crossbuck Assemblies (count) 0		2.B. STOP Signs (R1-1) (count) 0	2.C. YIELD Signs (R1-2) (count)	2.D. Advance Warning Signs (Check all that apply; include count) ☐ None ☒ W10-1 ☐ W10-3 ☐ W10-11 ☐ W10-2 ☐ W10-4 ☐ W10-12	
2.E. Low Ground Clearance Sign (W10-5) ☐ Yes (count _____) ☒ No		2.F. Pavement Markings ☒ Stop Lines ☐ Dynamic Envelope ☒ RR Xing Symbols ☐ None		2.G. Channelization Devices/Medians ☐ All Approaches ☐ Median ☐ One Approach ☒ None	
2.H. EXEMPT Sign (R15-3) ☐ Yes ☐ No		2.I. ENS Sign (I-13) Displayed ☒ Yes ☐ No		2.J. Other MUTCD Signs ☐ Yes ☒ No Specify Type _____ Count _____ Specify Type _____ Count _____ Specify Type _____ Count _____	
2.K. Private Crossing Signs (if private) ☐ Yes ☐ No		2.L. LED Enhanced Signs (List types)			
3. Types of Train Activated Warning Devices at the Grade Crossing (specify count of each device for all that apply)					
3.A. Gate Arms (count) Roadway <u>2</u> Pedestrian <u>0</u>		3.B. Gate Configuration ☒ 2 Quad ☐ Full (Barrier) Resistance ☐ 3 Quad ☐ Median Gates ☐ 4 Quad		3.C. Cantilevered (or Bridged) Flashing Light Structures (count) Over Traffic Lane <u>2</u> ☒ Incandescent Not Over Traffic Lane <u>0</u> ☐ LED	
3.D. Mast Mounted Flashing Lights (count of masts) <u>2</u> ☒ Incandescent ☐ LED ☒ Back Lights Included ☒ Side Lights Included		3.E. Total Count of Flashing Light Pairs 8		3.F. Installation Date of Current Active Warning Devices: (MM/YYYY) _____/_____/_____ ☐ Not Required	
3.G. Wayside Horn ☐ Yes Installed on (MM/YYYY) ____/____/_____ ☒ No		3.H. Highway Traffic Signals Controlling Crossing ☐ Yes ☒ No		3.I. Bells (count) 1	
3.J. Non-Train Active Warning ☐ Flagging/Flagman ☐ Manually Operated Signals ☐ Watchman ☐ Floodlighting ☒ None				3.K. Other Flashing Lights or Warning Devices Count <u>0</u> Specify type <u>0</u>	
4.A. Does nearby Hwy Intersection have Traffic Signals? ☐ Yes ☒ No		4.B. Hwy Traffic Signal Interconnection ☒ Not Interconnected ☐ For Traffic Signals ☐ For Warning Signs		4.C. Hwy Traffic Signal Preemption ☐ Simultaneous ☐ Advance	
5. Highway Traffic Pre-Signals ☐ Yes ☒ No Storage Distance * <u>0</u> Stop Line Distance * <u>0</u>		6. Highway Monitoring Devices (Check all that apply) ☐ Yes - Photo/Video Recording ☐ Yes - Vehicle Presence Detection ☒ None			
Part IV: Physical Characteristics					
1. Traffic Lanes Crossing Railroad ☐ One-way Traffic ☐ Two-way Traffic Number of Lanes <u>2</u> ☐ Divided Traffic		2. Is Roadway/Pathway Paved? ☒ Yes ☐ No		3. Does Track Run Down a Street? ☐ Yes ☒ No	
4. Is Crossing Illuminated? (Street lights within approx. 50 feet from nearest rail) ☐ Yes ☒ No		5. Crossing Surface (on Main Track, multiple types allowed) Installation Date * (MM/YYYY) ____/____/_____ Width * _____ Length * _____ ☐ 1 Timber ☒ 2 Asphalt ☐ 3 Asphalt and Timber ☐ 4 Concrete ☐ 5 Concrete and Rubber ☐ 6 Rubber ☐ 7 Metal ☐ 8 Unconsolidated ☐ 9 Composite ☐ 10 Other (specify) _____			
6. Intersecting Roadway within 500 feet? ☒ Yes ☐ No If Yes, Approximate Distance (feet) _____		7. Smallest Crossing Angle ☐ 0° - 29° ☐ 30° - 59° ☒ 60° - 90°		8. Is Commercial Power Available? * ☒ Yes ☐ No	
Part V: Public Highway Information					
1. Highway System ☐ (01) Interstate Highway System ☐ (02) Other Nat Hwy System (NHS) ☒ (03) Federal AID, Not NHS ☐ (08) Non-Federal Aid		2. Functional Classification of Road at Crossing ☐ (0) Rural ☒ (1) Urban ☐ (1) Interstate ☐ (5) Major Collector ☐ (2) Other Freeways and Expressways ☐ (3) Other Principal Arterial ☐ (6) Minor Collector ☐ (4) Minor Arterial ☒ (7) Local		3. Is Crossing on State Highway System? ☐ Yes ☒ No	
4. Highway Speed Limit 45 _____ MPH ☒ Posted ☐ Statutory		5. Linear Referencing System (LRS Route ID) *			
6. LRS Milepost *		7. Annual Average Daily Traffic (AADT) Year <u>1988</u> AADT <u>003700</u>			
8. Estimated Percent Trucks <u>20</u> %		9. Regularly Used by School Buses? ☐ Yes ☒ No Average Number per Day <u>0</u>		10. Emergency Services Route ☐ Yes ☐ No	
Submission Information - This information is used for administrative purposes and is not available on the public website.					
Submitted by _____ Organization _____ Phone _____ Date _____ Public reporting burden for this information collection is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed and completing and reviewing the collection of information. According to the Paperwork Reduction Act of 1995, a federal agency may not conduct or sponsor, and a person is not required to, nor shall a person be subject to a penalty for failure to comply with, a collection of information unless it displays a currently valid OMB control number. The valid OMB control number for information collection is 2130-0017. Send comments regarding this burden estimate or any other aspect of this collection, including for reducing this burden to: Information Collection Officer, Federal Railroad Administration, 1200 New Jersey Ave. SE, MS-25 Washington, DC 20590.					

APPENDIX C

TURNING MOVEMENT COUNTS



2018 MORELAND AVENUE (SR 42) COUNTS

TRAFFIC DATA SERVICES

Phone: (678) 687-8266 Fax: (404) 294-6122 E-mail: info@trafficdataservices.com

INTERSECTION VEHICLE CLASSIFICATION TURNING MOVEMENT COUNT SUMMARY

CLIENT: GRICE CONSULTING GROUP
PROJECT: MORELAND AVENUE TRAFFIC STUDY
DATE: WEDNESDAY, MAY 16TH 2018
PERIOD: 6:30 AM TO 9:30 AM
INTERSECTION: N/S MORELAND AVENUE
E/W BAILEY STREET

15-MIN COUNT	1 SBRT				2 SBTH				3 SBLT				4 WBRT				5 WBTH				6 WBLT			
	CARS	HEAVY DUTY TRUCKS	BUSES	TOTAL	CARS	HEAVY DUTY TRUCKS	BUSES	TOTAL	CARS	HEAVY DUTY TRUCKS	BUSES	TOTAL	CARS	HEAVY DUTY TRUCKS	BUSES	TOTAL	CARS	HEAVY DUTY TRUCKS	BUSES	TOTAL	CARS	HEAVY DUTY TRUCKS	BUSES	TOTAL
630-645	0	0	0	0	96	11	0	107	4	0	0	4	11	2	1	14	0	0	0	0	4	0	0	4
645-700	0	0	0	0	88	13	0	101	15	1	2	18	23	0	1	24	1	0	0	1	7	0	0	7
700-715	3	0	0	3	106	19	0	125	14	1	0	15	22	1	1	24	0	0	0	0	4	2	0	6
715-730	0	0	0	0	124	18	1	143	30	1	1	32	29	2	0	31	0	0	0	0	5	1	0	6
730-745	3	0	0	3	139	11	0	150	19	2	1	22	33	2	2	37	0	0	0	0	3	0	0	3
745-800	0	0	0	0	171	10	0	181	27	0	1	28	24	3	0	27	0	0	0	0	1	2	0	3
800-815	1	1	0	2	155	19	0	174	11	1	1	13	27	0	0	27	0	0	0	0	7	1	0	8
815-830	1	0	0	1	163	12	0	175	12	2	2	16	38	3	1	42	0	0	0	0	4	1	0	5
830-845	1	0	0	1	132	26	0	158	11	1	0	12	17	3	1	21	0	0	0	0	13	1	0	14
845-900	0	0	0	0	123	10	0	133	18	3	2	23	17	2	1	20	1	0	0	1	5	2	0	7
900-915	1	0	0	1	102	15	0	117	8	1	0	9	17	3	0	20	0	0	0	0	8	1	0	9
915-930	2	2	0	4	96	10	0	106	13	1	2	16	13	1	1	15	0	0	0	0	7	1	0	8
HOURL TOTALS																								
630-730	3	0	0	3	414	61	1	476	63	3	3	69	85	5	3	93	1	0	0	1	20	3	0	23
645-745	6	0	0	6	457	61	1	519	78	5	4	87	107	5	4	116	1	0	0	1	19	3	0	22
700-800	6	0	0	6	540	58	1	599	90	4	3	97	108	8	3	119	0	0	0	0	13	5	0	18
715-815	4	1	0	5	589	58	1	648	87	4	4	95	113	7	2	122	0	0	0	0	16	4	0	20
730-830	5	1	0	6	628	52	0	680	69	5	5	79	122	8	3	133	0	0	0	0	15	4	0	19
745-845	3	1	0	4	621	67	0	688	61	4	4	69	106	9	2	117	0	0	0	0	25	5	0	30
800-900	3	1	0	4	573	67	0	640	52	7	5	64	99	8	3	110	1	0	0	1	29	5	0	34
815-915	3	0	0	3	520	63	0	583	49	7	4	60	89	11	3	103	1	0	0	1	30	5	0	35
830-930	4	2	0	6	453	61	0	514	50	6	4	60	64	9	3	76	1	0	0	1	33	5	0	38

15-MIN COUNT	7 NBRT				8 NBTH				9 NBLT				10 EBRT				11 EBTH				12 EBLT				TOTALS			
	CARS	HEAVY DUTY TRUCKS	BUSES	TOTAL	CARS	HEAVY DUTY TRUCKS	BUSES	TOTAL	CARS	HEAVY DUTY TRUCKS	BUSES	TOTAL	CARS	HEAVY DUTY TRUCKS	BUSES	TOTAL	CARS	HEAVY DUTY TRUCKS	BUSES	TOTAL	CARS	HEAVY DUTY TRUCKS	BUSES	TOTAL	CARS	HEAVY DUTY TRUCKS	BUSES	TOTAL
630-645	2	0	0	2	475	35	0	510	7	2	0	9	1	1	0	2	0	0	0	0	0	1	0	1	600	52	1	653
645-700	0	0	0	0	465	44	0	509	4	3	0	7	1	5	0	6	0	0	0	0	0	1	0	1	604	67	3	674
700-715	0	0	0	0	562	48	0	610	2	2	0	4	3	2	0	5	0	0	0	0	1	0	0	1	717	75	1	793
715-730	2	0	0	2	538	52	0	590	2	3	0	5	2	5	0	7	1	0	0	1	0	1	0	1	733	83	2	818
730-745	3	1	0	4	583	48	0	631	9	1	0	10	4	3	0	7	0	0	0	0	0	2	0	2	796	70	3	869
745-800	6	0	0	6	490	56	0	546	6	2	0	8	3	4	0	7	2	0	0	0	2	0	0	0	730	77	1	808
800-815	3	0	0	3	508	52	0	560	6	5	0	11	1	0	0	1	0	0	0	0	1	0	0	1	720	79	1	800
815-830	5	0	0	5	418	43	1	462	5	1	0	6	3	3	0	6	0	0	0	0	1	1	0	2	650	66	4	720
830-845	0	1	0	1	388	50	2	440	2	5	0	7	0	2	0	2	0	0	0	0	0	0	0	0	564	89	3	656
845-900	3	0	0	3	304	58	0	362	4	3	0	7	0	6	0	6	0	0	0	0	3	1	0	4	478	85	3	566
900-915	1	2	0	3	260	61	0	321	3	1	0	4	0	2	0	2	0	0	0	0	0	1	0	1	400	87	0	487
915-930	1	0	0	1	191	60	0	251	0	4	0	4	0	1	0	1	0	1	0	1	1	1	0	2	324	82	3	409
HOURL TOTALS																												
630-730	4	0	0	4	2040	179	0	2219	15	10	0	25	7	13	0	20	1	0	0	1	1	3	0	4	2654	277	7	2938
645-745	5	1	0	6	2148	192	0	2340	17	9	0	26	10	15	0	25	1	0	0	1	1	4	0	5	2850	295	9	3154
700-800	11	1	0	12	2173	204	0	2377	19	8	0	27	12	14	0	26	3	0	0	3	1	3	0	4	2976	305	7	3288
715-815	14	1	0	15	2119	208	0	2327	23	11	0	34	10	12	0	22	3	0	0	3	1	3	0	4	2979	309	7	3295
730-830	17	1	0	18	1999	199	1	2199	26	9	0	35	11	10	0	21	2	0	0	2	2	3	0	5	2896	292	9	3197
745-845	14	1	0	15	1804	201	3	2008	19	13	0	32	7	9	0	16	2	0	0	2	2	1	0	3	2664	311	9	2984
800-900	11	1	0	12	1618	203	3	1824	17	14	0	31	4	11	0	15	0	0	0	0	5	2	0	7	2412	319	11	2742
815-915	9	3	0	12	1370	212	3	1585	14	10	0	24	3	13	0	16	0	0	0	0	4	3	0	7	2092	327	10	2429
830-930	5	3	0	8	1143	229	2	1374	9	13	0	22	0	11	0	11	0	1	0	1	4	3	0	7	1766	343	9	2118

TRAFFIC DATA SERVICES

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INTERSECTION VEHICLE CLASSIFICATION TURNING MOVEMENT COUNT SUMMARY

CLIENT: GRICE CONSULTING GROUP
 PROJECT: MORELAND AVENUE TRAFFIC STUDY
 DATE: WEDNESDAY, MAY 16TH 2018
 PERIOD: 3:30 PM TO 6:30 PM
 INTERSECTION: N/S MORELAND AVENUE
 E/W BAILEY STREET

15-MIN COUNT	1 SBRT				2 SBTH				3 SBLT				4 WBRT				5 WBTH				6 WBLT			
	CARS	HEAVY DUTY TRUCKS	BUSES	TOTAL	CARS	HEAVY DUTY TRUCKS	BUSES	TOTAL	CARS	HEAVY DUTY TRUCKS	BUSES	TOTAL	CARS	HEAVY DUTY TRUCKS	BUSES	TOTAL	CARS	HEAVY DUTY TRUCKS	BUSES	TOTAL	CARS	HEAVY DUTY TRUCKS	BUSES	TOTAL
330-345	0	0	0	0	271	23	0	294	19	2	0	21	16	1	1	18	0	0	0	0	13	0	0	13
345-400	0	0	0	0	318	36	0	354	24	0	1	25	29	1	1	31	0	0	0	0	13	2	0	15
400-415	1	0	0	1	329	47	2	378	22	0	1	23	28	0	1	29	0	0	0	0	13	1	0	14
415-430	1	0	0	1	368	52	0	420	29	3	1	33	20	0	0	20	0	0	0	0	12	0	0	12
430-445	1	0	0	1	343	45	1	389	30	3	1	34	17	1	2	20	0	0	0	0	8	0	0	8
445-500	1	1	1	3	367	41	0	408	32	2	1	35	29	0	0	29	0	0	0	0	11	0	0	11
500-515	0	0	0	0	379	46	0	425	40	1	1	42	27	1	2	30	1	0	0	1	12	0	0	12
515-530	3	1	0	4	355	32	0	387	30	5	1	36	34	1	0	35	0	0	0	0	5	0	0	5
530-545	2	1	0	3	349	39	0	388	39	1	1	41	39	0	2	41	0	0	0	0	11	0	0	11
545-600	0	2	0	2	263	49	0	312	32	0	1	33	26	1	0	27	0	0	0	0	8	2	0	10
600-615	1	0	0	1	324	22	0	346	22	0	0	22	21	0	1	22	0	0	0	0	4	0	0	4
615-630	1	1	0	2	307	15	1	323	30	0	2	32	24	1	1	26	0	0	0	0	8	0	0	8
HOURL TOTALS																								
330-430	2	0	0	2	1286	158	2	1446	94	5	3	102	93	2	3	98	0	0	0	0	51	3	0	54
345-445	3	0	0	3	1358	180	3	1541	105	6	4	115	94	2	4	100	0	0	0	0	46	3	0	49
400-500	4	1	1	6	1407	185	3	1595	113	8	4	125	94	1	3	98	0	0	0	0	44	1	0	45
415-515	3	1	1	5	1457	184	1	1642	131	9	4	144	93	2	4	99	1	0	0	1	43	0	0	43
430-530	5	2	1	8	1444	164	1	1609	132	11	4	147	107	3	4	114	1	0	0	1	36	0	0	36
445-545	6	3	1	10	1450	158	0	1608	141	9	4	154	129	2	4	135	1	0	0	1	39	0	0	39
500-600	5	4	0	9	1346	166	0	1512	141	7	4	152	126	3	4	133	1	0	0	1	36	2	0	38
515-615	6	4	0	10	1291	142	0	1433	123	6	3	132	120	2	3	125	0	0	0	0	28	2	0	30
530-630	4	4	0	8	1243	125	1	1369	123	1	4	128	110	2	4	116	0	0	0	0	31	2	0	33

15-MIN COUNT	7 NBRT				8 NBTH				9 NBLT				10 EBRT				11 EBTH				12 EBLT				TOTALS			
	CARS	HEAVY DUTY TRUCKS	BUSES	TOTAL	CARS	HEAVY DUTY TRUCKS	BUSES	TOTAL	CARS	HEAVY DUTY TRUCKS	BUSES	TOTAL	CARS	HEAVY DUTY TRUCKS	BUSES	TOTAL	CARS	HEAVY DUTY TRUCKS	BUSES	TOTAL	CARS	HEAVY DUTY TRUCKS	BUSES	TOTAL	CARS	HEAVY DUTY TRUCKS	BUSES	TOTAL
330-345	1	1	0	2	140	18	1	159	0	3	0	3	6	3	0	9	0	0	0	0	1	1	0	2	467	52	2	521
345-400	1	0	0	1	180	11	0	191	2	7	0	9	4	1	0	5	0	0	0	0	0	0	0	0	571	58	2	631
400-415	3	0	0	3	134	24	0	158	1	6	0	7	1	0	0	1	1	0	0	0	1	0	0	0	533	78	4	615
415-430	2	0	0	2	215	11	0	226	1	1	0	2	3	1	0	4	0	0	0	0	0	0	0	0	651	68	1	720
430-445	7	1	0	8	237	14	0	251	2	4	0	6	4	2	0	6	0	0	0	0	1	0	0	1	650	70	4	724
445-500	5	0	0	5	163	21	3	187	0	7	0	7	2	0	0	2	1	0	0	1	0	0	0	0	611	72	5	688
500-515	1	0	0	1	205	22	0	227	1	3	0	4	5	2	0	7	0	0	0	0	2	0	0	2	673	75	3	751
515-530	2	0	0	2	202	22	1	225	2	1	0	3	3	2	0	5	0	0	0	0	0	0	1	1	636	64	3	703
530-545	0	0	0	0	193	22	0	215	4	5	0	9	2	4	0	6	0	0	0	0	0	0	0	0	639	72	3	714
545-600	3	0	0	3	192	14	0	206	1	3	0	4	2	2	0	4	0	0	0	0	1	0	0	1	528	73	1	602
600-615	0	1	0	1	153	13	0	166	0	1	0	1	5	4	0	9	0	0	0	0	0	0	0	0	530	41	1	572
615-630	1	0	0	1	151	9	0	160	1	9	0	10	1	1	0	2	0	0	0	0	0	0	0	0	524	36	4	564
HOURL TOTALS																												
330-430	7	1	0	8	669	64	1	734	4	17	0	21	14	5	0	19	1	0	0	1	1	1	0	2	2222	256	9	2487
345-445	13	1	0	14	766	60	0	826	6	18	0	24	12	4	0	16	1	0	0	1	1	0	0	1	2405	274	11	2690
400-500	17	1	0	18	749	70	3	822	4	18	0	22	10	3	0	13	2	0	0	2	1	0	0	1	2445	288	14	2747
415-515	15	1	0	16	820	68	3	891	4	15	0	19	14	5	0	19	1	0	0	1	3	0	0	3	2585	285	13	2883
430-530	15	1	0	16	807	79	4	890	5	15	0	20	14	6	0	20	1	0	0	1	3	0	1	4	2570	281	15	2866
445-545	8	0	0	8	763	87	4	854	7	16	0	23	12	8	0	20	1	0	0	1	2	0	1	3	2559	283	14	2856
500-600	6	0	0	6	792	80	1	873	8	12	0	20	12	10	0	22	0	0	0	0	3	0	1	4	2476	284	10	2770
515-615	5	1	0	6	740	71	1	812	7	10	0	17	12	12	0	24	0	0	0	0	1	0	1	2	2333	250	8	2591
530-630	4	1	0	5	689	58	0	747	6	18	0	24	10	11	0	21	0	0	0	0	1	0	0	1	2221	222	9	2452

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INTERSECTION VEHICLE CLASSIFICATION TURNING MOVEMENT COUNT SUMMARY

CLIENT: GRICE CONSULTING GROUP
 PROJECT: MORELAND AVENUE TRAFFIC STUDY
 DATE: WEDNESDAY, MAY 16TH 2018
 PERIOD: 6:30 AM TO 9:30 AM
 INTERSECTION: N/S MORELAND AVENUE
 E/W I-285 WB RAMPS

15-MIN COUNTS	1 SBRT				2 SBTH				3 SBLT				4 WBRT				5 WBTH				6 WBLT			
	CARS	HEAVY DUTY TRUCKS	BUSES	TOTAL	CARS	HEAVY DUTY TRUCKS	BUSES	TOTAL	CARS	HEAVY DUTY TRUCKS	BUSES	TOTAL	CARS	HEAVY DUTY TRUCKS	BUSES	TOTAL	CARS	HEAVY DUTY TRUCKS	BUSES	TOTAL	CARS	HEAVY DUTY TRUCKS	BUSES	TOTAL
630-645	31	14	0	45	88	16	0	104	0	0	0	0	335	12	0	347	1	0	0	1	45	8	0	53
645-700	42	5	0	47	102	19	0	121	0	0	0	0	310	8	0	318	0	0	0	0	40	8	0	48
700-715	39	9	0	48	92	14	0	106	0	0	0	0	291	9	0	300	0	0	0	0	91	8	0	99
715-730	52	13	0	65	98	16	0	114	0	0	0	0	315	5	0	320	0	0	0	0	65	7	0	72
730-745	77	10	1	88	122	16	0	138	0	0	0	0	335	12	0	347	0	0	0	0	75	9	0	84
745-800	75	10	0	85	120	10	0	130	0	0	0	0	337	9	0	346	2	0	0	2	57	8	0	65
800-815	77	17	0	94	114	18	0	132	0	0	0	0	343	15	0	358	0	0	0	0	63	8	0	71
815-830	73	19	0	92	129	9	0	138	0	0	0	0	306	8	0	314	0	0	0	0	76	15	0	91
830-845	75	13	0	88	97	13	0	110	0	0	0	0	280	9	0	289	0	0	0	0	130	13	0	143
845-900	73	24	0	97	110	15	0	125	0	0	0	0	260	10	0	270	2	0	0	2	130	10	0	140
900-915	40	20	1	61	76	15	0	91	0	0	0	0	246	8	0	254	3	0	0	3	116	14	0	130
915-930	70	20	0	90	84	26	0	110	0	0	0	0	251	13	0	264	0	1	0	1	101	14	0	115
HOURL TOTALS																								
630-730	164	41	0	205	380	65	0	445	0	0	0	0	1251	34	0	1285	1	0	0	1	241	31	0	272
645-745	210	37	1	248	414	65	0	479	0	0	0	0	1251	34	0	1285	0	0	0	0	271	32	0	303
700-800	243	42	1	286	432	56	0	488	0	0	0	0	1278	35	0	1313	2	0	0	2	288	32	0	320
715-815	281	50	1	332	454	60	0	514	0	0	0	0	1330	41	0	1371	2	0	0	2	260	32	0	292
730-830	302	56	1	359	485	53	0	538	0	0	0	0	1321	44	0	1365	2	0	0	2	271	40	0	311
745-845	300	59	0	359	460	50	0	510	0	0	0	0	1266	41	0	1307	2	0	0	2	326	44	0	370
800-900	298	73	0	371	450	55	0	505	0	0	0	0	1189	42	0	1231	2	0	0	2	399	46	0	445
815-915	261	76	1	338	412	52	0	464	0	0	0	0	1092	35	0	1127	5	0	0	5	452	52	0	504
830-930	258	77	1	336	367	69	0	436	0	0	0	0	1037	40	0	1077	5	1	0	6	477	51	0	528

15-MIN COUNTS	7 NBRT				8 NBTH				9 NBLT				10 EBRT				11 EBTH				12 EBLT				TOTALS			
	CARS	HEAVY DUTY TRUCKS	BUSES	TOTAL	CARS	HEAVY DUTY TRUCKS	BUSES	TOTAL	CARS	HEAVY DUTY TRUCKS	BUSES	TOTAL	CARS	HEAVY DUTY TRUCKS	BUSES	TOTAL	CARS	HEAVY DUTY TRUCKS	BUSES	TOTAL	CARS	HEAVY DUTY TRUCKS	BUSES	TOTAL	CARS	HEAVY DUTY TRUCKS	BUSES	TOTAL
630-645	0	0	0	0	211	12	0	223	38	26	1	65	0	0	0	0	0	0	0	0	0	0	0	0	749	88	1	838
645-700	0	0	0	0	195	10	0	205	62	25	0	87	0	0	0	0	0	0	0	0	0	0	0	0	751	75	0	826
700-715	0	0	0	0	230	9	1	240	61	27	0	88	0	0	0	0	0	0	0	0	0	0	0	0	804	76	1	881
715-730	0	0	0	0	285	11	1	297	65	26	0	91	0	0	0	0	0	0	0	0	0	0	0	0	880	78	1	959
730-745	0	0	0	0	238	22	0	260	61	30	0	91	0	0	0	0	0	0	0	0	0	0	0	0	908	99	1	1008
745-800	0	0	0	0	290	18	0	308	65	26	0	91	0	0	0	0	0	0	0	0	0	0	0	0	946	81	0	1027
800-815	0	0	0	0	227	16	0	243	31	29	0	60	0	0	0	0	0	0	0	0	0	0	0	0	855	103	0	958
815-830	0	0	0	0	177	21	0	198	45	37	0	82	0	0	0	0	0	0	0	0	0	0	0	0	806	109	0	915
830-845	0	0	0	0	136	15	0	151	43	37	0	80	0	0	0	0	0	0	0	0	0	0	0	0	761	100	0	861
845-900	0	0	0	0	143	13	1	157	30	43	0	73	0	0	0	0	0	0	0	0	0	0	0	0	748	115	1	864
900-915	0	0	0	0	158	27	0	185	29	31	0	60	0	0	0	0	0	0	0	0	0	0	0	0	668	115	1	784
915-930	0	0	0	0	121	17	0	138	51	36	0	87	0	0	0	0	0	0	0	0	0	0	0	0	678	127	0	805
HOURL TOTALS																												
630-730	0	0	0	0	921	42	2	965	226	104	1	331	0	0	0	0	0	0	0	0	0	0	0	0	3184	317	3	3504
645-745	0	0	0	0	948	52	2	1002	249	108	0	357	0	0	0	0	0	0	0	0	0	0	0	0	3343	328	3	3674
700-800	0	0	0	0	1043	60	2	1105	252	109	0	361	0	0	0	0	0	0	0	0	0	0	0	0	3538	334	3	3875
715-815	0	0	0	0	1040	67	1	1108	222	111	0	333	0	0	0	0	0	0	0	0	0	0	0	0	3589	361	2	3952
730-830	0	0	0	0	932	77	0	1009	202	122	0	324	0	0	0	0	0	0	0	0	0	0	0	0	3515	392	1	3908
745-845	0	0	0	0	830	70	0	900	184	129	0	313	0	0	0	0	0	0	0	0	0	0	0	0	3368	393	0	3761
800-900	0	0	0	0	683	65	1	749	149	146	0	295	0	0	0	0	0	0	0	0	0	0	0	0	3170	427	1	3598
815-915	0	0	0	0	614	76	1	691	147	148	0	295	0	0	0	0	0	0	0	0	0	0	0	0	2983	439	2	3424
830-930	0	0	0	0	558	72	1	631	153	147	0	300	0	0	0	0	0	0	0	0	0	0	0	0	2855	457	2	3314

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INTERSECTION VEHICLE CLASSIFICATION TURNING MOVEMENT COUNT SUMMARY

CLIENT: GRICE CONSULTING GROUP
 PROJECT: MORELAND AVENUE TRAFFIC STUDY
 DATE: WEDNESDAY, MAY 16TH 2018
 PERIOD: 3:30 PM TO 6:30 PM
 INTERSECTION: N/S MORELAND AVENUE
 E/W I-285 WB RAMP

15-MIN COUNTS	1 SBRT				2 SBTH				3 SBLT				4 WBRT				5 WBTH				6 WBLT			
	CARS	HEAVY DUTY TRUCKS	BUSES	TOTAL	CARS	HEAVY DUTY TRUCKS	BUSES	TOTAL	CARS	HEAVY DUTY TRUCKS	BUSES	TOTAL	CARS	HEAVY DUTY TRUCKS	BUSES	TOTAL	CARS	HEAVY DUTY TRUCKS	BUSES	TOTAL	CARS	HEAVY DUTY TRUCKS	BUSES	TOTAL
330-345	84	12	0	96	246	18	1	265	0	0	0	0	90	15	0	105	0	0	0	0	43	11	0	54
345-400	85	14	0	99	289	23	0	312	0	0	0	0	102	11	0	113	0	0	0	0	36	8	0	44
400-415	91	7	0	98	315	13	0	328	0	0	0	0	93	11	1	105	1	0	0	1	33	20	0	53
415-430	97	13	1	111	399	27	1	427	0	0	0	0	74	13	0	87	1	0	0	1	43	14	0	57
430-445	102	4	0	106	371	29	1	401	0	0	0	0	79	10	0	89	1	1	0	2	41	20	0	61
445-500	114	11	1	126	466	19	1	486	0	0	0	0	71	18	1	90	0	0	0	0	29	17	0	46
500-515	101	14	0	115	388	11	0	399	0	0	0	0	69	10	0	79	0	0	0	0	47	14	0	61
515-530	95	12	0	107	445	18	0	463	0	0	0	0	70	13	0	83	1	0	0	1	49	20	0	69
530-545	111	3	1	115	372	12	1	385	0	0	0	0	71	15	0	86	1	0	0	1	40	17	0	57
545-600	88	6	0	94	377	9	0	386	0	0	0	0	105	11	0	116	1	0	0	1	24	21	0	45
600-615	56	11	0	67	298	14	0	312	0	0	0	0	64	15	0	79	0	0	0	0	42	21	0	63
615-630	62	13	0	75	293	13	0	306	0	0	0	0	75	12	0	87	1	0	0	1	45	24	0	69
HOURL TOTALS																								
330-430	357	46	1	404	1249	81	2	1332	0	0	0	0	359	50	1	410	2	0	0	2	155	53	0	208
345-445	375	38	1	414	1374	92	2	1468	0	0	0	0	348	45	1	394	3	1	0	4	153	62	0	215
400-500	404	35	2	441	1551	88	3	1642	0	0	0	0	317	52	2	371	3	1	0	4	146	71	0	217
415-515	414	42	2	458	1624	86	3	1713	0	0	0	0	293	51	1	345	2	1	0	3	160	65	0	225
430-530	412	41	1	454	1670	77	2	1749	0	0	0	0	289	51	1	341	2	1	0	3	166	71	0	237
445-545	421	40	2	463	1671	60	2	1733	0	0	0	0	281	56	1	338	2	0	0	2	165	68	0	233
500-600	395	35	1	431	1582	50	1	1633	0	0	0	0	315	49	0	364	3	0	0	3	160	72	0	232
515-615	350	32	1	383	1492	53	1	1546	0	0	0	0	310	54	0	364	3	0	0	3	155	79	0	234
630-630	317	33	1	351	1340	48	1	1389	0	0	0	0	315	53	0	368	3	0	0	3	151	83	0	234

15-MIN COUNTS	7 NBRT				8 NBTH				9 NBLT				10 EBRT				11 EBTH				12 EBLT				TOTALS			
	CARS	HEAVY DUTY TRUCKS	BUSES	TOTAL	CARS	HEAVY DUTY TRUCKS	BUSES	TOTAL	CARS	HEAVY DUTY TRUCKS	BUSES	TOTAL	CARS	HEAVY DUTY TRUCKS	BUSES	TOTAL	CARS	HEAVY DUTY TRUCKS	BUSES	TOTAL	CARS	HEAVY DUTY TRUCKS	BUSES	TOTAL	CARS	HEAVY DUTY TRUCKS	BUSES	TOTAL
330-345	0	0	0	0	85	20	0	105	54	26	0	80	0	0	0	0	0	0	0	0	0	0	0	0	602	102	1	705
345-400	0	0	0	0	89	23	0	112	45	25	0	70	0	0	0	0	0	0	0	0	0	0	0	0	646	104	0	750
400-415	0	0	0	0	106	17	0	123	61	27	0	88	0	0	0	0	0	0	0	0	0	0	0	0	700	95	1	796
415-430	0	0	0	0	107	14	2	123	58	25	0	83	0	0	0	0	0	0	0	0	0	0	0	0	779	106	4	889
430-445	0	0	0	0	109	25	0	134	48	26	0	74	0	0	0	0	0	0	0	0	0	0	0	0	751	115	1	867
445-500	0	0	0	0	121	23	0	144	48	14	0	62	0	0	0	0	0	0	0	0	0	0	0	0	849	102	3	954
500-515	0	0	0	0	128	24	0	152	63	19	0	82	0	0	0	0	0	0	0	0	0	0	0	0	796	92	0	888
515-530	0	0	0	0	109	11	0	120	72	20	0	92	0	0	0	0	0	0	0	0	0	0	0	0	841	94	0	935
530-545	0	0	0	0	102	18	0	120	50	18	0	68	0	0	0	0	0	0	0	0	0	0	0	0	747	83	2	832
545-600	0	0	0	0	100	26	0	126	52	12	0	64	0	0	0	0	0	0	0	0	0	0	0	0	747	85	0	832
600-615	0	0	0	0	92	23	0	115	47	19	0	66	0	0	0	0	0	0	0	0	0	0	0	0	599	103	0	702
615-630	0	0	0	0	78	22	0	100	41	20	0	61	0	0	0	0	0	0	0	0	0	0	0	0	595	104	0	699
HOURL TOTALS																												
330-430	0	0	0	0	387	74	2	463	218	103	0	321	0	0	0	0	0	0	0	0	0	0	0	0	2727	407	6	3140
345-445	0	0	0	0	411	79	2	492	212	103	0	315	0	0	0	0	0	0	0	0	0	0	0	0	2876	420	6	3302
400-500	0	0	0	0	443	79	2	524	215	92	0	307	0	0	0	0	0	0	0	0	0	0	0	0	3079	418	9	3506
415-515	0	0	0	0	465	86	2	553	217	84	0	301	0	0	0	0	0	0	0	0	0	0	0	0	3175	415	8	3598
430-530	0	0	0	0	467	83	0	550	231	79	0	310	0	0	0	0	0	0	0	0	0	0	0	0	3237	403	4	3644
445-545	0	0	0	0	460	76	0	536	233	71	0	304	0	0	0	0	0	0	0	0	0	0	0	0	3233	371	5	3609
500-600	0	0	0	0	439	79	0	518	237	69	0	306	0	0	0	0	0	0	0	0	0	0	0	0	3131	354	2	3487
515-615	0	0	0	0	403	78	0	481	221	69	0	290	0	0	0	0	0	0	0	0	0	0	0	0	2934	365	2	3301
630-630	0	0	0	0	372	89	0	461	190	69	0	259	0	0	0	0	0	0	0	0	0	0	0	0	2688	375	2	3065

TRAFFIC DATA SERVICES

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INTERSECTION VEHICLE CLASSIFICATION TURNING MOVEMENT COUNT SUMMARY

CLIENT: GRICE CONSULTING GROUP
PROJECT: MORELAND AVENUE TRAFFIC STUDY
DATE: WEDNESDAY, MAY 16TH 2018
PERIOD: 6:30 AM TO 9:30 AM
INTERSECTION: N/S MORELAND AVENUE
E/W I-285 EB RAMP

15-MIN COUNTS	1 SBRT				2 SBTH				3 SBLT				4 WBRT				5 WBTH				6 WBLT			
	CARS	HEAVY DUTY TRUCKS	BUSES	TOTAL	CARS	HEAVY DUTY TRUCKS	BUSES	TOTAL	CARS	HEAVY DUTY TRUCKS	BUSES	TOTAL	CARS	HEAVY DUTY TRUCKS	BUSES	TOTAL	CARS	HEAVY DUTY TRUCKS	BUSES	TOTAL	CARS	HEAVY DUTY TRUCKS	BUSES	TOTAL
630-645	0	0	0	0	54	17	3	74	77	16	0	93	0	0	0	0	0	0	0	0	0	0	0	0
645-700	0	0	0	0	67	11	0	78	94	2	0	96	0	0	0	0	0	0	0	0	0	0	0	0
700-715	0	0	0	0	66	15	0	81	113	8	2	123	0	0	0	0	0	0	0	0	0	0	0	0
715-730	0	0	0	0	47	15	0	62	104	6	0	110	0	0	0	0	0	0	0	0	0	0	0	0
730-745	0	0	0	0	95	13	0	108	111	11	0	122	0	0	0	0	0	0	0	0	0	0	0	0
745-800	0	0	0	0	102	12	1	115	96	6	0	102	0	0	0	0	0	0	0	0	0	0	0	0
800-815	0	0	0	0	89	17	0	106	62	10	1	73	0	0	0	0	0	0	0	0	0	0	0	0
815-830	0	0	0	0	94	22	0	116	54	5	0	59	0	0	0	0	0	0	0	0	0	0	0	0
830-845	0	0	0	0	85	16	0	101	108	8	0	116	0	0	0	0	0	0	0	0	0	0	0	0
845-900	0	0	0	0	53	14	0	67	117	9	0	126	0	0	0	0	0	0	0	0	0	0	0	0
900-915	0	0	0	0	73	22	1	96	58	13	0	71	0	0	0	0	0	0	0	0	0	0	0	0
915-930	0	0	0	0	72	21	0	93	48	14	0	62	0	0	0	0	0	0	0	0	0	0	0	0
HOURL TOTALS	0	0	0	0	234	58	3	295	388	32	2	422	0	0	0	0	0	0	0	0	0	0	0	0
630-730	0	0	0	0	275	54	0	329	422	27	2	451	0	0	0	0	0	0	0	0	0	0	0	0
645-745	0	0	0	0	310	55	1	366	424	31	2	457	0	0	0	0	0	0	0	0	0	0	0	0
700-800	0	0	0	0	333	57	1	391	373	33	1	407	0	0	0	0	0	0	0	0	0	0	0	0
715-815	0	0	0	0	380	64	1	445	323	32	1	356	0	0	0	0	0	0	0	0	0	0	0	0
730-830	0	0	0	0	370	67	1	438	320	29	1	350	0	0	0	0	0	0	0	0	0	0	0	0
745-845	0	0	0	0	321	69	0	390	341	32	1	374	0	0	0	0	0	0	0	0	0	0	0	0
800-900	0	0	0	0	305	74	1	380	337	35	0	372	0	0	0	0	0	0	0	0	0	0	0	0
815-915	0	0	0	0	283	73	1	357	331	44	0	375	0	0	0	0	0	0	0	0	0	0	0	0
830-930	0	0	0	0									0	0	0	0	0	0	0	0	0	0	0	0

15-MIN COUNTS	7 NBRT				8 NBTH				9 NBLT				10 EBRT				11 EBTH				12 EBLT				TOTALS			
	CARS	HEAVY DUTY TRUCKS	BUSES	TOTAL	CARS	HEAVY DUTY TRUCKS	BUSES	TOTAL	CARS	HEAVY DUTY TRUCKS	BUSES	TOTAL	CARS	HEAVY DUTY TRUCKS	BUSES	TOTAL	CARS	HEAVY DUTY TRUCKS	BUSES	TOTAL	CARS	HEAVY DUTY TRUCKS	BUSES	TOTAL	CARS	HEAVY DUTY TRUCKS	BUSES	TOTAL
630-645	28	13	1	42	175	37	0	212	0	0	0	0	88	2	0	90	0	0	0	0	56	13	0	69	478	98	4	580
645-700	38	11	0	49	219	29	0	248	0	0	0	0	76	7	0	83	0	0	0	0	79	11	0	90	573	71	0	644
700-715	42	17	0	59	255	30	0	285	0	0	0	0	55	6	2	63	0	0	0	0	85	7	0	92	616	83	4	703
715-730	29	18	0	47	262	32	0	294	0	0	0	0	81	7	0	88	0	0	0	0	68	9	0	77	591	87	0	678
730-745	29	19	0	48	233	41	0	274	0	0	0	0	94	9	1	104	0	0	0	0	61	9	0	70	623	102	1	726
745-800	35	19	0	54	208	32	0	240	0	0	0	0	48	12	0	60	0	0	0	0	69	16	1	86	558	97	2	657
800-815	19	15	0	34	212	39	0	251	0	0	0	0	50	8	0	58	0	0	0	0	105	12	0	117	537	101	1	639
815-830	22	14	0	36	144	46	0	190	0	0	0	0	32	11	1	44	0	0	0	0	113	12	0	125	459	110	1	570
830-845	21	23	0	44	165	44	0	209	0	0	0	0	64	8	0	72	0	0	0	0	94	20	0	114	537	119	0	656
845-900	24	12	0	36	123	51	0	174	0	0	0	0	36	12	1	49	0	0	0	0	62	18	0	80	415	116	1	532
900-915	19	5	0	24	101	32	0	133	0	0	0	0	28	11	0	39	0	0	0	0	28	24	0	52	307	107	1	415
915-930	42	18	0	60	107	43	0	150	0	0	0	0	17	17	1	35	0	0	0	0	38	71	1	110	324	184	2	510
HOURL TOTALS																												
630-730	137	59	1	197	911	128	0	1039	0	0	0	0	300	22	2	324	0	0	0	0	288	40	0	328	2258	339	8	2605
645-745	138	65	0	203	969	132	0	1101	0	0	0	0	306	29	3	338	0	0	0	0	293	36	0	329	2403	343	5	2751
700-800	135	73	0	208	958	135	0	1093	0	0	0	0	278	34	3	315	0	0	0	0	283	41	1	325	2388	369	7	2764
715-815	112	71	0	183	915	144	0	1059	0	0	0	0	273	36	1	310	0	0	0	0	303	46	1	350	2309	387	4	2700
730-830	105	67	0	172	797	158	0	955	0	0	0	0	224	40	2	266	0	0	0	0	348	49	1	398	2177	410	5	2592
745-845	97	71	0	168	729	161	0	890	0	0	0	0	194	39	1	234	0	0	0	0	381	60	1	442	2091	427	4	2522
800-900	86	64	0	150	644	180	0	824	0	0	0	0	182	39	2	223	0	0	0	0	374	62	0	436	1948	446	3	2397
815-915	86	54	0	140	533	173	0	706	0	0	0	0	160	42	2	204	0	0	0	0	297	74	0	371	1718	452	3	2173
830-930	106	58	0	164	496	170	0	666	0	0	0	0	145	48	2	195	0	0	0	0	222	133	1	356	1583	526	4	2113

TRAFFIC DATA SERVICES

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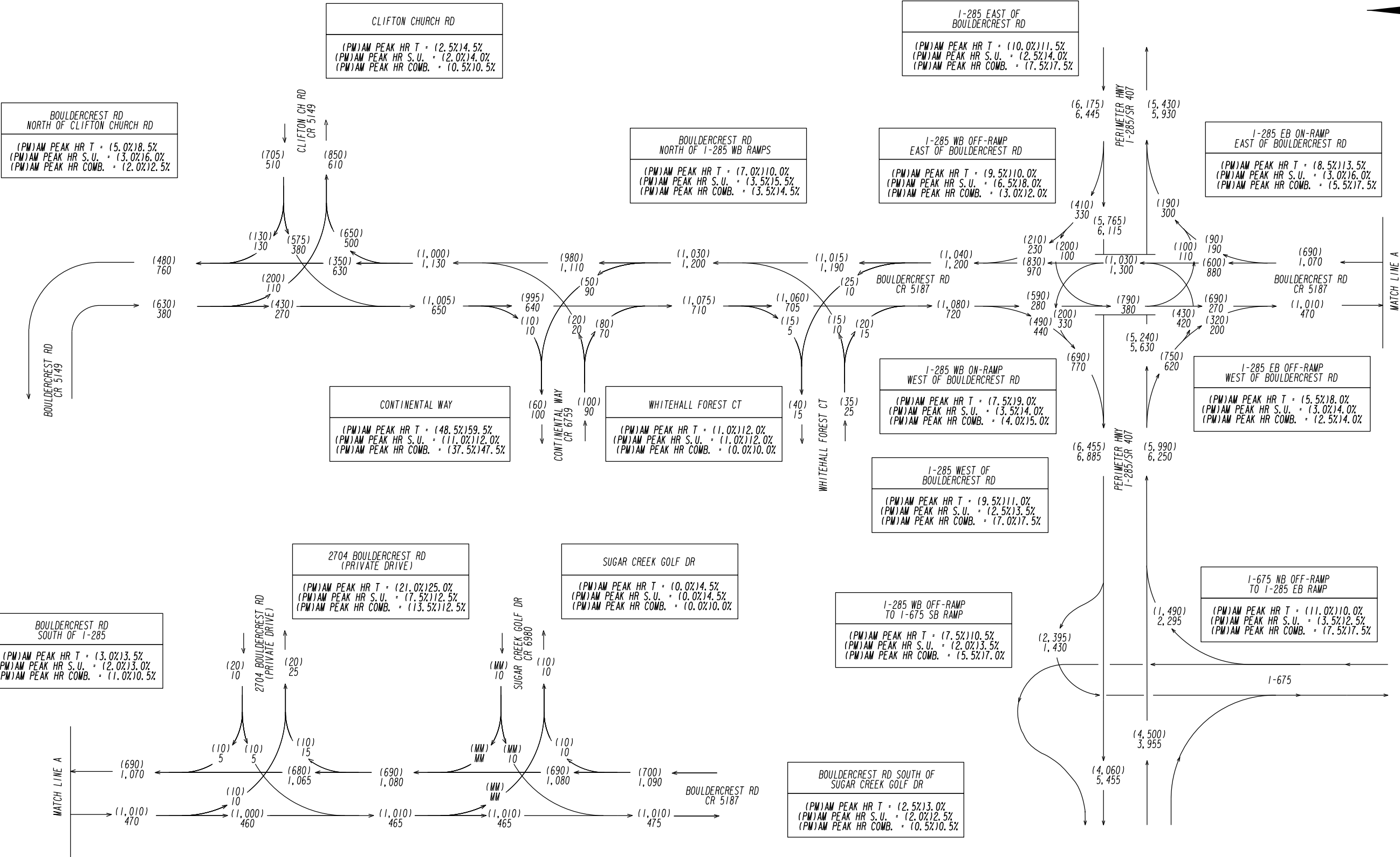
INTERSECTION VEHICLE CLASSIFICATION TURNING MOVEMENT COUNT SUMMARY

CLIENT: GRICE CONSULTING GROUP
PROJECT: MORELAND AVENUE TRAFFIC STUDY
DATE: WEDNESDAY, MAY 16TH 2018
PERIOD: 3:30 PM TO 6:30 PM
INTERSECTION: N/S MORELAND AVENUE
E/W I-285 EB RAMP

15-MIN COUNTS	1 SBRT				2 SBTH				3 SBLT				4 WBRT				5 WBTH				6 WBLT			
	CARS	HEAVY DUTY TRUCKS	BUSES	TOTAL	CARS	HEAVY DUTY TRUCKS	BUSES	TOTAL	CARS	HEAVY DUTY TRUCKS	BUSES	TOTAL	CARS	HEAVY DUTY TRUCKS	BUSES	TOTAL	CARS	HEAVY DUTY TRUCKS	BUSES	TOTAL	CARS	HEAVY DUTY TRUCKS	BUSES	TOTAL
330-345	0	0	0	0	138	24	0	162	174	11	1	186	0	0	0	0	0	0	0	0	0	0	0	0
345-400	0	0	0	0	139	29	1	169	222	12	0	234	0	0	0	0	0	0	0	0	0	0	0	0
400-415	0	0	0	0	159	25	0	184	255	17	0	272	0	0	0	0	0	0	0	0	0	0	0	0
415-430	0	0	0	0	129	38	0	167	271	21	0	292	0	0	0	0	0	0	0	0	0	0	0	0
430-445	0	0	0	0	105	35	0	140	329	21	2	352	0	0	0	0	0	0	0	0	0	0	0	0
445-500	0	0	0	0	138	27	0	165	321	14	0	335	0	0	0	0	0	0	0	0	0	0	0	0
500-515	0	0	0	0	146	23	0	169	330	13	0	343	0	0	0	0	0	0	0	0	0	0	0	0
515-530	0	0	0	0	147	33	0	180	308	13	0	321	0	0	0	0	0	0	0	0	0	0	0	0
530-545	0	0	0	0	142	20	2	164	275	9	0	284	0	0	0	0	0	0	0	0	0	0	0	0
545-600	0	0	0	0	100	31	2	133	239	10	0	249	0	0	0	0	0	0	0	0	0	0	0	0
600-615	0	0	0	0	137	41	2	180	256	12	0	268	0	0	0	0	0	0	0	0	0	0	0	0
615-630	0	0	0	0	75	49	2	126	204	4	0	208	0	0	0	0	0	0	0	0	0	0	0	0
HOURL TOTALS																								
330-430	0	0	0	0	565	116	1	682	922	61	1	984	0	0	0	0	0	0	0	0	0	0	0	0
345-445	0	0	0	0	532	127	1	660	1077	71	2	1150	0	0	0	0	0	0	0	0	0	0	0	0
400-500	0	0	0	0	531	125	0	656	1176	73	2	1251	0	0	0	0	0	0	0	0	0	0	0	0
415-515	0	0	0	0	518	123	0	641	1251	69	2	1322	0	0	0	0	0	0	0	0	0	0	0	0
430-530	0	0	0	0	536	118	0	654	1285	61	2	1351	0	0	0	0	0	0	0	0	0	0	0	0
445-545	0	0	0	0	573	103	2	678	1234	49	0	1283	0	0	0	0	0	0	0	0	0	0	0	0
500-600	0	0	0	0	535	107	4	646	1152	45	0	1197	0	0	0	0	0	0	0	0	0	0	0	0
515-615	0	0	0	0	526	125	6	657	1078	44	0	1122	0	0	0	0	0	0	0	0	0	0	0	0
530-630	0	0	0	0	454	141	8	603	974	35	0	1009	0	0	0	0	0	0	0	0	0	0	0	0

15-MIN COUNTS	7 NBRT				8 NBTH				9 NBLT				10 EBRT				11 EBTH				12 EBLT				TOTALS			
	CARS	HEAVY DUTY TRUCKS	BUSES	TOTAL	CARS	HEAVY DUTY TRUCKS	BUSES	TOTAL	CARS	HEAVY DUTY TRUCKS	BUSES	TOTAL	CARS	HEAVY DUTY TRUCKS	BUSES	TOTAL	CARS	HEAVY DUTY TRUCKS	BUSES	TOTAL	CARS	HEAVY DUTY TRUCKS	BUSES	TOTAL	CARS	HEAVY DUTY TRUCKS	BUSES	TOTAL
330-345	32	9	0	41	115	23	0	138	0	0	0	0	51	21	0	72	0	0	0	0	50	21	0	71	560	109	1	670
345-400	49	5	0	54	110	28	0	138	0	0	0	0	72	38	0	110	1	0	0	1	72	8	0	80	665	120	1	786
400-415	30	11	0	41	100	41	0	141	0	0	0	0	53	10	0	63	0	0	0	0	84	11	0	95	681	115	0	796
415-430	41	14	0	55	102	20	0	122	0	0	0	0	56	16	0	72	0	1	0	1	76	9	0	85	675	119	0	794
430-445	32	19	1	52	108	51	1	160	0	0	0	0	48	19	0	67	0	2	0	2	68	4	0	72	690	151	4	845
445-500	32	31	0	63	112	44	0	156	0	0	0	0	47	19	0	66	1	0	0	1	71	11	0	82	722	146	0	868
500-515	52	18	0	70	118	30	0	148	0	0	0	0	54	17	0	71	0	0	0	0	88	5	0	93	788	106	0	894
515-530	38	24	0	62	104	42	0	146	0	0	0	0	57	9	0	66	1	0	0	1	61	12	0	73	716	133	0	849
530-545	33	25	0	58	103	32	0	135	0	0	0	0	55	10	1	66	0	0	0	0	72	8	0	80	680	104	3	787
545-600	34	29	0	63	105	25	0	130	0	0	0	0	44	22	0	66	1	0	0	1	70	4	0	74	593	121	2	716
600-615	32	21	0	53	81	30	0	111	0	0	0	0	39	22	0	61	0	0	0	0	75	8	0	83	620	134	2	756
615-630	22	11	0	33	65	22	0	87	0	0	0	0	49	20	0	69	0	0	0	0	84	15	0	99	499	121	2	622
HOURL TOTALS																												
330-430	152	39	0	191	427	112	0	539	0	0	0	0	232	85	0	317	1	1	0	2	282	49	0	331	2581	463	2	3046
345-445	152	49	1	202	420	140	1	561	0	0	0	0	229	83	0	312	1	3	0	4	300	32	0	332	2711	505	5	3221
400-500	135	75	1	211	422	156	1	579	0	0	0	0	204	64	0	268	1	3	0	4	299	35	0	334	2768	531	4	3303
415-515	157	82	1	240	440	145	1	586	0	0	0	0	205	71	0	276	1	3	0	4	303	29	0	332	2875	522	4	3401
430-530	154	92	1	247	442	167	1	610	0	0	0	0	206	64	0	270	2	2	0	4	288	32	0	320	2916	536	4	3456
445-545	155	98	0	253	437	148	0	585	0	0	0	0	213	55	1	269	2	0	0	2	292	36	0	328	2906	489	3	3398
500-600	157	96	0	253	430	129	0	559	0	0	0	0	210	58	1	269	2	0	0	2	291	29	0	320	2777	464	5	3246
515-615	137	99	0	236	393	129	0	522	0	0	0	0	195	63	1	259	2	0	0	2	278	32	0	310	2609	492	7	3108
530-630	121	86	0	207	354	109	0	463	0	0	0	0	187	74	1	262	1	0	0	1	301	35	0	336	2392	480	9	2881

2019 BOULDERCREST ROAD SE COUNTS



LEGEND
(0,000) = PM DHV
0,000 = AM DHV

2019 EXISTING DESIGN HOUR VOLUMES



NOT TO SCALE

REVISION DATES			TRAFFIC DIAGRAM		
8/29/2019			I-285 @ BOULDERCREST ROAD DEKALB COUNTY		
9/25/2019					
CHECKED:	CMJ	DATE: 7/15/2019	DRAWING No.		
BACKCHECKED:	CA	DATE: 7/16/2019	10-0002		
CORRECTED:	CMJ	DATE: 7/16/2019			
VERIFIED:	CA	DATE: 7/16/2019	C-10		

2021 COUNTS



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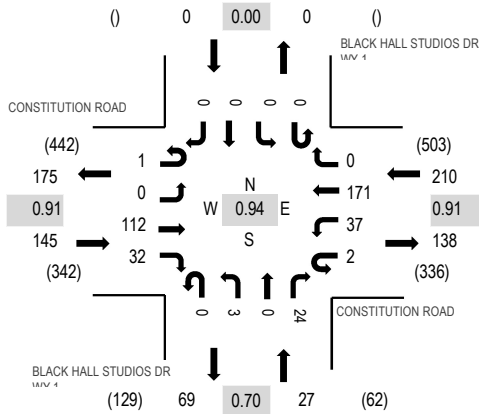
Location: #1 BLACK HALL STUDIOS DRWY 1 & CONSTITUTION ROAD AM

Date: Wednesday, February 10, 2021

Peak Hour: 07:15 AM - 08:15 AM

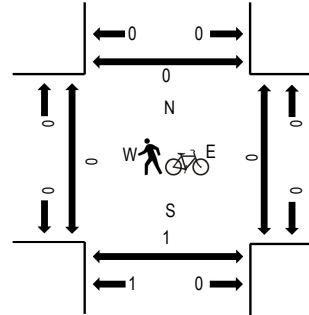
Peak 15-Minutes: 07:30 AM - 07:45 AM

Peak Hour - Motorized Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	CONSTITUTION ROAD Eastbound				CONSTITUTION ROAD Westbound				BLACK HALL STUDIOS DRWY 1 Northbound				BLACK HALL STUDIOS DRWY 1 Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
6:00 AM	0	0	19	5	0	8	15	0	0	1	0	11	0	0	0	0	59	277	0	0	0	0
6:15 AM	2	0	20	5	0	4	38	0	0	0	0	4	0	0	0	0	73	290	0	0	0	0
6:30 AM	0	0	25	2	0	2	38	0	0	0	0	2	0	0	0	0	69	314	0	0	0	0
6:45 AM	0	0	22	2	0	4	47	0	0	0	0	1	0	0	0	0	76	347	0	0	0	0
7:00 AM	0	0	23	2	0	3	40	0	0	1	0	3	0	0	0	0	72	370	0	0	0	0
7:15 AM	1	0	23	10	0	8	45	0	0	0	0	10	0	0	0	0	97	382	0	0	0	0
7:30 AM	0	0	31	9	1	9	48	0	0	0	0	4	0	0	0	0	102	344	0	0	0	0
7:45 AM	0	0	30	8	1	11	39	0	0	1	0	9	0	0	0	0	99	301	0	0	1	0
8:00 AM	0	0	28	5	0	9	39	0	0	2	0	1	0	0	0	0	84	260	0	0	0	0
8:15 AM	0	0	13	4	1	5	32	0	0	1	0	3	0	0	0	0	59		0	0	0	0
8:30 AM	0	0	24	2	0	4	28	0	0	0	0	1	0	0	0	0	59		0	0	0	0
8:45 AM	0	0	21	6	0	2	22	0	0	2	0	5	0	0	0	0	58		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Lights	1	0	102	32	2	35	167	0	0	3	0	24	0	0	0	0	366
Mediums	0	0	7	0	0	2	4	0	0	0	0	0	0	0	0	0	13
Total	1	0	112	32	2	37	171	0	0	3	0	24	0	0	0	0	382



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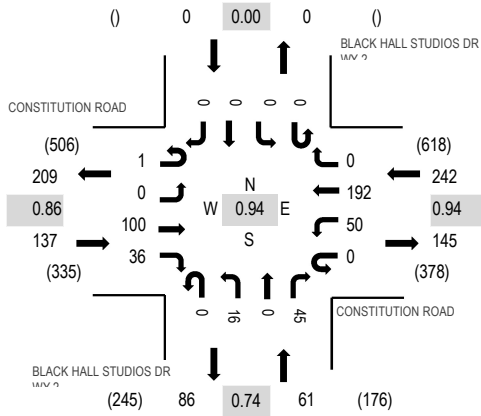
Location: #2 BLACK HALL STUDIOS DRWY 2 & CONSTITUTION ROAD AM

Date: Wednesday, February 10, 2021

Peak Hour: 07:15 AM - 08:15 AM

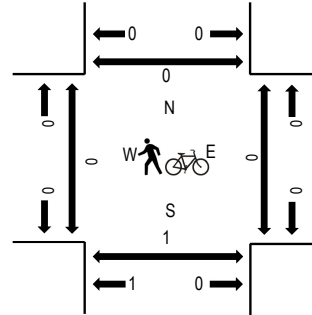
Peak 15-Minutes: 07:45 AM - 08:00 AM

Peak Hour - Motorized Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	CONSTITUTION ROAD Eastbound				CONSTITUTION ROAD Westbound				BLACK HALL STUDIOS DRWY 2 Northbound				BLACK HALL STUDIOS DRWY 2 Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
6:00 AM	0	0	23	7	0	15	26	0	0	0	0	11	0	0	0	0	82	343	0	0	0	0
6:15 AM	0	0	18	6	0	8	37	0	0	3	0	7	0	0	0	0	79	361	0	0	0	0
6:30 AM	0	0	18	9	1	10	35	0	0	6	0	8	0	0	0	0	87	396	0	0	0	0
6:45 AM	0	0	11	12	0	9	46	0	0	4	0	13	0	0	0	0	95	414	0	0	0	0
7:00 AM	0	0	22	4	0	21	41	0	0	4	0	8	0	0	0	0	100	436	0	0	0	0
7:15 AM	0	0	21	11	0	12	54	0	0	0	0	16	0	0	0	0	114	440	0	0	0	0
7:30 AM	0	0	29	7	0	12	48	0	0	7	0	2	0	0	0	0	105	403	0	0	0	0
7:45 AM	0	0	31	9	0	14	47	0	0	4	0	12	0	0	0	0	117	377	0	0	1	0
8:00 AM	1	0	19	9	0	12	43	0	0	5	0	15	0	0	0	0	104	350	0	0	0	0
8:15 AM	0	0	12	5	0	11	32	0	0	6	0	11	0	0	0	0	77		0	0	0	0
8:30 AM	0	0	23	2	0	15	29	0	0	2	0	8	0	0	0	0	79		0	0	0	0
8:45 AM	0	0	19	7	0	18	22	0	0	4	0	20	0	0	0	0	90		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Lights	1	0	91	36	0	45	187	0	0	14	0	38	0	0	0	0	412
Mediums	0	0	6	0	0	5	5	0	0	2	0	7	0	0	0	0	25
Total	1	0	100	36	0	50	192	0	0	16	0	45	0	0	0	0	440



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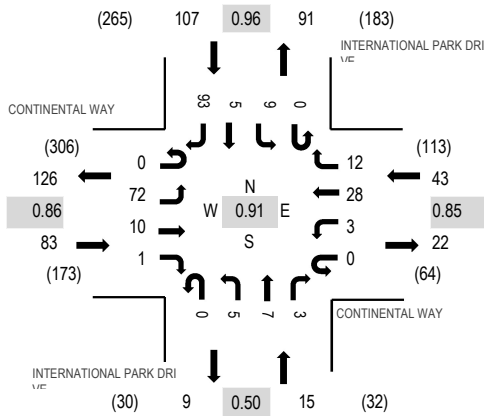
Location: #3 INTERNATIONAL PARK DRIVE & CONTINENTAL WAY AM

Date: Wednesday, February 10, 2021

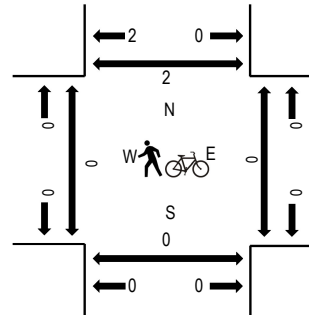
Peak Hour: 08:00 AM - 09:00 AM

Peak 15-Minutes: 08:00 AM - 08:15 AM

Peak Hour - Motorized Vehicles



Peak Hour - Pedestrians/Bicycles in Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	CONTINENTAL WAY Eastbound				CONTINENTAL WAY Westbound				INTERNATIONAL PARK DRIVE Northbound				INTERNATIONAL PARK DRIVE Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
6:00 AM	0	8	1	0	0	1	0	2	0	0	2	0	0	4	1	24	43	146	0	0	1	0
6:15 AM	0	4	1	1	0	3	3	0	0	1	1	1	0	2	2	14	33	154	0	0	0	0
6:30 AM	0	8	0	0	0	0	12	1	0	0	1	1	0	1	1	12	37	166	0	0	0	0
6:45 AM	0	1	2	0	0	5	7	1	0	2	1	0	0	0	0	14	33	176	0	0	0	0
7:00 AM	0	17	5	0	0	1	7	1	0	0	1	2	0	2	2	13	51	189	0	0	0	0
7:15 AM	0	12	3	0	0	0	9	0	0	0	1	0	0	6	0	14	45	206	0	0	1	0
7:30 AM	0	13	2	0	0	1	7	0	0	0	1	0	0	4	0	19	47	221	0	0	0	0
7:45 AM	0	10	2	0	0	3	2	4	0	0	2	0	0	3	0	20	46	236	0	0	0	0
8:00 AM	0	20	0	1	0	1	6	5	0	3	3	2	0	2	3	22	68	248	0	0	0	2
8:15 AM	0	13	5	0	0	2	9	3	0	1	1	1	0	2	0	23	60		0	0	0	0
8:30 AM	0	22	2	0	0	0	6	2	0	1	2	0	0	2	1	24	62		0	0	0	0
8:45 AM	0	17	3	0	0	0	7	2	0	0	1	0	0	3	1	24	58		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	1	2	0	0	0	0	2	0	0	4	2	0	4	1	2	18
Lights	0	60	7	1	0	3	28	9	0	5	2	1	0	3	4	80	203
Mediums	0	11	1	0	0	0	0	1	0	0	1	0	0	2	0	11	27
Total	0	72	10	1	0	3	28	12	0	5	7	3	0	9	5	93	248



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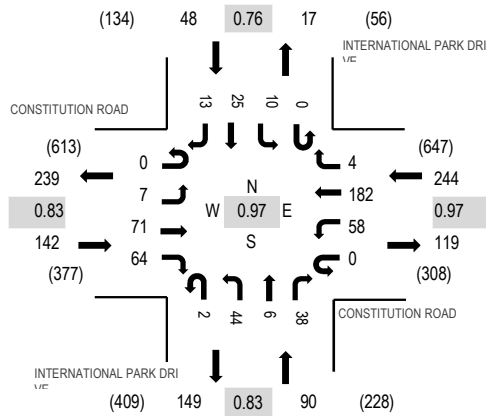
Location: #4 INTERNATIONAL PARK DRIVE & CONSTITUTION ROAD AM

Date: Wednesday, February 10, 2021

Peak Hour: 07:15 AM - 08:15 AM

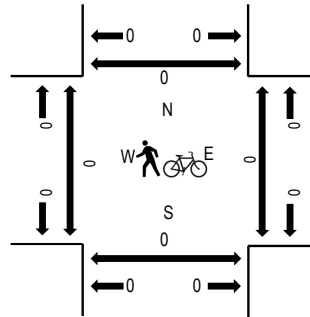
Peak 15-Minutes: 08:00 AM - 08:15 AM

Peak Hour - Motorized Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	CONSTITUTION ROAD Eastbound				CONSTITUTION ROAD Westbound				INTERNATIONAL PARK Northbound				INTERNATIONAL PARK Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
6:00 AM	0	1	12	22	0	11	29	0	0	7	0	8	0	2	1	3	96	400	0	0	0	0
6:15 AM	0	2	12	9	0	7	43	0	0	2	0	5	0	1	9	1	91	429	0	0	0	0
6:30 AM	0	4	18	6	0	18	35	3	0	8	0	6	0	2	4	2	106	472	0	0	0	0
6:45 AM	0	5	10	12	0	14	54	0	0	1	0	6	0	0	5	0	107	487	0	0	0	0
7:00 AM	0	0	18	11	0	16	46	2	0	15	1	5	0	2	6	3	125	514	1	0	0	0
7:15 AM	0	2	16	17	0	16	51	1	2	9	1	8	0	5	4	2	134	524	0	0	0	0
7:30 AM	0	1	15	14	0	13	48	2	0	9	2	6	0	1	7	3	121	496	0	0	0	0
7:45 AM	0	2	26	15	0	12	45	0	0	11	1	9	0	3	4	6	134	486	0	0	0	0
8:00 AM	0	2	14	18	0	17	38	1	0	15	2	15	0	1	10	2	135	472	0	0	0	0
8:15 AM	0	2	9	14	0	15	31	1	0	9	2	11	0	2	5	5	106		0	0	0	0
8:30 AM	0	2	16	11	0	14	29	1	0	11	5	8	0	2	11	1	111		0	0	0	0
8:45 AM	0	3	20	16	0	10	24	0	0	11	5	12	0	2	13	4	120		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	3	0	2	0	0	1	0	0	18	0	0	0	0	24
Lights	0	6	68	54	0	54	181	3	1	36	5	12	0	9	25	13	467
Mediums	0	1	3	7	0	2	1	1	0	8	1	8	0	1	0	0	33
Total	0	7	71	64	0	58	182	4	2	44	6	38	0	10	25	13	524



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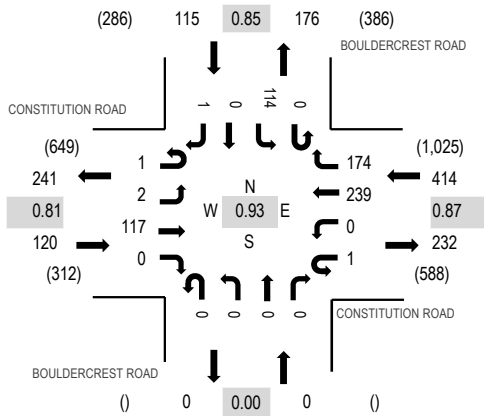
Location: #5 BOULDERCREST ROAD & CONSTITUTION ROAD AM

Date: Wednesday, February 10, 2021

Peak Hour: 07:15 AM - 08:15 AM

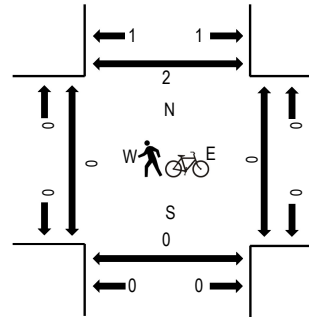
Peak 15-Minutes: 07:45 AM - 08:00 AM

Peak Hour - Motorized Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	CONSTITUTION ROAD Eastbound				CONSTITUTION ROAD Westbound				BOULDERCREST ROAD Northbound				BOULDERCREST ROAD Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
6:00 AM	0	0	23	0	0	0	42	12	0	0	0	0	0	12	0	0	89	416	0	0	0	0
6:15 AM	0	0	17	0	0	0	49	12	0	0	0	0	0	15	0	0	93	470	0	0	0	0
6:30 AM	0	0	29	0	0	0	60	16	0	0	0	0	0	14	0	0	119	535	0	0	0	0
6:45 AM	0	0	16	0	0	0	64	26	0	0	0	0	0	9	0	0	115	580	0	0	0	0
7:00 AM	0	0	25	0	0	0	63	27	0	0	0	0	0	27	0	1	143	640	0	0	0	0
7:15 AM	0	1	28	0	0	0	67	34	0	0	0	0	0	28	0	0	158	649	0	0	0	1
7:30 AM	1	0	23	0	0	0	63	56	0	0	0	0	0	20	0	1	164	628	0	0	0	1
7:45 AM	0	1	36	0	0	0	58	42	0	0	0	0	0	38	0	0	175	612	0	0	0	0
8:00 AM	0	0	30	0	1	0	51	42	0	0	0	0	0	28	0	0	152	567	0	0	0	0
8:15 AM	0	1	21	0	0	0	47	40	0	0	0	0	0	26	0	2	137		0	0	0	0
8:30 AM	0	1	26	0	0	0	42	40	0	0	0	0	0	38	0	1	148		0	0	0	0
8:45 AM	0	1	32	0	2	0	35	34	0	0	0	0	0	24	0	2	130		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	17	0	0	0	2	0	0	0	0	0	0	0	0	0	19
Lights	1	2	87	0	1	0	234	171	0	0	0	0	0	108	0	1	605
Mediums	0	0	13	0	0	0	3	3	0	0	0	0	0	6	0	0	25
Total	1	2	117	0	1	0	239	174	0	0	0	0	0	114	0	1	649



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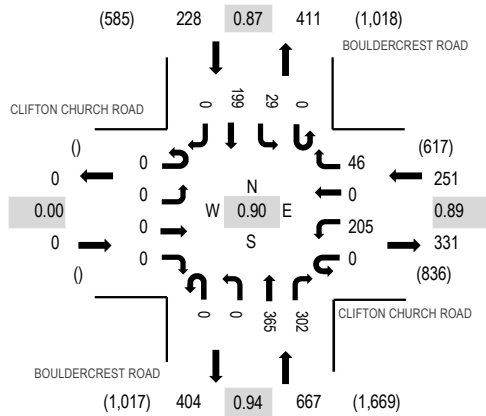
Location: #6 BOULDERCREST ROAD & CLIFTON CHURCH ROAD AM

Date: Wednesday, February 10, 2021

Peak Hour: 07:15 AM - 08:15 AM

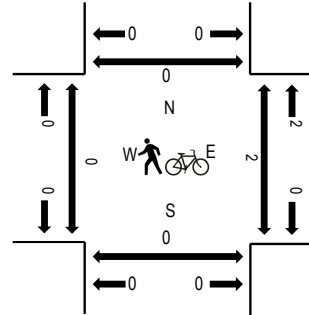
Peak 15-Minutes: 07:45 AM - 08:00 AM

Peak Hour - Motorized Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	CLIFTON CHURCH ROAD				CLIFTON CHURCH ROAD				BOULDERCREST ROAD				BOULDERCREST ROAD				Total	Rolling Hour	Pedestrian Crossings			
	Eastbound				Westbound				Northbound				Southbound						West	East	South	North
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right						
6:00 AM	0	0	0	0	0	18	0	2	0	0	48	40	0	4	29	0	141	738	0	0	0	0
6:15 AM	0	0	0	0	0	40	0	4	0	0	63	50	0	7	28	0	192	813	0	0	0	0
6:30 AM	0	0	0	0	0	31	0	10	0	0	60	50	0	2	39	0	192	887	0	0	0	0
6:45 AM	0	0	0	0	0	32	0	9	0	0	89	51	0	5	27	0	213	979	0	1	0	0
7:00 AM	0	0	0	0	0	33	0	4	0	0	77	60	0	7	35	0	216	1,086	0	0	0	0
7:15 AM	0	0	0	0	0	43	0	11	0	0	92	61	0	7	52	0	266	1,146	0	1	0	0
7:30 AM	0	0	0	0	0	53	0	17	0	0	90	81	0	8	35	0	284	1,144	0	0	0	0
7:45 AM	0	0	0	0	0	63	0	9	0	0	99	79	0	12	58	0	320	1,130	0	1	0	0
8:00 AM	0	0	0	0	0	46	0	9	0	0	84	81	0	2	54	0	276	1,047	0	0	0	0
8:15 AM	0	0	0	0	0	49	0	9	0	0	79	74	0	5	48	0	264		0	0	0	0
8:30 AM	0	0	0	0	0	48	0	13	0	0	77	68	0	12	52	0	270		0	0	0	0
8:45 AM	0	0	0	0	0	53	0	11	0	0	52	64	0	6	51	0	237		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	3	0	0	0	0	1	1	0	0	17	0	22
Lights	0	0	0	0	0	198	0	46	0	0	358	294	0	29	167	0	1,092
Mediums	0	0	0	0	0	4	0	0	0	0	6	7	0	0	15	0	32
Total	0	0	0	0	0	205	0	46	0	0	365	302	0	29	199	0	1,146



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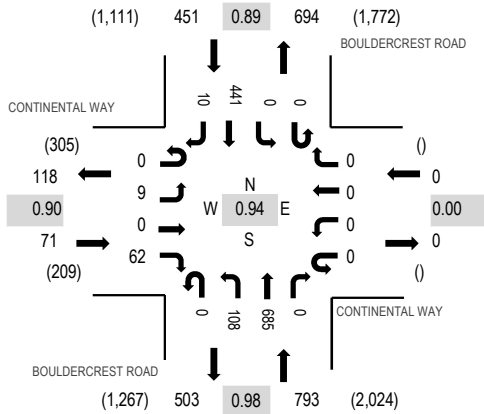
Location: #7 BOULDERCREST ROAD & CONTINENTAL WAY AM

Date: Wednesday, February 10, 2021

Peak Hour: 07:15 AM - 08:15 AM

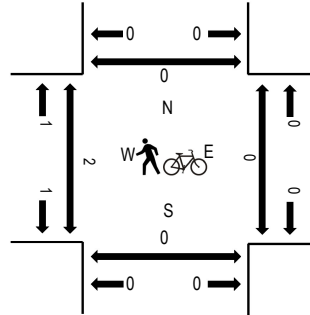
Peak 15-Minutes: 07:45 AM - 08:00 AM

Peak Hour - Motorized Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	CONTINENTAL WAY Eastbound				CONTINENTAL WAY Westbound				BOULDERCREST ROAD Northbound				BOULDERCREST ROAD Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
6:00 AM	0	2	0	14	0	0	0	0	0	12	100	0	0	0	53	1	182	888	0	0	0	0
6:15 AM	0	1	0	12	0	0	0	0	0	19	110	0	0	0	68	2	212	966	0	0	0	0
6:30 AM	0	3	0	12	0	0	0	0	0	27	108	0	0	0	78	0	228	1,065	1	0	0	0
6:45 AM	0	6	0	14	0	0	0	0	0	22	157	0	0	0	67	0	266	1,151	1	0	0	1
7:00 AM	0	3	0	16	0	0	0	0	0	22	143	0	0	0	72	4	260	1,236	0	0	0	0
7:15 AM	0	2	0	16	0	0	0	0	0	35	156	0	0	0	100	2	311	1,315	0	0	0	0
7:30 AM	0	4	0	18	0	0	0	0	0	25	172	0	0	0	93	2	314	1,314	1	0	0	0
7:45 AM	0	2	0	16	0	0	0	0	0	22	181	0	0	0	128	2	351	1,283	1	0	0	0
8:00 AM	0	1	0	12	0	0	0	0	0	26	176	0	0	0	120	4	339	1,220	0	0	0	0
8:15 AM	0	3	0	17	0	0	0	0	0	25	160	0	0	0	105	0	310		1	0	0	0
8:30 AM	0	0	0	16	0	0	0	0	0	20	143	0	0	0	102	2	283		0	0	0	0
8:45 AM	0	3	0	16	0	0	0	0	0	27	136	0	0	0	102	4	288		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	1	0	31	0	0	0	0	0	46	3	0	0	0	21	2	104
Lights	0	7	0	14	0	0	0	0	0	52	667	0	0	0	398	7	1,145
Mediums	0	1	0	17	0	0	0	0	0	10	15	0	0	0	22	1	66
Total	0	9	0	62	0	0	0	0	0	108	685	0	0	0	441	10	1,315



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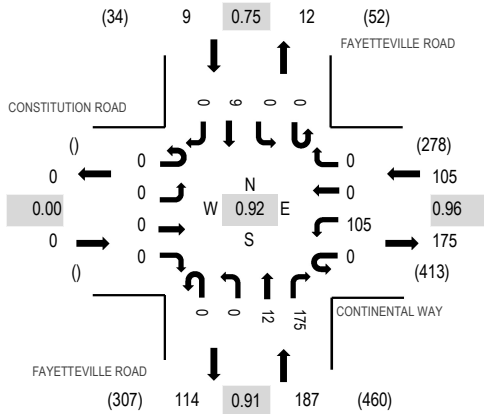
Location: #8 FAYETTEVILLE ROAD & CONTINENTAL WAY AM

Date: Wednesday, February 10, 2021

Peak Hour: 07:15 AM - 08:15 AM

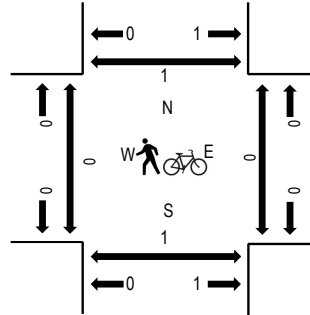
Peak 15-Minutes: 07:45 AM - 08:00 AM

Peak Hour - Motorized Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	CONSTITUTION ROAD				CONTINENTAL WAY				FAYETTEVILLE ROAD				FAYETTEVILLE ROAD				Total	Rolling Hour	Pedestrian Crossings			
	Eastbound				Westbound				Northbound				Southbound						West	East	South	North
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right						
6:00 AM	0	0	0	0	0	16	0	0	0	0	4	24	0	0	3	0	47	230	0	0	0	0
6:15 AM	0	0	0	0	0	12	0	0	0	0	9	32	0	0	1	0	54	246	0	0	0	0
6:30 AM	0	0	0	0	0	25	0	0	0	0	8	22	0	3	2	0	60	262	0	0	0	0
6:45 AM	0	0	0	0	0	29	0	0	0	0	7	28	0	0	5	0	69	283	0	0	0	0
7:00 AM	0	0	0	0	0	20	0	0	0	0	4	36	0	0	3	0	63	296	0	0	0	0
7:15 AM	0	0	0	0	0	22	0	0	0	0	2	44	0	0	2	0	70	301	0	0	0	0
7:30 AM	0	0	0	0	0	28	0	0	0	0	4	47	0	0	2	0	81	294	0	0	0	1
7:45 AM	0	0	0	0	0	28	0	0	0	0	3	49	0	0	2	0	82	278	0	0	0	0
8:00 AM	0	0	0	0	0	27	0	0	0	0	3	35	0	0	3	0	68	246	0	0	1	0
8:15 AM	0	0	0	0	0	24	0	0	0	0	5	30	0	1	3	0	63		0	0	0	0
8:30 AM	0	0	0	0	0	27	0	0	0	0	3	31	0	1	3	0	65		0	0	0	0
8:45 AM	0	0	0	0	0	20	0	0	0	0	0	30	0	0	0	0	50		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	3	0	0	1	0	4
Lights	0	0	0	0	0	93	0	0	0	0	11	158	0	0	5	0	267
Mediums	0	0	0	0	0	12	0	0	0	0	1	14	0	0	3	0	30
Total	0	0	0	0	0	105	0	0	0	0	12	175	0	0	9	0	301



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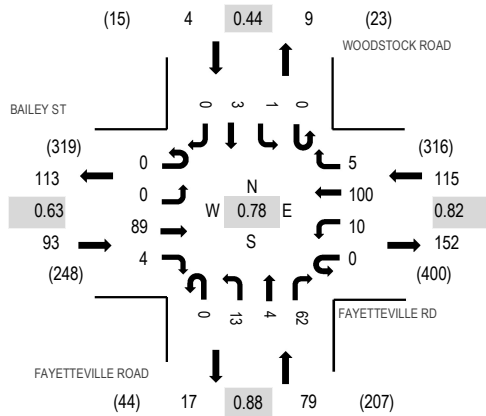
Location: #9 FAYETTEVILLE ROAD & FAYETTEVILLE RD AM

Date: Wednesday, February 11, 2021

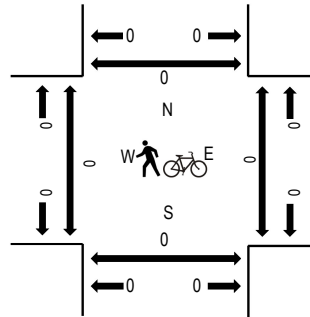
Peak Hour: 07:00 AM - 08:00 AM

Peak 15-Minutes: 07:45 AM - 08:00 AM

Peak Hour - Motorized Vehicles



Peak Hour - Pedestrians/Bicycles in Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	BAILEY ST Eastbound				FAYETTEVILLE RD Westbound				FAYETTEVILLE ROAD Northbound				WOODSTOCK ROAD Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
6:00 AM	0	0	12	0	0	1	19	1	0	2	1	8	0	0	0	0	44	239	0	0	0	0
6:15 AM	0	0	14	1	1	0	20	0	0	4	1	7	0	0	1	0	49	274	0	1	1	0
6:30 AM	0	0	18	1	0	1	41	0	0	0	0	13	0	0	0	0	74	286	0	0	0	0
6:45 AM	0	0	14	2	0	5	25	0	0	5	1	17	0	1	2	0	72	270	1	0	0	0
7:00 AM	0	0	13	3	0	4	37	1	0	3	0	18	0	0	0	0	79	291	0	0	0	0
7:15 AM	0	0	18	1	0	2	21	1	0	2	1	13	0	1	1	0	61	290	0	0	0	0
7:30 AM	0	0	11	0	0	2	21	1	0	6	1	14	0	0	2	0	58	284	0	0	0	0
7:45 AM	0	0	47	0	0	2	21	2	0	2	2	17	0	0	0	0	93	290	0	0	0	0
8:00 AM	0	0	28	0	0	1	23	3	0	3	2	17	0	1	0	0	78	256	0	0	0	1
8:15 AM	0	0	18	2	0	4	15	1	0	1	0	13	0	1	0	0	55		0	2	0	0
8:30 AM	0	0	23	0	0	1	18	0	0	5	1	12	0	3	1	0	64		0	0	0	0
8:45 AM	0	0	20	2	0	1	18	2	0	7	1	7	0	0	1	0	59		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	1	1	0	0	3	0	2	0	0	0	0	7
Lights	0	0	79	4	0	9	86	4	0	8	3	57	0	1	3	0	254
Mediums	0	0	10	0	0	0	13	1	0	2	1	3	0	0	0	0	30
Total	0	0	89	4	0	10	100	5	0	13	4	62	0	1	3	0	291



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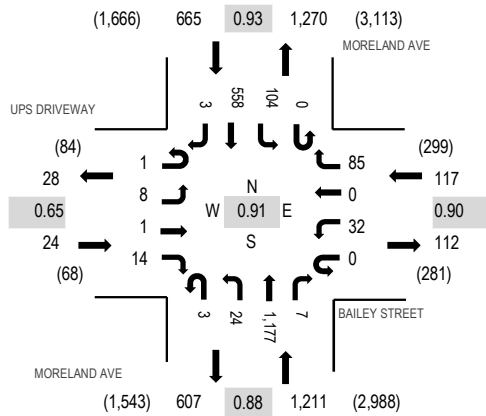
Location: #10 MORELAND AVE & BAILEY STREET AM

Date: Wednesday, February 10, 2021

Peak Hour: 07:30 AM - 08:30 AM

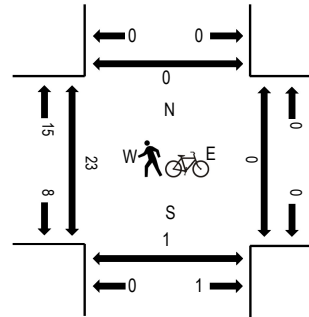
Peak 15-Minutes: 08:00 AM - 08:15 AM

Peak Hour - Motorized Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	UPS DRIVEWAY Eastbound				BAILEY STREET Westbound				MORELAND AVE Northbound				MORELAND AVE Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
6:00 AM	0	1	0	9	0	6	0	9	1	7	151	1	0	17	69	2	273	1,439	0	0	0	0
6:15 AM	0	2	0	4	0	3	0	13	1	7	209	2	0	25	75	3	344	1,533	0	0	0	0
6:30 AM	0	0	0	2	0	5	1	20	0	6	219	0	0	18	107	0	378	1,606	0	0	0	1
6:45 AM	0	1	0	7	0	13	0	15	2	5	257	3	0	21	117	3	444	1,740	0	0	0	1
7:00 AM	0	1	0	3	0	5	0	19	2	3	202	2	0	17	111	2	367	1,803	2	0	0	0
7:15 AM	0	1	0	1	0	11	0	16	0	4	252	2	0	24	106	0	417	1,988	5	0	0	0
7:30 AM	0	3	1	5	0	8	0	22	0	4	311	0	0	28	128	2	512	2,017	5	0	0	0
7:45 AM	0	0	0	5	0	5	0	24	1	3	286	5	0	27	151	0	507	1,909	5	0	1	0
8:00 AM	0	1	0	2	0	10	0	23	2	7	332	2	0	23	149	1	552	1,779	6	0	0	0
8:15 AM	1	4	0	2	0	9	0	16	0	10	248	0	0	26	130	0	446		7	0	0	0
8:30 AM	0	1	0	1	0	10	0	20	3	4	229	1	0	16	117	2	404		9	0	0	0
8:45 AM	0	1	0	9	0	6	0	10	2	6	194	0	0	20	128	1	377		11	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	1	5	0	6	0	1	0	1	0	4	32	1	0	1	22	1	75
Lights	0	3	1	7	0	30	0	72	3	19	1,105	3	0	95	508	2	1,848
Mediums	0	0	0	1	0	1	0	12	0	1	40	3	0	8	28	0	94
Total	1	8	1	14	0	32	0	85	3	24	1,177	7	0	104	558	3	2,017



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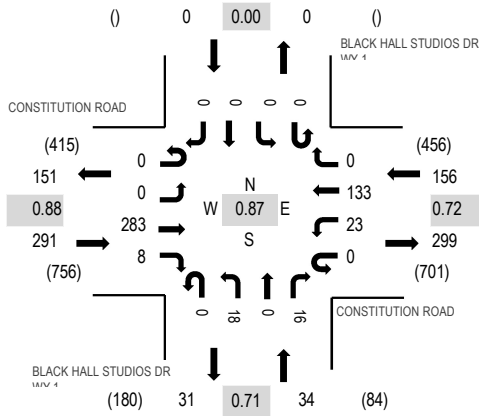
Location: #1 BLACK HALL STUDIOS DRWY 1 & CONSTITUTION ROAD PM

Date: Wednesday, February 10, 2021

Peak Hour: 04:00 PM - 05:00 PM

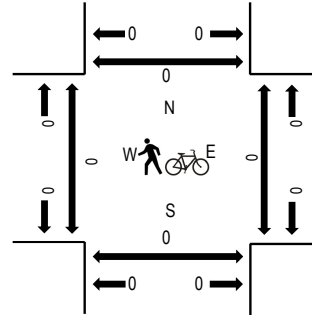
Peak 15-Minutes: 04:30 PM - 04:45 PM

Peak Hour - Motorized Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	CONSTITUTION ROAD Eastbound				CONSTITUTION ROAD Westbound				BLACK HALL STUDIOS Northbound				BLACK HALL STUDIOS Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	0	77	4	0	3	31	0	0	9	0	3	0	0	0	0	127	481	0	0	0	0
4:15 PM	0	0	68	3	0	3	29	0	0	6	0	5	0	0	0	0	114	452	0	0	0	0
4:30 PM	0	0	83	0	0	9	37	0	0	3	0	7	0	0	0	0	139	420	0	0	0	0
4:45 PM	0	0	55	1	0	8	36	0	0	0	0	1	0	0	0	0	101	388	0	0	0	0
5:00 PM	0	0	57	2	0	3	27	0	0	4	0	5	0	0	0	0	98	395	0	0	0	0
5:15 PM	0	0	39	4	0	6	29	0	0	2	0	2	0	0	0	0	82	404	0	0	0	0
5:30 PM	0	0	46	9	0	6	43	0	0	1	0	2	0	0	0	0	107	438	0	0	0	0
5:45 PM	0	0	48	23	0	7	28	0	0	1	0	1	0	0	0	0	108	454	0	0	0	0
6:00 PM	0	0	52	19	0	9	23	0	0	1	0	3	0	0	0	0	107	420	0	0	0	0
6:15 PM	0	0	48	21	0	9	30	0	0	4	0	4	0	0	0	0	116		0	0	0	0
6:30 PM	0	0	49	7	0	10	46	0	0	7	0	4	0	0	0	0	123		0	0	0	0
6:45 PM	0	0	33	8	0	6	18	0	0	0	0	9	0	0	0	0	74		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	7	0	0	0	4	0	0	0	0	0	0	0	0	0	11
Lights	0	0	266	7	0	23	120	0	0	18	0	15	0	0	0	0	449
Mediums	0	0	10	1	0	0	9	0	0	0	0	1	0	0	0	0	21
Total	0	0	283	8	0	23	133	0	0	18	0	16	0	0	0	0	481



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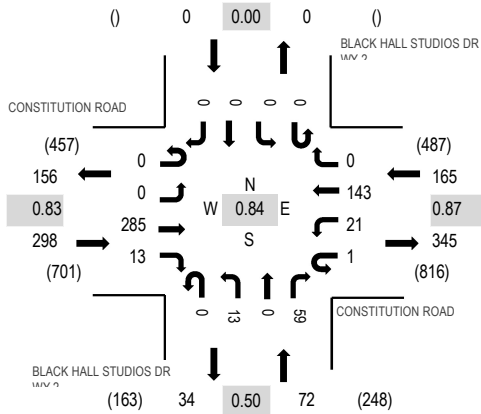
Location: #2 BLACK HALL STUDIOS DRWY 2 & CONSTITUTION ROAD PM

Date: Wednesday, February 10, 2021

Peak Hour: 04:00 PM - 05:00 PM

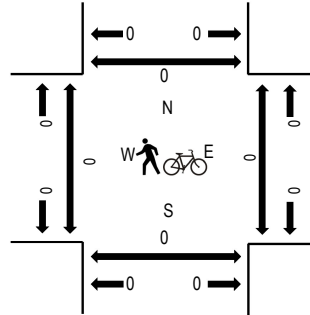
Peak 15-Minutes: 04:30 PM - 04:45 PM

Peak Hour - Motorized Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	CONSTITUTION ROAD				CONSTITUTION ROAD				BLACK HALL STUDIOS				BLACK HALL STUDIOS				Total	Rolling Hour	Pedestrian Crossings			
	Eastbound				Westbound				Northbound				Southbound						West	East	South	North
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right						
4:00 PM	0	0	74	5	0	5	34	0	0	1	0	16	0	0	0	0	135	535	0	0	0	0
4:15 PM	0	0	68	5	1	4	29	0	0	2	0	8	0	0	0	0	117	512	0	0	0	0
4:30 PM	0	0	87	3	0	4	43	0	0	5	0	18	0	0	0	0	160	484	0	0	0	0
4:45 PM	0	0	56	0	0	8	37	0	0	5	0	17	0	0	0	0	123	436	0	0	0	0
5:00 PM	0	0	61	1	0	8	25	0	0	5	0	12	0	0	0	0	112	408	0	0	0	0
5:15 PM	0	0	38	3	0	5	35	0	0	1	0	7	0	0	0	0	89	407	0	0	0	0
5:30 PM	0	0	46	2	0	5	45	0	0	4	0	10	0	0	0	0	112	454	0	0	0	0
5:45 PM	0	0	44	5	0	4	33	0	0	1	0	8	0	0	0	0	95	506	0	0	0	0
6:00 PM	0	0	40	16	0	7	32	0	0	1	0	15	0	0	0	0	111	493	0	0	0	0
6:15 PM	0	0	36	15	1	16	34	0	0	5	0	29	0	0	0	0	136		0	0	0	0
6:30 PM	0	0	40	13	0	14	33	0	0	23	0	41	0	0	0	0	164		0	0	0	0
6:45 PM	0	0	33	10	0	5	20	0	0	4	0	10	0	0	0	0	82		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	7	0	0	0	3	0	0	0	0	0	0	0	0	0	10
Lights	0	0	269	11	1	20	130	0	0	13	0	56	0	0	0	0	500
Mediums	0	0	9	2	0	1	10	0	0	0	0	3	0	0	0	0	25
Total	0	0	285	13	1	21	143	0	0	13	0	59	0	0	0	0	535



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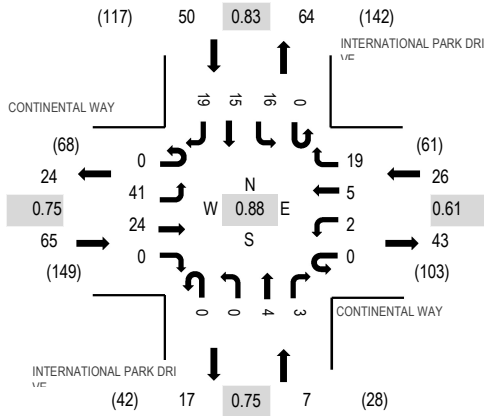
Location: #3 INTERNATIONAL PARK DRIVE & CONTINENTAL WAY PM

Date: Wednesday, February 10, 2021

Peak Hour: 04:15 PM - 05:15 PM

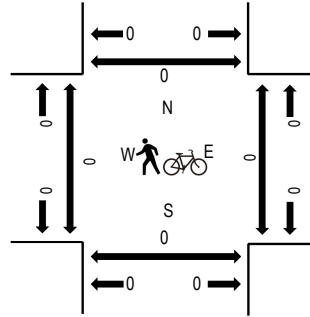
Peak 15-Minutes: 04:15 PM - 04:30 PM

Peak Hour - Motorized Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	CONTINENTAL WAY Eastbound				CONTINENTAL WAY Westbound				INTERNATIONAL PARK DRIVE Northbound				INTERNATIONAL PARK DRIVE Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	5	5	0	0	1	0	2	0	0	2	2	0	3	2	4	26	145	0	0	0	0
4:15 PM	0	12	9	0	0	0	2	4	0	0	1	0	0	6	6	2	42	148	0	0	0	0
4:30 PM	0	12	2	0	0	2	2	7	0	0	0	1	0	3	4	5	38	135	0	0	0	0
4:45 PM	0	6	8	0	0	0	1	6	0	0	2	1	0	6	2	7	39	123	0	0	0	0
5:00 PM	0	11	5	0	0	0	0	2	0	0	1	1	0	1	3	5	29	107	0	0	0	0
5:15 PM	0	12	10	0	0	0	1	0	0	0	1	0	2	0	0	3	29	103	0	0	0	0
5:30 PM	0	5	7	0	1	1	1	1	0	0	1	1	0	1	1	6	26	101	0	0	0	0
5:45 PM	0	4	1	0	0	3	2	1	0	0	2	2	0	2	3	3	23	101	0	0	0	0
6:00 PM	0	9	2	0	0	1	1	2	0	0	3	1	0	3	1	2	25	103	0	0	0	0
6:15 PM	0	6	3	0	0	1	1	2	0	0	1	0	0	6	3	4	27		0	0	0	0
6:30 PM	0	6	1	0	0	1	3	3	0	0	1	2	0	0	3	6	26		0	0	0	0
6:45 PM	0	4	4	0	0	2	3	1	0	0	2	0	0	3	2	4	25		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	1	1	0	0	2	1	5	0	0	1	0	0	7	5	2	25
Lights	0	39	22	0	0	0	4	9	0	0	2	2	0	6	8	16	108
Mediums	0	1	1	0	0	0	0	5	0	0	1	1	0	3	2	1	15
Total	0	41	24	0	0	2	5	19	0	0	4	3	0	16	15	19	148



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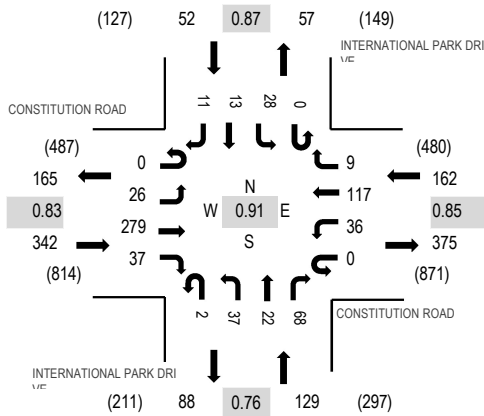
Location: #4 INTERNATIONAL PARK DRIVE & CONSTITUTION ROAD PM

Date: Wednesday, February 10, 2021

Peak Hour: 04:00 PM - 05:00 PM

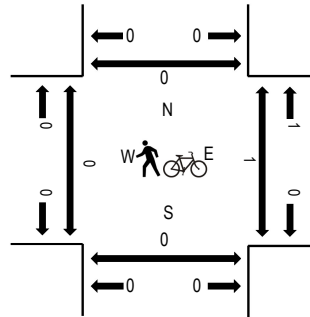
Peak 15-Minutes: 04:30 PM - 04:45 PM

Peak Hour - Motorized Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	CONSTITUTION ROAD Eastbound				CONSTITUTION ROAD Westbound				INTERNATIONAL PARK Northbound				INTERNATIONAL PARK Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	8	76	10	0	8	32	3	0	4	5	14	0	9	4	2	175	685	0	0	0	0
4:15 PM	0	4	55	13	0	11	26	2	0	7	7	15	0	8	3	0	151	653	0	0	0	0
4:30 PM	0	7	90	6	0	7	33	2	0	11	5	17	0	5	3	3	189	624	0	1	0	0
4:45 PM	0	7	58	8	0	10	26	2	2	15	5	22	0	6	3	6	170	560	0	0	0	0
5:00 PM	0	4	66	7	0	7	24	2	0	6	6	16	0	2	1	2	143	514	0	0	0	0
5:15 PM	1	3	39	4	0	8	28	3	0	8	8	13	0	2	0	5	122	499	0	0	0	0
5:30 PM	0	5	37	7	0	8	40	1	0	4	2	13	0	3	0	5	125	510	0	0	0	0
5:45 PM	0	1	56	1	0	11	25	1	0	7	3	10	0	3	3	3	124	541	0	0	0	0
6:00 PM	0	6	45	2	0	11	27	3	0	5	8	9	0	3	2	7	128	519	0	0	0	0
6:15 PM	0	8	49	6	0	7	31	1	0	7	2	7	0	1	1	13	133		0	0	0	0
6:30 PM	0	12	65	6	0	9	34	0	0	7	5	8	0	1	1	8	156		0	0	0	0
6:45 PM	0	6	32	4	0	16	21	0	0	2	2	10	0	6	1	2	102		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	2	4	0	17	2	0	1	2	0	7	0	0	0	0	35
Lights	0	26	275	25	0	12	111	9	1	31	22	55	0	27	12	10	616
Mediums	0	0	2	8	0	7	4	0	0	4	0	6	0	1	1	1	34
Total	0	26	279	37	0	36	117	9	2	37	22	68	0	28	13	11	685



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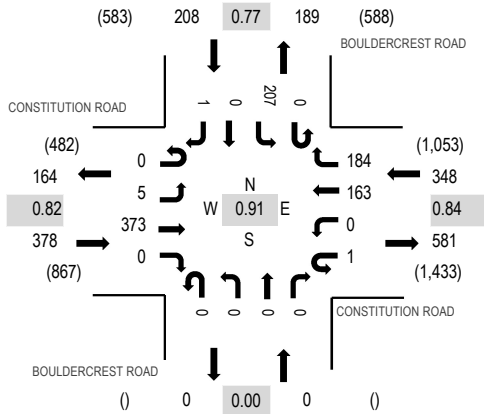
Location: #5 BOULDERCREST ROAD & CONSTITUTION ROAD PM

Date: Wednesday, February 10, 2021

Peak Hour: 04:00 PM - 05:00 PM

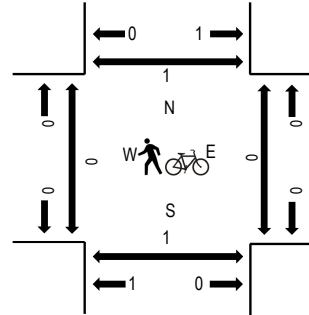
Peak 15-Minutes: 04:30 PM - 04:45 PM

Peak Hour - Motorized Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	CONSTITUTION ROAD Eastbound				CONSTITUTION ROAD Westbound				BOULDERCREST ROAD Northbound				BOULDERCREST ROAD Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	2	93	0	1	0	42	52	0	0	0	0	0	58	0	1	249	934	0	0	0	1
4:15 PM	0	1	81	0	0	0	40	39	0	0	0	0	0	55	0	0	216	879	0	0	0	0
4:30 PM	0	1	114	0	0	0	43	50	0	0	0	0	0	49	0	0	257	883	0	0	0	0
4:45 PM	0	1	85	0	0	0	38	43	0	0	0	0	0	45	0	0	212	850	0	0	1	0
5:00 PM	0	0	83	0	0	0	35	39	0	0	0	0	0	35	0	2	194	834	0	0	1	0
5:15 PM	0	0	52	0	1	0	39	58	0	0	0	0	0	70	0	0	220	824	0	0	0	1
5:30 PM	0	0	52	0	0	0	48	65	0	0	0	0	0	58	0	1	224	796	0	0	0	0
5:45 PM	0	1	66	0	0	0	35	51	0	0	0	0	0	42	0	1	196	766	0	0	0	1
6:00 PM	0	2	55	0	0	0	39	44	0	0	0	0	0	43	0	1	184	735	0	0	0	0
6:15 PM	0	0	58	0	0	0	36	51	0	0	0	0	0	47	0	0	192		0	0	0	0
6:30 PM	0	1	72	0	0	0	44	47	0	0	0	0	0	29	0	1	194		0	0	0	0
6:45 PM	0	2	45	0	0	0	35	38	0	0	0	0	0	44	0	1	165		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	9	0	0	0	19	0	0	0	0	0	0	0	0	0	28
Lights	0	5	354	0	1	0	132	176	0	0	0	0	0	198	0	1	867
Mediums	0	0	10	0	0	0	12	8	0	0	0	0	0	9	0	0	39
Total	0	5	373	0	1	0	163	184	0	0	0	0	0	207	0	1	934



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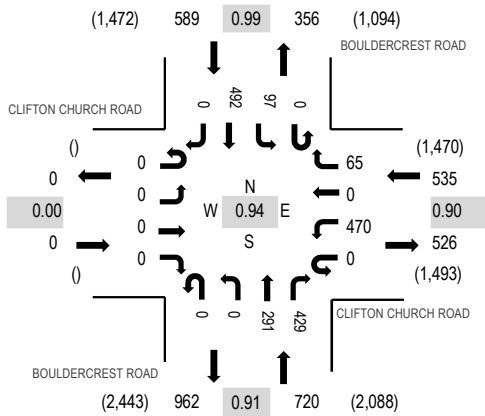
Location: #6 BOULDERCREST ROAD & CLIFTON CHURCH ROAD PM

Date: Wednesday, February 10, 2021

Peak Hour: 04:00 PM - 05:00 PM

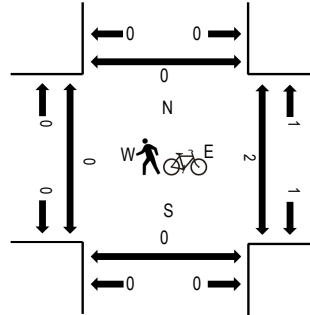
Peak 15-Minutes: 04:00 PM - 04:15 PM

Peak Hour - Motorized Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	CLIFTON CHURCH ROAD				CLIFTON CHURCH ROAD				BOULDERCREST ROAD				BOULDERCREST ROAD				Total	Rolling Hour	Pedestrian Crossings			
	Eastbound				Westbound				Northbound				Southbound						West	East	South	North
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right						
4:00 PM	0	0	0	0	0	110	0	11	0	0	87	138	0	26	120	0	492	1,844	0	1	0	0
4:15 PM	0	0	0	0	0	116	0	15	0	0	72	102	0	18	127	0	450	1,762	0	0	0	0
4:30 PM	0	0	0	0	0	112	0	22	0	0	64	87	0	26	123	0	434	1,758	0	1	0	0
4:45 PM	0	0	0	0	0	132	0	17	0	0	68	102	0	27	122	0	468	1,766	0	0	0	0
5:00 PM	0	0	0	0	0	102	0	14	0	0	61	102	0	22	109	0	410	1,701	0	3	0	0
5:15 PM	0	0	0	0	0	105	0	19	0	0	89	112	0	23	98	0	446	1,665	0	3	0	0
5:30 PM	0	0	0	0	0	108	0	21	0	0	93	114	0	24	82	0	442	1,595	0	0	0	1
5:45 PM	0	0	0	0	0	91	0	21	0	0	71	104	0	23	93	0	403	1,545	0	1	0	0
6:00 PM	0	0	0	0	0	79	0	20	0	0	73	101	0	30	71	0	374	1,485	0	0	0	0
6:15 PM	0	0	0	0	0	95	0	20	0	0	68	84	0	20	89	0	376		0	0	0	0
6:30 PM	0	0	0	0	0	107	0	24	0	0	66	94	0	17	84	0	392		0	0	0	0
6:45 PM	0	0	0	0	0	91	0	18	0	0	60	76	0	21	77	0	343		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	18	1	0	0	8	0	27
Lights	0	0	0	0	0	463	0	64	0	0	256	422	0	97	470	0	1,772
Mediums	0	0	0	0	0	7	0	1	0	0	17	6	0	0	14	0	45
Total	0	0	0	0	0	470	0	65	0	0	291	429	0	97	492	0	1,844



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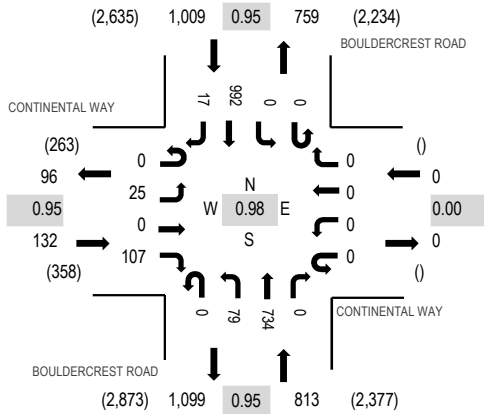
Location: #7 BOULDERCREST ROAD & CONTINENTAL WAY PM

Date: Wednesday, February 10, 2021

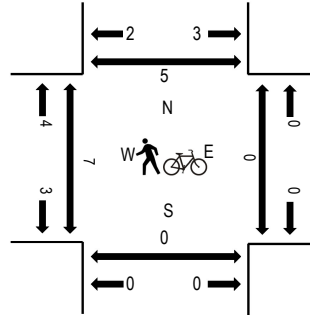
Peak Hour: 04:00 PM - 05:00 PM

Peak 15-Minutes: 04:00 PM - 04:15 PM

Peak Hour - Motorized Vehicles



Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	CONTINENTAL WAY Eastbound				CONTINENTAL WAY Westbound				BOULDERCREST ROAD Northbound				BOULDERCREST ROAD Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	5	0	31	0	0	0	0	0	17	217	0	0	0	226	3	499	1,954	2	0	0	1
4:15 PM	0	4	0	22	0	0	0	0	0	18	165	0	0	0	251	3	463	1,930	2	0	0	1
4:30 PM	0	9	0	28	0	0	0	0	0	23	182	0	0	0	250	7	499	1,943	2	0	0	2
4:45 PM	0	7	0	26	0	0	0	0	0	21	170	0	0	0	265	4	493	1,898	1	0	0	1
5:00 PM	0	6	0	28	0	0	0	0	0	13	188	0	0	0	236	4	475	1,841	1	0	0	1
5:15 PM	0	3	0	34	0	0	0	0	0	16	203	0	0	0	216	4	476	1,772	3	0	0	2
5:30 PM	0	5	0	19	0	0	0	0	0	18	206	0	0	0	204	2	454	1,684	3	0	0	0
5:45 PM	0	7	0	22	0	0	0	0	0	20	190	0	0	0	191	6	436	1,647	1	0	0	0
6:00 PM	0	5	0	23	0	0	0	0	0	18	178	0	0	0	178	4	406	1,575	0	0	0	0
6:15 PM	0	9	0	19	0	0	0	0	0	10	150	0	0	0	194	6	388		4	0	0	2
6:30 PM	0	2	0	18	0	0	0	0	0	19	169	0	0	0	203	6	417		0	0	0	0
6:45 PM	0	8	0	18	0	0	0	0	0	20	146	0	0	0	171	1	364		2	0	0	1

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	2	0	51	0	0	0	0	0	52	19	0	0	0	6	1	131
Lights	0	22	0	44	0	0	0	0	0	15	696	0	0	0	966	13	1,756
Mediums	0	1	0	12	0	0	0	0	0	12	19	0	0	0	20	3	67
Total	0	25	0	107	0	0	0	0	0	79	734	0	0	0	992	17	1,954



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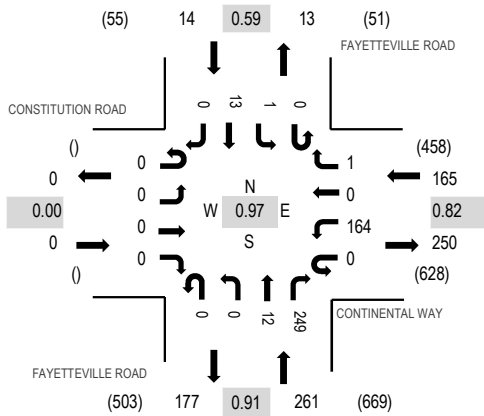
Location: #8 FAYETTEVILLE ROAD & CONTINENTAL WAY PM

Date: Wednesday, February 10, 2021

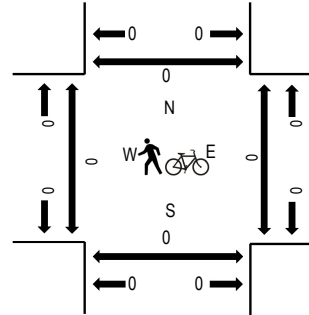
Peak Hour: 05:45 PM - 06:45 PM

Peak 15-Minutes: 06:30 PM - 06:45 PM

Peak Hour - Motorized Vehicles



Peak Hour - Pedestrians/Bicycles in Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	CONSTITUTION ROAD				CONTINENTAL WAY				FAYETTEVILLE ROAD				FAYETTEVILLE ROAD				Total	Rolling Hour	Pedestrian Crossings			
	Eastbound				Westbound				Northbound				Southbound						West	East	South	North
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right						
4:00 PM	0	0	0	0	0	47	0	1	0	0	1	67	0	0	3	0	119	405	0	0	0	0
4:15 PM	0	0	0	0	0	38	0	1	0	0	2	52	0	4	4	0	101	371	0	0	0	0
4:30 PM	0	0	0	0	0	53	0	0	0	0	6	43	0	1	3	0	106	352	0	0	0	0
4:45 PM	0	0	0	0	0	34	0	0	0	0	5	37	0	0	3	0	79	339	0	0	0	0
5:00 PM	0	0	0	0	0	32	0	0	0	0	5	37	0	1	10	0	85	372	0	0	0	0
5:15 PM	0	0	0	0	0	30	0	0	0	0	7	38	0	0	7	0	82	397	0	0	0	0
5:30 PM	0	0	0	0	0	35	0	0	0	0	6	48	0	0	4	0	93	420	0	0	0	0
5:45 PM	0	0	0	0	0	37	0	0	0	0	5	68	0	0	2	0	112	440	0	0	0	0
6:00 PM	0	0	0	0	0	31	0	1	0	0	2	71	0	1	4	0	110	405	0	0	0	0
6:15 PM	0	0	0	0	0	37	0	0	0	0	0	65	0	0	3	0	105		0	0	0	0
6:30 PM	0	0	0	0	0	59	0	0	0	0	5	45	0	0	4	0	113		0	0	0	0
6:45 PM	0	0	0	0	0	22	0	0	0	0	4	50	0	0	1	0	77		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	2	0	0	0	0	1	0	0	0	1	0	4
Lights	0	0	0	0	0	156	0	1	0	0	11	228	0	1	12	0	409
Mediums	0	0	0	0	0	6	0	0	0	0	0	21	0	0	0	0	27
Total	0	0	0	0	0	164	0	1	0	0	12	249	0	1	13	0	440



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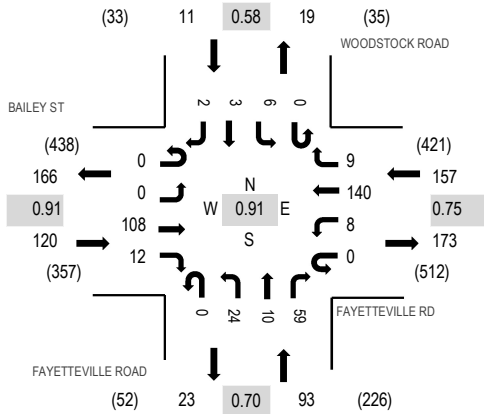
Location: #9 FAYETTEVILLE ROAD & FAYETTEVILLE RD PM

Date: Wednesday, February 11, 2021

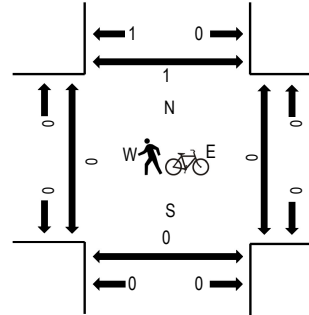
Peak Hour: 04:00 PM - 05:00 PM

Peak 15-Minutes: 04:30 PM - 04:45 PM

Peak Hour - Motorized Vehicles



Peak Hour - Pedestrians/Bicycles in Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	BAILEY ST Eastbound				FAYETTEVILLE RD Westbound				FAYETTEVILLE ROAD Northbound				WOODSTOCK ROAD Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	0	29	3	0	1	39	3	0	5	3	15	0	2	2	0	102	381	0	0	0	0
4:15 PM	0	0	21	4	0	3	23	1	0	5	5	23	0	2	0	1	88	364	0	0	0	1
4:30 PM	0	0	30	5	0	1	43	2	0	7	1	14	0	1	0	1	105	351	0	0	0	0
4:45 PM	0	0	28	0	0	3	35	3	0	7	1	7	0	1	1	0	86	317	0	0	0	0
5:00 PM	0	0	32	0	0	0	25	0	0	6	2	14	0	5	1	0	85	322	0	1	0	0
5:15 PM	0	0	33	0	0	1	25	1	0	2	1	8	0	4	0	0	75	328	0	0	0	0
5:30 PM	0	0	31	1	0	1	26	0	0	0	1	11	0	0	0	0	71	336	0	1	0	0
5:45 PM	0	0	34	3	0	1	33	1	0	4	0	14	0	1	0	0	91	357	0	0	0	0
6:00 PM	0	0	22	5	0	3	39	2	0	1	1	18	0	0	0	0	91	334	0	1	0	0
6:15 PM	0	0	25	1	0	3	27	1	0	4	1	19	0	2	0	0	83		0	0	0	0
6:30 PM	0	1	18	2	0	2	52	1	0	4	2	5	0	3	1	1	92		0	0	0	0
6:45 PM	0	0	28	1	0	1	18	1	0	5	0	10	0	2	2	0	68		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	4
Lights	0	0	99	12	0	7	130	9	0	23	9	44	0	6	3	2	344
Mediums	0	0	9	0	0	1	8	0	0	1	1	13	0	0	0	0	33
Total	0	0	108	12	0	8	140	9	0	24	10	59	0	6	3	2	381



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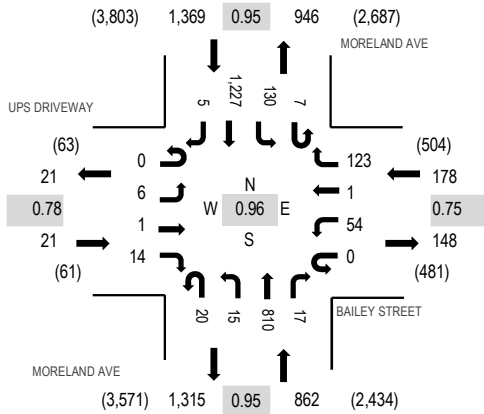
Location: #10 MORELAND AVE & BAILEY STREET PM

Date: Wednesday, February 10, 2021

Peak Hour: 04:00 PM - 05:00 PM

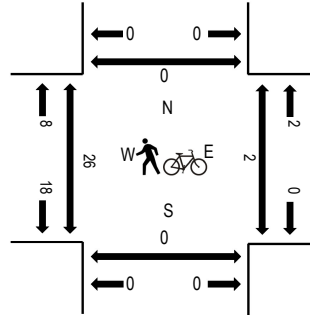
Peak 15-Minutes: 04:15 PM - 04:30 PM

Peak Hour - Motorized Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	UPS DRIVEWAY Eastbound				BAILEY STREET Westbound				MORELAND AVE Northbound				MORELAND AVE Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	1	0	2	0	12	0	34	10	5	196	10	1	45	289	1	606	2,430	5	2	0	0
4:15 PM	0	0	0	5	0	11	0	32	3	2	220	3	4	34	319	0	633	2,395	7	0	0	0
4:30 PM	0	4	0	4	0	18	0	32	6	5	198	3	0	30	288	1	589	2,368	7	0	0	0
4:45 PM	0	1	1	3	0	13	1	25	1	3	196	1	2	21	331	3	602	2,404	7	0	0	0
5:00 PM	0	0	0	7	0	13	0	31	4	4	192	1	1	21	295	2	571	2,390	7	0	0	0
5:15 PM	0	0	0	4	0	11	0	22	1	1	201	4	0	24	335	3	606	2,367	5	0	0	0
5:30 PM	0	3	0	5	0	13	0	19	3	3	236	2	0	30	307	4	625	2,284	3	0	0	0
5:45 PM	0	0	1	4	0	23	2	32	0	2	175	2	1	56	288	2	588	2,139	9	0	0	0
6:00 PM	0	1	0	5	1	11	0	21	1	3	206	1	0	47	251	0	548	1,982	7	0	0	0
6:15 PM	0	2	0	2	0	8	0	30	1	5	181	3	0	62	229	0	523		7	1	0	0
6:30 PM	0	0	0	3	0	19	1	44	2	3	157	3	1	33	213	1	480		7	0	0	0
6:45 PM	0	1	0	2	0	8	0	17	4	4	165	2	2	40	184	2	431		5	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	1	0	2	0	0	1	0	0	6	22	2	0	0	31	0	65
Lights	0	5	0	12	0	52	0	114	20	9	759	12	7	123	1,167	2	2,282
Mediums	0	0	1	0	0	2	0	9	0	0	29	3	0	7	29	3	83
Total	0	6	1	14	0	54	1	123	20	15	810	17	7	130	1,227	5	2,430

APPENDIX D

GDOT COUNT STATION DATA



0000089_3789 - 089-3789

Description: CR 519400 BEG AT

County: DeKalb

Route number: 00514900

LRS section: 0892514900

Functional class: 4U - Minor Arterial (Urban)

Coordinates: 33.68886229, -84.31245961

Site Data



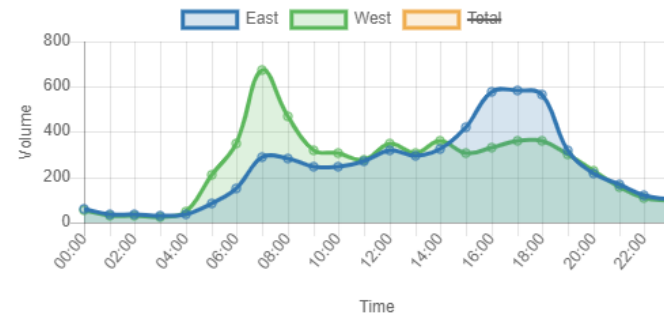
Count History

Year	Month	Count type	Duration	Count
2018	October	Class	48 hours	11846
2014	January	Volume	48 hours	10890
2010	March	Volume	48 hours	12029

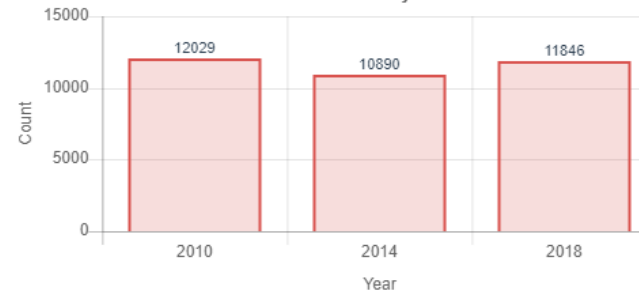
Annual Statistics

Data Item	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Statistics type	-	-	-	-	-	Estimated	Estimated	Estimated	Actual	Estimated
AADT	10300	10300	10300	10300	11400	12300	12700	13400	10900	10900
K-Factor	-	-	-	-	0.079	0.079	0.079	-	0.091	0.091
D-Factor	-	-	-	-	0.700	0.700	0.700	-	0.650	0.650
Future AADT	-	-	-	-	-	-	13300	16900	15500	16200

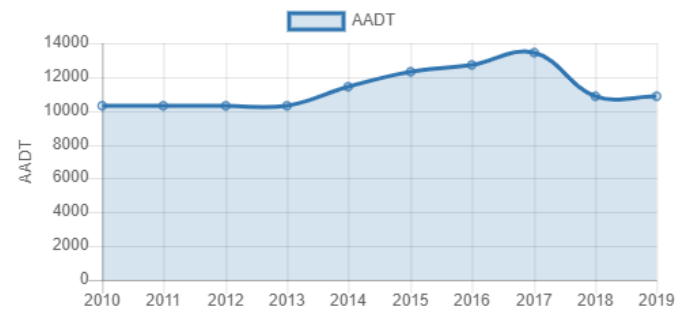
Average Hourly Volume



Count History



AADT Trend



FHWA Vehicle Classification

1. Motorcycles 2 axles, 2 or 3 wheels.		0.49%
2. Passenger cars 2 axles. Can have 1- or 2-axle trailers.		76.71%
3. Pickups, panels, vans 2-axle, 4-tire single units. Can have 1- or 2-axle trailers.		13.73%
4. Buses 2- or 3-axle, full length.		1.41%
5. Single-unit trucks 2-axle, 6-tire, (dual rear tires), single-unit trucks.		2.29%
6. Single-unit trucks 3-axle, single-unit trucks.		1.64%
7. Single-unit trucks 4 or more axle, single-unit trucks.		0.02%
8. Single-trailer trucks 3- or 4-axle, single-trailer trucks.		0.32%
9. Single-trailer trucks 5-axle, single-trailer trucks.		3.17%
10. Single-trailer trucks 6 or more axle, single-trailer trucks.		0.10%
11. Multi-trailer trucks 5 or less axle, multi-trailer trucks.		0.00%
12. Multi-trailer trucks 6-axle, multi-trailer trucks.		0%
13. Multi-trailer trucks 7 or more axle, multi-trailer trucks.		0.12%

0000089_3405 - 089-3405

Description: CRY 014300 L

County: DeKalb

Route number: 00518700

LRS section: 0892518700

Functional class: 4U - Minor Arterial (Urban)

Coordinates: 33.6865763998283, -84.3106807128111

Site Data



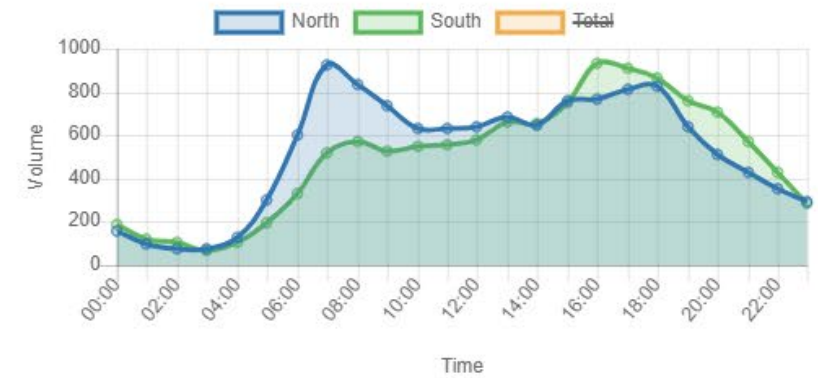
Count History

Year	Month	Count type	Duration	Count
2019	July	Volume	48 hours	24492
2016	May	Volume	48 hours	30024
2012	January	Volume	48 hours	21687

Annual Statistics

Data Item	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Statistics type	-	-	-	-	-	Estimated	Actual	Estimated	Estimated	Actual
AADT	21200	21100	21500	21600	21600	23200	26600	28200	28200	22500
K-Factor	-	-	-	-	-	-	0.082	-	-	0.075
D-Factor	-	-	-	-	-	-	0.600	-	-	0.530
Future AADT	-	-	-	-	-	-	26900	34400	45000	40100

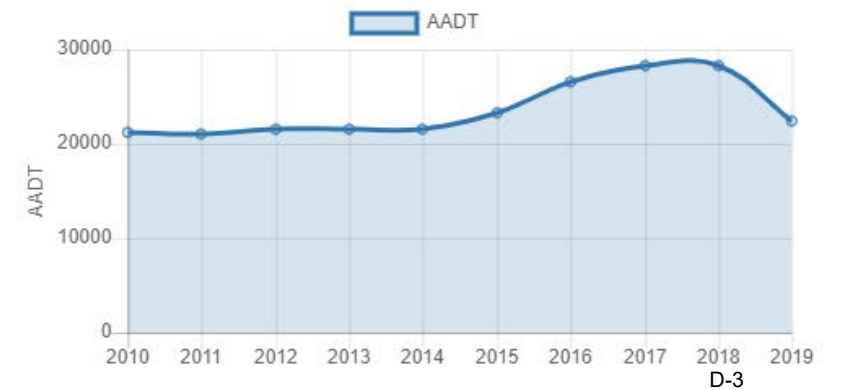
Average Hourly Volume



Count History



AADT Trend



0000121_5223 - 121-5223

Description: BEG DEKALB 089

County: Fulton

Route number: 00004200

LRS section: 1211004200

Functional class: 3U - Principal Arterial - Other (Urban)

Coordinates: 33.6966401462979, -84.3496324351984

Site Data



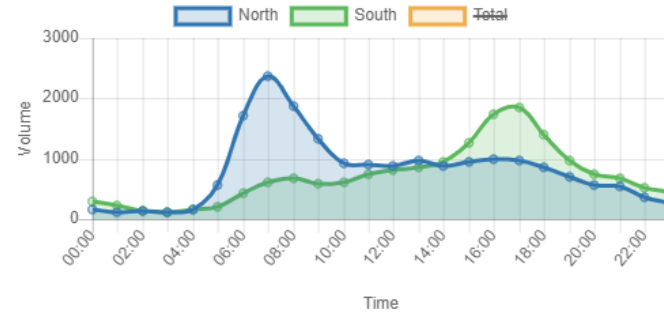
Count History

Year	Month	Count type	Duration	Count
2019	July	Class	48 hours	36183
2017	June	Volume	48 hours	37197
2017	May	Volume	48 hours	34653
2017	April	Volume	48 hours	34112
2017	February	Class	48 hours	30763
2015	March	Volume	48 hours	31131
2013	May	Class	48 hours	29442
2011	March	Class	48 hours	25920

Annual Statistics

Data Item	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Statistics type	-	-	-	-	-	Actual	Estimated	Actual	Estimated	Actual
AADT	21900	23600	23500	26200	26200	27800	28700	35000	34900	34100
K-Factor	-	-	-	0.090	0.090	0.110	0.110	0.101	0.101	0.090
D-Factor	-	-	-	0.800	0.800	0.800	0.800	0.590	0.590	0.800
Future AADT	-	-	-	-	-	-	31000	41100	58800	66200

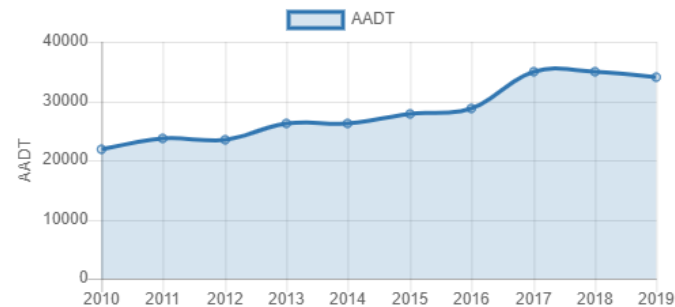
Average Hourly Volume



Count History



AADT Trend



FHWA Vehicle Classification

1. Motorcycles 2 axes, 2 or 3 wheels.		0.30%
2. Passenger cars 2 axes. Can have 1- or 2-axle trailers.		81.30%
3. Pickups, panels, vans 2-axle, 4-tire single units. Can have 1- or 2-axle trailers.		12.31%
4. Buses 2- or 3-axle, full length.		0.77%
5. Single-unit trucks 2-axle, 6-tire, (dual rear tires), single-unit trucks.		1.93%
6. Single-unit trucks 3-axle, single-unit trucks.		1.44%
7. Single-unit trucks 4 or more axle, single-unit trucks.		0.07%
8. Single-trailer trucks 3- or 4-axle, single-trailer trucks.		0.28%
9. Single-trailer trucks 5-axle, single-trailer trucks.		1.05%
10. Single-trailer trucks 6 or more axle, single-trailer trucks.		0.09%
11. Multi-trailer trucks 5 or less axle, multi-trailer trucks.		0.27%
12. Multi-trailer trucks 6-axle, multi-trailer trucks.		0.07%
13. Multi-trailer trucks 7 or more axle, multi-trailer trucks.		0.12%

0000089_3112 - 089-3112

Description: RPX 407153L407154R

County: DeKalb

Route number: 00004200

LRS section: 0891004200

Functional class: 3U - Principal Arterial - Other (Urban)

Coordinates: 33.67586647, -84.34375317

Site Data



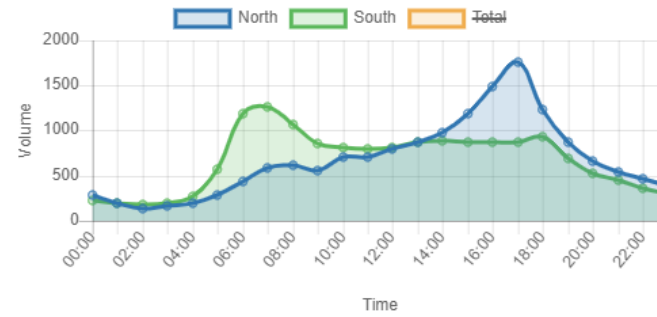
Count History

Year	Month	Count type	Duration	Count
2020	September	Class	48 hours	32141
2018	October	Class	48 hours	43100
2017	June	Volume	48 hours	44840
2017	May	Volume	48 hours	45956
2017	April	Volume	48 hours	42898
2016	May	Class	48 hours	40346
2014	January	Volume	48 hours	36208

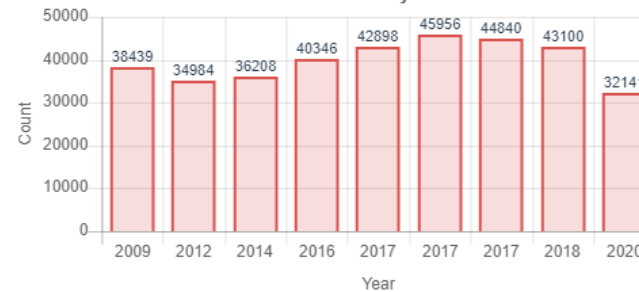
Annual Statistics

Data Item	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Statistics type	-	-	-	-	-	Estimated	Actual	Estimated	Actual	Estimated
AADT	36200	36200	34700	34800	37700	39000	36100	38200	39500	39800
K-Factor	-	-	-	-	0.088	0.088	0.090	-	0.096	0.096
D-Factor	-	-	-	-	0.800	0.800	0.800	-	0.770	0.770
Future AADT	-	-	-	-	-	-	42900	48100	49800	50200

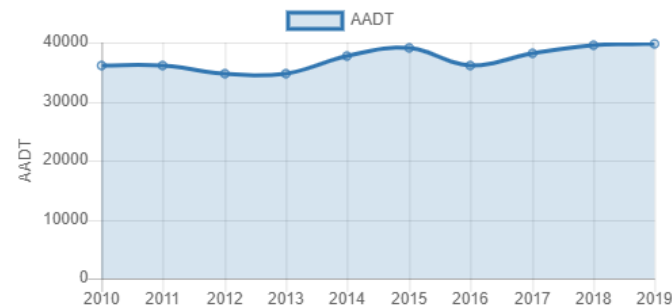
Average Hourly Volume



Count History



AADT Trend



FHWA Vehicle Classification

1. Motorcycles 2 axes, 2 or 3 wheels.		0.20%
2. Passenger cars 2 axes. Can have 1- or 2-axle trailers.		70.17%
3. Pickups, panels, vans 2-axle, 4-tire single units. Can have 1- or 2-axle trailers.		15.33%
4. Buses 2- or 3-axle, full length.		0.76%
5. Single-unit trucks 2-axle, 6-tire, (dual rear tires), single-unit trucks.		3.17%
6. Single-unit trucks 3-axle, single-unit trucks.		2.18%
7. Single-unit trucks 4 or more axle, single-unit trucks.		0.02%
8. Single-trailer trucks 3- or 4-axle, single-trailer trucks.		2.24%
9. Single-trailer trucks 5-axle, single-trailer trucks.		3.73%
10. Single-trailer trucks 6 or more axle, single-trailer trucks.		0.10%
11. Multi-trailer trucks 5 or less axle, multi-trailer trucks.		1.64%
12. Multi-trailer trucks 6-axle, multi-trailer trucks.		0.31%
13. Multi-trailer trucks 7 or more axle, multi-trailer trucks.		0.13%

000089_3407 - 089-3407

Description: CRT 514900 R

County: DeKalb

Route number: 00518700

LRS section: 0892518700

Functional class: 4U - Minor Arterial (Urban)

Coordinates: 33.6801403267709, -84.3081491344094

Site Data



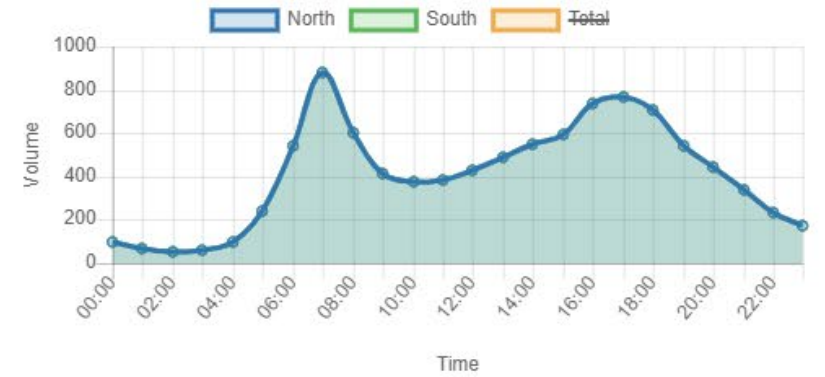
Count History

Year	Month	Count type	Duration	Count
2017	January	Volume	48 hours	19615
2013	March	Volume	48 hours	17643
2009	May	Volume	48 hours	18320

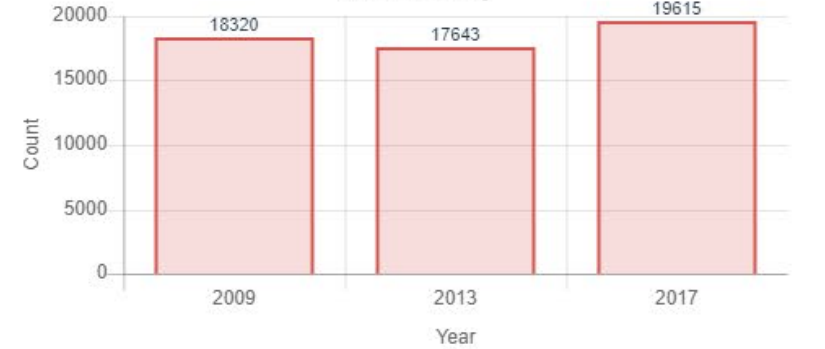
Annual Statistics

Data Item	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Statistics type	-	-	-	-	-	Estimated	Estimated	Actual	Estimated	Estimated
AADT	17700	17700	17600	15400	15400	16600	17100	18800	18800	18900
K-Factor	-	-	-	0.090	0.090	0.090	0.090	0.099	0.099	0.099
D-Factor	-	-	-	-	-	-	-	0.500	0.500	0.500
Future AADT	-	-	-	-	-	-	19600	24100	23700	23800

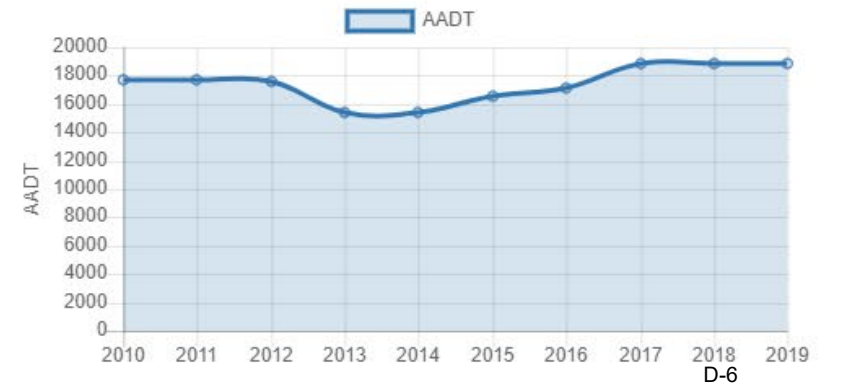
Average Hourly Volume



Count History



AADT Trend



0000089_3109 - 089-3109

Description: SRX 0054COLCR5169R

County: DeKalb

Route number: 00004200

LRS section: 0891004200

Functional class: 3U - Principal Arterial - Other (Urban)

Coordinates: 33.6645241556596, -84.3386411270918

Site Data



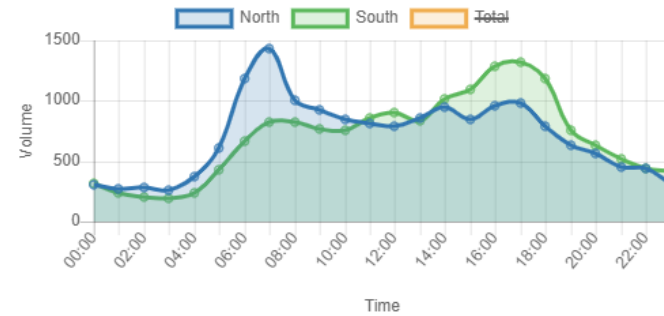
Count History

Year	Month	Count type	Duration	Count
2018	October	Class	48 hours	33555
2017	March	Class	48 hours	32264
2015	April	Volume	36 hours	17721
2013	October	Volume	48 hours	35802
2011	March	Class	48 hours	27848
2010	April	Class	48 hours	27242

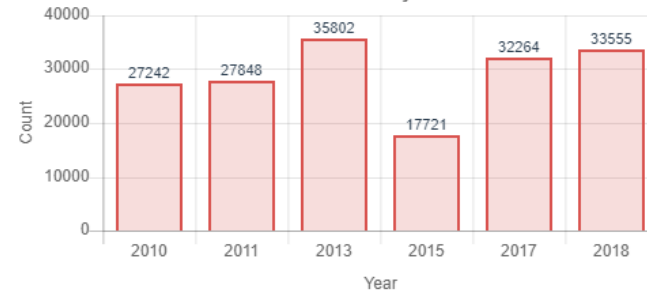
Annual Statistics

Data Item	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Statistics type	-	-	-	-	-	Estimated	Estimated	Actual	Estimated	Actual
AADT	24200	25000	24800	30300	30300	31300	32300	28800	28800	30900
K-Factor	-	-	-	0.060	0.060	0.060	0.060	0.097	0.097	0.075
D-Factor	-	-	-	0.600	0.600	0.600	0.600	0.530	0.530	0.560
Future AADT	-	-	-	-	-	-	57200	59700	52600	45600

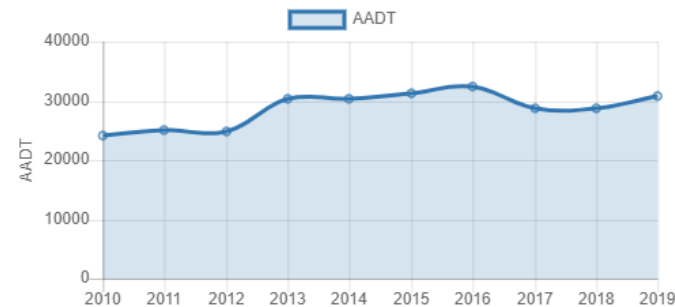
Average Hourly Volume



Count History



AADT Trend



FHWA Vehicle Classification

1. Motorcycles 2 axes, 2 or 3 wheels.		0.60%
2. Passenger cars 2 axes. Can have 1- or 2-axle trailers.		62.46%
3. Pickups, panels, vans 2-axle, 4-tire single units. Can have 1- or 2-axle trailers.		13.42%
4. Buses 2- or 3-axle, full length.		1.24%
5. Single-unit trucks 2-axle, 6-tire, (dual rear tires), single-unit trucks.		3.06%
6. Single-unit trucks 3-axle, single-unit trucks.		5.03%
7. Single-unit trucks 4 or more axle, single-unit trucks.		0.06%
8. Single-trailer trucks 3- or 4-axle, single-trailer trucks.		2.31%
9. Single-trailer trucks 5-axle, single-trailer trucks.		8.35%
10. Single-trailer trucks 6 or more axle, single-trailer trucks.		0.34%
11. Multi-trailer trucks 5 or less axle, multi-trailer trucks.		2.26%
12. Multi-trailer trucks 6-axle, multi-trailer trucks.		0.48%
13. Multi-trailer trucks 7 or more axle, multi-trailer trucks.		0.41%

APPENDIX E

TRIP GENERATION DATA



Trip Generation Summary

Alternative: Alternative 1

Phase:

Open Date: 1/19/2021

Project: Blackhall Phase II

Analysis Date: 1/19/2021

ITE	Land Use	Weekday Average Daily Trips				Weekday AM Peak Hour of Adjacent Street Traffic				Weekday PM Peak Hour of Adjacent Street Traffic			
		*	Enter	Exit	Total	*	Enter	Exit	Total	*	Enter	Exit	Total
150	WAREHOUSE 1		366	365	731		59	17	76		22	58	80
	420 1000 Sq. Ft. GFA												
710	OFFICEGENERAL 1		1039	1039	2078		200	32	232		37	193	230
	200 1000 Sq. Ft. GFA												
710	Film Stages		2110	2109	4219		414	67	481		76	401	477
	415 1000 Sq. Ft. GFA												
Unadjusted Volume			3515	3513	7028		673	116	789		135	652	787
Internal Capture Trips			0	0	0		0	0	0		0	0	0
Pass-By Trips			0	0	0		0	0	0		0	0	0
Volume Added to Adjacent Streets			3515	3513	7028		673	116	789		135	652	787

Total Weekday Average Daily Trips Internal Capture = 0 Percent

Total Weekday AM Peak Hour of Adjacent Street Traffic Internal Capture = 0 Percent

Total Weekday PM Peak Hour of Adjacent Street Traffic Internal Capture = 0 Percent

* - Custom rate used for selected time period.

Source: Institute of Transportation Engineers, Trip Generation Manual 10th Edition

TRIP GENERATION 10, TRAFFICWARE, LLC

P. 1

APPENDIX F

CRASH DATA



4. CONSTITUTION RD SE & INTERNATIONAL PARK DR SE

AccidentNo	AgencyName	Date	County	Route	IntersectingRoute	Injuries	Fatalities	MannerOfCollision	Light	Surface	DirVeh1	DirVeh2	MnvrVeh1	MnvrVeh2	U1FirstHarmfulEvent	U2FirstHarmfulEvent	NumberOfVehicles	U1Factors	U2Factors	U1TrafficControl	U2TrafficControl
5661904	Dekalb Co Police Department	3/4/2016	DEKALB	CONSTITUTION RD	INTERNATIONAL PARK DR	0	0	Sideswipe-Same Direction	Daylight	Dry	South	South	Changing Lanes	Straight	Motor Vehicle In Motion	Motor Vehicle In Motion	2	Changed Lanes Improperly	No Contributing Factors	Lanes	Lanes
5793747	Dekalb Co Police Department	6/3/2016	DEKALB	CONSTITUTION RD SE	INTERNATIONAL PARK DR	0	0	Not A Collision with Motor Vehicle	DarkNot Lighted	Dry	South	N/A	Turning Right	N/A	Embankment	N/A	1	Exceeding Speed Limit,Disregard Stop Sign/Signal,Driver Lost Control	N/A	Stop Sign	N/A
6203550	Dekalb Co Police Department	4/20/2017	DEKALB	CONSTITUTION RD SE	INTERNATIONAL PARK DR SE	0	0	Not A Collision with Motor Vehicle	DarkNot Lighted	Dry	West	N/A	Straight	N/A	Animal	N/A	1	No Contributing Factors	N/A	Lanes	N/A
6559043	Dekalb Co Police Department	1/19/2018	DEKALB	CONSTITUTION RD	WEST SIDE PL	0	0	Angle	Daylight	Dry	North	North	Turning Right	Straight	Motor Vehicle In Motion	Motor Vehicle In Motion	2	Improper Turn	No Contributing Factors	Lanes	Lanes
6809935	Dekalb Co Police Department	7/25/2018	DEKALB	INTERNATIONAL PARK DR SE	CONSTITUTION RD SE	1	0	Angle	Daylight	Dry	None	East	Straight	Straight	Motor Vehicle In Motion	Motor Vehicle In Motion	2	Failed to Yield	No Contributing Factors	Lanes	Lanes
7625277	Dekalb Co Police Department	4/29/2020	DEKALB	INTERNATIONAL PARK DR SE	CONSTITUTION RD SE	0	0	Angle	Daylight	Wet	North	North	Passing	Stopped	Motor Vehicle In Motion	Motor Vehicle In Motion	2	Improper Passing	No Contributing Factors	Lanes	Stop Sign
7637247	Dekalb Co Police Department	5/14/2020	DEKALB	INTERNATIONAL PARK DR SE	CONSTITUTION RD	0	0	Angle	Daylight	Dry	North	North	Straight	Turning Left	Motor Vehicle In Motion	Motor Vehicle In Motion	2	Other	No Contributing Factors	Lanes	Lanes
7760833	Dekalb Co Police Department	9/2/2020	DEKALB	CONSTITUTION RD SE	W SIDE PL	1	0	Angle	Daylight	Dry	East	East	Turning Left	Straight	Motor Vehicle In Motion	Motor Vehicle In Motion	2	Failed to Yield	No Contributing Factors	Lanes	Lanes

5. CONSTITUTION RD SE & BOULDERCREST RD SE

AccidentNo	AgencyName	Date	County	Route	IntersectingRoute	Injuries	Fatalities	MannerOfCollision	Light	Surface	DirVeh1	DirVeh2	MnvrVeh1	MnvrVeh2	U1FirstHarmfulEvent	U2FirstHarmfulEvent	NumberOfVehicles	U1Factors	U2Factors	U1TrafficControl	U2TrafficControl
5611686	Dekalb Co Police Department	1/19/2016	DEKALB	BOULDERCREST RD	CONSTITUTION RD	0	0	Sideswipe-Same Direction	Daylight	Dry	N/A	West	N/A	Turning Left	Motor Vehicle In Motion	Motor Vehicle In Motion	2	No Contributing Factors	No Contributing Factors	Lanes	Lanes
5613488	Dekalb Co Police Department	1/19/2016	DEKALB	BOULDERCREST RD	CONSTITUTION RD	0	0	Sideswipe-Same Direction	Daylight	Dry	N/A	West	N/A	Turning Left	Motor Vehicle In Motion	Motor Vehicle In Motion	2	No Contributing Factors	No Contributing Factors	Lanes	Lanes
5687881	Dekalb Co Police Department	3/24/2016	DEKALB	BOULDERCREST DR SE	CONSTITUTION RD	0	0	Rear End	Daylight	Dry	West	West	Straight	Straight	Motor Vehicle In Motion	Motor Vehicle In Motion	2	Following too Close	No Contributing Factors	Lanes	Lanes
5708985	Dekalb Co Police Department	4/11/2016	DEKALB	CONSTITUTION RD	BOULDERCREST RD	0	0	Angle	Daylight	Dry	West	South	Straight	Turning Left	Motor Vehicle In Motion	Motor Vehicle In Motion	2	Disregard Stop Sign/Signal	No Contributing Factors	Traffic Signal	Traffic Signal
5816811	Dekalb Co Police Department	6/30/2016	DEKALB	BOULDERCREST RD	CONSTITUTION RD	1	0	Angle	Daylight	Dry	North	South	Negotiating A Curve	Negotiating A Curve	Motor Vehicle In Motion	Motor Vehicle In Motion	3	Driver Lost Control,Distracted	No Contributing Factors	Lanes	Lanes
5845695	Dekalb Co Police Department	7/21/2016	DEKALB	BOULDERCREST RD	CONSTITUTION RD	2	0	Angle	Daylight	Wet	North	West	Straight	Turning Left	Motor Vehicle In Motion	Motor Vehicle In Motion	3	Failed to Yield	No Contributing Factors	Traffic Signal	Traffic Signal
5954970	Dekalb Co Police Department	10/9/2016	DEKALB	BOULDERCREST RD	CONSTITUTION RD	0	0	Rear End	DarkLighted	Dry	South	South	Backing	Stopped	Motor Vehicle In Motion	Motor Vehicle In Motion	2	Improper Backing	No Contributing Factors	Traffic Signal	Traffic Signal
6202234	Dekalb Co Police Department	4/21/2017	DEKALB	CONSTITUTION RD SE	CONSTITUTION RD	0	0	Sideswipe-Opposite Direction	Daylight	Dry	North	North	Changing Lanes	Straight	Motor Vehicle In Motion	Motor Vehicle In Motion	3	Changed Lanes Improperly	No Contributing Factors	Lanes	Lanes
6204513	Dekalb Co Police Department	4/24/2017	DEKALB	BOULDERCREST RD	CONSTITUTION RD	0	0	Not A Collision with Motor Vehicle	DarkNot Lighted	Wet	West	N/A	Turning Left	N/A	Ditch	N/A	1	Driver Lost Control	N/A	Lanes	N/A
6260013	Dekalb Co Police Department	6/2/2017	DEKALB	BOULDERCREST RD	CONSTITUTION RD	0	0	Not A Collision with Motor Vehicle	Daylight	Dry	South	N/A	Turning Right	N/A	Other Object (Not Fixed)	N/A	1	Improper Turn	N/A	Lanes	N/A
6674987	Dekalb Co Police Department	4/16/2018	DEKALB	BOULDERCREST RD	CONSTITUTION RD	0	0	Angle	Daylight	Dry	North	South	Turning Left	Stopped	Motor Vehicle In Motion	Motor Vehicle In Motion	2	Misjudged Clearance	No Contributing Factors	Lanes	Lanes
7127233	Dekalb Co Police Department	3/17/2019	DEKALB	BOULDERCREST RD	CONSTITUTION RD	2	0	Rear End	Daylight	Dry	South	South	Straight	Straight	Motor Vehicle In Motion	Motor Vehicle In Motion	2	Following too Close,Occupant Distraction (Distract	No Contributing Factors	Traffic Signal	Lanes
7320029	Dekalb Co Police Department	8/14/2019	DEKALB	BOULDERCREST RD	CONSTITUTION RD	0	0	Angle	DarkNot Lighted	Dry	South	East	Turning Left	Straight	Motor Vehicle In Motion	Motor Vehicle In Motion	2	Disregard Stop Sign/Signal	No Contributing Factors	Lanes	Lanes
7384261	Dekalb Co Police Department	10/9/2019	DEKALB	BOULDERCREST RD	CONSTITUTION RD	2	0	Angle	DarkNot Lighted	Dry	South	East	Turning Left	Straight	Motor Vehicle In Motion	Motor Vehicle In Motion	2	Disregard Other Traffic Contro	No Contributing Factors	RR Signal/Sign	Traffic Signal
7405980	Dekalb Co Police Department	10/26/2019	DEKALB	BOULDERCREST RD	CONSTITUTION RD	1	0	Not A Collision with Motor Vehicle	Daylight	Wet	West	N/A	Straight	N/A	Fence	N/A	1	Too Fast For Conditions	N/A	Lanes	N/A
7456686	Dekalb Co Police Department	11/29/2019	DEKALB	BOULDERCREST RD	CONSTITUTION RD	1	0	Angle	Daylight	Dry	West	East	Turning Left	Straight	Motor Vehicle In Motion	Motor Vehicle In Motion	2	Improper Turn	No Contributing Factors	Traffic Signal	Traffic Signal
7503830	Dekalb Co Police Department	1/4/2020	DEKALB	BOULDERCREST RD	CONSTITUTION RD	0	0	Rear End	Daylight	Dry	West	West	Straight	Straight	Motor Vehicle In Motion	Motor Vehicle In Motion	2	Following too Close	No Contributing Factors	Traffic Signal	Traffic Signal

6. BOULDERCREST RD SE & CLIFTON CHURCH RD

AccidentNo	AgencyName	Date	County	Route	IntersectingRoute	Injuries	Fatalities	MannerOfCollision	Light	Surface	DirVeh1	DirVeh2	MnvrVeh1	MnvrVeh2	NumberOfVehicles	U1Factors	U2Factors	U1TrafficControl	U2TrafficControl
5649340	Dekalb Co Police Department	2/25/2016	DEKALB	BOULDERCREST RD	CLIFTON CHURCH RD	0	0	Sideswipe-Same Direction	Daylight	Dry	West	West	Changing Lanes	Straight	2	Changed Lanes Improperly	No Contributing Factors	Lanes	Lanes
5652849	Dekalb Co Police Department	2/28/2016	DEKALB	CLIFTON CHURCH RD	BOULDERCREST RD	1	0	Sideswipe-Opposite Direction	Daylight	Dry	N/A	N/A	Straight	Straight	2	Misjudged Clearance	No Contributing Factors	Lanes	Lanes
5690050	Dekalb Co Police Department	3/23/2016	DEKALB	CLIFTON CHURCH RD	BOULDER CREST RD	0	0	Sideswipe-Same Direction	Daylight	Dry	South	South	Straight	Straight	2	Misjudged Clearance	Misjudged Clearance	Lanes	Lanes
5709708	Dekalb Co Police Department	4/9/2016	DEKALB	BOULDERCREST RD	CLIFTON CHURCH RD	0	0	Sideswipe-Same Direction	Daylight	Dry	South	South	Straight	Straight	2	Other	No Contributing Factors	Lanes	Lanes
5768270	Dekalb Co Police Department	5/23/2016	DEKALB	CLIFTON CHURCH RD	BOULDERCREST RD	0	0	Rear End	Daylight	Dry	N/A	West	N/A	Stopped	2	No Contributing Factors	No Contributing Factors	Traffic Signal	Traffic Signal
5783415	Dekalb Co Police Department	6/4/2016	DEKALB	CLIFTON CHURCH RD	BOULDERCREST RD	0	0	Sideswipe-Same Direction	Daylight	Dry	West	West	Changing Lanes	Straight	2	Changed Lanes Improperly	No Contributing Factors	Lanes	Lanes
5873268	Dekalb Co Police Department	8/10/2016	DEKALB	BOULDERCREST RD	CLIFTON CHURCH RD	0	0	Head On	Daylight	Wet	N/A	West	N/A	Straight	2	Changed Lanes Improperly	No Contributing Factors	Lanes	Lanes
5882724	Dekalb Co Police Department	8/17/2016	DEKALB	CLIFTON CHURCH RD SE	BOULDERCREST RD	0	0	Sideswipe-Same Direction	Daylight	Dry	N/A	South	Passing	Straight	2	Improper Passing	No Contributing Factors	Lanes	Lanes
5882868	Dekalb Co Police Department	8/18/2016	DEKALB	BOULDERCREST RD	CLIFTON CHURCH RD	1	0	Not A Collision with Motor Vehicle	DarkNot Lighted	Dry	South	N/A	N/A	N/A	1	Other	Other	Lanes	Lanes
5912595	Dekalb Co Police Department	9/10/2016	DEKALB	BOULDERCREST R	CLIFTON CHURCH RD	0	0	Angle	DarkLighted	Dry	East	North	Turning Left	Negotiating A Curve	2	Failed to Yield	No Contributing Factors	Lanes	Lanes
5928860	Dekalb Co Police Department	9/19/2016	DEKALB	BOULDERCREST RD SE	CLIFTON CHURCH ROAD	0	0	Sideswipe-Same Direction	DarkNot Lighted	Dry	North	North	Changing Lanes	Straight	2	Changed Lanes Improperly	No Contributing Factors	Lanes	Lanes
5958533	Dekalb Co Police Department	9/5/2016	DEKALB	CLIFTON CHURCH RD	BOULDERCREST RD	0	0	Rear End	Daylight	Dry	East	East	Straight	Stopped	2	Following too Close	No Contributing Factors	Lanes	Lanes
6174120	Dekalb Co Police Department	4/1/2017	DEKALB	CLIFTON CHURCH RD	BOULDERCREST RD	0	0	Rear End	Daylight	Dry	West	West	Straight	Straight	2	Following too Close	No Contributing Factors	Traffic Signal	Traffic Signal
6202228	Dekalb Co Police Department	4/21/2017	DEKALB	BOULDERCREST RD	CLIFTON CHURCH RD	0	0	Angle	Daylight	Dry	South	South	Turning Left	Turning Left	2	Improper Turn,Misjudged Clearance	No Contributing Factors	Lanes	Lanes
6268610	Dekalb Co Police Department	6/9/2017	DEKALB	BOULDERCREST RD	CLIFTON CHURCH RD	0	0	Rear End	Daylight	Dry	East	West	Backing	Stopped	2	Improper Backing	No Contributing Factors	No Control Present	No Control Present
6278529	Dekalb Co Police Department	6/18/2017	DEKALB	BOULDERCREST RD	CLIFTON CHURCH RD	0	0	Rear End	Daylight	Dry	N/A	North	Turning Left	Stopped	3	No Contributing Factors	No Contributing Factors	Lanes	Lanes
6296675	Dekalb Co Police Department	7/3/2017	DEKALB	CLIFTON CHURCH RD	BOULDERCREST RD	0	0	Rear End	Daylight	Wet	South	West	Straight	Turning Left	2	Following too Close	No Contributing Factors	Traffic Signal	Traffic Signal
6352212	Dekalb Co Police Department	8/13/2017	DEKALB	CLIFTON CHURCH ROAD	BOULDERCREST ROAD	0	0	Rear End	Daylight	Dry	West	West	Straight	Straight	3	Following too Close	No Contributing Factors	Traffic Signal	Traffic Signal
6367380	Dekalb Co Police Department	8/25/2017	DEKALB	BOULDERCREST RD	CLIFTON CHURCH RD	0	0	Sideswipe-Same Direction	Daylight	Dry	N/A	East	N/A	Straight	2	No Contributing Factors	No Contributing Factors	Lanes	Lanes
6486642	Dekalb Co Police Department	11/27/2017	DEKALB	CLIFTON CHURCH RD	BOULDERCREST RD	1	0	Sideswipe-Same Direction	Daylight	Dry	N/A	N/A	Changing Lanes	Straight	2	Other	No Contributing Factors	Traffic Signal	Traffic Signal
6516805	Dekalb Co Police Department	12/16/2017	DEKALB	BOULDERCREST RD	CLIFTON CHURCH RD	0	0	Sideswipe-Same Direction	DarkNot Lighted	Dry	N/A	South	N/A	Straight	2	No Contributing Factors	No Contributing Factors	Lanes	Lanes
6611002	Dekalb Co Police Department	2/26/2018	DEKALB	CLIFTON CHURCH RD	BOULDERCREST RD	0	0	Rear End	Daylight	Wet	South	West	Straight	Stopped	2	Following too Close	No Contributing Factors	Lanes	Lanes
6612283	Dekalb Co Police Department	2/27/2018	DEKALB	CLIFTON CHURCH RD	BOULDERCREST RD	0	0	Sideswipe-Same Direction	Daylight	Dry	West	West	Stopped	Straight	2	Other	Other	Traffic Signal	Traffic Signal
6621136	Dekalb Co Police Department	3/5/2018	DEKALB	BOULDERCREST RD	CLIFTON CHURCH RD	0	0	Head On	Daylight	Dry	N/A	East	N/A	Straight	2	Following too Close	No Contributing Factors	Lanes	Lanes
6647671	Dekalb Co Police Department	3/26/2018	DEKALB	CLIFTON CHURCH RD	BOULDERCREST RD	0	0	Not A Collision with Motor Vehicle	Daylight	Dry	North	N/A	Backing	N/A	1	Improper Backing	N/A	Lanes	N/A
6679724	Dekalb Co Police Department	4/9/2018	DEKALB	CLIFTON CHURCH RD	BOULDERCREST RD	0	0	Sideswipe-Opposite Direction	Daylight	Dry	East	West	Making U-turn	Stopped	2	Other Exterior Distraction (Di	No Contributing Factors	Lanes	Lanes
6717354	Dekalb Co Police Department	5/20/2018	DEKALB	CLIFTON CHURCH RD	BOULDERCREST RD	0	0	Rear End	Daylight	Dry	West	West	Straight	Stopped	2	Following too Close	No Contributing Factors	Traffic Signal	Traffic Signal
6774880	Dekalb Co Police Department	6/27/2018	DEKALB	BOULDERCREST RD	CLIFTON CHURCH RD	0	0	Angle	Daylight	Dry	South	North	Turning Left	Straight	2	Failed to Yield	No Contributing Factors	Traffic Signal	Traffic Signal
6818615	Dekalb Co Police Department	8/3/2018	DEKALB	BOULDERCREST RD	CLIFTON CHURCH RD	2	0	Angle	Daylight	Dry	East	North	Turning Left	Straight	2	Misjudged Clearance	No Contributing Factors	Traffic Signal	Traffic Signal
6824960	Dekalb Co Police Department	8/9/2018	DEKALB	BOULDERCREST RD	CLIFTON CHURCH RD	0	0	Sideswipe-Same Direction	Dawn	Wet	North	North	Changing Lanes	Straight	2	Changed Lanes Improperly	No Contributing Factors	Lanes	Lanes
6863368	Dekalb Co Police Department	9/6/2018	DEKALB	BOULDERCREST RD	CLIFTON CHURCH RD	0	0	Sideswipe-Opposite Direction	Daylight	Dry	East	West	Entering/Leaving Driveway	Straight	2	Failed to Yield	No Contributing Factors	Lanes	Lanes
6902584	Dekalb Co Police Department	10/5/2018	DEKALB	BOULDERCREST RD	CLIFTON CHURCH RD	0	0	Sideswipe-Same Direction	DarkLighted	Dry	South	South	Changing Lanes	Straight	2	Changed Lanes Improperly	No Contributing Factors	Lanes	Lanes
6953617	Dekalb Co Police Department	11/10/2018	DEKALB	CLIFTON CHURCH RD	BOULDERCREST RD	0	0	Sideswipe-Same Direction	Daylight	Dry	East	East	Changing Lanes	Straight	2	Changed Lanes Improperly	No Contributing Factors	Lanes	Lanes
6964231	Dekalb Co Police Department	11/17/2018	DEKALB	BOULDERCREST RD	CLIFTON CHURCH RD	0	0	Sideswipe-Opposite Direction	Daylight	Dry	North	West	Straight	Turning Left	2	Disregard Police - Traffic Con	No Contributing Factors	Traffic Signal	Traffic Signal
6994277	Dekalb Co Police Department	12/8/2018	DEKALB	BOULDERCREST RD	CLIFTON CHURCH RD	0	0	Head On	Daylight	Wet	North	South	Straight	Turning Left	2	Too Fast For Conditions	No Contributing Factors	Traffic Signal	Traffic Signal
7296912	Dekalb Co Police Department	7/25/2019	DEKALB	BOULDERCREST RD	CLIFTON CHURCH RD	0	0	Rear End	Daylight	Dry	North	North	Stopped	Stopped	2	Occupant Distraction (Distract	No Contributing Factors	Traffic Signal	Traffic Signal
7414664	Dekalb Co Police Department	11/1/2019	DEKALB	BOULDERCREST RD	CLIFTON CHURCH RD	0	0	Rear End	DarkLighted	Dry	N/A	N/A	Straight	Turning Right	2	Following too Close	No Contributing Factors	Lanes	Lanes
7493207	Dekalb Co Police Department	12/26/2019	DEKALB	CLIFTON CHURCH RD	BOULDERCREST RD	1	0	Angle	Daylight	Dry	South	West	Turning Right	Stopped	2	Wrong Side of Road	No Contributing Factors	Lanes	Lanes
7520314	Dekalb Co Police Department	1/18/2020	DEKALB	CLIFTON CHURCH RD	BOULDERCREST RD	0	0	Sideswipe-Same Direction	Daylight	Dry	South	South	Turning Left	Turning Left	2	Changed Lanes Improperly	No Contributing Factors	Traffic Signal	Traffic Signal
7526991	Dekalb Co Police Department	1/24/2020	DEKALB	CLIFTON CHURCH RD	BOULDERCREST RD	0	0	Sideswipe-Same Direction	Daylight	Dry	N/A	East	N/A	Straight	2	Changed Lanes Improperly	No Contributing Factors	Lanes	Lanes
7564488	Dekalb Co Police Department	2/27/2020	DEKALB	CLIFTON CHURCH RD	BOULDERCREST RD	0	0	Angle	Daylight	Dry	West	East	Straight	Straight	2	Other	No Contributing Factors	Lanes	Lanes
7672774	Dekalb Co Police Department	6/22/2020	DEKALB	CLIFTON CHURCH RD	BOULDERCREST RD	0	0	Angle	DarkLighted	Dry	North	West	Straight	Turning Left	2	Disregard Stop Sign/Signal,Driver Condition	No Contributing Factors	Traffic Signal	Traffic Signal
7681134	Dekalb Co Police Department	6/22/2020	DEKALB	BOULDERCREST RD	CLIFTON CHURCH RD	0	0	Sideswipe-Same Direction	Daylight	Dry	South	South	Changing Lanes	Straight	2	Changed Lanes Improperly	No Contributing Factors	Lanes	Lanes
7694275	Gsp Post 00	7/11/2020	DEKALB	BOULDERCREST RD	CLIFTON CHURCH RD	1	0	Angle	Daylight	Dry	South	West	Straight	Turning Left	3	Other,Disregard Police - Evasion	No Contributing Factors	Traffic Signal	Traffic Signal
7742743	Dekalb Co Police Department	8/17/2020	DEKALB	CLIFTON CHURCH RD	BOULDERCREST RD	0	0	Angle	Daylight	Dry	North	West	Turning Right	Straight	2	Improper Turn	No Contributing Factors	Traffic Signal	Traffic Signal

7. BOULDERCREST RD SE & CONTINENTAL WAY

AccidentNo	AgencyName	Date	County	Route	IntersectingRoute	Injuries	Fatalities	MannerOfCollision	Light	Surface	DirVeh1	DirVeh2	MnvrVeh1	MnvrVeh2	NumberOfVehicles	U1Factors	U2Factors	U1TrafficControl	U2TrafficControl
5608060	Dekalb Co Police Department	1/21/2016	DEKALB	CONTINENTAL WAY	BOULDERCREST RD	0	0	Rear End	DarkLighted	Dry	North	N/A	Straight	Parked	2	No Contributing Factors	No Contributing Factors	Lanes	Lanes
5641188	Dekalb Co Police Department	2/18/2016	DEKALB	BOULDERCREST RD	CONTINENTAL WAY	0	0	Angle	Daylight	Dry	South	North	Straight	Straight	2	Other	No Contributing Factors	Lanes	Lanes
5642016	Dekalb Co Police Department	2/18/2016	DEKALB	BOULDERCREST RD	CONTINENTAL WAY	0	0	Rear End	DarkLighted	Dry	North	N/A	Backing	Parked	2	Improper Backing	No Contributing Factors	Lanes	Lanes
5736954	Dekalb Co Police Department	4/30/2016	DEKALB	BOULDERCREST RD	CONTINENTAL WAY	0	0	Rear End	Daylight	Dry	N/A	N/A	Straight	Straight	3	Following too Close	No Contributing Factors	Lanes	Lanes
5756049	Dekalb Co Police Department	5/15/2016	DEKALB	BOULDERCREST RD	CONTINENTAL WAY	1	0	Rear End	Daylight	Dry	South	South	Straight	Stopped	2	Following too Close	No Contributing Factors	Lanes	Lanes
5813852	Dekalb Co Police Department	6/28/2016	DEKALB	BOULDERCREST RD	CONTINENTAL WAY	0	0	Rear End	DarkLighted	Dry	West	West	Straight	Stopped	2	Following too Close	No Contributing Factors	Traffic Signal	Traffic Signal
5874745	Dekalb Co Police Department	8/11/2016	DEKALB	BOULDERCREST RD	CONTINENTAL WAY	0	0	Angle	Daylight	Dry	N/A	East	Turning Right	Straight	2	Failed to Yield	No Contributing Factors	Traffic Signal	Traffic Signal
5888923	Dekalb Co Police Department	8/23/2016	DEKALB	BOULDERCREST RD	CONTIENTIAL WAY	1	0	Rear End	Daylight	Dry	South	South	Straight	Stopped	2	Following too Close	No Contributing Factors	Lanes	Traffic Signal
5912090	Dekalb Co Police Department	9/9/2016	DEKALB	BOULDERCREST RD	CONTINENTAL WAY	0	0	Angle	Daylight	Dry	South	South	Entering/Leaving Driveway	Straight	2	Improper Turn	No Contributing Factors	Lanes	Lanes
5922251	Dekalb Co Police Department	9/16/2016	DEKALB	BOULDERCREST RD SE	CONTINENTAL WAY	0	0	Rear End	Daylight	Dry	East	East	Straight	Stopped	2	Following too Close	No Contributing Factors	Lanes	Lanes
6040649	Dekalb Co Police Department	12/9/2016	DEKALB	BOULDERCREST RD SE	CONTINENTAL WAY	1	0	Rear End	Daylight	Dry	N/A	South	Straight	Stopped	2	No Contributing Factors	No Contributing Factors	Traffic Signal	Traffic Signal
6167778	Dekalb Co Police Department	3/27/2017	DEKALB	BOULDERCREST RD	CONTINENTAL WAY	0	0	Rear End	DarkLighted	Dry	South	South	Straight	Straight	2	Following too Close	No Contributing Factors	Traffic Signal	Traffic Signal
6197290	Dekalb Co Police Department	4/17/2017	DEKALB	BOULDERCREST RD	CONTINENTAL WAY	1	0	Rear End	Daylight	Dry	South	South	Straight	Straight	2	Following too Close	No Contributing Factors	Traffic Signal	Traffic Signal
6257613	Dekalb Co Police Department	5/31/2017	DEKALB	BOULDERCREST RD SE	CONTINENTAL WAY	1	0	Sideswipe-Opposite Direction	Daylight	Dry	South	North	Turning Right	Turning Left	2	Improper Turn	No Contributing Factors	Traffic Signal	Traffic Signal
6280108	Dekalb Co Police Department	6/19/2017	DEKALB	BOULDERCREST RD	CONTINENTAL WAY	0	0	Sideswipe-Opposite Direction	Daylight	Dry	South	North	Straight	Stopped	2	Disregard Stop Sign/Signal	No Contributing Factors	Lanes	Lanes
6280897	Dekalb Co Police Department	6/20/2017	DEKALB	CONTINENTAL WAY	BOULDERCREST RD SE	0	0	Rear End	Daylight	Wet	West	None	Backing	Stopped	2	Misjudged Clearance	No Contributing Factors	No Control Present	No Control Present
6354669	Dekalb Co Police Department	8/15/2017	DEKALB	BOULDERCREST RD SE	CONTINENTAL WAY	0	0	Angle	Daylight	Dry	South	South	Changing Lanes	Straight	2	Other	No Contributing Factors	Traffic Signal	Traffic Signal
6357569	Dekalb Co Police Department	8/17/2017	DEKALB	BOULDERCREST RD	CONTINENTAL WAY	0	0	Angle	Daylight	Dry	North	North	Turning Left	Stopped	2	Improper Turn	No Contributing Factors	Traffic Signal	Traffic Signal
6385917	Dekalb Co Police Department	9/8/2017	DEKALB	CONTINENTAL WAY	BOULDERCREST RD	0	0	Angle	Daylight	Dry	N/A	N/A	N/A	Parked	2	Misjudged Clearance	Parked Improperly	Lanes	Lanes
6531543	Dekalb Co Police Department	12/28/2017	DEKALB	BOULDERCREST RD	CONTINENTAL WAY	0	0	Sideswipe-Same Direction	Daylight	Dry	South	South	Changing Lanes	Straight	2	Changed Lanes Improperly	No Contributing Factors	Lanes	Lanes
6712690	Dekalb Co Police Department	5/16/2018	DEKALB	BOULDERCREST RD	CONTINENTAL WAY	0	0	Angle	Daylight	Wet	N/A	N/A	N/A	Parked	2	No Contributing Factors	No Contributing Factors	No Control Present	Lanes
6740802	Dekalb Co Police Department	6/8/2018	DEKALB	BOULDERCREST RD	CONTINENTAL WAY	0	0	Angle	Daylight	Dry	East	East	Turning Right	Straight	3	Improper Turn	No Contributing Factors	Lanes	Lanes
6779135	Dekalb Co Police Department	5/31/2018	DEKALB	BOULDERCREST RD	CONTINENTAL WAY	0	0	Angle	Daylight	Dry	North	South	Backing	Parked	2	No Contributing Factors	No Contributing Factors	No Control Present	No Control Present
6802329	Dekalb Co Police Department	6/23/2018	DEKALB	BOULDERCREST RD	CONTINENTAL WAY	1	0	Not A Collision with Motor Vehicle	DarkNot Lighted	Dry	East	North	N/A	Straight	1	Other	No Contributing Factors	Lanes	Lanes
6917625	Dekalb Co Police Department	10/17/2018	DEKALB	BOULDERCREST RD	CONTINENTAL WAY	1	0	Not A Collision with Motor Vehicle	Daylight	Dry	South	N/A	Passing	N/A	1	Improper Passing	N/A	Lanes	N/A
6949583	Dekalb Co Police Department	11/7/2018	DEKALB	BOULDERCREST RD	CONTINENTAL WAY	0	0	Rear End	Daylight	Wet	North	North	Straight	Stopped	2	Following too Close	No Contributing Factors	Traffic Signal	Traffic Signal
7081775	Dekalb Co Police Department	2/12/2019	DEKALB	BOULDERCREST RD	CONTINENTAL WAY	0	0	Rear End	Dusk	Wet	North	North	Straight	Changing Lanes	2	Following too Close	No Contributing Factors	Lanes	Lanes
7306119	Dekalb Co Police Department	8/2/2019	DEKALB	BOULDERCREST RD	CONTINENTAL WAY	2	0	Sideswipe-Same Direction	Daylight	Dry	South	South	Changing Lanes	Straight	2	Changed Lanes Improperly	No Contributing Factors	Lanes	Lanes
7405294	Dekalb Co Police Department	10/25/2019	DEKALB	BOULDERCREST RD	CONTINENTAL WAY	1	0	Angle	Daylight	Dry	East	South	Turning Right	Straight	2	Failed to Yield	No Contributing Factors	Lanes	Lanes
7472550	Dekalb Co Police Department	12/11/2019	DEKALB	BOULDERCREST RD	CONTINENTAL WAYNSE	0	0	Sideswipe-Same Direction	DarkNot Lighted	Dry	N/A	North	N/A	Turning Left	2	Improper Turn	No Contributing Factors	Lanes	Lanes
7484636	Dekalb Co Police Department	12/19/2019	DEKALB	BOULDERCREST RD	CONTINENTAL WAY	0	0	Rear End	Daylight	Dry	North	North	Straight	Straight	2	Following too Close	No Contributing Factors	Lanes	Lanes
7524649	Dekalb Co Police Department	1/22/2020	DEKALB	CONTINENTAL WAY	BOULDERCREST RD	1	0	Rear End	Daylight	Dry	West	West	Straight	Straight	2	Following too Close	No Contributing Factors	Lanes	Lanes
7543956	Dekalb Co Police Department	2/9/2020	DEKALB	BOULDERCREST RD	CONTINENTAL WAY	0	0	Rear End	Daylight	Dry	North	N/A	Backing	Parked	2	Improper Backing	No Contributing Factors	Lanes	Lanes
7602989	Dekalb Co Police Department	3/24/2020	DEKALB	BOULDERCREST RD	CONTINENTAL WAY	0	0	Rear End	Daylight	Dry	East	N/A	Backing	Parked	2	Improper Backing	No Contributing Factors	Lanes	Lanes
7655041	Dekalb Co Police Department	6/4/2020	DEKALB	BOULDERCREST RD	CONTINENTAL WAY	1	0	Sideswipe-Opposite Direction	Daylight	Dry	North	South	Turning Left	Straight	2	Failed to Yield	No Contributing Factors	Lanes	Lanes
7672750	Dekalb Co Police Department	6/22/2020	DEKALB	CONTINENTAL WAY	BOULDERCREST RD	0	0	Not A Collision with Motor Vehicle	DarkLighted	Dry	West	N/A	Turning Left	N/A	1	No Contributing Factors	N/A	Lanes	N/A
7819090	Dekalb Co Police Department	10/21/2020	DEKALB	BOULDERCREST RD	CONTINENTAL WAY	0	0	Rear End	Daylight	Dry	North	North	Straight	Stopped	2	Following too Close	No Contributing Factors	Traffic Signal	Traffic Signal

8. BOULDERCREST RD SE & I-285 WB RAMPS

AccidentNo	AgencyName	Date	County	Route	IntersectingRoute	Injuries	Fatalities	MannerOfCollision	Light	Surface	DirVeh1	DirVeh2	MnvrVeh1	MnvrVeh2	NumberOfVehicles	U1Factors	U2Factors	U1TrafficControl	U2TrafficControl
5581766	Dekalb Co Police Department	1/5/2016	DEKALB	I 285 RP W	BOULDERCREST RD	1	0	Rear End	Daylight	Dry	West	West	Straight	Straight	3	Following too Close	No Contributing Factors	Traffic Signal	Traffic Signal
5618236	Dekalb Co Police Department	1/31/2016	DEKALB	I 285 RP W	BOULDERCREST RD	0	0	Not A Collision with Motor Vehicle	Daylight	Dry	West	N/A	Straight	N/A	1	Misjudged Clearance	N/A	Traffic Signal	N/A
5658175	Dekalb Co Police Department	3/1/2016	DEKALB	BOULDERCREST RD	I-285 WEST HWY	1	0	Angle	Daylight	Dry	North	South	Straight	Turning Left	3	Distracted	No Contributing Factors	Traffic Signal	Traffic Signal
5662263	Dekalb Co Police Department	3/6/2016	DEKALB	I 285 IR	BOULDERCREST RD	0	0	Rear End	DarkLighted	Dry	South	South	N/A	Stopped	3	Following too Close	No Contributing Factors	Traffic Signal	Lanes
5668418	Dekalb Co Police Department	3/9/2016	DEKALB	BOUDLERCREST RD	I 285	0	0	Sideswipe-Same Direction	Daylight	Dry	North	North	Changing Lanes	Straight	2	No Contributing Factors	No Contributing Factors	Lanes	Lanes
5697163	Dekalb Co Police Department	4/1/2016	DEKALB	BOULDERCREST RD	I 285	0	0	Sideswipe-Same Direction	Daylight	Dry	North	North	Straight	Changing Lanes	2	Other	No Contributing Factors	Lanes	Lanes
5708401	Dekalb Co Police Department	4/10/2016	DEKALB	I 285 W	BOULDERCREST RD	2	0	Angle	Daylight	Dry	West	North	Straight	Straight	2	Disregard Stop Sign/Signal	No Contributing Factors	Lanes	Lanes
5722253	Dekalb Co Police Department	4/20/2016	DEKALB	BOULDERCREST RD	I 285	0	0	Angle	Dusk	Dry	West	West	Turning Right	Straight	2	Improper Passing,Improper Turn,Inattentive or Other Distracti	No Contributing Factors	Traffic Signal	Traffic Signal
5735651	Dekalb Co Police Department	4/27/2016	DEKALB	I-285 WB RP		0	0	Rear End	Daylight	Dry	West	West	Straight	Straight	2	Following too Close	No Contributing Factors	Lanes	Lanes
5777829	Dekalb Co Police Department	5/30/2016	DEKALB	I 285 OR	BOULDERCREST RD	0	0	Not A Collision with Motor Vehicle	Daylight	Dry	East	N/A	Straight	N/A	1	Reaction to Object or Animal	N/A	Lanes	N/A
5859419	Dekalb Co Police Department	8/1/2016	DEKALB	BOULDERCREST RD	I 285	0	0	Sideswipe-Same Direction	Dusk	Dry	South	South	Changing Lanes	Straight	2	Changed Lanes Improperly	No Contributing Factors	Lanes	Lanes
6226878	Dekalb Co Police Department	5/5/2017	DEKALB	I 285 IR	BOULDERCREST RD	1	0	Sideswipe-Same Direction	Daylight	Wet	West	West	Turning Left	Stopped	2	Failed to Yield	No Contributing Factors	Traffic Signal	Traffic Signal
6271452	Dekalb Co Police Department	6/11/2017	DEKALB	BOULDERCREST RD RP	I 285	3	0	Angle	Daylight	Dry	North	West	Straight	Turning Left	2	Disregard Stop Sign/Signal	No Contributing Factors	Traffic Signal	Traffic Signal
6368177	Dekalb Co Police Department	8/26/2017	DEKALB	I 285 OR	BOULDERCREST RD	0	0	Head On	DarkLighted	Dry	West	West	Straight	Changing Lanes	2	Following too Close	No Contributing Factors	Lanes	Lanes
6406832	Dekalb Co Police Department	9/26/2017	DEKALB	BOULDERCREST RD	285 SOUTHBOUND	0	0	Sideswipe-Same Direction	Daylight	Dry	West	West	Turning Right	Straight	2	Improper Turn	No Contributing Factors	Traffic Signal	Traffic Signal
6410925	Dekalb Co Police Department	9/29/2017	DEKALB	BOULDERCREST RD	I 285	0	0	Sideswipe-Same Direction	Daylight	Dry	North	North	Changing Lanes	Straight	2	Other	No Contributing Factors	Lanes	Lanes
6473797	Dekalb Co Police Department	11/15/2017	DEKALB	BOULDERCREST RD	I 285	0	0	Rear End	Daylight	Dry	North	North	Straight	Stopped	2	Following too Close	No Contributing Factors	Lanes	Lanes
6504578	Dekalb Co Police Department	12/7/2017	DEKALB	OR I 285 RP	BOULDERCREST RD	0	0	Angle	Daylight	Dry	West	West	Turning Right	Turning Left	2	Disregard Stop Sign/Signal	No Contributing Factors	Yield Sign	Traffic Signal
6526891	Dekalb Co Police Department	12/18/2017	DEKALB	IR I 285 RP	BOULDERCREST RD	0	0	Rear End	Daylight	Dry	West	West	Passing	Turning Left	2	Improper Passing	No Contributing Factors	Lanes	Lanes
6715516	Dekalb Co Police Department	5/17/2018	DEKALB	I-285 RP		4	0	Rear End	DarkNot Lighted	Wet	North	North	Straight	Stopped	2	Following too Close	No Contributing Factors	Traffic Signal	Traffic Signal
6783758	Dekalb Co Police Department	7/8/2018	DEKALB	BOULDERCREST RD	I 285	0	0	Angle	DarkLighted	Dry	West	East	Turning Left	Straight	2	Failed to Yield	No Contributing Factors	Traffic Signal	Traffic Signal
6814506	Dekalb Co Police Department	8/2/2018	DEKALB	I 285 RP E	BOULDERCREST RD	0	0	Angle	Daylight	Wet	N/A	East	N/A	Straight	2	Driver Lost Control	No Contributing Factors	Lanes	Lanes
6886403	Dekalb Co Police Department	9/24/2018	DEKALB	I 285 RP E	BOULDERCREST RD	0	0	Rear End	Daylight	Dry	East	East	Straight	Straight	2	Following too Close	No Contributing Factors	Lanes	Lanes
6897260	Dekalb Co Police Department	10/2/2018	DEKALB	BOULDERCREST RD	I 285	1	0	Not A Collision with Motor Vehicle	Daylight	Dry	North	East	Straight	N/A	1	Failed to Yield	Other	Lanes	Lanes
7086881	Dekalb Co Police Department	2/15/2019	DEKALB	BOULDERCREST RD RP	I 285	0	0	Angle	Daylight	Dry	West	West	Passing	Straight	2	Improper Passing	No Contributing Factors	Lanes	Lanes
7220174	Dekalb Co Police Department	5/24/2019	DEKALB	I-285 WEST	BOULDERCREST RD	0	0	Rear End	Daylight	Dry	West	West	Straight	Straight	2	Following too Close	No Contributing Factors	Lanes	Lanes
7238419	Dekalb Co Police Department	6/7/2019	DEKALB	BOULDERCREST RD	I 20	1	0	Angle	Daylight	Dry	North	West	Straight	Straight	2	Failed to Yield	No Contributing Factors	Traffic Signal	Traffic Signal
7254083	Dekalb Co Police Department	6/19/2019	DEKALB	BOULDERCREST RD	I 285	1	0	Angle	Daylight	Dry	North	West	Straight	Turning Left	2	Disregard Stop Sign/Signal	No Contributing Factors	Lanes	Lanes
7256656	Dekalb Co Police Department	6/21/2019	DEKALB	BOULDERCREST RD	I 285	0	0	Rear End	Daylight	Dry	North	North	Straight	Stopped	2	Following too Close	No Contributing Factors	Lanes	Traffic Signal
7315286	Dekalb Co Police Department	8/11/2019	DEKALB	BOULDERCREST RD RP	I 285	0	0	Angle	Daylight	Dry	North	South	Turning Left	Straight	2	Failed to Yield	No Contributing Factors	Traffic Signal	Traffic Signal
7401495	Dekalb Co Police Department	10/22/2019	DEKALB	BOULDERCREST RD	I 285	1	0	Angle	DarkLighted	Dry	South	West	Straight	Turning Left	2	Disregard Stop Sign/Signal	No Contributing Factors	Traffic Signal	Traffic Signal
7499474	Dekalb Co Police Department	12/31/2019	DEKALB	I 285 IR	BOULDERCREST RD	1	0	Sideswipe-Same Direction	Daylight	Dry	South	West	Changing Lanes	Straight	2	Changed Lanes Improperly	No Contributing Factors	Lanes	Lanes
7500105	Dekalb Co Police Department	1/1/2020	DEKALB	I 285 IR	BOULDERCREST RD	0	0	Rear End	DarkLighted	Dry	N/A	West	N/A	Straight	4	Misjudged Clearance	Following too Close	Lanes	Lanes
7517146	Gsp Post 00	1/11/2020	DEKALB	I-285W OFF-RAMP	BOULDERCREST ROAD	0	0	Not A Collision with Motor Vehicle	DarkNot Lighted	Dry	West	N/A	Straight	N/A	1	No Contributing Factors,Misjudged Clearance,Reckless Driving,Disregard Police - Evasion	N/A	Lanes	N/A
7526374	Dekalb Co Police Department	1/24/2020	DEKALB	BOULDERCREST RD RP	I 285	0	0	Not A Collision with Motor Vehicle	Daylight	Wet	South	N/A	Straight	N/A	1	Driver Lost Control	N/A	Lanes	N/A
7547160	Dekalb Co Police Department	2/12/2020	DEKALB	BOULDERCREST RD	I 285	0	0	Angle	Daylight	Dry	South	South	Straight	Stopped	2	Failed to Yield	No Contributing Factors	Lanes	Lanes
7610706	Dekalb Co Police Department	4/6/2020	DEKALB	I 285 RP W	BOULDERCREST RD	2	0	Sideswipe-Same Direction	DarkLighted	Dry	N/A	West	Straight	Straight	2	Other	No Contributing Factors	Lanes	Lanes
7617020	Dekalb Co Police Department	4/16/2020	DEKALB	BOULDERCREST RD	I 285	2	0	Sideswipe-Same Direction	Daylight	Dry	South	South	Turning Left	Straight	2	Improper Turn	No Contributing Factors	Lanes	Lanes
7619706	Dekalb Co Police Department	4/21/2020	DEKALB	BOULDERCREST RD RP	I 285	0	0	Angle	Daylight	Dry	West	South	Turning Right	Straight	2	Failed to Yield	No Contributing Factors	Lanes	No Control Present
7644915	Dekalb Co Police Department	5/24/2020	DEKALB	I-285 WEST	BOULDERCREST RD	0	0	Rear End	DarkLighted	Dry	West	West	Straight	Straight	2	Following too Close	No Contributing Factors	Lanes	Lanes
7650525	Dekalb Co Police Department	5/30/2020	DEKALB	WHITEHALL FOREST CT SE	BOULDERCREST RD	0	0	Angle	Daylight	Dry	N/A	East	N/A	Stopped	2	Reckless Driving	No Contributing Factors	Traffic Signal	Traffic Signal
7757044	Dekalb Co Police Department	8/31/2020	DEKALB	BOULDERCREST RD	I 285	1	0	Angle	DarkLighted	Dry	North	South	Turning Left	Straight	2	Failed to Yield	No Contributing Factors	Traffic Signal	Traffic Signal
7764155	Dekalb Co Police Department	9/5/2020	DEKALB	BOULDERCREST RD	I 285	6	0	Angle	DarkLighted	Dry	West	North	Turning Left	Straight	2	Failed to Yield	No Contributing Factors	Lanes	Lanes
7776313	Dekalb Co Police Department	9/17/2020	DEKALB	I 285 IR	BOULDERCREST RD	0	0	Rear End	DarkNot Lighted	Wet	West	West	Changing Lanes	Straight	2	Following too Close	No Contributing Factors	Lanes	Lanes
7796721	Dekalb Co Police Department	10/4/2020	DEKALB	BOULDERCREST RD	285	0	0	Rear End	Daylight	Dry	South	South	Backing	Stopped	2	Improper Backing	No Contributing Factors	Lanes	Lanes
7864513	Dekalb Co Police Department	11/25/2020	DEKALB	BOULDERCREST RD	I 285	1	0	Not A Collision with Motor Vehicle	Daylight	Dry	West	N/A	N/A	Straight	1	Disregard Stop Sign/Signal,Other	Other	Traffic Signal	Traffic Signal
7867506	Dekalb Co Police Department	11/29/2020	DEKALB	BOULDERCREST RD	I 285	0	0	Angle	DarkLighted	Wet	South	South	Changing Lanes	Turning Left	2	Changed Lanes Improperly	No Contributing Factors	Traffic Signal	Traffic Signal

9. BOULDERCREST RD SE & I-285 EB RAMPS

AccidentNo	AgencyName	Date	County	Route	IntersectingRoute	Injuries	Fatalities	MannerOfCollision	Light	Surface	DirVeh1	DirVeh2	MnvrVeh1	MnvrVeh2	NumberOfVehicles	U1Factors	U2Factors	U1TrafficControl	U2TrafficControl
5635236	Dekalb Co Police Department	2/12/2016	DEKALB	BOULDERCREST RD	I 285	4	0	Rear End	Daylight	Dry	North	North	Straight	Stopped	2	Following too Close	No Contributing Factors	Lanes	Lanes
5643362	Dekalb Co Police Department	2/20/2016	DEKALB	I-285 EB RP		1	0	Rear End	Daylight	Dry	East	East	Straight	Stopped	2	Following too Close	No Contributing Factors	Lanes	Lanes
5648526	Dekalb Co Police Department	2/24/2016	DEKALB	BOULDERCREST RD	I 285	1	0	Angle	Daylight	Wet	East	South	Turning Right	Straight	2	Improper Turn	No Contributing Factors	Traffic Signal	Traffic Signal
5664211	Dekalb Co Police Department	3/7/2016	DEKALB	I-285EB RP		0	0	Rear End	Daylight	Dry	East	East	Turning Right	Turning Right	2	Following too Close	No Contributing Factors	Traffic Signal	Traffic Signal
5700509	Dekalb Co Police Department	4/4/2016	DEKALB	IR I 285 RP	BOULDERCREST RD	1	0	Rear End	Daylight	Dry	East	East	Negotiating A Curve	Stopped	2	Following too Close	No Contributing Factors	Traffic Signal	Lanes
5708538	Dekalb Co Police Department	4/10/2016	DEKALB	BOULDERCREST RD	I 285	0	0	Rear End	Daylight	Dry	South	South	Straight	Stopped	2	Following too Close	No Contributing Factors	Traffic Signal	Traffic Signal
5709550	Dekalb Co Police Department	4/11/2016	DEKALB	BOULDERCREST RD	I-285 IS	1	0	Angle	Daylight	Dry	South	North	Turning Left	Turning Right	2	Failed to Yield	No Contributing Factors	Traffic Signal	Traffic Signal
5741727	Dekalb Co Police Department	5/4/2016	DEKALB	I 285 RP E		0	0	Rear End	Daylight	Dry	East	East	Turning Right	Stopped	2	Following too Close	No Contributing Factors	Traffic Signal	Traffic Signal
5744309	Dekalb Co Police Department	5/6/2016	DEKALB	I 285 E	BOULDERCREST RD	0	0	Rear End	Daylight	Dry	East	East	Turning Right	Stopped	2	Following too Close	No Contributing Factors	Lanes	Lanes
5748136	Dekalb Co Police Department	5/9/2016	DEKALB	BOULDERCREST RD	I 285	0	0	Sideswipe-Same Direction	Daylight	Dry	North	North	Passing	Straight	2	Improper Passing	No Contributing Factors	Lanes	Lanes
5793600	Dekalb Co Police Department	6/13/2016	DEKALB	I 285 RP E		0	0	Sideswipe-Same Direction	Daylight	Dry	East	None	Straight	Stopped	2	Mechanical Or Vehicle Failure	No Contributing Factors	Lanes	Lanes
5795430	Dekalb Co Police Department	6/15/2016	DEKALB	BOULDERCREST RD	I 285	0	0	Rear End	DarkLighted	Dry	N/A	N/A	Straight	Straight	2	Following too Close	No Contributing Factors	Lanes	Lanes
5797734	Dekalb Co Police Department	6/16/2016	DEKALB	I 285 RP E		1	0	Sideswipe-Same Direction	Daylight	Dry	East	East	Changing Lanes	Straight	2	Misjudged Clearance	No Contributing Factors	Lanes	Lanes
5817787	Dekalb Co Police Department	7/1/2016	DEKALB	I 285 RP E		0	0	Sideswipe-Same Direction	Daylight	Dry	East	East	Passing	Straight	2	Improper Passing	No Contributing Factors	No Control Present	No Control Present
5818755	Dekalb Co Police Department	7/3/2016	DEKALB	BOULDERCREST RD	I 285	0	0	Angle	Daylight	Dry	South	South	Making U-turn	Straight	2	Improper Turn	No Contributing Factors	Traffic Signal	Traffic Signal
5820905	Dekalb Co Police Department	7/5/2016	DEKALB	I 285 IR	I 285	0	0	Rear End	Daylight	Dry	East	East	Straight	Stopped	2	Following too Close	No Contributing Factors	Lanes	Lanes
5826528	Dekalb Co Police Department	7/11/2016	DEKALB	BOULDERCREST RD	I 285	0	0	Not A Collision with Motor Vehicle	DarkLighted	Dry	East	N/A	N/A	N/A	1	Disregard Police - Traffic Con	N/A	N/A	N/A
5846931	Dekalb Co Police Department	7/22/2016	DEKALB	BOULDERCREST RD	I 285	0	0	Angle	DarkLighted	Dry	N/A	South	N/A	Straight	2	No Contributing Factors	N/A	Traffic Signal	Traffic Signal
5855175	Dekalb Co Police Department	7/29/2016	DEKALB	I 285 OR	BOULDERCREST RD	1	0	Not A Collision with Motor Vehicle	DarkNot Lighted	Dry	N/A	East	N/A	Straight	2	Changed Lanes Improperly	No Contributing Factors	Lanes	Lanes
5967878	Dekalb Co Police Department	10/21/2016	DEKALB	OR I 285 RP	BOULDERCREST RD	0	0	Rear End	DarkLighted	Dry	East	East	Turning Right	Turning Right	2	Following too Close	No Contributing Factors	Traffic Signal	Traffic Signal
5970401	Dekalb Co Police Department	10/24/2016	DEKALB	BOULDERCREST ROAD	I-285 EAST BOUND	1	0	Rear End	DarkLighted	Dry	North	North	Straight	Stopped	2	Following too Close	No Contributing Factors	Traffic Signal	Traffic Signal
5973992	Dekalb Co Police Department	10/20/2016	DEKALB	BOULDERCREST RD RP	I 285	1	0	Rear End	Daylight	Dry	East	N/A	Backing	Stopped	2	Improper Backing,Inattentive or Other Distracti	No Contributing Factors	Lanes	Lanes
5978023	Dekalb Co Police Department	10/29/2016	DEKALB	OR I 285 RP	BOULDERCREST RD	0	0	Rear End	DarkLighted	Dry	East	N/A	Straight	Stopped	2	Following too Close	No Contributing Factors	Traffic Signal	Traffic Signal
5988323	Dekalb Co Police Department	11/6/2016	DEKALB	BOULDERCREST RD SE	I- 285	0	0	Angle	DarkLighted	Dry	East	East	Passing	Stopped	2	Improper Passing	No Contributing Factors	Lanes	Lanes
6018337	Dekalb Co Police Department	11/29/2016	DEKALB	I 285 OR	BOULDERCREST RD	0	0	Rear End	Daylight	Dry	East	East	Straight	Straight	3	Following too Close	No Contributing Factors	Lanes	Lanes
6024027	Dekalb Co Police Department	12/4/2016	DEKALB	BOULDERCREST RD RP	I 285	0	0	Not A Collision with Motor Vehicle	DarkLighted	Wet	East	N/A	Straight	N/A	1	Driver Lost Control	N/A	Lanes	N/A
6090166	Dekalb Co Police Department	1/23/2017	DEKALB	OR I 285 RP	BOULDERCREST RD	0	0	Rear End	Daylight	Wet	East	East	Straight	Straight	2	Following too Close	No Contributing Factors	Lanes	Lanes
6092664	Dekalb Co Police Department	1/24/2017	DEKALB	OR I 285 RP	BOULDERCREST RD	1	0	Not A Collision with Motor Vehicle	Dusk	Dry	South	East	Straight	Straight	2	Other	No Contributing Factors	Traffic Signal	Traffic Signal
6126490	Dekalb Co Police Department	2/22/2017	DEKALB	OR I 285 RP	BOULDERCREST RD	0	0	Rear End	Daylight	Wet	North	North	Turning Right	Turning Right	2	Following too Close	No Contributing Factors	Traffic Signal	Traffic Signal
6136931	Dekalb Co Police Department	3/3/2017	DEKALB	I 285 IR	BOULDERCREST RD	0	0	Angle	Daylight	Dry	North	East	N/A	Changing Lanes	2	Other	No Contributing Factors	Lanes	Lanes
6220631	Dekalb Co Police Department	5/5/2017	DEKALB	I 285 OR	BOULDERCREST RD	0	0	Angle	Daylight	Dry	East	East	Changing Lanes	Straight	2	Changed Lanes Improperly	No Contributing Factors	Lanes	Lanes
6220665	Dekalb Co Police Department	5/5/2017	DEKALB	I 285 OR	BOULDERCREST RD	0	0	Angle	Daylight	Dry	East	East	Straight	Changing Lanes	2	Following too Close	No Contributing Factors	Lanes	Lanes
6230130	Dekalb Co Police Department	5/11/2017	DEKALB	BOULDERCREST RD	I 285	0	0	Angle	Daylight	Dry	South	South	Making U-turn	Straight	2	Improper Turn	No Contributing Factors	Lanes	Lanes
6267425	Dekalb Co Police Department	6/8/2017	DEKALB	OR I 285 RP	BOULDERCREST RD	0	0	Rear End	Daylight	Dry	East	East	Straight	Stopped	2	Following too Close	No Contributing Factors	Traffic Signal	Traffic Signal
6339872	Dekalb Co Police Department	8/3/2017	DEKALB	I 285 IR	BOULDERCREST RD	0	0	Rear End	DarkLighted	Dry	East	East	Straight	Straight	2	Following too Close	No Contributing Factors	Lanes	Lanes
6351159	Dekalb Co Police Department	8/12/2017	DEKALB	I- 285 RAMP	BOULDERCREST RD	0	0	Rear End	Daylight	Dry	East	East	Straight	Stopped	2	Following too Close	No Contributing Factors	Lanes	Lanes
6359399	Dekalb Co Police Department	8/18/2017	DEKALB	285 EXIT RAMP RP E	BOULDERCREST RD	1	0	Rear End	DarkLighted	Dry	East	East	Straight	Straight	2	Following too Close	No Contributing Factors	Lanes	Lanes
6368178	Dekalb Co Police Department	8/26/2017	DEKALB	BOULDERCREST RD	I 285	0	0	Head On	DarkLighted	Dry	West	West	Straight	Straight	2	Disregard Other Traffic Contro	No Contributing Factors	Lanes	Lanes
6387674	Dekalb Co Police Department	9/10/2017	DEKALB	I 285 OR	BOULDERCREST RD	1	0	Rear End	DarkNot Lighted	Dry	East	East	Straight	Straight	2	Following too Close	No Contributing Factors	Lanes	No Control Present
6434844	Dekalb Co Police Department	10/20/2017	DEKALB	BOULDERCREST RD	I 285	0	0	Sideswipe-Opposite Direction	Daylight	Dry	East	North	Straight	Stopped	2	Other	No Contributing Factors	Traffic Signal	Traffic Signal
6439052	Dekalb Co Police Department	10/23/2017	DEKALB	OR I 285 RP	BOULDERCREST RD	0	0	Rear End	Daylight	Dry	East	East	Straight	Stopped	2	Following too Close	No Contributing Factors	No Control Present	Lanes
6455215	Dekalb Co Police Department	11/1/2017	DEKALB	BOULDERCREST RD SE	I- 285	3	0	Rear End	Daylight	Dry	East	East	Straight	Straight	2	Under the Influence (U.I.),Following too Close	No Contributing Factors	Lanes	Lanes
6462438	Dekalb Co Police Department	11/7/2017	DEKALB	RAMP I 285 RP	BOULDERCREST RD	0	0	Sideswipe-Same Direction	Daylight	Dry	N/A	East	Straight	Stopped	2	Improper Passing	No Contributing Factors	Traffic Signal	Traffic Signal
6514752	Dekalb Co Police Department	12/15/2017	DEKALB	BOULDERCREST RD	I-285	0	0	Not A Collision with Motor Vehicle	DarkNot Lighted	Dry	None	N/A	Stopped	N/A	1	Reckless Driving	N/A	Lanes	N/A
6527996	Dekalb Co Police Department	12/25/2017	DEKALB	IR I 285 RP	BOULDERCREST RD	1	0	Not A Collision with Motor Vehicle	DarkNot Lighted	Dry	East	N/A	Changing Lanes	N/A	1	Other	N/A	Lanes	N/A
6550278	Dekalb Co Police Department	1/12/2018	DEKALB	285 RP	BOULDERCREST	0	0	Rear End	DarkLighted	Dry	East	East	Straight	Stopped	2	Following too Close	No Contributing Factors	Lanes	Lanes
6568789	Dekalb Co Police Department	1/27/2018	DEKALB	IR I 285 RP	BOULDERCREST RD	0	0	Rear End	DarkNot Lighted	Wet	N/A	East	N/A	Stopped	2	Following too Close	No Contributing Factors	Traffic Signal	Traffic Signal
6616736	Dekalb Co Police Department	3/1/2018	DEKALB	RAMP I 285 RP E	BOULDERCREST RD	0	0	Rear End	Daylight	Wet	East	East	Straight	Stopped	2	Following too Close	No Contributing Factors	Lanes	Lanes
6628111	Dekalb Co Police Department	3/10/2018	DEKALB	BOULDERCREST RD	285	0	0	Rear End	DarkLighted	Dry	N/A	West	Other	Stopped	2	Reckless Driving	No Contributing Factors	Lanes	Lanes
6641205	Dekalb Co Police Department	3/21/2018	DEKALB	I 285 RP E	BOULDERCREST RD	0	0	Rear End	Daylight	Dry	East	East	Straight	Stopped	2	Following too Close	No Contributing Factors	Lanes	Lanes
6655474	Dekalb Co Police Department	4/2/2018	DEKALB	I 285 IR	BOULDERCREST RD	0	0	Rear End	Daylight	Dry	East	East	Straight	Straight	2	Following too Close	No Contributing Factors	Lanes	Lanes
6681089	Dekalb Co Police Department	4/22/2018	DEKALB	I 285 OR	BOULDERCREST RD	0	0	Not A Collision with Motor Vehicle	Daylight	Dry	East	N/A	Straight	N/A	1	Other	N/A	Lanes	N/A
6695266	Dekalb Co Police Department	5/2/2018	DEKALB	BOULDERCREST RD	I 285	1	0	Sideswipe-Same Direction	Daylight	Dry	N/A	South	Passing	Straight	2	Improper Passing	No Contributing Factors	Lanes	Lanes
6725074	Dekalb Co Police Department	5/25/2018	DEKALB	BOULDERCREST RD	I 285	2	0	Angle	Daylight	Dry	South	South	Changing Lanes	Changing Lanes	2	Changed Lanes Improperly	No Contributing Factors	Lanes	Lanes
6725081	Dekalb Co Police Department	5/24/2018	DEKALB	BOULDERCREST RD	I 285	0	0	Rear End	Daylight	Dry	North	North	Straight	Stopped	2	Following too Close	No Contributing Factors	Lanes	Lanes
6751023	Dekalb Co Police Department	6/18/2018	DEKALB	BOULDERCREST RD	I 285	0	0	Angle	Daylight	Dry	South	North	Turning Left	Straight	2	Failed to Yield	No Contributing Factors	Lanes	Lanes
6771760	Dekalb Co Police Department	6/27/2018	DEKALB	I-285 EAST BOUND EXIT RAMP	BOULDERCREST ROAD	0	0	Angle	DarkNot Lighted	Wet	East	South	Turning Left	Straight	2	Failed to Yield	No Contributing Factors	Traffic Signal	Traffic Signal
6792054	Dekalb Co Police Department	7/15/2018	DEKALB	OR I 285 RP	BOULDERCREST RD	0	0	Rear End	Daylight	Dry	East	East	Straight	Stopped	2	Following too Close	No Contributing Factors	Traffic Signal	Traffic Signal
6847092	Dekalb Co Police Department	8/25/2018	DEKALB	BOULDERCREST RD	I 285	1	1	Not A Collision with Motor Vehicle	DarkLighted	Dry	West	South	N/A	Straight	1	Failed to Yield	No Contributing Factors	Traffic Signal	Traffic Signal
6860688	Dekalb Co Police Department	9/4/2018	DEKALB	BOULDERCREST RD	I 285	1	0	Not A Collision with Motor Vehicle	DarkLighted	Dry	South	N/A	Straight	N/A	1	Other	No Contributing Factors	Lanes	Lanes
6891375	Dekalb Co Police Department	9/27/2018	DEKALB	I 285 OR	BOULDERCREST RD	0	0	Rear End	Daylight	Wet	East	East	Straight	Stopped	2	Following too Close	No Contributing Factors	Lanes	Lanes
6893747	Dekalb Co Police Department	9/28/2018	DEKALB	285 EXIT RP N	BOULDERCREST RD	0	0	Rear End	DarkLighted	Wet	South	South	Straight	Stopped	2	Following too Close	No Contributing Factors	Traffic Signal	No Control Present
6898738	Dekalb Co Police Department	8/8/2018	DEKALB	I 285 OR	BOULDERCREST RD	2	0	Rear End	Daylight	Dry	East	East	Straight	Straight	2	Following too Close	No Contributing Factors	Lanes	Lanes
6934159	Dekalb Co Police Department	10/30/2018	DEKALB	BOULDERCREST RD	285 RP	1	0	Angle	Daylight	Dry	North	East	Straight	Turning Left	2	Disregard Other Traffic Contro	No Contributing Factors	Traffic Signal	Traffic Signal
6947772	Dekalb Co Police Department	11/6/2018	DEKALB	BOULDERCREST RD	285	0	0	Rear End	DarkNot Lighted	Dry	North	North	Straight	Straight	2	Following too Close	No Contributing Factors	Lanes	Lanes
6950842	Dekalb Co Police Department	11/8/2018	DEKALB	EXIT RAMP I 285 RP	BOULDERCREST RD	3	0	Rear End	Daylight	Wet	East	East	Straight	Straight	2	Following too Close	No Contributing Factors	Lanes	Lanes
6976518	Dekalb Co Police Department	11/26/2018	DEKALB	BOULDERCREST RD	I 285	0	0	Angle	DarkLighted	Dry	East	North	Turning Left	Straight	2	Failed to Yield	No Contributing Factors	Traffic Signal	Traffic Signal
7030492	Dekalb Co Police Department	1/6/2019	DEKALB	I-285 EAST BOUND EXIT RAMP	BOULDERCREST RD	0	0	Angle	DarkNot Lighted	Dry	East	East	Passing	Straight	2	Improper Passing	No Contributing Factors	No Control Present	Lanes
7069472	Dekalb Co Police Department	2/3/2019	DEKALB	I 285 OR	BOULDERCREST RD	1	0	Rear End	DarkNot Lighted	Dry	East	East	Straight	Straight	3	Following too Close	No Contributing Factors	Lanes	Lanes
7075510	Dekalb Co Police Department	2/7/2019	DEKALB	IR I 285 RP	BOULDERCREST RD	0	0	Sideswipe-Same Direction	Daylight	Dry	N/A	South	Changing Lanes	Changing Lanes	2	No Contributing Factors	No Contributing Factors	Lanes	Lanes
7121897	Dekalb Co Police Department	3/13/2019	DEKALB	BOULDERCREST RD	I 285	0	0	Rear End	Daylight	Dry	East	East	Turning Right	Turning Right	2	Following too Close	No Contributing Factors	Traffic Signal	Traffic Signal
7140105	Dekalb Co Police Department	3/26/2019	DEKALB	BOULDERCREST RD	I 285	0	0	Sideswipe-Same Direction	Daylight	Dry	N/A	East	N/A	Straight	2	Changed Lanes Improperly	No Contributing Factors	Lanes	Lanes
7156611	Dekalb Co Police Department	4/8/2019	DEKALB	OR I 285 RP	BOULDERCREST RD	0	0	Rear End	DarkLighted	Dry	N/A	East	N/A	Stopped	2	No Contributing Factors	No Contributing Factors	Lanes	Lanes
7192765	Dekalb Co Police Department	5/4/2019	DEKALB	BOULDERCREST RD RP	I 285	1	0	Not A Collision with Motor Vehicle	DarkLighted	Wet	East	North	Turning Right	N/A	1	Failed to Yield	No Contributing Factors	Lanes	Lanes
7198285	Dekalb Co Police Department	5/8/2019	DEKALB																

7498548	Dekalb Co Police Department	12/30/2019	DEKALB	BOULDERCREST RD	285	0	0	Sideswipe-Same Direction	DarkNot Lighted	Dry	East	East	Changing Lanes	Straight	2	Changed Lanes Improperly	No Contributing Factors	Lanes	Lanes
7547894	Dekalb Co Police Department	2/12/2020	DEKALB	OR I 285 RP	BOULDERCREST RD	0	0	Rear End	DarkLighted	Dry	North	North	Straight	Stopped	2	Following too Close	No Contributing Factors	Lanes	Lanes
7559554	Dekalb Co Police Department	2/22/2020	DEKALB	I 285 OR	BOULDERCREST RD	2	0	Rear End	DarkLighted	Dry	East	East	Straight	Straight	2	Following too Close	No Contributing Factors	Lanes	Lanes
7567633	Dekalb Co Police Department	3/1/2020	DEKALB	BOULDERCREST RD	I 285	0	0	Angle	Daylight	Dry	South	South	Changing Lanes	Straight	2	Changed Lanes Improperly	No Contributing Factors	Lanes	Lanes
7576372	Dekalb Co Police Department	3/7/2020	DEKALB	I 285 OR	BOULDERCREST RD	1	0	Rear End	Daylight	Dry	East	East	Straight	Straight	2	Following too Close	No Contributing Factors	Lanes	Lanes
7594281	Dekalb Co Police Department	3/15/2020	DEKALB	E EXIT I 285 RP	BOULDERCREST RD	1	0	Rear End	DarkNot Lighted	Dry	East	East	Straight	Stopped	3	Failed to Yield,Driver Lost Control	No Contributing Factors	Traffic Signal	Traffic Signal
7650036	Dekalb Co Police Department	5/29/2020	DEKALB	OR I 285 RP	BOULDERCREST RD	0	0	Rear End	Daylight	Dry	East	East	Backing	Stopped	2	Improper Backing	No Contributing Factors	Lanes	Lanes
7668106	Dekalb Co Police Department	6/17/2020	DEKALB	I 285 OR	BOULDERCREST RD	0	0	Rear End	DarkLighted	Dry	East	East	Straight	Straight	2	Following too Close	No Contributing Factors	Lanes	Lanes
7670617	Dekalb Co Police Department	6/20/2020	DEKALB	BOULDERCREST RD	I 285	1	0	Sideswipe-Same Direction	Daylight	Dry	South	South	Changing Lanes	Straight	2	Changed Lanes Improperly	No Contributing Factors	Lanes	Lanes
7693981	Dekalb Co Police Department	7/11/2020	DEKALB	BOULDERCREST RD	I 285	0	0	Rear End	Daylight	Dry	N/A	North	N/A	Straight	2	Following too Close	No Contributing Factors	Traffic Signal	Traffic Signal
7704960	Dekalb Co Police Department	7/22/2020	DEKALB	I 285 OR	BOULDERCREST RD	0	0	Not A Collision with Motor Vehicle	Daylight	Dry	East	East	Straight	Straight	4	Other	No Contributing Factors	Lanes	Lanes
7731689	Dekalb Co Police Department	8/8/2020	DEKALB	BOULDERCREST RD	I 285	0	0	Rear End	Daylight	Dry	East	East	Straight	Straight	2	Following too Close	No Contributing Factors	Traffic Signal	Traffic Signal
7786861	Dekalb Co Police Department	9/25/2020	DEKALB	BOULDERCREST RD	I 285	0	0	Angle	Daylight	Dry	N/A	East	Changing Lanes	Straight	2	Failed to Yield	No Contributing Factors	Lanes	Lanes
7793791	Dekalb Co Police Department	10/1/2020	DEKALB	I 285 IR	BOULDERCREST RD	5	0	Rear End	Daylight	Dry	East	East	Straight	Straight	4	Following too Close	No Contributing Factors	Lanes	Lanes
7822021	Dekalb Co Police Department	10/24/2020	DEKALB	E EXIT I 285 RP	BOULDERCREST RD	0	0	Rear End	Daylight	Dry	East	East	Straight	Stopped	2	Reaction to Object or Animal	No Contributing Factors	Lanes	Lanes
7833470	Dekalb Co Police Department	10/23/2020	DEKALB	IR I 285 RP	BOULDERCREST RD	0	0	Rear End	DarkLighted	Dry	East	East	Straight	Stopped	2	Following too Close	No Contributing Factors	Lanes	Lanes
7834021	Dekalb Co Police Department	11/2/2020	DEKALB	BOULDERCREST RD	I 285	3	0	Angle	DarkNot Lighted	Dry	North	West	Straight	Turning Left	2	Disregard Stop Sign/Signal	No Contributing Factors	Traffic Signal	Traffic Signal
7873972	Dekalb Co Police Department	12/2/2020	DEKALB	BOULDERCREST RD	I 285	1	0	Not A Collision with Motor Vehicle	Daylight	Dry	West	East	N/A	Turning Left	1	Disregard Stop Sign/Signal	No Contributing Factors	Lanes	Lanes
7874211	Dekalb Co Police Department	12/3/2020	DEKALB	BOULDERCREST RD	I 285	1	0	Rear End	Dusk	Dry	South	South	Straight	Straight	2	Following too Close	No Contributing Factors	Lanes	Lanes

Agency Case Number 18-147300		Agency NCIC No. 0440200		GEORGIA MOTOR VEHICLE CRASH REPORT				County DEKALB		Date Rec. by DOT 8/26/2018	
Estimated Crash Date 8/25/2018		Time 22:45		Dispatch Date 8/25/2018		Time 22:48		Arrival Date 8/25/2018		Time 22:55	
Total Number of Vehicles 1		Injuries 1		Fatalities 1		Inside City Of Unincorporated					
Road of Occurrence BOULDERCREST RD								At Its Intersection With		I 285 OR	
Not At Its Intersection But								☐ Miles ☐ North ☐ East ☐ Feet ☒ South ☐ West		Of	
Latitude (Y) (Format) 33.683355								Longitude (X) (Format) -84.309652		☒ Suppl. To Original? ☐ Private Property? ☐ Hit And Run?	
Unit # 1		☐ Driver ☒ Ped ☐ Bike		LAST NAME FIRST MIDDLE Personal Information Removed		Unit # 2		☐ Driver ☐ Ped ☐ Bike		LAST NAME FIRST MIDDLE Personal Information Removed	
☒ Susp At Fault		Address Personal Information Removed		Address Personal Information Removed		☐ Susp At Fault		Address Personal Information Removed		Address Personal Information Removed	
City ATLANTA (DEKALB)		State GA		Zip 30315		DOB Redacted		City ELLENWOOD (CLAYTON)		State GA	
Driver's License No Personal Information		Class CLASS ID		State GA		Country USA		Driver's License No Personal Information		Class CLASS A	
Insurance Co. Personal Information Removed		Policy No. Personal Information		Telephone No. Redacted		Insurance Co. Personal Information Removed		Policy No. Personal Information		Telephone No. Redacted	
Year 2013		Make LINCOLN		Model MKX		Year 2019		Make LINCOLN		Model MKX	
VIN 2LMDJ6JK4DB		Vehicle Color Red		VIN 2LMDJ6JK4DB		Vehicle Color Red		VIN 2LMDJ6JK4DB		Vehicle Color Red	
Tag # Personal Information Removed		State GA		County Personal Information Removed		Year 2019		Tag # Personal Information Removed		State GA	
Trailer Tag #		State		County		Year		Trailer Tag #		State	
☐ Same as Driver		Owner's Last Name First Middle		☒ Same as Driver		Owner's Last Name First Middle Personal Information Removed		☐ Same as Driver		Owner's Last Name First Middle	
Address		Address Personal Information Removed		Address		Address Personal Information Removed		Address		Address Personal Information Removed	
City State Zip		City State Zip		City State Zip		City State Zip		City State Zip		City State Zip	
Removed By:		☐ Request ☐ List		Removed By: DRIVER		☒ Request ☐ List		Removed By:		☐ Request ☐ List	
Alcohol Test: No		Type:		Results:		Drug Test: No		Type:		Results:	
First Harmful Event: Motor Vehicle In Motion		Most Harmful Event:		Operator/Ped Cond: Unknown		First Harmful Event: Motor Vehicle In Motion		Most Harmful Event:		Operator/Ped Cond: Not Drinking	
Operator Factors: Failed to Yield		Operator Factors: No Contributing Factors		Operator Factors: No Contributing Factors		Operator Factors: No Contributing Factors		Operator Factors: No Contributing Factors		Operator Factors: No Contributing Factors	
Vehicle Factors:		Roadway Factors: No Contributing Factors		Vehicle Factors: No Contributing Factors		Roadway Factors: No Contributing Factors		Vehicle Factors: No Contributing Factors		Roadway Factors: No Contributing Factors	
Direction of Travel: West		Vehicle Maneuver:		Non-Motor Maneuver: Crossing, Not At Crosswalk		Direction of Travel: South		Vehicle Maneuver: Straight		Non-Motor Maneuver:	
Vehicle Class:		Vehicle Type:		Vision Obscured:		Vehicle Class: Privately Owned		Vehicle Type: Sports Utility Vehicle (SUV)		Vision Obscured: Not Obscured	
Number of Occupants:		Area of Initial Contact: Not Applicable - Pedestrian		Damage to Vehicle:		Number of Occupants: 1		Area of Initial Contact: Front End		Damage to Vehicle: Functional Damage	
Traffic Way Flow: Two-Way Trafficway with a physical separation		Road Composition: Black Top		Road Character: Straight and Level		Traffic Way Flow: Two-Way Trafficway with a physical separation		Road Composition: Black Top		Road Character: Straight and Level	
Number of Lanes:		Posted Speed:		Work Zone: None		Number of Lanes: 4		Posted Speed: 45		Work Zone: None	
Traffic Control: Traffic Signal		Device Inoperative: ☐ Yes ☒ No		Traffic Control: Traffic Signal		Device Inoperative: ☐ Yes ☒ No		Traffic Control: Traffic Signal		Device Inoperative: ☐ Yes ☒ No	
Citation Information:		Citation #		O.C.G.A. §		Citation Information:		Citation #		O.C.G.A. §	
Citation #		O.C.G.A. §		Citation #		O.C.G.A. §		Citation #		O.C.G.A. §	
Citation #		O.C.G.A. §		Citation #		O.C.G.A. §		Citation #		O.C.G.A. §	
COMMERCIAL MOTOR VEHICLES ONLY						COMMERCIAL MOTOR VEHICLES ONLY					
Carrier Name Personal Information Removed		City State Zip		Address Personal Information Removed		Carrier Name Personal Information Removed		City State Zip		Address Personal Information Removed	
U.S. D.O.T. #		No. of Axles		G.V.W.R		U.S. D.O.T. #		No. of Axles		G.V.W.R	
Cargo Body Type		Vehicle Config.		☐ Interstate ☐ Fed. Reportable ☐ Intrastate ☐ Yes ☐ No		Cargo Body Type		Vehicle Config.		☐ Interstate ☐ Fed. Reportable ☐ Intrastate ☐ Yes ☐ No	
C.D.L. ? ☐ Yes ☐ No		C.D.L. Suspended? ☐ Yes ☐ No		C.D.L. ? ☐ Yes ☐ No		C.D.L. Suspended? ☐ Yes ☐ No		C.D.L. ? ☐ Yes ☐ No		C.D.L. Suspended? ☐ Yes ☐ No	
Vehicle Placarded? ☐ Yes ☐ No		Hazardous Materials? ☐ Yes ☐ No		Vehicle Placarded? ☐ Yes ☐ No		Hazardous Materials? ☐ Yes ☐ No		Vehicle Placarded? ☐ Yes ☐ No		Hazardous Materials? ☐ Yes ☐ No	
Hazmat Released? ☐ Yes ☐ No		If YES: Name or 4 Digit Number from Diamond or Box:		One Digit Number from Bottom of Diamond:		Hazmat Released? ☐ Yes ☐ No		If YES: Name or 4 Digit Number from Diamond or Box:		One Digit Number from Bottom of Diamond:	
☐ Ran Off Road		☐ Down Hill Runaway		☐ Cargo Loss or Shift		☐ Separation of Units		☐ Ran Off Road		☐ Down Hill Runaway	
☐ Cargo Loss or Shift		☐ Separation of Units		☐ Cargo Loss or Shift		☐ Separation of Units		☐ Cargo Loss or Shift		☐ Separation of Units	

Unit # 3	☐ Driver ☒ Ped ☐ Bike	LAST NAME FIRST MIDDLE Personal Information Removed
☐ Susp At Fault		Address Personal Information Removed
City ATLANTA (DEKALB)	State GA	Zip 30316 DOB Redacted
Driver's License No Personal Information	Class CLASS A	State GA Country
Insurance Co. Personal Information Removed	Policy No. Personal Information	Telephone No. Redacted
Year	Make	Model
VIN		Vehicle Color
Tag # Personal Information Removed	State	County Year Personal Information Removed
Trailer Tag #	State	County Year
☐ Same as Driver	Owner's Last Name	First Middle
Address		
City	State	Zip
Removed By:		☐ Request ☐ List
Alcohol Test: No	Type:	Results:
Drug Test: No	Type:	Results:
First Harmful Event: Other Object (Not Fixed)	Most Harmful Event:	Operator/Ped Cond: U.I. Alcohol
Operator Factors: No Contributing Factors		
Vehicle Factors: Roadway Factors: No Contributing Factors		
Direction of Travel: South	Vehicle Maneuver:	Non-Motor Maneuver: Off Roadway
Vehicle Class:	Vehicle Type:	Vision Obscured:
Number of Occupants:	Area of Initial Contact: Not Applicable - Pedestrian	Damage to Vehicle:
Traffic Way Flow: Two-Way Trafficway with a physical separation	Road Composition: Black Top	Road Character: Straight and Level
Number of Lanes:	Posted Speed:	Work Zone: None
Traffic Control: Traffic Signal		Device Inoperative: ☐ Yes ☒ No
Citation Information:		
Citation #	O.C.G.A. §	
Citation #	O.C.G.A. §	
Citation #	O.C.G.A. §	
COMMERCIAL MOTOR VEHICLES ONLY		
Carrier Name Personal Information Removed		
Address Personal Information Removed	City Personal Information Removed	State Zip
U.S. D.O.T. #	No. of Axles	G.V.W.R
Cargo Body Type	Vehicle Config.	☐ Interstate ☐ Intrastate Fed. Reportable ☐ Yes ☐ No
C.D.L. ?	☐ Yes ☐ No	C.D.L. Suspended? ☐ Yes ☐ No
Vehicle Placarded?	☐ Yes ☐ No	Hazardous Materials? ☐ Yes ☐ No
Hazmat Released? ☐ Yes ☐ No If YES: Name or 4 Digit Number from Diamond or Box: One Digit Number from Bottom of Diamond:		
☐ Ran Off Road	☐ Down Hill Runaway	☐ Cargo Loss or Shift ☐ Separation of Units

COLLISION FIELDS

Manner of Collision: Not A Collision with Motor Vehicle	Location at Area of Impact: On Roadway - Non-Intersection	Weather: Clear	Surface Condition: Dry	Light Condition: Dark-Lighted
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NARRATIVE

Based on the physical evidence and statement of parties involved, the following occurred:

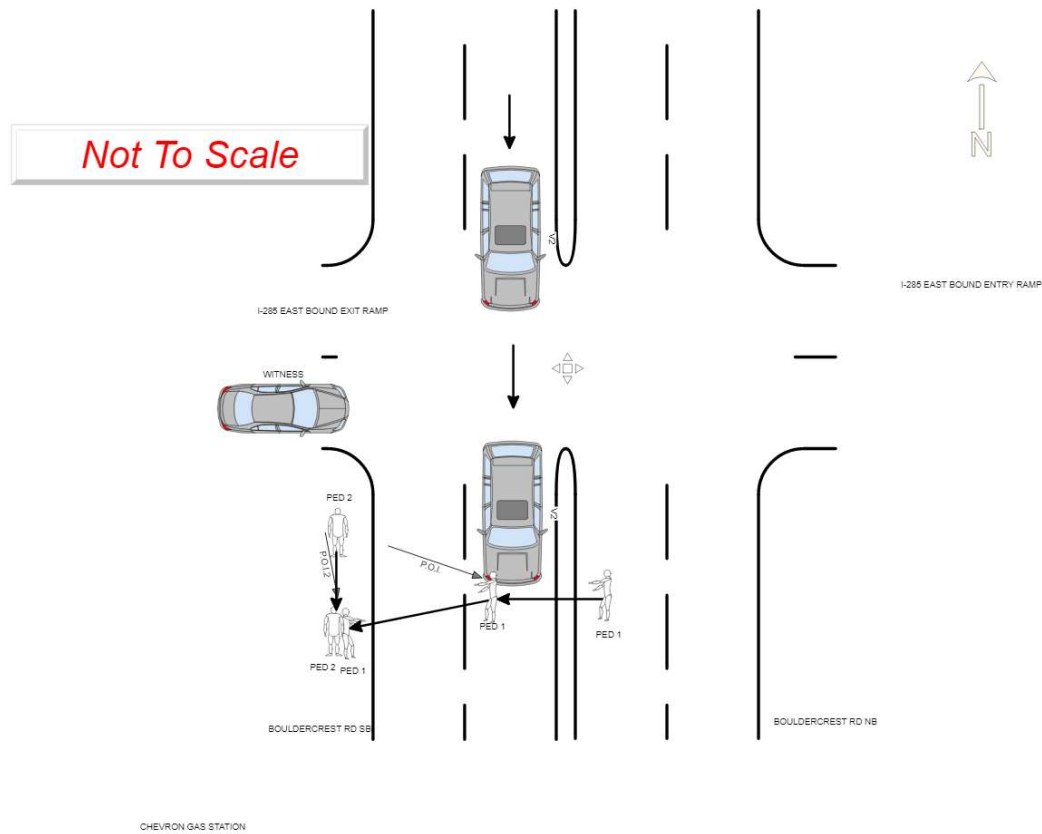
Vehicle #2 the Lincoln MKX (GA tag CFK7880) was traveling southbound on Bouldercrest Road just passed the exit ramp from I-285 East bound when the pedestrian Stanley Owens stepped into the roadway. Mr. Owens stepped into the roadway outside the crosswalk, traveling westbound across Bouldercrest Road. Mr. Owens was struck by the passenger side of vehicle #2 causing a dent to the front headlight area and windshield area of the vehicle. Driver #2 Ken Peebles pulled his vehicle into the parking lot of the Chevron gas station at 2691 Bouldercrest Road and walked over to check on the status of the pedestrian laying on the shoulder of the roadway. The witness Norbert Riggins was stopped on the exit ramp onto Bouldercrest Road in his red Ford Focus (GA tag #AGJ4505) when he observed the impact. Mr. Riggins stated that when the pedestrian stepped into the roadway outside of the crosswalk he was hit by the Lincoln which caused Mr. Owens to launch into the air, and strike Mr. Juarez Claytor walking southbound on the west side of the roadway. Upon my arrival Fire Rescue unit # 10 was on scene and began to treat Mr. Owens as a patient in critical condition. Mr. Owens was unable to speak due to his physical condition and was transported to Grady Hospital by AMR unit # M35. Fire Rescue unit # 10 treated Mr. Claytor who had visible injuries to his elbows, but was in stable condition (not transported to the hospital). I contacted the DeKalb County Traffic Specialist Unit and Detective C. Curtis unit #744, and Detective Ingram unit #749 responded to the scene. Further investigation was turned over to CID. A case number was issued and the vehicles were removed by the drivers.

SUPPLEMENTAL REPORT:

On 09/20/2018, I, Detective C. Curtis, was notified by the DeKalb County Medical Examiner's Office that Mr. Stanley Owens was pronounced dead on 09/19/2018 at 2345 after being placed in hospice care following this collision. His death is attributed to the injuries sustained during this crash. There are no charges pending in this case. This case is closed and cleared.

Supplemental report by Detective C. R. Curtis #2359/TSU 744

DIAGRAM



PROPERTY DAMAGE INFORMATION

Damage Other Than Vehicle:

Owner:

WITNESS INFORMATION

Name (Last, First)	Address	City	State	Zip Code	Telephone Number
Personal Information Removed	Personal Information Removed	ELLENWOOD (CLAYTON)	Georgia	30294	Redacted

OCCUPANT INFORMATION

1	Name (Last, First): Personal Information Removed					Address: Personal Information Removed				
	Age: 59	Sex: Male	Unit # 1	Position: Non-Motorist - Outside	Safety Eq: None Used	Ejected:	Extricated:	Air Bag:	Injury: Fatal Injury (K)	Taken for Treatment: Yes
	Injured Taken To: Grady Hospital		By: AMR 35		EMS Notified Time:		EMS Arrival Time:		Hospital Arrival Time:	
2	Name (Last, First): Personal Information Removed					Address: Personal Information Removed				
	Age: 53	Sex: Male	Unit # 2	Position: Front Seat-Left Side	Safety Eq: Lap and Shoulder Belt Used	Ejected: Not Ejected	Extricated: No	Air Bag: Non-Deployed Air	Injury: No Apparent Injury (O)	Taken for Treatment: No
	Injured Taken To:		By:		EMS Notified Time:		EMS Arrival Time:		Hospital Arrival Time:	
3	Name (Last, First): Personal Information Removed					Address: Personal Information Removed				
	Age: 63	Sex: Male	Unit # 3	Position: Non-Motorist - Outside	Safety Eq: None Used	Ejected:	Extricated:	Air Bag:	Injury: Suspected Minor or Visible Injury (B)	Taken for Treatment: No
	Injured Taken To:		By:		EMS Notified Time:		EMS Arrival Time:		Hospital Arrival Time:	
4	Name (Last, First):					Address:				
	Age:	Sex:	Unit #	Position:	Safety Eq:	Ejected:	Extricated:	Air Bag:	Injury:	Taken for Treatment:
	Injured Taken To:		By:		EMS Notified Time:		EMS Arrival Time:		Hospital Arrival Time:	

ADMINISTRATIVE

Photos Taken: ☒ Yes ☐ No	By: TSU CURTIS 744	Officer Note: If collision resulted in a fatality, please send prompt notification to the GDOT Crash Reporting Unit via either email at GeorgiaFARS@dot.ga.gov or Fax at (404) 635-2963.
Report By: WILLIAMS, M (3081)	Agency: DeKalb Co Police Department	Report Date: 08/26/2018 07:52
Checked By: JOHNSON, M		Date Checked: 9/25/2018

11. FAYETTEVILLE RD SE/BAILEY ST & WOODSTOCK RD

AccidentNo	AgencyName	Date	County	Route	IntersectingRoute	Injuries	Fatalities	MannerOfCollision	Light	Surface	DirVeh1	DirVeh2	MnvrVeh1	MnvrVeh2	NumberOfVehicles	U1Factors	U2Factors	U1TrafficControl	U2TrafficControl
6031416	Dekalb Co Police Department	12/7/2016	DEKALB	WOODSTOCK RD	CONSTITUTION RD	0	0	Rear End	Daylight	Dry	West	N/A	Backing	Parked	2	Improper Backing	No Contributing Factors	Lanes	Lanes
7507495	Dekalb Co Police Department	1/7/2020	DEKALB	FAYETTEVILLE RD SE	WOODSTOCK RD	0	0	Angle	Daylight	Dry	West	North	Straight	Straight	2	Failed to Yield	No Contributing Factors	Stop Sign	Stop Sign
7603209	Dekalb Co Police Department	3/25/2020	DEKALB	FAYETTEVILLE RD SE	FLEETWOOD DR	0	0	Angle	DarkLighted	Dry	East	East	Turning Left	Straight	2	Failed to Yield	No Contributing Factors	Stop Sign	Stop Sign

12. MORELAND AVE (SR 42) & BAILEY ST

AccidentNo	AgencyName	Date	County	Route	IntersectingRoute	Injuries	Fatalities	MannerOfCollision	Light	Surface	DirVeh1	DirVeh2	MnvrVeh1	MnvrVeh2	NumberOfVehicles	U1Factors	U2Factors	U1TrafficControl	U2TrafficControl
5672420	DeKalb Co Police Department	3/14/2016	DEKALB	BAILEY ST SE	MORELAND AVE	0	0	Rear End	DarkNot Lighted	Dry	West	West	Turning Right	Turning Right	2	Following too Close	No Contributing Factors	Stop Sign	Stop Sign
5689300	DeKalb Co Police Department	3/26/2016	DEKALB	MORELAND AVENUE AVE	CONSTITUTION ROAD RD	0	0	Angle	Daylight	Wet	N/A	North	Changing Lanes	Straight	2	Misjudged Clearance	No Contributing Factors	Lanes	Lanes
5724942	DeKalb Co Police Department	4/21/2016	DEKALB	MORELAND AVE	BAILEY ST	0	0	Angle	DarkNot Lighted	Wet	North	North	Entering/Leaving Parking	Straight	2	Failed to Yield	No Contributing Factors	Lanes	Lanes
5734711	DeKalb Co Police Department	4/28/2016	DEKALB	MORELAND AVE	BAILEY ST	1	0	Angle	Daylight	Dry	North	South	Turning Left	Straight	2	Failed to Yield	No Contributing Factors	Lanes	Lanes
5780825	DeKalb Co Police Department	6/2/2016	DEKALB	MORELAND AVE	CONSTITUTION RD	0	0	Not A Collision with Motor Vehicle	Daylight	Dry	South	N/A	Straight	N/A	1	No Contributing Factors	N/A	Lanes	N/A
5851198	DeKalb Co Police Department	7/15/2016	DEKALB	MORELAND AVE	BAILEY ST	2	0	Rear End	DarkLighted	Dry	North	North	Straight	Stopped	2	Following too Close	No Contributing Factors	Lanes	Lanes
5901487	DeKalb Co Police Department	8/17/2016	DEKALB	BAILEY ST	MORELAND AVE	2	0	Rear End	Daylight	Dry	East	West	Backing	Stopped	2	No Contributing Factors	No Contributing Factors	Lanes	Lanes
5914412	Gsp Post 00	9/9/2016	DEKALB	US-23 SB	BAILEY ST	2	0	Angle	Daylight	Dry	East	South	Changing Lanes	Straight	2	No Contributing Factors	No Contributing Factors	No Control Present	No Control Present
5967154	DeKalb Co Police Department	10/21/2016	DEKALB	BAILEY ST	MORELAND AVE	0	0	Rear End	DarkNot Lighted	Dry	West	West	Straight	Turning Right	2	Following too Close	No Contributing Factors	Lanes	Lanes
5987815	DeKalb Co Police Department	11/6/2016	DEKALB	MORELAND AVE	BAILEY ST	5	0	Rear End	DarkLighted	Dry	North	North	Straight	Straight	3	Following too Close	No Contributing Factors	Lanes	Lanes
5998684	DeKalb Co Police Department	11/14/2016	DEKALB	BAILEY ST SE	MORELAND AVE	0	0	Rear End	DarkLighted	Dry	South	N/A	Straight	Parked	2	Following too Close	No Contributing Factors	Lanes	Lanes
6006454	DeKalb Co Police Department	11/19/2016	DEKALB	MORELAND AVE	BAILEY ST	0	0	Angle	DarkLighted	Dry	South	North	Turning Left	Turning Left	2	Failed to Yield	No Contributing Factors	Lanes	Lanes
6014866	DeKalb Co Police Department	11/25/2016	DEKALB	MORELAND AVE	BAILEY ST	0	0	Angle	Daylight	Dry	N/A	North	Turning Right	Straight	2	Failed to Yield	No Contributing Factors	Stop Sign	Lanes
6035400	DeKalb Co Police Department	12/10/2016	DEKALB	MORELAND AVE	CONSTITUTION RD	3	0	Head On	DarkNot Lighted	Dry	North	South	Turning Left	Straight	3	Failed to Yield	No Contributing Factors	Lanes	Lanes
6040491	DeKalb Co Police Department	12/14/2016	DEKALB	MORELAND AVE	CONSTITUTION RD	1	0	Angle	DarkLighted	Dry	North	South	Turning Left	Straight	2	Failed to Yield	No Contributing Factors	Traffic Signal	Lanes
6043832	DeKalb Co Police Department	12/17/2016	DEKALB	MORELAND AVE	BAILEY ST	0	0	Rear End	Daylight	Dry	N/A	East	N/A	Stopped	2	Improper Backing	No Contributing Factors	Lanes	Lanes
6047200	DeKalb Co Police Department	10/25/2016	DEKALB	MORELAND AVE	WOODSTOCK RD	0	0	Rear End	Daylight	Dry	South	South	Straight	Straight	2	No Contributing Factors	No Contributing Factors	Lanes	Lanes
6072582	DeKalb Co Police Department	1/9/2017	DEKALB	BAILEY ST SE	MORELAND AVE	1	0	Rear End	Daylight	Dry	West	West	Backing	Straight	2	Improper Backing	No Contributing Factors	Lanes	Lanes
6087995	DeKalb Co Police Department	1/20/2017	DEKALB	MORELAND AVE	BAILEY ST	0	0	Sideswipe-Opposite Direction	Daylight	Dry	South	East	Straight	Straight	2	Failed to Yield	No Contributing Factors	Traffic Signal	Lanes
6095818	DeKalb Co Police Department	1/27/2017	DEKALB	BAILEY ST SE	MORELAND AVE	2	0	Angle	Daylight	Dry	North	South	Turning Left	Straight	2	Failed to Yield	No Contributing Factors	Lanes	Lanes
6098890	DeKalb Co Police Department	1/31/2017	DEKALB	MORELAND AVE	BAILEY ST	1	0	Angle	DarkLighted	Dry	West	East	Turning Left	Turning Left	2	Failed to Yield	No Contributing Factors	Stop Sign	Lanes
6119007	DeKalb Co Police Department	2/15/2017	DEKALB	MORELAND AVE	BAILEY ST	0	0	Angle	DarkLighted	Wet	South	South	Turning Left	Straight	2	Failed to Yield	No Contributing Factors	Lanes	Lanes
6119010	DeKalb Co Police Department	2/15/2017	DEKALB	MORELAND AVE	BAILEY ST	0	0	Angle	Daylight	Dry	North	North	Straight	Changing Lanes	2	Failed to Yield	No Contributing Factors	Other	Other
6140824	DeKalb Co Police Department	3/5/2017	DEKALB	MORELAND AVE	BAILEY ST.	2	0	Angle	DarkNot Lighted	Dry	West	North	Turning Left	Straight	2	Failed to Yield	No Contributing Factors	Stop Sign	No Control Present
6147068	DeKalb Co Police Department	3/11/2017	DEKALB	MORELAND AVE	BAILEY ST	0	0	Sideswipe-Same Direction	Daylight	Dry	North	North	Changing Lanes	Straight	2	Changed Lanes Improperly	No Contributing Factors	Lanes	Lanes
6160216	DeKalb Co Police Department	3/22/2017	FULTON	BAILEY ST SE	MORELAND AVE	0	0	Rear End	Daylight	Dry	South	South	Changing Lanes	Stopped	2	Changed Lanes Improperly	No Contributing Factors	Lanes	Lanes
6174016	DeKalb Co Police Department	3/31/2017	DEKALB	MORELAND AVE	BAILEY ST	0	0	Sideswipe-Opposite Direction	DarkNot Lighted	Wet	South	North	Straight	Turning Left	2	Exceeding Speed Limit,Weather Conditions,Misjudged Clearance,Too Fast For Conditions	No Contributing Factors	Lanes	Lanes
6219544	DeKalb Co Police Department	5/5/2017	DEKALB	BAILEY ST SE	MORELAND AVE	0	0	Angle	DarkLighted	Wet	N/A	N/A	N/A	Parked	2	Other	No Contributing Factors	Other	Other
6230452	DeKalb Co Police Department	5/11/2017	DEKALB	MORELAND AVE	BAILEY ST	0	0	Sideswipe-Same Direction	Daylight	Dry	South	South	Straight	Straight	3	Mechanical Or Vehicle Failure	No Contributing Factors	Lanes	Lanes
6283948	DeKalb Co Police Department	6/22/2017	DEKALB	MORELAND AVE	BAILEY ST	0	0	Sideswipe-Opposite Direction	Daylight	Wet	N/A	West	Straight	Straight	2	No Contributing Factors	No Contributing Factors	Lanes	Lanes
6284185	DeKalb Co Police Department	6/21/2017	DEKALB	MORELAND AVE	BAILEY ST	0	0	Angle	Daylight	Wet	West	West	Backing	Stopped	2	Improper Backing	No Contributing Factors	Lanes	Lanes
6325896	DeKalb Co Police Department	7/26/2017	DEKALB	BAILEY ST	MORELAND AVE	0	0	Rear End	Daylight	Dry	West	West	Turning Right	Stopped	2	No Contributing Factors	No Contributing Factors	Lanes	Lanes
6352213	DeKalb Co Police Department	8/13/2017	DEKALB	MORELAND AVE	BAILEY ST	0	0	Not A Collision with Motor Vehicle	Daylight	Dry	N/A	N/A	Backing	N/A	1	Misjudged Clearance	N/A	No Control Present	N/A
6368175	DeKalb Co Police Department	8/26/2017	DEKALB	MORELAND AVE	BAILEY ST	0	0	Not A Collision with Motor Vehicle	Daylight	Dry	N/A	South	N/A	Straight	2	Changed Lanes Improperly	No Contributing Factors	Lanes	Lanes
6425486	DeKalb Co Police Department	10/6/2017	DEKALB	BAILEY ST SE	MORELAND AVE	2	0	Rear End	Daylight	Dry	N/A	N/A	Turning Left	Turning Left	2	Following too Close	No Contributing Factors	Lanes	Lanes
6473382	DeKalb Co Police Department	11/14/2017	DEKALB	MORELAND AVE	BAILEY ST	0	0	Angle	DarkLighted	Dry	South	South	Changing Lanes	Straight	3	Changed Lanes Improperly	No Contributing Factors	Lanes	Lanes
6507888	DeKalb Co Police Department	12/10/2017	DEKALB	CONSTITUTION RD	MORELAND AVE	0	0	Rear End	DarkNot Lighted	Dry	South	South	Straight	Stopped	2	Following too Close	No Contributing Factors	Lanes	Lanes
6654804	DeKalb Co Police Department	4/2/2018	DEKALB	BAILEY ST SE	MORELAND AVE	1	0	Rear End	Daylight	Dry	West	West	Straight	Stopped	2	Following too Close	No Contributing Factors	Stop Sign	Stop Sign
6678449	DeKalb Co Police Department	4/19/2018	DEKALB	BAILEY ST	MORELAND AVE	0	0	Rear End	Daylight	Dry	West	West	Straight	Stopped	2	Following too Close	No Contributing Factors	Lanes	Lanes
6725116	DeKalb Co Police Department	5/24/2018	DEKALB	BAILEY ST SE	MORELAND AVE SE	0	0	Angle	Daylight	Dry	South	West	Backing	Stopped	2	Improper Backing	No Contributing Factors	Lanes	Lanes
6728380	DeKalb Co Police Department	5/29/2018	DEKALB	BAILEY ST SE	MORELAND AVE	0	0	Rear End	Daylight	Wet	South	South	Straight	Stopped	2	Following too Close	No Contributing Factors	Lanes	Lanes
6731125	DeKalb Co Police Department	5/31/2018	DEKALB	MORELAND AVE	BAILEY ST	0	0	Angle	Daylight	Dry	East	North	Turning Left	Straight	2	Improper Turn	No Contributing Factors	Lanes	Lanes
6768046	DeKalb Co Police Department	6/24/2018	DEKALB	MORELAND AVE	BAILEY ST	0	0	Rear End	Daylight	Dry	N/A	East	N/A	Straight	2	Improper Backing	No Contributing Factors	Lanes	Lanes
6796576	DeKalb Co Police Department	7/18/2018	DEKALB	BAILEY ST SE	MORELAND AVE	4	0	Rear End	DarkNot Lighted	Dry	West	West	Straight	Stopped	2	Following too Close	No Contributing Factors	Lanes	Lanes
6819614	DeKalb Co Police Department	8/6/2018	DEKALB	MORELAND AVE	BAILEY ST	0	0	Angle	DarkLighted	Dry	N/A	North	Turning Left	Straight	2	Failed to Yield	No Contributing Factors	Lanes	Lanes
6892783	DeKalb Co Police Department	9/28/2018	DEKALB	MORELAND AVE	BAILEY ST	0	0	Angle	Daylight	Dry	N/A	West	Turning Left	Straight	2	Failed to Yield,Other	No Contributing Factors	Lanes	Lanes
6897590	Atlanta Police Department	9/21/2018	FULTON	2427 MORELAND AVE SE	BAILEY ST SE	4	1	Angle	DarkLighted	Dry	East	South	Entering/Leaving Parking	Straight	2	Failed to Yield,Misjudged Clearance	No Contributing Factors	Lanes	Lanes
6912926	DeKalb Co Police Department	10/13/2018	DEKALB	MORELAND AVE	BAILEY ST	2	0	Angle	DarkNot Lighted	Dry	East	North	Turning Left	Straight	2	Failed to Yield	No Contributing Factors	Lanes	Lanes
6934216	DeKalb Co Police Department	10/30/2018	DEKALB	BAILEY ST SE	MORELAND AVE SE	0	0	Angle	Daylight	Dry	West	East	Turning Left	Turning Left	2	Improper Turn	No Contributing Factors	Lanes	Lanes
6958513	DeKalb Co Police Department	11/14/2018	DEKALB	MORELAND AVE	BAILEY ST	1	0	Sideswipe-Same Direction	DarkLighted	Wet	East	East	Changing Lanes	Straight	2	Changed Lanes Improperly	No Contributing Factors	Lanes	Lanes
6958514	DeKalb Co Police Department	11/14/2018	DEKALB	MORELAND AVE	BAILEY ST	0	0	Rear End	DarkLighted	Wet	East	East	Straight	Stopped	2	Following too Close	Other	Lanes	Lanes
6995406	DeKalb Co Police Department	12/8/2018	DEKALB	MORELAND AVE	BAILEY ST	0	0	Angle	DarkLighted	Wet	South	South	N/A	Straight	2	Other	No Contributing Factors	Lanes	Lanes
7013487	DeKalb Co Police Department	12/21/2018	FULTON	MORELAND AVE	BAILEY ST	4	0	Angle	Daylight	Wet	East	North	Other	Straight	2	Failed to Yield	No Contributing Factors	Lanes	Lanes
7019305	DeKalb Co Police Department	12/27/2018	DEKALB	MORELAND AVE	CONSTITUTION RD	0	0	Sideswipe-Same Direction	DarkNot Lighted	Wet	South	South	Changing Lanes	Stopped	2	No Contributing Factors	No Contributing Factors	Traffic Signal	Traffic Signal
7025857	DeKalb Co Police Department	1/2/2019	DEKALB	MORELAND AVE	BAILEY ST	0	0	Rear End	DarkNot Lighted	Wet	East	East	Straight	Straight	2	Following too Close	No Contributing Factors	Lanes	Lanes
7064296	DeKalb Co Police Department	1/18/2019	DEKALB	MORELAND AVE SE	MORELAND AVE	3	0	Angle	Daylight	Wet	South	North	Turning Left	Straight	3	Failed to Yield	No Contributing Factors	Lanes	Lanes
7087493	DeKalb Co Police Department	2/16/2019	DEKALB	MORELAND AVE	BAILEY ST	2	0	Rear End	Daylight	Dry	North	North	Straight	Straight	3	Following too Close	No Contributing Factors	Lanes	Lanes
7184972	DeKalb Co Police Department	5/1/2019	DEKALB	MORELAND AVE	BAILEY ST	0	0	Sideswipe-Same Direction	Daylight	Dry	East	East	Turning Left	Turning Left	2	Failed to Yield	No Contributing Factors	Lanes	Lanes
7214200	DeKalb Co Police Department	5/21/2019	DEKALB	MORELAND AVE	MORELAND AVE SE	0	0	Not A Collision with Motor Vehicle	DarkNot Lighted	Dry	North	North	Straight	N/A	1	Other	Other	No Control Present	No Control Present
7220297	DeKalb Co Police Department	5/24/2019	DEKALB	MORELAND AVE	BAILEY ST	0	0	Rear End	Daylight	Dry	West	West	Straight	Straight	2	Following too Close	Following too Close	Lanes	Lanes
7223748	DeKalb Co Police Department	5/28/2019	DEKALB	MORELAND AVE	BAILEY ST	0	0	Sideswipe-Same Direction	Daylight	Dry	South	South	Turning Left	Straight	2	Failed to Yield	No Contributing Factors	Lanes	Lanes
7245293	DeKalb Co Police Department	6/12/2019	DEKALB	MORELAND AVE	BAILEY ST	1	0	Rear End	Daylight	Dry	North	North	Straight	Straight	2	Following too Close	No Contributing Factors	Lanes	Lanes
7247892	DeKalb Co Police Department	6/14/2019	DEKALB	MORELAND AVE	BAILEY ST	1	0	Rear End	Daylight	Dry	South	South	Straight	Turning Right	2	Following too Close	No Contributing Factors	Lanes	Lanes
7277378	DeKalb Co Police Department	7/9/2019	DEKALB	BAILEY ST	MORELAND AVE	0	0	Rear End	Daylight	Dry	West	West	Turning Right	Stopped	2	Following too Close	No Contributing Factors	Yield Sign	Yield Sign
7313712	DeKalb Co Police Department	8/9/2019	DEKALB	MORELAND AVE	BAILEY ST	0	0	Angle	Daylight	Dry	South	North	Turning Left	Straight	2	Failed to Yield	No Contributing Factors	Lanes	Lanes
7330343	DeKalb Co Police Department	8/23/2019	DEKALB	MORELAND AVE	BAILEY ST	0	0	Sideswipe-Same Direction	Daylight	Dry	North	North	Changing Lanes	Straight	2	Failed to Yield,Misjudged Clearance	No Contributing Factors	Lanes	Lanes
7331095	DeKalb Co Police Department	8/24/2019	DEKALB	MORELAND AVE	BAILEY AVE	0	0	Rear End	DarkLighted	Dry	South	N/A	Straight	Straight	2	No Contributing Factors	No Contributing Factors	No Control Present	No Control Present
7433093	DeKalb Co Police Department	11/13/2019	DEKALB	MORELAND AVE SE	BAILEY ST SE	0	0	Sideswipe-Same Direction	Daylight	Dry	North	North	Other	Other	2	Other	Other	Lanes	Lanes
7436543	DeKalb Co Police Department	11/15/2019	DEKALB	MORELAND AVE	BAILEY ST	5	0	Angle	DarkLighted	Dry	West	North	Turning Left	Straight	3	Failed to Yield	No Contributing Factors	Lanes	Lanes
7454811	DeKalb Co Police Department	11/27/2019	DEKALB	MORELAND AVE	CONSTITUTION RD	2	0	Angle	Daylight	Dry	North	South	Turning Left	Straight	2	Failed to Yield	No Contributing Factors	Lanes	Lanes
7466990	DeKalb Co Police Department	12/8/2019	DEKALB	MORELAND AVE	BAILEY ST	0	0	Angle	Daylight	Dry	North	North	Turning Right	Straight	2	Improper Turn	No Contributing Factors	Lanes	Lanes
7519792	DeKalb Co Police Department	1/17/2020	DEKALB	MORELAND AVE	FAYETTEVILLE RD	1	0	Angle	Daylight	Dry	East	North	Turning Left	Straight	2	Failed to Yield	No Contributing Factors	Lanes	Lanes
7530672	DeKalb Co Police Department	1/28/2020	DEKALB	MORELAND AVE	BAILEY ST	1	0	Angle	Daylight	Dry	South	North	Turning Left	Straight	3	Failed to Yield	No Contributing Factors	Lanes	Lanes
7538155	DeKalb Co Police Department	2/4/2020	DEKALB	BAILEY ST SE	MORELAND AVE	0	0	Rear End	Daylight	Dry	West	West	Straight	Stopped	2	Following too Close	No Contributing Factors	Lanes	Yield Sign
7563429	DeKalb Co Police Department	2/26/2020	DEKALB	MORELAND AVE	BAILEY ST	0	0	Angle	Daylight	Dry	N/A	North	Turning Left	Straight	2	Failed to Yield</			

Agency Case Number 18264213400		Agency NCIC No. APD0000		GEORGIA MOTOR VEHICLE CRASH REPORT				County FULTON		Date Rec. by DOT 10/2/2018		
Estimated Crash Date 9/21/2018		Dispatch Date 9/21/2018		Arrival Date 9/21/2018		Time 20:48		Total Number of Vehicles 2		Injuries 4		Fatalities 1
Road of Occurrence 2427 MORELAND AVE SE		At Its Intersection With BAILEY ST SE								☐ Suppl. To Original? ☐ Private Property? ☐ Hit And Run?		
Not At Its Intersection But		☐ Miles ☐ North ☐ East ☐ Feet ☐ South ☐ West		Of								
Latitude (Y) (Format)		33.687648 00.00000		Longitude (X) (Format)		-84.349252 -00.00000						

Unit # ☒ Driver 1 ☐ Ped ☐ Bike		LAST NAME FIRST MIDDLE Personal Information Removed		Unit # ☒ Driver 2 ☐ Ped ☐ Bike		LAST NAME FIRST MIDDLE Personal Information Removed	
☒ Susp At Fault		Address Personal Information Removed		☐ Susp At Fault		Address Personal Information Removed	
City ATL	State GA	Zip 30318	DOB Redacted	City ATL	State GA	Zip 30315	DOB Redacted
Driver's License No Personal Information		Class CLASS C	State GA	Driver's License No Personal Information		Class CLASS C	State GA
Insurance Co. Personal Information Removed		Policy No. Personal Information	Telephone No. Redacted	Insurance Co. Personal Information Removed		Policy No. Personal Information	Telephone No. Redacted
Year 2018	Make HYUNDAI	Model ELANTRA		Year 2003	Make CHEVROLET	Model SILVERADO	
VIN 5NPD74LFXJH		Vehicle Color Black		VIN 1GCEK19T33Z		Vehicle Color Bronze	
Tag # Personal Information Removed	State GA	County Personal Information Removed	Year 32019	Tag # Personal Information Removed	State GA	County Personal Information Removed	Year
Trailer Tag #		State	County	Trailer Tag #		State	County
☒ Same as Driver		Owner's Last Name First Middle Personal Information Removed		☒ Same as Driver		Owner's Last Name First Middle Personal Information Removed	
Address Personal Information Removed				Address Personal Information Removed			
City ATL	State GA	Zip 30318		City ATL	State GA	Zip 30315	
Removed By: SOUTH METRO		☐ Request	☒ List	Removed By: PRIVATE TOW		☐ Request	☐ List
Alcohol Test: No	Type: Not Tested	Results: None Given	Drug Test: No	Type: Not Tested	Results: None Given	Drug Test:	Results:
First Harmful Event: Motor Vehicle In Motion		Most Harmful Event: Motor Vehicle In Motion		Operator/Ped Cond: Not Drinking			
Operator Factors: Failed to Yield, Misjudged Clearance				Operator Factors: No Contributing Factors			
Vehicle Factors: Other		Roadway Factors: No Contributing Factors		Vehicle Factors: Other		Roadway Factors: No Contributing Factors	
Direction of Travel: East	Vehicle Maneuver: Entering/Leaving Parking	Non-Motor Maneuver:		Direction of Travel: South	Vehicle Maneuver: Straight	Non-Motor Maneuver:	
Vehicle Class: Privately Owned	Vehicle Type: Passenger Car	Vision Obscured: Not Obscured		Vehicle Class: Privately Owned	Vehicle Type: Pickup Truck	Vision Obscured: Not Obscured	
Number of Occupants: 5	Area of Initial Contact: Left Side-Center	Damage to Vehicle: Disabling Damage		Number of Occupants: 1	Area of Initial Contact: Front End	Damage to Vehicle: Disabling Damage	
Traffic Way Flow: Two-Way Trafficway with a physical separation	Road Composition: Concrete	Road Character: Straight and Level		Traffic Way Flow: Two-Way Trafficway with a physical separation	Road Composition: Concrete	Road Character: Straight and Level	
Number of Lanes:	Posted Speed: 45	Work Zone: None		Number of Lanes:	Posted Speed: 45	Work Zone: None	
Traffic Control: Lanes		Device Inoperative: ☐ Yes ☐ No		Traffic Control: Lanes		Device Inoperative: ☐ Yes ☐ No	
Citation Information:				Citation Information:			
Citation #		O.C.G.A. §		Citation #		O.C.G.A. §	
Citation #		O.C.G.A. §		Citation #		O.C.G.A. §	
Citation #		O.C.G.A. §		Citation #		O.C.G.A. §	

COMMERCIAL MOTOR VEHICLES ONLY				COMMERCIAL MOTOR VEHICLES ONLY			
Carrier Name Personal Information Removed		City Personal Information Removed		State Personal Information Removed		Zip Personal Information Removed	
U.S. D.O.T. #		No. of Axles		G.V.W.R			
Cargo Body Type	Vehicle Config.	☐ Interstate ☐ Intrastate	Fed. Reportable ☐ Yes ☐ No	Cargo Body Type	Vehicle Config.	☐ Interstate ☐ Intrastate	Fed. Reportable ☐ Yes ☐ No
C.D.L. ?	☐ Yes ☐ No	C.D.L. Suspended? ☐ Yes ☐ No		C.D.L. ?	☐ Yes ☐ No	C.D.L. Suspended? ☐ Yes ☐ No	
Vehicle Placarded?	☐ Yes ☐ No	Hazardous Materials? ☐ Yes ☐ No		Vehicle Placarded?	☐ Yes ☐ No	Hazardous Materials? ☐ Yes ☐ No	
Hazmat Released? ☐ Yes ☐ No				Hazmat Released? ☐ Yes ☐ No			
If YES: Name or 4 Digit Number from Diamond or Box: One Digit Number from Bottom of Diamond:				If YES: Name or 4 Digit Number from Diamond or Box: One Digit Number from Bottom of Diamond:			
☐ Ran Off Road ☐ Down Hill Runaway ☐ Cargo Loss or Shift ☐ Separation of Units				☐ Ran Off Road ☐ Down Hill Runaway ☐ Cargo Loss or Shift ☐ Separation of Units			

COLLISION FIELDS

Manner of Collision: Angle	Location at Area of Impact: On Roadway - Roadway Intersection	Weather: Clear	Surface Condition: Dry	Light Condition: Dark-Lighted
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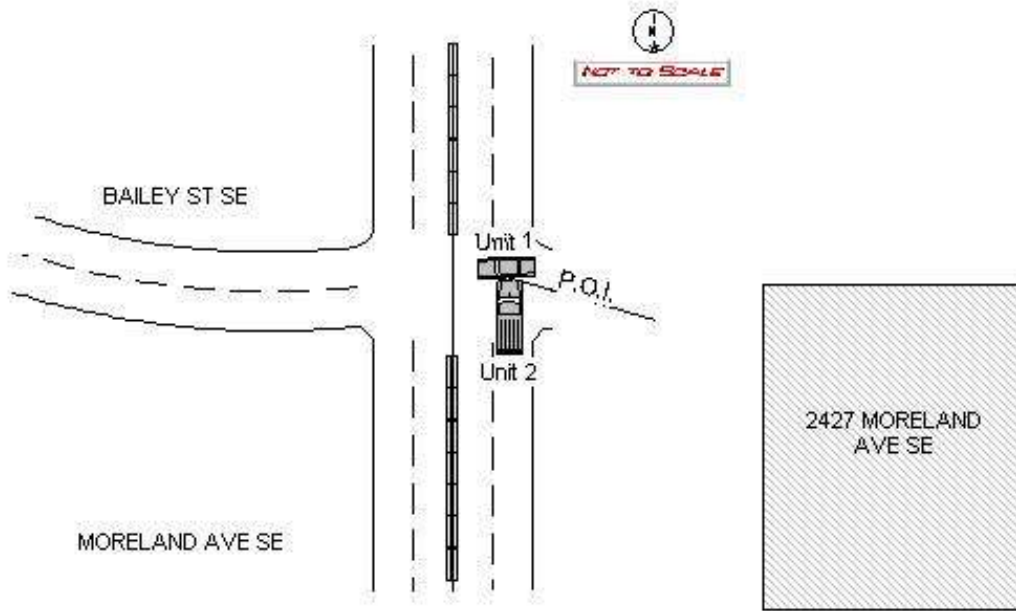
NARRATIVE

On Friday 9/21/2018 at approximately 8:48pm I, Ofc J Williams (unit 3308), was dispatched to 2427 Moreland Ave SE for a two vehicle accident with injuries. Upon my arrival, in marked patrol vehicle #32124, I activated my city issued bodycamera and observed two vehicles crashed in the roadway. Multiple Dekalb CO fire engines were on scene blocking traffic on the northbound and southbound sides of the roadway. Dekalb EMS vans were on scene as well. Driver #1 was rushed off in one of the Dekalb EMS vans as I walked into the chaotic accident scene. Dekalb PD Ofc Vann had driver #2 and the passenger from vehicle #2, who were uninjured, inside of his police vehicle. Ofc Vann had most of the call information written down for me upon my speaking to him. A fire Captain advised that driver #1 had a compound fracture to their right leg, a extremely large laceration on the same leg, and probably internal injuries. There were four children in vehicle #1, all of which were transported to Egleston Hospital with various injuries.

Ofc King (unit 3311) came on scene after my arrival. I went to speak with driver #2 who advised that they were driving southbound on Moreland Ave SE when vehicle #1 entered the roadway from the UPS freight facility at the incident location. Driver #2 advised that vehicle #1 attempted to "jet" across the roadway onto the opposite side (northbound) and the vehicles collided in the manner of a t-bone. Family members of driver #1 came on scene at this time and I received one of the children's information from them and an address for the occupants for vehicle #1. I could not obtain more information due to the emotional state of the family members. South Metro Towing was called to the location to tow both vehicles off of the roadway. Driver #2 removed sensitive items from their vehicle and vehicle #2 was privately towed. Vehicle #1 was impounded due to the owner not being on scene. Upon speaking with the Dekalb Firefighters it was advised that driver #1 they advised that driver #2 should be ok even though another firefighter was doubtful. Ofc Vann directed traffic on the northbound side of the road. Once the scene was clear I left the location to do a follow up at Grady with driver #1. Upon my arrival at Grady, Dekalb Fire was there and advised that driver #1 had just passed away making the accident a fatality. I contacted Sgt Price (unit 3394) and advised on the situation and that the scene had already been cleared. Unit 3394 spoke with the Hit and Run unit about the accident. Upon speaking with the family members I obtained information for driver #1. It was advised that driver #1 was at the UPS facility to pickup money for her children who were inside of the vehicle. After leaving Grady I did a follow up at Egleston Children's hospital for the passengers of vehicle #1. Two of the children were being admitted for surgery, one had been discharged already, and one still in trauma.

A nurse at Egleston advised that the mechanisms of the injuries from the accident showed that the children were not secured properly in the vehicle. It was advised that the passengers injuries varied. Demonio Cousin sustained a liver laceration and was knocked out from the impact. Quintavious Norwoord only suffered a hematoma above his right eye. Kimoria Montgomery sustained a skull fracture and a brain bleed. D'Nice Caldwell suffered multiple fractures and a liver laceration. Mr. Caldwell and Ms. Kimoria Montgomery being the ones admitted for surgery. Mr. Norwood being the child that has been discharged already. At this time there is nothing further to note.

DIAGRAM



PROPERTY DAMAGE INFORMATION

Damage Other Than Vehicle:

Owner:

WITNESS INFORMATION

Name (Last, First)	Address	City	State	Zip Code	Telephone Number

OCCUPANT INFORMATION

1	Name (Last, First): Personal Information Removed					Address: Personal Information Removed				
	Age: 29	Sex: Female	Unit # 1	Position: Front Seat-Left Side	Safety Eq: Lap and Shoulder Belt Used	Ejected: Trapped	Extricated: Yes	Air Bag: Deployed Multiple	Injury: Fatal Injury (K)	Taken for Treatment: No
	Injured Taken To:		By:		EMS Notified Time:		EMS Arrival Time:		Hospital Arrival Time:	
2	Name (Last, First): Personal Information Removed					Address: Personal Information Removed				
	Age: 6	Sex: Male	Unit # 1	Position: Rear Seat-Left Side	Safety Eq: Unknown	Ejected: Not Ejected	Extricated: No	Air Bag: Deployed Multiple	Injury: Suspected Serious	Taken for Treatment:
	Injured Taken To:		By:		EMS Notified Time:		EMS Arrival Time:		Hospital Arrival Time:	
3	Name (Last, First): Personal Information Removed					Address: Personal Information Removed				
	Age: 8	Sex: Male	Unit # 1	Position: Rear Seat-Right Side	Safety Eq: Unknown	Ejected: Not Ejected	Extricated: No	Air Bag: Deployed Multiple	Injury: Suspected Minor or Visible Injury (B)	Taken for Treatment:
	Injured Taken To:		By:		EMS Notified Time:		EMS Arrival Time:		Hospital Arrival Time:	
4	Name (Last, First): Personal Information Removed					Address: Personal Information Removed				
	Age:	Sex: Female	Unit # 1	Position: Rear Seat-Right Side	Safety Eq: Unknown	Ejected: Not Ejected	Extricated: No	Air Bag: Deployed Multiple	Injury: Suspected Serious	Taken for Treatment:
	Injured Taken To:		By:		EMS Notified Time:		EMS Arrival Time:		Hospital Arrival Time:	
5	Name (Last, First): Personal Information Removed					Address: Personal Information Removed				
	Age: 4	Sex: Male	Unit # 1	Position: Rear Seat-Left Side	Safety Eq: Unknown	Ejected: Not Ejected	Extricated: No	Air Bag: Deployed Multiple	Injury: Suspected Serious	Taken for Treatment:
	Injured Taken To:		By:		EMS Notified Time:		EMS Arrival Time:		Hospital Arrival Time:	
6	Name (Last, First): Personal Information Removed					Address: Personal Information Removed				
	Age: 59	Sex: Female	Unit # 2	Position: Front Seat-Left Side	Safety Eq: Lap and Shoulder Belt Used	Ejected: Not Ejected	Extricated: No	Air Bag: Deployed Air Bag	Injury: No Apparent Injury (O)	Taken for Treatment:
	Injured Taken To:		By:		EMS Notified Time:		EMS Arrival Time:		Hospital Arrival Time:	

ADMINISTRATIVE

Photos Taken: ☐ Yes ☒ No	By:	Officer Note: If collision resulted in a fatality, please send prompt notification to the GDOT Crash Reporting Unit via either email at GeorgiaFARS@dot.ga.gov or Fax at (404) 635-2963.
Report By: WILLIAMS, JOSHUA ()	Agency: Atlanta Police Department	Report Date: 09/30/2018 00:00
Checked By:		Date Checked: 10/2/2018

13. MORELAND AVE (SR 42) & I-285 WB RAMPS

AccidentNo	AgencyName	Date	County	Route	IntersectingRoute	Injuries	Fatalities	MannerOfCollision	Light	Surface	DirVeh1	DirVeh2	MnvrVeh1	MnvrVeh2	NumberOfVehicles	U1Factors	U2Factors	U1TrafficControl	U2TrafficControl
5586596	Dekalb Co Police Department	1/8/2016	DEKALB	MORELAND AVE	I 285	0	0	Angle	DarkLighted	Wet	North	North	Turning Left	Straight	2	Improper Turn	No Contributing Factors	Lanes	Lanes
5607373	Dekalb Co Police Department	1/21/2016	DEKALB	MORELAND AVE	I 285	1	0	Angle	DarkLighted	Wet	West	South	Turning Left	Straight	2	Failed to Yield	No Contributing Factors	Traffic Signal	Traffic Signal
5612150	Dekalb Co Police Department	1/27/2016	DEKALB	I-285 WB EXIT RP		0	0	Rear End	Daylight	Dry	West	West	Turning Right	Turning Right	2	Following too Close	No Contributing Factors	Stop Sign	Stop Sign
5646509	Dekalb Co Police Department	2/23/2016	DEKALB	I-285 WEST EXIT RAMP RP		1	0	Rear End	Daylight	Wet	West	West	Straight	Stopped	2	Following too Close	No Contributing Factors	Stop Sign	Stop Sign
5657831	Dekalb Co Police Department	3/1/2016	DEKALB	MORELAND AVE RP	I 285	0	0	Angle	DarkNot Lighted	Dry	West	South	Turning Left	Straight	2	Failed to Yield	No Contributing Factors	Traffic Signal	Traffic Signal
5662156	Dekalb Co Police Department	3/5/2016	DEKALB	MORELAND AVE	I 285	0	0	Rear End	DarkNot Lighted	Dry	N/A	South	N/A	Stopped	2	No Contributing Factors	N/A		Traffic Signal
5681689	Dekalb Co Police Department	3/20/2016	DEKALB	I 285 RP W		0	0	Rear End	Daylight	Dry	West	West	Straight	Stopped	2	Following too Close	No Contributing Factors	Lanes	Lanes
5698398	Dekalb Co Police Department	4/1/2016	DEKALB	I 285 RP W	MORELAND AVE	0	0	Rear End	Daylight	Dry	West	West	Straight	Stopped	2	Following too Close	No Contributing Factors	Lanes	Lanes
5722401	Dekalb Co Police Department	4/21/2016	DEKALB	HIGHWAY I-285 WEST EXIT RP		1	0	Rear End	Daylight	Dry	West	West	Straight	Stopped	2	Following too Close	No Contributing Factors	Traffic Signal	Traffic Signal
5737891	Dekalb Co Police Department	4/30/2016	DEKALB	MORELAND AVE	I 285	3	0	Rear End	DarkLighted	Dry	South	South	Straight	Stopped	2	Following too Close,Inattentive or Other Distracti	No Contributing Factors	Lanes	Traffic Signal
5741586	Dekalb Co Police Department	5/4/2016	DEKALB	MORELAND AVE	I 285	0	0	Rear End	Daylight	Dry	West	West	Negotiating A Curve	Stopped	2	Following too Close	No Contributing Factors	Traffic Signal	Traffic Signal
5750756	Dekalb Co Police Department	5/11/2016	DEKALB	MORELAND AVE	I-285 EXT	1	0	Not A Collision with Motor Vehicle	DarkLighted	Dry	South	N/A	Straight	N/A	1	Driver Lost Control	N/A	Lanes	N/A
5762694	Dekalb Co Police Department	5/20/2016	DEKALB	I 285 OR	MORELAND AVE	0	0	Rear End	DarkLighted	Wet	West	West	Negotiating A Curve	Stopped	2	Following too Close	No Contributing Factors	Lanes	Lanes
5787642	Dekalb Co Police Department	6/8/2016	DEKALB	I-285 WEST BOUND EXIT RP		1	0	Rear End	Daylight	Dry	West	West	Straight	Straight	2	Following too Close	No Contributing Factors	Stop Sign	Stop Sign
5817785	Dekalb Co Police Department	7/1/2016	DEKALB	I 675 RP N		0	0	Rear End	Daylight	Dry	West	West	Turning Right	Turning Right	2	Following too Close	No Contributing Factors	Lanes	Lanes
5823183	Dekalb Co Police Department	7/7/2016	DEKALB	MORELAND AVE	285W EXIT RAMP	0	0	Rear End	Daylight	Dry	West	West	Negotiating A Curve	Negotiating A Curve	2	No Contributing Factors	No Contributing Factors	Lanes	Lanes
5837487	Dekalb Co Police Department	7/15/2016	DEKALB	MORELAND AVE	I 285	0	0	Rear End	Dusk	Dry	South	South	Straight	Straight	2	Following too Close	No Contributing Factors	Lanes	Lanes
5855027	Dekalb Co Police Department	7/28/2016	DEKALB	MORELAND AVE	I 285	0	0	Rear End	Daylight	Wet	North	North	Straight	Stopped	2	Following too Close	No Contributing Factors	Lanes	Lanes
5855766	Dekalb Co Police Department	7/29/2016	DEKALB	MORELAND AVE	I 285	0	0	Angle	Daylight	Dry	South	West	Straight	Turning Left	2	Failed to Yield	No Contributing Factors	Traffic Signal	Traffic Signal
5868410	Dekalb Co Police Department	8/8/2016	DEKALB	I-285 WEST BOUND EXIT RP		0	0	Rear End	Daylight	Dry	West	West	Straight	Straight	2	Following too Close	No Contributing Factors	Stop Sign	Stop Sign
5869452	Dekalb Co Police Department	8/8/2016	DEKALB	IR I 285 RP	MORELAND AVE	0	0	Rear End	DarkNot Lighted	Wet	N/A	North	Backing	Stopped	2	Improper Backing	No Contributing Factors	Lanes	Lanes
5918413	Dekalb Co Police Department	9/14/2016	DEKALB	I 675 RP N		0	0	Angle	Daylight	Dry	West	North	Straight	Stopped	2	Following too Close	No Contributing Factors	Lanes	Stop Sign
5926852	Dekalb Co Police Department	9/20/2016	DEKALB	MORELAND AVE	I 285	1	0	Angle	DarkLighted	Dry	South	West	Straight	Turning Left	2	Disregard Stop Sign/Signal	No Contributing Factors	Traffic Signal	Traffic Signal
5928660	Dekalb Co Police Department	9/21/2016	DEKALB	I 285 RP N		0	0	Rear End	DarkLighted	Dry	North	None	Turning Right	Stopped	2	Following too Close	No Contributing Factors	Lanes	Lanes
5946601	Dekalb Co Police Department	10/6/2016	DEKALB	MORELAND AVE RP	I 285	0	0	Rear End	Daylight	Dry	West	West	Straight	Stopped	2	Following too Close	No Contributing Factors	Traffic Signal	Traffic Signal
5947669	Dekalb Co Police Department	10/6/2016	DEKALB	MORELAND AVE	I 285	1	0	Rear End	Daylight	Dry	South	South	Straight	Stopped	2	Following too Close	No Contributing Factors	Lanes	Lanes
5954918	Dekalb Co Police Department	10/12/2016	DEKALB	MORELAND AVE	I 285	0	0	Sideswipe-Same Direction	DarkLighted	Dry	South	South	Changing Lanes	Straight	2	Changed Lanes Improperly	No Contributing Factors	Lanes	Lanes
5959727	Dekalb Co Police Department	10/17/2016	DEKALB	I-285 WEST EXIT RAMP	MORELAND AVENUE	1	0	Rear End	Daylight	Dry	West	West	Turning Right	Turning Right	2	Following too Close	No Contributing Factors	Lanes	Lanes
5964277	Dekalb Co Police Department	9/26/2016	DEKALB	I- 285	MORELAND AVE SE	0	0	Rear End	Daylight	Dry	West	West	Straight	Stopped	2	Following too Close	No Contributing Factors	Lanes	Lanes
5969972	Dekalb Co Police Department	10/24/2016	DEKALB	I 285 RP W		0	0	Rear End	Daylight	Dry	West	West	Negotiating A Curve	Stopped	2	Following too Close	No Contributing Factors	Lanes	Lanes
6041799	Dekalb Co Police Department	12/15/2016	DEKALB	MORELAND AVE	I 285	0	0	Rear End	Daylight	Dry	West	West	Straight	Stopped	2	Following too Close	No Contributing Factors	Lanes	Lanes
6042160	Dekalb Co Police Department	12/15/2016	DEKALB	MORELAND AVE	I 285	0	0	Sideswipe-Same Direction	DarkLighted	Dry	South	South	Changing Lanes	Straight	2	Changed Lanes Improperly	No Contributing Factors	Lanes	Lanes
6060462	Dekalb Co Police Department	12/29/2016	DEKALB	I 285 IR	MORELAND AVE	0	0	Rear End	Daylight	Dry	West	West	Turning Right	Stopped	2	Following too Close	No Contributing Factors	Traffic Signal	Traffic Signal
6096067	Dekalb Co Police Department	1/27/2017	DEKALB	285-E	MORELAND AVE	0	0	Rear End	DarkLighted	Dry	N/A	North	N/A	Straight	2	Following too Close	No Contributing Factors	Lanes	Lanes
6121582	Dekalb Co Police Department	2/17/2017	DEKALB	IR I 285 RP	MORELAND AVE	0	0	Angle	Daylight	Dry	West	West	Changing Lanes	Straight	2	Other	No Contributing Factors	Lanes	Lanes
6121587	Dekalb Co Police Department	2/17/2017	DEKALB	MORELAND AVE	I 285	0	0	Rear End	Daylight	Dry	South	South	Straight	Straight	2	Following too Close	No Contributing Factors	Lanes	Lanes
6124518	Dekalb Co Police Department	2/20/2017	DEKALB	I 285 IR	MORELAND AVE	0	0	Sideswipe-Same Direction	DarkLighted	Dry	West	West	Passing	Turning Right	2	Improper Passing	No Contributing Factors	Lanes	Lanes
6125383	Dekalb Co Police Department	2/21/2017	DEKALB	I 285 OR	MORELAND AVE	0	0	Rear End	Daylight	Dry	N/A	N/A	Straight	Stopped	2	Following too Close	No Contributing Factors	Traffic Signal	Traffic Signal
6126688	Dekalb Co Police Department	2/22/2017	DEKALB	IR I 285 RP	MORELAND AVE	0	0	Rear End	Daylight	Wet	N/A	West	N/A	Straight	2	Improper Backing	No Contributing Factors	Traffic Signal	Traffic Signal
6130830	Dekalb Co Police Department	2/26/2017	DEKALB	I-285 WEST BOUND EXIT RAMP	MORELAND AVENUE	0	0	Angle	DarkLighted	Dry	West	West	Passing	Turning Right	2	Improper Passing	No Contributing Factors	Lanes	Lanes
6151860	Dekalb Co Police Department	3/15/2017	DEKALB	MORELAND AVE	I 285	0	0	Angle	Daylight	Dry	South	South	Changing Lanes	Straight	2	Changed Lanes Improperly	No Contributing Factors	Lanes	Lanes
6171036	Dekalb Co Police Department	3/30/2017	DEKALB	I 285 OR	MORELAND AVE	0	0	Sideswipe-Same Direction	Dawn	Dry	North	North	Turning Right	Turning Right	2	Misjudged Clearance	No Contributing Factors	Lanes	Lanes
6229576	Dekalb Co Police Department	5/11/2017	DEKALB	MORELAND AVE	I 285	1	0	Angle	Daylight	Dry	East	South	N/A	Straight	2	No Contributing Factors	No Contributing Factors	N/A	Lanes
6249683	Dekalb Co Police Department	5/25/2017	DEKALB	MORELAND AVE	I 285	1	0	Angle	Daylight	Dry	North	North	Changing Lanes	Straight	2	Changed Lanes Improperly	No Contributing Factors	Lanes	Lanes
6268609	Dekalb Co Police Department	6/9/2017	DEKALB	MORELAND AVE	I 285	0	0	Sideswipe-Same Direction	Daylight	Dry	South	South	Changing Lanes	Straight	2	Changed Lanes Improperly	No Contributing Factors	Lanes	Lanes
6289558	Dekalb Co Police Department	6/26/2017	DEKALB	IR I 285 RP	MORELAND AVE	0	0	Not A Collision with Motor Vehicle	Daylight	Dry	N/A	South	N/A	Changing Lanes	3	Changed Lanes Improperly	Other	Lanes	Lanes
6295542	Dekalb Co Police Department	7/2/2017	DEKALB	I-285 WEST BOUND EXIT RAMP	MORELAND AVENUE	0	0	Rear End	Daylight	Dry	West	West	Straight	Turning Right	2	Following too Close	No Contributing Factors	Lanes	Stop Sign
6309648	Dekalb Co Police Department	7/14/2017	DEKALB	I 285	MORELAND AVE	1	0	Rear End	Daylight	Dry	West	West	Straight	Stopped	2	Following too Close	No Contributing Factors	Lanes	Lanes
6310501	Dekalb Co Police Department	7/15/2017	DEKALB	3140 MORELAND AVE RP		0	0	Sideswipe-Same Direction	DarkLighted	Dry	N/A	N/A	N/A	Parked	2	No Contributing Factors	No Contributing Factors	Lanes	Lanes
6315490	Dekalb Co Police Department	7/20/2017	DEKALB	I 285 OR	MORELAND AVE	0	0	Rear End	Daylight	Dry	N/A	N/A	N/A	Straight	3	Following too Close	No Contributing Factors	Traffic Signal	Traffic Signal
6321839	Atlanta Police Department	7/21/2017	DEKALB	MORELAND AVE SE	I-20 WB EXPY SE	0	0	Rear End	Daylight	Dry	South	South	Straight	Stopped	2	N/A	No Contributing Factors	Gate	Lanes
6344895	Dekalb Co Police Department	8/8/2017	DEKALB	I 285 OR	MORELAND AVE	1	0	Rear End	Daylight	Wet	West	West	Straight	Stopped	2	Following too Close	No Contributing Factors	Traffic Signal	Traffic Signal
6358370	Dekalb Co Police Department	8/18/2017	DEKALB	MORELAND AVE RP	I 285	1	0	Rear End	Daylight	Dry	South	South	Straight	Stopped	2	Following too Close	No Contributing Factors	Traffic Signal	Traffic Signal
6359698	Dekalb Co Police Department	8/19/2017	DEKALB	EXIT I 285 RP W	MORELAND AVE	0	0	Rear End	Daylight	Dry	North	North	Straight	Stopped	2	Following too Close	No Contributing Factors	Lanes	Lanes
6373068	Dekalb Co Police Department	8/30/2017	DEKALB	MORELAND AVE	I 285	0	0	Rear End	Daylight	Dry	North	North	Straight	Straight	2	Following too Close	No Contributing Factors	Lanes	Lanes
6374801	Dekalb Co Police Department	8/31/2017	DEKALB	MORELAND AVE	I 285	0	0	Rear End	Daylight	Wet	South	South	Straight	Straight	2	Failed to Yield	No Contributing Factors	Lanes	Lanes
6380775	Dekalb Co Police Department	9/5/2017	DEKALB	W EXIT I 285 RP	MORELAND AVE	1	0	Rear End	Daylight	Dry	N/A	N/A	Turning Right	Stopped	2	Following too Close	No Contributing Factors	Lanes	Lanes
6383693	Gsp Post 00	9/5/2017	DEKALB	I-285 WESTBOUND	MORELAND AVE	1	0	Sideswipe-Same Direction	Daylight	Dry	West	West	Changing Lanes	Straight	2	No Contributing Factors	No Contributing Factors	No Control Present	No Control Present
6398660	Dekalb Co Police Department	9/20/2017	DEKALB	MORELAND AVE	I 285	0	0	Angle	DarkNot Lighted	Dry	South	South	Straight	Stopped	2	Following too Close	No Contributing Factors	Traffic Signal	Traffic Signal
6410083	Dekalb Co Police Department	9/29/2017	DEKALB	IR I 285 RP	MORELAND AVE	0	0	Rear End	Daylight	Dry	South	South	Turning Right	Turning Right	2	Following too Close	No Contributing Factors	Lanes	Lanes
6415438	Dekalb Co Police Department	10/4/2017	DEKALB	OR I 285 RP	MORELAND AVE	0	0	Sideswipe-Same Direction	Daylight	Dry	West	West	Changing Lanes	Straight	2	Changed Lanes Improperly	No Contributing Factors	Traffic Signal	Traffic Signal
6421720	Dekalb Co Police Department	10/9/2017	DEKALB	I 285 W	MORELAND AVE	0	0	Rear End	DarkLighted	Dry	West	West	Straight	Stopped	2	Following too Close	No Contributing Factors	Lanes	Lanes
6445019	Dekalb Co Police Department	10/13/2017	DEKALB	I-285 WEST BOUND EXIT RAMP	MORELAND AVENUE	0	0	Rear End	Daylight	Dry	West	West	Straight	Stopped	2	Following too Close	No Contributing Factors	Traffic Signal	Lanes
6445436	Dekalb Co Police Department	10/26/2017	DEKALB	EXT I 675 RP	MORELAND AVE	1	0	Rear End	Daylight	Dry	West	West	Straight	Stopped	2	Following too Close	No Contributing Factors	Lanes	Lanes
6449693	Atlanta Police Department	10/23/2017	FULTON	MORELAND AVE SE	I-20 WB EXPY SE	0	0	Rear End	Daylight	Dry	South	South	Straight	Straight	4	Following too Close	No Contributing Factors	Lanes	Lanes
6464246	Dekalb Co Police Department	11/8/2017	DEKALB	OR I 285 RP	MORELAND AVE	0	0	Rear End	DarkLighted	Wet	West	West	Straight	Stopped	2	Following too Close	No Contributing Factors	Traffic Signal	Traffic Signal
6477507	Dekalb Co Police Department	11/7/2017	DEKALB	MORELAND AVE	I 285	0	0	Rear End	Daylight	Dry	West	South	Straight	Straight	2	Following too Close	No Contributing Factors	Lanes	Lanes
6480132	Dekalb Co Police Department	11/20/2017	DEKALB	OR I 285 RP	MORELAND AVE	1	0	Rear End	Daylight	Dry	West	West	Straight	Stopped	2	Following too Close	No Contributing Factors	Traffic Signal	Traffic Signal
6484694	Dekalb Co Police Department	11/23/2017	DEKALB	MORELAND AVE	I 285	0	0	Rear End	Daylight	Dry	N/A	East	N/A	Stopped	4	Following too Close	No Contributing Factors	Lanes	Lanes
6495206	Dekalb Co Police Department	12/1/2017	DEKALB	I-285 WB EXIT RAMP	MORELAND AVE	0	0	Rear End	Daylight	Dry	West	West	Turning Right	Turning Right	2	Following too Close	No Contributing Factors	Lanes	Lanes
6527278	Dekalb Co Police Department	12/24/2017	DEKALB	MORELAND AVE	I 285	0	0	Angle	DarkLighted	Dry	N/A	N/A	Turning Left	Straight	2	Failed to Yield	Other	Traffic Signal	Traffic Signal
6528005	Dekalb Co Police Department	12/23/2017	DEKALB	MORELAND AVE	I 285	2	0	Angle	Daylight	Wet	South	North	Straight	Turning Left	2	Failed to Yield	No Contributing Factors	Traffic Signal	Lanes
6530215	Dekalb Co Police Department	12/27/2017	DEKALB	MORELAND AVE	I 285	0	0	Angle	Daylight	Dry	N/A	South	Turning Left	Straight	2	Failed to Yield	No Contributing Factors	Traffic Signal	Traffic Signal
6545409	Dekalb Co Police Department	1/10/2018	DEKALB	ACCESS RD	MORELAND AVE	2	0	Rear End	Dawn	Dry	West	West	Straight	Stopped	2	Following too Close	No Contributing Factors	Lanes	Lanes
6548125	Dekalb Co Police Department	1/9/2018	DEKALB	MORELAND AVE	MORELAND AVE	0	0	Rear End	Daylight	Dry	East	East	Turning Right	Turning Right	2	Following too Close	No Contributing Factors		

6652986	Dekalb Co Police Department	3/31/2018	DEKALB	MORELAND AVE	UNKNOWN	0	0	Rear End	Daylight	Dry	West	West	Straight	Stopped	2	Following too Close	No Contributing Factors	Traffic Signal	Lanes
6669637	Dekalb Co Police Department	4/11/2018	DEKALB	285 675 RP	MORELAND AVE	0	0	Rear End	Daylight	Dry	West	West	Negotiating A Curve	Stopped	2	Following too Close	No Contributing Factors	Lanes	Yield Sign
6680631	Dekalb Co Police Department	4/20/2018	DEKALB	MORELAND AVE	I 285	1	0	Not A Collision with Motor Vehicle	DarkNot Lighted	Dry	South	N/A	Turning Right	N/A	1	Other Activity - Mobile Device	N/A	Lanes	N/A
6687110	Dekalb Co Police Department	4/27/2018	DEKALB	I 285 RP W	MORELAND AVE	0	0	Rear End	Daylight	Dry	West	West	Straight	Stopped	2	Following too Close	No Contributing Factors	Traffic Signal	Traffic Signal
6687163	Dekalb Co Police Department	4/27/2018	DEKALB	MORELAND AVE	I-285 WB ENTRY RAMP	0	0	Rear End	Daylight	Dry	North	North	Straight	Straight	2	Misjudged Clearance	No Contributing Factors	Lanes	Lanes
6687730	Dekalb Co Police Department	4/27/2018	DEKALB	OR I 285 RP	MORELAND AVE	0	0	Rear End	Daylight	Dry	East	East	Straight	Stopped	2	Following too Close,Inattentive or Other Distracti	No Contributing Factors	Lanes	Lanes
6690375	Dekalb Co Police Department	4/30/2018	DEKALB	OR I 285 RP	MORELAND AVE	0	0	Rear End	Daylight	Dry	West	West	Straight	Straight	2	Following too Close	No Contributing Factors	Lanes	Lanes
6697572	Dekalb Co Police Department	5/6/2018	DEKALB	MORELAND AVE	I 285	0	0	Sideswipe-Same Direction	Daylight	Dry	N/A	N/A	Turning Left	Turning Left	2	Other	No Contributing Factors	Lanes	Lanes
6707112	Dekalb Co Police Department	5/13/2018	DEKALB	MORELAND AVE	I 285	0	0	Rear End	DarkNot Lighted	Dry	South	South	Straight	Stopped	2	Following too Close	No Contributing Factors	Lanes	Lanes
6708330	Dekalb Co Police Department	5/14/2018	DEKALB	I 285 RP	MORELAND AVE	0	0	Rear End	Daylight	Dry	West	West	Straight	Straight	2	Following too Close,Inattentive or Other Distracti	No Contributing Factors	Lanes	Lanes
6708391	Dekalb Co Police Department	5/14/2018	DEKALB	MORELAND AVE	I 675	0	0	Rear End	Daylight	Dry	South	South	Straight	Stopped	2	Following too Close	No Contributing Factors	Traffic Signal	Traffic Signal
6711666	Dekalb Co Police Department	5/16/2018	DEKALB	RAMP I 675 RP	MORELAND AVE	0	0	Rear End	Daylight	Wet	West	West	Straight	Stopped	2	Following too Close	No Contributing Factors	Lanes	Lanes
6716423	Dekalb Co Police Department	5/18/2018	DEKALB	OR I 285 RP	MORELAND AVE	0	0	Rear End	Daylight	Dry	West	West	Turning Right	Stopped	2	Following too Close	No Contributing Factors	Traffic Signal	Traffic Signal
6718701	Dekalb Co Police Department	5/21/2018	DEKALB	IR I 285 RP	MORELAND AVE	0	0	Angle	Daylight	Dry	East	West	Backing	Stopped	2	Improper Backing	No Contributing Factors	Lanes	Lanes
6721612	Dekalb Co Police Department	5/23/2018	DEKALB	RAMP I 675 RP	MORELAND AVE	0	0	Rear End	Daylight	Wet	West	West	Straight	Stopped	2	Following too Close	No Contributing Factors	Lanes	Lanes
6728508	Dekalb Co Police Department	5/29/2018	DEKALB	MORELAND AVE	I 285	1	0	Sideswipe-Same Direction	Daylight	Wet	West	West	Straight	Straight	2	Changed Lanes Improperly	No Contributing Factors	Lanes	Lanes
6735946	Dekalb Co Police Department	6/6/2018	DEKALB	EXIT (TO MORELAND AVE) I 285 RP	I 285	1	0	Rear End	Daylight	Dry	West	West	Straight	Straight	2	Following too Close	No Contributing Factors	Traffic Signal	Traffic Signal
6740342	Dekalb Co Police Department	6/8/2018	DEKALB	I-285 WB EXIT RAMP	MORELAND AVE	0	0	Rear End	Daylight	Dry	West	West	Turning Right	Turning Right	2	Following too Close	No Contributing Factors	Lanes	Lanes
6742030	Dekalb Co Police Department	6/10/2018	DEKALB	MORELAND AVE	I 285	2	0	Rear End	Daylight	Dry	South	South	Straight	Stopped	2	Following too Close	No Contributing Factors	Traffic Signal	Traffic Signal
6758165	Atlanta Police Department	6/6/2018	DEKALB	I20 WB EXPY EXIT RAMP	MORELAND AVE SE	0	0	Rear End	Daylight	Dry	North	North	Turning Right	Turning Right	2	N/A	No Contributing Factors	Traffic Signal	Traffic Signal
6765842	Dekalb Co Police Department	6/23/2018	DEKALB	OR I 285 RP	MORELAND AVE	0	0	Rear End	Daylight	Dry	West	West	Straight	Stopped	2	Following too Close	No Contributing Factors	Lanes	Lanes
6772680	Atlanta Police Department	6/22/2018	DEKALB	I-20WB RAMP SE	MORELAND AVE SE	0	0	Rear End	DarkLighted	Dry	West	West	Straight	Stopped	2	Following too Close	No Contributing Factors	Traffic Signal	Traffic Signal
6776489	Dekalb Co Police Department	7/1/2018	DEKALB	I 285 OR	MORELAND AVE	1	0	Rear End	Daylight	Dry	West	West	Straight	Straight	2	Following too Close	No Contributing Factors	Lanes	Lanes
6776862	Dekalb Co Police Department	7/2/2018	DEKALB	OR I 285 RP	MORELAND AVE	0	0	Angle	Daylight	Dry	North	North	Turning Right	Turning Right	2	Failed to Yield	No Contributing Factors	Traffic Signal	Traffic Signal
6777063	Dekalb Co Police Department	7/2/2018	DEKALB	MORELAND AVE RP	285	1	0	Rear End	Daylight	Dry	South	South	Straight	Stopped	2	Following too Close	No Contributing Factors	Lanes	Lanes
6787363	Dekalb Co Police Department	7/10/2018	DEKALB	MORELAND AVE	I 285	2	0	Angle	DarkNot Lighted	Dry	South	South	Turning Left	Turning Left	2	Other	Other	Traffic Signal	Traffic Signal
6791034	Dekalb Co Police Department	7/14/2018	DEKALB	MORELAND AVE	I 285	0	0	Rear End	DarkNot Lighted	Dry	South	South	Straight	Stopped	2	Other	No Contributing Factors	Traffic Signal	Traffic Signal
6824113	Dekalb Co Police Department	8/8/2018	DEKALB	I 675 RP	MORELAND AVE	0	0	Rear End	Daylight	Dry	West	West	Straight	Straight	2	Following too Close	No Contributing Factors	Lanes	Lanes
6832046	Dekalb Co Police Department	8/12/2018	DEKALB	MORELAND AVE	I 285	0	0	Angle	Daylight	Dry	East	East	Backing	Stopped	2	Improper Backing	No Contributing Factors	Traffic Signal	Traffic Signal
6843878	Dekalb Co Police Department	8/19/2018	DEKALB	I 285 OR	MORELAND AVE	0	0	Rear End	Daylight	Dry	West	West	Straight	Stopped	2	Following too Close	No Contributing Factors	Lanes	Lanes
6844478	Dekalb Co Police Department	8/23/2018	DEKALB	RAMP I 285 RP	MORELAND AVE	0	0	Rear End	Daylight	Dry	West	West	Straight	Straight	2	Following too Close	No Contributing Factors	Lanes	Lanes
6846400	Dekalb Co Police Department	8/24/2018	DEKALB	I 285 OR	MORELAND AVE	0	0	Rear End	Daylight	Dry	West	West	Straight	Straight	2	Following too Close	No Contributing Factors	Lanes	Lanes
6851299	Dekalb Co Police Department	8/28/2018	DEKALB	I 285 IR	MORELAND AVE	0	0	Rear End	Daylight	Dry	West	West	Turning Right	Turning Right	2	Following too Close	No Contributing Factors	Traffic Signal	Traffic Signal
6856375	Dekalb Co Police Department	8/31/2018	DEKALB	I 285 OR	MORELAND AVE	0	0	Rear End	Daylight	Dry	West	West	Straight	Straight	2	Following too Close	No Contributing Factors	Lanes	Lanes
6860579	Dekalb Co Police Department	9/4/2018	DEKALB	MORELAND AVE	I 285	0	0	Angle	Daylight	Dry	South	South	Changing Lanes	Straight	2	Changed Lanes Improperly	No Contributing Factors	Lanes	Lanes
6864290	Dekalb Co Police Department	9/7/2018	DEKALB	I-285	MOREAND AVE	0	0	Rear End	Daylight	Dry	West	West	Turning Right	Turning Right	2	Following too Close	No Contributing Factors	Traffic Signal	Traffic Signal
6880424	Dekalb Co Police Department	9/19/2018	DEKALB	MORELAND AVE	UNKNOWN	0	0	Rear End	Daylight	Dry	West	West	Turning Right	Turning Right	2	Following too Close	No Contributing Factors	Yield Sign	Yield Sign
6880903	Dekalb Co Police Department	9/20/2018	DEKALB	MORELAND AVE	I 285	0	0	Rear End	Daylight	Dry	West	West	Straight	Stopped	2	Following too Close	No Contributing Factors	Traffic Signal	Traffic Signal
6881081	Dekalb Co Police Department	9/20/2018	DEKALB	RAMP I 285 RP W	MORELAND AVE	0	0	Rear End	Daylight	Dry	West	East	Straight	Stopped	2	Following too Close	No Contributing Factors	Lanes	Lanes
6900712	Dekalb Co Police Department	10/4/2018	DEKALB	MORELAND AVE RP	I 285	0	0	Not A Collision with Motor Vehicle	DarkNot Lighted	Dry	West	North	N/A	Straight	1	Failed to Yield	No Contributing Factors	Traffic Signal	Traffic Signal
6902990	Dekalb Co Police Department	10/6/2018	DEKALB	MORELAND AVE	I 285	0	0	Angle	Daylight	Dry	East	North	Turning Left	Straight	2	Other	No Contributing Factors	Traffic Signal	Traffic Signal
6906119	Dekalb Co Police Department	10/9/2018	DEKALB	285 W 675 N RP	MORELAND AVE	0	0	Rear End	Daylight	Dry	West	West	Straight	Stopped	2	Other	No Contributing Factors	Lanes	Lanes
6906403	Dekalb Co Police Department	10/9/2018	DEKALB	MORELAND AVE RP	UNKNOWN	0	0	Sideswipe-Same Direction	Daylight	Wet	North	North	Changing Lanes	Turning Right	2	Changed Lanes Improperly	No Contributing Factors	Traffic Signal	Traffic Signal
6911987	Dekalb Co Police Department	10/12/2018	DEKALB	I 285 IR	I 675	0	0	Rear End	Daylight	Dry	East	East	Straight	Straight	2	Following too Close	No Contributing Factors	Lanes	Lanes
6911989	Dekalb Co Police Department	10/12/2018	DEKALB	I 285 IR	MORELAND AVE	0	0	Rear End	Daylight	Dry	West	West	Straight	Straight	2	Following too Close	No Contributing Factors	Lanes	Lanes
6931840	Dekalb Co Police Department	10/27/2018	DEKALB	MORELAND AVE	I 285	0	0	Angle	DarkLighted	Wet	West	North	Turning Left	Straight	2	Disregard Other Traffic Contro	No Contributing Factors	Traffic Signal	Traffic Signal
6933723	Dekalb Co Police Department	10/29/2018	DEKALB	MORELAND AVE RP	I 285	0	0	Angle	Dawn	Dry	N/A	South	N/A	Straight	2	Failed to Yield	No Contributing Factors	Traffic Signal	Traffic Signal
6934127	Dekalb Co Police Department	10/30/2018	DEKALB	I 285 IR	MORELAND AVE	1	0	Rear End	DarkLighted	Dry	West	West	Straight	Straight	2	Following too Close	No Contributing Factors	Traffic Signal	Traffic Signal
6943073	Dekalb Co Police Department	11/3/2018	DEKALB	EXIT RAMP I 285 RP W	MORELAND AVE	0	0	Rear End	Daylight	Dry	West	North	Straight	Stopped	2	Following too Close	No Contributing Factors	Lanes	Lanes
6949807	Dekalb Co Police Department	11/7/2018	DEKALB	I 285 OR	MORELAND AVE	0	0	Sideswipe-Same Direction	Daylight	Wet	East	East	Changing Lanes	Straight	2	Changed Lanes Improperly	No Contributing Factors	Lanes	Lanes
6953325	Dekalb Co Police Department	11/10/2018	DEKALB	MORELAND AVE RP	I 285	0	0	Angle	Daylight	Dry	West	South	Turning Left	Straight	2	Disregard Other Traffic Contro	No Contributing Factors	Traffic Signal	Traffic Signal
6959954	Dekalb Co Police Department	11/15/2018	DEKALB	MORELAND AVE	I 285	0	0	Sideswipe-Same Direction	DarkNot Lighted	Wet	N/A	East	N/A	Straight	2	Changed Lanes Improperly	No Contributing Factors	Lanes	Lanes
6964656	Dekalb Co Police Department	11/17/2018	DEKALB	EXIT RAMP I 285 RP W	MORELAND AVE	1	0	Rear End	DarkLighted	Dry	West	West	Straight	Stopped	2	Following too Close	No Contributing Factors	Lanes	Lanes
6999403	Dekalb Co Police Department	12/12/2018	DEKALB	I 285 IR	MORELAND AVE	0	0	Rear End	DarkLighted	Dry	West	West	Straight	Stopped	2	Following too Close	No Contributing Factors	Traffic Signal	Traffic Signal
7002945	Dekalb Co Police Department	12/14/2018	DEKALB	MORELAND AVE	I-285	0	0	Rear End	Daylight	Wet	South	South	Turning Right	Turning Right	2	Following too Close	No Contributing Factors	Traffic Signal	Traffic Signal
7026128	Gsp Post 00	1/2/2019	DEKALB	I-285 W	MORELAND AVE EXIT	0	0	Sideswipe-Same Direction	Daylight	Dry	West	West	Changing Lanes	Negotiating A Curve	2	Changed Lanes Improperly	No Contributing Factors	Lanes	Lanes
7031403	Dekalb Co Police Department	1/7/2019	DEKALB	UNKNOWN RP	MORELAND AVE	0	0	Rear End	Daylight	Dry	East	East	Straight	Straight	2	Following too Close,Reckless Driving	Reckless Driving	Lanes	Lanes
7034327	Dekalb Co Police Department	1/8/2019	DEKALB	W I 285 RP	MORELAND AVE	1	0	Rear End	Daylight	Dry	West	West	Straight	Stopped	2	Following too Close	No Contributing Factors	Lanes	Yield Sign
7047764	Dekalb Co Police Department	1/17/2019	DEKALB	MORELAND AVE	I 285	1	0	Rear End	DarkLighted	Dry	North	North	Straight	Straight	2	Following too Close	No Contributing Factors	Lanes	Lanes
7057612	Dekalb Co Police Department	1/24/2019	DEKALB	MORELAND AVE	I 285	0	0	Sideswipe-Same Direction	Daylight	Dry	East	East	Changing Lanes	Turning Left	2	Changed Lanes Improperly	No Contributing Factors	Lanes	Lanes
7061367	Dekalb Co Police Department	1/28/2019	DEKALB	MORELAND AVE	I 675	0	0	Sideswipe-Same Direction	DarkNot Lighted	Dry	North	North	Changing Lanes	Straight	2	Changed Lanes Improperly	No Contributing Factors	Lanes	Lanes
7083033	Dekalb Co Police Department	2/13/2019	DEKALB	I-285 EXIT RAMP	MORELAND AVE	0	0	Rear End	Daylight	Dry	West	West	Turning Right	Turning Right	2	Following too Close	No Contributing Factors	Traffic Signal	Traffic Signal
7110040	Dekalb Co Police Department	3/5/2019	DEKALB	MORELAND AVE	I 285	0	0	Sideswipe-Same Direction	DarkNot Lighted	Dry	South	South	Turning Left	Turning Left	2	Other	Other	Traffic Signal	Traffic Signal
7114264	Dekalb Co Police Department	3/8/2019	DEKALB	I 285 RP W	MORELAND AVE	0	0	Sideswipe-Same Direction	Daylight	Dry	South	South	Turning Right	Turning Left	2	Misjudged Clearance	No Contributing Factors	Lanes	Lanes
7124640	Dekalb Co Police Department	3/14/2019	DEKALB	I-675 EXIT RAMP	MORELAND AVE	0	0	Rear End	Dawn	Dry	West	North	Turning Right	Turning Right	2	Following too Close	No Contributing Factors	Traffic Signal	Traffic Signal
7125720	Dekalb Co Police Department	3/15/2019	DEKALB	MORELAND AVE	I 285	2	0	Angle	DarkLighted	Dry	North	South	Turning Left	Straight	2	Failed to Yield	No Contributing Factors	Lanes	Lanes
7131568	Dekalb Co Police Department	3/20/2019	DEKALB	W EXIT I 285 RP	MORELAND AVE	0	0	Rear End	Daylight	Dry	West	West	Straight	Stopped	2	Following too Close	No Contributing Factors	Lanes	Lanes
7145777	Dekalb Co Police Department	3/31/2019	DEKALB	MORELAND AVE	I 285	2	0	Rear End	DarkLighted	Dry	West	West	Stopped	Straight	2	Disregard Other Traffic Contro	No Contributing Factors	Lanes	Lanes
7155217	Dekalb Co Police Department	4/5/2019	DEKALB	I 285 IR	MORELAND AVE	0	0	Angle	Daylight	Dry	East	East	Straight	Straight	2	Other	No Contributing Factors	Lanes	Lanes
7169047	Dekalb Co Police Department	4/18/2019	DEKALB	I 285 IR	MORELAND AVE	1	0	Rear End	DarkLighted	Dry	East	East	Straight	Straight	2	Following too Close	No Contributing Factors	Lanes	Lanes
7171400	Dekalb Co Police Department	4/21/2019	DEKALB	MORELAND AVE	285	0	0	Angle	DarkLighted	Dry	South	North	Straight	Turning Left	2	Other	No Contributing Factors	Traffic Signal	Traffic Signal
7177425	Dekalb Co Police Department	4/17/2019	DEKALB	MORELAND AVE	I 285	1	0	Angle	Daylight	Dry	North	North	Changing Lanes	Straight	2	Changed Lanes Improperly	No Contributing Factors	Lanes	Lanes
7183289	Dekalb Co Police Department	4/30/2019	DEKALB	I 675 N	MORELAND AVE	0	0	Rear End	Daylight	Dry	West	West	Straight	Stopped	2	Following too Close	No Contributing Factors	Lanes	Lanes
7187347	Dekalb Co Police Department	5/1/2019	DEKALB	EXIT RAMP FROM I-675 & I-285	MORELAND AVE	0	0	Sideswipe-Same Direction	Daylight	Dry	West	West	Changing Lanes	Straight	2	Changed Lanes Improperly	No Contributing Factors	Lanes	Lanes
7231207	Dekalb Co Police Department	6/2/2019	DEKALB	ACCESS RD RP	MORELAND AVE	0	0	Rear End	DarkLighted	Wet	West	West	Straight	Stopped	2	Other	No Contributing Factors	Traffic Signal	Traffic Signal
7232975	Dekalb Co Police Department	6/3/2019	DE																

7318347 Dekalb Co Police Department	8/13/2019 DEKALB	I 675 N	MORELAND AVE	0	0 Sideswipe-Same Direction	Daylight	Dry	North	West	Turning Left	Turning Left	2 Improper Turn	No Contributing Factors	Lanes	Lanes
7337991 Dekalb Co Police Department	8/30/2019 DEKALB	I 675 RP N	MORELAND AVE	0	0 Rear End	Daylight	Dry	North	West	Straight	Stopped	2 Following too Close	No Contributing Factors	Lanes	Lanes
7345061 Dekalb Co Police Department	8/30/2019 DEKALB	MORELAND AVE	I 285	0	0 Angle	DarkLighted	Dry	N/A	South	Turning Right	Straight	2 Other	No Contributing Factors	Yield Sign	Traffic Signal
7353922 Dekalb Co Police Department	9/13/2019 DEKALB	EXIT I 285 RP W	MORELAND AVE	1	0 Rear End	Daylight	Dry	West	West	Straight	Turning Right	2 Following too Close	No Contributing Factors	Lanes	Lanes
7364674 Dekalb Co Police Department	9/23/2019 DEKALB	MORELAND AVE RP	I 675	0	0 Sideswipe-Same Direction	Daylight	Dry	West	West	Stopped	Straight	2 No Contributing Factors	No Contributing Factors	Lanes	Lanes
7368083 Dekalb Co Police Department	9/24/2019 DEKALB	MORELAND AVE RP	I 285	0	0 Sideswipe-Same Direction	Daylight	Dry	West	West	Changing Lanes	Turning Left	2 Changed Lanes Improperly	No Contributing Factors	Traffic Signal	Traffic Signal
7371327 Dekalb Co Police Department	9/27/2019 DEKALB	285 EXIT RAMP RP W	MORELAND AVE	0	0 Not A Collision with Motor Vehicle	Daylight	Dry	West	N/A	Turning Right	N/A	1 Improper Turn	N/A	Lanes	N/A
7371448 Dekalb Co Police Department	9/27/2019 DEKALB	MORELAND AVE	I 285	0	0 Sideswipe-Same Direction	Daylight	Dry	N/A	East	N/A	Straight	3 Changed Lanes Improperly	No Contributing Factors	Lanes	Lanes
7374316 Dekalb Co Police Department	9/30/2019 DEKALB	MORELAND AVE	285 WEST ENTRY RAMP	1	0 Rear End	Daylight	Dry	South	South	Straight	Stopped	2 Following too Close	No Contributing Factors	Lanes	Lanes
7391120 Dekalb Co Police Department	10/15/2019 DEKALB	I 285 IR	MORELAND AVE	0	0 Rear End	DarkLighted	Dry	West	West	Turning Right	Stopped	2 Following too Close	No Contributing Factors	Lanes	Lanes
7393588 Dekalb Co Police Department	10/16/2019 DEKALB	MORELAND AVE	I 285	0	0 Angle	DarkLighted	Dry	N/A	South	Turning Left	Straight	2 Failed to Yield	No Contributing Factors	Traffic Signal	Traffic Signal
7393817 Dekalb Co Police Department	10/17/2019 DEKALB	MORELAND AVE RP	I 285	0	0 Angle	Dawn	Dry	West	North	Turning Left	Straight	2 Failed to Yield	No Contributing Factors	Traffic Signal	Traffic Signal
7402997 Dekalb Co Police Department	10/24/2019 DEKALB	EXIT RAMP 285 RP W	MORELAND AVE	1	0 Angle	DarkNot Lighted	Dry	North	South	Turning Left	Straight	2 Other	Other	Lanes	Lanes
7433592 Dekalb Co Police Department	11/13/2019 DEKALB	MORELAND AVE	I 285	1	0 Angle	DarkLighted	Dry	South	South	Changing Lanes	Straight	2 Changed Lanes Improperly	No Contributing Factors	Lanes	Lanes
7436909 Dekalb Co Police Department	11/16/2019 DEKALB	MORELAND AVE	I 285	1	0 Rear End	DarkNot Lighted	Wet	South	South	Straight	Stopped	3 Other	No Contributing Factors	Traffic Signal	Traffic Signal
7444784 Dekalb Co Police Department	11/21/2019 DEKALB	MORELAND AVE	I 285	0	0 Rear End	DarkNot Lighted	Dry	North	North	Straight	Straight	2 Following too Close	No Contributing Factors	Lanes	Lanes
7465399 Dekalb Co Police Department	12/6/2019 DEKALB	I 285 RP W	MORELAND AVE	1	0 Rear End	Daylight	Dry	West	West	Straight	Straight	2 Following too Close	No Contributing Factors	Lanes	Lanes
7475966 Dekalb Co Police Department	12/13/2019 DEKALB	EXIT RAMP I 285 RP W	MORELAND AVE	1	0 Rear End	DarkLighted	Wet	West	West	Straight	Stopped	2 Following too Close	No Contributing Factors	Lanes	Lanes
7492207 Dekalb Co Police Department	12/25/2019 DEKALB	MORELAND AVE	I 285	0	0 Rear End	DarkLighted	Dry	South	South	Turning Right	Stopped	2 Following too Close	No Contributing Factors	Traffic Signal	Traffic Signal
7500194 Dekalb Co Police Department	1/2/2020 DEKALB	MORELAND AVE	I 285	0	0 Rear End	DarkLighted	Wet	North	North	Turning Left	Stopped	2 Following too Close	No Contributing Factors	Traffic Signal	Traffic Signal
7511445 Dekalb Co Police Department	1/10/2020 DEKALB	MORELAND AVE	I 285	0	0 Rear End	DarkLighted	Dry	East	East	Straight	Straight	2 Changed Lanes Improperly	No Contributing Factors	Lanes	Lanes
7534262 Dekalb Co Police Department	1/31/2020 DEKALB	MORELAND AVE	I 285	0	0 Rear End	Daylight	Dry	South	South	Straight	Straight	2 Following too Close	No Contributing Factors	Lanes	Lanes
7536617 Dekalb Co Police Department	2/3/2020 DEKALB	I 285 W	MORELAND AVE	1	0 Rear End	Daylight	Dry	West	West	Negotiating A Curve	Stopped	2 Following too Close	No Contributing Factors	Lanes	Lanes
7544710 Dekalb Co Police Department	2/10/2020 DEKALB	MORELAND AVE	I 285	0	0 Rear End	Daylight	Dry	None	N/A	Backing	Parked	2 No Contributing Factors	No Contributing Factors	No Control Present	Lanes
7548517 Gsp Post 00	2/10/2020 DEKALB	EXIT RAMP FROM I-285 WEST TO M	MORELAND AVENUE	0	0 Rear End	Daylight	Dry	West	West	Straight	Stopped	2 No Contributing Factors,Following too Close	No Contributing Factors	Yield Sign	Yield Sign
7566047 Dekalb Co Police Department	2/28/2020 DEKALB	I 285 W	MORELAND AVE	0	0 Rear End	Daylight	Dry	West	West	Straight	Turning Right	2 Following too Close	No Contributing Factors	Lanes	Lanes
7566650 Dekalb Co Police Department	2/28/2020 DEKALB	I 285 W	MORELAND AVE	0	0 Sideswipe-Same Direction	DarkLighted	Dry	West	West	Turning Right	Turning Right	2 Following too Close	No Contributing Factors	Traffic Signal	Traffic Signal
7570117 Dekalb Co Police Department	3/3/2020 DEKALB	I 675 N	MORELAND AVE	0	0 Rear End	Daylight	Wet	North	North	Straight	Stopped	2 Following too Close	No Contributing Factors	Lanes	Lanes
7579732 Dekalb Co Police Department	2/10/2020 DEKALB	MORELAND AVE	I 285	0	0 Sideswipe-Same Direction	DarkLighted	Wet	South	South	Changing Lanes	Straight	2 Changed Lanes Improperly	No Contributing Factors	Lanes	Lanes
7595054 Dekalb Co Police Department	3/16/2020 DEKALB	I 675 RP N	MORELAND AVE	0	0 Rear End	Daylight	Dry	West	West	Straight	Stopped	2 Following too Close	No Contributing Factors	Lanes	Lanes
7601849 Dekalb Co Police Department	3/23/2020 DEKALB	I 675 N	MORELAND AVE	0	0 Sideswipe-Same Direction	Daylight	Wet	North	North	Changing Lanes	Straight	2 Changed Lanes Improperly	No Contributing Factors	Lanes	Lanes
7609311 Dekalb Co Police Department	4/3/2020 DEKALB	I-285 WEST	675 SOUTH EXIT RAMP	0	0 Sideswipe-Same Direction	DarkNot Lighted	Dry	West	West	Straight	Straight	3 Other	Driver Lost Control	Lanes	Lanes
7611351 Dekalb Co Police Department	4/7/2020 DEKALB	MORELAND AVE RP	I 285	0	0 Not A Collision with Motor Vehicle	DarkLighted	Dry	N/A	South	N/A	N/A	1 Failed to Yield	No Contributing Factors	Lanes	Lanes
7618270 Dekalb Co Police Department	4/18/2020 DEKALB	IR I 285 RP	MORELAND AVE	0	0 Rear End	Daylight	Dry	West	West	Straight	Stopped	2 Following too Close	No Contributing Factors	Traffic Signal	Traffic Signal
7624246 Dekalb Co Police Department	4/28/2020 DEKALB	MORELAND AVE	I 285	1	0 Head On	Daylight	Dry	North	South	Straight	Turning Left	2 No Contributing Factors	No Contributing Factors	Traffic Signal	Traffic Signal
7624701 Dekalb Co Police Department	4/28/2020 DEKALB	MORELAND AVE RP	I 285	0	0 Rear End	Daylight	Dry	West	West	Straight	Stopped	2 Following too Close	No Contributing Factors	Lanes	Lanes
7639669 Dekalb Co Police Department	5/17/2020 DEKALB	MORELAND AVE	I 285	2	0 Rear End	Daylight	Dry	North	North	Straight	Straight	3 Following too Close	No Contributing Factors	Lanes	Lanes
7693008 Dekalb Co Police Department	7/9/2020 DEKALB	MORELAND AVE	I 285	0	0 Rear End	Daylight	Dry	South	South	Straight	Stopped	3 Inattentive or Other Distracti	No Contributing Factors	Lanes	Lanes
7721824 Dekalb Co Police Department	8/6/2020 DEKALB	I 285 OR	MORELAND AVE	0	0 Sideswipe-Same Direction	Daylight	Dry	N/A	West	N/A	Straight	2 Other	No Contributing Factors	Lanes	Lanes
7722216 Gsp Post 00	9/11/2019 DEKALB	I-285 EAST EXIT RAMP	SR42 MORELAND AVE	0	0 Rear End	Daylight	Dry	West	West	Turning Right	Stopped	2 Following too Close	No Contributing Factors	Traffic Signal	Traffic Signal
7728931 Gsp Post 00	9/19/2019 DEKALB	RAMP FROM I-675 NORTHBOUND	MORELAND AVE.	0	0 Rear End	Daylight	Dry	West	West	Straight	Stopped	2 Following too Close	No Contributing Factors	Traffic Signal	Traffic Signal
7733669 Dekalb Co Police Department	8/10/2020 DEKALB	I-285 WB EXIT RAMP	MORELAND AVE	2	0 Sideswipe-Same Direction	Daylight	Dry	West	West	Turning Right	Stopped	2 Following too Close	No Contributing Factors	Traffic Signal	Traffic Signal
7738399 Dekalb Co Police Department	8/13/2020 DEKALB	MORELAND AVE	I 285	0	0 Sideswipe-Same Direction	Daylight	Dry	South	South	Changing Lanes	Straight	2 Changed Lanes Improperly	No Contributing Factors	Lanes	Lanes
7740756 Dekalb Co Police Department	8/14/2020 DEKALB	MORELAND AVE	I 285	0	0 Angle	Daylight	Dry	North	West	Straight	Straight	2 Failed to Yield	No Contributing Factors	Traffic Signal	Traffic Signal
7761860 Dekalb Co Police Department	8/31/2020 DEKALB	I 285 IR	MORELAND AVE	0	0 Not A Collision with Motor Vehicle	Daylight	Dry	N/A	East	N/A	Straight	2 Other	No Contributing Factors	Lanes	Lanes
7763134 Dekalb Co Police Department	9/4/2020 DEKALB	ACCESS RD	MORELAND AVE	0	0 Sideswipe-Opposite Direction	Daylight	Dry	N/A	North	N/A	Turning Left	2 Failed to Yield	No Contributing Factors	Traffic Signal	Traffic Signal
7769023 Dekalb Co Police Department	9/10/2020 DEKALB	I-285 WB EXIT RAMP	MORELAND AVE	0	0 Rear End	Daylight	Ice/Frost	West	West	Straight	Straight	2 Following too Close	No Contributing Factors	Traffic Signal	Traffic Signal
7769087 Dekalb Co Police Department	9/10/2020 DEKALB	MORELAND AVE	I-285 WB	1	0 Rear End	Daylight	Dry	North	North	Straight	Straight	2 Following too Close	No Contributing Factors	Traffic Signal	Traffic Signal
7785060 Dekalb Co Police Department	9/24/2020 DEKALB	I-285 WB EXIT RAMP	MORELAND AVE	0	0 Sideswipe-Same Direction	Daylight	Wet	West	West	Changing Lanes	Stopped	2 Changed Lanes Improperly	No Contributing Factors	Traffic Signal	Traffic Signal
7787054 Dekalb Co Police Department	9/26/2020 DEKALB	MORELAND AVE	I 285	0	0 Rear End	Daylight	Dry	South	South	Backing	Stopped	2 Improper Backing	No Contributing Factors	Traffic Signal	Lanes
7794747 Dekalb Co Police Department	10/2/2020 DEKALB	I 285 IR	I 675	0	0 Sideswipe-Same Direction	Daylight	Dry	N/A	West	N/A	Changing Lanes	2 Changed Lanes Improperly	No Contributing Factors	Lanes	Lanes
7840844 Dekalb Co Police Department	11/6/2020 DEKALB	MORELAND AVE	I 285	2	0 Angle	DarkLighted	Dry	South	South	Changing Lanes	Stopped	2 Changed Lanes Improperly	No Contributing Factors	Lanes	Lanes
7861654 Dekalb Co Police Department	11/20/2020 DEKALB	MORELAND AVE	I 285	0	0 Angle	DarkLighted	Dry	South	South	Making U-turn	Straight	2 Improper Turn	No Contributing Factors	Traffic Signal	Traffic Signal
7867165 Dekalb Co Police Department	11/29/2020 DEKALB	MORELAND AVE	I 285	0	0 Head On	Daylight	Dry	North	South	N/A	Straight	2 Other	No Contributing Factors	Lanes	Lanes
7878196 Dekalb Co Police Department	12/7/2020 DEKALB	MORELAND AVE	I 285	0	0 Angle	Daylight	Dry	West	West	Changing Lanes	Straight	2 Changed Lanes Improperly	No Contributing Factors	Traffic Signal	Traffic Signal
7882716 Dekalb Co Police Department	12/10/2020 DEKALB	I 285 OR	MORELAND AVE	3	0 Sideswipe-Same Direction	Daylight	Dry	West	West	Straight	Straight	2 Changed Lanes Improperly	No Contributing Factors	Lanes	Lanes
7898733 Dekalb Co Police Department	12/23/2020 DEKALB	MORELAND AVE RP	I 285	2	0 Rear End	Daylight	Dry	North	North	Other	Straight	2 Following too Close	No Contributing Factors	Lanes	Lanes

14. MORELAND AVE (SR 42) & I-285 EB RAMPS

AccidentNo	AgencyName	Date	County	Route	IntersectingRoute	Injuries	Fatalities	MannerOfCollision	Light	Surface	DirVeh1	DirVeh2	MnvrVeh1	MnvrVeh2	NumberOfVehicles	U1Factors	U2Factors	U1TrafficControl	U2TrafficControl
5622225	Dekalb Co Police Department	2/3/2016	DEKALB	MORELAND RP		0	0	Rear End	DarkLighted	Wet	East	East	Straight	Stopped	2	Following too Close	No Contributing Factors	Lanes	Lanes
5630161	Dekalb Co Police Department	2/1/2016	DEKALB	I 285 E	MORELAND AVE	2	0	Angle	Daylight	Dry	East	East	Turning Right	Turning Right	2	Following too Close	No Contributing Factors	Lanes	Lanes
5642632	Dekalb Co Police Department	2/19/2016	DEKALB	I-285E EXIT RAMP	MORELAND AVE	1	0	Rear End	Daylight	Dry	East	East	Straight	Stopped	2	No Contributing Factors	No Contributing Factors	Lanes	Lanes
5645711	Dekalb Co Police Department	2/22/2016	DEKALB	MORELAND AVE	I 285	0	0	Sideswipe-Same Direction	Daylight	Wet	North	North	Changing Lanes	Straight	2	Changed Lanes Improperly	No Contributing Factors	Lanes	Lanes
5720973	Dekalb Co Police Department	4/20/2016	DEKALB	MORELAND AVE	ACCESS RD	0	0	Angle	Daylight	Dry	South	South	Turning Left	Turning Left	2	Misjudged Clearance	No Contributing Factors	Traffic Signal	Traffic Signal
5741618	Dekalb Co Police Department	5/4/2016	DEKALB	OR I 285 RP	MORELAND AVE	0	0	Rear End	Daylight	Dry	East	East	Negotiating A Curve	Stopped	2	Following too Close	No Contributing Factors	Lanes	Lanes
5751908	Dekalb Co Police Department	4/24/2016	DEKALB	MORELAND AVE	I 285	0	0	Rear End	Daylight	Dry	North	None	Straight	Stopped	2	Following too Close	No Contributing Factors	Traffic Signal	Traffic Signal
5789869	Dekalb Co Police Department	6/10/2016	DEKALB	MORELAND AVE RP		0	0	Not A Collision with Motor Vehicle	Daylight	Dry	West	N/A	Turning Left	N/A	1	Driver Lost Control	N/A	Traffic Signal	N/A
5793447	Dekalb Co Police Department	6/13/2016	DEKALB	I 285 RP E		0	0	Angle	Daylight	Dry	East	South	Straight	Straight	2	No Contributing Factors	No Contributing Factors	Stop Sign	Traffic Signal
5794619	Dekalb Co Police Department	6/14/2016	DEKALB	I 285 E	MORELAND AVE AVE	0	0	Rear End	Daylight	Dry	East	East	Turning Right	Stopped	2	Following too Close	No Contributing Factors	Lanes	Lanes
5811515	Dekalb Co Police Department	6/14/2016	DEKALB	I 285 E	MORELAND AVE	0	0	Rear End	Dusk	Wet	East	East	Straight	Stopped	2	Following too Close	No Contributing Factors	Traffic Signal	Traffic Signal
5816415	Dekalb Co Police Department	6/28/2016	DEKALB	MORELAND AVE	I 285	1	0	Not A Collision with Motor Vehicle	Daylight	Wet	North	N/A	Straight	N/A	1	Other	N/A	Lanes	N/A
5836944	Dekalb Co Police Department	7/14/2016	DEKALB	MORELAND AVE	I 285 EB RAMP	0	0	Angle	DarkNot Lighted	Dry	N/A	North	Turning Right	Straight	2	Changed Lanes Improperly,Improper Turn	No Contributing Factors	Traffic Signal	Traffic Signal
5869451	Dekalb Co Police Department	8/8/2016	DEKALB	MORELAND AVE	I 285	0	0	Rear End	DarkLighted	Wet	North	North	Straight	Stopped	2	Following too Close	No Contributing Factors	Traffic Signal	Traffic Signal
5876940	Dekalb Co Police Department	8/15/2016	DEKALB	I-285 EAST BOUND EXIT RP		1	0	Not A Collision with Motor Vehicle	Daylight	Dry	East	N/A	Changing Lanes	N/A	1	Driver Lost Control,Mechanical Or Vehicle Failure	N/A	Traffic Signal	N/A
5879693	Dekalb Co Police Department	8/16/2016	DEKALB	MORELAND AVE	I 285	0	0	Sideswipe-Same Direction	Daylight	Dry	South	South	Making U-turn	Straight	2	Improper Turn	No Contributing Factors	Traffic Signal	Traffic Signal
5883868	Dekalb Co Police Department	8/19/2016	DEKALB	MORELAND AVE	I 285	2	0	Rear End	Daylight	Dry	North	North	Straight	Straight	2	Following too Close	No Contributing Factors	Lanes	Lanes
5885812	Dekalb Co Police Department	8/21/2016	DEKALB	3140 MORELAND AVE		0	0	Angle	DarkNot Lighted	Dry	N/A	N/A	N/A	Parked	2	No Contributing Factors	No Contributing Factors	N/A	No Control Present
5891641	Dekalb Co Police Department	8/25/2016	DEKALB	I 285 RP E		0	0	Rear End	Daylight	Dry	East	East	Straight	Stopped	2	Following too Close	No Contributing Factors	Lanes	Lanes
5896851	Dekalb Co Police Department	8/19/2016	DEKALB	OR I 285 RP	MORELAND AVE	0	0	Rear End	Daylight	Dry	East	East	Straight	Straight	2	Following too Close	No Contributing Factors	Traffic Signal	Traffic Signal
5897344	Gsp Post 00	8/30/2016	DEKALB	RAMP TO MORELAND AVE. FROM I		1	0	Rear End	Daylight	Dry	North	N/A	Straight	N/A	1	No Contributing Factors	N/A	No Control Present	N/A
5905697	Dekalb Co Police Department	9/5/2016	DEKALB	I 285 OR	MORELAND AVE	0	0	Rear End	DarkLighted	Dry	East	East	Straight	Straight	2	Following too Close	No Contributing Factors	Traffic Signal	Traffic Signal
5906640	Dekalb Co Police Department	9/6/2016	DEKALB	I 285 IR	MORELAND AVE	2	0	Rear End	Daylight	Dry	East	East	Straight	Straight	2	Following too Close	No Contributing Factors	Lanes	Lanes
5977646	Dekalb Co Police Department	10/29/2016	DEKALB	MORELAND AVE	UNKNOWN	0	0	Sideswipe-Same Direction	DarkNot Lighted	Dry	N/A	N/A	Changing Lanes	Straight	2	Changed Lanes Improperly	No Contributing Factors	Lanes	Lanes
5989468	Dekalb Co Police Department	11/7/2016	DEKALB	I 285 RP E		0	0	Rear End	Daylight	Dry	East	East	Straight	Stopped	2	Following too Close	No Contributing Factors	Lanes	Lanes
5991851	Dekalb Co Police Department	11/8/2016	DEKALB	I 285 IR	MORELAND AVE	0	0	Sideswipe-Same Direction	DarkLighted	Dry	South	South	Turning Right	Turning Right	2	Misjudged Clearance	No Contributing Factors	Lanes	Lanes
6006107	Dekalb Co Police Department	11/19/2016	DEKALB	MORELAND AVE RP	I 285	0	0	Rear End	Daylight	Dry	West	West	Straight	Straight	2	Following too Close	No Contributing Factors	Lanes	Lanes
6007388	Dekalb Co Police Department	11/20/2016	DEKALB	MORELAND AVE RP	I 285	0	0	Angle	DarkLighted	Dry	South	East	Straight	Turning Left	2	Failed to Yield	No Contributing Factors	Traffic Signal	Traffic Signal
6024252	Dekalb Co Police Department	12/4/2016	DEKALB	MORELAND AVE	I 285	0	0	Rear End	Daylight	Wet	North	North	Straight	Straight	2	Following too Close	No Contributing Factors	Lanes	Lanes
6034868	Dekalb Co Police Department	12/9/2016	DEKALB	MORELAND AVE	I 285	0	0	Rear End	Daylight	Dry	North	North	Straight	Turning Right	2	Following too Close	No Contributing Factors	Lanes	Lanes
6047415	Dekalb Co Police Department	12/19/2016	DEKALB	I 285 OR	MORELAND AVE	0	0	Rear End	Daylight	Dry	East	East	Straight	Stopped	2	Following too Close	No Contributing Factors	Traffic Signal	Traffic Signal
6103298	Dekalb Co Police Department	2/2/2017	DEKALB	MORELAND AVE	I 285	0	0	Rear End	Daylight	Wet	North	North	Straight	Straight	2	Following too Close	No Contributing Factors	Traffic Signal	Traffic Signal
6134886	Dekalb Co Police Department	3/2/2017	DEKALB	MORELAND AVE	I 285	0	0	Rear End	DarkLighted	Dry	East	East	Turning Right	Stopped	2	Following too Close	No Contributing Factors	Traffic Signal	Traffic Signal
6144410	Dekalb Co Police Department	3/9/2017	DEKALB	OR I 285 RP	MORELAND AVE	0	0	Rear End	Daylight	Dry	West	West	Straight	Stopped	2	Following too Close	No Contributing Factors	Traffic Signal	Lanes
6167275	Dekalb Co Police Department	3/27/2017	DEKALB	MORELAND AVE	I 675	0	0	Sideswipe-Same Direction	Daylight	Dry	North	North	Changing Lanes	Stopped	2	Failed to Yield	No Contributing Factors	Traffic Signal	Traffic Signal
6168775	Dekalb Co Police Department	3/28/2017	DEKALB	OR I 285 RP	MORELAND AVE	0	0	Rear End	Daylight	Dry	East	East	Stopped	Stopped	2	Other	No Contributing Factors	Traffic Signal	Traffic Signal
6243728	Dekalb Co Police Department	5/22/2017	DEKALB	MORELAND AVE	I 285	0	0	Not A Collision with Motor Vehicle	Daylight	Dry	North	N/A	Turning Left	N/A	1	Driver Lost Control	N/A	Traffic Signal	N/A
6248218	Dekalb Co Police Department	5/24/2017	DEKALB	MORELAND AVE RP	I 285	0	0	Rear End	Daylight	Dry	East	East	Turning Right	Stopped	2	Following too Close	No Contributing Factors	Traffic Signal	Traffic Signal
6305869	Dekalb Co Police Department	7/11/2017	DEKALB	MORELAND AVE	I 285	1	0	Angle	Daylight	Dry	South	N/A	Straight	Turning Left	2	Disregard Stop Sign/Signal	No Contributing Factors	Traffic Signal	Traffic Signal
6319038	Dekalb Co Police Department	7/21/2017	DEKALB	I 285	MORELAND AVE	1	0	Rear End	Daylight	Dry	East	East	Straight	Stopped	2	Following too Close	No Contributing Factors	Lanes	Lanes
6330312	Dekalb Co Police Department	7/30/2017	DEKALB	MORELAND AVE	I 285	0	0	Sideswipe-Same Direction	DarkNot Lighted	Dry	South	South	Turning Left	Turning Left	2	Other	No Contributing Factors	Traffic Signal	Traffic Signal
6334545	Dekalb Co Police Department	8/1/2017	DEKALB	I 285 OR	MORELAND AVE	0	0	Rear End	Daylight	Dry	N/A	South	N/A	Straight	2	Other	No Contributing Factors	Traffic Signal	Traffic Signal
6362530	Dekalb Co Police Department	8/21/2017	DEKALB	MORELAND AVE	I 285	0	0	Sideswipe-Same Direction	DarkNot Lighted	Dry	North	North	Changing Lanes	Straight	2	Changed Lanes Improperly	No Contributing Factors	Traffic Signal	Traffic Signal
6401249	Dekalb Co Police Department	9/22/2017	DEKALB	MORELAND AVE	I 285	0	0	Angle	DarkLighted	Dry	N/A	North	N/A	Turning Left	2	Disregard Other Traffic Contro	No Contributing Factors	Lanes	Lanes
6408689	Dekalb Co Police Department	9/28/2017	DEKALB	MORELAND AVE	I 285	0	0	Sideswipe-Same Direction	Daylight	Dry	North	North	Changing Lanes	Straight	2	Changed Lanes Improperly	No Contributing Factors	Traffic Signal	Traffic Signal
6414160	Dekalb Co Police Department	10/3/2017	DEKALB	I-285 EB EXIT RAMP	MORELAND	0	0	Rear End	Daylight	Dry	East	East	Straight	Stopped	2	Following too Close	No Contributing Factors	Lanes	Lanes
6425791	Dekalb Co Police Department	10/11/2017	DEKALB	I 285 OR	MORELAND AVE	0	0	Rear End	Daylight	Dry	East	East	Straight	Straight	2	Following too Close	No Contributing Factors	Lanes	Lanes
6429551	Dekalb Co Police Department	10/16/2017	DEKALB	MORELAND AVE SE	I- 285	0	0	Angle	Daylight	Wet	North	South	Turning Left	Straight	2	Disregard Other Traffic Contro	No Contributing Factors	Traffic Signal	Traffic Signal
6441162	Dekalb Co Police Department	10/25/2017	DEKALB	MORELAND AVE	I 285	0	0	Angle	DarkNot Lighted	Dry	South	South	Making U-turn	Straight	2	Improper Turn	No Contributing Factors	Lanes	Lanes
6446483	Dekalb Co Police Department	10/26/2017	DEKALB	I 285 OR	MORELAND AVE	0	0	Not A Collision with Motor Vehicle	DarkLighted	Dry	East	N/A	Straight	N/A	1	Reaction to Object or Animal	N/A	Lanes	N/A
6447157	Dekalb Co Police Department	10/27/2017	DEKALB	MORELAND AVE SE	I- 285	0	0	Rear End	Daylight	Dry	N/A	South	Straight	Stopped	2	No Contributing Factors	No Contributing Factors	Lanes	Lanes
6447481	Dekalb Co Police Department	10/27/2017	DEKALB	IR I 285 RP	MORELAND AVE	0	0	Sideswipe-Same Direction	Daylight	Dry	East	East	Changing Lanes	Straight	2	Changed Lanes Improperly	No Contributing Factors	Lanes	Lanes
6466613	Dekalb Co Police Department	11/8/2017	DEKALB	MORELAND AVE RP	I 285	0	0	Angle	Daylight	Wet	East	East	Changing Lanes	Straight	2	Changed Lanes Improperly	No Contributing Factors	Lanes	Traffic Signal
6471382	Dekalb Co Police Department	11/13/2017	DEKALB	I 285 E	MORELAND AVE	0	0	Sideswipe-Same Direction	Daylight	Dry	N/A	East	N/A	Stopped	2	Other	No Contributing Factors	Lanes	Lanes
6472564	Dekalb Co Police Department	11/13/2017	DEKALB	I- 285	MORELAND AVE SE	1	0	Angle	DarkNot Lighted	Dry	North	North	Turning Right	Straight	2	Improper Turn	No Contributing Factors	Lanes	Lanes
6476385	Dekalb Co Police Department	11/17/2017	DEKALB	MORELAND AVE	I 285	1	0	Angle	DarkLighted	Dry	North	East	N/A	Turning Left	2	Disregard Other Traffic Contro	No Contributing Factors	Traffic Signal	No Control Present
6478718	Dekalb Co Police Department	11/18/2017	DEKALB	OR I 285 RP	MORELAND AVE	0	0	Sideswipe-Same Direction	DarkNot Lighted	Dry	South	South	Turning Left	Turning Left	2	Driver Lost Control,Other	No Contributing Factors	Lanes	Lanes
6484479	Dekalb Co Police Department	11/23/2017	DEKALB	E EXIT RAMP I 285 RP	MORELAND AVE	2	0	Angle	Daylight	Dry	South	South	Changing Lanes	Straight	2	Changed Lanes Improperly	No Contributing Factors	Lanes	Lanes
6536682	Dekalb Co Police Department	1/3/2018	DEKALB	OR I 285 RP	MORELAND AVE	2	0	Rear End	DarkLighted	Dry	East	East	Straight	Stopped	2	Following too Close	Other	Lanes	Lanes
6546550	Dekalb Co Police Department	1/11/2018	DEKALB	MORELAND AVE	I 285	0	0	Rear End	DarkLighted	Wet	East	East	Straight	Stopped	2	Following too Close	No Contributing Factors	Lanes	Lanes
6553708	Dekalb Co Police Department	1/16/2018	DEKALB	MORELAND AVE	I 675	0	0	Angle	Daylight	Dry	West	West	Changing Lanes	Straight	2	Changed Lanes Improperly	No Contributing Factors	Lanes	Lanes
6565169	Dekalb Co Police Department	1/24/2018	DEKALB	I 285 E	MORELAND AVE	0	0	Rear End	Daylight	Dry	East	East	Straight	Straight	2	Following too Close	No Contributing Factors	Lanes	Lanes
6611749	Dekalb Co Police Department	2/26/2018	DEKALB	MORELAND AVE	I 285	0	0	Angle	DarkLighted	Dry	East	South	Turning Left	Turning Left	2	Disregard Stop Sign/Signal	No Contributing Factors	Traffic Signal	Traffic Signal
6614697	Dekalb Co Police Department	2/28/2018	DEKALB	I 285 RP E	MORELAND AVE	0	0	Rear End	DarkNot Lighted	Dry	East	East	Straight	Stopped	2	No Contributing Factors	No Contributing Factors	Lanes	Lanes
6630424	Dekalb Co Police Department	3/12/2018	DEKALB	OR I 285 RP	MORELAND AVE	0	0	Angle	Straight	Dry	East	East	Changing Lanes	Straight	2	No Signal/Improper Signal	No Contributing Factors	Lanes	Lanes
6631392	Dekalb Co Police Department	1/11/2018	DEKALB	I 285 IR	MORELAND AVE	0	0	Rear End	DarkLighted	Wet	East	East	Straight	Stopped	2	Following too Close	No Contributing Factors	No Control Present	Lanes
6640430	Dekalb Co Police Department	3/20/2018	DEKALB	MORELAND AVE RP	I 285	0	0	Angle	Daylight	Dry	East	East	Backing	Stopped	2	Improper Backing	No Contributing Factors	Lanes	Lanes
6672659	Dekalb Co Police Department	4/14/2018	DEKALB	I-285 EXIT RAMP	MORELAND AVE	0	0	Rear End	Daylight	Dry	East	East	Turning Right	Turning Right	2	Following too Close,Misjudged Clearance	No Contributing Factors	Lanes	Lanes
6725207	Dekalb Co Police Department	5/25/2018	DEKALB	MORELAND AVE	I 285	4	0	Sideswipe-Same Direction	Daylight	Dry	North	North	Changing Lanes	Straight	2	Changed Lanes Improperly	No Contributing Factors	Traffic Signal	Traffic Signal
6746189	Dekalb Co Police Department	6/13/2018	DEKALB	OR I 285 RP	MORELAND AVE	0	0	Sideswipe-Same Direction	Daylight	Wet	N/A	East	Passing	Stopped	2	Improper Turn	No Contributing Factors	Lanes	Lanes
6747220	Dekalb Co Police Department	6/9/2018	DEKALB	MORELAND AVE	I 285	3	0	Rear End	Daylight	Wet	North	North	N/A	Stopped	2	Following too Close	No Contributing Factors	Lanes	Lanes
6766549	Dekalb Co Police Department	6/24/2018	DEKALB	I 285 OR	MORELAND AVE	1	0	Rear End	Daylight	Dry	East	East	Straight	Straight	2	Following too Close	No Contributing Factors	Lanes	Lanes
6768541	Dekalb Co Police Department	6/26/2018	DEKALB	OR I 285 RP	MORELAND AVE	0	0	Rear End	Daylight	Dry	East	East	Straight	Stopped	2	Following too Close	No Contributing Factors	Lanes	Lanes
6771416	Dekalb Co Police Department	6/27/2018	DEKALB	I 285 OR	MORELAND AVE	0	0	Rear End	Daylight	Dry	East	East	Straight	Stopped	2	Following too Close	No Contributing Factors	Lanes	Lanes
6782421	Dekalb Co Police Department	7/5/2018	DEKALB	I 285 OR	MORELAND AVE	0	0	Sideswipe-Same											

7127433	Dekalb Co Police Department	3/17/2019	DEKALB	MORELAND AVE	285 EXPY	0	0	Rear End	DarkLighted	Dry	South	South	Straight	Straight	2	Following too Close	No Contributing Factors	No Control Present	No Control Present
7130749	Dekalb Co Police Department	3/19/2019	DEKALB	OR I 285 RP	MORELAND AVE	0	0	Sideswipe-Same Direction	DarkNot Lighted	Dry	East	East	Straight	Straight	2	Reaction to Object or Animal	No Contributing Factors	Lanes	Lanes
7141494	Dekalb Co Police Department	3/22/2019	DEKALB	I 285 IR	MORELAND AVE	1	0	Rear End	Daylight	Dry	East	East	Straight	Straight	2	Following too Close	Other	Lanes	Lanes
7144049	Dekalb Co Police Department	3/29/2019	DEKALB	UNKNOWN RP	I 285	0	0	Rear End	Daylight	Dry	East	N/A	Straight	N/A	2	Following too Close	No Contributing Factors	Traffic Signal	Traffic Signal
7150852	Dekalb Co Police Department	4/3/2019	DEKALB	MORELAND AVE	I 285	0	0	Angle	Daylight	Dry	North	East	Straight	Turning Left	2	Disregard Other Traffic Contro	No Contributing Factors	Lanes	Lanes
7179280	Dekalb Co Police Department	4/27/2019	DEKALB	MORELAND AVE	I 285	0	0	Rear End	DarkNot Lighted	Dry	South	South	Backing	Stopped	2	Improper Backing	No Contributing Factors	Lanes	Lanes
7210798	Dekalb Co Police Department	5/17/2019	DEKALB	MORELAND AVE	I 285	0	0	Angle	Daylight	Dry	North	South	Straight	Turning Left	2	Failed to Yield	No Contributing Factors	Lanes	Lanes
7232946	Dekalb Co Police Department	6/3/2019	DEKALB	IR I 285 RP	MORELAND AVE	0	0	Rear End	Daylight	Dry	East	East	Straight	Stopped	2	Following too Close	Other	Traffic Signal	Traffic Signal
7237343	Dekalb Co Police Department	6/6/2019	DEKALB	I-285 EB	MORELAND AVE	2	0	Rear End	Daylight	Dry	East	East	Straight	Straight	3	Following too Close	No Contributing Factors	Lanes	Lanes
7278915	Dekalb Co Police Department	7/10/2019	DEKALB	I-285 EAST BOUND EXIT	MORELAND AVENUE	0	0	Sideswipe-Same Direction	Daylight	Dry	East	East	Changing Lanes	Stopped	2	Changed Lanes Improperly	No Contributing Factors	Lanes	Lanes
7280523	Dekalb Co Police Department	7/11/2019	DEKALB	MORELAND AVE RP	285 RP	0	0	Angle	DarkLighted	Dry	South	East	Turning Right	Straight	2	Failed to Yield	No Contributing Factors	Traffic Signal	Traffic Signal
7294372	Dekalb Co Police Department	7/22/2019	DEKALB	OR I 285 RP	MORELAND AVE	0	0	Rear End	Daylight	Dry	East	None	Straight	Stopped	2	Following too Close	No Contributing Factors	Traffic Signal	Traffic Signal
7299997	Dekalb Co Police Department	7/20/2019	DEKALB	MORELAND AVE RP	I 285	1	0	Head On	DarkLighted	Wet	East	East	Straight	Straight	2	Following too Close	No Contributing Factors	Lanes	Lanes
7307703	Dekalb Co Police Department	8/4/2019	DEKALB	MORELAND AVE RP	I 285	3	0	Rear End	Daylight	Dry	West	West	Straight	Stopped	2	Following too Close	No Contributing Factors	No Control Present	No Control Present
7396548	Dekalb Co Police Department	10/18/2019	DEKALB	MORELAND AVE	I 285	0	0	Rear End	DarkNot Lighted	Dry	North	North	Straight	Stopped	2	Other	No Contributing Factors	Traffic Signal	Traffic Signal
7412762	Dekalb Co Police Department	10/31/2019	DEKALB	E EXIT I 285 RP	MORELAND AVE	0	0	Angle	DarkLighted	Wet	N/A	East	N/A	Turning Right	2	Other	No Contributing Factors	Traffic Signal	Yield Sign
7420169	Dekalb Co Police Department	11/4/2019	DEKALB	OR I 285 RP	MORELAND AVE	0	0	Rear End	DarkLighted	Dry	East	East	Straight	Straight	2	Following too Close	No Contributing Factors	Traffic Signal	Traffic Signal
7437767	Dekalb Co Police Department	11/16/2019	DEKALB	MORELAND AVE	I 285	0	0	Angle	DarkLighted	Dry	South	South	Changing Lanes	Turning Left	2	Changed Lanes Improperly,Driver Condition	No Contributing Factors	Traffic Signal	Traffic Signal
7486441	Dekalb Co Police Department	12/20/2019	DEKALB	675 ENTRY RAMP RP S	MORELAND AVE	0	0	Sideswipe-Same Direction	Daylight	Dry	East	East	Turning Left	Straight	2	Other	No Contributing Factors	Lanes	Lanes
7508792	Dekalb Co Police Department	1/8/2020	DEKALB	I 285 RP E	MORELAND AVE	0	0	Sideswipe-Same Direction	Daylight	Dry	East	East	Changing Lanes	Straight	2	Changed Lanes Improperly	No Contributing Factors	Lanes	Lanes
7521977	Dekalb Co Police Department	1/21/2020	DEKALB	MORELAND AVE RP	I 285	3	0	Angle	DarkLighted	Dry	East	South	Making U-turn	Straight	2	Improper Turn	No Contributing Factors	Traffic Signal	Traffic Signal
7541548	Dekalb Co Police Department	2/6/2020	DEKALB	285 RP E	MORELAND AVE	2	0	Angle	Daylight	Wet	South	South	Changing Lanes	Turning Right	2	Changed Lanes Improperly	No Contributing Factors	Lanes	Lanes
7559261	Dekalb Co Police Department	2/22/2020	DEKALB	MORELAND AVE	I 285	1	0	Not A Collision with Motor Vehicle	Daylight	Dry	South	N/A	Making U-turn	N/A	1	Other	N/A	Lanes	N/A
7569151	Dekalb Co Police Department	3/2/2020	DEKALB	MORELAND AVE	I 675	0	0	Angle	DarkLighted	Wet	N/A	North	N/A	Turning Left	2	Failed to Yield	No Contributing Factors	Lanes	Lanes
7572788	Dekalb Co Police Department	3/4/2020	DEKALB	MORELAND AVE RP	I 285	0	0	Sideswipe-Same Direction	DarkNot Lighted	Wet	East	East	Turning Right	Turning Left	2	Other	No Contributing Factors	Lanes	Lanes
7629820	Dekalb Co Police Department	5/5/2020	DEKALB	MORELAND AVE	I 285	0	0	Sideswipe-Same Direction	DarkLighted	Dry	N/A	South	N/A	Stopped	2	Improper Passing	No Contributing Factors	Lanes	Lanes
7703163	Dekalb Co Police Department	7/21/2020	DEKALB	I 285 OR	MORELAND AVE	0	0	Not A Collision with Motor Vehicle	DarkNot Lighted	Dry	East	N/A	Straight	N/A	1	Reckless Driving	N/A	Lanes	N/A
7707382	Dekalb Co Police Department	7/24/2020	DEKALB	MORELAND AVE	I 285	0	0	Sideswipe-Same Direction	Daylight	Dry	South	South	Changing Lanes	Stopped	3	Misjudged Clearance	No Contributing Factors	Lanes	Lanes
7707947	Dekalb Co Police Department	7/25/2020	DEKALB	OR I 285 RP	MORELAND AVE	2	0	Rear End	Daylight	Wet	North	North	Straight	Straight	2	Following too Close	No Contributing Factors	Traffic Signal	Traffic Signal
7711625	Dekalb Co Police Department	7/19/2020	DEKALB	MORELAND AVE	I 285	3	0	Angle	DarkLighted	Dry	East	South	Straight	Turning Left	2	Disregard Other Traffic Contro	No Contributing Factors	Lanes	Lanes
7747099	Dekalb Co Police Department	8/21/2020	DEKALB	OR I 285 RP	MORELAND AVE	0	0	Rear End	Daylight	Wet	East	East	Changing Lanes	Straight	2	Changed Lanes Improperly,Other	No Contributing Factors	Lanes	Lanes
7752179	Dekalb Co Police Department	8/26/2020	DEKALB	MORELAND AVE	I 285	1	0	Head On	DarkNot Lighted	Dry	East	North	Turning Left	Straight	2	Other	No Contributing Factors	Traffic Signal	Traffic Signal
7755245	Gsp Post 00	8/26/2020	DEKALB	MORELAND AVE	I-285 EB EXIT RAMP	1	0	Angle	DarkLighted	Dry	East	North	Straight	Straight	2	Disregard Stop Sign/Signal,Disregard Police - Traffic Con	No Contributing Factors	Traffic Signal	Traffic Signal
7785288	Dekalb Co Police Department	9/10/2020	DEKALB	MORELAND AVE	I 285	0	0	Rear End	Daylight	Dry	South	South	Straight	Stopped	2	Following too Close	No Contributing Factors	Traffic Signal	Traffic Signal
7786275	Dekalb Co Police Department	9/25/2020	DEKALB	285 EXIT RAMP RP W	MORELAND AVE	0	0	Rear End	Daylight	Dry	West	West	Turning Right	Turning Right	2	Following too Close	No Contributing Factors	Traffic Signal	Traffic Signal
7787267	Dekalb Co Police Department	9/26/2020	DEKALB	MORELAND AVE SE	I- 285	1	0	Angle	DarkNot Lighted	Dry	East	North	Turning Left	Straight	3	Failed to Yield	No Contributing Factors	Lanes	Traffic Signal
7798550	Dekalb Co Police Department	10/6/2020	DEKALB	MORELAND AVE	I 285	1	0	Angle	DarkLighted	Dry	N/A	East	N/A	Turning Left	2	Failed to Yield	No Contributing Factors	Traffic Signal	Traffic Signal
7803865	Dekalb Co Police Department	10/9/2020	DEKALB	I 285 E	MORELAND AVE	0	0	Rear End	Daylight	Dry	South	South	Straight	Stopped	2	Following too Close	No Contributing Factors	Traffic Signal	Traffic Signal
7845143	Dekalb Co Police Department	11/5/2020	DEKALB	MORELAND AVE	I 285	0	0	Angle	DarkLighted	Dry	East	North	Turning Left	Straight	2	Failed to Yield	No Contributing Factors	Traffic Signal	Traffic Signal
7859115	Dekalb Co Police Department	11/21/2020	DEKALB	MORELAND AVE	I 285	0	0	Sideswipe-Same Direction	DarkLighted	Dry	East	East	Turning Left	Turning Left	2	Improper Turn	No Contributing Factors	Lanes	Lanes
7864849	Dekalb Co Police Department	11/25/2020	DEKALB	MORELAND	I-285 EB	0	0	Angle	DarkNot Lighted	Wet	North	South	Straight	Turning Left	2	Disregard Stop Sign/Signal	No Contributing Factors	Lanes	Lanes
7875796	Dekalb Co Police Department	12/2/2020	DEKALB	MORELAND AVE	I 285	0	0	Rear End	Daylight	Dry	N/A	North	N/A	Straight	2	Following too Close	No Contributing Factors	Traffic Signal	Traffic Signal
7885075	Dekalb Co Police Department	12/12/2020	DEKALB	MORELAND AVE	I 285	0	0	Rear End	Daylight	Dry	South	South	Straight	Straight	2	Following too Close	No Contributing Factors	Lanes	Lanes
7899911	Dekalb Co Police Department	12/24/2020	DEKALB	MORELAND AVE	285 BRG	0	0	Rear End	Daylight	Wet	South	South	Straight	Straight	2	Following too Close	No Contributing Factors	Lanes	Lanes
7905845	Dekalb Co Police Department	12/30/2020	DEKALB	MORELAND AVE	I 285	0	0	Angle	Dusk	Dry	West	South	Backing	Straight	2	Improper Backing	No Contributing Factors	Traffic Signal	Lanes

APPENDIX G

CAPACITY ANALYSIS REPORTS - EXISTING CONDITIONS



AM PEAK HOUR

3: Moreland Ave (SR 42) & I-285 EB Ramps

Existing Conditions

AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	368	0	326	0	0	0	0	1145	192	427	1314	0
Future Volume (veh/h)	368	0	326	0	0	0	0	1145	192	427	1314	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	1707	1900	1722				0	1693	1322	1781	1678	0
Adj Flow Rate, veh/h	396	0	0				0	1231	0	459	1413	0
Peak Hour Factor	0.93	0.93	0.93				0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	13	0	12				0	14	39	8	15	0
Cap, veh/h	500	0					0	3213		520	2404	0
Arrive On Green	0.15	0.00	0.00				0.00	0.55	0.00	0.16	0.75	0.00
Sat Flow, veh/h	3252	0	1459				0	6059	1120	3291	3272	0
Grp Volume(v), veh/h	396	0	0				0	1231	0	459	1413	0
Grp Sat Flow(s),veh/h/ln	1626	0	1459				0	1456	1120	1646	1594	0
Q Serve(g_s), s	16.4	0.0	0.0				0.0	16.8	0.0	19.1	27.4	0.0
Cycle Q Clear(g_c), s	16.4	0.0	0.0				0.0	16.8	0.0	19.1	27.4	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	500	0					0	3213		520	2404	0
V/C Ratio(X)	0.79	0.00					0.00	0.38		0.88	0.59	0.00
Avail Cap(c_a), veh/h	832	0					0	3213		912	2404	0
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	0.00				0.00	1.00	0.00	0.37	0.37	0.00
Uniform Delay (d), s/veh	57.1	0.0	0.0				0.0	17.8	0.0	57.7	7.6	0.0
Incr Delay (d2), s/veh	5.9	0.0	0.0				0.0	0.3	0.0	0.8	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
%ile BackOfQ(95%),veh/ln	11.4	0.0	0.0				0.0	9.3	0.0	10.6	10.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.0	0.0	0.0				0.0	18.2	0.0	58.5	8.0	0.0
LnGrp LOS	E	A					A	B		E	A	A
Approach Vol, veh/h	396		A					1231	A	1872		
Approach Delay, s/veh	63.0							18.2		20.4		
Approach LOS	E							B		C		
Timer - Assigned Phs	2		4	5	6							
Phs Duration (G+Y+Rc), s	111.3		28.7	28.3	83.0							
Change Period (Y+Rc), s	* 5.7		* 7.2	* 6.2	* 5.7							
Max Green Setting (Gmax), s	* 91		* 36	* 39	* 46							
Max Q Clear Time (g_c+I1), s	29.4		18.4	21.1	18.8							
Green Ext Time (p_c), s	56.9		3.1	1.0	25.0							
Intersection Summary												
HCM 6th Ctrl Delay			24.4									
HCM 6th LOS			C									
Notes												
User approved volume balancing among the lanes for turning movement.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.												

6: Moreland Ave (SR 42) & I-285 WB Ramps



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↖	↖	↖	↖	↑↑↑			↑↑↑	↖
Traffic Volume (veh/h)	0	0	0	307	2	1440	350	1163	0	0	1434	349
Future Volume (veh/h)	0	0	0	307	2	1440	350	1163	0	0	1434	349
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				1737	1900	1856	1411	1811	0	0	1722	1678
Adj Flow Rate, veh/h				214	0	0	365	1211	0	0	1494	0
Peak Hour Factor				0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %				11	0	3	33	6	0	0	12	15
Cap, veh/h				251	0		433	2977	0	0	1663	
Arrive On Green				0.15	0.00	0.00	0.28	0.60	0.00	0.00	0.28	0.00
Sat Flow, veh/h				1654	0	3145	1344	5107	0	0	6165	1422
Grp Volume(v), veh/h				214	0	0	365	1211	0	0	1494	0
Grp Sat Flow(s),veh/h/ln				1654	0	1572	1344	1648	0	0	1481	1422
Q Serve(g_s), s				17.6	0.0	0.0	29.0	18.1	0.0	0.0	34.0	0.0
Cycle Q Clear(g_c), s				17.6	0.0	0.0	29.0	18.1	0.0	0.0	34.0	0.0
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				251	0		433	2977	0	0	1663	
V/C Ratio(X)				0.85	0.00		0.84	0.41	0.00	0.00	0.90	
Avail Cap(c_a), veh/h				506	0		433	2977	0	0	1663	
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	0.00	0.87	0.87	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				57.9	0.0	0.0	34.5	14.7	0.0	0.0	48.4	0.0
Incr Delay (d2), s/veh				15.5	0.0	0.0	15.9	0.4	0.0	0.0	8.1	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
%ile BackOfQ(95%),veh/ln				13.1	0.0	0.0	18.9	10.4	0.0	0.0	19.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				73.4	0.0	0.0	50.3	15.0	0.0	0.0	56.6	0.0
LnGrp LOS				E	A		D	B	A	A	E	
Approach Vol, veh/h					214	A		1576			1494	A
Approach Delay, s/veh					73.4			23.2			56.6	
Approach LOS					E			C			E	
Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	45.0	45.5				90.5		28.4				
Change Period (Y+Rc), s	6.3	* 6.2				* 6.2		7.2				
Max Green Setting (Gmax), s	39	* 39				* 84		42.8				
Max Q Clear Time (g_c+D), s	36.0					20.1		19.6				
Green Ext Time (p_c), s	0.5	2.8				52.7		1.6				

Intersection Summary

HCM 6th Ctrl Delay 41.7

HCM 6th LOS D

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

9: Moreland Ave (SR 42) & UPS DW/Bailey St

Existing Conditions

AM Peak Hour

Intersection												
Int Delay, s/veh	24.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕	↕	↕↕↕		↕	↕↕↕	
Traffic Vol, veh/h	5	3	23	59	0	205	36	2443	17	104	680	5
Future Vol, veh/h	5	3	23	59	0	205	36	2443	17	104	680	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	Yield	-	-	None	-	-	None
Storage Length	-	-	-	-	-	60	125	-	-	215	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	100	0	54	6	0	15	28	6	44	9	9	33
Mvmt Flow	6	3	26	66	0	228	40	2714	19	116	756	6
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2157	3804	381	3340	3798	1367	762	0	0	2733	0	0
Stage 1	991	991	-	2804	2804	-	-	-	-	-	-	-
Stage 2	1166	2813	-	536	994	-	-	-	-	-	-	-
Critical Hdwy	8.4	6.5	8.18	6.52	6.5	7.4	5.86	-	-	5.48	-	-
Critical Hdwy Stg 1	9.3	5.5	-	7.42	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	8.7	5.5	-	6.82	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	4.8	4	4.44	3.86	4	4.05	3.38	-	-	3.19	-	-
Pot Cap-1 Maneuver	15	4	428	~ 8	4	~ 105	431	-	-	~ 47	-	-
Stage 1	104	327	-	~ 9	40	-	-	-	-	-	-	-
Stage 2	88	40	-	444	326	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	0	428	-	0	~ 105	431	-	-	~ 47	-	-
Mov Cap-2 Maneuver	-	0	-	-	0	-	-	-	-	-	-	-
Stage 1	94	0	-	~ 8	36	-	-	-	-	-	-	-
Stage 2	-	36	-	-	0	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s					0.2		111.8					
HCM LOS	-		-									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1WBLn2	SBL	SBT	SBR					
Capacity (veh/h)	431	-	-	-	-	105	~ 47	-	-			
HCM Lane V/C Ratio	0.093	-	-	-	-	2.169	2.459	-	-			
HCM Control Delay (s)	14.2	-	-	-	-	622.8	848.5	-	-			
HCM Lane LOS	B	-	-	-	-	F	F	-	-			
HCM 95th %tile Q(veh)	0.3	-	-	-	-	19.7	12.1	-	-			
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined				*: All major volume in platoon				

12: Fayetteville Rd SE & Bailey St & Woodstock Rd

Existing Conditions

AM Peak Hour

Intersection												
Intersection Delay, s/veh	10.6											
Intersection LOS	B											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	123	1	15	250	14	14	7	71	2	3	0
Future Vol, veh/h	0	123	1	15	250	14	14	7	71	2	3	0
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles, %	0	10	0	14	16	14	38	17	8	0	0	0
Mvmt Flow	0	158	1	19	321	18	18	9	91	3	4	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Approach	EB		WB				NB			SB		
Opposing Approach	WB		EB				SB			NB		
Opposing Lanes	1		1				1			1		
Conflicting Approach Left	SB		NB				EB			WB		
Conflicting Lanes Left	1		1				1			1		
Conflicting Approach Right	NB		SB				WB			EB		
Conflicting Lanes Right	1		1				1			1		
HCM Control Delay	9.2		11.6				9.5			8.5		
HCM LOS	A		B				A			A		
Lane	NBLn1	EBLn1	WBLn1	SBLn1								
Vol Left, %	15%	0%	5%	40%								
Vol Thru, %	8%	99%	90%	60%								
Vol Right, %	77%	1%	5%	0%								
Sign Control	Stop	Stop	Stop	Stop								
Traffic Vol by Lane	92	124	279	5								
LT Vol	14	0	15	2								
Through Vol	7	123	250	3								
RT Vol	71	1	14	0								
Lane Flow Rate	118	159	358	6								
Geometry Grp	1	1	1	1								
Degree of Util (X)	0.175	0.212	0.461	0.01								
Departure Headway (Hd)	5.327	4.805	4.639	5.377								
Convergence, Y/N	Yes	Yes	Yes	Yes								
Cap	671	744	776	661								
Service Time	3.38	2.85	2.675	3.446								
HCM Lane V/C Ratio	0.176	0.214	0.461	0.009								
HCM Control Delay	9.5	9.2	11.6	8.5								
HCM Lane LOS	A	A	B	A								
HCM 95th-tile Q	0.6	0.8	2.5	0								

15: Fayetteville Rd SE & Constitution Rd SE

Existing Conditions

AM Peak Hour

Intersection						
Int Delay, s/veh	0.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	269	4	13	183	4	10
Future Vol, veh/h	269	4	13	183	4	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	11	0	8	10	0	44
Mvmt Flow	292	4	14	199	4	11
Major/Minor		Major1		Minor2		
Conflicting Flow All		0	0	114	213	
Stage 1		-	-	0	0	
Stage 2		-	-	114	213	
Critical Hdwy		-	-	6.4	6.94	
Critical Hdwy Stg 1		-	-	-	-	
Critical Hdwy Stg 2		-	-	5.4	5.94	
Follow-up Hdwy		-	-	3.5	4.396	
Pot Cap-1 Maneuver		-	-	887	617	
Stage 1		-	-	-	-	
Stage 2		-	-	916	654	
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver		-	-	887	0	
Mov Cap-2 Maneuver		-	-	887	0	
Stage 1		-	-	-	0	
Stage 2		-	-	916	0	
Approach		NB		SB		
HCM Control Delay, s		0		9.1		
HCM LOS				A		
Minor Lane/Major Mvmt	NBT	NBR	SBLn1			
Capacity (veh/h)	-	-	887			
HCM Lane V/C Ratio	-	-	0.017			
HCM Control Delay (s)	-	-	9.1			
HCM Lane LOS	-	-	A			
HCM 95th %tile Q(veh)	-	-	0.1			

17: Blackhall Studios DW 1 & Constitution Rd SE

Existing Conditions

AM Peak Hour

Intersection						
Int Delay, s/veh	1.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	152	35	59	270	3	32
Future Vol, veh/h	152	35	59	270	3	32
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Yield	-	None	-	Yield
Storage Length	-	110	-	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	9	0	5	2	0	0
Mvmt Flow	162	37	63	287	3	34
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	162	0	575	162
Stage 1	-	-	-	-	162	-
Stage 2	-	-	-	-	413	-
Critical Hdwy	-	-	4.15	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.245	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1399	-	483	888
Stage 1	-	-	-	-	872	-
Stage 2	-	-	-	-	672	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1399	-	457	888
Mov Cap-2 Maneuver	-	-	-	-	457	-
Stage 1	-	-	-	-	872	-
Stage 2	-	-	-	-	636	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		1.4		9.5	
HCM LOS					A	
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	457	888	-	-	1399	-
HCM Lane V/C Ratio	0.007	0.038	-	-	0.045	-
HCM Control Delay (s)	12.9	9.2	-	-	7.7	0
HCM Lane LOS	B	A	-	-	A	A
HCM 95th %tile Q(veh)	0	0.1	-	-	0.1	-

19: Blackhall Studios DW 2 & Constitution Rd SE

Intersection

Int Delay, s/veh 2.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑		↑	↑	
Traffic Vol, veh/h	144	40	81	311	18	63
Future Vol, veh/h	144	40	81	311	18	63
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	80	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	9	0	10	3	13	16
Mvmt Flow	153	43	86	331	19	67

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	196
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.2
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.29
Pot Cap-1 Maneuver	-	-	1330
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1330
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.6	11.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	671	-	-	1330	-
HCM Lane V/C Ratio	0.128	-	-	0.065	-
HCM Control Delay (s)	11.2	-	-	7.9	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.4	-	-	0.2	-

21: International Park Dr SE & Constitution Rd SE

Intersection												
Int Delay, s/veh	5.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	129	70	105	330	7	48	7	67	18	28	14
Future Vol, veh/h	8	129	70	105	330	7	48	7	67	18	28	14
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	130	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	14	4	16	7	1	25	18	17	68	10	0	0
Mvmt Flow	8	133	72	108	340	7	49	7	69	19	29	14

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	347	0	0	205	0	0	766	748	103	642	777	340
Stage 1	-	-	-	-	-	-	185	185	-	556	556	-
Stage 2	-	-	-	-	-	-	581	563	-	86	221	-
Critical Hdwy	4.31	-	-	4.205	-	-	7.57	6.755	7.92	7.45	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.77	5.755	-	6.25	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.37	5.755	-	6.65	5.5	-
Follow-up Hdwy	2.333	-	-	2.2665	-	-	3.671	4.1615	3.946	3.595	4	3.3
Pot Cap-1 Maneuver	1137	-	-	1333	-	-	282	318	769	359	330	707
Stage 1	-	-	-	-	-	-	760	715	-	497	516	-
Stage 2	-	-	-	-	-	-	465	478	-	892	724	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1137	-	-	1333	-	-	239	290	769	299	301	707
Mov Cap-2 Maneuver	-	-	-	-	-	-	239	290	-	299	301	-
Stage 1	-	-	-	-	-	-	755	710	-	494	474	-
Stage 2	-	-	-	-	-	-	393	439	-	798	719	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			1.9			18.5			17.6		
HCM LOS							C			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	391	1137	-	-	1333	-	-	347
HCM Lane V/C Ratio	0.322	0.007	-	-	0.081	-	-	0.178
HCM Control Delay (s)	18.5	8.2	-	-	7.9	-	-	17.6
HCM Lane LOS	C	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	1.4	0	-	-	0.3	-	-	0.6

24: International Park Dr SE & Blackhall Studios East/Continental Way

Existing Conditions

AM Peak Hour

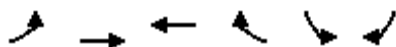
Intersection												
Int Delay, s/veh	5.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	61	8	1	6	26	10	3	8	2	17	3	83
Future Vol, veh/h	61	8	1	6	26	10	3	8	2	17	3	83
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	76	76	76	76	76	76	76	76	76	76	76	76
Heavy Vehicles, %	22	43	0	0	0	33	0	71	100	40	33	17
Mvmt Flow	80	11	1	8	34	13	4	11	3	22	4	109
Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	147	125	59	130	178	13	113	0	0	14	0	0
Stage 1	103	103	-	21	21	-	-	-	-	-	-	-
Stage 2	44	22	-	109	157	-	-	-	-	-	-	-
Critical Hdwy	7.32	6.93	6.2	7.1	6.5	6.53	4.1	-	-	4.5	-	-
Critical Hdwy Stg 1	6.32	5.93	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.32	5.93	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.698	4.387	3.3	3.5	4	3.597	2.2	-	-	2.56	-	-
Pot Cap-1 Maneuver	778	695	1012	847	719	984	1489	-	-	1389	-	-
Stage 1	856	737	-	1003	882	-	-	-	-	-	-	-
Stage 2	922	802	-	901	772	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	728	681	1012	823	705	984	1489	-	-	1389	-	-
Mov Cap-2 Maneuver	728	681	-	823	705	-	-	-	-	-	-	-
Stage 1	853	724	-	1000	879	-	-	-	-	-	-	-
Stage 2	872	800	-	872	759	-	-	-	-	-	-	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s	10.7		10			1.7			1.3			
HCM LOS	B		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1489	-	-	725	773	1389	-	-				
HCM Lane V/C Ratio	0.003	-	-	0.127	0.071	0.016	-	-				
HCM Control Delay (s)	7.4	0	-	10.7	10	7.6	0	-				
HCM Lane LOS	A	A	-	B	B	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0.4	0.2	0	-	-				

26: Bouldercrest Rd SE & Continental Way



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	24	72	108	1181	690	10
Future Volume (veh/h)	24	72	108	1181	690	10
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	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	1574	759	1129	1856	1752	1455
Adj Flow Rate, veh/h	26	0	115	1256	734	11
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	22	77	52	3	10	30
Cap, veh/h	56		437	3076	2643	40
Arrive On Green	0.04	0.00	0.05	1.00	1.00	1.00
Sat Flow, veh/h	1499	643	1076	3618	3444	50
Grp Volume(v), veh/h	26	0	115	1256	364	381
Grp Sat Flow(s),veh/h/ln	1499	643	1076	1763	1664	1743
Q Serve(g_s), s	2.2	0.0	2.5	0.0	0.0	0.0
Cycle Q Clear(g_c), s	2.2	0.0	2.5	0.0	0.0	0.0
Prop In Lane	1.00	1.00	1.00			0.03
Lane Grp Cap(c), veh/h	56		437	3076	1311	1372
V/C Ratio(X)	0.46		0.26	0.41	0.28	0.28
Avail Cap(c_a), veh/h	254		553	3076	1311	1372
HCM Platoon Ratio	1.00	1.00	1.33	1.33	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.49	0.49	0.90	0.90
Uniform Delay (d), s/veh	61.3	0.0	1.8	0.0	0.0	0.0
Incr Delay (d2), s/veh	8.2	0.0	0.3	0.2	0.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.8	0.0	0.7	0.2	0.3	0.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	69.5	0.0	2.2	0.2	0.5	0.5
LnGrp LOS	E		A	A	A	A
Approach Vol, veh/h	26	A		1371	745	
Approach Delay, s/veh	69.5			0.4	0.5	
Approach LOS	E			A	A	
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	11.1	108.1		10.9		119.1
Change Period (Y+Rc), s	6.0	* 5.7		6.0		* 5.7
Max Green Setting (Gmax), s	19.0	* 71		22.0		* 96
Max Q Clear Time (g_c+11), s	4.5	2.0		4.2		2.0
Green Ext Time (p_c), s	0.6	26.1		0.1		64.5
Intersection Summary						
HCM 6th Ctrl Delay			1.2			
HCM 6th LOS			A			
Notes						
User approved pedestrian interval to be less than phase max green.						
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.						
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.						

27: Constitution Rd SE & Bouldercrest Rd SE



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↰	↱↱	↰↱		↰	↱
Traffic Volume (veh/h)	2	212	441	384	207	1
Future Volume (veh/h)	2	212	441	384	207	1
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	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	1515	1870	1870	1826	1900
Adj Flow Rate, veh/h	2	228	474	0	223	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	26	2	2	5	0
Cap, veh/h	517	1695	1638		298	
Arrive On Green	0.00	0.59	0.46	0.00	0.17	0.00
Sat Flow, veh/h	1810	2954	3741	0	1739	1610
Grp Volume(v), veh/h	2	228	474	0	223	0
Grp Sat Flow(s), veh/h/ln	1810	1439	1777	0	1739	1610
Q Serve(g_s), s	0.0	1.6	3.8	0.0	5.5	0.0
Cycle Q Clear(g_c), s	0.0	1.6	3.8	0.0	5.5	0.0
Prop In Lane	1.00			0.00	1.00	1.00
Lane Grp Cap(c), veh/h	517	1695	1638		298	
V/C Ratio(X)	0.00	0.13	0.29		0.75	
Avail Cap(c_a), veh/h	1678	3475	4291		1117	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	5.9	4.2	7.6	0.0	17.9	0.0
Incr Delay (d2), s/veh	0.0	0.1	0.2	0.0	3.8	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%), veh/ln	0.0	0.4	1.7	0.0	3.9	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	5.9	4.2	7.8	0.0	21.7	0.0
LnGrp LOS	A	A	A		C	
Approach Vol, veh/h		230	474	A	223	A
Approach Delay, s/veh		4.3	7.8		21.7	
Approach LOS		A	A		C	
Timer - Assigned Phs		2			5	6
Phs Duration (G+Y+Rc), s		31.9			5.8	26.1
Change Period (Y+Rc), s		5.1			* 5.7	5.1
Max Green Setting (Gmax), s		54.9			* 29	54.9
Max Q Clear Time (g_c+I1), s		3.6			2.0	5.8
Green Ext Time (p_c), s		6.8			0.0	15.2

Intersection Summary

HCM 6th Ctrl Delay 10.3

HCM 6th LOS B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

29: Bouldercrest Rd SE & Clifton Church Rd



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↰↱	↱	↰↱	↱	↰	↰↱
Traffic Volume (veh/h)	394	135	690	515	113	306
Future Volume (veh/h)	394	135	690	515	113	306
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	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	1856	1900	1870	1856	1900	1663
Adj Flow Rate, veh/h	438	150	767	572	126	340
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	3	0	2	3	0	16
Cap, veh/h	587	276	2309	1022	320	2322
Arrive On Green	0.17	0.17	0.21	0.21	0.04	0.73
Sat Flow, veh/h	3428	1610	3647	1572	1810	3243
Grp Volume(v), veh/h	438	150	767	572	126	340
Grp Sat Flow(s), veh/h/ln	1714	1610	1777	1572	1810	1580
Q Serve(g_s), s	15.8	11.1	23.7	42.2	2.9	4.2
Cycle Q Clear(g_c), s	15.8	11.1	23.7	42.2	2.9	4.2
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	587	276	2309	1022	320	2322
V/C Ratio(X)	0.75	0.54	0.33	0.56	0.39	0.15
Avail Cap(c_a), veh/h	883	415	2309	1022	374	2322
HCM Platoon Ratio	1.00	1.00	0.33	0.33	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.92	0.92	0.96	0.96
Uniform Delay (d), s/veh	51.2	49.2	27.2	34.5	9.8	5.1
Incr Delay (d2), s/veh	4.0	3.5	0.4	2.0	1.6	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%), veh/ln	11.4	15.4	16.7	25.1	2.0	2.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	55.2	52.8	27.6	36.5	11.4	5.2
LnGrp LOS	E	D	C	D	B	A
Approach Vol, veh/h	588		1339			466
Approach Delay, s/veh	54.6		31.4			6.9
Approach LOS	D		C			A
Timer - Assigned Phs	2		4		5	6
Phs Duration (G+Y+Rc), s	101.2		28.8		11.1	90.2
Change Period (Y+Rc), s	* 5.7		6.5		6.0	* 5.7
Max Green Setting (Gmax), s	* 84		33.5		9.0	* 69
Max Q Clear Time (g_c+I1), s	6.2		17.8		4.9	44.2
Green Ext Time (p_c), s		11.5		4.5	0.2	19.8
Intersection Summary						
HCM 6th Ctrl Delay			32.3			
HCM 6th LOS			C			
Notes						
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.						

31: Bouldercrest Rd SE & I-285 WB Ramps



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕	↕	↕	↕			↕	↕
Traffic Volume (veh/h)	0	0	0	103	0	237	340	1052	0	0	309	453
Future Volume (veh/h)	0	0	0	103	0	237	340	1052	0	0	309	453
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				1752	1900	1752	1767	1811	0	0	1781	1767
Adj Flow Rate, veh/h				112	0	0	370	1143	0	0	336	492
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				10	0	10	9	6	0	0	8	9
Cap, veh/h				138	0		650	1503	0	0	2330	1030
Arrive On Green				0.08	0.00	0.00	0.20	1.00	0.00	0.00	1.00	1.00
Sat Flow, veh/h				1810	0	1485	1682	1811	0	0	3474	1497
Grp Volume(v), veh/h				112	0	0	370	1143	0	0	336	492
Grp Sat Flow(s),veh/h/ln				1810	0	1485	1682	1811	0	0	1692	1497
Q Serve(g_s), s				7.9	0.0	0.0	9.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s				7.9	0.0	0.0	9.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				138	0		650	1503	0	0	2330	1030
V/C Ratio(X)				0.81	0.00		0.57	0.76	0.00	0.00	0.14	0.48
Avail Cap(c_a), veh/h				199	0		865	1503	0	0	2330	1030
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.67	1.67
Upstream Filter(I)				1.00	0.00	0.00	0.51	0.51	0.00	0.00	0.95	0.95
Uniform Delay (d), s/veh				59.1	0.0	0.0	3.1	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh				20.2	0.0	0.0	0.5	1.9	0.0	0.0	0.1	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				7.8	0.0	0.0	3.1	1.4	0.0	0.0	0.1	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				79.3	0.0	0.0	3.6	1.9	0.0	0.0	0.1	1.5
LnGrp LOS				E	A		A	A	A	A	A	A
Approach Vol, veh/h					112	A		1513			828	
Approach Delay, s/veh					79.3			2.3			0.9	
Approach LOS					E			A			A	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	18.4	96.0		15.6		114.4						
Change Period (Y+Rc), s	5.7	6.5		5.7		6.5						
Max Green Setting (Gmax), s	29	68.5		14.3		103.5						
Max Q Clear Time (g_c+M1), s	2.0			9.9		2.0						
Green Ext Time (p_c), s	1.7	17.4		0.2		78.8						

Intersection Summary

HCM 6th Ctrl Delay	5.4
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

34: Bouldercrest Rd SE & I-285 EB Ramps



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗					↕		↖	↕	
Traffic Volume (veh/h)	433	0	206	0	0	0	0	959	196	113	299	0
Future Volume (veh/h)	433	0	206	0	0	0	0	959	196	113	299	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	1781	1900	1781				0	1811	1707	1707	1811	0
Adj Flow Rate, veh/h	471	0	0				0	1042	213	123	325	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	8	0	8				0	6	13	13	6	0
Cap, veh/h	513	0					0	1495	305	239	1127	0
Arrive On Green	0.28	0.00	0.00				0.00	0.53	0.53	0.10	1.00	0.00
Sat Flow, veh/h	1810	0	1510				0	2937	580	1626	1811	0
Grp Volume(v), veh/h	471	0	0				0	629	626	123	325	0
Grp Sat Flow(s),veh/h/ln	1810	0	1510				0	1721	1707	1626	1811	0
Q Serve(g_s), s	32.8	0.0	0.0				0.0	35.5	35.8	4.5	0.0	0.0
Cycle Q Clear(g_c), s	32.8	0.0	0.0				0.0	35.5	35.8	4.5	0.0	0.0
Prop In Lane	1.00		1.00				0.00		0.34	1.00		0.00
Lane Grp Cap(c), veh/h	513	0					0	904	896	239	1127	0
V/C Ratio(X)	0.92	0.00					0.00	0.70	0.70	0.51	0.29	0.00
Avail Cap(c_a), veh/h	547	0					0	904	896	331	1127	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	0.00				0.00	1.00	1.00	0.99	0.99	0.00
Uniform Delay (d), s/veh	45.1	0.0	0.0				0.0	23.1	23.1	18.4	0.0	0.0
Incr Delay (d2), s/veh	23.8	0.0	0.0				0.0	4.4	4.5	2.0	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
%ile BackOfQ(95%),veh/ln	24.6	0.0	0.0				0.0	21.4	21.4	2.9	0.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.8	0.0	0.0				0.0	27.5	27.7	20.5	0.6	0.0
LnGrp LOS	E	A					A	C	C	C	A	A
Approach Vol, veh/h	471		A				1255				448	
Approach Delay, s/veh	68.8						27.6				6.1	
Approach LOS	E						C				A	
Timer - Assigned Phs	2				5		6				8	
Phs Duration (G+Y+Rc), s	87.4				12.6		74.8				42.6	
Change Period (Y+Rc), s	6.5				6.0		6.5				5.7	
Max Green Setting (Gmax), s	78.5				14.0		58.5				39.3	
Max Q Clear Time (g_c+11), s	2.0				6.5		37.8				34.8	
Green Ext Time (p_c), s	9.6				0.2		18.5				2.1	
Intersection Summary												
HCM 6th Ctrl Delay			32.1									
HCM 6th LOS			C									
Notes												

PM PEAK HOUR

3: Moreland Ave (SR 42) & I-285 EB Ramps

Existing Conditions

PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	351	4	281	0	0	0	0	608	222	1314	689	0
Future Volume (veh/h)	351	4	281	0	0	0	0	608	222	1314	689	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	1752	788	1544				0	1500	1366	1811	1618	0
Adj Flow Rate, veh/h	372	0	0				0	640	0	1383	725	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	10	75	24				0	27	36	6	19	0
Cap, veh/h	466	0					0	1520		1361	2315	0
Arrive On Green	0.14	0.00	0.00				0.00	0.29	0.00	0.41	0.75	0.00
Sat Flow, veh/h	3337	0	1309				0	5369	1158	3346	3156	0
Grp Volume(v), veh/h	372	0	0				0	640	0	1383	725	0
Grp Sat Flow(s),veh/h/ln	1668	0	1309				0	1290	1158	1673	1537	0
Q Serve(g_s), s	13.0	0.0	0.0				0.0	12.0	0.0	48.8	9.1	0.0
Cycle Q Clear(g_c), s	13.0	0.0	0.0				0.0	12.0	0.0	48.8	9.1	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	466	0					0	1520		1361	2315	0
V/C Ratio(X)	0.80	0.00					0.00	0.42		1.02	0.31	0.00
Avail Cap(c_a), veh/h	634	0					0	1520		1361	2315	0
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	0.00				0.00	1.00	0.00	0.52	0.52	0.00
Uniform Delay (d), s/veh	50.0	0.0	0.0				0.0	34.1	0.0	35.6	4.8	0.0
Incr Delay (d2), s/veh	7.9	0.0	0.0				0.0	0.9	0.0	21.8	0.2	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	9.8	0.0	0.0				0.0	6.7	0.0	28.7	4.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.9	0.0	0.0				0.0	34.9	0.0	57.4	5.0	0.0
LnGrp LOS	E	A					A	C		F	A	A
Approach Vol, veh/h		372	A					640	A		2108	
Approach Delay, s/veh		57.9						34.9			39.4	
Approach LOS		E						C			D	
Timer - Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		96.1		23.9	55.0	41.1						
Change Period (Y+Rc), s		* 5.7		* 7.2	* 6.2	* 5.7						
Max Green Setting (Gmax), s		* 84		* 23	* 49	* 29						
Max Q Clear Time (g_c+I1), s		11.1		15.0	50.8	14.0						
Green Ext Time (p_c), s		35.4		1.8	0.0	10.7						
Intersection Summary												
HCM 6th Ctrl Delay			40.7									
HCM 6th LOS			D									
Notes												
User approved volume balancing among the lanes for turning movement.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.												

6: Moreland Ave (SR 42) & I-285 WB Ramps



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↖	↖	↖	↖	↖	↖	↖	↖	↖
Traffic Volume (veh/h)	0	0	0	228	4	390	322	637	0	0	1775	463
Future Volume (veh/h)	0	0	0	228	4	390	322	637	0	0	1775	463
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		No		No
Adj Sat Flow, veh/h/ln				1411	1530	1678	1455	1678	0	0	1811	1781
Adj Flow Rate, veh/h				167	0	0	350	692	0	0	1929	0
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				33	25	15	30	15	0	0	6	8
Cap, veh/h				192	0		418	3218	0	0	2560	
Arrive On Green				0.14	0.00	0.00	0.24	0.70	0.00	0.00	0.41	0.00
Sat Flow, veh/h				1344	0	2844	1386	4731	0	0	6484	1510
Grp Volume(v), veh/h				167	0	0	350	692	0	0	1929	0
Grp Sat Flow(s),veh/h/ln				1344	0	1422	1386	1527	0	0	1558	1510
Q Serve(g_s), s				14.6	0.0	0.0	20.8	6.4	0.0	0.0	31.7	0.0
Cycle Q Clear(g_c), s				14.6	0.0	0.0	20.8	6.4	0.0	0.0	31.7	0.0
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				192	0		418	3218	0	0	2560	
V/C Ratio(X)				0.87	0.00		0.84	0.22	0.00	0.00	0.75	
Avail Cap(c_a), veh/h				255	0		418	3218	0	0	2560	
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	0.00	0.81	0.81	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				50.4	0.0	0.0	29.6	6.3	0.0	0.0	30.2	0.0
Incr Delay (d2), s/veh				27.1	0.0	0.0	14.9	0.1	0.0	0.0	2.1	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
%ile BackOfQ(95%),veh/ln				10.4	0.0	0.0	15.8	3.2	0.0	0.0	17.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				77.5	0.0	0.0	44.5	6.4	0.0	0.0	32.3	0.0
LnGrp LOS				E	A		D	A	A	A	C	
Approach Vol, veh/h					167	A		1042			1929	A
Approach Delay, s/veh					77.5			19.2			32.3	
Approach LOS					E			B			C	
Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	35.0	55.5				90.5		24.3				
Change Period (Y+Rc), s	6.3	* 6.2				* 6.2		7.2				
Max Green Setting (Gmax), s	29	* 49				* 84		22.8				
Max Q Clear Time (g_c+2.0), s	20.8	33.7				8.4		16.6				
Green Ext Time (p_c), s	0.4	15.0				32.9		0.5				

Intersection Summary

HCM 6th Ctrl Delay	30.3
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

9: Moreland Ave (SR 42) & UPS DW/Bailey St

Existing Conditions

PM Peak Hour

Intersection												
Int Delay, s/veh	1.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕	↕	↕↕↕		↕	↕↕↕	
Traffic Vol, veh/h	6	3	14	64	2	146	23	863	50	177	1675	6
Future Vol, veh/h	6	3	14	64	2	146	23	863	50	177	1675	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	Yield	-	-	None	-	-	None
Storage Length	-	-	-	-	-	60	125	-	-	215	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	17	100	14	4	100	7	40	6	29	5	5	60
Mvmt Flow	6	3	15	67	2	152	24	899	52	184	1745	6
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2525	3115	876	2041	3092	476	1751	0	0	951	0	0
Stage 1	2116	2116	-	973	973	-	-	-	-	-	-	-
Stage 2	409	999	-	1068	2119	-	-	-	-	-	-	-
Critical Hdwy	6.74	8.5	7.38	6.48	8.5	7.24	6.1	-	-	5.4	-	-
Critical Hdwy Stg 1	7.64	7.5	-	7.38	7.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	7.04	7.5	-	6.78	7.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.97	5	4.04	3.84	5	3.97	3.5	-	-	3.15	-	-
Pot Cap-1 Maneuver	24	~ 2	232	~ 58	~ 2	447	110	-	-	404	-	-
Stage 1	26	27	-	205	173	-	-	-	-	-	-	-
Stage 2	506	166	-	210	27	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	~ 1	232	-	~ 1	447	110	-	-	404	-	-
Mov Cap-2 Maneuver	-	~ 1	-	-	~ 1	-	-	-	-	-	-	-
Stage 1	20	15	-	160	135	-	-	-	-	-	-	-
Stage 2	257	130	-	85	15	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s					1.1		2					
HCM LOS	-		-									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1WBLn2	SBL	SBT	SBR					
Capacity (veh/h)	110	-	-	-	-	447	404	-	-			
HCM Lane V/C Ratio	0.218	-	-	-	-	0.34	0.456	-	-			
HCM Control Delay (s)	46.6	-	-	-	-	17.2	21.2	-	-			
HCM Lane LOS	E	-	-	-	-	C	C	-	-			
HCM 95th %tile Q(veh)	0.8	-	-	-	-	1.5	2.3	-	-			
Notes												
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon												

12: Fayetteville Rd SE & Bailey St & Woodstock Rd

Existing Conditions

PM Peak Hour

Intersection												
Intersection Delay, s/veh	9.8											
Intersection LOS	A											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	217	13	10	184	12	26	11	119	13	3	2
Future Vol, veh/h	0	217	13	10	184	12	26	11	119	13	3	2
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
Heavy Vehicles, %	0	8	0	13	7	0	4	10	25	0	0	0
Mvmt Flow	0	238	14	11	202	13	29	12	131	14	3	2
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Approach	EB		WB		NB		SB					
Opposing Approach	WB		EB		SB		NB					
Opposing Lanes	1		1		1		1					
Conflicting Approach Left	SB		NB		EB		WB					
Conflicting Lanes Left	1		1		1		1					
Conflicting Approach Right	NB		SB		WB		EB					
Conflicting Lanes Right	1		1		1		1					
HCM Control Delay	10.1		10		9.1		8.6					
HCM LOS	B		A		A		A					
Lane	NBLn1	EBLn1	WBLn1	SBLn1								
Vol Left, %	17%	0%	5%	72%								
Vol Thru, %	7%	94%	89%	17%								
Vol Right, %	76%	6%	6%	11%								
Sign Control	Stop	Stop	Stop	Stop								
Traffic Vol by Lane	156	230	206	18								
LT Vol	26	0	10	13								
Through Vol	11	217	184	3								
RT Vol	119	13	12	2								
Lane Flow Rate	171	253	226	20								
Geometry Grp	1	1	1	1								
Degree of Util (X)	0.224	0.332	0.305	0.029								
Departure Headway (Hd)	4.7	4.733	4.852	5.354								
Convergence, Y/N	Yes	Yes	Yes	Yes								
Cap	759	756	738	663								
Service Time	2.753	2.784	2.904	3.428								
HCM Lane V/C Ratio	0.225	0.335	0.306	0.03								
HCM Control Delay	9.1	10.1	10	8.6								
HCM Lane LOS	A	B	A	A								
HCM 95th-tile Q	0.9	1.5	1.3	0.1								

15: Fayetteville Rd SE & Constitution Rd SE

Existing Conditions

PM Peak Hour

Intersection						
Int Delay, s/veh	0.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	192	4	15	334	8	14
Future Vol, veh/h	192	4	15	334	8	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	5	0	7	11	0	8
Mvmt Flow	226	5	18	393	9	16
Major/Minor	Major1		Minor2			
Conflicting Flow All			0	0	215	411
Stage 1			-	-	0	0
Stage 2			-	-	215	411
Critical Hdwy			-	-	6.4	6.58
Critical Hdwy Stg 1			-	-	-	-
Critical Hdwy Stg 2			-	-	5.4	5.58
Follow-up Hdwy			-	-	3.5	4.072
Pot Cap-1 Maneuver			-	-	778	522
Stage 1			-	-	-	-
Stage 2			-	-	826	585
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver			-	-	778	0
Mov Cap-2 Maneuver			-	-	778	0
Stage 1			-	-	-	0
Stage 2			-	-	826	0
Approach	NB		SB			
HCM Control Delay, s			0		9.8	
HCM LOS					A	
Minor Lane/Major Mvmt	NBT	NBR	SBLn1			
Capacity (veh/h)	-	-	778			
HCM Lane V/C Ratio	-	-	0.033			
HCM Control Delay (s)	-	-	9.8			
HCM Lane LOS	-	-	A			
HCM 95th %tile Q(veh)	-	-	0.1			

17: Blackhall Studios DW 1 & Constitution Rd SE

Intersection

Int Delay, s/veh 1.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑		↑	↑	↑
Traffic Vol, veh/h	333	9	31	176	20	19
Future Vol, veh/h	333	9	31	176	20	19
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Yield	-	None	-	Yield
Storage Length	-	110	-	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	6	13	0	10	0	6
Mvmt Flow	383	10	36	202	23	22

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	383
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.1
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.2
Pot Cap-1 Maneuver	-	-	1187
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1187
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.2	12.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	418	656	-	-	1187	-
HCM Lane V/C Ratio	0.055	0.033	-	-	0.03	-
HCM Control Delay (s)	14.1	10.7	-	-	8.1	0
HCM Lane LOS	B	B	-	-	A	A
HCM 95th %tile Q(veh)	0.2	0.1	-	-	0.1	-

19: Blackhall Studios DW 2 & Constitution Rd SE

Intersection						
Int Delay, s/veh	2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑		↑	↑	
Traffic Vol, veh/h	338	14	28	193	14	70
Future Vol, veh/h	338	14	28	193	14	70
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	80	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	6	15	5	9	0	5
Mvmt Flow	402	17	33	230	17	83
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	419	0	698	402
Stage 1	-	-	-	-	402	-
Stage 2	-	-	-	-	296	-
Critical Hdwy	-	-	4.15	-	6.4	6.25
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.245	-	3.5	3.345
Pot Cap-1 Maneuver	-	-	1124	-	410	642
Stage 1	-	-	-	-	680	-
Stage 2	-	-	-	-	759	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1124	-	396	642
Mov Cap-2 Maneuver	-	-	-	-	396	-
Stage 1	-	-	-	-	680	-
Stage 2	-	-	-	-	733	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		1.1		12.5	
HCM LOS					B	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	582	-	-	1124	-	
HCM Lane V/C Ratio	0.172	-	-	0.03	-	
HCM Control Delay (s)	12.5	-	-	8.3	0	
HCM Lane LOS	B	-	-	A	A	
HCM 95th %tile Q(veh)	0.6	-	-	0.1	-	

21: International Park Dr SE & Constitution Rd SE

Existing Conditions

PM Peak Hour

Intersection												
Int Delay, s/veh	5.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	29	338	41	52	168	13	41	24	83	34	14	12
Future Vol, veh/h	29	338	41	52	168	13	41	24	83	34	14	12
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	130	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	1	32	67	5	0	16	0	19	4	8	9
Mvmt Flow	32	371	45	57	185	14	45	26	91	37	15	13
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	199	0	0	416	0	0	778	771	208	562	779	185
Stage 1	-	-	-	-	-	-	458	458	-	299	299	-
Stage 2	-	-	-	-	-	-	320	313	-	263	480	-
Critical Hdwy	4.1	-	-	5.105	-	-	7.54	6.5	7.185	7.36	6.62	6.335
Critical Hdwy Stg 1	-	-	-	-	-	-	6.74	5.5	-	6.16	5.62	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.34	5.5	-	6.56	5.62	-
Follow-up Hdwy	2.2	-	-	2.8365	-	-	3.652	4	3.4805	3.538	4.076	3.3855
Pot Cap-1 Maneuver	1385	-	-	825	-	-	279	333	754	420	317	837
Stage 1	-	-	-	-	-	-	523	570	-	704	653	-
Stage 2	-	-	-	-	-	-	657	661	-	715	541	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1385	-	-	825	-	-	245	303	754	321	288	837
Mov Cap-2 Maneuver	-	-	-	-	-	-	245	303	-	321	288	-
Stage 1	-	-	-	-	-	-	511	557	-	688	608	-
Stage 2	-	-	-	-	-	-	587	615	-	585	529	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.5			2.2			19.2			17.4		
HCM LOS							C			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	415	1385	-	-	825	-	-	355				
HCM Lane V/C Ratio	0.392	0.023	-	-	0.069	-	-	0.186				
HCM Control Delay (s)	19.2	7.7	-	-	9.7	-	-	17.4				
HCM Lane LOS	C	A	-	-	A	-	-	C				
HCM 95th %tile Q(veh)	1.8	0.1	-	-	0.2	-	-	0.7				

24: International Park Dr SE & Blackhall Studios East/Continental Way

Existing Conditions

PM Peak Hour

Intersection												
Int Delay, s/veh	6.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	39	26	0	3	6	21	0	6	4	20	15	20
Future Vol, veh/h	39	26	0	3	6	21	0	6	4	20	15	20
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	6	8	0	67	20	53	0	40	25	56	50	17
Mvmt Flow	45	30	0	3	7	24	0	7	5	23	17	23
Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	100	87	29	100	96	10	40	0	0	12	0	0
Stage 1	75	75	-	10	10	-	-	-	-	-	-	-
Stage 2	25	12	-	90	86	-	-	-	-	-	-	-
Critical Hdwy	7.16	6.58	6.2	7.77	6.7	6.73	4.1	-	-	4.66	-	-
Critical Hdwy Stg 1	6.16	5.58	-	6.77	5.7	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.16	5.58	-	6.77	5.7	-	-	-	-	-	-	-
Follow-up Hdwy	3.554	4.072	3.3	4.103	4.18	3.777	2.2	-	-	2.704	-	-
Pot Cap-1 Maneuver	872	792	1052	748	761	940	1583	-	-	1317	-	-
Stage 1	924	821	-	866	853	-	-	-	-	-	-	-
Stage 2	983	874	-	779	790	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	832	778	1052	716	747	940	1583	-	-	1317	-	-
Mov Cap-2 Maneuver	832	778	-	716	747	-	-	-	-	-	-	-
Stage 1	924	806	-	866	853	-	-	-	-	-	-	-
Stage 2	950	874	-	736	776	-	-	-	-	-	-	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s	9.9		9.3			0			2.8			
HCM LOS	A		A									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1583	-	-	810	868	1317	-	-				
HCM Lane V/C Ratio	-	-	-	0.093	0.04	0.018	-	-				
HCM Control Delay (s)	0	-	-	9.9	9.3	7.8	0	-				
HCM Lane LOS	A	-	-	A	A	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0.3	0.1	0.1	-	-				

26: Bouldercrest Rd SE & Continental Way



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	25	107	79	1009	1070	17
Future Volume (veh/h)	25	107	79	1009	1070	17
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	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	1722	1026	700	1826	1856	1544
Adj Flow Rate, veh/h	26	0	81	1030	1092	17
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	12	59	81	5	3	24
Cap, veh/h	61		232	3027	2793	43
Arrive On Green	0.04	0.00	0.08	1.00	1.00	1.00
Sat Flow, veh/h	1640	869	666	3561	3646	55
Grp Volume(v), veh/h	26	0	81	1030	542	567
Grp Sat Flow(s), veh/h/ln	1640	869	666	1735	1763	1846
Q Serve(g_s), s	2.0	0.0	3.2	0.0	0.0	0.0
Cycle Q Clear(g_c), s	2.0	0.0	3.2	0.0	0.0	0.0
Prop In Lane	1.00	1.00	1.00			0.03
Lane Grp Cap(c), veh/h	61		232	3027	1386	1451
V/C Ratio(X)	0.42		0.35	0.34	0.39	0.39
Avail Cap(c_a), veh/h	303		302	3027	1386	1451
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.33	1.33
Upstream Filter(I)	1.00	0.00	0.66	0.66	0.80	0.80
Uniform Delay (d), s/veh	61.2	0.0	1.8	0.0	0.0	0.0
Incr Delay (d2), s/veh	6.5	0.0	1.3	0.2	0.7	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.7	0.0	0.6	0.2	0.5	0.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	67.6	0.0	3.1	0.2	0.7	0.6
LnGrp LOS	E		A	A	A	A
Approach Vol, veh/h	26	A		1111	1109	
Approach Delay, s/veh	67.6			0.4	0.7	
Approach LOS	E			A	A	
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	11.2	107.9		10.9		119.1
Change Period (Y+Rc), s	6.0	* 5.7		6.0		* 5.7
Max Green Setting (Gmax), s	19.0	* 69		24.0		* 94
Max Q Clear Time (g_c+I1), s	5.2	2.0		4.0		2.0
Green Ext Time (p_c), s	0.4	43.9		0.1		48.7

Intersection Summary

HCM 6th Ctrl Delay	1.3
HCM 6th LOS	A

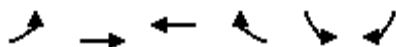
Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

27: Constitution Rd SE & Bouldercrest Rd SE



Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations							
Traffic Volume (veh/h)	6	449	232	263	249	1	
Future Volume (veh/h)	6	449	232	263	249	1	
Initial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00	
Parking Bus, Adj	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	1826	1618	1841	1841	1900	
Adj Flow Rate, veh/h	7	493	255	0	274	0	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	
Percent Heavy Veh, %	0	5	19	4	4	0	
Cap, veh/h	555	1813	1146		366		
Arrive On Green	0.01	0.52	0.37	0.00	0.21	0.00	
Sat Flow, veh/h	1810	3561	3237	0	1753	1610	
Grp Volume(v), veh/h	7	493	255	0	274	0	
Grp Sat Flow(s),veh/h/ln	1810	1735	1537	0	1753	1610	
Q Serve(g_s), s	0.1	3.2	2.3	0.0	5.9	0.0	
Cycle Q Clear(g_c), s	0.1	3.2	2.3	0.0	5.9	0.0	
Prop In Lane	1.00			0.00	1.00	1.00	
Lane Grp Cap(c), veh/h	555	1813	1146		366		
V/C Ratio(X)	0.01	0.27	0.22		0.75		
Avail Cap(c_a), veh/h	1845	4694	4161		1262		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	0.00	
Uniform Delay (d), s/veh	6.8	5.4	8.7	0.0	15.1	0.0	
Incr Delay (d2), s/veh	0.0	0.2	0.2	0.0	3.1	0.0	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(95%),veh/ln	0.0	1.0	0.9	0.0	4.0	0.0	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	6.8	5.6	8.9	0.0	18.1	0.0	
LnGrp LOS	A	A	A		B		
Approach Vol, veh/h		500	255	A	274	A	
Approach Delay, s/veh		5.6	8.9		18.1		
Approach LOS		A	A		B		
Timer - Assigned Phs		2			5	6	8
Phs Duration (G+Y+Rc), s		26.3			6.1	20.2	14.3
Change Period (Y+Rc), s		5.1			* 5.7	5.1	5.8
Max Green Setting (Gmax), s		54.9			* 29	54.9	29.2
Max Q Clear Time (g_c+I1), s		5.2			2.1	4.3	7.9
Green Ext Time (p_c), s		16.0			0.0	7.7	0.9

Intersection Summary

HCM 6th Ctrl Delay	9.7
HCM 6th LOS	A

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

29: Bouldercrest Rd SE & Clifton Church Rd



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↖↗	↖	↕	↖	↖	↕
Traffic Volume (veh/h)	595	134	361	673	206	492
Future Volume (veh/h)	595	134	361	673	206	492
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	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	1870	1722	1870	1900	1841
Adj Flow Rate, veh/h	633	143	384	716	219	523
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	1	2	12	2	0	4
Cap, veh/h	721	328	1934	937	424	2446
Arrive On Green	0.21	0.21	0.20	0.20	0.06	0.70
Sat Flow, veh/h	3483	1585	3358	1585	1810	3589
Grp Volume(v), veh/h	633	143	384	716	219	523
Grp Sat Flow(s), veh/h/ln	1742	1585	1636	1585	1810	1749
Q Serve(g_s), s	22.9	10.2	12.8	55.6	5.9	6.9
Cycle Q Clear(g_c), s	22.9	10.2	12.8	55.6	5.9	6.9
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	721	328	1934	937	424	2446
V/C Ratio(X)	0.88	0.44	0.20	0.76	0.52	0.21
Avail Cap(c_a), veh/h	764	347	1934	937	437	2446
HCM Platoon Ratio	1.00	1.00	0.33	0.33	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.94	0.94	0.92	0.92
Uniform Delay (d), s/veh	50.0	44.9	26.5	43.8	9.6	6.9
Incr Delay (d2), s/veh	12.1	1.9	0.2	5.6	1.9	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%), veh/ln	16.6	14.5	9.4	33.0	4.2	4.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	62.0	46.9	26.8	49.3	11.5	7.1
LnGrp LOS	E	D	C	D	B	A
Approach Vol, veh/h	776		1100			742
Approach Delay, s/veh	59.3		41.4			8.4
Approach LOS	E		D			A
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		96.6		33.4	14.1	82.5
Change Period (Y+Rc), s		* 5.7		6.5	6.0	* 5.7
Max Green Setting (Gmax), s		* 89		28.5	9.0	* 74
Max Q Clear Time (g_c+I1), s		8.9		24.9	7.9	57.6
Green Ext Time (p_c), s		19.7		2.0	0.1	11.6
Intersection Summary						
HCM 6th Ctrl Delay			37.4			
HCM 6th LOS			D			
Notes						
User approved pedestrian interval to be less than phase max green.						
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.						

31: Bouldercrest Rd SE & I-285 WB Ramps



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕	↕	↕	↕			↕	↕
Traffic Volume (veh/h)	0	0	0	206	0	219	206	869	0	0	672	505
Future Volume (veh/h)	0	0	0	206	0	219	206	869	0	0	672	505
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				1767	1900	1767	1796	1811	0	0	1870	1796
Adj Flow Rate, veh/h				224	0	0	224	945	0	0	730	549
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				9	0	9	7	6	0	0	2	7
Cap, veh/h				259	0		391	1382	0	0	2255	966
Arrive On Green				0.14	0.00	0.00	0.17	1.00	0.00	0.00	0.21	0.21
Sat Flow, veh/h				1810	0	1497	1711	1811	0	0	3647	1522
Grp Volume(v), veh/h				224	0	0	224	945	0	0	730	549
Grp Sat Flow(s),veh/h/ln				1810	0	1497	1711	1811	0	0	1777	1522
Q Serve(g_s), s				15.7	0.0	0.0	5.6	0.0	0.0	0.0	22.6	42.1
Cycle Q Clear(g_c), s				15.7	0.0	0.0	5.6	0.0	0.0	0.0	22.6	42.1
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				259	0		391	1382	0	0	2255	966
V/C Ratio(X)				0.86	0.00		0.57	0.68	0.00	0.00	0.32	0.57
Avail Cap(c_a), veh/h				380	0		500	1382	0	0	2255	966
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	0.33	0.33
Upstream Filter(I)				1.00	0.00	0.00	0.80	0.80	0.00	0.00	0.89	0.89
Uniform Delay (d), s/veh				54.5	0.0	0.0	9.0	0.0	0.0	0.0	27.7	35.4
Incr Delay (d2), s/veh				16.8	0.0	0.0	1.3	2.2	0.0	0.0	0.3	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
%ile BackOfQ(95%),veh/ln				13.0	0.0	0.0	2.9	1.5	0.0	0.0	16.0	24.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				71.2	0.0	0.0	10.3	2.2	0.0	0.0	28.1	37.6
LnGrp LOS				E	A		B	A	A	A	C	D
Approach Vol, veh/h				224		A		1169			1279	
Approach Delay, s/veh				71.2				3.8			32.2	
Approach LOS				E				A			C	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	66.7	89.0		24.3		105.7						
Change Period (Y+Rc), s	5.7	6.5		5.7		6.5						
Max Green Setting (Gmax), s	65.5			27.3		90.5						
Max Q Clear Time (g_c+I1), s	44.1			17.7		2.0						
Green Ext Time (p_c), s	0.7	16.8		0.9		52.9						
Intersection Summary												
HCM 6th Ctrl Delay				23.0								
HCM 6th LOS				C								
Notes												
User approved pedestrian interval to be less than phase max green.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.												

34: Bouldercrest Rd SE & I-285 EB Ramps



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱					↰↱		↰	↱	
Traffic Volume (veh/h)	443	0	330	0	0	0	0	632	93	103	775	0
Future Volume (veh/h)	443	0	330	0	0	0	0	632	93	103	775	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	1826	1900	1826				0	1811	1781	1781	1870	0
Adj Flow Rate, veh/h	482	0	0				0	687	101	112	842	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	5	0	5				0	6	8	8	2	0
Cap, veh/h	565	0					0	1505	221	367	1111	0
Arrive On Green	0.31	0.00	0.00				0.00	0.50	0.50	0.10	1.00	0.00
Sat Flow, veh/h	1810	0	1547				0	3100	442	1697	1870	0
Grp Volume(v), veh/h	482	0	0				0	392	396	112	842	0
Grp Sat Flow(s),veh/h/ln	1810	0	1547				0	1721	1732	1697	1870	0
Q Serve(g_s), s	32.5	0.0	0.0				0.0	19.2	19.3	4.1	0.0	0.0
Cycle Q Clear(g_c), s	32.5	0.0	0.0				0.0	19.2	19.3	4.1	0.0	0.0
Prop In Lane	1.00		1.00				0.00		0.26	1.00		0.00
Lane Grp Cap(c), veh/h	565	0					0	860	865	367	1111	0
V/C Ratio(X)	0.85	0.00					0.00	0.46	0.46	0.31	0.76	0.00
Avail Cap(c_a), veh/h	728	0					0	860	865	468	1111	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	0.00				0.00	1.00	1.00	0.95	0.95	0.00
Uniform Delay (d), s/veh	41.9	0.0	0.0				0.0	21.1	21.1	14.6	0.0	0.0
Incr Delay (d2), s/veh	15.0	0.0	0.0				0.0	1.7	1.7	0.5	4.6	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
%ile BackOfQ(95%),veh/ln	23.1	0.0	0.0				0.0	12.7	12.8	2.7	2.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.9	0.0	0.0				0.0	22.8	22.8	15.1	4.6	0.0
LnGrp LOS	E	A					A	C	C	B	A	A
Approach Vol, veh/h	482		A					788		954		
Approach Delay, s/veh	56.9							22.8		5.9		
Approach LOS	E							C		A		
Timer - Assigned Phs	2			5		6	8					
Phs Duration (G+Y+Rc), s	83.7			12.2		71.5	46.3					
Change Period (Y+Rc), s	6.5			6.0		6.5	5.7					
Max Green Setting (Gmax), s	65.5			14.0		45.5	52.3					
Max Q Clear Time (g_c+1), s	2.0			6.1		21.3	34.5					
Green Ext Time (p_c), s	36.1			0.2		15.5	6.2					
Intersection Summary												
HCM 6th Ctrl Delay			22.9									
HCM 6th LOS			C									

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

APPENDIX H

CAPACITY ANALYSIS REPORTS - NO-BUILD CONDITIONS



AM PEAK HOUR

3: Moreland Ave (SR 42) & I-285 EB Ramps

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	386	0	342	0	0	0	0	1203	202	448	1380	0
Future Volume (veh/h)	386	0	342	0	0	0	0	1203	202	448	1380	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	1707	1900	1722				0	1693	1322	1781	1678	0
Adj Flow Rate, veh/h	415	0	0				0	1294	0	482	1484	0
Peak Hour Factor	0.93	0.93	0.93				0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	13	0	12				0	14	39	8	15	0
Cap, veh/h	520	0					0	3136		543	2384	0
Arrive On Green	0.16	0.00	0.00				0.00	0.54	0.00	0.16	0.75	0.00
Sat Flow, veh/h	3252	0	1459				0	6059	1120	3291	3272	0
Grp Volume(v), veh/h	415	0	0				0	1294	0	482	1484	0
Grp Sat Flow(s),veh/h/ln	1626	0	1459				0	1456	1120	1646	1594	0
Q Serve(g_s), s	17.2	0.0	0.0				0.0	18.5	0.0	20.1	30.8	0.0
Cycle Q Clear(g_c), s	17.2	0.0	0.0				0.0	18.5	0.0	20.1	30.8	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	520	0					0	3136		543	2384	0
V/C Ratio(X)	0.80	0.00					0.00	0.41		0.89	0.62	0.00
Avail Cap(c_a), veh/h	832	0					0	3136		912	2384	0
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	0.00				0.00	1.00	0.00	0.28	0.28	0.00
Uniform Delay (d), s/veh	56.6	0.0	0.0				0.0	19.2	0.0	57.2	8.3	0.0
Incr Delay (d2), s/veh	5.9	0.0	0.0				0.0	0.4	0.0	1.0	0.3	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	11.9	0.0	0.0				0.0	10.1	0.0	10.7	11.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.5	0.0	0.0				0.0	19.6	0.0	58.1	8.7	0.0
LnGrp LOS	E	A					A	B		E	A	A
Approach Vol, veh/h	415		A				1294		A	1966		
Approach Delay, s/veh	62.5						19.6			20.8		
Approach LOS	E						B			C		
Timer - Assigned Phs	2			4	5	6						
Phs Duration (G+Y+Rc), s	110.4			29.6	29.3	81.1						
Change Period (Y+Rc), s	* 5.7			* 7.2	* 6.2	* 5.7						
Max Green Setting (Gmax), s	* 91			* 36	* 39	* 46						
Max Q Clear Time (g_c+I1), s	32.8			19.2	22.1	20.5						
Green Ext Time (p_c), s	55.0			3.2	1.0	24.0						
Intersection Summary												
HCM 6th Ctrl Delay			25.1									
HCM 6th LOS			C									
Notes												
User approved volume balancing among the lanes for turning movement.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.												

6: Moreland Ave (SR 42) & I-285 WB Ramps



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↰	↰	↰	↰	↰	↰		↰	↰
Traffic Volume (veh/h)	0	0	0	322	2	1512	368	1221	0	0	1506	366
Future Volume (veh/h)	0	0	0	322	2	1512	368	1221	0	0	1506	366
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		No		No
Adj Sat Flow, veh/h/ln				1737	1900	1856	1411	1811	0	0	1722	1678
Adj Flow Rate, veh/h				224	0	0	383	1272	0	0	1569	0
Peak Hour Factor				0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %				11	0	3	33	6	0	0	12	15
Cap, veh/h				261	0		428	2977	0	0	1663	
Arrive On Green				0.16	0.00	0.00	0.28	0.60	0.00	0.00	0.28	0.00
Sat Flow, veh/h				1654	0	3145	1344	5107	0	0	6165	1422
Grp Volume(v), veh/h				224	0	0	383	1272	0	0	1569	0
Grp Sat Flow(s),veh/h/ln				1654	0	1572	1344	1648	0	0	1481	1422
Q Serve(g_s), s				18.5	0.0	0.0	32.1	19.3	0.0	0.0	36.3	0.0
Cycle Q Clear(g_c), s				18.5	0.0	0.0	32.1	19.3	0.0	0.0	36.3	0.0
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				261	0		428	2977	0	0	1663	
V/C Ratio(X)				0.86	0.00		0.89	0.43	0.00	0.00	0.94	
Avail Cap(c_a), veh/h				506	0		428	2977	0	0	1663	
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	0.00	0.84	0.84	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				57.4	0.0	0.0	37.0	14.9	0.0	0.0	49.3	0.0
Incr Delay (d2), s/veh				15.4	0.0	0.0	20.8	0.4	0.0	0.0	12.2	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				13.6	0.0	0.0	20.5	10.8	0.0	0.0	20.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				72.8	0.0	0.0	57.8	15.3	0.0	0.0	61.5	0.0
LnGrp LOS				E	A		E	B	A	A	E	
Approach Vol, veh/h					224	A		1655			1569	A
Approach Delay, s/veh					72.8			25.1			61.5	
Approach LOS					E			C			E	
Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	45.0	45.5				90.5		29.3				
Change Period (Y+Rc), s	6.3	* 6.2				* 6.2		7.2				
Max Green Setting (Gmax), s	39	* 39				* 84		42.8				
Max Q Clear Time (g_c+R), s	34.1	38.3				21.3		20.5				
Green Ext Time (p_c), s	0.4	0.5				53.5		1.7				

Intersection Summary

HCM 6th Ctrl Delay 44.8

HCM 6th LOS D

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

9: Moreland Ave (SR 42) & UPS DW/Bailey St

Intersection												
Int Delay, s/veh	33.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	3	24	62	0	216	38	2565	18	109	714	5
Future Vol, veh/h	5	3	24	62	0	216	38	2565	18	109	714	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	Yield	-	-	None	-	-	None
Storage Length	-	-	-	-	-	60	125	-	-	215	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	100	0	54	6	0	15	28	6	44	9	9	33
Mvmt Flow	6	3	27	69	0	240	42	2850	20	121	793	6
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2262	3992	400	3505	3985	1435	799	0	0	2870	0	0
Stage 1	1038	1038	-	2944	2944	-	-	-	-	-	-	-
Stage 2	1224	2954	-	561	1041	-	-	-	-	-	-	-
Critical Hdwy	8.4	6.5	8.18	6.52	6.5	7.4	5.86	-	-	5.48	-	-
Critical Hdwy Stg 1	9.3	5.5	-	7.42	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	8.7	5.5	-	6.82	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	4.8	4	4.44	3.86	4	4.05	3.38	-	-	3.19	-	-
Pot Cap-1 Maneuver	12	~ 3	414	~ 6	3	~ 94	412	-	-	~ 39	-	-
Stage 1	95	311	-	~ 7	34	-	-	-	-	-	-	-
Stage 2	79	34	-	429	310	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	-	0	414	-	0	~ 94	412	-	-	~ 39	-	-
Mov Cap-2 Maneuver	-	0	-	-	0	-	-	-	-	-	-	-
Stage 1	85	0	-	~ 6	31	-	-	-	-	-	-	-
Stage 2	-	31	-	-	0	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s					0.2		153.4					
HCM LOS	-		-									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1WBLn2	SBL	SBT	SBR					
Capacity (veh/h)	412	-	-	-	-	94	~ 39	-	-			
HCM Lane V/C Ratio	0.102	-	-	-	-	2.553	3.105	-	-			
HCM Control Delay (s)	14.7	-	-	-	-	800.8	1165.5	-	-			
HCM Lane LOS	B	-	-	-	-	F	F	-	-			
HCM 95th %tile Q(veh)	0.3	-	-	-	-	22.3	13.6	-	-			
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined				*: All major volume in platoon				

12: Fayetteville Rd SE & Bailey St & Woodstock Rd

Intersection

Intersection Delay, s/veh 10.9

Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	129	1	16	263	15	15	7	75	2	3	0
Future Vol, veh/h	0	129	1	16	263	15	15	7	75	2	3	0
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles, %	0	10	0	14	16	14	38	17	8	0	0	0
Mvmt Flow	0	165	1	21	337	19	19	9	96	3	4	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.3	12.1	9.7	8.6
HCM LOS	A	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	15%	0%	5%	40%
Vol Thru, %	7%	99%	89%	60%
Vol Right, %	77%	1%	5%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	97	130	294	5
LT Vol	15	0	16	2
Through Vol	7	129	263	3
RT Vol	75	1	15	0
Lane Flow Rate	124	167	377	6
Geometry Grp	1	1	1	1
Degree of Util (X)	0.186	0.225	0.489	0.01
Departure Headway (Hd)	5.394	4.853	4.672	5.462
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	662	737	769	650
Service Time	3.452	2.899	2.709	3.537
HCM Lane V/C Ratio	0.187	0.227	0.49	0.009
HCM Control Delay	9.7	9.3	12.1	8.6
HCM Lane LOS	A	A	B	A
HCM 95th-tile Q	0.7	0.9	2.7	0

15: Fayetteville Rd SE & Constitution Rd SE

Intersection

Int Delay, s/veh 0.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	283	4	14	192	5	11
Future Vol, veh/h	283	4	14	192	5	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	11	0	8	10	0	44
Mvmt Flow	308	4	15	209	5	12

Major/Minor	Major1	Minor2
Conflicting Flow All	0	0 120 224
Stage 1	-	- 0 0
Stage 2	-	- 120 224
Critical Hdwy	-	- 6.4 6.94
Critical Hdwy Stg 1	-	- - -
Critical Hdwy Stg 2	-	- 5.4 5.94
Follow-up Hdwy	-	- 3.5 4.396
Pot Cap-1 Maneuver	-	- 880 608
Stage 1	-	- - -
Stage 2	-	- 910 647
Platoon blocked, %	-	- -
Mov Cap-1 Maneuver	-	- 880 0
Mov Cap-2 Maneuver	-	- 880 0
Stage 1	-	- - 0
Stage 2	-	- 910 0

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

Minor Lane/Major Mvmt	NBT	NBR	SBLn1
Capacity (veh/h)	-	-	880
HCM Lane V/C Ratio	-	-	0.02
HCM Control Delay (s)	-	-	9.2
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	0.1

17: Blackhall Studios DW 1 & Constitution Rd SE

Intersection

Int Delay, s/veh 1.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗		↖	↖	↗
Traffic Vol, veh/h	160	37	62	284	3	34
Future Vol, veh/h	160	37	62	284	3	34
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Yield	-	None	-	Yield
Storage Length	-	110	-	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	9	0	5	2	0	0
Mvmt Flow	170	39	66	302	3	36

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	170
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.15
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.245
Pot Cap-1 Maneuver	-	-	1389
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1389
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.4	9.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	438	879	-	-	1389	-
HCM Lane V/C Ratio	0.007	0.041	-	-	0.047	-
HCM Control Delay (s)	13.3	9.3	-	-	7.7	0
HCM Lane LOS	B	A	-	-	A	A
HCM 95th %tile Q(veh)	0	0.1	-	-	0.1	-

19: Blackhall Studios DW 2 & Constitution Rd SE

Intersection						
Int Delay, s/veh	2.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	152	42	85	327	19	66
Future Vol, veh/h	152	42	85	327	19	66
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	80	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	9	0	10	3	13	16
Mvmt Flow	162	45	90	348	20	70
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	207	0	690	162
Stage 1	-	-	-	-	162	-
Stage 2	-	-	-	-	528	-
Critical Hdwy	-	-	4.2	-	6.53	6.36
Critical Hdwy Stg 1	-	-	-	-	5.53	-
Critical Hdwy Stg 2	-	-	-	-	5.53	-
Follow-up Hdwy	-	-	2.29	-	3.617	3.444
Pot Cap-1 Maneuver	-	-	1318	-	395	848
Stage 1	-	-	-	-	841	-
Stage 2	-	-	-	-	570	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1318	-	361	848
Mov Cap-2 Maneuver	-	-	-	-	361	-
Stage 1	-	-	-	-	841	-
Stage 2	-	-	-	-	522	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		1.6		11.4	
HCM LOS	B					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	652	-	-	1318	-	
HCM Lane V/C Ratio	0.139	-	-	0.069	-	
HCM Control Delay (s)	11.4	-	-	7.9	0	
HCM Lane LOS	B	-	-	A	A	
HCM 95th %tile Q(veh)	0.5	-	-	0.2	-	

21: International Park Dr SE & Constitution Rd SE

Intersection												
Int Delay, s/veh	5.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	136	74	110	347	7	50	7	70	19	29	15
Future Vol, veh/h	8	136	74	110	347	7	50	7	70	19	29	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	130	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	14	4	16	7	1	25	18	17	68	10	0	0
Mvmt Flow	8	140	76	113	358	7	52	7	72	20	30	15
Major/Minor	Major1		Major2			Minor1			Minor2			
Conflicting Flow All	365	0	0	216	0	0	804	785	108	674	816	358
Stage 1	-	-	-	-	-	-	194	194	-	584	584	-
Stage 2	-	-	-	-	-	-	610	591	-	90	232	-
Critical Hdwy	4.31	-	-	4.205	-	-	7.57	6.755	7.92	7.45	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.77	5.755	-	6.25	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.37	5.755	-	6.65	5.5	-
Follow-up Hdwy	2.333	-	-	2.2665	-	-	3.671	4.1615	3.946	3.595	4	3.3
Pot Cap-1 Maneuver	1119	-	-	1320	-	-	265	302	763	341	314	691
Stage 1	-	-	-	-	-	-	750	708	-	479	501	-
Stage 2	-	-	-	-	-	-	448	464	-	887	716	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1119	-	-	1320	-	-	222	274	763	281	285	691
Mov Cap-2 Maneuver	-	-	-	-	-	-	222	274	-	281	285	-
Stage 1	-	-	-	-	-	-	745	703	-	476	458	-
Stage 2	-	-	-	-	-	-	374	424	-	789	711	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s	0.3		1.9			19.9			18.6			
HCM LOS						C			C			
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	371	1119	-	-	1320	-	-	330				
HCM Lane V/C Ratio	0.353	0.007	-	-	0.086	-	-	0.197				
HCM Control Delay (s)	19.9	8.2	-	-	8	-	-	18.6				
HCM Lane LOS	C	A	-	-	A	-	-	C				
HCM 95th %tile Q(veh)	1.6	0	-	-	0.3	-	-	0.7				

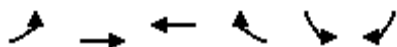
24: International Park Dr SE & Blackhall Studios East/Continental Way

Intersection												
Int Delay, s/veh	5.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	64	8	1	6	27	11	3	8	2	18	3	87
Future Vol, veh/h	64	8	1	6	27	11	3	8	2	18	3	87
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	76	76	76	76	76	76	76	76	76	76	76	76
Heavy Vehicles, %	22	43	0	0	0	33	0	71	100	40	33	17
Mvmt Flow	84	11	1	8	36	14	4	11	3	24	4	114
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	155	131	61	136	187	13	118	0	0	14	0	0
Stage 1	109	109	-	21	21	-	-	-	-	-	-	-
Stage 2	46	22	-	115	166	-	-	-	-	-	-	-
Critical Hdwy	7.32	6.93	6.2	7.1	6.5	6.53	4.1	-	-	4.5	-	-
Critical Hdwy Stg 1	6.32	5.93	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.32	5.93	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.698	4.387	3.3	3.5	4	3.597	2.2	-	-	2.56	-	-
Pot Cap-1 Maneuver	768	690	1010	840	711	984	1483	-	-	1389	-	-
Stage 1	850	732	-	1003	882	-	-	-	-	-	-	-
Stage 2	919	802	-	895	765	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	715	675	1010	815	695	984	1483	-	-	1389	-	-
Mov Cap-2 Maneuver	715	675	-	815	695	-	-	-	-	-	-	-
Stage 1	847	718	-	1000	879	-	-	-	-	-	-	-
Stage 2	866	800	-	864	750	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	10.8		10.1		1.7		1.3					
HCM LOS	B		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1483	-	-	713	767	1389	-	-				
HCM Lane V/C Ratio	0.003	-	-	0.135	0.075	0.017	-	-				
HCM Control Delay (s)	7.4	0	-	10.8	10.1	7.6	0	-				
HCM Lane LOS	A	A	-	B	B	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0.5	0.2	0.1	-	-				

26: Bouldercrest Rd SE & Continental Way/I-285 WB Off Ramp

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	0	76	108	21	228	92	1013	0	0	725	11
Future Volume (veh/h)	25	0	76	108	21	228	92	1013	0	0	725	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	1574	0	759	1752	1767	1752	1129	1856	0	0	1752	1455
Adj Flow Rate, veh/h	27	0	0	115	22	243	98	1078	0	0	771	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, %	22	0	77	10	9	10	52	3	0	0	10	30
Cap, veh/h	114	0		857	319	268	346	2315	0	0	1848	685
Arrive On Green	0.04	0.00	0.00	0.26	0.18	0.18	0.11	1.00	0.00	0.00	1.00	1.00
Sat Flow, veh/h	1499	27		3237	1767	1485	1076	3618	0	0	3416	1233
Grp Volume(v), veh/h	27	62.6		115	22	243	98	1078	0	0	771	12
Grp Sat Flow(s),veh/h/ln	1499	E		1618	1767	1485	1076	1763	0	0	1664	1233
Q Serve(g_s), s	2.3			3.5	1.3	20.9	5.1	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	2.3			3.5	1.3	20.9	5.1	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00			1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h	114			857	319	268	346	2315	0	0	1848	685
V/C Ratio(X)	0.24			0.13	0.07	0.91	0.28	0.47	0.00	0.00	0.42	0.02
Avail Cap(c_a), veh/h	148			857	414	348	411	2315	0	0	1848	685
HCM Platoon Ratio	1.00			1.00	1.00	1.00	2.00	2.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	1.00			1.00	1.00	1.00	1.00	1.00	0.00	0.00	0.89	0.89
Uniform Delay (d), s/veh	61.1			36.4	44.2	52.2	9.5	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	1.5			0.1	0.1	22.5	0.9	0.7	0.0	0.0	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
%ile BackOfQ(95%),veh/ln	1.7			2.5	1.1	14.3	2.1	0.4	0.0	0.0	0.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.6			36.5	44.3	74.7	10.4	0.7	0.0	0.0	0.6	0.0
LnGrp LOS	E			D	D	E	B	A	A	A	A	A
Approach Vol, veh/h					380				1176			
Approach Delay, s/veh					61.4				1.5			
Approach LOS					E				A			
Timer - Assigned Phs	1	2	3					6	7	8		
Phs Duration (G+Y+Rc), s	13.2	77.9	38.9					91.1	11.0	28.0		
Change Period (Y+Rc), s	6.0	* 5.7	4.5					* 5.7	6.0	4.5		
Max Green Setting (Gmax), s	15.0	* 54	11.5					* 75	8.0	30.5		
Max Q Clear Time (g_c+I1), s	7.1	2.0	5.5					2.0	4.3	22.9		
Green Ext Time (p_c), s	0.3	25.3	0.2					45.5	0.0	0.6		
Intersection Summary												
HCM 6th Ctrl Delay				11.5								
HCM 6th LOS				B								
Notes												
User approved pedestrian interval to be less than phase max green.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.												

27: Constitution Rd SE & Bouldercrest Rd SE



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	2	223	463	404	217	1
Future Volume (veh/h)	2	223	463	404	217	1
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	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	1515	1870	1870	1826	1900
Adj Flow Rate, veh/h	2	240	498	0	233	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	26	2	2	5	0
Cap, veh/h	507	1704	1666		308	
Arrive On Green	0.00	0.59	0.47	0.00	0.18	0.00
Sat Flow, veh/h	1810	2954	3741	0	1739	1610
Grp Volume(v), veh/h	2	240	498	0	233	0
Grp Sat Flow(s), veh/h/ln	1810	1439	1777	0	1739	1610
Q Serve(g_s), s	0.0	1.8	4.1	0.0	6.0	0.0
Cycle Q Clear(g_c), s	0.0	1.8	4.1	0.0	6.0	0.0
Prop In Lane	1.00			0.00	1.00	1.00
Lane Grp Cap(c), veh/h	507	1704	1666		308	
V/C Ratio(X)	0.00	0.14	0.30		0.76	
Avail Cap(c_a), veh/h	1624	3345	4130		1075	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	6.0	4.3	7.8	0.0	18.5	0.0
Incr Delay (d2), s/veh	0.0	0.1	0.2	0.0	3.8	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%), veh/ln	0.0	0.4	1.9	0.0	4.3	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	6.0	4.4	8.0	0.0	22.3	0.0
LnGrp LOS	A	A	A		C	
Approach Vol, veh/h		242	498	A	233	A
Approach Delay, s/veh		4.4	8.0		22.3	
Approach LOS		A	A		C	
Timer - Assigned Phs		2			5	6
Phs Duration (G+Y+Rc), s		33.1			5.8	27.2
Change Period (Y+Rc), s		5.1			* 5.7	5.1
Max Green Setting (Gmax), s		54.9			* 29	54.9
Max Q Clear Time (g_c+I1), s		3.8			2.0	6.1
Green Ext Time (p_c), s		7.2			0.0	16.0

Intersection Summary

HCM 6th Ctrl Delay	10.5
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

29: Bouldercrest Rd SE & Clifton Church Rd



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↰↱	↱	↰↱	↱	↰↱	↰↱
Traffic Volume (veh/h)	415	142	725	541	119	321
Future Volume (veh/h)	415	142	725	541	119	321
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	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	1856	1900	1870	1856	1900	1663
Adj Flow Rate, veh/h	461	158	806	601	132	357
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	3	0	2	3	0	16
Cap, veh/h	612	287	2277	1008	303	2299
Arrive On Green	0.18	0.18	0.21	0.21	0.04	0.73
Sat Flow, veh/h	3428	1610	3647	1572	1810	3243
Grp Volume(v), veh/h	461	158	806	601	132	357
Grp Sat Flow(s), veh/h/ln	1714	1610	1777	1572	1810	1580
Q Serve(g_s), s	16.6	11.6	25.1	44.8	3.1	4.5
Cycle Q Clear(g_c), s	16.6	11.6	25.1	44.8	3.1	4.5
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	612	287	2277	1008	303	2299
V/C Ratio(X)	0.75	0.55	0.35	0.60	0.44	0.16
Avail Cap(c_a), veh/h	883	415	2277	1008	355	2299
HCM Platoon Ratio	1.00	1.00	0.33	0.33	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.88	0.88	0.95	0.95
Uniform Delay (d), s/veh	50.7	48.6	28.3	36.1	10.7	5.4
Incr Delay (d2), s/veh	4.2	3.5	0.4	2.3	2.0	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%), veh/ln	11.9	16.0	17.4	26.4	2.2	2.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	54.9	52.1	28.7	38.4	12.7	5.6
LnGrp LOS	D	D	C	D	B	A
Approach Vol, veh/h	619		1407			489
Approach Delay, s/veh	54.2		32.8			7.5
Approach LOS	D		C			A
Timer - Assigned Phs	2		4		5	6
Phs Duration (G+Y+Rc), s	100.3		29.7		11.3	89.0
Change Period (Y+Rc), s	* 5.7		6.5		6.0	* 5.7
Max Green Setting (Gmax), s	* 84		33.5		9.0	* 69
Max Q Clear Time (g_c+I1), s	6.5		18.6		5.1	46.8
Green Ext Time (p_c), s	12.2		4.6		0.2	18.6
Intersection Summary						
HCM 6th Ctrl Delay			33.2			
HCM 6th LOS			C			
Notes						
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.						

31: Bouldercrest Rd SE & I-285 WB On Ramps

Intersection												
Int Delay, s/veh	0											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations						↗		↗	↗		↗	↗
Traffic Vol, veh/h	0	0	0	0	0	0	0	1105	357	0	433	476
Future Vol, veh/h	0	0	0	0	0	0	0	1105	357	0	433	476
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	6	9	0	8	9
Mvmt Flow	0	0	0	0	0	0	0	1201	388	0	471	517
Major/Minor												
	Minor1			Major1			Major2					
Conflicting Flow All	-	-	-	601	-	0	0	-	-	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	6.9	-	-	-	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	3.3	-	-	-	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	0	448	0	-	-	0	-	-	-	-
Stage 1	0	0	0	-	0	-	-	0	-	-	-	-
Stage 2	0	0	0	-	0	-	-	0	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	0	0	448	-	-	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	0	0	-	-	-	-	-	-	-	-	-
Stage 1	-	0	0	-	-	-	-	-	-	-	-	-
Stage 2	-	0	0	-	-	-	-	-	-	-	-	-
Approach												
	WB			NB			SB					
HCM Control Delay, s	0	0	0	0	0	0	0	0	0	0	0	0
HCM LOS	A	A	A	A	A	A	A	A	A	A	A	A
Minor Lane/Major Mvmt												
	NBT	NBR	WBLn1	SBT	SBR							
Capacity (veh/h)	-	-	-	-	-							
HCM Lane V/C Ratio	-	-	-	-	-							
HCM Control Delay (s)	-	-	0	-	-							
HCM Lane LOS	-	-	A	-	-							
HCM 95th %tile Q(veh)	-	-	-	-	-							

34: Bouldercrest Rd SE & I-285 EB Ramps

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	455	0	216	0	0	0	0	1007	206	119	314	0
Future Volume (veh/h)	455	0	216	0	0	0	0	1007	206	119	314	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	1781	1900	1781				0	1811	1707	1707	1811	0
Adj Flow Rate, veh/h	495	0	235				0	1095	224	129	341	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	8	0	8				0	6	13	13	6	0
Cap, veh/h	757	0	674				0	2060	866	534	2350	0
Arrive On Green	0.22	0.00	0.22				0.00	0.60	0.60	0.08	1.00	0.00
Sat Flow, veh/h	3393	0	3019				0	3532	1447	3155	3532	0
Grp Volume(v), veh/h	495	0	235				0	1095	224	129	341	0
Grp Sat Flow(s),veh/h/ln	1697	0	1510				0	1721	1447	1577	1721	0
Q Serve(g_s), s	17.2	0.0	8.5				0.0	24.3	9.6	1.9	0.0	0.0
Cycle Q Clear(g_c), s	17.2	0.0	8.5				0.0	24.3	9.6	1.9	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	757	0	674				0	2060	866	534	2350	0
V/C Ratio(X)	0.65	0.00	0.35				0.00	0.53	0.26	0.24	0.15	0.00
Avail Cap(c_a), veh/h	1026	0	913				0	2060	866	754	2350	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	45.9	0.0	42.5				0.0	15.3	12.4	11.0	0.0	0.0
Incr Delay (d2), s/veh	4.4	0.0	1.4				0.0	1.0	0.7	0.3	0.1	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
%ile BackOfQ(95%),veh/ln	12.2	0.0	5.9				0.0	14.5	5.7	1.1	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.3	0.0	44.0				0.0	16.3	13.1	11.2	0.1	0.0
LnGrp LOS	D	A	D				A	B	B	B	A	A
Approach Vol, veh/h	730						1319			470		
Approach Delay, s/veh	48.3						15.8			3.2		
Approach LOS	D						B			A		
Timer - Assigned Phs	2			5			6			8		
Phs Duration (G+Y+Rc), s	95.3			11.0			84.3			34.7		
Change Period (Y+Rc), s	6.5			6.0			6.5			5.7		
Max Green Setting (Gmax), s	78.5			14.0			58.5			39.3		
Max Q Clear Time (g_c+I1), s	2.0			3.9			26.3			19.2		
Green Ext Time (p_c), s	10.1			0.4			26.6			9.8		
Intersection Summary												
HCM 6th Ctrl Delay			22.8									
HCM 6th LOS			C									
Notes												

PM PEAK HOUR

3: Moreland Ave (SR 42) & I-285 EB Ramps

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	369	4	295	0	0	0	0	638	233	1380	723	0
Future Volume (veh/h)	369	4	295	0	0	0	0	638	233	1380	723	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	1752	788	1544				0	1500	1366	1811	1618	0
Adj Flow Rate, veh/h	391	0	0				0	672	0	1453	761	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	10	75	24				0	27	36	6	19	0
Cap, veh/h	484	0					0	1492		1361	2299	0
Arrive On Green	0.14	0.00	0.00				0.00	0.29	0.00	0.41	0.75	0.00
Sat Flow, veh/h	3337	0	1309				0	5369	1158	3346	3156	0
Grp Volume(v), veh/h	391	0	0				0	672	0	1453	761	0
Grp Sat Flow(s),veh/h/ln	1668	0	1309				0	1290	1158	1673	1537	0
Q Serve(g_s), s	13.6	0.0	0.0				0.0	12.8	0.0	48.8	10.0	0.0
Cycle Q Clear(g_c), s	13.6	0.0	0.0				0.0	12.8	0.0	48.8	10.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	484	0					0	1492		1361	2299	0
V/C Ratio(X)	0.81	0.00					0.00	0.45		1.07	0.33	0.00
Avail Cap(c_a), veh/h	634	0					0	1492		1361	2299	0
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	0.00				0.00	1.00	0.00	0.46	0.46	0.00
Uniform Delay (d), s/veh	49.7	0.0	0.0				0.0	34.9	0.0	35.6	5.1	0.0
Incr Delay (d2), s/veh	8.4	0.0	0.0				0.0	1.0	0.0	38.2	0.2	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	10.2	0.0	0.0				0.0	7.2	0.0	33.1	4.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.1	0.0	0.0				0.0	35.8	0.0	73.8	5.3	0.0
LnGrp LOS	E	A					A	D		F	A	A
Approach Vol, veh/h		391	A					672	A		2214	
Approach Delay, s/veh		58.1						35.8			50.2	
Approach LOS		E						D			D	
Timer - Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		95.4		24.6	55.0	40.4						
Change Period (Y+Rc), s		* 5.7		* 7.2	* 6.2	* 5.7						
Max Green Setting (Gmax), s		* 84		* 23	* 49	* 29						
Max Q Clear Time (g_c+I1), s		12.0		15.6	50.8	14.8						
Green Ext Time (p_c), s		37.4		1.8	0.0	10.6						
Intersection Summary												
HCM 6th Ctrl Delay			48.2									
HCM 6th LOS			D									
Notes												
User approved volume balancing among the lanes for turning movement.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.												

6: Moreland Ave (SR 42) & I-285 WB Ramps



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↰	↰	↰	↰	↰	↰		↰	↰
Traffic Volume (veh/h)	0	0	0	239	4	410	338	669	0	0	1864	486
Future Volume (veh/h)	0	0	0	239	4	410	338	669	0	0	1864	486
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		No		
Adj Sat Flow, veh/h/ln				1411	1530	1678	1455	1678	0	0	1811	1781
Adj Flow Rate, veh/h				175	0	0	367	727	0	0	2026	0
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				33	25	15	30	15	0	0	6	8
Cap, veh/h				199	0		412	3218	0	0	2560	
Arrive On Green				0.15	0.00	0.00	0.24	0.70	0.00	0.00	0.41	0.00
Sat Flow, veh/h				1344	0	2844	1386	4731	0	0	6484	1510
Grp Volume(v), veh/h				175	0	0	367	727	0	0	2026	0
Grp Sat Flow(s),veh/h/ln				1344	0	1422	1386	1527	0	0	1558	1510
Q Serve(g_s), s				15.3	0.0	0.0	23.4	6.7	0.0	0.0	34.1	0.0
Cycle Q Clear(g_c), s				15.3	0.0	0.0	23.4	6.7	0.0	0.0	34.1	0.0
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				199	0		412	3218	0	0	2560	
V/C Ratio(X)				0.88	0.00		0.89	0.23	0.00	0.00	0.79	
Avail Cap(c_a), veh/h				255	0		412	3218	0	0	2560	
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	0.00	0.79	0.79	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				50.0	0.0	0.0	31.8	6.3	0.0	0.0	30.9	0.0
Incr Delay (d2), s/veh				28.3	0.0	0.0	19.9	0.1	0.0	0.0	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
%ile BackOfQ(95%),veh/ln				10.8	0.0	0.0	17.3	3.4	0.0	0.0	18.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				78.3	0.0	0.0	51.8	6.4	0.0	0.0	33.5	0.0
LnGrp LOS				E	A		D	A	A	A	C	
Approach Vol, veh/h					175	A		1094			2026	A
Approach Delay, s/veh					78.3			21.6			33.5	
Approach LOS					E			C			C	
Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	35.0	55.5				90.5		25.0				
Change Period (Y+Rc), s	6.3	* 6.2				* 6.2		7.2				
Max Green Setting (Gmax), s	29	* 49				* 84		22.8				
Max Q Clear Time (g_c+2p_c), s	25.4	36.1				8.7		17.3				
Green Ext Time (p_c), s	0.3	12.7				35.0		0.5				

Intersection Summary

HCM 6th Ctrl Delay 31.9

HCM 6th LOS C

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

9: Moreland Ave (SR 42) & UPS DW/Bailey St

Intersection												
Int Delay, s/veh	54.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	3	15	67	2	153	24	906	53	186	1759	6
Future Vol, veh/h	6	3	15	67	2	153	24	906	53	186	1759	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	Yield	-	-	None	-	-	None
Storage Length	-	-	-	-	-	60	125	-	-	215	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	17	100	14	4	100	7	40	6	29	5	5	60
Mvmt Flow	6	3	16	70	2	159	25	944	55	194	1832	6
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2652	3272	919	2144	3248	500	1838	0	0	999	0	0
Stage 1	2223	2223	-	1022	1022	-	-	-	-	-	-	-
Stage 2	429	1049	-	1122	2226	-	-	-	-	-	-	-
Critical Hdwy	6.74	8.5	7.38	6.48	8.5	7.24	6.1	-	-	5.4	-	-
Critical Hdwy Stg 1	7.64	7.5	-	7.38	7.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	7.04	7.5	-	6.78	7.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.97	5	4.04	3.84	5	3.97	3.5	-	-	3.15	-	-
Pot Cap-1 Maneuver	20	~ 1	217	~ 50	~ 2	432	98	-	-	383	-	-
Stage 1	22	23	-	189	160	-	-	-	-	-	-	-
Stage 2	492	154	-	194	23	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	0	217	~ 23	~ 1	432	98	-	-	383	-	-
Mov Cap-2 Maneuver	-	0	-	~ 23	~ 1	-	-	-	-	-	-	-
Stage 1	16	11	-	141	119	-	-	-	-	-	-	-
Stage 2	227	115	-	~ 64	11	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s			\$ 758.5		1.3		2.3					
HCM LOS	-		F									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1WBLn2	SBL	SBT	SBR					
Capacity (veh/h)	98	-	-	- 14	432	383	-	-				
HCM Lane V/C Ratio	0.255	-	-	- 5.134	0.369	0.506	-	-				
HCM Control Delay (s)	53.9	-	-	\$ 2400.3	18.1	23.6	-	-				
HCM Lane LOS	F	-	-	- F	C	C	-	-				
HCM 95th %tile Q(veh)	0.9	-	-	- 9.9	1.7	2.8	-	-				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined				*: All major volume in platoon				

12: Fayetteville Rd SE & Bailey St & Woodstock Rd

Intersection

Intersection Delay, s/veh 10.1

Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	228	14	11	193	13	27	12	125	14	3	2
Future Vol, veh/h	0	228	14	11	193	13	27	12	125	14	3	2
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
Heavy Vehicles, %	0	8	0	13	7	0	4	10	25	0	0	0
Mvmt Flow	0	251	15	12	212	14	30	13	137	15	3	2
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.5	10.3	9.3	8.7
HCM LOS	B	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	16%	0%	5%	74%
Vol Thru, %	7%	94%	89%	16%
Vol Right, %	76%	6%	6%	11%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	164	242	217	19
LT Vol	27	0	11	14
Through Vol	12	228	193	3
RT Vol	125	14	13	2
Lane Flow Rate	180	266	238	21
Geometry Grp	1	1	1	1
Degree of Util (X)	0.239	0.353	0.325	0.032
Departure Headway (Hd)	4.767	4.78	4.901	5.446
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	748	747	730	651
Service Time	2.829	2.839	2.961	3.531
HCM Lane V/C Ratio	0.241	0.356	0.326	0.032
HCM Control Delay	9.3	10.5	10.3	8.7
HCM Lane LOS	A	B	B	A
HCM 95th-tile Q	0.9	1.6	1.4	0.1

15: Fayetteville Rd SE & Constitution Rd SE

Intersection

Int Delay, s/veh 0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	202	4	16	351	8	15
Future Vol, veh/h	202	4	16	351	8	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	5	0	7	11	0	8
Mvmt Flow	238	5	19	413	9	18

Major/Minor	Major1	Minor2
Conflicting Flow All	0	0 226 432
Stage 1	-	- 0 0
Stage 2	-	- 226 432
Critical Hdwy	-	- 6.4 6.58
Critical Hdwy Stg 1	-	- - -
Critical Hdwy Stg 2	-	- 5.4 5.58
Follow-up Hdwy	-	- 3.5 4.072
Pot Cap-1 Maneuver	-	- 767 507
Stage 1	-	- - -
Stage 2	-	- 816 572
Platoon blocked, %	-	-
Mov Cap-1 Maneuver	-	- 767 0
Mov Cap-2 Maneuver	-	- 767 0
Stage 1	-	- - 0
Stage 2	-	- 816 0

Approach	NB	SB
HCM Control Delay, s	0	9.9
HCM LOS		A

Minor Lane/Major Mvmt	NBT	NBR	SBLn1
Capacity (veh/h)	-	-	767
HCM Lane V/C Ratio	-	-	0.035
HCM Control Delay (s)	-	-	9.9
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	0.1

17: Blackhall Studios DW 1 & Constitution Rd SE

Intersection

Int Delay, s/veh 1.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗		↖	↖	↗
Traffic Vol, veh/h	350	9	33	185	21	20
Future Vol, veh/h	350	9	33	185	21	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Yield	-	None	-	Yield
Storage Length	-	110	-	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	6	13	0	10	0	6
Mvmt Flow	402	10	38	213	24	23

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	402
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.1
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.2
Pot Cap-1 Maneuver	-	-	1168
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1168
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.2	12.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	398	640	-	-	1168	-
HCM Lane V/C Ratio	0.061	0.036	-	-	0.032	-
HCM Control Delay (s)	14.6	10.8	-	-	8.2	0
HCM Lane LOS	B	B	-	-	A	A
HCM 95th %tile Q(veh)	0.2	0.1	-	-	0.1	-

19: Blackhall Studios DW 2 & Constitution Rd SE

Intersection

Int Delay, s/veh 2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	355	15	29	203	15	74
Future Vol, veh/h	355	15	29	203	15	74
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	80	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	6	15	5	9	0	5
Mvmt Flow	423	18	35	242	18	88

Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	441	0	735	423
Stage 1	-	-	-	-	423	-
Stage 2	-	-	-	-	312	-
Critical Hdwy	-	-	4.15	-	6.4	6.25
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.245	-	3.5	3.345
Pot Cap-1 Maneuver	-	-	1103	-	390	624
Stage 1	-	-	-	-	665	-
Stage 2	-	-	-	-	747	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1103	-	376	624
Mov Cap-2 Maneuver	-	-	-	-	376	-
Stage 1	-	-	-	-	665	-
Stage 2	-	-	-	-	719	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1	12.9
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	562	-	-	1103	-
HCM Lane V/C Ratio	0.189	-	-	0.031	-
HCM Control Delay (s)	12.9	-	-	8.4	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.7	-	-	0.1	-

21: International Park Dr SE & Constitution Rd SE

Intersection												
Int Delay, s/veh	5.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	30	356	43	55	176	14	43	25	87	36	15	13
Future Vol, veh/h	30	356	43	55	176	14	43	25	87	36	15	13
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	130	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	1	32	67	5	0	16	0	19	4	8	9
Mvmt Flow	33	391	47	60	193	15	47	27	96	40	16	14
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	208	0	0	438	0	0	817	809	219	588	817	193
Stage 1	-	-	-	-	-	-	481	481	-	313	313	-
Stage 2	-	-	-	-	-	-	336	328	-	275	504	-
Critical Hdwy	4.1	-	-	5.105	-	-	7.54	6.5	7.185	7.36	6.62	6.335
Critical Hdwy Stg 1	-	-	-	-	-	-	6.74	5.5	-	6.16	5.62	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.34	5.5	-	6.56	5.62	-
Follow-up Hdwy	2.2	-	-	2.8365	-	-	3.652	4.34805	3.538	4.076	3.3855	
Pot Cap-1 Maneuver	1375	-	-	806	-	-	262	317	741	403	301	828
Stage 1	-	-	-	-	-	-	506	557	-	692	643	-
Stage 2	-	-	-	-	-	-	644	651	-	704	528	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1375	-	-	806	-	-	228	287	741	301	272	828
Mov Cap-2 Maneuver	-	-	-	-	-	-	228	287	-	301	272	-
Stage 1	-	-	-	-	-	-	494	544	-	675	595	-
Stage 2	-	-	-	-	-	-	570	603	-	568	515	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.5			2.2			20.9			18.5		
HCM LOS							C			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	394	1375	-	-	806	-	-	336				
HCM Lane V/C Ratio	0.432	0.024	-	-	0.075	-	-	0.209				
HCM Control Delay (s)	20.9	7.7	-	-	9.8	-	-	18.5				
HCM Lane LOS	C	A	-	-	A	-	-	C				
HCM 95th %tile Q(veh)	2.1	0.1	-	-	0.2	-	-	0.8				

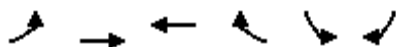
24: International Park Dr SE & Blackhall Studios East/Continental Way

Intersection												
Int Delay, s/veh	6.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	41	27	0	3	6	22	0	6	4	21	16	21
Future Vol, veh/h	41	27	0	3	6	22	0	6	4	21	16	21
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	6	8	0	67	20	53	0	40	25	56	50	17
Mvmt Flow	48	31	0	3	7	26	0	7	5	24	19	24
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	105	91	31	105	101	10	43	0	0	12	0	0
Stage 1	79	79	-	10	10	-	-	-	-	-	-	-
Stage 2	26	12	-	95	91	-	-	-	-	-	-	-
Critical Hdwy	7.16	6.58	6.2	7.77	6.7	6.73	4.1	-	-	4.66	-	-
Critical Hdwy Stg 1	6.16	5.58	-	6.77	5.7	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.16	5.58	-	6.77	5.7	-	-	-	-	-	-	-
Follow-up Hdwy	3.554	4.072	3.3	4.103	4.18	3.777	2.2	-	-	2.704	-	-
Pot Cap-1 Maneuver	865	788	1049	742	756	940	1579	-	-	1317	-	-
Stage 1	920	818	-	866	853	-	-	-	-	-	-	-
Stage 2	981	874	-	774	786	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	823	773	1049	709	742	940	1579	-	-	1317	-	-
Mov Cap-2 Maneuver	823	773	-	709	742	-	-	-	-	-	-	-
Stage 1	920	802	-	866	853	-	-	-	-	-	-	-
Stage 2	946	874	-	730	771	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	10			9.3			0			2.8		
HCM LOS	B			A								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1579	-	-	802	868	1317	-	-				
HCM Lane V/C Ratio	-	-	-	0.099	0.042	0.019	-	-				
HCM Control Delay (s)	0	-	-	10	9.3	7.8	0	-				
HCM Lane LOS	A	-	-	B	A	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0.3	0.1	0.1	-	-				

26: Bouldercrest Rd SE & Continental Way/I-285 WB Off Ramp

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				 				 			 	
Traffic Volume (veh/h)	26	0	112	216	17	213	66	847	0	0	1124	18
Future Volume (veh/h)	26	0	112	216	17	213	66	847	0	0	1124	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	1722	0	1026	1767	1781	1767	700	1826	0	0	1856	1544
Adj Flow Rate, veh/h	27	0	0	220	17	217	67	864	0	0	1147	18
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, %	12	0	59	9	8	9	81	5	0	0	3	24
Cap, veh/h	119	0		801	287	241	195	2346	0	0	2034	755
Arrive On Green	0.04	0.00	0.00	0.25	0.16	0.16	0.11	1.00	0.00	0.00	1.00	1.00
Sat Flow, veh/h	1640	27		3264	1781	1497	666	3561	0	0	3618	1309
Grp Volume(v), veh/h	27	62.4		220	17	217	67	864	0	0	1147	18
Grp Sat Flow(s),veh/h/ln	1640	E		1632	1781	1497	666	1735	0	0	1763	1309
Q Serve(g_s), s	2.1			7.1	1.1	18.5	5.5	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	2.1			7.1	1.1	18.5	5.5	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00			1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h	119			801	287	241	195	2346	0	0	2034	755
V/C Ratio(X)	0.23			0.27	0.06	0.90	0.34	0.37	0.00	0.00	0.56	0.02
Avail Cap(c_a), veh/h	157			801	363	305	216	2346	0	0	2034	755
HCM Platoon Ratio	1.00			1.00	1.00	1.00	2.00	2.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	1.00			1.00	1.00	1.00	1.00	1.00	0.00	0.00	0.78	0.78
Uniform Delay (d), s/veh	61.0			39.7	46.2	53.5	8.7	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	1.4			0.2	0.1	24.1	2.2	0.4	0.0	0.0	0.9	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
%ile BackOfQ(95%),veh/ln	1.7			5.1	0.8	13.2	1.4	0.3	0.0	0.0	0.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.4			39.9	46.3	77.6	10.9	0.4	0.0	0.0	0.9	0.0
LnGrp LOS	E			D	D	E	B	A	A	A	A	A
Approach Vol, veh/h					454				931			
Approach Delay, s/veh					58.2				1.2			
Approach LOS					E				A			
Timer - Assigned Phs	1	2	3				6	7	8			
Phs Duration (G+Y+Rc), s	12.9	80.7	36.4				93.6	11.0	25.4			
Change Period (Y+Rc), s	6.0	* 5.7	4.5				* 5.7	6.0	4.5			
Max Green Setting (Gmax), s	11.0	* 62	16.5				* 79	8.0	26.5			
Max Q Clear Time (g_c+I1), s	7.5	2.0	9.1				2.0	4.1	20.5			
Green Ext Time (p_c), s	0.1	42.9	0.5				34.8	0.0	0.4			
Intersection Summary												
HCM 6th Ctrl Delay				11.7								
HCM 6th LOS				B								
Notes												
User approved pedestrian interval to be less than phase max green.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.												

27: Constitution Rd SE & Bouldercrest Rd SE



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	7	472	244	276	261	1
Future Volume (veh/h)	7	472	244	276	261	1
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	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	1826	1618	1841	1841	1900
Adj Flow Rate, veh/h	8	519	268	0	287	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	5	19	4	4	0
Cap, veh/h	555	1832	1179		379	
Arrive On Green	0.01	0.53	0.38	0.00	0.22	0.00
Sat Flow, veh/h	1810	3561	3237	0	1753	1610
Grp Volume(v), veh/h	8	519	268	0	287	0
Grp Sat Flow(s), veh/h/ln	1810	1735	1537	0	1753	1610
Q Serve(g_s), s	0.1	3.5	2.5	0.0	6.5	0.0
Cycle Q Clear(g_c), s	0.1	3.5	2.5	0.0	6.5	0.0
Prop In Lane	1.00			0.00	1.00	1.00
Lane Grp Cap(c), veh/h	555	1832	1179		379	
V/C Ratio(X)	0.01	0.28	0.23		0.76	
Avail Cap(c_a), veh/h	1781	4475	3966		1203	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	6.9	5.6	8.9	0.0	15.6	0.0
Incr Delay (d2), s/veh	0.0	0.2	0.2	0.0	3.1	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%), veh/ln	0.0	1.2	1.0	0.0	4.4	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	6.9	5.8	9.1	0.0	18.8	0.0
LnGrp LOS	A	A	A		B	
Approach Vol, veh/h		527	268	A	287	A
Approach Delay, s/veh		5.8	9.1		18.8	
Approach LOS		A	A		B	
Timer - Assigned Phs		2			5	6
Phs Duration (G+Y+Rc), s		27.6			6.2	21.4
Change Period (Y+Rc), s		5.1			* 5.7	5.1
Max Green Setting (Gmax), s		54.9			* 29	54.9
Max Q Clear Time (g_c+I1), s		5.5			2.1	4.5
Green Ext Time (p_c), s		16.9			0.0	8.1

Intersection Summary

HCM 6th Ctrl Delay	10.0
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

29: Bouldercrest Rd SE & Clifton Church Rd



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↰↱	↱	↰↱	↱	↰↱	↰↱
Traffic Volume (veh/h)	625	141	379	707	216	517
Future Volume (veh/h)	625	141	379	707	216	517
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	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	1870	1722	1870	1900	1841
Adj Flow Rate, veh/h	665	150	403	752	230	550
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	1	2	12	2	0	4
Cap, veh/h	739	336	1907	924	410	2427
Arrive On Green	0.21	0.21	0.19	0.19	0.07	0.69
Sat Flow, veh/h	3483	1585	3358	1585	1810	3589
Grp Volume(v), veh/h	665	150	403	752	230	550
Grp Sat Flow(s), veh/h/ln	1742	1585	1636	1585	1810	1749
Q Serve(g_s), s	24.2	10.7	13.5	59.1	6.4	7.4
Cycle Q Clear(g_c), s	24.2	10.7	13.5	59.1	6.4	7.4
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	739	336	1907	924	410	2427
V/C Ratio(X)	0.90	0.45	0.21	0.81	0.56	0.23
Avail Cap(c_a), veh/h	764	347	1907	924	417	2427
HCM Platoon Ratio	1.00	1.00	0.33	0.33	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.93	0.93	0.91	0.91
Uniform Delay (d), s/veh	49.9	44.6	27.3	45.8	10.2	7.2
Incr Delay (d2), s/veh	14.4	2.0	0.2	7.3	2.6	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%), veh/ln	7.5	15.0	9.8	35.2	4.6	4.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	64.2	46.6	27.6	53.1	12.8	7.4
LnGrp LOS	E	D	C	D	B	A
Approach Vol, veh/h	815		1155			780
Approach Delay, s/veh	61.0		44.2			9.0
Approach LOS	E		D			A
Timer - Assigned Phs	2		4		5	6
Phs Duration (G+Y+Rc), s	95.9		34.1		14.5	81.5
Change Period (Y+Rc), s	* 5.7		6.5		6.0	* 5.7
Max Green Setting (Gmax), s	* 89		28.5		9.0	* 74
Max Q Clear Time (g_c+I1), s	9.4		26.2		8.4	61.1
Green Ext Time (p_c), s	21.0		1.4		0.1	9.9
Intersection Summary						
HCM 6th Ctrl Delay			39.2			
HCM 6th LOS			D			
Notes						
User approved pedestrian interval to be less than phase max green.						
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.						

31: Bouldercrest Rd SE & I-285 WB On Ramps

Intersection												
Int Delay, s/veh	0											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations						↗		↗↗	↗		↗↗	↗
Traffic Vol, veh/h	0	0	0	0	0	0	0	913	216	0	922	530
Future Vol, veh/h	0	0	0	0	0	0	0	913	216	0	922	530
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	6	7	0	2	7
Mvmt Flow	0	0	0	0	0	0	0	992	235	0	1002	576
Major/Minor				Minor1		Major1		Major2				
Conflicting Flow All				-	-	496	-	0	0	-	-	0
Stage 1				-	-	-	-	-	-	-	-	-
Stage 2				-	-	-	-	-	-	-	-	-
Critical Hdwy				-	-	6.9	-	-	-	-	-	-
Critical Hdwy Stg 1				-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2				-	-	-	-	-	-	-	-	-
Follow-up Hdwy				-	-	3.3	-	-	-	-	-	-
Pot Cap-1 Maneuver				0	0	525	0	-	-	0	-	-
Stage 1				0	0	-	0	-	-	0	-	-
Stage 2				0	0	-	0	-	-	0	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver				-	0	525	-	-	-	-	-	-
Mov Cap-2 Maneuver				-	0	-	-	-	-	-	-	-
Stage 1				-	0	-	-	-	-	-	-	-
Stage 2				-	0	-	-	-	-	-	-	-
Approach				WB		NB		SB				
HCM Control Delay, s				0		0		0				
HCM LOS				A								
Minor Lane/Major Mvmt		NBT	NBRWBLn1	SBT	SBR							
Capacity (veh/h)		-	-	-	-							
HCM Lane V/C Ratio		-	-	-	-							
HCM Control Delay (s)		-	-	0	-							
HCM Lane LOS		-	-	A	-							
HCM 95th %tile Q(veh)		-	-	-	-							

34: Bouldercrest Rd SE & I-285 EB Ramps

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	465	0	347	0	0	0	0	664	98	108	814	0
Future Volume (veh/h)	465	0	347	0	0	0	0	664	98	108	814	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	1826	1900	1826				0	1811	1781	1781	1870	0
Adj Flow Rate, veh/h	505	0	377				0	722	107	117	885	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	5	0	5				0	6	8	8	2	0
Cap, veh/h	915	0	815				0	1923	844	775	2285	0
Arrive On Green	0.26	0.00	0.26				0.00	0.56	0.56	0.08	1.00	0.00
Sat Flow, veh/h	3478	0	3095				0	3532	1510	3291	3647	0
Grp Volume(v), veh/h	505	0	377				0	722	107	117	885	0
Grp Sat Flow(s),veh/h/ln	1739	0	1547				0	1721	1510	1646	1777	0
Q Serve(g_s), s	16.3	0.0	13.3				0.0	15.2	4.4	1.9	0.0	0.0
Cycle Q Clear(g_c), s	16.3	0.0	13.3				0.0	15.2	4.4	1.9	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	915	0	815				0	1923	844	775	2285	0
V/C Ratio(X)	0.55	0.00	0.46				0.00	0.38	0.13	0.15	0.39	0.00
Avail Cap(c_a), veh/h	1399	0	1245				0	1923	844	1005	2285	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	41.3	0.0	40.2				0.0	16.0	13.6	10.9	0.0	0.0
Incr Delay (d2), s/veh	2.4	0.0	1.9				0.0	0.6	0.3	0.1	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
%ile BackOfQ(95%),veh/ln	11.6	0.0	9.0				0.0	10.0	2.8	1.2	0.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.7	0.0	42.1				0.0	16.6	13.9	11.1	0.5	0.0
LnGrp LOS	D	A	D				A	B	B	B	A	A
Approach Vol, veh/h	882						829			1002		
Approach Delay, s/veh	43.0						16.2			1.7		
Approach LOS	D						B			A		
Timer - Assigned Phs	2			5			6			8		
Phs Duration (G+Y+Rc), s	90.1			10.9			79.2			39.9		
Change Period (Y+Rc), s	6.5			6.0			6.5			5.7		
Max Green Setting (Gmax), s	65.5			14.0			45.5			52.3		
Max Q Clear Time (g_c+I1), s	2.0			3.9			17.2			18.3		
Green Ext Time (p_c), s	32.7			0.3			17.1			15.9		
Intersection Summary												
HCM 6th Ctrl Delay			19.6									
HCM 6th LOS			B									
Notes												

APPENDIX I

CAPACITY ANALYSIS REPORTS - BUILD CONDITIONS



AM PEAK HOUR

3: Moreland Ave (SR 42) & I-285 EB Ramps

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	494	0	342	0	0	0	0	1216	202	455	1382	0
Future Volume (veh/h)	494	0	342	0	0	0	0	1216	202	455	1382	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	1707	1900	1722				0	1693	1322	1781	1678	0
Adj Flow Rate, veh/h	531	0	0				0	1308	0	489	1486	0
Peak Hour Factor	0.93	0.93	0.93				0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	13	0	12				0	14	39	8	15	0
Cap, veh/h	638	0					0	2913		550	2269	0
Arrive On Green	0.20	0.00	0.00				0.00	0.50	0.00	0.17	0.71	0.00
Sat Flow, veh/h	3252	0	1459				0	6059	1120	3291	3272	0
Grp Volume(v), veh/h	531	0	0				0	1308	0	489	1486	0
Grp Sat Flow(s),veh/h/ln	1626	0	1459				0	1456	1120	1646	1594	0
Q Serve(g_s), s	22.0	0.0	0.0				0.0	20.3	0.0	20.3	35.2	0.0
Cycle Q Clear(g_c), s	22.0	0.0	0.0				0.0	20.3	0.0	20.3	35.2	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	638	0					0	2913		550	2269	0
V/C Ratio(X)	0.83	0.00					0.00	0.45		0.89	0.66	0.00
Avail Cap(c_a), veh/h	832	0					0	2913		912	2269	0
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	0.00				0.00	1.00	0.00	0.27	0.27	0.00
Uniform Delay (d), s/veh	54.1	0.0	0.0				0.0	22.5	0.0	57.0	10.9	0.0
Incr Delay (d2), s/veh	7.8	0.0	0.0				0.0	0.5	0.0	1.0	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
%ile BackOfQ(95%),veh/ln	14.6	0.0	0.0				0.0	11.1	0.0	10.8	13.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.8	0.0	0.0				0.0	23.0	0.0	58.0	11.3	0.0
LnGrp LOS	E	A					A	C		E	B	A
Approach Vol, veh/h		531	A					1308	A		1975	
Approach Delay, s/veh		61.8						23.0			22.9	
Approach LOS		E						C			C	
Timer - Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		105.3		34.7	29.6	75.7						
Change Period (Y+Rc), s		* 5.7		* 7.2	* 6.2	* 5.7						
Max Green Setting (Gmax), s		* 91		* 36	* 39	* 46						
Max Q Clear Time (g_c+I1), s		37.2		24.0	22.3	22.3						
Green Ext Time (p_c), s		51.0		3.5	1.1	22.5						
Intersection Summary												
HCM 6th Ctrl Delay			28.4									
HCM 6th LOS			C									
Notes												
User approved volume balancing among the lanes for turning movement.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.												

6: Moreland Ave (SR 42) & I-285 WB Ramps



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↶	↷	↶	↶	↶			↶	↶
Traffic Volume (veh/h)	0	0	0	322	2	1552	368	1342	0	0	1515	385
Future Volume (veh/h)	0	0	0	322	2	1552	368	1342	0	0	1515	385
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				1737	1900	1856	1411	1811	0	0	1722	1678
Adj Flow Rate, veh/h				224	0	0	383	1398	0	0	1578	0
Peak Hour Factor				0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %				11	0	3	33	6	0	0	12	15
Cap, veh/h				261	0		428	2977	0	0	1663	
Arrive On Green				0.16	0.00	0.00	0.28	0.60	0.00	0.00	0.28	0.00
Sat Flow, veh/h				1654	0	3145	1344	5107	0	0	6165	1422
Grp Volume(v), veh/h				224	0	0	383	1398	0	0	1578	0
Grp Sat Flow(s),veh/h/ln				1654	0	1572	1344	1648	0	0	1481	1422
Q Serve(g_s), s				18.5	0.0	0.0	32.2	22.0	0.0	0.0	36.6	0.0
Cycle Q Clear(g_c), s				18.5	0.0	0.0	32.2	22.0	0.0	0.0	36.6	0.0
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				261	0		428	2977	0	0	1663	
V/C Ratio(X)				0.86	0.00		0.90	0.47	0.00	0.00	0.95	
Avail Cap(c_a), veh/h				506	0		428	2977	0	0	1663	
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	0.00	0.81	0.81	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				57.4	0.0	0.0	37.1	15.4	0.0	0.0	49.4	0.0
Incr Delay (d2), s/veh				15.4	0.0	0.0	20.4	0.4	0.0	0.0	12.9	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				13.6	0.0	0.0	20.4	12.0	0.0	0.0	20.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				72.8	0.0	0.0	57.5	15.9	0.0	0.0	62.2	0.0
LnGrp LOS				E	A		E	B	A	A	E	
Approach Vol, veh/h					224	A		1781			1578	A
Approach Delay, s/veh					72.8			24.8			62.2	
Approach LOS					E			C			E	
Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	45.0	45.5				90.5		29.3				
Change Period (Y+Rc), s	6.3	* 6.2				* 6.2		7.2				
Max Green Setting (Gmax), s	39	* 39				* 84		42.8				
Max Q Clear Time (g_c+R), s	34.2	38.6				24.0		20.5				
Green Ext Time (p_c), s	0.4	0.2				54.1		1.7				

Intersection Summary

HCM 6th Ctrl Delay 44.3

HCM 6th LOS D

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

9: Moreland Ave (SR 42) & UPS DW/Bailey St

Intersection

Int Delay, s/veh 111.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕	↕	↕		↕	↕	
Traffic Vol, veh/h	5	3	24	90	0	228	38	2565	179	176	714	5
Future Vol, veh/h	5	3	24	90	0	228	38	2565	179	176	714	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	Yield	-	-	None	-	-	None
Storage Length	-	-	-	-	-	60	125	-	-	215	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	100	0	54	6	0	15	28	6	44	9	9	33
Mvmt Flow	6	3	27	100	0	253	42	2850	199	196	793	6

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2412	4321	400	3745	4225	1525	799	0	0	3049	0	0
Stage 1	1188	1188	-	3034	3034	-	-	-	-	-	-	-
Stage 2	1224	3133	-	711	1191	-	-	-	-	-	-	-
Critical Hdwy	8.4	6.5	8.18	6.52	6.5	7.4	5.86	-	-	5.48	-	-
Critical Hdwy Stg 1	9.3	5.5	-	7.42	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	8.7	5.5	-	6.82	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	4.8	4	4.44	3.86	4	4.05	3.38	-	-	3.19	-	-
Pot Cap-1 Maneuver	9	~ 2	414	~ 4	2	~ 81	412	-	-	~ 32	-	-
Stage 1	69	264	-	~ 6	30	-	-	-	-	-	-	-
Stage 2	79	27	-	347	263	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	-	0	414	-	0	~ 81	412	-	-	~ 32	-	-
Mov Cap-2 Maneuver	-	0	-	-	0	-	-	-	-	-	-	-
Stage 1	62	0	-	~ 5	27	-	-	-	-	-	-	-
Stage 2	-	24	-	-	0	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s			0.2	\$ 500.5
HCM LOS	-	-		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1WBLn2	SBL	SBT	SBR
Capacity (veh/h)	412	-	-	-	81	~ 32	-
HCM Lane V/C Ratio	0.102	-	-	-	3.128	6.111	-
HCM Control Delay (s)	14.7	-	-	-	\$ 1068.2	\$ 2544.9	-
HCM Lane LOS	B	-	-	-	F	F	-
HCM 95th %tile Q(veh)	0.3	-	-	-	25.3	23.6	-

Notes

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

12: Fayetteville Rd SE & Bailey St & Woodstock Rd

Intersection

Intersection Delay, s/veh 15.9

Intersection LOS C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	357	1	16	303	15	15	7	75	2	3	0
Future Vol, veh/h	0	357	1	16	303	15	15	7	75	2	3	0
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles, %	0	10	0	14	16	14	38	17	8	0	0	0
Mvmt Flow	0	458	1	21	388	19	19	9	96	3	4	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	17	16.1	11.1	9.6
HCM LOS	C	C	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	15%	0%	5%	40%
Vol Thru, %	7%	100%	91%	60%
Vol Right, %	77%	0%	4%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	97	358	334	5
LT Vol	15	0	16	2
Through Vol	7	357	303	3
RT Vol	75	1	15	0
Lane Flow Rate	124	459	428	6
Geometry Grp	1	1	1	1
Degree of Util (X)	0.218	0.648	0.614	0.012
Departure Headway (Hd)	6.297	5.082	5.166	6.513
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	570	716	702	548
Service Time	4.338	3.093	3.178	4.566
HCM Lane V/C Ratio	0.218	0.641	0.61	0.011
HCM Control Delay	11.1	17	16.1	9.6
HCM Lane LOS	B	C	C	A
HCM 95th-tile Q	0.8	4.8	4.2	0

15: Fayetteville Rd SE & Constitution Rd SE

Build Conditions

AM Peak Hour

Intersection						
Int Delay, s/veh	0.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	323	4	14	420	5	11
Future Vol, veh/h	323	4	14	420	5	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	11	0	8	10	0	44
Mvmt Flow	351	4	15	457	5	12
Major/Minor		Major1		Minor2		
Conflicting Flow All		0	0	244	472	
Stage 1		-	-	0	0	
Stage 2		-	-	244	472	
Critical Hdwy		-	-	6.4	6.94	
Critical Hdwy Stg 1		-	-	-	-	
Critical Hdwy Stg 2		-	-	5.4	5.94	
Follow-up Hdwy		-	-	3.5	4.396	
Pot Cap-1 Maneuver		-	-	749	434	
Stage 1		-	-	-	-	
Stage 2		-	-	801	495	
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver		-	-	749	0	
Mov Cap-2 Maneuver		-	-	749	0	
Stage 1		-	-	-	0	
Stage 2		-	-	801	0	
Approach		NB		SB		
HCM Control Delay, s		0		9.9		
HCM LOS				A		
Minor Lane/Major Mvmt	NBT	NBR	SBLn1			
Capacity (veh/h)	-	-	749			
HCM Lane V/C Ratio	-	-	0.023			
HCM Control Delay (s)	-	-	9.9			
HCM Lane LOS	-	-	A			
HCM 95th %tile Q(veh)	-	-	0.1			

17: Blackhall Studios DW 1 & Constitution Rd SE

Intersection

Int Delay, s/veh 1.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗		↖	↖	↗
Traffic Vol, veh/h	274	151	62	304	23	34
Future Vol, veh/h	274	151	62	304	23	34
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Yield	-	None	-	Yield
Storage Length	-	110	-	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	9	0	5	2	0	0
Mvmt Flow	291	161	66	323	24	36

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	291
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.15
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.245
Pot Cap-1 Maneuver	-	-	1254
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1254
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.4	12.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	359	753	-	-	1254	-
HCM Lane V/C Ratio	0.068	0.048	-	-	0.053	-
HCM Control Delay (s)	15.8	10	-	-	8	0
HCM Lane LOS	C	B	-	-	A	A
HCM 95th %tile Q(veh)	0.2	0.2	-	-	0.2	-

19: Blackhall Studios DW 2 & Constitution Rd SE

Intersection

Int Delay, s/veh 2.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
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Lane Configurations	↑	↑		↑	↑	
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Traffic Vol, veh/h	152	156	85	327	39	66
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Future Vol, veh/h	152	156	85	327	39	66
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Conflicting Peds, #/hr	0	0	0	0	0	0
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Sign Control	Free	Free	Free	Free	Stop	Stop
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RT Channelized	-	None	-	None	-	None
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Storage Length	-	80	-	-	0	-
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Veh in Median Storage, #	0	-	-	0	0	-
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Grade, %	0	-	-	0	0	-
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Peak Hour Factor	94	94	94	94	94	94
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Heavy Vehicles, %	9	0	10	3	13	16
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Mvmt Flow	162	166	90	348	41	70
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Major/Minor	Major1	Major2	Minor1
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Conflicting Flow All	0	0	328	0	690	162
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Stage 1	-	-	-	-	162	-
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Stage 2	-	-	-	-	528	-
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Critical Hdwy	-	-	4.2	-	6.53	6.36
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Critical Hdwy Stg 1	-	-	-	-	5.53	-
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Critical Hdwy Stg 2	-	-	-	-	5.53	-
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Follow-up Hdwy	-	-	2.29	-	3.617	3.444
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Pot Cap-1 Maneuver	-	-	1188	-	395	848
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Stage 1	-	-	-	-	841	-
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Stage 2	-	-	-	-	570	-
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Platoon blocked, %	-	-	-	-	-	-
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Mov Cap-1 Maneuver	-	-	1188	-	358	848
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Mov Cap-2 Maneuver	-	-	-	-	358	-
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Stage 1	-	-	-	-	841	-
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Stage 2	-	-	-	-	516	-
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Approach	EB	WB	NB
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HCM Control Delay, s	0	1.7	13
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HCM LOS			B
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Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
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Capacity (veh/h)	562	-	-	1188	-
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HCM Lane V/C Ratio	0.199	-	-	0.076	-
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HCM Control Delay (s)	13	-	-	8.3	0
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HCM Lane LOS	B	-	-	A	A
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HCM 95th %tile Q(veh)	0.7	-	-	0.2	-
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21: International Park Dr SE & Constitution Rd SE

Intersection												
Int Delay, s/veh	19.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	136	74	319	347	7	50	9	106	19	43	15
Future Vol, veh/h	8	136	74	319	347	7	50	9	106	19	43	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	130	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	14	4	16	7	1	25	18	17	68	10	0	0
Mvmt Flow	8	140	76	329	358	7	52	9	109	20	44	15
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	365	0	0	216	0	0	1243	1217	108	1107	1248	358
Stage 1	-	-	-	-	-	-	194	194	-	1016	1016	-
Stage 2	-	-	-	-	-	-	1049	1023	-	91	232	-
Critical Hdwy	4.31	-	-	4.205	-	-	7.57	6.755	7.92	7.45	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.77	5.755	-	6.25	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.37	5.755	-	6.65	5.5	-
Follow-up Hdwy	2.333	-	-	2.2665	-	-	3.671	4.1615	3.946	3.595	4	3.3
Pot Cap-1 Maneuver	1119	-	-	1320	-	-	127	164	763	167	175	691
Stage 1	-	-	-	-	-	-	750	708	-	273	318	-
Stage 2	-	-	-	-	-	-	250	287	-	885	716	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1119	-	-	1320	-	-	75	122	763	109	131	691
Mov Cap-2 Maneuver	-	-	-	-	-	-	75	122	-	109	131	-
Stage 1	-	-	-	-	-	-	745	703	-	271	239	-
Stage 2	-	-	-	-	-	-	149	216	-	743	711	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			4.1			93.6			55.1		
HCM LOS							F			F		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	188	1119	-	-	1320	-	-	147				
HCM Lane V/C Ratio	0.905	0.007	-	-	0.249	-	-	0.54				
HCM Control Delay (s)	93.6	8.2	-	-	8.6	-	-	55.1				
HCM Lane LOS	F	A	-	-	A	-	-	F				
HCM 95th %tile Q(veh)	6.9	0	-	-	1	-	-	2.7				

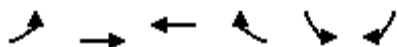
24: International Park Dr SE & Blackhall Studios East/Continental Way

Intersection												
Int Delay, s/veh	13.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	64	8	1	228	27	11	3	46	40	18	226	87
Future Vol, veh/h	64	8	1	228	27	11	3	46	40	18	226	87
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	76	76	76	76	76	76	76	76	76	76	76	76
Heavy Vehicles, %	22	43	0	0	0	33	0	71	100	40	33	17
Mvmt Flow	84	11	1	300	36	14	4	61	53	24	297	114
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	523	524	354	504	555	88	411	0	0	114	0	0
Stage 1	402	402	-	96	96	-	-	-	-	-	-	-
Stage 2	121	122	-	408	459	-	-	-	-	-	-	-
Critical Hdwy	7.32	6.93	6.2	7.1	6.5	6.53	4.1	-	-	4.5	-	-
Critical Hdwy Stg 1	6.32	5.93	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.32	5.93	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.698	4.387	3.3	3.5	4	3.597	2.2	-	-	2.56	-	-
Pot Cap-1 Maneuver	434	405	694	482	443	891	1159	-	-	1270	-	-
Stage 1	587	535	-	916	819	-	-	-	-	-	-	-
Stage 2	837	722	-	624	570	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	391	393	694	461	430	891	1159	-	-	1270	-	-
Mov Cap-2 Maneuver	391	393	-	461	430	-	-	-	-	-	-	-
Stage 1	585	522	-	912	816	-	-	-	-	-	-	-
Stage 2	784	719	-	595	556	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	17.1		32.3		0.3		0.4					
HCM LOS	C		D									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1159	-	-	394	467	1270	-	-				
HCM Lane V/C Ratio	0.003	-	-	0.244	0.749	0.019	-	-				
HCM Control Delay (s)	8.1	0	-	17.1	32.3	7.9	0	-				
HCM Lane LOS	A	A	-	C	D	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0.9	6.3	0.1	-	-				

26: Bouldercrest Rd SE & Continental Way/I-285 WB Off Ramp

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	0	114	108	202	343	133	1053	0	0	752	11
Future Volume (veh/h)	25	0	114	108	202	343	133	1053	0	0	752	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	1574	0	759	1752	1767	1752	1129	1856	0	0	1752	1455
Adj Flow Rate, veh/h	27	0	0	115	215	365	141	1120	0	0	800	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, %	22	0	77	10	9	10	52	3	0	0	10	30
Cap, veh/h	113	0		1033	414	348	328	2124	0	0	1565	580
Arrive On Green	0.04	0.00	0.00	0.32	0.23	0.23	0.17	1.00	0.00	0.00	0.94	0.94
Sat Flow, veh/h	1499	27		3237	1767	1485	1076	3618	0	0	3416	1233
Grp Volume(v), veh/h	27	62.6		115	215	365	141	1120	0	0	800	12
Grp Sat Flow(s),veh/h/ln	1499	E		1618	1767	1485	1076	1763	0	0	1664	1233
Q Serve(g_s), s	2.3			3.3	13.8	30.5	9.0	0.0	0.0	0.0	3.6	0.1
Cycle Q Clear(g_c), s	2.3			3.3	13.8	30.5	9.0	0.0	0.0	0.0	3.6	0.1
Prop In Lane	1.00			1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h	113			1033	414	348	328	2124	0	0	1565	580
V/C Ratio(X)	0.24			0.11	0.52	1.05	0.43	0.53	0.00	0.00	0.51	0.02
Avail Cap(c_a), veh/h	148			1033	414	348	359	2124	0	0	1565	580
HCM Platoon Ratio	1.00			1.00	1.00	1.00	2.00	2.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	1.00			1.00	1.00	1.00	1.00	1.00	0.00	0.00	0.90	0.90
Uniform Delay (d), s/veh	61.1			31.2	43.4	49.8	12.7	0.0	0.0	0.0	2.2	2.1
Incr Delay (d2), s/veh	1.5			0.0	1.1	61.3	1.9	0.9	0.0	0.0	1.1	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
%ile BackOfQ(95%),veh/ln	1.7			2.3	10.1	24.4	3.5	0.5	0.0	0.0	1.8	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.6			31.3	44.5	111.1	14.6	0.9	0.0	0.0	3.2	2.1
LnGrp LOS	E			C	D	F	B	A	A	A	A	A
Approach Vol, veh/h					695			1261			812	
Approach Delay, s/veh					77.3			2.5			3.2	
Approach LOS					E			A			A	
Timer - Assigned Phs	1	2	3			6	7	8				
Phs Duration (G+Y+Rc), s	17.2	66.8	46.0			84.0	11.0	35.0				
Change Period (Y+Rc), s	6.0	* 5.7	4.5			* 5.7	6.0	4.5				
Max Green Setting (Gmax), s	15.0	* 54	11.5			* 75	8.0	30.5				
Max Q Clear Time (g_c+I1), s	11.0	5.6	5.3			2.0	4.3	32.5				
Green Ext Time (p_c), s	0.3	25.5	0.2			47.6	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			21.9									
HCM 6th LOS			C									
Notes												
User approved pedestrian interval to be less than phase max green.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.												

27: Constitution Rd SE & Bouldercrest Rd SE



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	2	259	672	404	217	1
Future Volume (veh/h)	2	259	672	404	217	1
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	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	1515	1870	1870	1826	1900
Adj Flow Rate, veh/h	2	278	723	0	233	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	26	2	2	5	0
Cap, veh/h	447	1861	1949		297	
Arrive On Green	0.00	0.65	0.55	0.00	0.17	0.00
Sat Flow, veh/h	1810	2954	3741	0	1739	1610
Grp Volume(v), veh/h	2	278	723	0	233	0
Grp Sat Flow(s), veh/h/ln	1810	1439	1777	0	1739	1610
Q Serve(g_s), s	0.0	2.3	6.9	0.0	7.7	0.0
Cycle Q Clear(g_c), s	0.0	2.3	6.9	0.0	7.7	0.0
Prop In Lane	1.00			0.00	1.00	1.00
Lane Grp Cap(c), veh/h	447	1861	1949		297	
V/C Ratio(X)	0.00	0.15	0.37		0.78	
Avail Cap(c_a), veh/h	1330	2646	3268		851	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	5.8	4.1	7.6	0.0	23.7	0.0
Incr Delay (d2), s/veh	0.0	0.1	0.3	0.0	4.6	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%), veh/ln	0.0	0.7	3.3	0.0	5.8	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	5.8	4.2	7.9	0.0	28.3	0.0
LnGrp LOS	A	A	A		C	
Approach Vol, veh/h		280	723	A	233	A
Approach Delay, s/veh		4.2	7.9		28.3	
Approach LOS		A	A		C	
Timer - Assigned Phs		2			5	6
Phs Duration (G+Y+Rc), s		43.7			5.9	37.8
Change Period (Y+Rc), s		5.1			* 5.7	5.1
Max Green Setting (Gmax), s		54.9			* 29	54.9
Max Q Clear Time (g_c+I1), s		4.3			2.0	8.9
Green Ext Time (p_c), s		8.5			0.0	23.9

Intersection Summary

HCM 6th Ctrl Delay	10.9
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

29: Bouldercrest Rd SE & Clifton Church Rd



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↰↱	↱	↰↱	↱	↰↱	↰↱
Traffic Volume (veh/h)	415	196	880	541	128	348
Future Volume (veh/h)	415	196	880	541	128	348
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	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	1856	1900	1870	1856	1900	1663
Adj Flow Rate, veh/h	461	218	978	601	142	387
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	3	0	2	3	0	16
Cap, veh/h	625	294	2255	998	264	2287
Arrive On Green	0.18	0.18	0.21	0.21	0.04	0.72
Sat Flow, veh/h	3428	1610	3647	1572	1810	3243
Grp Volume(v), veh/h	461	218	978	601	142	387
Grp Sat Flow(s), veh/h/ln	1714	1610	1777	1572	1810	1580
Q Serve(g_s), s	16.5	16.6	31.1	45.0	3.4	5.0
Cycle Q Clear(g_c), s	16.5	16.6	31.1	45.0	3.4	5.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	625	294	2255	998	264	2287
V/C Ratio(X)	0.74	0.74	0.43	0.60	0.54	0.17
Avail Cap(c_a), veh/h	883	415	2255	998	311	2287
HCM Platoon Ratio	1.00	1.00	0.33	0.33	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.80	0.80	0.96	0.96
Uniform Delay (d), s/veh	50.2	50.3	31.1	36.6	14.1	5.7
Incr Delay (d2), s/veh	3.8	8.1	0.5	2.2	3.5	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%), veh/ln	11.8	21.3	20.7	26.0	3.0	2.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	54.0	58.3	31.6	38.7	17.5	5.8
LnGrp LOS	D	E	C	D	B	A
Approach Vol, veh/h	679		1579			529
Approach Delay, s/veh	55.4		34.3			9.0
Approach LOS	E		C			A
Timer - Assigned Phs	2		4		5	6
Phs Duration (G+Y+Rc), s	99.8		30.2		11.6	88.2
Change Period (Y+Rc), s	* 5.7		6.5		6.0	* 5.7
Max Green Setting (Gmax), s	* 84		33.5		9.0	* 69
Max Q Clear Time (g_c+I1), s	7.0		18.6		5.4	47.0
Green Ext Time (p_c), s	13.4		5.1		0.3	19.8
Intersection Summary						
HCM 6th Ctrl Delay			34.6			
HCM 6th LOS			C			
Notes						
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.						

31: Bouldercrest Rd SE & I-285 WB On Ramps

Intersection												
Int Delay, s/veh	0											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations						↗		↗↗	↗		↗↗	↗
Traffic Vol, veh/h	0	0	0	0	0	0	0	1186	357	0	485	489
Future Vol, veh/h	0	0	0	0	0	0	0	1186	357	0	485	489
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	6	9	0	8	9
Mvmt Flow	0	0	0	0	0	0	0	1289	388	0	527	532
Major/Minor				Minor1		Major1		Major2				
Conflicting Flow All				-	-	645	-	0	0	-	-	0
Stage 1				-	-	-	-	-	-	-	-	
Stage 2				-	-	-	-	-	-	-	-	
Critical Hdwy				-	-	6.9	-	-	-	-	-	
Critical Hdwy Stg 1				-	-	-	-	-	-	-	-	
Critical Hdwy Stg 2				-	-	-	-	-	-	-	-	
Follow-up Hdwy				-	-	3.3	-	-	-	-	-	
Pot Cap-1 Maneuver				0	0	420	0	-	-	0	-	
Stage 1				0	0	-	0	-	-	0	-	
Stage 2				0	0	-	0	-	-	0	-	
Platoon blocked, %								-	-		-	
Mov Cap-1 Maneuver				-	0	420	-	-	-	-	-	
Mov Cap-2 Maneuver				-	0	-	-	-	-	-	-	
Stage 1				-	0	-	-	-	-	-	-	
Stage 2				-	0	-	-	-	-	-	-	
Approach				WB		NB		SB				
HCM Control Delay, s				0		0		0				
HCM LOS				A								
Minor Lane/Major Mvmt		NBT	NBRWBLn1	SBT	SBR							
Capacity (veh/h)		-	-	-	-							
HCM Lane V/C Ratio		-	-	-	-							
HCM Control Delay (s)		-	-	0	-							
HCM Lane LOS		-	-	A	-							
HCM 95th %tile Q(veh)		-	-	-	-							

34: Bouldercrest Rd SE & I-285 EB Ramps

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	529	0	216	0	0	0	0	1014	206	170	315	0
Future Volume (veh/h)	529	0	216	0	0	0	0	1014	206	170	315	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	1781	1900	1781				0	1811	1707	1707	1811	0
Adj Flow Rate, veh/h	575	0	235				0	1102	224	185	342	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	8	0	8				0	6	13	13	6	0
Cap, veh/h	829	0	737				0	1971	829	518	2278	0
Arrive On Green	0.24	0.00	0.24				0.00	0.57	0.57	0.09	1.00	0.00
Sat Flow, veh/h	3393	0	3019				0	3532	1447	3155	3532	0
Grp Volume(v), veh/h	575	0	235				0	1102	224	185	342	0
Grp Sat Flow(s),veh/h/ln	1697	0	1510				0	1721	1447	1577	1721	0
Q Serve(g_s), s	20.0	0.0	8.3				0.0	26.2	10.2	3.0	0.0	0.0
Cycle Q Clear(g_c), s	20.0	0.0	8.3				0.0	26.2	10.2	3.0	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	829	0	737				0	1971	829	518	2278	0
V/C Ratio(X)	0.69	0.00	0.32				0.00	0.56	0.27	0.36	0.15	0.00
Avail Cap(c_a), veh/h	1026	0	913				0	1971	829	723	2278	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	44.7	0.0	40.3				0.0	17.4	14.0	12.8	0.0	0.0
Incr Delay (d2), s/veh	4.8	0.0	1.1				0.0	1.2	0.8	0.5	0.1	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
%ile BackOfQ(95%),veh/ln	13.7	0.0	5.7				0.0	15.6	6.2	1.8	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.5	0.0	41.4				0.0	18.6	14.8	13.3	0.1	0.0
LnGrp LOS	D	A	D				A	B	B	B	A	A
Approach Vol, veh/h	810						1326			527		
Approach Delay, s/veh	47.1						18.0			4.8		
Approach LOS	D						B			A		
Timer - Assigned Phs	2			5			6			8		
Phs Duration (G+Y+Rc), s	92.6			11.6			81.0			37.4		
Change Period (Y+Rc), s	6.5			6.0			6.5			5.7		
Max Green Setting (Gmax), s	78.5			14.0			58.5			39.3		
Max Q Clear Time (g_c+I1), s	2.0			5.0			28.2			22.0		
Green Ext Time (p_c), s	10.2			0.5			25.4			9.7		
Intersection Summary												
HCM 6th Ctrl Delay			24.2									
HCM 6th LOS			C									
Notes												

PM PEAK HOUR

3: Moreland Ave (SR 42) & I-285 EB Ramps

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	391	4	295	0	0	0	0	641	233	1419	736	0
Future Volume (veh/h)	391	4	295	0	0	0	0	641	233	1419	736	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	1752	788	1544				0	1500	1366	1811	1618	0
Adj Flow Rate, veh/h	415	0	0				0	675	0	1494	775	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	10	75	24				0	27	36	6	19	0
Cap, veh/h	506	0					0	1458		1361	2278	0
Arrive On Green	0.15	0.00	0.00				0.00	0.28	0.00	0.41	0.74	0.00
Sat Flow, veh/h	3337	0	1309				0	5369	1158	3346	3156	0
Grp Volume(v), veh/h	415	0	0				0	675	0	1494	775	0
Grp Sat Flow(s),veh/h/ln	1668	0	1309				0	1290	1158	1673	1537	0
Q Serve(g_s), s	14.5	0.0	0.0				0.0	13.0	0.0	48.8	10.5	0.0
Cycle Q Clear(g_c), s	14.5	0.0	0.0				0.0	13.0	0.0	48.8	10.5	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	506	0					0	1458		1361	2278	0
V/C Ratio(X)	0.82	0.00					0.00	0.46		1.10	0.34	0.00
Avail Cap(c_a), veh/h	634	0					0	1458		1361	2278	0
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	0.00				0.00	1.00	0.00	0.42	0.42	0.00
Uniform Delay (d), s/veh	49.3	0.0	0.0				0.0	35.5	0.0	35.6	5.4	0.0
Incr Delay (d2), s/veh	9.2	0.0	0.0				0.0	1.1	0.0	49.6	0.2	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	10.8	0.0	0.0				0.0	7.3	0.0	36.1	4.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.5	0.0	0.0				0.0	36.6	0.0	85.2	5.6	0.0
LnGrp LOS	E	A					A	D		F	A	A
Approach Vol, veh/h		415	A					675	A		2269	
Approach Delay, s/veh		58.5						36.6			58.0	
Approach LOS		E						D			E	
Timer - Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		94.6		25.4	55.0	39.6						
Change Period (Y+Rc), s		* 5.7		* 7.2	* 6.2	* 5.7						
Max Green Setting (Gmax), s		* 84		* 23	* 49	* 29						
Max Q Clear Time (g_c+I1), s		12.5		16.5	50.8	15.0						
Green Ext Time (p_c), s		38.1		1.7	0.0	10.5						
Intersection Summary												
HCM 6th Ctrl Delay			53.8									
HCM 6th LOS			D									
Notes												
User approved volume balancing among the lanes for turning movement.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.												

6: Moreland Ave (SR 42) & I-285 WB Ramps



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↖	↖	↖	↖	↖	↖	↖	↖	↖
Traffic Volume (veh/h)	0	0	0	239	4	418	338	694	0	0	1916	590
Future Volume (veh/h)	0	0	0	239	4	418	338	694	0	0	1916	590
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		No		No
Adj Sat Flow, veh/h/ln				1411	1530	1678	1455	1678	0	0	1811	1781
Adj Flow Rate, veh/h				175	0	0	367	754	0	0	2083	0
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				33	25	15	30	15	0	0	6	8
Cap, veh/h				199	0		409	3218	0	0	2560	
Arrive On Green				0.15	0.00	0.00	0.24	0.70	0.00	0.00	0.41	0.00
Sat Flow, veh/h				1344	0	2844	1386	4731	0	0	6484	1510
Grp Volume(v), veh/h				175	0	0	367	754	0	0	2083	0
Grp Sat Flow(s),veh/h/ln				1344	0	1422	1386	1527	0	0	1558	1510
Q Serve(g_s), s				15.3	0.0	0.0	23.7	7.0	0.0	0.0	35.5	0.0
Cycle Q Clear(g_c), s				15.3	0.0	0.0	23.7	7.0	0.0	0.0	35.5	0.0
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				199	0		409	3218	0	0	2560	
V/C Ratio(X)				0.88	0.00		0.90	0.23	0.00	0.00	0.81	
Avail Cap(c_a), veh/h				255	0		409	3218	0	0	2560	
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	0.00	0.78	0.78	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				50.0	0.0	0.0	32.4	6.4	0.0	0.0	31.3	0.0
Incr Delay (d2), s/veh				28.3	0.0	0.0	20.6	0.1	0.0	0.0	3.0	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
%ile BackOfQ(95%),veh/ln				10.8	0.0	0.0	17.4	3.5	0.0	0.0	19.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				78.3	0.0	0.0	53.1	6.5	0.0	0.0	34.3	0.0
LnGrp LOS				E	A		D	A	A	A	C	
Approach Vol, veh/h					175	A		1121			2083	A
Approach Delay, s/veh					78.3			21.7			34.3	
Approach LOS					E			C			C	
Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	35.0	55.5				90.5		25.0				
Change Period (Y+Rc), s	6.3	* 6.2				* 6.2		7.2				
Max Green Setting (Gmax), s	29	* 49				* 84		22.8				
Max Q Clear Time (g_c+2p), s	25.7	37.5				9.0		17.3				
Green Ext Time (p_c), s	0.3	11.3				36.5		0.5				

Intersection Summary

HCM 6th Ctrl Delay 32.4

HCM 6th LOS C

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

9: Moreland Ave (SR 42) & UPS DW/Bailey St

Intersection

Int Delay, s/veh 349.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕	↕ ↕ ↕			↕ ↕ ↕		
Traffic Vol, veh/h	6	3	15	223	2	218	24	906	86	199	1759	6
Future Vol, veh/h	6	3	15	223	2	218	24	906	86	199	1759	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	Yield	-	-	None	-	-	None
Storage Length	-	-	-	-	-	60	125	-	-	215	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	17	100	14	4	100	7	40	6	29	5	5	60
Mvmt Flow	6	3	16	232	2	227	25	944	90	207	1832	6

Major/Minor	Minor2		Minor1		Major1		Major2		Major2		Major2	
Conflicting Flow All	2678	3333	919	2187	3291	517	1838	0	0	1034	0	0
Stage 1	2249	2249	-	1039	1039	-	-	-	-	-	-	-
Stage 2	429	1084	-	1148	2252	-	-	-	-	-	-	-
Critical Hdwy	6.74	8.5	7.38	6.48	8.5	7.24	6.1	-	-	5.4	-	-
Critical Hdwy Stg 1	7.64	7.5	-	7.38	7.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	7.04	7.5	-	6.78	7.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.97	5	4.04	3.84	5	3.97	3.5	-	-	3.15	-	-
Pot Cap-1 Maneuver	19	~ 1	217	~ 47	~ 1	421	98	-	-	368	-	-
Stage 1	21	22	-	~ 184	156	-	-	-	-	-	-	-
Stage 2	492	146	-	~ 187	22	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 4	0	217	~ 20	0	421	98	-	-	368	-	-
Mov Cap-2 Maneuver	~ 4	0	-	~ 20	0	-	-	-	-	-	-	-
Stage 1	16	10	-	~ 137	116	-	-	-	-	-	-	-
Stage 2	166	109	-	~ 52	10	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, \$	1021.4	2651.3	1.3	2.7
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1WBLn2	SBL	SBT	SBR
Capacity (veh/h)	98	-	-	13 20 421	368	-	-
HCM Lane V/C Ratio	0.255	-	-	1.923 11.719 0.539	0.563	-	-
HCM Control Delay (s)	53.9	-	-	\$ 1021.4 \$ 5197.8	23.1 26.7	-	-
HCM Lane LOS	F	-	-	F F C	D	-	-
HCM 95th %tile Q(veh)	0.9	-	-	3.9 29.8 3.1	3.3	-	-

Notes

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

12: Fayetteville Rd SE & Bailey St & Woodstock Rd

Build Conditions

PM Peak Hour

Intersection	
Intersection Delay, s/veh	15.3
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	0	274	14	11	414	13	27	12	125	14	3	2
Future Vol, veh/h	0	274	14	11	414	13	27	12	125	14	3	2
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
Heavy Vehicles, %	0	8	0	13	7	0	4	10	25	0	0	0
Mvmt Flow	0	301	15	12	455	14	30	13	137	15	3	2
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	12.8	18.8	10.8	9.7
HCM LOS	B	C	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	16%	0%	3%	74%
Vol Thru, %	7%	95%	95%	16%
Vol Right, %	76%	5%	3%	11%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	164	288	438	19
LT Vol	27	0	11	14
Through Vol	12	274	414	3
RT Vol	125	14	13	2
Lane Flow Rate	180	316	481	21
Geometry Grp	1	1	1	1
Degree of Util (X)	0.28	0.463	0.689	0.037
Departure Headway (Hd)	5.595	5.266	5.152	6.428
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	642	684	703	556
Service Time	3.635	3.298	3.179	4.483
HCM Lane V/C Ratio	0.28	0.462	0.684	0.038
HCM Control Delay	10.8	12.8	18.8	9.7
HCM Lane LOS	B	B	C	A
HCM 95th-tile Q	1.1	2.5	5.5	0.1

15: Fayetteville Rd SE & Constitution Rd SE

Build Conditions

PM Peak Hour

Intersection						
Int Delay, s/veh	0.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	423	4	16	397	8	15
Future Vol, veh/h	423	4	16	397	8	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	5	0	7	11	0	8
Mvmt Flow	498	5	19	467	9	18
Major/Minor		Major1		Minor2		
Conflicting Flow All		0	0	253	486	
Stage 1		-	-	0	0	
Stage 2		-	-	253	486	
Critical Hdwy		-	-	6.4	6.58	
Critical Hdwy Stg 1		-	-	-	-	
Critical Hdwy Stg 2		-	-	5.4	5.58	
Follow-up Hdwy		-	-	3.5	4.072	
Pot Cap-1 Maneuver		-	-	740	473	
Stage 1		-	-	-	-	
Stage 2		-	-	794	541	
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver		-	-	740	0	
Mov Cap-2 Maneuver		-	-	740	0	
Stage 1		-	-	-	0	
Stage 2		-	-	794	0	
Approach		NB		SB		
HCM Control Delay, s		0		10		
HCM LOS				B		
Minor Lane/Major Mvmt	NBT	NBR	SBLn1			
Capacity (veh/h)	-	-	740			
HCM Lane V/C Ratio	-	-	0.037			
HCM Control Delay (s)	-	-	10			
HCM Lane LOS	-	-	B			
HCM 95th %tile Q(veh)	-	-	0.1			

17: Blackhall Studios DW 1 & Constitution Rd SE

Intersection

Int Delay, s/veh 4.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑		↑	↑	↑
Traffic Vol, veh/h	373	32	33	296	131	20
Future Vol, veh/h	373	32	33	296	131	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Yield	-	None	-	Yield
Storage Length	-	110	-	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	6	13	0	10	0	6
Mvmt Flow	429	37	38	340	151	23

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	429
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.1
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.2
Pot Cap-1 Maneuver	-	-	1141
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1141
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.8	23.7
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	322	618	-	-	1141	-
HCM Lane V/C Ratio	0.468	0.037	-	-	0.033	-
HCM Control Delay (s)	25.6	11.1	-	-	8.3	0
HCM Lane LOS	D	B	-	-	A	A
HCM 95th %tile Q(veh)	2.4	0.1	-	-	0.1	-

19: Blackhall Studios DW 2 & Constitution Rd SE

Intersection						
Int Delay, s/veh	5.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑		↑	↑	
Traffic Vol, veh/h	355	38	29	203	126	74
Future Vol, veh/h	355	38	29	203	126	74
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	80	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	6	15	5	9	0	5
Mvmt Flow	423	45	35	242	150	88
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	468	0	735	423
Stage 1	-	-	-	-	423	-
Stage 2	-	-	-	-	312	-
Critical Hdwy	-	-	4.15	-	6.4	6.25
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.245	-	3.5	3.345
Pot Cap-1 Maneuver	-	-	1078	-	390	624
Stage 1	-	-	-	-	665	-
Stage 2	-	-	-	-	747	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1078	-	375	624
Mov Cap-2 Maneuver	-	-	-	-	375	-
Stage 1	-	-	-	-	665	-
Stage 2	-	-	-	-	719	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		1.1		22.4	
HCM LOS	C					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	440	-	-	1078	-	
HCM Lane V/C Ratio	0.541	-	-	0.032	-	
HCM Control Delay (s)	22.4	-	-	8.4	0	
HCM Lane LOS	C	-	-	A	A	
HCM 95th %tile Q(veh)	3.1	-	-	0.1	-	

21: International Park Dr SE & Constitution Rd SE

Intersection												
Int Delay, s/veh	17.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	30	356	43	97	176	14	43	38	290	36	18	13
Future Vol, veh/h	30	356	43	97	176	14	43	38	290	36	18	13
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	130	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	1	32	67	5	0	16	0	19	4	8	9
Mvmt Flow	33	391	47	107	193	15	47	42	319	40	20	14
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	208	0	0	438	0	0	913	903	219	690	911	193
Stage 1	-	-	-	-	-	-	481	481	-	407	407	-
Stage 2	-	-	-	-	-	-	432	422	-	283	504	-
Critical Hdwy	4.1	-	-	5.105	-	-	7.54	6.5	7.185	7.36	6.62	6.335
Critical Hdwy Stg 1	-	-	-	-	-	-	6.74	5.5	-	6.16	5.62	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.34	5.5	-	6.56	5.62	-
Follow-up Hdwy	2.2	-	-	2.8365	-	-	3.652	4	3.4805	3.538	4.076	3.3855
Pot Cap-1 Maneuver	1375	-	-	806	-	-	223	279	741	342	265	828
Stage 1	-	-	-	-	-	-	506	557	-	615	584	-
Stage 2	-	-	-	-	-	-	569	592	-	696	528	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1375	-	-	806	-	-	181	236	741	149	224	828
Mov Cap-2 Maneuver	-	-	-	-	-	-	181	236	-	149	224	-
Stage 1	-	-	-	-	-	-	494	544	-	600	506	-
Stage 2	-	-	-	-	-	-	466	513	-	357	515	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.5			3.4			45.1			33.6		
HCM LOS							E			D		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	470	1375	-	-	806	-	-	198				
HCM Lane V/C Ratio	0.867	0.024	-	-	0.132	-	-	0.372				
HCM Control Delay (s)	45.1	7.7	-	-	10.1	-	-	33.6				
HCM Lane LOS	E	A	-	-	B	-	-	D				
HCM 95th %tile Q(veh)	9.1	0.1	-	-	0.5	-	-	1.6				

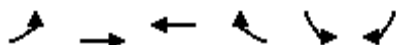
24: International Park Dr SE & Blackhall Studios East/Continental Way

Intersection												
Int Delay, s/veh	3.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	41	27	0	47	6	22	0	222	219	21	61	21
Future Vol, veh/h	41	27	0	47	6	22	0	222	219	21	61	21
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	6	8	0	67	20	53	0	40	25	56	50	17
Mvmt Flow	48	31	0	55	7	26	0	258	255	24	71	24
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	533	644	83	533	529	386	95	0	0	513	0	0
Stage 1	131	131	-	386	386	-	-	-	-	-	-	-
Stage 2	402	513	-	147	143	-	-	-	-	-	-	-
Critical Hdwy	7.16	6.58	6.2	7.77	6.7	6.73	4.1	-	-	4.66	-	-
Critical Hdwy Stg 1	6.16	5.58	-	6.77	5.7	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.16	5.58	-	6.77	5.7	-	-	-	-	-	-	-
Follow-up Hdwy	3.554	4.072	3.3	4.103	4.18	3.777	2.2	-	-	2.704	-	-
Pot Cap-1 Maneuver	451	384	982	371	431	563	1512	-	-	826	-	-
Stage 1	863	776	-	525	580	-	-	-	-	-	-	-
Stage 2	617	526	-	723	745	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	415	372	982	339	418	563	1512	-	-	826	-	-
Mov Cap-2 Maneuver	415	372	-	339	418	-	-	-	-	-	-	-
Stage 1	863	752	-	525	580	-	-	-	-	-	-	-
Stage 2	582	526	-	671	722	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	16.3		16.9		0		1.9					
HCM LOS	C		C									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1512	-	-	397	390	826	-	-				
HCM Lane V/C Ratio	-	-	-	0.199	0.224	0.03	-	-				
HCM Control Delay (s)	0	-	-	16.3	16.9	9.5	0	-				
HCM Lane LOS	A	-	-	C	C	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0.7	0.8	0.1	-	-				

26: Bouldercrest Rd SE & Continental Way/I-285 WB Off Ramp

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	0	327	216	53	236	74	855	0	0	1275	18
Future Volume (veh/h)	26	0	327	216	53	236	74	855	0	0	1275	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	1722	0	1026	1767	1781	1767	700	1826	0	0	1856	1544
Adj Flow Rate, veh/h	27	0	0	220	54	241	76	872	0	0	1301	18
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, %	12	0	59	9	8	9	81	5	0	0	3	24
Cap, veh/h	119	0		852	315	264	183	2291	0	0	1945	722
Arrive On Green	0.04	0.00	0.00	0.26	0.18	0.18	0.13	1.00	0.00	0.00	1.00	1.00
Sat Flow, veh/h	1640	27		3264	1781	1497	666	3561	0	0	3618	1309
Grp Volume(v), veh/h	27	62.4		220	54	241	76	872	0	0	1301	18
Grp Sat Flow(s),veh/h/ln	1640	E		1632	1781	1497	666	1735	0	0	1763	1309
Q Serve(g_s), s	2.1			6.9	3.3	20.5	6.6	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	2.1			6.9	3.3	20.5	6.6	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00			1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h	119			852	315	264	183	2291	0	0	1945	722
V/C Ratio(X)	0.23			0.26	0.17	0.91	0.42	0.38	0.00	0.00	0.67	0.02
Avail Cap(c_a), veh/h	157			852	363	305	198	2291	0	0	1945	722
HCM Platoon Ratio	1.00			1.00	1.00	1.00	2.00	2.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	1.00			1.00	1.00	1.00	1.00	1.00	0.00	0.00	0.79	0.79
Uniform Delay (d), s/veh	61.0			38.1	45.5	52.5	9.5	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	1.4			0.2	0.3	27.8	3.2	0.5	0.0	0.0	1.5	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
%ile BackOfQ(95%),veh/ln	1.7			5.0	2.7	14.7	1.7	0.3	0.0	0.0	0.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.4			38.2	45.7	80.3	12.7	0.5	0.0	0.0	1.5	0.1
LnGrp LOS	E			D	D	F	B	A	A	A	A	A
Approach Vol, veh/h					515		948			1319		
Approach Delay, s/veh					58.7		1.5			1.4		
Approach LOS					E		A			A		
Timer - Assigned Phs	1	2	3				6	7	8			
Phs Duration (G+Y+Rc), s	14.2	77.4	38.4				91.6	11.0	27.5			
Change Period (Y+Rc), s	6.0	* 5.7	4.5				* 5.7	6.0	4.5			
Max Green Setting (Gmax), s	11.0	* 62	16.5				* 79	8.0	26.5			
Max Q Clear Time (g_c+I1), s	8.6	2.0	8.9				2.0	4.1	22.5			
Green Ext Time (p_c), s	0.1	48.1	0.5				35.3	0.0	0.4			
Intersection Summary												
HCM 6th Ctrl Delay				12.5								
HCM 6th LOS				B								
Notes												
User approved pedestrian interval to be less than phase max green.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.												

27: Constitution Rd SE & Bouldercrest Rd SE



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	7	675	286	276	261	1
Future Volume (veh/h)	7	675	286	276	261	1
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	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	1826	1618	1841	1841	1900
Adj Flow Rate, veh/h	8	742	314	0	287	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	5	19	4	4	0
Cap, veh/h	608	2068	1483		362	
Arrive On Green	0.01	0.60	0.48	0.00	0.21	0.00
Sat Flow, veh/h	1810	3561	3237	0	1753	1610
Grp Volume(v), veh/h	8	742	314	0	287	0
Grp Sat Flow(s), veh/h/ln	1810	1735	1537	0	1753	1610
Q Serve(g_s), s	0.1	6.1	3.2	0.0	8.6	0.0
Cycle Q Clear(g_c), s	0.1	6.1	3.2	0.0	8.6	0.0
Prop In Lane	1.00			0.00	1.00	1.00
Lane Grp Cap(c), veh/h	608	2068	1483		362	
V/C Ratio(X)	0.01	0.36	0.21		0.79	
Avail Cap(c_a), veh/h	1550	3452	3060		928	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	6.4	5.7	8.2	0.0	20.8	0.0
Incr Delay (d2), s/veh	0.0	0.2	0.2	0.0	4.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%), veh/ln	0.1	2.3	1.4	0.0	6.3	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	6.4	5.9	8.4	0.0	24.7	0.0
LnGrp LOS	A	A	A		C	
Approach Vol, veh/h		750	314	A	287	A
Approach Delay, s/veh		6.0	8.4		24.7	
Approach LOS		A	A		C	
Timer - Assigned Phs		2			5	6
Phs Duration (G+Y+Rc), s		38.0			6.3	31.7
Change Period (Y+Rc), s		5.1			* 5.7	5.1
Max Green Setting (Gmax), s		54.9			* 29	54.9
Max Q Clear Time (g_c+I1), s		8.1			2.1	5.2
Green Ext Time (p_c), s		24.8			0.0	9.6

Intersection Summary

HCM 6th Ctrl Delay	10.5
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

29: Bouldercrest Rd SE & Clifton Church Rd



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↰↱	↱	↰↱	↱	↰	↰↱
Traffic Volume (veh/h)	625	152	410	707	268	668
Future Volume (veh/h)	625	152	410	707	268	668
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	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	1870	1722	1870	1900	1841
Adj Flow Rate, veh/h	665	162	436	752	285	711
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	1	2	12	2	0	4
Cap, veh/h	739	336	1893	917	404	2427
Arrive On Green	0.21	0.21	0.19	0.19	0.07	0.69
Sat Flow, veh/h	3483	1585	3358	1585	1810	3589
Grp Volume(v), veh/h	665	162	436	752	285	711
Grp Sat Flow(s), veh/h/ln	1742	1585	1636	1585	1810	1749
Q Serve(g_s), s	24.2	11.7	14.7	59.2	8.2	10.2
Cycle Q Clear(g_c), s	24.2	11.7	14.7	59.2	8.2	10.2
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	739	336	1893	917	404	2427
V/C Ratio(X)	0.90	0.48	0.23	0.82	0.71	0.29
Avail Cap(c_a), veh/h	764	347	1893	917	404	2427
HCM Platoon Ratio	1.00	1.00	0.33	0.33	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.92	0.92	0.85	0.85
Uniform Delay (d), s/veh	49.9	44.9	28.1	46.1	11.4	7.6
Incr Delay (d2), s/veh	14.3	2.3	0.3	7.5	5.9	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%), veh/ln	7.5	16.0	10.5	35.2	6.4	6.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	64.2	47.2	28.4	53.6	17.3	7.9
LnGrp LOS	E	D	C	D	B	A
Approach Vol, veh/h	827		1188			996
Approach Delay, s/veh	60.8		44.3			10.6
Approach LOS	E		D			B
Timer - Assigned Phs	2		4		5	6
Phs Duration (G+Y+Rc), s	95.9		34.1		15.0	80.9
Change Period (Y+Rc), s	* 5.7		6.5		6.0	* 5.7
Max Green Setting (Gmax), s	* 89		28.5		9.0	* 74
Max Q Clear Time (g_c+I1), s	12.2		26.2		10.2	61.2
Green Ext Time (p_c), s	29.7		1.4		0.0	10.1
Intersection Summary						
HCM 6th Ctrl Delay			37.7			
HCM 6th LOS			D			
Notes						
User approved pedestrian interval to be less than phase max green.						
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.						

31: Bouldercrest Rd SE & I-285 WB On Ramps

Intersection												
Int Delay, s/veh	0											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations						↗		↗↗	↗		↗↗	↗
Traffic Vol, veh/h	0	0	0	0	0	0	0	929	216	0	1216	602
Future Vol, veh/h	0	0	0	0	0	0	0	929	216	0	1216	602
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	6	7	0	2	7
Mvmt Flow	0	0	0	0	0	0	0	1010	235	0	1322	654
Major/Minor				Minor1		Major1		Major2				
Conflicting Flow All				-	-	505	-	0	0	-	-	0
Stage 1				-	-	-	-	-	-	-	-	-
Stage 2				-	-	-	-	-	-	-	-	-
Critical Hdwy				-	-	6.9	-	-	-	-	-	-
Critical Hdwy Stg 1				-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2				-	-	-	-	-	-	-	-	-
Follow-up Hdwy				-	-	3.3	-	-	-	-	-	-
Pot Cap-1 Maneuver				0	0	518	0	-	-	0	-	-
Stage 1				0	0	-	0	-	-	0	-	-
Stage 2				0	0	-	0	-	-	0	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver				-	0	518	-	-	-	-	-	-
Mov Cap-2 Maneuver				-	0	-	-	-	-	-	-	-
Stage 1				-	0	-	-	-	-	-	-	-
Stage 2				-	0	-	-	-	-	-	-	-
Approach				WB		NB		SB				
HCM Control Delay, s				0		0		0				
HCM LOS				A								
Minor Lane/Major Mvmt		NBT	NBRWBLn1	SBT	SBR							
Capacity (veh/h)		-	-	-	-							
HCM Lane V/C Ratio		-	-	-	-							
HCM Control Delay (s)		-	-	0	-							
HCM Lane LOS		-	-	A	-							
HCM 95th %tile Q(veh)		-	-	-	-							

34: Bouldercrest Rd SE & I-285 EB Ramps

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	480	0	347	0	0	0	0	665	98	395	821	0
Future Volume (veh/h)	480	0	347	0	0	0	0	665	98	395	821	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	1826	1900	1826				0	1811	1781	1781	1870	0
Adj Flow Rate, veh/h	522	0	377				0	723	107	429	892	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	5	0	5				0	6	8	8	2	0
Cap, veh/h	935	0	832				0	1743	765	848	2265	0
Arrive On Green	0.27	0.00	0.27				0.00	0.51	0.51	0.17	1.00	0.00
Sat Flow, veh/h	3478	0	3095				0	3532	1510	3291	3647	0
Grp Volume(v), veh/h	522	0	377				0	723	107	429	892	0
Grp Sat Flow(s),veh/h/ln	1739	0	1547				0	1721	1510	1646	1777	0
Q Serve(g_s), s	16.8	0.0	13.2				0.0	17.1	4.9	8.2	0.0	0.0
Cycle Q Clear(g_c), s	16.8	0.0	13.2				0.0	17.1	4.9	8.2	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	935	0	832				0	1743	765	848	2265	0
V/C Ratio(X)	0.56	0.00	0.45				0.00	0.41	0.14	0.51	0.39	0.00
Avail Cap(c_a), veh/h	1399	0	1245				0	1743	765	924	2265	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	40.9	0.0	39.6				0.0	20.0	17.0	12.4	0.0	0.0
Incr Delay (d2), s/veh	2.4	0.0	1.8				0.0	0.7	0.4	0.6	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
%ile BackOfQ(95%),veh/ln	11.8	0.0	8.9				0.0	11.2	3.2	4.5	0.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.3	0.0	41.4				0.0	20.8	17.4	13.0	0.5	0.0
LnGrp LOS	D	A	D				A	C	B	B	A	A
Approach Vol, veh/h	899						830			1321		
Approach Delay, s/veh	42.5						20.3			4.6		
Approach LOS	D						C			A		
Timer - Assigned Phs	2			5			6			8		
Phs Duration (G+Y+Rc), s	89.4			17.0			72.4			40.6		
Change Period (Y+Rc), s	6.5			6.0			6.5			5.7		
Max Green Setting (Gmax), s	65.5			14.0			45.5			52.3		
Max Q Clear Time (g_c+I1), s	2.0			10.2			19.1			18.8		
Green Ext Time (p_c), s	33.1			0.8			16.4			16.1		
Intersection Summary												
HCM 6th Ctrl Delay			20.0									
HCM 6th LOS			C									
Notes												

APPENDIX J

SEGMENT ANALYSIS REPORTS



2021 EXISTING CONDITIONS

AM PEAK HOUR

HCS7 Multilane Highway Report

Project Information

Analyst	JS	Date	3/31/2021
Agency	Lumin8	Analysis Year	2021 - Existing
Jurisdiction	GDOT	Time Period Analyzed	AM Peak
Project Description	Blackhall Phase 2	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Northbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	50.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1513	Heavy Vehicle Adjustment Factor (fhv)	0.885
Peak Hour Factor	0.93	Flow Rate (Vp), pc/h/ln	613
Total Trucks, %	13.00	Capacity (c), pc/h/ln	2000
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2000
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.31

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	50.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	12.3
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (fA)	0.0		

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HCS7 Multilane Highway Report

Project Information

Analyst	JS	Date	3/31/2021
Agency	Lumin8	Analysis Year	2021 - Existing
Jurisdiction	GDOT	Time Period Analyzed	AM Peak
Project Description	Blackhall Phase 2	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Southbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	50.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1741	Heavy Vehicle Adjustment Factor (fHV)	0.897
Peak Hour Factor	0.96	Flow Rate (Vp), pc/h/ln	1011
Total Trucks, %	11.50	Capacity (c), pc/h/ln	2000
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2000
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.51

Direction 2 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	50.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	20.2
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (fA)	0.0		

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HCS7 Multilane Highway Report

Project Information

Analyst	JS	Date	3/31/2021
Agency	Lumin8	Analysis Year	2021 - Existing
Jurisdiction	GDOT	Time Period Analyzed	AM Peak
Project Description	Blackhall Phase 2	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Northbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	7.7
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	48.1		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2603	Heavy Vehicle Adjustment Factor (fHV)	0.962
Peak Hour Factor	0.96	Flow Rate (Vp), pc/h/ln	940
Total Trucks, %	4.00	Capacity (c), pc/h/ln	1962
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1962
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.48

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	48.1
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	19.5
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (fA)	1.9		

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HCS7 Multilane Highway Report

Project Information

Analyst	JS	Date	3/31/2021
Agency	Lumin8	Analysis Year	2021 - Existing
Jurisdiction	GDOT	Time Period Analyzed	AM Peak
Project Description	Blackhall Phase 2	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Southbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	9.9
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	47.5		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	762	Heavy Vehicle Adjustment Factor (fhv)	0.909
Peak Hour Factor	0.90	Flow Rate (Vp), pc/h/ln	310
Total Trucks, %	10.00	Capacity (c), pc/h/ln	1950
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1950
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.16

Direction 2 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	47.5
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	6.5
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	2.5		

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Phone: Fax:
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Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period AM Peak
Highway Bailey St
From/To SR 42 to Woodstock Rd
Jurisdiction GDOT
Analysis Year 2021
Description Blackhall Phase 2

Input Data

Highway class	Class 3	Peak hour factor, PHF	0.90
Shoulder width	3.0 ft	% Trucks and buses	10 %
Lane width	13.0 ft	% Trucks crawling	0.0 %
Segment length	0.1 mi	Truck crawl speed	0.0 mi/hr
Terrain type	Level	% Recreational vehicles	0 %
Grade: Length	- mi	% No-passing zones	100 %
Up/down	- %	Access point density	0 /mi

Analysis direction volume, Vd 124 veh/h
Opposing direction volume, Vo 264 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.7	1.4
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.935	0.962
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	147 pc/h	305 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 2.6 mi/h
Adj. for access point density, (note-3) fA 0.0 mi/h

Free-flow speed, FFSd 42.4 mi/h

Adjustment for no-passing zones, fnp 3.3 mi/h
Average travel speed, ATSD 35.6 mi/h
Percent Free Flow Speed, PFFS 83.9 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.1	1.1
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	0.990	0.990
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	139 pc/h	296 pc/h
Base percent time-spent-following, (note-4) BPTSFd	17.7 %	
Adjustment for no-passing zones, fnp	50.0	
Percent time-spent-following, PTSFd	33.7 %	

Level of Service and Other Performance Measures

Level of service, LOS	B	
Volume to capacity ratio, v/c	0.08	
Peak 15-min vehicle-miles of travel, VMT15	3	veh-mi
Peak-hour vehicle-miles of travel, VMT60	12	veh-mi
Peak 15-min total travel time, TT15	0.1	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.1	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSD (from above)	35.6	mi/h
Percent time-spent-following, PTSFd (from above)	33.7	
Level of service, LOSd (from above)	B	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	45
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	137.8
Effective width of outside lane, We	22.08
Effective speed factor, St	4.42
Bicycle LOS Score, BLOS	5.27
Bicycle LOS	E

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period AM Peak
Highway Bailey St
From/To SR 42 to Woodstock Rd
Jurisdiction GDOT
Analysis Year 2021
Description Blackhall Phase 2

Input Data

Highway class	Class 3	Peak hour factor, PHF	0.90
Shoulder width	3.0 ft	% Trucks and buses	10 %
Lane width	13.0 ft	% Trucks crawling	0.0 %
Segment length	0.1 mi	Truck crawl speed	0.0 mi/hr
Terrain type	Level	% Recreational vehicles	0 %
Grade: Length	- mi	% No-passing zones	100 %
Up/down	- %	Access point density	0 /mi

Analysis direction volume, Vd 264 veh/h
Opposing direction volume, Vo 124 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.4	1.7
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.962	0.935
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	305 pc/h	147 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 2.6 mi/h
Adj. for access point density, (note-3) fA 0.0 mi/h

Free-flow speed, FFSd 42.4 mi/h

Adjustment for no-passing zones, fnp 3.2 mi/h
Average travel speed, ATSD 35.7 mi/h
Percent Free Flow Speed, PFFS 84.3 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.1	1.1
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	0.990	0.990
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	296 pc/h	139 pc/h
Base percent time-spent-following, (note-4) BPTSFd	29.9 %	
Adjustment for no-passing zones, fnp	50.0	
Percent time-spent-following, PTSFd	63.9 %	

Level of Service and Other Performance Measures

Level of service, LOS	B	
Volume to capacity ratio, v/c	0.17	
Peak 15-min vehicle-miles of travel, VMT15	7	veh-mi
Peak-hour vehicle-miles of travel, VMT60	26	veh-mi
Peak 15-min total travel time, TT15	0.2	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.1	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSD (from above)	35.7	mi/h
Percent time-spent-following, PTSFd (from above)	63.9	
Level of service, LOSd (from above)	B	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, S_p	45
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, v_{OL}	293.3
Effective width of outside lane, W_e	16.00
Effective speed factor, S_t	4.42
Bicycle LOS Score, B_{LOS}	6.81
Bicycle LOS	F

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period AM Peak
Highway Bailey St
From/To Woodstock Rd to FayettevilleRd
Jurisdiction GDOT
Analysis Year 2021
Description Blackhall Phase 2

Input Data

Highway class	Class 3	Peak hour factor, PHF	0.78
Shoulder width	0.0 ft	% Trucks and buses	10 %
Lane width	15.0 ft	% Trucks crawling	0.0 %
Segment length	0.1 mi	Truck crawl speed	0.0 mi/hr
Terrain type	Level	% Recreational vehicles	0 %
Grade: Length	- mi	% No-passing zones	100 %
Up/down	- %	Access point density	0 /mi

Analysis direction volume, Vd 196 veh/h
Opposing direction volume, Vo 279 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.4	1.3
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.962	0.971
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	261 pc/h	368 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 4.2 mi/h
Adj. for access point density, (note-3) fA 0.0 mi/h

Free-flow speed, FFSd 40.8 mi/h

Adjustment for no-passing zones, fnp 2.9 mi/h
Average travel speed, ATSD 33.0 mi/h
Percent Free Flow Speed, PFFS 80.9 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.1	1.1
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	0.990	0.990
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	254 pc/h	361 pc/h
Base percent time-spent-following, (note-4) BPTSFd	29.6 %	
Adjustment for no-passing zones, fnp	53.9	
Percent time-spent-following, PTSFd	51.9 %	

Level of Service and Other Performance Measures

Level of service, LOS	C	
Volume to capacity ratio, v/c	0.15	
Peak 15-min vehicle-miles of travel, VMT15	6	veh-mi
Peak-hour vehicle-miles of travel, VMT60	20	veh-mi
Peak 15-min total travel time, TT15	0.2	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.1	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSD (from above)	33.0	mi/h
Percent time-spent-following, PTSFd (from above)	51.9	
Level of service, LOSd (from above)	C	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, S_p	45
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, v_{OL}	251.3
Effective width of outside lane, W_e	15.00
Effective speed factor, S_t	4.42
Bicycle LOS Score, $BLOS$	6.82
Bicycle LOS	F

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period AM Peak
Highway Bailey St
From/To Woodstock Rd to FayettevilleRd
Jurisdiction GDOT
Analysis Year 2021
Description Blackhall Phase 2

Input Data

Highway class	Class 3	Peak hour factor, PHF	0.92
Shoulder width	0.0 ft	% Trucks and buses	11 %
Lane width	15.0 ft	% Trucks crawling	0.0 %
Segment length	0.1 mi	Truck crawl speed	0.0 mi/hr
Terrain type	Level	% Recreational vehicles	0 %
Grade: Length	- mi	% No-passing zones	100 %
Up/down	- %	Access point density	0 /mi

Analysis direction volume, Vd 279 veh/h
Opposing direction volume, Vo 196 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.4	1.5
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.958	0.948
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	317 pc/h	225 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 4.2 mi/h
Adj. for access point density, (note-3) fA 0.0 mi/h

Free-flow speed, FFSd 40.8 mi/h

Adjustment for no-passing zones, fnp 3.8 mi/h
Average travel speed, ATSD 32.8 mi/h
Percent Free Flow Speed, PFFS 80.3 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.1	1.1
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	0.989	0.989
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	307 pc/h	215 pc/h
Base percent time-spent-following, (note-4) BPTSFd	32.0 %	
Adjustment for no-passing zones, fnp	55.9	
Percent time-spent-following, PTSFd	64.9 %	

Level of Service and Other Performance Measures

Level of service, LOS	C	
Volume to capacity ratio, v/c	0.18	
Peak 15-min vehicle-miles of travel, VMT15	8	veh-mi
Peak-hour vehicle-miles of travel, VMT60	28	veh-mi
Peak 15-min total travel time, TT15	0.2	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.1	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSD (from above)	32.8	mi/h
Percent time-spent-following, PTSFd (from above)	64.9	
Level of service, LOSd (from above)	C	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, S_p	
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, v_{OL}	303.3
Effective width of outside lane, W_e	15.00
Effective speed factor, S_t	4.42
Bicycle LOS Score, B_{LOS}	7.37
Bicycle LOS	F

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period AM Peak
Highway Bailey St
From/To Fayetteville Rd to Blackhall 1
Jurisdiction GDOT
Analysis Year 2021
Description Blackhall Phase 2

Input Data

Highway class	Class 3	Peak hour factor, PHF	0.92
Shoulder width	2.0 ft	% Trucks and buses	5 %
Lane width	11.0 ft	% Trucks crawling	0.0 %
Segment length	0.7 mi	Truck crawl speed	0.0 mi/hr
Terrain type	Level	% Recreational vehicles	0 %
Grade: Length	- mi	% No-passing zones	100 %
Up/down	- %	Access point density	15 /mi

Analysis direction volume, Vd 187 veh/h
Opposing direction volume, Vo 273 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.5	1.4
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.976	0.980
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	208 pc/h	303 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 3.0 mi/h
Adj. for access point density, (note-3) fA 3.8 mi/h

Free-flow speed, FFSd 38.3 mi/h

Adjustment for no-passing zones, fnp 3.3 mi/h
Average travel speed, ATSD 31.0 mi/h
Percent Free Flow Speed, PFFS 80.9 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.1	1.1
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	0.995	0.995
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	204 pc/h	298 pc/h
Base percent time-spent-following, (note-4) BPTSFd	24.3 %	
Adjustment for no-passing zones, fnp	55.8	
Percent time-spent-following, PTSFd	47.0 %	

Level of Service and Other Performance Measures

Level of service, LOS	C	
Volume to capacity ratio, v/c	0.12	
Peak 15-min vehicle-miles of travel, VMT15	36	veh-mi
Peak-hour vehicle-miles of travel, VMT60	131	veh-mi
Peak 15-min total travel time, TT15	1.2	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.7	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSD (from above)	31.0	mi/h
Percent time-spent-following, PTSFd (from above)	47.0	
Level of service, LOSd (from above)	C	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	203.3
Effective width of outside lane, We	13.00
Effective speed factor, St	4.42
Bicycle LOS Score, BLOS	5.42
Bicycle LOS	E

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period AM Peak
Highway Bailey St
From/To Fayetteville Rd to Blackhall 1
Jurisdiction GDOT
Analysis Year 2021
Description Blackhall Phase 2

Input Data

Highway class	Class 3	Peak hour factor, PHF	0.94
Shoulder width	2.0 ft	% Trucks and buses	5 %
Lane width	11.0 ft	% Trucks crawling	0.0 %
Segment length	0.7 mi	Truck crawl speed	0.0 mi/hr
Terrain type	Level	% Recreational vehicles	0 %
Grade: Length	- mi	% No-passing zones	100 %
Up/down	- %	Access point density	15 /mi

Analysis direction volume, Vd 273 veh/h
Opposing direction volume, Vo 187 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.4	1.5
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.980	0.976
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	296 pc/h	204 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 3.0 mi/h
Adj. for access point density, (note-3) fA 3.8 mi/h

Free-flow speed, FFSd 38.3 mi/h

Adjustment for no-passing zones, fnp 4.0 mi/h
Average travel speed, ATSD 30.4 mi/h
Percent Free Flow Speed, PFFS 79.5 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.1	1.1
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	0.995	0.995
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	292 pc/h	200 pc/h
Base percent time-spent-following, (note-4) BPTSFd	29.6 %	
Adjustment for no-passing zones, fnp	55.9	
Percent time-spent-following, PTSFd	62.8 %	

Level of Service and Other Performance Measures

Level of service, LOS	C	
Volume to capacity ratio, v/c	0.17	
Peak 15-min vehicle-miles of travel, VMT15	51	veh-mi
Peak-hour vehicle-miles of travel, VMT60	191	veh-mi
Peak 15-min total travel time, TT15	1.7	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.7	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSD (from above)	30.4	mi/h
Percent time-spent-following, PTSFd (from above)	62.8	
Level of service, LOSd (from above)	C	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, S_p	45
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, v_{OL}	290.4
Effective width of outside lane, W_e	13.00
Effective speed factor, S_t	4.42
Bicycle LOS Score, $BLOS$	5.61
Bicycle LOS	F

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period AM Peak
Highway Bailey St
From/To Blackhall DW 1 to BlackhallDW2
Jurisdiction GDOT
Analysis Year 2021
Description Blackhall Phase 2

Input Data

Highway class	Class 3	Peak hour factor, PHF	0.94
Shoulder width	3.0 ft	% Trucks and buses	10 %
Lane width	11.0 ft	% Trucks crawling	0.0 %
Segment length	0.1 mi	Truck crawl speed	0.0 mi/hr
Terrain type	Level	% Recreational vehicles	0 %
Grade: Length	- mi	% No-passing zones	100 %
Up/down	- %	Access point density	0 /mi

Analysis direction volume, Vd 184 veh/h
Opposing direction volume, Vo 329 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.5	1.3
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.952	0.971
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	206 pc/h	360 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 3.0 mi/h
Adj. for access point density, (note-3) fA 0.0 mi/h

Free-flow speed, FFSd 42.0 mi/h

Adjustment for no-passing zones, fnp 3.0 mi/h
Average travel speed, ATSD 34.6 mi/h
Percent Free Flow Speed, PFFS 82.5 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.1	1.1
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	0.990	0.990
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	198 pc/h	353 pc/h
Base percent time-spent-following, (note-4) BPTSFd	24.5 %	
Adjustment for no-passing zones, fnp	51.9	
Percent time-spent-following, PTSFd	43.2 %	

Level of Service and Other Performance Measures

Level of service, LOS	C	
Volume to capacity ratio, v/c	0.12	
Peak 15-min vehicle-miles of travel, VMT15	5	veh-mi
Peak-hour vehicle-miles of travel, VMT60	18	veh-mi
Peak 15-min total travel time, TT15	0.1	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.1	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSD (from above)	34.6	mi/h
Percent time-spent-following, PTSFd (from above)	43.2	
Level of service, LOSd (from above)	C	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, S_p	45
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, v_{OL}	195.7
Effective width of outside lane, W_e	14.00
Effective speed factor, S_t	4.42
Bicycle LOS Score, $BLOS$	6.91
Bicycle LOS	F

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period AM Peak
Highway Bailey St
From/To Blackhall DW 1 to BlackhallDW2
Jurisdiction GDOT
Analysis Year 2021
Description Blackhall Phase 2

Input Data

Highway class	Class 3	Peak hour factor, PHF	0.94
Shoulder width	3.0 ft	% Trucks and buses	4 %
Lane width	11.0 ft	% Trucks crawling	0.0 %
Segment length	0.1 mi	Truck crawl speed	0.0 mi/hr
Terrain type	Level	% Recreational vehicles	0 %
Grade: Length	- mi	% No-passing zones	100 %
Up/down	- %	Access point density	0 /mi

Analysis direction volume, Vd 329 veh/h
Opposing direction volume, Vo 184 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.3	1.5
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.988	0.980
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	354 pc/h	200 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 3.0 mi/h
Adj. for access point density, (note-3) fA 0.0 mi/h

Free-flow speed, FFSd 42.0 mi/h

Adjustment for no-passing zones, fnp 4.0 mi/h
Average travel speed, ATSD 33.7 mi/h
Percent Free Flow Speed, PFFS 80.2 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.1	1.1
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	0.996	0.996
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	351 pc/h	197 pc/h
Base percent time-spent-following, (note-4) BPTSFd	34.3 %	
Adjustment for no-passing zones, fnp	51.9	
Percent time-spent-following, PTSFd	67.5 %	

Level of Service and Other Performance Measures

Level of service, LOS	C	
Volume to capacity ratio, v/c	0.21	
Peak 15-min vehicle-miles of travel, VMT15	9	veh-mi
Peak-hour vehicle-miles of travel, VMT60	33	veh-mi
Peak 15-min total travel time, TT15	0.3	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.1	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSD (from above)	33.7	mi/h
Percent time-spent-following, PTSFd (from above)	67.5	
Level of service, LOSd (from above)	C	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	350.0
Effective width of outside lane, We	14.00
Effective speed factor, St	4.42
Bicycle LOS Score, BLOS	5.30
Bicycle LOS	E

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period AM Peak
Highway Bailey St
From/To Blackhall DW2 to International
Jurisdiction GDOT
Analysis Year 2021
Description Blackhall Phase 2

Input Data

Highway class	Class 3	Peak hour factor, PHF	0.94
Shoulder width	3.0 ft	% Trucks and buses	11 %
Lane width	12.0 ft	% Trucks crawling	0.0 %
Segment length	0.6 mi	Truck crawl speed	0.0 mi/hr
Terrain type	Level	% Recreational vehicles	0 %
Grade: Length	- mi	% No-passing zones	100 %
Up/down	- %	Access point density	0 /mi

Analysis direction volume, Vd 207 veh/h
Opposing direction volume, Vo 392 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.5	1.3
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.948	0.968
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	232 pc/h	431 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 2.6 mi/h
Adj. for access point density, (note-3) fA 0.0 mi/h

Free-flow speed, FFSd 42.4 mi/h

Adjustment for no-passing zones, fnp 2.6 mi/h
Average travel speed, ATSD 34.7 mi/h
Percent Free Flow Speed, PFFS 81.8 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.1	1.0
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	0.989	1.000
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	223 pc/h	417 pc/h
Base percent time-spent-following, (note-4) BPTSFd	28.1 %	
Adjustment for no-passing zones, fnp	48.0	
Percent time-spent-following, PTSFd	44.8 %	

Level of Service and Other Performance Measures

Level of service, LOS	C	
Volume to capacity ratio, v/c	0.13	
Peak 15-min vehicle-miles of travel, VMT15	33 veh-mi	
Peak-hour vehicle-miles of travel, VMT60	124 veh-mi	
Peak 15-min total travel time, TT15	1.0 veh-h	
Capacity from ATS, CdATS	1700 veh/h	
Capacity from PTSF, CdPTSF	1700 veh/h	
Directional Capacity	1700 veh/h	

Passing Lane Analysis

Total length of analysis segment, Lt	0.6 mi	
Length of two-lane highway upstream of the passing lane, Lu	- mi	
Length of passing lane including tapers, Lpl	- mi	
Average travel speed, ATSD (from above)	34.7 mi/h	
Percent time-spent-following, PTSFd (from above)	44.8	
Level of service, LOSd (from above)	C	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	- mi	
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	- mi	
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0 %	

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	- mi	
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	- mi	
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	- %	

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	- veh-h	

Bicycle Level of Service

Posted speed limit, S_p	
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, v_{OL}	220.2
Effective width of outside lane, W_e	15.00
Effective speed factor, S_t	4.42
Bicycle LOS Score, B_{LOS}	7.20
Bicycle LOS	F

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period AM Peak
Highway Bailey St
From/To Blackhall DW2 to International
Jurisdiction GDOT
Analysis Year 2021
Description Blackhall Phase 2

Input Data

Highway class	Class 3	Peak hour factor, PHF	0.97
Shoulder width	3.0 ft	% Trucks and buses	4 %
Lane width	12.0 ft	% Trucks crawling	0.0 %
Segment length	0.6 mi	Truck crawl speed	0.0 mi/hr
Terrain type	Level	% Recreational vehicles	0 %
Grade: Length	- mi	% No-passing zones	100 %
Up/down	- %	Access point density	0 /mi

Analysis direction volume, Vd 392 veh/h
Opposing direction volume, Vo 207 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.3	1.5
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.988	0.980
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	409 pc/h	218 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 2.6 mi/h
Adj. for access point density, (note-3) fA 0.0 mi/h

Free-flow speed, FFSd 42.4 mi/h

Adjustment for no-passing zones, fnp 3.9 mi/h
Average travel speed, ATSD 33.7 mi/h
Percent Free Flow Speed, PFFS 79.4 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.0	1.1
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	0.996
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	404 pc/h	214 pc/h
Base percent time-spent-following, (note-4) BPTSFD	39.7 %	
Adjustment for no-passing zones, fnp	49.4	
Percent time-spent-following, PTSFD	72.0 %	

Level of Service and Other Performance Measures

Level of service, LOS	C	
Volume to capacity ratio, v/c	0.24	
Peak 15-min vehicle-miles of travel, VMT15	61	veh-mi
Peak-hour vehicle-miles of travel, VMT60	235	veh-mi
Peak 15-min total travel time, TT15	1.8	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.6	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSD (from above)	33.7	mi/h
Percent time-spent-following, PTSFD (from above)	72.0	
Level of service, LOSd (from above)	C	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, S_p	
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, v_{OL}	404.1
Effective width of outside lane, W_e	15.00
Effective speed factor, S_t	4.42
Bicycle LOS Score, B_{LOS}	5.25
Bicycle LOS	E

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

HCS7 Multilane Highway Report

Project Information

Analyst	JS	Date	3/31/2021
Agency	Lumin8	Analysis Year	2021 - Existing
Jurisdiction	GDOT	Time Period Analyzed	AM Peak
Project Description	Blackhall Phase 2	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	20.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	40.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	214	Heavy Vehicle Adjustment Factor (fHV)	0.909
Peak Hour Factor	0.97	Flow Rate (Vp), pc/h/ln	122
Total Trucks, %	10.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.06

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	40.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	3.0
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	5.0		

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HCS7 Multilane Version 7.8.5
8. International Park to Bouldercrest Rd - AM.xuf

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HCS7 Multilane Highway Report

Project Information

Analyst	JS	Date	3/31/2021
Agency	Lumin8	Analysis Year	2021 - Existing
Jurisdiction	GDOT	Time Period Analyzed	AM Peak
Project Description	Blackhall Phase 2	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	442	Heavy Vehicle Adjustment Factor (fHV)	0.980
Peak Hour Factor	0.93	Flow Rate (Vp), pc/h/ln	242
Total Trucks, %	2.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.13

Direction 2 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	5.4
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.0		

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8. International Park to Bouldercrest Rd - AM.xuf

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HCS7 Multilane Highway Report

Project Information

Analyst	JS	Date	3/31/2021
Agency	Lumin8	Analysis Year	2021 - Existing
Jurisdiction	GDOT	Time Period Analyzed	AM Peak
Project Description	Blackhall Phase 2	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	20.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	8
Free-Flow Speed (FFS), mi/h	39.1		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	419	Heavy Vehicle Adjustment Factor (fHV)	0.885
Peak Hour Factor	0.93	Flow Rate (Vp), pc/h/ln	254
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.13

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	39.1
Total Lateral Clearance Adj. (fLLC)	0.9	Density (D), pc/mi/ln	6.5
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	5.0		

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HCS7 Multilane Version 7.8.5
9. Bouldercrest Rd to Clifton Church Rd - AM.xuf

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HCS7 Multilane Highway Report

Project Information

Analyst	JS	Date	3/31/2021
Agency	Lumin8	Analysis Year	2021 - Existing
Jurisdiction	GDOT	Time Period Analyzed	AM Peak
Project Description	Blackhall Phase 2	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	8.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	8
Free-Flow Speed (FFS), mi/h	42.1		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	825	Heavy Vehicle Adjustment Factor (fHV)	0.980
Peak Hour Factor	0.90	Flow Rate (Vp), pc/h/ln	468
Total Trucks, %	2.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.25

Direction 2 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	42.1
Total Lateral Clearance Adj. (fLLC)	0.9	Density (D), pc/mi/ln	11.1
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (fA)	2.0		

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HCS7 Multilane Version 7.8.5
9. Bouldercrest Rd to Clifton Church Rd - AM.xuf

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HCS7 Multilane Highway Report

Project Information

Analyst	JS	Date	3/31/2021
Agency	Lumin8	Analysis Year	2021 - Existing
Jurisdiction	GDOT	Time Period Analyzed	AM Peak
Project Description	Blackhall Phase 2	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Northbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	25.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLT	Total Lateral Clearance (TLC), ft	8
Free-Flow Speed (FFS), mi/h	37.9		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1205	Heavy Vehicle Adjustment Factor (fHV)	0.971
Peak Hour Factor	0.94	Flow Rate (Vp), pc/h/ln	660
Total Trucks, %	3.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.35

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	37.8
Total Lateral Clearance Adj. (fLLC)	0.9	Density (D), pc/mi/ln	17.5
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (fA)	6.3		

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10. Clifton Church Rd to Continental Way - AM - Copy.xuf

HCS7 Multilane Highway Report

Project Information

Analyst	JS	Date	3/31/2021
Agency	Lumin8	Analysis Year	2021 - Existing
Jurisdiction	GDOT	Time Period Analyzed	AM Peak
Project Description	Blackhall Phase 2	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Southbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	5.8
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	8
Free-Flow Speed (FFS), mi/h	42.7		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	700	Heavy Vehicle Adjustment Factor (fhv)	0.909
Peak Hour Factor	0.90	Flow Rate (Vp), pc/h/ln	428
Total Trucks, %	10.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.23

Direction 2 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	42.6
Total Lateral Clearance Adj. (fLLC)	0.9	Density (D), pc/mi/ln	10.0
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	1.5		

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10. Clifton Church Rd to Continental Way - AM - Copy.xuf

HCS7 Multilane Highway Report

Project Information

Analyst	JS	Date	3/31/2021
Agency	Lumin8	Analysis Year	2021 - Existing
Jurisdiction	GDOT	Time Period Analyzed	AM Peak
Project Description	Blackhall Phase 2	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Northbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	25.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLT	Total Lateral Clearance (TLC), ft	8
Free-Flow Speed (FFS), mi/h	37.9		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1289	Heavy Vehicle Adjustment Factor (fHV)	0.937
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	748
Total Trucks, %	6.67	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.39

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	37.8
Total Lateral Clearance Adj. (fLLC)	0.9	Density (D), pc/mi/ln	19.8
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (fA)	6.3		

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11. Continental Way to 285 WB - AM - Copy.xuf

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HCS7 Multilane Highway Report

Project Information

Analyst	JS	Date	3/31/2021
Agency	Lumin8	Analysis Year	2021 - Existing
Jurisdiction	GDOT	Time Period Analyzed	AM Peak
Project Description	Blackhall Phase 2	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Southbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	22.2
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	8
Free-Flow Speed (FFS), mi/h	38.6		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	762	Heavy Vehicle Adjustment Factor (fhv)	0.861
Peak Hour Factor	0.94	Flow Rate (Vp), pc/h/ln	471
Total Trucks, %	16.20	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.25

Direction 2 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	38.6
Total Lateral Clearance Adj. (fLLC)	0.9	Density (D), pc/mi/ln	12.2
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (fA)	5.6		

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11. Continental Way to 285 WB - AM - Copy.xuf

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Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period AM Peak
Highway Bouldercrest Rd
From/To 285 WB to 285 Eb
Jurisdiction GDOT
Analysis Year 2021
Description Blackhall Phase 2

Input Data

Highway class	Class 3	Peak hour factor, PHF	0.92
Shoulder width	6.0 ft	% Trucks and buses	10 %
Lane width	12.0 ft	% Trucks crawling	0.0 %
Segment length	0.1 mi	Truck crawl speed	0.0 mi/hr
Terrain type	Level	% Recreational vehicles	0 %
Grade: Length	- mi	% No-passing zones	100 %
Up/down	- %	Access point density	0 /mi

Analysis direction volume, Vd 1392 veh/h
Opposing direction volume, Vo 412 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.0	1.3
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	1.000	0.971
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	1513 pc/h	461 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 0.0 mi/h
Adj. for access point density, (note-3) fA 0.0 mi/h

Free-flow speed, FFSd 45.0 mi/h

Adjustment for no-passing zones, fnp 2.4 mi/h
Average travel speed, ATSD 27.3 mi/h
Percent Free Flow Speed, PFFS 60.6 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.0	1.0
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	1.000
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	1513 pc/h	448 pc/h
Base percent time-spent-following, (note-4) BPTSFd	85.9 %	
Adjustment for no-passing zones, fnp	12.9	
Percent time-spent-following, PTSFd	95.9 %	

Level of Service and Other Performance Measures

Level of service, LOS	E	
Volume to capacity ratio, v/c	0.89	
Peak 15-min vehicle-miles of travel, VMT15	38	veh-mi
Peak-hour vehicle-miles of travel, VMT60	139	veh-mi
Peak 15-min total travel time, TT15	1.4	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.1	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSD (from above)	27.3	mi/h
Percent time-spent-following, PTSFd (from above)	95.9	
Level of service, LOSd (from above)	E	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	1513.0
Effective width of outside lane, We	24.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	6.36
Bicycle LOS	F

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period AM Peak
Highway Bouldercrest Rd
From/To 285 WB to 285 Eb
Jurisdiction GDOT
Analysis Year 2021
Description Blackhall Phase 2

Input Data

Highway class	Class 3	Peak hour factor, PHF	0.92
Shoulder width	6.0 ft	% Trucks and buses	10 %
Lane width	12.0 ft	% Trucks crawling	0.0 %
Segment length	0.1 mi	Truck crawl speed	0.0 mi/hr
Terrain type	Level	% Recreational vehicles	0 %
Grade: Length	- mi	% No-passing zones	100 %
Up/down	- %	Access point density	0 /mi

Analysis direction volume, Vd 412 veh/h
Opposing direction volume, Vo 1392 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.3	1.0
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.971	1.000
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	461 pc/h	1513 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 0.0 mi/h
Adj. for access point density, (note-3) fA 0.0 mi/h

Free-flow speed, FFSd 45.0 mi/h

Adjustment for no-passing zones, fnp 0.6 mi/h
Average travel speed, ATSD 29.0 mi/h
Percent Free Flow Speed, PFFS 64.5 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.0	1.0
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	1.000
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	448 pc/h	1513 pc/h
Base percent time-spent-following, (note-4) BPTSFd	58.9 %	
Adjustment for no-passing zones, fnp	12.9	
Percent time-spent-following, PTSFd	61.8 %	

Level of Service and Other Performance Measures

Level of service, LOS	E	
Volume to capacity ratio, v/c	0.26	
Peak 15-min vehicle-miles of travel, VMT15	11 veh-mi	
Peak-hour vehicle-miles of travel, VMT60	41 veh-mi	
Peak 15-min total travel time, TT15	0.4 veh-h	
Capacity from ATS, CdATS	1700 veh/h	
Capacity from PTSF, CdPTSF	1700 veh/h	
Directional Capacity	1700 veh/h	

Passing Lane Analysis

Total length of analysis segment, Lt	0.1 mi
Length of two-lane highway upstream of the passing lane, Lu	- mi
Length of passing lane including tapers, Lpl	- mi
Average travel speed, ATSD (from above)	29.0 mi/h
Percent time-spent-following, PTSFd (from above)	61.8
Level of service, LOSd (from above)	E

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	- mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	- mi
Adj. factor for the effect of passing lane on average speed, fpl	-
Average travel speed including passing lane, ATSpl	-
Percent free flow speed including passing lane, PFFSpl	0.0 %

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	- mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	- mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-
Percent time-spent-following including passing lane, PTSFpl	- %

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E
Peak 15-min total travel time, TT15	- veh-h

Bicycle Level of Service

Posted speed limit, S_p	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, v_{OL}	447.8
Effective width of outside lane, W_e	24.00
Effective speed factor, S_t	4.79
Bicycle LOS Score, $BLOS$	5.74
Bicycle LOS	F

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period AM Peak
Highway International Park Dr
From/To Constitution to Continental
Jurisdiction GDOT
Analysis Year 2021
Description Blackhall Phase 2

Input Data

Highway class	Class 3	Peak hour factor, PHF	0.86
Shoulder width	3.0 ft	% Trucks and buses	24 %
Lane width	16.0 ft	% Trucks crawling	0.0 %
Segment length	0.3 mi	Truck crawl speed	0.0 mi/hr
Terrain type	Level	% Recreational vehicles	0 %
Grade: Length	- mi	% No-passing zones	100 %
Up/down	- %	Access point density	10 /mi

Analysis direction volume, Vd 79 veh/h
Opposing direction volume, Vo 203 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.9	1.5
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.822	0.893
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	112 pc/h	264 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 2.6 mi/h
Adj. for access point density, (note-3) fA 2.5 mi/h

Free-flow speed, FFSd 39.9 mi/h

Adjustment for no-passing zones, fnp 3.6 mi/h
Average travel speed, ATSD 33.4 mi/h
Percent Free Flow Speed, PFFS 83.7 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.1	1.1
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	0.977	0.977
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	94 pc/h	242 pc/h
Base percent time-spent-following, (note-4) BPTSFd	11.9 %	
Adjustment for no-passing zones, fnp	48.2	
Percent time-spent-following, PTSFd	25.4 %	

Level of Service and Other Performance Measures

Level of service, LOS	B	
Volume to capacity ratio, v/c	0.05	
Peak 15-min vehicle-miles of travel, VMT15	7 veh-mi	
Peak-hour vehicle-miles of travel, VMT60	24 veh-mi	
Peak 15-min total travel time, TT15	0.2 veh-h	
Capacity from ATS, CdATS	1700 veh/h	
Capacity from PTSF, CdPTSF	1700 veh/h	
Directional Capacity	1700 veh/h	

Passing Lane Analysis

Total length of analysis segment, Lt	0.3 mi
Length of two-lane highway upstream of the passing lane, Lu	- mi
Length of passing lane including tapers, Lpl	- mi
Average travel speed, ATSD (from above)	33.4 mi/h
Percent time-spent-following, PTSFd (from above)	25.4
Level of service, LOSd (from above)	B

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	- mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	- mi
Adj. factor for the effect of passing lane on average speed, fpl	-
Average travel speed including passing lane, ATSpl	-
Percent free flow speed including passing lane, PFFSpl	0.0 %

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	- mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	- mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-
Percent time-spent-following including passing lane, PTSFpl	- %

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E
Peak 15-min total travel time, TT15	- veh-h

Bicycle Level of Service

Posted speed limit, S_p	45
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, v_{OL}	91.9
Effective width of outside lane, W_e	30.50
Effective speed factor, S_t	4.42
Bicycle LOS Score, B_{LOS}	9.95
Bicycle LOS	F

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period AM Peak
Highway International Park Dr
From/To Constitution to Continental
Jurisdiction GDOT
Analysis Year 2021
Description Blackhall Phase 2

Input Data

Highway class	Class 3	Peak hour factor, PHF	0.97
Shoulder width	3.0 ft	% Trucks and buses	9 %
Lane width	16.0 ft	% Trucks crawling	0.0 %
Segment length	0.3 mi	Truck crawl speed	0.0 mi/hr
Terrain type	Level	% Recreational vehicles	0 %
Grade: Length	- mi	% No-passing zones	100 %
Up/down	- %	Access point density	10 /mi

Analysis direction volume, Vd 203 veh/h
Opposing direction volume, Vo 79 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.5	1.9
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.957	0.925
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	219 pc/h	88 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 2.6 mi/h
Adj. for access point density, (note-3) fA 2.5 mi/h

Free-flow speed, FFSd 39.9 mi/h

Adjustment for no-passing zones, fnp 2.4 mi/h
Average travel speed, ATSD 35.1 mi/h
Percent Free Flow Speed, PFFS 88.0 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.1	1.1
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	0.991	0.991
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	211 pc/h	82 pc/h
Base percent time-spent-following, (note-4) BPTSFd	22.6 %	
Adjustment for no-passing zones, fnp	48.4	
Percent time-spent-following, PTSFd	57.5 %	

Level of Service and Other Performance Measures

Level of service, LOS	B	
Volume to capacity ratio, v/c	0.12	
Peak 15-min vehicle-miles of travel, VMT15	16 veh-mi	
Peak-hour vehicle-miles of travel, VMT60	61 veh-mi	
Peak 15-min total travel time, TT15	0.5 veh-h	
Capacity from ATS, CdATS	1700 veh/h	
Capacity from PTSF, CdPTSF	1700 veh/h	
Directional Capacity	1700 veh/h	

Passing Lane Analysis

Total length of analysis segment, Lt	0.3 mi
Length of two-lane highway upstream of the passing lane, Lu	- mi
Length of passing lane including tapers, Lpl	- mi
Average travel speed, ATSD (from above)	35.1 mi/h
Percent time-spent-following, PTSFd (from above)	57.5
Level of service, LOSd (from above)	B

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	- mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	- mi
Adj. factor for the effect of passing lane on average speed, fpl	-
Average travel speed including passing lane, ATSpl	-
Percent free flow speed including passing lane, PFFSpl	0.0 %

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	- mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	- mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-
Percent time-spent-following including passing lane, PTSFpl	- %

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E
Peak 15-min total travel time, TT15	- veh-h

Bicycle Level of Service

Posted speed limit, S_p	45
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, v_{OL}	209.3
Effective width of outside lane, W_e	19.00
Effective speed factor, S_t	4.42
Bicycle LOS Score, $BLOS$	5.75
Bicycle LOS	F

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period AM Peak
Highway Continental Way
From/To International to Bouldercrest
Jurisdiction GDOT
Analysis Year 2021
Description Blackhall Phase 2

Input Data

Highway class	Class 3	Peak hour factor, PHF	0.76
Shoulder width	3.0 ft	% Trucks and buses	62 %
Lane width	12.0 ft	% Trucks crawling	0.0 %
Segment length	0.6 mi	Truck crawl speed	0.0 mi/hr
Terrain type	Level	% Recreational vehicles	0 %
Grade: Length	- mi	% No-passing zones	100 %
Up/down	- %	Access point density	13 /mi

Analysis direction volume, Vd 27 veh/h
Opposing direction volume, Vo 118 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.9	1.7
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.642	0.697
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	55 pc/h	223 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 2.6 mi/h
Adj. for access point density, (note-3) fA 3.3 mi/h

Free-flow speed, FFSd 39.2 mi/h

Adjustment for no-passing zones, fnp 3.9 mi/h
Average travel speed, ATSD 33.1 mi/h
Percent Free Flow Speed, PFFS 84.7 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.1	1.1
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	0.942	0.942
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	38 pc/h	165 pc/h
Base percent time-spent-following, (note-4) BPTSFd	4.7 %	
Adjustment for no-passing zones, fnp	47.2	
Percent time-spent-following, PTSFd	13.5 %	

Level of Service and Other Performance Measures

Level of service, LOS	B	
Volume to capacity ratio, v/c	0.02	
Peak 15-min vehicle-miles of travel, VMT15	5	veh-mi
Peak-hour vehicle-miles of travel, VMT60	16	veh-mi
Peak 15-min total travel time, TT15	0.2	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.6	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSD (from above)	33.1	mi/h
Percent time-spent-following, PTSFd (from above)	13.5	
Level of service, LOSd (from above)	B	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	45
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	35.5
Effective width of outside lane, We	27.98
Effective speed factor, St	4.42
Bicycle LOS Score, BLOS	48.25
Bicycle LOS	F

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period AM Peak
Highway Continental Way
From/To International to Bouldercrest
Jurisdiction GDOT
Analysis Year 2021
Description Blackhall Phase 2

Input Data

Highway class	Class 3	Peak hour factor, PHF	0.94
Shoulder width	3.0 ft	% Trucks and buses	50 %
Lane width	12.0 ft	% Trucks crawling	0.0 %
Segment length	0.6 mi	Truck crawl speed	0.0 mi/hr
Terrain type	Level	% Recreational vehicles	0 %
Grade: Length	- mi	% No-passing zones	100 %
Up/down	- %	Access point density	13 /mi

Analysis direction volume, Vd 118 veh/h
Opposing direction volume, Vo 27 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.8	1.9
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.714	0.690
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	176 pc/h	42 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 2.6 mi/h
Adj. for access point density, (note-3) fA 3.3 mi/h

Free-flow speed, FFSd 39.2 mi/h

Adjustment for no-passing zones, fnp 2.4 mi/h
Average travel speed, ATSD 35.1 mi/h
Percent Free Flow Speed, PFFS 89.5 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.1	1.1
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	0.952	0.952
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	132 pc/h	30 pc/h
Base percent time-spent-following, (note-4) BPTSFd	15.0 %	
Adjustment for no-passing zones, fnp	47.3	
Percent time-spent-following, PTSFd	53.5 %	

Level of Service and Other Performance Measures

Level of service, LOS	B	
Volume to capacity ratio, v/c	0.07	
Peak 15-min vehicle-miles of travel, VMT15	19	veh-mi
Peak-hour vehicle-miles of travel, VMT60	71	veh-mi
Peak 15-min total travel time, TT15	0.5	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.6	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSD (from above)	35.1	mi/h
Percent time-spent-following, PTSFd (from above)	53.5	
Level of service, LOSd (from above)	B	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, S_p	
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, v_{OL}	125.5
Effective width of outside lane, W_e	21.15
Effective speed factor, S_t	4.42
Bicycle LOS Score, B_{LOS}	35.58
Bicycle LOS	F

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

PM PEAK HOUR

HCS7 Multilane Highway Report

Project Information

Analyst	JS	Date	3/31/2021
Agency	Lumin8	Analysis Year	2021 - Existing
Jurisdiction	GDOT	Time Period Analyzed	PM Peak
Project Description	Blackhall Phase 2	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Northbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	50.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	959	Heavy Vehicle Adjustment Factor (fHV)	0.826
Peak Hour Factor	0.95	Flow Rate (Vp), pc/h/ln	407
Total Trucks, %	21.00	Capacity (c), pc/h/ln	2000
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2000
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.20

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	50.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	8.1
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.0		

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Project Information

Analyst	JS	Date	3/31/2021
Agency	Lumin8	Analysis Year	2021 - Existing
Jurisdiction	GDOT	Time Period Analyzed	PM Peak
Project Description	Blackhall Phase 2	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Southbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	50.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	2003	Heavy Vehicle Adjustment Factor (fHV)	0.917
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	1187
Total Trucks, %	9.00	Capacity (c), pc/h/ln	2000
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2000
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.59

Direction 2 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	50.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	23.7
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (fA)	0.0		

HCS7 Multilane Highway Report

Project Information

Analyst	JS	Date	3/31/2021
Agency	Lumin8	Analysis Year	2021 - Existing
Jurisdiction	GDOT	Time Period Analyzed	PM Peak
Project Description	Blackhall Phase 2	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Northbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	7.7
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	48.1		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1027	Heavy Vehicle Adjustment Factor (fHV)	0.870
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	428
Total Trucks, %	15.00	Capacity (c), pc/h/ln	1962
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1962
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.22

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	48.1
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	8.9
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	1.9		

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HCS7 Multilane Highway Report

Project Information

Analyst	JS	Date	3/31/2021
Agency	Lumin8	Analysis Year	2021 - Existing
Jurisdiction	GDOT	Time Period Analyzed	PM Peak
Project Description	Blackhall Phase 2	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Southbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	9.9
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	47.5		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1753	Heavy Vehicle Adjustment Factor (fHV)	0.952
Peak Hour Factor	0.96	Flow Rate (Vp), pc/h/ln	639
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1950
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1950
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.33

Direction 2 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	47.5
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	13.5
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (fA)	2.5		

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2. 285 WB to Bailey St.xuf

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Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period PM Peak
Highway Bailey St
From/To SR 42 to Woodstock Rd
Jurisdiction GDOT
Analysis Year 2021
Description Blackhall Phase 2

Input Data

Highway class	Class 3	Peak hour factor, PHF	0.96
Shoulder width	3.0 ft	% Trucks and buses	12 %
Lane width	13.0 ft	% Trucks crawling	0.0 %
Segment length	0.1 mi	Truck crawl speed	0.0 mi/hr
Terrain type	Level	% Recreational vehicles	0 %
Grade: Length	- mi	% No-passing zones	100 %
Up/down	- %	Access point density	0 /mi

Analysis direction volume, Vd 230 veh/h
Opposing direction volume, Vo 212 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.5	1.5
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.943	0.943
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	254 pc/h	234 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 2.6 mi/h
Adj. for access point density, (note-3) fA 0.0 mi/h

Free-flow speed, FFSd 42.4 mi/h

Adjustment for no-passing zones, fnp 3.8 mi/h
Average travel speed, ATSD 34.8 mi/h
Percent Free Flow Speed, PFFS 82.2 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.1	1.1
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	0.988	0.988
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	242 pc/h	223 pc/h
Base percent time-spent-following, (note-4) BPTSFd	26.1 %	
Adjustment for no-passing zones, fnp	61.4	
Percent time-spent-following, PTSFd	58.1 %	

Level of Service and Other Performance Measures

Level of service, LOS	C	
Volume to capacity ratio, v/c	0.14	
Peak 15-min vehicle-miles of travel, VMT15	6	veh-mi
Peak-hour vehicle-miles of travel, VMT60	23	veh-mi
Peak 15-min total travel time, TT15	0.2	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.1	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSD (from above)	34.8	mi/h
Percent time-spent-following, PTSFd (from above)	58.1	
Level of service, LOSd (from above)	C	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	239.6
Effective width of outside lane, We	16.00
Effective speed factor, St	4.42
Bicycle LOS Score, BLOS	7.49
Bicycle LOS	F

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period PM Peak
Highway Bailey St
From/To SR 42 to Woodstock Rd
Jurisdiction GDOT
Analysis Year 2021
Description Blackhall Phase 2

Input Data

Highway class	Class 3	Peak hour factor, PHF	0.91
Shoulder width	3.0 ft	% Trucks and buses	7 %
Lane width	13.0 ft	% Trucks crawling	0.0 %
Segment length	0.1 mi	Truck crawl speed	0.0 mi/hr
Terrain type	Level	% Recreational vehicles	0 %
Grade: Length	- mi	% No-passing zones	100 %
Up/down	- %	Access point density	0 /mi

Analysis direction volume, Vd 212 veh/h
Opposing direction volume, Vo 230 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.5	1.4
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.966	0.973
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	241 pc/h	260 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 2.6 mi/h
Adj. for access point density, (note-3) fA 0.0 mi/h

Free-flow speed, FFSd 42.4 mi/h

Adjustment for no-passing zones, fnp 3.6 mi/h
Average travel speed, ATSD 34.9 mi/h
Percent Free Flow Speed, PFFS 82.3 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.1	1.1
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	0.993	0.993
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	235 pc/h	255 pc/h
Base percent time-spent-following, (note-4) BPTSFd	26.0 %	
Adjustment for no-passing zones, fnp	60.5	
Percent time-spent-following, PTSFd	55.0 %	

Level of Service and Other Performance Measures

Level of service, LOS	C	
Volume to capacity ratio, v/c	0.14	
Peak 15-min vehicle-miles of travel, VMT15	6	veh-mi
Peak-hour vehicle-miles of travel, VMT60	21	veh-mi
Peak 15-min total travel time, TT15	0.2	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.1	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSD (from above)	34.9	mi/h
Percent time-spent-following, PTSFd (from above)	55.0	
Level of service, LOSd (from above)	C	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, S_p	
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, v_{OL}	233.0
Effective width of outside lane, W_e	16.00
Effective speed factor, S_t	4.42
Bicycle LOS Score, $BLOS$	5.66
Bicycle LOS	F

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period PM Peak
Highway Bailey St
From/To Woodstock Rd to FayettevilleRd
Jurisdiction GDOT
Analysis Year 2021
Description Blackhall Phase 2

Input Data

Highway class	Class 3	Peak hour factor, PHF	0.91
Shoulder width	0.0 ft	% Trucks and buses	13 %
Lane width	15.0 ft	% Trucks crawling	0.0 %
Segment length	0.1 mi	Truck crawl speed	0.0 mi/hr
Terrain type	Level	% Recreational vehicles	0 %
Grade: Length	- mi	% No-passing zones	100 %
Up/down	- %	Access point density	0 /mi

Analysis direction volume, Vd 349 veh/h
Opposing direction volume, Vo 206 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.3	1.5
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.962	0.939
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	399 pc/h	241 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 4.2 mi/h
Adj. for access point density, (note-3) fA 0.0 mi/h

Free-flow speed, FFSd 40.8 mi/h

Adjustment for no-passing zones, fnp 3.7 mi/h
Average travel speed, ATSD 32.1 mi/h
Percent Free Flow Speed, PFFS 78.7 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.1	1.1
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	0.987	0.987
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	389 pc/h	229 pc/h
Base percent time-spent-following, (note-4) BPTSFd	37.9 %	
Adjustment for no-passing zones, fnp	51.3	
Percent time-spent-following, PTSFd	70.2 %	

Level of Service and Other Performance Measures

Level of service, LOS	C	
Volume to capacity ratio, v/c	0.23	
Peak 15-min vehicle-miles of travel, VMT15	10	veh-mi
Peak-hour vehicle-miles of travel, VMT60	35	veh-mi
Peak 15-min total travel time, TT15	0.3	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.1	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSD (from above)	32.1	mi/h
Percent time-spent-following, PTSFd (from above)	70.2	
Level of service, LOSd (from above)	C	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	45
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	383.5
Effective width of outside lane, We	15.00
Effective speed factor, St	4.42
Bicycle LOS Score, BLOS	8.31
Bicycle LOS	F

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period PM Peak
Highway Bailey St
From/To Woodstock Rd to FayettevilleRd
Jurisdiction GDOT
Analysis Year 2021
Description Blackhall Phase 2

Input Data

Highway class	Class 3	Peak hour factor, PHF	0.85
Shoulder width	0.0 ft	% Trucks and buses	5 %
Lane width	15.0 ft	% Trucks crawling	0.0 %
Segment length	0.1 mi	Truck crawl speed	0.0 mi/hr
Terrain type	Level	% Recreational vehicles	0 %
Grade: Length	- mi	% No-passing zones	100 %
Up/down	- %	Access point density	0 /mi

Analysis direction volume, Vd 206 veh/h
Opposing direction volume, Vo 349 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.5	1.3
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.976	0.985
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	248 pc/h	417 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 4.2 mi/h
Adj. for access point density, (note-3) fA 0.0 mi/h

Free-flow speed, FFSd 40.8 mi/h

Adjustment for no-passing zones, fnp 2.6 mi/h
Average travel speed, ATSD 33.0 mi/h
Percent Free Flow Speed, PFFS 80.9 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.1	1.0
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	0.995	1.000
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	244 pc/h	411 pc/h
Base percent time-spent-following, (note-4) BPTSFd	30.3 %	
Adjustment for no-passing zones, fnp	48.9	
Percent time-spent-following, PTSFd	48.5 %	

Level of Service and Other Performance Measures

Level of service, LOS	C	
Volume to capacity ratio, v/c	0.14	
Peak 15-min vehicle-miles of travel, VMT15	6 veh-mi	
Peak-hour vehicle-miles of travel, VMT60	21 veh-mi	
Peak 15-min total travel time, TT15	0.2 veh-h	
Capacity from ATS, CdATS	1700 veh/h	
Capacity from PTSF, CdPTSF	1700 veh/h	
Directional Capacity	1700 veh/h	

Passing Lane Analysis

Total length of analysis segment, Lt	0.1 mi
Length of two-lane highway upstream of the passing lane, Lu	- mi
Length of passing lane including tapers, Lpl	- mi
Average travel speed, ATSD (from above)	33.0 mi/h
Percent time-spent-following, PTSFd (from above)	48.5
Level of service, LOSd (from above)	C

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	- mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	- mi
Adj. factor for the effect of passing lane on average speed, fpl	-
Average travel speed including passing lane, ATSpl	-
Percent free flow speed including passing lane, PFFSpl	0.0 %

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	- mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	- mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-
Percent time-spent-following including passing lane, PTSFpl	- %

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E
Peak 15-min total travel time, TT15	- veh-h

Bicycle Level of Service

Posted speed limit, Sp	
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	242.4
Effective width of outside lane, We	15.00
Effective speed factor, St	4.42
Bicycle LOS Score, BLOS	5.24
Bicycle LOS	E

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period PM Peak
Highway Bailey St
From/To Fayetteville Rd to Blackhall 1
Jurisdiction GDOT
Analysis Year 2021
Description Blackhall Phase 2

Input Data

Highway class	Class 3	Peak hour factor, PHF	0.85
Shoulder width	2.0 ft	% Trucks and buses	11 %
Lane width	11.0 ft	% Trucks crawling	0.0 %
Segment length	0.7 mi	Truck crawl speed	0.0 mi/hr
Terrain type	Level	% Recreational vehicles	0 %
Grade: Length	- mi	% No-passing zones	100 %
Up/down	- %	Access point density	15 /mi

Analysis direction volume, Vd 342 veh/h
Opposing direction volume, Vo 196 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.3	1.5
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.968	0.948
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	416 pc/h	243 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 3.0 mi/h
Adj. for access point density, (note-3) fA 3.8 mi/h

Free-flow speed, FFSd 38.3 mi/h

Adjustment for no-passing zones, fnp 3.7 mi/h
Average travel speed, ATSD 29.4 mi/h
Percent Free Flow Speed, PFFS 76.9 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.0	1.1
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	0.989
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	402 pc/h	233 pc/h
Base percent time-spent-following, (note-4) BPTSFd	38.7 %	
Adjustment for no-passing zones, fnp	49.7	
Percent time-spent-following, PTSFd	70.2 %	

Level of Service and Other Performance Measures

Level of service, LOS	C	
Volume to capacity ratio, v/c	0.24	
Peak 15-min vehicle-miles of travel, VMT15	70	veh-mi
Peak-hour vehicle-miles of travel, VMT60	239	veh-mi
Peak 15-min total travel time, TT15	2.4	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.7	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSD (from above)	29.4	mi/h
Percent time-spent-following, PTSFd (from above)	70.2	
Level of service, LOSd (from above)	C	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, S_p	
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, v_{OL}	402.4
Effective width of outside lane, W_e	13.00
Effective speed factor, S_t	4.42
Bicycle LOS Score, B_{LOS}	7.79
Bicycle LOS	F

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period PM Peak
Highway Bailey St
From/To Fayetteville Rd to Blackhall 1
Jurisdiction GDOT
Analysis Year 2021
Description Blackhall Phase 2

Input Data

Highway class	Class 3	Peak hour factor, PHF	0.87
Shoulder width	2.0 ft	% Trucks and buses	10 %
Lane width	11.0 ft	% Trucks crawling	0.0 %
Segment length	0.7 mi	Truck crawl speed	0.0 mi/hr
Terrain type	Level	% Recreational vehicles	0 %
Grade: Length	- mi	% No-passing zones	100 %
Up/down	- %	Access point density	15 /mi

Analysis direction volume, Vd 196 veh/h
Opposing direction volume, Vo 342 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.5	1.3
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.952	0.971
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	237 pc/h	405 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 3.0 mi/h
Adj. for access point density, (note-3) fA 3.8 mi/h

Free-flow speed, FFSd 38.3 mi/h

Adjustment for no-passing zones, fnp 2.7 mi/h
Average travel speed, ATSD 30.6 mi/h
Percent Free Flow Speed, PFFS 80.0 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.1	1.1
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	0.990	0.990
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	228 pc/h	397 pc/h
Base percent time-spent-following, (note-4) BPTSFd	28.3 %	
Adjustment for no-passing zones, fnp	50.3	
Percent time-spent-following, PTSFd	46.6 %	

Level of Service and Other Performance Measures

Level of service, LOS	C	
Volume to capacity ratio, v/c	0.13	
Peak 15-min vehicle-miles of travel, VMT15	39	veh-mi
Peak-hour vehicle-miles of travel, VMT60	137	veh-mi
Peak 15-min total travel time, TT15	1.3	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.7	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSD (from above)	30.6	mi/h
Percent time-spent-following, PTSFd (from above)	46.6	
Level of service, LOSd (from above)	C	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, S_p	
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, v_{OL}	225.3
Effective width of outside lane, W_e	13.00
Effective speed factor, S_t	4.42
Bicycle LOS Score, B_{LOS}	7.11
Bicycle LOS	F

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period PM Peak
Highway Bailey St
From/To Blackhall DW 1 to BlackhallDW2
Jurisdiction GDOT
Analysis Year 2021
Description Blackhall Phase 2

Input Data

Highway class	Class 3	Peak hour factor, PHF	0.87
Shoulder width	3.0 ft	% Trucks and buses	6 %
Lane width	11.0 ft	% Trucks crawling	0.0 %
Segment length	0.1 mi	Truck crawl speed	0.0 mi/hr
Terrain type	Level	% Recreational vehicles	0 %
Grade: Length	- mi	% No-passing zones	100 %
Up/down	- %	Access point density	0 /mi

Analysis direction volume, Vd 342 veh/h
Opposing direction volume, Vo 207 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.3	1.5
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.982	0.971
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	400 pc/h	245 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 3.0 mi/h
Adj. for access point density, (note-3) fA 0.0 mi/h

Free-flow speed, FFSd 42.0 mi/h

Adjustment for no-passing zones, fnp 3.7 mi/h
Average travel speed, ATSD 33.3 mi/h
Percent Free Flow Speed, PFFS 79.3 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.1	1.1
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	0.994	0.994
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	395 pc/h	239 pc/h
Base percent time-spent-following, (note-4) BPTSFd	39.7 %	
Adjustment for no-passing zones, fnp	50.7	
Percent time-spent-following, PTSFd	71.3 %	

Level of Service and Other Performance Measures

Level of service, LOS	C	
Volume to capacity ratio, v/c	0.23	
Peak 15-min vehicle-miles of travel, VMT15	10	veh-mi
Peak-hour vehicle-miles of travel, VMT60	34	veh-mi
Peak 15-min total travel time, TT15	0.3	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.1	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSD (from above)	33.3	mi/h
Percent time-spent-following, PTSFd (from above)	71.3	
Level of service, LOSd (from above)	C	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	393.1
Effective width of outside lane, We	14.00
Effective speed factor, St	4.42
Bicycle LOS Score, BLOS	5.92
Bicycle LOS	F

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period PM Peak
Highway Bailey St
From/To Blackhall DW 1 to BlackhallDW2
Jurisdiction GDOT
Analysis Year 2021
Description Blackhall Phase 2

Input Data

Highway class	Class 3	Peak hour factor, PHF	0.84
Shoulder width	3.0 ft	% Trucks and buses	9 %
Lane width	11.0 ft	% Trucks crawling	0.0 %
Segment length	0.1 mi	Truck crawl speed	0.0 mi/hr
Terrain type	Level	% Recreational vehicles	0 %
Grade: Length	- mi	% No-passing zones	100 %
Up/down	- %	Access point density	0 /mi

Analysis direction volume, Vd 207 veh/h
Opposing direction volume, Vo 342 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.5	1.3
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.957	0.974
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	258 pc/h	418 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 3.0 mi/h
Adj. for access point density, (note-3) fA 0.0 mi/h

Free-flow speed, FFSd 42.0 mi/h

Adjustment for no-passing zones, fnp 2.6 mi/h
Average travel speed, ATSD 34.1 mi/h
Percent Free Flow Speed, PFFS 81.3 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.1	1.0
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	0.991	1.000
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	249 pc/h	407 pc/h
Base percent time-spent-following, (note-4) BPTSFd	29.8 %	
Adjustment for no-passing zones, fnp	49.2	
Percent time-spent-following, PTSFd	48.5 %	

Level of Service and Other Performance Measures

Level of service, LOS	C	
Volume to capacity ratio, v/c	0.15	
Peak 15-min vehicle-miles of travel, VMT15	6	veh-mi
Peak-hour vehicle-miles of travel, VMT60	21	veh-mi
Peak 15-min total travel time, TT15	0.2	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.1	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSD (from above)	34.1	mi/h
Percent time-spent-following, PTSFd (from above)	48.5	
Level of service, LOSd (from above)	C	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, S_p	
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, v_{OL}	246.4
Effective width of outside lane, W_e	14.00
Effective speed factor, S_t	4.42
Bicycle LOS Score, $BLOS$	6.66
Bicycle LOS	F

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period AM Peak
Highway Bailey St
From/To Blackhall DW2 to International
Jurisdiction GDOT
Analysis Year 2021
Description Blackhall Phase 2

Input Data

Highway class	Class 3	Peak hour factor, PHF	0.84
Shoulder width	3.0 ft	% Trucks and buses	6 %
Lane width	12.0 ft	% Trucks crawling	0.0 %
Segment length	0.6 mi	Truck crawl speed	0.0 mi/hr
Terrain type	Level	% Recreational vehicles	0 %
Grade: Length	- mi	% No-passing zones	100 %
Up/down	- %	Access point density	0 /mi

Analysis direction volume, Vd 408 veh/h
Opposing direction volume, Vo 221 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.2	1.4
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.988	0.977
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	492 pc/h	269 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 2.6 mi/h
Adj. for access point density, (note-3) fA 0.0 mi/h

Free-flow speed, FFSd 42.4 mi/h

Adjustment for no-passing zones, fnp 3.6 mi/h
Average travel speed, ATSD 32.9 mi/h
Percent Free Flow Speed, PFFS 77.7 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.0	1.1
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	0.994
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	486 pc/h	265 pc/h
Base percent time-spent-following, (note-4) BPTSFd	46.9 %	
Adjustment for no-passing zones, fnp	41.5	
Percent time-spent-following, PTSFd	73.8 %	

Level of Service and Other Performance Measures

Level of service, LOS	C	
Volume to capacity ratio, v/c	0.29	
Peak 15-min vehicle-miles of travel, VMT15	73	veh-mi
Peak-hour vehicle-miles of travel, VMT60	245	veh-mi
Peak 15-min total travel time, TT15	2.2	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.6	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSD (from above)	32.9	mi/h
Percent time-spent-following, PTSFd (from above)	73.8	
Level of service, LOSd (from above)	C	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, S_p	
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, v_{OL}	485.7
Effective width of outside lane, W_e	15.00
Effective speed factor, S_t	4.42
Bicycle LOS Score, $BLOS$	5.88
Bicycle LOS	F

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period AM Peak
Highway Bailey St
From/To Blackhall DW2 to International
Jurisdiction GDOT
Analysis Year 2021
Description Blackhall Phase 2

Input Data

Highway class	Class 3	Peak hour factor, PHF	0.91
Shoulder width	3.0 ft	% Trucks and buses	6 %
Lane width	12.0 ft	% Trucks crawling	0.0 %
Segment length	0.6 mi	Truck crawl speed	0.0 mi/hr
Terrain type	Level	% Recreational vehicles	0 %
Grade: Length	- mi	% No-passing zones	100 %
Up/down	- %	Access point density	0 /mi

Analysis direction volume, Vd 221 veh/h
Opposing direction volume, Vo 408 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.5	1.3
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.971	0.982
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	250 pc/h	457 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 2.6 mi/h
Adj. for access point density, (note-3) fA 0.0 mi/h

Free-flow speed, FFSd 42.4 mi/h

Adjustment for no-passing zones, fnp 2.4 mi/h
Average travel speed, ATSD 34.5 mi/h
Percent Free Flow Speed, PFFS 81.3 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.1	1.0
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	0.994	1.000
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	244 pc/h	448 pc/h
Base percent time-spent-following, (note-4) BPTSFd	31.1 %	
Adjustment for no-passing zones, fnp	45.2	
Percent time-spent-following, PTSFd	47.0 %	

Level of Service and Other Performance Measures

Level of service, LOS	C	
Volume to capacity ratio, v/c	0.14	
Peak 15-min vehicle-miles of travel, VMT15	36	veh-mi
Peak-hour vehicle-miles of travel, VMT60	133	veh-mi
Peak 15-min total travel time, TT15	1.0	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.6	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSD (from above)	34.5	mi/h
Percent time-spent-following, PTSFd (from above)	47.0	
Level of service, LOSd (from above)	C	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, S_p	
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, v_{OL}	242.9
Effective width of outside lane, W_e	15.00
Effective speed factor, S_t	4.42
Bicycle LOS Score, B_{LOS}	5.57
Bicycle LOS	F

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

HCS7 Multilane Highway Report

Project Information

Analyst	JS	Date	3/31/2021
Agency	Lumin8	Analysis Year	2021 - Existing
Jurisdiction	GDOT	Time Period Analyzed	PM Peak
Project Description	Blackhall Phase 2	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	20.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	40.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	455	Heavy Vehicle Adjustment Factor (fHV)	0.958
Peak Hour Factor	0.91	Flow Rate (Vp), pc/h/ln	261
Total Trucks, %	4.40	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.14

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	40.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	6.5
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	5.0		

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Project Information

Analyst	JS	Date	3/31/2021
Agency	Lumin8	Analysis Year	2021 - Existing
Jurisdiction	GDOT	Time Period Analyzed	PM Peak
Project Description	Blackhall Phase 2	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	233	Heavy Vehicle Adjustment Factor (fHV)	0.840
Peak Hour Factor	0.91	Flow Rate (Vp), pc/h/ln	152
Total Trucks, %	19.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.08

Direction 2 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	3.4
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.0		

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8. International Park to Bouldercrest Rd.xuf

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HCS7 Multilane Highway Report

Project Information

Analyst	JS	Date	3/31/2021
Agency	Lumin8	Analysis Year	2021 - Existing
Jurisdiction	GDOT	Time Period Analyzed	PM Peak
Project Description	Blackhall Phase 2	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	20.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	8
Free-Flow Speed (FFS), mi/h	39.1		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	698	Heavy Vehicle Adjustment Factor (fHV)	0.952
Peak Hour Factor	0.91	Flow Rate (Vp), pc/h/ln	403
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.21

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	39.1
Total Lateral Clearance Adj. (fLLC)	0.9	Density (D), pc/mi/ln	10.3
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	5.0		

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9. Bouldercrest Rd to Clifton Church Rd.xuf

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HCS7 Multilane Highway Report

Project Information

Analyst	JS	Date	3/31/2021
Agency	Lumin8	Analysis Year	2021 - Existing
Jurisdiction	GDOT	Time Period Analyzed	PM Peak
Project Description	Blackhall Phase 2	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	8.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	8
Free-Flow Speed (FFS), mi/h	42.1		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	495	Heavy Vehicle Adjustment Factor (fHV)	0.915
Peak Hour Factor	0.94	Flow Rate (Vp), pc/h/ln	288
Total Trucks, %	9.30	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.15

Direction 2 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	42.1
Total Lateral Clearance Adj. (fLLC)	0.9	Density (D), pc/mi/ln	6.8
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	2.0		

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HCS7 Multilane Highway Report

Project Information

Analyst	JS	Date	3/31/2021
Agency	Lumin8	Analysis Year	2021 - Existing
Jurisdiction	GDOT	Time Period Analyzed	PM Peak
Project Description	Blackhall Phase 2	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Northbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	25.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLT	Total Lateral Clearance (TLC), ft	8
Free-Flow Speed (FFS), mi/h	37.9		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1034	Heavy Vehicle Adjustment Factor (fHV)	0.952
Peak Hour Factor	0.98	Flow Rate (Vp), pc/h/ln	554
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.29

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	37.8
Total Lateral Clearance Adj. (fLLC)	0.9	Density (D), pc/mi/ln	14.7
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (fA)	6.3		

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10. Clifton Church Rd to Continental Way.xuf

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HCS7 Multilane Highway Report

Project Information

Analyst	JS	Date	3/31/2021
Agency	Lumin8	Analysis Year	2021 - Existing
Jurisdiction	GDOT	Time Period Analyzed	PM Peak
Project Description	Blackhall Phase 2	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Southbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	5.8
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	8
Free-Flow Speed (FFS), mi/h	42.7		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1087	Heavy Vehicle Adjustment Factor (fhv)	0.976
Peak Hour Factor	0.94	Flow Rate (Vp), pc/h/ln	592
Total Trucks, %	2.50	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.31

Direction 2 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	42.6
Total Lateral Clearance Adj. (fLLC)	0.9	Density (D), pc/mi/ln	13.9
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (fA)	1.5		

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10. Clifton Church Rd to Continental Way.xuf

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HCS7 Multilane Highway Report

Project Information

Analyst	JS	Date	3/31/2021
Agency	Lumin8	Analysis Year	2021 - Existing
Jurisdiction	GDOT	Time Period Analyzed	PM Peak
Project Description	Blackhall Phase 2	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Northbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	25.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLT	Total Lateral Clearance (TLC), ft	8
Free-Flow Speed (FFS), mi/h	37.9		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1088	Heavy Vehicle Adjustment Factor (fHV)	0.937
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	631
Total Trucks, %	6.67	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.33

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	37.8
Total Lateral Clearance Adj. (fLLC)	0.9	Density (D), pc/mi/ln	16.7
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (fA)	6.3		

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11. Continental Way to 285 WB.xuf

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HCS7 Multilane Highway Report

Project Information

Analyst	JS	Date	3/31/2021
Agency	Lumin8	Analysis Year	2021 - Existing
Jurisdiction	GDOT	Time Period Analyzed	PM Peak
Project Description	Blackhall Phase 2	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Southbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	22.2
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLT	Total Lateral Clearance (TLC), ft	8
Free-Flow Speed (FFS), mi/h	38.6		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1177	Heavy Vehicle Adjustment Factor (fHV)	0.925
Peak Hour Factor	0.98	Flow Rate (Vp), pc/h/ln	649
Total Trucks, %	8.10	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.34

Direction 2 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	38.6
Total Lateral Clearance Adj. (fLLC)	0.9	Density (D), pc/mi/ln	16.8
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (fA)	5.6		

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11. Continental Way to 285 WB.xuf

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Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period PM Peak
Highway Bouldercrest Rd
From/To 285 WB to 285 Eb
Jurisdiction GDOT
Analysis Year 2021
Description Blackhall Phase 2

Input Data

Highway class	Class 3	Peak hour factor, PHF	0.92
Shoulder width	6.0 ft	% Trucks and buses	6 %
Lane width	12.0 ft	% Trucks crawling	0.0 %
Segment length	0.1 mi	Truck crawl speed	0.0 mi/hr
Terrain type	Level	% Recreational vehicles	0 %
Grade: Length	- mi	% No-passing zones	100 %
Up/down	- %	Access point density	0 /mi

Analysis direction volume, Vd 1075 veh/h
Opposing direction volume, Vo 878 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.0	1.0
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	1.000	1.000
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	1168 pc/h	954 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 0.0 mi/h
Adj. for access point density, (note-3) fA 0.0 mi/h

Free-flow speed, FFSd 45.0 mi/h

Adjustment for no-passing zones, fnp 1.1 mi/h
Average travel speed, ATSD 27.4 mi/h
Percent Free Flow Speed, PFFS 60.9 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.0	1.0
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	1.000
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	1168 pc/h	954 pc/h
Base percent time-spent-following, (note-4) BPTSFd	81.5 %	
Adjustment for no-passing zones, fnp	16.5	
Percent time-spent-following, PTSFd	90.6 %	

Level of Service and Other Performance Measures

Level of service, LOS	E	
Volume to capacity ratio, v/c	0.69	
Peak 15-min vehicle-miles of travel, VMT15	29	veh-mi
Peak-hour vehicle-miles of travel, VMT60	108	veh-mi
Peak 15-min total travel time, TT15	1.1	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.1	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSD (from above)	27.4	mi/h
Percent time-spent-following, PTSFd (from above)	90.6	
Level of service, LOSd (from above)	E	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, S_p	
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, v_{OL}	1168.5
Effective width of outside lane, W_e	24.00
Effective speed factor, S_t	4.79
Bicycle LOS Score, B_{LOS}	4.77
Bicycle LOS	E

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period PM Peak
Highway Bouldercrest Rd
From/To 285 WB to 285 Eb
Jurisdiction GDOT
Analysis Year 2021
Description Blackhall Phase 2

Input Data

Highway class	Class 3	Peak hour factor, PHF	0.92
Shoulder width	6.0 ft	% Trucks and buses	4 %
Lane width	12.0 ft	% Trucks crawling	0.0 %
Segment length	0.1 mi	Truck crawl speed	0.0 mi/hr
Terrain type	Level	% Recreational vehicles	0 %
Grade: Length	- mi	% No-passing zones	100 %
Up/down	- %	Access point density	0 /mi

Analysis direction volume, Vd 878 veh/h
Opposing direction volume, Vo 1075 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.0	1.0
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	1.000	1.000
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	954 pc/h	1168 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 0.0 mi/h
Adj. for access point density, (note-3) fA 0.0 mi/h

Free-flow speed, FFSd 45.0 mi/h

Adjustment for no-passing zones, fnp 1.0 mi/h
Average travel speed, ATSD 27.5 mi/h
Percent Free Flow Speed, PFFS 61.1 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.0	1.0
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	1.000
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	954 pc/h	1168 pc/h
Base percent time-spent-following, (note-4) BPTSFd	78.4 %	
Adjustment for no-passing zones, fnp	16.5	
Percent time-spent-following, PTSFd	85.8 %	

Level of Service and Other Performance Measures

Level of service, LOS	E	
Volume to capacity ratio, v/c	0.56	
Peak 15-min vehicle-miles of travel, VMT15	24	veh-mi
Peak-hour vehicle-miles of travel, VMT60	88	veh-mi
Peak 15-min total travel time, TT15	0.9	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.1	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSD (from above)	27.5	mi/h
Percent time-spent-following, PTSFd (from above)	85.8	
Level of service, LOSd (from above)	E	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	954.3
Effective width of outside lane, We	24.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	4.06
Bicycle LOS	D

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period PM Peak
Highway International Park Dr
From/To Constitution to Continental
Jurisdiction GDOT
Analysis Year 2021
Description Blackhall Phase 2

Input Data

Highway class	Class 3	Peak hour factor, PHF	0.86
Shoulder width	3.0 ft	% Trucks and buses	24 %
Lane width	16.0 ft	% Trucks crawling	0.0 %
Segment length	0.3 mi	Truck crawl speed	0.0 mi/hr
Terrain type	Level	% Recreational vehicles	0 %
Grade: Length	- mi	% No-passing zones	100 %
Up/down	- %	Access point density	10 /mi

Analysis direction volume, Vd 66 veh/h
Opposing direction volume, Vo 107 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.9	1.8
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.822	0.839
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	93 pc/h	148 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 2.6 mi/h
Adj. for access point density, (note-3) fA 2.5 mi/h

Free-flow speed, FFSd 39.9 mi/h

Adjustment for no-passing zones, fnp 3.2 mi/h
Average travel speed, ATSD 34.9 mi/h
Percent Free Flow Speed, PFFS 87.4 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.1	1.1
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	0.977	0.977
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	79 pc/h	127 pc/h
Base percent time-spent-following, (note-4) BPTSFd	9.4 %	
Adjustment for no-passing zones, fnp	52.7	
Percent time-spent-following, PTSFd	29.6 %	

Level of Service and Other Performance Measures

Level of service, LOS	B	
Volume to capacity ratio, v/c	0.04	
Peak 15-min vehicle-miles of travel, VMT15	6	veh-mi
Peak-hour vehicle-miles of travel, VMT60	20	veh-mi
Peak 15-min total travel time, TT15	0.2	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.3	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSD (from above)	34.9	mi/h
Percent time-spent-following, PTSFd (from above)	29.6	
Level of service, LOSd (from above)	B	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, S_p	
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, v_{OL}	76.7
Effective width of outside lane, W_e	31.73
Effective speed factor, S_t	4.42
Bicycle LOS Score, B_{LOS}	9.47
Bicycle LOS	F

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period PM Peak
Highway International Park Dr
From/To Constitution to Continental
Jurisdiction GDOT
Analysis Year 2021
Description Blackhall Phase 2

Input Data

Highway class	Class 3		Peak hour factor, PHF	0.91	
Shoulder width	3.0	ft	% Trucks and buses	46	%
Lane width	16.0	ft	% Trucks crawling	0.0	%
Segment length	0.3	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Level		% Recreational vehicles	0	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	10	/mi

Analysis direction volume, Vd 107 veh/h
Opposing direction volume, Vo 66 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.8	1.9
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.731	0.707
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	161 pc/h	103 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 2.6 mi/h
Adj. for access point density, (note-3) fA 2.5 mi/h

Free-flow speed, FFSd 39.9 mi/h

Adjustment for no-passing zones, fnp 2.4 mi/h
Average travel speed, ATSD 35.4 mi/h
Percent Free Flow Speed, PFFS 88.7 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.1	1.1
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	0.956	0.956
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	123 pc/h	76 pc/h
Base percent time-spent-following, (note-4) BPTSFd	14.0 %	
Adjustment for no-passing zones, fnp	52.7	
Percent time-spent-following, PTSFd	46.6 %	

Level of Service and Other Performance Measures

Level of service, LOS	B	
Volume to capacity ratio, v/c	0.07	
Peak 15-min vehicle-miles of travel, VMT15	9	veh-mi
Peak-hour vehicle-miles of travel, VMT60	32	veh-mi
Peak 15-min total travel time, TT15	0.3	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.3	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSD (from above)	35.4	mi/h
Percent time-spent-following, PTSFd (from above)	46.6	
Level of service, LOSd (from above)	B	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, S_p	45
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, v_{OL}	117.6
Effective width of outside lane, W_e	27.84
Effective speed factor, S_t	4.42
Bicycle LOS Score, $BLOS$	29.52
Bicycle LOS	F

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period PM Peak
Highway Continental Way
From/To International to Bouldercrest
Jurisdiction GDOT
Analysis Year 2021
Description Blackhall Phase 2

Input Data

Highway class	Class 3	Peak hour factor, PHF	0.86
Shoulder width	3.0 ft	% Trucks and buses	28 %
Lane width	12.0 ft	% Trucks crawling	0.0 %
Segment length	0.6 mi	Truck crawl speed	0.0 mi/hr
Terrain type	Level	% Recreational vehicles	0 %
Grade: Length	- mi	% No-passing zones	100 %
Up/down	- %	Access point density	13 /mi

Analysis direction volume, Vd 50 veh/h
Opposing direction volume, Vo 96 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.9	1.9
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.799	0.799
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	73 pc/h	140 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 2.6 mi/h
Adj. for access point density, (note-3) fA 3.3 mi/h

Free-flow speed, FFSd 39.2 mi/h

Adjustment for no-passing zones, fnp 3.0 mi/h
Average travel speed, ATSD 34.5 mi/h
Percent Free Flow Speed, PFFS 88.0 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.1	1.1
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	0.973	0.973
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	60 pc/h	115 pc/h
Base percent time-spent-following, (note-4) BPTSFd	7.2 %	
Adjustment for no-passing zones, fnp	50.9	
Percent time-spent-following, PTSFd	24.7 %	

Level of Service and Other Performance Measures

Level of service, LOS	B	
Volume to capacity ratio, v/c	0.03	
Peak 15-min vehicle-miles of travel, VMT15	9	veh-mi
Peak-hour vehicle-miles of travel, VMT60	30	veh-mi
Peak 15-min total travel time, TT15	0.3	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.6	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSD (from above)	34.5	mi/h
Percent time-spent-following, PTSFd (from above)	24.7	
Level of service, LOSd (from above)	B	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, S_p	45
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, v_{OL}	58.1
Effective width of outside lane, W_e	26.25
Effective speed factor, S_t	4.42
Bicycle LOS Score, B_{LOS}	13.63
Bicycle LOS	F

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period PM Peak
Highway Continental Way
From/To International to Bouldercrest
Jurisdiction GDOT
Analysis Year 2021
Description Blackhall Phase 2

Input Data

Highway class	Class 3	Peak hour factor, PHF	0.98
Shoulder width	3.0 ft	% Trucks and buses	71 %
Lane width	12.0 ft	% Trucks crawling	0.0 %
Segment length	0.6 mi	Truck crawl speed	0.0 mi/hr
Terrain type	Level	% Recreational vehicles	0 %
Grade: Length	- mi	% No-passing zones	100 %
Up/down	- %	Access point density	13 /mi

Analysis direction volume, Vd 96 veh/h
Opposing direction volume, Vo 50 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.9	1.9
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.610	0.610
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	161 pc/h	84 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM	-	mi/h
Observed total demand, (note-3) V	-	veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS	45.0	mi/h
Adj. for lane and shoulder width, (note-3) fLS	2.6	mi/h
Adj. for access point density, (note-3) fA	3.3	mi/h

Free-flow speed, FFSd	39.2	mi/h
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Adjustment for no-passing zones, fnp	2.4	mi/h
Average travel speed, ATSD	34.8	mi/h
Percent Free Flow Speed, PFFS	89.0	%

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.1	1.1
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	0.934	0.934
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	105 pc/h	55 pc/h
Base percent time-spent-following, (note-4) BPTSFd	12.2 %	
Adjustment for no-passing zones, fnp	50.9	
Percent time-spent-following, PTSFd	45.6 %	

Level of Service and Other Performance Measures

Level of service, LOS	B	
Volume to capacity ratio, v/c	0.06	
Peak 15-min vehicle-miles of travel, VMT15	15 veh-mi	
Peak-hour vehicle-miles of travel, VMT60	58 veh-mi	
Peak 15-min total travel time, TT15	0.4 veh-h	
Capacity from ATS, CdATS	1700 veh/h	
Capacity from PTSF, CdPTSF	1700 veh/h	
Directional Capacity	1700 veh/h	

Passing Lane Analysis

Total length of analysis segment, Lt	0.6 mi	
Length of two-lane highway upstream of the passing lane, Lu	- mi	
Length of passing lane including tapers, Lpl	- mi	
Average travel speed, ATSD (from above)	34.8 mi/h	
Percent time-spent-following, PTSFd (from above)	45.6	
Level of service, LOSd (from above)	B	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	- mi	
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	- mi	
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0 %	

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	- mi	
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	- mi	
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	- %	

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	- veh-h	

Bicycle Level of Service

Posted speed limit, S_p	45
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, v_{OL}	98.0
Effective width of outside lane, W_e	22.80
Effective speed factor, S_t	4.42
Bicycle LOS Score, $BLOS$	63.10
Bicycle LOS	F

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

2024 NO-BUILD CONDITIONS

AM PEAK HOUR

HCS7 Multilane Highway Report

Project Information

Analyst	JS	Date	3/31/2021
Agency	Lumin8	Analysis Year	2024 - No Build
Jurisdiction	GDOT	Time Period Analyzed	AM Peak
Project Description	Blackhall Phase 2	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Northbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	50.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1589	Heavy Vehicle Adjustment Factor (fHV)	0.885
Peak Hour Factor	0.93	Flow Rate (Vp), pc/h/ln	644
Total Trucks, %	13.00	Capacity (c), pc/h/ln	2000
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2000
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.32

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	50.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	12.9
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (fA)	0.0		

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Project Information

Analyst	JS	Date	3/31/2021
Agency	Lumin8	Analysis Year	2024 - No Build
Jurisdiction	GDOT	Time Period Analyzed	AM Peak
Project Description	Blackhall Phase 2	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Southbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	50.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1828	Heavy Vehicle Adjustment Factor (fhv)	0.897
Peak Hour Factor	0.96	Flow Rate (Vp), pc/h/ln	1062
Total Trucks, %	11.50	Capacity (c), pc/h/ln	2000
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2000
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.53

Direction 2 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	50.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	21.2
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (fA)	0.0		

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HCS7 Multilane Highway Report

Project Information

Analyst	JS	Date	3/31/2021
Agency	Lumin8	Analysis Year	2024 - No Build
Jurisdiction	GDOT	Time Period Analyzed	AM Peak
Project Description	Blackhall Phase 2	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Northbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	7.7
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	48.1		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2733	Heavy Vehicle Adjustment Factor (fHV)	0.962
Peak Hour Factor	0.96	Flow Rate (Vp), pc/h/ln	986
Total Trucks, %	4.00	Capacity (c), pc/h/ln	1962
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1962
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.50

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	48.1
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	20.5
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (fA)	1.9		

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HCS7 Multilane Highway Report

Project Information

Analyst	JS	Date	3/31/2021
Agency	Lumin8	Analysis Year	2024 - No Build
Jurisdiction	GDOT	Time Period Analyzed	AM Peak
Project Description	Blackhall Phase 2	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Southbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	9.9
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	47.5		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	800	Heavy Vehicle Adjustment Factor (fHV)	0.909
Peak Hour Factor	0.90	Flow Rate (Vp), pc/h/ln	326
Total Trucks, %	10.00	Capacity (c), pc/h/ln	1950
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1950
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.17

Direction 2 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	47.5
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	6.9
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	2.5		

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2. 285 WB to Bailey St.xuf

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Phone: Fax:
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Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period AM Peak
Highway Bailey St
From/To SR 42 to Woodstock Rd
Jurisdiction GDOT
Analysis Year 2024 - No Build
Description Blackhall Phase 2

Input Data

Highway class	Class 3	Peak hour factor, PHF	0.90
Shoulder width	3.0 ft	% Trucks and buses	10 %
Lane width	13.0 ft	% Trucks crawling	0.0 %
Segment length	0.1 mi	Truck crawl speed	0.0 mi/hr
Terrain type	Level	% Recreational vehicles	0 %
Grade: Length	- mi	% No-passing zones	100 %
Up/down	- %	Access point density	0 /mi

Analysis direction volume, Vd 130 veh/h
Opposing direction volume, Vo 278 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.7	1.4
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.935	0.962
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	154 pc/h	321 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 2.6 mi/h
Adj. for access point density, (note-3) fA 0.0 mi/h

Free-flow speed, FFSd 42.4 mi/h

Adjustment for no-passing zones, fnp 3.2 mi/h
Average travel speed, ATSD 35.5 mi/h
Percent Free Flow Speed, PFFS 83.7 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.1	1.1
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	0.990	0.990
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	146 pc/h	312 pc/h
Base percent time-spent-following, (note-4) BPTSFd	18.1 %	
Adjustment for no-passing zones, fnp	49.7	
Percent time-spent-following, PTSFd	33.9 %	

Level of Service and Other Performance Measures

Level of service, LOS	B	
Volume to capacity ratio, v/c	0.08	
Peak 15-min vehicle-miles of travel, VMT15	4	veh-mi
Peak-hour vehicle-miles of travel, VMT60	13	veh-mi
Peak 15-min total travel time, TT15	0.1	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.1	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSD (from above)	35.5	mi/h
Percent time-spent-following, PTSFd (from above)	33.9	
Level of service, LOSd (from above)	B	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, S_p	45
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, v_{OL}	144.4
Effective width of outside lane, W_e	21.60
Effective speed factor, S_t	4.42
Bicycle LOS Score, $BLOS$	5.40
Bicycle LOS	E

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period AM Peak
Highway Bailey St
From/To SR 42 to Woodstock Rd
Jurisdiction GDOT
Analysis Year 2024 - No Build
Description Blackhall Phase 2

Input Data

Highway class	Class 3	Peak hour factor, PHF	0.90
Shoulder width	3.0 ft	% Trucks and buses	10 %
Lane width	13.0 ft	% Trucks crawling	0.0 %
Segment length	0.1 mi	Truck crawl speed	0.0 mi/hr
Terrain type	Level	% Recreational vehicles	0 %
Grade: Length	- mi	% No-passing zones	100 %
Up/down	- %	Access point density	0 /mi

Analysis direction volume, Vd 278 veh/h
Opposing direction volume, Vo 130 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.4	1.7
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.962	0.935
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	321 pc/h	154 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 2.6 mi/h
Adj. for access point density, (note-3) fA 0.0 mi/h

Free-flow speed, FFSd 42.4 mi/h

Adjustment for no-passing zones, fnp 3.3 mi/h
Average travel speed, ATSD 35.5 mi/h
Percent Free Flow Speed, PFFS 83.6 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.1	1.1
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	0.990	0.990
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	312 pc/h	146 pc/h
Base percent time-spent-following, (note-4) BPTSFd	31.2 %	
Adjustment for no-passing zones, fnp	49.7	
Percent time-spent-following, PTSFd	65.1 %	

Level of Service and Other Performance Measures

Level of service, LOS	B	
Volume to capacity ratio, v/c	0.18	
Peak 15-min vehicle-miles of travel, VMT15	8	veh-mi
Peak-hour vehicle-miles of travel, VMT60	28	veh-mi
Peak 15-min total travel time, TT15	0.2	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.1	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSD (from above)	35.5	mi/h
Percent time-spent-following, PTSFd (from above)	65.1	
Level of service, LOSd (from above)	B	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, S_p	45
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, v_{OL}	308.9
Effective width of outside lane, W_e	16.00
Effective speed factor, S_t	4.42
Bicycle LOS Score, $BLOS$	6.84
Bicycle LOS	F

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period AM Peak
Highway Bailey St
From/To Woodstock Rd to FayettevilleRd
Jurisdiction GDOT
Analysis Year 2021
Description Blackhall Phase 2

Input Data

Highway class	Class 3	Peak hour factor, PHF	0.78
Shoulder width	0.0 ft	% Trucks and buses	10 %
Lane width	15.0 ft	% Trucks crawling	0.0 %
Segment length	0.1 mi	Truck crawl speed	0.0 mi/hr
Terrain type	Level	% Recreational vehicles	0 %
Grade: Length	- mi	% No-passing zones	100 %
Up/down	- %	Access point density	0 /mi

Analysis direction volume, Vd 206 veh/h
Opposing direction volume, Vo 294 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.4	1.3
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.962	0.971
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	275 pc/h	388 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 4.2 mi/h
Adj. for access point density, (note-3) fA 0.0 mi/h

Free-flow speed, FFSd 40.8 mi/h

Adjustment for no-passing zones, fnp 2.8 mi/h
Average travel speed, ATSD 32.9 mi/h
Percent Free Flow Speed, PFFS 80.6 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.1	1.1
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	0.990	0.990
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	267 pc/h	381 pc/h
Base percent time-spent-following, (note-4) BPTSFd	31.3 %	
Adjustment for no-passing zones, fnp	51.8	
Percent time-spent-following, PTSFd	52.6 %	

Level of Service and Other Performance Measures

Level of service, LOS	C	
Volume to capacity ratio, v/c	0.16	
Peak 15-min vehicle-miles of travel, VMT15	7	veh-mi
Peak-hour vehicle-miles of travel, VMT60	21	veh-mi
Peak 15-min total travel time, TT15	0.2	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.1	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSD (from above)	32.9	mi/h
Percent time-spent-following, PTSFd (from above)	52.6	
Level of service, LOSd (from above)	C	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, S_p	
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, v_{OL}	264.1
Effective width of outside lane, W_e	15.00
Effective speed factor, S_t	4.42
Bicycle LOS Score, B_{LOS}	6.91
Bicycle LOS	F

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period AM Peak
Highway Bailey St
From/To Woodstock Rd to FayettevilleRd
Jurisdiction GDOT
Analysis Year 2024 - No Build
Description Blackhall Phase 2

Input Data

Highway class	Class 3	Peak hour factor, PHF	0.92
Shoulder width	0.0 ft	% Trucks and buses	11 %
Lane width	15.0 ft	% Trucks crawling	0.0 %
Segment length	0.1 mi	Truck crawl speed	0.0 mi/hr
Terrain type	Level	% Recreational vehicles	0 %
Grade: Length	- mi	% No-passing zones	100 %
Up/down	- %	Access point density	0 /mi

Analysis direction volume, Vd 294 veh/h
Opposing direction volume, Vo 206 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.4	1.5
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.958	0.948
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	334 pc/h	236 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 4.2 mi/h
Adj. for access point density, (note-3) fA 0.0 mi/h

Free-flow speed, FFSd 40.8 mi/h

Adjustment for no-passing zones, fnp 3.8 mi/h
Average travel speed, ATSD 32.6 mi/h
Percent Free Flow Speed, PFFS 79.9 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.1	1.1
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	0.989	0.989
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	323 pc/h	226 pc/h
Base percent time-spent-following, (note-4) BPTSFd	32.8 %	
Adjustment for no-passing zones, fnp	55.5	
Percent time-spent-following, PTSFd	65.5 %	

Level of Service and Other Performance Measures

Level of service, LOS	C	
Volume to capacity ratio, v/c	0.19	
Peak 15-min vehicle-miles of travel, VMT15	8	veh-mi
Peak-hour vehicle-miles of travel, VMT60	29	veh-mi
Peak 15-min total travel time, TT15	0.2	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.1	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSD (from above)	32.6	mi/h
Percent time-spent-following, PTSFd (from above)	65.5	
Level of service, LOSd (from above)	C	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, S_p	45
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, v_{OL}	319.6
Effective width of outside lane, W_e	15.00
Effective speed factor, S_t	4.42
Bicycle LOS Score, $BLOS$	7.39
Bicycle LOS	F

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period AM Peak
Highway Bailey St
From/To Fayetteville Rd to Blackhall 1
Jurisdiction GDOT
Analysis Year 2024 - No Build
Description Blackhall Phase 2

Input Data

Highway class	Class 3	Peak hour factor, PHF	0.92
Shoulder width	2.0 ft	% Trucks and buses	5 %
Lane width	11.0 ft	% Trucks crawling	0.0 %
Segment length	0.7 mi	Truck crawl speed	0.0 mi/hr
Terrain type	Level	% Recreational vehicles	0 %
Grade: Length	- mi	% No-passing zones	100 %
Up/down	- %	Access point density	15 /mi

Analysis direction volume, Vd 197 veh/h
Opposing direction volume, Vo 287 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.5	1.4
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.976	0.980
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	219 pc/h	318 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 3.0 mi/h
Adj. for access point density, (note-3) fA 3.8 mi/h

Free-flow speed, FFSd 38.3 mi/h

Adjustment for no-passing zones, fnp 3.2 mi/h
Average travel speed, ATSD 30.8 mi/h
Percent Free Flow Speed, PFFS 80.7 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.1	1.1
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	0.995	0.995
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	215 pc/h	314 pc/h
Base percent time-spent-following, (note-4) BPTSFd	26.1 %	
Adjustment for no-passing zones, fnp	55.5	
Percent time-spent-following, PTSFd	48.7 %	

Level of Service and Other Performance Measures

Level of service, LOS	C	
Volume to capacity ratio, v/c	0.13	
Peak 15-min vehicle-miles of travel, VMT15	37	veh-mi
Peak-hour vehicle-miles of travel, VMT60	138	veh-mi
Peak 15-min total travel time, TT15	1.2	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.7	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSD (from above)	30.8	mi/h
Percent time-spent-following, PTSFd (from above)	48.7	
Level of service, LOSd (from above)	C	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, S_p	45
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, v_{OL}	214.1
Effective width of outside lane, W_e	13.00
Effective speed factor, S_t	4.42
Bicycle LOS Score, $BLOS$	5.46
Bicycle LOS	E

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period AM Peak
Highway Bailey St
From/To Fayetteville Rd to Blackhall 1
Jurisdiction GDOT
Analysis Year 2024 - No Build
Description Blackhall Phase 2

Input Data

Highway class	Class 3	Peak hour factor, PHF	0.94
Shoulder width	2.0 ft	% Trucks and buses	5 %
Lane width	11.0 ft	% Trucks crawling	0.0 %
Segment length	0.7 mi	Truck crawl speed	0.0 mi/hr
Terrain type	Level	% Recreational vehicles	0 %
Grade: Length	- mi	% No-passing zones	100 %
Up/down	- %	Access point density	15 /mi

Analysis direction volume, Vd 287 veh/h
Opposing direction volume, Vo 197 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.4	1.5
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.980	0.976
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	312 pc/h	215 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 3.0 mi/h
Adj. for access point density, (note-3) fA 3.8 mi/h

Free-flow speed, FFSd 38.3 mi/h

Adjustment for no-passing zones, fnp 3.9 mi/h
Average travel speed, ATSD 30.3 mi/h
Percent Free Flow Speed, PFFS 79.1 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.1	1.1
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	0.995	0.995
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	307 pc/h	211 pc/h
Base percent time-spent-following, (note-4) BPTSFd	30.4 %	
Adjustment for no-passing zones, fnp	55.7	
Percent time-spent-following, PTSFd	63.4 %	

Level of Service and Other Performance Measures

Level of service, LOS	C	
Volume to capacity ratio, v/c	0.18	
Peak 15-min vehicle-miles of travel, VMT15	53	veh-mi
Peak-hour vehicle-miles of travel, VMT60	201	veh-mi
Peak 15-min total travel time, TT15	1.8	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.7	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSD (from above)	30.3	mi/h
Percent time-spent-following, PTSFd (from above)	63.4	
Level of service, LOSd (from above)	C	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, S_p	45
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, v_{OL}	305.3
Effective width of outside lane, W_e	13.00
Effective speed factor, S_t	4.42
Bicycle LOS Score, B_{LOS}	5.64
Bicycle LOS	F

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period AM Peak
Highway Bailey St
From/To Blackhall DW 1 to BlackhallDW2
Jurisdiction GDOT
Analysis Year 2024 - No Build
Description Blackhall Phase 2

Input Data

Highway class	Class 3	Peak hour factor, PHF	0.94
Shoulder width	3.0 ft	% Trucks and buses	10 %
Lane width	11.0 ft	% Trucks crawling	0.0 %
Segment length	0.1 mi	Truck crawl speed	0.0 mi/hr
Terrain type	Level	% Recreational vehicles	0 %
Grade: Length	- mi	% No-passing zones	100 %
Up/down	- %	Access point density	0 /mi

Analysis direction volume, Vd 194 veh/h
Opposing direction volume, Vo 346 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.5	1.3
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.952	0.971
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	217 pc/h	379 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 3.0 mi/h
Adj. for access point density, (note-3) fA 0.0 mi/h

Free-flow speed, FFSd 42.0 mi/h

Adjustment for no-passing zones, fnp 2.8 mi/h
Average travel speed, ATSD 34.5 mi/h
Percent Free Flow Speed, PFFS 82.2 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.1	1.1
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	0.990	0.990
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	208 pc/h	372 pc/h
Base percent time-spent-following, (note-4) BPTSFd	26.0 %	
Adjustment for no-passing zones, fnp	51.7	
Percent time-spent-following, PTSFd	44.5 %	

Level of Service and Other Performance Measures

Level of service, LOS	C	
Volume to capacity ratio, v/c	0.12	
Peak 15-min vehicle-miles of travel, VMT15	5	veh-mi
Peak-hour vehicle-miles of travel, VMT60	19	veh-mi
Peak 15-min total travel time, TT15	0.1	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.1	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSD (from above)	34.5	mi/h
Percent time-spent-following, PTSFd (from above)	44.5	
Level of service, LOSd (from above)	C	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, S_p	45
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, v_{OL}	206.4
Effective width of outside lane, W_e	14.00
Effective speed factor, S_t	4.42
Bicycle LOS Score, $BLOS$	6.93
Bicycle LOS	F

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period AM Peak
Highway Bailey St
From/To Blackhall DW 1 to BlackhallDW2
Jurisdiction GDOT
Analysis Year 2024 - No Build
Description Blackhall Phase 2

Input Data

Highway class	Class 3	Peak hour factor, PHF	0.94
Shoulder width	3.0 ft	% Trucks and buses	4 %
Lane width	11.0 ft	% Trucks crawling	0.0 %
Segment length	0.1 mi	Truck crawl speed	0.0 mi/hr
Terrain type	Level	% Recreational vehicles	0 %
Grade: Length	- mi	% No-passing zones	100 %
Up/down	- %	Access point density	0 /mi

Analysis direction volume, Vd 346 veh/h
Opposing direction volume, Vo 194 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.3	1.5
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.988	0.980
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	373 pc/h	211 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 3.0 mi/h
Adj. for access point density, (note-3) fA 0.0 mi/h

Free-flow speed, FFSd 42.0 mi/h

Adjustment for no-passing zones, fnp 3.9 mi/h
Average travel speed, ATSD 33.5 mi/h
Percent Free Flow Speed, PFFS 79.9 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.1	1.1
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	0.996	0.996
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	370 pc/h	207 pc/h
Base percent time-spent-following, (note-4) BPTSFd	35.4 %	
Adjustment for no-passing zones, fnp	51.7	
Percent time-spent-following, PTSFd	68.6 %	

Level of Service and Other Performance Measures

Level of service, LOS	C	
Volume to capacity ratio, v/c	0.22	
Peak 15-min vehicle-miles of travel, VMT15	9	veh-mi
Peak-hour vehicle-miles of travel, VMT60	35	veh-mi
Peak 15-min total travel time, TT15	0.3	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.1	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSD (from above)	33.5	mi/h
Percent time-spent-following, PTSFd (from above)	68.6	
Level of service, LOSd (from above)	C	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	45
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	368.1
Effective width of outside lane, We	14.00
Effective speed factor, St	4.42
Bicycle LOS Score, BLOS	5.33
Bicycle LOS	E

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period AM Peak
Highway Bailey St
From/To Blackhall DW2 to International
Jurisdiction GDOT
Analysis Year 2024 - No Build
Description Blackhall Phase 2

Input Data

Highway class	Class 3	Peak hour factor, PHF	0.94
Shoulder width	3.0 ft	% Trucks and buses	11 %
Lane width	12.0 ft	% Trucks crawling	0.0 %
Segment length	0.6 mi	Truck crawl speed	0.0 mi/hr
Terrain type	Level	% Recreational vehicles	0 %
Grade: Length	- mi	% No-passing zones	100 %
Up/down	- %	Access point density	0 /mi

Analysis direction volume, Vd 218 veh/h
Opposing direction volume, Vo 412 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.5	1.3
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.948	0.968
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	245 pc/h	453 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 2.6 mi/h
Adj. for access point density, (note-3) fA 0.0 mi/h

Free-flow speed, FFSd 42.4 mi/h

Adjustment for no-passing zones, fnp 2.5 mi/h
Average travel speed, ATSD 34.5 mi/h
Percent Free Flow Speed, PFFS 81.4 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.1	1.0
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	0.989	1.000
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	234 pc/h	438 pc/h
Base percent time-spent-following, (note-4) BPTSFd	29.5 %	
Adjustment for no-passing zones, fnp	46.1	
Percent time-spent-following, PTSFd	45.6 %	

Level of Service and Other Performance Measures

Level of service, LOS	C	
Volume to capacity ratio, v/c	0.14	
Peak 15-min vehicle-miles of travel, VMT15	35	veh-mi
Peak-hour vehicle-miles of travel, VMT60	131	veh-mi
Peak 15-min total travel time, TT15	1.0	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.6	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSD (from above)	34.5	mi/h
Percent time-spent-following, PTSFd (from above)	45.6	
Level of service, LOSd (from above)	C	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	45
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	231.9
Effective width of outside lane, We	15.00
Effective speed factor, St	4.42
Bicycle LOS Score, BLOS	7.23
Bicycle LOS	F

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period AM Peak
Highway Bailey St
From/To Blackhall DW2 to International
Jurisdiction GDOT
Analysis Year 2024 - No Build
Description Blackhall Phase 2

Input Data

Highway class	Class 3	Peak hour factor, PHF	0.97
Shoulder width	3.0 ft	% Trucks and buses	4 %
Lane width	12.0 ft	% Trucks crawling	0.0 %
Segment length	0.6 mi	Truck crawl speed	0.0 mi/hr
Terrain type	Level	% Recreational vehicles	0 %
Grade: Length	- mi	% No-passing zones	100 %
Up/down	- %	Access point density	0 /mi

Analysis direction volume, Vd 412 veh/h
Opposing direction volume, Vo 218 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.3	1.5
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.988	0.980
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	430 pc/h	229 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 2.6 mi/h
Adj. for access point density, (note-3) fA 0.0 mi/h

Free-flow speed, FFSd 42.4 mi/h

Adjustment for no-passing zones, fnp 3.8 mi/h
Average travel speed, ATSD 33.5 mi/h
Percent Free Flow Speed, PFFS 78.9 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.0	1.1
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	0.996
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	425 pc/h	226 pc/h
Base percent time-spent-following, (note-4) BPTSFd	40.5 %	
Adjustment for no-passing zones, fnp	47.4	
Percent time-spent-following, PTSFd	71.4 %	

Level of Service and Other Performance Measures

Level of service, LOS	C	
Volume to capacity ratio, v/c	0.25	
Peak 15-min vehicle-miles of travel, VMT15	64	veh-mi
Peak-hour vehicle-miles of travel, VMT60	247	veh-mi
Peak 15-min total travel time, TT15	1.9	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.6	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSD (from above)	33.5	mi/h
Percent time-spent-following, PTSFd (from above)	71.4	
Level of service, LOSd (from above)	C	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, S_p	45
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, v_{OL}	424.7
Effective width of outside lane, W_e	15.00
Effective speed factor, S_t	4.42
Bicycle LOS Score, $BLOS$	5.26
Bicycle LOS	E

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

HCS7 Multilane Highway Report

Project Information

Analyst	JS	Date	3/31/2021
Agency	Lumin8	Analysis Year	2021 - Existing
Jurisdiction	GDOT	Time Period Analyzed	AM Peak
Project Description	Blackhall Phase 2	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	20.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	40.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	225	Heavy Vehicle Adjustment Factor (fHV)	0.909
Peak Hour Factor	0.97	Flow Rate (Vp), pc/h/ln	128
Total Trucks, %	10.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.07

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	40.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	3.2
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	5.0		

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HCS7 Multilane Highway Report

Project Information

Analyst	JS	Date	3/31/2021
Agency	Lumin8	Analysis Year	2021 - Existing
Jurisdiction	GDOT	Time Period Analyzed	AM Peak
Project Description	Blackhall Phase 2	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	464	Heavy Vehicle Adjustment Factor (fhv)	0.980
Peak Hour Factor	0.93	Flow Rate (Vp), pc/h/ln	254
Total Trucks, %	2.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.13

Direction 2 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	5.6
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.0		

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8. International Park to Bouldercrest Rd.xuf

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HCS7 Multilane Highway Report

Project Information

Analyst	JS	Date	3/31/2021
Agency	Lumin8	Analysis Year	2021 - Existing
Jurisdiction	GDOT	Time Period Analyzed	AM Peak
Project Description	Blackhall Phase 2	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	20.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLT	Total Lateral Clearance (TLC), ft	8
Free-Flow Speed (FFS), mi/h	39.1		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	440	Heavy Vehicle Adjustment Factor (fHV)	0.885
Peak Hour Factor	0.93	Flow Rate (Vp), pc/h/ln	268
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.14

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	39.1
Total Lateral Clearance Adj. (fLLC)	0.9	Density (D), pc/mi/ln	6.9
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	5.0		

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HCS7 Multilane Version 7.8.5
9. Bouldercrest Rd to Clifton Church Rd.xuf

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HCS7 Multilane Highway Report

Project Information

Analyst	JS	Date	3/31/2021
Agency	Lumin8	Analysis Year	2021 - Existing
Jurisdiction	GDOT	Time Period Analyzed	AM Peak
Project Description	Blackhall Phase 2	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	8.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	8
Free-Flow Speed (FFS), mi/h	42.1		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	867	Heavy Vehicle Adjustment Factor (fHV)	0.980
Peak Hour Factor	0.90	Flow Rate (Vp), pc/h/ln	492
Total Trucks, %	2.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.26

Direction 2 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	42.1
Total Lateral Clearance Adj. (fLLC)	0.9	Density (D), pc/mi/ln	11.7
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (fA)	2.0		

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9. Bouldercrest Rd to Clifton Church Rd.xuf

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HCS7 Multilane Highway Report

Project Information

Analyst	JS	Date	3/31/2021
Agency	Lumin8	Analysis Year	2024 - No Build
Jurisdiction	GDOT	Time Period Analyzed	AM Peak
Project Description	Blackhall Phase 2	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Northbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	25.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLT	Total Lateral Clearance (TLC), ft	8
Free-Flow Speed (FFS), mi/h	37.9		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1266	Heavy Vehicle Adjustment Factor (fhv)	0.971
Peak Hour Factor	0.94	Flow Rate (Vp), pc/h/ln	694
Total Trucks, %	3.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.37

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	37.8
Total Lateral Clearance Adj. (fLLC)	0.9	Density (D), pc/mi/ln	18.4
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (fA)	6.3		

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10. Clifton Church Rd to Continental Way.xuf

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HCS7 Multilane Highway Report

Project Information

Analyst	JS	Date	3/31/2021
Agency	Lumin8	Analysis Year	2024 - No Build
Jurisdiction	GDOT	Time Period Analyzed	AM Peak
Project Description	Blackhall Phase 2	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Southbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	5.8
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	8
Free-Flow Speed (FFS), mi/h	42.7		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	736	Heavy Vehicle Adjustment Factor (fHV)	0.909
Peak Hour Factor	0.90	Flow Rate (Vp), pc/h/ln	450
Total Trucks, %	10.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.24

Direction 2 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	42.6
Total Lateral Clearance Adj. (fLLC)	0.9	Density (D), pc/mi/ln	10.6
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	1.5		

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10. Clifton Church Rd to Continental Way.xuf

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HCS7 Multilane Highway Report

Project Information

Analyst	JS	Date	3/31/2021
Agency	Lumin8	Analysis Year	2024 - No Build
Jurisdiction	GDOT	Time Period Analyzed	AM Peak
Project Description	Blackhall Phase 2	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Northbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	25.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLT	Total Lateral Clearance (TLC), ft	8
Free-Flow Speed (FFS), mi/h	37.9		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1105	Heavy Vehicle Adjustment Factor (fhv)	0.937
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	641
Total Trucks, %	6.67	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.34

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	37.8
Total Lateral Clearance Adj. (fLLC)	0.9	Density (D), pc/mi/ln	17.0
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (fA)	6.3		

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HCS7 Multilane Version 7.8.5
11. Continental Way to 285 WB.xuf

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HCS7 Multilane Highway Report

Project Information

Analyst	JS	Date	3/31/2021
Agency	Lumin8	Analysis Year	2024 - No Build
Jurisdiction	GDOT	Time Period Analyzed	AM Peak
Project Description	Blackhall Phase 2	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Southbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	22.2
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	8
Free-Flow Speed (FFS), mi/h	38.6		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	909	Heavy Vehicle Adjustment Factor (fHV)	0.861
Peak Hour Factor	0.94	Flow Rate (Vp), pc/h/ln	562
Total Trucks, %	16.20	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.30

Direction 2 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	38.6
Total Lateral Clearance Adj. (fLLC)	0.9	Density (D), pc/mi/ln	14.6
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (fA)	5.6		

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HCS7 Multilane Version 7.8.5
11. Continental Way to 285 WB.xuf

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HCS7 Multilane Highway Report

Project Information

Analyst	JS	Date	4/1/2021
Agency	Lumin8	Analysis Year	2024 - No Build
Jurisdiction	GDOT	Time Period Analyzed	AM Peak
Project Description	Blackhall Phase 2	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Northbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1462	Heavy Vehicle Adjustment Factor (fHV)	0.909
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	874
Total Trucks, %	10.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.46

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	19.4
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (fA)	0.0		

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12. 285 WB to 285 EB.xuf

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HCS7 Multilane Highway Report

Project Information

Analyst	JS	Date	4/1/2021
Agency	Lumin8	Analysis Year	2024 - No Build
Jurisdiction	GDOT	Time Period Analyzed	AM Peak
Project Description	Blackhall Phase 2	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Southbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	433	Heavy Vehicle Adjustment Factor (fHV)	0.909
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	259
Total Trucks, %	10.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.14

Direction 2 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	5.8
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.0		

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HCS7 Multilane Version 7.8.5
12. 285 WB to 285 EB.xuf

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Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period AM Peak
Highway International Park Dr
From/To Constitution to Continental
Jurisdiction GDOT
Analysis Year 2024 - No Build
Description Blackhall Phase 2

Input Data

Highway class	Class 3	Peak hour factor, PHF	0.86
Shoulder width	3.0 ft	% Trucks and buses	24 %
Lane width	16.0 ft	% Trucks crawling	0.0 %
Segment length	0.3 mi	Truck crawl speed	0.0 mi/hr
Terrain type	Level	% Recreational vehicles	0 %
Grade: Length	- mi	% No-passing zones	100 %
Up/down	- %	Access point density	10 /mi

Analysis direction volume, Vd 83 veh/h
Opposing direction volume, Vo 213 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.9	1.5
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.822	0.893
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	117 pc/h	277 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 2.6 mi/h
Adj. for access point density, (note-3) fA 2.5 mi/h

Free-flow speed, FFSd 39.9 mi/h

Adjustment for no-passing zones, fnp 3.5 mi/h
Average travel speed, ATSD 33.3 mi/h
Percent Free Flow Speed, PFFS 83.6 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.1	1.1
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	0.977	0.977
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	99 pc/h	254 pc/h
Base percent time-spent-following, (note-4) BPTSFd	12.3 %	
Adjustment for no-passing zones, fnp	48.1	
Percent time-spent-following, PTSFd	25.8 %	

Level of Service and Other Performance Measures

Level of service, LOS	B	
Volume to capacity ratio, v/c	0.06	
Peak 15-min vehicle-miles of travel, VMT15	7 veh-mi	
Peak-hour vehicle-miles of travel, VMT60	25 veh-mi	
Peak 15-min total travel time, TT15	0.2 veh-h	
Capacity from ATS, CdATS	1700 veh/h	
Capacity from PTSF, CdPTSF	1700 veh/h	
Directional Capacity	1700 veh/h	

Passing Lane Analysis

Total length of analysis segment, Lt	0.3 mi
Length of two-lane highway upstream of the passing lane, Lu	- mi
Length of passing lane including tapers, Lpl	- mi
Average travel speed, ATSD (from above)	33.3 mi/h
Percent time-spent-following, PTSFd (from above)	25.8
Level of service, LOSd (from above)	B

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	- mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	- mi
Adj. factor for the effect of passing lane on average speed, fpl	-
Average travel speed including passing lane, ATSpl	-
Percent free flow speed including passing lane, PFFSpl	0.0 %

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	- mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	- mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-
Percent time-spent-following including passing lane, PTSFpl	- %

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E
Peak 15-min total travel time, TT15	- veh-h

Bicycle Level of Service

Posted speed limit, S_p	45
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, v_{OL}	96.5
Effective width of outside lane, W_e	30.11
Effective speed factor, S_t	4.42
Bicycle LOS Score, $BLOS$	10.09
Bicycle LOS	F

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period AM Peak
Highway International Park Dr
From/To Constitution to Continental
Jurisdiction GDOT
Analysis Year 2024 - No Build
Description Blackhall Phase 2

Input Data

Highway class	Class 3	Peak hour factor, PHF	0.97
Shoulder width	3.0 ft	% Trucks and buses	9 %
Lane width	16.0 ft	% Trucks crawling	0.0 %
Segment length	0.3 mi	Truck crawl speed	0.0 mi/hr
Terrain type	Level	% Recreational vehicles	0 %
Grade: Length	- mi	% No-passing zones	100 %
Up/down	- %	Access point density	10 /mi

Analysis direction volume, Vd 213 veh/h
Opposing direction volume, Vo 83 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.5	1.9
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.957	0.925
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	229 pc/h	93 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 2.6 mi/h
Adj. for access point density, (note-3) fA 2.5 mi/h

Free-flow speed, FFSd 39.9 mi/h

Adjustment for no-passing zones, fnp 2.4 mi/h
Average travel speed, ATSD 35.0 mi/h
Percent Free Flow Speed, PFFS 87.7 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.1	1.1
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	0.991	0.991
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	222 pc/h	86 pc/h
Base percent time-spent-following, (note-4) BPTSFd	23.6 %	
Adjustment for no-passing zones, fnp	48.3	
Percent time-spent-following, PTSFd	58.4 %	

Level of Service and Other Performance Measures

Level of service, LOS	B	
Volume to capacity ratio, v/c	0.13	
Peak 15-min vehicle-miles of travel, VMT15	16 veh-mi	
Peak-hour vehicle-miles of travel, VMT60	64 veh-mi	
Peak 15-min total travel time, TT15	0.5 veh-h	
Capacity from ATS, CdATS	1700 veh/h	
Capacity from PTSF, CdPTSF	1700 veh/h	
Directional Capacity	1700 veh/h	

Passing Lane Analysis

Total length of analysis segment, Lt	0.3 mi
Length of two-lane highway upstream of the passing lane, Lu	- mi
Length of passing lane including tapers, Lpl	- mi
Average travel speed, ATSD (from above)	35.0 mi/h
Percent time-spent-following, PTSFd (from above)	58.4
Level of service, LOSd (from above)	B

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	- mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	- mi
Adj. factor for the effect of passing lane on average speed, fpl	-
Average travel speed including passing lane, ATSpl	-
Percent free flow speed including passing lane, PFFSpl	0.0 %

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	- mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	- mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-
Percent time-spent-following including passing lane, PTSFpl	- %

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E
Peak 15-min total travel time, TT15	- veh-h

Bicycle Level of Service

Posted speed limit, S_p	45
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, v_{OL}	219.6
Effective width of outside lane, W_e	19.00
Effective speed factor, S_t	4.42
Bicycle LOS Score, $BLOS$	5.78
Bicycle LOS	F

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period AM Peak
Highway Continental Way
From/To International to Bouldercrest
Jurisdiction GDOT
Analysis Year 2024 - No Build
Description Blackhall Phase 2

Input Data

Highway class	Class 3	Peak hour factor, PHF	0.76
Shoulder width	3.0 ft	% Trucks and buses	62 %
Lane width	12.0 ft	% Trucks crawling	0.0 %
Segment length	0.6 mi	Truck crawl speed	0.0 mi/hr
Terrain type	Level	% Recreational vehicles	0 %
Grade: Length	- mi	% No-passing zones	100 %
Up/down	- %	Access point density	13 /mi

Analysis direction volume, Vd 28 veh/h
Opposing direction volume, Vo 124 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.9	1.6
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.642	0.729
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	57 pc/h	224 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 2.6 mi/h
Adj. for access point density, (note-3) fA 3.3 mi/h

Free-flow speed, FFSd 39.2 mi/h

Adjustment for no-passing zones, fnp 3.8 mi/h
Average travel speed, ATSD 33.1 mi/h
Percent Free Flow Speed, PFFS 84.6 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.1	1.1
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	0.942	0.942
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	39 pc/h	173 pc/h
Base percent time-spent-following, (note-4) BPTSFd	4.8 %	
Adjustment for no-passing zones, fnp	47.0	
Percent time-spent-following, PTSFd	13.4 %	

Level of Service and Other Performance Measures

Level of service, LOS	B	
Volume to capacity ratio, v/c	0.02	
Peak 15-min vehicle-miles of travel, VMT15	6	veh-mi
Peak-hour vehicle-miles of travel, VMT60	17	veh-mi
Peak 15-min total travel time, TT15	0.2	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.6	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSD (from above)	33.1	mi/h
Percent time-spent-following, PTSFd (from above)	13.4	
Level of service, LOSd (from above)	B	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, S_p	45
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, v_{OL}	36.8
Effective width of outside lane, W_e	27.90
Effective speed factor, S_t	4.42
Bicycle LOS Score, $BLOS$	48.28
Bicycle LOS	F

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period AM Peak
Highway Continental Way
From/To International to Bouldercrest
Jurisdiction GDOT
Analysis Year 2024 - No Build
Description Blackhall Phase 2

Input Data

Highway class	Class 3		Peak hour factor, PHF	0.94	
Shoulder width	3.0	ft	% Trucks and buses	50	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	0.6	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Level		% Recreational vehicles	0	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	13	/mi

Analysis direction volume, Vd 124 veh/h
Opposing direction volume, Vo 28 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.8	1.9
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.714	0.690
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	185 pc/h	43 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 2.6 mi/h
Adj. for access point density, (note-3) fA 3.3 mi/h

Free-flow speed, FFSd 39.2 mi/h

Adjustment for no-passing zones, fnp 2.4 mi/h
Average travel speed, ATSD 35.0 mi/h
Percent Free Flow Speed, PFFS 89.4 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.1	1.1
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	0.952	0.952
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	139 pc/h	31 pc/h
Base percent time-spent-following, (note-4) BPTSFd	15.7 %	
Adjustment for no-passing zones, fnp	47.2	
Percent time-spent-following, PTSFd	54.3 %	

Level of Service and Other Performance Measures

Level of service, LOS	B	
Volume to capacity ratio, v/c	0.08	
Peak 15-min vehicle-miles of travel, VMT15	20	veh-mi
Peak-hour vehicle-miles of travel, VMT60	74	veh-mi
Peak 15-min total travel time, TT15	0.6	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.6	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSD (from above)	35.0	mi/h
Percent time-spent-following, PTSFd (from above)	54.3	
Level of service, LOSd (from above)	B	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, S_p	45
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, v_{OL}	131.9
Effective width of outside lane, W_e	20.70
Effective speed factor, S_t	4.42
Bicycle LOS Score, B_{LOS}	35.70
Bicycle LOS	F

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

PM PEAK HOUR

HCS7 Multilane Highway Report

Project Information

Analyst	JS	Date	3/31/2021
Agency	Lumin8	Analysis Year	2024 - No Build
Jurisdiction	GDOT	Time Period Analyzed	PM Peak
Project Description	Blackhall Phase 2	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Northbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	50.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1007	Heavy Vehicle Adjustment Factor (fHV)	0.826
Peak Hour Factor	0.95	Flow Rate (Vp), pc/h/ln	428
Total Trucks, %	21.00	Capacity (c), pc/h/ln	2000
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2000
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.21

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	50.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	8.6
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.0		

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Project Information

Analyst	JS	Date	3/31/2021
Agency	Lumin8	Analysis Year	2024 - No Build
Jurisdiction	GDOT	Time Period Analyzed	PM Peak
Project Description	Blackhall Phase 2	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Southbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	50.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	2103	Heavy Vehicle Adjustment Factor (fHV)	0.917
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	1246
Total Trucks, %	9.00	Capacity (c), pc/h/ln	2000
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2000
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.62

Direction 2 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	50.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	24.9
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (fA)	0.0		

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HCS7 Multilane Highway Report

Project Information

Analyst	JS	Date	3/31/2021
Agency	Lumin8	Analysis Year	2024 - No Build
Jurisdiction	GDOT	Time Period Analyzed	PM Peak
Project Description	Blackhall Phase 2	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Northbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	7.7
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	48.1		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1079	Heavy Vehicle Adjustment Factor (fhv)	0.870
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	449
Total Trucks, %	15.00	Capacity (c), pc/h/ln	1962
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1962
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.23

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	48.1
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	9.3
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	1.9		

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HCS7 Multilane Highway Report

Project Information

Analyst	JS	Date	3/31/2021
Agency	Lumin8	Analysis Year	2024 - No Build
Jurisdiction	GDOT	Time Period Analyzed	PM Peak
Project Description	Blackhall Phase 2	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Southbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	9.9
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	47.5		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1841	Heavy Vehicle Adjustment Factor (fHV)	0.952
Peak Hour Factor	0.96	Flow Rate (Vp), pc/h/ln	671
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1950
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1950
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.34

Direction 2 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	47.5
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	14.1
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (fA)	2.5		

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Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period PM Peak
Highway Bailey St
From/To SR 42 to Woodstock Rd
Jurisdiction GDOT
Analysis Year 2024 - No Build
Description Blackhall Phase 2

Input Data

Highway class	Class 3	Peak hour factor, PHF	0.96
Shoulder width	3.0 ft	% Trucks and buses	12 %
Lane width	13.0 ft	% Trucks crawling	0.0 %
Segment length	0.1 mi	Truck crawl speed	0.0 mi/hr
Terrain type	Level	% Recreational vehicles	0 %
Grade: Length	- mi	% No-passing zones	100 %
Up/down	- %	Access point density	0 /mi

Analysis direction volume, Vd 242 veh/h
Opposing direction volume, Vo 222 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.4	1.5
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.954	0.943
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	264 pc/h	245 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 2.6 mi/h
Adj. for access point density, (note-3) fA 0.0 mi/h

Free-flow speed, FFSd 42.4 mi/h

Adjustment for no-passing zones, fnp 3.7 mi/h
Average travel speed, ATSD 34.7 mi/h
Percent Free Flow Speed, PFFS 81.9 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.1	1.1
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	0.988	0.988
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	255 pc/h	234 pc/h
Base percent time-spent-following, (note-4) BPTSFd	27.0 %	
Adjustment for no-passing zones, fnp	60.4	
Percent time-spent-following, PTSFd	58.5 %	

Level of Service and Other Performance Measures

Level of service, LOS	C	
Volume to capacity ratio, v/c	0.15	
Peak 15-min vehicle-miles of travel, VMT15	6	veh-mi
Peak-hour vehicle-miles of travel, VMT60	24	veh-mi
Peak 15-min total travel time, TT15	0.2	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.1	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSD (from above)	34.7	mi/h
Percent time-spent-following, PTSFd (from above)	58.5	
Level of service, LOSd (from above)	C	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, S_p	45
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, v_{OL}	252.1
Effective width of outside lane, W_e	16.00
Effective speed factor, S_t	4.42
Bicycle LOS Score, B_{LOS}	7.52
Bicycle LOS	F

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period PM Peak
Highway Bailey St
From/To SR 42 to Woodstock Rd
Jurisdiction GDOT
Analysis Year 2024 - No Build
Description Blackhall Phase 2

Input Data

Highway class	Class 3	Peak hour factor, PHF	0.91
Shoulder width	3.0 ft	% Trucks and buses	7 %
Lane width	13.0 ft	% Trucks crawling	0.0 %
Segment length	0.1 mi	Truck crawl speed	0.0 mi/hr
Terrain type	Level	% Recreational vehicles	0 %
Grade: Length	- mi	% No-passing zones	100 %
Up/down	- %	Access point density	0 /mi

Analysis direction volume, Vd 222 veh/h
Opposing direction volume, Vo 242 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.5	1.4
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.966	0.973
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	253 pc/h	273 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 2.6 mi/h
Adj. for access point density, (note-3) fA 0.0 mi/h

Free-flow speed, FFSd 42.4 mi/h

Adjustment for no-passing zones, fnp 3.5 mi/h
Average travel speed, ATSD 34.8 mi/h
Percent Free Flow Speed, PFFS 82.1 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.1	1.1
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	0.993	0.993
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	246 pc/h	268 pc/h
Base percent time-spent-following, (note-4) BPTSFd	28.0 %	
Adjustment for no-passing zones, fnp	59.5	
Percent time-spent-following, PTSFd	56.5 %	

Level of Service and Other Performance Measures

Level of service, LOS	C	
Volume to capacity ratio, v/c	0.14	
Peak 15-min vehicle-miles of travel, VMT15	6	veh-mi
Peak-hour vehicle-miles of travel, VMT60	22	veh-mi
Peak 15-min total travel time, TT15	0.2	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.1	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSD (from above)	34.8	mi/h
Percent time-spent-following, PTSFd (from above)	56.5	
Level of service, LOSd (from above)	C	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, S_p	45
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, v_{OL}	244.0
Effective width of outside lane, W_e	16.00
Effective speed factor, S_t	4.42
Bicycle LOS Score, $BLOS$	5.68
Bicycle LOS	F

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period PM Peak
Highway Bailey St
From/To Woodstock Rd to FayettevilleRd
Jurisdiction GDOT
Analysis Year 2024 - No Build
Description Blackhall Phase 2

Input Data

Highway class	Class 3	Peak hour factor, PHF	0.91
Shoulder width	0.0 ft	% Trucks and buses	13 %
Lane width	15.0 ft	% Trucks crawling	0.0 %
Segment length	0.1 mi	Truck crawl speed	0.0 mi/hr
Terrain type	Level	% Recreational vehicles	0 %
Grade: Length	- mi	% No-passing zones	100 %
Up/down	- %	Access point density	0 /mi

Analysis direction volume, Vd 367 veh/h
Opposing direction volume, Vo 217 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.3	1.5
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.962	0.939
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	419 pc/h	254 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 4.2 mi/h
Adj. for access point density, (note-3) fA 0.0 mi/h

Free-flow speed, FFSd 40.8 mi/h

Adjustment for no-passing zones, fnp 3.6 mi/h
Average travel speed, ATSD 31.9 mi/h
Percent Free Flow Speed, PFFS 78.3 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.0	1.1
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	0.987
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	403 pc/h	242 pc/h
Base percent time-spent-following, (note-4) BPTSFd	40.2 %	
Adjustment for no-passing zones, fnp	49.6	
Percent time-spent-following, PTSFd	71.2 %	

Level of Service and Other Performance Measures

Level of service, LOS	C	
Volume to capacity ratio, v/c	0.24	
Peak 15-min vehicle-miles of travel, VMT15	10	veh-mi
Peak-hour vehicle-miles of travel, VMT60	37	veh-mi
Peak 15-min total travel time, TT15	0.3	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.1	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSD (from above)	31.9	mi/h
Percent time-spent-following, PTSFd (from above)	71.2	
Level of service, LOSd (from above)	C	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, S_p	45
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, v_{OL}	403.3
Effective width of outside lane, W_e	15.00
Effective speed factor, S_t	4.42
Bicycle LOS Score, B_{LOS}	8.33
Bicycle LOS	F

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period PM Peak
Highway Bailey St
From/To Woodstock Rd to FayettevilleRd
Jurisdiction GDOT
Analysis Year 2024 - No Build
Description Blackhall Phase 2

Input Data

Highway class	Class 3	Peak hour factor, PHF	0.85
Shoulder width	0.0 ft	% Trucks and buses	5 %
Lane width	15.0 ft	% Trucks crawling	0.0 %
Segment length	0.1 mi	Truck crawl speed	0.0 mi/hr
Terrain type	Level	% Recreational vehicles	0 %
Grade: Length	- mi	% No-passing zones	100 %
Up/down	- %	Access point density	0 /mi

Analysis direction volume, Vd 217 veh/h
Opposing direction volume, Vo 367 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.4	1.3
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.980	0.985
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	261 pc/h	438 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 4.2 mi/h
Adj. for access point density, (note-3) fA 0.0 mi/h

Free-flow speed, FFSd 40.8 mi/h

Adjustment for no-passing zones, fnp 2.5 mi/h
Average travel speed, ATSD 32.8 mi/h
Percent Free Flow Speed, PFFS 80.5 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.1	1.0
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	0.995	1.000
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	257 pc/h	432 pc/h
Base percent time-spent-following, (note-4) BPTSFd	31.9 %	
Adjustment for no-passing zones, fnp	46.7	
Percent time-spent-following, PTSFd	49.3 %	

Level of Service and Other Performance Measures

Level of service, LOS	C	
Volume to capacity ratio, v/c	0.15	
Peak 15-min vehicle-miles of travel, VMT15	6	veh-mi
Peak-hour vehicle-miles of travel, VMT60	22	veh-mi
Peak 15-min total travel time, TT15	0.2	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.1	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSD (from above)	32.8	mi/h
Percent time-spent-following, PTSFd (from above)	49.3	
Level of service, LOSd (from above)	C	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	45
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	255.3
Effective width of outside lane, We	15.00
Effective speed factor, St	4.42
Bicycle LOS Score, BLOS	5.27
Bicycle LOS	E

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period PM Peak
Highway Bailey St
From/To Fayetteville Rd to Blackhall 1
Jurisdiction GDOT
Analysis Year 2024 - No Build
Description Blackhall Phase 2

Input Data

Highway class	Class 3	Peak hour factor, PHF	0.85
Shoulder width	2.0 ft	% Trucks and buses	11 %
Lane width	11.0 ft	% Trucks crawling	0.0 %
Segment length	0.7 mi	Truck crawl speed	0.0 mi/hr
Terrain type	Level	% Recreational vehicles	0 %
Grade: Length	- mi	% No-passing zones	100 %
Up/down	- %	Access point density	15 /mi

Analysis direction volume, Vd 359 veh/h
Opposing direction volume, Vo 206 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.3	1.5
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.968	0.948
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	436 pc/h	256 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 3.0 mi/h
Adj. for access point density, (note-3) fA 3.8 mi/h

Free-flow speed, FFSd 38.3 mi/h

Adjustment for no-passing zones, fnp 3.6 mi/h
Average travel speed, ATSD 29.2 mi/h
Percent Free Flow Speed, PFFS 76.5 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.0	1.1
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	0.989
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	422 pc/h	245 pc/h
Base percent time-spent-following, (note-4) BPTSFd	41.5 %	
Adjustment for no-passing zones, fnp	47.7	
Percent time-spent-following, PTSFd	71.7 %	

Level of Service and Other Performance Measures

Level of service, LOS	C	
Volume to capacity ratio, v/c	0.25	
Peak 15-min vehicle-miles of travel, VMT15	74	veh-mi
Peak-hour vehicle-miles of travel, VMT60	251	veh-mi
Peak 15-min total travel time, TT15	2.5	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.7	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSD (from above)	29.2	mi/h
Percent time-spent-following, PTSFd (from above)	71.7	
Level of service, LOSd (from above)	C	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, S_p	45
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, v_{OL}	422.4
Effective width of outside lane, W_e	13.00
Effective speed factor, S_t	4.42
Bicycle LOS Score, $BLOS$	7.81
Bicycle LOS	F

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period PM Peak
Highway Bailey St
From/To Fayetteville Rd to Blackhall 1
Jurisdiction GDOT
Analysis Year 2024 - No Build
Description Blackhall Phase 2

Input Data

Highway class	Class 3	Peak hour factor, PHF	0.87
Shoulder width	2.0 ft	% Trucks and buses	10 %
Lane width	11.0 ft	% Trucks crawling	0.0 %
Segment length	0.7 mi	Truck crawl speed	0.0 mi/hr
Terrain type	Level	% Recreational vehicles	0 %
Grade: Length	- mi	% No-passing zones	100 %
Up/down	- %	Access point density	15 /mi

Analysis direction volume, Vd 206 veh/h
Opposing direction volume, Vo 359 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.5	1.3
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.952	0.971
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	249 pc/h	425 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 3.0 mi/h
Adj. for access point density, (note-3) fA 3.8 mi/h

Free-flow speed, FFSd 38.3 mi/h

Adjustment for no-passing zones, fnp 2.6 mi/h
Average travel speed, ATSD 30.4 mi/h
Percent Free Flow Speed, PFFS 79.6 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.1	1.0
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	0.990	1.000
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	239 pc/h	413 pc/h
Base percent time-spent-following, (note-4) BPTSFd	29.9 %	
Adjustment for no-passing zones, fnp	48.6	
Percent time-spent-following, PTSFd	47.7 %	

Level of Service and Other Performance Measures

Level of service, LOS	C	
Volume to capacity ratio, v/c	0.14	
Peak 15-min vehicle-miles of travel, VMT15	41	veh-mi
Peak-hour vehicle-miles of travel, VMT60	144	veh-mi
Peak 15-min total travel time, TT15	1.3	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.7	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSD (from above)	30.4	mi/h
Percent time-spent-following, PTSFd (from above)	47.7	
Level of service, LOSd (from above)	C	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, S_p	45
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, v_{OL}	236.8
Effective width of outside lane, W_e	13.00
Effective speed factor, S_t	4.42
Bicycle LOS Score, B_{LOS}	7.14
Bicycle LOS	F

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period PM Peak
Highway Bailey St
From/To Blackhall DW 1 to BlackhallDW2
Jurisdiction GDOT
Analysis Year 2024 - No Build
Description Blackhall Phase 2

Input Data

Highway class	Class 3	Peak hour factor, PHF	0.87
Shoulder width	3.0 ft	% Trucks and buses	6 %
Lane width	11.0 ft	% Trucks crawling	0.0 %
Segment length	0.1 mi	Truck crawl speed	0.0 mi/hr
Terrain type	Level	% Recreational vehicles	0 %
Grade: Length	- mi	% No-passing zones	100 %
Up/down	- %	Access point density	0 /mi

Analysis direction volume, Vd 370 veh/h
Opposing direction volume, Vo 218 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.3	1.4
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.982	0.977
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	433 pc/h	256 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 3.0 mi/h
Adj. for access point density, (note-3) fA 0.0 mi/h

Free-flow speed, FFSd 42.0 mi/h

Adjustment for no-passing zones, fnp 3.6 mi/h
Average travel speed, ATSD 33.0 mi/h
Percent Free Flow Speed, PFFS 78.6 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.0	1.1
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	0.994
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	425 pc/h	252 pc/h
Base percent time-spent-following, (note-4) BPTSFd	41.4 %	
Adjustment for no-passing zones, fnp	47.5	
Percent time-spent-following, PTSFd	71.2 %	

Level of Service and Other Performance Measures

Level of service, LOS	C	
Volume to capacity ratio, v/c	0.25	
Peak 15-min vehicle-miles of travel, VMT15	11 veh-mi	
Peak-hour vehicle-miles of travel, VMT60	37 veh-mi	
Peak 15-min total travel time, TT15	0.3 veh-h	
Capacity from ATS, CdATS	1700 veh/h	
Capacity from PTSF, CdPTSF	1700 veh/h	
Directional Capacity	1700 veh/h	

Passing Lane Analysis

Total length of analysis segment, Lt	0.1 mi
Length of two-lane highway upstream of the passing lane, Lu	- mi
Length of passing lane including tapers, Lpl	- mi
Average travel speed, ATSD (from above)	33.0 mi/h
Percent time-spent-following, PTSFd (from above)	71.2
Level of service, LOSd (from above)	C

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	- mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	- mi
Adj. factor for the effect of passing lane on average speed, fpl	-
Average travel speed including passing lane, ATSpl	-
Percent free flow speed including passing lane, PFFSpl	0.0 %

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	- mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	- mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-
Percent time-spent-following including passing lane, PTSFpl	- %

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E
Peak 15-min total travel time, TT15	- veh-h

Bicycle Level of Service

Posted speed limit, S_p	45
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, v_{OL}	425.3
Effective width of outside lane, W_e	14.00
Effective speed factor, S_t	4.42
Bicycle LOS Score, $BLOS$	5.96
Bicycle LOS	F

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period PM Peak
Highway Bailey St
From/To Blackhall DW 1 to BlackhallDW2
Jurisdiction GDOT
Analysis Year 2024 - No Build
Description Blackhall Phase 2

Input Data

Highway class	Class 3	Peak hour factor, PHF	0.84
Shoulder width	3.0 ft	% Trucks and buses	9 %
Lane width	11.0 ft	% Trucks crawling	0.0 %
Segment length	0.1 mi	Truck crawl speed	0.0 mi/hr
Terrain type	Level	% Recreational vehicles	0 %
Grade: Length	- mi	% No-passing zones	100 %
Up/down	- %	Access point density	0 /mi

Analysis direction volume, Vd 218 veh/h
Opposing direction volume, Vo 370 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.4	1.3
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.965	0.974
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	269 pc/h	452 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 3.0 mi/h
Adj. for access point density, (note-3) fA 0.0 mi/h

Free-flow speed, FFSd 42.0 mi/h

Adjustment for no-passing zones, fnp 2.5 mi/h
Average travel speed, ATSD 33.9 mi/h
Percent Free Flow Speed, PFFS 80.8 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.1	1.0
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	0.991	1.000
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	262 pc/h	440 pc/h
Base percent time-spent-following, (note-4) BPTSFd	32.0 %	
Adjustment for no-passing zones, fnp	45.9	
Percent time-spent-following, PTSFd	49.1 %	

Level of Service and Other Performance Measures

Level of service, LOS	C	
Volume to capacity ratio, v/c	0.15	
Peak 15-min vehicle-miles of travel, VMT15	6	veh-mi
Peak-hour vehicle-miles of travel, VMT60	22	veh-mi
Peak 15-min total travel time, TT15	0.2	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.1	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSD (from above)	33.9	mi/h
Percent time-spent-following, PTSFd (from above)	49.1	
Level of service, LOSd (from above)	C	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	259.5
Effective width of outside lane, We	14.00
Effective speed factor, St	4.42
Bicycle LOS Score, BLOS	6.69
Bicycle LOS	F

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period AM Peak
Highway Bailey St
From/To Blackhall DW2 to International
Jurisdiction GDOT
Analysis Year 2024 - No Build
Description Blackhall Phase 2

Input Data

Highway class	Class 3		Peak hour factor, PHF	0.84	
Shoulder width	3.0	ft	% Trucks and buses	6	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	0.6	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Level		% Recreational vehicles	0	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	0	/mi

Analysis direction volume, Vd 429 veh/h
Opposing direction volume, Vo 232 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.2	1.4
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.988	0.977
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	517 pc/h	283 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 2.6 mi/h
Adj. for access point density, (note-3) fA 0.0 mi/h

Free-flow speed, FFSd 42.4 mi/h

Adjustment for no-passing zones, fnp 3.5 mi/h
Average travel speed, ATSD 32.7 mi/h
Percent Free Flow Speed, PFFS 77.2 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.0	1.1
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	0.994
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	511 pc/h	278 pc/h
Base percent time-spent-following, (note-4) BPTSFd	47.7 %	
Adjustment for no-passing zones, fnp	39.1	
Percent time-spent-following, PTSFd	73.0 %	

Level of Service and Other Performance Measures

Level of service, LOS	C	
Volume to capacity ratio, v/c	0.30	
Peak 15-min vehicle-miles of travel, VMT15	77	veh-mi
Peak-hour vehicle-miles of travel, VMT60	257	veh-mi
Peak 15-min total travel time, TT15	2.4	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.6	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSD (from above)	32.7	mi/h
Percent time-spent-following, PTSFd (from above)	73.0	
Level of service, LOSd (from above)	C	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, S_p	
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, v_{OL}	510.7
Effective width of outside lane, W_e	15.00
Effective speed factor, S_t	4.42
Bicycle LOS Score, $BLOS$	5.86
Bicycle LOS	F

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period AM Peak
Highway Bailey St
From/To Blackhall DW2 to International
Jurisdiction GDOT
Analysis Year 2024 - No Build
Description Blackhall Phase 2

Input Data

Highway class	Class 3		Peak hour factor, PHF	0.91	
Shoulder width	3.0	ft	% Trucks and buses	6	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	0.6	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Level		% Recreational vehicles	0	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	0	/mi

Analysis direction volume, Vd 232 veh/h
Opposing direction volume, Vo 429 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.4	1.2
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.977	0.988
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	261 pc/h	477 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 2.6 mi/h
Adj. for access point density, (note-3) fA 0.0 mi/h

Free-flow speed, FFSd 42.4 mi/h

Adjustment for no-passing zones, fnp 2.4 mi/h
Average travel speed, ATSD 34.3 mi/h
Percent Free Flow Speed, PFFS 80.9 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.1	1.0
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	0.994	1.000
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	256 pc/h	471 pc/h
Base percent time-spent-following, (note-4) BPTSFd	32.4 %	
Adjustment for no-passing zones, fnp	43.0	
Percent time-spent-following, PTSFd	47.5 %	

Level of Service and Other Performance Measures

Level of service, LOS	C	
Volume to capacity ratio, v/c	0.15	
Peak 15-min vehicle-miles of travel, VMT15	38	veh-mi
Peak-hour vehicle-miles of travel, VMT60	139	veh-mi
Peak 15-min total travel time, TT15	1.1	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.6	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSD (from above)	34.3	mi/h
Percent time-spent-following, PTSFd (from above)	47.5	
Level of service, LOSd (from above)	C	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, S_p	
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, v_{OL}	254.9
Effective width of outside lane, W_e	15.00
Effective speed factor, S_t	4.42
Bicycle LOS Score, B_{LOS}	5.59
Bicycle LOS	F

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

HCS7 Multilane Highway Report

Project Information

Analyst	JS	Date	3/31/2021
Agency	Lumin8	Analysis Year	2024 - No Build
Jurisdiction	GDOT	Time Period Analyzed	PM Peak
Project Description	Blackhall Phase 2	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	20.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	40.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	479	Heavy Vehicle Adjustment Factor (fhv)	0.958
Peak Hour Factor	0.91	Flow Rate (Vp), pc/h/ln	274
Total Trucks, %	4.40	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.14

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	40.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	6.8
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	5.0		

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Project Information

Analyst	JS	Date	3/31/2021
Agency	Lumin8	Analysis Year	2024 - No Build
Jurisdiction	GDOT	Time Period Analyzed	PM Peak
Project Description	Blackhall Phase 2	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	245	Heavy Vehicle Adjustment Factor (fhv)	0.840
Peak Hour Factor	0.91	Flow Rate (Vp), pc/h/ln	160
Total Trucks, %	19.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.08

Direction 2 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	3.6
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.0		

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HCS7 Multilane Highway Report

Project Information

Analyst	JS	Date	3/31/2021
Agency	Lumin8	Analysis Year	2024 - No Build
Jurisdiction	GDOT	Time Period Analyzed	PM Peak
Project Description	Blackhall Phase 2	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	20.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	8
Free-Flow Speed (FFS), mi/h	39.1		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	733	Heavy Vehicle Adjustment Factor (fhv)	0.952
Peak Hour Factor	0.91	Flow Rate (Vp), pc/h/ln	423
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.22

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	39.1
Total Lateral Clearance Adj. (fLLC)	0.9	Density (D), pc/mi/ln	10.8
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	5.0		

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9. Bouldercrest Rd to Clifton Church Rd.xuf

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Project Information

Analyst	JS	Date	3/31/2021
Agency	Lumin8	Analysis Year	2024 - No Build
Jurisdiction	GDOT	Time Period Analyzed	PM Peak
Project Description	Blackhall Phase 2	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	8.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	8
Free-Flow Speed (FFS), mi/h	42.1		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	520	Heavy Vehicle Adjustment Factor (fHV)	0.915
Peak Hour Factor	0.94	Flow Rate (Vp), pc/h/ln	302
Total Trucks, %	9.30	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.16

Direction 2 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	42.1
Total Lateral Clearance Adj. (fLLC)	0.9	Density (D), pc/mi/ln	7.2
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	2.0		

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9. Bouldercrest Rd to Clifton Church Rd.xuf

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HCS7 Multilane Highway Report

Project Information

Analyst	JS	Date	3/31/2021
Agency	Lumin8	Analysis Year	2024 - No Build
Jurisdiction	GDOT	Time Period Analyzed	PM Peak
Project Description	Blackhall Phase 2	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Northbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	25.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWTLT	Total Lateral Clearance (TLC), ft	8
Free-Flow Speed (FFS), mi/h	37.9		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1086	Heavy Vehicle Adjustment Factor (fhv)	0.952
Peak Hour Factor	0.98	Flow Rate (Vp), pc/h/ln	582
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.31

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	37.8
Total Lateral Clearance Adj. (fLLC)	0.9	Density (D), pc/mi/ln	15.4
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (fA)	6.3		

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10. Clifton Church Rd to Continental Way.xuf

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HCS7 Multilane Highway Report

Project Information

Analyst	JS	Date	3/31/2021
Agency	Lumin8	Analysis Year	2024 - No Build
Jurisdiction	GDOT	Time Period Analyzed	PM Peak
Project Description	Blackhall Phase 2	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Southbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	5.8
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	8
Free-Flow Speed (FFS), mi/h	42.7		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1142	Heavy Vehicle Adjustment Factor (fHV)	0.976
Peak Hour Factor	0.94	Flow Rate (Vp), pc/h/ln	622
Total Trucks, %	2.50	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.33

Direction 2 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	42.6
Total Lateral Clearance Adj. (fLLC)	0.9	Density (D), pc/mi/ln	14.6
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (fA)	1.5		

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10. Clifton Church Rd to Continental Way.xuf

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HCS7 Multilane Highway Report

Project Information

Analyst	JS	Date	3/31/2021
Agency	Lumin8	Analysis Year	2024 - No Build
Jurisdiction	GDOT	Time Period Analyzed	PM Peak
Project Description	Blackhall Phase 2	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Northbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	25.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	8
Free-Flow Speed (FFS), mi/h	37.9		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	913	Heavy Vehicle Adjustment Factor (fhv)	0.937
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	530
Total Trucks, %	6.67	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.28

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	37.8
Total Lateral Clearance Adj. (fLLC)	0.9	Density (D), pc/mi/ln	14.0
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (fA)	6.3		

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HCS7 Multilane Highway Report

Project Information

Analyst	JS	Date	3/31/2021
Agency	Lumin8	Analysis Year	2024 - No Build
Jurisdiction	GDOT	Time Period Analyzed	PM Peak
Project Description	Blackhall Phase 2	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Southbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	22.2
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	8
Free-Flow Speed (FFS), mi/h	38.6		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1452	Heavy Vehicle Adjustment Factor (fHV)	0.925
Peak Hour Factor	0.98	Flow Rate (Vp), pc/h/ln	801
Total Trucks, %	8.10	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.42

Direction 2 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	38.6
Total Lateral Clearance Adj. (fLLC)	0.9	Density (D), pc/mi/ln	20.8
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (fA)	5.6		

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HCS7 Multilane Highway Report

Project Information

Analyst	JS	Date	4/1/2021
Agency	Lumin8	Analysis Year	2024 - No Build
Jurisdiction	GDOT	Time Period Analyzed	PM Peak
Project Description	Blackhall Phase 2	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Northbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1129	Heavy Vehicle Adjustment Factor (fhv)	0.943
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	650
Total Trucks, %	6.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.34

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	14.4
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (fA)	0.0		

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HCS7 Multilane Highway Report

Project Information

Analyst	JS	Date	4/1/2021
Agency	Lumin8	Analysis Year	2024 - No Build
Jurisdiction	GDOT	Time Period Analyzed	PM Peak
Project Description	Blackhall Phase 2	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Southbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	922	Heavy Vehicle Adjustment Factor (fhv)	0.962
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	521
Total Trucks, %	4.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.27

Direction 2 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	11.6
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (fA)	0.0		

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Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period PM Peak
Highway International Park Dr
From/To Constitution to Continental
Jurisdiction GDOT
Analysis Year 2024 - No Build
Description Blackhall Phase 2

Input Data

Highway class	Class 3	Peak hour factor, PHF	0.86
Shoulder width	3.0 ft	% Trucks and buses	24 %
Lane width	16.0 ft	% Trucks crawling	0.0 %
Segment length	0.3 mi	Truck crawl speed	0.0 mi/hr
Terrain type	Level	% Recreational vehicles	0 %
Grade: Length	- mi	% No-passing zones	100 %
Up/down	- %	Access point density	10 /mi

Analysis direction volume, Vd 69 veh/h
Opposing direction volume, Vo 113 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.9	1.8
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.822	0.839
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	98 pc/h	157 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 2.6 mi/h
Adj. for access point density, (note-3) fA 2.5 mi/h

Free-flow speed, FFSd 39.9 mi/h

Adjustment for no-passing zones, fnp 3.3 mi/h
Average travel speed, ATSD 34.6 mi/h
Percent Free Flow Speed, PFFS 86.7 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.1	1.1
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	0.977	0.977
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	82 pc/h	135 pc/h
Base percent time-spent-following, (note-4) BPTSFd	9.7 %	
Adjustment for no-passing zones, fnp	52.7	
Percent time-spent-following, PTSFd	29.6 %	

Level of Service and Other Performance Measures

Level of service, LOS	B	
Volume to capacity ratio, v/c	0.05	
Peak 15-min vehicle-miles of travel, VMT15	6 veh-mi	
Peak-hour vehicle-miles of travel, VMT60	21 veh-mi	
Peak 15-min total travel time, TT15	0.2 veh-h	
Capacity from ATS, CdATS	1700 veh/h	
Capacity from PTSF, CdPTSF	1700 veh/h	
Directional Capacity	1700 veh/h	

Passing Lane Analysis

Total length of analysis segment, Lt	0.3 mi
Length of two-lane highway upstream of the passing lane, Lu	- mi
Length of passing lane including tapers, Lpl	- mi
Average travel speed, ATSD (from above)	34.6 mi/h
Percent time-spent-following, PTSFd (from above)	29.6
Level of service, LOSd (from above)	B

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	- mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	- mi
Adj. factor for the effect of passing lane on average speed, fpl	-
Average travel speed including passing lane, ATSpl	-
Percent free flow speed including passing lane, PFFSpl	0.0 %

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	- mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	- mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-
Percent time-spent-following including passing lane, PTSFpl	- %

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E
Peak 15-min total travel time, TT15	- veh-h

Bicycle Level of Service

Posted speed limit, S_p	45
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, v_{OL}	80.2
Effective width of outside lane, W_e	31.44
Effective speed factor, S_t	4.42
Bicycle LOS Score, $BLOS$	9.58
Bicycle LOS	F

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period PM Peak
Highway International Park Dr
From/To Constitution to Continental
Jurisdiction GDOT
Analysis Year 2024 - No Build
Description Blackhall Phase 2

Input Data

Highway class	Class 3	Peak hour factor, PHF	0.91
Shoulder width	3.0 ft	% Trucks and buses	46 %
Lane width	16.0 ft	% Trucks crawling	0.0 %
Segment length	0.3 mi	Truck crawl speed	0.0 mi/hr
Terrain type	Level	% Recreational vehicles	0 %
Grade: Length	- mi	% No-passing zones	100 %
Up/down	- %	Access point density	10 /mi

Analysis direction volume, Vd 113 veh/h
Opposing direction volume, Vo 69 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.8	1.9
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.731	0.707
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	170 pc/h	107 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 2.6 mi/h
Adj. for access point density, (note-3) fA 2.5 mi/h

Free-flow speed, FFSd 39.9 mi/h

Adjustment for no-passing zones, fnp 2.5 mi/h
Average travel speed, ATSD 35.2 mi/h
Percent Free Flow Speed, PFFS 88.3 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.1	1.1
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	0.956	0.956
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	130 pc/h	79 pc/h
Base percent time-spent-following, (note-4) BPTSFd	14.8 %	
Adjustment for no-passing zones, fnp	52.7	
Percent time-spent-following, PTSFd	47.6 %	

Level of Service and Other Performance Measures

Level of service, LOS	B	
Volume to capacity ratio, v/c	0.07	
Peak 15-min vehicle-miles of travel, VMT15	9	veh-mi
Peak-hour vehicle-miles of travel, VMT60	34	veh-mi
Peak 15-min total travel time, TT15	0.3	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.3	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSD (from above)	35.2	mi/h
Percent time-spent-following, PTSFd (from above)	47.6	
Level of service, LOSd (from above)	B	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, S_p	45
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, v_{OL}	124.2
Effective width of outside lane, W_e	27.26
Effective speed factor, S_t	4.42
Bicycle LOS Score, $BLOS$	29.70
Bicycle LOS	F

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period PM Peak
Highway Continental Way
From/To International to Bouldercrest
Jurisdiction GDOT
Analysis Year 2024 - No Build
Description Blackhall Phase 2

Input Data

Highway class	Class 3	Peak hour factor, PHF	0.86
Shoulder width	3.0 ft	% Trucks and buses	28 %
Lane width	12.0 ft	% Trucks crawling	0.0 %
Segment length	0.6 mi	Truck crawl speed	0.0 mi/hr
Terrain type	Level	% Recreational vehicles	0 %
Grade: Length	- mi	% No-passing zones	100 %
Up/down	- %	Access point density	13 /mi

Analysis direction volume, Vd 52 veh/h
Opposing direction volume, Vo 101 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.9	1.8
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.799	0.817
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	76 pc/h	144 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 2.6 mi/h
Adj. for access point density, (note-3) fA 3.3 mi/h

Free-flow speed, FFSd 39.2 mi/h

Adjustment for no-passing zones, fnp 3.1 mi/h
Average travel speed, ATSD 34.3 mi/h
Percent Free Flow Speed, PFFS 87.7 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.1	1.1
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	0.973	0.973
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	62 pc/h	121 pc/h
Base percent time-spent-following, (note-4) BPTSFd	7.5 %	
Adjustment for no-passing zones, fnp	50.8	
Percent time-spent-following, PTSFd	24.7 %	

Level of Service and Other Performance Measures

Level of service, LOS	B	
Volume to capacity ratio, v/c	0.04	
Peak 15-min vehicle-miles of travel, VMT15	9	veh-mi
Peak-hour vehicle-miles of travel, VMT60	31	veh-mi
Peak 15-min total travel time, TT15	0.3	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.6	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSD (from above)	34.3	mi/h
Percent time-spent-following, PTSFd (from above)	24.7	
Level of service, LOSd (from above)	B	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	45
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	60.5
Effective width of outside lane, We	26.10
Effective speed factor, St	4.42
Bicycle LOS Score, BLOS	13.68
Bicycle LOS	F

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period PM Peak
Highway Continental Way
From/To International to Bouldercrest
Jurisdiction GDOT
Analysis Year 2024 - No Build
Description Blackhall Phase 2

Input Data

Highway class	Class 3	Peak hour factor, PHF	0.98
Shoulder width	3.0 ft	% Trucks and buses	71 %
Lane width	12.0 ft	% Trucks crawling	0.0 %
Segment length	0.6 mi	Truck crawl speed	0.0 mi/hr
Terrain type	Level	% Recreational vehicles	0 %
Grade: Length	- mi	% No-passing zones	100 %
Up/down	- %	Access point density	13 /mi

Analysis direction volume, Vd 101 veh/h
Opposing direction volume, Vo 52 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.9	1.9
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.610	0.610
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	169 pc/h	87 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 2.6 mi/h
Adj. for access point density, (note-3) fA 3.3 mi/h

Free-flow speed, FFSd 39.2 mi/h

Adjustment for no-passing zones, fnp 2.4 mi/h
Average travel speed, ATSD 34.8 mi/h
Percent Free Flow Speed, PFFS 88.8 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.1	1.1
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	0.934	0.934
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	110 pc/h	57 pc/h
Base percent time-spent-following, (note-4) BPTSFd	12.7 %	
Adjustment for no-passing zones, fnp	50.8	
Percent time-spent-following, PTSFd	46.2 %	

Level of Service and Other Performance Measures

Level of service, LOS	B	
Volume to capacity ratio, v/c	0.06	
Peak 15-min vehicle-miles of travel, VMT15	15	veh-mi
Peak-hour vehicle-miles of travel, VMT60	61	veh-mi
Peak 15-min total travel time, TT15	0.4	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.6	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSD (from above)	34.8	mi/h
Percent time-spent-following, PTSFd (from above)	46.2	
Level of service, LOSd (from above)	B	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	45
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	103.1
Effective width of outside lane, We	22.42
Effective speed factor, St	4.42
Bicycle LOS Score, BLOS	63.21
Bicycle LOS	F

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

2024 BUILD CONDITIONS

AM PEAK HOUR

HCS7 Multilane Highway Report

Project Information

Analyst	JS	Date	3/31/2021
Agency	Lumin8	Analysis Year	2024 - Build
Jurisdiction	GDOT	Time Period Analyzed	AM Peak
Project Description	Blackhall Phase 2	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Northbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	50.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1710	Heavy Vehicle Adjustment Factor (fHV)	0.885
Peak Hour Factor	0.93	Flow Rate (Vp), pc/h/ln	693
Total Trucks, %	13.00	Capacity (c), pc/h/ln	2000
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2000
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.35

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	50.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	13.9
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (fA)	0.0		

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HCS7 Multilane Highway Report

Project Information

Analyst	JS	Date	3/31/2021
Agency	Lumin8	Analysis Year	2024 - Build
Jurisdiction	GDOT	Time Period Analyzed	AM Peak
Project Description	Blackhall Phase 2	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Southbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	50.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1837	Heavy Vehicle Adjustment Factor (fHV)	0.897
Peak Hour Factor	0.96	Flow Rate (Vp), pc/h/ln	1066
Total Trucks, %	11.50	Capacity (c), pc/h/ln	2000
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2000
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.53

Direction 2 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	50.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	21.3
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (fA)	0.0		

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HCS7 Multilane Highway Report

Project Information

Analyst	JS	Date	3/31/2021
Agency	Lumin8	Analysis Year	2024 - Build
Jurisdiction	GDOT	Time Period Analyzed	AM Peak
Project Description	Blackhall Phase 2	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Northbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	7.7
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	48.1		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	2894	Heavy Vehicle Adjustment Factor (fHV)	0.962
Peak Hour Factor	0.96	Flow Rate (Vp), pc/h/ln	1045
Total Trucks, %	4.00	Capacity (c), pc/h/ln	1962
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1962
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.53

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	48.1
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	21.7
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (fA)	1.9		

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HCS7 Multilane Highway Report

Project Information

Analyst	JS	Date	3/31/2021
Agency	Lumin8	Analysis Year	2024 - Build
Jurisdiction	GDOT	Time Period Analyzed	AM Peak
Project Description	Blackhall Phase 2	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Southbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	9.9
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	47.5		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	828	Heavy Vehicle Adjustment Factor (fHV)	0.909
Peak Hour Factor	0.90	Flow Rate (Vp), pc/h/ln	337
Total Trucks, %	10.00	Capacity (c), pc/h/ln	1950
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1950
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.17

Direction 2 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	47.5
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	7.1
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	2.5		

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HCS7 Multilane Version 7.8.5
2. 285 WB to Bailey St.xuf

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Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period AM Peak
Highway Bailey St
From/To SR 42 to Woodstock Rd
Jurisdiction GDOT
Analysis Year 2024 - Build
Description Blackhall Phase 2

Input Data

Highway class	Class 3	Peak hour factor, PHF	0.90
Shoulder width	3.0 ft	% Trucks and buses	10 %
Lane width	13.0 ft	% Trucks crawling	0.0 %
Segment length	0.1 mi	Truck crawl speed	0.0 mi/hr
Terrain type	Level	% Recreational vehicles	0 %
Grade: Length	- mi	% No-passing zones	100 %
Up/down	- %	Access point density	0 /mi

Analysis direction volume, Vd 358 veh/h
Opposing direction volume, Vo 318 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.3	1.3
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.971	0.971
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	410 pc/h	364 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 2.6 mi/h
Adj. for access point density, (note-3) fA 0.0 mi/h

Free-flow speed, FFSd 42.4 mi/h

Adjustment for no-passing zones, fnp 2.9 mi/h
Average travel speed, ATSD 33.5 mi/h
Percent Free Flow Speed, PFFS 78.9 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.1	1.1
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	0.990	0.990
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	402 pc/h	357 pc/h
Base percent time-spent-following, (note-4) BPTSFd	41.8 %	
Adjustment for no-passing zones, fnp	47.3	
Percent time-spent-following, PTSFd	66.9 %	

Level of Service and Other Performance Measures

Level of service, LOS	C	
Volume to capacity ratio, v/c	0.23	
Peak 15-min vehicle-miles of travel, VMT15	10	veh-mi
Peak-hour vehicle-miles of travel, VMT60	36	veh-mi
Peak 15-min total travel time, TT15	0.3	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.1	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSD (from above)	33.5	mi/h
Percent time-spent-following, PTSFd (from above)	66.9	
Level of service, LOSd (from above)	C	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, S_p	45
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, v_{OL}	397.8
Effective width of outside lane, W_e	16.00
Effective speed factor, S_t	4.42
Bicycle LOS Score, $BLOS$	6.97
Bicycle LOS	F

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period AM Peak
Highway Bailey St
From/To SR 42 to Woodstock Rd
Jurisdiction GDOT
Analysis Year 2024 - Build
Description Blackhall Phase 2

Input Data

Highway class	Class 3	Peak hour factor, PHF	0.90
Shoulder width	3.0 ft	% Trucks and buses	10 %
Lane width	13.0 ft	% Trucks crawling	0.0 %
Segment length	0.1 mi	Truck crawl speed	0.0 mi/hr
Terrain type	Level	% Recreational vehicles	0 %
Grade: Length	- mi	% No-passing zones	100 %
Up/down	- %	Access point density	0 /mi

Analysis direction volume, Vd 318 veh/h
Opposing direction volume, Vo 358 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.3	1.3
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.971	0.971
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	364 pc/h	410 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 2.6 mi/h
Adj. for access point density, (note-3) fA 0.0 mi/h

Free-flow speed, FFSd 42.4 mi/h

Adjustment for no-passing zones, fnp 2.7 mi/h
Average travel speed, ATSD 33.7 mi/h
Percent Free Flow Speed, PFFS 79.6 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.1	1.1
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	0.990	0.990
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	357 pc/h	402 pc/h
Base percent time-spent-following, (note-4) BPTSFd	39.1 %	
Adjustment for no-passing zones, fnp	47.3	
Percent time-spent-following, PTSFd	61.3 %	

Level of Service and Other Performance Measures

Level of service, LOS	C	
Volume to capacity ratio, v/c	0.21	
Peak 15-min vehicle-miles of travel, VMT15	9	veh-mi
Peak-hour vehicle-miles of travel, VMT60	32	veh-mi
Peak 15-min total travel time, TT15	0.3	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.1	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSD (from above)	33.7	mi/h
Percent time-spent-following, PTSFd (from above)	61.3	
Level of service, LOSd (from above)	C	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, S_p	45
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, v_{OL}	353.3
Effective width of outside lane, W_e	16.00
Effective speed factor, S_t	4.42
Bicycle LOS Score, $BLOS$	6.91
Bicycle LOS	F

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period AM Peak
Highway Bailey St
From/To Woodstock Rd to FayettevilleRd
Jurisdiction GDOT
Analysis Year 2024 - Build
Description Blackhall Phase 2

Input Data

Highway class	Class 3	Peak hour factor, PHF	0.78
Shoulder width	0.0 ft	% Trucks and buses	10 %
Lane width	15.0 ft	% Trucks crawling	0.0 %
Segment length	0.1 mi	Truck crawl speed	0.0 mi/hr
Terrain type	Level	% Recreational vehicles	0 %
Grade: Length	- mi	% No-passing zones	100 %
Up/down	- %	Access point density	0 /mi

Analysis direction volume, Vd 434 veh/h
Opposing direction volume, Vo 334 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.1	1.3
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.990	0.971
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	562 pc/h	441 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 4.2 mi/h
Adj. for access point density, (note-3) fA 0.0 mi/h

Free-flow speed, FFSd 40.8 mi/h

Adjustment for no-passing zones, fnp 2.5 mi/h
Average travel speed, ATSD 30.5 mi/h
Percent Free Flow Speed, PFFS 74.8 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.0	1.0
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	1.000
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	556 pc/h	428 pc/h
Base percent time-spent-following, (note-4) BPTSFd	54.4 %	
Adjustment for no-passing zones, fnp	38.4	
Percent time-spent-following, PTSFd	76.1 %	

Level of Service and Other Performance Measures

Level of service, LOS	D	
Volume to capacity ratio, v/c	0.33	
Peak 15-min vehicle-miles of travel, VMT15	14	veh-mi
Peak-hour vehicle-miles of travel, VMT60	43	veh-mi
Peak 15-min total travel time, TT15	0.5	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.1	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSD (from above)	30.5	mi/h
Percent time-spent-following, PTSFd (from above)	76.1	
Level of service, LOSd (from above)	D	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, S_p	45
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, v_{OL}	556.4
Effective width of outside lane, W_e	15.00
Effective speed factor, S_t	4.42
Bicycle LOS Score, $BLOS$	7.29
Bicycle LOS	F

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period AM Peak
Highway Bailey St
From/To Woodstock Rd to FayettevilleRd
Jurisdiction GDOT
Analysis Year 2024 - Build
Description Blackhall Phase 2

Input Data

Highway class	Class 3	Peak hour factor, PHF	0.92
Shoulder width	0.0 ft	% Trucks and buses	11 %
Lane width	15.0 ft	% Trucks crawling	0.0 %
Segment length	0.1 mi	Truck crawl speed	0.0 mi/hr
Terrain type	Level	% Recreational vehicles	0 %
Grade: Length	- mi	% No-passing zones	100 %
Up/down	- %	Access point density	0 /mi

Analysis direction volume, Vd 334 veh/h
Opposing direction volume, Vo 434 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.3	1.2
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.968	0.978
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	375 pc/h	482 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 4.2 mi/h
Adj. for access point density, (note-3) fA 0.0 mi/h

Free-flow speed, FFSd 40.8 mi/h

Adjustment for no-passing zones, fnp 2.3 mi/h
Average travel speed, ATSD 31.8 mi/h
Percent Free Flow Speed, PFFS 78.0 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.1	1.0
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	0.989	1.000
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	367 pc/h	472 pc/h
Base percent time-spent-following, (note-4) BPTSFd	41.8 %	
Adjustment for no-passing zones, fnp	42.1	
Percent time-spent-following, PTSFd	60.2 %	

Level of Service and Other Performance Measures

Level of service, LOS	C	
Volume to capacity ratio, v/c	0.21	
Peak 15-min vehicle-miles of travel, VMT15	9	veh-mi
Peak-hour vehicle-miles of travel, VMT60	33	veh-mi
Peak 15-min total travel time, TT15	0.3	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.1	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSD (from above)	31.8	mi/h
Percent time-spent-following, PTSFd (from above)	60.2	
Level of service, LOSd (from above)	C	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, S_p	45
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, v_{OL}	363.0
Effective width of outside lane, W_e	15.00
Effective speed factor, S_t	4.42
Bicycle LOS Score, $BLOS$	7.46
Bicycle LOS	F

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period AM Peak
Highway Bailey St
From/To Fayetteville Rd to Blackhall 1
Jurisdiction GDOT
Analysis Year 2024 - Build
Description Blackhall Phase 2

Input Data

Highway class	Class 3	Peak hour factor, PHF	0.92
Shoulder width	2.0 ft	% Trucks and buses	5 %
Lane width	11.0 ft	% Trucks crawling	0.0 %
Segment length	0.7 mi	Truck crawl speed	0.0 mi/hr
Terrain type	Level	% Recreational vehicles	0 %
Grade: Length	- mi	% No-passing zones	100 %
Up/down	- %	Access point density	15 /mi

Analysis direction volume, Vd 425 veh/h
Opposing direction volume, Vo 327 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.2	1.3
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.990	0.985
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	467 pc/h	361 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 3.0 mi/h
Adj. for access point density, (note-3) fA 3.8 mi/h

Free-flow speed, FFSd 38.3 mi/h

Adjustment for no-passing zones, fnp 3.0 mi/h
Average travel speed, ATSD 28.9 mi/h
Percent Free Flow Speed, PFFS 75.5 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.0	1.1
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	0.995
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	462 pc/h	357 pc/h
Base percent time-spent-following, (note-4) BPTSFd	46.0 %	
Adjustment for no-passing zones, fnp	42.7	
Percent time-spent-following, PTSFd	70.1 %	

Level of Service and Other Performance Measures

Level of service, LOS	C	
Volume to capacity ratio, v/c	0.27	
Peak 15-min vehicle-miles of travel, VMT15	81	veh-mi
Peak-hour vehicle-miles of travel, VMT60	297	veh-mi
Peak 15-min total travel time, TT15	2.8	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.7	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSD (from above)	28.9	mi/h
Percent time-spent-following, PTSFd (from above)	70.1	
Level of service, LOSd (from above)	C	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, S_p	45
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, v_{OL}	462.0
Effective width of outside lane, W_e	13.00
Effective speed factor, S_t	4.42
Bicycle LOS Score, $BLOS$	5.85
Bicycle LOS	F

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period AM Peak
Highway Bailey St
From/To Fayetteville Rd to Blackhall 1
Jurisdiction GDOT
Analysis Year 2024 - Build
Description Blackhall Phase 2

Input Data

Highway class	Class 3	Peak hour factor, PHF	0.94
Shoulder width	2.0 ft	% Trucks and buses	5 %
Lane width	11.0 ft	% Trucks crawling	0.0 %
Segment length	0.7 mi	Truck crawl speed	0.0 mi/hr
Terrain type	Level	% Recreational vehicles	0 %
Grade: Length	- mi	% No-passing zones	100 %
Up/down	- %	Access point density	15 /mi

Analysis direction volume, Vd 327 veh/h
Opposing direction volume, Vo 425 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.4	1.2
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.980	0.990
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	355 pc/h	457 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 3.0 mi/h
Adj. for access point density, (note-3) fA 3.8 mi/h

Free-flow speed, FFSd 38.3 mi/h

Adjustment for no-passing zones, fnp 2.4 mi/h
Average travel speed, ATSD 29.5 mi/h
Percent Free Flow Speed, PFFS 77.1 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.1	1.0
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	0.995	1.000
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	350 pc/h	452 pc/h
Base percent time-spent-following, (note-4) BPTSFd	40.2 %	
Adjustment for no-passing zones, fnp	43.1	
Percent time-spent-following, PTSFd	59.0 %	

Level of Service and Other Performance Measures

Level of service, LOS	C	
Volume to capacity ratio, v/c	0.20	
Peak 15-min vehicle-miles of travel, VMT15	61 veh-mi	
Peak-hour vehicle-miles of travel, VMT60	229 veh-mi	
Peak 15-min total travel time, TT15	2.1 veh-h	
Capacity from ATS, CdATS	1700 veh/h	
Capacity from PTSF, CdPTSF	1700 veh/h	
Directional Capacity	1700 veh/h	

Passing Lane Analysis

Total length of analysis segment, Lt	0.7 mi
Length of two-lane highway upstream of the passing lane, Lu	- mi
Length of passing lane including tapers, Lpl	- mi
Average travel speed, ATSD (from above)	29.5 mi/h
Percent time-spent-following, PTSFd (from above)	59.0
Level of service, LOSd (from above)	C

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	- mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	- mi
Adj. factor for the effect of passing lane on average speed, fpl	-
Average travel speed including passing lane, ATSpl	-
Percent free flow speed including passing lane, PFFSpl	0.0 %

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	- mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	- mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-
Percent time-spent-following including passing lane, PTSFpl	- %

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E
Peak 15-min total travel time, TT15	- veh-h

Bicycle Level of Service

Posted speed limit, S_p	45
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, v_{OL}	347.9
Effective width of outside lane, W_e	13.00
Effective speed factor, S_t	4.42
Bicycle LOS Score, B_{LOS}	5.70
Bicycle LOS	F

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period AM Peak
Highway Bailey St
From/To Blackhall DW 1 to BlackhallDW2
Jurisdiction GDOT
Analysis Year 2024 - Build
Description Blackhall Phase 2

Input Data

Highway class	Class 3	Peak hour factor, PHF	0.94
Shoulder width	3.0 ft	% Trucks and buses	10 %
Lane width	11.0 ft	% Trucks crawling	0.0 %
Segment length	0.1 mi	Truck crawl speed	0.0 mi/hr
Terrain type	Level	% Recreational vehicles	0 %
Grade: Length	- mi	% No-passing zones	100 %
Up/down	- %	Access point density	0 /mi

Analysis direction volume, Vd 308 veh/h
Opposing direction volume, Vo 366 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.4	1.3
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.962	0.971
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	341 pc/h	401 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 3.0 mi/h
Adj. for access point density, (note-3) fA 0.0 mi/h

Free-flow speed, FFSd 42.0 mi/h

Adjustment for no-passing zones, fnp 2.7 mi/h
Average travel speed, ATSD 33.5 mi/h
Percent Free Flow Speed, PFFS 79.9 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.1	1.1
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	0.990	0.990
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	331 pc/h	393 pc/h
Base percent time-spent-following, (note-4) BPTSFd	37.6 %	
Adjustment for no-passing zones, fnp	48.7	
Percent time-spent-following, PTSFd	59.9 %	

Level of Service and Other Performance Measures

Level of service, LOS	C	
Volume to capacity ratio, v/c	0.19	
Peak 15-min vehicle-miles of travel, VMT15	8	veh-mi
Peak-hour vehicle-miles of travel, VMT60	31	veh-mi
Peak 15-min total travel time, TT15	0.2	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.1	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSD (from above)	33.5	mi/h
Percent time-spent-following, PTSFd (from above)	59.9	
Level of service, LOSd (from above)	C	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, S_p	45
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, v_{OL}	327.7
Effective width of outside lane, W_e	14.00
Effective speed factor, S_t	4.42
Bicycle LOS Score, B_{LOS}	7.17
Bicycle LOS	F

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period AM Peak
Highway Bailey St
From/To Blackhall DW 1 to BlackhallDW2
Jurisdiction GDOT
Analysis Year 2024 - Build
Description Blackhall Phase 2

Input Data

Highway class	Class 3	Peak hour factor, PHF	0.94
Shoulder width	3.0 ft	% Trucks and buses	4 %
Lane width	11.0 ft	% Trucks crawling	0.0 %
Segment length	0.1 mi	Truck crawl speed	0.0 mi/hr
Terrain type	Level	% Recreational vehicles	0 %
Grade: Length	- mi	% No-passing zones	100 %
Up/down	- %	Access point density	0 /mi

Analysis direction volume, Vd 366 veh/h
Opposing direction volume, Vo 308 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.3	1.4
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.988	0.984
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	394 pc/h	333 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 3.0 mi/h
Adj. for access point density, (note-3) fA 0.0 mi/h

Free-flow speed, FFSd 42.0 mi/h

Adjustment for no-passing zones, fnp 3.1 mi/h
Average travel speed, ATSD 33.2 mi/h
Percent Free Flow Speed, PFFS 79.1 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.1	1.1
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	0.996	0.996
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	391 pc/h	329 pc/h
Base percent time-spent-following, (note-4) BPTSFd	40.7 %	
Adjustment for no-passing zones, fnp	48.9	
Percent time-spent-following, PTSFd	67.3 %	

Level of Service and Other Performance Measures

Level of service, LOS	C	
Volume to capacity ratio, v/c	0.23	
Peak 15-min vehicle-miles of travel, VMT15	10	veh-mi
Peak-hour vehicle-miles of travel, VMT60	37	veh-mi
Peak 15-min total travel time, TT15	0.3	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.1	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSD (from above)	33.2	mi/h
Percent time-spent-following, PTSFd (from above)	67.3	
Level of service, LOSd (from above)	C	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, S_p	
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, v_{OL}	389.4
Effective width of outside lane, W_e	14.00
Effective speed factor, S_t	4.42
Bicycle LOS Score, B_{LOS}	5.36
Bicycle LOS	E

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period AM Peak
Highway Bailey St
From/To Blackhall DW2 to International
Jurisdiction GDOT
Analysis Year 2024 - Build
Description Blackhall Phase 2

Input Data

Highway class	Class 3	Peak hour factor, PHF	0.94
Shoulder width	3.0 ft	% Trucks and buses	11 %
Lane width	12.0 ft	% Trucks crawling	0.0 %
Segment length	0.6 mi	Truck crawl speed	0.0 mi/hr
Terrain type	Level	% Recreational vehicles	0 %
Grade: Length	- mi	% No-passing zones	100 %
Up/down	- %	Access point density	0 /mi

Analysis direction volume, Vd 218 veh/h
Opposing direction volume, Vo 412 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.5	1.3
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.948	0.968
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	245 pc/h	453 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 2.6 mi/h
Adj. for access point density, (note-3) fA 0.0 mi/h

Free-flow speed, FFSd 42.4 mi/h

Adjustment for no-passing zones, fnp 2.5 mi/h
Average travel speed, ATSD 34.5 mi/h
Percent Free Flow Speed, PFFS 81.4 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.1	1.0
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	0.989	1.000
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	234 pc/h	438 pc/h
Base percent time-spent-following, (note-4) BPTSFd	29.5 %	
Adjustment for no-passing zones, fnp	46.1	
Percent time-spent-following, PTSFd	45.6 %	

Level of Service and Other Performance Measures

Level of service, LOS	C	
Volume to capacity ratio, v/c	0.14	
Peak 15-min vehicle-miles of travel, VMT15	35	veh-mi
Peak-hour vehicle-miles of travel, VMT60	131	veh-mi
Peak 15-min total travel time, TT15	1.0	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.6	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSD (from above)	34.5	mi/h
Percent time-spent-following, PTSFd (from above)	45.6	
Level of service, LOSd (from above)	C	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	45
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	231.9
Effective width of outside lane, We	15.00
Effective speed factor, St	4.42
Bicycle LOS Score, BLOS	7.23
Bicycle LOS	F

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period AM Peak
Highway Bailey St
From/To Blackhall DW2 to International
Jurisdiction GDOT
Analysis Year 2024 - Build
Description Blackhall Phase 2

Input Data

Highway class	Class 3		Peak hour factor, PHF	0.97	
Shoulder width	3.0	ft	% Trucks and buses	4	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	0.6	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Level		% Recreational vehicles	0	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	0	/mi

Analysis direction volume, Vd 412 veh/h
Opposing direction volume, Vo 218 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.3	1.5
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.988	0.980
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	430 pc/h	229 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 2.6 mi/h
Adj. for access point density, (note-3) fA 0.0 mi/h

Free-flow speed, FFSd 42.4 mi/h

Adjustment for no-passing zones, fnp 3.8 mi/h
Average travel speed, ATSD 33.5 mi/h
Percent Free Flow Speed, PFFS 78.9 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.0	1.1
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	0.996
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	425 pc/h	226 pc/h
Base percent time-spent-following, (note-4) BPTSFd	40.5 %	
Adjustment for no-passing zones, fnp	47.4	
Percent time-spent-following, PTSFd	71.4 %	

Level of Service and Other Performance Measures

Level of service, LOS	C	
Volume to capacity ratio, v/c	0.25	
Peak 15-min vehicle-miles of travel, VMT15	64	veh-mi
Peak-hour vehicle-miles of travel, VMT60	247	veh-mi
Peak 15-min total travel time, TT15	1.9	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.6	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSD (from above)	33.5	mi/h
Percent time-spent-following, PTSFd (from above)	71.4	
Level of service, LOSd (from above)	C	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, S_p	
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, v_{OL}	424.7
Effective width of outside lane, W_e	15.00
Effective speed factor, S_t	4.42
Bicycle LOS Score, B_{LOS}	5.26
Bicycle LOS	E

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

HCS7 Multilane Highway Report

Project Information

Analyst	JS	Date	3/31/2021
Agency	Lumin8	Analysis Year	2024 - Build
Jurisdiction	GDOT	Time Period Analyzed	AM Peak
Project Description	Blackhall Phase 2	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	20.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	40.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	261	Heavy Vehicle Adjustment Factor (fHV)	0.909
Peak Hour Factor	0.97	Flow Rate (Vp), pc/h/ln	148
Total Trucks, %	10.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.08

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	40.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	3.7
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	5.0		

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8. International Park to Bouldercrest Rd.xuf

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HCS7 Multilane Highway Report

Project Information

Analyst	JS	Date	3/31/2021
Agency	Lumin8	Analysis Year	2024 - Build
Jurisdiction	GDOT	Time Period Analyzed	AM Peak
Project Description	Blackhall Phase 2	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	673	Heavy Vehicle Adjustment Factor (fHV)	0.980
Peak Hour Factor	0.93	Flow Rate (Vp), pc/h/ln	369
Total Trucks, %	2.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.19

Direction 2 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	8.2
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.0		

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8. International Park to Bouldercrest Rd.xuf

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HCS7 Multilane Highway Report

Project Information

Analyst	JS	Date	3/31/2021
Agency	Lumin8	Analysis Year	2024 - Build
Jurisdiction	GDOT	Time Period Analyzed	AM Peak
Project Description	Blackhall Phase 2	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	20.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	8
Free-Flow Speed (FFS), mi/h	39.1		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	476	Heavy Vehicle Adjustment Factor (fhv)	0.885
Peak Hour Factor	0.93	Flow Rate (Vp), pc/h/ln	289
Total Trucks, %	13.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.15

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	39.1
Total Lateral Clearance Adj. (fLLC)	0.9	Density (D), pc/mi/ln	7.4
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	5.0		

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9. Bouldercrest Rd to Clifton Church Rd.xuf

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HCS7 Multilane Highway Report

Project Information

Analyst	JS	Date	3/31/2021
Agency	Lumin8	Analysis Year	2024 - Build
Jurisdiction	GDOT	Time Period Analyzed	AM Peak
Project Description	Blackhall Phase 2	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	8.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	8
Free-Flow Speed (FFS), mi/h	42.1		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1076	Heavy Vehicle Adjustment Factor (fhv)	0.980
Peak Hour Factor	0.90	Flow Rate (Vp), pc/h/ln	610
Total Trucks, %	2.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.32

Direction 2 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	42.1
Total Lateral Clearance Adj. (fLLC)	0.9	Density (D), pc/mi/ln	14.5
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (fA)	2.0		

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9. Bouldercrest Rd to Clifton Church Rd.xuf

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HCS7 Multilane Highway Report

Project Information

Analyst	JS	Date	3/31/2021
Agency	Lumin8	Analysis Year	2024 - No Build
Jurisdiction	GDOT	Time Period Analyzed	AM Peak
Project Description	Blackhall Phase 2	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Northbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	25.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLT	Total Lateral Clearance (TLC), ft	8
Free-Flow Speed (FFS), mi/h	37.9		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1421	Heavy Vehicle Adjustment Factor (fhv)	0.971
Peak Hour Factor	0.94	Flow Rate (Vp), pc/h/ln	778
Total Trucks, %	3.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.41

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	37.8
Total Lateral Clearance Adj. (fLLC)	0.9	Density (D), pc/mi/ln	20.6
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (fA)	6.3		

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10. Clifton Church Rd to Continental Way.xuf

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HCS7 Multilane Highway Report

Project Information

Analyst	JS	Date	3/31/2021
Agency	Lumin8	Analysis Year	2024 - No Build
Jurisdiction	GDOT	Time Period Analyzed	AM Peak
Project Description	Blackhall Phase 2	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Southbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	5.8
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	8
Free-Flow Speed (FFS), mi/h	42.7		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	763	Heavy Vehicle Adjustment Factor (fHV)	0.909
Peak Hour Factor	0.90	Flow Rate (Vp), pc/h/ln	466
Total Trucks, %	10.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.25

Direction 2 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	42.6
Total Lateral Clearance Adj. (fLLC)	0.9	Density (D), pc/mi/ln	10.9
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	1.5		

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10. Clifton Church Rd to Continental Way.xuf

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HCS7 Multilane Highway Report

Project Information

Analyst	JS	Date	3/31/2021
Agency	Lumin8	Analysis Year	2024 - Build
Jurisdiction	GDOT	Time Period Analyzed	AM Peak
Project Description	Blackhall Phase 2	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Northbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	25.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLT	Total Lateral Clearance (TLC), ft	8
Free-Flow Speed (FFS), mi/h	37.9		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1186	Heavy Vehicle Adjustment Factor (fHV)	0.937
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	688
Total Trucks, %	6.67	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.36

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	37.8
Total Lateral Clearance Adj. (fLLC)	0.9	Density (D), pc/mi/ln	18.2
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (fA)	6.3		

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11. Continental Way to 285 WB.xuf

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HCS7 Multilane Highway Report

Project Information

Analyst	JS	Date	3/31/2021
Agency	Lumin8	Analysis Year	2024 - Build
Jurisdiction	GDOT	Time Period Analyzed	AM Peak
Project Description	Blackhall Phase 2	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Southbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	22.2
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	8
Free-Flow Speed (FFS), mi/h	38.6		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	974	Heavy Vehicle Adjustment Factor (fhv)	0.861
Peak Hour Factor	0.94	Flow Rate (Vp), pc/h/ln	602
Total Trucks, %	16.20	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.32

Direction 2 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	38.6
Total Lateral Clearance Adj. (fLLC)	0.9	Density (D), pc/mi/ln	15.6
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (fA)	5.6		

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HCS7 Multilane Version 7.8.5
11. Continental Way to 285 WB.xuf

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HCS7 Multilane Highway Report

Project Information

Analyst	JS	Date	4/1/2021
Agency	Lumin8	Analysis Year	2024 - Build
Jurisdiction	GDOT	Time Period Analyzed	AM Peak
Project Description	Blackhall Phase 2	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Northbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1543	Heavy Vehicle Adjustment Factor (fhv)	0.909
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	922
Total Trucks, %	10.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.49

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	20.5
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (fA)	0.0		

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HCS7 Multilane Version 7.8.5
12. 285 WB to 285 EB.xuf

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HCS7 Multilane Highway Report

Project Information

Analyst	JS	Date	4/1/2021
Agency	Lumin8	Analysis Year	2024 - Build
Jurisdiction	GDOT	Time Period Analyzed	AM Peak
Project Description	Blackhall Phase 2	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Southbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	485	Heavy Vehicle Adjustment Factor (fHV)	0.909
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	290
Total Trucks, %	10.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.15

Direction 2 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	6.4
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.0		

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HCS7 Multilane Version 7.8.5
12. 285 WB to 285 EB.xuf

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Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period AM Peak
Highway International Park Dr
From/To Constitution to Continental
Jurisdiction GDOT
Analysis Year 2024 - Build
Description Blackhall Phase 2

Input Data

Highway class	Class 3	Peak hour factor, PHF	0.86
Shoulder width	3.0 ft	% Trucks and buses	24 %
Lane width	16.0 ft	% Trucks crawling	0.0 %
Segment length	0.3 mi	Truck crawl speed	0.0 mi/hr
Terrain type	Level	% Recreational vehicles	0 %
Grade: Length	- mi	% No-passing zones	100 %
Up/down	- %	Access point density	10 /mi

Analysis direction volume, Vd 121 veh/h
Opposing direction volume, Vo 436 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.7	1.2
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.856	0.954
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	164 pc/h	531 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 2.6 mi/h
Adj. for access point density, (note-3) fA 2.5 mi/h

Free-flow speed, FFSD 39.9 mi/h

Adjustment for no-passing zones, fnp 2.1 mi/h
Average travel speed, ATSD 32.4 mi/h
Percent Free Flow Speed, PFFS 81.2 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.1	1.0
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	0.977	1.000
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	144 pc/h	507 pc/h
Base percent time-spent-following, (note-4) BPTSFd	21.3 %	
Adjustment for no-passing zones, fnp	38.6	
Percent time-spent-following, PTSFd	29.8 %	

Level of Service and Other Performance Measures

Level of service, LOS	C	
Volume to capacity ratio, v/c	0.08	
Peak 15-min vehicle-miles of travel, VMT15	11 veh-mi	
Peak-hour vehicle-miles of travel, VMT60	36 veh-mi	
Peak 15-min total travel time, TT15	0.3 veh-h	
Capacity from ATS, CdATS	1700 veh/h	
Capacity from PTSF, CdPTSF	1700 veh/h	
Directional Capacity	1700 veh/h	

Passing Lane Analysis

Total length of analysis segment, Lt	0.3 mi
Length of two-lane highway upstream of the passing lane, Lu	- mi
Length of passing lane including tapers, Lpl	- mi
Average travel speed, ATSD (from above)	32.4 mi/h
Percent time-spent-following, PTSFd (from above)	29.8
Level of service, LOSd (from above)	C

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	- mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	- mi
Adj. factor for the effect of passing lane on average speed, fpl	-
Average travel speed including passing lane, ATSpl	-
Percent free flow speed including passing lane, PFFSpl	0.0 %

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	- mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	- mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-
Percent time-spent-following including passing lane, PTSFpl	- %

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E
Peak 15-min total travel time, TT15	- veh-h

Bicycle Level of Service

Posted speed limit, S_p	45
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, v_{OL}	140.7
Effective width of outside lane, W_e	26.51
Effective speed factor, S_t	4.42
Bicycle LOS Score, $BLOS$	11.30
Bicycle LOS	F

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period AM Peak
Highway International Park Dr
From/To Constitution to Continental
Jurisdiction GDOT
Analysis Year 2024 - Build
Description Blackhall Phase 2

Input Data

Highway class	Class 3		Peak hour factor, PHF	0.97	
Shoulder width	3.0	ft	% Trucks and buses	9	%
Lane width	16.0	ft	% Trucks crawling	0.0	%
Segment length	0.3	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Level		% Recreational vehicles	0	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	10	/mi

Analysis direction volume, Vd 436 veh/h
Opposing direction volume, Vo 121 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.3	1.8
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.974	0.933
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	461 pc/h	134 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 2.6 mi/h
Adj. for access point density, (note-3) fA 2.5 mi/h

Free-flow speed, FFSd 39.9 mi/h

Adjustment for no-passing zones, fnp 2.9 mi/h
Average travel speed, ATSD 32.3 mi/h
Percent Free Flow Speed, PFFS 81.0 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.0	1.1
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	0.991
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	449 pc/h	126 pc/h
Base percent time-spent-following, (note-4) BPTSFd	41.3 %	
Adjustment for no-passing zones, fnp	41.7	
Percent time-spent-following, PTSFd	73.9 %	

Level of Service and Other Performance Measures

Level of service, LOS	C	
Volume to capacity ratio, v/c	0.26	
Peak 15-min vehicle-miles of travel, VMT15	34	veh-mi
Peak-hour vehicle-miles of travel, VMT60	131	veh-mi
Peak 15-min total travel time, TT15	1.1	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.3	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSD (from above)	32.3	mi/h
Percent time-spent-following, PTSFd (from above)	73.9	
Level of service, LOSd (from above)	C	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, S_p	45
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, v_{OL}	449.5
Effective width of outside lane, W_e	19.00
Effective speed factor, S_t	4.42
Bicycle LOS Score, $BLOS$	6.14
Bicycle LOS	F

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period AM Peak
Highway Continental Way
From/To International to Bouldercrest
Jurisdiction GDOT
Analysis Year 2024 - Build
Description Blackhall Phase 2

Input Data

Highway class	Class 3	Peak hour factor, PHF	0.76
Shoulder width	3.0 ft	% Trucks and buses	62 %
Lane width	12.0 ft	% Trucks crawling	0.0 %
Segment length	0.6 mi	Truck crawl speed	0.0 mi/hr
Terrain type	Level	% Recreational vehicles	0 %
Grade: Length	- mi	% No-passing zones	100 %
Up/down	- %	Access point density	13 /mi

Analysis direction volume, Vd 66 veh/h
Opposing direction volume, Vo 346 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.9	1.2
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.642	0.890
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	135 pc/h	512 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 2.6 mi/h
Adj. for access point density, (note-3) fA 3.3 mi/h

Free-flow speed, FFSd 39.2 mi/h

Adjustment for no-passing zones, fnp 2.2 mi/h
Average travel speed, ATSD 31.9 mi/h
Percent Free Flow Speed, PFFS 81.6 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.1	1.0
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	0.942	1.000
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	92 pc/h	455 pc/h
Base percent time-spent-following, (note-4) BPTSFd	14.1 %	
Adjustment for no-passing zones, fnp	37.7	
Percent time-spent-following, PTSFd	20.4 %	

Level of Service and Other Performance Measures

Level of service, LOS	C	
Volume to capacity ratio, v/c	0.05	
Peak 15-min vehicle-miles of travel, VMT15	13 veh-mi	
Peak-hour vehicle-miles of travel, VMT60	40 veh-mi	
Peak 15-min total travel time, TT15	0.4 veh-h	
Capacity from ATS, CdATS	1700 veh/h	
Capacity from PTSF, CdPTSF	1700 veh/h	
Directional Capacity	1700 veh/h	

Passing Lane Analysis

Total length of analysis segment, Lt	0.6 mi	
Length of two-lane highway upstream of the passing lane, Lu	- mi	
Length of passing lane including tapers, Lpl	- mi	
Average travel speed, ATSD (from above)	31.9 mi/h	
Percent time-spent-following, PTSFd (from above)	20.4	
Level of service, LOSd (from above)	C	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	- mi	
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	- mi	
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0 %	

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	- mi	
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	- mi	
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	- %	

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	- veh-h	

Bicycle Level of Service

Posted speed limit, S_p	45
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, v_{OL}	86.8
Effective width of outside lane, W_e	25.05
Effective speed factor, S_t	4.42
Bicycle LOS Score, $BLOS$	49.47
Bicycle LOS	F

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period AM Peak
Highway Continental Way
From/To International to Bouldercrest
Jurisdiction GDOT
Analysis Year 2024 - Build
Description Blackhall Phase 2

Input Data

Highway class	Class 3	Peak hour factor, PHF	0.94
Shoulder width	3.0 ft	% Trucks and buses	50 %
Lane width	12.0 ft	% Trucks crawling	0.0 %
Segment length	0.6 mi	Truck crawl speed	0.0 mi/hr
Terrain type	Level	% Recreational vehicles	0 %
Grade: Length	- mi	% No-passing zones	100 %
Up/down	- %	Access point density	13 /mi

Analysis direction volume, Vd 346 veh/h
Opposing direction volume, Vo 66 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.3	1.9
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.870	0.690
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	423 pc/h	102 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 2.6 mi/h
Adj. for access point density, (note-3) fA 3.3 mi/h

Free-flow speed, FFSd 39.2 mi/h

Adjustment for no-passing zones, fnp 2.4 mi/h
Average travel speed, ATSD 32.6 mi/h
Percent Free Flow Speed, PFFS 83.4 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.1	1.1
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	0.952	0.952
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	386 pc/h	74 pc/h
Base percent time-spent-following, (note-4) BPTSFd	36.9 %	
Adjustment for no-passing zones, fnp	39.8	
Percent time-spent-following, PTSFd	70.3 %	

Level of Service and Other Performance Measures

Level of service, LOS	B	
Volume to capacity ratio, v/c	0.22	
Peak 15-min vehicle-miles of travel, VMT15	55	veh-mi
Peak-hour vehicle-miles of travel, VMT60	208	veh-mi
Peak 15-min total travel time, TT15	1.7	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.6	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSD (from above)	32.6	mi/h
Percent time-spent-following, PTSFd (from above)	70.3	
Level of service, LOSd (from above)	B	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, S_p	45
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, v_{OL}	368.1
Effective width of outside lane, W_e	15.00
Effective speed factor, S_t	4.42
Bicycle LOS Score, $BLOS$	37.23
Bicycle LOS	F

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

PM PEAK HOUR

HCS7 Multilane Highway Report

Project Information

Analyst	JS	Date	3/31/2021
Agency	Lumin8	Analysis Year	2024 - No Build
Jurisdiction	GDOT	Time Period Analyzed	PM Peak
Project Description	Blackhall Phase 2	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Northbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	50.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1032	Heavy Vehicle Adjustment Factor (fHV)	0.826
Peak Hour Factor	0.95	Flow Rate (Vp), pc/h/ln	438
Total Trucks, %	21.00	Capacity (c), pc/h/ln	2000
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2000
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.22

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	50.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	8.8
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.0		

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Project Information

Analyst	JS	Date	3/31/2021
Agency	Lumin8	Analysis Year	2024 - No Build
Jurisdiction	GDOT	Time Period Analyzed	PM Peak
Project Description	Blackhall Phase 2	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Southbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	50.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	2155	Heavy Vehicle Adjustment Factor (fHV)	0.917
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	1277
Total Trucks, %	9.00	Capacity (c), pc/h/ln	2000
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2000
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.64

Direction 2 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	50.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	25.5
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (fA)	0.0		

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HCS7 Multilane Highway Report

Project Information

Analyst	JS	Date	3/31/2021
Agency	Lumin8	Analysis Year	2024 - Build
Jurisdiction	GDOT	Time Period Analyzed	PM Peak
Project Description	Blackhall Phase 2	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Northbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	7.7
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	48.1		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1112	Heavy Vehicle Adjustment Factor (fhv)	0.870
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	463
Total Trucks, %	15.00	Capacity (c), pc/h/ln	1962
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1962
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.24

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	48.1
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	9.6
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	1.9		

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HCS7 Multilane Highway Report

Project Information

Analyst	JS	Date	3/31/2021
Agency	Lumin8	Analysis Year	2024 - Build
Jurisdiction	GDOT	Time Period Analyzed	PM Peak
Project Description	Blackhall Phase 2	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Southbound		
Number of Lanes (N), ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	9.9
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	47.5		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1997	Heavy Vehicle Adjustment Factor (fHV)	0.952
Peak Hour Factor	0.96	Flow Rate (Vp), pc/h/ln	728
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1950
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1950
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.37

Direction 2 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	47.5
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	15.3
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (fA)	2.5		

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Phone: Fax:
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Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period PM Peak
Highway Bailey St
From/To SR 42 to Woodstock Rd
Jurisdiction GDOT
Analysis Year 2024 - Build
Description Blackhall Phase 2

Input Data

Highway class	Class 3	Peak hour factor, PHF	0.96
Shoulder width	3.0 ft	% Trucks and buses	12 %
Lane width	13.0 ft	% Trucks crawling	0.0 %
Segment length	0.1 mi	Truck crawl speed	0.0 mi/hr
Terrain type	Level	% Recreational vehicles	0 %
Grade: Length	- mi	% No-passing zones	100 %
Up/down	- %	Access point density	0 /mi

Analysis direction volume, Vd 288 veh/h
Opposing direction volume, Vo 443 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.4	1.2
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.954	0.977
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	314 pc/h	472 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 2.6 mi/h
Adj. for access point density, (note-3) fA 0.0 mi/h

Free-flow speed, FFSd 42.4 mi/h

Adjustment for no-passing zones, fnp 2.4 mi/h
Average travel speed, ATSD 33.9 mi/h
Percent Free Flow Speed, PFFS 80.0 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.1	1.0
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	0.988	1.000
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	304 pc/h	461 pc/h
Base percent time-spent-following, (note-4) BPTSFd	36.0 %	
Adjustment for no-passing zones, fnp	43.3	
Percent time-spent-following, PTSFd	53.2 %	

Level of Service and Other Performance Measures

Level of service, LOS	C	
Volume to capacity ratio, v/c	0.18	
Peak 15-min vehicle-miles of travel, VMT15	8	veh-mi
Peak-hour vehicle-miles of travel, VMT60	29	veh-mi
Peak 15-min total travel time, TT15	0.2	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.1	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSD (from above)	33.9	mi/h
Percent time-spent-following, PTSFd (from above)	53.2	
Level of service, LOSd (from above)	C	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, S_p	45
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, v_{OL}	300.0
Effective width of outside lane, W_e	16.00
Effective speed factor, S_t	4.42
Bicycle LOS Score, $BLOS$	7.61
Bicycle LOS	F

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period PM Peak
Highway Bailey St
From/To SR 42 to Woodstock Rd
Jurisdiction GDOT
Analysis Year 2024 - Build
Description Blackhall Phase 2

Input Data

Highway class	Class 3		Peak hour factor, PHF	0.91	
Shoulder width	3.0	ft	% Trucks and buses	7	%
Lane width	13.0	ft	% Trucks crawling	0.0	%
Segment length	0.1	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Level		% Recreational vehicles	0	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	0	/mi

Analysis direction volume, Vd 443 veh/h
Opposing direction volume, Vo 288 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.2	1.4
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.986	0.973
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	494 pc/h	325 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 2.6 mi/h
Adj. for access point density, (note-3) fA 0.0 mi/h

Free-flow speed, FFSd 42.4 mi/h

Adjustment for no-passing zones, fnp 3.2 mi/h
Average travel speed, ATSD 32.9 mi/h
Percent Free Flow Speed, PFFS 77.5 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.0	1.1
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	0.993
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	487 pc/h	319 pc/h
Base percent time-spent-following, (note-4) BPTSFd	47.8 %	
Adjustment for no-passing zones, fnp	40.8	
Percent time-spent-following, PTSFd	72.5 %	

Level of Service and Other Performance Measures

Level of service, LOS	C	
Volume to capacity ratio, v/c	0.29	
Peak 15-min vehicle-miles of travel, VMT15	12	veh-mi
Peak-hour vehicle-miles of travel, VMT60	44	veh-mi
Peak 15-min total travel time, TT15	0.4	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.1	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSD (from above)	32.9	mi/h
Percent time-spent-following, PTSFd (from above)	72.5	
Level of service, LOSd (from above)	C	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, S_p	
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, v_{OL}	486.8
Effective width of outside lane, W_e	16.00
Effective speed factor, S_t	4.42
Bicycle LOS Score, B_{LOS}	6.01
Bicycle LOS	F

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period PM Peak
Highway Bailey St
From/To Woodstock Rd to FayettevilleRd
Jurisdiction GDOT
Analysis Year 2024 - Build
Description Blackhall Phase 2

Input Data

Highway class	Class 3	Peak hour factor, PHF	0.91
Shoulder width	0.0 ft	% Trucks and buses	13 %
Lane width	15.0 ft	% Trucks crawling	0.0 %
Segment length	0.1 mi	Truck crawl speed	0.0 mi/hr
Terrain type	Level	% Recreational vehicles	0 %
Grade: Length	- mi	% No-passing zones	100 %
Up/down	- %	Access point density	0 /mi

Analysis direction volume, Vd 413 veh/h
Opposing direction volume, Vo 438 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.2	1.2
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.975	0.975
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	465 pc/h	494 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 4.2 mi/h
Adj. for access point density, (note-3) fA 0.0 mi/h

Free-flow speed, FFSd 40.8 mi/h

Adjustment for no-passing zones, fnp 2.3 mi/h
Average travel speed, ATSD 31.1 mi/h
Percent Free Flow Speed, PFFS 76.2 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.0	1.0
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	1.000
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	454 pc/h	481 pc/h
Base percent time-spent-following, (note-4) BPTSFd	47.7 %	
Adjustment for no-passing zones, fnp	41.9	
Percent time-spent-following, PTSFd	68.0 %	

Level of Service and Other Performance Measures

Level of service, LOS	C	
Volume to capacity ratio, v/c	0.27	
Peak 15-min vehicle-miles of travel, VMT15	11	veh-mi
Peak-hour vehicle-miles of travel, VMT60	41	veh-mi
Peak 15-min total travel time, TT15	0.4	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.1	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSD (from above)	31.1	mi/h
Percent time-spent-following, PTSFd (from above)	68.0	
Level of service, LOSd (from above)	C	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, S_p	45
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, v_{OL}	453.8
Effective width of outside lane, W_e	15.00
Effective speed factor, S_t	4.42
Bicycle LOS Score, $BLOS$	8.39
Bicycle LOS	F

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period PM Peak
Highway Bailey St
From/To Woodstock Rd to FayettevilleRd
Jurisdiction GDOT
Analysis Year 2024 - Build
Description Blackhall Phase 2

Input Data

Highway class	Class 3	Peak hour factor, PHF	0.85
Shoulder width	0.0 ft	% Trucks and buses	5 %
Lane width	15.0 ft	% Trucks crawling	0.0 %
Segment length	0.1 mi	Truck crawl speed	0.0 mi/hr
Terrain type	Level	% Recreational vehicles	0 %
Grade: Length	- mi	% No-passing zones	100 %
Up/down	- %	Access point density	0 /mi

Analysis direction volume, Vd 438 veh/h
Opposing direction volume, Vo 413 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.2	1.2
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.990	0.990
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	520 pc/h	491 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 4.2 mi/h
Adj. for access point density, (note-3) fA 0.0 mi/h

Free-flow speed, FFSd 40.8 mi/h

Adjustment for no-passing zones, fnp 2.3 mi/h
Average travel speed, ATSD 30.7 mi/h
Percent Free Flow Speed, PFFS 75.2 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.0	1.0
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	1.000
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	515 pc/h	486 pc/h
Base percent time-spent-following, (note-4) BPTSFd	52.5 %	
Adjustment for no-passing zones, fnp	40.0	
Percent time-spent-following, PTSFd	73.1 %	

Level of Service and Other Performance Measures

Level of service, LOS	C	
Volume to capacity ratio, v/c	0.30	
Peak 15-min vehicle-miles of travel, VMT15	13	veh-mi
Peak-hour vehicle-miles of travel, VMT60	44	veh-mi
Peak 15-min total travel time, TT15	0.4	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.1	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSD (from above)	30.7	mi/h
Percent time-spent-following, PTSFd (from above)	73.1	
Level of service, LOSd (from above)	C	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, S_p	
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, v_{OL}	515.3
Effective width of outside lane, W_e	15.00
Effective speed factor, S_t	4.42
Bicycle LOS Score, B_{LOS}	5.62
Bicycle LOS	F

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period PM Peak
Highway Bailey St
From/To Fayetteville Rd to Blackhall 1
Jurisdiction GDOT
Analysis Year 2024 - Build
Description Blackhall Phase 2

Input Data

Highway class	Class 3	Peak hour factor, PHF	0.85
Shoulder width	2.0 ft	% Trucks and buses	11 %
Lane width	11.0 ft	% Trucks crawling	0.0 %
Segment length	0.7 mi	Truck crawl speed	0.0 mi/hr
Terrain type	Level	% Recreational vehicles	0 %
Grade: Length	- mi	% No-passing zones	100 %
Up/down	- %	Access point density	15 /mi

Analysis direction volume, Vd 412 veh/h
Opposing direction volume, Vo 427 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.2	1.2
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.978	0.978
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	496 pc/h	514 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 3.0 mi/h
Adj. for access point density, (note-3) fA 3.8 mi/h

Free-flow speed, FFSD 38.3 mi/h

Adjustment for no-passing zones, fnp 2.2 mi/h
Average travel speed, ATSD 28.2 mi/h
Percent Free Flow Speed, PFFS 73.8 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.0	1.0
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	1.000
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	485 pc/h	502 pc/h
Base percent time-spent-following, (note-4) BPTSFd	51.0 %	
Adjustment for no-passing zones, fnp	40.6	
Percent time-spent-following, PTSFd	71.0 %	

Level of Service and Other Performance Measures

Level of service, LOS	D	
Volume to capacity ratio, v/c	0.29	
Peak 15-min vehicle-miles of travel, VMT15	85	veh-mi
Peak-hour vehicle-miles of travel, VMT60	288	veh-mi
Peak 15-min total travel time, TT15	3.0	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.7	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSD (from above)	28.2	mi/h
Percent time-spent-following, PTSFd (from above)	71.0	
Level of service, LOSd (from above)	D	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, S_p	45
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, v_{OL}	484.7
Effective width of outside lane, W_e	13.00
Effective speed factor, S_t	4.42
Bicycle LOS Score, $BLOS$	7.88
Bicycle LOS	F

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period PM Peak
Highway Bailey St
From/To Fayetteville Rd to Blackhall 1
Jurisdiction GDOT
Analysis Year 2024 - Build
Description Blackhall Phase 2

Input Data

Highway class	Class 3	Peak hour factor, PHF	0.87
Shoulder width	2.0 ft	% Trucks and buses	10 %
Lane width	11.0 ft	% Trucks crawling	0.0 %
Segment length	0.7 mi	Truck crawl speed	0.0 mi/hr
Terrain type	Level	% Recreational vehicles	0 %
Grade: Length	- mi	% No-passing zones	100 %
Up/down	- %	Access point density	15 /mi

Analysis direction volume, Vd 427 veh/h
Opposing direction volume, Vo 412 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.2	1.2
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.980	0.980
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	501 pc/h	483 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 3.0 mi/h
Adj. for access point density, (note-3) fA 3.8 mi/h

Free-flow speed, FFSd 38.3 mi/h

Adjustment for no-passing zones, fnp 2.3 mi/h
Average travel speed, ATSD 28.3 mi/h
Percent Free Flow Speed, PFFS 74.0 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.0	1.0
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	1.000
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	491 pc/h	474 pc/h
Base percent time-spent-following, (note-4) BPTSFd	50.3 %	
Adjustment for no-passing zones, fnp	41.3	
Percent time-spent-following, PTSFd	71.3 %	

Level of Service and Other Performance Measures

Level of service, LOS	D	
Volume to capacity ratio, v/c	0.29	
Peak 15-min vehicle-miles of travel, VMT15	86	veh-mi
Peak-hour vehicle-miles of travel, VMT60	299	veh-mi
Peak 15-min total travel time, TT15	3.0	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.7	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSD (from above)	28.3	mi/h
Percent time-spent-following, PTSFd (from above)	71.3	
Level of service, LOSd (from above)	D	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	490.8
Effective width of outside lane, We	13.00
Effective speed factor, St	4.42
Bicycle LOS Score, BLOS	7.51
Bicycle LOS	F

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period PM Peak
Highway Bailey St
From/To Blackhall DW 1 to BlackhallDW2
Jurisdiction GDOT
Analysis Year 2024 - Build
Description Blackhall Phase 2

Input Data

Highway class	Class 3	Peak hour factor, PHF	0.87
Shoulder width	3.0 ft	% Trucks and buses	6 %
Lane width	11.0 ft	% Trucks crawling	0.0 %
Segment length	0.1 mi	Truck crawl speed	0.0 mi/hr
Terrain type	Level	% Recreational vehicles	0 %
Grade: Length	- mi	% No-passing zones	100 %
Up/down	- %	Access point density	0 /mi

Analysis direction volume, Vd 393 veh/h
Opposing direction volume, Vo 329 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.2	1.3
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.988	0.982
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	457 pc/h	385 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 3.0 mi/h
Adj. for access point density, (note-3) fA 0.0 mi/h

Free-flow speed, FFSd 42.0 mi/h

Adjustment for no-passing zones, fnp 2.8 mi/h
Average travel speed, ATSD 32.7 mi/h
Percent Free Flow Speed, PFFS 77.8 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.0	1.1
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	0.994
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	452 pc/h	380 pc/h
Base percent time-spent-following, (note-4) BPTSFd	45.7 %	
Adjustment for no-passing zones, fnp	43.4	
Percent time-spent-following, PTSFd	69.3 %	

Level of Service and Other Performance Measures

Level of service, LOS	C	
Volume to capacity ratio, v/c	0.27	
Peak 15-min vehicle-miles of travel, VMT15	11	veh-mi
Peak-hour vehicle-miles of travel, VMT60	39	veh-mi
Peak 15-min total travel time, TT15	0.3	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.1	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSD (from above)	32.7	mi/h
Percent time-spent-following, PTSFd (from above)	69.3	
Level of service, LOSd (from above)	C	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, S_p	45
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, v_{OL}	451.7
Effective width of outside lane, W_e	14.00
Effective speed factor, S_t	4.42
Bicycle LOS Score, $BLOS$	5.99
Bicycle LOS	F

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period PM Peak
Highway Bailey St
From/To Blackhall DW 1 to BlackhallDW2
Jurisdiction GDOT
Analysis Year 2024 - Build
Description Blackhall Phase 2

Input Data

Highway class	Class 3	Peak hour factor, PHF	0.84
Shoulder width	3.0 ft	% Trucks and buses	9 %
Lane width	11.0 ft	% Trucks crawling	0.0 %
Segment length	0.1 mi	Truck crawl speed	0.0 mi/hr
Terrain type	Level	% Recreational vehicles	0 %
Grade: Length	- mi	% No-passing zones	100 %
Up/down	- %	Access point density	0 /mi

Analysis direction volume, Vd 329 veh/h
Opposing direction volume, Vo 393 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.3	1.2
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.974	0.982
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	402 pc/h	476 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 3.0 mi/h
Adj. for access point density, (note-3) fA 0.0 mi/h

Free-flow speed, FFSd 42.0 mi/h

Adjustment for no-passing zones, fnp 2.4 mi/h
Average travel speed, ATSD 32.8 mi/h
Percent Free Flow Speed, PFFS 78.2 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.1	1.0
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	0.991	1.000
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	395 pc/h	468 pc/h
Base percent time-spent-following, (note-4) BPTSFd	44.1 %	
Adjustment for no-passing zones, fnp	42.5	
Percent time-spent-following, PTSFd	63.6 %	

Level of Service and Other Performance Measures

Level of service, LOS	C	
Volume to capacity ratio, v/c	0.23	
Peak 15-min vehicle-miles of travel, VMT15	10	veh-mi
Peak-hour vehicle-miles of travel, VMT60	33	veh-mi
Peak 15-min total travel time, TT15	0.3	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.1	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSD (from above)	32.8	mi/h
Percent time-spent-following, PTSFd (from above)	63.6	
Level of service, LOSd (from above)	C	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, S_p	
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, v_{OL}	391.7
Effective width of outside lane, W_e	14.00
Effective speed factor, S_t	4.42
Bicycle LOS Score, $BLOS$	6.89
Bicycle LOS	F

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period AM Peak
Highway Bailey St
From/To Blackhall DW2 to International
Jurisdiction GDOT
Analysis Year 2024 - Build
Description Blackhall Phase 2

Input Data

Highway class	Class 3		Peak hour factor, PHF	0.84	
Shoulder width	3.0	ft	% Trucks and buses	6	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	0.6	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Level		% Recreational vehicles	0	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	0	/mi

Analysis direction volume, Vd 429 veh/h
Opposing direction volume, Vo 232 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.2	1.4
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.988	0.977
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	517 pc/h	283 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 2.6 mi/h
Adj. for access point density, (note-3) fA 0.0 mi/h

Free-flow speed, FFSd 42.4 mi/h

Adjustment for no-passing zones, fnp 3.5 mi/h
Average travel speed, ATSD 32.7 mi/h
Percent Free Flow Speed, PFFS 77.2 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.0	1.1
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	0.994
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	511 pc/h	278 pc/h
Base percent time-spent-following, (note-4) BPTSFd	47.7 %	
Adjustment for no-passing zones, fnp	39.1	
Percent time-spent-following, PTSFd	73.0 %	

Level of Service and Other Performance Measures

Level of service, LOS	C	
Volume to capacity ratio, v/c	0.30	
Peak 15-min vehicle-miles of travel, VMT15	77 veh-mi	
Peak-hour vehicle-miles of travel, VMT60	257 veh-mi	
Peak 15-min total travel time, TT15	2.4 veh-h	
Capacity from ATS, CdATS	1700 veh/h	
Capacity from PTSF, CdPTSF	1700 veh/h	
Directional Capacity	1700 veh/h	

Passing Lane Analysis

Total length of analysis segment, Lt	0.6 mi	
Length of two-lane highway upstream of the passing lane, Lu	- mi	
Length of passing lane including tapers, Lpl	- mi	
Average travel speed, ATSD (from above)	32.7 mi/h	
Percent time-spent-following, PTSFd (from above)	73.0	
Level of service, LOSd (from above)	C	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	- mi	
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	- mi	
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0 %	

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	- mi	
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	- mi	
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	- %	

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	- veh-h	

Bicycle Level of Service

Posted speed limit, Sp	45
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	510.7
Effective width of outside lane, We	15.00
Effective speed factor, St	4.42
Bicycle LOS Score, BLOS	5.91
Bicycle LOS	F

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period AM Peak
Highway Bailey St
From/To Blackhall DW2 to International
Jurisdiction GDOT
Analysis Year 2024 - Build
Description Blackhall Phase 2

Input Data

Highway class	Class 3		Peak hour factor, PHF	0.91	
Shoulder width	3.0	ft	% Trucks and buses	6	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	0.6	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Level		% Recreational vehicles	0	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	0	/mi

Analysis direction volume, Vd 232 veh/h
Opposing direction volume, Vo 429 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.4	1.2
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.977	0.988
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	261 pc/h	477 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 2.6 mi/h
Adj. for access point density, (note-3) fA 0.0 mi/h

Free-flow speed, FFSd 42.4 mi/h

Adjustment for no-passing zones, fnp 2.4 mi/h
Average travel speed, ATSD 34.3 mi/h
Percent Free Flow Speed, PFFS 80.9 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.1	1.0
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	0.994	1.000
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	256 pc/h	471 pc/h
Base percent time-spent-following, (note-4) BPTSFd	32.4 %	
Adjustment for no-passing zones, fnp	43.0	
Percent time-spent-following, PTSFd	47.5 %	

Level of Service and Other Performance Measures

Level of service, LOS	C	
Volume to capacity ratio, v/c	0.15	
Peak 15-min vehicle-miles of travel, VMT15	38	veh-mi
Peak-hour vehicle-miles of travel, VMT60	139	veh-mi
Peak 15-min total travel time, TT15	1.1	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.6	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSD (from above)	34.3	mi/h
Percent time-spent-following, PTSFd (from above)	47.5	
Level of service, LOSd (from above)	C	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	254.9
Effective width of outside lane, We	15.00
Effective speed factor, St	4.42
Bicycle LOS Score, BLOS	5.59
Bicycle LOS	F

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

HCS7 Multilane Highway Report

Project Information

Analyst	JS	Date	3/31/2021
Agency	Lumin8	Analysis Year	2024 - Build
Jurisdiction	GDOT	Time Period Analyzed	PM Peak
Project Description	Blackhall Phase 2	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	20.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	40.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	682	Heavy Vehicle Adjustment Factor (fhv)	0.958
Peak Hour Factor	0.91	Flow Rate (Vp), pc/h/ln	391
Total Trucks, %	4.40	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.21

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	40.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	9.8
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	5.0		

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HCS7 Multilane Highway Report

Project Information

Analyst	JS	Date	3/31/2021
Agency	Lumin8	Analysis Year	2024 - Build
Jurisdiction	GDOT	Time Period Analyzed	PM Peak
Project Description	Blackhall Phase 2	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	287	Heavy Vehicle Adjustment Factor (fhv)	0.840
Peak Hour Factor	0.91	Flow Rate (Vp), pc/h/ln	188
Total Trucks, %	19.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.10

Direction 2 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	4.2
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.0		

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HCS7 Multilane Version 7.8.5
8. International Park to Bouldercrest Rd.xuf

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HCS7 Multilane Highway Report

Project Information

Analyst	JS	Date	3/31/2021
Agency	Lumin8	Analysis Year	2024 - Build
Jurisdiction	GDOT	Time Period Analyzed	PM Peak
Project Description	Blackhall Phase 2	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	20.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLT	Total Lateral Clearance (TLC), ft	8
Free-Flow Speed (FFS), mi/h	39.1		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	936	Heavy Vehicle Adjustment Factor (fHV)	0.952
Peak Hour Factor	0.91	Flow Rate (Vp), pc/h/ln	540
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.28

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	39.1
Total Lateral Clearance Adj. (fLLC)	0.9	Density (D), pc/mi/ln	13.8
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (fA)	5.0		

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9. Bouldercrest Rd to Clifton Church Rd.xuf

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HCS7 Multilane Highway Report

Project Information

Analyst	JS	Date	3/31/2021
Agency	Lumin8	Analysis Year	2024 - Build
Jurisdiction	GDOT	Time Period Analyzed	PM Peak
Project Description	Blackhall Phase 2	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	8.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	8
Free-Flow Speed (FFS), mi/h	42.1		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	562	Heavy Vehicle Adjustment Factor (fhv)	0.915
Peak Hour Factor	0.94	Flow Rate (Vp), pc/h/ln	326
Total Trucks, %	9.30	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.17

Direction 2 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	42.1
Total Lateral Clearance Adj. (fLLC)	0.9	Density (D), pc/mi/ln	7.7
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	2.0		

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9. Bouldercrest Rd to Clifton Church Rd.xuf

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HCS7 Multilane Highway Report

Project Information

Analyst	JS	Date	3/31/2021
Agency	Lumin8	Analysis Year	2024 - Build
Jurisdiction	GDOT	Time Period Analyzed	PM Peak
Project Description	Blackhall Phase 2	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Northbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	25.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	8
Free-Flow Speed (FFS), mi/h	37.9		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1421	Heavy Vehicle Adjustment Factor (fhv)	0.952
Peak Hour Factor	0.98	Flow Rate (Vp), pc/h/ln	762
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.40

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	37.8
Total Lateral Clearance Adj. (fLLC)	0.9	Density (D), pc/mi/ln	20.2
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (fA)	6.3		

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HCS7 Multilane Version 7.8.5
10. Clifton Church Rd to Continental Way.xuf

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HCS7 Multilane Highway Report

Project Information

Analyst	JS	Date	3/31/2021
Agency	Lumin8	Analysis Year	2024 - Build
Jurisdiction	GDOT	Time Period Analyzed	PM Peak
Project Description	Blackhall Phase 2	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Southbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	5.8
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	8
Free-Flow Speed (FFS), mi/h	42.7		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1293	Heavy Vehicle Adjustment Factor (fhv)	0.976
Peak Hour Factor	0.94	Flow Rate (Vp), pc/h/ln	704
Total Trucks, %	2.50	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.37

Direction 2 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	42.6
Total Lateral Clearance Adj. (fLLC)	0.9	Density (D), pc/mi/ln	16.5
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (fA)	1.5		

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HCS7 Multilane Version 7.8.5
10. Clifton Church Rd to Continental Way.xuf

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HCS7 Multilane Highway Report

Project Information

Analyst	JS	Date	3/31/2021
Agency	Lumin8	Analysis Year	2024 - Build
Jurisdiction	GDOT	Time Period Analyzed	PM Peak
Project Description	Blackhall Phase 2	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Northbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	25.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLT	Total Lateral Clearance (TLC), ft	8
Free-Flow Speed (FFS), mi/h	37.9		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1186	Heavy Vehicle Adjustment Factor (fHV)	0.937
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	688
Total Trucks, %	6.67	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.36

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	37.8
Total Lateral Clearance Adj. (fLLC)	0.9	Density (D), pc/mi/ln	18.2
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (fA)	6.3		

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HCS7 Multilane Version 7.8.5
11. Continental Way to 285 WB.xuf

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HCS7 Multilane Highway Report

Project Information

Analyst	JS	Date	3/31/2021
Agency	Lumin8	Analysis Year	2024 - Build
Jurisdiction	GDOT	Time Period Analyzed	PM Peak
Project Description	Blackhall Phase 2	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Southbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	22.2
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	8
Free-Flow Speed (FFS), mi/h	38.6		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1818	Heavy Vehicle Adjustment Factor (fhv)	0.925
Peak Hour Factor	0.98	Flow Rate (Vp), pc/h/ln	1003
Total Trucks, %	8.10	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.53

Direction 2 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	38.6
Total Lateral Clearance Adj. (fLLC)	0.9	Density (D), pc/mi/ln	26.0
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (fA)	5.6		

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HCS7 Multilane Version 7.8.5
11. Continental Way to 285 WB.xuf

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HCS7 Multilane Highway Report

Project Information

Analyst	JS	Date	4/1/2021
Agency	Lumin8	Analysis Year	2024 - Build
Jurisdiction	GDOT	Time Period Analyzed	PM Peak
Project Description	Blackhall Phase 2	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Northbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	1145	Heavy Vehicle Adjustment Factor (fHV)	0.943
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	660
Total Trucks, %	6.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.35

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	14.7
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (fA)	0.0		

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HCS7 Multilane Version 7.8.5
12. 285 WB to 285 EB.xuf

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HCS7 Multilane Highway Report

Project Information

Analyst	JS	Date	4/1/2021
Agency	Lumin8	Analysis Year	2024 - Build
Jurisdiction	GDOT	Time Period Analyzed	PM Peak
Project Description	Blackhall Phase 2	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Southbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	1216	Heavy Vehicle Adjustment Factor (fHV)	0.962
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	687
Total Trucks, %	4.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.36

Direction 2 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	15.3
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (fA)	0.0		

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HCS7 Multilane Version 7.8.5
12. 285 WB to 285 EB.xuf

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Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period PM Peak
Highway International Park Dr
From/To Constitution to Continental
Jurisdiction GDOT
Analysis Year 2024 - Build
Description Blackhall Phase 2

Input Data

Highway class	Class 3	Peak hour factor, PHF	0.86
Shoulder width	3.0 ft	% Trucks and buses	24 %
Lane width	16.0 ft	% Trucks crawling	0.0 %
Segment length	0.3 mi	Truck crawl speed	0.0 mi/hr
Terrain type	Level	% Recreational vehicles	0 %
Grade: Length	- mi	% No-passing zones	100 %
Up/down	- %	Access point density	10 /mi

Analysis direction volume, Vd 285 veh/h
Opposing direction volume, Vo 158 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.4	1.6
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.912	0.874
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	363 pc/h	210 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 2.6 mi/h
Adj. for access point density, (note-3) fA 2.5 mi/h

Free-flow speed, FFSd 39.9 mi/h

Adjustment for no-passing zones, fnp 3.9 mi/h
Average travel speed, ATSD 31.5 mi/h
Percent Free Flow Speed, PFFS 79.0 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.1	1.1
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	0.977	0.977
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	339 pc/h	188 pc/h
Base percent time-spent-following, (note-4) BPTSFd	33.3 %	
Adjustment for no-passing zones, fnp	51.9	
Percent time-spent-following, PTSFd	66.7 %	

Level of Service and Other Performance Measures

Level of service, LOS	C	
Volume to capacity ratio, v/c	0.19	
Peak 15-min vehicle-miles of travel, VMT15	25	veh-mi
Peak-hour vehicle-miles of travel, VMT60	86	veh-mi
Peak 15-min total travel time, TT15	0.8	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.3	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSD (from above)	31.5	mi/h
Percent time-spent-following, PTSFd (from above)	66.7	
Level of service, LOSd (from above)	C	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, S_p	45
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, v_{OL}	331.4
Effective width of outside lane, W_e	19.00
Effective speed factor, S_t	4.42
Bicycle LOS Score, B_{LOS}	13.44
Bicycle LOS	F

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period PM Peak
Highway International Park Dr
From/To Constitution to Continental
Jurisdiction GDOT
Analysis Year 2024 - Build
Description Blackhall Phase 2

Input Data

Highway class	Class 3	Peak hour factor, PHF	0.91
Shoulder width	3.0 ft	% Trucks and buses	46 %
Lane width	16.0 ft	% Trucks crawling	0.0 %
Segment length	0.3 mi	Truck crawl speed	0.0 mi/hr
Terrain type	Level	% Recreational vehicles	0 %
Grade: Length	- mi	% No-passing zones	100 %
Up/down	- %	Access point density	10 /mi

Analysis direction volume, Vd 158 veh/h
Opposing direction volume, Vo 285 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.6	1.4
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.784	0.845
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	221 pc/h	371 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 2.6 mi/h
Adj. for access point density, (note-3) fA 2.5 mi/h

Free-flow speed, FFSd 39.9 mi/h

Adjustment for no-passing zones, fnp 2.9 mi/h
Average travel speed, ATSD 32.4 mi/h
Percent Free Flow Speed, PFFS 81.2 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.1	1.1
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	0.956	0.956
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	182 pc/h	328 pc/h
Base percent time-spent-following, (note-4) BPTSFd	22.5 %	
Adjustment for no-passing zones, fnp	52.1	
Percent time-spent-following, PTSFd	41.1 %	

Level of Service and Other Performance Measures

Level of service, LOS	C	
Volume to capacity ratio, v/c	0.10	
Peak 15-min vehicle-miles of travel, VMT15	13 veh-mi	
Peak-hour vehicle-miles of travel, VMT60	47 veh-mi	
Peak 15-min total travel time, TT15	0.4 veh-h	
Capacity from ATS, CdATS	1700 veh/h	
Capacity from PTSF, CdPTSF	1700 veh/h	
Directional Capacity	1700 veh/h	

Passing Lane Analysis

Total length of analysis segment, Lt	0.3 mi
Length of two-lane highway upstream of the passing lane, Lu	- mi
Length of passing lane including tapers, Lpl	- mi
Average travel speed, ATSD (from above)	32.4 mi/h
Percent time-spent-following, PTSFd (from above)	41.1
Level of service, LOSd (from above)	C

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	- mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	- mi
Adj. factor for the effect of passing lane on average speed, fpl	-
Average travel speed including passing lane, ATSpl	-
Percent free flow speed including passing lane, PFFSpl	0.0 %

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	- mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	- mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-
Percent time-spent-following including passing lane, PTSFpl	- %

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E
Peak 15-min total travel time, TT15	- veh-h

Bicycle Level of Service

Posted speed limit, S_p	45
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, v_{OL}	173.6
Effective width of outside lane, W_e	22.99
Effective speed factor, S_t	4.42
Bicycle LOS Score, $BLOS$	30.95
Bicycle LOS	F

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period PM Peak
Highway Continental Way
From/To International to Bouldercrest
Jurisdiction GDOT
Analysis Year 2024 - Build
Description Blackhall Phase 2

Input Data

Highway class	Class 3	Peak hour factor, PHF	0.86
Shoulder width	3.0 ft	% Trucks and buses	28 %
Lane width	12.0 ft	% Trucks crawling	0.0 %
Segment length	0.6 mi	Truck crawl speed	0.0 mi/hr
Terrain type	Level	% Recreational vehicles	0 %
Grade: Length	- mi	% No-passing zones	100 %
Up/down	- %	Access point density	13 /mi

Analysis direction volume, Vd 267 veh/h
Opposing direction volume, Vo 145 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.4	1.6
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.899	0.856
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	345 pc/h	197 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 2.6 mi/h
Adj. for access point density, (note-3) fA 3.3 mi/h

Free-flow speed, FFSd 39.2 mi/h

Adjustment for no-passing zones, fnp 4.0 mi/h
Average travel speed, ATSD 31.0 mi/h
Percent Free Flow Speed, PFFS 79.2 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.1	1.1
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	0.973	0.973
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	319 pc/h	173 pc/h
Base percent time-spent-following, (note-4) BPTSFd	31.8 %	
Adjustment for no-passing zones, fnp	51.9	
Percent time-spent-following, PTSFd	65.5 %	

Level of Service and Other Performance Measures

Level of service, LOS	C	
Volume to capacity ratio, v/c	0.18	
Peak 15-min vehicle-miles of travel, VMT15	47	veh-mi
Peak-hour vehicle-miles of travel, VMT60	160	veh-mi
Peak 15-min total travel time, TT15	1.5	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.6	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSD (from above)	31.0	mi/h
Percent time-spent-following, PTSFd (from above)	65.5	
Level of service, LOSd (from above)	C	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, S_p	45
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, v_{OL}	310.5
Effective width of outside lane, W_e	15.00
Effective speed factor, S_t	4.42
Bicycle LOS Score, $BLOS$	16.80
Bicycle LOS	F

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst JS
Agency/Co. Lumin8
Date Performed 3/31/2021
Analysis Time Period PM Peak
Highway Continental Way
From/To International to Bouldercrest
Jurisdiction GDOT
Analysis Year 2024 - Build
Description Blackhall Phase 2

Input Data

Highway class	Class 3		Peak hour factor, PHF	0.98	
Shoulder width	3.0	ft	% Trucks and buses	71	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	0.6	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Level		% Recreational vehicles	0	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	13	/mi

Analysis direction volume, Vd 145 veh/h
Opposing direction volume, Vo 267 veh/h

Average Travel Speed

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.7	1.4
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adj. factor, (note-5) fHV	0.668	0.779
Grade adj. factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	221 pc/h	350 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, (note-3) S FM - mi/h
Observed total demand, (note-3) V - veh/h

Estimated Free-Flow Speed:

Base free-flow speed, (note-3) BFFS 45.0 mi/h
Adj. for lane and shoulder width, (note-3) fLS 2.6 mi/h
Adj. for access point density, (note-3) fA 3.3 mi/h

Free-flow speed, FFSd 39.2 mi/h

Adjustment for no-passing zones, fnp 3.0 mi/h
Average travel speed, ATSD 31.7 mi/h
Percent Free Flow Speed, PFFS 81.0 %

Percent Time-Spent-Following

Direction	Analysis (d)	Opposing (o)
PCE for trucks, ET	1.1	1.1
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	0.934	0.934
Grade adjustment factor, (note-1) fg	1.00	1.00
Directional flow rate, (note-2) vi	158 pc/h	292 pc/h
Base percent time-spent-following, (note-4) BPTSFd	19.8 %	
Adjustment for no-passing zones, fnp	52.3	
Percent time-spent-following, PTSFd	38.2 %	

Level of Service and Other Performance Measures

Level of service, LOS	C	
Volume to capacity ratio, v/c	0.09	
Peak 15-min vehicle-miles of travel, VMT15	22	veh-mi
Peak-hour vehicle-miles of travel, VMT60	87	veh-mi
Peak 15-min total travel time, TT15	0.7	veh-h
Capacity from ATS, CdATS	1700	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1700	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	0.6	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSD (from above)	31.7	mi/h
Percent time-spent-following, PTSFd (from above)	38.2	
Level of service, LOSd (from above)	C	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, S_p	45
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, v_{OL}	148.0
Effective width of outside lane, W_e	19.13
Effective speed factor, S_t	4.42
Bicycle LOS Score, B_{LOS}	64.08
Bicycle LOS	F

Notes:

1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for $v > 200$ veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

APPENDIX K

ICE SPREADSHEETS



MORELAND AVE (SR 42) & BAILEY ST

GDOT PI # (or N/A): Request By:

County: GDOT District:

Major (State) Road: Speed Limit:

Minor (Crossing) ST: Speed Limit:

Major ST Direction: Area Type:

Intersection Control:

Prepared By: Analyst:

Date: Project ID:

Project Purpose:

2021	Existing Data Year	2021 Existing Year Volumes					789 (1858) [38200]		Annual Growth Rate: 1.5%	
2024	Project Opening Year								K Factor*: 9%	
2044	Project Design Year									

GDOT PI #		N/A		Note: Up to 5 alternatives may be selected and evaluated; Use this ICE Stage 1 to screen 5 or fewer alternatives to evaluate in Stage 2 1. Does alternative address the project need in a balanced manner and in scale with the project? 2. Does alternative improve safety performance in terms of reducing severe crashes? 3. Does alternative incorporate safety, convenience and accessibility for pedestrians and/or bicyclists? 4. Does alternative improve (or preserve) traffic operations (congestion, delay, reliability, etc.)? 5. Does alternative appear feasible given the site characteristics, constraints & location context? 6. Does alternative appear feasible with respect to other project factors? 7. Overall feasible alternative (select alternative for further evaluation in Stage 2)? Screening Decision Justification:						
Project Location:		SR 42 @ Bailey St								
Existing Control:		Conventional (Minor Stop)								
Prepared by:		Lumin8								
Date:		4/22/2021								
Answer "Yes" or "No" to each policy question for each control type to identify which alternatives should be evaluated in the Stage 2 Decision Record; enter justification in the rightmost column Intersection Alternative (see "Intersections" tab for detailed description of intersection/interchange type)										
Unsignalized Intersections	Conventional (Minor Stop)		No	No	No	No	No	No	No	Existing conditions
	Conventional (All-Way Stop)		No	No	No	No	No	No	No	Mainline volume too high
	Mini Roundabout		No	No	No	No	No	No	No	6-ln divided section
	Single Lane Roundabout		No	No	No	No	No	No	No	6-ln divided section
	Multilane Roundabout		No	No	No	No	No	No	No	6-ln divided section, does not meet 90/10
	RCUT (stop control)		No	Yes	Yes	Yes	No	No	Yes	
	RIRO w/down stream U-Turn		No	No	No	No	No	No	No	Intersection is full access with high mainline left turn volumes
	High-T (unsignalized)		No	No	No	No	No	No	No	4-leg intersection
	Offset-T Intersections		No	No	No	No	No	No	No	4-leg intersection
	Diamond Interch (Stop Control)		No	No	No	No	No	No	No	Not an interchange
	Diamond Interch (RAB Control)		No	No	No	No	No	No	No	Not an interchange
	No LT Lane Improvements		No	No	No	No	No	No	No	
	No RT Lane Improvements		No	No	No	No	No	No	No	
Other unsignalized (provide description):		No	No	No	No	No	No	No		
Signalized Intersections	Traffic Signal		Yes	Yes	Yes	Yes	Yes	Yes	Yes	
	Median U-Turn (Indirect Left)		No	No	No	No	No	No	No	Median not wide enough
	RCUT (signalized)		Yes	Yes	Yes	Yes	No	No	Yes	
	Displaced Left Turn (CFI)		No	No	No	No	No	No	No	Not enough ROW
	Continuous Green-T		No	No	No	No	No	No	No	4-leg intersection
	Jughandle		No	No	No	No	No	No	No	Not enough ROW
	Quadrant Roadway		No	No	No	No	No	No	No	Not enough ROW
	Diamond Interch (Signal Control)		No	No	No	No	No	No	No	Not an interchange
	Diverging Diamond		No	No	No	No	No	No	No	Not an interchange
	Single Point Interchange		No	No	No	No	No	No	No	Not an interchange
	No LT Lane Improvements		No	No	No	No	No	No	No	
	No RT Lane Improvements		No	No	No	No	No	No	No	
	Other Signalized (provide description):		No	No	No	No	No	No	No	

☐ = Intersection type selected for more detailed analysis in Stage 2 Alternative Selection Decision Record

GDOT ICE STAGE 2: ALTERNATIVE SELECTION DECISION RECORD

ICE Version 2.15 | Revised 07/01/2019

GDOT PI # (or N/A) N/A
 County: DeKalb
 Project Location: SR 42 @ Bailey St
 Existing Intersection Control: Conventional (Minor Stop)

GDOT District: 7 - Metro Atlanta
 Area Type: Urban

Date: 4/22/2021
 Agency/Firm: Lumin8
 Analyst: CR

Type of Analysis: Conventional Non-Safety Funded Project

Opening / Design Year Traffic Operations

Intersection meets signal/AWS warrants?	Meets Signal Warrants	
Traffic Analysis Measure of Effectiveness	Intersection Delay	
Traffic Analysis Software Used	Synchro 10	
Analysis Time Period	AM Peak Hr	PM Peak Hr
2024 Opening Yr No-Build Peak Hr Intersection Delay	500.0 sec	500.0 sec
2024 Opening Yr No-Build Peak Hr Intersection V/C	3.11	5.00
2044 Design Yr No-Build Peak Hr Intersection Delay	500.0 sec	500.0 sec
2044 Design Yr No-Build Peak Hr Intersection V/C	5.00	5.00

Complete Streets Warrants Met?

- ☐ PEDESTRIANS
☐ BICYCLES
☐ TRANSIT

Crash Type	Crash Severity			
	PDO	Injury Crash*	Fatal Crash*	
Angle	19	17	1	45%
Head-On	0	1	0	1%
Rear End	17	10	0	33%
Sideswipe - same	8	1	0	11%
Sideswipe - opposite	4	0	0	5%
Not Collision w/Motor Veh	4	1	0	6%
TOTALS:	52	30	1	83

* Number of crashes resulting in injuries / fatalities, not number of persons

Alternatives Analysis:

Proposed Control Type/Improvement:

Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
RCUT (stop control)	Traffic Signal	RCUT (signalized)	N/A	N/A

Project Cost: (From CostEst Worksheet)

	Additional description here	Add LT bays (2) on Minor ST	Additional description here		
Construction Cost	\$298,000	\$467,000	\$692,000		
ROW Cost	\$0	\$0	\$0		
Environmental Cost	\$0	\$0	\$0		
Reimbursable Utility Cost	\$4,000	\$23,000	\$10,000		
Design & Contingency Cost	\$77,000	\$163,000	\$179,000		
Cost Adjustment (justification req'd)	0%	0%	0%		
Total Cost	\$379,000	\$653,000	\$881,000		

Traffic Operations:

	Synchro 10		Synchro 10		Synchro 10			
Traffic Analysis Software Used	AM Peak Hr	PM Peak Hr	AM Peak Hr	PM Peak Hr	AM Peak Hr	PM Peak Hr		
Analysis Period	500.0 sec	500.0 sec	73.8 sec	51.2 sec	71.6 sec	419.6 sec		
2044 Design Yr Build Intersection Delay	5.00	2.63	1.16	0.74	1.10	2.63		
2044 Design Yr Build Intersection V/C								

Safety Analysis:

Predefined CRF: PDO	31%	39%	48%		
Predefined CRF: Fatal/Inj	53%	40%	53%		
Predefined CRF Source:	NC/MO Table 4-7	FHWA Clearinghouse #s 325 / 7984	FHWA Clearinghouse #s 7982/HRT-17-083 / 7984/HRT-17-083		
User Defined CRF: PDO					
User Defined CRF: Fatal/Inj					
User Defined CRF Source (write in if applicable):					

Environmental Impacts:¹

Historic District/Property	None	None	None		
Archaeology Resources	None	None	None		
Graveyard	None	None	None		
Stream	None	None	None		
Underground Tank/Hazmat	None	None	None		
Park Land	None	None	None		
EJ Community	None	None	None		
Wooded Area	None	None	None		
Wetland	None	None	None		

Note: If environmental impact is significant (RED), provide justification impact won't jeopardize project delivery using "Env" worksheet

¹ Environmental impacts are only preliminary estimates; detailed environmental impact documentation will be included with project concept report

Stakeholder Posture:

Local Community Support	Unknown	Unknown	Unknown		
GDOT Support	Unknown	Unknown	Unknown		

Final ICE Stage 2 Score:	-3.7	4.5	1.0		
Rank of Control Type Alternatives:	3	1	2		

Note: Stage 2 score is not given (shown as "-") if signal or AWS is selected as control type but respective warrants are not met

Provide additional comments and/or explain any unique analysis inputs, or results (as necessary): Delays for Signalized and Unsignalized RCUT taken from RCUT analysis tool, which takes travel time, U-turn delay, etc. into account.

Project Information

Location: SR 42 @ Bailey St County: DeKalb Date: 4/22/2021
 GDOT PI # (or N/A): N/A Area Type: Urban Agency/Firm: Lumin8
 Existing Intersection Control: Conventional (Minor Stop) GDOT District: 7 - Metro Atlanta Analyst: CR
 Type of Analysis: Conventional Non-Safety Funded Project Major Street Direction: North/South

Table 1: Existing Conditions

Movement	NB SR 42			SB SR 42			EB Bailey St			WB Bailey St		
	Left Turn	Thru	Right Turn	Left Turn	Thru	Right Turn	Left Turn	Thru	Right Turn	Left Turn	Thru	Right Turn
Number of Lanes	1	3	0	1	3	0	0	1	1	0	1	0
Lane Widths*	12'	12'	0'	12'	12'	0'	0'	12'	12'	0'	12'	0'
Bay Length**	125'		0'	215'		0'	0'		60'	0'		0'
Median Width		20'			20'			0'			0'	
Right-of-Way	100'						50'					

Table 2: Proposed Conditions

	RCUT (stop control)	Traffic Signal	RCUT (signalized)	N/A	N/A
Proposed Pavement Type	F.D. Asphalt	F.D. Asphalt	F.D. Asphalt	F.D. Asphalt	F.D. Asphalt
Reimbursable Utility:	Minimal	Moderate	Minimal	Minimal	Minimal
# of Driveway(s) Impacted	0	0	0	0	0
Modify/Replace Traffic Signal	0	4	4	0	0
Lighting Poles (ea)	0	0	0	0	0
Flashing Beacons (ea)	0	0	0	0	0
RFB/PHB Ped Crossings (ea)	0	0	0	0	0
New/Replace Sidewalks (LF)	0'	0'	0'	0'	0'
New/Replace Cross Drains (LF)	0'	0'	0'	0'	0'
New/Replace Guardrail (LF)	0'	0'	0'	0'	0'
New Retaining Wall (LF)	0'	0'	0'	0'	0'
Bridge/New/Widen/Replace (sqft)	0	0	0	0	0
Add'l ROW/Easements/Demolition	\$0	\$0	\$0	\$0	\$0

Site Context

Topography:	Level
Traffic Mgmt Plan:	Maintain Traffic
Project Size:	Single Intersection

Intersections

Signal Poles	Strain Pole
Design Vehicle	WB-67
Existing Interchange?	No

Roundabouts

Inscribed DIA - Mini	80
Inscribed DIA - Single	140
Inscribed DIA - Multi	200
Circulating Lane Width	18

Cost Multipliers

Grading Complete:	15%
Reimbursable Utility:	2%
Traffic Control:	20%
Project Size:	0%
Prelim Engineering:	15%
Project Contingency:	20%

ROW Costs

Prevalent ROW Type:	Mixed (Average)
ROW Cost/Acre:	\$288,750
ROW Multiplier:	1.6

Table 3: Control Type Cost Breakdown

Pay Item	Per Ln Mi Unit Cost	Unit Cost	RCUT (stop control)		Traffic Signal		RCUT (signalized)		N/A		N/A	
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost
New Construction (Base & Pave)	\$500K/LM	\$9.47/sqft	0	\$1	8,000	\$75,758	0	\$1				
Roadway Mill and Overlay	\$64K/LM	\$1.21/sqft	0	\$0	0	\$0	0	\$0				
Urban C&G/Drainage - both sides	441-6720	\$19.08/LF	3880	\$74,030	2,100	\$40,068	3,880	\$74,030				
Rural Typ Drainage - both sides	\$150K/LM	\$2.84/LF	0	\$0	0	\$0	0	\$0				
Concrete Island (sqyd)	n/a	\$51.58/syd	500	\$25,790	0	\$0	500	\$25,790				
Median Landscaping	\$100K/LM	\$1.89/LF	5820	\$11,023	0	\$0	5,820	\$11,023				
Typical Driveways Impacted (ea)	n/a	\$7,500 ea	0	\$0	0	\$0	0	\$0				
Typical E&S Control Temp/Perm	\$150K/LM	\$34.09/LF	1940	\$66,136	1,050	\$35,795	1,940	\$66,136				
Roundabout Truck Apron (sqft)	n/a	\$10.25/sqft	0	\$0	0	\$0	0	\$0				
Signing & Marking	\$0	\$22.73/LF	1,940	\$44,096	1,050	\$23,867	1,940	\$44,096				
Flashing Beacon (ea)	n/a	\$20,000 ea	0	\$0	0	\$0	0	\$0				
New Traffic Signal (Strain Poles)	674-1000	\$73,030ea	0	\$0	4	\$292,120	4	\$292,120				
Lighting (per pole)	n/a	\$5,607 ea	0	\$0	0	\$0	0	\$0				
Signalized Ped Crossings (ea)	n/a	\$19,637 ea	0	\$0	0	\$0	0	\$0				
6' Sidewalk (LF)	n/a	\$49.23/LF	0	\$0	0	\$0	0	\$0				
New/replace cross drains (LF)	n/a	\$41.31/LF	0	\$0	0	\$0	0	\$0				
Typical Guardrail (LF)	n/a	\$65.56/LF	0	\$0	0	\$0	0	\$0				
Retaining Wall (LF)	n/a	\$808.52/LF	0	\$0	0	\$0	0	\$0				
Bridge widen/replace (SF)	n/a	\$210/sqft	0	\$0	0	\$0	0	\$0				
Env Costs (from Stage 2 impacts)	n/a	n/a	0	\$0	0	\$0	0	\$0				
Grading Complete - 15%	n/a	n/a		\$33,161		\$0		\$76,979				
Traffic Control - 20%	n/a	n/a		\$44,215		\$0		\$102,639				
Reimbursable Utility	n/a	n/a		\$4,422		\$23,380		\$10,264				
Preliminary Engineering - 15%	n/a	n/a		\$33,161		\$70,141		\$76,979				
Contingency - 20%	n/a	n/a		\$44,215		\$93,522		\$102,639				
ROW Cost/Acre: Mixed (Average)	n/a	\$288,750ac		\$64,962		\$0		\$64,962				
Add'l ROW / Displacement / Demo	n/a	n/a		\$0		\$0		\$0				
ROW Multiplier - 1.6	n/a	n/a		\$38,977		\$0		\$38,977				
Project Scale Reduction - 0.0%	n/a	n/a		\$0		\$0		\$0				
Grand Total Costs				\$484,000		\$655,000		\$987,000				

Table 4: Assumption Adjustments/Quantity Overrides

Alternative Evaluated	Assumptions:	Pavement	Calculated ROW (ac)	User Override*	Calculated Pavement	User Override*	Major ST Const Limits	User Override*	Minor ST Const Limits	User Override*
RCUT (stop control)	Loons/Leftovers Only	F.D. Asphalt	0.22	0.0	21,943	0.1	1,400	0.0	540	0.0
Traffic Signal	--select one--	F.D. Asphalt	0.00	0.0	8,000	0.0	50	0.0	1,000	0.0
RCUT (signalized)	Loons/Leftovers Only	F.D. Asphalt	0.22	0.0	21,943	0.1	1,400	0.0	540	0.0
N/A	#N/A	F.D. Asphalt	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
N/A	#N/A	F.D. Asphalt	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A

MORELAND AVE (SR 42) & I-285 WB RAMPS

GDOT PI # (or N/A): Request By:

County: GDOT District:

Major (State) Road: Speed Limit:

Minor (Crossing) ST: Speed Limit:

Major ST Direction: Area Type:

Intersection Control:

Prepared By: Analyst:

Date: Project ID:

Project Purpose:

2021 Existing Data Year
 2024 Project Opening Year
 2044 Project Design Year

2021 Existing Year Volumes
 1783 (2238) [48700]

Annual Growth Rate:
 K Factor*:

2021 Intersection Daily Entering Volume (est): 56,550

Peak Hour % Trucks
 EB: 0%, WB: 9%, NB: 15%, SB: 9%

Approach Splits: SR 42 - 0.75 / I-285 WB Ramps - 0.25

2024 Opening Year Volumes
 2527 (3172) [69100]

2024 Intersection Daily Entering Volume (est): 80,150

2024 Intersection Daily Entering Volume (est): 80,150

2044 Design Year Volumes
 2555 (3328) [71200]

2044 Intersection Daily Entering Volume (est): 82,750

2044 Intersection Daily Entering Volume (est): 82,750

Introduction: In 2005, SAFETEA-LU established the Highway Safety Improvement Program (HSIP) and mandated that each state prepare a Strategic Highway Safety Plan (SHSP) to prioritize safety funding investments. Intersections quickly became a common component of most states' SHSP emphasis areas and HSIP project lists, including Georgia's SHSP. Intersection Control Evaluation (ICE) policies and procedures represent a traceable and transparent procedure to streamline the evaluation of intersection control alternatives, and further leverage safety advancements for intersection improvements beyond just the safety program. Approximately one-third of all traffic fatalities and roughly seventy five percent of all traffic crashes in Georgia occur at or adjacent to intersections. Accordingly, the Georgia SHSP includes an emphasis on enhancing intersection safety to advance the *Toward Zero Deaths* vision embraced by the Georgia Governor's Office of Highway Safety (GOHS). This ICE tool was developed to support the ICE policy, developed and adopted to help ensure that intersection investments across the entire Georgia highway system are selected, prioritized and implemented with defensible benefits for safety towards those ends.

Tool Goal: The goal of this ICE tool is to provide a simplified and consistent way of importing traffic, safety, cost, environmental impact and stakeholder posture data to assess and quantify intersection control improvement benefits. The tool supports the ICE policy and procedures to provide traceability, transparency, consistency and accountability when identifying and selecting an intersection control solution that both meets project purpose and reflects overall best value in terms of specific performance-based criteria.

Requirements: An ICE is required for any intersection improvement (e.g. new or modified intersection, widening/reconstruction or corridor project, or work accomplished through a driveway or encroachment permit that affects an intersection) where: 1) the intersection includes at least one roadway designated as a State Route (State Highway System) or as part of the National Highway System; or 2) the intersection will be designed or constructed using State or Federal funding. In certain circumstances where an ICE would otherwise be required, the requirement may be waived based on appropriate evidence presented with a written request. (See the "Waiver" tab to review criteria that may make a project waiver eligible and for instructions to submit a waiver request to the Department). An ICE is not required when the proposed work does not include any changes to the intersection design, involves only routine traffic signal timing and equipment maintenance, or for driveway permits where the driveway is not a new leg to an already existing intersection on either 1) a divided, multi-lane highway with a closed median and only right-in/right-out access or 2) an undivided roadway where the development is not required to construct left and/or right turn lanes (as per the Driveway Manual and District Traffic Engineer).

Two-Stage Process: A complete ICE process consists of two (2) distinct stages, and it is expected that the respective level of effort for completing both stages of ICE will correspond to the magnitude and complexity of the intersection. Prior to starting an ICE, the District Traffic Engineer and/or State Traffic Engineer should be consulted for advice on an appropriate level of effort. The Stage 1 and Stage 2 ICE forms are designed minimize required data inputs using drop-down menu choices and limiting text entry. All fields shaded grey include drop down menu choices and all fields shaded blue require data entry. All other cells in the worksheet are locked.

Stage 1: Screening Decision Record Stage 1 should be conducted early in the project development process and is intended to inform which alternatives are worthy of further evaluation in Stage 2. Stage 1 serves as a screening effort meant to eliminate non-competitive options and identify which alternatives merit further considerations based on their practical feasibility. Users should use good engineering judgement in responding to the seven policy questions by selecting "Yes" or "No" in the drop-down boxes. Alternatives should not be summarily eliminated without due consideration, and reasons for eliminating or advancing an alternative should be documented in the "Screening Decision Justification" column.

Stage 2: Alternative Selection Decision Record Stage 2 involves a more detailed and familiar evaluation of the alternatives identified in Stage 1 in order to support the selection of a preferred alternative that may be advanced to detailed design. Stage 2 data entry may require the use of external analysis tools to determine costs, operations and/or safety data that, combined with environmental and stakeholder posture data, form the basis of the ICE evaluation. A separate "CostEst" worksheet tab helps users develop pre-planning-level cost estimates for each Stage 2 alternative evaluated, and a separate Users Guide has been prepared to give guidance on Stage 1 and Stage 2 data entry. Once all data is entered, each alternative is scored and ranked, with the results reported at the bottom of the Stage 2 worksheet to inform on the best of the intersection controls evaluated for project recommendation.

Documentation: A complete ICE document consists of the combination of the outputs from either a completed and signed waiver form or both Stage 1 and Stage 2 worksheets (along with supporting costing and/or environmental documentation), to be included in the approved project Concept Report (or equivalent) or as a stand-alone document.

Waiver Request - Level 2 / 3

In certain circumstances where an ICE would otherwise be required, an ICE may be waived based on appropriate evidence presented with a written request. Scenarios in which an ICE waiver request may be considered include:

- Proposed improvements do not substantially alter the character of the intersection, and are considered minor in nature, such as extending existing turn lane(s) or modifying signal phasing at an existing traffic signal
- The intersection consists of a public roadway intersecting a divided, multilane roadway where the access will be limited to a closed median with only right-in/right-out access that will operate acceptably; or
- The intersection is along an undivided, two-lane roadway that will not be widened and meets the following criteria:
 - Low risk in terms of exposure (total intersection entering volume less than 1,000 vehicles /day)
 - Latest 5 years of crash history is not indicative of a crash problem (no discernible crash patterns coupled with low crash frequency and severity)
 - Layout has no unusual or undesirable geometric features (such as restricted sight distance)
 - The proposed changes are not expected to adversely affect safety

If only one alternative is determined to be feasible from the ICE Stage 1, then a waiver may be submitted in lieu of completing ICE Stage 2. The waiver must clearly explain why there is no other feasible alternative. A Waiver Form should also be submitted to document an agreed upon decision to select a preferred alternative other than the highest scoring alternative in Stage 2.

ICE waiver forms with supporting documentation should be submitted for approval to the Office of Traffic Operations or District Engineer (depending on Waiver level). Questions regarding the waiver process should be routed to the State Traffic Engineer.

Project Information:
Location: SR 42 @ I-285 WB Ramps
County: DeKalb
GDOT District: 7 - Metro Atlanta
Area Type: Urban
Existing Intersection Control: Signal (turn lanes on mainline)

GDOT PI # (or N/A): N/A
Requested By: Henrico 183, LLC
Prepared By: Lumin8
Analyst: CR
Date: 4/22/2021
Waiver Request Type: Driveway Permit

Traffic and Operations Data:¹

Intersection meets signal/AWS warrants?	Meets Signal Warrants	
Traffic Analysis Type:	Intersection Delay	
Existing Avg Daily Traffic (Major Street):	42,450	
Existing Avg Daily Traffic (Minor Street):	14,100	
Analysis Period:	AM Peak	PM Peak
2024 Opening Yr Peak Hour Intersection Delay:	72.8 sec	78.3 sec
2024 Opening Yr Peak Hour Intersection V/C:	0.95	0.90
2044 Design Yr Peak Hour Intersection Delay:	180.7 sec	168.4 sec
2044 Design Yr Peak Hour Intersection V/C:	1.28	1.27

¹Crash data required for all existing intersections. ADT's required if available (from data collected or nearest GDOT count station site). Capacity data is optional unless needed to justify basis of the waiver request.

Crash Data (Required): ¹			
Crash Data: Enter most recent 5 years of crash data	Crash Severity		
	PDO	Injury Crash*	Fatal Crash*
Angle	28	14	0
Head-On	2	1	0
Rear End	106	35	0
Sideswipe - same	36	5	0
Sideswipe - opposite	1	0	0
Not Collision w/Motor Veh	6	4	0
TOTALS:	179	59	0

* Number of crashes resulting in injuries / fatalities, not number of persons

Description of Work / Justification for Waiver (Required):	The signalized intersection of Moreland Avenue (SR 42) and I-285 WB Ramps maintains an acceptable level of service for the intersection through build conditions and is not adversely affected by the development.
Proposed Intersection Control:	Traffic Signal

REQUESTED BY: _____ **Date:** _____

Title: _____

APPROVED BY: _____ **Date:** _____

Name: _____

District Engineer or (Approved Delegate)

MORELAND AVE (SR 42) & I-285 EB RAMPS

GDOT PI # (or N/A): Request By:

County: GDOT District:

Major (State) Road: Speed Limit:

Minor (Crossing) ST: Speed Limit:

Major ST Direction: Area Type:

Intersection Control:

Prepared By: Analyst:

Date: Project ID:

Project Purpose:

2021 Existing Year Volumes

Existing Data Year: 2021
Project Opening Year: 2024
Project Design Year: 2044

Annual Growth Rate:
K Factor*:

2021 Intersection Daily Entering Volume (est): 47,050

Peak Hour % Trucks

EB	WB	NB	SB
14%	0%	22%	12%

Approach Splits: SR 42 - 0.73 / I-285 EB Ramps - 0.27

2024 Opening Year Volumes

2468 (2839) [51300]

2024 Intersection Daily Entering Volume (est): 66,700

1897 (1176) [46900]

2044 Design Year Volumes

2477 (2891) [52700]

2044 Intersection Daily Entering Volume (est): 68,300

1910 (1179) [47100]

Introduction: In 2005, SAFETEA-LU established the Highway Safety Improvement Program (HSIP) and mandated that each state prepare a Strategic Highway Safety Plan (SHSP) to prioritize safety funding investments. Intersections quickly became a common component of most states' SHSP emphasis areas and HSIP project lists, including Georgia's SHSP. Intersection Control Evaluation (ICE) policies and procedures represent a traceable and transparent procedure to streamline the evaluation of intersection control alternatives, and further leverage safety advancements for intersection improvements beyond just the safety program. Approximately one-third of all traffic fatalities and roughly seventy five percent of all traffic crashes in Georgia occur at or adjacent to intersections. Accordingly, the Georgia SHSP includes an emphasis on enhancing intersection safety to advance the *Toward Zero Deaths* vision embraced by the Georgia Governor's Office of Highway Safety (GOHS). This ICE tool was developed to support the ICE policy, developed and adopted to help ensure that intersection investments across the entire Georgia highway system are selected, prioritized and implemented with defensible benefits for safety towards those ends.

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Stage 2: Alternative Selection Decision Record Stage 2 involves a more detailed and familiar evaluation of the alternatives identified in Stage 1 in order to support the selection of a preferred alternative that may be advanced to detailed design. Stage 2 data entry may require the use of external analysis tools to determine costs, operations and/or safety data that, combined with environmental and stakeholder posture data, form the basis of the ICE evaluation. A separate "CostEst" worksheet tab helps users develop pre-planning-level cost estimates for each Stage 2 alternative evaluated, and a separate Users Guide has been prepared to give guidance on Stage 1 and Stage 2 data entry. Once all data is entered, each alternative is scored and ranked, with the results reported at the bottom of the Stage 2 worksheet to inform on the best of the intersection controls evaluated for project recommendation.

Documentation: A complete ICE document consists of the combination of the outputs from either a completed and signed waiver form or both Stage 1 and Stage 2 worksheets (along with supporting costing and/or environmental documentation), to be included in the approved project Concept Report (or equivalent) or as a stand-alone document.

Waiver Request - Level 2 / 3

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- The intersection is along an undivided, two-lane roadway that will not be widened and meets the following criteria:
 - Low risk in terms of exposure (total intersection entering volume less than 1,000 vehicles /day)
 - Latest 5 years of crash history is not indicative of a crash problem (no discernible crash patterns coupled with low crash frequency and severity)
 - Layout has no unusual or undesirable geometric features (such as restricted sight distance)
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ICE waiver forms with supporting documentation should be submitted for approval to the Office of Traffic Operations or District Engineer (depending on Waiver level). Questions regarding the waiver process should be routed to the State Traffic Engineer.

Project Information:

Location: SR 42 @ I-285 EB Ramps
County: DeKalb
GDOT District: 7 - Metro Atlanta
Area Type: Urban
Existing Intersection Control: Signal (turn lanes on mainline)

GDOT PI # (or N/A): N/A

Requested By: Henrico 183, LLC

Prepared By: Lumin8

Analyst: CR

Date: 4/22/2021

Waiver Request Type: Driveway Permit

Traffic and Operations Data:¹

Intersection meets signal/AWS warrants?	Meets Signal Warrants	
Traffic Analysis Type:	Intersection Delay	
Existing Avg Daily Traffic (Major Street):	34,650	
Existing Avg Daily Traffic (Minor Street):	12,400	
Analysis Period:	AM Peak	PM Peak
2024 Opening Yr Peak Hour Intersection Delay:	61.8 sec	58.5 sec
2024 Opening Yr Peak Hour Intersection V/C:	0.89	1.10
2044 Design Yr Peak Hour Intersection Delay:	63.9 sec	248.0 sec
2044 Design Yr Peak Hour Intersection V/C:	0.93	1.47

Crash Data (Required):¹

Crash Data: Enter most recent 5 years of crash data	Crash Severity		
	PDO	Injury Crash*	Fatal Crash*
Angle	29	12	0
Head-On	1	2	0
Rear End	48	14	0
Sideswipe - same	24	1	0
Sideswipe - opposite	2	0	0
Not Collision w/Motor Veh	4	3	0
TOTALS:	108	32	0

Crash Type

<-

¹Crash data required for all existing intersections. ADT's required if available (from data collected or nearest GDOT count station site). Capacity data is optional unless needed to justify basis of the waiver request.

* Number of crashes resulting in injuries / fatalities, not number of persons

Description of Work / Justification for Waiver (Required):

The signalized intersection of Moreland Avenue (SR 42) and I-285 EB Ramps maintains an acceptable level of service for the intersection through build conditions and is not adversely affected by the development.

Proposed Intersection Control: Traffic Signal

REQUESTED BY:

Date:

Title:

APPROVED BY:

Date:

Name:

District Engineer or (Approved Delegate)

APPENDIX L

CAPACITY ANALYSIS REPORTS - ICE ALTERNATIVES



MORELAND AVE (SR 42) & BAILEY ST

TRAFFIC SIGNAL

2024

AM PEAK HOUR

9: Moreland Ave (SR 42) & UPS DW/Bailey St

AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								  			  	
Traffic Volume (veh/h)	5	3	24	90	0	228	38	2565	179	176	714	5
Future Volume (veh/h)	5	3	24	90	0	228	38	2565	179	176	714	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	418	1900	1100	1811	1900	1678	1485	1811	1248	1767	1767	1411
Adj Flow Rate, veh/h	6	3	27	100	0	0	42	2850	0	196	793	6
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	100	0	54	6	0	15	28	6	44	9	9	33
Cap, veh/h	48	5	38	229	234		428	3284		226	3900	29
Arrive On Green	0.03	0.03	0.03	0.05	0.00	0.00	0.66	0.66	0.00	0.08	0.79	0.79
Sat Flow, veh/h	231	171	1207	1725	1900	0	540	4944	1058	1682	4938	37
Grp Volume(v), veh/h	36	0	0	100	0	0	42	2850	0	196	516	283
Grp Sat Flow(s),veh/h/ln	1609	0	0	1725	1900	0	540	1648	1058	1682	1608	1760
Q Serve(g_s), s	1.9	0.0	0.0	5.0	0.0	0.0	2.9	47.2	0.0	6.4	4.2	4.2
Cycle Q Clear(g_c), s	2.3	0.0	0.0	5.0	0.0	0.0	2.9	47.2	0.0	6.4	4.2	4.2
Prop In Lane	0.17		0.75	1.00		0.00	1.00		1.00	1.00		0.02
Lane Grp Cap(c), veh/h	91	0	0	229	234		428	3284		226	2540	1390
V/C Ratio(X)	0.40	0.00	0.00	0.44	0.00		0.10	0.87		0.87	0.20	0.20
Avail Cap(c_a), veh/h	319	0	0	229	505		429	3286		255	2597	1422
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	0.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.6	0.0	0.0	44.6	0.0	0.0	6.3	13.8	0.0	33.2	2.7	2.7
Incr Delay (d2), s/veh	2.8	0.0	0.0	1.3	0.0	0.0	0.1	2.7	0.0	23.7	0.0	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	1.8	0.0	0.0	4.5	0.0	0.0	0.5	20.7	0.0	10.3	1.4	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.4	0.0	0.0	45.9	0.0	0.0	6.4	16.5	0.0	56.9	2.8	2.8
LnGrp LOS	D	A	A	D	A		A	B		E	A	A
Approach Vol, veh/h		36			100	A		2892	A		995	
Approach Delay, s/veh		52.4			45.9			16.3			13.4	
Approach LOS		D			D			B			B	
Timer - Assigned Phs	1	2	3	4		6		8				
Phs Duration (G+Y+Rc), s	13.0	73.2	9.5	7.7		86.1		17.2				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5		4.5		4.5				
Max Green Setting (Gmax), s	10.3	68.7	5.0	18.0		83.5		27.5				
Max Q Clear Time (g_c+I1), s	8.4	49.2	7.0	4.3		6.2		0.0				
Green Ext Time (p_c), s	0.1	19.4	0.0	0.1		21.3		0.0				
Intersection Summary												
HCM 6th Ctrl Delay			16.7									
HCM 6th LOS			B									
Notes												
Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.												

PM PEAK HOUR

9: Moreland Ave (SR 42) & UPS DW/Bailey St

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								  			  	
Traffic Volume (veh/h)	6	3	15	223	2	218	24	906	86	199	1759	6
Future Volume (veh/h)	6	3	15	223	2	218	24	906	86	199	1759	6
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	1648	418	1693	1841	418	1796	1307	1811	1470	1826	1826	1011
Adj Flow Rate, veh/h	6	3	16	232	2	0	25	944	0	207	1832	6
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, %	17	100	14	4	100	7	40	6	29	5	5	60
Cap, veh/h	77	1	7	499	108		184	2085		451	3037	10
Arrive On Green	0.03	0.03	0.03	0.15	0.26	0.00	0.42	0.42	0.00	0.10	0.59	0.59
Sat Flow, veh/h	84	42	224	1753	418	0	176	4944	1246	1739	5129	17
Grp Volume(v), veh/h	25	0	0	232	2	0	25	944	0	207	1187	651
Grp Sat Flow(s),veh/h/ln	351	0	0	1753	418	0	176	1648	1246	1739	1662	1823
Q Serve(g_s), s	1.8	0.0	0.0	7.2	0.2	0.0	6.3	8.2	0.0	3.6	13.6	13.6
Cycle Q Clear(g_c), s	1.8	0.0	0.0	7.2	0.2	0.0	9.7	8.2	0.0	3.6	13.6	13.6
Prop In Lane	0.24		0.64	1.00		0.00	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	85	0	0	499	108		184	2085		451	1967	1079
V/C Ratio(X)	0.29	0.00	0.00	0.46	0.02		0.14	0.45		0.46	0.60	0.60
Avail Cap(c_a), veh/h	179	0	0	596	244		286	4939		618	4205	2307
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	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	29.6	0.0	0.0	21.2	16.6	0.0	14.1	12.4	0.0	8.2	7.8	7.8
Incr Delay (d2), s/veh	1.9	0.0	0.0	0.7	0.1	0.0	0.3	0.2	0.0	0.7	0.3	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	0.7	0.0	0.0	4.9	0.0	0.0	0.4	4.3	0.0	1.8	5.5	6.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.5	0.0	0.0	21.9	16.7	0.0	14.4	12.6	0.0	9.0	8.1	8.3
LnGrp LOS	C	A	A	C	B		B	B		A	A	A
Approach Vol, veh/h		25			234	A		969	A		2045	
Approach Delay, s/veh		31.5			21.9			12.6			8.2	
Approach LOS		C			C			B			A	
Timer - Assigned Phs	1	2	3	4		6		8				
Phs Duration (G+Y+Rc), s	10.2	29.8	13.7	6.3		40.1		20.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5		4.5		4.5				
Max Green Setting (Gmax), s	11.5	60.0	12.5	18.0		76.0		35.0				
Max Q Clear Time (g_c+I1), s	5.6	11.7	9.2	3.8		15.6		2.2				
Green Ext Time (p_c), s	0.3	9.0	0.2	0.1		19.9		0.0				
Intersection Summary												
HCM 6th Ctrl Delay				10.7								
HCM 6th LOS				B								
Notes												
Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.												

2044

AM PEAK HOUR

9: Moreland Ave (SR 42) & UPS DW/Bailey St

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								  			  	
Traffic Volume (veh/h)	7	4	32	112	0	304	51	3463	185	214	964	7
Future Volume (veh/h)	7	4	32	112	0	304	51	3463	185	214	964	7
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	418	1900	1100	1811	1900	1678	1485	1811	1248	1767	1767	1411
Adj Flow Rate, veh/h	8	4	36	124	0	0	57	3848	0	238	1071	8
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	100	0	54	6	0	15	28	6	44	9	9	33
Cap, veh/h	38	8	45	176	202		345	3480		206	4088	31
Arrive On Green	0.04	0.04	0.04	0.04	0.00	0.00	0.70	0.70	0.00	0.09	0.83	0.83
Sat Flow, veh/h	193	212	1215	1725	1900	0	415	4944	1058	1682	4938	37
Grp Volume(v), veh/h	48	0	0	124	0	0	57	3848	0	238	697	382
Grp Sat Flow(s),veh/h/ln	1620	0	0	1725	1900	0	415	1648	1058	1682	1608	1760
Q Serve(g_s), s	2.6	0.0	0.0	5.0	0.0	0.0	6.5	96.5	0.0	12.5	6.5	6.5
Cycle Q Clear(g_c), s	4.0	0.0	0.0	5.0	0.0	0.0	6.5	96.5	0.0	12.5	6.5	6.5
Prop In Lane	0.17		0.75	1.00		0.00	1.00		1.00	1.00		0.02
Lane Grp Cap(c), veh/h	91	0	0	176	202		345	3480		206	2662	1457
V/C Ratio(X)	0.53	0.00	0.00	0.70	0.00		0.17	1.11		1.16	0.26	0.26
Avail Cap(c_a), veh/h	241	0	0	176	381		345	3480		206	2662	1457
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	0.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	65.5	0.0	0.0	62.0	0.0	0.0	7.0	20.3	0.0	54.1	2.6	2.6
Incr Delay (d2), s/veh	4.7	0.0	0.0	11.8	0.0	0.0	0.2	52.5	0.0	111.1	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	3.2	0.0	0.0	4.5	0.0	0.0	1.0	63.9	0.0	20.1	2.4	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	70.1	0.0	0.0	73.8	0.0	0.0	7.2	72.8	0.0	165.1	2.6	2.7
LnGrp LOS	E	A	A	E	A		A	F		F	A	A
Approach Vol, veh/h		48			124	A		3905	A		1317	
Approach Delay, s/veh		70.1			73.8			71.9			32.0	
Approach LOS		E			E			E			C	
Timer - Assigned Phs	1	2	3	4		6		8				
Phs Duration (G+Y+Rc), s	17.0	101.0	9.5	9.6		118.0		19.1				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5		4.5		4.5				
Max Green Setting (Gmax), s	12.5	96.5	5.0	18.0		113.5		27.5				
Max Q Clear Time (g_c+I1), s	14.5	98.5	7.0	6.0		8.5		0.0				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.1		37.1		0.0				
Intersection Summary												
HCM 6th Ctrl Delay			62.2									
HCM 6th LOS			E									
Notes												
Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.												

PM PEAK HOUR

9: Moreland Ave (SR 42) & UPS DW/Bailey St

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								  			  	
Traffic Volume (veh/h)	8	4	20	246	3	272	32	1223	105	264	2375	8
Future Volume (veh/h)	8	4	20	246	3	272	32	1223	105	264	2375	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	1648	418	1693	1841	418	1796	1307	1811	1470	1826	1826	1011
Adj Flow Rate, veh/h	8	4	21	256	3	0	33	1274	0	275	2474	8
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, %	17	100	14	4	100	7	40	6	29	5	5	60
Cap, veh/h	45	2	8	296	71		116	3084		412	3816	12
Arrive On Green	0.04	0.04	0.04	0.09	0.17	0.00	0.62	0.62	0.00	0.08	0.74	0.74
Sat Flow, veh/h	69	60	226	1753	418	0	93	4944	1246	1739	5129	17
Grp Volume(v), veh/h	33	0	0	256	3	0	33	1274	0	275	1602	880
Grp Sat Flow(s),veh/h/ln	355	0	0	1753	418	0	93	1648	1246	1739	1662	1823
Q Serve(g_s), s	3.1	0.0	0.0	9.5	0.6	0.0	28.3	13.7	0.0	5.5	25.0	25.0
Cycle Q Clear(g_c), s	3.8	0.0	0.0	9.5	0.6	0.0	40.8	13.7	0.0	5.5	25.0	25.0
Prop In Lane	0.24		0.64	1.00		0.00	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	56	0	0	296	71		116	3084		412	2472	1356
V/C Ratio(X)	0.59	0.00	0.00	0.86	0.04		0.28	0.41		0.67	0.65	0.65
Avail Cap(c_a), veh/h	103	0	0	296	128		116	3084		535	2508	1376
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	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	51.6	0.0	0.0	45.0	36.3	0.0	19.8	10.0	0.0	8.2	6.6	6.6
Incr Delay (d2), s/veh	9.7	0.0	0.0	22.2	0.2	0.0	1.3	0.1	0.0	2.1	0.6	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	1.8	0.0	0.0	6.9	0.1	0.0	1.1	7.6	0.0	3.1	10.4	11.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.3	0.0	0.0	67.2	36.6	0.0	21.2	10.1	0.0	10.3	7.2	7.7
LnGrp LOS	E	A	A	E	D		C	B		B	A	A
Approach Vol, veh/h		33			259	A		1307	A		2757	
Approach Delay, s/veh		61.3			66.8			10.3			7.7	
Approach LOS		E			E			B			A	
Timer - Assigned Phs	1	2	3	4		6		8				
Phs Duration (G+Y+Rc), s	12.6	69.8	14.0	8.3		82.4		22.3				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5		4.5		4.5				
Max Green Setting (Gmax), s	15.5	59.0	9.5	18.0		79.0		32.0				
Max Q Clear Time (g_c+1), s	7.5	42.8	11.5	5.8		27.0		2.6				
Green Ext Time (p_c), s	0.6	14.2	0.0	0.0		50.9		0.0				
Intersection Summary												
HCM 6th Ctrl Delay			12.4									
HCM 6th LOS			B									
Notes												
Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.												

SIGNALIZED RCUT

2024

AM PEAK HOUR

30: Moreland Ave (SR 42) & Smith Rd SE/Woodstock Rd

Intersection													
Int Delay, s/veh	0.3												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↔	↑↑↑		↔	↑↑↑	
Traffic Vol, veh/h	0	0	0	0	0	0	90	0	2798	0	0	895	0
Future Vol, veh/h	0	0	0	0	0	0	90	0	2798	0	0	895	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	130	-	-	125	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	6	6	6	2	2	9	2
Mvmt Flow	0	0	0	0	0	0	98	0	3041	0	0	973	0
Major/Minor	Minor2		Minor1		Major1		Major2						
Conflicting Flow All	2385	4210	487	3626	4210	1521	710	973	0	-	3041	0	0
Stage 1	973	973	-	3237	3237	-	-	-	-	-	-	-	-
Stage 2	1412	3237	-	389	973	-	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	7.14	6.44	6.54	7.14	5.72	5.42	-	-	5.34	-	-
Critical Hdwy Stg 1	7.34	5.54	-	7.34	5.54	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	6.74	5.54	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.82	4.02	3.92	2.36	3.16	-	-	3.12	-	-
Pot Cap-1 Maneuver	36	2	450	6	2	92	617	392	-	0	36	-	0
Stage 1	208	329	-	5	23	-	-	-	-	0	-	-	0
Stage 2	129	23	-	555	329	-	-	-	-	0	-	-	0
Platoon blocked, %									-			-	
Mov Cap-1 Maneuver	32	2	450	5	2	92	617	617	-	-	36	-	-
Mov Cap-2 Maneuver	32	2	-	5	2	-	-	-	-	-	-	-	-
Stage 1	175	329	-	4	19	-	-	-	-	-	-	-	-
Stage 2	109	19	-	555	329	-	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB						
HCM Control Delay, s	0		0		0.4		0						
HCM LOS	A		A										
Minor Lane/Major Mvmt	NBL		NBT		EBLn1WBLn1		SBL		SBT				
Capacity (veh/h)	617		-		-		36		-				
HCM Lane V/C Ratio	0.159		-		-		-		-				
HCM Control Delay (s)	11.9		-		0		0		0				
HCM Lane LOS	B		-		A		A		A				
HCM 95th %tile Q(veh)	0.6		-		-		0		-				

9: Moreland Ave (SR 42) & UPS DW/Bailey St Performance by movement

Movement	EBR	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	0.9	3.1	7.3	23.1	11.1	7.2	20.0	5.6	0.0	9.5

48: Moreland Ave (SR 42) & S River Industrial Blvd SE/DW

AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	0	0	0	0	2782	0	8	828	0
Future Volume (veh/h)	0	0	0	0	0	0	0	2782	0	8	828	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	1870	1870	1870	1870	1870	1870	1870	1811	1870	1870	1767	1870
Adj Flow Rate, veh/h	0	0	0	0	0	0	0	3024	0	9	900	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	6	2	2	9	2
Cap, veh/h	64	2	0	0	2	0	624	3164	1458	90	4435	1458
Arrive On Green	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.92	0.00	0.92	0.92	0.00
Sat Flow, veh/h	1781	1870	0	0	-132796	0	1781	3441	1585	77	4823	1585
Grp Volume(v), veh/h	0	0	0	0	0	0	0	3024	0	9	900	0
Grp Sat Flow(s),veh/h/ln	1781	1870	0	0	1870	0	1781	1721	1585	77	1608	1585
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65.3	0.0	9.8	2.1	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65.3	0.0	75.0	2.1	0.0
Prop In Lane	1.00		0.00	0.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	64	2	0	0	2	0	624	3164	1458	90	4435	1458
V/C Ratio(X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.96	0.00	0.10	0.20	0.00
Avail Cap(c_a), veh/h	510	349	0	0	349	0	824	3166	1458	90	4435	1458
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)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	27.9	0.4	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.3	0.0	1.0	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	0.0	0.0	0.0	0.0	0.0	0.0	6.5	0.0	0.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.2	0.0	28.9	0.5	0.0
LnGrp LOS	A	A	A	A	A	A	A	B	A	C	A	A
Approach Vol, veh/h	0			0			3024			909		
Approach Delay, s/veh	0.0			0.0			11.2			0.8		
Approach LOS							B			A		
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	0.0	111.9		0.0		111.9		0.0				
Change Period (Y+Rc), s	* 6.3	9.0		7.1		9.0		7.1				
Max Green Setting (Gmax), s	* 13	84.0		20.9		103.0		20.9				
Max Q Clear Time (g_c+I1), s	0.0	77.0		0.0		67.3		0.0				
Green Ext Time (p_c), s	0.0	6.0		0.0		35.7		0.0				
Intersection Summary												
HCM 6th Ctrl Delay				8.8								
HCM 6th LOS				A								
Notes												
User approved pedestrian interval to be less than phase max green.												
User approved ignoring U-Turning movement.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

PM PEAK HOUR

42: Moreland Ave (SR 42) & Smith Rd SE/Woodstock Rd

Intersection													
Int Delay, s/veh	10.7												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕ ↑↑↑				↕ ↑↑↑	
Traffic Vol, veh/h	0	0	0	0	0	0	223	0	1130	0	0	1964	0
Future Vol, veh/h	0	0	0	0	0	0	223	0	1130	0	0	1964	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	130	-	-	125	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	4	2	6	2	2	5	2
Mvmt Flow	0	0	0	0	0	0	242	0	1228	0	0	2135	0
Major/Minor	Minor2		Minor1		Major1		Major2						
Conflicting Flow All	3110	3847	1068	2566	3847	614	1558	2135	0	0	1228	0	0
Stage 1	2135	2135	-	1712	1712	-	-	-	-	-	-	-	-
Stage 2	975	1712	-	854	2135	-	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	7.14	6.44	6.54	7.14	5.68	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	7.34	5.54	-	7.34	5.54	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	6.74	5.54	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.82	4.02	3.92	2.34	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	12	4	187	28	4	373	~ 209	107	-	-	303	-	-
Stage 1	31	88	-	62	144	-	-	-	-	-	-	-	-
Stage 2	244	144	-	290	88	-	-	-	-	-	-	-	-
Platoon blocked, %									-	-		-	-
Mov Cap-1 Maneuver	-	0	187	-	0	373	~ 209	209	-	-	303	-	-
Mov Cap-2 Maneuver	-	0	-	-	0	-	-	-	-	-	-	-	-
Stage 1	31	88	-	62	0	-	-	-	-	-	-	-	-
Stage 2	-	0	-	290	88	-	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB						
HCM Control Delay, s	0		0		26.3		0						
HCM LOS	A		A										
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	209	-	-	-	-	303	-	-					
HCM Lane V/C Ratio	1.16	-	-	-	-	-	-	-					
HCM Control Delay (s)	159.6	-	-	0	0	0	-	-					
HCM Lane LOS	F	-	-	A	A	A	-	-					
HCM 95th %tile Q(veh)	11.8	-	-	-	-	0	-	-					
Notes													
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon							

9: Moreland Ave (SR 42) & UPS DW/Bailey St Performance by movement

Movement	EBR	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.0	2.8	0.1	1.2	0.0	0.0	0.0	0.1
Total Del/Veh (s)	1.0	10.5	13.3	17.7	4.5	10.8	17.8	21.7	16.1

48: Moreland Ave (SR 42) & S River Industrial Blvd SE/DW

PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	0	0	0	0	1016	0	9	1997	0
Future Volume (veh/h)	0	0	0	0	0	0	0	1016	0	9	1997	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	1870	1870	1870	1870	1870	1870	1870	1811	1870	1870	1826	1870
Adj Flow Rate, veh/h	0	0	0	0	0	0	0	1104	0	10	2171	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	6	2	2	5	2
Cap, veh/h	93	2	0	0	2	0	240	3040	1400	516	4403	1400
Arrive On Green	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88	0.00	0.88	0.88	0.00
Sat Flow, veh/h	1781	1870	0	0	-132796	0	1781	3441	1585	511	4985	1585
Grp Volume(v), veh/h	0	0	0	0	0	0	0	1104	0	10	2171	0
Grp Sat Flow(s),veh/h/ln	1781	1870	0	0	1870	0	1781	1721	1585	511	1662	1585
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.3	0.0	0.3	6.9	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.3	0.0	4.5	6.9	0.0
Prop In Lane	1.00		0.00	0.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	93	2	0	0	2	0	240	3040	1400	516	4403	1400
V/C Ratio(X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36	0.00	0.02	0.49	0.00
Avail Cap(c_a), veh/h	671	434	0	0	434	0	485	3836	1767	522	4459	1418
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)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	1.2	0.9	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.2	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	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	1.2	1.1	0.0
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h	0			0			1104			2181		
Approach Delay, s/veh	0.0			0.0			0.9			1.1		
Approach LOS							A			A		
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	0.0	77.1		0.0		77.1		0.0				
Change Period (Y+Rc), s	* 6.3	9.0		7.1		9.0		7.1				
Max Green Setting (Gmax), s	* 11	69.0		17.9		86.0		17.9				
Max Q Clear Time (g_c+I1), s	0.0	8.9		0.0		6.3		0.0				
Green Ext Time (p_c), s	0.0	59.2		0.0		53.8		0.0				
Intersection Summary												
HCM 6th Ctrl Delay				1.1								
HCM 6th LOS				A								
Notes												
User approved pedestrian interval to be less than phase max green.												
User approved ignoring U-Turning movement.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

2044

AM PEAK HOUR

30: Moreland Ave (SR 42) & Smith Rd SE/Woodstock Rd

Intersection													
Int Delay, s/veh	0.4												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations									  			  	
Traffic Vol, veh/h	0	0	0	0	0	0	112	0	3774	0	0	1185	0
Future Vol, veh/h	0	0	0	0	0	0	112	0	3774	0	0	1185	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	130	-	-	125	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	6	6	6	2	2	9	2
Mvmt Flow	0	0	0	0	0	0	122	0	4102	0	0	1288	0
Major/Minor	Minor2		Minor1		Major1		Major2						
Conflicting Flow All	3173	5634	644	4861	5634	2051	940	1288	0	-	4102	0	0
Stage 1	1288	1288	-	4346	4346	-	-	-	-	-	-	-	-
Stage 2	1885	4346	-	515	1288	-	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	7.14	6.44	6.54	7.14	5.72	5.42	-	-	5.34	-	-
Critical Hdwy Stg 1	7.34	5.54	-	7.34	5.54	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	6.74	5.54	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.82	4.02	3.92	2.36	3.16	-	-	3.12	-	-
Pot Cap-1 Maneuver	11	0	356	1	0	39	459	274	-	0	10	-	0
Stage 1	125	233	-	1	5	-	-	-	-	0	-	-	0
Stage 2	64	5	-	466	233	-	-	-	-	0	-	-	0
Platoon blocked, %									-			-	
Mov Cap-1 Maneuver	9	0	356	1	0	39	459	459	-	-	10	-	-
Mov Cap-2 Maneuver	9	0	-	1	0	-	-	-	-	-	-	-	-
Stage 1	92	233	-	1	4	-	-	-	-	-	-	-	-
Stage 2	47	4	-	466	233	-	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB						
HCM Control Delay, s	0		0		0.5		0						
HCM LOS	A		A										
Minor Lane/Major Mvmt	NBL		NBT		EBLn1WBLn1		SBL		SBT				
Capacity (veh/h)	459		-		-		10		-				
HCM Lane V/C Ratio	0.265		-		-		-		-				
HCM Control Delay (s)	15.7		-		0		0		-				
HCM Lane LOS	C		-		A		A		-				
HCM 95th %tile Q(veh)	1.1		-		-		0		-				

9: Moreland Ave (SR 42) & UPS DW/Bailey St Performance by movement

Movement	EBR	WBR	NBL	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.1	50.3	0.0	0.0	0.9	0.0	0.0	5.1
Total Del/Veh (s)	1.3	82.1	12.5	12.7	7.2	24.6	3.9	15.9

48: Moreland Ave (SR 42)

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	0	0	0	0	3699	0	11	1108	0
Future Volume (veh/h)	0	0	0	0	0	0	0	3699	0	11	1108	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	1870	1870	1870	1870	1870	1870	1870	1811	1870	1870	1767	1870
Adj Flow Rate, veh/h	0	0	0	0	0	0	0	4021	0	12	1204	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	6	2	2	9	2
Cap, veh/h	64	2	0	0	2	0	481	3165	1458	64	4435	1458
Arrive On Green	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.92	0.00	0.92	0.92	0.00
Sat Flow, veh/h	1781	1870	0	0	-132796	0	1781	3441	1585	28	4823	1585
Grp Volume(v), veh/h	0	0	0	0	0	0	0	4021	0	12	1204	0
Grp Sat Flow(s),veh/h/ln	1781	1870	0	0	1870	0	1781	1721	1585	28	1608	1585
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	103.0	0.0	0.0	3.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	103.0	0.0	103.0	3.0	0.0
Prop In Lane	1.00		0.00	0.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	64	2	0	0	2	0	481	3165	1458	64	4435	1458
V/C Ratio(X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.27	0.00	0.19	0.27	0.00
Avail Cap(c_a), veh/h	510	349	0	0	349	0	681	3165	1458	64	4435	1458
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(l)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.5	0.0	56.0	0.5	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	124.4	0.0	2.9	0.1	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	81.8	0.0	0.7	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	128.9	0.0	58.9	0.6	0.0
LnGrp LOS	A	A	A	A	A	A	A	F	A	E	A	A
Approach Vol, veh/h	0				0				4021			
Approach Delay, s/veh	0.0				0.0				128.9			
Approach LOS									F			
Timer - Assigned Phs	1	2	4		6		8					
Phs Duration (G+Y+Rc), s	0.0	112.0	0.0		112.0		0.0					
Change Period (Y+Rc), s	* 6.3	9.0	7.1		9.0		7.1					
Max Green Setting (Gmax), s	* 13	84.0	20.9		103.0		20.9					
Max Q Clear Time (g_c+11), s	0.0	105.0	0.0		105.0		0.0					
Green Ext Time (p_c), s	0.0	0.0	0.0		0.0		0.0					
Intersection Summary												
HCM 6th Ctrl Delay	99.2											
HCM 6th LOS	F											
Notes												
User approved pedestrian interval to be less than phase max green.												
User approved ignoring U-Turning movement.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

PM PEAK HOUR

42: Moreland Ave (SR 42) & Smith Rd SE/Woodstock Rd

Intersection													
Int Delay, s/veh	46.7												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕ ↑↑↑				↕ ↑↑↑	
Traffic Vol, veh/h	0	0	0	0	0	0	249	0	1503	0	0	2647	0
Future Vol, veh/h	0	0	0	0	0	0	249	0	1503	0	0	2647	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	130	-	-	125	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	4	2	6	2	2	5	2
Mvmt Flow	0	0	0	0	0	0	271	0	1634	0	0	2877	0
Major/Minor	Minor2		Minor1		Major1		Major2						
Conflicting Flow All	4073	5053	1439	3327	5053	817	2100	2877	0	0	1634	0	0
Stage 1	2877	2877	-	2176	2176	-	-	-	-	-	-	-	-
Stage 2	1196	2176	-	1151	2877	-	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	7.14	6.44	6.54	7.14	5.68	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	7.34	5.54	-	7.34	5.54	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	6.74	5.54	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.82	4.02	3.92	2.34	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	3	1	105	9	1	274 ~ 103	44	-	-	191	-	-	-
Stage 1	9	36	-	29	84	-	-	-	-	-	-	-	-
Stage 2	177	84	-	189	36	-	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	0	105	-	0	274 ~ 103	103	-	-	191	-	-	-
Mov Cap-2 Maneuver	-	0	-	-	0	-	-	-	-	-	-	-	-
Stage 1	9	36	-	29	0	-	-	-	-	-	-	-	-
Stage 2	-	0	-	189	36	-	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB						
HCM Control Delay, s	0		0		117.3		0						
HCM LOS	A		A										
Minor Lane/Major Mvmt	NBL		NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	103		-	-	-	-	191	-	-				
HCM Lane V/C Ratio	2.628		-	-	-	-	-	-	-				
HCM Control Delay (s)	\$ 825.1		-	-	0	0	0	-	-				
HCM Lane LOS	F		-	-	A	A	A	-	-				
HCM 95th %tile Q(veh)	25		-	-	-	-	0	-	-				
Notes													
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon							

9: Moreland Ave (SR 42) & UPS DW/Bailey St Performance by movement

Movement	EBR	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.1	5.6	0.0	0.0	0.2	0.0	0.0	0.0	0.6
Total Del/Veh (s)	1.1	32.5	112.1	34.4	8.1	26.6	16.2	21.3	23.3

48: Moreland Ave (SR 42) & S River Industrial Blvd SE/DW

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	0	0	0	0	1360	0	12	2887	0
Future Volume (veh/h)	0	0	0	0	0	0	0	1360	0	12	2887	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	1870	1870	1870	1870	1870	1870	1870	1811	1870	1870	1826	1870
Adj Flow Rate, veh/h	0	0	0	0	0	0	0	1478	0	13	3138	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	6	2	2	5	2
Cap, veh/h	84	2	0	0	2	0	136	3079	1418	376	4460	1418
Arrive On Green	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.89	0.00	0.89	0.89	0.00
Sat Flow, veh/h	1781	1870	0	0	-132796	0	1781	3441	1585	357	4985	1585
Grp Volume(v), veh/h	0	0	0	0	0	0	0	1478	0	13	3138	0
Grp Sat Flow(s),veh/h/ln	1781	1870	0	0	1870	0	1781	1721	1585	357	1662	1585
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.8	0.0	0.6	15.3	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.8	0.0	7.4	15.3	0.0
Prop In Lane	1.00		0.00	0.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	84	2	0	0	2	0	136	3079	1418	376	4460	1418
V/C Ratio(X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48	0.00	0.03	0.70	0.00
Avail Cap(c_a), veh/h	605	391	0	0	391	0	356	3459	1593	376	4460	1418
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)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	1.5	1.3	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.1	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	1.6	1.9	0.0
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h	0			0			1478			3151		
Approach Delay, s/veh	0.0			0.0			1.1			1.9		
Approach LOS							A			A		
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	0.0	85.6		0.0		85.6		0.0				
Change Period (Y+Rc), s	* 6.3	9.0		7.1		9.0		7.1				
Max Green Setting (Gmax), s	* 11	69.0		17.9		86.0		17.9				
Max Q Clear Time (g_c+I1), s	0.0	17.3		0.0		8.8		0.0				
Green Ext Time (p_c), s	0.0	51.6		0.0		67.8		0.0				
Intersection Summary												
HCM 6th Ctrl Delay				1.7								
HCM 6th LOS				A								
Notes												
User approved pedestrian interval to be less than phase max green.												
User approved ignoring U-Turning movement.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

RCUT

2024

AM PEAK HOUR

30: Moreland Ave (SR 42) & Smith Rd SE/Woodstock Rd

Intersection													
Int Delay, s/veh	0.3												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↔	↑↑↑		↔	↑↑↑	
Traffic Vol, veh/h	0	0	0	0	0	0	90	0	2798	0	0	895	0
Future Vol, veh/h	0	0	0	0	0	0	90	0	2798	0	0	895	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	130	-	-	125	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	6	6	6	2	2	9	2
Mvmt Flow	0	0	0	0	0	0	98	0	3041	0	0	973	0
Major/Minor	Minor2		Minor1		Major1		Major2						
Conflicting Flow All	2385	4210	487	3626	4210	1521	710	973	0	-	3041	0	0
Stage 1	973	973	-	3237	3237	-	-	-	-	-	-	-	-
Stage 2	1412	3237	-	389	973	-	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	7.14	6.44	6.54	7.14	5.72	5.42	-	-	5.34	-	-
Critical Hdwy Stg 1	7.34	5.54	-	7.34	5.54	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	6.74	5.54	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.82	4.02	3.92	2.36	3.16	-	-	3.12	-	-
Pot Cap-1 Maneuver	36	2	450	6	2	92	617	392	-	0	36	-	0
Stage 1	208	329	-	5	23	-	-	-	-	0	-	-	0
Stage 2	129	23	-	555	329	-	-	-	-	0	-	-	0
Platoon blocked, %									-			-	
Mov Cap-1 Maneuver	32	2	450	5	2	92	617	617	-	-	36	-	-
Mov Cap-2 Maneuver	32	2	-	5	2	-	-	-	-	-	-	-	-
Stage 1	175	329	-	4	19	-	-	-	-	-	-	-	-
Stage 2	109	19	-	555	329	-	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB						
HCM Control Delay, s	0		0		0.4		0						
HCM LOS	A		A										
Minor Lane/Major Mvmt	NBL		NBT		EBLn1WBLn1		SBL		SBT				
Capacity (veh/h)	617		-		-		36		-				
HCM Lane V/C Ratio	0.159		-		-		-		-				
HCM Control Delay (s)	11.9		-		0		0		-				
HCM Lane LOS	B		-		A		A		-				
HCM 95th %tile Q(veh)	0.6		-		-		0		-				

9: Moreland Ave (SR 42) & UPS DW/Bailey St

Intersection												
Int Delay, s/veh	185											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↗			↗	↗ ↑↑↑	↗ ↑↑↑	↗	↗ ↑↑↑	↗ ↑↑↑	
Traffic Vol, veh/h	0	0	32	0	0	318	38	2570	182	176	804	5
Future Vol, veh/h	0	0	32	0	0	318	38	2570	182	176	804	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Yield	-	-	Yield	-	-	Yield	-	-	None
Storage Length	-	-	0	-	-	-	125	-	225	450	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	100	0	65	6	0	15	28	6	44	9	9	33
Mvmt Flow	0	0	36	0	0	353	42	2856	202	196	893	6
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	-	-	450	-	-	1428	899	0	0	2856	0	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	8.4	-	-	7.4	5.86	-	-	5.48	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	4.55	-	-	4.05	3.38	-	-	3.19	-	-
Pot Cap-1 Maneuver	0	0	363	0	0	~ 95	365	-	-	~ 40	-	-
Stage 1	0	0	-	0	0	-	-	-	-	-	-	-
Stage 2	0	0	-	0	0	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	363	-	-	~ 95	365	-	-	~ 40	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	16		\$ 1316.4		0.2		\$ 348.7					
HCM LOS	C		F									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	365	-	-	363	95	~ 40	-	-				
HCM Lane V/C Ratio	0.116	-	-	0.098	3.719	4.889	-	-				
HCM Control Delay (s)	16.1	-	-	\$ 1316.4	\$ 1951.6	-	-	-				
HCM Lane LOS	C	-	-	C	F	F	-	-				
HCM 95th %tile Q(veh)	0.4	-	-	0.3	36	22.7	-	-				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined				*: All major volume in platoon				

48: Moreland Ave (SR 42) & S River Industrial Blvd SE/DW

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	0	0	0	0	2782	0	8	828	0
Future Volume (veh/h)	0	0	0	0	0	0	0	2782	0	8	828	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	1870	1870	1870	1870	1870	1870	1870	1811	1870	1870	1767	1870
Adj Flow Rate, veh/h	0	0	0	0	0	0	0	3024	0	9	900	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	6	2	2	9	2
Cap, veh/h	64	2	0	0	2	0	624	3164	1458	90	4435	1458
Arrive On Green	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.92	0.00	0.92	0.92	0.00
Sat Flow, veh/h	1781	1870	0	0	-132796	0	1781	3441	1585	77	4823	1585
Grp Volume(v), veh/h	0	0	0	0	0	0	0	3024	0	9	900	0
Grp Sat Flow(s),veh/h/ln	1781	1870	0	0	1870	0	1781	1721	1585	77	1608	1585
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65.3	0.0	9.8	2.1	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65.3	0.0	75.0	2.1	0.0
Prop In Lane	1.00		0.00	0.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	64	2	0	0	2	0	624	3164	1458	90	4435	1458
V/C Ratio(X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.96	0.00	0.10	0.20	0.00
Avail Cap(c_a), veh/h	510	349	0	0	349	0	824	3166	1458	90	4435	1458
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)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	27.9	0.4	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.3	0.0	1.0	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	0.0	0.0	0.0	0.0	0.0	0.0	6.5	0.0	0.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.2	0.0	28.9	0.5	0.0
LnGrp LOS	A	A	A	A	A	A	A	B	A	C	A	A
Approach Vol, veh/h	0			0			3024			909		
Approach Delay, s/veh	0.0			0.0			11.2			0.8		
Approach LOS							B			A		
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	0.0	111.9		0.0		111.9		0.0				
Change Period (Y+Rc), s	* 6.3	9.0		7.1		9.0		7.1				
Max Green Setting (Gmax), s	* 13	84.0		20.9		103.0		20.9				
Max Q Clear Time (g_c+I1), s	0.0	77.0		0.0		67.3		0.0				
Green Ext Time (p_c), s	0.0	6.0		0.0		35.7		0.0				
Intersection Summary												
HCM 6th Ctrl Delay				8.8								
HCM 6th LOS				A								
Notes												
User approved pedestrian interval to be less than phase max green.												
User approved ignoring U-Turning movement.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

PM PEAK HOUR

42: Moreland Ave (SR 42) & Smith Rd SE/Woodstock Rd

Intersection													
Int Delay, s/veh	10.7												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕ ↑↑↑			↕ ↑↑↑		
Traffic Vol, veh/h	0	0	0	0	0	0	223	0	1130	0	0	1964	0
Future Vol, veh/h	0	0	0	0	0	0	223	0	1130	0	0	1964	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	130	-	-	125	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	4	2	6	2	2	5	2
Mvmt Flow	0	0	0	0	0	0	242	0	1228	0	0	2135	0
Major/Minor	Minor2		Minor1		Major1		Major2						
Conflicting Flow All	3110	3847	1068	2566	3847	614	1558	2135	0	0	1228	0	0
Stage 1	2135	2135	-	1712	1712	-	-	-	-	-	-	-	-
Stage 2	975	1712	-	854	2135	-	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	7.14	6.44	6.54	7.14	5.68	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	7.34	5.54	-	7.34	5.54	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	6.74	5.54	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.82	4.02	3.92	2.34	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	12	4	187	28	4	373	~ 209	107	-	-	303	-	-
Stage 1	31	88	-	62	144	-	-	-	-	-	-	-	-
Stage 2	244	144	-	290	88	-	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	0	187	-	0	373	~ 209	209	-	-	303	-	-
Mov Cap-2 Maneuver	-	0	-	-	0	-	-	-	-	-	-	-	-
Stage 1	31	88	-	62	0	-	-	-	-	-	-	-	-
Stage 2	-	0	-	290	88	-	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB						
HCM Control Delay, s	0		0		26.3		0						
HCM LOS	A		A										
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	209	-	-	-	-	303	-	-					
HCM Lane V/C Ratio	1.16	-	-	-	-	-	-	-					
HCM Control Delay (s)	159.6	-	-	0	0	0	-	-					
HCM Lane LOS	F	-	-	A	A	A	-	-					
HCM 95th %tile Q(veh)	11.8	-	-	-	-	0	-	-					
Notes													
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon													

9: Moreland Ave (SR 42) & UPS DW/Bailey St

Intersection												
Int Delay, s/veh	11.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↗			↗	↗	↑↑↑	↗	↗	↑↑↑	
Traffic Vol, veh/h	0	0	24	0	0	443	24	912	89	199	1982	8
Future Vol, veh/h	0	0	24	0	0	443	24	912	89	199	1982	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Yield	-	-	Yield	-	-	Yield	-	-	None
Storage Length	-	-	0	-	-	-	125	-	225	450	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	17	100	14	4	100	7	40	6	29	5	5	60
Mvmt Flow	0	0	25	0	0	461	25	950	93	207	2065	8
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	-	-	1037	-	-	475	2073	0	0	950	0	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	7.38	-	-	7.24	6.1	-	-	5.4	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	4.04	-	-	3.97	3.5	-	-	3.15	-	-
Pot Cap-1 Maneuver	0	0	180	0	0	~ 448	71	-	-	405	-	-
Stage 1	0	0	-	0	0	-	-	-	-	-	-	-
Stage 2	0	0	-	0	0	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	180	-	-	~ 448	71	-	-	405	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	28.2		81.2		1.9		2.1					
HCM LOS	D		F									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	71	-	-	180	448	405	-	-				
HCM Lane V/C Ratio	0.352	-	-	0.139	1.03	0.512	-	-				
HCM Control Delay (s)	81.1	-	-	28.2	81.2	22.8	-	-				
HCM Lane LOS	F	-	-	D	F	C	-	-				
HCM 95th %tile Q(veh)	1.3	-	-	0.5	14	2.8	-	-				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined				*: All major volume in platoon				

48: Moreland Ave (SR 42) & S River Industrial Blvd SE/DW

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	0	0	0	0	1016	0	9	1997	0
Future Volume (veh/h)	0	0	0	0	0	0	0	1016	0	9	1997	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	1870	1870	1870	1870	1870	1870	1870	1811	1870	1870	1826	1870
Adj Flow Rate, veh/h	0	0	0	0	0	0	0	1104	0	10	2171	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	6	2	2	5	2
Cap, veh/h	93	2	0	0	2	0	240	3040	1400	516	4403	1400
Arrive On Green	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88	0.00	0.88	0.88	0.00
Sat Flow, veh/h	1781	1870	0	0	-132796	0	1781	3441	1585	511	4985	1585
Grp Volume(v), veh/h	0	0	0	0	0	0	0	1104	0	10	2171	0
Grp Sat Flow(s),veh/h/ln	1781	1870	0	0	1870	0	1781	1721	1585	511	1662	1585
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.3	0.0	0.3	6.9	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.3	0.0	4.5	6.9	0.0
Prop In Lane	1.00		0.00	0.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	93	2	0	0	2	0	240	3040	1400	516	4403	1400
V/C Ratio(X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36	0.00	0.02	0.49	0.00
Avail Cap(c_a), veh/h	671	434	0	0	434	0	485	3836	1767	522	4459	1418
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)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	1.2	0.9	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.2	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	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	1.2	1.1	0.0
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h	0			0			1104			2181		
Approach Delay, s/veh	0.0			0.0			0.9			1.1		
Approach LOS							A			A		
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	0.0	77.1		0.0		77.1		0.0				
Change Period (Y+Rc), s	* 6.3	9.0		7.1		9.0		7.1				
Max Green Setting (Gmax), s	* 11	69.0		17.9		86.0		17.9				
Max Q Clear Time (g_c+I1), s	0.0	8.9		0.0		6.3		0.0				
Green Ext Time (p_c), s	0.0	59.2		0.0		53.8		0.0				
Intersection Summary												
HCM 6th Ctrl Delay				1.1								
HCM 6th LOS				A								
Notes												
User approved pedestrian interval to be less than phase max green.												
User approved ignoring U-Turning movement.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

2044

AM PEAK HOUR

30: Moreland Ave (SR 42) & Smith Rd SE/Woodstock Rd

Intersection													
Int Delay, s/veh	0.4												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↔	↑↑↑		↔	↑↑↑	
Traffic Vol, veh/h	0	0	0	0	0	0	112	0	3774	0	0	1185	0
Future Vol, veh/h	0	0	0	0	0	0	112	0	3774	0	0	1185	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	130	-	-	125	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	6	6	6	2	2	9	2
Mvmt Flow	0	0	0	0	0	0	122	0	4102	0	0	1288	0
Major/Minor	Minor2		Minor1		Major1		Major2						
Conflicting Flow All	3173	5634	644	4861	5634	2051	940	1288	0	-	4102	0	0
Stage 1	1288	1288	-	4346	4346	-	-	-	-	-	-	-	-
Stage 2	1885	4346	-	515	1288	-	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	7.14	6.44	6.54	7.14	5.72	5.42	-	-	5.34	-	-
Critical Hdwy Stg 1	7.34	5.54	-	7.34	5.54	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	6.74	5.54	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.82	4.02	3.92	2.36	3.16	-	-	3.12	-	-
Pot Cap-1 Maneuver	11	0	356	1	0	39	459	274	-	0	10	-	0
Stage 1	125	233	-	1	5	-	-	-	-	0	-	-	0
Stage 2	64	5	-	466	233	-	-	-	-	0	-	-	0
Platoon blocked, %									-			-	
Mov Cap-1 Maneuver	9	0	356	1	0	39	459	459	-	-	10	-	-
Mov Cap-2 Maneuver	9	0	-	1	0	-	-	-	-	-	-	-	-
Stage 1	92	233	-	1	4	-	-	-	-	-	-	-	-
Stage 2	47	4	-	466	233	-	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB						
HCM Control Delay, s	0		0		0.5		0						
HCM LOS	A		A										
Minor Lane/Major Mvmt	NBL		NBT		EBLn1WBLn1		SBL		SBT				
Capacity (veh/h)	459		-		-		10		-				
HCM Lane V/C Ratio	0.265		-		-		-		-				
HCM Control Delay (s)	15.7		-		0		0		-				
HCM Lane LOS	C		-		A		A		-				
HCM 95th %tile Q(veh)	1.1		-		-		0		-				

9: Moreland Ave (SR 42) & UPS DW/Bailey St

Intersection												
Int Delay, s/veh	755.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↗			↗	↘	↑↑↑	↗	↘	↑↑↑	
Traffic Vol, veh/h	0	0	43	0	0	416	51	3470	189	214	1076	7
Future Vol, veh/h	0	0	43	0	0	416	51	3470	189	214	1076	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Yield	-	-	Yield	-	-	Yield	-	-	None
Storage Length	-	-	0	-	-	-	125	-	225	450	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	100	0	65	6	0	15	28	6	44	9	9	33
Mvmt Flow	0	0	48	0	0	462	57	3856	210	238	1196	8
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	-	-	602	-	-	1928	1204	0	0	3856	0	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	8.4	-	-	7.4	5.86	-	-	5.48	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	4.55	-	-	4.05	3.38	-	-	3.19	-	-
Pot Cap-1 Maneuver	0	0	277	0	0	~ 41	251	-	-	~ 11	-	-
Stage 1	0	0	-	0	0	-	-	-	-	-	-	-
Stage 2	0	0	-	0	0	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	277	-	-	~ 41	251	-	-	~ 11	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	20.7		\$ 4810.4		0.3		\$ 1640.2					
HCM LOS	C		F									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	251	-	-	277	41	~ 11	-	-				
HCM Lane V/C Ratio	0.226	-	-	0.172	11.274	21.616	-	-				
HCM Control Delay (s)	23.5	-	-	20.5	\$ 4810.4	\$ 9940.9	-	-				
HCM Lane LOS	C	-	-	C	F	F	-	-				
HCM 95th %tile Q(veh)	0.8	-	-	0.6	55.8	31.2	-	-				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined				*: All major volume in platoon				

48: Moreland Ave (SR 42) & S River Industrial Blvd SE/DW

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	0	0	0	0	3699	0	11	1108	0
Future Volume (veh/h)	0	0	0	0	0	0	0	3699	0	11	1108	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	1870	1870	1870	1870	1870	1870	1870	1811	1870	1870	1767	1870
Adj Flow Rate, veh/h	0	0	0	0	0	0	0	4021	0	12	1204	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	6	2	2	9	2
Cap, veh/h	64	2	0	0	2	0	481	3165	1458	64	4435	1458
Arrive On Green	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.92	0.00	0.92	0.92	0.00
Sat Flow, veh/h	1781	1870	0	0	-132796	0	1781	3441	1585	28	4823	1585
Grp Volume(v), veh/h	0	0	0	0	0	0	0	4021	0	12	1204	0
Grp Sat Flow(s),veh/h/ln	1781	1870	0	0	1870	0	1781	1721	1585	28	1608	1585
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	103.0	0.0	0.0	3.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	103.0	0.0	103.0	3.0	0.0
Prop In Lane	1.00		0.00	0.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	64	2	0	0	2	0	481	3165	1458	64	4435	1458
V/C Ratio(X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.27	0.00	0.19	0.27	0.00
Avail Cap(c_a), veh/h	510	349	0	0	349	0	681	3165	1458	64	4435	1458
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)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.5	0.0	56.0	0.5	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	124.4	0.0	2.9	0.1	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	81.8	0.0	0.7	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	128.9	0.0	58.9	0.6	0.0
LnGrp LOS	A	A	A	A	A	A	A	F	A	E	A	A
Approach Vol, veh/h	0				0				4021			
Approach Delay, s/veh	0.0				0.0				128.9			
Approach LOS									F			
Timer - Assigned Phs	1	2	4		6		8					
Phs Duration (G+Y+Rc), s	0.0	112.0	0.0		112.0		0.0					
Change Period (Y+Rc), s	* 6.3	9.0	7.1		9.0		7.1					
Max Green Setting (Gmax), s	* 13	84.0	20.9		103.0		20.9					
Max Q Clear Time (g_c+I1), s	0.0	105.0	0.0		105.0		0.0					
Green Ext Time (p_c), s	0.0	0.0	0.0		0.0		0.0					
Intersection Summary												
HCM 6th Ctrl Delay	99.2											
HCM 6th LOS	F											
Notes												
User approved pedestrian interval to be less than phase max green.												
User approved ignoring U-Turning movement.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

PM PEAK HOUR

42: Moreland Ave (SR 42) & Smith Rd SE/Woodstock Rd

Intersection													
Int Delay, s/veh	46.7												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕ ↑↑↑			↕ ↑↑↑		
Traffic Vol, veh/h	0	0	0	0	0	0	249	0	1503	0	0	2647	0
Future Vol, veh/h	0	0	0	0	0	0	249	0	1503	0	0	2647	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	130	-	-	125	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	4	2	6	2	2	5	2
Mvmt Flow	0	0	0	0	0	0	271	0	1634	0	0	2877	0
Major/Minor	Minor2		Minor1		Major1		Major2						
Conflicting Flow All	4073	5053	1439	3327	5053	817	2100	2877	0	0	1634	0	0
Stage 1	2877	2877	-	2176	2176	-	-	-	-	-	-	-	-
Stage 2	1196	2176	-	1151	2877	-	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	7.14	6.44	6.54	7.14	5.68	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	7.34	5.54	-	7.34	5.54	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	6.74	5.54	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.82	4.02	3.92	2.34	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	3	1	105	9	1	274	~ 103	44	-	-	191	-	-
Stage 1	9	36	-	29	84	-	-	-	-	-	-	-	-
Stage 2	177	84	-	189	36	-	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	0	105	-	0	274	~ 103	103	-	-	191	-	-
Mov Cap-2 Maneuver	-	0	-	-	0	-	-	-	-	-	-	-	-
Stage 1	9	36	-	29	0	-	-	-	-	-	-	-	-
Stage 2	-	0	-	189	36	-	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB						
HCM Control Delay, s	0		0		117.3		0						
HCM LOS	A		A										
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR						
Capacity (veh/h)	103	-	-	-	-	191	-	-					
HCM Lane V/C Ratio	2.628	-	-	-	-	-	-	-					
HCM Control Delay (s)	\$ 825.1	-	-	0	0	0	-	-					
HCM Lane LOS	F	-	-	A	A	A	-	-					
HCM 95th %tile Q(veh)	25	-	-	-	-	0	-	-					
Notes													
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon							

9: Moreland Ave (SR 42) & UPS DW/Bailey St

Intersection												
Int Delay, s/veh	40											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↗			↗	↗	↑↑↑	↗	↗	↑↑↑	
Traffic Vol, veh/h	0	0	32	0	0	521	32	1231	109	264	2621	11
Future Vol, veh/h	0	0	32	0	0	521	32	1231	109	264	2621	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Yield	-	-	Yield	-	-	Yield	-	-	None
Storage Length	-	-	0	-	-	-	125	-	225	450	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	17	100	14	4	100	7	40	6	29	5	5	60
Mvmt Flow	0	0	33	0	0	543	33	1282	114	275	2730	11
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	-	-	1371	-	-	641	2741	0	0	1282	0	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	7.38	-	-	7.24	6.1	-	-	5.4	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	4.04	-	-	3.97	3.5	-	-	3.15	-	-
Pot Cap-1 Maneuver	0	0	105	0	0	~ 348	~ 28	-	-	278	-	-
Stage 1	0	0	-	0	0	-	-	-	-	-	-	-
Stage 2	0	0	-	0	0	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	-	105	-	-	~ 348	~ 28	-	-	278	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	54.5		293.2		10.3		8.3					
HCM LOS	F		F									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	~ 28	-	-	105	348	278	-	-				
HCM Lane V/C Ratio	1.19	-	-	0.317	1.56	0.989	-	-				
HCM Control Delay (s)	\$ 442.4	-	-	54.5	293.2	91.5	-	-				
HCM Lane LOS	F	-	-	F	F	F	-	-				
HCM 95th %tile Q(veh)	3.9	-	-	1.2	30.9	10	-	-				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined				*: All major volume in platoon				

48: Moreland Ave (SR 42) & S River Industrial Blvd SE/DW

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	0	0	0	0	1360	0	12	2887	0
Future Volume (veh/h)	0	0	0	0	0	0	0	1360	0	12	2887	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	1870	1870	1870	1870	1870	1870	1870	1811	1870	1870	1826	1870
Adj Flow Rate, veh/h	0	0	0	0	0	0	0	1478	0	13	3138	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	6	2	2	5	2
Cap, veh/h	84	2	0	0	2	0	136	3079	1418	376	4460	1418
Arrive On Green	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.89	0.00	0.89	0.89	0.00
Sat Flow, veh/h	1781	1870	0	0	-132796	0	1781	3441	1585	357	4985	1585
Grp Volume(v), veh/h	0	0	0	0	0	0	0	1478	0	13	3138	0
Grp Sat Flow(s),veh/h/ln	1781	1870	0	0	1870	0	1781	1721	1585	357	1662	1585
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.8	0.0	0.6	15.3	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.8	0.0	7.4	15.3	0.0
Prop In Lane	1.00		0.00	0.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	84	2	0	0	2	0	136	3079	1418	376	4460	1418
V/C Ratio(X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48	0.00	0.03	0.70	0.00
Avail Cap(c_a), veh/h	605	391	0	0	391	0	356	3459	1593	376	4460	1418
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)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	1.5	1.3	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.1	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	1.6	1.9	0.0
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h												
Approach Delay, s/veh												
Approach LOS												
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	0.0	85.6		0.0		85.6		0.0				
Change Period (Y+Rc), s	* 6.3	9.0		7.1		9.0		7.1				
Max Green Setting (Gmax), s	* 11	69.0		17.9		86.0		17.9				
Max Q Clear Time (g_c+I1), s	0.0	17.3		0.0		8.8		0.0				
Green Ext Time (p_c), s	0.0	51.6		0.0		67.8		0.0				
Intersection Summary												
HCM 6th Ctrl Delay												
HCM 6th LOS												
Notes												
User approved pedestrian interval to be less than phase max green.												
User approved ignoring U-Turning movement.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

APPENDIX M

CAPACITY ANALYSIS REPORTS - OTHER IMPROVEMENTS



**CONSTITUTION RD SE &
INTERNATIONAL PARK DR SE**

**ADD NB/SB RIGHT
TURN LANES**

2024

AM PEAK HOUR

21: International Park Dr SE & Constitution Rd SE

AM Peak Hour

Intersection												
Int Delay, s/veh	13.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	136	74	319	347	7	50	9	106	19	43	15
Future Vol, veh/h	8	136	74	319	347	7	50	9	106	19	43	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	130	-	0	-	-	150	-	-	150
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	14	4	16	7	1	25	18	17	68	10	0	0
Mvmt Flow	8	140	76	329	358	7	52	9	109	20	44	15
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	365	0	0	216	0	0	1243	1217	108	1107	1248	358
Stage 1	-	-	-	-	-	-	194	194	-	1016	1016	-
Stage 2	-	-	-	-	-	-	1049	1023	-	91	232	-
Critical Hdwy	4.31	-	-	4.205	-	-	7.57	6.755	7.92	7.45	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.77	5.755	-	6.25	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.37	5.755	-	6.65	5.5	-
Follow-up Hdwy	2.333	-	-	2.2665	-	-	3.671	4.1615	3.946	3.595	4	3.3
Pot Cap-1 Maneuver	1119	-	-	1320	-	-	127	164	763	167	175	691
Stage 1	-	-	-	-	-	-	750	708	-	273	318	-
Stage 2	-	-	-	-	-	-	250	287	-	885	716	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1119	-	-	1320	-	-	75	122	763	109	131	691
Mov Cap-2 Maneuver	-	-	-	-	-	-	75	122	-	109	131	-
Stage 1	-	-	-	-	-	-	745	703	-	271	239	-
Stage 2	-	-	-	-	-	-	149	216	-	743	711	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			4.1			53.7			52.2		
HCM LOS							F			F		
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2		
Capacity (veh/h)	80	763	1119	-	-	1320	-	-	123	691		
HCM Lane V/C Ratio	0.76	0.143	0.007	-	-	0.249	-	-	0.52	0.022		
HCM Control Delay (s)	131.4	10.5	8.2	-	-	8.6	-	-	62.3	10.3		
HCM Lane LOS	F	B	A	-	-	A	-	-	F	B		
HCM 95th %tile Q(veh)	3.7	0.5	0	-	-	1	-	-	2.4	0.1		

PM PEAK HOUR

21: International Park Dr SE & Constitution Rd SE

Intersection												
Int Delay, s/veh	8.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	30	356	43	97	176	14	43	38	290	36	18	13
Future Vol, veh/h	30	356	43	97	176	14	43	38	290	36	18	13
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	130	-	0	-	-	150	-	-	150
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	1	32	67	5	0	16	0	19	4	8	9
Mvmt Flow	33	391	47	107	193	15	47	42	319	40	20	14
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	208	0	0	438	0	0	913	903	219	690	911	193
Stage 1	-	-	-	-	-	-	481	481	-	407	407	-
Stage 2	-	-	-	-	-	-	432	422	-	283	504	-
Critical Hdwy	4.1	-	-	5.105	-	-	7.54	6.5	7.185	7.36	6.62	6.335
Critical Hdwy Stg 1	-	-	-	-	-	-	6.74	5.5	-	6.16	5.62	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.34	5.5	-	6.56	5.62	-
Follow-up Hdwy	2.2	-	-	2.8365	-	-	3.652	4	3.4805	3.538	4.076	3.3855
Pot Cap-1 Maneuver	1375	-	-	806	-	-	223	279	741	342	265	828
Stage 1	-	-	-	-	-	-	506	557	-	615	584	-
Stage 2	-	-	-	-	-	-	569	592	-	696	528	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1375	-	-	806	-	-	181	236	741	149	224	828
Mov Cap-2 Maneuver	-	-	-	-	-	-	181	236	-	149	224	-
Stage 1	-	-	-	-	-	-	494	544	-	600	506	-
Stage 2	-	-	-	-	-	-	466	513	-	357	515	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.5			3.4			18.4			32.2		
HCM LOS							C			D		
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2		
Capacity (veh/h)	203	741	1375	-	-	806	-	-	168	828		
HCM Lane V/C Ratio	0.438	0.43	0.024	-	-	0.132	-	-	0.353	0.017		
HCM Control Delay (s)	35.9	13.5	7.7	-	-	10.1	-	-	37.7	9.4		
HCM Lane LOS	E	B	A	-	-	B	-	-	E	A		
HCM 95th %tile Q(veh)	2	2.2	0.1	-	-	0.5	-	-	1.5	0.1		

2044

AM PEAK HOUR

21: International Park Dr SE & Constitution Rd SE

Intersection												
Int Delay, s/veh	74.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	184	100	358	468	9	68	11	131	26	53	20
Future Vol, veh/h	11	184	100	358	468	9	68	11	131	26	53	20
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	130	-	0	-	-	150	-	-	150
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	14	4	16	7	1	25	18	17	68	10	0	0
Mvmt Flow	11	190	103	369	482	9	70	11	135	27	55	21
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	491	0	0	293	0	0	1527	1493	147	1343	1535	482
Stage 1	-	-	-	-	-	-	264	264	-	1220	1220	-
Stage 2	-	-	-	-	-	-	1263	1229	-	123	315	-
Critical Hdwy	4.31	-	-	4.205	-	-	7.57	6.755	7.92	7.45	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.77	5.755	-	6.25	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.37	5.755	-	6.65	5.5	-
Follow-up Hdwy	2.333	-	-	2.2665	-	-	3.671	4.1615	3.946	3.595	4	3.3
Pot Cap-1 Maneuver	1001	-	-	1235	-	-	78	110	715	113	117	588
Stage 1	-	-	-	-	-	-	681	658	-	208	255	-
Stage 2	-	-	-	-	-	-	187	227	-	848	659	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1001	-	-	1235	-	-	~ 27	76	715	62	81	588
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 27	76	-	62	81	-
Stage 1	-	-	-	-	-	-	674	651	-	206	179	-
Stage 2	-	-	-	-	-	-	88	159	-	668	652	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			3.9			\$ 403.6			188.3		
HCM LOS							F			F		
Minor Lane/Major Mvmt	NBLn1		NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2	
Capacity (veh/h)	30		715	1001	-	-	1235	-	-	74	588	
HCM Lane V/C Ratio	2.715		0.189	0.011	-	-	0.299	-	-	1.101	0.035	
HCM Control Delay (s)	\$ 1054.4		11.2	8.6	-	-	9.2	-	-	233.1	11.3	
HCM Lane LOS	F		B	A	-	-	A	-	-	F	B	
HCM 95th %tile Q(veh)	9.6		0.7	0	-	-	1.3	-	-	6	0.1	
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon						

PM PEAK HOUR

21: International Park Dr SE & Constitution Rd SE

Intersection												
Int Delay, s/veh	24.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	41	481	58	116	238	19	58	47	320	49	23	18
Future Vol, veh/h	41	481	58	116	238	19	58	47	320	49	23	18
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	130	-	0	-	-	150	-	-	150
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	1	32	67	5	0	16	0	19	4	8	9
Mvmt Flow	45	529	64	127	262	21	64	52	352	54	25	20
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	283	0	0	593	0	0	1200	1188	297	897	1199	262
Stage 1	-	-	-	-	-	-	651	651	-	516	516	-
Stage 2	-	-	-	-	-	-	549	537	-	381	683	-
Critical Hdwy	4.1	-	-	5.105	-	-	7.54	6.5	7.185	7.36	6.62	6.335
Critical Hdwy Stg 1	-	-	-	-	-	-	6.74	5.5	-	6.16	5.62	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.34	5.5	-	6.56	5.62	-
Follow-up Hdwy	2.2	-	-	2.8365	-	-	3.652	4	3.4805	3.538	4.076	3.3855
Pot Cap-1 Maneuver	1291	-	-	685	-	-	138	190	658	245	178	757
Stage 1	-	-	-	-	-	-	398	468	-	536	521	-
Stage 2	-	-	-	-	-	-	489	526	-	609	437	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1291	-	-	685	-	-	97	149	658	71	140	757
Mov Cap-2 Maneuver	-	-	-	-	-	-	97	149	-	71	140	-
Stage 1	-	-	-	-	-	-	384	452	-	517	425	-
Stage 2	-	-	-	-	-	-	365	429	-	242	422	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.6			3.6			51			138.1		
HCM LOS							F			F		
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2		
Capacity (veh/h)	115	658	1291	-	-	685	-	-	84	757		
HCM Lane V/C Ratio	1.003	0.534	0.035	-	-	0.186	-	-	0.942	0.026		
HCM Control Delay (s)	155.9	16.6	7.9	-	-	11.5	-	-	170.2	9.9		
HCM Lane LOS	F	C	A	-	-	B	-	-	F	A		
HCM 95th %tile Q(veh)	6.6	3.2	0.1	-	-	0.7	-	-	5.2	0.1		

**SINGLE LANE ROUNDABOUT WITH A NB
RIGHT TURN BYPASS LANE**

2024

AM PEAK HOUR

MOVEMENT SUMMARY

 **Site: 101 [2024 AM - Single Lane (Site Folder: General)]**

New Site
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: International Park Drive SE														
3	L2	50	18.0	52	18.0	0.054	3.7	LOS A	0.3	8.2	0.37	0.19	0.37	27.1
8	T1	9	17.0	9	17.0	0.054	3.6	LOS A	0.3	8.2	0.37	0.19	0.37	23.0
18	R2	106	68.0	109	68.0	0.110	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	25.2
Approach		165	50.1	170	50.1	0.110	1.3	LOS A	0.3	8.2	0.13	0.07	0.13	25.6
East: Constitution Road SE														
1	L2	319	7.0	329	7.0	0.587	10.3	LOS B	5.6	144.2	0.44	0.23	0.44	28.1
6	T1	347	1.0	358	1.0	0.587	10.1	LOS B	5.6	144.2	0.44	0.23	0.44	33.7
16	R2	7	25.0	7	25.0	0.587	10.9	LOS B	5.6	144.2	0.44	0.23	0.44	26.6
Approach		673	4.1	694	4.1	0.587	10.2	LOS B	5.6	144.2	0.44	0.23	0.44	30.7
North: International Park Drive SE														
7	L2	19	10.0	20	10.0	0.124	7.7	LOS A	0.7	19.1	0.75	0.65	0.75	27.7
4	T1	43	0.0	44	0.0	0.124	6.9	LOS A	0.7	19.1	0.75	0.65	0.75	22.9
14	R2	15	0.0	15	0.0	0.124	6.9	LOS A	0.7	19.1	0.75	0.65	0.75	28.0
Approach		77	2.5	79	2.5	0.124	7.1	LOS A	0.7	19.1	0.75	0.65	0.75	24.8
West: Constitution Road SE														
5	L2	8	14.0	8	14.0	0.271	7.6	LOS A	1.6	42.8	0.62	0.51	0.62	29.9
2	T1	136	4.0	140	4.0	0.271	7.1	LOS A	1.6	42.8	0.62	0.51	0.62	36.2
12	R2	74	16.0	76	16.0	0.271	7.7	LOS A	1.6	42.8	0.62	0.51	0.62	28.2
Approach		218	8.4	225	8.4	0.271	7.3	LOS A	1.6	42.8	0.62	0.51	0.62	32.8
All Vehicles		1133	11.5	1168	11.5	0.587	8.2	LOS A	5.6	144.2	0.45	0.29	0.45	29.7

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).

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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PM PEAK HOUR

MOVEMENT SUMMARY

 **Site: 101 [2024 PM - Single Lane (Site Folder: General)]**

New Site
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: International Park Drive SE														
3	L2	43	16.0	47	16.0	0.090	4.8	LOS A	0.5	14.2	0.59	0.42	0.59	27.6
8	T1	38	0.0	42	0.0	0.090	4.1	LOS A	0.5	14.2	0.59	0.42	0.59	23.2
18	R2	290	19.0	319	19.0	0.226	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	25.2
Approach		371	16.7	408	16.7	0.226	1.1	LOS A	0.5	14.2	0.13	0.09	0.13	25.2
East: Constitution Road SE														
1	L2	97	67.0	107	67.0	0.349	9.3	LOS A	2.2	67.0	0.43	0.26	0.43	29.4
6	T1	176	5.0	193	5.0	0.349	7.1	LOS A	2.2	67.0	0.43	0.26	0.43	35.4
16	R2	14	0.0	15	0.0	0.349	6.9	LOS A	2.2	67.0	0.43	0.26	0.43	27.9
Approach		287	25.7	315	25.7	0.349	7.9	LOS A	2.2	67.0	0.43	0.26	0.43	32.7
North: International Park Drive SE														
7	L2	36	4.0	40	4.0	0.087	5.0	LOS A	0.5	12.2	0.56	0.42	0.56	28.3
4	T1	18	8.0	20	8.0	0.087	5.2	LOS A	0.5	12.2	0.56	0.42	0.56	23.0
14	R2	13	9.0	14	9.0	0.087	5.3	LOS A	0.5	12.2	0.56	0.42	0.56	27.3
Approach		67	6.0	74	6.0	0.087	5.1	LOS A	0.5	12.2	0.56	0.42	0.56	26.5
West: Constitution Road SE														
5	L2	30	0.0	33	0.0	0.462	8.7	LOS A	3.3	85.1	0.58	0.42	0.58	29.3
2	T1	356	1.0	391	1.0	0.462	8.7	LOS A	3.3	85.1	0.58	0.42	0.58	35.6
12	R2	43	32.0	47	32.0	0.462	10.0	LOS B	3.3	85.1	0.58	0.42	0.58	27.7
Approach		429	4.0	471	4.0	0.462	8.8	LOS A	3.3	85.1	0.58	0.42	0.58	34.1
All Vehicles		1154	13.6	1268	13.6	0.462	5.8	LOS A	3.3	85.1	0.40	0.27	0.40	30.0

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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2044

AM PEAK HOUR

MOVEMENT SUMMARY

 **Site: 101 [2044 AM - Single Lane (Site Folder: General)]**

New Site
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: International Park Drive SE														
3	L2	68	18.0	70	18.0	0.072	3.8	LOS A	0.4	11.5	0.43	0.25	0.43	27.0
8	T1	11	17.0	11	17.0	0.072	3.8	LOS A	0.4	11.5	0.43	0.25	0.43	23.0
18	R2	131	68.0	135	68.0	0.135	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	25.2
Approach		210	49.1	216	49.1	0.135	1.5	LOS A	0.4	11.5	0.16	0.09	0.16	25.6
East: Constitution Road SE														
1	L2	358	7.0	369	7.0	0.710	13.5	LOS B	8.3	214.9	0.61	0.35	0.61	27.1
6	T1	468	1.0	482	1.0	0.710	13.3	LOS B	8.3	214.9	0.61	0.35	0.61	32.3
16	R2	9	25.0	9	25.0	0.710	14.1	LOS B	8.3	214.9	0.61	0.35	0.61	25.7
Approach		835	3.8	861	3.8	0.710	13.4	LOS B	8.3	214.9	0.61	0.35	0.61	29.8
North: International Park Drive SE														
7	L2	26	10.0	27	10.0	0.196	10.4	LOS B	1.4	34.7	0.89	0.81	0.89	26.9
4	T1	53	0.0	55	0.0	0.196	9.4	LOS A	1.4	34.7	0.89	0.81	0.89	22.3
14	R2	20	0.0	21	0.0	0.196	9.4	LOS A	1.4	34.7	0.89	0.81	0.89	27.1
Approach		99	2.6	102	2.6	0.196	9.7	LOS A	1.4	34.7	0.89	0.81	0.89	24.2
West: Constitution Road SE														
5	L2	11	14.0	11	14.0	0.369	9.1	LOS A	2.4	64.8	0.71	0.61	0.71	29.4
2	T1	184	4.0	190	4.0	0.369	8.5	LOS A	2.4	64.8	0.71	0.61	0.71	35.4
12	R2	100	16.0	103	16.0	0.369	9.2	LOS A	2.4	64.8	0.71	0.61	0.71	27.7
Approach		295	8.4	304	8.4	0.369	8.8	LOS A	2.4	64.8	0.71	0.61	0.71	32.1
All Vehicles		1439	11.3	1484	11.3	0.710	10.4	LOS B	8.3	214.9	0.59	0.40	0.59	29.1

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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PM PEAK HOUR

MOVEMENT SUMMARY

 **Site: 101 [2044 PM - Single Lane (Site Folder: General)]**

New Site
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: International Park Drive SE														
3	L2	58	16.0	64	16.0	0.131	5.8	LOS A	0.9	23.5	0.72	0.56	0.72	27.3
8	T1	47	0.0	52	0.0	0.131	4.9	LOS A	0.9	23.5	0.72	0.56	0.72	23.0
18	R2	320	19.0	352	19.0	0.250	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	25.2
Approach		425	16.5	467	16.5	0.250	1.4	LOS A	0.9	23.5	0.18	0.14	0.18	25.2
East: Constitution Road SE														
1	L2	116	67.0	127	67.0	0.448	11.0	LOS B	3.3	97.0	0.54	0.36	0.54	28.9
6	T1	238	5.0	262	5.0	0.448	8.6	LOS A	3.3	97.0	0.54	0.36	0.54	34.6
16	R2	19	0.0	21	0.0	0.448	8.4	LOS A	3.3	97.0	0.54	0.36	0.54	27.4
Approach		373	24.0	410	24.0	0.448	9.3	LOS A	3.3	97.0	0.54	0.36	0.54	32.2
North: International Park Drive SE														
7	L2	49	4.0	54	4.0	0.125	5.7	LOS A	0.7	18.9	0.65	0.52	0.65	28.1
4	T1	23	8.0	25	8.0	0.125	5.9	LOS A	0.7	18.9	0.65	0.52	0.65	22.8
14	R2	18	9.0	20	9.0	0.125	6.0	LOS A	0.7	18.9	0.65	0.52	0.65	27.1
Approach		90	6.0	99	6.0	0.125	5.8	LOS A	0.7	18.9	0.65	0.52	0.65	26.3
West: Constitution Road SE														
5	L2	41	0.0	45	0.0	0.620	12.0	LOS B	7.1	183.1	0.73	0.65	0.90	28.1
2	T1	481	1.0	529	1.0	0.620	12.0	LOS B	7.1	183.1	0.73	0.65	0.90	33.9
12	R2	58	32.0	64	32.0	0.620	13.4	LOS B	7.1	183.1	0.73	0.65	0.90	26.6
Approach		580	4.0	637	4.0	0.620	12.2	LOS B	7.1	183.1	0.73	0.65	0.90	32.5
All Vehicles		1468	12.8	1613	12.8	0.620	7.9	LOS A	7.1	183.1	0.52	0.42	0.58	29.6

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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