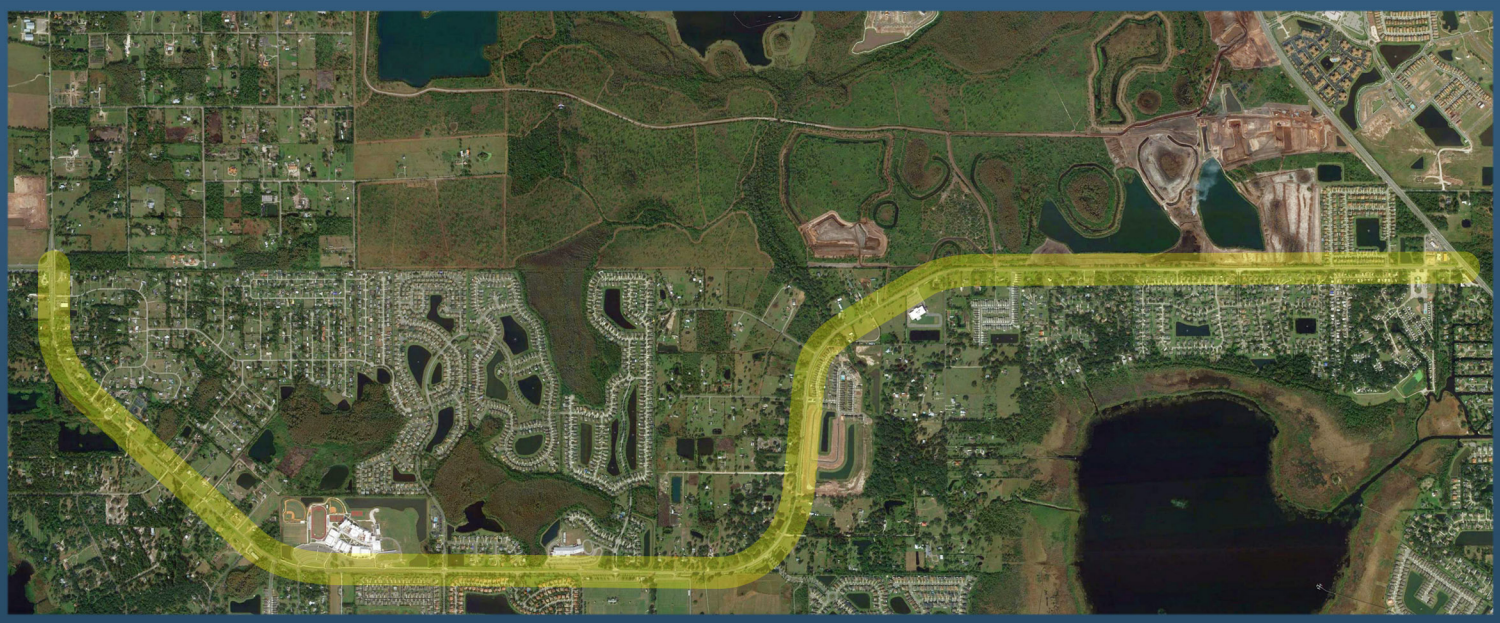
BOGGY CREEK ROAD PROJECT TRAFFIC ANALYSIS REPORT



Prepared for:
OSCEOLA COUNTY, FLORIDA

Prepared by:
VHB

Boggy Creek Road Widening
Draft Project Traffic Analysis Report (PTAR)

This Final PTAR is prepared in support of the widening of Boggy Creek Road from Simpson Road to Narcoossee Road. The current report includes the development of existing base year traffic volumes, evaluation of existing operating conditions, development of design traffic characteristics, year 2019 model validation efforts, and development of growth rates for developing future traffic forecasts for No Build and Build conditions. In addition, this report includes the evaluation of operating conditions of the corridor as appropriate during the service life of the proposed roadway project.

Prepared for:

Osceola County **1/27/2021**

Prepared by:

Vanasse Hangen Brustlin (VHB)

CERTIFICATION BY

VANASSE HANGEN BRUSTLIN, INC.

Financial Project ID: -NA-

I, Babuji Ambikapathy P.E. Number 50689, have prepared and reviewed the Project Traffic Analysis Report for the proposed Boggy Creek Road widening and Alternatives Evaluation study. I have specifically followed the guidelines "Project Traffic Forecasting Handbook (2019)" as adopted by the Florida Department of Transportation. Based on traffic count information, general data sources, privately generated data sources and other pertinent information, the Project Traffic Report has been prepared using current traffic engineering, transportation planning, and Florida Department of Transportation practices and procedures.

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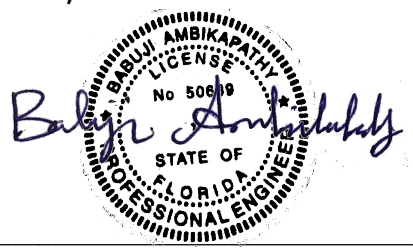

THIS DOCUMENT HAS BEEN DIGITALLY SIGNED AND SEALED BY:

Babuji Ambikapathy, P.E. #50689

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1/27/2021

Date

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Executive Summary

Osceola County is conducting an Alternative Evaluation Study followed by a development of design plans for the widening of Boggy Creek Road from Simpson Road to Narcoossee Road from a two-lane undivided roadway to a four-lane divided roadway. The purpose of this project traffic analysis report (PTAR) is to document the traffic analysis for a roadway and intersection analyses, for the study corridor of Boggy Creek Road from Simpson Road to Narcoossee Road located in Osceola County, Florida.

Boggy Creek Road is classified as a minor arterial that is primarily a north/south facility that begins from Narcoossee Road to the south in Osceola County and terminates to the north at the SR 528/Beachline Expressway in Orange County. Within the study corridor, Boggy Creek Road is partially an east/west facility & partially north/south facility and a two (2) lane undivided roadway that serves the travel demands of various residential developments, schools, and related businesses. The posted speed limit along the Boggy Creek Road varies from 45 miles per hour to 55 miles per hour.

The study analysis was conducted for existing year 2019, opening year 2025, mid-design year 2035 and design year 2045. For this study, Under the No Build scenario, the corridor operations are evaluated assuming the existing geometry and the Build Alternative improvements include widening Boggy Creek Road from 2 to 4 lanes throughout the project study corridor as well as required turn lane improvements at the study intersections to accommodate the projected traffic demand within the study corridor. The following planned improvements are assumed under both No Build and Build scenarios:

- the extension of Simpson Road, east of Boggy Creek Road, to the future extension of the Osceola Parkway and associated improvements at the intersection of Boggy Creek Road & Simpson Road;
- and, widening of Narcoossee Road to six lanes.

As part of the study analysis (existing and future), Boggy Creek Road corridor between Simpson Road and Narcoossee Road with nine (9) study intersections were evaluated based on the latest Highway Capacity Manual (HCM) 6th Edition methodologies within the Synchro software. The latest adopted Central Florida Regional Planning Model (CFRPM) v6.1 was developed for use in this PTAR. A subarea model was validated for base year 2019, and a future year (2040) subarea model scenario was then developed based on the calibration efforts to obtain future year volume forecasts. Recommended traffic growth rates for the study corridors were determined based on a comparison of historical traffic trends, travel demand model volumes, and population estimates.

Based on the existing operational analysis, all the study intersections along Boggy Creek Road were observed to be operating at or better than targeted FDOT Level of Service (LOS) E, except a couple of

unsignalized intersections. For the existing conditions, roadway LOS along Boggy Creek Road from Simpson Road to Springlake Village Boulevard is at LOS E or F.

Under 2025 No Build conditions, the roadway LOS along Boggy Creek Road from Simpson Road to Nele Road are anticipated to operate at LOS F during the AM and PM peak hours. The segment between Nele Road and Springlake Village Boulevard is expected to operate at LOS F during the PM peak only. Under both 2035 No Build Conditions & 2045 No Build Conditions, the segments from Simpson Road to Turnberry Boulevard are expected to operate at LOS F during AM and PM peak hours.

The signalized intersection with Simpson Road was anticipated to operate at LOS F from year 2025 No Build during AM peak hour. For all the unsignalized intersections the minor street movements were found to operate at LOS E (or LOS F) from Year 2025 No Build conditions. The signalized intersection at Nele Road and Narcoossee Road were anticipated to fail at LOS F by year 2045 No Build conditions.

Based on the No Build roadway and No Build intersection analysis, it can be clearly seen that the existing Boggy Creek Road from Simpson Road to Narcoossee Road needs to be widened to a four-lane divided roadway and make it safer for the traveling public.

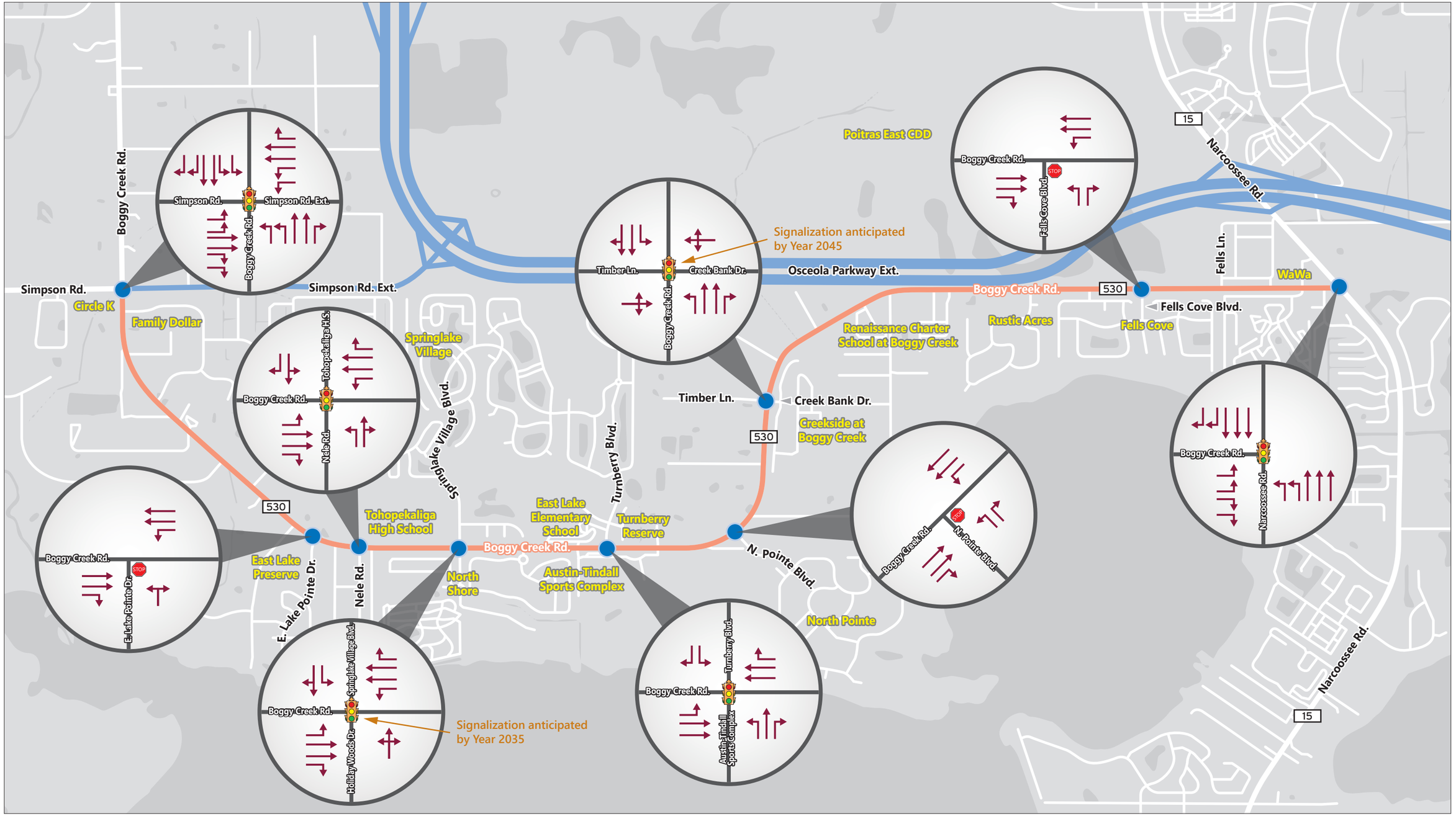
Under Build conditions, operational analysis was performed for Boggy Creek Road corridor with the improvements mentioned in the **Table A**. All roadway segments and study intersections are anticipated to operate at LOS standard (E) or better during the AM and PM peak hours in Years 2025, 2035, and 2045. The improvements shown in **Table A** wee illustrated in **Figure A**. The overall intersection and roadway LOS results for the Build alternative show significant improvement over the No Build alternative.

Table A: Recommended Improvements – Build Alternative

Roadway/Intersection	Improvement
General	Provide appropriate corridor and intersection lighting Reconstruct roadway to a four-lane divided roadway with a 22' raised median (or 15.5' raised median in constrained areas), a shared use path on the south side of the road, and a sidewalk on the north side of the road
Simpson Road#	Coordinate geometric improvements with the upcoming Simpson Road extension project. The ultimate configuration of the intersection should include two through lanes and dual left turn lanes for all approaches. The eastbound and southbound approaches should have dual right turn lanes; the westbound and northbound should have single right turn lanes. Signal Phasing: Overlap all right turn movements with complementary left turn movements.
Nele Road	Add a northbound left turn lane
Springlake Village Boulevard	Signalize intersection by 2035*
Timber Lane/Creek Bank Drive	Signalize intersection by 2045*
Narcoossee Road	Add a second northbound left turn lane Add a second southbound right turn lane Add a second eastbound left turn lane Add a second eastbound right turn lane Signal Phasing: Overlap eastbound right turn with northbound left turn

* Actual signalization should be based on a signal warrant analysis using observed turning movement counts.

The intersection of Boggy Creek Road and Simpson Road was evaluated under "Simpson Road Improvements PD&E Services".



N.T.S.

- Project Location
- Lane Geometry
- Stop Controlled Intersection
- Signalized Intersection

Figure A

Future Year Recommended Geometry
Boggy Creek Road Project Traffic Analysis Report

Based on the safety analysis, portions of Boggy Creek Road from Simpson Road to East Lake Pointe Drive and from Fells Cove Boulevard to Narcoossee Road can be categorized as high crash segments. Review of the crash trends pointed to a need to focus on intersection crash trends at the signalized intersections at Narcoossee Road and Simpson Road. These two intersections alone accounted for 82% of the corridor's intersection crashes. As such the crash trends at each of these intersections were examined in further detail. Review of the five (5) fatal crashes along the study corridor within the last five years revealed a pattern of head-on collisions occurring at horizontal curves during nighttime, with dark unlighted conditions. Based on the crash review, the following safety challenges and opportunities were identified:

- Enhanced corridor and intersection lighting
- Installing a raised median
- Providing horizontal alignment warning signs on the corridor's curves, particularly at East Lake Pointe Drive and High Planes Lane.
- Protected only left turn phases during peak periods at Simpson Road and Narcoossee Road intersections.
- Adequate turn lane storage at Simpson Road
- Retroreflective backplates on signal heads at Narcoossee Road
- Recommended review of pavement conditions or drainage at Narcoossee Road that may be contributing to slippery roadway conditions
- Addition of a southbound U-turn lane at Narcoossee
- Elimination of the free flow movement for the southbound right turn lane at Narcoossee

The existing conditions operational (roadway and intersections) and safety analysis clearly shows that the existing Boggy Creek Road from Simpson Road to Narcoossee Road needs to be widened to a four-lane divided roadway and make it safer for the traveling public.

With the implementation of the improvements in the Build alternative, including addition of a raised median, roadway widening, and incorporation of turn lane improvements, the following safety outcomes are anticipated to result:

- The total number of crashes in the corridor is expected to increase only slightly from No Build (90.4 crashes/year) to Build conditions (93.8 crashes/year). However, it is important to note that the Build condition accommodates a substantial increase in corridor traffic volumes; thus, the actual crash rate for the corridor is expected to be lower under Build conditions.

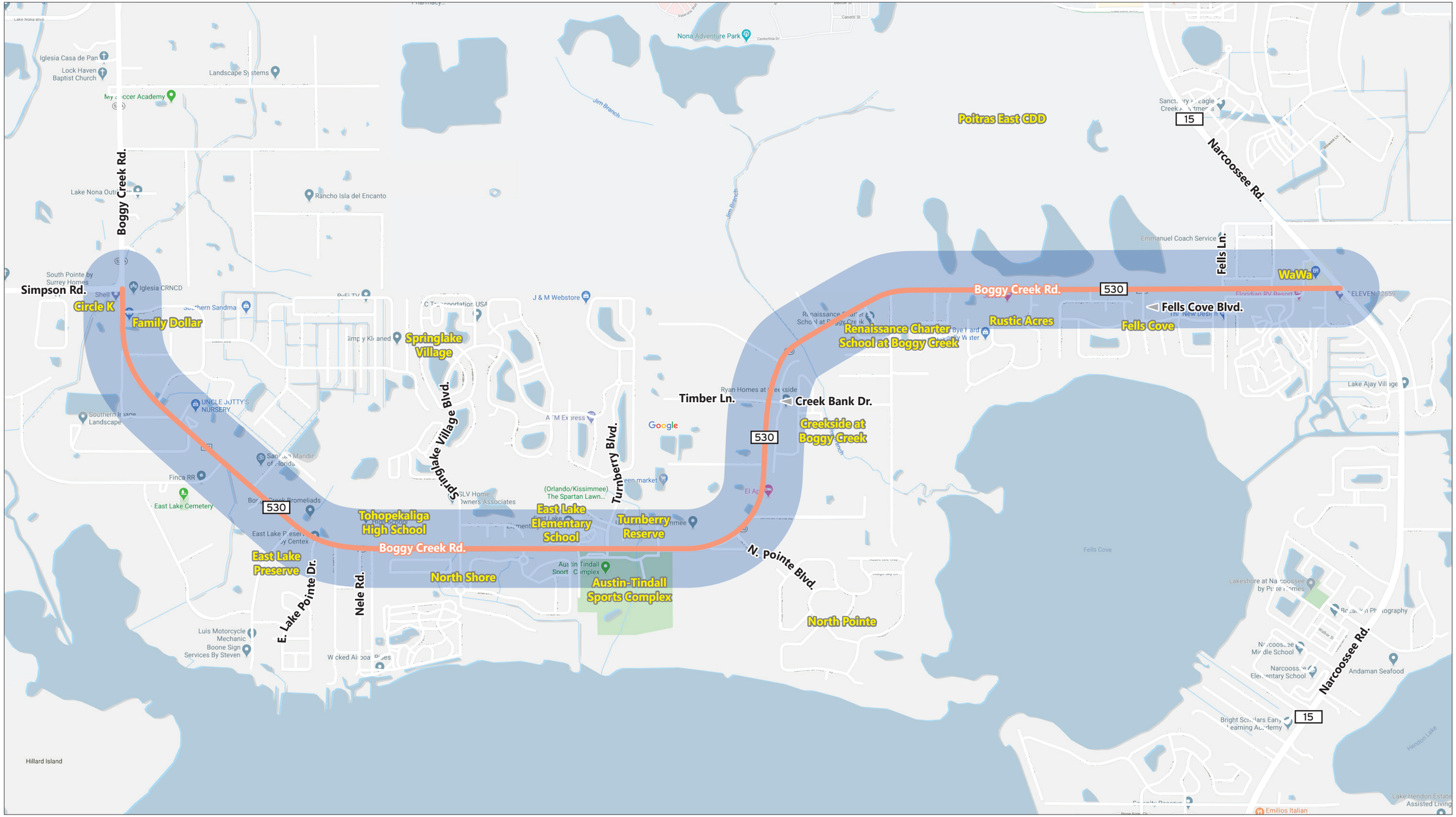
- The number of fatal and injury crashes are anticipated increase only slightly from the No Build (28.1 crashes/year) to Build alternative (28.9 crashes/year). Again, given that the Build alternative accommodates a much larger volume of traffic, the actual rate of crashes is expected to be lower in the Build alternative.

- Not inherently accounted for in this evaluation, but important to consider qualitatively, is the provision of bicycle facilities proposed in the Build alternative. The Build alternative is expected to provide an off road (shared use path) facility for cyclists throughout the entirety of the corridor. This will provide cyclists a greater separation from vehicular traffic.

1 Introduction

Osceola County is conducting an Alternative Evaluation Study followed by a development of design plans for the widening of Boggy Creek Road from Simpson Road to Narcoossee Road from a two-lane undivided roadway to a four-lane divided roadway. The purpose of this memorandum is to document the traffic analysis for a roadway and intersection analyses, for the study corridor of Boggy Creek Road from Simpson Road to Narcoossee Road located in Osceola County, Florida. This memorandum has been prepared based on the comments obtained from Osceola County on the Draft Phase 1 of the PTAR dated September 30, 2020, Draft Traffic Forecasts Memorandum dated October 30, 2020, and the Draft PTAR dated December 2020. The comments and responses are included in **Appendix A**.

VHB's role is to perform the Design Traffic Analysis to analyze the existing conditions and assess the need for future capacity and intersection improvements along Boggy Creek Road at the study intersections of East Lake Pointe Drive, Nele Road, Springlake Village Boulevard, Turnberry Boulevard, North Pointe Boulevard, Timber Lane, Fells Cove Boulevard, and Narcoossee Road. The intersection of Boggy Creek Road and Simpson Road was evaluated under "Simpson Road Improvements PD&E Services". The study corridor extends approximately 5.90 miles long and located within Osceola County's jurisdiction. The study area is shown in **Figure 1**.



N.T.S.

Project Location

Area of Influence

Figure 1

Study Area of Influence and Project Location Map
Boggy Creek Road Project Traffic Analysis Report

1.1 Study Area

The primary study area of influence includes the intersections considered to be impacted by the widening improvements along the Boggy Creek Road study corridor as discussed with Osceola County staff and provided in the Traffic Analysis Methodology for the PTAR included in **Appendix B.**

The project study corridor includes a total of nine (9) study intersections, of which four (4) are signalized and the remaining five (5) are unsignalized. The study intersections to be evaluated per the approved Project Traffic Methodology and discussions with Osceola County staff are listed below:

- Simpson Road at Boggy Creek Road – Signal Controlled
- East Lake Pointe Drive at Boggy Creek Road – Stop Controlled
- Nele Road/Tohopekaliga High School at Boggy Creek Road – Signal Controlled
- Springlake Village Boulevard at Boggy Creek Road – Stop Controlled
- Turnberry Boulevard/Austin Tindall Park at Boggy Creek Road – Signal Controlled
- North Pointe Boulevard at Boggy Creek Road – Stop Controlled
- Timber Lane/Creek Bank Drive at Boggy Creek Road – Stop Controlled
- Fells Cove Boulevard at Boggy Creek Road – Stop Controlled
- Narcoossee Road at Boggy Creek Road – Signal Controlled

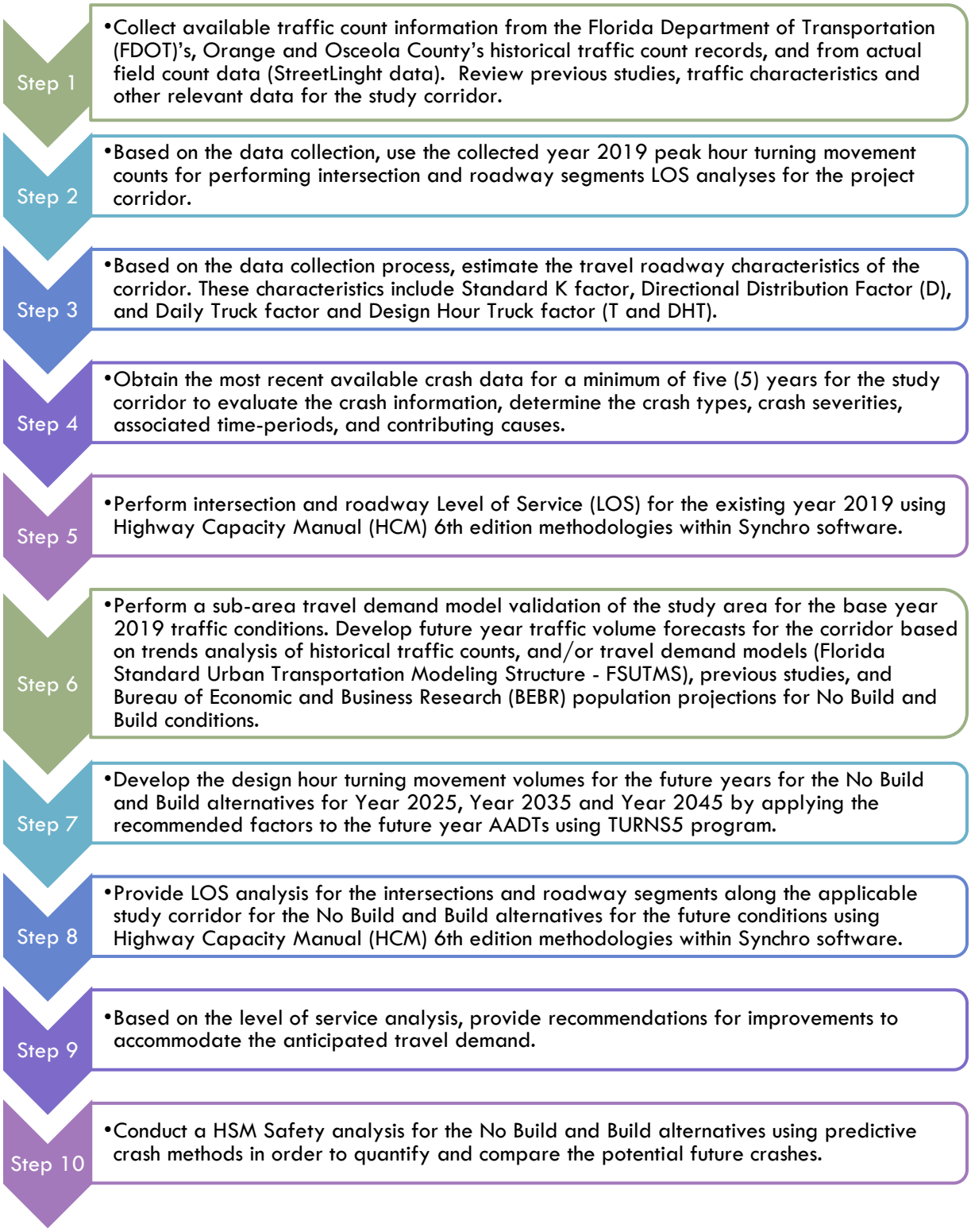
1.2 Objective

The overall objective of this PTAR is to provide Osceola County with the Annual Average Daily Traffic (AADT), peak hour volumes, intersection and roadway Level of Service (LOS) for the existing year 2019, and traffic forecasts for opening year 2025, mid-design year 2035 and design year 2045 for No Build and Build conditions. This report includes 5-year safety review, development of the design traffic characteristics including Standard K Factor, Directional Distribution Factor (D), and percentage of trucks for both the design hour and daily demand (DHT, T) for use in the operational analysis of future conditions. In addition, this report includes future operational analyses for opening year 2025, mid-design year 2035 and design year 2045 for No Build and Build conditions and recommended improvements based on the results.

1.3 Methodology

The focus of this traffic study is to evaluate the traffic conditions at the surrounding intersections to be used by motorists and transit services traveling along the study corridor and the potential traffic impacts at these intersections. The methodology used for the development of this PTAR report is illustrated in **Figure 2**.

Figure 2: Boggy Creek Road PTAR Methodology



2 Project Information

2.1 Boggy Creek Road Project Information

2.1.1 Boggy Creek Road

Boggy Creek Road is classified as a minor arterial that is primarily a north/south facility that begins from Narcoossee Road to the south in Osceola County and terminates to the north at the SR 528/Beachline Expressway in Orange County. Within the study corridor, Boggy Creek Road is partially an east/west facility & partially north/south facility and a two (2) lane undivided roadway that serves the travel demands of various residential developments, schools, and related businesses. The posted speed limit along the Boggy Creek Road varies from 45 miles per hour to 55 miles per hour. Based on field review conducted, the speed limit along Boggy Creek Road from Simpson Road to Springlake Village Boulevard was found to be posted at 45 miles per hour and from Springlake Village Boulevard to Narcoossee Road the posted speed limit was found to be 55 miles per hour.

2.1.2 Boggy Creek Road Transit Service

The Central Florida Regional Transportation Authority (LYNX) provides public transportation services to Orange, Seminole and Osceola counties. In addition to the daily fixed route local bus service, LYNX also provides other services including LYMMO (a free downtown Orlando circulator), a commuter assistance Vanpool program, Neighbor Link service, ACCESS LYNX paratransit service, Knight LYNX service, Xpress Bus service, Fast Link service and the Road Rangers sponsored by State Farm roadside assistance program on Interstate 4 (I-4).

Based on review of the study corridor and the LYNX routing maps, currently LYNX does not provide any transit services along the Boggy Creek Road study corridor.

3 Existing Conditions

This section describes the analysis of traffic flow operating conditions for the existing year 2019 at the intersections and roadway segments along the study corridor. Due to COVID-19 pandemic, it was determined that traffic counts collected in the field will be low. In analyzing the year 2019 operating conditions of the intersections and roadway segments, traffic counts collected and obtained from StreetLight data for the year 2019 (pre COVID-19) were used along with the existing roadway and intersection geometry. The turning movement volumes collected were compared with previous studies, seasonally adjusted, balanced when required and used for the existing year 2019 LOS analysis for the intersections and roadway segments. The existing conditions intersection and roadway LOS analyses were performed using Synchro 10 software. The following sub-sections describe the overall process.

3.1 Traffic Count Information

As mentioned in the methodology document, traffic volumes for the Boggy Creek Road study corridor for year 2019 were obtained from FDOT, Osceola County, Orange County, and StreetLight data. StreetLight data was used to collect turning movement counts for pre-COVID traffic conditions at study intersections. **Figure 3** provides the location of turning movement count data collected for the study.

Copies of all traffic count data are provided in **Appendix C**.

	Intersection Name	Traffic Control
1	Simpson Rd.	Signal
2	E. Lake Pointe Dr.	Stop Control
3	Nele Rd. / Tohopekaliga High School	Signal
4	Springlake Village Blvd.	Stop Control
5	Turnberry Blvd.	Signal
6	N. Pointe Blvd.	Stop Control
7	Timber Ln. / Creek Bank Dr.	Stop Control
8	Fells Cove Blvd.	Stop Control
9	Narcoossee Rd.	Signal

N
N.T.S.

Project Location

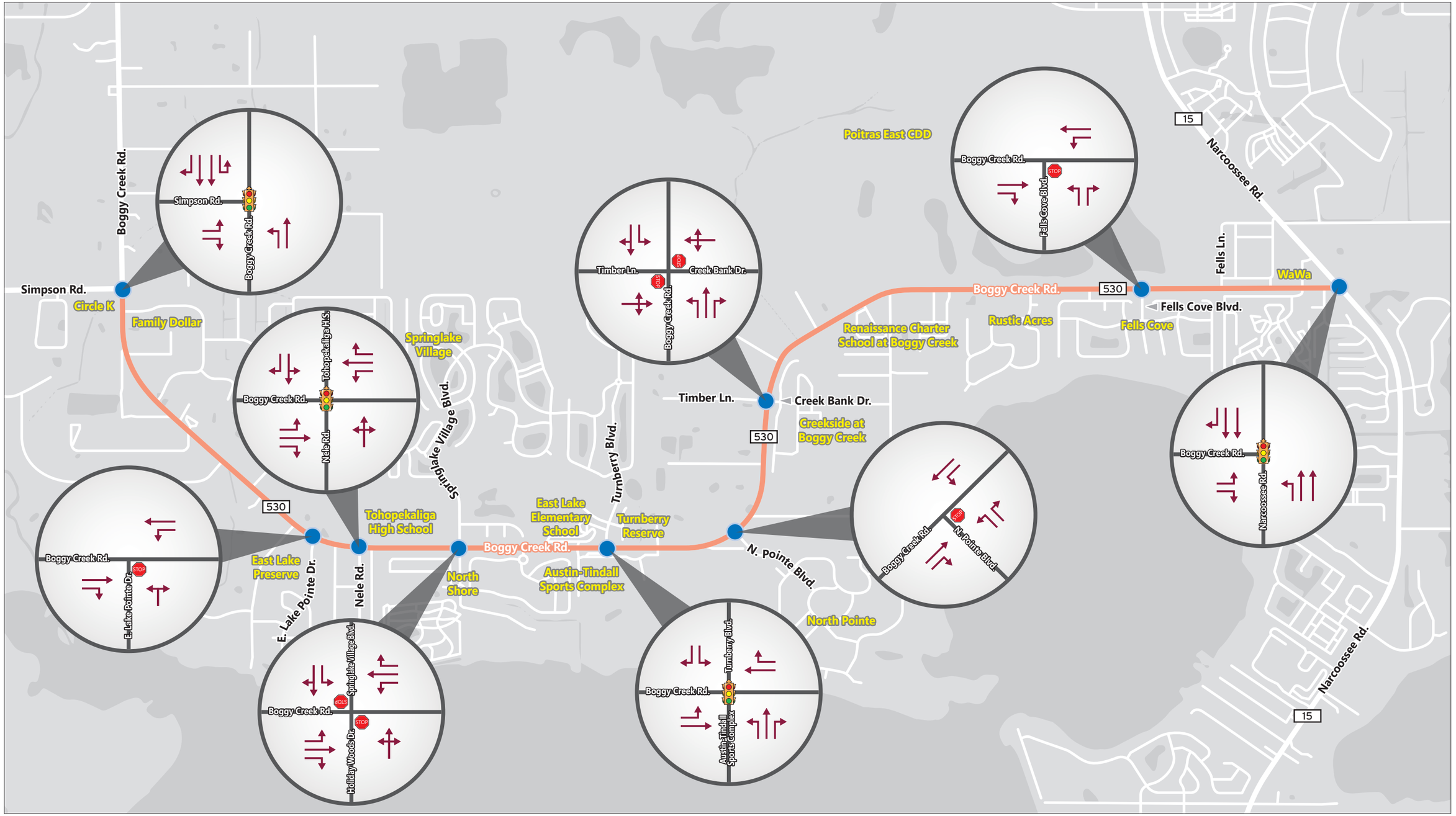
Figure 3

Pre-COVID Data Collection (Turning Movement Counts) Locations
Boggy Creek Road Project Traffic Analysis Report

3.2 Existing Geometry

Figure 4 provides the existing base year 2019 intersection geometry for all the intersections evaluated in this study. The existing base year 2019 intersection geometry information was obtained and verified based on field visits and aerial photographs.

The existing geometry plays a vital role in assessing the intersection level of service (LOS). LOS is a qualitative measure of how efficient a roadway or intersection operates. LOS A represents the highest traffic flow quality, while LOS E represents traffic flow at capacity. LOS F represents forced flow congested conditions. LOS B, C, and D represent a gradual degradation in traffic flow quality before reaching capacity. The existing geometry will be considered as one of the factors in determining potential intersection improvements to accommodate the travel demand.



N.T.S.

- Project Location
- Lane Geometry
- Stop Controlled Intersection
- Signalized Intersection

Figure 4

Existing Base Year 2019 Geometry
Boggy Creek Road Project Traffic Analysis Report

3.3 Existing Traffic Volumes

The available traffic count information from 2019 Orange County annual counts and 2019 Osceola County annual counts were used to develop existing traffic characteristics for the Boggy Creek Road study corridor and the intersecting side streets.

Based on the volume counts obtained peak hour traffic flow (K measured) and, directional split (D measured) for the roadways in the study area were derived and summarized in **Table 1**. These field-measured adjustment factors provide an indication of existing traffic flow characteristics (i.e., constrained or unconstrained flow) which will be compared against the recommended ranges that are acceptable to the FDOT's Project Traffic Forecasting Handbook.

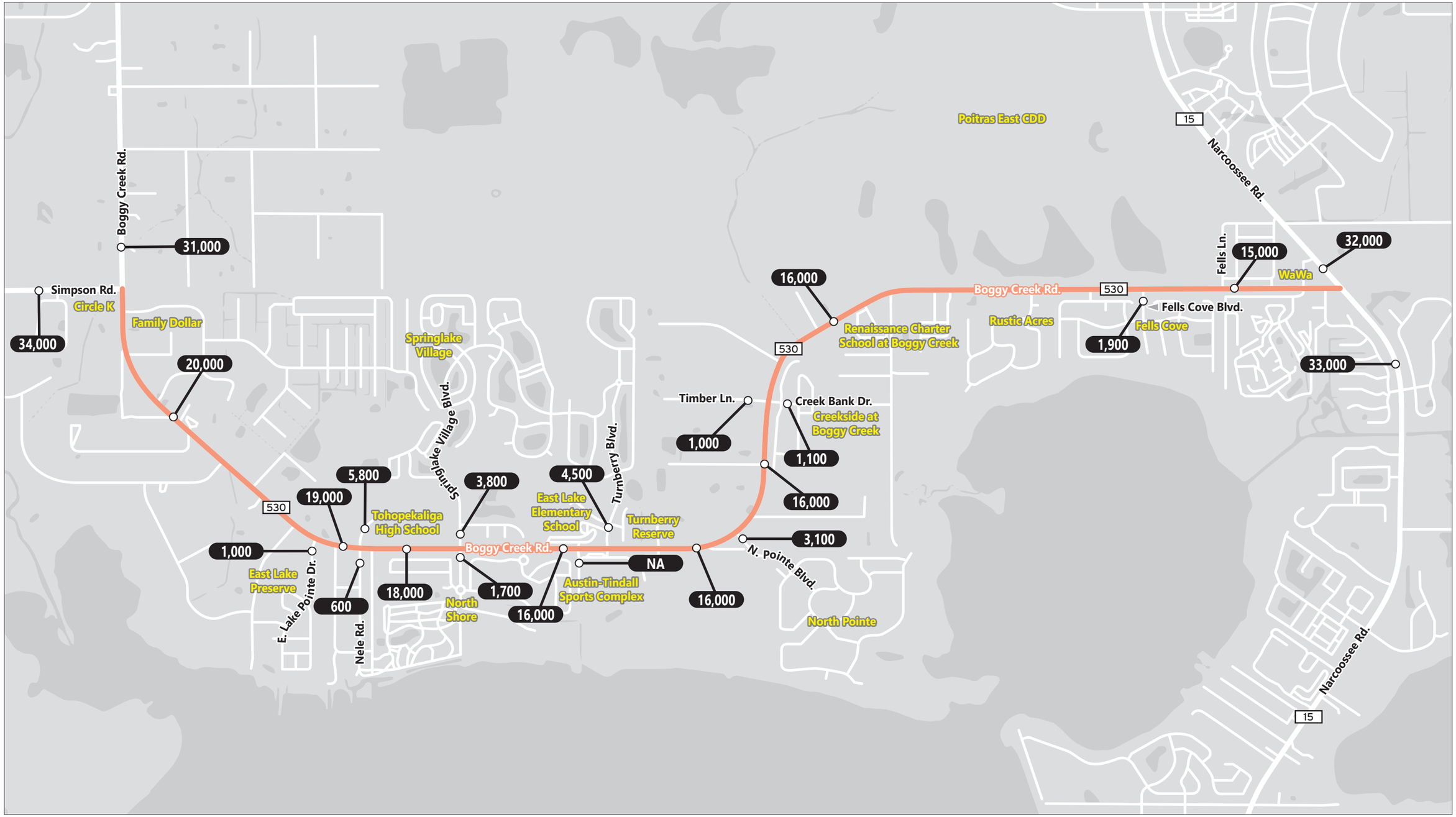
Utilizing the turning movement volumes at each intersection and the existing measured characteristics based on the roadway traffic counts, the base year AADT volumes were derived at each study intersection. **Figure 5** provide the adjusted existing base year AADT's for the study corridor. Note that the AADT volumes for the existing base year 2019 conditions were derived by applying the K measured factor from traffic volume counts obtained from Osceola County and Orange County, to the adjusted existing turning movement volumes that were collected as part of this study.

Table 1: Traffic Volumes & Characteristics Summary (based on available 2019 traffic counts)

Roadway/Segment	Date of Count	Measured Characteristics							
		ADT	Peak Hour	NB/EB	SB/WB	Peak Time	K Factor	D Factor	T Factor
Boggy Creek Road									
North of Simpson Road[1] (Station 8141)	11/12/2019-11/14/2019	31,712	1,941	1,225	716	7:00-8:00 AM	6.10%	63.10%	-NA-
			2,041	892	1,149	4:15-5:15 PM	6.40%	56.30%	-NA-
Simpson Road to Austin Tindall Park[2] (Station 474)	3/27/2019	18,581	1,489	620	869	7:30-8:30 AM	8.00%	58.40%	-NA-
			1,409	787	622	4:45-5:45 PM	7.60%	55.90%	-NA-
Austin Tindall Park to Narcoossee Road[2] (Station 475)	3/27/2019	15,334	1,138	737	401	7:30-8:30 AM	7.40%	64.80%	-NA-
			1,169	458	711	4:15-5:15 PM	7.60%	60.80%	-NA-
Narcoossee Road									
North of Boggy Creek Road[1] (Station 1686)	10/1/2019-10/3/2019	31,742	2,375	1,832	543	6:30-7:30 AM	7.50%	77.10%	-NA-
			2,537	922	1,615	4:30-5:30 PM	8.00%	63.70%	-NA-
South of Boggy Creek Road[2] (Station 551)	3/27/2019	35,090	2,959	2,142	817	7:30-8:30 AM	8.40%	72.40%	-NA-
			2,739	728	2,011	6:30-7:30 PM	7.80%	73.40%	-NA-
Simpson Road									
West of Boggy Creek Road[2] (Station 479)	3/13/2019	27,868	1,582	819	763	6:30-7:30 AM	5.70%	51.80%	-NA-
			1,528	673	855	5:45-6:45 PM	5.50%	56.00%	-NA-

Notes:

1. 2019 Orange County Annual Traffic Counts
2. 2019 Osceola County Annual Traffic Counts



Project Location

000 Annual Average Daily Traffic (AADT)

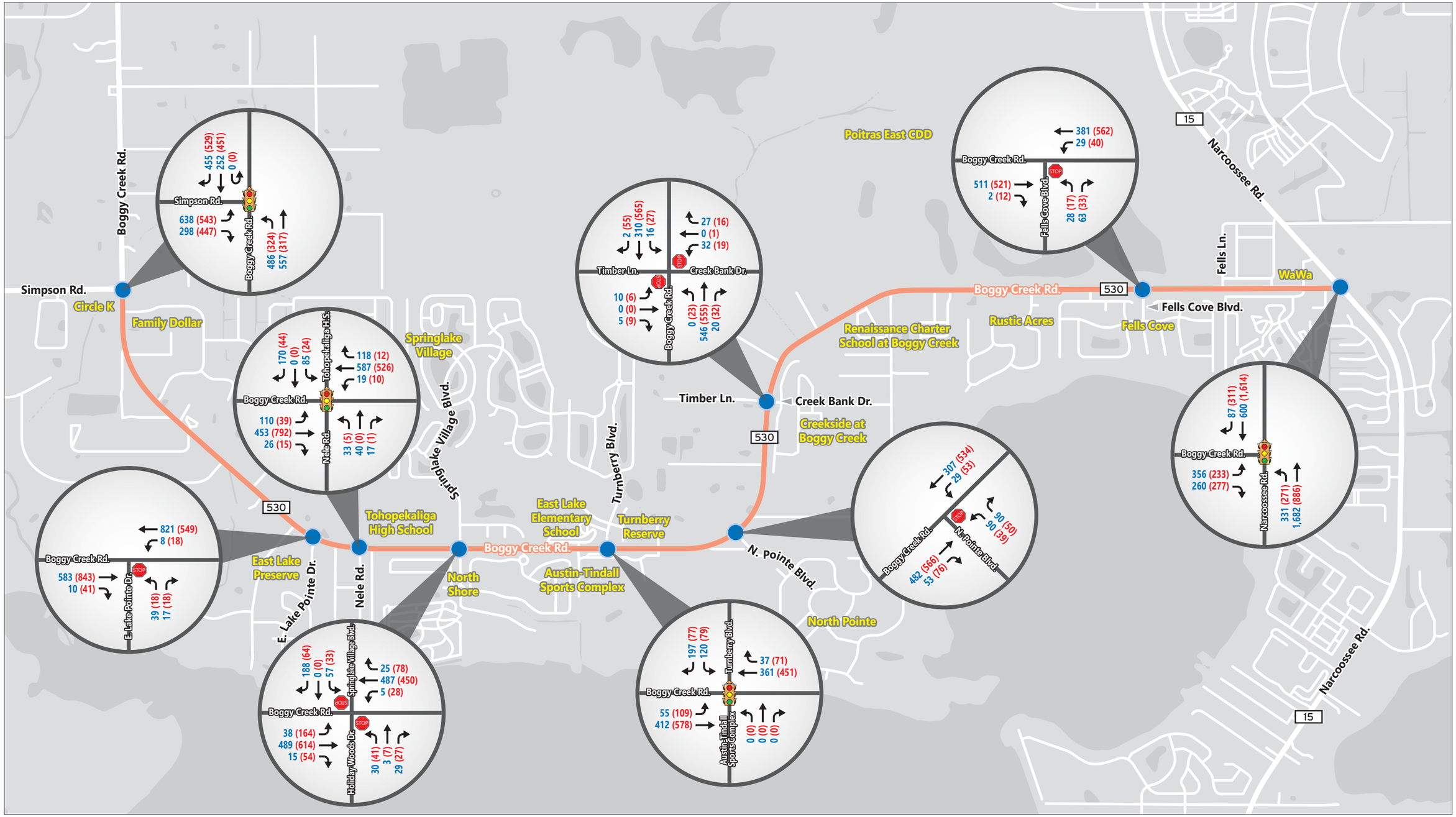
N.T.S.

Figure 5

Existing Base Year 2019
Annual Average Daily Traffic (AADT)
Boggy Creek Road Project Traffic Analysis Report

3.4 Year 2019 Turning Movement Counts

Turning movement counts were obtained for the AM and PM peak hour conditions for the nine (9) study intersections from StreetLight data, checked for reasonableness (with previous traffic studies) and balanced for upstream and downstream flows. The turning movement counts from the side streets were adjusted based on the previous projects and then through movements on Boggy Creek Road were adjusted for reasonableness based on engineering judgement. Raw data for the base year AM and PM peak hour turning movement volumes collected for September 2019 (represents both a pre-COVID and a non-holiday period) at the study intersections are available in **Appendix B**. The adjusted base year AM and PM peak hour turning movement volumes for the study corridor are shown in **Figure 6**.



N.T.S.

- Project Location
- AM (PM) Turning Movement Volumes
- Stop Controlled Intersection
- Signalized Intersection

Figure 6

Existing Base Year 2019 Turning Movement Volumes

Boggy Creek Road Project Traffic Analysis Report

3.5 2019 Year LOS Analysis

An analysis of the LOS performance based on existing geometry serves as one of the factors in identifying roadway and intersection improvements needed to accommodate existing and future travel demand.

Intersection levels of service were determined utilizing Highway Capacity Manual (HCM) 6th edition methodologies within Synchro 10.0 software. For the study roadway segments, LOS was determined using arterial speeds from Synchro 10.0. The signal timing data provided by the Osceola County were used in the intersection LOS analysis for all the signalized intersections.

Per Highway Capacity Manual (HCM 6th Exhibit 20-2), at an unsignalized intersection, an average control delay per vehicle from 35 seconds up to 50 seconds is considered LOS E condition and beyond 50 seconds is considered LOS F condition. For signalized intersections (HCM 6th Exhibit 19-8), an average control delay per vehicle from 55 seconds up to 80 seconds is considered LOS E condition and beyond 80 seconds is considered LOS F condition.

3.5.1 Year 2019 Intersection LOS Analysis

The year 2019 AM and PM peak hour turning movement volumes along with existing intersection geometry and signal timings were used in the intersection LOS analysis. A summary of the traffic operations LOS analysis (Delays, v/c ratio and 95th percentile queues for each movement) for the study intersections are included in **Table 2.**

As shown in **Table 2**, all the signalized intersections were found to operate at LOS D or better except Boggy Creek Road at Simpson Road intersection. As mentioned before, this intersection of Boggy Creek Road and Simpson Road was evaluated under "Simpson Road Improvements PD&E Services". For all the unsignalized intersections where the minor street movements operate under stop control, were found to operate at a LOS C or better except for the minor streets of Springlake Village Boulevard and East Lake Pointe Drive that were found to operate at LOS E (or LOS F).

The existing year 2019 AM and PM peak hour Synchro intersection analysis outputs are included in **Appendix D.**

Table 2: Year 2019 Peak Intersection Analysis Summary

Study Intersections along Boggy Creek Road	Control Type	Movement	Year 2019 AM Peak Hour				Year 2019 PM Peak Hour			
			95% Queue	v/c ratio	Delay (s)	LOS	95% Queue	v/c ratio	Delay (s)	LOS
Simpson Road	Signal	**Overall**			**135.7**	**F**			**73.5**	**E**
		EBL	1,375	1.100	132.1	F	1,025	0.970	91.2	F
		EBR	475	0.580	53.3	D	800	0.890	78.0	E
		NBL	1,700	1.940	490.2	F	950	1.380	253.7	F
		NBT	600	0.550	27.2	C	300	0.310	20.8	C
		SBT	175	0.170	31.9	C	300	0.290	33.2	C
		SBR	225	0.380	6.4	A	275	0.450	7.1	A
East Lake Pointe Drive	Stop	WBL	0	0.010	8.8	A	0	0.030	10.1	B
		NBL/R	25	0.340	36.2	E	25	0.200	28.6	D
Nele Road/ Tohopekaliga High School	Signal	**Overall**			**35.9**	**D**			**10.4**	**B**
		EBL	50	0.320	10.9	B	0	0.060	4.1	A
		EBT	300	0.440	11.5	B	325	0.600	8.7	A
		EBR	25	0.030	7.5	A	0	0.010	3.8	A
		WBL	0	0.040	7.9	A	0	0.020	5.9	A
		WBT	450	0.600	15.9	B	225	0.410	7.6	A
		WBR	75	0.140	9.5	A	0	0.010	4.7	A
		NBL	325	1.240	232.9	F	0	0.050	54.5	D
		NBT/R	0	0.000	0.0	A	0	0.000	0.0	A
		SBL/T	175	0.650	65.6	E	25	0.170	55.1	E
		SBR	350	0.900	92.0	F	75	0.480	57.1	E
Springlake Village Boulevard	Stop	EBL	0	0.040	8.7	A	25	0.170	9.3	A
		WBL	0	0.010	8.5	A	0	0.030	9.2	A
		NBL/T/R	50	0.400	41.1	E	100	0.810	124.1	F
		SBL	50	0.380	40.4	E	50	0.520	106.2	F
		SBR	50	0.350	14.9	B	0	0.110	11.9	B
Turnberry Boulevard	Signal	**Overall**			**21.1**	**C**			**12.1**	**B**
		EBL	25	0.090	6.7	A	25	0.180	5.3	A
		EBT	125	0.320	6.0	A	125	0.420	4.5	A
		WBT	200	0.340	12.5	B	225	0.400	10.8	B
		WBR	25	0.040	9.6	A	25	0.080	7.7	A
		SBL	150	0.460	47.5	D	100	0.520	50.3	D
		SBR	275	0.850	58.8	E	100	0.570	51.4	D
North Pointe Boulevard	Stop	NWL	25	0.310	22.3	C	25	0.240	32.0	D
		NWR	25	0.170	12.6	B	0	0.100	13.0	B
		SWL	0	0.030	8.7	A	0	0.060	9.2	A
Timber Lane/ Creek Bank Drive	Stop	WBL/T/R	25	0.200	19.1	C	25	0.200	28.6	D
		EBL/T/R	0	0.060	18.3	C	0	0.070	22.7	C
		NBL	0	0.000	0.0	A	0	0.030	9.0	A
		SBL	0	0.020	8.8	A	0	0.030	8.9	A
Fells Cove Boulevard	Stop	WBL	0	0.030	8.6	A	0	0.040	8.8	A
		NBL	0	0.110	20.5	C	0	0.090	25.9	D
		NBR	0	0.120	12.6	B	0	0.070	12.2	B
Narcoossee Road	Signal	**Overall**			**40.7**	**D**			**40.3**	**D**
		EBL	750	1.290	197.9	F	300	0.840	63.2	E
		EBR	450	1.060	117.2	F	525	1.130	139.6	F
		SET	175	0.330	14.3	B	725	0.940	35.9	D
		SER	0	0.000	0.0	A	0	0.000	0.0	A
		NWL	125	0.580	9.3	A	350	0.910	55.4	E
		NWT	375	0.710	11.1	B	150	0.380	6.7	A

3.5.2 Year 2019 Roadway Operational Analysis

The existing year roadway segment LOS analysis was performed for AM and PM peak hours based on generalized capacities obtained from 2020 FDOT Generalized Service Volume Tables.

As shown in **Table 3,** all roadway segments along Boggy Creek Road were found to operate with an acceptable level of service (LOS) C or better condition except for the roadway segments from north of Simpson Road to Nele Road that were found to operate at an LOS F/LOS E condition during year 2019 AM peak hour conditions. During 2019 PM peak hour conditions, all roadway segments along Boggy Creek Road were found currently operating at LOS C condition or better except the roadway segments from north of Simpson Road to Springlake Village Boulevard that were found operating at LOS F/LOS E condition.

Based on the results shown in **Table 3** it can be clearly seen that the existing Boggy Creek Road from Simpson Road to Narcoossee Road needs to be widened to a four-lane divided roadway and make it safer for the traveling public.

Table 3: Year 2019 Roadway Operational Analysis Summary

Roadway Segments along Boggy Creek Road	Number of Lanes	Target LOS Standard	Capacity	AM Peak Hour			PM Peak Design Hour		
				Volume	V/C Ratio	LOS	Volume	V/C Ratio	LOS
North of Simpson Road	2 Ln	E	880	1,195	1.360	F	980	1.110	F
Simpson Road to East Lake Pointe Drive	2 Ln	E	880	1,043	1.190	F	898	1.020	F
East Lake Pointe Drive to Nele Road	2 Ln	E	880	829	0.940	E	861	0.980	E
Nele Road to Springlake Village Boulevard	2 Ln	E	880	724	0.820	C	832	0.950	E
Springlake Village Boulevard to Turnberry Boulevard	2 Ln	E	880	575	0.650	C	714	0.810	C
Turnberry Boulevard to North Pointe Boulevard	2 Ln	E	1,610	549	0.340	C	665	0.410	C
North Pointe Boulevard to Timber Lane	2 Ln	E	1,610	572	0.360	C	616	0.380	C
Timber Lane to Fells Cove Boulevard	2 Ln	E	1,610	583	0.360	C	647	0.400	C
Fells Cove Boulevard to Narcoossee Road	2 Ln	E	1,610	616	0.380	C	602	0.370	C

4 Crash Data Review

As part of this Alternative Evaluation Study, a safety analysis was conducted based on the approved Traffic Analysis Methodology that follows the criteria contained in the Highway Safety Manual (HSM). The safety analysis is based on the latest available five (5) years of crash data from (January 1, 2015 to December 31, 2019). The safety analysis will be based on the following methodology:

- Identifying the Crash Severity & Conditions
- Identifying the Crash Type
- Identifying the Number of Crashes by Study Intersections
- Overview of Fatal crashes
- Development of Roadway Segment Crash Frequency and Crash Rates
- Conduct Comparison of Crash Rate to FDOT Districtwide and Statewide Statistics

4.1 Existing Crash Data Statistics

Crash data for nine (9) intersections on Boggy Creek Road, from Simpson Road to Narcoossee Road, were collected from Signal Four Analytics. The data covers crashes occurring between the dates of January 1, 2015 to December 31, 2019 (latest available five (5) years of data). A total of 509 crashes occurred within the study corridor during the five (5) year analysis period. **Tables 4 and 5** summarize the crash severity and conditions along the Boggy Creek Road study corridor for each year from January 2015 to December 2019.

As shown in **Table 4**, out of the 509 total crashes that occurred over the five (5) year period, there were a total of 5 fatal crashes (0.98%), 220 injury crashes (43.22%), and 284 (55.80%) property damage only crashes. In addition, a total of 7 crashes (1.38%) occurred during the five (5) year study period that involved being under the influence of Alcohol and Drugs.

Based on **Table 5**, out of the 509 total crashes that occurred, there were a total of 313 (61.5%) crashes occurred during the daylight hours, 156 crashes (30.7%) during dark conditions, 25 crashes (4.9%) during dawn conditions, and 15 (2.9%) crashes were reported to have occurred during dusk conditions. In addition, a total of 455 (89.4%) crashes occurred during dry roadway conditions with the remaining 54 (10.6%) occurring during wet and slippery roadway conditions.

Table 4: Crash Summary by Year and Severity

Year	Total Number of Crashes	Fatal Crashes	Injury Crashes	Property Damage Only Crashes	Under the Influence of Alcohol	Under the Influence of Drugs
2015	70	0	35	35	0	0
2016	75	2	30	43	1	1
2017	88	1	36	51	2	0
2018	151	0	67	84	3	0
2019	125	2	52	71	0	0
2015-2019	**509**	**5**	**220**	**284**	**6**	**1**
Average per Year	101.8	1.0	44.0	56.8	1.2	0.2
Percent	------	0.98%	43.22%	55.80%	1.17%	0.20%

Table 5: Crash Summary by Year and Conditions

Year	Total Number of Crashes	Dry Conditions	Wet Conditions	Daylight Conditions	Dawn Conditions	Dusk Conditions	Dark Conditions
2015	70	66	8	33	3	2	32
2016	75	66	9	40	5	2	28
2017	88	78	10	59	3	2	24
2018	151	136	15	105	6	5	35
2019	125	113	12	76	8	4	37
2015-2019	**509**	**455**	**54**	**313**	**25**	**15**	**156**
Average Per Year	101.8	91.0	10.8	62.6	5.0	3.0	31.2
Percent	------	89.4%	10.6%	61.5%	4.9%	2.9%	30.7%

4.2 Existing Crash Data by Crash Type

Table 6 shows the summary of the crashes by crash types. Per the summary, Rear End crashes accounted for most crashes (41.26% of total) within the study corridor followed by Left Turn crashes (26.13% of total), Off Road crashes (7.86% of total), and Other crashes (11.00% of total). As shown in **Table 6,** there were a total of 4 crashes (0.79% of total) that involved pedestrian and bicycles that were reported in the last five (5) years.

Table 6: Crash Summary by Year and Crash Type

Crash Type	2015	2016	2017	2018	2019	Total	Average per Year	Percent
Rear End	19	28	41	64	58	210	42.0	41.26%
Head On	1	1	1	1	2	6	1.2	1.18%
Sideswipe	1	4	8	2	9	24	4.8	4.72%
Roll-Over	4	1	3	2	0	10	2.0	1.96%
Angle	1	0	3	4	1	9	1.8	1.77%
Left Turn	23	22	21	37	30	133	26.6	26.13%
Right Turn	4	2	3	3	0	12	2.4	2.36%
Off Road	8	6	2	14	10	40	8.0	7.86%
Pedestrian & Bicycle	1	1	0	1	1	4	0.8	0.79%
Animal	1	1	1	1	1	5	1	0.98%
Other	7	9	5	22	13	56	11.2	11.00%
Total	70	75	88	151	125	509	101.8	100.00%

Note: "Other" is defined as types of crashes not presented in the table or categorized as "other" in the crash report

4.3 Existing Crash Data by Intersections

For this PTAR study, a review was performed for the crash data over the five (5) year study period at the study intersections. **Tables 7** and **8** summarizes the crash severity and conditions at the study intersections along the Boggy Creek Road study corridor for each year from January 2015 to December 2019.

As shown in **Table 7**, out of the 360 total intersections crashes that occurred over the five (5) year period at the study intersections, there was a total of 1 fatal crash (0.28%), 159 injury crashes (44.12%), and 200 (55.60%) property damage only crashes.

Based on **Table 8**, out of the 360 total intersection crashes that occurred, there were a total of 212 (58.9%) crashes occurred during the daylight hours, 120 crashes (33.4%) during dark conditions, 16 crashes (4.4%) during dawn conditions, and 12 (3.3%) crashes were reported to have occurred during dusk conditions. In addition, a total of 320 (88.9%) crashes occurred during dry roadway conditions with the remaining 40 (11.1%) occurring during wet and slippery roadway conditions

In addition, as shown in **Tables 7 and 8**, it was found that the signalized intersection of Simpson Road had the highest number of crashes at a total of 172. The signalized intersection of Narcoossee Road was found to have the next highest number of crashes with 123 crashes. The third highest number of crashes was found to occur at the signalized intersection of Turnberry Boulevard/Austin Tindall Park at 23 crashes. The remaining study intersections were found to have less than 15 crashes that occurred over the five (5) year study period. The two highest-crash intersections, the signalized intersections at Simpson Road and Narcoossee Road, accounted for 82% of the corridor's intersection crashes. As such the crash trends at each of these intersections were examined in further detail.

4.3.1 Simpson Road

At the intersection with Simpson Road, the leading crash types are rear end and left turn crashes. These crash types are also slightly overrepresented when compared to the averages at intersections along the corridor. Rear end crashes account for 47% of crashes at this intersection, but only 41% of the crashes at other intersections on the corridor. Left turn crashes make up 35% of crashes at this intersection, but only 27% of crashes at other intersections on the corridor.

Generally, lighting conditions appear to be contributing to the occurrence of crashes in the corridor. The statewide average for crashes occurring in non-daylight (dark, dawn, and dusk) conditions over the past four years has hovered around 27%; the average percentage of crashes occurring in such conditions at intersections in this corridor is 41%. At this intersection, non-daylight crashes accounted for 48% of crashes,

indicating an overrepresentation of crashes occurring during dark, dawn, and dusk conditions. Intersection lighting does not appear to be provided at this intersection.

Potential contributing factors to the occurrence of crashes at this intersection are listed below:

- Intersection lighting does not appear to be provided.
- Gaps for the northbound left may be difficult to find or judge in the peak periods when the movement is permitted.
- The NB and SB outside through lanes merges with the inside through lane just beyond the intersection.
- The storage for the eastbound left turn lane does not appear to be adequate.

4.3.2 Narcoossee Road

At the intersection with Narcoossee, rear end and left turn crashes are the leading crash types, although neither are overrepresented when compared to the other intersections along the corridor. Though accounting for a relatively small percentage of intersection crashes, both sideswipe crashes and "other" crashes are overrepresented at this intersection. Sideswipe crashes account for 7% of crashes at this intersection, but only 2% of the crashes at other intersections on the corridor. Other crashes make up 12% of crashes at this intersection, but only 8% of crashes at other intersections on the corridor.

A number of the sideswipe crashes appear to be caused by improper lane changing on Narcoossee, though a couple crashes appear to be related to the free-flow southbound right turn lane that feeds into the right turn only lane on westbound Boggy Creek Road. No clear trends were gleaned from the "other" crash types other than a couple crashes involving an illegal southbound U-turn at the intersection. Crashes occurring with wet pavement conditions are also overrepresented when comparing to the other corridor intersections (15% versus 10%). At this intersection, non-daylight crashes accounted for 35% of crashes, indicating an overrepresentation of crashes occurring during dark, dawn, and dusk conditions. Intersection lighting is provided in one corner of this intersection.

Potential contributing factors to the occurrence of crashes at this intersection are listed below:

- Intersection lighting may not be adequate.
- Retroreflective backplates are not installed on NB and SB approaches.
- The southbound right turn lane free flows into a drop lane.
- Southbound u-turns are restricted, and no turn lane is provided, though crash history indicates drivers are attempting this maneuver from the inside through lane.

- The pavement at this intersection may be slippery when wet due to inadequate drainage or worn pavement.
- Gaps for the northbound left may be difficult to find or judge in the peak periods when the movement is permitted.

Table 7: Intersection Crash Summary by Severity

No.	Intersection	Control Type	Total Number of Crashes	Fatal Crashes	Injury Crashes	Property Damage Only Crashes
1	Simpson Road	Signal	172	0	82	90
2	East Lake Pointe Drive	Stop	2	0	1	1
3	Nele Road/Tohopekaliga High School	Signal	8	0	1	7
4	Springlake Village Boulevard/Holiday Woods Drive	Stop	15	0	6	9
5	Turnberry Boulevard/Austin Tindall Park	Signal	23	1	9	13
6	North Pointe Boulevard	Stop	7	0	3	4
7	Timber Lane/Creek Bank Drive	Stop	5	0	1	4
8	Fells Cove Boulevard	Stop	5	0	3	2
9	Narcoossee Road	Signal	123	0	53	70
Total		**------**	**360**	**1**	**159**	**200**

Table 8: Intersection Crash Summary by Conditions

No.	Intersection	Total Number of Crashes	Roadway Conditions		Lighting Conditions			
			Dry	Wet	Daylight	Dawn	Dusk	Dark
1	Simpson Road	172	156	16	89	8	6	69
2	East Lake Pointe Drive	2	2	0	1	0	0	1
3	Nele Road/Tohopekaliga High School	8	7	1	4	3	0	1
4	Springlake Village Boulevard/Holiday Woods Drive	15	12	3	9	0	0	6
5	Turnberry Boulevard/Austin Tindall Park	23	22	1	17	2	0	4
6	North Pointe Boulevard	7	6	1	6	0	0	1
7	Timber Lane/Creek Bank Drive	5	5	0	3	0	0	2
8	Fells Cove Boulevard	5	5	0	3	0	0	2
9	Narcoossee Road	123	105	18	80	3	6	34
Total		**360**	**320**	**40**	**212**	**16**	**12**	**120**

4.4 Existing Crash Data by Segments

Tables 9 and **10** summarizes the crash severity and conditions at the study segments along the Boggy Creek Road study corridor from January 2015 to December 2019.

As shown in **Table 9,** out of the 149 total crashes that occurred over the five (5) year period at the study segments there was a total of 4 fatal crash (2.68%), 62 injury crashes (41.61%), and 83 (55.70%) property damage only crashes.

Based on **Table 10**, out of the 149 total segment crashes that occurred, there were a total of 100 (67.11%) crashes occurred during the daylight hours, 36 crashes (24.16%) during dark conditions, and remaining crashes during dawn or dusk conditions. In addition, a total of 135 (90.60%) crashes occurred during dry roadway conditions with the remaining 14 (9.40%) occurring during wet and slippery roadway conditions.

Table 9: Segment Crash Summary by Severity

Segments along Boggy Creek Road	Total Number of Crashes	Fatal Crashes	Injury Crashes	Property Damage Only Crashes
Simpson Road to East Lake Pointe Drive	68	0	27	41
East Lake Pointe Drive to Nele Road/Tohopekaliga High School	14	2	3	9
Nele Road/Tohopekaliga High School to Springlake Village Boulevard/Holiday Woods Drive	12	0	4	8
Springlake Village Boulevard/Holiday Woods Drive to Turnberry Boulevard/Austin Tindall Park	4	0	1	3
Turnberry Boulevard/Austin Tindall Park to North Pointe Boulevard	1	0	0	1
North Pointe Boulevard to Timber Lane/Creek Bank Drive	11	0	7	4
Timber Lane/Creek Bank Drive to Fells Cove Boulevard	27	2	14	11
Fells Cove Boulevard to Narcoossee Road	12	0	6	6

Table 10: Segment Crash Summary by Conditions

Segments along Boggy Creek Road	Roadway Conditions		Lighting Conditions			
	Dry	Wet	Daylight	Dawn	Dusk	Dark
Simpson Road to East Lake Pointe Drive	61	7	51	2	3	12
East Lake Pointe Drive to Nele Road/Tohopekaliga High School	12	2	10	0	0	4
Nele Road/Tohopekaliga High School to Springlake Village Boulevard/Holiday Woods Drive	10	2	7	2	1	2
Springlake Village Boulevard/Holiday Woods Drive to Turnberry Boulevard/Austin Tindall Park	4	0	3	0	0	1
Turnberry Boulevard/Austin Tindall Park to North Pointe Boulevard	1	0	0	0	0	1
North Pointe Boulevard to Timber Lane/Creek Bank Drive	11	0	6	0	0	5
Timber Lane/Creek Bank Drive to Fells Cove Boulevard	24	3	15	5	0	7
Fells Cove Boulevard to Narcoossee Road	12	0	8	0	0	4

4.5 Overview of Fatal Crashes

The following provides more details on the cause of five (5) fatal accidents occurred over the five (5) year study period from January 2015 to December 2019 based on the crash reports obtained from Signal Four Analytics:

1. The first fatality crash occurred during August 2016 and involved the motorist driving under the influence of alcohol and drugs. Based on the crash report, this was a single vehicle accident that included a driver and one passenger. The vehicle was travelling east along Boggy Creek Road near the intersection of East Lake Pointe Road and as the driver of the vehicle failed to maintain control of the vehicle, the vehicle ran off the roadway and collided with a tree. The crash occurred in dark (unlighted) and dry conditions.
2. The second fatality involved improper vehicle operation and occurred during September 2016. While travelling east along Boggy Creek Road approaching the intersection of High Plains Lane, the driver failed to safely navigate the curvature of the roadway and crossed into the westbound travel lanes causing a head-on collision with another vehicle. The crash occurred in dark (unlighted), and dry conditions.
3. The third fatality occurred during July 2017, with the driver heading east along Boggy Creek Road approaching the intersection of East Lake Pointe Road within the roadway curvature. The driver at fault failed to navigate the curve and crossed over in the westbound travel lanes into oncoming traffic for a head-on collision. The crash occurred in daytime, and dry conditions.
4. The fourth fatality occurred during October 2019, involved a motorcyclist travelling east along Boggy Creek Road after passing the intersection of High Plains Lane. The motorcyclist attempted to overtake and pass a vehicle and collided with another vehicle approaching in the westbound travel lanes. This resulted in a 4-vehicle crash due to improper lane change and passing. The crash occurred in dark (unlighted), in slippery, wet conditions.
5. The final fatality occurred during October 2019. The driver at fault was travelling east along Boggy Creek Road failed to stay within the appropriate travel lane while negotiating the curvature of the roadway resulting in a head-on collision. The crash occurred in dark (unlighted), and dry conditions.

Overall, the fatal crashes are similar in that four out of five fatalities were head-on collisions, and four out of five occurred during nighttime, dark unlighted conditions. Potential countermeasures to incorporate into the roadway design include providing corridor lighting, installing a raised median, and providing horizontal alignment warning signs on the corridor's curves, particularly at East Lake Pointe Drive and High Planes Lane.

4.6 Crash Frequency & Crash Rate Development

Based on the Boggy Creek Road Traffic Methodology, crash rates and frequencies along the study corridor were developed based on the five (5) year crash information obtained from Signal Four Analytics.

Table 11 shows the summary of the crash rate compared to the latest available statewide average crash rates for the segment types. The latest 5-year statewide crash rates were available are for 2014-2018, and are provided in **Appendix E**. The crash rates are expressed in the number of crashes per million vehicles traveled, based on the following equation:

$$Crash\ Rate\ of\ Segment = \frac{Total\ Number\ of\ Crashes\ x\ 1{,}000{,}000}{AADT\ x\ 365\ x\ Number\ of\ Years\ x\ Length\ of\ Roadway\ Segment}$$

As shown in **Table 11**, along the Boggy Creek Road study corridor, the roadway segment from Fells Cove Boulevard to Narcoossee Road was found to have the highest crash rate at 6.58 per million vehicle miles traveled with a total of 137 crashes. The second and third highest crash rates of 5.08 (239 crashes) and 2.53 (50 crashes) per million vehicle miles traveled were found to be along the roadway segments from Simpson Road to East Lake Pointe Drive, and East Lake Pointe Drive to Springlake Village Boulevard/Holiday Woods Drive, respectively. The roadway segment from Springlake Village Boulevard/Holiday Woods Drive was found to have the lowest crash rate at 0.87 per million vehicle miles traveled with a total of 83 crash occurrences.

It is to be noted that FDOT District Five and FDOT statewide crash rates for a similar facility is 3.10 and 3.65, respectively. Based on this information portions of Boggy Creek Road from Simpson Road to East Lake Pointe Drive and from Fells Cove Boulevard to Narcoossee Road can be categorized as high crash segments. Also, there were five (5) fatalities (explained in Section 4.4) along the study corridor within the last five years. This clearly shows that the existing Boggy Creek Road from Simpson Road to Narcoossee Road needs to be widened to a four-lane divided roadway and make it safer for the traveling public.

Table 11: Crash Frequency & Crash Rate Summary

Roadway Segment	AADT	Number of Crashes	Segment Length	Crash Frequency	Crash Rate
Simpson Road to East Lake Pointe Drive	20,000	239	1.29	47.8	5.08
East Lake Pointe Drive to Springlake Village Boulevard/Holiday Woods Drive	19,000	50	0.57	10	2.53
Springlake Village Boulevard/Holiday Woods Drive to Fells Cove Boulevard	16,000	83	3.28	16.6	0.87
Fells Cove Boulevard to Narcoossee Road	15,000	137	0.76	27.4	6.58

As requested by Osceola County, the year 2020 crash data was obtained from Signal Four analytics and provided in the **Appendix E**. A total of 77 crashes occurred within the study corridor during the year 2020 (till November). Out of the 77 total crashes that occurred, there were a total of 59 (77%) crashes occurred during the daylight hours and 18 (23%) crashes were reported to have occurred during dark conditions. In addition, a total of 70 (91%) crashes occurred during dry roadway conditions with the remaining 7 (9%) occurring during wet and slippery roadway conditions. Rear End crashes accounted for most crashes (45% of total) within the study corridor followed by Left Turn crashes (22% of total), Off Road crashes (10% of total), and Other crashes (9% of total). There was a total of 2 crashes (3% of total) related to pedestrian and bicycles that were reported during the year 2020 (till November).

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5 Development of Design Characteristics

The design traffic characteristics established in this section will be used in developing the Annual Average Daily Traffic (AADT) projections for the roadway segments in the future year conditions. These characteristics are determined based on the procedures outlined in the FDOT's Project Traffic Forecasting Handbook, dated January 2019.

5.1 Standard K Factor

The existing measured traffic characteristics for the study corridor are shown in **Table 1** for the mainline segments and major minor streets based on existing base year traffic counts. Based on the evaluation of the existing measured characteristics and the FDOT recommended Standard K value of 9.0%, a standard K Factor of 9.0% is recommended to be used for Boggy Creek Road per the Boggy Creek Road Traffic Analysis Methodology.

5.2 D Factor

The peak hour directional percent factor (D) represents the percentage of traffic during the peak hour that travels in the roadway's peak direction. This directional distribution factor, D factor, is based on the median value of the directional factors for the highest 200 hours of volumes for each continuous count station. In determining this factor for the study corridor and side streets, statewide guidelines obtained from the 2019 FDOT Project Traffic Forecasting Handbook for D factor were compared to D factors obtained from the field collected traffic counts.

The measured D for the study area roadways is shown in **Table 1**, respectively. The average of the measured D factors for the major streets of Boggy Creek Road, Narcoossee Road, and Simpson Road were found to be at 59.9%, 71.7%, and 53.2%, respectively.

Table 12 provides the current recommended range of D values from the FDOT Project Traffic Forecasting Handbook (2019) for an urbanized and rural arterial roadway.

Table 12: Recommended Range of D Values

Area & Highway Type	Value	Source
		FDOT[1]
Urban Arterial	Low	50.8%
	Medium	57.9%
	High	67.1%
Rural Arterial	Low	51.1%
	Medium	58.1%
	High	79.6%

Notes:
(1) Source: Table 2-2: FDOT Project Traffic Forecasting Handbook, January 2019

For this PTAR study, a D factor of 58.9% is recommended for Boggy Creek Road based on the average of the FDOT medium recommended and measured characteristics. Similarly, for Simpson Road a D factor of 55.6% is recommended based on the average of the existing measured characteristics and FDOT medium recommended D factor. For Narcoossee Road the existing measured D Factor was found to be an average value of 71.7%. However, as growth in this area is anticipated a D factor of 64.8% is recommended for Narcoossee Road based on the average of measured D factor and FDOT recommended medium value.

5.3 T & DHT Factors

The daily truck factor, T factor represents the percentage composition of medium sized and heavy trucks occurring in the traffic stream for a 24-hour period. The design hour truck, DHT, is the percentage of truck traffic during the peak hour and is recommended as one-half of the T factor in the Project Traffic Forecasting Handbook.

For this study, a T factor of 7.5% and DHT factor of 4.0% is recommended along the Boggy Creek Road (CoSite 927050) study corridor based on the Florida Traffic Online information and various other studies conducted along or in the vicinity of the study corridor. For Simpson Road (CoSite 927049) and Narcoossee Road (CoSite 927045) a T factor of 8.7% and 6.9% and DHT factor of 4.5% and 3.5% are recommended respectively. For the remaining minor side streets due based on the land uses being more residential, it is recommended to use a T factor of 2.0%.

5.4 Recommended Design Traffic Characteristics

Based on the afore- mentioned discussions and information, **Table 13** provides a summary of the recommended design traffic characteristics within the study corridor to be utilized for this PTAR.

Table 13: Recommended Design Traffic Characteristics

Roadway	Recommended Design Characteristics			
	K Factor	D Factor	T Factor	DHT Factor
Boggy Creek Road	9.0%	58.9%	7.5%	4.0%
Narcoossee Road	9.0%	64.8%	6.9%	3.5%
Simpson Road	9.0%	55.6%	8.7%	4.5%
Other Side Streets	Existing	Existing	2.0%	Existing

6 Sub-Area Model Validation

6.1 Introduction

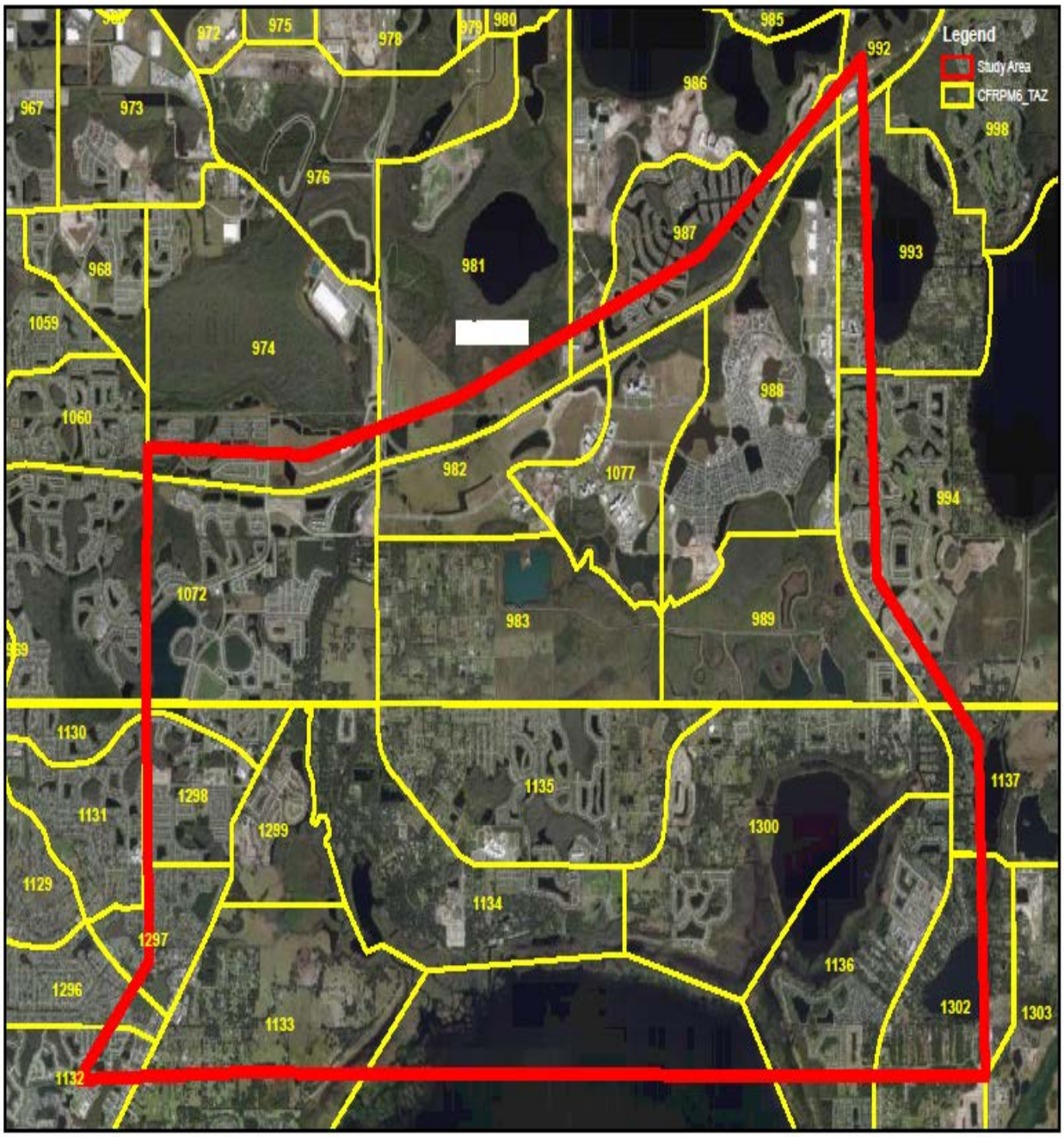
The traffic model applied for this study is based on the latest adopted Central Florida Regional Planning Model (CFRPM) version 6.1 with Cost Feasible Network for the year 2020 and future year 2040. The CFRPM model is an evaluation tool that represents land use and transportation interaction to assess the capability of the region's highway and transit networks to support anticipated growth. A sub-area validation was performed for the CFRPM year 2019 in support of this PTAR. The sub-area validation model revisions for the validated base year 2019 model will then be applied to the future year 2040 CFRPM model that will be utilized for this study. The sub-area model validation study area map is illustrated in **Figure 7**.

6.2 Base Year 2019 Model Validation

The model validation for the Boggy Creek Road Alternative Evaluation Study was performed to achieve better results in forecasting the future year traffic projections for the roadways within the study corridor. The model refinement was performed by fine tuning the network and land uses using the guidelines identified in the Travel Model Validation and Reasonable Checking Manual Second Edition provided by the Federal Highway Administration and FSUTMS-Cube Framework Phase II, Model Calibration and Validation Standards prepared by the FDOT System Planning Office.

In general, model validation is performed to ensure that the model is accurate enough to forecast the number of lanes required to handle the future project volumes. Validation criteria including volume over count (v/c) ratios and root mean square error (RMSE) were used to assess the accuracy of the base year model.

Figure 7: Sub-Area Model Validation Study Area



6.2.1 Base Year 2019 Model Adjustments

The validation base year 2019 model for the Boggy Creek Road is based on CFRPM6.1 Cost Feasible 2020 network. The Socio-Economic (SE) data for the base year 2019 model was initially developed by interpolating between the CFRPM Year 2010 SE data and CFRPM Year 2040 SE data. The 2019 SE data for the land use traffic analysis zones (TAZ's) within the vicinity of the sub-area model study area was developed based on review and comparison of land use intensity data information available from the Osceola and Orange County Property Appraisers website.

The validation base year 2019 model network in the sub-area study limits were checked and compared with all improvements and roadway conditions within the study corridor. The following summarizes the model network changes that were adjusted for validation purposes:

- Adjusted and modified the TAZ centroid connections for TAZ 974, TAZ 982, TAZ 986, TAZ 988, TAZ 989, TAZ 994, TAZ 1072, TAZ 1077, TAZ 1130, TAZ 1131, TAZ 1132, TAZ 1300, and TAZ 1301.
- Modified Boggy Creek Road between Simpson Road and Lake Nona Boulevard from 4 Lanes to 2 Lanes
- Modified Simpson Road between Osceola Parkway and Boggy Creek Road from 4 Lanes to 2 Lanes
- Modified Simpson Road between Osceola Parkway and Royal Palm Drive from 6 Lanes to 2 Lanes
- Modified Simpson Road between Royal Palm Drive and Buenaventura Boulevard from 6 Lanes to 4 lanes
- Modified Tavistock Lake Boulevard between Lake Nona Boulevard and Narcoossee Road from 4 Lanes to 2 Lanes
- Modified J. Lawson Boulevard to reflect the correct roadway alignment and to include a roadway connection with Boggy Creek Road
- Changed the facility type of Boggy Creek Road from Narcoossee Road to Simpson Road from 43 to 41
- Changed the facility type of Boggy Creek Road from Simpson Road to SR 417 (Central Florida Greeneway) from 46 to 41
- Changed the facility type of East Osceola Parkway from Buenaventura Boulevard to Simpson Road from 23 to 21
- Coded Lake Nona Boulevard between Boggy Creek Road and Medical City Drive as a 4-lane roadway with facility type 26 and facility type 46

- Changed the speed on Tavistock Lake Boulevard between Lake Nona Boulevard and Narcoossee Road from 45 miles per hour to 35 miles per hour
- Changed the SR 417 Toll Rates at the Lake Nona NB on ramp and SB off ramp from $0.75 to $0.50 and the at the Boggy Creek Road Mainline Toll Plaza from $1.25 to $0.75

6.2.2 Base year 2019 Model Validation Results

The validation of a traffic model involves verifying various statistics, most of which are related to actual ground counts that have been taken on various links throughout the highway network. Measures of effectiveness including the ratio of assigned volume-over-count volume on links, Percent Error by Facility Type, Percent Error by Volume Group, and Percent RMSE have been used in this study to evaluate whether the base year 2019 model has been validated within the allowable limits.

6.2.3 Base Year 2019 Volumes and Model Volumes

The year 2019 AADT counts for individual roadway segments were obtained from FDOT 2019 Florida Traffic Online, 2019 Orange County counts, 2019 Osceola County counts, and the 2019 CFX Traffic Data and Statistics Manual. The Peak Season Weekly Average Daily Traffic (PSWADT) obtained from CFRPM was converted to AADT using the 2019 Model Output Conversion Factor MOCF (from Florida Traffic Online 2019) of 0.97 for Osceola County and 0.98 for Orange County. The summary of the traffic count information and MOCF factors are included in **Appendix F**.

6.2.4 Model Measures of Effectiveness

To determine the accuracy of the validated sub-area model, Volume-Over-Count (V/C) ratios statistics were compared against the thresholds set by FDOT. For this study, nineteen (19) roadway segments were used to evaluate and compare the assigned volumes to counts within the study area. **Tables 14** and **15** summarizes the percent deviation error for facility types and volume groups for the before and after model validation scenarios along the Boggy Creek Road study corridor.

The percent deviation error is defined as ((Year 2019 model assignment in AADT – Year 2019 actual count in AADT)/(Year 2019 actual count in AADT)). Based on the results shown in **Tables 14 and 15,** the facility types and volume groups are within the acceptable and preferable FDOT standards.

Table 14: Volume-over-Count Ratio and Percent Error by Facility Type

Facility Type	FDOT Standards		Base Year 2019 Model Validation	
	Acceptable	Preferable	Before	After
Freeway (FT1X, FT8X, FT9X)	+/- 7%	+/- 6%	-41.51%	4.35%
Divided Arterial (FT2X)	+/- 15%	+/- 10%	21.48%	4.34%
Undivided Arterial (FT3X)	+/- 15%	+/- 10%	N/A	N/A
Collector (FT 4X)	+/- 25%	+/- 20%	-9.82%	-2.81%
One Way (FT6X)	+/- 25%	+/- 20%	N/A	N/A

Table 15: Percent Error by Volume Group

Volume Group	FDOT Standards		Base Year 2019 Model Validation	
	Acceptable	Preferable	Before	After
< 10,000 Volume	50%	25%	5.61%	-7.51%
10,000 - 30,000	30%	20%	-5.83%	-4.35%
30,000 - 50,000	25%	15%	4.56%	3.53%
50,000 - 65,000	20%	10%	NA	NA
65,000 - 75,000	15%	10%	-31.43	8.32
> 75,000	10%	5%	-76.89%	-2.09%

6.2.5 Root Mean Square Error (RMSE)

The percent RMSE is another aggregate measure of how well the model has been validated against ground counts and a commonly reported statistic in model validation. RMSE, is a measure of dispersion, tends to normalize model error better than volume-over-count ratios that allow for high ratios to offset low ratios. **Table 16** summarizes the RMSE statistic for the validated model and the acceptable and preferable thresholds set by FDOT. As shown in **Table 16**, the % RMSE values for all the volume groups are well within the acceptable percentages set by FDOT and well within the preferable percentage set by FDOT. In addition, the RMSE values shown show that the adjusted network has been fine-tuned to replicate the ground counts within the sub-are model study area.

Table 16: Percent Root Mean Square Error by Volume Group

Volume Group	% RMSE	Acceptable % RMSE	Preferable % RMSE
1 - 5,000:	N/A	100%	45%
5,000 - 10,000:	9.12%	45%	35%
10,000 - 15,000:	24.60%	35%	27%
15,000 - 20,000:	10.71%	30%	25%
20,000 - 30,000:	3.74%	27%	15%
30,000 - 50,000:	4.92%	25%	15%
50,000 - 60,000:	N/A	20%	10%
> 60,000	4.58%	19%	10%
Areawide	2.87%	45%	35%

6.3 Base Year 2019 Model Validation Conclusion

The validation results show that the adjusted network has been fine-tuned to replicate the ground counts within the Boggy Creek Road study corridor. Based on the validation efforts, the sub-area model is considered acceptable to be utilized in projecting and/or estimating future travel demands within the study area.

The base year 2019 Model plots for the before and after validation are shown in **Appendix F**.

7 Future Traffic Forecasts

The development of traffic projections for the Boggy Creek Road study corridor required the examination of historical growth, proposed development levels within the corridor vicinity, and a basic understanding of local traffic circulation patterns and travel characteristics of the corridor. As such, the following sources were used to derive reasonable future traffic forecasts for the study corridor.

- **Travel Demand Model:** The CFRPM version 6.1 model was used in the traffic forecasting process.
- **Population Projections:** The population estimates obtained from the most current Bureau of Economic and Business Research (BEBR), Florida Population Studies, Volume 53 Bulletin 186, dated January 2020 was used.
- **Historical Traffic Trends Analysis:** Historical traffic trends analysis based on least squares regression analysis was conducted for the study roadways using traffic data from the 2019 Florida Traffic Online (FTO) and the 2019 Osceola County and Orange County Traffic Count Programs.

7.1 Study Alternatives

For this study, a No-Build alternative and a Build alternative will be evaluated. The No-Build alternative evaluates the existing two-lane configuration of Boggy Creek Road, whereas the Build alternative evaluates a four-lane configuration of Boggy Creek Road within the study limits. Both the No-Build and Build alternatives included all the programmed and planned improvements near the study area as described below.

7.2 Travel Demand Model

The year 2040 CFRPM version 6.1 model is the appropriate travel-forecasting tool for generating future daily traffic volume projections during a typical weekday in the predefined project sub-area based on the FSUTMS-Cube Framework Phase II – Model Calibration Standards. The base year model (the year 2019) was validated to meet all the applicable performance criteria. As the first step, the validation adjustments that were applied to the base year 2019 model were carried over to the future year 2040 model.

7.2.1 Socio-Economic (SE) Data

For future conditions, two model runs were conducted, 1) a year 2040 No-Build alternative and 2) a year 2040 Build alternative. Based on the input from Osceola County and FDOT, the 2040 Socio-Economic (SE) data for the model subarea was based on the CFRPM version 7 SE data. CFRPM version 7 is the upcoming update to version 6 and was used to develop the 2045 MetroPlan Orlando Long Range Transportation Plan (LRTP).

CFRPM version 7 is currently under development, but the SE data is available for corridor studies. The year 2040 SE data from CFRPM version 7 was developed for the model subarea by interpolating between the latest 2015 and 2045 SE data in CFRPM version 7 (that was provided by FDOT District 5 in September 2020). The SE data for the rest of the CFRPM version 6.1 model for the year 2040 was not changed and is based on the approved 2040 SE data that is available for CFRPM version 6.1.

7.2.2 Nearby Developments

The following developments near the Boggy Creek Study corridor provided by Osceola County were reviewed and included as part of the travel demand model effort. The following provides a list of Traffic Impact Analysis (TIA) Reports provided by Osceola County for this study.

- Boggy Creek Property Subdivision Plan
- East Lake Preserve and the Austin Tindall Sports Complex Expansion
- Boggy Creek Fish Camp Redevelopment
- Creekside Residential Development and Osprey Ridge
- Split Oak Estates
- Poitras N-7

7.2.3 Programmed & Planned Improvements

Before conducting the year 2040 model run, the future year travel demand model network was reviewed and adjusted accordingly based on coordination with the stakeholders including Osceola County, FDOT, and Central Florida Expressway Authority (CFX). The future year travel demand model considered all the programmed and planned improvements in the vicinity of the study area that are consistent with regional transportation plans including the following:

- FDOT Five Year Work Program
- FDOT Strategic Intermodal System (SIS) plans
- Committed improvements from local and private sources

- Adopted LRTPs and Comprehensive Plans
- CFX Five Year Work Plan
- CFX 2040 Master Plan

The following **Table 17** illustrates the programmed and planned improvements and was developed in coordination with the project stakeholders. As part of the coordination process, CFX provided the proposed toll rates for Osceola Parkway Extension. The base year 2019 and horizon year 2040 model plots are included in **Appendix F.**

Table 17: Programmed and Planned Improvements List

Agency	Roadway	From	To	Improvement	Phase	Source
Programmed Improvements						
CFX	SR 417	International Drive	John Young Parkway	Widen to 6 Lanes with Auxiliary Lanes	Bidding & CST (CST anticipated 2023)	CFX Five Year Work Plan FY 2021-2025 (CFX 2040 Master Plan Summary)
CFX	SR 417	John Young Parkway	Landstar Boulevard	Widen to 6 Lanes with Auxiliary Lanes	Design & CST (CST anticipated 2023)	
CFX	SR 417	Landstar Boulevard	Boggy Creek Road	Widen to 6 Lanes with Auxiliary Lanes	Design & CST (CST anticipated 2023)	
CFX	SR 417	Boggy Creek Road	Narcoossee Road	Widen to 6 Lanes with Auxiliary Lanes	Design & CST (CST anticipated 2023)	
CFX	SR 417	Narcoossee Road	SR 528	Widen to 6 Lanes with Auxiliary Lanes	Design & CST (CST anticipated 2023)	
FTE	Florida's Turnpike	Osceola Parkway	US 192/US 441	Widen to 8 Lanes	ROW, Design, CST (CST funds till 2024/25)	MetroPlan Orlando TIP (FY 2020/21 - 2024/25)
FTE	Florida's Turnpike	Kissimmee Park Road	US 192	Widen to 8 Lanes	CST (CST funds till 2024/25)	
Osceola County	CR 530/Simpson Road	Meyers Road	Boggy Creek Road	Widen to 4 Lanes	CST anticipated FY 2022	Osceola County Road Improvements & MetroPlan Orlando 2020/21-2024/25 TIP
Osceola County	CR 530/Simpson Road	Osceola Parkway	US 192	Widen to 4 Lanes	CST anticipated FY 2023	
Osceola County	Bill Beck Boulevard	Woodcrest Boulevard	Osceola Parkway	New 2 Lane Roadway	CST anticipated FY 2021	
Osceola County	Poinciana Boulevard	Pleasant Hill Road	Trafalgar Boulevard	Widen to 4 Lanes	CST anticipated FY 2024	
Osceola County	Partin Settlement Road	Neptune Road	E. Lakeshore Boulevard	Widen to 4 Lanes	CST anticipated FY 2024	
Orange County	Boggy Creek Road	Beacon Park Boulevard	SR 417	Widen to 6 Lanes	ROW, Design & CST (CST anticipated FY 2021)	Orange County 10-year Roadway Program
Orange County	Boggy Creek Road	Orange/Osceola County Line	Beacon Park Boulevard	Widen to 4 Lanes	ROW, Design & CST (CST anticipated FY 2021)	
Planned Improvements						
CFX	Osceola Parkway Extension	SR 417	Laureate Boulevard	New Expressway	PD&E, Design & CST	CFX Five Year Work Plan FY 2021-2025 (CFX 2040 Master Plan)
CFX	Osceola Parkway Extension	Laureate Boulevard	Narcoossee Road	New Expressway	PD&E, Design & CST	
CFX	Osceola Parkway Extension	Narcoossee Road	Sunbridge Parkway	New Expressway	PD&E, Design & CST	
CFX	Simpson Road Extension	Boggy Creek Road	Osceola Parkway Extension	New 4 Lane Roadway	PD&E, Design & CST	
Osceola County	Osceola Parkway	Interstate 4	SR 417	Widen to 8 Lanes	Planning, Design, CST (funded by 2040)	MetroPlan Orlando 2040 LRTP
Osceola County	Osceola Parkway	John Young Pkwy	US 441	Widen to 6 Lanes		
Osceola County	Osceola Parkway	Buenaventura Blvd	Boggy Creek Road	Widen to 6 Lanes		
Osceola County	Narcoossee Road	US 192	Orange County Line	Widen to 6 Lanes	Planning, Design, CST (funded by 2030)	
Private/Public Partnership Improvements						
Osceola County	Cyrils Drive Extension/Sunbridge Parkway	Absher Road	Orange/Osceola County Line	New 4 Lane Roadway (2 Lanes Initial)	Design & CST (CST anticipated 2025)	Tavistock LLC - Development Plan
Orange County	Sunbridge Parkway	Orange/Osceola County Line	SR 528	New 4 Lane Roadway (2 Lanes Initial)	Design & CST (CST anticipated 2025)	Tavistock LLC - Development Plan
Orange County	Cyrils Drive	Absher Road	Narcoossee Road	New 4 Lane Roadway	Design & CST (CST anticipated 2025)	Tavistock LLC - Development Plan

Notes: FY- Fiscal Year, TIP – Transportation Improvement Program, LRTP – Long Range Transportation Plan, CFX – Central Florida Expressway Authority, ROW – Right-of-Way, CST - Construction

7.2.4 Model Based Growth Rates

Table 18 summarizes the growth rates derived using the 2019 base year and the horizon year 2040 model volumes for the No-Build and Build alternatives.

Table 18: Model-Based Growth Rate Summary

Study Segments	Base Year 2019 Model	Year 2040 No Build		Year 2040 Build	
		Model Volume	Annual Growth Rate	Model Volume	Annual Growth Rate
Boggy Creek Road					
SR 417 to Simpson Road	35,687	36,579	0.12%	41,001	0.71%
Simpson Road to Springlake Village Boulevard	16,489	22,400	1.71%	41,754	7.30%
Springlake Village Boulevard to Fells Cove Boulevard	12,757	16,248	1.30%	34,188	8.00%
Fells Cove Boulevard to Narcoossee Road	14,434	22,613	2.70%	37,001	7.45%
Springlake Village Boulevard to Narcoossee Road (Average)			**2.00%**		**7.72%**
Narcoossee Road					
North of Boggy Creek Road	39,797	79,660	4.77%	72,226	3.88%
South of Boggy Creek Road	43,988	78,725	3.76%	88,157	4.78%
Simpson Road/Simpson Road Extension					
West of Boggy Creek Road	28,410	47,732	3.24%	47,956	3.28%
East of Boggy Creek Road	-	34,630	-	31,802	-

The following observations were made based on **Table 18**.

- Based on existing volumes, the year 2045 model volumes, and the anticipated future capacity along Boggy Creek Road, the model-based growth rates are derived for three separate sections of Boggy Creek Road.
    - North of Simpson Road
    - Simpson Road to Springlake Village Boulevard
    - Springlake Village Boulevard to Narcoossee Road
- Within the study limits (for widening), Boggy Creek Road has annual model-based growth rates ranging from 1.30 percent to 2.70 percent in the No-Build alternative. In the Build alternative, the model-based growth rates range from 7.30 percent to 8.00 percent. The Build alternative shows a significantly higher growth rate compared to the No-Build alternative. The most likely reason is that a four-lane Boggy Creek Road attracts a higher percentage of through traffic from Narcoossee Road, Simpson Road Extension, and Boggy Creek Road north of Simpson Road.
- For Narcoossee Road, the No-Build alternative shows similar traffic volumes north and south of Boggy Creek Road. Under the Build alternative, the added capacity on Boggy Creek Road is

observed to attract additional traffic. Because of this reason, the traffic volume south of Boggy Creek Road is significantly higher compared to the No-Build alternative.

- The proposed Simpson Road Extension to Osceola Parkway Extension has a higher traffic volume in the No-Build alternative compared to the Build alternative. The constrained roadway condition on Boggy Creek Road in the No-Build alternative is observed to send more traffic onto Simpson Road Extension.

7.2.5 BEBR Growth Rates

The University of Florida's latest BEBR projections were obtained for both Orange and Osceola Counties since the study corridor is near the Osceola/Orange County line. The BEBR projections show an estimate for 2019 and projections for 2045. The low, medium and high projections for 2045 are summarized in **Table 19**. The growth rates between 2019 and 2045 range from approximately 0.62 percent to 2.66 percent for Orange County, and 1.44 percent to 4.29 percent for Osceola County. BEBR population study data is included in **Appendix G.**

Table 19: BEBR Population-Based Growth Rates

County	2019 Population Estimate	Future Year 2045		
		Projection Type	Population Projection	Annual Growth Rate
Osceola	370,552	Low	508,900	1.44%
	370,552	Medium	642,600	2.82%
	370,552	High	783,900	4.29%
Orange	1,386,080	Low	1,610,900	0.62%
	1,386,080	Medium	1,972,200	1.63%
	1,386,080	High	2,344,100	2.66%

7.3 Historical Traffic Trends

Based on the historical count information obtained from the 2019 Osceola and Orange County Annual Traffic Count Programs, linear regression trends analyses were performed. To account for the last recession, all the available AADTs from 2012 to 2019 were used in the Trends Analysis Sheets. The analysis results are summarized in **Table 20.** R-squared values denote the goodness-of-fit of a linear regression model to the existing data points. As shown in **Table 20**, the r-squared values generally denote a favorable goodness-of-fit. The trends analysis sheets are provided in **Appendix H**.

Table 20: Trends-Based Growth Rates

Study Segments	2019 Trends Volume	2045 Trends Volume	Trends Analysis	
			R-Squared Value	Annual Growth Rate
Boggy Creek Road				
North of Simpson Road	33,500	79,300	88.91%	5.26%
Simpson Road to Austin Tindall Park	19,700	44,200	83.37%	4.78%
Austin Tindall Park to Narcoossee Road	14,800	41,700	92.38%	6.99%
Narcoossee Road				
North of Boggy Creek Road	33,600	101,800	84.75%	7.81%
South of Boggy Creek Road	34,700	85,400	87.95%	5.62%
Simpson Road				
West of Boggy Creek Road	27,400	41,500	97.04%	2.48%

7.4 Recommended Traffic Forecasts

Based on a comparison of annual growth rates from the three primary sources (CFRPM models, BEBR population estimates, and historical trends analysis), **Table 21** shows the recommended linear annual growth rates that are used to forecast the future Annual Average Daily Traffic (AADT) volumes for this study. The following provides a discussion on the recommended growth rates.

The following provides a discussion on the recommended growth rates.

- The recommended growth rates for the study corridors including Boggy Creek Road, Simpson Road, and Narcoossee Road are derived based on a review of the existing volumes, the year 2045 model volumes for the No-Build and Build alternatives, existing capacity of the two-lane Boggy Creek Road, anticipated capacity of the proposed four-lane Boggy Creek Road, and engineering judgment.
- The recommended growth rates are derived for the following three separate sections of Boggy Creek Road.
    - North of Simpson Road
    - Simpson Road to Springlake Village Boulevard
    - Springlake Village Boulevard to Narcoossee Road
- In general, both Orange and Osceola BEBR population projections were used to derive the growth rates because of the proximity of the study corridor to both Counties.
- Since Simpson Road Extension from Boggy Creek Road to Osceola Parkway Extension is a new four-lane roadway, 2040 model volumes were first converted to AADTs using a Model Output Conversion Factor (MOCF) of 0.97 (Osceola Countywide MOCF from the 2019 FTO) and then grew using a minimum growth rate 0.5% to derive the 2045 AADTs.

- For East Lake Pointe Drive, Nele Road, Springlake Village Boulevard/Holiday Woods Drive, and Timber Lane/Creek Bank Drive, the future volumes will be based on build-out project trip estimates shown in TIA reports (refer to Section 7.2.2). Therefore, future AADTs will be not be derived for these roadways. Instead, build-out turning movement volumes as shown in these TIA reports will be used for all future years.
- For other minor side streets, a minimum growth rate of 0.5 percent is used to derive the future volumes.

Figures 8 and 9 illustrate the opening year 2025, mid-design year 2035, and design year 2045 AADT volumes based on the recommended growth rates for the No-Build and Build alternatives, respectively.

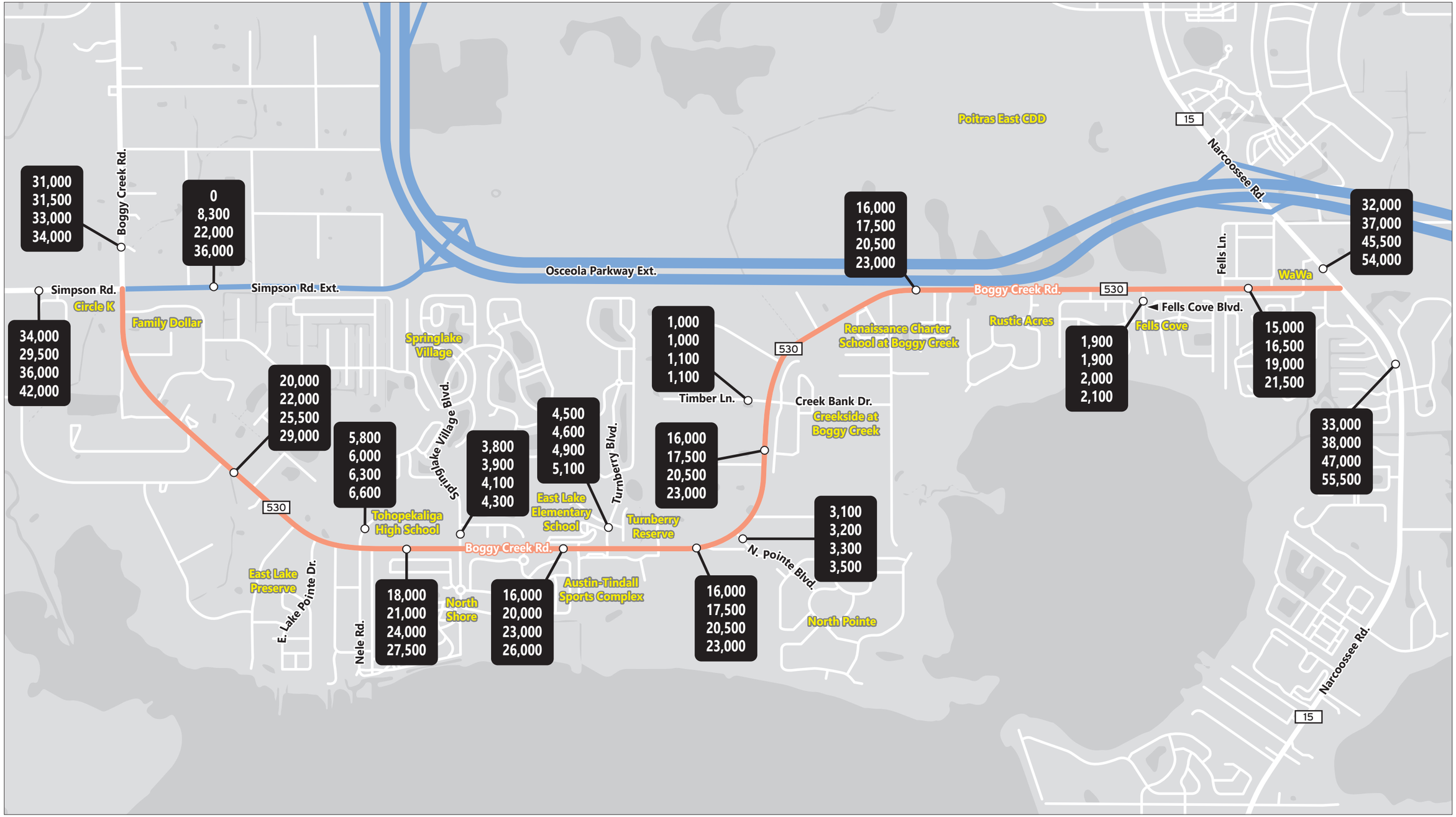
Table 21: Recommended Growth Rates

Study Segment	Annual Growth Rate (No-Build)	Source	Annual Growth Rate (Build)	Source
Boggy Creek Road				
North of Simpson Road	0.37%	Average of Model & Orange Low BEBR	1.07%	Average of Model & Osceola Low BEBR
Simpson Road to Springlake Village Road	1.71%	CFRPM Model	4.16%	Average of Model, Osceola Low BEBR & Orange Low BEBR
Springlake Village Road to Narcoossee Road	2.00%	CFRPM Model	5.49%	Average of Model, Osceola Low BEBR & Orange Low BEBR
Narcoossee Road				
North of Boggy Creek Road	2.65%	Average of Model (north & south of Boggy Creek Road), Osceola Low BEBR & Orange Low BEBR	2.46%	Average of Model, Osceola Low BEBR & Orange Low BEBR
South of Boggy Creek Road	2.65%	Average of Model (north & south of Boggy Creek Road), Osceola Low BEBR & Orange Low BEBR	2.91%	Average of Model, Osceola Low BEBR & Orange Low BEBR
Simpson Road				
West of Boggy Creek Road	2.34%	Average of Model & Osceola Low BEBR	2.36%	Average of Model & Osceola Low BEBR
East of Boggy Creek Road	-	2040 Model Volume plus minimum growth rate of 0.5% from 2040 to 2045	-	2040 Model Volume plus minimum growth rate of 0.5% from 2040 to 2045
Other Side streets				
East Lake Pointe Drive, Nele Road, Springlake Village Boulevard/Holiday Woods Drive, & Timber Lane/Creek Bank Drive	-	*TIA Reports	-	*TIA Reports
Other Side Streets	0.5%*	#Minimum growth rate	0.5%*	#Minimum growth rate

Notes:

* Buildout turning movement volumes provided in the TIAs will be used for all the analysis years starting from 2025

A minimum growth rate of 0.5% is assumed for all other side streets because of the build-out nature of the land use



N.T.S.

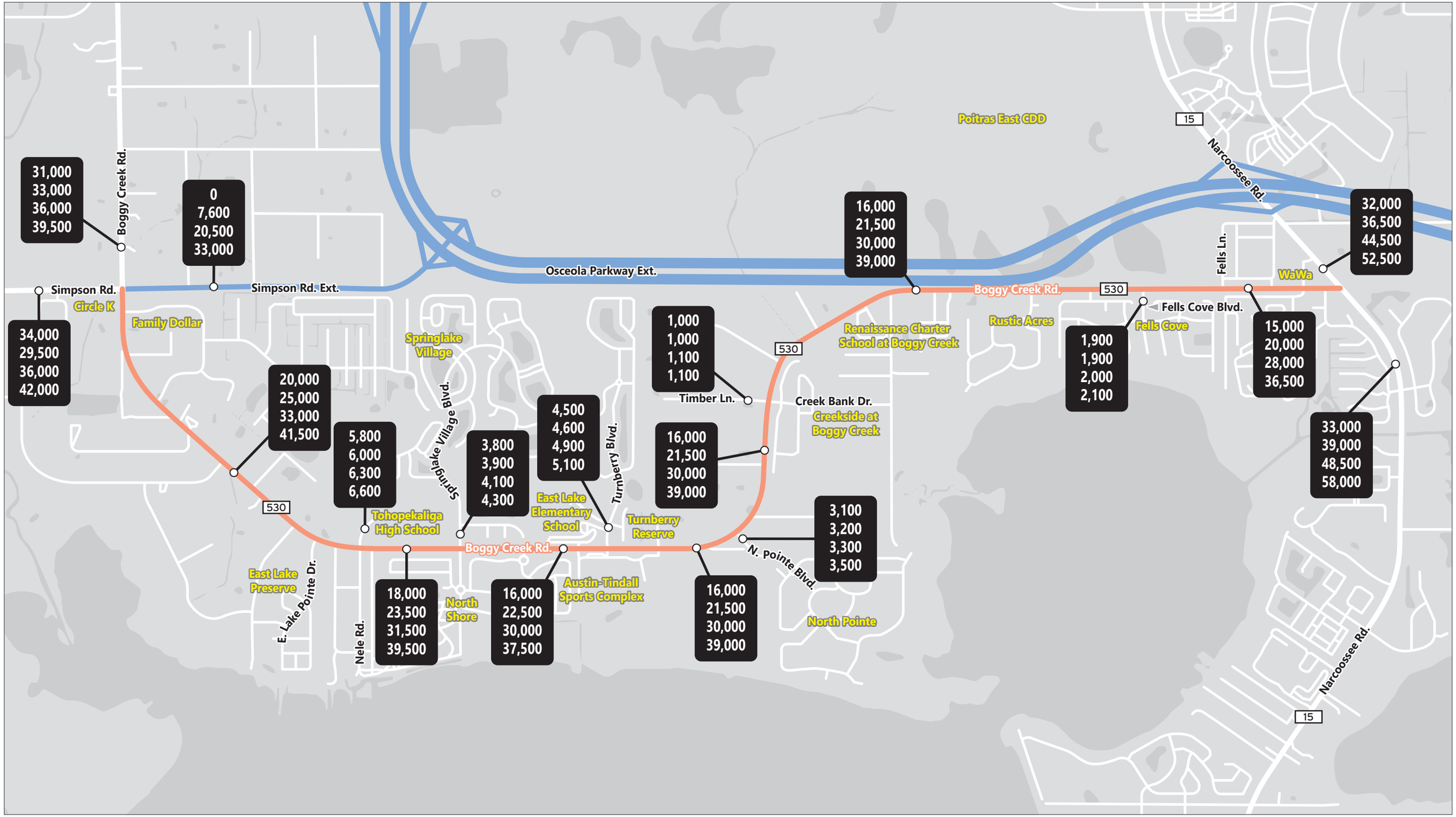
Project Location

YR 2019
YR 2025
YR 2035
YR 2045

Annual Average Daily Traffic (AADT)

Figure 8

Future Year Annual Average Daily Traffic (AADT) No Build
Boggy Creek Road Project Traffic Analysis Report



N.T.S.

Project Location

YR 2019
YR 2025
YR 2035
YR 2045

Annual Average Daily Traffic (AADT)

Figure 9

Future Year Annual Average Daily Traffic (AADT) Build
Boggy Creek Road Project Traffic Analysis Report

7.5 Intersection Design Hour Volumes

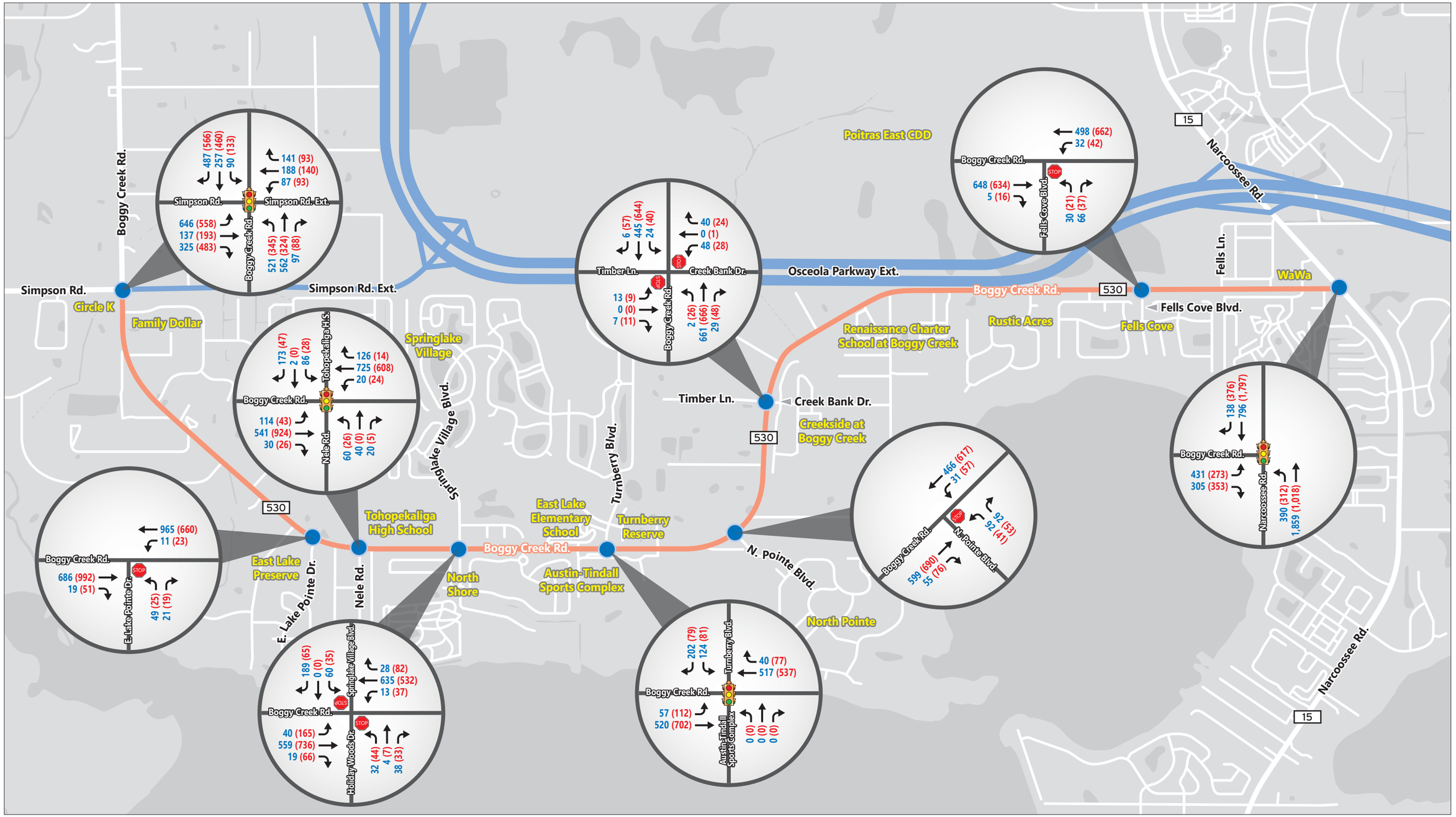
The existing AADT counts, future year (2045) AADT forecasts, existing turning movement counts, and recommended traffic characteristics (K and D factors) were used to develop the design hour volumes (DHVs) for both the AM and PM design hours at the intersections for the opening (2025), mid (2035), and design (2045) years.

As documented in **Section 5.1**, a standard K factor, 9.0% (urban area), was used for all the study corridors and the intersecting study roadways. As documented in **Section 5.2**, the following D factors were used in this analysis:

- **Boggy Creek Road:** 58.9%
- **Narcoossee Road:** 64.8%
- **Simpson Road**: 55.6%
- **Other Side Streets:** Existing

The DHVs for the study intersections were developed by inputting the parameters discussed above into the TURNS5 program. The TURNS5 program balances AADTs and calculates DHVs based on these inputs: existing AADTs (counts), model forecasted AADTs, existing turning movement counts (when available), and K and D factors. The estimated design hour volumes for the AM and PM design hours from TURNS5 spreadsheet were assessed and balanced for reasonableness. Adjustments were made and are reported in the TURNS5 output sheets included in **Appendix I.** Generally, when TURNS5 outputs indicated that Year 2025 and Year 2045 design hour volumes were lower than or equal to the existing peak hour volumes, volumes were adjusted to reflect modest growth. These adjustments are necessary because accepting an estimated volume that is unrealistically large may lead to overdesign and accepting an estimated volume that is too small may result in an inadequate design. Turning movement volumes were also adjusted to resolve any volume balancing inconsistencies between adjacent intersections.

The future year AM and PM design hour volumes used in the evaluation of No Build and Build conditions are shown in the figures that follow. **Figures 10**, **11**, and **12** present the No Build turning movement volumes (AM and PM) in Years 2025, 2035, and 2045, respectively. **Figures 13**, **14**, and **15** present the Build turning movement volumes (AM and PM) in Years 2025, 2035, and 2045, respectively.



N.T.S.

Project Location

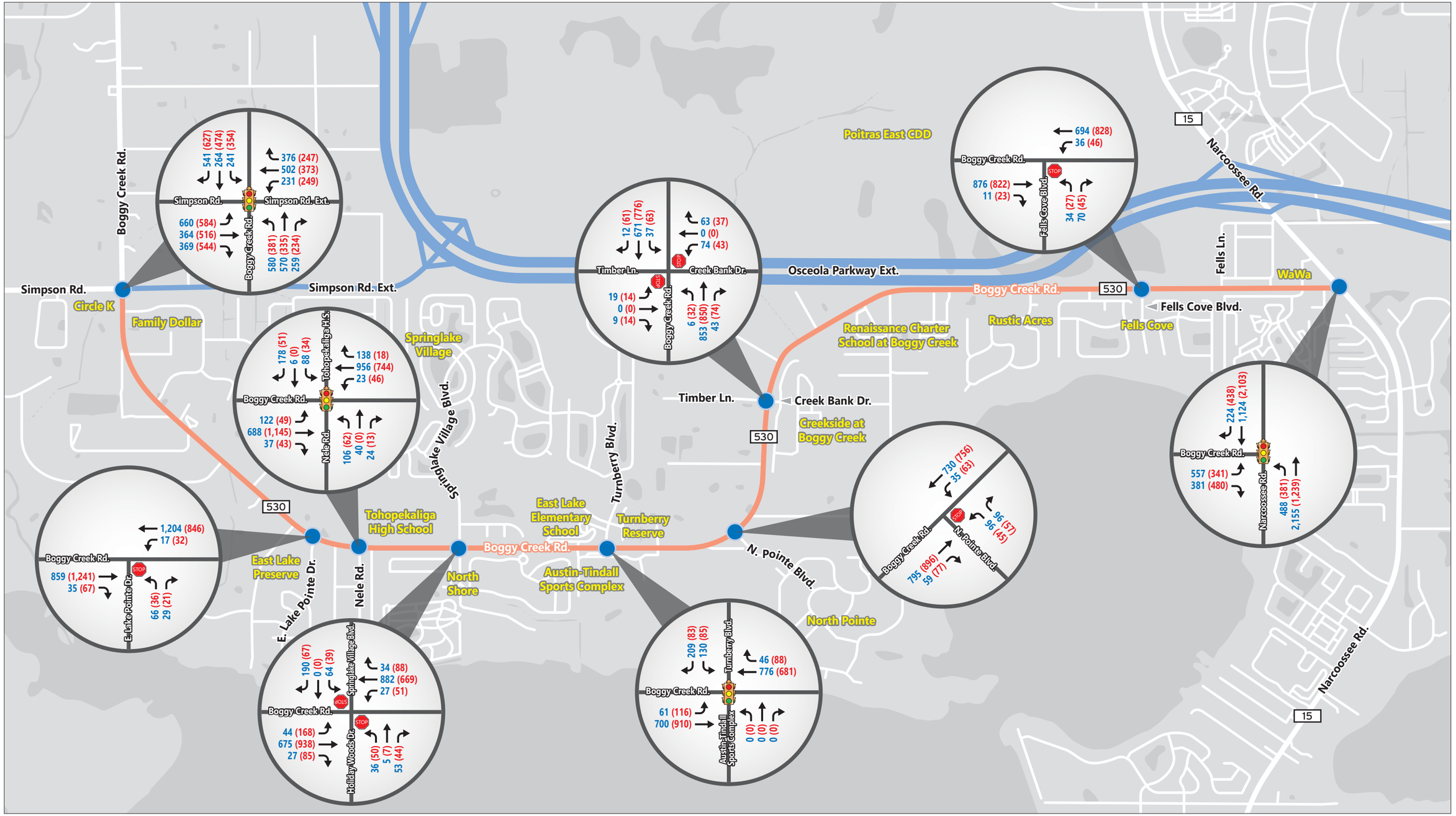
AM (PM) Turning Movement Volumes

Stop Controlled Intersection

Signalized Intersection

Figure 10

Future Year 2025 No Build Turning Movement Volumes
Boggy Creek Road Project Traffic Analysis Report



N.T.S.

Project Location

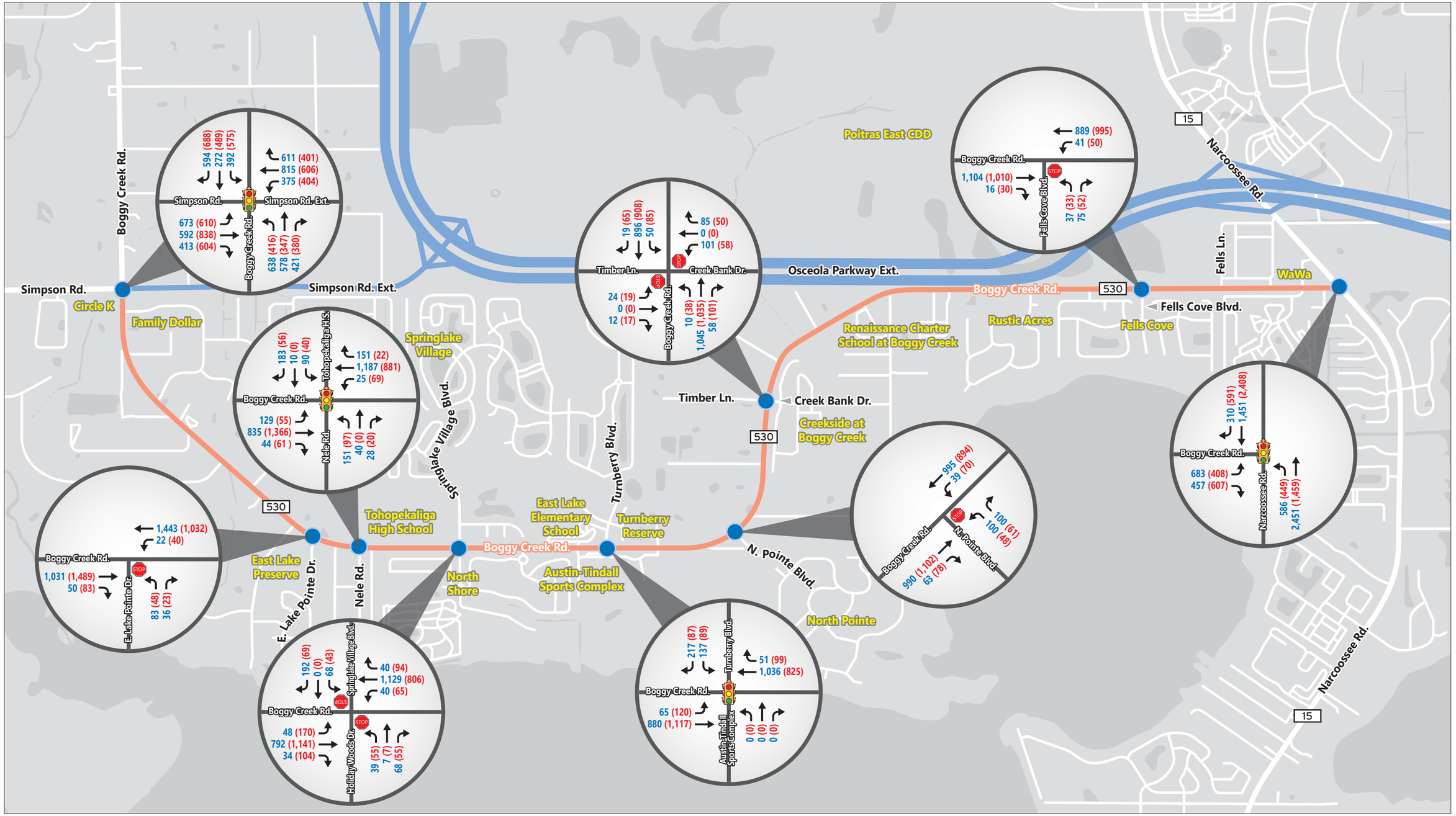
AM (PM) Turning Movement Volumes

STOP Stop Controlled Intersection

Signalized Intersection

Figure 11

Future Year 2035 No Build Turning Movement Volumes
Boggy Creek Road Project Traffic Analysis Report



N.T.S.

Project Location

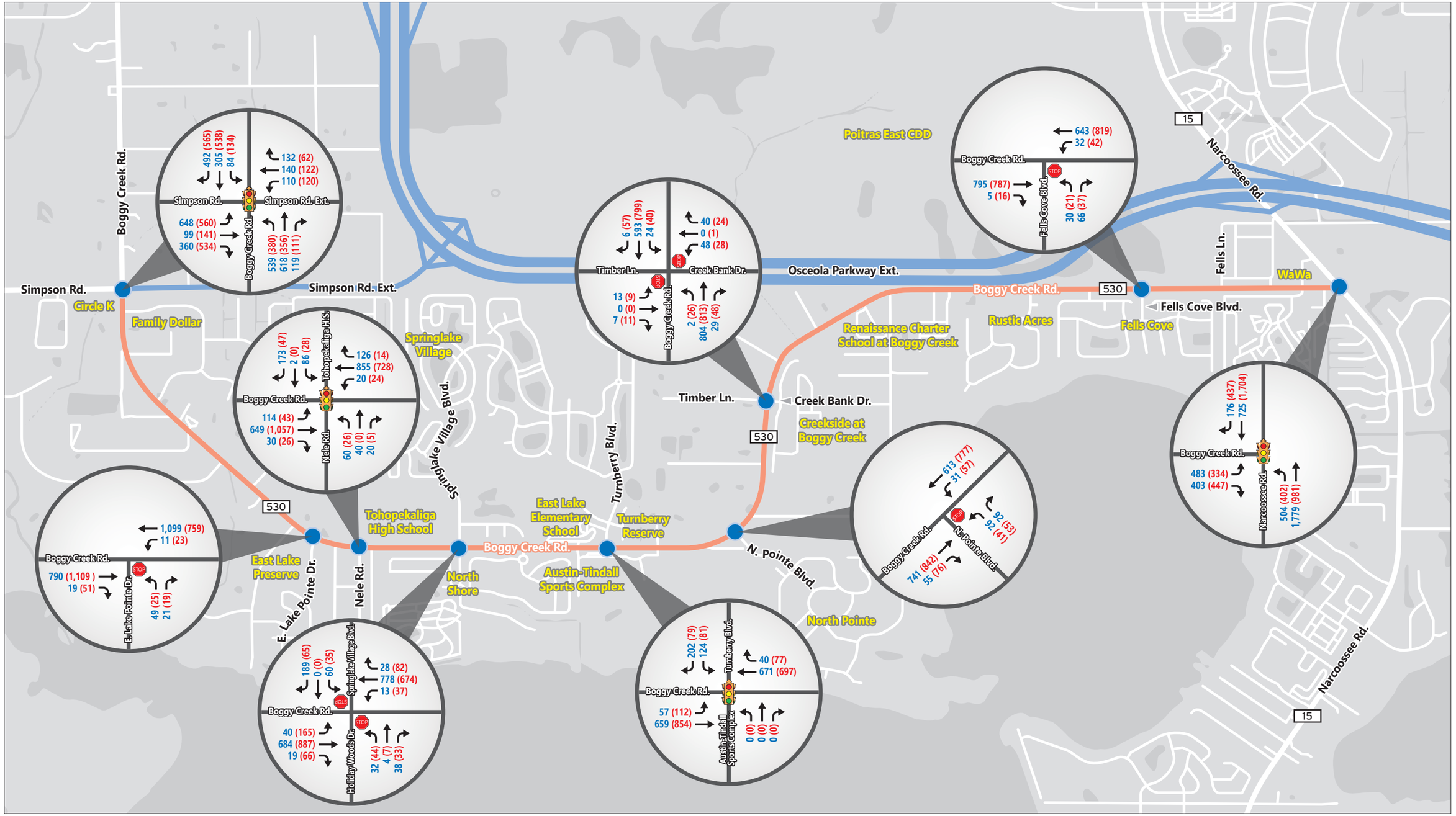
AM (PM) Turning Movement Volumes

Stop Controlled Intersection

Signalized Intersection

Figure 12

Future Year 2045 No Build Turning Movement Volumes
Boggy Creek Road Project Traffic Analysis Report



N.T.S.

Project Location

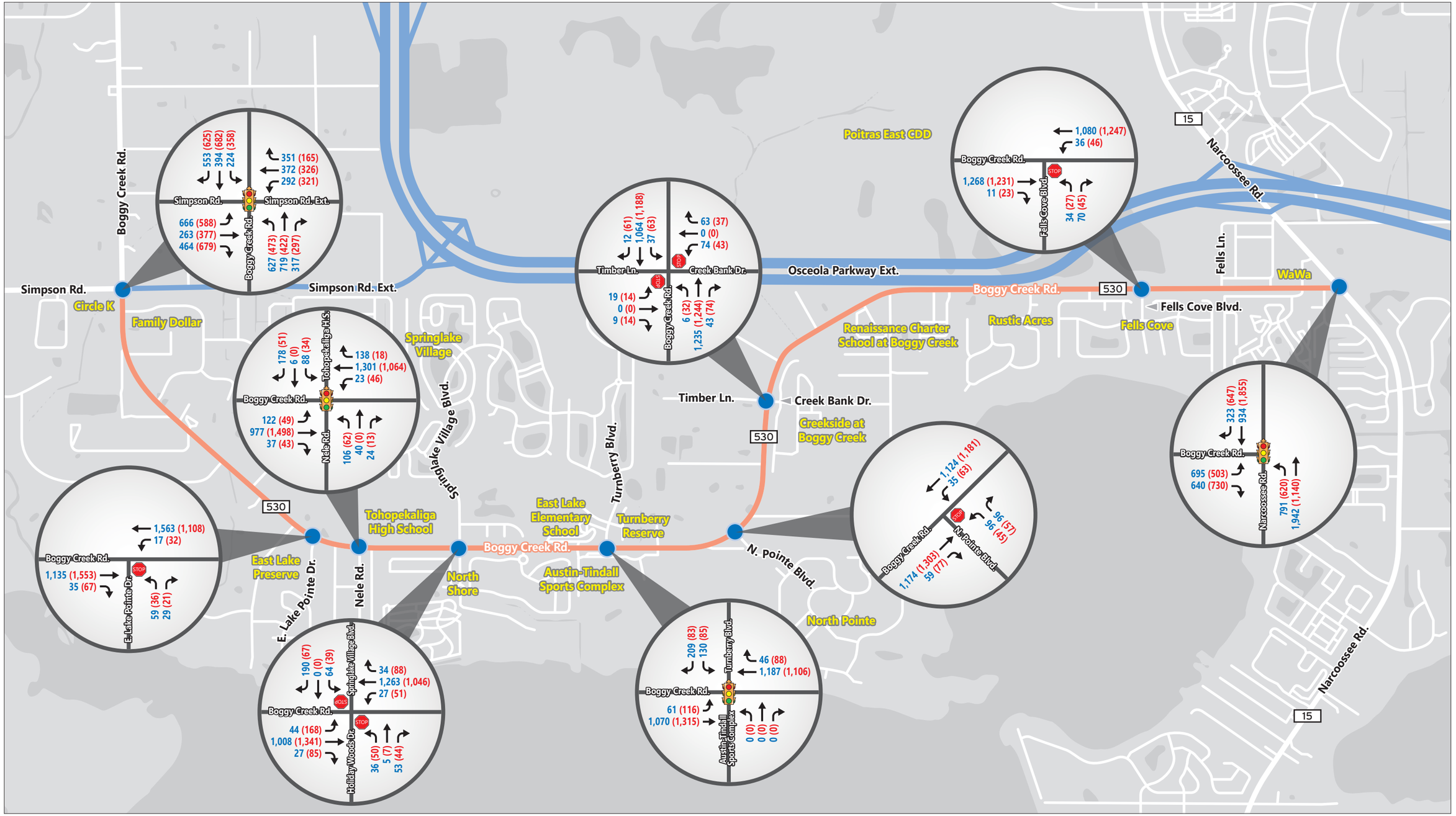
AM (PM) Turning Movement Volumes

Stop Controlled Intersection

Signalized Intersection

Figure 13

Future Year 2025 Build Turning Movement Volumes
Boggy Creek Road Project Traffic Analysis Report



N.T.S.

Project Location

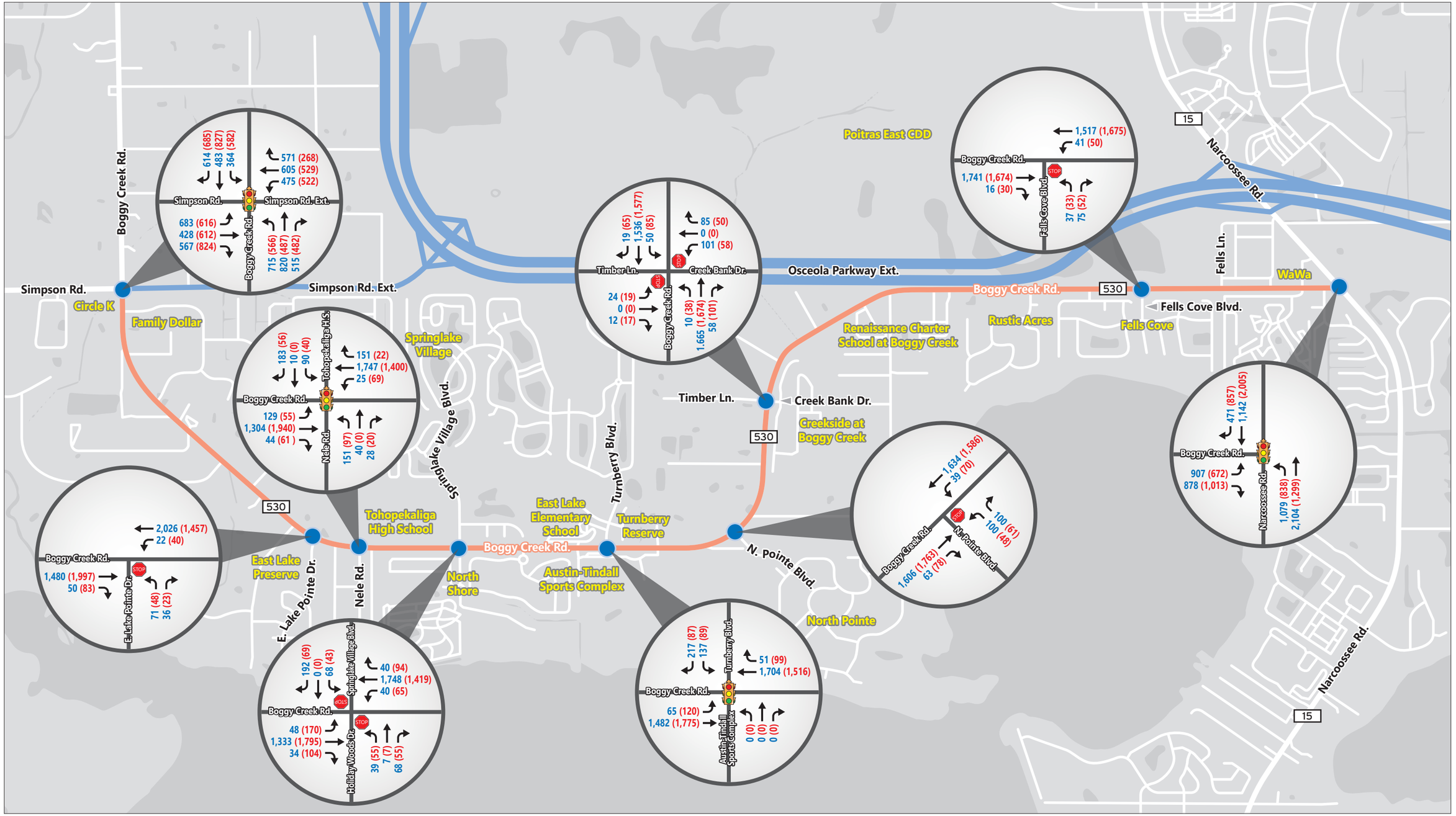
AM (PM) Turning Movement Volumes

Stop Controlled Intersection

Signalized Intersection

Figure 14

Future Year 2035 Build Turning Movement Volumes
Boggy Creek Road Project Traffic Analysis Report



N.T.S.

Project Location

AM (PM) Turning Movement Volumes

Stop Controlled Intersection

Signalized Intersection

Figure 15

Future Year 2045 Build Turning Movement Volumes
Boggy Creek Road Project Traffic Analysis Report

8 Future Operational Analysis

This chapter presents the results of the traffic operations analysis conducted for the No Build and Build alternatives. A detailed operational evaluation at study intersections using Synchro software version 10.0 was performed in order to develop the operational recommendations. Analysis techniques used in the study include the signalized and unsignalized intersection evaluations in Synchro based on the HCM 6th Edition methodology.

The analysis evaluated the No Build and Build alternatives under three separate planning horizons:

- Opening Year (2025)
- Mid Design Year (2035)
- Design Year (2045)

The results of this analysis are presented in the sections that follow.

8.1 No Build Operational Analysis

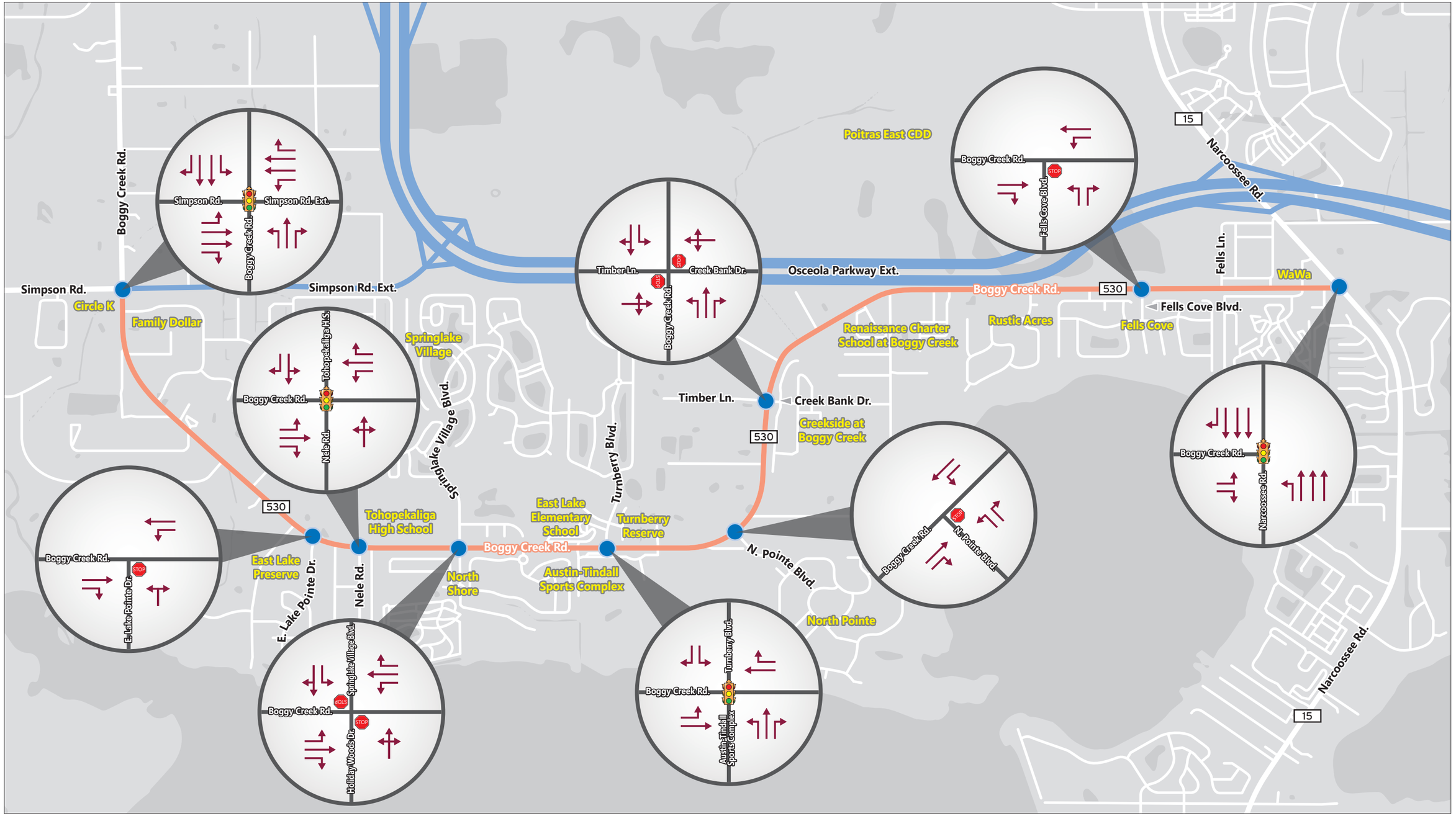
The No Build operational analysis represents the baseline evaluation of the operational performance on the corridor. Under the No Build scenario, the corridor operations are evaluated assuming the existing geometry and the following planned improvements were assumed in this evaluation:

- the extension of Simpson Road, east of Boggy Creek Road, to the future extension of the Osceola Parkway and associated improvements at the intersection of Boggy Creek Road & Simpson Road;
- and, widening of Narcoossee Road to six lanes.

The lane geometries assumed for each intersection in the No Build analysis are presented in **Figure 16.** This same geometry was assumed for all future years (2025, 2035, and 2045).

8.1.1 Roadway Level of Service Analysis – No Build

Roadway segment level of service analysis (peak hour directional) was performed for each of the segments within the study area using the forecasted No Build turning movement volumes and the generalized capacities obtained from 2020 FDOT Generalized Service Volume Tables. The results of this analysis are presented in **Table 22.**



N.T.S.

- Project Location
- Lane Geometry
- Stop Controlled Intersection
- Signalized Intersection

Figure 16

Future Year No Build Geometry
Boggy Creek Road Project Traffic Analysis Report

Table 22: No Build Roadway Segment Level of Service Analysis

Roadway/Segment	Number of Lanes	Targeted LOS Standard	LOS E Capacity	No Build AM Peak Hour Conditions									No Build PM Peak Hour Conditions								
				Year 2025			Year 2035			Year 2045			Year 2025			Year 2035			Year 2045		
				Peak Volume	V/C Ratio	LOS	Peak Volume	V/C Ratio	LOS	Peak Volume	V/C Ratio	LOS	Peak Volume	V/C Ratio	LOS	Peak Volume	V/C Ratio	LOS	Peak Volume	V/C Ratio	LOS
Boggy Creek Road																					
North of Simpson Road	2 Lane Undivided	E	880	1,349	1.530	F	1,606	1.830	F	1,862	2.120	F	1,159	1.320	F	1,455	1.650	F	1,752	1.990	F
Simpson Road to East Lake Pointe Drive	2 Lane Undivided	E	880	1,180	1.340	F	1,409	1.600	F	1,637	1.860	F	1,043	1.190	F	1,308	1.490	F	1,572	1.790	F
East Lake Pointe Drive to Nele Road	2 Lane Undivided	E	880	976	1.110	F	1,240	1.410	F	1,521	1.730	F	1,011	1.150	F	1,262	1.430	F	1,512	1.720	F
Nele Road to Springlake Village Boulevard	2 Lane Undivided	E	880	871	0.990	E	1,117	1.270	F	1,363	1.550	F	967	1.100	F	1,192	1.350	F	1,426	1.620	F
Springlake Village Boulevard to Turnberry Boulevard	2 Lane Undivided	E	880	719	0.820	C	985	1.120	F	1,253	1.420	F	814	0.930	C	1,026	1.170	F	1,239	1.410	F
Turnberry Boulevard to North Pointe Boulevard	2 Lane Undivided	E	1,610	654	0.410	C	854	0.530	C	1,095	0.680	D	783	0.490	C	995	0.620	D	1,206	0.750	E
North Pointe Boulevard to Timber Lane	2 Lane Undivided	E	1,610	692	0.430	C	902	0.560	D	1,113	0.690	D	743	0.460	C	956	0.590	D	1,174	0.730	D
Timber Lane to Fells Cove Boulevard	2 Lane Undivided	E	1,610	714	0.440	C	935	0.580	D	1,154	0.720	D	741	0.460	C	901	0.560	D	1,104	0.690	D
Fells Cove Boulevard to Narcoossee Road	2 Lane Undivided	E	1,610	736	0.460	C	946	0.590	D	1,179	0.730	D	704	0.440	C	874	0.540	C	1,062	0.660	D

Under 2025 No Build conditions, the three segments west of Nele Road are anticipated to operate at LOS F during the AM and PM peak hours. The segment between Nele Road and Springlake Village Boulevard is expected to operate at LOS F during the PM peak only.

Looking forward to 2035 No Build Conditions, the five western segments in the corridor, from north of Simpson Road to Turnberry Boulevard. are expected to operate at LOS F during AM and PM peak hours. Under 2045 No Build Conditions, the same five western segments are expected to fail, but with even higher volume-to-capacity ratios well in excess of 1.00.

8.1.2 Intersection Level of Service Analysis – No Build

Intersection analysis was performed to determine if there are any deficiencies for the signalized and unsignalized intersections under future year (2025, 2035, and 2045) conditions. Forecasted turning movement volumes as shown in **Section 7.5** were used to analyze the No Build alternative. The results of the intersection analysis are summarized in Tables **23, 24, and 25** for Years 2025, 2035, and 2045, respectively. **Tables 23-25** show a summary of the 95th percentile queues (in feet), volume-to-capacity ratios, average delays (in seconds), and LOS for each of the intersection movements under AM and PM peak hour conditions. For signalized intersections, these tables also show the average overall intersection delay (in seconds) and LOS. Synchro output sheets for each of these analyses are provided in **Appendix J**.

Year 2025

- The only signalized intersection anticipated to operate at LOS F in Year 2025 is the intersection with Simpson Road during the AM peak hour. The average intersection delay is expected to be 83.8 seconds, driven by a particularly high delay (376.8 s/veh) and v/c ratio (1.580) for the westbound right turn.
- For all the unsignalized intersections where the minor street movements operate under stop control, were found to operate at LOS E (or LOS F).
- A notably high average delay and v/c ratio are expected for the shared northbound left/through/right at Springlake Village Boulevard during the PM peak hour. This movement is expected to operate with average delays of 323.2 s/veh and a v/c ratio of 1.320.

Year 2035

- The only signalized intersection anticipated to operate at LOS F in Year 2035 is the intersection with Simpson Road during the AM peak hour. The average intersection delay is expected to be 155.4 seconds, driven by a particularly high delays and v/c ratios for the westbound right 575.0 s/veh, 2.090) and the northbound left (261.2 s/veh, 1.460).
- For all the unsignalized intersections where the minor street movements operate under stop control, were found to operate at LOS F with higher delays and v/c ratios compared to the opening year conditions.
- Notably high average delays and v/c ratios are expected for several stop-controlled movements on the corridor's side streets.
    - In the AM peak hour, the East Lake Pointe Drive shared northbound left/right is anticipated to operate with a 411.8 sec/veh average delay and a v/c ratio of 1.538.
    - During the AM peak hour and PM peak hour, the shared northbound left/through/right and southbound left at Springlake Village Boulevard are expected to experience exceptionally high average delays and v/c ratios.
    - Delays and v/c ratios for the shared eastbound left/through movements at Timber Lane/Creek Bank Drive are anticipated to be elevated in both the AM and PM peak hours.

Year 2045

- Several signalized intersections are anticipated to operate at LOS F in Year 2045.
    - The intersection with Simpson Road is expected to operate at LOS F during the AM and PM peak hours. In the AM peak hour, the average intersection delay is expected to be 198.1 seconds, driven by notably high delays and v/c ratios for the westbound right 703.5 s/veh, 2.400) and the eastbound left (305.4 s/veh, 1.550). In the PM peak hour, the average intersection delay is expected to be 127.6 seconds, driven by notably high delays and v/c ratios for the westbound right 394.7 s/veh, 1.700) and the eastbound right (357.5 s/veh, 1.640).
    - The intersection at Nele Road/Tohopekaliga High School is anticipated to operate at LOS F in the AM peak hour. The average intersection delay of 111.6 seconds is influenced by the northbound lefts (average delay of 381.8 s/veh and v/c ratio of 1.640).
    - The intersection with Narcoossee Road is expected to operate at LOS F during the AM and PM peak hours. In the AM peak hour, the average intersection delay is expected to be 83.1 seconds, driven by notably high delays and v/c ratios for the eastbound left (231.3 s/veh, 1.390) and the north westbound left (218.0 s/veh, 1.370). In the PM peak hour, the average

intersection delay is expected to be 127.6 seconds, driven by notably high delays and v/c ratios for the eastbound right (503.7 s/veh, 1.960).

- For all the unsignalized intersections where the minor street movements operate under stop control, were found to operate at LOS F with higher delays and v/c ratios compared to the mid design year conditions.
- Notably high average delays and v/c ratios are expected for several stop-controlled movements on the corridor's side streets .
    - In the AM and PM peak hour, the East Lake Pointe Drive shared northbound left/right is anticipated to operate with high delays and v/c ratios.
    - During the AM peak hour and PM peak hour, the shared northbound left/through/right and southbound left at Springlake Village Boulevard are expected to experience exceptionally high average delays and v/c ratios.
    - Delays and v/c ratios for the westbound and eastbound shared left/through movements at Timber Lane/Creek Bank Drive are anticipated to be elevated in both the AM and PM peak hours.

Based on the roadway and intersection analysis results summarized in **Tables 22** through **25** for the No Build Alternative, it can be clearly seen that the existing Boggy Creek Road from Simpson Road to Narcoossee Road needs to be widened to a four-lane divided roadway and make it safer for the traveling public.

Table 23: Year 2025 No Build Intersection Level of Service Analysis

Study Intersections along Boggy Creek Road	Control Type	Movement	Year 2025 AM Peak Hour				Year 2025 PM Peak Hour			
			95% Queue	v/c ratio	Delay (s)	LOS	95% Queue	v/c ratio	Delay (s)	LOS
Simpson Road	Signal	**Overall**			**83.8**	**F**			**37.1**	**D**
		EBL	1,123	1.110	114.7	F	715	1.000	72.2	E
		EBT	85	0.130	36.3	D	98	0.190	31.8	C
		EBR	425	0.690	48.5	D	815	1.120	120.1	F
		WBL	148	0.440	62.4	E	118	0.400	46.7	D
		WBT	220	0.940	116.6	F	95	0.480	53.5	D
		WBR	480	1.580	376.8	F	155	0.720	70.3	E
		NBL	683	1.160	130.7	F	68	0.680	5.4	A
		NBT	670	0.770	44.6	D	70	0.230	3.5	A
		NBR	105	0.160	27.6	C	18	0.070	2.8	A
		SBL	33	0.450	43.7	D	28	0.170	3.3	A
		SBT	183	0.290	44.3	D	68	0.190	5.0	A
		SBR	410	0.560	21.2	C	13	0.380	0.7	A
East Lake Pointe Drive	Stop	WBL	0	0.014	9.3	A	3	0.039	11.0	B
		NBL/R	78	0.614	74.0	F	40	0.377	51.0	F
Nele Road/ Tohopekaliga High School	Signal	**Overall**			**41.7**	**D**			**16.6**	**B**
		EBL	58	0.430	16.1	B	10	0.090	6.5	A
		EBT	280	0.580	12.6	B	465	0.830	18.6	B
		EBR	10	0.040	6.9	A	8	0.030	5.8	A
		WBL	8	0.050	8.3	A	8	0.090	11.8	B
		WBT	525	0.850	24.5	C	255	0.560	11.6	B
		WBR	60	0.170	9.7	A	5	0.020	6.3	A
		NBL	348	1.270	215.9	F	30	0.180	38.1	D
		NBT/R	0	0.000	0.0	A	0	0.000	0.0	A
		SBL/T	105	0.510	39.5	D	25	0.130	37.0	D
		SBR	370	1.110	136.0	F	45	0.360	38.0	D
Springlake Village Boulevard	Stop	EBL	3	0.047	9.2	A	18	0.187	9.8	A
		WBL	0	0.014	8.8	A	5	0.050	9.8	A
		NBL/T/R	95	0.715	95.2	F	183	1.320	323.2	F
		SBL	75	0.625	87.2	F	88	0.899	259.8	F
		SBR	55	0.434	18.8	C	10	0.130	12.8	B
Turnberry Boulevard	Signal	**Overall**			**21.9**	**C**			**12.4**	**B**
		EBL	18	0.110	8.0	A	23	0.200	6.1	A
		EBT	183	0.400	6.8	A	155	0.510	5.3	A
		WBT	300	0.490	14.8	B	258	0.480	11.8	B
		WBR	20	0.040	9.7	A	30	0.080	7.8	A
		SBL	165	0.480	47.7	D	108	0.530	50.9	D
		SBR	303	0.870	69.7	E	108	0.580	53.7	D
North Pointe Boulevard	Stop	NWL	60	0.484	38.8	E	35	0.345	48.3	E
		NWR	18	0.201	14.4	B	10	0.131	14.7	B
		SWL	3	0.036	9.2	A	5	0.074	9.8	A
Timber Lane/ Creek Bank Drive	Stop	WBL/T/R	10	0.117	27.6	D	13	0.151	35.5	E
		EBL/T/R	50	0.433	34.1	D	45	0.419	50.3	F
		NBL	0	0.002	8.3	A	3	0.032	9.3	A
		SBL	3	0.029	9.3	A	5	0.050	9.5	A
Fells Cove Boulevard	Stop	WBL	3	0.038	9.2	A	5	0.049	9.2	A
		NBL	15	0.178	29.7	D	15	0.161	36.3	E
		NBR	13	0.154	14.5	B	8	0.085	13.6	B
Narcoossee Road	Signal	**Overall**			**27.6**	**C**			**39.1**	**D**
		EBL	555	1.050	89.3	F	293	0.850	53.2	D
		EBR	298	0.830	45.9	D	663	1.240	169.7	F
		SET	173	0.400	19.2	B	433	0.870	28.0	C
		SER	0	0.000	0.0	0	0	0.000	0.0	0
		NWL	258	0.880	33.5	C	348	0.910	48.3	D
		NWT	288	0.650	12.7	B	105	0.320	7.0	A

Table 24: Year 2035 No Build Intersection Level of Service Analysis

Study Intersections along Boggy Creek Road	Control Type	Movement	Year 2035 AM Peak Hour				Year 2035 PM Peak Hour			
			95% Queue	v/c ratio	Delay (s)	LOS	95% Queue	v/c ratio	Delay (s)	LOS
Simpson Road	Signal	**Overall**			**155.4**	**F**			**65.9**	**E**
		EBL	1,430	1.320	202.3	F	925	1.050	93.8	F
		EBT	248	0.420	46.2	D	328	0.520	44.9	D
		EBR	623	0.960	88.7	F	1,240	1.270	190.3	F
		WBL	320	0.660	51.8	D	358	0.750	57.4	E
		WBT	600	1.240	194.3	F	333	0.890	84.6	F
		WBR	1,340	2.090	575.0	F	663	1.320	241.9	F
		NBL	1,205	1.460	261.2	F	288	0.850	25.8	C
		NBT	813	0.920	66.5	E	270	0.340	18.2	B
		NBR	323	0.490	41.0	D	195	0.270	17.3	B
		SBL	475	1.150	149.2	F	233	0.600	13.7	B
		SBT	183	0.280	42.0	D	205	0.260	18.9	B
		SBR	505	0.650	26.3	C	183	0.500	4.7	A
East Lake Pointe Drive	Stop	WBL	3	0.025	10.1	B	5	0.068	12.9	B
		NBL/R	218	1.538	411.8	F	120	1.017	237.0	F
Nele Road/ Tohopekaliga High School	Signal	**Overall**			**61.0**	**E**			**31.3**	**C**
		EBL	303	0.940	103.9	F	10	0.120	7.8	A
		EBT	578	0.700	18.9	B	958	1.000	43.6	F
		EBR	23	0.040	8.8	A	13	0.040	6.2	A
		WBL	13	0.080	13.2	B	33	0.270	25.6	C
		WBT	1,348	1.010	53.7	F	350	0.650	13.2	B
		WBR	98	0.170	11.1	B	5	0.020	6.1	A
		NBL	588	1.420	289.6	F	90	0.500	47.9	D
		NBT/R	0	0.000	0.0	A	0	0.000	0.0	A
		SBL/T	170	0.460	54.5	D	38	0.180	42.5	D
		SBR	340	0.830	75.1	E	58	0.420	43.6	D
Springlake Village Boulevard	Stop	EBL	5	0.066	10.5	B	20	0.217	10.6	B
		WBL	3	0.033	9.3	A	8	0.084	11.1	B
		NBL/T/R	258	2.199	744.5	F	305	3.038	1158.6	F
		SBL	165	1.497	454.5	F	143	2.415	1110.8	F
		SBR	98	0.615	32.3	D	15	0.161	14.8	B
Turnberry Boulevard	Signal	**Overall**			**24.4**	**C**			**13.7**	**B**
		EBL	25	0.170	13.4	B	25	0.240	7.6	A
		EBT	303	0.530	8.8	A	240	0.640	6.8	A
		WBT	570	0.700	20.4	C	350	0.580	13.0	B
		WBR	25	0.050	9.8	A	35	0.090	7.3	A
		SBL	200	0.490	55.3	E	130	0.600	59.7	E
		SBR	350	0.890	78.8	E	133	0.660	64.9	E
North Pointe Boulevard	Stop	NWL	158	1.021	175.4	F	75	0.667	125.1	F
		NWR	28	0.275	18.5	C	18	0.189	18.9	C
		SWL	5	0.049	10.1	B	8	0.099	11.0	B
Timber Lane/ Creek Bank Drive	Stop	WBL/T/R	40	0.415	87.8	F	45	0.461	102.3	F
		EBL/T/R	253	1.360	285.5	F	168	1.220	283.2	F
		NBL	0	0.007	9.2	A	3	0.044	10.0	A
		SBL	5	0.054	10.3	B	8	0.095	10.7	B
Fells Cove Boulevard	Stop	WBL	5	0.052	10.2	B	5	0.064	10.1	B
		NBL	40	0.389	67.1	F	35	0.360	74.2	F
		NBR	20	0.225	19.2	C	13	0.134	16.8	C
Narcoossee Road	Signal	**Overall**			**46.1**	**D**			**75.2**	**E**
		EBL	855	1.050	96.1	F	553	0.990	95.7	F
		EBR	455	0.810	49.9	D	1,325	1.560	320.2	F
		SET	445	0.820	48.2	D	825	0.980	51.0	D
		SER	0	0.000	0.0	0	0	0.000	0.0	0
		NWL	755	1.020	82.0	F	618	1.030	97.7	F
		NWT	585	0.780	23.3	C	203	0.380	8.8	A

Table 25: Year 2045 No Build Intersection Level of Service Analysis

Study Intersections along Boggy Creek Road	Control Type	Movement	Year 2045 AM Peak Hour				Year 2045 PM Peak Hour			
			95% Queue	v/c ratio	Delay (s)	LOS	95% Queue	v/c ratio	Delay (s)	LOS
Simpson Road	Signal	**Overall**			**198.1**	**F**			**127.6**	**F**
		EBL	1,808	1.550	305.4	F	1,438	1.370	226.9	F
		EBT	448	0.860	67.5	E	675	0.990	84.4	F
		EBR	1,058	1.360	238.7	F	1,808	1.640	357.5	F
		WBL	538	0.950	70.9	E	958	1.360	227.4	F
		WBT	1,073	1.430	264.5	F	633	1.150	148.5	F
		WBR	2,268	2.400	703.5	F	1,258	1.700	394.7	F
		NBL	1,268	1.390	216.6	F	283	0.900	29.4	C
		NBT	665	0.750	41.4	D	245	0.320	14.2	B
		NBR	478	0.650	37.5	D	280	0.410	15.7	B
		SBL	645	1.150	130.3	F	333	0.900	25.7	C
		SBT	145	0.190	27.1	C	163	0.230	12.0	B
		SBR	435	0.610	17.0	B	125	0.530	3.7	A
East Lake Pointe Drive	Stop	WBL	3	0.038	11.2	B	10	0.109	15.5	C
		NBL/R	368	3.796	1506.1	F	225	2.669	1052.7	F
Nele Road/ Tohopekaliga High School	Signal	**Overall**			**111.6**	**F**			**48.7**	**D**
		EBL	308	1.110	161.8	F	20	0.130	7.6	A
		EBT	913	0.850	28.5	C	1,570	1.030	49.1	F
		EBR	30	0.050	9.7	A	20	0.050	4.6	A
		WBL	20	0.130	22.4	C	98	0.530	51.8	D
		WBT	2,645	1.240	143.9	F	463	0.660	10.9	B
		WBR	115	0.190	11.8	B	8	0.020	4.3	A
		NBL	838	1.640	381.8	F	403	1.500	350.7	F
		NBT/R	0	0.000	0.0	A	0	0.000	0.0	A
		SBL/T	193	0.430	56.1	E	73	0.320	69.4	E
		SBR	353	0.790	71.5	E	120	0.700	88.5	F
Springlake Village Boulevard	Stop	EBL	8	0.090	12.1	B	25	0.250	11.7	B
		WBL	5	0.055	10.0	A	10	0.131	12.9	B
		NBL/T/R	415	13.333	6358.1	F	403	7.245	3254.1	F
		SBL	238	3.977	1772.8	F	183	9.053	5030.0	F
		SBR	180	0.883	77.6	F	18	0.201	17.5	C
Turnberry Boulevard	Signal	**Overall**			**32.3**	**C**			**15.5**	**B**
		EBL	68	0.320	32.0	C	50	0.290	9.8	A
		EBT	470	0.670	12.0	B	390	0.760	9.0	A
		WBT	1,085	0.930	37.3	D	478	0.650	13.2	B
		WBR	30	0.050	10.1	B	40	0.090	6.2	A
		SBL	220	0.500	58.6	E	170	0.710	74.9	E
		SBR	373	0.890	79.0	E	173	0.790	79.2	E
North Pointe Boulevard	Stop	NWL	270	2.193	730.6	F	128	1.263	388.0	F
		NWR	43	0.377	25.5	D	28	0.270	25.6	D
		SWL	5	0.066	11.2	B	13	0.133	12.5	B
Timber Lane/ Creek Bank Drive	Stop	WBL/T/R	118	1.516	599.3	F	113	1.404	533.2	F
		EBL/T/R	543	3.996	1518.3	F	328	3.248	1251.0	F
		NBL	0	0.015	10.2	B	5	0.060	10.7	B
		SBL	8	0.088	11.6	B	13	0.155	12.4	B
Fells Cove Boulevard	Stop	WBL	5	0.074	11.6	B	8	0.084	11.2	B
		NBL	85	0.847	224.9	F	78	0.789	216.4	F
		NBR	35	0.333	27.6	D	18	0.202	21.6	C
Narcoossee Road	Signal	**Overall**			**83.1**	**F**			**127.6**	**F**
		EBL	1,550	1.390	231.3	F	868	1.170	162.3	F
		EBR	695	1.050	97.6	F	2,048	1.960	503.7	F
		SET	568	0.950	54.1	D	1,280	1.090	90.1	F
		SER	0	0.000	0.0	0	0	0.000	0.0	0
		NWL	1,153	1.370	218.0	F	988	1.220	170.7	F
		NWT	645	0.870	24.1	C	273	0.440	10.0	B

8.2 Build Operational Analysis

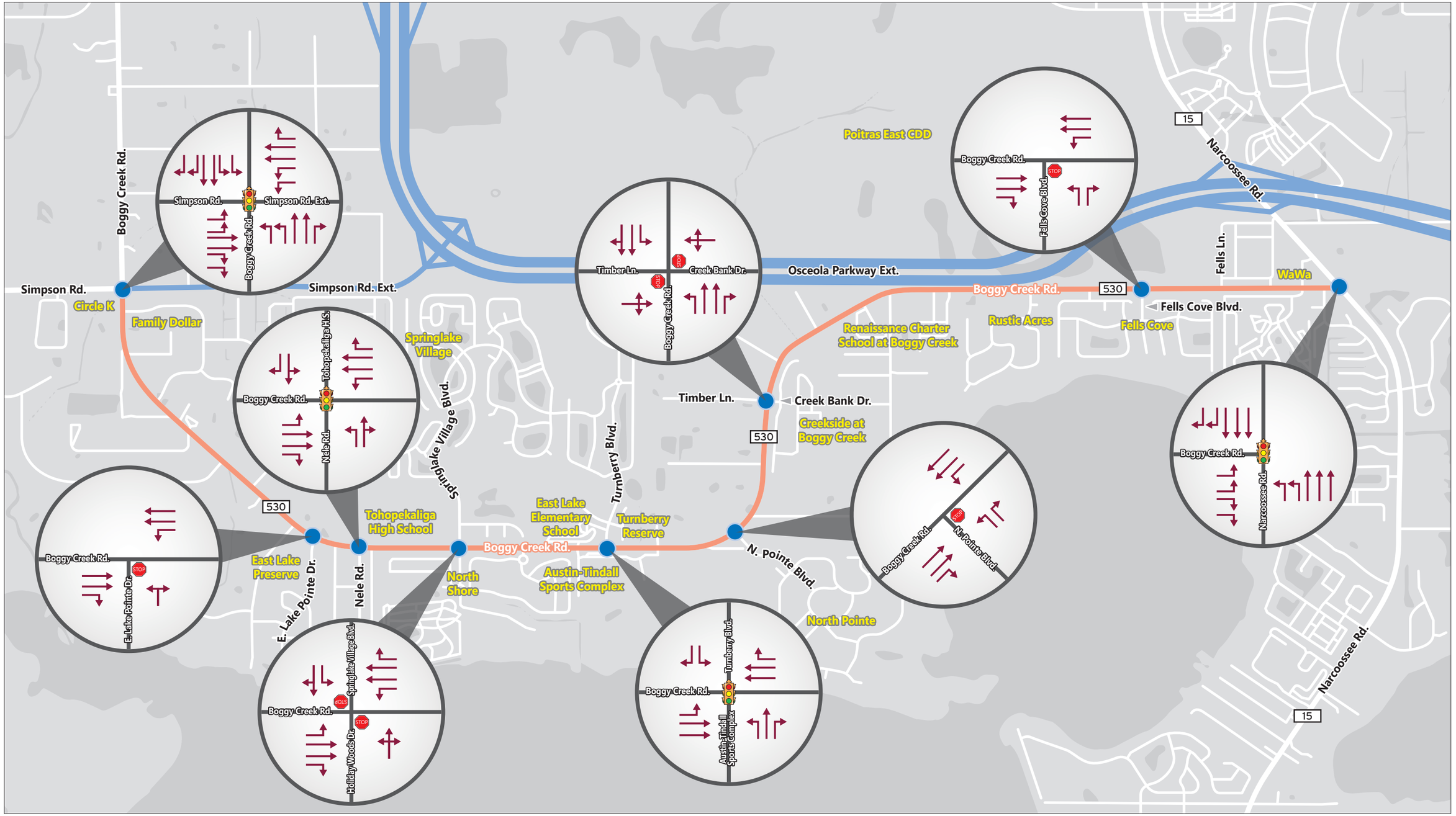
The Build operational analysis represents the evaluation of the operational performance on the corridor with proposed improvements. Under the Build scenario, the corridor operations are evaluated assuming the transformation of the corridor to a four-lane divided typical section with turn lane and signal phasing improvements at signalized intersections along the corridor. The Build alternative also includes improvements at unsignalized locations that are anticipated to experience high levels of delay. The following planned improvements were assumed in this evaluation:

- the extension of Simpson Road, east of Boggy Creek Road, to the future extension of the Osceola Parkway and associated improvements at the intersection of Boggy Creek Road & Simpson Road;
- and, widening of Narcoossee Road to six lanes.

The lane geometries assumed for each intersection in the Build analysis are presented in **Figure 24**. This same geometry was assumed for all future years (2025, 2035, and 2045).

8.2.1 Roadway Level of Service Analysis – Build

Roadway segment level of service analysis (peak hour directional) was performed for each of the segments within the study area using the forecasted Build turning movement volumes and generalized capacities obtained from 2020 FDOT Generalized Service Volume Tables. The results of this analysis are presented in **Table 26**. Under the Build alternative, all roadway segments are anticipated to meet the LOS standard (E) during the AM and PM peak hours in Years 2025, 2035, and 2045.



N.T.S.

- Project Location
- Lane Geometry
- Stop Controlled Intersection
- Signalized Intersection

Figure 17

Future Year Build Geometry
Boggy Creek Road Project Traffic Analysis Report

Table 26: Build Roadway Segment Level of Service Analysis

Roadway/Segment	Number of Lanes	Targeted LOS Standard	LOS E Capacity	Build AM Peak Hour Conditions									Build PM Peak Hour Conditions								
				Year 2025			Year 2035			Year 2045			Year 2025			Year 2035			Year 2045		
				Peak Volume	V/C Ratio	LOS	Peak Volume	V/C Ratio	LOS	Peak Volume	V/C Ratio	LOS	Peak Volume	V/C Ratio	LOS	Peak Volume	V/C Ratio	LOS	Peak Volume	V/C Ratio	LOS
Boggy Creek Road																					
North of Simpson Road	4 Lane Divided	E	2,100	1,398	0.670	C	1,736	0.830	C	2,074	0.990	D	1,237	0.590	C	1,665	0.790	C	2,094	0.997	D
Simpson Road to East Lake Pointe Drive	4 Lane Divided	E	2,100	1,327	0.630	C	1,801	0.860	C	2,097	1.000	E	1,204	0.570	C	1,713	0.820	C	2,080	0.990	D
East Lake Pointe Drive to Nele Road	4 Lane Divided	E	2,100	1,125	0.540	C	1,620	0.770	C	2,081	0.990	D	1,144	0.540	C	1,621	0.770	C	2,056	0.980	D
Nele Road to Springlake Village Boulevard	4 Lane Divided	E	2,100	1,012	0.480	C	1,520	0.720	C	1,979	0.940	D	1,118	0.530	C	1,594	0.760	C	2,069	0.990	D
Springlake Village Boulevard to Turnberry Boulevard	4 Lane Divided	E	2,100	873	0.420	C	1,396	0.660	C	1,921	0.910	C	966	0.460	C	1,431	0.680	C	1,895	0.900	C
Turnberry Boulevard to North Pointe Boulevard	4 Lane Divided	E	2,100	796	0.380	C	1,233	0.590	C	1,755	0.840	C	935	0.450	C	1,400	0.670	C	1,864	0.890	C
North Pointe Boulevard to Timber Lane	4 Lane Divided	E	2,100	835	0.400	C	1,284	0.610	C	1,733	0.830	C	895	0.430	C	1,360	0.650	C	1,824	0.870	C
Timber Lane to Fells Cove Boulevard	4 Lane Divided	E	2,100	857	0.410	C	1,317	0.630	C	1,774	0.840	C	896	0.430	C	1,312	0.620	C	1,743	0.830	C
Fells Cove Boulevard to Narcoossee Road	4 Lane Divided	E	2,100	886	0.420	C	1,338	0.640	C	1,816	0.860	C	861	0.410	C	1,293	0.620	C	1,726	0.820	C

8.2.2 Intersection Level of Service Analysis – Build

Intersection analysis was performed to determine if there are any deficiencies for the signalized and unsignalized intersections under future year (2025, 2035, and 2045) conditions. Forecasted turning movement volumes as shown in **Section 7.5** were used to analyze the Build alternative. The results of the intersection analysis are summarized in **Tables 27, 28, and 29** for years 2025, 2035, and 2045, respectively. **Tables 27-29** show a summary of the 95th percentile queues (in feet), volume-to-capacity ratios, average delays (in seconds), and LOS for each of the intersection movements under AM and PM peak hour conditions. For signalized intersections, these tables also show the average overall intersection delay (in seconds) and LOS. Synchro output sheets for each of these analyses are provided in **Appendix K**.

Year 2025

- All signalized intersections are anticipated to operate at LOS E or better in Year 2025.
- All stop-controlled movements at unsignalized intersections along the corridor are anticipated to operate with reasonable delays and v/c ratios.

Year 2035

- All signalized intersections are anticipated to operate at LOS E or better in Year 2035.
- Notably high average delays and v/c ratios are anticipated in the PM peak hour for the shared northbound left/through/right at Springlake Village Boulevard. The lane group is expected to operate with a 518.0 sec/veh average delay and a v/c ratio of 1.772. Using forecasted traffic volumes, a planning-level analysis indicates that this intersection could meet signal warrants 1A and 1B by 2035 (provided in **Appendix K**). **Table 30** shows the performance of this intersection, if signalized in 2035. The intersection is expected to operate with low delays and acceptable levels of service.

Year 2045

- All signalized intersections are anticipated to operate at LOS E or better in Year 2045.
- Notably high average delays and v/c ratios are expected for several stop-controlled movements on the corridor's side streets.
    - During the AM peak hour and PM peak hour, the shared northbound left/through/right at Springlake Village Boulevard is expected to experience exceptionally high average delays and v/c ratios. In the PM peak, the southbound left is also expected to operate with a high delay and high v/c ratio. Using forecasted traffic volumes, a planning-level analysis

indicates that this intersection could meet signal warrants 1A and 1B by 2035 (provided in **Appendix K**). **Table 30** shows the performance of this intersection, if signalized in 2045. The intersection is expected to operate with low delays and acceptable levels of service.

- Delays and v/c ratios for the westbound shared left/through movement at Timber Lane/Creek Bank Drive are anticipated to be elevated in both the AM and PM peak hours. Using forecasted traffic volumes, a planning-level analysis indicates that this intersection could meet signal warrant 1B by 2045 (provided in **Appendix K**). **Table 30** shows the performance of this intersection, if signalized in 2045. The intersection is expected to operate with low delays and acceptable levels of service.

Table 27: Year 2025 Build Intersection Level of Service Analysis

Study Intersections along Boggy Creek Road	Control Type	Movement	Year 2025 AM Peak Hour				Year 2025 PM Peak Hour			
			95% Queue	v/c ratio	Delay (s)	LOS	95% Queue	v/c ratio	Delay (s)	LOS
Simpson Road	Signal	**Overall**			**59.5**	**E**			**45.2**	**D**
		EBL	568	1.090	114.4	F	420	0.990	83.0	F
		EBT	60	0.130	40.1	D	80	0.200	39.1	D
		EBR	185	0.360	28.3	C	283	0.640	35.0	D
		WBL	85	0.550	61.6	E	85	0.560	56.4	E
		WBT	100	0.410	55.4	E	80	0.360	50.9	D
		WBR	195	0.630	55.9	E	78	0.260	44.8	D
		NBL	518	1.090	118.4	F	315	0.970	89.7	F
		NBT	268	0.400	23.8	C	148	0.240	21.6	C
		NBR	100	0.170	16.7	B	78	0.150	16.3	B
		SBL	68	0.660	66.9	E	98	0.720	60.7	E
		SBT	168	0.280	32.6	C	255	0.440	29.9	C
		SBR	203	0.360	19.4	B	203	0.400	16.8	B
East Lake Pointe Drive	Stop	WBL	0	0.015	9.7	A	3	0.044	11.9	B
		NBL/R	23	0.242	20.5	C	15	0.181	22.1	C
Nele Road/ Tohopekaliga High School	Signal	**Overall**			**19.6**	**B**			**12.6**	**B**
		EBL	35	0.350	10.1	B	10	0.110	6.5	A
		EBT	145	0.420	10.8	B	240	0.660	12.5	B
		EBR	10	0.040	8.1	A	8	0.040	7.0	A
		WBL	8	0.060	8.8	A	8	0.090	8.3	A
		WBT	245	0.630	16.0	B	158	0.470	10.9	B
		WBR	60	0.200	11.7	B	5	0.020	7.6	A
		NBL	68	0.550	41.5	D	23	0.160	31.5	C
		NBT/R	53	0.290	29.0	C	5	0.040	29.0	C
		SBL/T	85	0.440	32.6	C	25	0.140	29.8	C
		SBR	250	0.920	68.8	E	40	0.350	30.3	C
Springlake Village Boulevard	Stop	EBL	5	0.055	10.0	A	20	0.215	10.7	B
		WBL	0	0.016	9.3	A	5	0.058	10.7	B
		NBL/T/R	28	0.267	21.8	C	78	0.593	59.4	F
		SBL	30	0.299	29.2	D	28	0.290	44.5	E
		SBR	38	0.340	14.3	B	10	0.107	11.3	B
Turnberry Boulevard	Signal	**Overall**			**18.5**	**B**			**10.0**	**B**
		EBL	18	0.110	6.7	A	23	0.200	4.9	A
		EBT	98	0.270	5.4	A	70	0.330	3.6	A
		WBT	188	0.330	12.1	B	153	0.330	9.5	A
		WBR	20	0.040	9.7	A	30	0.080	7.8	A
		SBL	165	0.480	47.7	D	105	0.530	50.5	D
		SBR	303	0.870	69.7	E	105	0.580	52.3	D
North Pointe Boulevard	Stop	NWL	33	0.320	22.4	C	15	0.177	22.9	C
		NWR	15	0.159	12.0	B	8	0.099	12.1	B
		SWL	3	0.042	9.8	A	8	0.086	10.7	B
Timber Lane/ Creek Bank Drive	Stop	EBL/T/R	5	0.061	16.1	C	5	0.071	18.1	C
		WBL/T/R	28	0.280	20.0	C	18	0.200	21.1	C
		NBL	0	0.002	8.9	A	3	0.037	10.1	B
		SBL	3	0.034	9.9	A	5	0.057	10.2	B
Fells Cove Boulevard	Stop	WBL	3	0.043	9.8	A	5	0.057	9.9	A
		NBL	10	0.112	19.3	C	8	0.084	19.9	C
		NBR	10	0.119	12.0	B	5	0.066	11.6	B
Narcoossee Road	Signal	**Overall**			**21.6**	**C**			**20.7**	**C**
		EBL	248	0.870	47.9	D	163	0.800	44.0	D
		EBR	140	0.440	22.9	C	163	0.620	26.8	C
		SET	150	0.360	17.9	B	320	0.760	19.8	B
		SER	50	0.160	16.2	B	108	0.360	14.2	B
		NWL	268	0.890	50.5	D	200	0.850	44.5	D
		NWT	205	0.550	8.1	A	63	0.290	4.7	A

Table 28: Year 2035 Build Intersection Level of Service Analysis

Study Intersections along Boggy Creek Road	Control Type	Movement	Year 2035 AM Peak Hour				Year 2035 PM Peak Hour			
			95% Queue	v/c ratio	Delay (s)	LOS	95% Queue	v/c ratio	Delay (s)	LOS
Simpson Road	Signal	**Overall**			**67.0**	**E**			**50.3**	**D**
		EBL	573	1.000	93.1	F	435	0.950	74.6	E
		EBT	195	0.360	50.2	D	245	0.590	49.0	D
		EBR	248	0.410	29.0	C	408	0.790	42.4	D
		WBL	258	0.860	77.2	E	245	0.850	66.4	E
		WBT	365	0.980	105.1	F	253	0.840	68.4	E
		WBR	770	1.180	169.0	F	208	0.460	42.8	D
		NBL	613	1.010	92.6	F	370	0.940	79.6	E
		NBT	393	0.530	34.7	C	223	0.360	31.9	C
		NBR	343	0.470	25.3	C	265	0.430	24.6	C
		SBL	203	0.810	72.7	E	280	0.880	72.0	E
		SBT	268	0.440	47.1	D	380	0.650	41.1	D
		SBR	283	0.450	27.2	C	260	0.470	21.6	C
East Lake Pointe Drive	Stop	WBL	3	0.033	11.8	B	8	0.098	16.6	C
		NBL/R	68	0.524	42.9	E	48	0.438	50.3	F
Nele Road/ Tohopekaliga High School	Signal	**Overall**			**28.1**	**C**			**21.3**	**C**
		EBL	55	0.540	18.4	B	13	0.170	8.5	A
		EBT	260	0.620	14.0	B	523	0.940	26.4	C
		EBR	15	0.050	8.6	A	15	0.060	7.7	A
		WBL	8	0.090	10.0	B	23	0.240	17.3	B
		WBT	510	0.940	30.0	C	270	0.660	13.6	B
		WBR	70	0.220	12.0	B	8	0.030	7.6	A
		NBL	223	0.980	112.1	F	65	0.420	37.5	D
		NBT/R	60	0.290	30.4	C	13	0.100	31.9	C
		SBL/T	95	0.460	34.4	C	33	0.180	33.1	C
		SBR	250	0.890	62.2	E	50	0.380	33.1	C
Springlake Village Boulevard	Stop	EBL	8	0.098	13.4	B	33	0.311	14.2	B
		WBL	3	0.045	11.0	B	10	0.124	14.5	B
		NBL/T/R	90	0.651	64.6	F	245	1.772	518.0	F
		SBL	93	0.724	110.0	F	88	0.838	212.4	F
		SBR	70	0.509	23.3	C	13	0.148	13.8	B
Turnberry Boulevard	Signal	**Overall**			**18.6**	**B**			**10.6**	**B**
		EBL	20	0.180	10.0	A	25	0.290	7.2	A
		EBT	188	0.440	6.7	A	135	0.500	4.6	A
		WBT	358	0.590	15.8	B	265	0.520	11.7	B
		WBR	23	0.050	9.8	A	35	0.090	7.9	A
		SBL	175	0.500	47.9	D	113	0.550	51.9	D
		SBR	313	0.880	70.7	E	13	0.610	55.2	E
North Pointe Boulevard	Stop	NWL	85	0.616	57.0	F	38	0.356	46.3	E
		NWR	23	0.234	15.9	C	13	0.154	15.9	C
		SWL	5	0.071	12.5	B	13	0.147	14.3	B
Timber Lane/ Creek Bank Drive	Stop	EBL/T/R	15	0.183	32.3	D	18	0.202	35.8	E
		WBL/T/R	140	0.815	79.5	F	73	0.573	58.1	F
		NBL	0	0.011	11.1	B	5	0.066	12.5	B
		SBL	8	0.078	12.8	B	13	0.138	13.7	B
Fells Cove Boulevard	Stop	WBL	5	0.076	12.8	B	8	0.095	12.8	B
		NBL	23	0.239	36.4	E	18	0.195	35.5	E
		NBR	18	0.184	16.0	C	10	0.115	14.8	B
Narcoossee Road	Signal	**Overall**			**39.7**	**D**			**32.8**	**C**
		EBL	480	1.060	91.2	F	283	0.930	58.2	E
		EBR	233	0.580	22.5	C	273	0.750	27.6	C
		SET	245	0.530	25.6	C	523	0.970	39.8	D
		SER	128	0.300	23.4	C	235	0.620	24.0	C
		NWL	580	1.100	103.7	F	335	0.940	55.6	E
		NWT	283	0.610	10.5	B	108	0.350	6.3	A

Table 29: Year 2045 Build Intersection Level of Service Analysis

Study Intersections along Boggy Creek Road	Control Type	Movement	Year 2045 AM Peak Hour				Year 2045 PM Peak Hour			
			95% Queue	v/c ratio	Delay (s)	LOS	95% Queue	v/c ratio	Delay (s)	LOS
Simpson Road	Signal	**Overall**			**76.6**	**E**			**54.2**	**D**
		EBL	695	1.030	113.8	F	510	0.960	83.8	F
		EBT	343	0.520	58.6	E	475	0.900	72.6	E
		EBR	333	0.450	30.8	C	525	0.820	46.3	D
		WBL	445	0.900	85.4	F	448	0.950	87.1	F
		WBT	543	0.880	81.5	F	435	0.920	79.5	E
		WBR	1,245	1.150	148.6	F	318	0.500	37.9	D
		NBL	633	0.940	81.5	F	478	0.950	85.1	F
		NBT	645	0.800	63.6	E	235	0.300	24.0	C
		NBR	693	0.740	45.1	D	338	0.500	15.2	B
		SBL	355	0.880	86.5	F	488	0.960	85.1	F
		SBT	430	0.750	75.6	E	405	0.520	28.2	C
		SBR	425	0.590	44.5	D	213	0.390	11.0	B
East Lake Pointe Drive	Stop	WBL	5	0.059	14.8	B	15	0.181	23.9	C
		NBL/R	140	0.880	115.0	F	125	0.934	173.5	F
Nele Road/ Tohopekaliga High School	Signal	**Overall**			**52.9**	**D**			**36.8**	**D**
		EBL	265	1.040	130.2	F	38	0.280	16.0	B
		EBT	638	0.760	23.6	C	1,318	1.030	49.4	F
		EBR	33	0.060	11.9	B	35	0.070	8.7	A
		WBL	15	0.150	18.6	B	90	0.570	42.0	D
		WBT	1,340	1.050	65.0	F	585	0.740	17.8	B
		WBR	125	0.200	14.6	B	13	0.030	8.2	A
		NBL	415	1.090	160.9	F	203	0.660	71.3	E
		NBT/R	110	0.220	45.0	D	35	0.110	52.7	D
		SBL/T	178	0.410	51.5	D	73	0.210	55.4	E
		SBR	298	0.640	52.6	D	98	0.300	54.3	D
Springlake Village Boulevard	Stop	EBL	15	0.165	19.0	C	58	0.450	21.2	C
		WBL	8	0.092	13.7	B	25	0.248	22.3	C
		NBL/T/R	375	5.000	2126.2	F	428	15.395	7382.6	F
		SBL	183	1.704	550.6	F	+	+	+	+
		SBR	133	0.740	48.1	E	20	0.205	17.7	C
Turnberry Boulevard	Signal	**Overall**			**21.7**	**C**			**11.5**	**B**
		EBL	55	0.310	23.0	C	63	0.410	11.9	B
		EBT/R	363	0.600	9.5	A	228	0.640	5.2	A
		WBT	723	0.800	23.2	C	410	0.640	11.9	B
		WBR	30	0.050	10.2	B	38	0.090	6.3	A
		SBL	220	0.490	58.4	E	160	0.730	71.5	E
		SBR	360	0.880	72.9	E	163	0.810	76.5	E
North Pointe Boulevard	Stop	NWL	180	1.144	222.2	F	80	0.702	130.3	F
		NWR	38	0.344	22.8	C	23	0.238	22.4	C
		SWL	10	0.119	16.9	C	25	0.252	21.4	C
Timber Lane/ Creek Bank Drive	Stop	EBL/T/R	55	0.519	98.5	F	58	0.557	110.6	F
		WBL/T/R	428	2.105	606.3	F	240	1.579	414.4	F
		NBL	3	0.027	14.7	B	10	0.113	16.5	C
		SBL	15	0.161	18.2	C	30	0.288	21.2	C
Fells Cove Boulevard	Stop	WBL	13	0.137	18.2	C	15	0.159	17.9	C
		NBL	50	0.481	85.2	F	43	0.424	77.9	F
		NBR	30	0.288	23.4	C	18	0.189	20.3	C
Narcoossee Road	Signal	**Overall**			**49.1**	**D**			**56.5**	**E**
		EBL	730	1.050	96.5	F	623	1.110	125.3	F
		EBR	330	0.570	18.2	B	590	0.880	43.9	D
		SET	515	0.900	59.6	E	898	1.010	63.2	F
		SER	315	0.680	51.1	D	495	0.790	41.2	D
		NWL	820	1.030	83.9	F	673	1.030	91.5	F
		NWT	513	0.690	17.7	B	210	0.380	8.1	A

Table 30: Proposed Signalization Intersection Level of Service Analysis

Study Intersections along Boggy Creek Road	Control Type	Movement	AM Peak Hour				PM Peak Hour			
			95% Queue	v/c ratio	Delay (s)	LOS	95% Queue	v/c ratio	Delay (s)	LOS
Year 2035 Build Conditions										
Springlake Village Boulevard	Signal	**Overall**			**6.5**	**A**			**4.3**	**A**
		EBL	3	0.150	0.9	A	13	0.470	2.7	A
		EBT	8	0.460	0.6	A	10	0.570	0.6	A
		EBR	0	0.030	0.0	A	0	0.080	0.1	A
		WBL	3	0.070	0.3	A	5	0.180	1.2	A
		WBT	15	0.600	1.0	A	8	0.440	0.5	A
		WBR	0	0.040	0.1	A	3	0.080	0.1	A
		NBL/T/R	143	0.280	45.7	D	173	0.340	55.6	E
		SBL	90	0.190	43.2	D	63	0.140	50.3	D
		SBR	268	0.490	48.6	D	108	0.220	51.1	D
Year 2045 Build Conditions										
Springlake Village Boulevard	Signal	**Overall**			**7.6**	**A**			**9.0**	**A**
		EBL	5	0.230	1.6	A	198	0.850	25.9	C
		EBT	10	0.560	0.6	A	5	0.750	0.3	A
		EBR	0	0.030	0.0	A	0	0.100	0.0	A
		WBL	3	0.130	0.6	A	43	0.340	11.9	B
		WBT	20	0.730	1.3	A	365	0.590	10.9	B
		WBR	0	0.040	0.0	A	38	0.090	6.3	A
		NBL/T/R	215	0.540	67.6	E	205	0.430	60.2	E
		SBL	123	0.330	58.5	E	70	0.170	52.6	D
		SBR	318	0.660	66.3	E	113	0.240	53.0	D
Timber Lane/Creek Bank Drive	Signal	**Overall**			**11.2**	**B**			**7.7**	**A**
		EBL/T/R	23	0.110	22.9	C	28	0.160	31.0	C
		WBL/T/R	128	0.580	27.0	C	93	0.500	34.0	C
		NBL	5	0.050	15.0	B	15	0.180	12.4	B
		NBT	213	0.790	10.3	B	135	0.690	6.2	A
		NBR	8	0.060	4.4	A	8	0.090	3.0	A
		SBL	30	0.290	22.3	C	50	0.430	18.9	B
		SBT	190	0.720	9.9	A	133	0.660	6.4	A
		SBR	198	0.720	9.9	A	140	0.670	6.5	A

8.3 Safety Outcomes

An HSM Safety analysis was conducted for the No Build and Build alternatives using predictive crash methods in order to quantify and compare the potential future crashes. The results of this analysis are presented in **Table 31**. The predictive method was able to account for all proposed roadway improvements included in the recommendations, except for the potential future signalization of existing stop-controlled intersections and the inclusion of a shared use path. The associated calculations and supporting documentation of this analysis are presented in **Appendix L.**

Table 31: Predicted Average Crash Frequency for 2045 Conditions (crashes/year)

Facility	Fatal and injury (FI)		Total	
	No Build	Build	No Build	Build
Segment				
Simpson Road to East Lake Pointe Dr	4.187	3.277	14.740	11.796
East Lake Pointe Dr to Nele Road	0.607	0.467	1.970	1.675
Nele Road to Springlake Village Blvd	1.173	1.023	3.799	3.682
Springlake Village Blvd to Turnberry Blvd	1.470	1.449	4.849	5.216
Turnberry Blvd to North Pointe Blvd	1.112	1.166	3.963	4.198
North Pointe Blvd to Timber Lane	1.542	1.447	5.358	5.184
Timber Lane to Fells Cove Blvd	3.676	3.743	13.093	13.474
Fells Cove Blvd to Narcoossee Road	1.809	1.785	6.055	6.411
Intersection				
Simpson Road	3.353	2.262	9.476	6.407
East Lake Pointe Dr	0.796	0.969	2.202	2.667
Nele Road	1.436	2.342	4.090	6.531
Springlake Village Blvd	0.770	1.035	1.803	2.349
Turnberry Blvd	1.067	1.902	3.093	5.298
North Pointe Blvd	0.691	1.062	1.967	3.111
Timber Lane	0.851	1.146	2.019	2.613
Fells Cove Blvd	0.593	0.886	1.595	2.420
Narcoossee Road	2.972	2.976	10.321	10.785
Total	**28.103**	**28.936**	**90.392**	**93.816**

With the implementation of the improvements in the Build alternative, including addition of a raised median, roadway widening, and incorporation of turn lane improvements, the following safety outcomes are anticipated to result:

- The total number of crashes in the corridor is expected to increase only slightly from No Build (90.4 crashes/year) to Build conditions (93.8 crashes/year). However, it is important to note that the Build condition accommodates a substantial increase in corridor traffic volumes; thus, the actual crash rate for the corridor is expected to be lower under Build conditions.

- The number of fatal and injury crashes are anticipated increase only slightly from the No Build (28.1 crashes/year) to Build alternative (28.9 crashes/year). Again, given that the Build alternative accommodates a much larger volume of traffic, the actual rate of crashes is expected to be lower in the Build alternative.

- Not inherently accounted for in this evaluation, but important to consider qualitatively, is the provision of bicycle facilities proposed in the Build alternative. The Build alternative is expected to provide an off road (shared use path) facility for cyclists throughout the entirety of the corridor. This will provide cyclists a greater separation from vehicular traffic.

9 Noise & Air Quality

9.1 Noise Analysis

The existing, opening year and design year AADT's information for No Build and Build conditions are provided in **Appendix M** for Noise Analysis, as per the FDOT Noise Policy (Part 2, Chapter 17, Section 17-4.2 of the PD&E Manual). The truck% distributions were obtained from FDOT CoSite 920105.

9.2 Air Quality Analysis

The opening year and design year traffic data for No Build and Build conditions for the intersection of Boggy Creek Road & East Lake Pointe Drive is provided in **Appendix N** for Air Quality Analysis, as per the FDOT Air Quality Policy (Part 2, Chapter 19 of the PD&E Manual – Figure 19-3).

10 Recommendations

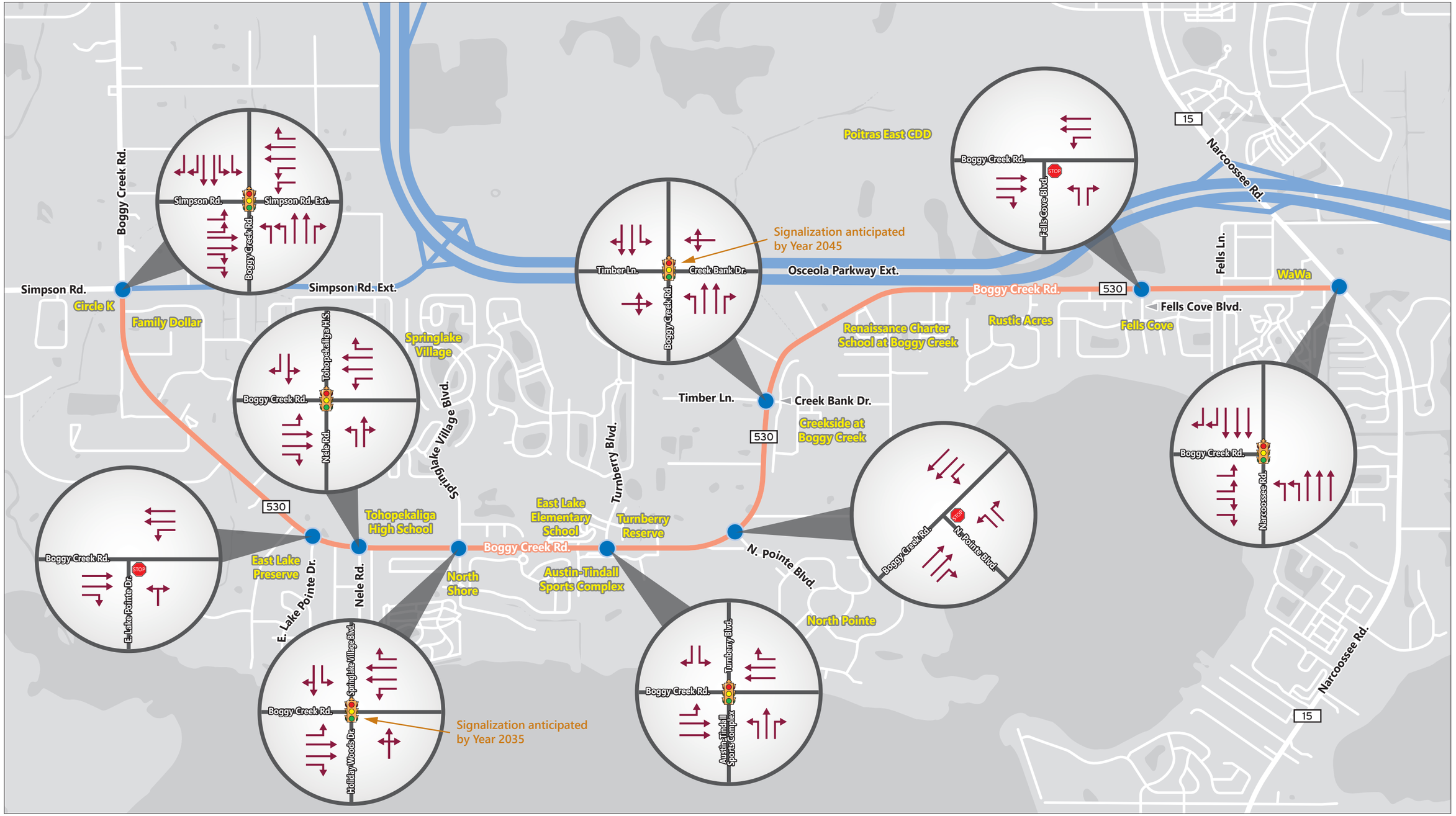
Based on the evaluation of operating conditions for the Design Year 2045 Build traffic conditions, this study recommends the roadway and intersection capacity improvements as shown in **Table 32** and on **Figure 18**, to accommodate projected traffic volumes and enhance safety within the study corridor.

Table 32: Recommendations

Roadway/Intersection	Improvement
General	Provide appropriate corridor and intersection lighting Reconstruct roadway to a four-lane divided roadway with a 22' raised median (or 15.5' raised median in constrained areas), a shared use path on the south side of the road, and a sidewalk on the north side of the road
Simpson Road#	Coordinate geometric improvements with the upcoming Simpson Road extension project. The ultimate configuration of the intersection should include two through lanes and dual left turn lanes for all approaches. The eastbound and southbound approaches should have dual right turn lanes; the westbound and northbound should have single right turn lanes. Signal Phasing: Overlap all right turn movements with complementary left turn movements.
Nele Road	Add a northbound left turn lane
Springlake Village Boulevard	Signalize intersection by 2035*
Timber Lane/Creek Bank Drive	Signalize intersection by 2045*
Narcoossee Road	Add a second northbound left turn lane Add a second southbound right turn lane Add a second eastbound left turn lane Add a second eastbound right turn lane Signal Phasing: Overlap eastbound right turn with northbound left turn

* Actual signalization should be based on a signal warrant analysis using observed turning movement counts.

The intersection of Boggy Creek Road and Simpson Road was evaluated under "Simpson Road Improvements PD&E Services".



N.T.S.

- Project Location
- Lane Geometry
- Stop Controlled Intersection
- Signalized Intersection

Figure 18

Future Year Recommended Geometry
Boggy Creek Road Project Traffic Analysis Report

In addition to the proposed improvements, this study used the 95th percentile queues from the HCM intersection analysis, to develop the queue length recommendations at the signalized intersections along the study corridor. **Table 33** shows the recommended queue lengths for the Design Year 2045 design hour conditions.

It should be noted that the specific lengths do not include the taper or deceleration distance (refer to FDOT index 301 to determine the appropriate specific taper and deceleration length). These queue lengths are recommended at locations where these lengths can be achieved. Actual design and implementation of these queue length requirements will be a function of design and the physical practicality of their construction.

Table 33: Recommended Queue Storage Lengths for Turn Lanes at Signals

Intersection	Turn Lane Queue Length (feet)							
	EBL	EBR	WBL	WBR	NBL	NBR	SBL	SBR
Simpson Road	700	525	450	1,250	650	700	500	425
Nele Road	275	50	100	125	425	-	-	300
Springlake Village Blvd	200	25	50	50	-	-	-	325
Turnberry Blvd	75	-	-	50	-	-	225	375
Timber Lane/Creek Bank Drive	-	-	-	-	25	25	50	200
Narcoossee Road	750	600	-	-	825	-	-	500

11 Appendices

Appendix A – Response to Comments

Appendix B – Boggy Creek Road Traffic Methodology

Appendix C – Raw Traffic Counts

Appendix D – Existing Synchro Intersection Analysis Outputs

Appendix E – Crash Data Information

Appendix F – Model Validation Information and Model Plots

Appendix G – BEBR Population Forecasts

Appendix H – Trends Analysis

Appendix I – TURNS5 Output Sheets

Appendix J – No Build Conditions Synchro Intersection Analysis Outputs

Appendix K – Build Conditions Synchro Intersection Analysis Outputs

Appendix L – HSM Predictive Analysis

Appendix M – Noise Analysis Traffic Data

Appendix N – Air Quality Analysis Traffic Data

Appendix A

Response to Comments

Boggy Creek Draft Phase 1 PTAR Response to Comments 10/23/2020		
Number	**Comments (10/19/2020)**	**Responses (10/23/2020)**
1	Executive Summary: Please provide an executive summary in the final PTAR. It's not needed for the Phase 1 – Existing Conditions Report, but it would be helpful in the final document.	Executive summary will be included in the Final Phase of the PTAR.
2	Page 17: Seasonal Factor: Please update the seasonal factor for Boggy Creek Road north of Simpson Road.	The Seasonal Factor for Boggy Creek Road will be updated from 0.96 to 1.00 per the FDOT Peak Seasonal Factor summary table for Orange County.
3	Page 17 / 18: Volumes in Figure 5: The volumes in Figure 5 do not always match the volumes in Table 1. For example, north and west of the intersection of Boggy Creek Road and Simpson Road. Please revise as needed.	The volumes in Table 1 were obtained from the available traffic count locations. The Existing AADT's shown in Figure 5 were developed based on applying the measured K factor obtained from the existing traffic data to the TMC counts obtained from Street Light Data for consistency. Figure 5 shows the final set of existing AADT volumes. This will be clarified in the report.
4	Page 19: Previous TMC's: Please provide the turning movement count data from previous traffic studies that were used to check the streetlight data for reasonableness. Several of the approach volumes in the streetlight data do not appear to match approach volumes from the roadway segment count data.	The TMCs from previous traffic studies will be provided in the traffic count appendix section.
5	Page 19: Intersection Adjustments: Please document manual adjustments to the intersection turning movement volumes and briefly explain why changes were made. This does not need to be an exhaustive process, but general assumptions and considerations would be helpful.	The adjustments were made because the StreetLight TMC estimates were used in the Study (as mentioned in the Traffic Analysis Methodology document). The adjustments included using the available 2019 traffic counts and previous studies (TIAs) to validate the StreetLight data estimates. This text and TMC development sheets will be added to the report.
6	Page 21: Intersection Analysis: The County does not require LOS E conditions for transportation facilities. Please include intersection volume-to-capacity ratios as a performance metric. A v/c ratio of less than 1.0 is considered desirable but is not required by Osceola County. For unsignalized intersection analyses, please use SimTraffic to calculate the anticipated queues and performance.	1. Target LOS E standard will be removed from the table. V/C ratio's will be added to table to reflect the overall intersection operation and individual movements. 2. As mentioned in the Traffic Analysis Methodology, HCM 6th Edition based queues and LOS will be provided for the unsignalized intersections. A new table summarizing the queues at all intersections will also be added to the report.
7	Page 25: Crash Trends: The number of crashes per year increased significantly in 2018, then decreased in 2019, but still significantly higher than in prior years. Are data available for year 2020? While the pandemic has resulted in decreased traffic volumes, it would be interesting to see how the traffic reduction has affected the total number of crashes.	We will verify and review Signal 4 Analytics program to see if the year 2020 crash information is now available. Will not be a full year but will utilize and review the crash information for the year 2020 for the applicable months if the crash information is available.
8	Page 29: Crash Causes: Please comment on how the individual intersection geometry or configuration may contribute to certain crash types.	Additional text will be added to the report to provide a brief summary on how the individual intersection geometry or configuration may contribute to certain type of crashes at the intersection. (i.e. congestion, sight lines, etc.)
9	Page 31: Fatal Crashes: In addition to occurring during nighttime, several of the fatalities were at or near curves. Are there any safety recommendations to modify the curves, implement medians, or otherwise bring attention to the curves?	This information will be shared with the Design Team and necessary safety recommendations will be implemented as part the future roadway configuration.
10	Page 35: D Factor: Recognizing that the current D factor for Narcoossee Road is high, please consider using FDOT's high value, or an average of the actual D factor and FDOT's medium D factor.	The recommended D factor will be adjusted to utilize the average of the FDOT Medium and Measured Characteristic. With this the D factor for Narcoossee Road will now be at a value of 64.8%.
11	Add text regarding the PD&E build recommendation and expected intersection operation.	Please note the submitted report documents only the existing conditions. This discussion will be part of the next submittal, which will be the full Project Traffic Analysis Report (PTAR).
12	For further discussion: 1. Stop controlled intersections at Springlake Village Blvd and East Lake Point Dr are identified as LOS E/F, will be interesting if build alt requires signal warrant and signalization at these locations or if an innovative approach (e.g. RCUT) can be applied. 2. Appears the safety analysis can be expanded by stating anticipated benefits of build alt since highest accident types are lt turn and rear end (67% combined), which are indicators of congested areas that will be improved by increased capacity in a road widening. High accident locations along the corridor are the Simpson Rd, Narcoossee Rd and Turnberry Blvd intersections that will also benefit by increased capacity and median separation, and fatalities are due to reckless driving along a curve that should benefit from a raised median. Could also mention that 38% of accidents occur in non- daylight conditions and an LJR is included in the project, and a crash reduction analysis will be performed when evaluating the build alternative. Also, discuss T-factor 7.5%	1. In the full PTAR, a preliminary signal warrant analysis will be conducted to determine if these stop-controlled intersections will be meet the applicable signal warrants. In addition, discussions with the Design Team will occur to determine the best intersection operation alternative for these locations (i.e. RCUT, etc.). 2. Agree. In the full PTAR, a section will be provided to include a future safety analysis based on the Highway Safety Manual (HSM) procedures. 3. A T Factor of 7.5 % was reported along Boggy Creek Road from year 2015 to present based on the FDOT Online Traffic Information.

Boggy Creek Draft Phase 1 PTAR Response to Comments 11/18/2020

Number	Comments (11/17/2020)	Responses (11/18/2020)
1	Page 2: Planned Improvements: Please verify when the projects listed in Table 1 are anticipated to be completed.	All the planned & programmed improvements were approved by the Osceola County on 10/01/2020. The anticipated completion dates will be included for the planned improvements in Table 1.
2	Page 11: Recommended Growth Rates: Please provide a table summarizing the three growth methods for all segments within the study area. Please explain why each growth rate method was selected for each segment.	Please note that Table 5 shows the source of the growth rate for each study roadway. As explained in the report and illustrated in Table 5, average of model-based growth rates (Table 2) & BEBR population-based growth rates (Table 3) are generally used for the study roadways because of the significant number of roadway improvements including Osceola Parkway Extension and Simpson Road Extension and significant change in SE data in the future. For the same reason, trends-based growth rates were not considered for this study. In general, trends analysis assumes that future growth pattern will follow the same historical pattern in the past and the roadway facilities in the project area remain largely unchanged in the future.
3	Figure 2: No Build AADTs: We were not able to replicate the future volumes shown in Figure 2 based on existing volumes and the growth rates proposed in Table 5. For example, the segment of Narcoossee Road north of Boggy Creek Road figure does not appear to have a 2.65% annual growth rate. Please provide additional data to show how the volumes were calculated or revise the volumes accordingly.	The future volumes are derived using the existing year 2019 AADTs (which were provided in the existing conditions report) and not the 2019 Base year model volumes. We will include the year 2019 AADTs in Figure 2 to avoid confusion.
4	Figure 3: Build AADTs: We were not able to replicate the future volumes shown in Figure 3 based on existing volumes and the growth rates proposed in Table 5. For example, the segment of Narcoossee Road north of Boggy Creek Road figure does not appear to have a 2.46% annual growth rate. Please provide additional data to show how the volumes were calculated or revise the volumes accordingly.	Please see the above response. We will include the year 2019 AADTs in Figure 3 to avoid confusion.
5	Appendix C: Trends Analysis: Please include the AADT data used to perform the trend analysis in the Appendix.	The “Count” column shown in each Trends Analysis Sheet (Appendix C) is the AADT data used.
6	Appendix C: Trends Analysis: The number of years used in the trend analysis varies from segment to segment. Please document how you selected the number of years to use for each segment.	To account for the last recession, all the available AADTs from 2012 to 2019 were used in the Trends Analysis Sheets. This will be mentioned in the report.

Draft Boggy Creek Road PTAR - Responses to Comments

- Re: Comment #2 response, since the study are is anticipated to be a high growth area, please do not include Orange County BEBR Low projection. This portion of the study area is not expected to mimic the overall countywide growth (of Orange County).
  Response: This comment is noted. However, the study used a blended growth rates and not just based on Orange County BEBR Low projection. The growth rates recommended for the study roadways including Boggy Creek Road strive to provide reasonable future volumes and are based on 1) review of model based growth rates, BEBR population estimates, and trends analysis (based on historical traffic counts), 2) existing volumes, 3) future land uses along the study corridor (mostly residential), 4) context classification, 5) County's vision and 6) engineering judgement. For instance, just taking BEBR High projection or model volumes will produce volumes that may be unreasonable for the study corridor.

- 1st and 2nd bullets on 2nd page of the Exec Summary and in page 76 seem contradictory by stating crashes in build and no-build conditions are "comparable", then stating they are expected to decrease in the build condition (which should be expected).
  Response: The text will be updated accordingly.

- Other findings of the crash analysis should be mentioned in the Exec Summary, particularly that 82% of intersection crashes occur at the Simpson and Narcoossee intersections and list the suggested problems and remedies from pages 24 & 25, particularly the need for intersection lighting. May also want to mention that 3 of the 5 fatal crashes were caused by vehicles drifting into oncoming traffic while going through a curve, which will be mitigated by a divided roadway.
  Response: The Executive Summary will be updated with crash analysis findings mentioned above.

- The no-build LOS for 2025, 2035 and 2045, Table 20, the list of recommendations, Table 30, and the recommended intersection configurations, Figure 18, should be included in the Exec Summary.
  Response: The Executive Summary will be updated accordingly.

- Should add Poitras East CDD to Fig 1.
  Response: Poitras East CDD will be included in the Figure 1.

- In Section 4 it is mentioned that 509 crashes occurred in the 5-yr period of which 360 were at intersections. However, it is not mentioned if the remaining 149 are concentrated in a specific segment of the corridor or if they are relatively distributed.
  Response: The text will be updated with segment crash information.

- Fig 18, dual turn lanes are shown at locations where peak vol. exceeds 300 except for the SB. Should dual turn lanes be applied at Narcoossee?
  Response: The operational analysis will be updated with dual SBR turn lanes at Boggy Creek Rd & Narcoossee Rd intersection.

Appendix B

Boggy Creek Road Traffic Methodology

DRAFT
Traffic Analysis Methodology for Project Traffic Analysis Report (PTAR)

Alternatives Evaluation Study

Boggy Creek Road Four-lane Widening from Simpson Road to Narcoossee Road

Osceola County

Prime Agreement No: PS-20-11479-DG

July 2020

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1 Project Description

1.1 Project Background

Osceola County is conducting an Alternatives Evaluation Study followed by a development of design plans for the widening of Boggy Creek Road from Simpson Road to Narcoossee Road. This project involves the two-lane to four-lane widening of Boggy Creek Road within the project limits along with multimodal accommodations, associated drainage improvements and stormwater ponds, and modification of the signalized intersections.

In the existing conditions, Boggy Creek Road is an urban major collector with two travel lanes (one in each direction), with posted speeds ranging from 45 miles per hour (MPH) to 55 MPH. The project is in Osceola County as shown in below **Table 1**.

Table 1: Boggy Creek Road Existing Roadway Characteristics

Roadway ID	From	Begin MP	To	End MP	Functional Class	Speed (MPH)
92500000	Simpson Road	6.166	Morningside Drive	6.640	Urban Major Collector	45
	Morningside Drive	6.640	Narcoossee Road	12.073		55

This document provides details of the technical approach for Project Traffic Analysis of the Boggy Creek Road study corridor. The traffic analysis will be conducted based on methods and procedures described in the 2020 Florida Department of Transportation (FDOT) Project Development & Environment (PD&E) Manual, the 2014 FDOT Traffic Analysis Handbook, and the 2019 FDOT Project Traffic Forecasting Handbook. This traffic analysis will be documented in the Project Traffic Analysis Report (PTAR).

Project Location

N.T.S.

Figure 1

Project Location Map
Boggy Creek Project Traffic Analysis Report (PTAR)

2 Data Collection

Because of the COVID-19 Pandemic, the existing traffic data for pre-COVID traffic conditions (before March 2020) will be collected from various sources including StreetLight data, FDOT, Osceola County, and previous studies. StreetLight data can be used to collect turning movement counts and volume counts for pre-COVID traffic conditions at any desired location. Field visits will also be conducted to collect information on existing geometry, storage lengths, traffic signal heads, and to determine/verify signal phasing information, such as protected/permitted left-turn operations, right-turn-on-red restrictions, phase overlaps, etc. The signal timing plans for signalized intersections will be obtained from Osceola County.

The project corridor includes a total of eight study intersections, of which three (3) are signalized and the remaining five (5) are unsignalized. The study count locations per the approved scope are shown in **Table 2**.

Table 2: Study Count Locations List

Count Type	Study Location
72-hour Bi-directional Volume Count **(11 Locations)**	▪ Boggy Creek Road, West of Nele Road/ Tohopekaliga High School ▪ Boggy Creek Road, East of Nele Road/ Tohopekaliga High School ▪ Nele Road/High School, North of Boggy Creek Road ▪ Nele Road/High School, South of Boggy Creek Road ▪ Boggy Creek Road, West of Turnberry Boulevard ▪ Boggy Creek Road, East of Turnberry Boulevard ▪ Turnberry Boulevard, North of Boggy Creek Road ▪ Turnberry Boulevard, South of Boggy Creek Road ▪ Boggy Creek Road, East of N Pointe Boulevard ▪ Boggy Creek Road, West of Narcoossee Road ▪ Narcoossee Road, North of Boggy Creek Road
72-hour Bi-directional Classification Count **(2 Locations)**	▪ Boggy Creek Road, b/w Simpson Road & Great Oaks Boulevard ▪ Boggy Creek Road, northeast of Timber Lane/Creek Bank Drive
8-hour Turning Movement Counts **(8 intersections)**	▪ East Lake Pointe Drive – Stop control ▪ Nele Road/Tohopekaliga High School – Signal ▪ Springlake Village Boulevard – Stop Control ▪ Turnberry Boulevard – Signal ▪ North Pointe Boulevard – Stop Control ▪ Timber Lane/Creek Bank Drive – Stop Control ▪ Fells Cove Boulevard – Stop Control ▪ Narcoossee Road – Signal

2.1 Traffic Count Sources

As shown in **Figure 2** and **Table 3**, the volume counts will be collected and summarized from different sources including 2019 Florida Traffic Online (FTO) and 2019 Osceola County Counts.

The turning movement counts (TMC) will be obtained from the previous projects as shown in **Figure 3** and **Table 4**.

N.T.S.

Project Location
2019 FDOT CoSite - No Synopsis Report
2019 Osceola County (OC) Counts - Volume Counts

Figure 2

Pre-COVID Data Collection Sources (Volume Counts)
Boggy Creek Project Traffic Analysis Report (PTAR)

Table 3: Pre-COVID Data Collection Sources (Volume Counts)

Source	CoSite/Station#	Location	Volume Counts	Date Counted
2019 FTO	757044	Boggy Creek Road, North of Simpson Road	No Synopsis Report	-
	927050	Boggy Creek Road, South of Timber Lane	No Synopsis Report	-
	927049	Simpson Road, West of Boggy Creek Road	No Synopsis Report	-
	927045	Narcoossee Road, South of Boggy Creek Road	No Synopsis Report	-
2019 Osceola County Counts	474	Boggy Creek Road b/w Simpson Road & East Lake Pointe Drive	Volume	March 2019
	475	Boggy Creek Road b/w Fells Cove Boulevard & Narcoossee Road		
	479	Simpson Road, West of Boggy Creek Road		
	551	Narcoossee Road, South of Boggy Creek Road		

	Intersection Name	Traffic Control	TMC (Time Period / Year)	Source
1	Simpson Rd.	Signal	7-9 AM and 4-6 PM / Jan. 2019	Boggy Creek Fish Camp Redevelopment
2	E. Lake Pointe Dr.	Stop Control		
3	Nele Rd. / Tohopekaliga High School	Signal	7-9 AM and 4-6 PM / Jan. 2019	Boggy Creek Fish Camp Redevelopment
4	Springlake Village Blvd.	Stop Control	7-9 AM and 4-6 PM / Jan. 2019	Boggy Creek Fish Camp Redevelopment
5	Turnberry Blvd.	Signal	7-9 AM and 4-6 PM / Jan. 2019	Boggy Creek Fish Camp Redevelopment
6	N. Pointe Blvd.	Stop Control		
7	Timber Ln. / Creek Bank Dr.	Stop Control		
8	Fells Cove Blvd.	Stop Control	7-9 AM and 4-6 PM / Nov. 2018	Poitras Neighborhood N-7
9	Narcoossee Rd.	Signal	7-9 AM and 4-6 PM / Nov. 2018	Poitras Neighborhood N-7

N

N.T.S.

Project Location

Figure 3

Pre-COVID Data Collection Sources (Turning Movement Counts)
Boggy Creek Project Traffic Analysis Report (PTAR)

Table 4: Pre-COVID Data Collection Sources (TMC)

Intersection #	Intersection Name	Traffic Control	TMC*	Year	Source
1	Simpson Road	Signal	7-9 AM & 4-6 PM	Jan-19	Boggy Creek Fish Camp Redevelopment
2	East Lake Pointe Drive	Stop control	-	-	-
3	Nele Road/High School	Signal	7-9 AM & 4-6 PM	Jan-19	Boggy Creek Fish Camp Redevelopment
4	Springlake Village Boulevard	Stop control	7-9 AM & 4-6 PM	Jan-19	Boggy Creek Fish Camp Redevelopment
5	Turnberry Boulevard	Signal	7-9 AM & 4-6 PM	Jan-19	Boggy Creek Fish Camp Redevelopment
6	North Pointe Boulevard	Stop control	-	-	-
7	Timber Lane/Creek Bank Drive	Stop control	-	-	-
8	Fells Cove Boulevard	Stop control	7-9 AM & 4-6 PM	Nov-18	Poitras Neighborhood N-7
9	Narcoossee Road	Signal	7-9 AM & 4-6 PM	Nov-18	Poitras Neighborhood N-7

Note: *TMCs are not available for 8-hours as required per the approved scope

2.2 Pedestrian, Bicycle & Other Multimodal Data

Pedestrian and bicycle data will be extracted from the available six turning movement counts as shown in **Table 4**. Pedestrian and bicycle data for the remaining three study intersections will be collected in the field in September 2020 when the Osceola County schools reopen after the summer break. Currently, there are no transit stops (or routes) on Boggy Creek Road within project limits. Based on the latest Osceola County Comprehensive Plan - 2040 Transit System plans, transit-related improvements are not planned on Boggy Creek Road within the project limits.

2.3 Existing Traffic Development

Because of the COVID-19 Pandemic, the existing year of 2019 will be used for this project. The development of the existing year 2019 AADT and TMC volumes are discussed in this section.

2.3.1 Annual Average Daily Traffic (AADT)

As shown in **Table 3/Figure 2**, the year 2019 AADTs are available at some of the study count locations and will be used in the PTAR. Because of the restriction to collect a classification count for the pre-CVOID conditions, the available year 2019 FDOT count on Boggy Creek Road south of Timber Lane/Creek Bank Drive will be used as the classification count (in lieu of the required 2 classification counts) for this study. Historical traffic trends will be conducted and reviewed to assess the reasonableness of the available counts. The following list shows the locations that do not have available 2019 volume counts.

- Boggy Creek Rd, East of Nele Rd/High School
- Nele Rd/High School, North of Boggy Creek Rd
- Nele Rd/High School, South of Boggy Creek Rd
- Boggy Creek Rd, West of Turnberry Blvd
- Boggy Creek Rd, East of Turnberry Blvd
- Turnberry Blvd, North of Boggy Creek Rd
- Turnberry Blvd, South of Boggy Creek Rd
- Narcoossee Rd, North of Boggy Creek Rd

The methodology proposed to collect volume counts for the locations that do not have 2019 counts is explained in Section 2.3.2.

2.3.2 Intersection Peak Hour Volumes (from TMC)

As shown in **Table 4**, 2019 TMCs (7-9 AM & 4-6 PM) are available at four study intersections and 2018 TMCs (7-9 AM & 4-6 PM) are available at two study intersections. Eight-hour TMCs as required per the approved scope are not available at any of the eight study intersections. To estimate the year 2019 TMCs (for all 8 hours) and to collect volume counts at locations that do not have the year 2019 counts, the following methodology is proposed:

- TMCs from the StreetLight data will be collected for all the study intersections. The TMCs will be collected for September 2019 that represents both a pre-COVID and a non-holiday period. The available 2019 volume counts and the available 2018 and 2019 TMCs will be used to validate the StreetLight data.
- The other advantage of collecting the StreetLight data is that volume counts can also be collected at each leg of these study intersections. This will provide volume counts for the locations that do not have the year 2019 volume counts (as mentioned in Section 2.3.1), and also for the study intersection approaches where volume counts are not included in the scope.
- Moreover, the count data will be adjusted as needed based on the traffic data collection methodology recommended by Osceola County. The TMCs will be validated and balanced for reasonableness.

3 Project Assumptions

3.1 Analysis Years

The corridor will be analyzed for the following years:

- Existing Year 2019
- Opening Year 2025
- Mid-design Year 2035
- Design Year 2045

3.2 Project Alternatives

The study will evaluate the following alternatives:

- **No-Build Alternative:** The No-Build alternative will represent the existing roadway and intersection configuration and any committed improvements within the study area.
- **Build Alternative**: The Build alternative will represent the widening of the Boggy Creek Road corridor from two-lanes to four-lanes within the study limits along with committed and planned improvements near the study area.

3.3 Travel Demand Model

The latest version of the Central Florida Regional Planning Model (CFRPM) [version 6.1], FDOT's adopted regional planning model, with the base year 2010 and the horizon year 2040 will be used in developing the future traffic projections within the study area.

3.4 Target Level of Service (LOS)

LOS targets per the Osceola County Comprehensive Plan are summarized below:

- Boggy Creek Road and Study Intersections: LOS E

3.5 Analysis Tool(s)

Synchro/SimTraffic 10 will be used to perform the LOS operational analyses for the study intersections and arterial. HCM 6th Edition based analysis results (if available) will be provided for both the signalized and unsignalized intersections. Roadway segment LOS will be computed using Synchro/SimTraffic reported average speed and criteria from Exhibit 18-1 of HCM 6th Edition.

3.6 Design Hour Traffic Factors for Future Analysis

- Peak Hour Factor (PHF)
    - 0.95
- Standard K Factor (proportion of the AADT that occurs during the design hour):
    - 9.0% for all study roadways (source: Project Traffic Forecasting Handbook)
- D Factor (percentage of the total, two-way design hour traffic traveling in the peak direction)
    - Will be determined in the PTAR
- T Factor (percentage of the AADT volume generated by trucks or commercial vehicles)
    - Will be determined in the PTAR

3.7 Study Measures of Effectiveness (MOEs)

The analysis results will include the following performance measures:

- Study Intersection:
    - Overall LOS,
    - Overall Delay (seconds per vehicle), and
    - 95th percentile queues for turn lanes (for future storage length requirements)
- Arterial:
    - Speed, and
    - LOS

3.8 Safety Analysis

Historical Crash Data: 2015-2019

Source:

- From Osceola County.
- Signal Four Analytics and local agencies.

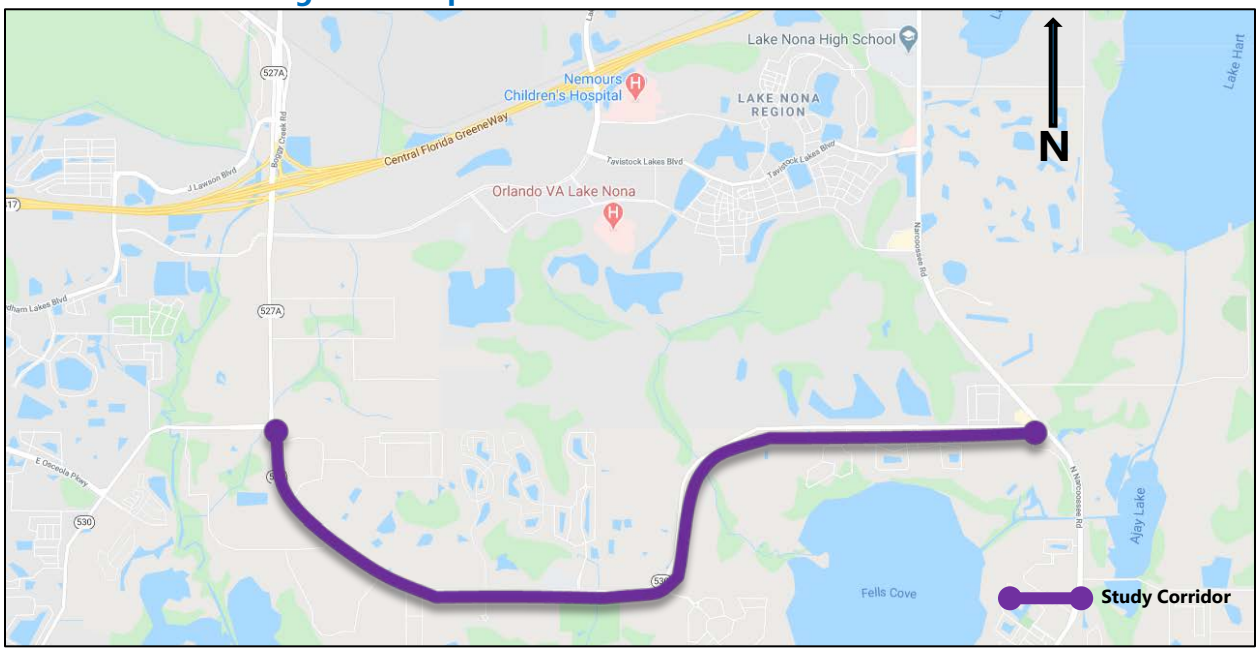
4 Future Traffic Development

The traffic forecasting methodology will be consistent with the procedures outlined in the 2019 FDOT Project Traffic Forecasting Handbook. This section discusses the detailed methodology for the future year traffic forecast development process for both No-Build and Build conditions.

4.1 Sub-Area Model Validation

As mentioned before, CFRPM version 6.1 with the base year 2010, and the horizon year 2040 will be used in developing the future traffic projections within the study area. The proposed sub-area, shown in **Figure 4**, in the CFRPM model will be calibrated and validated for the existing year 2019 conditions. The Socio-Economic (SE) data for the year 2019 will be derived using interpolation between the approved 2015 and 2020 datasets that are available for CFRPM 6.1. As part of the sub-area validation, land use and roadway network data, roadway speeds, capacities, travel patterns, pathfinding algorithms will be examined, and necessary model updates will be made to better validate model results within the study area. The model validation and calibration of the CFRPM model will be following the guidance provided in the "FSUTMS-Cube Framework Phase II Model Calibration and Validation Standards".

Figure 4: Proposed Travel Demand Model Sub-Area



4.2 Future Year Model Development

After the subarea base year validation, the same model updates will be applied to 2040 future year models. For future conditions, a total of two model runs will be conducted; one (1) Year 2040 No-Build alternative and one (1) Year 2040 Build alternative.

4.2.1 Stakeholder Coordination

Before conducting the year 2040 model run, the socio-economic data and the roadway network (Cost Feasible 2040 CFRPM) will be updated to account for any new developments and network connectivity identified by the County. The future year travel demand model will consider programmed and planned improvements in the vicinity of the study area that are consistent with regional transportation plans including the following:

- FDOT Five Year Work Program and MetroPlan Orlando Transportation Improvement Program
- FDOT Strategic Intermodal System (SIS) plans
- Committed improvements from local and private sources
- Adopted LRTPs and Comprehensive Plans
- Central Florida Expressway Authority (CFX) Masterplan

Specifically, the project team will coordinate with the County, CFX, and Florida's Turnpike Enterprise (FTE) on the following important planned improvements.

- Based on input from the Stakeholders, the proposed Osceola Parkway Extension, Sunbridge Parkway Extension, and Cyrils Drive Extension will be included in the travel demand modeling effort for both the No-Build and Build alternatives. The proposed alignment, the anticipated year of opening, and the segment limits of these proposed extensions will be determined based on coordination with the Stakeholders.

4.3 Future Traffic Forecasts

The design year 2045 traffic volumes will be estimated by using a recommended growth rate or rates. These rates will be determined based on a review of the historical traffic trends analysis, travel demand model projections, and Bureau of Economics & Business Research [BEBR] low, medium, and high population estimates.

Should there be future traffic estimates that are not consistent with the historic trends or reasonable expectations for growth in the study corridor, these issues will be reviewed with the County, and an acceptable solution will be reached on any revisions necessary. The opening year 2025 and the interim year 2035 traffic projections shall be developed by the method of interpolation using the year 2019 (existing traffic volumes) and the year 2045 traffic volumes.

4.4 Design Traffic Characteristics

The recommended standard "K" factor of 9.0% will be used for all the study roadway segments. The "D" and "T" factors will be developed using historical data reported by FTO, previous counts, and the recommended ranges identified in the 2019 Project Traffic Forecasting Handbook.

4.5 Design Hour Volumes

The recommended design traffic characteristics, existing intersection turning movement volumes and the future traffic projections will be used as inputs to the TURNS5 spreadsheet to develop the intersection design hour volumes. The output of the TURNS5 will be adjusted to account for reasonability and balancing purposes.

5 Operational Analysis

5.1 Traffic Operational Analysis

Detailed operational analyses will be performed for all analysis years for both AM and PM peak hours using Synchro. Based on input from the County, SimTraffic simulation may be conducted for the critical signalized intersections. Analyses will be performed for the following scenarios:

- Existing Year 2019
- Opening Year 2025 – No-Build and Build
- Interim Year 2035 – No-Build and Build
- Design Year 2045 – No-Build and Build

The need for future signalization at the stop-controlled intersections will be based on volume-based signal warrants (1-3). These requirements will be evaluated for both the No-Build and the Build alternatives.

5.2 Alternative Analysis

The study intersection alternatives will be developed and assessed under the Build condition with input from the project team and based on traffic demand. Turn lane and storage length requirements will be based on the operational analyses of the future Build alternative.

6 Safety Analysis

6.1 Crash Data Analysis

Detailed crash data within the study area will be analyzed and documented. The safety analysis will summarize crash rates, location of crashes, crash types, contributing causes of these crashes, most common types of crashes, crash rates, and safety ratios.

6.2 Safety Analysis

The safety analysis will be performed following Part 2, Chapter 2 of the PD&E Manual**.** Based on the information obtained from the crash data, the project safety needs associated with the existing and future conditions will be identified. Furthermore, No-Build and Build Highway Safety Manual (HSM) Safety analysis will be conducted utilizing Crash Modification Factors (CMF's), if available, and predictive crash methods to compare potential future crashes between alternatives.

7 Documentation

A PTAR will be prepared to document the data collection task, results of existing conditions analysis, results of the CFRPM model validation, the year 2040 travel demand modeling effort, development of future AADTs and design hour volumes, safety analysis, No-Build and Build alternative analysis results and final recommendations.

Appendix C

Raw Traffic Counts

Roadway Count Summary

Start Date	12-Nov-19	Start Time	00:00
Stop Date	13-Nov-19	Stop Time	24:00
County	Orange	Station ID	8141
Location	Boggy Creek Rd : Beth Rd to Simpson Rd (Osceola County Line) (1,000 Ft. N. of Simpson Rd)		

12-Nov-19 — Northbound Volume for Lane 1

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	35	26	23	46	106	160	287	294	294	255	213	215
30	37	25	35	85	129	245	306	297	300	223	209	221
45	28	23	33	90	145	281	295	331	309	247	239	251
00	27	31	44	72	157	296	292	316	290	227	194	199
Hr Total	127	105	135	293	537	982	1180	1238	1193	952	855	886

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	209	244	201	209	205	231	224	163	140	120	81	47
30	237	232	214	224	220	204	215	150	130	108	71	37
45	233	232	209	210	216	227	177	139	134	94	72	51
00	181	215	222	224	227	215	184	146	111	97	81	29
Hr Total	860	923	846	867	868	877	800	598	515	419	305	164

24 Hour Total	16,525				
AM Peak Hour Begins	7:30	AM Peak Volume	1,241	AM Peak Hour Factor	0.94
PM Peak Hour Begins	13:00	PM Peak Volume	923	PM Peak Hour Factor	0.95

12-Nov-19 — Southbound Volume for Lane 2

End Time	00	01	02	03	04	05	6	07	08	09	10	11
15	99	46	32	25	51	54	81	153	146	170	183	153
30	86	39	42	35	47	64	118	210	152	144	139	130
45	66	49	44	37	53	81	158	191	147	154	147	182
00	66	37	20	28	57	76	173	168	164	185	160	196
Hr Total	317	171	138	125	208	275	530	722	609	653	629	661

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	188	161	188	260	287	289	226	272	178	148	180	107
30	193	192	184	247	287	267	265	246	207	195	183	124
45	186	184	225	313	274	278	285	216	201	189	152	120
00	199	176	251	250	297	267	302	191	167	166	134	97
Hr Total	766	713	848	1070	1145	1101	1078	925	753	698	649	448

24 Hour Total	15,232				
AM Peak Hour Begins	12:00	AM Peak Volume	766	AM Peak Hour Factor	0.96
PM Peak Hour Begins	16:15	PM Peak Volume	1,147	PM Peak Hour Factor	0.97

12-Nov-19 — Total Volume for All Lanes

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	134	72	55	71	157	214	368	447	440	425	396	368
30	123	64	77	120	176	309	424	507	452	367	348	351
45	94	72	77	127	198	362	453	522	456	401	386	433
00	93	68	64	100	214	372	465	484	454	412	354	395
Hr Total	444	276	273	418	745	1257	1710	1960	1802	1605	1484	1547

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	397	405	389	469	492	520	450	435	318	268	261	154
30	430	424	398	471	507	471	480	396	337	303	254	161
45	419	416	434	523	490	505	462	355	335	283	224	171
00	380	391	473	474	524	482	486	337	278	263	215	126
Hr Total	1626	1636	1694	1937	2013	1978	1878	1523	1268	1117	954	612

24 Hour Total	31,757				
AM Peak Hour Begins	7:00	AM Peak Volume	1,960	AM Peak Hour Factor	0.94
PM Peak Hour Begins	16:15	PM Peak Volume	2,041	PM Peak Hour Factor	0.97

Roadway Count Summary

Start Date	13-Nov-19	Start Time	00:00
Stop Date	14-Nov-19	Stop Time	24:00
County	Orange	Station ID	8141
Location	Boggy Creek Rd : Beth Rd to Simpson Rd (Osceola County Line) (1,000 Ft. N. of Simpson Rd)		

13-Nov-19 — Northbound Volume for Lane 1

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	26	23	32	69	81	166	317	306	290	267	206	199
30	35	26	37	82	133	214	317	299	300	250	231	195
45	21	22	36	76	130	297	295	297	303	226	205	236
00	17	33	43	79	143	313	258	318	305	232	203	177
Hr Total	99	104	148	306	487	990	1187	1220	1198	975	845	807

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	189	196	222	207	209	222	221	142	154	112	73	44
30	203	217	209	206	235	240	197	155	139	104	99	47
45	228	221	223	222	208	204	199	147	95	115	51	36
00	204	194	207	205	249	191	163	138	100	87	62	45
Hr Total	824	828	861	840	901	857	780	582	488	418	285	172

24 Hour Total	16,202				
AM Peak Hour Begins	5:30	AM Peak Volume	1,244	AM Peak Hour Factor	0.98
PM Peak Hour Begins	16:30	PM Peak Volume	919	PM Peak Hour Factor	0.92

13-Nov-19 — Southbound Volume for Lane 2

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	98	53	40	29	37	56	92	170	153	172	136	162
30	73	45	46	39	37	47	128	178	155	146	137	133
45	70	48	53	30	46	81	152	198	164	159	177	175
00	69	44	29	31	53	74	178	172	121	163	161	194
Hr Total	310	190	168	129	173	258	550	718	593	640	611	664

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	199	207	224	241	262	298	235	265	202	186	141	107
30	197	222	229	253	325	275	262	235	188	184	151	116
45	176	205	263	292	259	268	256	238	180	191	169	115
00	211	187	265	274	290	280	251	191	172	198	127	89
Hr Total	783	821	981	1060	1136	1121	1004	929	742	759	588	427

24 Hour Total	15,355				
AM Peak Hour Begins	12:00	AM Peak Volume	783	AM Peak Hour Factor	0.93
PM Peak Hour Begins	16:15	PM Peak Volume	1,172	PM Peak Hour Factor	0.90

13-Nov-19 — Total Volume for All Lanes

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	124	76	72	98	118	222	409	476	443	439	342	361
30	108	71	83	121	170	261	445	477	455	396	368	328
45	91	70	89	106	176	378	447	495	467	385	382	411
00	86	77	72	110	196	387	436	490	426	395	364	371
Hr Total	409	294	316	435	660	1248	1737	1938	1791	1615	1456	1471

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	388	403	446	448	471	520	456	407	356	298	214	151
30	400	439	438	459	560	515	459	390	327	288	250	163
45	404	426	486	514	467	472	455	385	275	306	220	151
00	415	381	472	479	539	471	414	329	272	285	189	134
Hr Total	1607	1649	1842	1900	2037	1978	1784	1511	1230	1177	873	599

24 Hour Total	31,557				
AM Peak Hour Begins	7:00	AM Peak Volume	1,938	AM Peak Hour Factor	0.98
PM Peak Hour Begins	16:15	PM Peak Volume	2,086	PM Peak Hour Factor	0.93

Roadway Count Summary

Start Date	14-Nov-19	Start Time	00:00
Stop Date	15-Nov-19	Stop Time	24:00
County	Orange	Station ID	8141
Location	Boggy Creek Rd : Beth Rd to Simpson Rd (Osceola County Line) (1,000 Ft. N. of Simpson Rd)		

14-Nov-19 — Northbound Volume for Lane 1

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	39	19	14	47	88	162	320	293	289	280	218	196
30	29	27	51	76	97	241	305	321	290	290	205	195
45	26	13	35	75	143	283	286	293	303	271	194	210
00	18	28	63	90	159	292	289	311	298	240	206	194
Hr Total	112	87	163	288	487	978	1200	1218	1180	1081	823	795

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	232	186	231	198	240	233	229	143	127	137	92	42
30	235	241	212	214	209	229	166	153	118	105	74	51
45	238	229	224	221	211	205	197	148	110	104	84	45
00	191	214	223	216	214	207	156	135	117	81	64	53
Hr Total	896	870	890	849	874	874	748	579	472	427	314	191

24 Hour Total	16,396				
AM Peak Hour Begins	7:00	AM Peak Volume	1,218	AM Peak Hour Factor	0.95
PM Peak Hour Begins	13:15	PM Peak Volume	915	PM Peak Hour Factor	0.95

14-Nov-19 — Southbound Volume for Lane 2

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	95	64	44	32	28	63	84	158	130	174	140	171
30	74	58	36	45	31	58	111	172	146	140	175	170
45	81	56	49	36	34	83	147	218	139	159	160	206
00	72	51	36	33	52	73	167	158	187	137	151	194
Hr Total	322	229	165	146	145	277	509	706	602	610	626	741

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	182	217	273	255	271	276	246	283	228	182	168	123
30	200	225	251	278	315	284	204	256	196	195	148	117
45	217	207	241	270	283	222	249	198	201	208	140	120
00	206	215	242	294	254	169	260	206	166	180	133	94
Hr Total	805	864	1007	1097	1123	951	959	943	791	765	589	454

24 Hour Total	15,426				
AM Peak Hour Begins	12:00	AM Peak Volume	805	AM Peak Hour Factor	0.93
PM Peak Hour Begins	15:45	PM Peak Volume	1,163	PM Peak Hour Factor	0.92

14-Nov-19 — Total Volume for All Lanes

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	134	83	58	79	116	225	404	451	419	454	358	367
30	103	85	87	121	128	299	416	493	436	430	380	365
45	107	69	84	111	177	366	433	511	442	430	354	416
00	90	79	99	123	211	365	456	469	485	377	357	388
Hr Total	434	316	328	434	632	1255	1709	1924	1782	1691	1449	1536

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	414	403	504	453	511	509	475	426	355	319	260	165
30	435	466	463	492	524	513	370	409	314	300	222	168
45	455	436	465	491	494	427	446	346	311	312	224	165
00	397	429	465	510	468	376	416	341	283	261	197	147
Hr Total	1701	1734	1897	1946	1997	1825	1707	1522	1263	1192	903	645

24 Hour Total	31,822				
AM Peak Hour Begins	7:00	AM Peak Volume	1,924	AM Peak Hour Factor	0.94
PM Peak Hour Begins	15:45	PM Peak Volume	2,039	PM Peak Hour Factor	0.97

Roadway Count Summary

Start Date	12-Nov-19	Start Time	00:00
Stop Date	14-Nov-19	Stop Time	24:00
County	Orange	Station ID	8141
Location	Boggy Creek Rd : Beth Rd to Simpson Rd (Osceola County Line) (1,000 Ft. N. of Simpson Rd)		

12-Nov-19 — Northbound Volume for Lane 1

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	33	23	23	54	92	163	308	298	291	267	212	203
30	34	26	41	81	120	233	309	306	297	254	215	204
45	25	19	35	80	139	287	292	307	305	248	213	232
00	21	31	50	80	153	300	280	315	298	233	201	190
Hr Total	113	99	149	296	504	983	1189	1225	1190	1003	841	829

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	210	209	218	205	218	229	225	149	140	123	82	44
30	225	230	212	215	221	224	193	153	129	106	81	45
45	233	227	219	218	212	212	191	145	113	104	69	44
00	192	208	217	215	230	204	168	140	109	88	69	42
Hr Total	860	874	866	852	881	869	776	586	492	421	301	176

24 Hour Total	16,374				
AM Peak Hour Begins	7:00	AM Peak Volume	1,225	AM Peak Hour Factor	0.97
PM Peak Hour Begins	16:45	PM Peak Volume	895	PM Peak Hour Factor	0.97

12-Nov-19 — Southbound Volume for Lane 2

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	97	54	39	29	39	58	86	160	143	172	153	162
30	78	47	41	40	38	56	119	187	151	143	150	144
45	72	51	49	34	44	82	152	202	150	157	161	188
00	69	44	28	31	54	74	173	166	157	162	157	195
Hr Total	316	197	157	133	175	270	530	715	601	634	622	689

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	190	195	228	252	273	288	236	273	203	172	163	112
30	197	213	221	259	309	275	244	246	197	191	161	119
45	193	199	243	292	272	256	263	217	194	196	154	118
00	205	193	253	273	280	239	271	196	168	181	131	93
Hr Total	785	799	945	1076	1135	1058	1014	932	762	741	609	443

24 Hour Total	15,338				
AM Peak Hour Begins	12:00	AM Peak Volume	785	AM Peak Hour Factor	0.96
PM Peak Hour Begins	16:15	PM Peak Volume	1,149	PM Peak Hour Factor	0.93

12-Nov-19 — Total Volume for All Lanes

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	131	77	62	83	130	220	394	458	434	439	365	365
30	111	73	82	121	158	290	428	492	448	398	365	348
45	97	70	83	115	184	369	444	509	455	405	374	420
00	90	75	78	111	207	375	452	481	455	395	358	385
Hr Total	429	295	306	429	679	1253	1719	1941	1792	1637	1463	1518

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	400	404	446	457	491	516	460	423	343	295	245	157
30	422	443	433	474	530	500	436	398	326	297	242	164
45	426	426	462	509	484	468	454	362	307	300	223	162
00	397	400	470	488	510	443	439	336	278	270	200	136
Hr Total	1645	1673	1811	1928	2016	1927	1790	1519	1254	1162	910	619

24 Hour Total	31,712				
AM Peak Hour Begins	7:00	AM Peak Volume	1,941	AM Peak Hour Factor	0.95
PM Peak Hour Begins	16:15	PM Peak Volume	2,041	PM Peak Hour Factor	0.96

Roadway Count Summary

Vanasse Hangen Brustlin, Inc.

Start Date : March 27, 2019
Stop Date : March 27, 2019
County : 0
Location : Boggy Creek Rd W of Austin Tyndell Park

Start Time 00:00
Stop Time 24:00
Station Number 474
Equipment ID 33

27-Mar-19 **Eastbound Volume**

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	27	22	22	18	19	13	49	131	155	85	86	94
30	39	17	13	10	12	39	67	113	122	82	115	124
45	34	13	19	14	26	54	76	125	86	88	75	97
00	26	18	9	18	22	47	90	218	96	80	92	124
Hr Total	**126**	**70**	**63**	**60**	**79**	**153**	**282**	**587**	**459**	**335**	**368**	**439**

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	112	123	136	142	186	198	191	166	127	111	62	43
30	130	187	164	137	187	193	225	173	139	106	77	54
45	134	198	190	179	171	191	197	140	124	90	48	54
00	119	149	174	141	205	190	198	143	113	103	69	55
Hr Total	**495**	**657**	**664**	**599**	**749**	**772**	**811**	**622**	**503**	**410**	**256**	**206**

24 Hour Total : 9,765
AM Peak Hour begins : 7:30
PM Peak Hour begins : 18:00

AM Peak Volume : 620
PM Peak Volume : 811

AM Peak Hour Factor : 0.71
PM PeaK Hour Factor : 0.90

27-Mar-19 **Westbound Volume**

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	11	12	6	5	27	53	172	94	219	123	94	111
30	10	7	5	16	49	93	179	221	251	148	99	98
45	9	8	7	21	43	110	100	194	184	134	108	132
00	11	7	10	15	45	121	148	205	107	125	105	91
Hr Total	**41**	**34**	**28**	**57**	**164**	**377**	**599**	**714**	**761**	**530**	**406**	**432**

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	100	128	112	141	116	156	149	136	75	68	31	29
30	90	101	149	153	123	143	120	122	63	49	25	21
45	110	140	160	125	130	137	102	77	65	45	41	23
00	85	102	147	126	186	131	110	85	61	37	33	15
Hr Total	**385**	**471**	**568**	**545**	**555**	**567**	**481**	**420**	**264**	**199**	**130**	**88**

24 Hour Total : 8,816
AM Peak Hour begins : 7:30
PM Peak Hour begins : 16:45

AM Peak Volume : 869
PM Peak Volume : 622

AM Peak Hour Factor : 0.87
PM PeaK Hour Factor : 0.84

27-Mar-19 **Total Volume for All Lanes**

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	38	34	28	23	46	66	221	225	374	208	180	205
30	49	24	18	26	61	132	246	334	373	230	214	222
45	43	21	26	35	69	164	176	319	270	222	183	229
00	37	25	19	33	67	168	238	423	203	205	197	215
Hr Total	**167**	**104**	**91**	**117**	**243**	**530**	**881**	**1,301**	**1,220**	**865**	**774**	**871**

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	212	251	248	283	302	354	340	302	202	179	93	72
30	220	288	313	290	310	336	345	295	202	155	102	75
45	244	338	350	304	301	328	299	217	189	135	89	77
00	204	251	321	267	391	321	308	228	174	140	102	70
Hr Total	**880**	**1,128**	**1,232**	**1,144**	**1,304**	**1,339**	**1,292**	**1,042**	**767**	**609**	**386**	**294**

24 Hour Total : 18,581
AM Peak Hour begins : 7:30
PM Peak Hour begins : 16:45

AM Peak Volume : 1,489
PM Peak Volume : 1,409

AM Peak Hour Factor : 0.88
PM PeaK Hour Factor : 0.90

Roadway Count Summary

Vanasse Hangen Brustlin, Inc.

Start Date : March 27, 2019
Stop Date : March 27, 2019
County : 0
Location : BOGGY CREEK RD. E E. of Jim Branch Creek

Start Time 00:00
Stop Time 24:00
Station Number 475
Equipment ID 125

27-Mar-19 **Eastbound Volume**

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	15	12	14	19	8	38	92	140	204	108	80	98
30	26	6	16	19	24	41	105	156	179	112	115	116
45	20	18	12	17	30	63	172	175	132	119	87	128
00	26	15	20	15	34	62	180	179	126	102	112	104
Hr Total	**87**	**51**	**62**	**70**	**96**	**204**	**549**	**650**	**641**	**441**	**394**	**446**

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	115	85	94	110	109	127	109	103	97	80	45	27
30	110	96	111	103	110	125	112	131	67	60	61	43
45	113	116	109	100	102	135	141	95	79	70	46	32
00	117	100	128	95	119	104	134	80	85	69	38	33
Hr Total	**455**	**397**	**442**	**408**	**440**	**491**	**496**	**409**	**328**	**279**	**190**	**135**

24 Hour Total : 8,161
AM Peak Hour begins : 7:30
PM Peak Hour begins : 18:30

AM Peak Volume : 737
PM Peak Volume : 509

AM Peak Hour Factor : 0.90
PM PeaK Hour Factor : 0.90

27-Mar-19 **Westbound Volume**

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	8	7	2	1	20	30	83	35	76	109	67	85
30	10	7	1	9	21	56	112	77	105	90	74	61
45	13	5	6	4	11	52	46	104	108	88	71	76
00	4	3	3	8	19	52	27	116	105	62	78	71
Hr Total	**35**	**22**	**12**	**22**	**71**	**190**	**268**	**332**	**394**	**349**	**290**	**293**

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	83	130	166	170	163	151	88	105	73	58	31	18
30	106	142	160	180	163	129	102	61	71	40	25	10
45	123	151	196	120	194	138	84	71	76	35	33	22
00	127	162	168	157	203	136	69	78	67	29	25	6
Hr Total	**439**	**585**	**690**	**627**	**723**	**554**	**343**	**315**	**287**	**162**	**114**	**56**

24 Hour Total : 7,173
AM Peak Hour begins : 8:15
PM Peak Hour begins : 16:00

AM Peak Volume : 427
PM Peak Volume : 723

AM Peak Hour Factor : 0.98
PM PeaK Hour Factor : 0.89

27-Mar-19 **Total Volume for All Lanes**

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	23	19	16	20	28	68	175	175	280	217	147	183
30	36	13	17	28	45	97	217	233	284	202	189	177
45	33	23	18	21	41	115	218	279	240	207	158	204
00	30	18	23	23	53	114	207	295	231	164	190	175
Hr Total	**122**	**73**	**74**	**92**	**167**	**394**	**817**	**982**	**1,035**	**790**	**684**	**739**

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	198	215	260	280	272	278	197	208	170	138	76	45
30	216	238	271	283	273	254	214	192	138	100	86	53
45	236	267	305	220	296	273	225	166	155	105	79	54
00	244	262	296	252	322	240	203	158	152	98	63	39
Hr Total	**894**	**982**	**1,132**	**1,035**	**1,163**	**1,045**	**839**	**724**	**615**	**441**	**304**	**191**

24 Hour Total : 15,334
AM Peak Hour begins : 7:30
PM Peak Hour begins : 16:15

AM Peak Volume : 1,138
PM Peak Volume : 1,169

AM Peak Hour Factor : 0.96
PM PeaK Hour Factor : 0.91

Roadway Count Summary

Start Date	01-Oct-19	Start Time	00:00
Stop Date	02-Oct-19	Stop Time	24:00
County	Orange	Station ID	8064
Location	Narcoossee Rd: Clapp Simms Duda Rd to Osceola County Line (900 Ft N. Boggy Creek Rd)		

01-Oct-19 Northbound for Lane 1

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	38	21	15	9	14	22	91	164	148	140	137	183
30	38	18	13	8	11	50	93	160	172	162	169	218
45	20	19	8	14	14	60	99	176	157	184	153	189
00	20	14	9	13	25	78	137	136	148	161	160	241
Hr Total	116	72	45	44	64	210	420	636	625	647	619	831

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	201	174	215	289	460	390	349	244	245	154	111	57
30	213	219	255	321	371	378	396	261	169	161	100	63
45	232	230	269	306	426	377	379	209	176	133	85	54
00	213	194	286	327	428	361	299	207	182	122	61	32
Hr Total	859	817	1025	1243	1685	1506	1423	921	772	570	357	206

24 Hour Total	15,713				
AM Peak Hour Begins	11:45	AM Peak Volume	887	AM Peak Hour Factor	0.92
PM Peak Hour Begins	16:00	PM Peak Volume	1,685	PM Peak Hour Factor	0.92

01-Oct-19 Southbound for Lane 2

End Time	00	01	02	03	04	05	6	07	08	09	10	11
15	14	6	10	18	42	136	392	475	169	258	240	223
30	12	4	21	26	57	174	462	422	182	274	226	193
45	11	10	19	26	73	212	491	418	288	230	219	209
00	8	10	9	32	103	292	432	320	272	225	228	189
Hr Total	45	30	59	102	275	814	1777	1635	911	987	913	814

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	215	233	216	186	204	247	225	159	117	82	49	30
30	212	199	197	233	239	228	185	131	97	52	33	28
45	207	199	235	256	239	218	156	128	76	56	31	26
00	186	180	179	222	243	225	152	111	68	44	25	14
Hr Total	820	811	827	897	925	918	718	529	358	234	138	98

24 Hour Total	15,635				
AM Peak Hour Begins	6:15	AM Peak Volume	1,860	AM Peak Hour Factor	0.95
PM Peak Hour Begins	16:15	PM Peak Volume	968	PM Peak Hour Factor	0.98

01-Oct-19 Total Volume for All Lanes

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	52	27	25	27	56	158	483	639	317	398	377	406
30	50	22	34	34	68	224	555	582	354	436	395	411
45	31	29	27	40	87	272	590	594	445	414	372	398
00	28	24	18	45	128	370	569	456	420	386	388	430
Hr Total	161	102	104	146	339	1024	2197	2271	1536	1634	1532	1645

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	416	407	431	475	664	637	574	403	362	236	160	87
30	425	418	452	554	610	606	581	392	266	213	133	91
45	439	429	504	562	665	595	535	337	252	189	116	80
00	399	374	465	549	671	586	451	318	250	166	86	46
Hr Total	1679	1628	1852	2140	2610	2424	2141	1450	1130	804	495	304

24 Hour Total	31,348				
AM Peak Hour Begins	6:45	AM Peak Volume	2,384	AM Peak Hour Factor	0.93
PM Peak Hour Begins	16:00	PM Peak Volume	2,610	PM Peak Hour Factor	0.98

Roadway Count Summary

Start Date	02-Oct-19	Start Time	00:00
Stop Date	03-Oct-19	Stop Time	24:00
County	Orange	Station ID	8064
Location	Narcoossee Rd: Clapp Simms Duda Rd to Osceola County Line (900 Ft N. Boggy Creek Rd)		

02-Oct-19 Northbound for Lane 1

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	34	22	15	9	9	26	80	175	160	158	156	207
30	36	25	13	8	11	41	122	184	159	146	143	189
45	30	12	9	12	19	51	97	180	163	164	147	183
00	22	19	14	11	15	79	118	165	158	159	182	184
Hr Total	122	78	51	40	54	197	417	704	640	627	628	763

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	210	192	257	318	369	395	380	274	203	153	111	76
30	227	253	280	290	409	408	368	219	204	127	92	65
45	209	250	236	330	393	377	378	223	184	160	80	55
00	232	214	245	347	392	365	292	213	172	104	70	52
Hr Total	878	909	1018	1285	1563	1545	1418	929	763	544	353	248

24 Hour Total	15,774				
AM Peak Hour Begins	12:30	AM Peak Volume	886	AM Peak Hour Factor	0.88
PM Peak Hour Begins	16:15	PM Peak Volume	1,589	PM Peak Hour Factor	0.97

02-Oct-19 Southbound for Lane 2

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	13	7	3	19	36	143	404	420	406	242	192	207
30	10	13	11	24	62	161	435	422	404	284	230	217
45	9	9	14	26	81	205	500	352	300	248	235	196
00	11	7	18	31	75	275	435	375	269	195	215	208
Hr Total	43	36	46	100	254	784	1774	1569	1379	969	872	828

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	218	222	237	223	201	225	234	153	128	72	35	23
30	229	202	221	208	220	221	216	146	103	54	34	20
45	242	203	206	265	225	216	183	136	71	50	26	16
00	219	221	254	200	223	200	156	102	80	47	25	25
Hr Total	908	848	918	896	869	862	789	537	382	223	120	84

24 Hour Total	16,090				
AM Peak Hour Begins	6:15	AM Peak Volume	1,790	AM Peak Hour Factor	0.90
PM Peak Hour Begins	14:45	PM Peak Volume	950	PM Peak Hour Factor	0.90

02-Oct-19 Total Volume for All Lanes

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	47	29	18	28	45	169	484	595	566	400	348	414
30	46	38	24	32	73	202	557	606	563	430	373	406
45	39	21	23	38	100	256	597	532	463	412	382	379
00	33	26	32	42	90	354	553	540	427	354	397	392
Hr Total	165	114	97	140	308	981	2191	2273	2019	1596	1500	1591

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	428	414	494	541	570	620	614	427	331	225	146	99
30	456	455	501	498	629	629	584	365	307	181	126	85
45	451	453	442	595	618	593	561	359	255	210	106	71
00	451	435	499	547	615	565	448	315	252	151	95	77
Hr Total	1786	1757	1936	2181	2432	2407	2207	1466	1145	767	473	332

24 Hour Total	31,864				
AM Peak Hour Begins	6:30	AM Peak Volume	2,351	AM Peak Hour Factor	0.97
PM Peak Hour Begins	16:15	PM Peak Volume	2,482	PM Peak Hour Factor	0.99

Roadway Count Summary

Start Date	03-Oct-19	Start Time	00:00
Stop Date	04-Oct-19	Stop Time	24:00
County	Orange	Station ID	8064
Location	Narcoossee Rd: Clapp Simms Duda Rd to Osceola County Line (900 Ft N. Boggy Creek Rd)		

03-Oct-19 Northbound for Lane 1

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	42	26	25	13	18	30	76	145	164	161	175	201
30	36	17	14	12	12	42	109	179	146	177	155	221
45	23	17	8	12	21	50	128	175	162	181	137	192
00	28	22	9	9	16	80	124	154	133	159	191	229
Hr Total	129	82	56	46	67	202	437	653	605	678	658	843

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	223	187	254	291	431	381	376	303	201	146	121	75
30	226	204	194	292	359	409	342	262	187	150	80	76
45	226	189	175	298	436	394	301	232	186	137	81	64
00	198	234	228	279	407	375	319	233	157	163	64	42
Hr Total	873	814	851	1160	1633	1559	1338	1030	731	596	346	257

24 Hour Total	15,644				
AM Peak Hour Begins	11:45	AM Peak Volume	904	AM Peak Hour Factor	0.99
PM Peak Hour Begins	16:00	PM Peak Volume	1,633	PM Peak Hour Factor	0.94

03-Oct-19 Southbound for Lane 2

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	17	9	11	19	44	123	398	451	385	261	254	213
30	12	11	16	30	70	178	442	415	426	286	217	224
45	10	8	20	30	73	210	509	389	271	240	214	223
00	7	10	16	32	97	253	443	389	269	208	238	232
Hr Total	46	38	63	111	284	764	1792	1644	1351	995	923	892

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	212	197	170	219	180	220	225	145	121	86	45	30
30	242	224	205	213	227	236	219	170	98	64	53	27
45	226	191	211	215	235	232	201	138	82	69	29	17
00	195	214	222	203	225	228	169	162	86	47	27	14
Hr Total	875	826	808	850	867	916	814	615	387	266	154	88

24 Hour Total	16,369				
AM Peak Hour Begins	6:15	AM Peak Volume	1,845	AM Peak Hour Factor	0.91
PM Peak Hour Begins	17:15	PM Peak Volume	921	PM Peak Hour Factor	0.98

03-Oct-19 Total Volume for All Lanes

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	59	35	36	32	62	153	474	596	549	422	429	414
30	48	28	30	42	82	220	551	594	572	463	372	445
45	33	25	28	42	94	260	637	564	433	421	351	415
00	35	32	25	41	113	333	567	543	402	367	429	461
Hr Total	175	120	119	157	351	966	2229	2297	1956	1673	1581	1735

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	435	384	424	510	611	601	601	448	322	232	166	105
30	468	428	399	505	586	645	561	432	285	214	133	103
45	452	380	386	513	671	626	502	370	268	206	110	81
00	393	448	450	482	632	603	488	395	243	210	91	56
Hr Total	1748	1640	1659	2010	2500	2475	2152	1645	1118	862	500	345

24 Hour Total	32,013				
AM Peak Hour Begins	6:30	AM Peak Volume	2,394	AM Peak Hour Factor	0.94
PM Peak Hour Begins	16:30	PM Peak Volume	2,549	PM Peak Hour Factor	0.95

Roadway Count Summary

Start Date	01-Oct-19	Start Time	00:00
Stop Date	03-Oct-19	Stop Time	24:00
County	Orange	Station ID	8064
Location	Narcoossee Rd: Clapp Simms Duda Rd to Osceola County Line (900 Ft N. Boggy Creek Rd)		

01-Oct-19 Northbound for Lane 1

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	38	23	18	10	14	26	82	161	157	153	156	197
30	37	20	13	9	11	44	108	174	159	162	156	209
45	24	16	8	13	18	54	108	177	161	176	146	188
00	23	18	11	11	19	79	126	152	146	160	178	218
Hr Total	122	77	51	43	62	203	425	664	623	651	635	812

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	211	184	242	299	420	389	368	274	216	151	114	69
30	222	225	243	301	380	398	369	247	187	146	91	68
45	222	223	227	311	418	383	353	221	182	143	82	58
00	214	214	253	318	409	367	303	218	170	130	65	42
Hr Total	870	847	965	1229	1627	1537	1393	960	755	570	352	237

24 Hour Total	15,710					
AM Peak Hour Begins	11:45	AM Peak Volume	874	AM Peak Hour Factor		0.98
PM Peak Hour Begins	16:00	PM Peak Volume	1,627	PM Peak Hour Factor		0.97

01-Oct-19 Southbound for Lane 2

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	15	7	8	19	41	134	398	449	320	254	229	214
30	11	9	16	27	63	171	446	420	337	281	224	211
45	10	9	18	27	76	209	500	386	286	239	223	209
00	9	9	14	32	92	273	437	361	270	209	227	210
Hr Total	45	35	56	104	271	787	1781	1616	1214	984	903	845

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	215	217	208	209	195	231	228	152	122	80	43	28
30	228	208	208	218	229	228	207	149	99	57	40	25
45	225	198	217	245	233	222	180	134	76	58	29	20
00	200	205	218	208	230	218	159	125	78	46	26	18
Hr Total	868	828	851	881	887	899	774	560	376	241	137	90

24 Hour Total	16,031					
AM Peak Hour Begins	6:15	AM Peak Volume	1,832	AM Peak Hour Factor		0.92
PM Peak Hour Begins	16:15	PM Peak Volume	923	PM Peak Hour Factor		0.99

01-Oct-19 Total Volume for All Lanes

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	53	30	26	29	54	160	480	610	477	407	385	411
30	48	29	29	36	74	215	554	594	496	443	380	421
45	34	25	26	40	94	263	608	563	447	416	368	397
00	32	27	25	43	110	352	563	513	416	369	405	428
Hr Total	167	112	107	148	333	990	2206	2280	1837	1634	1538	1657

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	426	402	450	509	615	619	596	426	338	231	157	97
30	450	434	451	519	608	627	575	396	286	203	131	93
45	447	421	444	557	651	605	533	355	258	202	111	77
00	414	419	471	526	639	585	462	343	248	176	91	60
Hr Total	1738	1675	1816	2110	2514	2435	2167	1520	1131	811	489	327

24 Hour Total	31,742					
AM Peak Hour Begins	6:30	AM Peak Volume	2,375	AM Peak Hour Factor		0.97
PM Peak Hour Begins	16:30	PM Peak Volume	2,537	PM Peak Hour Factor		0.97

Roadway Count Summary

Vanasse Hangen Brustlin, Inc.

Start Date : March 27, 2019
Stop Date : March 27, 2019
County : 0
Location : Narcoossee Rd (CR 15) Jones Rd at orange county line

Start Time 00:00
Stop Time 24:00
Station Number 551
Equipment ID 97

27-Mar-19 **Northbound Volume**

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	21	10	11	29	59	129	384	496	532	386	246	195
30	15	15	9	38	73	197	553	508	522	355	245	166
45	17	18	25	27	76	205	531	554	312	299	237	182
00	20	5	17	46	89	286	523	534	331	262	232	204
Hr Total	**73**	**48**	**62**	**140**	**297**	**817**	**1,991**	**2,092**	**1,697**	**1,302**	**960**	**747**

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	158	196	190	217	177	211	241	163	147	88	41	33
30	217	189	199	207	198	192	208	156	137	91	61	43
45	195	189	235	186	223	242	198	148	116	76	52	42
00	195	197	189	216	223	194	211	136	105	72	46	19
Hr Total	**765**	**771**	**813**	**826**	**821**	**839**	**858**	**603**	**505**	**327**	**200**	**137**

24 Hour Total : 17,691
AM Peak Hour begins : 7:30
PM Peak Hour begins : 17:30
AM Peak Volume : 2,142
PM Peak Volume : 885
AM Peak Hour Factor : 0.97
PM PeaK Hour Factor : 0.91

27-Mar-19 **Southbound Volume**

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	53	31	21	19	16	31	90	165	193	214	196	180
30	52	26	29	15	28	42	120	188	230	183	220	188
45	46	25	25	25	33	76	153	195	193	221	183	205
00	33	30	22	16	30	53	159	199	218	175	199	224
Hr Total	**184**	**112**	**97**	**75**	**107**	**202**	**522**	**747**	**834**	**793**	**798**	**797**

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	192	214	284	287	403	395	67	510	244	183	129	85
30	205	240	296	376	417	326	313	456	210	179	129	68
45	221	292	310	374	246	381	522	278	198	170	105	69
00	220	219	318	351	107	251	523	276	200	140	95	57
Hr Total	**838**	**965**	**1,208**	**1,388**	**1,173**	**1,353**	**1,425**	**1,520**	**852**	**672**	**458**	**279**

24 Hour Total : 17,399
AM Peak Hour begins : 8:15
PM Peak Hour begins : 18:30
AM Peak Volume : 855
PM Peak Volume : 2,011
AM Peak Hour Factor : 0.93
PM PeaK Hour Factor : 0.96

27-Mar-19 **Total Volume for All Lanes**

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	74	41	32	48	75	160	474	661	725	600	442	375
30	67	41	38	53	101	239	673	696	752	538	465	354
45	63	43	50	52	109	281	684	749	505	520	420	387
00	53	35	39	62	119	339	682	733	549	437	431	428
Hr Total	**257**	**160**	**159**	**215**	**404**	**1,019**	**2,513**	**2,839**	**2,531**	**2,095**	**1,758**	**1,544**

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	350	410	474	504	580	606	308	673	391	271	170	118
30	422	429	495	583	615	518	521	612	347	270	190	111
45	416	481	545	560	469	623	720	426	314	246	157	111
00	415	416	507	567	330	445	734	412	305	212	141	76
Hr Total	**1,603**	**1,736**	**2,021**	**2,214**	**1,994**	**2,192**	**2,283**	**2,123**	**1,357**	**999**	**658**	**416**

24 Hour Total : 35,090
AM Peak Hour begins : 7:30
PM Peak Hour begins : 18:30
AM Peak Volume : 2,959
PM Peak Volume : 2,739
AM Peak Hour Factor : 0.98
PM PeaK Hour Factor : 0.93

Roadway Count Summary

Vanasse Hangen Brustlin, Inc.

Start Date : March 13, 2019
Stop Date : March 13, 2019
County : 0

Start Time 00:00
Stop Time 24:00
Station Number 479
Equipment ID 202

Location : Simpson Rd Boggy Creek Rd (East)

13-Mar-19 **Eastbound Volume**

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	16	28	54	79	120	217	167	191	168	164	174	188
30	32	34	73	102	156	249	157	177	179	166	169	195
45	24	25	67	108	193	237	210	167	163	179	161	222
00	25	52	78	98	178	214	241	148	151	207	182	225
Hr Total	**97**	**139**	**272**	**387**	**647**	**917**	**775**	**683**	**661**	**716**	**686**	**830**

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	251	193	169	199	209	155	152	178	153	115	63	45
30	211	192	199	237	200	163	176	140	135	99	61	25
45	180	187	194	241	209	189	189	163	122	81	57	32
00	202	173	233	212	198	156	162	147	128	72	47	28
Hr Total	**844**	**745**	**795**	**889**	**816**	**663**	**679**	**628**	**538**	**367**	**228**	**130**

24 Hour Total : 14,132
AM Peak Hour begins : 5:00 AM Peak Volume : 917 AM Peak Hour Factor : 0.92
PM Peak Hour begins : 14:45 PM Peak Volume : 910 PM PeaK Hour Factor : 0.94

13-Mar-19 **Westbound Volume**

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	47	31	24	27	64	116	168	186	145	174	179	158
30	31	28	20	28	88	143	172	216	149	168	168	202
45	28	32	33	47	72	159	199	198	180	165	167	214
00	37	19	22	60	89	177	162	167	185	168	169	184
Hr Total	**143**	**110**	**99**	**162**	**313**	**595**	**701**	**767**	**659**	**675**	**683**	**758**

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	131	176	172	231	182	202	188	184	221	155	118	87
30	232	226	221	207	180	137	230	202	149	155	89	82
45	233	223	222	230	155	106	219	146	154	161	101	70
00	228	251	220	169	70	218	158	161	156	117	91	55
Hr Total	**824**	**876**	**835**	**837**	**587**	**663**	**795**	**693**	**680**	**588**	**399**	**294**

24 Hour Total : 13,736
AM Peak Hour begins : 11:45 AM Peak Volume : 780 AM Peak Hour Factor : 0.84
PM Peak Hour begins : 14:15 PM Peak Volume : 894 PM PeaK Hour Factor : 0.97

13-Mar-19 **Total Volume for All Lanes**

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	63	59	78	106	184	333	335	377	313	338	353	346
30	63	62	93	130	244	392	329	393	328	334	337	397
45	52	57	100	155	265	396	409	365	343	344	328	436
00	62	71	100	158	267	391	403	315	336	375	351	409
Hr Total	**240**	**249**	**371**	**549**	**960**	**1,512**	**1,476**	**1,450**	**1,320**	**1,391**	**1,369**	**1,588**

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	382	369	341	430	391	357	340	362	374	270	181	132
30	443	418	420	444	380	300	406	342	284	254	150	107
45	413	410	416	471	364	295	408	309	276	242	158	102
00	430	424	453	381	268	374	320	308	284	189	138	83
Hr Total	**1,668**	**1,621**	**1,630**	**1,726**	**1,403**	**1,326**	**1,474**	**1,321**	**1,218**	**955**	**627**	**424**

24 Hour Total : 27,868
AM Peak Hour begins : 11:30 AM Peak Volume : 1,670 AM Peak Hour Factor : 0.94
PM Peak Hour begins : 14:45 PM Peak Volume : 1,798 PM PeaK Hour Factor : 0.95

TURNING MOVEMENT COUNTS - STREETLIGHT DATA

2_BoggyCreek_LakePointDr_Sept2019

	Boggy Creek			Boggy Creek			E LakePoint Dr					
	EB_In			WB_In			NB_In					
	EB Left	EB Thru	EB Right	WB Left	WB Thru	WB Right	NB Left	NB Thru	NB Right	SB Left	SB Thru	SB Right
08: 7am (7am-8am)	0	568	3	0	791	0	16	0	7	0	0	0
09: 8am (8am-9am)	0	301	2	1	690	0	10	0	5	0	0	0
17: 4pm (4pm-5pm)	0	703	6	8	530	0	3	0	2	0	0	0
18: 5pm (5pm-6pm)	0	843	16	13	549	0	13	0	9	0	0	0

3_BoggyCreek_NeleRd_Sept2019

	Boggy Creek			Boggy Creek			Nele Rd			High School		
	EB_In			WB_In			NB_In			SB_In		
	EB Left	EB Thru	EB Right	WB Left	WB Thru	WB Right	NB Left	NB Thru	NB Right	SB Left	SB Thru	SB Right
08: 7am (7am-8am)	0	453	21	19	587	3	33	0	57	0	0	0
09: 8am (8am-9am)	3	301	4	2	674	2	0	0	2	0	0	0
17: 4pm (4pm-5pm)	0	665	21	6	495	5	2	0	2	8	0	0
18: 5pm (5pm-6pm)	17	792	15	10	526	2	5	0	1	4	0	9

4_BoggyCreek_SpringLake_Sept2019

	Boggy Creek			Boggy Creek			Holiday Woods Dr			Springlake Village Blvd		
	EB_In			WB_In			NB_In					
	EB Left	EB Thru	EB Right	WB Left	WB Thru	WB Right	NB Left	NB Thru	NB Right	SB Left	SB Thru	SB Right
08: 7am (7am-8am)	13	489	5	0	437	25	20	3	29	57	0	158
09: 8am (8am-9am)	26	268	9	11	545	26	28	0	22	118	0	132
17: 4pm (4pm-5pm)	73	609	44	14	423	124	12	0	10	35	0	54
18: 5pm (5pm-6pm)	164	634	24	8	450	78	21	7	7	63	0	64

5_BoggyCreek_Turnberry_Sept2019

	Boggy Creek			Boggy Creek			Turnberry Blvd			Turnberry Blvd		
	EB_In			WB_In			NB_In			SB_In		
	EB Left	EB Thru	EB Right	WB Left	WB Thru	WB Right	NB Left	NB Thru	NB Right	SB Left	SB Thru	SB Right
08: 7am (7am-8am)	51	412	10	18	361	37	15	15	17	85	6	107
09: 8am (8am-9am)	38	402	4	4	405	29	5	0	4	71	5	137
17: 4pm (4pm-5pm)	112	483	27	6	515	85	0	16	8	40	0	48
18: 5pm (5pm-6pm)	109	578	105	37	451	71	21	0	8	51	28	77

6_BoggyCreek_PointeBlvd_Sept2019

	Boggy Creek			Boggy Creek			N Pointe Blvd					
	EB_In			WB_In			NB_In					
	EB Left	EB Thru	EB Right	WB Left	WB Thru	WB Right	NB Left	NB Thru	NB Right	SB Left	SB Thru	SB Right
08: 7am (7am-8am)	0	452	3	19	307	0	90	0	90	0	0	0
09: 8am (8am-9am)	0	448	22	18	309	0	93	0	103	0	0	0
17: 4pm (4pm-5pm)	0	472	56	93	559	0	26	0	30	0	0	0
18: 5pm (5pm-6pm)	0	526	76	53	534	0	39	0	50	0	0	0

7_BoggyCreek_TimberLn_Sept2019

	Timber Lane			Creek Bank Drive			Boggy Creek Road			Boggy Creek Road		
	EB_In			WB_In			NB_In			SB_In		
	EB Left	EB Thru	EB Right	WB Left	WB Thru	WB Right	NB Left	NB Thru	NB Right	SB Left	SB Thru	SB Right
08: 7am (7am-8am)	10	-	-	2	-	3	-	531	5	1	310	-
09: 8am (8am-9am)	32	-	7	1	-	3	-	534	7	2	324	-
17: 4pm (4pm-5pm)	6	-	9	4	-	-	-	484	7	2	633	25
18: 5pm (5pm-6pm)	5	-	-	1	1	1	23	540	2	3	565	55

8_BoggyCreek_Fells Cove_Sept2019

	Boggy Creek			Boggy Creek			Fells Cove Blvd					
	EB_In			WB_In			NB_In					
	EB Left	EB Thru	EB Right	WB Left	WB Thru	WB Right	NB Left	NB Thru	NB Right	SB Left	SB Thru	SB Right
08: 7am (7am-8am)	0	486	2	29	351	0	8	0	63	0	0	0
09: 8am (8am-9am)	0	563	1	12	309	0	13	0	73	0	0	0
17: 4pm (4pm-5pm)	0	424	12	68	650	0	17	0	40	0	0	0
18: 5pm (5pm-6pm)	0	521	12	40	612	0	7	0	20	0	0	0

9_BoggyCreek_CR15_Sept2019

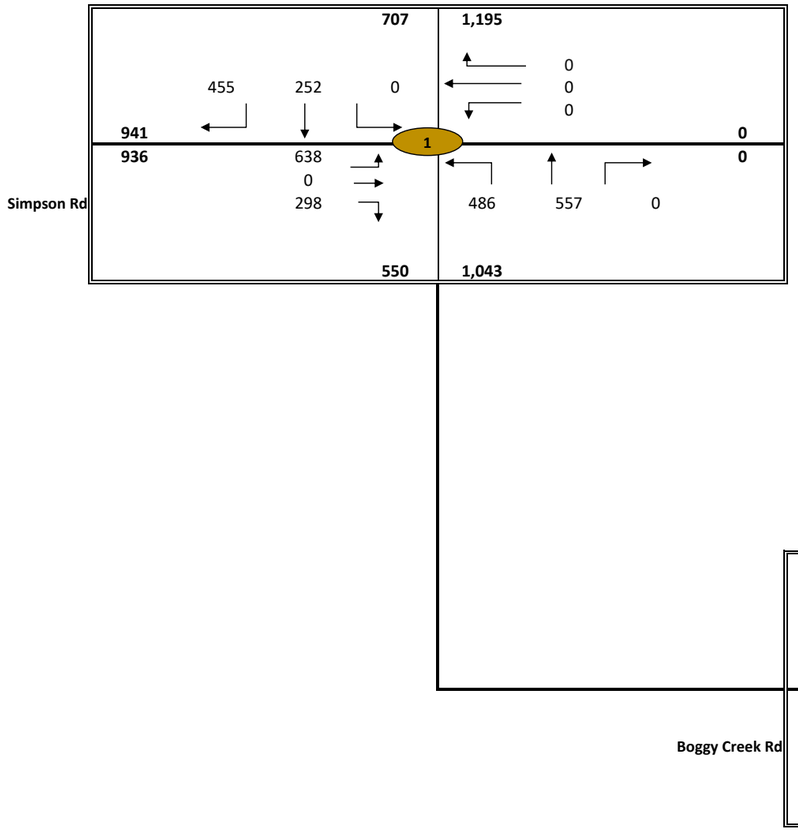
	Boggy Creek						Narcoossee Rd			Narcoossee Rd		
	EB_In			WB_In			NB_In					
	EB Left	EB Thru	EB Right	WB Left	WB Thru	WB Right	NB Left	NB Thru	NB Right	SB Left	SB Thru	SB Right
08: 7am (7am-8am)	291	0	190	0	0	0	286	1,562	0	0	525	57
09: 8am (8am-9am)	293	0	322	0	0	0	292	1,243	0	0	428	58
17: 4pm (4pm-5pm)	198	0	243	0	0	0	420	656	0	0	1,317	251
18: 5pm (5pm-6pm)	253	0	317	0	0	0	301	836	0	0	1,504	261

Appendix A

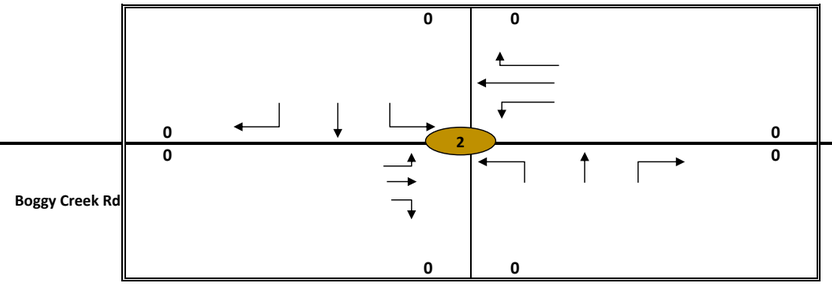
TMC's from Previous Projects

7 -8 AM (Previous Projects)

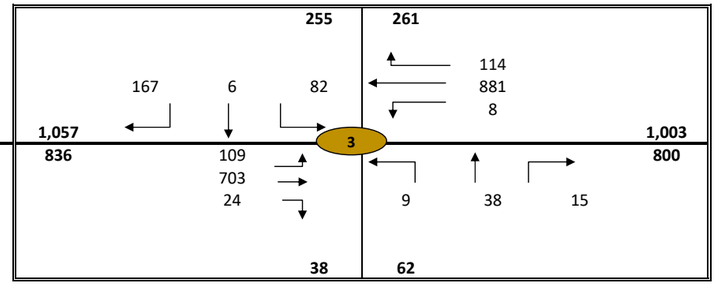
Boggy Creek Rd 11/14/2019
Source: Boggy Creek Retail Development LLC



East Lake Pointe Dr
Source: Boggy Creek Property TIA (191 Units total)
Assumption: 100 units as of Year 2019

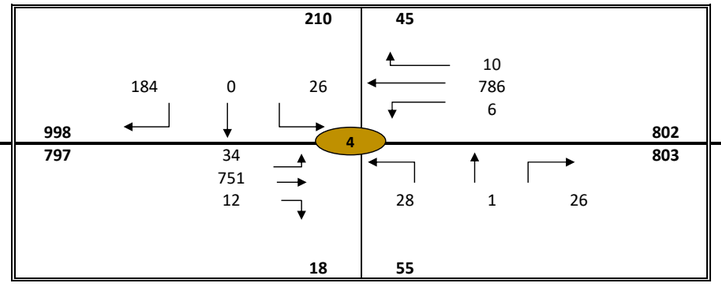


Nele Rd/High School 12/6/2018
Source: FishCamp Development TIA

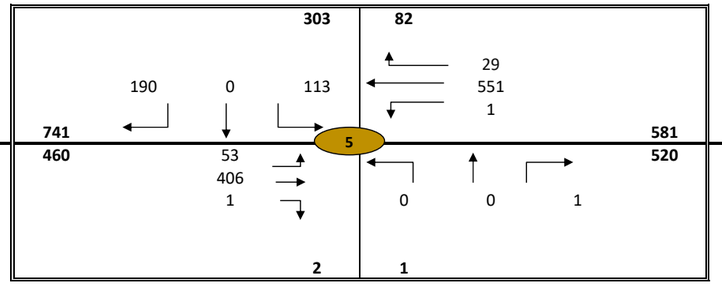


7 -8 AM (Previous Projects)

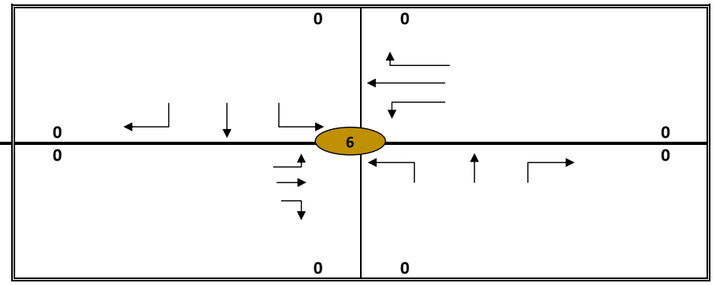
Springlake Village Blvd 12/6/2018
Source: FishCamp Development TIA



Turnberry Bl 1/8/2019
Source: FishCamp Development TIA



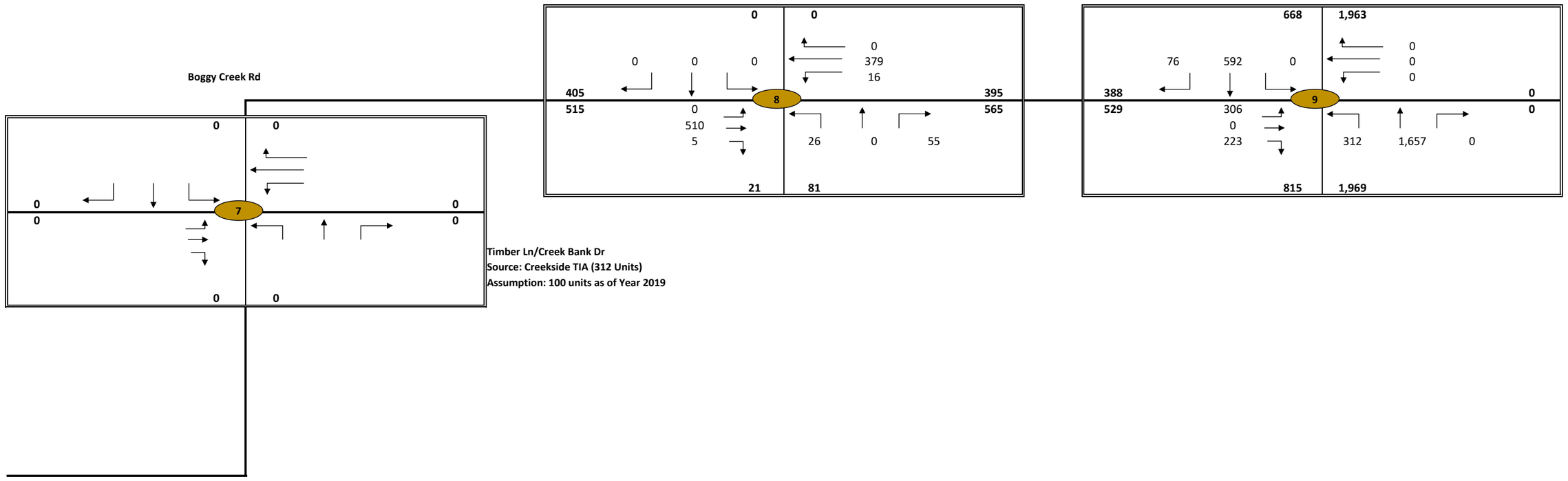
N Pointe Blv N/A



7 -8 AM (Previous Projects)

Fells Cove Blvd 11/8/2018
Source: Poitras Neighborhood N-7

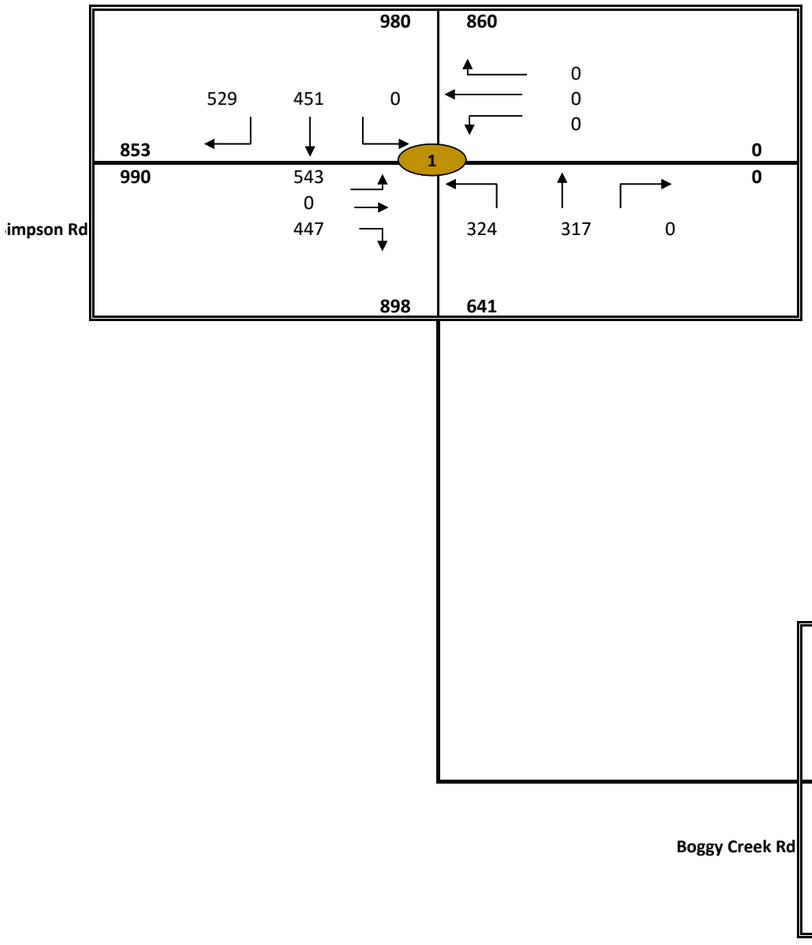
Narcoossee Rd 11/8/2018
Source: Poitras Neighborhood N-7



Timber Ln/Creek Bank Dr
Source: Creekside TIA (312 Units)
Assumption: 100 units as of Year 2019

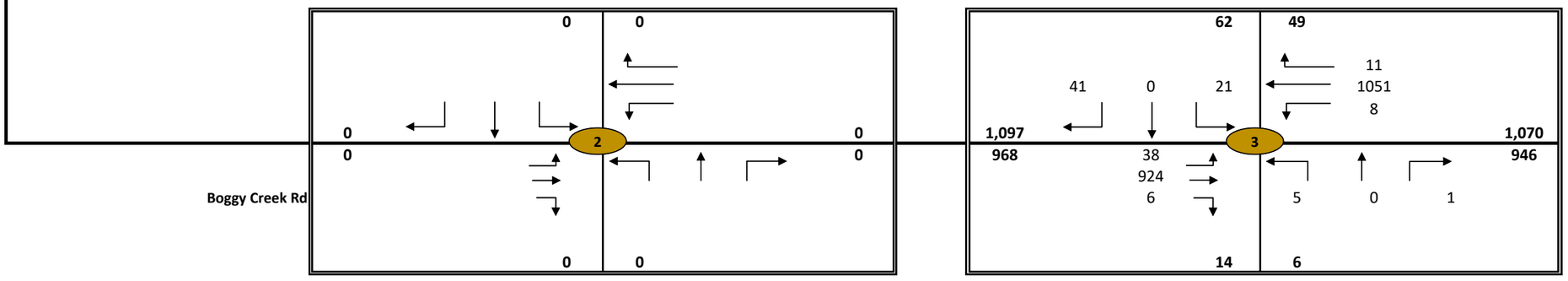
5 - 6 PM (Previous Projects)

Boggy Creek Rd 1/8/2019
Source: Boggy Creek Retail Development LLC



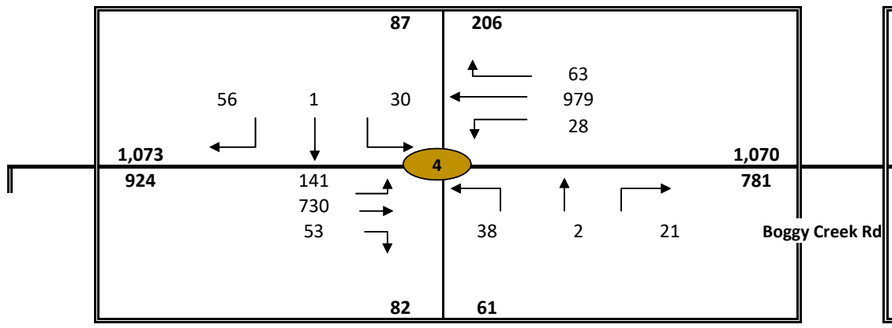
East Lake Pointe Dr N/A
Source: Boggy Creek Property TIA (191 Units total)
Assumption: 100 units as of Year 2019

Nele Rd/High School 12/6/2018
Source: FishCamp Development TIA

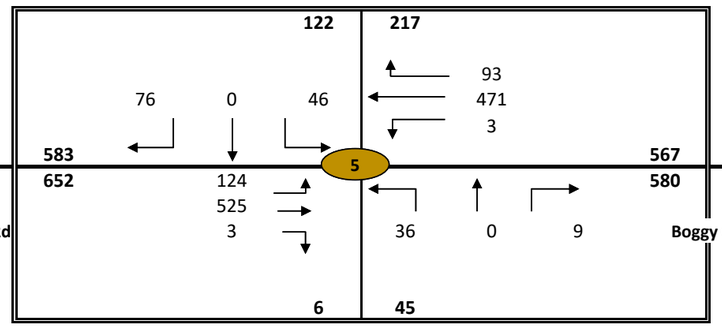


5 - 6 PM (Previous Projects)

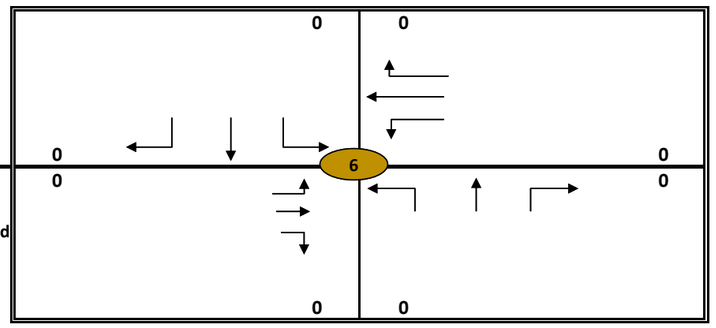
Springlake Village Blvd 12/6/2018
Source: FishCamp Development TIA



Turnberry I 1/8/2019
Source: FishCamp Development TIA



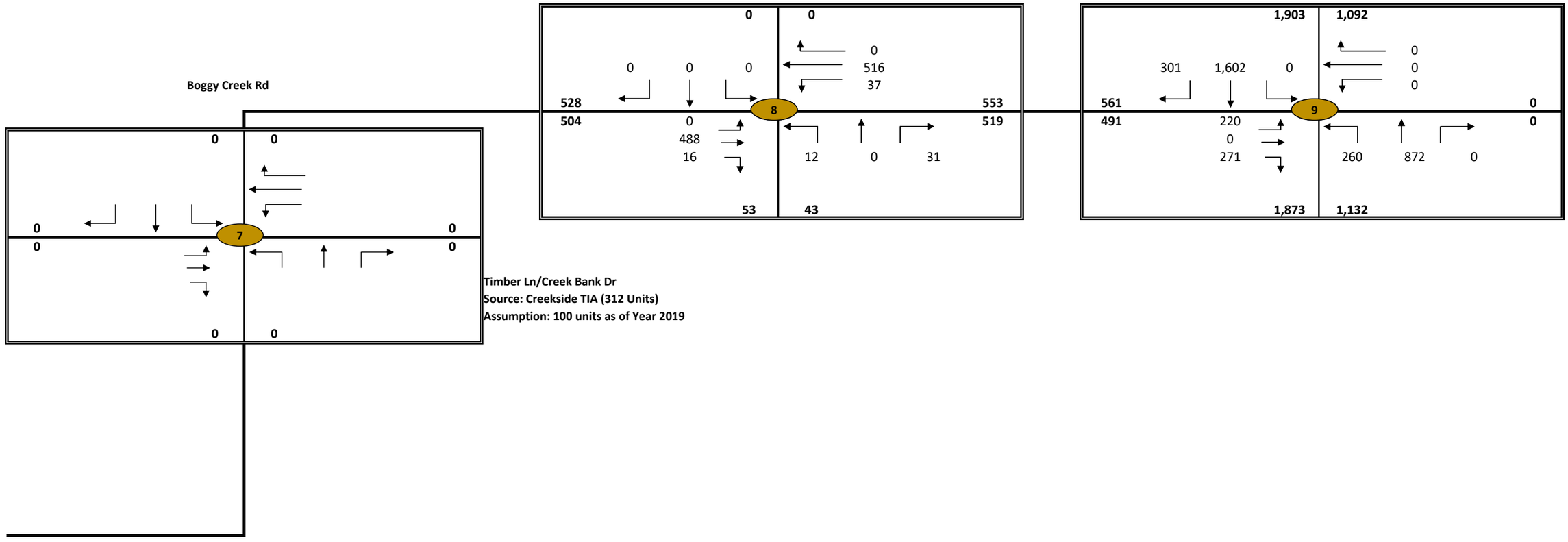
N Pointe B N/A



5 - 6 PM (Previous Projects)

Fells Cove Blvd ########
Source: Poitras Neighborhood N-7

Narcoossee Rd ########
Source: Poitras Neighborhood N-7

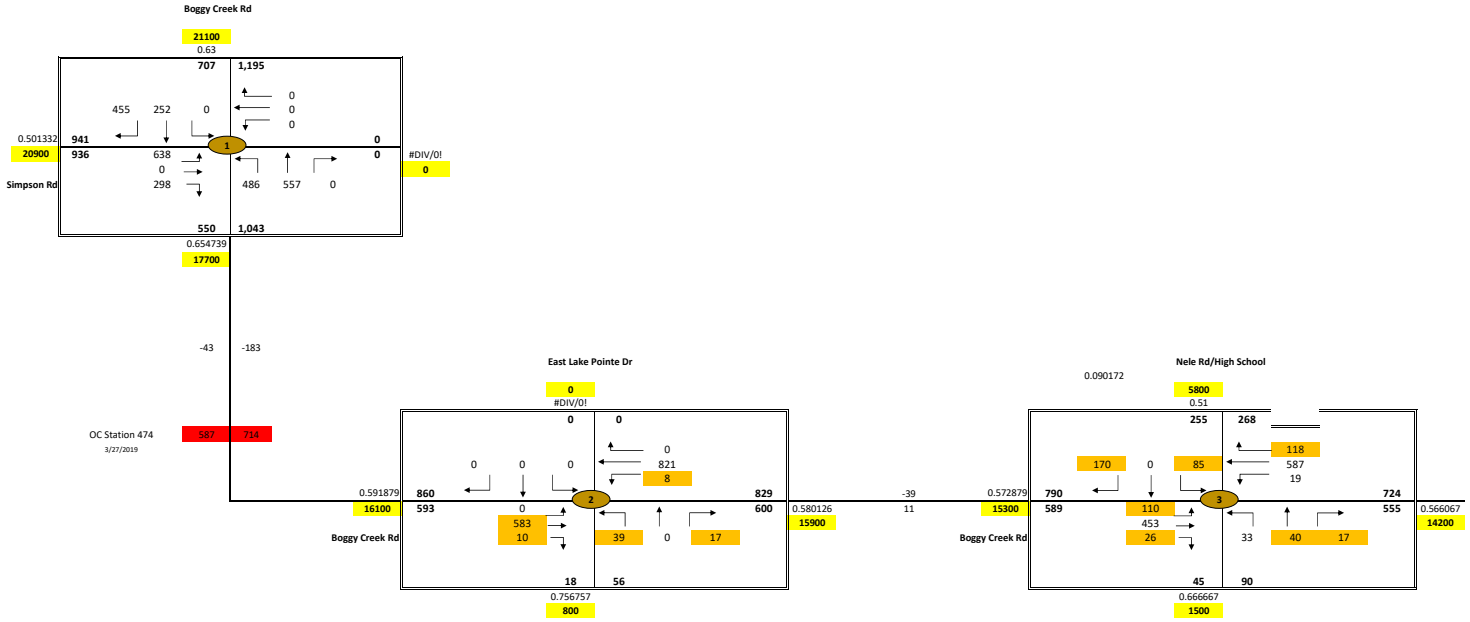


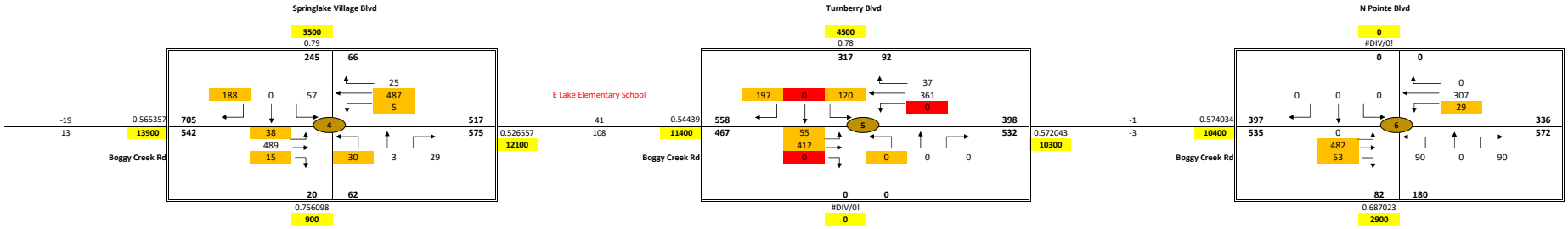
Timber Ln/Creek Bank Dr
Source: Creekside TIA (312 Units)
Assumption: 100 units as of Year 2019

Appendix A

Adjusted TMC's

2019 7 -8 AM Adjusted




Springlake Village Blvd
3500
0.79
245
66
188
0
57
25
487
5
-19
13
0.565357
13900
705
542
38
489
15
4
517
575
30
3
29
20
62
0.756098
900
Boggy Creek Rd
0.526557
12100
E Lake Elementary School
41
108
0.54439
11400
Turnberry Blvd
4500
0.78
317
92
197
0
120
37
361
0
558
467
55
412
0
5
398
532
0
0
0
0
0
0
#DIV/0!
0
0.572043
10300
Boggy Creek Rd
-1
-3
0.574034
10400
N Pointe Blvd
0
#DIV/0!
0
0
0
0
0
307
29
397
535
0
482
53
6
336
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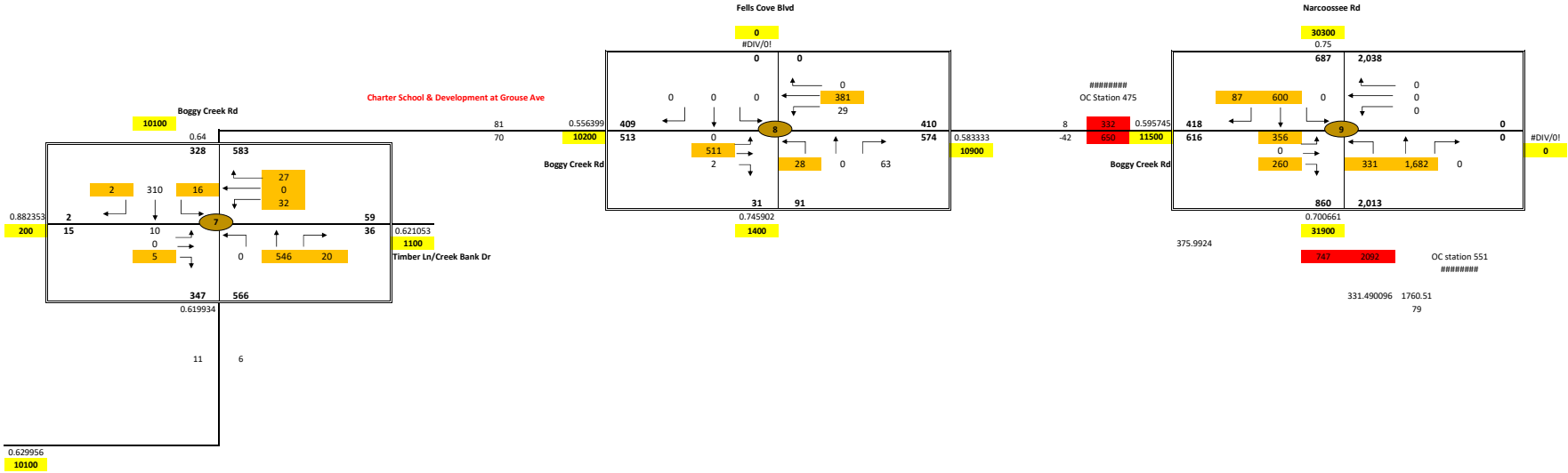
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81
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10200
409
513
410
574
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10900
########
OC Station 475
8
332
650
0.595745
11500
418
616
687
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87
600
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5
546
20
347
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11
6
7
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1100
Timber Ln/Creek Bank Dr
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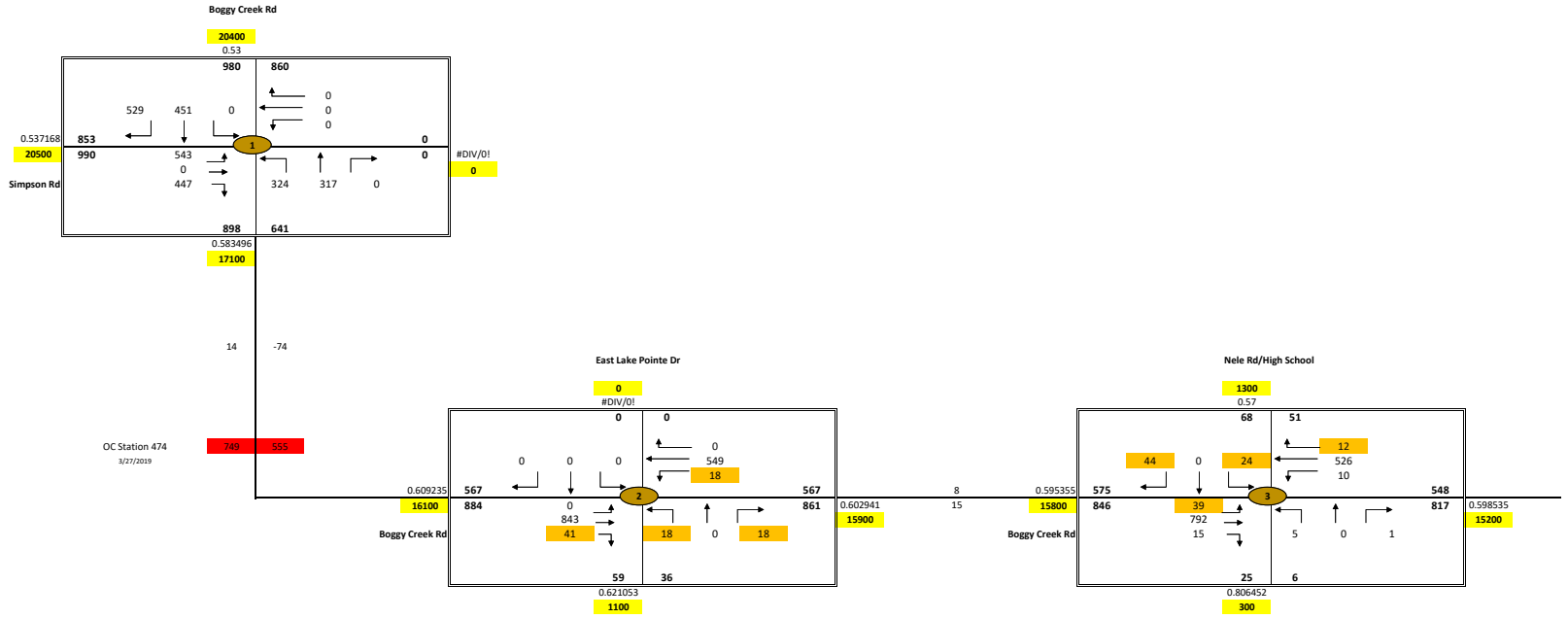
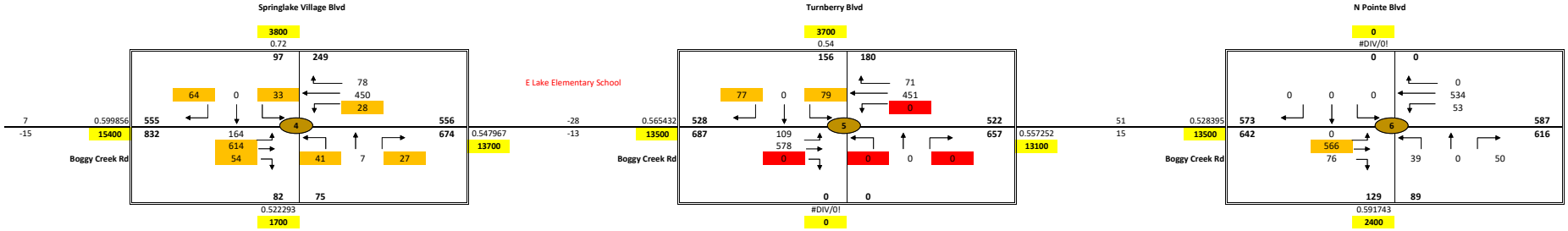
29

2019 5 - 6 PM Adjusted

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164
614
54
4
556
674
41
7
27
Boggy Creek Rd
82
75
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13700
E Lake Elementary School
-28
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13500
Turnberry Blvd
3700
0.54
156
180
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0
79
71
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0
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687
109
578
0
5
522
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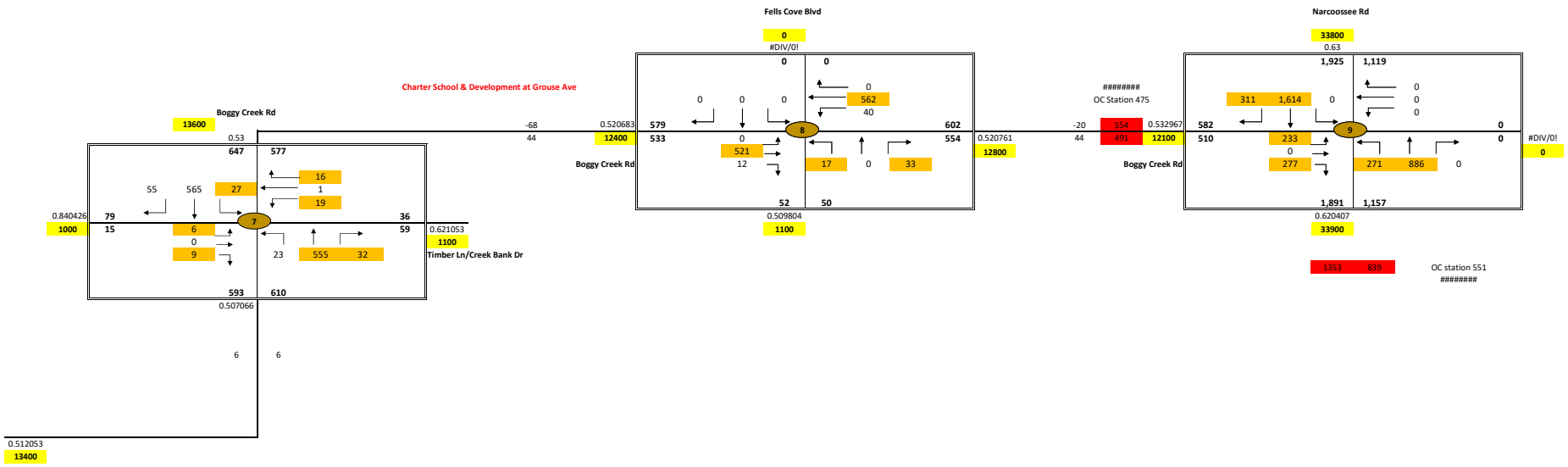
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OC station 551
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Appendix D

Existing Synchro Intersection Analysis Outputs

Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Traffic Volume (veh/h)	638	298	486	557	0	252	455
Future Volume (veh/h)	638	298	486	557	0	252	455
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	1826	1826	1841	1841		1841	1841
Adj Flow Rate, veh/h	672	314	512	586		265	479
Peak Hour Factor	0.95	0.95	0.95	0.95		0.95	0.95
Percent Heavy Veh, %	5	5	4	4		4	4
Cap, veh/h	608	541	265	1069		1582	1251
Arrive On Green	0.35	0.35	0.09	0.58		0.45	0.45
Sat Flow, veh/h	1739	1547	1753	1841		3589	1560
Grp Volume(v), veh/h	672	314	512	586		265	479
Grp Sat Flow(s),veh/h/ln	1739	1547	1753	1841		1749	1560
Q Serve(g_s), s	68.2	32.3	17.2	38.2		8.8	17.1
Cycle Q Clear(g_c), s	68.2	32.3	17.2	38.2		8.8	17.1
Prop In Lane	1.00	1.00	1.00				1.00
Lane Grp Cap(c), veh/h	608	541	265	1069		1582	1251
V/C Ratio(X)	1.10	0.58	1.94	0.55		0.17	0.38
Avail Cap(c_a), veh/h	608	541	265	1069		1582	1251
HCM Platoon Ratio	1.00	1.00	1.00	1.00		1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00		1.00	1.00
Uniform Delay (d), s/veh	63.4	51.7	55.7	25.2		31.6	5.5
Incr Delay (d2), s/veh	68.7	1.6	434.5	2.0		0.2	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		0.0	0.0
%ile BackOfQ(95%),veh/ln	55.4	18.6	67.8	23.8		6.8	9.0
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	132.1	53.3	490.2	27.2		31.9	6.4
LnGrp LOS	F	D	F	C		C	A
Approach Vol, veh/h	986			1098		744	
Approach Delay, s/veh	107.0			243.1		15.5	
Approach LOS	F			F		B	

Timer - Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	25.0	95.0				120.0		75.0
Change Period (Y+Rc), s	7.8	6.8				6.8		6.8
Max Green Setting (Gmax), s	17.2	58.2				58.2		68.2
Max Q Clear Time (g_c+I1), s	19.2	19.1				40.2		70.2
Green Ext Time (p_c), s	0.0	3.5				3.3		0.0

Intersection Summary	
HCM 6th Ctrl Delay	135.7
HCM 6th LOS	F

Notes

User approved ignoring U-Turning movement.

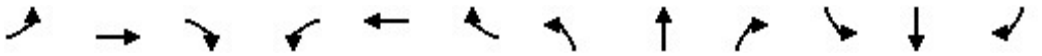
Intersection	
Int Delay, s/veh	1.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	583	10	8	821	39	17
Future Vol, veh/h	583	10	8	821	39	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	225	240	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	4	4	4	4	2	2
Mvmt Flow	614	11	8	864	41	18

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	625	0	1494	614
Stage 1	-	-	-	-	614	-
Stage 2	-	-	-	-	880	-
Critical Hdwy	-	-	4.14	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.236	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	947	-	136	492
Stage 1	-	-	-	-	540	-
Stage 2	-	-	-	-	406	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	947	-	135	492
Mov Cap-2 Maneuver	-	-	-	-	135	-
Stage 1	-	-	-	-	540	-
Stage 2	-	-	-	-	403	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	36.2
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	173	-	-	947	-
HCM Lane V/C Ratio	0.341	-	-	0.009	-
HCM Control Delay (s)	36.2	-	-	8.8	-
HCM Lane LOS	E	-	-	A	-
HCM 95th %tile Q(veh)	1.4	-	-	0	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	453	26	19	587	118	33	40	17	85	0	170
Future Volume (veh/h)	110	453	26	19	587	118	33	40	17	85	0	170
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	1841	1841	1841	1841	1841	1841	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	134	552	32	23	716	144	40	49	21	104	0	207
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	4	4	4	4	4	4	2	2	2	2	2	2
Cap, veh/h	425	1241	1052	550	1197	1015	38	40	10	160	0	229
Arrive On Green	0.06	0.67	0.67	0.03	0.65	0.65	0.14	0.14	0.14	0.14	0.00	0.14
Sat Flow, veh/h	1753	1841	1560	1753	1841	1560	18	278	70	742	0	1585
Grp Volume(v), veh/h	134	552	32	23	716	144	110	0	0	104	0	207
Grp Sat Flow(s),veh/h/ln	1753	1841	1560	1753	1841	1560	366	0	0	742	0	1585
Q Serve(g_s), s	3.3	19.1	0.9	0.6	30.5	4.9	0.7	0.0	0.0	0.0	0.0	17.6
Cycle Q Clear(g_c), s	3.3	19.1	0.9	0.6	30.5	4.9	19.8	0.0	0.0	19.1	0.0	17.6
Prop In Lane	1.00		1.00	1.00		1.00	0.36		0.19	1.00		1.00
Lane Grp Cap(c), veh/h	425	1241	1052	550	1197	1015	89	0	0	160	0	229
V/C Ratio(X)	0.32	0.44	0.03	0.04	0.60	0.14	1.24	0.00	0.00	0.65	0.00	0.90
Avail Cap(c_a), veh/h	815	1241	1052	599	1197	1015	89	0	0	160	0	229
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	10.6	10.4	7.4	7.9	13.7	9.2	59.3	0.0	0.0	58.4	0.0	57.8
Incr Delay (d2), s/veh	0.3	1.2	0.1	0.0	2.2	0.3	173.7	0.0	0.0	7.2	0.0	34.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.0	11.8	0.5	0.4	17.9	2.9	12.9	0.0	0.0	7.1	0.0	14.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.9	11.5	7.5	7.9	15.9	9.5	232.9	0.0	0.0	65.6	0.0	92.0
LnGrp LOS	B	B	A	A	B	A	F	A	A	E	A	F
Approach Vol, veh/h		718			883			110			311	
Approach Delay, s/veh		11.3			14.7			232.9			83.2	
Approach LOS		B			B			F			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.2	100.0		25.0	15.5	96.7		25.0				
Change Period (Y+Rc), s	7.5	7.5		* 5.2	7.5	7.5		* 5.2				
Max Green Setting (Gmax), s	8.5	92.5		* 20	38.5	62.5		* 20				
Max Q Clear Time (g_c+I1), s	2.6	21.1		21.1	5.3	32.5		21.8				
Green Ext Time (p_c), s	0.0	8.6		0.0	0.2	11.5		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		35.9	
HCM 6th LOS		D	

Notes

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

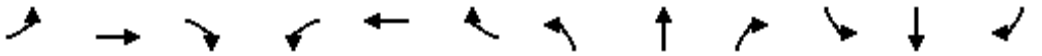
Intersection	
Int Delay, s/veh	5.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	38	489	15	5	487	25	30	3	29	57	0	188
Future Vol, veh/h	38	489	15	5	487	25	30	3	29	57	0	188
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	460	-	250	345	-	400	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	4	4	4	4	4	4	2	2	2	2	2	2
Mvmt Flow	40	515	16	5	513	26	32	3	31	60	0	198

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	539	0	0	531	0	0	1230	1144	515	1143	1134	513
Stage 1	-	-	-	-	-	-	595	595	-	523	523	-
Stage 2	-	-	-	-	-	-	635	549	-	620	611	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.236	-	-	2.236	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1019	-	-	1026	-	-	154	200	560	177	203	561
Stage 1	-	-	-	-	-	-	491	492	-	537	530	-
Stage 2	-	-	-	-	-	-	467	516	-	476	484	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1019	-	-	1026	-	-	96	191	560	160	194	561
Mov Cap-2 Maneuver	-	-	-	-	-	-	96	191	-	160	194	-
Stage 1	-	-	-	-	-	-	472	473	-	516	527	-
Stage 2	-	-	-	-	-	-	301	513	-	429	465	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	0.1	41.1	20.8
HCM LOS			E	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	163	1019	-	-	1026	-	-	160	561
HCM Lane V/C Ratio	0.4	0.039	-	-	0.005	-	-	0.375	0.353
HCM Control Delay (s)	41.1	8.7	-	-	8.5	-	-	40.4	14.9
HCM Lane LOS	E	A	-	-	A	-	-	E	B
HCM 95th %tile Q(veh)	1.8	0.1	-	-	0	-	-	1.6	1.6



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	412	0	0	361	37	0	0	0	120	0	197
Future Volume (veh/h)	55	412	0	0	361	37	0	0	0	120	0	197
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	1841	1841	0	0	1841	1841	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	58	434	0	0	380	39	0	0	0	126	0	207
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	0	0	4	4	2	2	2	2	2	2
Cap, veh/h	666	1358	0	0	1117	947	1	2	1	273	0	243
Arrive On Green	0.07	0.74	0.00	0.00	0.61	0.61	0.00	0.00	0.00	0.15	0.00	0.15
Sat Flow, veh/h	1753	1841	0	0	1841	1560	1781	1870	1585	1781	0	1585
Grp Volume(v), veh/h	58	434	0	0	380	39	0	0	0	126	0	207
Grp Sat Flow(s),veh/h/ln	1753	1841	0	0	1841	1560	1781	1870	1585	1781	0	1585
Q Serve(g_s), s	1.3	9.7	0.0	0.0	12.3	1.2	0.0	0.0	0.0	7.7	0.0	15.3
Cycle Q Clear(g_c), s	1.3	9.7	0.0	0.0	12.3	1.2	0.0	0.0	0.0	7.7	0.0	15.3
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	666	1358	0	0	1117	947	1	2	1	273	0	243
V/C Ratio(X)	0.09	0.32	0.00	0.00	0.34	0.04	0.00	0.00	0.00	0.46	0.00	0.85
Avail Cap(c_a), veh/h	700	1358	0	0	1117	947	327	343	291	445	0	396
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	6.7	5.4	0.0	0.0	11.7	9.5	0.0	0.0	0.0	46.3	0.0	49.5
Incr Delay (d2), s/veh	0.0	0.6	0.0	0.0	0.8	0.1	0.0	0.0	0.0	1.2	0.0	9.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.7	5.2	0.0	0.0	8.1	0.7	0.0	0.0	0.0	6.4	0.0	10.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	6.7	6.0	0.0	0.0	12.5	9.6	0.0	0.0	0.0	47.5	0.0	58.8
LnGrp LOS	A	A	A	A	B	A	A	A	A	D	A	E
Approach Vol, veh/h		492			419			0			333	
Approach Delay, s/veh		6.1			12.2			0.0			54.6	
Approach LOS		A			B						D	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		95.6		24.4	15.7	79.9		0.0				
Change Period (Y+Rc), s		7.1		6.0	7.1	7.1		6.0				
Max Green Setting (Gmax), s		48.9		30.0	10.9	30.9		22.0				
Max Q Clear Time (g_c+I1), s		11.7		17.3	3.3	14.3		0.0				
Green Ext Time (p_c), s		5.2		1.1	0.0	3.6		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			21.1									
HCM 6th LOS			C									

Intersection	
Int Delay, s/veh	3.3

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	90	90	482	53	29	307
Future Vol, veh/h	90	90	482	53	29	307
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	295	390	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	4	4	4	4
Mvmt Flow	95	95	507	56	31	323

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	892	507	0	0	563	0
Stage 1	507	-	-	-	-	-
Stage 2	385	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.14	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.236	-
Pot Cap-1 Maneuver	312	566	-	-	999	-
Stage 1	605	-	-	-	-	-
Stage 2	688	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	302	566	-	-	999	-
Mov Cap-2 Maneuver	302	-	-	-	-	-
Stage 1	605	-	-	-	-	-
Stage 2	667	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	17.5	0	0.8
HCM LOS	C		

Minor Lane/Major Mvmt	NET	NER	NWLn1	NWLn2	SWL	SWT
Capacity (veh/h)	-	-	302	566	999	-
HCM Lane V/C Ratio	-	-	0.314	0.167	0.031	-
HCM Control Delay (s)	-	-	22.3	12.6	8.7	-
HCM Lane LOS	-	-	C	B	A	-
HCM 95th %tile Q(veh)	-	-	1.3	0.6	0.1	-

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	10	0	5	32	0	27	0	546	20	16	310	2
Future Vol, veh/h	10	0	5	32	0	27	0	546	20	16	310	2
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	-	-	-	-	-	-	240	-	300	425	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	4	4	4	4	4	4
Mvmt Flow	11	0	5	34	0	28	0	575	21	17	326	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	961	957	327	939	937	575	328	0	0	596	0	0
Stage 1	361	361	-	575	575	-	-	-	-	-	-	-
Stage 2	600	596	-	364	362	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.236	-	-	2.236	-	-
Pot Cap-1 Maneuver	236	258	714	244	265	518	1220	-	-	971	-	-
Stage 1	657	626	-	503	503	-	-	-	-	-	-	-
Stage 2	488	492	-	655	625	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	220	253	714	239	260	518	1220	-	-	971	-	-
Mov Cap-2 Maneuver	220	253	-	239	260	-	-	-	-	-	-	-
Stage 1	657	615	-	503	503	-	-	-	-	-	-	-
Stage 2	461	492	-	639	614	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	18.3	19.1	0	0.4
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1220	-	-	286	317	971	-	-
HCM Lane V/C Ratio	-	-	-	0.055	0.196	0.017	-	-
HCM Control Delay (s)	0	-	-	18.3	19.1	8.8	-	-
HCM Lane LOS	A	-	-	C	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.7	0.1	-	-

Intersection	
Int Delay, s/veh	1.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	511	2	29	381	28	63
Future Vol, veh/h	511	2	29	381	28	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	-	400	415	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	4	4	4	4	2	2
Mvmt Flow	538	2	31	401	29	66

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	540	0	1001	538
Stage 1	-	-	-	-	538	-
Stage 2	-	-	-	-	463	-
Critical Hdwy	-	-	4.14	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.236	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1018	-	269	543
Stage 1	-	-	-	-	585	-
Stage 2	-	-	-	-	634	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1018	-	261	543
Mov Cap-2 Maneuver	-	-	-	-	261	-
Stage 1	-	-	-	-	585	-
Stage 2	-	-	-	-	615	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.6	15
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	261	543	-	-	1018	-
HCM Lane V/C Ratio	0.113	0.122	-	-	0.03	-
HCM Control Delay (s)	20.5	12.6	-	-	8.6	-
HCM Lane LOS	C	B	-	-	A	-
HCM 95th %tile Q(veh)	0.4	0.4	-	-	0.1	-

Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Volume (veh/h)	356	260	600	87	331	1682
Future Volume (veh/h)	356	260	600	87	331	1682
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	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	375	274	632	0	348	1771
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4
Cap, veh/h	292	260	1908		595	2486
Arrive On Green	0.17	0.17	0.55	0.00	0.10	0.71
Sat Flow, veh/h	1753	1560	3589	1560	1753	3589
Grp Volume(v), veh/h	375	274	632	0	348	1771
Grp Sat Flow(s),veh/h/ln	1753	1560	1749	1560	1753	1749
Q Serve(g_s), s	18.3	18.3	11.0	0.0	9.1	32.6
Cycle Q Clear(g_c), s	18.3	18.3	11.0	0.0	9.1	32.6
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	292	260	1908		595	2486
V/C Ratio(X)	1.29	1.06	0.33		0.58	0.71
Avail Cap(c_a), veh/h	292	260	1908		704	2486
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	1.00
Uniform Delay (d), s/veh	45.9	45.8	13.9	0.0	9.0	9.3
Incr Delay (d2), s/veh	152.1	71.3	0.5	0.0	0.3	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	30.4	17.9	7.4	0.0	5.2	15.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	197.9	117.2	14.3	0.0	9.3	11.1
LnGrp LOS	F	F	B		A	B
Approach Vol, veh/h	649		632	A		2119
Approach Delay, s/veh	163.8		14.3			10.8
Approach LOS	F		B			B

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	18.2	66.8			85.0	25.0
Change Period (Y+Rc), s	6.8	6.8			6.8	6.7
Max Green Setting (Gmax), s	18.2	53.2			78.2	18.3
Max Q Clear Time (g_c+I1), s	11.1	13.0			34.6	20.3
Green Ext Time (p_c), s	0.3	5.3			23.9	0.0

Intersection Summary	
HCM 6th Ctrl Delay	40.7
HCM 6th LOS	D

Notes

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

Arterial Level of Service: EB Boggy Creek Rd

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Simpson Rd	I	45	81.4	32.0	113.4	1.02	32.3	C
Nele Road	I	45	117.8	10.4	128.2	1.47	41.4	B
Austin Tindalll Park	I	50	67.9	2.4	70.3	0.95	48.7	A
Narcoossee Rd	I	55	227.2	196.8	424.0	3.47	29.5	C
Total	I		494.3	241.6	735.9	6.91	33.8	C

Arterial Level of Service: WB Boggy Creek Rd

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Turnberry Blvd	I	55	227.2	6.1	233.3	3.47	53.6	A
High School	I	50	67.9	15.9	83.8	0.95	40.9	B
Simpson Rd	I	45	117.8	27.8	145.6	1.47	36.4	B
Total	I		412.9	49.8	462.7	5.90	45.9	A

Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Traffic Volume (veh/h)	543	447	324	317	0	451	529
Future Volume (veh/h)	543	447	324	317	0	451	529
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	1826	1826	1841	1841		1841	1841
Adj Flow Rate, veh/h	572	471	341	334		475	557
Peak Hour Factor	0.95	0.95	0.95	0.95		0.95	0.95
Percent Heavy Veh, %	5	5	4	4		4	4
Cap, veh/h	592	527	247	1086		1615	1251
Arrive On Green	0.34	0.34	0.09	0.59		0.46	0.46
Sat Flow, veh/h	1739	1547	1753	1841		3589	1560
Grp Volume(v), veh/h	572	471	341	334		475	557
Grp Sat Flow(s),veh/h/ln	1739	1547	1753	1841		1749	1560
Q Serve(g_s), s	63.1	56.3	17.2	17.7		16.5	21.4
Cycle Q Clear(g_c), s	63.1	56.3	17.2	17.7		16.5	21.4
Prop In Lane	1.00	1.00	1.00				1.00
Lane Grp Cap(c), veh/h	592	527	247	1086		1615	1251
V/C Ratio(X)	0.97	0.89	1.38	0.31		0.29	0.45
Avail Cap(c_a), veh/h	608	541	247	1086		1615	1251
HCM Platoon Ratio	1.00	1.00	1.00	1.00		1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00		1.00	1.00
Uniform Delay (d), s/veh	63.2	61.0	59.9	20.0		32.7	5.9
Incr Delay (d2), s/veh	27.9	17.0	193.9	0.7		0.5	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		0.0	0.0
%ile BackOfQ(95%),veh/ln	41.3	32.3	38.1	12.4		11.5	10.8
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	91.2	78.0	253.7	20.8		33.2	7.1
LnGrp LOS	F	E	F	C		C	A
Approach Vol, veh/h	1043			675		1032	
Approach Delay, s/veh	85.2			138.5		19.1	
Approach LOS	F			F		B	

Timer - Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	25.0	96.8				121.8		73.2
Change Period (Y+Rc), s	7.8	6.8				6.8		6.8
Max Green Setting (Gmax), s	17.2	58.2				58.2		68.2
Max Q Clear Time (g_c+I1), s	19.2	23.4				19.7		65.1
Green Ext Time (p_c), s	0.0	5.5				1.9		1.3

Intersection Summary	
HCM 6th Ctrl Delay	73.5
HCM 6th LOS	E

Notes

User approved ignoring U-Turning movement.

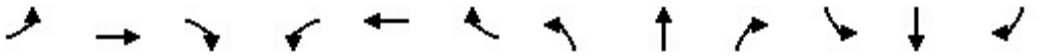
Intersection	
Int Delay, s/veh	0.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	843	41	18	549	18	18
Future Vol, veh/h	843	41	18	549	18	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	225	240	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	4	4	4	4	2	2
Mvmt Flow	887	43	19	578	19	19

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	930	0	1503	887
Stage 1	-	-	-	-	887	-
Stage 2	-	-	-	-	616	-
Critical Hdwy	-	-	4.14	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.236	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	727	-	134	343
Stage 1	-	-	-	-	402	-
Stage 2	-	-	-	-	539	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	727	-	131	343
Mov Cap-2 Maneuver	-	-	-	-	131	-
Stage 1	-	-	-	-	402	-
Stage 2	-	-	-	-	525	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	28.6
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	190	-	-	727	-
HCM Lane V/C Ratio	0.199	-	-	0.026	-
HCM Control Delay (s)	28.6	-	-	10.1	-
HCM Lane LOS	D	-	-	B	-
HCM 95th %tile Q(veh)	0.7	-	-	0.1	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	792	15	10	526	12	5	0	1	24	0	44
Future Volume (veh/h)	39	792	15	10	526	12	5	0	1	24	0	44
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	1841	1841	1841	1841	1841	1841	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	41	834	16	11	554	13	5	0	1	25	0	46
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	2	2	2	2	2	2
Cap, veh/h	650	1389	1177	446	1336	1132	109	5	12	149	0	96
Arrive On Green	0.05	0.75	0.75	0.02	0.73	0.73	0.06	0.00	0.06	0.06	0.00	0.06
Sat Flow, veh/h	1753	1841	1560	1753	1841	1560	904	82	197	1497	0	1585
Grp Volume(v), veh/h	41	834	16	11	554	13	6	0	0	25	0	46
Grp Sat Flow(s),veh/h/ln	1753	1841	1560	1753	1841	1560	1183	0	0	1497	0	1585
Q Serve(g_s), s	0.7	25.0	0.3	0.2	14.5	0.3	0.0	0.0	0.0	0.0	0.0	3.4
Cycle Q Clear(g_c), s	0.7	25.0	0.3	0.2	14.5	0.3	1.6	0.0	0.0	1.6	0.0	3.4
Prop In Lane	1.00		1.00	1.00		1.00	0.83		0.17	1.00		1.00
Lane Grp Cap(c), veh/h	650	1389	1177	446	1336	1132	125	0	0	149	0	96
V/C Ratio(X)	0.06	0.60	0.01	0.02	0.41	0.01	0.05	0.00	0.00	0.17	0.00	0.48
Avail Cap(c_a), veh/h	1114	1389	1177	532	1336	1132	266	0	0	292	0	256
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	4.1	6.8	3.7	5.9	6.6	4.7	54.3	0.0	0.0	54.9	0.0	55.7
Incr Delay (d2), s/veh	0.0	1.9	0.0	0.0	1.0	0.0	0.2	0.0	0.0	0.2	0.0	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.3	12.8	0.2	0.1	8.6	0.1	0.3	0.0	0.0	1.4	0.0	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.1	8.7	3.8	5.9	7.6	4.7	54.5	0.0	0.0	55.1	0.0	57.1
LnGrp LOS	A	A	A	A	A	A	D	A	A	E	A	E
Approach Vol, veh/h		891			578			6			71	
Approach Delay, s/veh		8.4			7.5			54.5			56.4	
Approach LOS		A			A			D			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.0	100.0		12.6	13.5	96.5		12.6				
Change Period (Y+Rc), s	7.5	7.5		* 5.2	7.5	7.5		* 5.2				
Max Green Setting (Gmax), s	8.5	92.5		* 20	38.5	62.5		* 20				
Max Q Clear Time (g_c+I1), s	2.2	27.0		5.4	2.7	16.5		3.6				
Green Ext Time (p_c), s	0.0	16.6		0.1	0.1	8.0		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	10.4
HCM 6th LOS	B

Notes

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

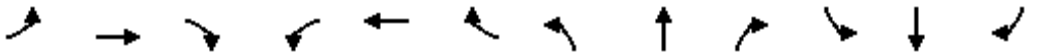
Intersection	
Int Delay, s/veh	9.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	164	614	54	28	450	78	41	7	27	33	0	64
Future Vol, veh/h	164	614	54	28	450	78	41	7	27	33	0	64
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	460	-	250	345	-	400	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	4	4	4	4	4	4	2	2	2	2	2	2
Mvmt Flow	173	646	57	29	474	82	43	7	28	35	0	67

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	556	0	0	703	0	0	1599	1606	646	1570	1581	474
Stage 1	-	-	-	-	-	-	992	992	-	532	532	-
Stage 2	-	-	-	-	-	-	607	614	-	1038	1049	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.236	-	-	2.236	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1005	-	-	885	-	-	86	105	472	90	109	590
Stage 1	-	-	-	-	-	-	296	324	-	531	526	-
Stage 2	-	-	-	-	-	-	483	483	-	279	304	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1005	-	-	885	-	-	65	84	472	67	87	590
Mov Cap-2 Maneuver	-	-	-	-	-	-	65	84	-	67	87	-
Stage 1	-	-	-	-	-	-	245	268	-	440	509	-
Stage 2	-	-	-	-	-	-	414	467	-	211	252	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.8	0.5	124.1	44
HCM LOS			F	E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	97	1005	-	-	885	-	-	67	590
HCM Lane V/C Ratio	0.814	0.172	-	-	0.033	-	-	0.518	0.114
HCM Control Delay (s)	124.1	9.3	-	-	9.2	-	-	106.2	11.9
HCM Lane LOS	F	A	-	-	A	-	-	F	B
HCM 95th %tile Q(veh)	4.4	0.6	-	-	0.1	-	-	2.1	0.4



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	109	578	0	0	451	71	0	0	0	79	0	77
Future Volume (veh/h)	109	578	0	0	451	71	0	0	0	79	0	77
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	1841	1841	0	0	1841	1841	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	115	608	0	0	475	75	0	0	0	83	0	81
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	0	0	4	4	2	2	2	2	2	2
Cap, veh/h	652	1455	0	0	1174	995	2	2	1	161	0	143
Arrive On Green	0.09	0.79	0.00	0.00	0.64	0.64	0.00	0.00	0.00	0.09	0.00	0.09
Sat Flow, veh/h	1753	1841	0	0	1841	1560	1781	1870	1585	1781	0	1585
Grp Volume(v), veh/h	115	608	0	0	475	75	0	0	0	83	0	81
Grp Sat Flow(s),veh/h/ln	1753	1841	0	0	1841	1560	1781	1870	1585	1781	0	1585
Q Serve(g_s), s	2.0	11.4	0.0	0.0	13.9	2.0	0.0	0.0	0.0	4.9	0.0	5.4
Cycle Q Clear(g_c), s	2.0	11.4	0.0	0.0	13.9	2.0	0.0	0.0	0.0	4.9	0.0	5.4
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	652	1455	0	0	1174	995	2	2	1	161	0	143
V/C Ratio(X)	0.18	0.42	0.00	0.00	0.40	0.08	0.00	0.00	0.00	0.52	0.00	0.57
Avail Cap(c_a), veh/h	657	1455	0	0	1174	995	453	476	403	194	0	173
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	5.2	3.6	0.0	0.0	9.7	7.6	0.0	0.0	0.0	47.7	0.0	48.0
Incr Delay (d2), s/veh	0.1	0.9	0.0	0.0	1.0	0.1	0.0	0.0	0.0	2.5	0.0	3.5
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	0.9	4.6	0.0	0.0	8.5	1.1	0.0	0.0	0.0	4.1	0.0	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	5.3	4.5	0.0	0.0	10.8	7.7	0.0	0.0	0.0	50.3	0.0	51.4
LnGrp LOS	A	A	A	A	B	A	A	A	A	D	A	D
Approach Vol, veh/h		723			550			0			164	
Approach Delay, s/veh		4.6			10.3			0.0			50.9	
Approach LOS		A			B						D	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		94.1		15.9	16.8	77.3		0.0				
Change Period (Y+Rc), s		7.1		6.0	7.1	7.1		6.0				
Max Green Setting (Gmax), s		50.9		12.0	10.0	33.8		28.0				
Max Q Clear Time (g_c+I1), s		13.4		7.4	4.0	15.9		0.0				
Green Ext Time (p_c), s		8.2		0.2	0.1	5.0		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			12.1									
HCM 6th LOS			B									

Intersection	
Int Delay, s/veh	1.8

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	39	50	566	76	53	534
Future Vol, veh/h	39	50	566	76	53	534
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	295	390	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	4	4	4	4
Mvmt Flow	41	53	596	80	56	562

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1270	596	0	0	676	0
Stage 1	596	-	-	-	-	-
Stage 2	674	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.14	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.236	-
Pot Cap-1 Maneuver	186	504	-	-	906	-
Stage 1	550	-	-	-	-	-
Stage 2	506	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	174	504	-	-	906	-
Mov Cap-2 Maneuver	174	-	-	-	-	-
Stage 1	550	-	-	-	-	-
Stage 2	475	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	21.3	0	0.8
HCM LOS	C		

Minor Lane/Major Mvmt	NET	NER	NWLn1	NWLn2	SWL	SWT
Capacity (veh/h)	-	-	174	504	906	-
HCM Lane V/C Ratio	-	-	0.236	0.104	0.062	-
HCM Control Delay (s)	-	-	32	13	9.2	-
HCM Lane LOS	-	-	D	B	A	-
HCM 95th %tile Q(veh)	-	-	0.9	0.3	0.2	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	0	9	19	1	16	23	555	32	27	565	55
Future Vol, veh/h	6	0	9	19	1	16	23	555	32	27	565	55
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	-	-	-	-	-	-	240	-	300	425	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	4	4	4	4	4	4
Mvmt Flow	6	0	9	20	1	17	24	584	34	28	595	58

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1338	1346	624	1317	1341	584	653	0	0	618	0	0
Stage 1	680	680	-	632	632	-	-	-	-	-	-	-
Stage 2	658	666	-	685	709	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.236	-	-	2.236	-	-
Pot Cap-1 Maneuver	130	151	485	134	152	512	924	-	-	953	-	-
Stage 1	441	451	-	468	474	-	-	-	-	-	-	-
Stage 2	453	457	-	438	437	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	120	143	485	126	144	512	924	-	-	953	-	-
Mov Cap-2 Maneuver	120	143	-	126	144	-	-	-	-	-	-	-
Stage 1	430	438	-	456	462	-	-	-	-	-	-	-
Stage 2	426	445	-	417	424	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	22.7	28.6	0.3	0.4
HCM LOS	C	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	924	-	-	219	190	953	-	-
HCM Lane V/C Ratio	0.026	-	-	0.072	0.199	0.03	-	-
HCM Control Delay (s)	9	-	-	22.7	28.6	8.9	-	-
HCM Lane LOS	A	-	-	C	D	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.2	0.7	0.1	-	-

Intersection	
Int Delay, s/veh	1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	521	12	40	562	17	33
Future Vol, veh/h	521	12	40	562	17	33
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	400	415	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	4	4	4	4	2	2
Mvmt Flow	548	13	42	592	18	35

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	561	0	1224	548
Stage 1	-	-	-	-	548	-
Stage 2	-	-	-	-	676	-
Critical Hdwy	-	-	4.14	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.236	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1000	-	198	536
Stage 1	-	-	-	-	579	-
Stage 2	-	-	-	-	505	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1000	-	190	536
Mov Cap-2 Maneuver	-	-	-	-	190	-
Stage 1	-	-	-	-	579	-
Stage 2	-	-	-	-	484	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.6	16.9
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	190	536	-	-	1000	-
HCM Lane V/C Ratio	0.094	0.065	-	-	0.042	-
HCM Control Delay (s)	25.9	12.2	-	-	8.8	-
HCM Lane LOS	D	B	-	-	A	-
HCM 95th %tile Q(veh)	0.3	0.2	-	-	0.1	-

Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Volume (veh/h)	233	277	1614	311	271	886
Future Volume (veh/h)	233	277	1614	311	271	886
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	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	245	292	1699	0	285	933
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4
Cap, veh/h	292	260	1809		314	2486
Arrive On Green	0.17	0.17	0.52	0.00	0.13	0.71
Sat Flow, veh/h	1753	1560	3589	1560	1753	3589
Grp Volume(v), veh/h	245	292	1699	0	285	933
Grp Sat Flow(s),veh/h/ln	1753	1560	1749	1560	1753	1749
Q Serve(g_s), s	14.9	18.3	50.2	0.0	12.3	11.6
Cycle Q Clear(g_c), s	14.9	18.3	50.2	0.0	12.3	11.6
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	292	260	1809		314	2486
V/C Ratio(X)	0.84	1.13	0.94		0.91	0.38
Avail Cap(c_a), veh/h	292	260	1809		373	2486
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	1.00
Uniform Delay (d), s/veh	44.4	45.8	24.9	0.0	34.2	6.3
Incr Delay (d2), s/veh	18.8	93.8	10.9	0.0	21.2	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	12.2	20.6	28.8	0.0	14.1	6.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	63.2	139.6	35.9	0.0	55.4	6.7
LnGrp LOS	E	F	D		E	A
Approach Vol, veh/h	537		1699	A		1218
Approach Delay, s/veh	104.8		35.9			18.1
Approach LOS	F		D			B

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	21.3	63.7			85.0	25.0
Change Period (Y+Rc), s	6.8	6.8			6.8	6.7
Max Green Setting (Gmax), s	18.2	53.2			78.2	18.3
Max Q Clear Time (g_c+I1), s	14.3	52.2			13.6	20.3
Green Ext Time (p_c), s	0.2	0.9			9.3	0.0

Intersection Summary	
HCM 6th Ctrl Delay	40.3
HCM 6th LOS	D

Notes

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

Arterial Level of Service: EB Boggy Creek Rd

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Simpson Rd	I	45	81.4	34.0	115.4	1.02	31.7	C
Nele Road	I	45	117.8	6.6	124.4	1.47	42.6	A
Austin Tyndell Park	I	50	67.9	3.0	70.9	0.95	48.3	A
Narcoossee Rd	I	55	227.2	77.3	304.5	3.47	41.0	B
Total	I		494.3	120.9	615.2	6.91	40.5	B

Arterial Level of Service: WB Boggy Creek Rd

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Turnberry Blvd	I	55	227.2	6.6	233.8	3.47	53.5	A
High School	I	50	67.9	8.2	76.1	0.95	45.0	A
Simpson Rd	I	45	117.8	21.6	139.4	1.47	38.1	B
Total	I		412.9	36.4	449.3	5.90	47.2	A

Appendix E

Crash Data Information

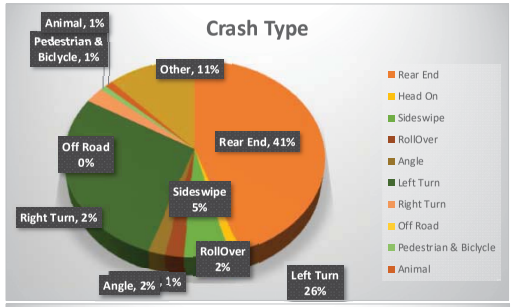
Crash Data Summary

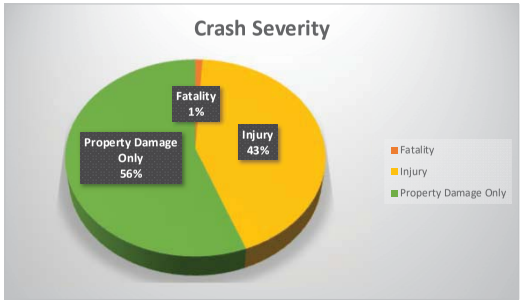
Crash Type	2015	2016	2017	2018	2019	Total	Proportion
Rear End	19	28	41	64	58	**210**	41%
Head On	1	1	1	1	2	**6**	1%
Sideswipe	1	4	8	2	9	**24**	5%
RollOver	4	1	3	2	0	**10**	2%
Angle	1	0	3	4	1	**9**	2%
Left Turn	23	22	21	37	30	**133**	26%
Right Turn	4	2	3	3	0	**12**	2%
Off Road	8	6	2	14	10	**40**	8%
Pedestrian & Biclycle	1	1	0	1	1	**4**	1%
Animal	1	1	1	1	1	**5**	1%
Other	7	9	5	22	13	**56**	11%
Total	**70**	**75**	**88**	**151**	**125**	**509**	100%

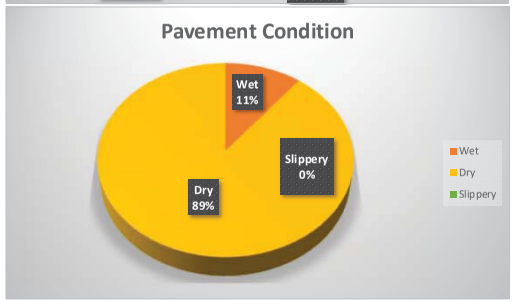
Crash Severity	2015	2016	2017	2018	2019	Total	Proportion
Fatality	0	2	1	0	2	**5**	1%
Injury	35	30	36	67	52	**220**	43%
Property Damage Only	35	43	51	84	71	**284**	56%
Total	**70**	**75**	**88**	**151**	**125**	**509**	100%

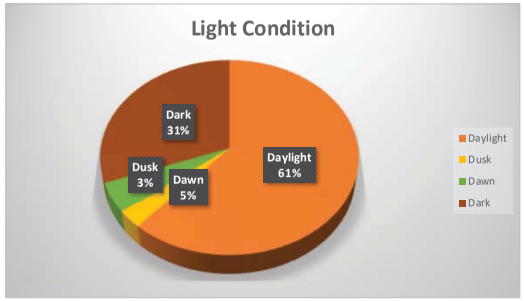
Pavement Condition	2015	2016	2017	2018	2019	Total	Proportion
Wet	8	9	10	15	12	**54**	11%
Dry	62	66	78	136	113	**455**	89%
Slippery	0	0	0	0	0	**0**	0%
Total	**70**	**75**	**88**	**151**	**125**	**509**	100%

Light Condition	2015	2016	2017	2018	2019	Total	Proportion
Daylight	33	40	59	105	76	**313**	61%
Dusk	2	2	2	5	4	**15**	3%
Dawn	3	5	3	6	8	**25**	5%
Dark	32	28	24	35	37	**156**	31%
Total	**70**	**75**	**88**	**151**	**125**	**509**	100%
Under the Influence	**2015**	**2016**	**2017**	**2018**	**2019**	**Total**	**Proportion**
Alcohol	0	1	2	3	0	**6**	1%
Drugs	0	1	0	0	0	**1**	0.20%
Total	**0**	**2**	**2**	**3**	**0**	**7**	1%









Crash Data Summary

No.	Crash ID	Date	Day	Time	Crash Type	Crash Severity	Fatalities	Injuries	Property Damage	Day/Night	Wet/Dry	Alcohol Related	Drug Related
1	84561808	1/3/2015	Saturday	4:50 PM	Rear End	Property Damage Only	0	0	$2,000	Daylight	Dry	No	No
2	84544871	1/3/2015	Saturday	9:50 PM	Rollover	Property Damage Only	0	0	$4,000	Dark - Not Lighted	Dry	No	No
3	84565976	1/16/2015	Friday	5:28 AM	Head On	Property Damage Only	0	0	$10,000	Dark - Lighted	Dry	No	No
4	84553691	1/22/2015	Thursday	2:06 PM	Right Turn	Property Damage Only	0	0	$2,700	Daylight	Dry	No	No
5	84563040	1/23/2015	Friday	2:00 PM	Rear End	Injury	0	1	$3,500	Daylight	Dry	No	No
6	84563048	1/24/2015	Saturday	6:25 PM	Rear End	Property Damage Only	0	0	$1,020	Dark - Lighted	Dry	No	No
7	84561541	1/31/2015	Saturday	8:48 PM	Left Turn	Injury	0	1	$11,000	Dark - Not Lighted	Dry	No	No
8	84566175	2/11/2015	Wednesday	5:45 AM	Rear End	Property Damage Only	0	0	$1,600	Dark - Not Lighted	Dry	No	No
9	84860992	2/18/2015	Wednesday	10:00 PM	Left Turn	Injury	0	1	$4,000	Dark - Lighted	Dry	No	No
10	83385233	2/20/2015	Friday	3:24 PM	Other	Property Damage Only	0	0	$0	Daylight	Dry	No	No
11	84865267	2/28/2015	Saturday	3:22 PM	Rear End	Property Damage Only	0	0	$800	Daylight	Wet	No	No
12	83385297	3/10/2015	Tuesday	4:26 PM	Rear End	Property Damage Only	0	0	$0	Daylight	Dry	No	No
13	84881855	3/15/2015	Sunday	4:19 AM	Left Turn	Property Damage Only	0	0	$7,500	Dark - Lighted	Dry	No	No
14	84876580	3/16/2015	Monday	9:42 PM	Right Turn	Property Damage Only	0	0	$5,000	Dark - Lighted	Dry	No	No
15	84872363	3/18/2015	Wednesday	7:01 AM	Rear End	Property Damage Only	0	0	$7,500	Dawn	Dry	No	No
16	84878191	3/20/2015	Friday	11:27 PM	Left Turn	Injury	0	2	$4,000	Dark - Not Lighted	Dry	No	No
17	84886489	4/4/2015	Saturday	8:10 PM	Left Turn	Injury	0	5	$15,000	Dark - Lighted	Dry	No	No
18	84882569	4/7/2015	Tuesday	7:35 PM	Right Turn	Property Damage Only	0	0	$7,000	Dusk	Dry	No	No
19	84878219	4/9/2015	Thursday	8:00 PM	Off Road	Property Damage Only	0	0	$350	Dark - Lighted	Dry	No	No
20	84898466	4/9/2015	Thursday	10:36 PM	Left Turn	Injury	0	2	$8,000	Dark - Not Lighted	Dry	No	No
21	84871868	4/13/2015	Monday	4:10 AM	Animal	Property Damage Only	0	0	$20,000	Dark - Not Lighted	Wet	No	No
22	84878538	4/15/2015	Wednesday	6:20 PM	Rear End	Property Damage Only	0	0	$1,300	Daylight	Dry	No	No
23	84880809	4/15/2015	Wednesday	10:17 PM	Left Turn	Injury	0	3	$7,000	Dark - Lighted	Wet	No	No
24	84904812	4/21/2015	Tuesday	5:03 PM	Rear End	Property Damage Only	0	0	$700	Daylight	Dry	No	No
25	83385446	4/22/2015	Wednesday	4:47 PM	Other	Property Damage Only	0	0	$0	Daylight	Dry	No	No
26	84880888	4/27/2015	Monday	8:34 AM	Rear End	Injury	0	1	$5,500	Daylight	Dry	No	No
27	84875486	5/2/2015	Saturday	5:09 AM	Pedestrian	Injury	0	1	$2,500	Dawn	Dry	No	No
28	84886525	5/7/2015	Thursday	6:59 AM	Left Turn	Property Damage Only	0	0	$5,000	Daylight	Dry	No	No
29	85110794	5/7/2015	Thursday	5:23 PM	Left Turn	Injury	0	2	$5,000	Daylight	Dry	No	No
30	84902988	5/9/2015	Saturday	8:55 PM	Left Turn	Injury	0	1	$5,500	Dark - Not Lighted	Dry	No	No
31	84904303	5/14/2015	Thursday	9:45 PM	Other	Injury	0	1	$6,500	Dark - Lighted	Dry	No	No
32	84904313	5/19/2015	Tuesday	9:20 PM	Left Turn	Property Damage Only	0	0	$6,000	Dark - Lighted	Dry	No	No
33	83385499	5/21/2015	Thursday	9:27 AM	Angle	Property Damage Only	0	0	$0	Daylight	Dry	No	No
34	84902854	6/4/2015	Thursday	10:08 PM	Off Road	Property Damage Only	0	0	$17,000	Dark - Not Lighted	Dry	No	No
35	85127187	6/18/2015	Thursday	1:12 PM	Left Turn	Property Damage Only	0	0	$6,000	Daylight	Dry	No	No
36	85139112	6/21/2015	Sunday	6:39 AM	Off Road	Injury	0	1	$10,000	Daylight	Dry	No	No
37	85139868	6/29/2015	Monday	1:35 PM	Off Road	Injury	0	1	$3,900	Daylight	Wet	No	No
38	85127208	7/1/2015	Wednesday	5:53 AM	Rollover	Injury	0	2	$7,000	Dawn	Dry	No	No
39	85124399	7/7/2015	Tuesday	8:09 AM	Rear End	Property Damage Only	0	0	$2,600	Daylight	Dry	No	No
40	85145405	7/20/2015	Monday	5:06 PM	Other	Injury	0	1	$2,500	Daylight	Dry	No	No
41	84876780	7/27/2015	Monday	12:39 PM	Other	Injury	0	3	$13,000	Daylight	Dry	No	No
42	85153209	8/5/2015	Wednesday	6:48 PM	Left Turn	Injury	0	4	$11,000	Daylight	Dry	No	No
43	85182787	8/16/2015	Sunday	1:00 PM	Rear End	Injury	0	1	$400	Daylight	Dry	No	No
44	85185072	8/22/2015	Saturday	5:56 PM	Off Road	Injury	0	2	$7,500	Daylight	Dry	No	No
45	85186023	9/2/2015	Wednesday	7:09 AM	Rear End	Injury	0	2	$15,600	Daylight	Dry	No	No
46	83385799	9/4/2015	Friday	2:40 PM	Rear End	Property Damage Only	0	0	$0	Daylight	Wet	No	No
47	85171224	9/5/2015	Saturday	10:32 PM	Left Turn	Injury	0	3	$14,000	Dark - Not Lighted	Dry	No	No
48	85162476	9/10/2015	Thursday	5:55 PM	Left Turn	Property Damage Only	0	0	$12,000	Daylight	Dry	No	No
49	85179421	9/23/2015	Wednesday	6:50 AM	Left Turn	Injury	0	1	$10,500	Dusk	Dry	No	No
50	85190302	9/25/2015	Friday	8:10 PM	Left Turn	Injury	0	2	$20,000	Dark - Not Lighted	Wet	No	No
51	85183179	10/1/2015	Thursday	8:29 PM	Rollover	Injury	0	1	$0	Dark - Lighted	Dry	No	No
52	85190315	10/1/2015	Thursday	9:16 PM	Left Turn	Injury	0	4	$23,000	Dark - Not Lighted	Dry	No	No
53	83385899	10/9/2015	Friday	9:30 PM	Sideswipe	Property Damage Only	0	0	$0	Dark - Lighted	Dry	No	No
54	85184409	10/11/2015	Sunday	5:25 PM	Right Turn	Injury	0	2	$21,500	Daylight	Dry	No	No
55	85195373	10/13/2015	Tuesday	3:28 PM	Other	Injury	0	1	$5,000	Daylight	Dry	No	No
56	85164431	10/19/2015	Monday	10:20 PM	Off Road	Property Damage Only	0	0	$4,800	Dark - Not Lighted	Dry	No	No
57	85213203	10/21/2015	Wednesday	9:03 AM	Other	Injury	0	1	$29,000	Daylight	Dry	No	No
58	85209616	10/28/2015	Wednesday	9:08 PM	Rear End	Property Damage Only	0	0	$100	Dark - Not Lighted	Dry	No	No
59	85213222	11/3/2015	Tuesday	6:47 PM	Left Turn	Injury	0	7	$22,500	Dark - Lighted	Dry	No	No
60	85224719	11/10/2015	Tuesday	7:30 PM	Left Turn	Property Damage Only	0	0	$4,500	Dark - Not Lighted	Dry	No	No
61	83385998	11/16/2015	Monday	3:57 PM	Left Turn	Property Damage Only	0	0	$0	Daylight	Dry	No	No
62	85209659	11/21/2015	Saturday	10:45 PM	Left Turn	Injury	0	2	$12,500	Dark - Not Lighted	Wet	No	No
63	85215377	11/22/2015	Sunday	7:28 AM	Off Road	Injury	0	1	$10,000	Daylight	Wet	No	No
64	85215228	12/9/2015	Wednesday	2:15 AM	Off Road	Injury	0	1	$5,500	Dark - Not Lighted	Dry	No	No
65	85218416	12/10/2015	Thursday	6:37 AM	Rollover	Injury	0	2	$6,000	Daylight	Dry	No	No
66	85241470	12/10/2015	Thursday	6:24 PM	Rear End	Property Damage Only	0	0	$2,300	Dark - Not Lighted	Dry	No	No
67	85241471	12/10/2015	Thursday	7:31 PM	Rear End	Injury	0	1	$3,500	Dark - Not Lighted	Dry	No	No
68	85236066	12/13/2015	Sunday	4:12 AM	Rear End	Property Damage Only	0	0	$1,050	Dark - Not Lighted	Dry	No	No
69	85230292	12/14/2015	Monday	9:43 AM	Rear End	Property Damage Only	0	0	$10,000	Daylight	Dry	No	No
70	85230313	12/21/2015	Monday	9:13 AM	Left Turn	Property Damage Only	0	0	$1,500	Daylight	Dry	No	No
71	85250804	1/1/2016	Friday	4:06 PM	Rear End	Property Damage Only	0	0	$1,000	Daylight	Dry	No	No
72	85163269	1/9/2016	Saturday	9:06 PM	Left Turn	Injury	0	4	$24,000	Dark - Lighted	Wet	No	No
73	85249252	1/12/2016	Tuesday	6:44 AM	Left Turn	Injury	0	1	$6,500	Dawn	Dry	No	No
74	83386168	1/27/2016	Wednesday	8:30 AM	Left Turn	Property Damage Only	0	0	$0	Daylight	Wet	No	No
75	85253422	2/12/2016	Friday	6:34 AM	Rear End	Property Damage Only	0	0	$7,000	Dawn	Dry	No	No
76	85278746	2/14/2016	Sunday	12:05 PM	Rear End	Injury	0	1	$175	Daylight	Dry	No	No
77	85260508	2/15/2016	Monday	9:23 PM	Off Road	Property Damage Only	0	0	$3,500	Dark - Lighted	Wet	No	No
78	85277398	2/19/2016	Friday	6:40 PM	Other	Property Damage Only	0	0	$13,000	Dark - Not Lighted	Dry	No	No
79	85270369	2/19/2016	Friday	10:08 PM	Left Turn	Injury	0	1	$21,000	Dark - Not Lighted	Dry	No	No
80	85249297	2/24/2016	Wednesday	9:03 AM	Left Turn	Injury	0	1	$7,000	Daylight	Wet	No	No
81	85289389	3/2/2016	Wednesday	8:39 PM	Left Turn	Injury	0	2	$10,000	Dark - Not Lighted	Dry	No	No
82	85285892	3/12/2016	Saturday	7:55 AM	Other	Property Damage Only	0	0	$4,500	Daylight	Dry	No	No
83	85289436	3/31/2016	Thursday	6:39 PM	Rear End	Injury	0	1	$6,500	Daylight	Dry	No	No
84	85297461	4/7/2016	Thursday	6:10 PM	Sideswipe	Property Damage Only	0	0	$2,000	Daylight	Dry	No	No
85	85297462	4/7/2016	Thursday	8:25 PM	Left Turn	Property Damage Only	0	0	$11,000	Dark - Lighted	Dry	No	No
86	85281759	4/11/2016	Monday	5:00 AM	Pedestrian	Injury	0	1	$0	Dark - Not Lighted	Dry	No	No
87	85304120	4/14/2016	Thursday	7:54 PM	Rear End	Property Damage Only	0	0	$750	Dusk	Wet	No	No
88	85300101	4/22/2016	Friday	9:10 AM	Sideswipe	Property Damage Only	0	0	$300	Daylight	Dry	No	No
89	85310962	4/22/2016	Friday	12:30 PM	Unknown	Property Damage Only	0	0	$8,000	Daylight	Dry	No	No
90	85308177	4/23/2016	Saturday	9:19 PM	Left Turn	Injury	0	2	$20,000	Dark - Lighted	Dry	No	No
91	85302653	4/26/2016	Tuesday	12:00 AM	Rear End	Injury	0	1	$125	Dark - Lighted	Dry	No	No
92	85313208	4/28/2016	Thursday	8:20 AM	Rear End	Property Damage Only	0	0	$3,500	Daylight	Dry	No	No
93	85306328	5/1/2016	Sunday	11:55 PM	Left Turn	Injury	0	2	$11,000	Dark - Lighted	Dry	No	No
94	85312192	5/2/2016	Monday	1:15 PM	Rear End	Injury	0	1	$18,500	Daylight	Dry	No	No
95	85307662	5/11/2016	Wednesday	8:24 AM	Rear End	Property Damage Only	0	0	$600	Daylight	Dry	No	No
96	85308213	5/14/2016	Saturday	9:01 PM	Left Turn	Injury	0	3	$7,800	Dark - Not Lighted	Dry	No	No

Crash Data Summary

No.	Crash ID	Date	Day	Time	Crash Type	Crash Severity	Fatalities	Injuries	Property Damage	Day/Night	Wet/Dry	Alcohol Related	Drug Related
97	85324318	5/17/2016	Tuesday	5:29 PM	Rear End	Injury	0	1	$0	Daylight	Wet	No	No
98	85166346	5/20/2016	Friday	5:26 AM	Left Turn	Injury	0	2	$6,500	Dark - Not Lighted	Dry	No	No
99	85308107	5/23/2016	Monday	6:02 AM	Rollover	Injury	0	1	$5,000	Dawn	Dry	No	No
100	85313770	5/23/2016	Monday	6:00 PM	Rear End	Property Damage Only	0	0	$2,500	Daylight	Dry	No	No
101	85329336	5/26/2016	Thursday	1:57 AM	Off Road	Property Damage Only	0	0	$8,000	Dark - Not Lighted	Dry	No	No
102	85308113	5/28/2016	Saturday	1:25 PM	Sideswipe	Property Damage Only	0	0	$1,000	Daylight	Dry	No	No
103	86542186	6/17/2016	Friday	1:35 PM	Rear End	Property Damage Only	0	0	$0	Daylight	Dry	No	No
104	85348053	6/30/2016	Thursday	11:15 AM	Rear End	Property Damage Only	0	0	$4,600	Daylight	Dry	No	No
105	85354779	7/4/2016	Monday	11:29 PM	Left Turn	Property Damage Only	0	0	$1,500	Dark - Lighted	Dry	No	No
106	85347250	7/8/2016	Friday	2:35 PM	Sideswipe	Injury	0	1	$2,600	Daylight	Dry	No	No
107	85333345	7/10/2016	Sunday	5:49 AM	Off Road	Injury	0	1	$7,000	Dark - Not Lighted	Dry	No	No
108	85358602	7/22/2016	Friday	9:44 PM	Left Turn	Injury	0	1	$8,500	Dark - Lighted	Dry	No	No
109	85359488	7/24/2016	Sunday	8:39 PM	Right Turn	Injury	0	3	$11,000	Dark - Not Lighted	Dry	No	No
110	85342298	7/28/2016	Thursday	2:03 PM	Left Turn	Property Damage Only	0	0	$31,000	Daylight	Dry	No	No
111	85365859	8/6/2016	Saturday	1:28 AM	Off Road	Fatality	1	1	$8,000	Dark - Not Lighted	Dry	Yes	Yes
112	85354819	8/9/2016	Tuesday	7:47 AM	Rear End	Injury	0	2	$7,500	Daylight	Dry	No	No
113	85364811	8/10/2016	Wednesday	5:40 AM	Rear End	Property Damage Only	0	0	$251	Dawn	Dry	No	No
114	85374087	8/20/2016	Saturday	11:15 AM	Rear End	Property Damage Only	0	0	$300	Daylight	Dry	No	No
115	85369437	8/23/2016	Tuesday	12:07 PM	Rear End	Injury	0	1	$13,500	Daylight	Dry	No	No
116	85381805	8/26/2016	Friday	5:25 PM	Other	Property Damage Only	0	0	$1,000	Daylight	Wet	No	No
118	85374104	8/27/2016	Saturday	8:40 PM	Animal	Property Damage Only	0	0	$501	Dark - Not Lighted	Dry	No	No
119	84541178	8/31/2016	Wednesday	6:58 PM	Other	Property Damage Only	0	0	$7,500	Dusk	Wet	No	No
120	85382822	9/1/2016	Thursday	8:28 AM	Left Turn	Property Damage Only	0	0	$10,000	Daylight	Dry	No	No
121	85375177	9/14/2016	Wednesday	2:45 PM	Rear End	Property Damage Only	0	0	$3,500	Daylight	Wet	No	No
122	85397201	9/15/2016	Thursday	6:45 AM	Left Turn	Injury	0	2	$18,000	Daylight	Dry	No	No
123	85384733	9/16/2016	Friday	9:52 PM	Head On	Fatality	1	3	$30,000	Dark - Not Lighted	Dry	No	No
124	85401433	9/22/2016	Thursday	5:59 PM	Left Turn	Injury	0	2	$20,000	Daylight	Dry	No	No
125	85383038	9/30/2016	Friday	3:30 AM	Off Road	Property Damage Only	0	0	$4,300	Dark - Not Lighted	Dry	No	No
126	85403493	9/30/2016	Friday	5:52 AM	Rear End	Injury	0	1	$1,000	Dark - Not Lighted	Dry	No	No
127	85398823	10/14/2016	Friday	5:59 PM	Rear End	Property Damage Only	0	0	$2,000	Daylight	Dry	No	No
128	86736281	10/17/2016	Monday	12:44 PM	Rear End	Property Damage Only	0	0	$0	Daylight	Dry	No	No
129	85384773	10/20/2016	Thursday	9:00 AM	Off Road	Property Damage Only	0	0	$3,250	Daylight	Dry	No	No
130	85378435	10/20/2016	Thursday	10:15 AM	Unknown	Property Damage Only	0	0	$1,600	Daylight	Dry	No	No
131	85420807	11/2/2016	Wednesday	5:50 AM	Rear End	Property Damage Only	0	0	$4,650	Dark - Not Lighted	Dry	No	No
132	85404565	11/6/2016	Sunday	3:48 PM	Rear End	Injury	0	4	$20,000	Daylight	Dry	No	No
133	85420817	11/10/2016	Thursday	6:54 AM	Rear End	Property Damage Only	0	0	$700	Dawn	Dry	No	No
134	86736376	11/14/2016	Monday	7:32 AM	Rear End	Property Damage Only	0	0	$0	Daylight	Dry	No	No
135	85427773	11/14/2016	Monday	5:14 PM	Rear End	Injury	0	1	$50	Daylight	Dry	No	No
136	85407636	11/16/2016	Wednesday	6:33 PM	Right Turn	Property Damage Only	0	0	$3,500	Dark - Lighted	Dry	No	No
137	86736386	11/19/2016	Saturday	8:25 AM	Rear End	Property Damage Only	0	0	$0	Daylight	Dry	No	No
138	85411660	11/25/2016	Friday	5:50 PM	Left Turn	Injury	0	1	$13,000	Dark - Lighted	Dry	No	No
139	85404584	11/26/2016	Saturday	6:17 PM	Left Turn	Property Damage Only	0	0	$20,000	Dark - Not Lighted	Dry	No	No
140	85437871	11/27/2016	Sunday	5:50 PM	Left Turn	Injury	0	2	$4,000	Daylight	Dry	No	No
141	85423658	12/2/2016	Friday	7:04 PM	Left Turn	Injury	0	1	$6,000	Dark - Lighted	Dry	No	No
142	85431265	12/4/2016	Sunday	6:13 PM	Left Turn	Property Damage Only	0	0	$5,000	Dark - Not Lighted	Dry	No	No
143	85423272	12/10/2016	Saturday	3:40 PM	Rear End	Property Damage Only	0	0	$2,500	Daylight	Dry	No	No
144	85420861	12/13/2016	Tuesday	9:45 AM	Other	Property Damage Only	0	0	$6,000	Daylight	Dry	No	No
145	86736442	12/14/2016	Wednesday	8:02 AM	Unknown	Property Damage Only	0	0	$0	Daylight	Dry	No	No
146	85444038	1/5/2017	Thursday	10:10 AM	Rear End	Injury	0	1	$1,300	Daylight	Dry	No	No
147	85444039	1/6/2017	Friday	7:48 AM	Sideswipe	Property Damage Only	0	0	$900	Daylight	Dry	No	No
148	85450918	1/8/2017	Sunday	6:46 PM	Rear End	Injury	0	2	$2,500	Dark - Not Lighted	Dry	No	No
149	85434515	1/10/2017	Tuesday	6:21 AM	Rear End	Property Damage Only	0	0	$4,000	Dark - Lighted	Dry	No	No
150	85458060	1/24/2017	Tuesday	4:59 PM	Right Turn	Injury	0	1	$1,000	Daylight	Dry	No	No
151	85444060	1/25/2017	Wednesday	6:26 AM	Left Turn	Injury	0	4	$18,000	Dark - Lighted	Dry	No	No
152	85468221	1/25/2017	Wednesday	7:35 AM	Sideswipe	Property Damage Only	0	0	$5,000	Daylight	Wet	No	No
153	85469600	1/30/2017	Monday	6:55 AM	Rear End	Property Damage Only	0	0	$1,650	Daylight	Dry	No	No
154	85469623	2/7/2017	Tuesday	10:10 AM	Other	Property Damage Only	0	0	$2,250	Daylight	Dry	No	No
155	85481780	2/13/2017	Monday	8:30 AM	Left Turn	Injury	0	1	$5,000	Daylight	Dry	No	No
156	85477993	2/14/2017	Tuesday	2:00 AM	Rollover	Property Damage Only	0	0	$11,000	Dark - Not Lighted	Dry	No	No
157	85477994	2/14/2017	Tuesday	8:35 AM	Sideswipe	Injury	0	3	$15,200	Daylight	Dry	No	No
158	85455768	2/21/2017	Tuesday	10:00 PM	Left Turn	Injury	0	1	$6,500	Dark - Lighted	Dry	No	No
159	86736665	2/23/2017	Thursday	12:18 PM	Rear End	Property Damage Only	0	0	$0	Daylight	Dry	No	No
160	86736694	3/1/2017	Wednesday	4:25 PM	Animal	Injury	0	1	$1,000	Daylight	Dry	No	No
161	85489884	3/8/2017	Wednesday	7:00 PM	Rear End	Property Damage Only	0	0	$14,000	Dark - Not Lighted	Dry	No	No
162	85495693	3/15/2017	Wednesday	9:25 AM	Rear End	Property Damage Only	0	0	$325	Daylight	Dry	No	No
163	85493486	4/9/2017	Sunday	11:05 AM	Rear End	Property Damage Only	0	0	$4,000	Daylight	Dry	No	No
164	85491371	4/13/2017	Thursday	8:32 PM	Rear End	Property Damage Only	0	0	$6,500	Dark - Not Lighted	Dry	No	No
165	85476094	4/26/2017	Wednesday	6:39 AM	Rear End	Property Damage Only	0	0	$1,150	Daylight	Dry	No	No
166	85510518	5/5/2017	Friday	2:54 PM	Left Turn	Property Damage Only	0	0	$4,500	Daylight	Dry	No	No
167	85511556	5/9/2017	Tuesday	2:30 PM	Rear End	Injury	0	1	$1,900	Daylight	Dry	No	No
168	85526242	5/11/2017	Thursday	1:22 PM	Left Turn	Injury	0	3	$12,000	Daylight	Dry	No	No
169	85525303	5/22/2017	Monday	4:20 PM	Other	Injury	0	5	$24,000	Daylight	Dry	No	No
170	85531396	5/24/2017	Wednesday	12:00 PM	Sideswipe	Property Damage Only	0	0	$600	Daylight	Dry	No	No
171	85524224	6/11/2017	Sunday	11:00 AM	Rear End	Property Damage Only	0	0	$1,300	Daylight	Dry	No	No
172	85547110	6/14/2017	Wednesday	8:05 AM	Left Turn	Injury	0	2	$22,000	Daylight	Dry	No	No
173	86991305	6/15/2017	Thursday	10:00 PM	Rear End	Property Damage Only	0	0	$0	Dark - Lighted	Wet	No	No
174	85544496	6/18/2017	Sunday	11:55 PM	Other	Injury	0	1	$15,000	Dark - Not Lighted	Dry	No	No
175	85545085	6/23/2017	Friday	3:47 PM	Rear End	Property Damage Only	0	0	$8,000	Daylight	Dry	No	No
176	85545098	6/26/2017	Monday	3:45 PM	Rear End	Injury	0	1	$5,500	Daylight	Wet	No	No
177	85545766	6/28/2017	Wednesday	1:45 PM	Sideswipe	Property Damage Only	0	0	$200	Daylight	Dry	No	No
178	85551697	6/30/2017	Friday	3:20 AM	Left Turn	Property Damage Only	0	0	$3,000	Dark - Lighted	Dry	No	No
179	85525255	6/30/2017	Friday	12:38 PM	Right Turn	Injury	0	1	$3,500	Daylight	Dry	No	No
180	85555179	6/30/2017	Friday	10:00 PM	Angle	Property Damage Only	0	0	$1,000	Dark - Lighted	Dry	Yes	No
181	85539656	7/3/2017	Monday	4:15 PM	Rear End	Property Damage Only	0	0	$3,500	Daylight	Dry	No	No
182	85565171	7/16/2017	Sunday	1:42 PM	Rear End	Injury	0	3	$7,000	Daylight	Dry	No	No
183	85548362	7/17/2017	Monday	5:30 PM	Rear End	Property Damage Only	0	0	$550	Daylight	Wet	No	No
184	87413635	7/19/2017	Wednesday	12:56 PM	Rear End	Property Damage Only	0	0	$0	Daylight	Dry	No	No
185	85548365	7/19/2017	Wednesday	3:40 PM	Head On	Fatality	1	7	$30,000	Daylight	Dry	No	No
186	85561974	7/21/2017	Friday	6:20 PM	Rear End	Property Damage Only	0	0	$2,400	Daylight	Wet	No	No
187	85561980	7/24/2017	Monday	9:25 AM	Rear End	Property Damage Only	0	0	$120	Daylight	Dry	No	No
188	85570187	7/30/2017	Sunday	2:50 PM	Rear End	Property Damage Only	0	0	$1,500	Daylight	Wet	No	No
189	85556369	8/4/2017	Friday	9:00 AM	Rear End	Property Damage Only	0	0	$8,500	Daylight	Dry	No	No
190	85576278	8/15/2017	Tuesday	2:30 PM	Angle	Property Damage Only	0	0	$3,500	Daylight	Dry	No	No
191	85578337	8/18/2017	Friday	12:30 PM	Rear End	Injury	0	2	$24,000	Daylight	Dry	No	No
192	87413769	8/20/2017	Sunday	12:37 AM	Left Turn	Property Damage Only	0	0	$1,400	Dark - Lighted	Dry	Yes	No
193	85561339	8/21/2017	Monday	6:27 AM	Rear End	Property Damage Only	0	0	$9,000	Daylight	Dry	No	No
194	85556394	8/22/2017	Tuesday	6:55 AM	Left Turn	Injury	0	2	$4,500	Dawn	Dry	No	No

Crash Data Summary

No.	Crash ID	Date	Day	Time	Crash Type	Crash Severity	Fatalities	Injuries	Property Damage	Day/Night	Wet/Dry	Alcohol Related	Drug Related
195	85561133	8/26/2017	Saturday	12:53 PM	Sideswipe	Property Damage Only	0	0	$600	Daylight	Dry	No	No
196	85590643	8/30/2017	Wednesday	7:50 AM	Left Turn	Injury	0	2	$8,000	Daylight	Dry	No	No
197	85577519	9/2/2017	Saturday	1:00 AM	Other	Injury	0	1	$3,500	Dark - Lighted	Wet	No	No
198	85576302	9/4/2017	Monday	2:00 PM	Left Turn	Injury	0	1	$5,500	Daylight	Dry	No	No
199	85591300	9/5/2017	Tuesday	6:38 AM	Left Turn	Injury	0	1	$6,500	Dark - Lighted	Dry	No	No
200	83781355	9/9/2017	Saturday	2:08 PM	Sideswipe	Property Damage Only	0	0	$2,500	Daylight	Dry	No	No
201	85590664	9/11/2017	Monday	4:05 PM	Rollover	Injury	0	2	$3,500	Daylight	Dry	No	No
202	85600003	9/19/2017	Tuesday	9:34 PM	Rear End	Property Damage Only	0	0	$1,200	Dark - Not Lighted	Dry	No	No
203	85582991	9/25/2017	Monday	5:25 PM	Rear End	Injury	0	2	$8,400	Daylight	Dry	No	No
204	85592348	9/28/2017	Thursday	7:25 AM	Sideswipe	Property Damage Only	0	0	$1,025	Daylight	Dry	No	No
205	87413913	10/4/2017	Wednesday	8:25 AM	Rear End	Property Damage Only	0	0	$1,500	Daylight	Dry	No	No
206	85592085	10/8/2017	Sunday	8:26 PM	Left Turn	Property Damage Only	0	0	$6,900	Dark - Lighted	Wet	No	No
207	85572342	10/9/2017	Monday	7:36 AM	Rear End	Injury	0	1	$1,000	Daylight	Dry	No	No
208	85591359	10/10/2017	Tuesday	8:03 AM	Rear End	Property Damage Only	0	0	$600	Daylight	Dry	No	No
209	87413938	10/13/2017	Friday	10:24 AM	Rear End	Property Damage Only	0	0	$1,100	Daylight	Dry	No	No
210	85591368	10/14/2017	Saturday	6:53 AM	Off Road	Property Damage Only	0	0	$2,500	Dark - Not Lighted	Wet	No	No
211	85604093	10/14/2017	Saturday	6:10 PM	Right Turn	Injury	0	1	$2,000	Daylight	Dry	No	No
212	85599417	10/17/2017	Tuesday	8:10 AM	Left Turn	Injury	0	3	$7,000	Daylight	Dry	No	No
213	87109862	10/18/2017	Wednesday	5:47 PM	Rear End	Property Damage Only	0	0	$5,000	Daylight	Dry	No	No
214	85605760	10/19/2017	Thursday	4:49 PM	Left Turn	Injury	0	2	$30,000	Daylight	Dry	No	No
215	87107893	10/27/2017	Friday	8:15 AM	Rear End	Property Damage Only	0	0	$1,400	Daylight	Dry	No	No
216	85604117	10/27/2017	Friday	5:45 PM	Rear End	Injury	0	1	$650	Daylight	Dry	No	No
217	85592365	10/28/2017	Saturday	10:35 PM	Off Road	Property Damage Only	0	0	$500	Dark - Not Lighted	Wet	No	No
218	87107684	10/29/2017	Sunday	7:18 PM	Rear End	Injury	0	4	$8,000	Dusk	Dry	No	No
219	87108037	10/30/2017	Monday	7:22 PM	Rear End	Property Damage Only	0	0	$1,300	Dawn	Dry	No	No
220	87115840	11/15/2017	Wednesday	2:45 PM	Angle	Injury	0	3	$5,500	Daylight	Dry	No	No
221	87112243	11/16/2017	Thursday	5:16 PM	Left Turn	Property Damage Only	0	0	$3,500	Daylight	Dry	No	No
222	87108064	11/17/2017	Friday	7:46 PM	Left Turn	Property Damage Only	0	0	$6,000	Dark - Lighted	Dry	No	No
223	87106519	11/19/2017	Sunday	1:40 PM	Rear End	Injury	0	1	$8,000	Daylight	Dry	No	No
224	87111644	11/28/2017	Tuesday	6:32 AM	Left Turn	Injury	0	1	$13,000	Dark - Not Lighted	Dry	No	No
225	87135713	11/30/2017	Thursday	6:01 PM	Left Turn	Property Damage Only	0	0	$8,500	Dusk	Dry	No	No
226	87414122	12/6/2017	Wednesday	2:49 PM	Rear End	Property Damage Only	0	0	$1,000	Daylight	Dry	No	No
227	87111656	12/8/2017	Friday	2:37 AM	Rollover	Property Damage Only	0	0	$2,000	Dark - Not Lighted	Dry	No	No
228	87135728	12/8/2017	Friday	7:10 PM	Rear End	Property Damage Only	0	0	$7,000	Dark - Lighted	Dry	No	No
229	87414135	12/10/2017	Sunday	10:55 PM	Other	Injury	0	1	$8,000	Dark - Not Lighted	Dry	No	No
230	87132703	12/14/2017	Thursday	6:50 AM	Rear End	Property Damage Only	0	0	$4,000	Dawn	Dry	No	No
231	87122550	12/14/2017	Thursday	3:55 PM	Rear End	Property Damage Only	0	0	$1,000	Daylight	Dry	No	No
232	87135939	12/21/2017	Thursday	5:20 PM	Left Turn	Injury	0	1	$3,000	Daylight	Dry	No	No
233	87148280	12/28/2017	Thursday	6:06 AM	Left Turn	Injury	0	2	$10,000	Dark - Lighted	Dry	No	No
234	87132148	1/1/2018	Monday	1:02 AM	Left Turn	Property Damage Only	0	0	$4,000	Dark - Lighted	Dry	No	No
235	87136672	1/1/2018	Monday	5:30 AM	Rear End	Property Damage Only	0	0	$13,000	Dark - Not Lighted	Dry	No	No
236	87149910	1/2/2018	Tuesday	6:20 PM	Left Turn	Property Damage Only	0	0	$5,000	Dawn	Dry	No	No
237	87118825	1/3/2018	Wednesday	12:33 PM	Unknown	Injury	0	3	$15,000	Daylight	Wet	No	No
238	87149914	1/4/2018	Thursday	11:35 AM	Right Turn	Injury	0	1	$1,500	Daylight	Dry	No	No
239	87134978	1/4/2018	Thursday	11:54 PM	Off Road	Property Damage Only	0	0	$10,000	Dark - Not Lighted	Dry	No	No
240	87134106	1/9/2018	Tuesday	11:37 AM	Sideswipe	Property Damage Only	0	0	$700	Daylight	Dry	No	No
241	87150626	1/11/2018	Thursday	7:14 AM	Rollover	Injury	0	1	$3,500	Daylight	Wet	No	No
242	87151472	1/12/2018	Friday	2:25 PM	Rear End	Injury	0	1	$5,500	Daylight	Dry	No	No
243	87141626	1/14/2018	Sunday	6:19 AM	Rollover	Property Damage Only	0	0	$10,000	Daylight	Dry	No	No
244	87149939	1/16/2018	Tuesday	7:25 PM	Left Turn	Injury	0	1	$8,000	Dawn	Dry	No	No
245	87414292	1/18/2018	Thursday	6:35 AM	Rear End	Property Damage Only	0	0	$1,000	Dawn	Dry	No	No
246	87414297	1/19/2018	Friday	1:45 PM	Unknown	Property Damage Only	0	0	$1,100	Daylight	Dry	No	No
247	87151485	1/21/2018	Sunday	1:00 PM	Rear End	Property Damage Only	0	0	$3,500	Daylight	Dry	No	No
248	87148315	1/23/2018	Tuesday	5:37 AM	Off Road	Injury	0	1	$2,500	Dark - Not Lighted	Wet	No	No
249	87136500	1/24/2018	Wednesday	3:20 PM	Rear End	Property Damage Only	0	0	$7,000	Daylight	Dry	No	No
250	87166885	1/27/2018	Saturday	10:20 PM	Other	Property Damage Only	0	0	$42,500	Dark - Lighted	Dry	No	No
251	87158249	1/29/2018	Monday	8:54 AM	Rear End	Property Damage Only	0	0	$7,200	Daylight	Wet	No	No
252	87158254	2/6/2018	Tuesday	7:38 AM	Left Turn	Property Damage Only	0	0	$1,600	Daylight	Dry	No	No
253	87161461	2/7/2018	Wednesday	9:00 AM	Rear End	Property Damage Only	0	0	$12,100	Daylight	Dry	No	No
254	87148336	2/8/2018	Thursday	5:55 AM	Rear End	Injury	0	4	$5,200	Dark - Lighted	Dry	No	No
255	87132707	2/9/2018	Friday	7:40 AM	Rear End	Injury	0	2	$14,000	Daylight	Dry	No	No
256	87173398	2/9/2018	Friday	3:08 PM	Rear End	Injury	0	2	$5,200	Daylight	Dry	No	No
257	87158256	2/12/2018	Monday	8:44 AM	Unknown	Injury	0	1	$4,000	Daylight	Dry	No	No
258	87144334	2/15/2018	Thursday	3:35 PM	Rear End	Property Damage Only	0	0	$1,000	Daylight	Dry	No	No
259	87174163	2/19/2018	Monday	10:50 AM	Rear End	Injury	0	1	$16,000	Daylight	Dry	No	No
260	87183378	2/21/2018	Wednesday	6:46 AM	Other	Property Damage Only	0	0	$3,000	Daylight	Dry	No	No
261	87145281	2/22/2018	Thursday	9:30 AM	Rear End	Injury	0	1	$5,000	Daylight	Dry	No	No
262	87414449	2/27/2018	Tuesday	8:41 AM	Rear End	Property Damage Only	0	0	$1,000	Daylight	Dry	No	No
263	87158272	3/1/2018	Thursday	6:59 AM	Rear End	Property Damage Only	0	0	$600	Daylight	Dry	No	No
264	87168366	3/8/2018	Thursday	12:45 PM	Off Road	Injury	0	1	$1,200	Daylight	Dry	No	No
265	87183299	3/8/2018	Thursday	3:30 PM	Rear End	Injury	0	3	$15,500	Daylight	Dry	No	No
266	87166714	3/9/2018	Friday	3:00 PM	Rear End	Property Damage Only	0	0	$3,500	Daylight	Dry	No	No
267	87145308	3/11/2018	Sunday	9:50 AM	Rear End	Injury	0	3	$14,000	Daylight	Dry	No	No
268	87172199	3/14/2018	Wednesday	4:53 PM	Angle	Property Damage Only	0	0	$400	Daylight	Dry	No	No
269	87191329	3/15/2018	Thursday	8:00 AM	Unknown	Injury	0	1	$13,000	Daylight	Dry	No	No
270	87414518	3/15/2018	Thursday	4:45 PM	Unknown	Property Damage Only	0	0	$3,500	Daylight	Dry	No	No
271	87414542	3/17/2018	Saturday	8:11 PM	Head On	Property Damage Only	0	0	$11,000	Dark - Lighted	Dry	Yes	No
272	87201284	3/19/2018	Monday	10:15 PM	Rear End	Injury	0	1	$50	Dawn	Wet	No	No
273	87166925	3/23/2018	Friday	9:30 AM	Rear End	Property Damage Only	0	0	$4,500	Daylight	Dry	No	No
274	87183358	3/27/2018	Tuesday	8:15 AM	Rear End	Property Damage Only	0	0	$1,000	Daylight	Dry	No	No
275	87166934	3/27/2018	Tuesday	12:10 PM	Rear End	Property Damage Only	0	0	$4,500	Daylight	Dry	No	No
276	87191564	3/27/2018	Tuesday	8:18 PM	Left Turn	Injury	0	1	$5,000	Dark - Not Lighted	Dry	No	No
277	87179965	3/30/2018	Friday	6:01 AM	Left Turn	Injury	0	2	$5,800	Daylight	Dry	No	No
278	87201750	4/3/2018	Tuesday	11:20 AM	Rear End	Property Damage Only	0	0	$2,000	Daylight	Dry	No	No
279	87198409	4/3/2018	Tuesday	4:52 PM	Unknown	Property Damage Only	0	0	$500	Daylight	Dry	No	No
280	87166943	4/7/2018	Saturday	8:25 AM	Rear End	Property Damage Only	0	0	$20,000	Daylight	Dry	No	No
281	87192275	4/10/2018	Tuesday	3:45 PM	Unknown	Property Damage Only	0	0	$1,500	Daylight	Wet	No	No
282	87201776	4/12/2018	Thursday	10:35 AM	Rear End	Injury	0	4	$19,000	Daylight	Dry	No	No
283	87191353	4/12/2018	Thursday	9:27 PM	Off Road	Property Damage Only	0	0	$100	Dark - Lighted	Dry	No	No
284	87185792	4/17/2018	Tuesday	3:35 PM	Rear End	Property Damage Only	0	0	$5,500	Daylight	Dry	No	No
285	87181356	4/18/2018	Wednesday	2:50 PM	Rear End	Injury	0	2	$2,300	Daylight	Dry	No	No
286	87181362	4/20/2018	Friday	5:00 PM	Left Turn	Property Damage Only	0	0	$1,700	Daylight	Dry	No	No
287	87191594	4/20/2018	Friday	11:18 PM	Left Turn	Injury	0	1	$11,000	Dark - Not Lighted	Dry	No	No
288	87201789	4/22/2018	Sunday	10:00 AM	Rear End	Injury	0	6	$24,000	Daylight	Wet	No	No
289	87214026	4/25/2018	Wednesday	12:00 PM	Left Turn	Property Damage Only	0	0	$2,700	Daylight	Dry	No	No
290	87180923	4/27/2018	Friday	9:48 AM	Off Road	Property Damage Only	0	0	$6,000	Daylight	Dry	No	No
291	87218316	4/30/2018	Monday	5:20 PM	Left Turn	Property Damage Only	0	0	$5,000	Daylight	Dry	No	No

Crash Data Summary

No.	Crash ID	Date	Day	Time	Crash Type	Crash Severity	Fatalities	Injuries	Property Damage	Day/Night	Wet/Dry	Alcohol Related	Drug Related
292	87198430	5/3/2018	Thursday	5:02 PM	Left Turn	Injury	0	1	$15,000	Daylight	Dry	No	No
293	87214037	5/7/2018	Monday	9:20 AM	Rear End	Property Damage Only	0	0	$1,000	Daylight	Dry	No	No
294	87209850	5/12/2018	Saturday	9:55 PM	Left Turn	Property Damage Only	0	0	$4,000	Dark - Lighted	Dry	No	No
295	87209849	5/12/2018	Saturday	10:00 PM	Left Turn	Injury	0	3	$12,500	Dark - Lighted	Dry	No	No
296	87209854	5/13/2018	Sunday	11:35 PM	Off Road	Property Damage Only	0	0	$6,000	Dark - Not Lighted	Wet	No	No
297	87230518	5/25/2018	Friday	11:03 AM	Angle	Injury	0	2	$7,000	Daylight	Dry	No	No
298	87226078	5/28/2018	Monday	2:58 PM	Other	Property Damage Only	0	0	$6,000	Daylight	Dry	No	No
299	87214066	6/3/2018	Sunday	12:15 PM	Unknown	Property Damage Only	0	0	$10,000	Daylight	Dry	No	No
300	87241748	6/5/2018	Tuesday	5:27 PM	Unknown	Injury	0	2	$8,000	Daylight	Dry	No	No
301	87226511	6/8/2018	Friday	5:45 AM	Off Road	Injury	0	1	$10,000	Dawn	Dry	No	No
302	87235028	6/8/2018	Friday	7:10 AM	Rear End	Property Damage Only	0	0	$7,000	Daylight	Wet	No	No
303	87235032	6/11/2018	Monday	9:15 AM	Rear End	Property Damage Only	0	0	$500	Daylight	Dry	No	No
304	87226100	6/17/2018	Sunday	12:03 AM	Unknown	Property Damage Only	0	0	$3,500	Dark - Not Lighted	Dry	No	No
305	87867005	6/20/2018	Wednesday	5:20 PM	Rear End	Property Damage Only	0	0	$1,000	Daylight	Dry	No	No
306	87242865	6/23/2018	Saturday	11:42 AM	Left Turn	Injury	0	4	$8,000	Daylight	Dry	Yes	No
307	87250600	6/27/2018	Wednesday	6:26 PM	Angle	Property Damage Only	0	0	$10,000	Daylight	Wet	No	No
308	87226113	6/28/2018	Thursday	12:28 AM	Off Road	Injury	0	1	$5,000	Dark - Lighted	Dry	No	No
309	87231805	7/4/2018	Wednesday	9:08 AM	Off Road	Property Damage Only	0	0	$0	Daylight	Dry	No	No
310	87248973	7/9/2018	Monday	12:20 AM	Left Turn	Injury	0	3	$18,000	Dark - Not Lighted	Dry	No	No
311	87247452	7/13/2018	Friday	3:46 AM	Off Road	Property Damage Only	0	0	$0	Dark - Lighted	Dry	No	No
312	87241234	7/17/2018	Tuesday	1:30 PM	Unknown	Property Damage Only	0	0	$2,500	Daylight	Dry	No	No
313	87234981	7/20/2018	Friday	6:45 AM	Left Turn	Injury	0	1	$5,800	Dusk	Dry	No	No
314	87234982	7/20/2018	Friday	11:21 AM	Unknown	Injury	0	4	$28,500	Daylight	Wet	No	No
315	87249642	7/20/2018	Friday	2:10 PM	Rear End	Injury	0	1	$1,500	Daylight	Dry	No	No
316	87255297	7/20/2018	Friday	6:54 PM	Other	Property Damage Only	0	0	$3,000	Daylight	Dry	No	No
317	87241237	7/21/2018	Saturday	4:20 PM	Left Turn	Injury	0	2	$2,500	Daylight	Dry	No	No
318	87252823	8/1/2018	Wednesday	8:40 PM	Left Turn	Injury	0	3	$13,500	Dark - Lighted	Wet	No	No
319	87271663	8/2/2018	Thursday	3:00 PM	Rear End	Property Damage Only	0	0	$100	Daylight	Dry	No	No
320	87252828	8/6/2018	Monday	7:25 PM	Rear End	Property Damage Only	0	0	$4,500	Daylight	Dry	No	No
321	87260020	8/10/2018	Friday	12:31 PM	Rear End	Injury	0	1	$6,000	Daylight	Wet	No	No
322	87260023	8/10/2018	Friday	5:23 PM	Rear End	Injury	0	9	$4,500	Daylight	Dry	No	No
323	87271689	8/12/2018	Sunday	12:00 PM	Rear End	Injury	0	3	$12,000	Daylight	Dry	No	No
324	87254630	8/14/2018	Tuesday	9:00 AM	Rear End	Property Damage Only	0	0	$3,750	Daylight	Dry	No	No
325	87254634	8/16/2018	Thursday	7:45 AM	Left Turn	Injury	0	1	$7,500	Daylight	Dry	No	No
326	87265644	8/16/2018	Thursday	8:23 AM	Rear End	Property Damage Only	0	0	$4,000	Daylight	Dry	No	No
327	87287491	8/21/2018	Tuesday	6:55 PM	Rear End	Property Damage Only	0	0	$150	Dusk	Wet	No	No
328	87867189	8/23/2018	Thursday	7:15 AM	Rear End	Property Damage Only	0	0	$3,000	Daylight	Dry	No	No
329	87867192	8/24/2018	Friday	8:27 AM	Right Turn	Property Damage Only	0	0	$1,000	Daylight	Dry	No	No
330	87867213	8/27/2018	Monday	8:50 AM	Rear End	Property Damage Only	0	0	$600	Daylight	Dry	No	No
331	87241273	8/28/2018	Tuesday	5:45 AM	Left Turn	Injury	0	1	$1,200	Daylight	Wet	No	No
332	87867225	8/30/2018	Thursday	6:45 AM	Rear End	Property Damage Only	0	0	$200	Daylight	Dry	No	No
333	87254655	8/30/2018	Thursday	8:20 AM	Rear End	Injury	0	1	$7,000	Daylight	Dry	No	No
334	87274145	8/30/2018	Thursday	8:41 PM	Rear End	Injury	0	3	$5,500	Dark - Lighted	Dry	Yes	No
335	87273899	8/31/2018	Friday	2:58 AM	Off Road	Injury	0	1	$2,000	Dark - Not Lighted	Dry	No	No
336	87260217	8/31/2018	Friday	12:40 PM	Rear End	Injury	0	2	$5,000	Daylight	Dry	No	No
337	87293133	8/31/2018	Friday	3:21 PM	Left Turn	Property Damage Only	0	0	$5,500	Daylight	Dry	No	No
338	87274674	9/1/2018	Saturday	2:03 PM	Rear End	Property Damage Only	0	0	$2,000	Daylight	Dry	No	No
339	87274675	9/1/2018	Saturday	2:05 PM	Rear End	Property Damage Only	0	0	$6,500	Daylight	Dry	No	No
340	87867243	9/4/2018	Tuesday	6:28 AM	Left Turn	Property Damage Only	0	0	$2,000	Dark - Unknown Lighting	Dry	No	No
341	87265663	9/4/2018	Tuesday	7:09 AM	Rear End	Injury	0	2	$3,000	Dawn	Dry	No	No
342	87284719	9/4/2018	Tuesday	6:40 PM	Unknown	Property Damage Only	0	0	$10,000	Daylight	Dry	No	No
343	87272185	9/6/2018	Thursday	6:37 AM	Left Turn	Property Damage Only	0	0	$6,500	Daylight	Dry	No	No
344	87867268	9/12/2018	Wednesday	10:40 AM	Sideswipe	Property Damage Only	0	0	$3,000	Daylight	Dry	No	No
345	88004542	9/14/2018	Friday	8:20 AM	Rear End	Property Damage Only	0	0	$2,000	Daylight	Dry	No	No
346	87287526	9/14/2018	Friday	2:14 PM	Off Road	Injury	0	1	$10,000	Daylight	Dry	No	No
347	87287525	9/14/2018	Friday	2:14 PM	Rear End	Property Damage Only	0	0	$2,000	Daylight	Dry	No	No
348	88007941	9/15/2018	Saturday	11:00 AM	Left Turn	Injury	0	2	$10,000	Daylight	Dry	No	No
349	85508076	9/16/2018	Sunday	2:09 PM	Rear End	Property Damage Only	0	0	$301	Daylight	Dry	No	No
350	87288655	9/17/2018	Monday	7:34 AM	Rear End	Injury	0	3	$6,500	Daylight	Dry	No	No
351	87288662	9/20/2018	Thursday	6:08 AM	Left Turn	Injury	0	2	$5,200	Dark - Not Lighted	Dry	No	No
352	87997018	9/23/2018	Sunday	3:47 PM	Unknown	Property Damage Only	0	0	$1,000	Daylight	Dry	No	No
353	88012615	9/26/2018	Wednesday	7:20 AM	Left Turn	Injury	0	2	$13,000	Daylight	Dry	No	No
354	87251500	9/26/2018	Wednesday	2:30 PM	Unknown	Injury	0	1	$1,700	Daylight	Dry	No	No
355	87294486	10/1/2018	Monday	4:45 PM	Left Turn	Property Damage Only	0	0	$9,000	Daylight	Dry	No	No
356	87993028	10/1/2018	Monday	10:03 PM	Right Turn	Injury	0	1	$14,600	Dark - Not Lighted	Dry	No	No
357	87295253	10/2/2018	Tuesday	7:00 AM	Rear End	Injury	0	1	$4,000	Daylight	Dry	No	No
358	88015345	10/5/2018	Friday	6:30 AM	Rear End	Injury	0	2	$3,600	Dark - Lighted	Dry	No	No
359	87290472	10/5/2018	Friday	8:00 PM	Unknown	Injury	0	1	$10,500	Dark - Lighted	Dry	No	No
360	88022751	10/12/2018	Friday	6:45 PM	Left Turn	Property Damage Only	0	0	$8,000	Daylight	Dry	No	No
361	87867393	10/14/2018	Sunday	9:45 PM	Rear End	Property Damage Only	0	0	$200	Dark - Lighted	Dry	No	No
362	88004576	10/17/2018	Wednesday	8:35 AM	Rear End	Property Damage Only	0	0	$2,500	Daylight	Dry	No	No
363	88027922	10/23/2018	Tuesday	7:00 AM	Left Turn	Property Damage Only	0	0	$3,000	Dusk	Dry	No	No
364	88022767	10/23/2018	Tuesday	2:50 PM	Left Turn	Property Damage Only	0	0	$4,000	Daylight	Dry	No	No
365	88024358	10/30/2018	Tuesday	8:30 PM	Left Turn	Property Damage Only	0	0	$23,000	Dark - Lighted	Dry	No	No
366	88029491	11/2/2018	Friday	8:20 PM	Left Turn	Injury	0	1	$9,400	Dark - Not Lighted	Dry	No	No
367	88022795	11/4/2018	Sunday	12:00 AM	Animal	Injury	0	1	$0	Dark - Not Lighted	Dry	No	No
368	88009134	11/5/2018	Monday	11:02 AM	Rear End	Injury	0	2	$6,200	Daylight	Dry	No	No
369	88015097	11/5/2018	Monday	5:14 PM	Angle	Property Damage Only	0	0	$5,500	Dusk	Dry	No	No
370	88015110	11/8/2018	Thursday	7:29 PM	Left Turn	Property Damage Only	0	0	$4,000	Dark - Not Lighted	Dry	No	No
371	87867463	11/9/2018	Friday	7:30 AM	Rear End	Property Damage Only	0	0	$2,000	Daylight	Dry	No	No
372	88031410	11/15/2018	Thursday	7:04 PM	Left Turn	Injury	0	2	$10,000	Dusk	Dry	No	No
373	88031026	11/15/2018	Thursday	10:50 PM	Other	Injury	0	2	$4,000	Dark - Not Lighted	Dry	No	No
374	88029524	11/27/2018	Tuesday	9:15 AM	Rear End	Property Damage Only	0	0	$1,100	Daylight	Dry	No	No
375	88030247	12/3/2018	Monday	11:49 PM	Left Turn	Injury	0	1	$8,000	Dark - Not Lighted	Dry	No	No
376	88049944	12/4/2018	Tuesday	4:54 PM	Left Turn	Injury	0	1	$6,000	Daylight	Dry	No	No
377	88029540	12/6/2018	Thursday	9:30 AM	Left Turn	Property Damage Only	0	0	$2,900	Daylight	Dry	No	No
378	88051390	12/14/2018	Friday	8:00 AM	Rear End	Injury	0	2	$4,000	Daylight	Dry	No	No
379	88042329	12/16/2018	Sunday	2:45 AM	Off Road	Injury	0	1	$5,000	Dark - Lighted	Dry	No	No
380	88036725	12/18/2018	Tuesday	3:59 PM	Pedestrian	Injury	0	2	$20,000	Daylight	Dry	No	No
381	88057649	12/21/2018	Friday	10:00 AM	Other	Injury	0	1	$3,800	Daylight	Dry	No	No
382	88057436	12/27/2018	Thursday	1:20 PM	Rear End	Property Damage Only	0	0	$600	Daylight	Dry	No	No
383	88057442	12/28/2018	Friday	8:10 PM	Rear End	Property Damage Only	0	0	$1,000	Dark - Lighted	Dry	No	No
384	88043757	12/31/2018	Monday	4:00 AM	Off Road	Property Damage Only	0	0	$3,000	Dark - Not Lighted	Dry	No	No
385	88047671	1/2/2019	Wednesday	8:29 AM	Angle	Property Damage Only	0	0	$1,475	Daylight	Dry	No	No
386	88051630	1/5/2019	Saturday	6:47 PM	Rear End	Injury	0	2	$1,500	Dark - Not Lighted	Dry	No	No
387	88057678	1/7/2019	Monday	9:25 AM	Bicycle	Injury	0	1	$50	Daylight	Dry	No	No
388	88057680	1/8/2019	Tuesday	1:10 PM	Rear End	Injury	0	1	$5,500	Daylight	Dry	No	No

Crash Data Summary

No.	Crash ID	Date	Day	Time	Crash Type	Crash Severity	Fatalities	Injuries	Property Damage	Day/Night	Wet/Dry	Alcohol Related	Drug Related
389	87231328	1/9/2019	Wednesday	6:15 AM	Other	Property Damage Only	0	0	$1,000	Dark - Not Lighted	Dry	No	No
390	87867588	1/9/2019	Wednesday	7:15 AM	Sideswipe	Property Damage Only	0	0	$0	Dawn	Dry	No	No
391	88064139	1/10/2019	Thursday	6:44 AM	Left Turn	Injury	0	2	$15,500	Daylight	Dry	No	No
392	87867599	1/11/2019	Friday	7:10 AM	Rear End	Property Damage Only	0	0	$0	Dawn	Dry	No	No
393	88063222	1/16/2019	Wednesday	5:04 PM	Other	Property Damage Only	0	0	$2,000	Dark - Lighted	Dry	No	No
394	87867625	1/17/2019	Thursday	2:32 PM	Rear End	Property Damage Only	0	0	$150	Daylight	Dry	No	No
395	88078709	1/22/2019	Tuesday	12:48 AM	Off Road	Property Damage Only	0	0	$6,650	Dark - Not Lighted	Dry	No	No
396	87867675	2/3/2019	Sunday	11:30 PM	Rear End	Property Damage Only	0	0	$2,000	Dark - Lighted	Dry	No	No
397	88086276	2/7/2019	Thursday	7:44 PM	Animal	Property Damage Only	0	0	$3,500	Dark - Not Lighted	Dry	No	No
398	88064189	2/10/2019	Sunday	10:53 AM	Other	Property Damage Only	0	0	$5,000	Daylight	Wet	No	No
399	88087863	2/11/2019	Monday	1:55 PM	Rear End	Property Damage Only	0	0	$50	Daylight	Dry	No	No
400	85508094	2/13/2019	Wednesday	12:30 PM	Rear End	Injury	0	1	$2,000	Daylight	Dry	No	No
401	88083535	2/15/2019	Friday	2:40 AM	Other	Property Damage Only	0	0	$4,200	Dark - Lighted	Dry	No	No
402	88086290	2/15/2019	Friday	7:09 PM	Rear End	Property Damage Only	0	0	$4,100	Dark - Lighted	Dry	No	No
403	88083674	2/25/2019	Monday	7:09 PM	Rear End	Property Damage Only	0	0	$6,000	Dusk	Dry	No	No
404	88083554	2/27/2019	Wednesday	10:55 PM	Left Turn	Injury	0	1	$9,000	Dark - Not Lighted	Dry	No	No
405	88079137	3/3/2019	Sunday	10:21 AM	Rear End	Injury	0	1	$3,500	Daylight	Dry	No	No
406	88106258	3/8/2019	Friday	7:00 PM	Rear End	Injury	0	2	$7,500	Dark - Lighted	Dry	No	No
407	88099992	3/11/2019	Monday	6:32 AM	Other	Injury	0	4	$24,000	Daylight	Dry	No	No
408	88106268	3/15/2019	Friday	3:28 PM	Left Turn	Injury	0	5	$10,000	Daylight	Dry	No	No
409	88087896	3/17/2019	Sunday	5:20 AM	Left Turn	Injury	0	1	$6,000	Dark - Not Lighted	Dry	No	No
410	88097384	3/25/2019	Monday	6:35 PM	Head On	Property Damage Only	0	0	$8,000	Daylight	Dry	No	No
411	89087120	4/2/2019	Tuesday	3:44 PM	Off Road	Property Damage Only	0	0	$500	Daylight	Dry	No	No
412	88111220	4/5/2019	Friday	4:50 PM	Left Turn	Property Damage Only	0	0	$4,000	Daylight	Dry	No	No
413	89087147	4/10/2019	Wednesday	8:27 AM	Rear End	Property Damage Only	0	0	$600	Daylight	Dry	No	No
414	88084055	4/12/2019	Friday	6:16 AM	Rear End	Property Damage Only	0	0	$5,000	Daylight	Dry	No	No
415	88097308	4/12/2019	Friday	8:52 AM	Rear End	Property Damage Only	0	0	$4,000	Daylight	Dry	No	No
416	88912280	4/16/2019	Tuesday	6:30 PM	Unknown	Property Damage Only	0	0	$10,500	Daylight	Dry	No	No
417	88097312	4/18/2019	Thursday	9:12 AM	Left Turn	Property Damage Only	0	0	$2,000	Daylight	Dry	No	No
418	88106323	4/18/2019	Thursday	3:03 PM	Rear End	Injury	0	3	$15,050	Daylight	Dry	No	No
419	88108994	4/20/2019	Saturday	11:55 PM	Left Turn	Property Damage Only	0	0	$1,000	Dark - Not Lighted	Dry	No	No
420	88119954	4/21/2019	Sunday	1:39 AM	Left Turn	Property Damage Only	0	0	$6,000	Dark - Not Lighted	Dry	No	No
421	88129629	4/23/2019	Tuesday	2:59 PM	Rear End	Property Damage Only	0	0	$350	Daylight	Dry	No	No
422	88119957	4/24/2019	Wednesday	10:00 PM	Left Turn	Injury	0	2	$7,000	Dark - Not Lighted	Dry	No	No
423	88119959	4/25/2019	Thursday	8:40 PM	Other	Injury	0	1	$8,000	Dark - Not Lighted	Dry	No	No
424	88103868	4/26/2019	Friday	2:35 PM	Rear End	Property Damage Only	0	0	$2,500	Daylight	Dry	No	No
425	88103711	4/29/2019	Monday	7:57 AM	Rear End	Injury	0	3	$19,000	Daylight	Dry	No	No
426	89087265	5/7/2019	Tuesday	7:45 AM	Rear End	Property Damage Only	0	0	$500	Dawn	Dry	No	No
427	88126346	5/11/2019	Saturday	4:22 PM	Rear End	Property Damage Only	0	0	$4,000	Daylight	Dry	No	No
428	88132189	5/13/2019	Monday	5:15 PM	Rear End	Property Damage Only	0	0	$6,000	Daylight	Wet	No	No
429	88129659	5/16/2019	Thursday	9:28 PM	Sideswipe	Property Damage Only	0	0	$2,500	Dark - Lighted	Dry	No	No
430	88133273	5/21/2019	Tuesday	7:45 AM	Rear End	Property Damage Only	0	0	$1,000	Daylight	Dry	No	No
431	88133277	5/23/2019	Thursday	5:45 AM	Left Turn	Injury	0	2	$13,500	Dark - Lighted	Dry	No	No
432	89087322	5/23/2019	Thursday	1:00 PM	Left Turn	Property Damage Only	0	0	$1,500	Daylight	Dry	No	No
433	88143848	5/23/2019	Thursday	4:58 PM	Unknown	Injury	0	2	$31,000	Daylight	Dry	No	No
434	88141153	5/25/2019	Saturday	2:40 AM	Off Road	Property Damage Only	0	0	$3,800	Dark - Lighted	Dry	No	No
435	88120000	5/28/2019	Tuesday	2:40 PM	Left Turn	Property Damage Only	0	0	$11,000	Daylight	Dry	No	No
436	88120001	5/28/2019	Tuesday	5:30 PM	Rear End	Injury	0	2	$800	Daylight	Dry	No	No
437	88129676	6/5/2019	Wednesday	10:39 PM	Left Turn	Injury	0	2	$20,150	Dark - Lighted	Dry	No	No
438	88132267	6/8/2019	Saturday	3:50 PM	Rear End	Property Damage Only	0	0	$3,700	Daylight	Dry	No	No
439	89087399	6/8/2019	Saturday	8:30 PM	Off Road	Property Damage Only	0	0	$6,500	Dark - Lighted	Wet	No	No
440	88155361	6/11/2019	Tuesday	2:20 AM	Off Road	Injury	0	1	$5,750	Dark - Not Lighted	Dry	No	No
441	88135834	6/15/2019	Saturday	9:10 PM	Rear End	Injury	0	1	$250	Dark - Not Lighted	Dry	No	No
442	88140708	6/19/2019	Wednesday	6:26 AM	Off Road	Injury	0	1	$20,000	Dawn	Dry	No	No
443	88133296	6/21/2019	Friday	11:00 PM	Rear End	Injury	0	2	$14,500	Dark - Not Lighted	Dry	No	No
444	88158991	6/22/2019	Saturday	2:14 PM	Rear End	Injury	0	1	$150	Daylight	Dry	No	No
445	88139926	6/26/2019	Wednesday	5:15 PM	Left Turn	Injury	0	7	$15,000	Daylight	Dry	No	No
446	88167348	7/1/2019	Monday	1:55 PM	Sideswipe	Injury	0	6	$11,000	Daylight	Dry	No	No
447	88149772	7/6/2019	Saturday	4:00 AM	Left Turn	Property Damage Only	0	0	$12,000	Dark - Not Lighted	Dry	No	No
448	88133780	7/8/2019	Monday	8:32 AM	Rear End	Property Damage Only	0	0	$1,850	Daylight	Dry	No	No
449	89087556	7/9/2019	Tuesday	9:39 AM	Sideswipe	Property Damage Only	0	0	$1,000	Daylight	Dry	No	No
450	88169489	7/12/2019	Friday	2:43 PM	Rear End	Injury	0	4	$7,600	Daylight	Dry	No	No
451	89087574	7/12/2019	Friday	4:18 PM	Rear End	Property Damage Only	0	0	$550	Daylight	Dry	No	No
452	88155407	7/14/2019	Sunday	12:20 AM	Off Road	Property Damage Only	0	0	$1,550	Dark - Not Lighted	Dry	No	No
453	88133787	7/23/2019	Tuesday	10:33 AM	Rear End	Property Damage Only	0	0	$500	Daylight	Dry	No	No
454	88154388	7/25/2019	Thursday	9:40 PM	Rear End	Property Damage Only	0	0	$2,000	Dark - Lighted	Wet	No	No
455	88184076	8/12/2019	Monday	11:54 AM	Other	Injury	0	2	$5,000	Daylight	Dry	No	No
456	88169537	8/12/2019	Monday	3:26 PM	Rear End	Property Damage Only	0	0	$4,750	Daylight	Wet	No	No
457	88178215	8/17/2019	Saturday	12:10 PM	Rear End	Property Damage Only	0	0	$5,000	Daylight	Dry	No	No
458	88182159	8/20/2019	Tuesday	5:46 PM	Rear End	Property Damage Only	0	0	$100	Dawn	Dry	No	No
459	88184925	8/21/2019	Wednesday	4:27 PM	Left Turn	Injury	0	2	$13,000	Daylight	Dry	No	No
460	88178220	8/25/2019	Sunday	12:15 PM	Rear End	Property Damage Only	0	0	$3,000	Daylight	Dry	No	No
461	88184713	8/25/2019	Sunday	5:43 PM	Left Turn	Property Damage Only	0	0	$9,000	Daylight	Dry	No	No
462	88178221	8/27/2019	Tuesday	7:40 AM	Rear End	Property Damage Only	0	0	$4,500	Daylight	Dry	No	No
463	88184928	8/27/2019	Tuesday	4:30 PM	Rear End	Property Damage Only	0	0	$4,500	Daylight	Dry	No	No
464	88204882	8/29/2019	Thursday	9:53 PM	Left Turn	Property Damage Only	0	0	$1,900	Daylight	Dry	No	No
465	88204883	8/29/2019	Thursday	10:50 PM	Left Turn	Injury	0	1	$3,000	Dark - Lighted	Wet	No	No
466	88178223	8/30/2019	Friday	8:20 AM	Rear End	Injury	0	1	$8,000	Daylight	Dry	No	No
467	88166910	8/30/2019	Friday	11:49 AM	Other	Injury	0	2	$23,000	Daylight	Dry	No	No
468	89087812	9/6/2019	Friday	5:07 PM	Rear End	Property Damage Only	0	0	$500	Daylight	Dry	No	No
469	88167384	9/13/2019	Friday	9:37 PM	Rear End	Injury	0	6	$4,000	Dark - Not Lighted	Dry	No	No
470	88186667	9/17/2019	Tuesday	3:45 PM	Rear End	Property Damage Only	0	0	$500	Daylight	Dry	No	No
471	88212686	9/18/2019	Wednesday	5:52 PM	Rear End	Property Damage Only	0	0	$12,100	Daylight	Dry	No	No
472	88201198	9/21/2019	Saturday	1:10 AM	Sideswipe	Injury	0	1	$8,000	Dark - Not Lighted	Dry	No	No
473	88182757	9/23/2019	Monday	6:32 AM	Left Turn	Property Damage Only	0	0	$1,000	Dark - Lighted	Dry	No	No
474	88186584	9/23/2019	Monday	10:24 AM	Left Turn	Injury	0	2	$16,000	Daylight	Dry	No	No
475	85211023	9/23/2019	Monday	6:00 PM	Rear End	Property Damage Only	0	0	$8,200	Daylight	Dry	No	No
476	88184112	9/25/2019	Wednesday	11:01 AM	Unknown	Property Damage Only	0	0	$4,000	Daylight	Dry	No	No
477	88184116	9/27/2019	Friday	8:15 AM	Off Road	Injury	0	1	$10,000	Dawn	Dry	No	No
478	88198676	10/6/2019	Sunday	4:50 AM	Sideswipe	Injury	0	2	$500	Dark - Not Lighted	Dry	No	No
479	88208051	10/6/2019	Sunday	6:56 AM	Left Turn	Property Damage Only	0	0	$10,000	Daylight	Wet	No	No
480	89391525	10/7/2019	Monday	2:54 PM	Rear End	Property Damage Only	0	0	$1,500	Daylight	Dry	No	No
481	88221162	10/9/2019	Wednesday	8:10 AM	Rear End	Injury	0	1	$3,900	Daylight	Dry	No	No
482	85407983	10/9/2019	Wednesday	4:35 PM	Left Turn	Injury	0	3	$8,900	Daylight	Dry	No	No
483	88221168	10/11/2019	Friday	10:15 AM	Sideswipe	Injury	0	1	$9,050	Daylight	Dry	No	No
484	88212597	10/11/2019	Friday	4:01 PM	Left Turn	Injury	0	1	$10,000	Daylight	Dry	No	No
485	88227322	10/13/2019	Sunday	10:10 AM	Rear End	Property Damage Only	0	0	$2,000	Daylight	Dry	No	No

Crash Data Summary

No.	Crash ID	Date	Day	Time	Crash Type	Crash Severity	Fatalities	Injuries	Property Damage	Day/Night	Wet/Dry	Alcohol Related	Drug Related
486	88227253	10/14/2019	Monday	5:01 PM	Rear End	Property Damage Only	0	0	$5,600	Daylight	Dry	No	No
487	88217138	10/19/2019	Saturday	6:27 PM	Rear End	Property Damage Only	0	0	$3,750	Daylight	Dry	No	No
488	89391586	10/21/2019	Monday	6:05 PM	Rear End	Injury	0	1	$300	Dusk	Dry	No	No
489	88221181	10/22/2019	Tuesday	11:40 AM	Rear End	Property Damage Only	0	0	$500	Daylight	Dry	No	No
490	88225488	10/22/2019	Tuesday	11:00 PM	Head On	Fatality	1	1	$8,000	Dark - Lighted	Dry	No	No
491	88202153	10/25/2019	Friday	3:25 PM	Rear End	Injury	0	1	$5,000	Daylight	Wet	No	No
492	88211454	10/25/2019	Friday	8:00 PM	Rear End	Fatality	1	3	$15,500	Dark - Not Lighted	Wet	No	No
493	88237236	10/25/2019	Friday	9:05 PM	Left Turn	Property Damage Only	0	0	$15,000	Dark - Not Lighted	Wet	No	No
494	88221189	10/28/2019	Monday	11:00 PM	Left Turn	Injury	0	1	$3,000	Dark - Not Lighted	Dry	No	No
495	88232644	10/29/2019	Tuesday	10:10 PM	Sideswipe	Property Damage Only	0	0	$2,000	Dark - Lighted	Dry	No	No
496	88235886	11/1/2019	Friday	7:04 AM	Rear End	Injury	0	1	$1,600	Daylight	Dry	No	No
497	88217808	11/8/2019	Friday	5:07 PM	Left Turn	Property Damage Only	0	0	$2,900	Dusk	Wet	No	No
498	89391713	11/12/2019	Tuesday	5:00 PM	Rear End	Property Damage Only	0	0	$1,000	Daylight	Dry	No	No
499	88248097	11/15/2019	Friday	12:50 PM	Unknown	Injury	0	1	$2,500	Daylight	Dry	No	No
500	88227680	11/15/2019	Friday	7:02 PM	Left Turn	Injury	0	1	$13,500	Dusk	Dry	No	No
501	89391704	11/19/2019	Tuesday	1:45 PM	Rear End	Property Damage Only	0	0	$1,000	Daylight	Dry	No	No
502	88261105	11/30/2019	Saturday	11:43 AM	Off Road	Injury	0	1	$19,000	Daylight	Dry	No	No
503	88248112	11/30/2019	Saturday	7:11 PM	Left Turn	Injury	0	6	$7,000	Dark - Not Lighted	Dry	No	No
504	88258975	12/4/2019	Wednesday	12:07 PM	Rear End	Injury	0	1	$5,500	Daylight	Dry	No	No
505	83753523	12/4/2019	Wednesday	4:10 PM	Sideswipe	Property Damage Only	0	0	$10,000	Daylight	Dry	No	No
506	88260946	12/7/2019	Saturday	8:23 AM	Off Road	Injury	0	1	$5,150	Dawn	Dry	No	No
507	89391786	12/9/2019	Monday	4:45 PM	Rear End	Property Damage Only	0	0	$1,300	Daylight	Dry	No	No
508	88260951	12/13/2019	Friday	6:49 AM	Left Turn	Injury	0	3	$10,000	Dawn	Wet	No	No
509	89391837	12/19/2019	Thursday	2:19 PM	Other	Property Damage Only	0	0	$2,000	Daylight	Dry	No	No

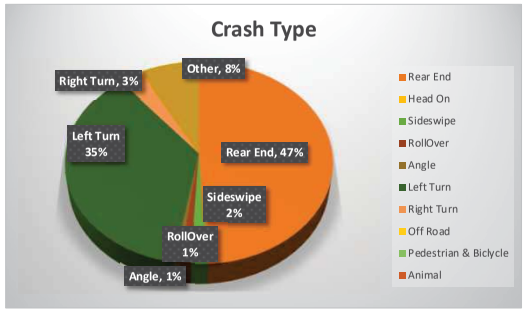
Crash Data Summary - Boggy Creek Rd/Simpson Rd Intersection

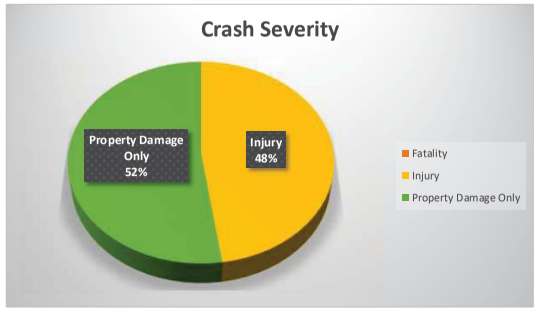
Crash Type	2015	2016	2017	2018	2019	Total	Proportion
Rear End	9	13	13	24	22	**81**	47.09%
Head On	0	0	0	0	0	**0**	0.00%
Sideswipe	1	0	1	0	1	**3**	1.74%
RollOver	1	0	1	0	0	**2**	1.16%
Angle	0	0	0	1	0	**1**	0.58%
Left Turn	13	14	6	14	13	**60**	34.88%
Right Turn	3	1	1	0	0	**5**	2.91%
Off Road	0	2	0	4	1	**7**	4.07%
Pedestrian & Biclycle	0	0	0	0	0	**0**	0.00%
Animal	0	0	0	0	0	**0**	0.00%
Other	1	4	1	4	3	**13**	7.56%
Total	**28**	**34**	**23**	**47**	**40**	**172**	100%

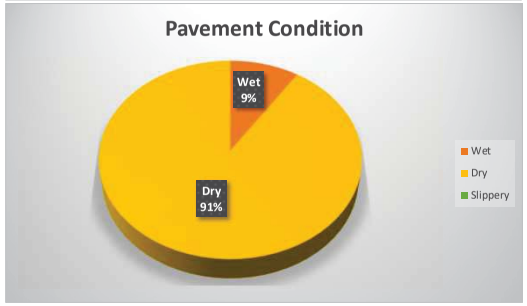
Crash Severity	2015	2016	2017	2018	2019	Total	Proportion
Fatality	0	0	0	0	0	**0**	0%
Injury	14	15	10	24	19	**82**	48%
Property Damage Only	14	19	13	23	21	**90**	52%
Total	**28**	**34**	**23**	**47**	**40**	**172**	100%

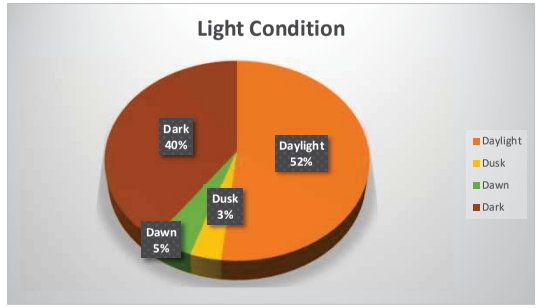
Pavement Condition	2015	2016	2017	2018	2019	Total	Proportion
Wet	1	4	3	6	2	**16**	9%
Dry	27	30	20	41	38	**156**	91%
Slippery	0	0	0	0	0	**0**	0%
Total	**28**	**34**	**23**	**47**	**40**	**172**	100%

Light Condition	2015	2016	2017	2018	2019	Total	Proportion
Daylight	9	16	16	28	20	**89**	52%
Dusk	2	1	0	1	2	**6**	3%
Dawn	1	1	0	5	1	**8**	5%
Dark	16	16	7	13	17	**69**	40%
Total	**28**	**34**	**23**	**47**	**40**	**172**	100%
Under the Influence	**2015**	**2016**	**2017**	**2018**	**2019**	**Total**	**Proportion**
Alcohol	0	0	0	2	0	**2**	1%
Drugs	0	0	0	0	0	**0**	0.00%
Total	**0**	**0**	**0**	**2**	**0**	**2**	1%









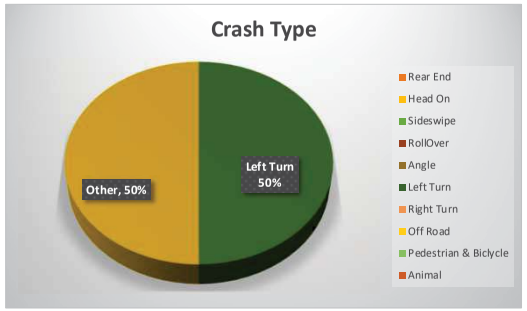
Crash Data Summary - Boggy Creek Rd/East Lake Point Dr Intersection

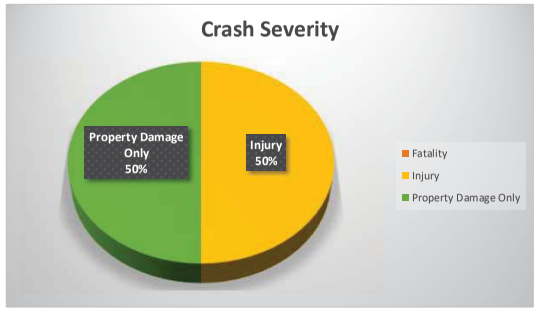
Crash Type	2015	2016	2017	2018	2019	Total	Proportion
Rear End	0	0	0	0	0	**0**	0%
Head On	0	0	0	0	0	**0**	0%
Sideswipe	0	0	0	0	0	**0**	0%
RollOver	0	0	0	0	0	**0**	0%
Angle	0	0	0	0	0	**0**	0%
Left Turn	0	0	0	0	1	**1**	50%
Right Turn	0	0	0	0	0	**0**	0%
Off Road	0	0	0	0	0	**0**	0%
Pedestrian & Biclycle	0	0	0	0	0	**0**	0%
Animal	0	0	0	0	0	**0**	0%
Other	0	0	0	1	0	**1**	50%
Total	**0**	**0**	**0**	**1**	**1**	**2**	100%

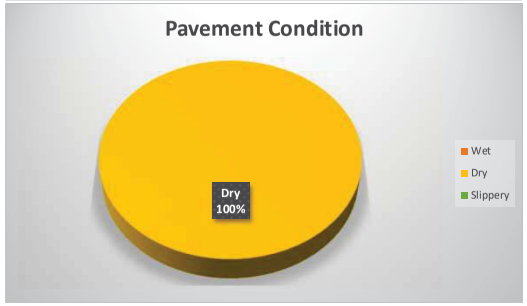
Crash Severity	2015	2016	2017	2018	2019	Total	Proportion
Fatality	0	0	0	0	0	**0**	0%
Injury	0	0	0	0	1	**1**	50%
Property Damage Only	0	0	0	1	0	**1**	50%
Total	**0**	**0**	**0**	**1**	**1**	**2**	100%

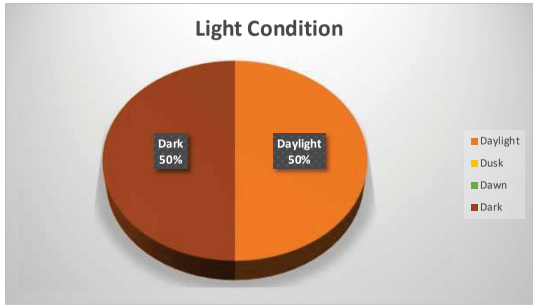
Pavement Condition	2015	2016	2017	2018	2019	Total	Proportion
Wet	0	0	0	0	0	**0**	0%
Dry	0	0	0	1	1	**2**	100%
Slippery	0	0	0	0	0	**0**	0%
Total	**0**	**0**	**0**	**1**	**1**	**2**	100%

Light Condition	2015	2016	2017	2018	2019	Total	Proportion
Daylight	0	0	0	0	1	**1**	50%
Dusk	0	0	0	0	0	**0**	0%
Dawn	0	0	0	0	0	**0**	0%
Dark	0	0	0	1	0	**1**	50%
Total	**0**	**0**	**0**	**1**	**1**	**2**	100%
Under the Influence	**2015**	**2016**	**2017**	**2018**	**2019**	**Total**	**Proportion**
Alcohol	0	0	0	0	0	**0**	0%
Drugs	0	0	0	0	0	**0**	0.00%
Total	**0**	**0**	**0**	**0**	**0**	**0**	0%









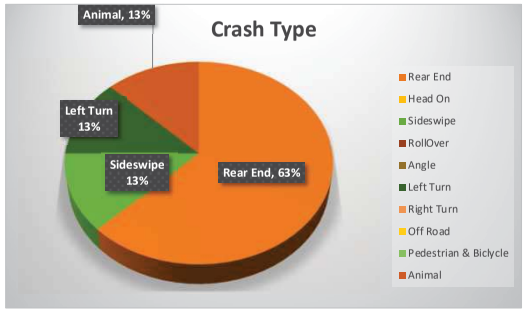
Crash Data Summary - Boggy Creek Rd/Nele Rd Intersection

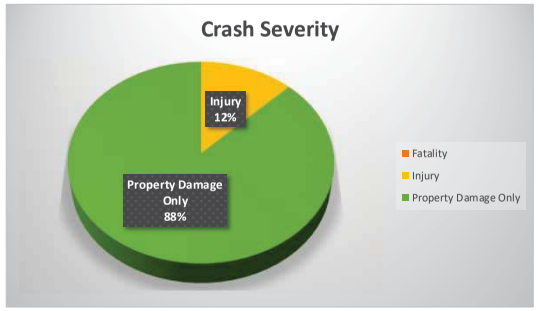
Crash Type	2015	2016	2017	2018	2019	Total	Proportion
Rear End	0	1	0	2	2	**5**	63%
Head On	0	0	0	0	0	**0**	0%
Sideswipe	0	0	0	0	1	**1**	13%
RollOver	0	0	0	0	0	**0**	0%
Angle	0	0	0	0	0	**0**	0%
Left Turn	0	0	1	0	0	**1**	13%
Right Turn	0	0	0	0	0	**0**	0%
Off Road	0	0	0	0	0	**0**	0%
Pedestrian & Biclycle	0	0	0	0	0	**0**	0%
Animal	0	1	0	0	0	**1**	13%
Other	0	0	0	0	0	**0**	0%
Total	**0**	**2**	**1**	**2**	**3**	**8**	100%

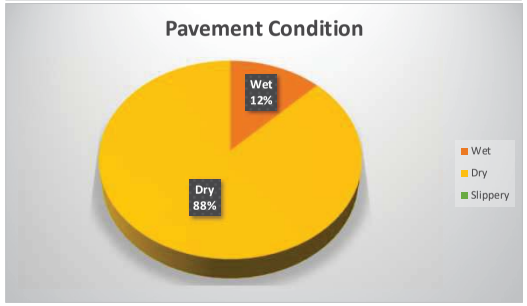
Crash Severity	2015	2016	2017	2018	2019	Total	Proportion
Fatality	0	0	0	0	0	**0**	0%
Injury	0	0	1	0	0	**1**	13%
Property Damage Only	0	2	0	2	3	**7**	88%
Total	**0**	**2**	**1**	**2**	**3**	**8**	100%

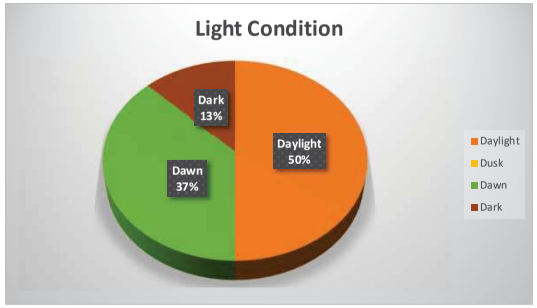
Pavement Condition	2015	2016	2017	2018	2019	Total	Proportion
Wet	0	1	0	0	0	**1**	13%
Dry	0	1	1	2	3	**7**	88%
Slippery	0	0	0	0	0	**0**	0%
Total	**0**	**2**	**1**	**2**	**3**	**8**	100%

Light Condition	2015	2016	2017	2018	2019	Total	Proportion
Daylight	0	1	0	2	1	**4**	50%
Dusk	0	0	0	0	0	**0**	0%
Dawn	0	0	1	0	2	**3**	38%
Dark	0	1	0	0	0	**1**	13%
Total	**0**	**2**	**1**	**2**	**3**	**8**	100%
Under the Influence	**2015**	**2016**	**2017**	**2018**	**2019**	**Total**	**Proportion**
Alcohol	0	0	0	0	0	**0**	0%
Drugs	0	0	0	0	0	**0**	0.00%
Total	**0**	**0**	**0**	**0**	**0**	**0**	0%









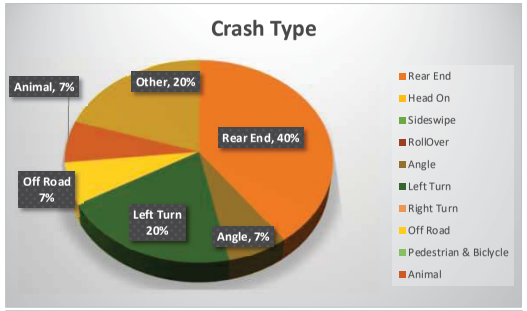
Crash Data Summary - Boggy Creek Rd/Springlake Village Blvd Intersection

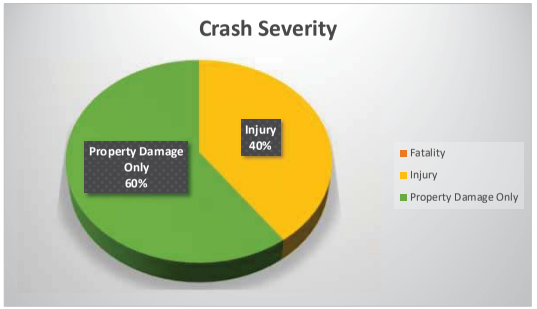
Crash Type	2015	2016	2017	2018	2019	Total	Proportion
Rear End	0	1	1	0	4	**6**	40%
Head On	0	0	0	0	0	**0**	0%
Sideswipe	0	0	0	0	0	**0**	0%
RollOver	0	0	0	0	0	**0**	0%
Angle	0	0	0	1	0	**1**	7%
Left Turn	2	0	0	0	1	**3**	20%
Right Turn	0	0	0	0	0	**0**	0%
Off Road	1	0	0	0	0	**1**	7%
Pedestrian & Biclycle	0	0	0	0	0	**0**	0%
Animal	0	0	0	0	1	**1**	7%
Other	1	0	0	1	1	**3**	20%
Total	**4**	**1**	**1**	**2**	**7**	**15**	100%

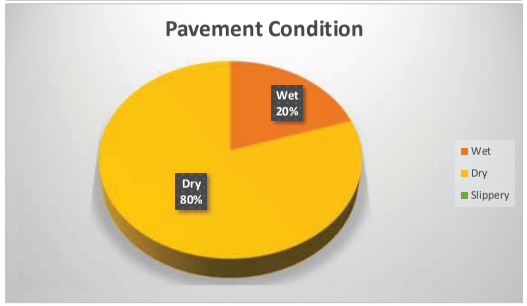
Crash Severity	2015	2016	2017	2018	2019	Total	Proportion
Fatality	0	0	0	0	0	**0**	0%
Injury	3	0	1	1	1	**6**	40%
Property Damage Only	1	1	0	1	6	**9**	60%
Total	**4**	**1**	**1**	**2**	**7**	**15**	100%

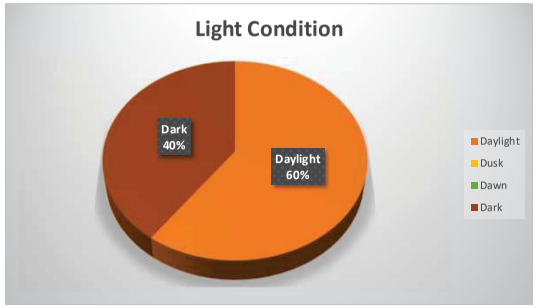
Pavement Condition	2015	2016	2017	2018	2019	Total	Proportion
Wet	0	0	0	1	2	**3**	20%
Dry	4	1	1	1	5	**12**	80%
Slippery	0	0	0	0	0	**0**	0%
Total	**4**	**1**	**1**	**2**	**7**	**15**	100%

Light Condition	2015	2016	2017	2018	2019	Total	Proportion
Daylight	1	1	1	2	4	**9**	60%
Dusk	0	0	0	0	0	**0**	0%
Dawn	0	0	0	0	0	**0**	0%
Dark	3	0	0	0	3	**6**	40%
Total	**4**	**1**	**1**	**2**	**7**	**15**	100%
Under the Influence	**2015**	**2016**	**2017**	**2018**	**2019**	**Total**	**Proportion**
Alcohol	0	0	0	0	0	**0**	0%
Drugs	0	0	0	0	0	**0**	0.00%
Total	**0**	**0**	**0**	**0**	**0**	**0**	0%









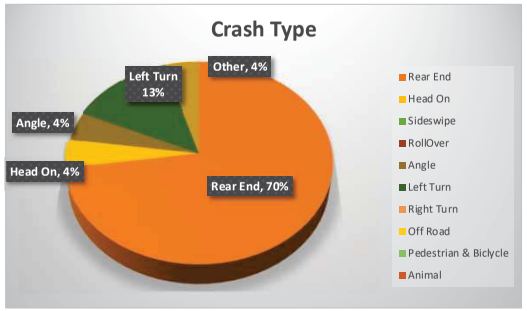
Crash Data Summary - Boggy Creek Rd/Turnberry Blvd/Austin-Tindall Intersection

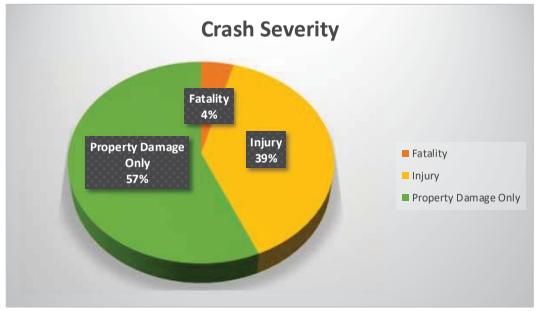
Crash Type	2015	2016	2017	2018	2019	Total	Proportion
Rear End	1	2	3	6	4	**16**	70%
Head On	0	0	0	0	1	**1**	4%
Sideswipe	0	0	0	0	0	**0**	0%
RollOver	0	0	0	0	0	**0**	0%
Angle	0	0	1	0	0	**1**	4%
Left Turn	0	1	1	1	0	**3**	13%
Right Turn	0	0	0	0	0	**0**	0%
Off Road	0	0	0	1	0	**1**	4%
Pedestrian & Biclycle	0	0	0	0	0	**0**	0%
Animal	0	0	0	0	0	**0**	0%
Other	0	0	0	1	0	**1**	4%
Total	**1**	**3**	**5**	**9**	**5**	**23**	100%

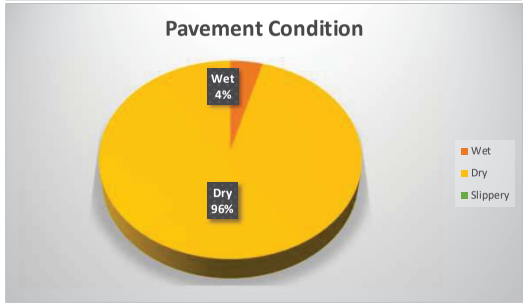
Crash Severity	2015	2016	2017	2018	2019	Total	Proportion
Fatality	0	0	0	0	1	**1**	4%
Injury	0	1	2	5	1	**9**	39%
Property Damage Only	1	2	3	4	3	**13**	57%
Total	**1**	**3**	**5**	**9**	**5**	**23**	100%

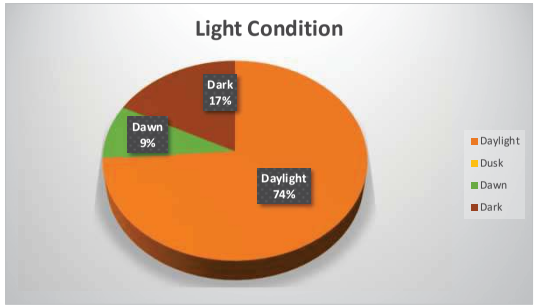
Pavement Condition	2015	2016	2017	2018	2019	Total	Proportion
Wet	0	1	0	0	0	**1**	4%
Dry	1	2	5	9	5	**22**	96%
Slippery	0	0	0	0	0	**0**	0%
Total	**1**	**3**	**5**	**9**	**5**	**23**	100%

Light Condition	2015	2016	2017	2018	2019	Total	Proportion
Daylight	1	3	3	7	3	**17**	74%
Dusk	0	0	0	0	0	**0**	0%
Dawn	0	0	0	1	1	**2**	9%
Dark	0	0	2	1	1	**4**	17%
Total	**1**	**3**	**5**	**9**	**5**	**23**	100%
Under the Influence	**2015**	**2016**	**2017**	**2018**	**2019**	**Total**	**Proportion**
Alcohol	0	0	1	0	0	**1**	4%
Drugs	0	0	0	0	0	**0**	0.00%
Total	**0**	**0**	**1**	**0**	**0**	**1**	4%









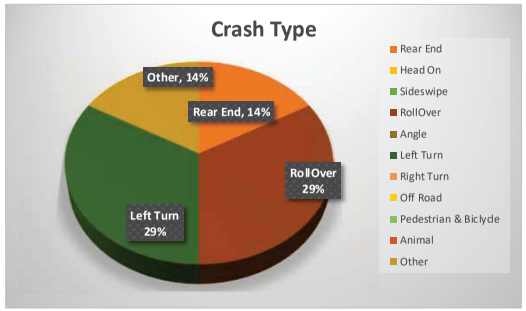
Crash Data Summary - Boggy Creek Rd/N Pointe Blvd Intersection

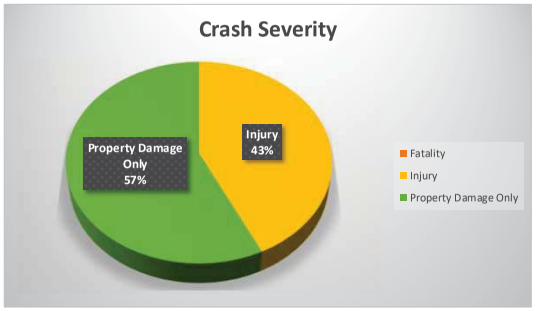
Crash Type	2015	2016	2017	2018	2019	Total	Proportion
Rear End	0	0	0	1	0	**1**	14%
Head On	0	0	0	0	0	**0**	0%
Sideswipe	0	0	0	0	0	**0**	0%
RollOver	0	0	1	1	0	**2**	29%
Angle	0	0	0	0	0	**0**	0%
Left Turn	0	0	0	1	1	**2**	29%
Right Turn	0	0	0	0	0	**0**	0%
Off Road	1	0	0	0	0	**1**	14%
Pedestrian & Biclycle	0	0	0	0	0	**0**	0%
Animal	0	0	0	0	0	**0**	0%
Other	0	0	0	1	0	**1**	14%
Total	**1**	**0**	**1**	**4**	**1**	**7**	100%

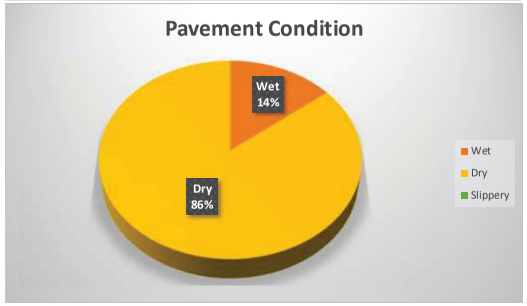
Crash Severity	2015	2016	2017	2018	2019	Total	Proportion
Fatality	0	0	0	0	0	**0**	0%
Injury	1	0	0	2	0	**3**	43%
Property Damage Only	0	0	1	2	1	**4**	57%
Total	**1**	**0**	**1**	**4**	**1**	**7**	100%

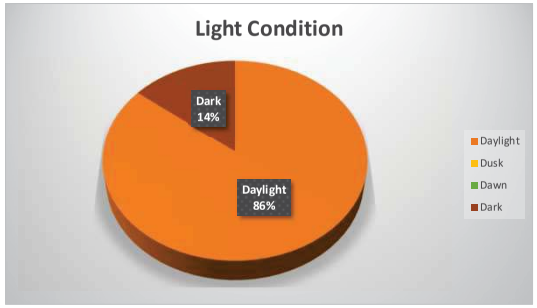
Pavement Condition	2015	2016	2017	2018	2019	Total	Proportion
Wet	0	0	0	1	0	**1**	14%
Dry	1	0	1	3	1	**6**	86%
Slippery	0	0	0	0	0	**0**	0%
Total	**1**	**0**	**1**	**4**	**1**	**7**	100%

Light Condition	2015	2016	2017	2018	2019	Total	Proportion
Daylight	1	0	0	4	1	**6**	86%
Dusk	0	0	0	0	0	**0**	0%
Dawn	0	0	0	0	0	**0**	0%
Dark	0	0	1	0	0	**1**	14%
Total	**1**	**0**	**1**	**4**	**1**	**7**	100%
Under the Influence	**2015**	**2016**	**2017**	**2018**	**2019**	**Total**	**Proportion**
Alcohol	0	0	0	0	0	**0**	0%
Drugs	0	0	0	0	0	**0**	0.00%
Total	**0**	**0**	**0**	**0**	**0**	**0**	0%









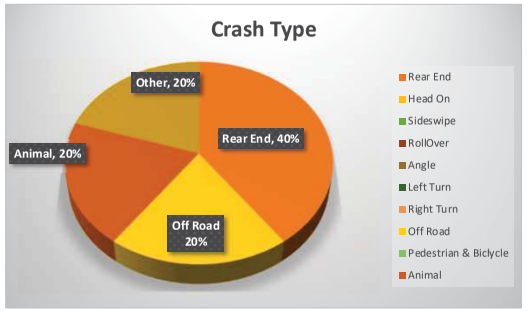
Crash Data Summary - Boggy Creek Rd/Timber Ln Intersection

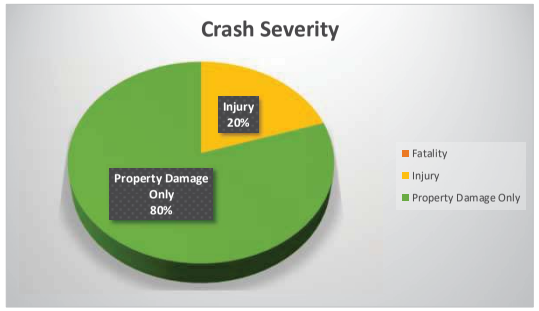
Crash Type	2015	2016	2017	2018	2019	Total	Proportion
Rear End	1	0	1	0	0	**2**	40%
Head On	0	0	0	0	0	**0**	0%
Sideswipe	0	0	0	0	0	**0**	0%
RollOver	0	0	0	0	0	**0**	0%
Angle	0	0	0	0	0	**0**	0%
Left Turn	0	0	0	0	0	**0**	0%
Right Turn	0	0	0	0	0	**0**	0%
Off Road	0	0	0	1	0	**1**	20%
Pedestrian & Biclycle	0	0	0	0	0	**0**	0%
Animal	0	0	1	0	0	**1**	20%
Other	0	1	0	0	0	**1**	20%
Total	**1**	**1**	**2**	**1**	**0**	5	100%

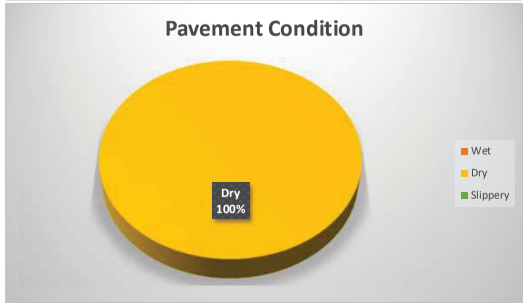
Crash Severity	2015	2016	2017	2018	2019	Total	Proportion
Fatality	0	0	0	0	0	**0**	0%
Injury	0	0	1	0	0	**1**	20%
Property Damage Only	1	1	1	1	0	**4**	80%
Total	**1**	**1**	**2**	**1**	**0**	5	100%

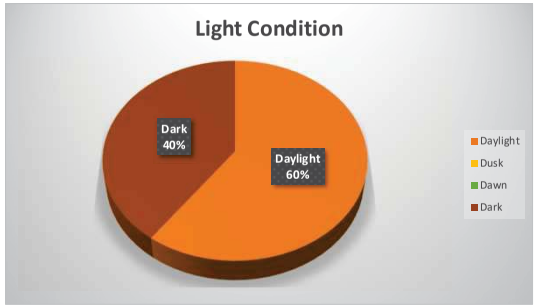
Pavement Condition	2015	2016	2017	2018	2019	Total	Proportion
Wet	0	0	0	0	0	**0**	0%
Dry	1	1	2	1	0	**5**	100%
Slippery	0	0	0	0	0	**0**	0%
Total	**1**	**1**	**2**	**1**	**0**	5	100%

Light Condition	2015	2016	2017	2018	2019	Total	Proportion
Daylight	0	1	2	0	0	**3**	60%
Dusk	0	0	0	0	0	**0**	0%
Dawn	0	0	0	0	0	**0**	0%
Dark	1	0	0	1	0	**2**	40%
Total	**1**	**1**	**2**	**1**	**0**	5	100%
Under the Influence	**2015**	**2016**	**2017**	**2018**	**2019**	**Total**	**Proportion**
Alcohol	0	0	0	0	0	**0**	0%
Drugs	0	0	0	0	0	**0**	0.00%
Total	**0**	**0**	**0**	**0**	**0**	0	0%









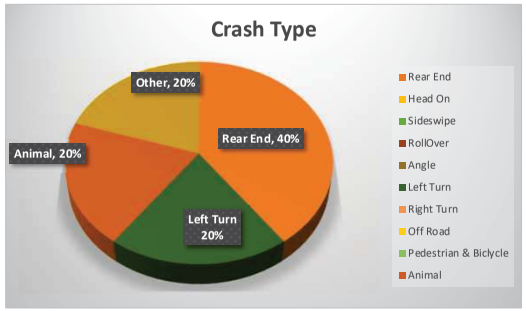
Crash Data Summary - Boggy Creek Rd/Fells Cove Blvd Intersection

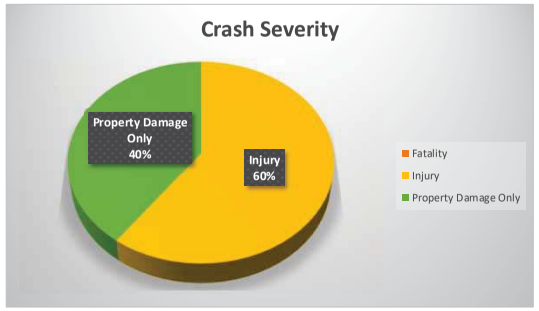
Crash Type	2015	2016	2017	2018	2019	Total	Proportion
Rear End	0	0	0	1	1	**2**	40%
Head On	0	0	0	0	0	**0**	0%
Sideswipe	0	0	0	0	0	**0**	0%
RollOver	0	0	0	0	0	**0**	0%
Angle	0	0	0	0	0	**0**	0%
Left Turn	0	0	1	0	0	**1**	20%
Right Turn	0	0	0	0	0	**0**	0%
Off Road	0	0	0	0	0	**0**	0%
Pedestrian & Biclycle	0	0	0	0	0	**0**	0%
Animal	0	0	0	1	0	**1**	20%
Other	0	0	0	1	0	**1**	20%
Total	**0**	**0**	**1**	**3**	**1**	**5**	100%

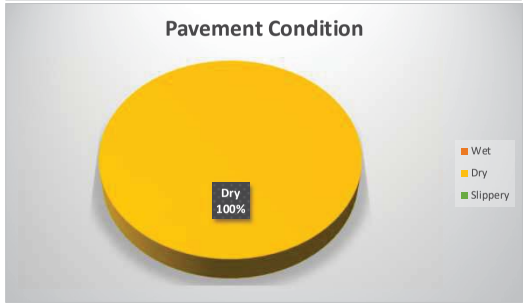
Crash Severity	2015	2016	2017	2018	2019	Total	Proportion
Fatality	0	0	0	0	0	**0**	0%
Injury	0	0	1	2	0	**3**	60%
Property Damage Only	0	0	0	1	1	**2**	40%
Total	**0**	**0**	**1**	**3**	**1**	**5**	100%

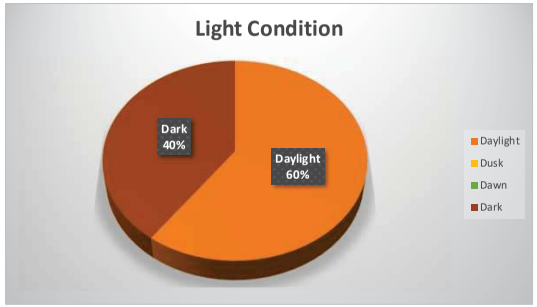
Pavement Condition	2015	2016	2017	2018	2019	Total	Proportion
Wet	0	0	0	0	0	**0**	0%
Dry	0	0	1	3	1	**5**	100%
Slippery	0	0	0	0	0	**0**	0%
Total	**0**	**0**	**1**	**3**	**1**	**5**	100%

Light Condition	2015	2016	2017	2018	2019	Total	Proportion
Daylight	0	0	0	2	1	**3**	60%
Dusk	0	0	0	0	0	**0**	0%
Dawn	0	0	0	0	0	**0**	0%
Dark	0	0	1	1	0	**2**	40%
Total	**0**	**0**	**1**	**3**	**1**	**5**	100%
Under the Influence	**2015**	**2016**	**2017**	**2018**	**2019**	**Total**	**Proportion**
Alcohol	0	0	0	0	0	**0**	0%
Drugs	0	0	0	0	0	**0**	0.00%
Total	**0**	**0**	**0**	**0**	**0**	**0**	0%









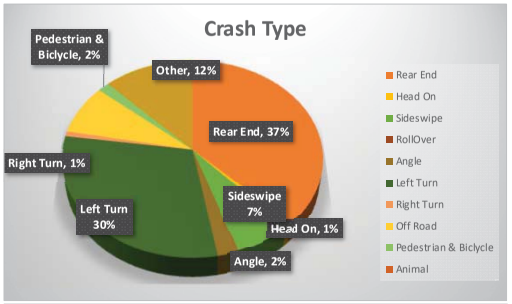
Crash Data Summary - Boggy Creek Rd/Narcoossee Rd Intersection

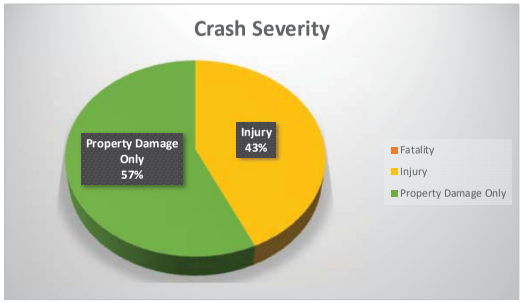
Crash Type	2015	2016	2017	2018	2019	Total	Proportion
Rear End	5	5	12	12	12	**46**	37%
Head On	0	0	0	0	1	**1**	1%
Sideswipe	0	2	3	1	2	**8**	7%
RollOver	0	0	0	0	0	**0**	0%
Angle	0	0	1	2	0	**3**	2%
Left Turn	4	5	7	10	11	**37**	30%
Right Turn	0	0	1	0	0	**1**	1%
Off Road	1	1	1	4	3	**10**	8%
Pedestrian & Biclycle	0	0	0	1	1	**2**	2%
Animal	0	0	0	0	0	**0**	0%
Other	1	1	0	5	8	**15**	12%
Total	**11**	**14**	**25**	**35**	**38**	**123**	100%

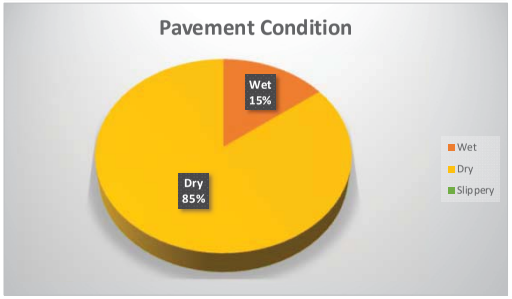
Crash Severity	2015	2016	2017	2018	2019	Total	Proportion
Fatality	0	0	0	0	0	**0**	0%
Injury	5	9	8	15	16	**53**	43%
Property Damage Only	6	5	17	20	22	**70**	57%
Total	**11**	**14**	**25**	**35**	**38**	**123**	100%

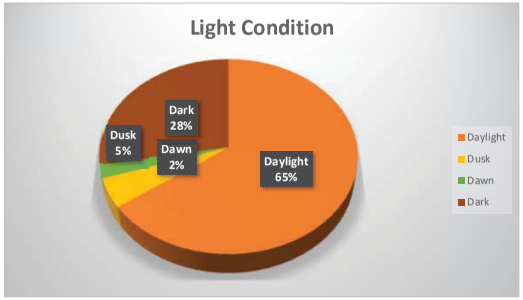
Pavement Condition	2015	2016	2017	2018	2019	Total	Proportion
Wet	2	2	4	3	7	**18**	15%
Dry	9	12	21	32	31	**105**	85%
Slippery	0	0	0	0	0	**0**	0%
Total	**11**	**14**	**25**	**35**	**38**	**123**	100%

Light Condition	2015	2016	2017	2018	2019	Total	Proportion
Daylight	6	8	16	24	26	**80**	65%
Dusk	0	0	1	2	3	**6**	5%
Dawn	0	1	1	0	1	**3**	2%
Dark	5	5	7	9	8	**34**	28%
Total	**11**	**14**	**25**	**35**	**38**	**123**	100%
Under the Influence	**2015**	**2016**	**2017**	**2018**	**2019**	**Total**	**Proportion**
Alcohol	0	0	0	0	0	**0**	0%
Drugs	0	0	0	0	0	**0**	0%
Total	**0**	**0**	**0**	**0**	**0**	**0**	0%









District	County	Crash Rate Category	Average Crash Rate	Influence Area Crashes	Crash Count	Millions Entering Vehicles	Total Centerline Miles
5	Orange	Interstate Urban	1.58193	1	11391	7201	123
5	Orange	Interstate Rural	0	0	0	0	0
5	Orange	Toll Road Urban	0.57793	75	5202	9131	457
5	Orange	Toll Road Rural	0.47922	5	601	1265	98
5	Orange	Urban Other Limited Access	0	0	0	0	0
5	Orange	Rural Other Limited Access	0	0	0	0	0
5	Orange	Ramp Urban	0	3074	488	151	74
5	Orange	Ramp Rural	0	7376	4891	1323	500
5	Orange	Urban 2-3Ln 2Wy Divd Rasd	9.49833	180	200	40	8
5	Orange	Urban 2-3Ln 2Wy Divd Pavd	5.42408	188	220	75	15
5	Orange	Urban 2-3Ln 2Wy Undivd	3.1194	91	228	102	27
5	Orange	Suburban 2-3Ln 2Wy Divd Rasd	0.15006	0	3	20	3
5	Orange	Suburban 2-3Ln 2Wy Divd Pavd	2.46996	130	685	330	58
5	Orange	Suburban 2-3Ln 2Wy Undivd	0.44688	1	211	474	91
5	Orange	Rural 2-3Ln 2Wy Divd Rasd	2.86284	34	9	15	2
5	Orange	Rural 2-3Ln 2Wy Divd Pavd	0	0	0	1	0
5	Orange	Rural 2-3Ln 2Wy Undivd	0	0	0	5	13
5	Orange	Urban 4-5Ln 2Wy Divd Rasd	3.01888	1427	7217	2863	256
5	Orange	Urban 4-5Ln 2Wy Divd Pavd	5.33896	1269	6387	1434	129
5	Orange	Urban 4-5Ln 2Wy Undivd	5.90713	129	1179	221	28
5	Orange	Suburban 4-5Ln 2Wy Divd Rasd	2.52439	435	4649	2014	161
5	Orange	Suburban 4-5Ln 2Wy Divd Pavd	2.07242	25	432	221	17
5	Orange	Suburban 4-5Ln 2Wy Undivd	0.40877	0	3	7	1
5	Orange	Rural 4-5Ln 2Wy Divd Rasd	0.6263	4	505	813	143
5	Orange	Rural 4-5Ln 2Wy Divd Pavd	0	0	0	4	1
5	Orange	Rural 4-5Ln 2Wy Undivd	0	0	0	0	0
5	Orange	Urban 6+Ln 2Wy Divd Rasd	4.69556	3022	20316	4970	298
5	Orange	Urban 6+Ln 2Wy Divd Pavd	5.95528	114	631	125	8
5	Orange	Urban 6+Ln 2Wy Undivd	0	0	0	0	0
5	Orange	Suburban 6+Ln 2Wy Divd Rasd	4.27655	984	5749	1574	90
5	Orange	Suburban 6+Ln 2Wy Divd Pavd	1.69082	4	10	8	1

District	County	Crash Rate Category	Average Crash Rate	Influence Area Crashes	Crash Count	Millions Entering Vehicles	Total Centerline Miles
5	Orange	Suburban 6+Ln 2Wy Undivd	0	0	0	0	0
5	Orange	Rural 6+Ln 2Wy Divd Rasd	0	0	0	0	0
5	Orange	Rural 6+Ln 2Wy Divd Pavd	0	0	0	0	0
5	Orange	Rural 6+Ln 2Wy Undivd	0	0	0	0	0
5	Orange	Urban One Way	5.91854	340	775	188	40
5	Orange	Suburban One Way	2.53794	43	158	79	12
5	Orange	Rural One Way	0.62972	0	1	2	2
5	Orange	Undefined	0	648	124	0	0
5	Orange	Not Coded	2.15379	2381	72265	34658	2656
5	Osceola	Interstate Urban	0.66776	2	1044	1566	39
5	Osceola	Interstate Rural	0	0	0	0	0
5	Osceola	Toll Road Urban	0	0	0	0	0
5	Osceola	Toll Road Rural	0	0	0	0	0
5	Osceola	Urban Other Limited Access	0	0	0	0	0
5	Osceola	Rural Other Limited Access	0	0	0	0	0
5	Osceola	Ramp Urban	0	75	60	0	0
5	Osceola	Ramp Rural	0	200	232	191	91
5	Osceola	Urban 2-3Ln 2Wy Divd Rasd	0	0	0	16	3
5	Osceola	Urban 2-3Ln 2Wy Divd Pavd	0	0	0	11	2
5	Osceola	Urban 2-3Ln 2Wy Undivd	0.04723	0	1	21	9
5	Osceola	Suburban 2-3Ln 2Wy Divd Rasd	0.99818	0	22	22	2
5	Osceola	Suburban 2-3Ln 2Wy Divd Pavd	0.99402	16	207	224	38
5	Osceola	Suburban 2-3Ln 2Wy Undivd	0.3045	2	120	401	87
5	Osceola	Rural 2-3Ln 2Wy Divd Rasd	2.21141	0	5	2	1
5	Osceola	Rural 2-3Ln 2Wy Divd Pavd	1.50624	12	19	21	10
5	Osceola	Rural 2-3Ln 2Wy Undivd	0.89891	44	310	394	319
5	Osceola	Urban 4-5Ln 2Wy Divd Rasd	2.7531	79	459	195	32
5	Osceola	Urban 4-5Ln 2Wy Divd Pavd	5.90373	141	218	61	7
5	Osceola	Urban 4-5Ln 2Wy Undivd	0	0	0	0	0
5	Osceola	Suburban 4-5Ln 2Wy Divd Rasd	2.07257	61	1402	706	54
5	Osceola	Suburban 4-5Ln 2Wy Divd Pavd	2.36369	22	340	153	15

District	County	Crash Rate Category	Average Crash Rate	Influence Area Crashes	Crash Count	Millions Entering Vehicles	Total Centerline Miles
5	Osceola	Suburban 4-5Ln 2Wy Undivd	0	0	0	0	0
5	Osceola	Rural 4-5Ln 2Wy Divd Rasd	0.94247	3	345	369	121
5	Osceola	Rural 4-5Ln 2Wy Divd Pavd	0	0	0	0	0
5	Osceola	Rural 4-5Ln 2Wy Undivd	0	0	0	0	0
5	Osceola	Urban 6+Ln 2Wy Divd Rasd	3.85824	694	4057	1231	70
5	Osceola	Urban 6+Ln 2Wy Divd Pavd	2.70776	0	26	10	0
5	Osceola	Urban 6+Ln 2Wy Undivd	0	0	0	0	0
5	Osceola	Suburban 6+Ln 2Wy Divd Rasd	1.96199	82	1535	824	48
5	Osceola	Suburban 6+Ln 2Wy Divd Pavd	0.64956	0	6	9	0
5	Osceola	Suburban 6+Ln 2Wy Undivd	0	0	0	0	0
5	Osceola	Rural 6+Ln 2Wy Divd Rasd	0	0	0	0	0
5	Osceola	Rural 6+Ln 2Wy Divd Pavd	0	0	0	0	0
5	Osceola	Rural 6+Ln 2Wy Undivd	0	0	0	0	0
5	Osceola	Urban One Way	0	0	0	0	0
5	Osceola	Suburban One Way	0	0	0	0	0
5	Osceola	Rural One Way	0	0	0	0	0
5	Osceola	Undefined	0	0	19	0	0
5	Osceola	Not Coded	1.68724	419	10427	6428	950
5	Districtwide	Interstate Urban	0.86661	14	24670	28483	987
5	Districtwide	Interstate Rural	0.51719	13	3654	7090	409
5	Districtwide	Toll Road Urban	0.57613	75	5214	9180	465
5	Districtwide	Toll Road Rural	0.48436	11	632	1328	111
5	Districtwide	Urban Other Limited Access	0.49471	1	279	566	39
5	Districtwide	Rural Other Limited Access	0	0	0	0	16
5	Districtwide	Ramp Urban	0	5323	741	195	99
5	Districtwide	Ramp Rural	0	12128	8315	2297	1021
5	Districtwide	Urban 2-3Ln 2Wy Divd Rasd	4.80499	228	491	150	28
5	Districtwide	Urban 2-3Ln 2Wy Divd Pavd	4.40418	466	927	316	63
5	Districtwide	Urban 2-3Ln 2Wy Undivd	3.09642	525	667	385	131
5	Districtwide	Suburban 2-3Ln 2Wy Divd Rasd	3.65661	114	511	171	36
5	Districtwide	Suburban 2-3Ln 2Wy Divd Pavd	1.83197	487	2899	1848	372

District	County	Crash Rate Category	Average Crash Rate	Influence Area Crashes	Crash Count	Millions Entering Vehicles	Total Centerline Miles
5	Districtwide	Suburban 2-3Ln 2Wy Undivd	0.77795	187	2455	3396	1014
5	Districtwide	Rural 2-3Ln 2Wy Divd Rasd	2.34162	34	58	39	11
5	Districtwide	Rural 2-3Ln 2Wy Divd Pavd	1.98514	115	821	472	148
5	Districtwide	Rural 2-3Ln 2Wy Undivd	0.62681	125	2408	4041	1897
5	Districtwide	Urban 4-5Ln 2Wy Divd Rasd	2.8798	4398	23375	9644	1060
5	Districtwide	Urban 4-5Ln 2Wy Divd Pavd	4.10634	3311	14018	4220	475
5	Districtwide	Urban 4-5Ln 2Wy Undivd	5.50865	171	1510	305	45
5	Districtwide	Suburban 4-5Ln 2Wy Divd Rasd	1.61444	1155	19331	12689	1466
5	Districtwide	Suburban 4-5Ln 2Wy Divd Pavd	1.92423	193	3016	1668	171
5	Districtwide	Suburban 4-5Ln 2Wy Undivd	2.86388	48	157	72	9
5	Districtwide	Rural 4-5Ln 2Wy Divd Rasd	0.74846	71	2518	3459	783
5	Districtwide	Rural 4-5Ln 2Wy Divd Pavd	0.74941	0	92	123	33
5	Districtwide	Rural 4-5Ln 2Wy Undivd	0	0	0	0	0
5	Districtwide	Urban 6+Ln 2Wy Divd Rasd	3.47761	5134	37670	12308	793
5	Districtwide	Urban 6+Ln 2Wy Divd Pavd	3.94878	436	3488	994	72
5	Districtwide	Urban 6+Ln 2Wy Undivd	0	0	0	0	0
5	Districtwide	Suburban 6+Ln 2Wy Divd Rasd	3.16496	1201	9972	3530	216
5	Districtwide	Suburban 6+Ln 2Wy Divd Pavd	3.1381	13	222	75	6
5	Districtwide	Suburban 6+Ln 2Wy Undivd	0	0	0	0	0
5	Districtwide	Rural 6+Ln 2Wy Divd Rasd	3.56343	0	43	12	1
5	Districtwide	Rural 6+Ln 2Wy Divd Pavd	0	0	0	0	0
5	Districtwide	Rural 6+Ln 2Wy Undivd	0	0	0	0	0
5	Districtwide	Urban One Way	5.65786	912	2121	536	105
5	Districtwide	Suburban One Way	2.01423	75	429	250	52
5	Districtwide	Rural One Way	0.44943	0	1	2	2
5	Districtwide	Undefined	0	1403	407	0	0
5	Districtwide	Not Coded	1.62046	4887	173112	109844	12136
Statewide		Interstate Urban	0.97609	917	139702	144063	4096
Statewide		Interstate Rural	0.45743	32	20894	45747	3389
Statewide		Toll Road Urban	0.76697	792	40644	54025	2444
Statewide		Toll Road Rural	0.44367	15	4030	9117	902

District	County	Crash Rate Category	Average Crash Rate	Influence Area Crashes	Crash Count	Millions Entering Vehicles	Total Centerline Miles
Statewide		Urban Other Limited Access	1.97012	3727	23023	13578	615
Statewide		Rural Other Limited Access	1.04001	22	22	42	30
Statewide		Ramp Urban	0	61864	17665	4280	1120
Statewide		Ramp Rural	0	60290	40246	10184	4426
Statewide		Urban 2-3Ln 2Wy Divd Rasd	7.43575	2749	3109	788	186
Statewide		Urban 2-3Ln 2Wy Divd Pavd	6.05442	4525	11489	2645	616
Statewide		Urban 2-3Ln 2Wy Undivd	3.65431	2292	5983	2264	859
Statewide		Suburban 2-3Ln 2Wy Divd Rasd	3.58864	966	2492	964	226
Statewide		Suburban 2-3Ln 2Wy Divd Pavd	2.7246	4499	20773	9275	2027
Statewide		Suburban 2-3Ln 2Wy Undivd	1.20203	2013	18758	17280	5828
Statewide		Rural 2-3Ln 2Wy Divd Rasd	1.31682	172	567	561	150
Statewide		Rural 2-3Ln 2Wy Divd Pavd	1.80882	741	4402	2843	981
Statewide		Rural 2-3Ln 2Wy Undivd	0.76849	1465	19611	27425	18338
Statewide		Urban 4-5Ln 2Wy Divd Rasd	3.63399	22538	110992	36745	4333
Statewide		Urban 4-5Ln 2Wy Divd Pavd	5.88464	22572	94769	19940	2392
Statewide		Urban 4-5Ln 2Wy Undivd	6.81454	2556	15813	2696	449
Statewide		Suburban 4-5Ln 2Wy Divd Rasd	1.72964	5869	79934	49607	5573
Statewide		Suburban 4-5Ln 2Wy Divd Pavd	2.39669	1201	9729	4560	451
Statewide		Suburban 4-5Ln 2Wy Undivd	1.84544	54	340	213	41
Statewide		Rural 4-5Ln 2Wy Divd Rasd	0.71456	421	12840	18558	4554
Statewide		Rural 4-5Ln 2Wy Divd Pavd	0.57728	5	347	610	176
Statewide		Rural 4-5Ln 2Wy Undivd	2.19644	0	39	18	9
Statewide		Urban 6+Ln 2Wy Divd Rasd	4.71425	48952	297452	73480	4703
Statewide		Urban 6+Ln 2Wy Divd Pavd	5.27306	3544	20458	4552	323
Statewide		Urban 6+Ln 2Wy Undivd	65.01849	27	307	5	1
Statewide		Suburban 6+Ln 2Wy Divd Rasd	2.71114	5888	69922	27962	1697
Statewide		Suburban 6+Ln 2Wy Divd Pavd	1.11785	204	2355	2289	95
Statewide		Suburban 6+Ln 2Wy Undivd	0	0	6	0	0
Statewide		Rural 6+Ln 2Wy Divd Rasd	0.86296	6	194	232	55
Statewide		Rural 6+Ln 2Wy Divd Pavd	0	8	0	0	0
Statewide		Rural 6+Ln 2Wy Undivd	0	0	0	0	0

District	County	Crash Rate Category	Average Crash Rate	Influence Area Crashes	Crash Count	Millions Entering Vehicles	Total Centerline Miles
Statewide		Urban One Way	10.84173	10463	29815	3715	955
Statewide		Suburban One Way	2.23848	2092	5130	3226	535
Statewide		Rural One Way	3.78566	655	412	282	139
Statewide		Undefined	0	9619	5078	0	0
Statewide		Not Coded	1.95757	33013	1129342	593773	72715

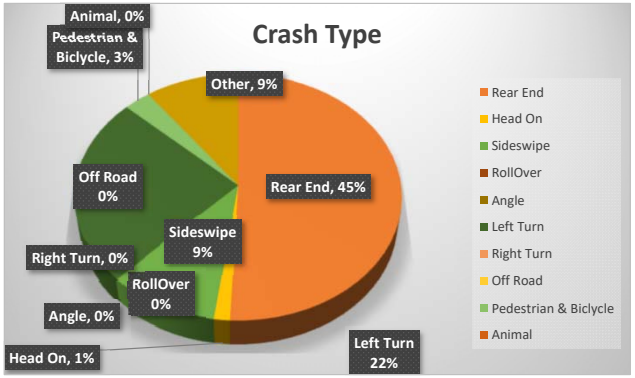
2020Crash Data Summary

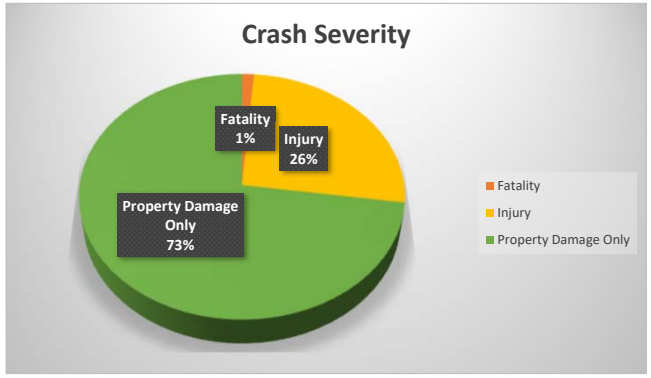
Crash Type	2020	Proportion
Rear End	35	45%
Head On	1	1%
Sideswipe	7	9%
RollOver	0	0%
Angle	0	0%
Left Turn	17	22%
Right Turn	0	0%
Off Road	8	10%
Pedestrian & Biclycle	2	3%
Animal	0	0%
Other	7	9%
Total	**77**	100%

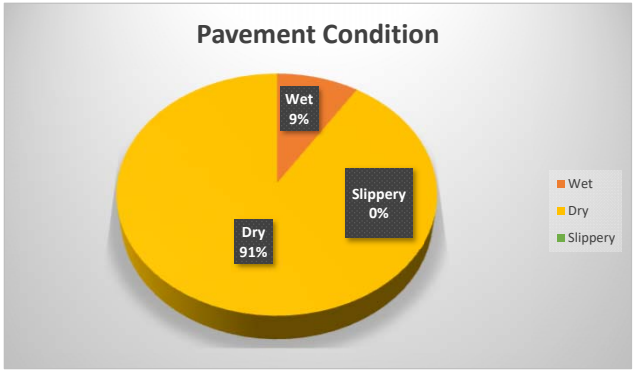
Crash Severity	2020	Proportion
Fatality	1	1%
Injury	20	26%
Property Damage Only	56	73%
Total	**77**	100%

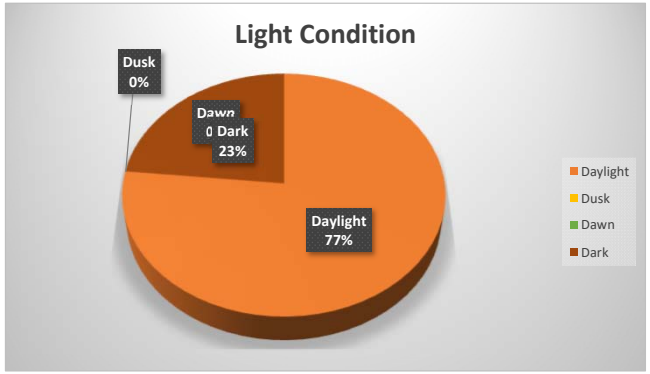
Pavement Condition	2020	Proportion
Wet	7	9%
Dry	70	91%
Slippery	0	0%
Total	**77**	100%

Light Condition	2020	Proportion
Daylight	59	77%
Dusk	0	0%
Dawn	0	0%
Dark	18	23%
Total	**77**	100%









2020 Crash Data Summary

No.	Crash ID	Date	Day	Time	Crash Type	Crash Severity	Fatalities	Injuries	Property Damage	Day/Night	Wet/Dry
1	883XXXXX	11/10/2020	Tuesday	8:44 AM	Rear End	Property Damage Only	0	0	$4,500	Daylight	Dry
2	88310950	3/27/2020	Friday	11:16 AM	Rear End	Property Damage Only	0	0	$4,000	Daylight	Dry
3	88360705	8/30/2020	Sunday	9:36 PM	Other	Property Damage Only	0	0	$6,000	Dark - Lighted	Dry
4	88290144	2/18/2020	Tuesday	8:35 AM	Rear End	Injury	0	2	$4,000	Daylight	Dry
5	88237891	1/16/2020	Thursday	6:40 AM	Pedestrian	Fatality	1	1	$5,000	Dark - Not Lighted	Dry
6	241XXXXX	10/21/2020	Wednesday	3:00 PM	Left Turn	Property Damage Only	0	0	$1,000	Daylight	Dry
7	883XXXXX	11/10/2020	Tuesday	8:44 AM	Rear End	Property Damage Only	0	0	$4,500	Daylight	Dry
8	88362301	7/2/2020	Thursday	7:08 AM	Other	Injury	0	1	$4,000	Daylight	Dry
9	88360690	7/30/2020	Thursday	9:32 AM	Rear End	Injury	0	2	$600	Daylight	Dry
10	88347791	6/22/2020	Monday	10:38 AM	Rear End	Property Damage Only	0	0	$1,000	Daylight	Dry
11	88286032	2/7/2020	Friday	10:20 AM	Rear End	Property Damage Only	0	0	$3,750	Daylight	Dry
12	88286377	1/17/2020	Friday	7:12 PM	Left Turn	Injury	0	2	$8,000	Dark - Not Lighted	Dry
13	88362567	7/25/2020	Saturday	4:30 PM	Left Turn	Injury	0	3	$9,000	Daylight	Dry
14	88313030	4/25/2020	Saturday	12:40 AM	Off Road	Injury	0	1	$3,150	Dark - Not Lighted	Wet
15	88360057	7/17/2020	Friday	3:18 AM	Off Road	Property Damage Only	0	0	$4,200	Dark - Not Lighted	Dry
16	88370976	8/6/2020	Thursday	5:00 PM	Left Turn	Property Damage Only	0	0	$3,750	Daylight	Dry
17	88291187	7/21/2020	Tuesday	12:27 PM	Rear End	Property Damage Only	0	0	$12,900	Daylight	Wet
18	88259303	1/17/2020	Friday	11:00 PM	Left Turn	Injury	0	3	$4,500	Dark - Not Lighted	Dry
19	88260980	1/24/2020	Friday	9:46 AM	Rear End	Property Damage Only	0	0	$2,500	Daylight	Dry
20	88370402	7/17/2020	Friday	2:34 PM	Sideswipe	Property Damage Only	0	0	$150	Daylight	Dry
21	88286043	2/13/2020	Thursday	7:17 AM	Rear End	Injury	0	1	$5,700	Daylight	Dry
22	88360183	7/23/2020	Thursday	6:40 PM	Rear End	Injury	0	1	$7,000	Daylight	Wet
23	88287500	3/5/2020	Thursday	12:55 PM	Sideswipe	Property Damage Only	0	0	$500	Daylight	Dry
24	89392205	5/14/2020	Thursday	9:17 AM	Rear End	Property Damage Only	0	0	$6,000	Daylight	Dry
25	88276966	2/12/2020	Wednesday	8:00 AM	Rear End	Property Damage Only	0	0	$9,000	Daylight	Dry
26	88294240	5/21/2020	Thursday	6:50 AM	Off Road	Property Damage Only	0	0	$500	Daylight	Dry
27	88370999	9/3/2020	Thursday	10:00 PM	Bicycle	Injury	0	1	$0	Dark - Not Lighted	Dry
28	83753524	1/16/2020	Thursday	7:48 AM	Other	Property Damage Only	0	0	$2,000	Daylight	Dry
29	88337604	3/31/2020	Tuesday	5:30 PM	Rear End	Injury	0	2	$150	Daylight	Dry
30	88304846	2/27/2020	Thursday	11:26 AM	Left Turn	Injury	0	1	$7,000	Daylight	Dry
31	88390586	9/10/2020	Thursday	11:53 AM	Left Turn	Property Damage Only	0	0	$20,000	Daylight	Dry
32	88294196	2/28/2020	Friday	6:20 PM	Rear End	Property Damage Only	0	0	$0	Daylight	Dry
33	88291158	6/24/2020	Wednesday	9:58 AM	Rear End	Property Damage Only	0	0	$1,000	Daylight	Dry
34	883XXXXX	11/10/2020	Tuesday	8:44 AM	Rear End	Property Damage Only	0	0	$4,500	Daylight	Dry
35	88304152	6/22/2020	Monday	3:00 PM	Rear End	Property Damage Only	0	0	$1,200	Daylight	Dry
36	89392113	3/9/2020	Monday	2:41 PM	Rear End	Property Damage Only	0	0	$1,000	Daylight	Dry
37	88291152	6/19/2020	Friday	12:38 PM	Left Turn	Property Damage Only	0	0	$9,000	Daylight	Dry
38	884XXXXX	10/24/2020	Saturday	1:00 AM	Off Road	Property Damage Only	0	0	$3,100	Dark - Lighted	Dry
39	88310952	4/10/2020	Friday	10:57 AM	Rear End	Property Damage Only	0	0	$3,500	Daylight	Dry
40	88292990	2/4/2020	Tuesday	6:16 PM	Sideswipe	Injury	0	1	$9,000	Daylight	Dry
41	88281484	3/3/2020	Tuesday	3:47 PM	Other	Property Damage Only	0	0	$500	Daylight	Dry
42	88349649	6/18/2020	Thursday	6:32 PM	Rear End	Property Damage Only	0	0	$2,500	Daylight	Dry
43	88276967	2/12/2020	Wednesday	10:15 AM	Off Road	Property Damage Only	0	0	$8,000	Daylight	Dry
44	89392266	6/17/2020	Wednesday	4:39 PM	Rear End	Property Damage Only	0	0	$1,000	Daylight	Dry
45	88304153	6/22/2020	Monday	2:43 PM	Rear End	Property Damage Only	0	0	$5,000	Daylight	Dry
46	88311546	5/1/2020	Friday	3:57 PM	Off Road	Property Damage Only	0	0	$6,150	Daylight	Dry
47	883XXXXX	11/10/2020	Tuesday	8:44 AM	Rear End	Property Damage Only	0	0	$4,500	Daylight	Dry
48	88304870	3/5/2020	Thursday	4:40 PM	Left Turn	Injury	0	1	$9,000	Daylight	Dry
49	883XXXXX	11/10/2020	Tuesday	8:44 AM	Rear End	Property Damage Only	0	0	$4,500	Daylight	Dry
50	88291185	7/20/2020	Monday	10:20 AM	Rear End	Property Damage Only	0	0	$3,500	Daylight	Dry
51	241XXXXX	10/21/2020	Wednesday	3:00 PM	Left Turn	Property Damage Only	0	0	$1,000	Daylight	Dry
52	884XXXXX	10/24/2020	Saturday	1:00 AM	Off Road	Property Damage Only	0	0	$3,100	Dark - Lighted	Dry
53	89392279	6/28/2020	Sunday	7:15 PM	Other	Property Damage Only	0	0	$2,500	Daylight	Dry
54	88349642	6/8/2020	Monday	9:20 PM	Sideswipe	Property Damage Only	0	0	$250	Dark - Lighted	Dry
55	88349623	5/25/2020	Monday	9:43 PM	Head On	Injury	0	2	$30,000	Dark - Not Lighted	Wet
56	88304117	4/22/2020	Wednesday	8:45 PM	Left Turn	Injury	0	2	$4,000	Dark - Lighted	Dry
57	88350072	6/25/2020	Thursday	10:39 AM	Unknown	Property Damage Only	0	0	$9,500	Daylight	Dry
58	883XXXXX	11/10/2020	Tuesday	8:44 AM	Rear End	Property Damage Only	0	0	$4,500	Daylight	Dry
59	883XXXXX	11/10/2020	Tuesday	8:44 AM	Rear End	Property Damage Only	0	0	$4,500	Daylight	Dry
60	88286042	2/13/2020	Thursday	6:25 AM	Rear End	Property Damage Only	0	0	$6,250	Dark - Lighted	Dry
61	88298026	4/4/2020	Saturday	2:44 PM	Left Turn	Property Damage Only	0	0	$17,500	Daylight	Dry
62	883XXXXX	11/10/2020	Tuesday	8:44 AM	Rear End	Property Damage Only	0	0	$4,500	Daylight	Dry
63	883XXXXX	11/10/2020	Tuesday	8:44 AM	Rear End	Property Damage Only	0	0	$4,500	Daylight	Dry
64	88278874	4/6/2020	Monday	6:10 AM	Off Road	Injury	0	1	$2,500	Dark - Not Lighted	Wet
65	88344677	6/10/2020	Wednesday	5:53 PM	Left Turn	Injury	0	1	$17,500	Daylight	Wet
66	883XXXXX	11/10/2020	Tuesday	8:44 AM	Rear End	Property Damage Only	0	0	$4,500	Daylight	Dry

2020 Crash Data Summary

No.	Crash ID	Date	Day	Time	Crash Type	Crash Severity	Fatalities	Injuries	Property Damage	Day/Night	Wet/Dry
67	88360193	7/30/2020	Thursday	4:40 PM	Rear End	Property Damage Only	0	0	$2,000	Daylight	Dry
68	883XXXXX	11/10/2020	Tuesday	8:44 AM	Rear End	Property Damage Only	0	0	$4,500	Daylight	Dry
69	88291661	5/31/2020	Sunday	12:15 AM	Left Turn	Property Damage Only	0	0	$1,500	Dark - Lighted	Wet
70	88391044	9/1/2020	Tuesday	2:48 AM	Left Turn	Property Damage Only	0	0	$10,000	Dark - Lighted	Dry
71	89392025	2/19/2020	Wednesday	3:19 PM	Sideswipe	Property Damage Only	0	0	$1,000	Daylight	Dry
72	88303876	3/31/2020	Tuesday	3:44 PM	Left Turn	Property Damage Only	0	0	$1,000	Daylight	Dry
73	88248147	1/9/2020	Thursday	5:30 AM	Sideswipe	Injury	0	1	$1,500	Dark - Not Lighted	Dry
74	88304496	2/19/2020	Wednesday	6:45 AM	Other	Property Damage Only	0	0	$1,000	Daylight	Dry
75	88227781	1/4/2020	Saturday	2:35 PM	Left Turn	Injury	0	1	$15,000	Daylight	Dry
76	87278321	7/9/2020	Thursday	5:45 AM	Sideswipe	Property Damage Only	0	0	$2,000	Dark - Lighted	Dry
77	883XXXXX	11/10/2020	Tuesday	8:44 AM	Rear End	Property Damage Only	0	0	$4,500	Daylight	Dry

Simpson Road to East Lake Pointe Drive - Crash Data Summary

No.	Crash ID	Date	Day	Time	Crash Type	Crash Severity	Fatalities	Injuries	Property Damage	Day/Night	Wet/Dry	Alcohol Related	Drug Related
1	84544871	1/3/2015	Saturday	9:50 PM	Rollover	Property Damage Only	0	0	$4,000	Dark - Not Lighted	Dry	No	No
2	83385233	2/20/2015	Friday	3:24 PM	Other	Property Damage Only	0	0	$0	Daylight	Dry	No	No
3	83385297	3/10/2015	Tuesday	4:26 PM	Rear End	Property Damage Only	0	0	$0	Daylight	Dry	No	No
4	84871868	4/13/2015	Monday	4:10 AM	Animal	Property Damage Only	0	0	$20,000	Dark - Not Lighted	Wet	No	No
5	84904812	4/21/2015	Tuesday	5:03 PM	Rear End	Property Damage Only	0	0	$700	Daylight	Dry	No	No
6	85110794	5/7/2015	Thursday	5:23 PM	Left Turn	Injury	0	2	$5,000	Daylight	Dry	No	No
7	83385499	5/21/2015	Thursday	9:27 AM	Angle	Property Damage Only	0	0	$0	Daylight	Dry	No	No
8	85139868	6/29/2015	Monday	1:35 PM	Off Road	Injury	0	1	$3,900	Daylight	Wet	No	No
9	83385799	9/4/2015	Friday	2:40 PM	Rear End	Property Damage Only	0	0	$0	Daylight	Wet	No	No
10	85162476	9/10/2015	Thursday	5:55 PM	Left Turn	Property Damage Only	0	0	$12,000	Daylight	Dry	No	No
11	85184409	10/11/2015	Sunday	5:25 PM	Right Turn	Injury	0	2	$21,500	Daylight	Dry	No	No
12	85195373	10/13/2015	Tuesday	3:28 PM	Other	Injury	0	1	$5,000	Daylight	Dry	No	No
13	85224719	11/10/2015	Tuesday	7:30 PM	Left Turn	Property Damage Only	0	0	$4,500	Dark - Not Lighted	Dry	No	No
14	85297461	4/7/2016	Thursday	6:10 PM	Sideswipe	Property Damage Only	0	0	$2,000	Daylight	Dry	No	No
15	85310962	4/22/2016	Friday	12:30 PM	Unknown	Property Damage Only	0	0	$8,000	Daylight	Dry	No	No
16	85308107	5/23/2016	Monday	6:02 AM	Rollover	Injury	0	1	$5,000	Dawn	Dry	No	No
17	85308113	5/28/2016	Saturday	1:25 PM	Sideswipe	Property Damage Only	0	0	$1,000	Daylight	Dry	No	No
18	85359488	7/24/2016	Sunday	8:39 PM	Right Turn	Injury	0	3	$11,000	Dark - Not Lighted	Dry	No	No
19	84541178	8/31/2016	Wednesday	6:58 PM	Other	Property Damage Only	0	0	$7,500	Dusk	Wet	No	No
20	86736376	11/14/2016	Monday	7:32 AM	Rear End	Property Damage Only	0	0	$0	Daylight	Dry	No	No
21	85458060	1/24/2017	Tuesday	4:59 PM	Right Turn	Injury	0	1	$1,000	Daylight	Dry	No	No
22	85493486	4/9/2017	Sunday	11:05 AM	Rear End	Property Damage Only	0	0	$4,000	Daylight	Dry	No	No
23	85531396	5/24/2017	Wednesday	12:00 PM	Sideswipe	Property Damage Only	0	0	$600	Daylight	Dry	No	No
24	85524224	6/11/2017	Sunday	11:00 AM	Rear End	Property Damage Only	0	0	$1,300	Daylight	Dry	No	No
25	85561133	8/26/2017	Saturday	12:53 PM	Sideswipe	Property Damage Only	0	0	$600	Daylight	Dry	No	No
26	85590643	8/30/2017	Wednesday	7:50 AM	Left Turn	Injury	0	2	$8,000	Daylight	Dry	No	No
27	85576302	9/4/2017	Monday	2:00 PM	Left Turn	Injury	0	1	$5,500	Daylight	Dry	No	No
28	87108064	11/17/2017	Friday	7:46 PM	Left Turn	Property Damage Only	0	0	$6,000	Dark - Lighted	Dry	No	No
29	87135713	11/30/2017	Thursday	6:01 PM	Left Turn	Property Damage Only	0	0	$8,500	Dusk	Dry	No	No
30	87118825	1/3/2018	Wednesday	12:33 PM	Unknown	Injury	0	3	$15,000	Daylight	Wet	No	No
31	87149914	1/4/2018	Thursday	11:35 AM	Right Turn	Injury	0	1	$1,500	Daylight	Dry	No	No
32	87414297	1/19/2018	Friday	1:45 PM	Unknown	Property Damage Only	0	0	$1,100	Daylight	Dry	No	No
33	87151485	1/21/2018	Sunday	1:00 PM	Rear End	Property Damage Only	0	0	$3,500	Daylight	Dry	No	No
34	87158254	2/6/2018	Tuesday	7:38 AM	Left Turn	Property Damage Only	0	0	$1,600	Daylight	Dry	No	No
35	87183378	2/21/2018	Wednesday	6:46 AM	Other	Property Damage Only	0	0	$3,000	Daylight	Dry	No	No
36	87414449	2/27/2018	Tuesday	8:41 AM	Rear End	Property Damage Only	0	0	$1,000	Daylight	Dry	No	No
37	87166925	3/23/2018	Friday	9:30 AM	Rear End	Property Damage Only	0	0	$4,500	Daylight	Dry	No	No
38	87198409	4/3/2018	Tuesday	4:52 PM	Unknown	Property Damage Only	0	0	$500	Daylight	Dry	No	No
39	87181356	4/18/2018	Wednesday	2:50 PM	Rear End	Injury	0	2	$2,300	Daylight	Dry	No	No
40	87181362	4/20/2018	Friday	5:00 PM	Left Turn	Property Damage Only	0	0	$1,700	Daylight	Dry	No	No
41	87241748	6/5/2018	Tuesday	5:27 PM	Unknown	Injury	0	2	$8,000	Daylight	Dry	No	No
42	87234981	7/20/2018	Friday	6:45 AM	Left Turn	Injury	0	1	$5,800	Dusk	Dry	No	No
43	87241237	7/21/2018	Saturday	4:20 PM	Left Turn	Injury	0	2	$2,500	Daylight	Dry	No	No
44	87260023	8/10/2018	Friday	5:23 PM	Rear End	Injury	0	9	$4,500	Daylight	Dry	No	No
45	87271689	8/12/2018	Sunday	12:00 PM	Rear End	Injury	0	3	$12,000	Daylight	Dry	No	No
46	87867192	8/24/2018	Friday	8:27 AM	Right Turn	Property Damage Only	0	0	$1,000	Daylight	Dry	No	No
47	87241273	8/28/2018	Tuesday	5:45 AM	Left Turn	Injury	0	1	$1,200	Daylight	Wet	No	No
48	87293133	8/31/2018	Friday	3:21 PM	Left Turn	Property Damage Only	0	0	$5,500	Daylight	Dry	No	No
49	87274675	9/1/2018	Saturday	2:05 PM	Rear End	Property Damage Only	0	0	$6,500	Daylight	Dry	No	No
50	87867243	9/4/2018	Tuesday	6:28 AM	Left Turn	Property Damage Only	0	0	$2,000	Dark - Unknown Lighting	Dry	No	No
51	87993028	10/1/2018	Monday	10:03 PM	Right Turn	Injury	0	1	$14,600	Dark - Not Lighted	Dry	No	No
52	88009134	11/5/2018	Monday	11:02 AM	Rear End	Injury	0	2	$6,200	Daylight	Dry	No	No
53	87867463	11/9/2018	Friday	7:30 AM	Rear End	Property Damage Only	0	0	$2,000	Daylight	Dry	No	No
54	88029540	12/6/2018	Thursday	9:30 AM	Left Turn	Property Damage Only	0	0	$2,900	Daylight	Dry	No	No
55	88043757	12/31/2018	Monday	4:00 AM	Off Road	Property Damage Only	0	0	$3,000	Dark - Not Lighted	Dry	No	No
56	88047671	1/2/2019	Wednesday	8:29 AM	Angle	Property Damage Only	0	0	$1,475	Daylight	Dry	No	No
57	88051630	1/5/2019	Saturday	6:47 PM	Rear End	Injury	0	2	$1,500	Dark - Not Lighted	Dry	No	No
58	88106258	3/8/2019	Friday	7:00 PM	Rear End	Injury	0	2	$7,500	Dark - Lighted	Dry	No	No
59	88119959	4/25/2019	Thursday	8:40 PM	Other	Injury	0	1	$8,000	Dark - Not Lighted	Dry	No	No
60	88103868	4/26/2019	Friday	2:35 PM	Rear End	Property Damage Only	0	0	$2,500	Daylight	Dry	No	No
61	88120000	5/28/2019	Tuesday	2:40 PM	Left Turn	Property Damage Only	0	0	$11,000	Daylight	Dry	No	No
62	89087556	7/9/2019	Tuesday	9:39 AM	Sideswipe	Property Damage Only	0	0	$1,000	Daylight	Dry	No	No
63	88201198	9/21/2019	Saturday	1:10 AM	Sideswipe	Injury	0	1	$8,000	Dark - Not Lighted	Dry	No	No
64	89391525	10/7/2019	Monday	2:54 PM	Rear End	Property Damage Only	0	0	$1,500	Daylight	Dry	No	No
65	88212597	10/11/2019	Friday	4:01 PM	Left Turn	Injury	0	1	$10,000	Daylight	Dry	No	No
66	88221181	10/22/2019	Tuesday	11:40 AM	Rear End	Property Damage Only	0	0	$500	Daylight	Dry	No	No
67	88260946	12/7/2019	Saturday	8:23 AM	Off Road	Injury	0	1	$5,150	Dawn	Dry	No	No
68	87260020	8/10/2018	Friday	12:31 PM	Rear End	Injury	0	1	$6,000	Daylight	Wet	No	No

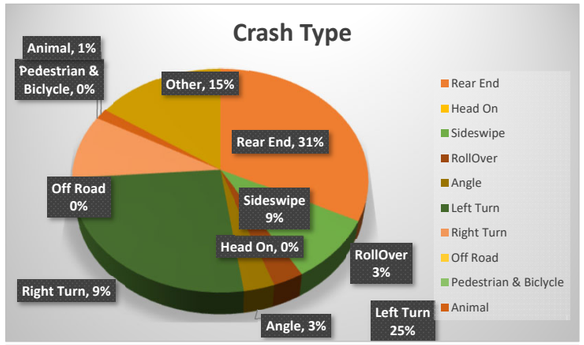
Simpson Road to East Lake Pointe Drive - Crash Data Summary

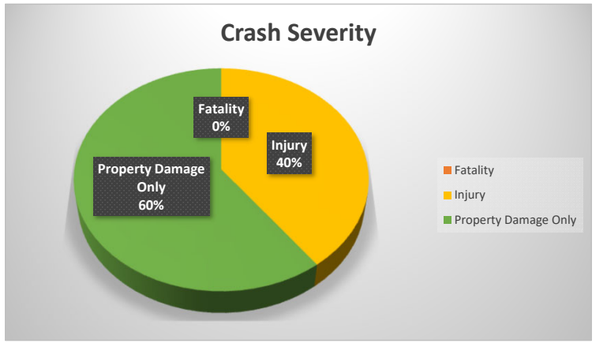
Crash Type	2015	2016	2017	2018	2019	Total	Proportion
Rear End	3	1	2	10	5	**21**	31%
Head On	0	0	0	0	0	**0**	0%
Sideswipe	0	2	2	0	2	**6**	9%
RollOver	1	1	0	0	0	**2**	3%
Angle	1	0	0	0	1	**2**	3%
Left Turn	3	0	4	8	2	**17**	25%
Right Turn	1	1	1	3	0	**6**	9%
Off Road	1	0	0	1	1	**3**	4%
Pedestrian & Biclycle	0	0	0	0	0	**0**	0%
Animal	1	0	0	0	0	**1**	1%
Other	2	2	0	5	1	**10**	15%
Total	**13**	**7**	**9**	**27**	**12**	**68**	100%

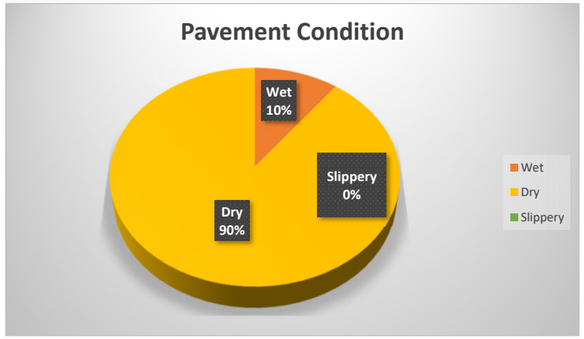
Crash Severity	2015	2016	2017	2018	2019	Total	Proportion
Fatality	0	0	0	0	0	**0**	0%
Injury	4	2	3	12	6	**27**	40%
Property Damage Only	9	5	6	15	6	**41**	60%
Total	**13**	**7**	**9**	**27**	**12**	**68**	100%

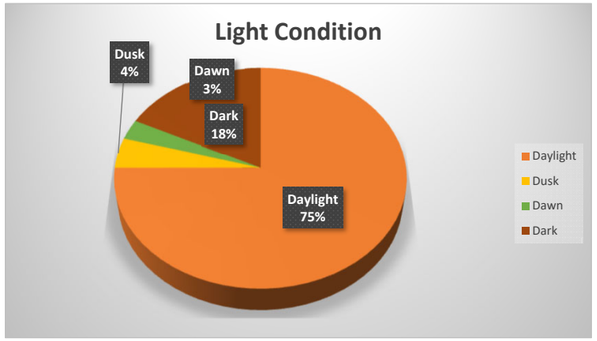
Pavement Condition	2015	2016	2017	2018	2019	Total	Proportion
Wet	3	1	0	3	0	**7**	10%
Dry	10	6	9	24	12	**61**	90%
Slippery	0	0	0	0	0	**0**	0%
Total	**13**	**7**	**9**	**27**	**12**	**68**	100%

Light Condition	2015	2016	2017	2018	2019	Total	Proportion
Daylight	10	4	7	23	7	**51**	75%
Dusk	0	1	1	1	0	**3**	4%
Dawn	0	1	0	0	1	**2**	3%
Dark	3	1	1	3	4	**12**	18%
Total	**13**	**7**	**9**	**27**	**12**	**68**	100%
Under the Influence	**2015**	**2016**	**2017**	**2018**	**2019**	**Total**	**Proportion**
Alcohol	0	0	0	0	0	**0**	0%
Drugs	0	0	0	0	0	**0**	0.00%
Total	**0**	**0**	**0**	**0**	**0**	**0**	0%









East Lake Pointe Drive to Nele Road/Tohopekaliga High School - Crash Data Summary

No.	Crash ID	Date	Day	Time	Crash Type	Crash Severity	Fatalities	Injuries	Property Damage	Day/Night	Wet/Dry	Alcohol Related	Drug Related
1	84565976	1/16/2015	Friday	5:28 AM	Head On	Property Damage Only	0	0	$10,000	Dark - Lighted	Dry	No	No
2	85215377	11/22/2015	Sunday	7:28 AM	Off Road	Injury	0	1	$10,000	Daylight	Wet	No	No
3	85215228	12/9/2015	Wednesday	2:15 AM	Off Road	Injury	0	1	$5,500	Dark - Not Lighted	Dry	No	No
4	85329336	5/26/2016	Thursday	1:57 AM	Off Road	Property Damage Only	0	0	$8,000	Dark - Not Lighted	Dry	No	No
5	85365859	8/6/2016	Saturday	1:28 AM	Off Road	Fatality	1	1	$8,000	Dark - Not Lighted	Dry	Yes	Yes
6	85548365	7/19/2017	Wednesday	3:40 PM	Head On	Fatality	1	7	$30,000	Daylight	Dry	No	No
7	85590664	9/11/2017	Monday	4:05 PM	Rollover	Injury	0	2	$3,500	Daylight	Dry	No	No
8	87413913	10/4/2017	Wednesday	8:25 AM	Rear End	Property Damage Only	0	0	$1,500	Daylight	Dry	No	No
9	87141626	1/14/2018	Sunday	6:19 AM	Rollover	Property Damage Only	0	0	$10,000	Daylight	Dry	No	No
10	87158249	1/29/2018	Monday	8:54 AM	Rear End	Property Damage Only	0	0	$7,200	Daylight	Wet	No	No
11	87867268	9/12/2018	Wednesday	10:40 AM	Sideswipe	Property Damage Only	0	0	$3,000	Daylight	Dry	No	No
12	88097312	4/18/2019	Thursday	9:12 AM	Left Turn	Property Damage Only	0	0	$2,000	Daylight	Dry	No	No
13	88184112	9/25/2019	Wednesday	11:01 AM	Unknown	Property Damage Only	0	0	$4,000	Daylight	Dry	No	No
14	89391786	12/9/2019	Monday	4:45 PM	Rear End	Property Damage Only	0	0	$1,300	Daylight	Dry	No	No

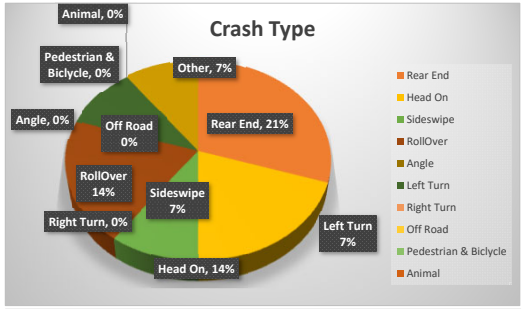
East Lake Pointe Drive to Nele Road/Tohopekaliga High School - Crash Data Summary

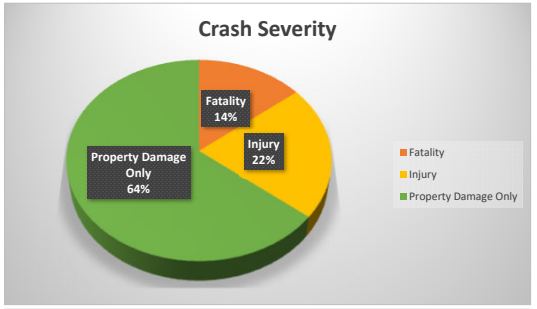
Crash Type	2015	2016	2017	2018	2019	Total	Proportion
Rear End	0	0	1	1	1	**3**	21%
Head On	1	0	1	0	0	**2**	14%
Sideswipe	0	0	0	1	0	**1**	7%
RollOver	0	0	1	1	0	**2**	14%
Angle	0	0	0	0	0	**0**	0%
Left Turn	0	0	0	0	1	**1**	7%
Right Turn	0	0	0	0	0	**0**	0%
Off Road	2	2	0	0	0	**4**	29%
Pedestrian & Biclycle	0	0	0	0	0	**0**	0%
Animal	0	0	0	0	0	**0**	0%
Other	0	0	0	0	1	**1**	7%
Total	**3**	**2**	**3**	**3**	**3**	**14**	100%

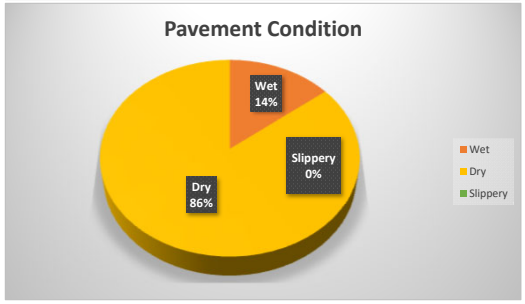
Crash Severity	2015	2016	2017	2018	2019	Total	Proportion
Fatality	0	1	1	0	0	**2**	14%
Injury	2	0	1	0	0	**3**	21%
Property Damage Only	1	1	1	3	3	**9**	64%
Total	**3**	**2**	**3**	**3**	**3**	**14**	100%

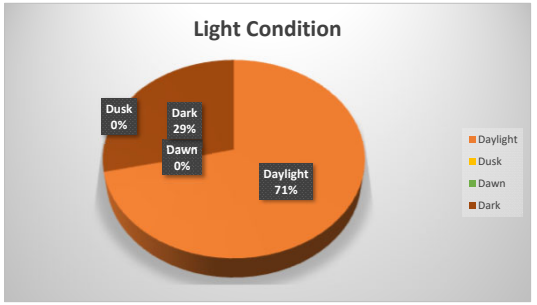
Pavement Condition	2015	2016	2017	2018	2019	Total	Proportion
Wet	1	0	0	1	0	**2**	14%
Dry	2	2	3	2	3	**12**	86%
Slippery	0	0	0	0	0	**0**	0%
Total	**3**	**2**	**3**	**3**	**3**	**14**	100%

Light Condition	2015	2016	2017	2018	2019	Total	Proportion
Daylight	1	0	3	3	3	**10**	71%
Dusk	0	0	0	0	0	**0**	0%
Dawn	0	0	0	0	0	**0**	0%
Dark	2	2	0	0	0	**4**	29%
Total	**3**	**2**	**3**	**3**	**3**	**14**	100%
Under the Influence	**2015**	**2016**	**2017**	**2018**	**2019**	**Total**	**Proportion**
Alcohol	0	1	0	0	0	**1**	7%
Drugs	0	1	0	0	0	**1**	7%
Total	**0**	**2**	**0**	**0**	**0**	**2**	14%









Nele Road/Tohopekaliga High School to Springlake Village Boulevard/Holiday Woods Drive - Crash Data Summary

No.	Crash ID	Date	Day	Time	Crash Type	Crash Severity	Fatalities	Injuries	Property Damage	Day/Night	Wet/Dry	Alcohol Related	Drug Related
1	85209659	11/21/2015	Saturday	10:45 PM	Left Turn	Injury	0	2	$12,500	Dark - Not Lighted	Wet	No	No
2	85253422	2/12/2016	Friday	6:34 AM	Rear End	Property Damage Only	0	0	$7,000	Dawn	Dry	No	No
3	85548362	7/17/2017	Monday	5:30 PM	Rear End	Property Damage Only	0	0	$550	Daylight	Wet	No	No
4	87132703	12/14/2017	Thursday	6:50 AM	Rear End	Property Damage Only	0	0	$4,000	Dawn	Dry	No	No
5	87265644	8/16/2018	Thursday	8:23 AM	Rear End	Property Damage Only	0	0	$4,000	Daylight	Dry	No	No
6	88015345	10/5/2018	Friday	6:30 AM	Rear End	Injury	0	2	$3,600	Dark - Lighted	Dry	No	No
7	88027922	10/23/2018	Tuesday	7:00 AM	Left Turn	Property Damage Only	0	0	$3,000	Dusk	Dry	No	No
8	87867625	1/17/2019	Thursday	2:32 PM	Rear End	Property Damage Only	0	0	$150	Daylight	Dry	No	No
9	88103711	4/29/2019	Monday	7:57 AM	Rear End	Injury	0	3	$19,000	Daylight	Dry	No	No
10	88178221	8/27/2019	Tuesday	7:40 AM	Rear End	Property Damage Only	0	0	$4,500	Daylight	Dry	No	No
11	88178223	8/30/2019	Friday	8:20 AM	Rear End	Injury	0	1	$8,000	Daylight	Dry	No	No
12	89087812	9/6/2019	Friday	5:07 PM	Rear End	Property Damage Only	0	0	$500	Daylight	Dry	No	No

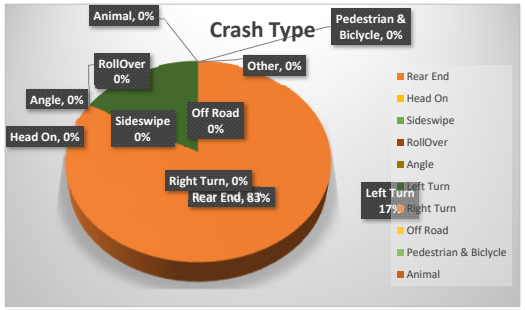
Nele Road/Tohopekaliga High School to Springlake Village Boulevard/Holiday Woods Drive - Crash Data Summary

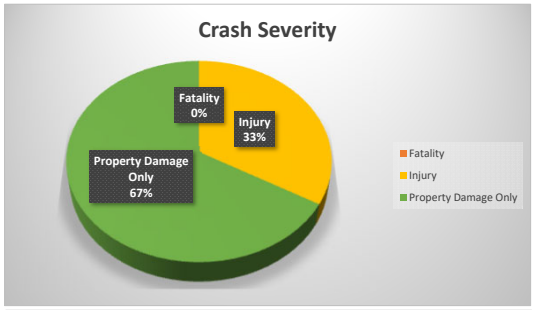
Crash Type	2015	2016	2017	2018	2019	Total	Proportion
Rear End	0	1	2	2	5	**10**	83%
Head On	0	0	0	0	0	**0**	0%
Sideswipe	0	0	0	0	0	**0**	0%
RollOver	0	0	0	0	0	**0**	0%
Angle	0	0	0	0	0	**0**	0%
Left Turn	1	0	0	1	0	**2**	17%
Right Turn	0	0	0	0	0	**0**	0%
Off Road	0	0	0	0	0	**0**	0%
Pedestrian & Biclycle	0	0	0	0	0	**0**	0%
Animal	0	0	0	0	0	**0**	0%
Other	0	0	0	0	0	**0**	0%
Total	**1**	**1**	**2**	**3**	**5**	**12**	100%

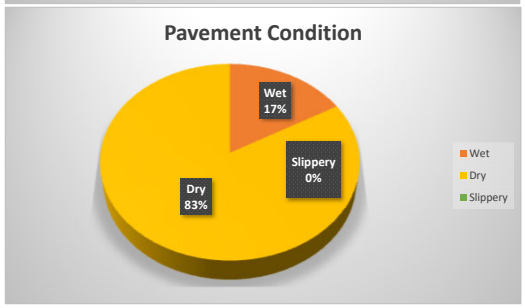
Crash Severity	2015	2016	2017	2018	2019	Total	Proportion
Fatality	0	0	0	0	0	**0**	0%
Injury	1	0	0	1	2	**4**	33%
Property Damage Only	0	1	2	2	3	**8**	67%
Total	**1**	**1**	**2**	**3**	**5**	**12**	100%

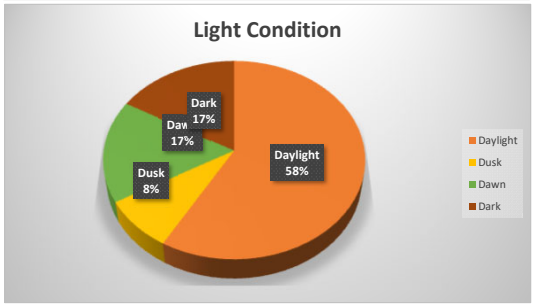
Pavement Condition	2015	2016	2017	2018	2019	Total	Proportion
Wet	1	0	1	0	0	**2**	17%
Dry	0	1	1	3	5	**10**	83%
Slippery	0	0	0	0	0	**0**	0%
Total	**1**	**1**	**2**	**3**	**5**	**12**	100%

Light Condition	2015	2016	2017	2018	2019	Total	Proportion
Daylight	0	0	1	1	5	**7**	58%
Dusk	0	0	0	1	0	**1**	8%
Dawn	0	1	1	0	0	**2**	17%
Dark	1	0	0	1	0	**2**	17%
Total	**1**	**1**	**2**	**3**	**5**	**12**	100%
Under the Influence	**2015**	**2016**	**2017**	**2018**	**2019**	**Total**	**Proportion**
Alcohol	0	0	0	0	0	**0**	0%
Drugs	0	0	0	0	0	**0**	0.00%
Total	**0**	**0**	**0**	**0**	**0**	**0**	0%









Springlake Village Boulevard/Holiday Woods Drive to Turnberry Boulevard/Austin Tindall Park - Crash Data Summary

No.	Crash ID	Date	Day	Time	Crash Type	Crash Severity	Fatalities	Injuries	Property Damage	Day/Night	Wet/Dry	Alcohol Related	Drug Related
1	87180923	4/27/2018	Friday	9:48 AM	Off Road	Property Damage Only	0	0	$6,000	Daylight	Dry	No	No
2	87226078	5/28/2018	Monday	2:58 PM	Other	Property Damage Only	0	0	$6,000	Daylight	Dry	No	No
3	85382822	9/1/2016	Thursday	8:28 AM	Left Turn	Property Damage Only	0	0	$10,000	Daylight	Dry	No	No
4	88198676	10/6/2019	Sunday	4:50 AM	Sideswipe	Injury	0	2	$500	Dark - Not Lighted	Dry	No	No

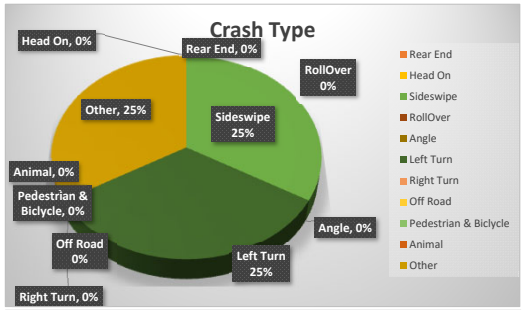
Springlake Village Boulevard/Holiday Woods Drive to Turnberry Boulevard/Austin Tindall Park - Crash Data Summary

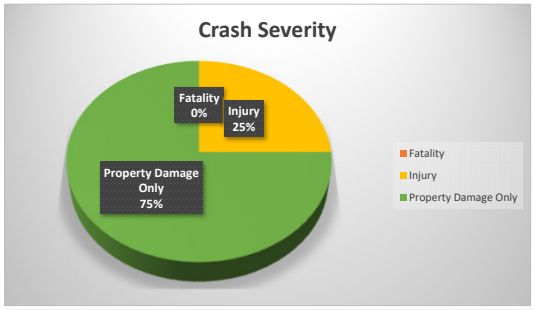
Crash Type	2015	2016	2017	2018	2019	Total	Proportion
Rear End	0	0	0	0	0	**0**	0%
Head On	0	0	0	0	0	**0**	0%
Sideswipe	0	0	0	0	1	**1**	25%
RollOver	0	0	0	0	0	**0**	0%
Angle	0	0	0	0	0	**0**	0%
Left Turn	0	1	0	0	0	**1**	25%
Right Turn	0	0	0	0	0	**0**	0%
Off Road	0	0	0	1	0	**1**	25%
Pedestrian & Biclycle	0	0	0	0	0	**0**	0%
Animal	0	0	0	0	0	**0**	0%
Other	0	0	0	1	0	**1**	25%
Total	**0**	**1**	**0**	**2**	**1**	**4**	100%

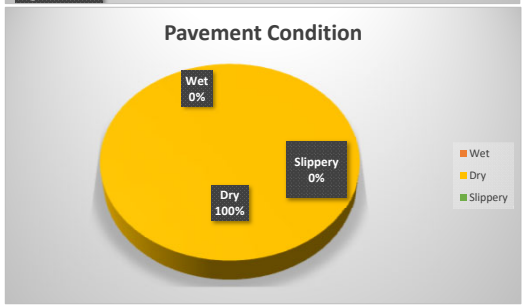
Crash Severity	2015	2016	2017	2018	2019	Total	Proportion
Fatality	0	0	0	0	0	**0**	0%
Injury	0	0	0	0	1	**1**	25%
Property Damage Only	0	1	0	2	0	**3**	75%
Total	**0**	**1**	**0**	**2**	**1**	**4**	100%

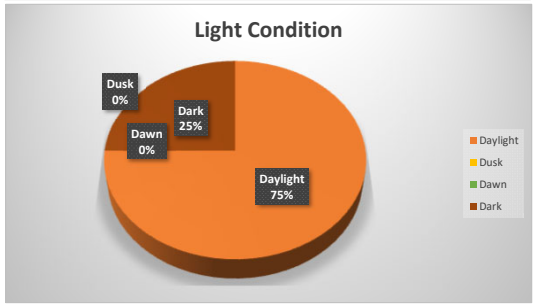
Pavement Condition	2015	2016	2017	2018	2019	Total	Proportion
Wet	0	0	0	0	0	**0**	0%
Dry	0	1	0	2	1	**4**	100%
Slippery	0	0	0	0	0	**0**	0%
Total	**0**	**1**	**0**	**2**	**1**	**4**	100%

Light Condition	2015	2016	2017	2018	2019	Total	Proportion
Daylight	0	1	0	2	0	**3**	75%
Dusk	0	0	0	0	0	**0**	0%
Dawn	0	0	0	0	0	**0**	0%
Dark	0	0	0	0	1	**1**	25%
Total	**0**	**1**	**0**	**2**	**1**	**4**	100%
Under the Influence	**2015**	**2016**	**2017**	**2018**	**2019**	**Total**	**Proportion**
Alcohol	0	0	0	0	0	**0**	0%
Drugs	0	0	0	0	0	**0**	0.00%
Total	**0**	**0**	**0**	**0**	**0**	**0**	0%









Turnberry Boulevard/Austin Tindall Park to North Pointe Boulevard - Crash Data Summary

No.	Crash ID	Date	Day	Time	Crash Type	Crash Severity	Fatalities	Injuries	Property Damage	Day/Night	Wet/Dry	Alcohol Related	Drug Related
1	87166885	1/27/2018	Saturday	10:20 PM	Other	Property Damage Only	0	0	$42,500	Dark - Lighted	Dry	No	No
2													
3													
4													
5													
6													
7													
8													

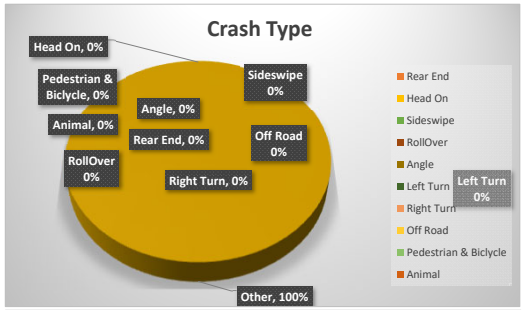
Turnberry Boulevard/Austin Tindall Park to North Pointe Boulevard - Crash Data Summary

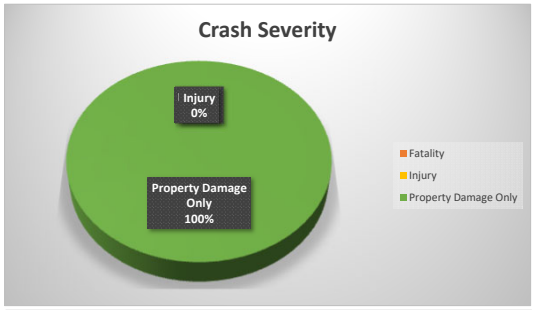
Crash Type	2015	2016	2017	2018	2019	Total	Proportion
Rear End	0	0	0	0	0	**0**	0%
Head On	0	0	0	0	0	**0**	0%
Sideswipe	0	0	0	0	0	**0**	0%
RollOver	0	0	0	0	0	**0**	0%
Angle	0	0	0	0	0	**0**	0%
Left Turn	0	0	0	0	0	**0**	0%
Right Turn	0	0	0	0	0	**0**	0%
Off Road	0	0	0	0	0	**0**	0%
Pedestrian & Biclycle	0	0	0	0	0	**0**	0%
Animal	0	0	0	0	0	**0**	0%
Other	0	0	0	1	0	**1**	100%
Total	**0**	**0**	**0**	**1**	**0**	**1**	100%

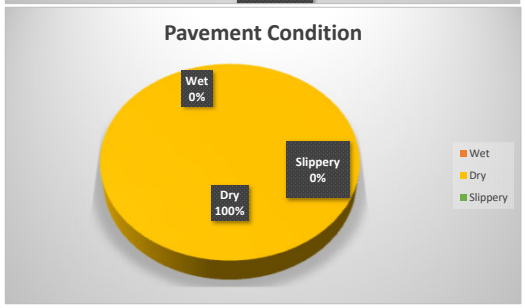
Crash Severity	2015	2016	2017	2018	2019	Total	Proportion
Fatality	0	0	0	0	0	**0**	0%
Injury	0	0	0	0	0	**0**	0%
Property Damage Only	0	0	0	1	0	**1**	100%
Total	**0**	**0**	**0**	**1**	**0**	**1**	100%

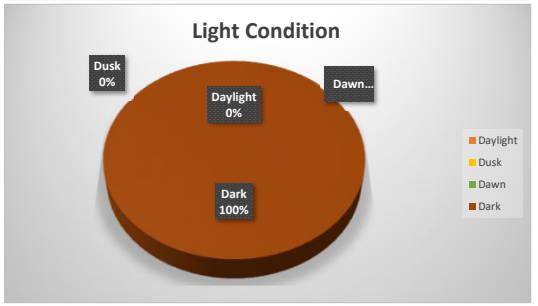
Pavement Condition	2015	2016	2017	2018	2019	Total	Proportion
Wet	0	0	0	0	0	**0**	0%
Dry	0	0	0	1	0	**1**	100%
Slippery	0	0	0	0	0	**0**	0%
Total	**0**	**0**	**0**	**1**	**0**	**1**	100%

Light Condition	2015	2016	2017	2018	2019	Total	Proportion
Daylight	0	0	0	0	0	**0**	0%
Dusk	0	0	0	0	0	**0**	0%
Dawn	0	0	0	0	0	**0**	0%
Dark	0	0	0	1	0	**1**	100%
Total	**0**	**0**	**0**	**1**	**0**	**1**	100%
Under the Influence	**2015**	**2016**	**2017**	**2018**	**2019**	**Total**	**Proportion**
Alcohol	0	0	0	0	0	**0**	0%
Drugs	0	0	0	0	0	**0**	0.00%
Total	**0**	**0**	**0**	**0**	**0**	**0**	0%









North Pointe Boulevard to Timber Lane/Creek Bank Drive - Crash Data Summary

No.	Crash ID	Date	Day	Time	Crash Type	Crash Severity	Fatalities	Injuries	Property Damage	Day/Night	Wet/Dry	Alcohol Related	Drug Related
1	85164431	10/19/2015	Monday	10:20 PM	Off Road	Property Damage Only	0	0	$4,800	Dark - Not Lighted	Dry	No	No
2	85312192	5/2/2016	Monday	1:15 PM	Rear End	Injury	0	1	$18,500	Daylight	Dry	No	No
3	85469623	2/7/2017	Tuesday	10:10 AM	Other	Property Damage Only	0	0	$2,250	Daylight	Dry	No	No
4	85544496	6/18/2017	Sunday	11:55 PM	Other	Injury	0	1	$15,000	Dark - Not Lighted	Dry	No	No
5	87414135	12/10/2017	Sunday	10:55 PM	Other	Injury	0	1	$8,000	Dark - Not Lighted	Dry	No	No
6	87151472	1/12/2018	Friday	2:25 PM	Rear End	Injury	0	1	$5,500	Daylight	Dry	No	No
7	87414542	3/17/2018	Saturday	8:11 PM	Head On	Property Damage Only	0	0	$11,000	Dark - Lighted	Dry	Yes	No
8	89087120	4/2/2019	Tuesday	3:44 PM	Off Road	Property Damage Only	0	0	$500	Daylight	Dry	No	No
9	88155361	6/11/2019	Tuesday	2:20 AM	Off Road	Injury	0	1	$5,750	Dark - Not Lighted	Dry	No	No
10	85213203	10/21/2015	Wednesday	9:03 AM	Other	Injury	0	1	$29,000	Daylight	Dry	No	No
11	85218416	12/10/2015	Thursday	6:37 AM	Rollover	Injury	0	2	$6,000	Daylight	Dry	No	No

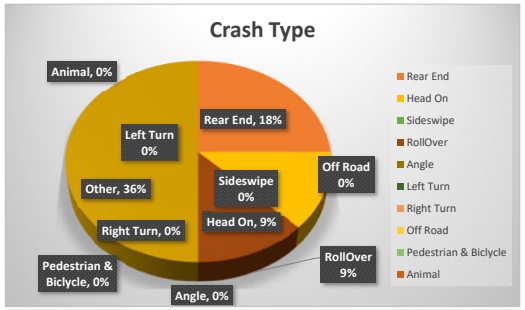
North Pointe Boulevard to Timber Lane/Creek Bank Drive - Crash Data Summary

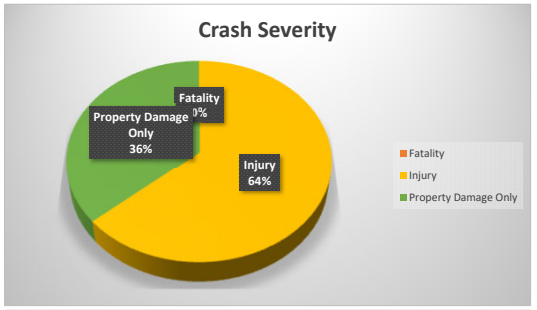
Crash Type	2015	2016	2017	2018	2019	Total	Proportion
Rear End	0	1	0	1	0	**2**	18%
Head On	0	0	0	1	0	**1**	9%
Sideswipe	0	0	0	0	0	**0**	0%
RollOver	1	0	0	0	0	**1**	9%
Angle	0	0	0	0	0	**0**	0%
Left Turn	0	0	0	0	0	**0**	0%
Right Turn	0	0	0	0	0	**0**	0%
Off Road	1	0	0	0	2	**3**	27%
Pedestrian & Biclycle	0	0	0	0	0	**0**	0%
Animal	0	0	0	0	0	**0**	0%
Other	1	0	3	0	0	**4**	36%
Total	**3**	**1**	**3**	**2**	**2**	**11**	100%

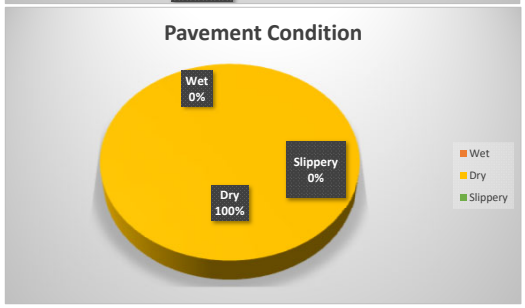
Crash Severity	2015	2016	2017	2018	2019	Total	Proportion
Fatality	0	0	0	0	0	**0**	0%
Injury	2	1	2	1	1	**7**	64%
Property Damage Only	1	0	1	1	1	**4**	36%
Total	**3**	**1**	**3**	**2**	**2**	**11**	100%

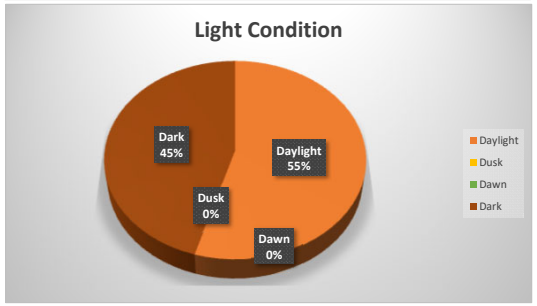
Pavement Condition	2015	2016	2017	2018	2019	Total	Proportion
Wet	0	0	0	0	0	**0**	0%
Dry	3	1	3	2	2	**11**	100%
Slippery	0	0	0	0	0	**0**	0%
Total	**3**	**1**	**3**	**2**	**2**	**11**	100%

Light Condition	2015	2016	2017	2018	2019	Total	Proportion
Daylight	2	1	1	1	1	**6**	55%
Dusk	0	0	0	0	0	**0**	0%
Dawn	0	0	0	0	0	**0**	0%
Dark	1	0	2	1	1	**5**	45%
Total	**3**	**1**	**3**	**2**	**2**	**11**	100%
Under the Influence	**2015**	**2016**	**2017**	**2018**	**2019**	**Total**	**Proportion**
Alcohol	0	0	0	1	0	**1**	9%
Drugs	0	0	0	0	0	**0**	0.00%
Total	**0**	**0**	**0**	**1**	**0**	**1**	9%









Timber Lane/Creek Bank Drive to Fells Cove Boulevard - Crash Data Summary

No.	Crash ID	Date	Day	Time	Crash Type	Crash Severity	Fatalities	Injuries	Property Damage	Day/Night	Wet/Dry	Alcohol Related	Drug Related
1	84875486	5/2/2015	Saturday	5:09 AM	Pedestrian	Injury	0	1	$2,500	Dawn	Dry	No	No
2	85139112	6/21/2015	Sunday	6:39 AM	Off Road	Injury	0	1	$10,000	Daylight	Dry	No	No
3	85127208	7/1/2015	Wednesday	5:53 AM	Rollover	Injury	0	2	$7,000	Dawn	Dry	No	No
4	85285892	3/12/2016	Saturday	7:55 AM	Other	Property Damage Only	0	0	$4,500	Daylight	Dry	No	No
5	85281759	4/11/2016	Monday	5:00 AM	Pedestrian	Injury	0	1	$0	Dark - Not Lighted	Dry	No	No
6	85384733	9/16/2016	Friday	9:52 PM	Head On	Fatality	1	3	$30,000	Dark - Not Lighted	Dry	No	No
7	86736281	10/17/2016	Monday	12:44 PM	Rear End	Property Damage Only	0	0	$0	Daylight	Dry	No	No
8	85384773	10/20/2016	Thursday	9:00 AM	Off Road	Property Damage Only	0	0	$3,250	Daylight	Dry	No	No
9	85420817	11/10/2016	Thursday	6:54 AM	Rear End	Property Damage Only	0	0	$700	Dawn	Dry	No	No
10	85477994	2/14/2017	Tuesday	8:35 AM	Sideswipe	Injury	0	3	$15,200	Daylight	Dry	No	No
11	85489884	3/8/2017	Wednesday	7:00 PM	Rear End	Property Damage Only	0	0	$14,000	Dark - Not Lighted	Dry	No	No
12	85545085	6/23/2017	Friday	3:47 PM	Rear End	Property Damage Only	0	0	$8,000	Daylight	Dry	No	No
13	85545098	6/26/2017	Monday	3:45 PM	Rear End	Injury	0	1	$5,500	Daylight	Wet	No	No
14	85545766	6/28/2017	Wednesday	1:45 PM	Sideswipe	Property Damage Only	0	0	$200	Daylight	Dry	No	No
15	85591368	10/14/2017	Saturday	6:53 AM	Off Road	Property Damage Only	0	0	$2,500	Dark - Not Lighted	Wet	No	No
16	85599417	10/17/2017	Tuesday	8:10 AM	Left Turn	Injury	0	3	$7,000	Daylight	Dry	No	No
17	87166714	3/9/2018	Friday	3:00 PM	Rear End	Property Damage Only	0	0	$3,500	Daylight	Dry	No	No
18	87166943	4/7/2018	Saturday	8:25 AM	Rear End	Property Damage Only	0	0	$20,000	Daylight	Dry	No	No
19	87201776	4/12/2018	Thursday	10:35 AM	Rear End	Injury	0	4	$19,000	Daylight	Dry	No	No
20	87254634	8/16/2018	Thursday	7:45 AM	Left Turn	Injury	0	1	$7,500	Daylight	Dry	No	No
21	87273899	8/31/2018	Friday	2:58 AM	Off Road	Injury	0	1	$2,000	Dark - Not Lighted	Dry	No	No
22	88140708	6/19/2019	Wednesday	6:26 AM	Off Road	Injury	0	1	$20,000	Dawn	Dry	No	No
23	88167348	7/1/2019	Monday	1:55 PM	Sideswipe	Injury	0	6	$11,000	Daylight	Dry	No	No
24	88155407	7/14/2019	Sunday	12:20 AM	Off Road	Property Damage Only	0	0	$1,550	Dark - Not Lighted	Dry	No	No
25	88184116	9/27/2019	Friday	8:15 AM	Off Road	Injury	0	1	$10,000	Dawn	Dry	No	No
26	88221168	10/11/2019	Friday	10:15 AM	Sideswipe	Injury	0	1	$9,050	Daylight	Dry	No	No
27	88211454	10/25/2019	Friday	8:00 PM	Rear End	Fatality	1	3	$15,500	Dark - Not Lighted	Wet	No	No

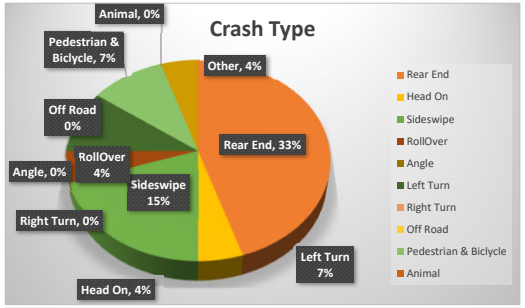
Timber Lane/Creek Bank Drive to Fells Cove Boulevard - Crash Data Summary

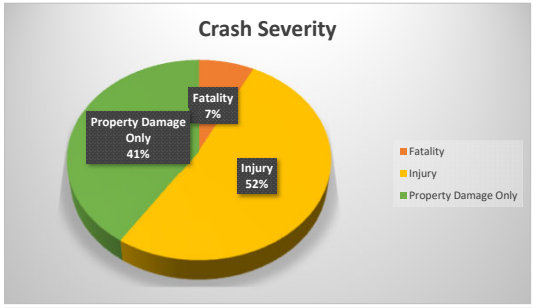
Crash Type	2015	2016	2017	2018	2019	Total	Proportion
Rear End	0	2	3	3	1	**9**	33%
Head On	0	1	0	0	0	**1**	4%
Sideswipe	0	0	2	0	2	**4**	15%
RollOver	1	0	0	0	0	**1**	4%
Angle	0	0	0	0	0	**0**	0%
Left Turn	0	0	1	1	0	**2**	7%
Right Turn	0	0	0	0	0	**0**	0%
Off Road	1	1	1	1	3	**7**	26%
Pedestrian & Biclycle	1	1	0	0	0	**2**	7%
Animal	0	0	0	0	0	**0**	0%
Other	0	1	0	0	0	**1**	4%
Total	**3**	**6**	**7**	**5**	**6**	**27**	100%

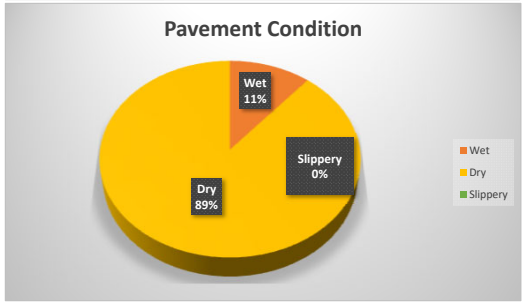
Crash Severity	2015	2016	2017	2018	2019	Total	Proportion
Fatality	0	1	0	0	1	**2**	7%
Injury	3	1	3	3	4	**14**	52%
Property Damage Only	0	4	4	2	1	**11**	41%
Total	**3**	**6**	**7**	**5**	**6**	**27**	100%

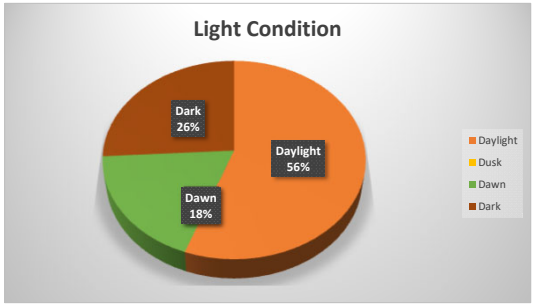
Pavement Condition	2015	2016	2017	2018	2019	Total	Proportion
Wet	0	0	2	0	1	**3**	11%
Dry	3	6	5	5	5	**24**	89%
Slippery	0	0	0	0	0	**0**	0%
Total	**3**	**6**	**7**	**5**	**6**	**27**	100%

Light Condition	2015	2016	2017	2018	2019	Total	Proportion
Daylight	1	3	5	4	2	**15**	56%
Dusk	0	0	0	0	0	**0**	0%
Dawn	2	1	0	0	2	**5**	19%
Dark	0	2	2	1	2	**7**	26%
Total	**3**	**6**	**7**	**5**	**6**	**27**	100%
Under the Influence	**2015**	**2016**	**2017**	**2018**	**2019**	**Total**	**Proportion**
Alcohol	0	0	0	0	0	**0**	0%
Drugs	0	0	0	0	0	**0**	0.00%
Total	**0**	**0**	**0**	**0**	**0**	**0**	0%









Simpson Road to Narcoossee Rd - Crash Data Summary

No.	Crash ID	Date	Day	Time	Crash Type	Crash Severity	Fatalities	Injuries	Property Damage	Day/Night	Wet/Dry	Alcohol Related	Drug Related
1	85270369	2/19/2016	Friday	10:08 PM	Left Turn	Injury	0	1	$21,000	Dark - Not Lighted	Dry	No	No
2	85525303	5/22/2017	Monday	4:20 PM	Other	Injury	0	5	$24,000	Daylight	Dry	No	No
3	85561339	8/21/2017	Monday	6:27 AM	Rear End	Property Damage Only	0	0	$9,000	Daylight	Dry	No	No
4	87115840	11/15/2017	Wednesday	2:45 PM	Angle	Injury	0	3	$5,500	Daylight	Dry	No	No
5	87158272	3/1/2018	Thursday	6:59 AM	Rear End	Property Damage Only	0	0	$600	Daylight	Dry	No	No
6	87288662	9/20/2018	Thursday	6:08 AM	Left Turn	Injury	0	2	$5,200	Dark - Not Lighted	Dry	No	No
7	88169489	7/12/2019	Friday	2:43 PM	Rear End	Injury	0	4	$7,600	Daylight	Dry	No	No
8	83385446	4/22/2015	Wednesday	4:47 PM	Other	Property Damage Only	0	0	$0	Daylight	Dry	No	No
9	85374087	8/20/2016	Saturday	11:15 AM	Rear End	Property Damage Only	0	0	$300	Daylight	Dry	No	No
10	85491371	4/13/2017	Thursday	8:32 PM	Rear End	Property Damage Only	0	0	$6,500	Dark - Not Lighted	Dry	No	No
11	85565171	7/16/2017	Sunday	1:42 PM	Rear End	Injury	0	3	$7,000	Daylight	Dry	No	No
12	87191353	4/12/2018	Thursday	9:27 PM	Off Road	Property Damage Only	0	0	$100	Dark - Lighted	Dry	No	No

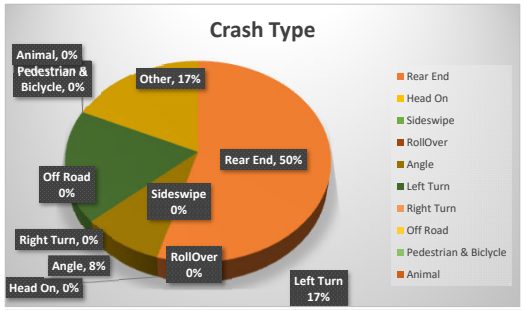
Simpson Road to Narcoossee Rd - Crash Data Summary

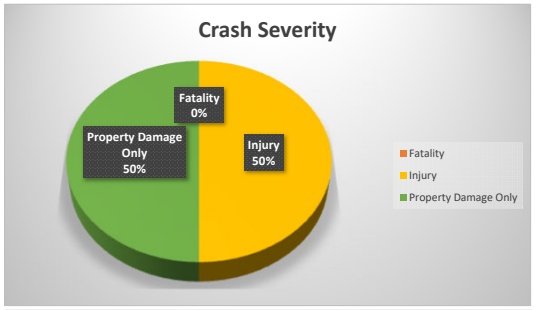
Crash Type	2015	2016	2017	2018	2019	Total	Proportion
Rear End	0	1	3	1	1	**6**	50%
Head On	0	0	0	0	0	**0**	0%
Sideswipe	0	0	0	0	0	**0**	0%
RollOver	0	0	0	0	0	**0**	0%
Angle	0	0	1	0	0	**1**	8%
Left Turn	0	1	0	1	0	**2**	17%
Right Turn	0	0	0	0	0	**0**	0%
Off Road	0	0	0	1	0	**1**	8%
Pedestrian & Biclycle	0	0	0	0	0	**0**	0%
Animal	0	0	0	0	0	**0**	0%
Other	1	0	1	0	0	**2**	17%
Total	**1**	**2**	**5**	**3**	**1**	**12**	100%

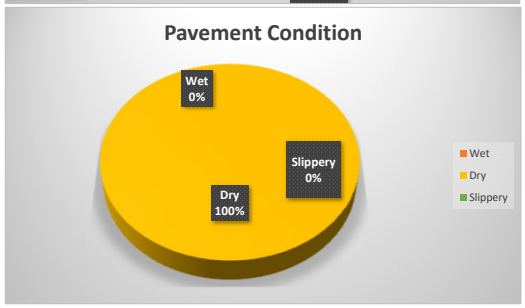
Crash Severity	2015	2016	2017	2018	2019	Total	Proportion
Fatality	0	0	0	0	0	**0**	0%
Injury	0	1	3	1	1	**6**	50%
Property Damage Only	1	1	2	2	0	**6**	50%
Total	**1**	**2**	**5**	**3**	**1**	**12**	100%

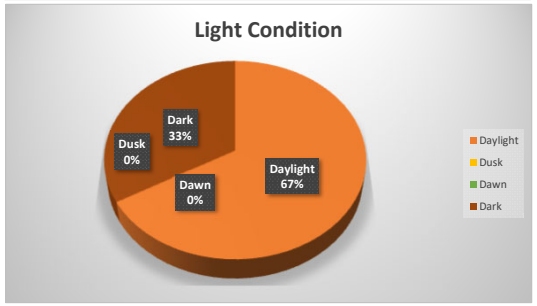
Pavement Condition	2015	2016	2017	2018	2019	Total	Proportion
Wet	0	0	0	0	0	**0**	0%
Dry	1	2	5	3	1	**12**	100%
Slippery	0	0	0	0	0	**0**	0%
Total	**1**	**2**	**5**	**3**	**1**	**12**	100%

Light Condition	2015	2016	2017	2018	2019	Total	Proportion
Daylight	1	1	4	1	1	**8**	67%
Dusk	0	0	0	0	0	**0**	0%
Dawn	0	0	0	0	0	**0**	0%
Dark	0	1	1	2	0	**4**	33%
Total	**1**	**2**	**5**	**3**	**1**	**12**	100%
Under the Influence	**2015**	**2016**	**2017**	**2018**	**2019**	**Total**	**Proportion**
Alcohol	0	0	0	0	0	**0**	0%
Drugs	0	0	0	0	0	**0**	0.00%
Total	**0**	**0**	**0**	**0**	**0**	**0**	0%









Appendix F

Model Validation Information & Model Plots

Table 1
Boggy Creek PTAR Study
- Year 2019 Validation Link Report

Roadway Name	from	to	Year 2019 AADT Count	Facility Type Before	2019 Model AADT Before Validation Total	Facility Type After	2019 Model AADT After Validation Total	Volume / Count (Before)	Volume / Count (After)
SR 417	Narcoossee Rd	Lake Nona Blvd	67,680	93	40,891	93	72,859	0.60	1.08
SR 417	Lake Nona Blvd	Boggy Creek Rd	68,540	93	52,513	93	74,698	0.77	1.09
SR 417	Boggy Creek Rd	Landstar Blvd	84,070	93	19,429	93	82,313	0.23	0.98
Boggy Creek Rd	Austin Tydell Park	Narcoossee Rd	15,334	43	12,463	41	14,483	0.81	0.94
Boggy Creek Rd	Boggy Creek Rd (West)/Simpson Rd	Austin Tindall Park	18,581	43	13,688	41	18,736	0.74	1.01
Boggy Creek Rd	Lake Nona Blvd	Boggy Creek Rd (East)/Simpson Rd	31,712	46	23,486	41	35,048	0.74	1.11
Boggy Creek Rd	SR 417	Lake Nona Blvd	37,150	46	30,230	41	40,435	0.81	1.09
Narcoossee Rd	North of Tavistock Lake Rd		39,500	23	43,481	23	33,481	1.10	0.85
Narcoossee Rd	North of Boggy Creek Rd		32,694	23	46,151	23	34,322	1.41	1.05
Narcoossee Rd	South of Boggy Creek Rd		35,090	22	45,778	22	42,255	1.30	1.20
Simpson Rd	Boggy Creek Rd	Osceola Pkwy	27,589	41	33,262	41	27,558	1.21	1.00
Simpson Rd	Osceola Pkwy	Buenaventura Blvd	25,657	41	24,396	41	23,380	0.95	0.91
Simpson Rd	West of Buenaventura Blvd		41,751	41	38,711	41	40,045	0.93	0.96
E Osceola Pkway	Buenaventura Blvd	Simpson Rd	21,500	23	21,040	21	21,399	0.98	1.00
Lake Nona Blvd	West of Boggy Creek Rd		7,000	41	12,197	26	7,972	1.74	1.14
Lake Nona Blvd	East of Boggy Creek Rd		11,096		0	26	13,826	0.00	1.25
Lake Nona Blvd	North of Tavistock Lake Rd		19,860	41	16,186	41	14,168	0.81	0.71
Lake Nona Blvd	North of SR 417		8,470	41	2,690	41	7,098	0.32	0.84
Tavistock Lake Rd	West of Narcoossee Rd		9,388	41	11,366	41	7,921	1.21	0.84
SR 417 EB ON from Boggy Creek Rd			4,900	97	10,239	71	4,190	2.09	0.86
SR 417 EB OFF to Boggy Creek Rd			2,900	71	88	71	1,015	0.03	0.35
SR 417 WB ON from Boggy Creek Rd			4,100	71	6	71	1,202	0.00	0.29
SR 417 WB OFF to Boggy Creek Rd			5,100	97	11,629	71	6,021	2.28	1.18
Total			**619,662**		**509,919**		**624,425**		
MOCF Factors									
2019 Osceola Cty	0.97								
2019 Orange Cty	0.98								
'Reference Only									


Legend
Study Area
CFRPM6_TAZ
968
972
975
978
979
980
985
992
967
973
986
998
976
987
993
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1302
1303
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1132

APPENDIX B

Base Year 2019 Model Validation - Land Uses Changes

CFRPM61	Year 2019 (interpolated)									
zones	SF	SF POP	MF	MF POP	Hotel	Hotel P	IND	COM	SER	Sch
982	2	3	1	2	72	152	11	92	697	0
983	85	222	3	6	0	0	1	1	2	0
988	825	1753	682	1458	87	182	0	88	1018	2613
1077	614	1304	409	874	0	0	5	37	851	1099
989	125	265	103	221	0	0	0	78	249	68
Total	1564	3322	1194	2553	87	182	5	203	2118	3780
986	38	73	30	64	77	163	7	0	8	0
987	259	650	418	841	0	0	1	48	0	0
1072	3603	9891	740	1674	0	0	29	209	665	1380
1300	486	1020	45	153	0	0	25	23	39	28
1134	485	1019	0	0	24	50	25	22	36	25
1135	1377	2907	0	0	0	0	28	24	56	208
1131	1096	2795	236	588	16	34	31	111	171	856
1297	1070	2781	237	555	16	34	13	54	195	138
1298	1070	2781	237	587	17	34	63	98	201	238
Total	3236	8357	710	1730	49	102	107	263	567	1232
1299	256	666	31	97	0	0	49	88	304	337
1130	1024	2662	26	83	0	0	49	111	511	675
1129	2773	8245	3	8	0	0	42	315	396	226
1136	1125	2869	22	72	0	0	18	7	310	1254
1137	115	318	6	20	0	0	45	146	254	377

CFRPM7	Year 2015										
zones	SF	SF POP	MF	MF POP	Hotel	Hotel P	IND	COM	SER	Total Emp	Sch
4793	0	0	0	0	204	166	0	0	84	84	0
4812	0	0	0	0	0	0	0	0	0	0	0
4802	76	222	19	31	0	0	10	9	92	111	0
Total	76	222	19	31	204	166	10	9	176	195	0
4805	0	0	0	0	0	0	0	0	0	0	0
4816	0	0	0	0	0	0	7	0	114	121	2266
4819	374	1091	202	332	0	0	0	0	0	0	0
4828	0	0	0	0	0	0	12	177	70	259	1568
4806	77	225	0	0	0	0	0	2	1213	1215	0
4801	0	0	0	0	0	0	0	0	0	0	0
4807	0	0	0	0	0	0	0	0	0	0	0
4826	238	695	84	138	0	0	13	0	21		
Total	689	2011	286	470	0	0	32	179	1418	1595	3834
4777	8	23	0	0	0	0	18	5	488	511	0
4792	620	1809	1044	1717	0	0	4	0	37	41	0
4744	147	482	246	702	2	2	13	26	49	88	0
4745	53	61	0	0	0	0	4	2	14	20	0
4759	241	921	0	0	0	0	0	0	10	10	0
4763	747	2855	0	0	8	7	16	6	9	31	0
4765	174	665	0	0	0	0	0	0	6	6	0
4767	327	1182	122	404	0	0	0	6	4	10	0
4772	478	1827	0	0	0	0	6	10	132	148	856
4778	0	0	0	0	0	0	0	0	0	0	0
4784	708	2706	129	463	0	0	1	3	107	111	0
Total	2875	10699	497	1569	10	9	40	53	331	424	856
5232	849	2292	145	339	0	0	19	30	71	120	0
5228	289	708	46	108	24	18	6	12	41	59	0
5261	102	275	23	54	0	0	12	10	22	44	0
Total	391	983	69	162	24	18	18	22	63	103	0
5264	36	97	23	54	0	0	0	0	0	0	0
5281	1078	2911	0	0	0	0	18	9	47	74	1013
5308	38	103	387	905	0	0	10	0	7	17	0
Total	1152	3111	410	959	0	0	28	9	54	91	1013
5345	1906	4670	0	0	25	18	24	52	217	293	960
5290	146	358	16	26	1	1	10	36	207	253	30
5320	1010	2474	0	0	1	1	11	4	177	192	0
5335	608	1642	1	3	1	1	6	2	31	39	0
Total	3670	9144	17	29	28	21	51	94	632	777	990
5315	375	1013	2	5	23	17	0	5	17	22	0
5352	463	1250	0	0	0	0	3	0	2	5	0
5372	575	1552	0	0	5	4	6	35	51	92	0
5382	73	197	0	0	0	0	0	0	0	0	0
Total	1111	2999	0	0	5	4	9	35	53	97	0
5357	1514	3709	0	0	3	2	28	50	420	498	760
5370	368	902	0	0	0	0	5	3	11	19	0
Total	1882	4611	0	0	3	2	33	53	431	517	760
5207	916	2402	141	259	0	0	118	7	28	153	1885
5185	239	627	48	88	0	0	18	15	281	314	0
Total	1155	3029	189	347	0	0	136	22	309	467	1885
5227	1	2	1	2	0	0	0	0	0	0	0
5238	105	245	0	0	0	0	9	1	6	16	0
Total	106	247	1	2	0	0	9	1	6	16	

CFRPM61	Year 2019 (interpolated)									
zones	SF	SF POP	MF	MF POP	Hotel	Hotel P	IND	COM	SER	Total
982					204	166				
983			19	31			10	9	92	111
988										
1077										
989										
986							18	5	488	511
987	620	1809	1044	1717						
1072										
1300	849	2292	145	339			19	30	71	
1134									63	110
1288										
1131	1530	3582								
1297										
1298										
1299	375	1013								
1130	1111	2999								
1129										
1136										
1137							9	1	6	

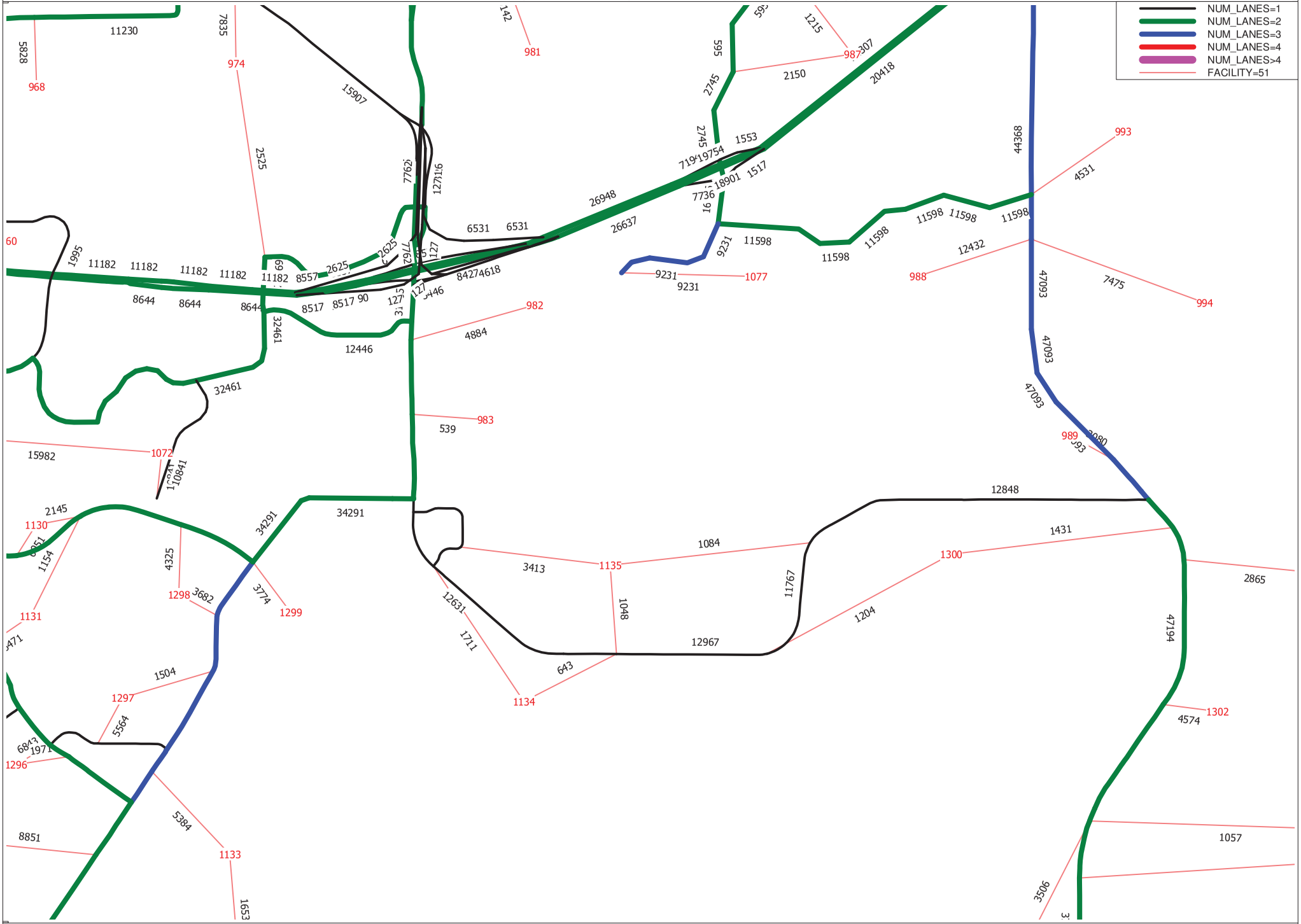
APPENDIX B
Base Year 2019 Model Validation - Land Uses Changes

CFRPM61 zones	Year 2019 (interpolated) SF	SF POP	MF	MF POP	Hotel	Hotel P	IND	COM	SER	Sch
1302	300	830	7	22	0	0	122	177	360	660
1133	828	2105	35	94	0	0	110	247	220	
1301	1133	2674	761	2537	181	389	185	817	484	1488

CFRPM7 zones	Year 2015 SF	SF POP	MF	MF POP	Hotel	Hotel P	IND	COM	SER	Total Emp	Sch
5200	379	883	15	33	0	0	17	2	19	38	0
5236	721	1948	8	18	1	1	29	127	304	460	141
5219	0	0	0	0	0	0	0	0	0	0	0
5193	0	0	0	0	0	0	2	0	0	2	0
5166	0	0	0	0	0	0	0	0	0	0	0
5175	0	0	0	0	0	0	1	0	0	1	0
Total	0	0	0	0	0	0	3	0	0	3	0

CFRPM61 zones	Year 2019 (interpolated) SF	SF POP	MF	MF POP	Hotel	Hotel P	IND	COM	SER	Total
1302										
1133									304	661
1301	0	0	0	0	0	0	0	0	0	0

CFRPM61 Total Traffic Volumes (Before Validation) - Year 2019 Boggy Creek Rd Study Base Year Validation



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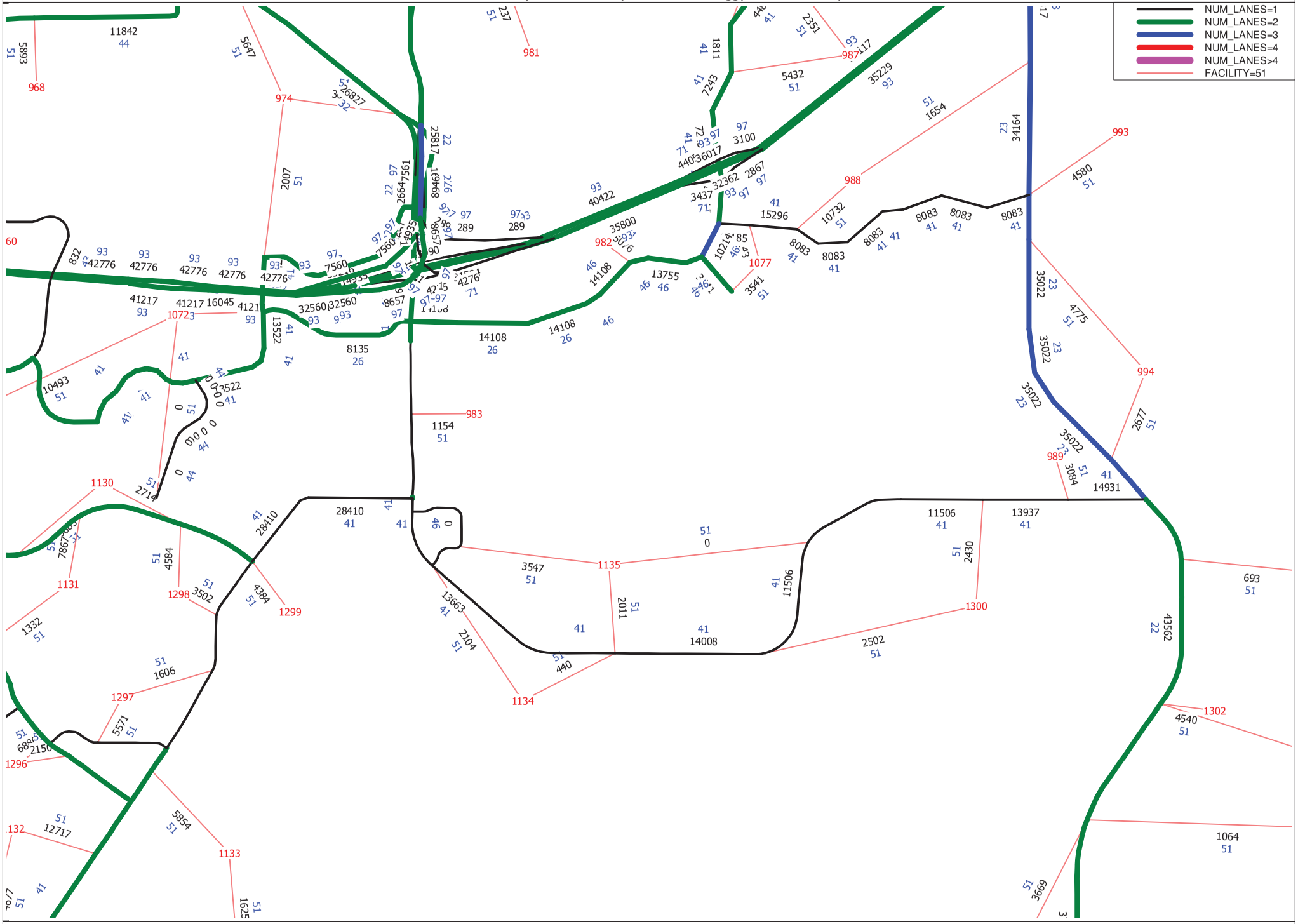
cube

CFRPM61 Total Traffic Volumes (After Validation) - Year 2019 Boggy Creek Rd Study Base Year Validation



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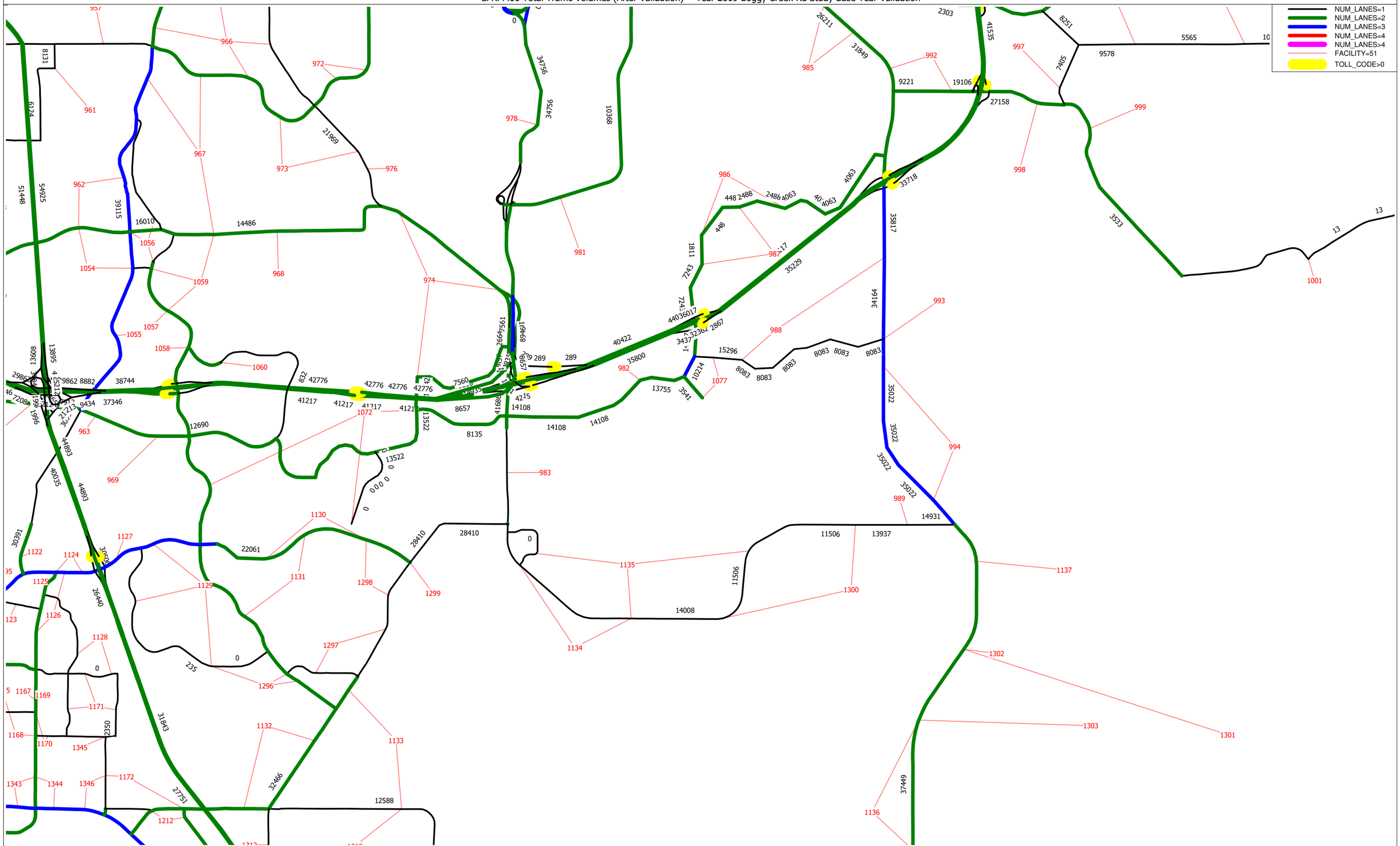
cube

CFRPM61 Total Traffic Volumes (After Validation) - Year 2019 Boggy Creek Rd Study Base Year Validation



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Appendix F

2040 Model Plots

CFRPM61 CF 2040 - Total Traffic Volumes PSWADT - No Build Scenario

NUM_LANES=1
NUM_LANES=2
NUM_LANES=3
NUM_LANES=4
NUM_LANES>4
FACILITY=51
TOLL_CODE>0

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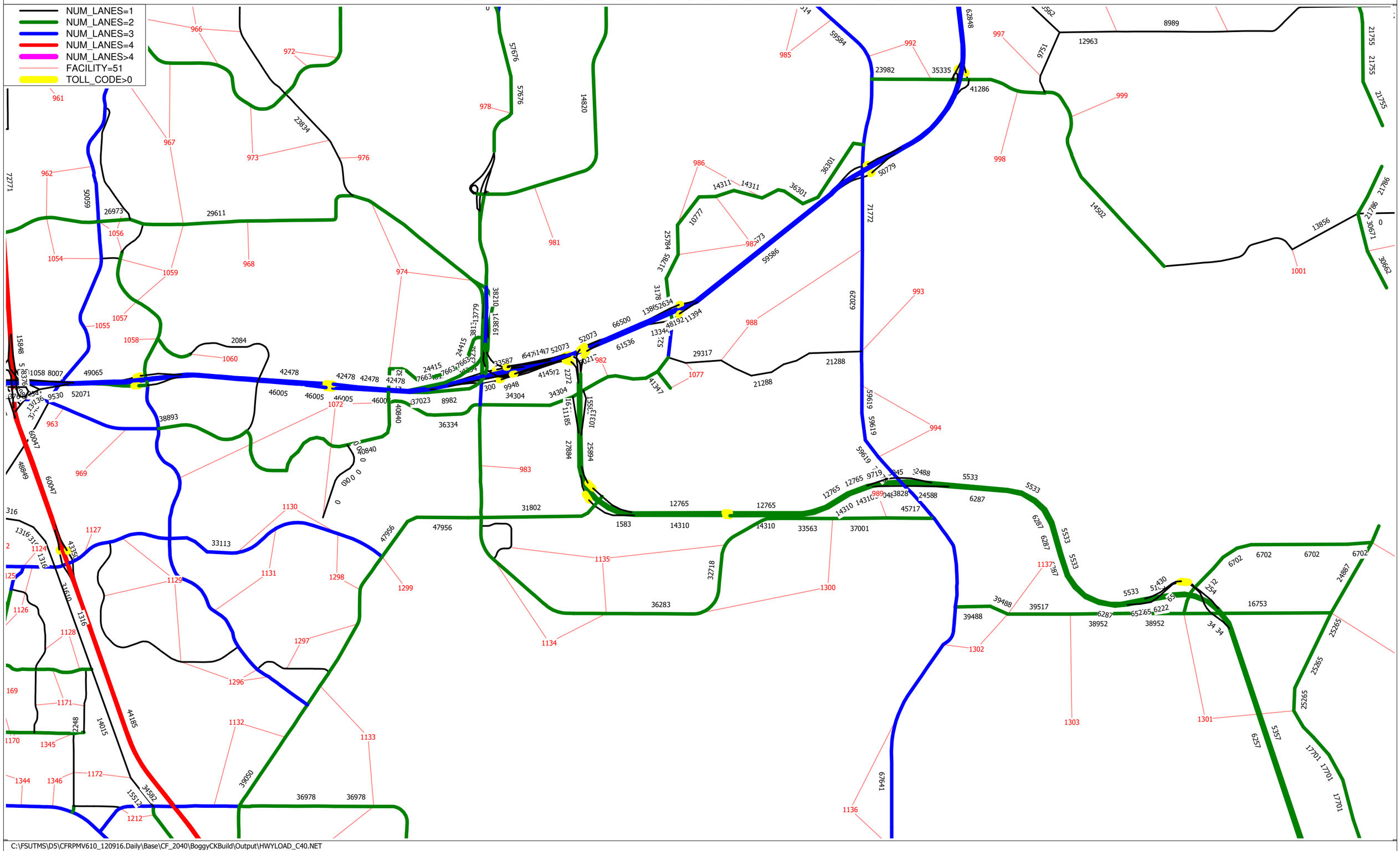
cube

CFRPM61 CF 2040 - Total Traffic Volumes PSWADT - Build Scenario



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Appendix G

BEBR Population Forecasts

College of Liberal Arts and Sciences
Bureau of Economic and Business Research

BEBR

Florida Population Studies

Volume 53, Bulletin 186, January 2020

Projections of Florida Population by County, 2020–2045, with Estimates for 2019

Stefan Rayer, Population Program Director
Ying Wang, Research Demographer

The Bureau of Economic and Business Research (BEBR) has been making population projections for Florida and its counties since the 1970s. This report presents our most recent set of projections and describes the methodology used to construct those projections. To account for uncertainty regarding future population growth, we publish three series of projections. We believe the medium series is the most likely to provide accurate forecasts in most circumstances, but the low and high series provide an indication of the uncertainty surrounding the medium series. It should be noted that these projections refer solely to permanent residents of Florida; they do not include tourists or seasonal residents.

State projections

The starting point for the state-level projections was the April 1, 2010 census population count by age, sex, race, and Hispanic origin, as adjusted by the National Center for Health Statistics (NCHS) in the Vintage 2017 bridged race population estimates. Projections were made in one-year intervals using a cohort-component methodology in which births, deaths, and migration are projected separately for each age-sex cohort in Florida for non-Hispanic whites, non-Hispanic nonwhites, and Hispanics. We applied three different sets of assumptions to provide low, medium, and high series of projections. Although the low and high series do not provide absolute bounds on future population change, they provide a reasonable range in which Florida's future population is likely to fall.

Survival rates were applied by single year of age, sex, race, and Hispanic origin to project future deaths in the population. These rates were based on Florida Life Tables for 2007–2013, using mortality data published by the Office of Vital Statistics in the Florida Department of Health. The survival rates were adjusted upward each year until 2044 to account for projected increases in life expectancy. These adjustments were based on projected increases in survival rates released by the U.S. Census Bureau. We used the same mortality assumptions for all three series of projections because there is less uncertainty regarding future changes in mortality rates than is true for migration and fertility rates.

Domestic migration rates by age and sex were based on Public Use Microdata Sample (PUMS) files from the 2005–2009 and 2013–2017 American Community Survey (ACS) 5-year estimates. We chose an average of those two sets of migration estimates because the recession of 2007–2009 had a substantial impact on migration patterns in Florida, affecting in- and out-migration in both time periods; in addition, projections based on more than one time period

Projections of Florida Population by County, 2020–2045, with Estimates for 2019 (continued)

County and State	Estimates April 1, 2019	Projections, April 1 2020	2025	2030	2035	2040	2045
MIAMI-DADE	2,812,130						
Low		2,734,000	2,815,500	2,873,400	2,917,900	2,938,500	2,944,500
Medium		2,849,900	3,022,600	3,167,900	3,294,700	3,399,200	3,489,900
High		2,961,800	3,214,300	3,458,200	3,679,000	3,875,800	4,057,700
MONROE	76,212						
Low		73,200	71,500	69,800	68,100	66,400	64,700
Medium		76,300	76,500	76,800	77,100	77,400	77,700
High		79,300	81,900	84,500	87,000	89,200	91,400
NASSAU	85,070						
Low		81,600	86,200	89,400	91,200	92,100	92,500
Medium		86,900	95,800	103,100	109,100	114,300	118,900
High		92,100	104,300	116,100	127,200	137,500	148,000
OKALOOSA	201,514						
Low		195,500	199,600	202,500	203,600	203,900	203,900
Medium		203,800	214,300	223,300	230,400	236,600	242,300
High		211,800	227,900	243,700	256,800	269,000	280,900
OKEECHOBEE	41,808						
Low		40,400	40,600	40,400	40,200	39,800	39,400
Medium		42,100	43,400	44,400	45,300	46,000	46,700
High		43,800	46,500	48,900	51,300	53,500	55,700
ORANGE	1,386,080						
Low		1,346,300	1,439,500	1,504,600	1,548,500	1,584,300	1,610,900
Medium		1,418,900	1,573,000	1,696,800	1,797,400	1,888,700	1,972,200
High		1,488,000	1,686,200	1,869,600	2,029,700	2,188,600	2,344,100
OSCEOLA	370,552						
Low		361,000	406,300	442,500	469,700	491,000	508,900
Medium		384,800	452,100	510,200	558,900	602,200	642,600
High		407,000	488,400	568,000	640,700	711,600	783,900
PALM BEACH	1,447,857						
Low		1,406,300	1,441,300	1,465,900	1,483,700	1,494,900	1,497,500
Medium		1,465,800	1,547,200	1,616,500	1,676,600	1,729,500	1,775,200
High		1,523,500	1,645,400	1,764,200	1,870,700	1,971,800	2,063,600
PASCO	527,122						
Low		515,300	545,800	569,400	585,600	597,100	605,200
Medium		537,300	586,100	626,800	659,200	686,700	711,000
High		558,300	623,100	685,200	738,300	787,600	833,900
PINELLAS	978,045						
Low		955,000	962,400	962,500	957,600	953,600	948,200
Medium		984,900	1,014,400	1,035,600	1,051,300	1,066,600	1,080,600
High		1,014,100	1,069,900	1,120,200	1,158,700	1,197,400	1,233,300
POLK	690,606						
Low		668,200	701,500	723,800	737,600	745,000	748,800
Medium		704,100	766,400	817,000	858,000	893,100	924,700
High		738,500	821,700	899,500	966,700	1,029,200	1,089,600
PUTNAM	73,268						
Low		70,400	68,700	66,900	65,300	63,500	61,800
Medium		73,300	73,600	73,700	73,900	74,100	74,300
High		76,300	78,700	81,100	83,400	85,400	87,300
ST. JOHNS	254,412						
Low		247,500	278,000	301,300	318,500	332,400	343,900
Medium		263,900	309,300	347,600	379,400	408,100	434,900
High		279,200	334,200	386,800	434,500	481,800	529,700
ST. LUCIE	309,359						
Low		302,300	319,300	333,800	344,300	352,000	357,600
Medium		315,200	342,900	367,500	387,400	404,400	419,400
High		327,500	364,600	401,700	434,100	464,300	492,800

Appendix H

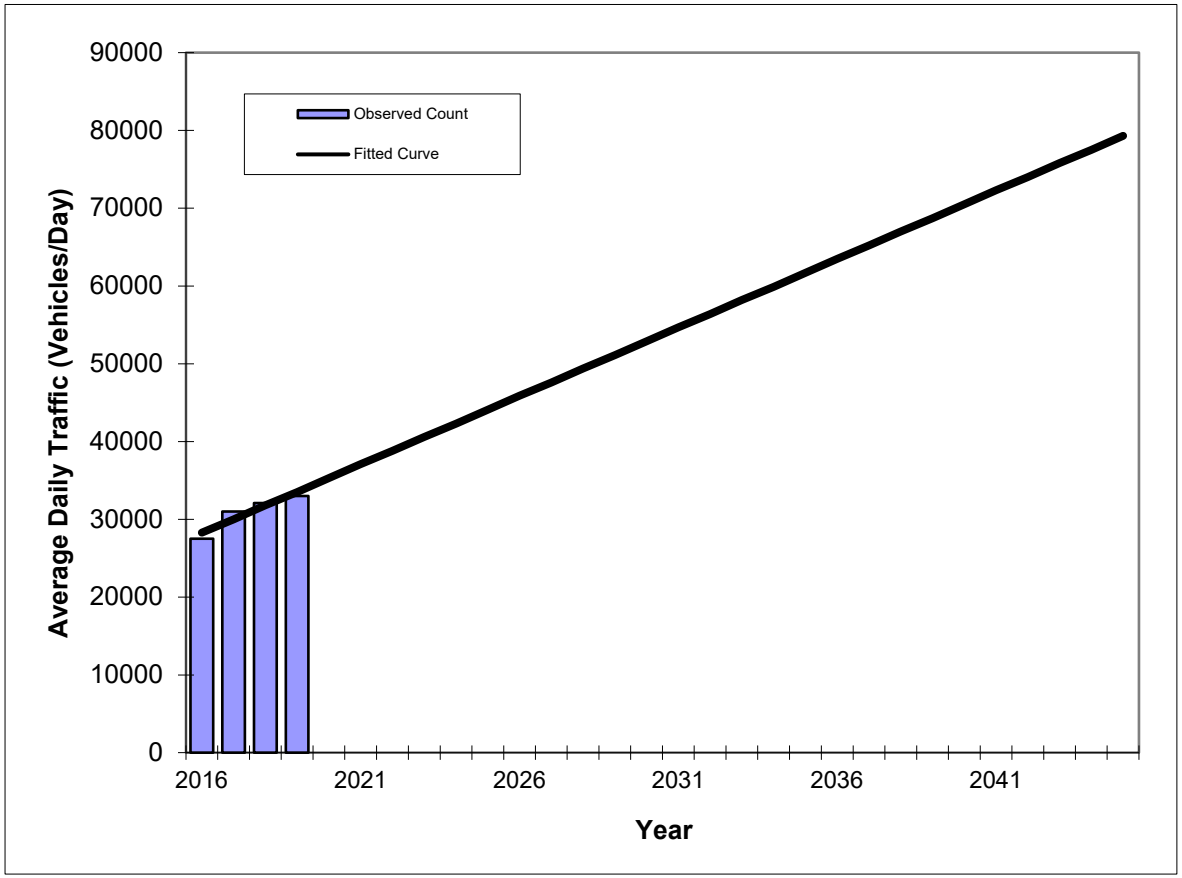
Trends Analysis

Traffic Trends - V3.0

North of Simpson Road

FIN#	**Boggy Creek Road PTAR**
Location	**1**

County:	Orange (75)
Station #:	8141
Highway:	BOGGY CREEK RD



Year	Traffic (ADT/AADT) Count*	Trend**
2016	27500	28300
2017	31000	30000
2018	32100	31800
2019	33000	33500
2025 Opening Year Trend		
2025	N/A	44100
2035 Mid-Year Trend		
2035	N/A	61700
2045 Design Year Trend		
2045	N/A	79300
TRANPLAN Forecasts/Trends		

** Annual Trend Increase:	1,760
Trend R-squared:	88.91%
Trend Annual Historic Growth Rate:	6.12%
Trend Growth Rate (2019 to Design Year):	5.26%
Printed:	28-Oct-20

Straight Line Growth Option

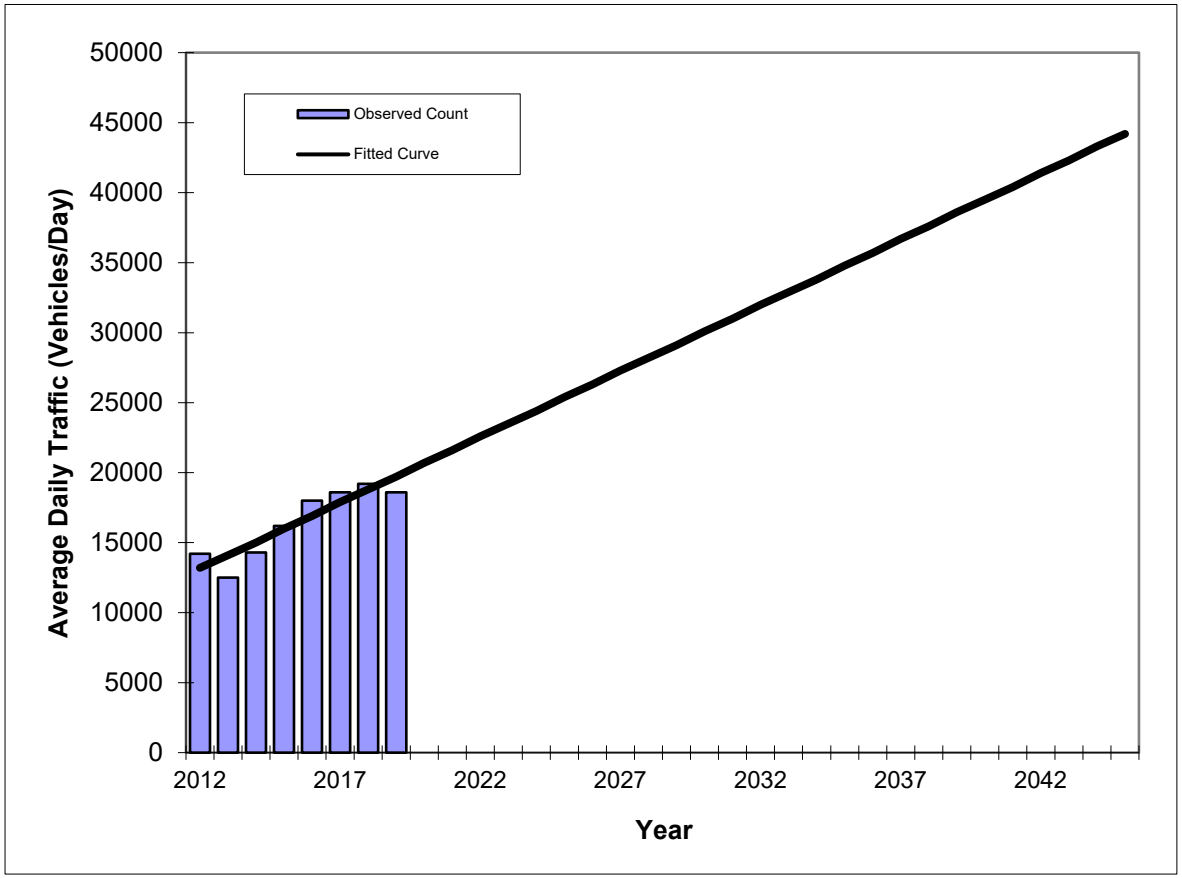
*Axle-Adjusted

Traffic Trends - V3.0

Simpson Road to Austin Tyndell Park

FIN#	**Boggy Creek Road PTAR**
Location	**2**

County:	Osceola (92)
Station #:	474
Highway:	BOGGY CREEK ROAD



Year	Traffic (ADT/AADT) Count*	Trend**
2012	14200	13200
2013	12500	14100
2014	14300	15000
2015	16200	16000
2016	18000	16900
2017	18600	17900
2018	19200	18800
2019	18600	19700
2025 Opening Year Trend		
2025	N/A	25400
2035 Mid-Year Trend		
2035	N/A	34800
2045 Design Year Trend		
2045	N/A	44200
TRANPLAN Forecasts/Trends		

*Axle-Adjusted

** Annual Trend Increase:	940
Trend R-squared:	83.37%
Trend Annual Historic Growth Rate:	7.03%
Trend Growth Rate (2019 to Design Year):	4.78%
Printed:	28-Oct-20

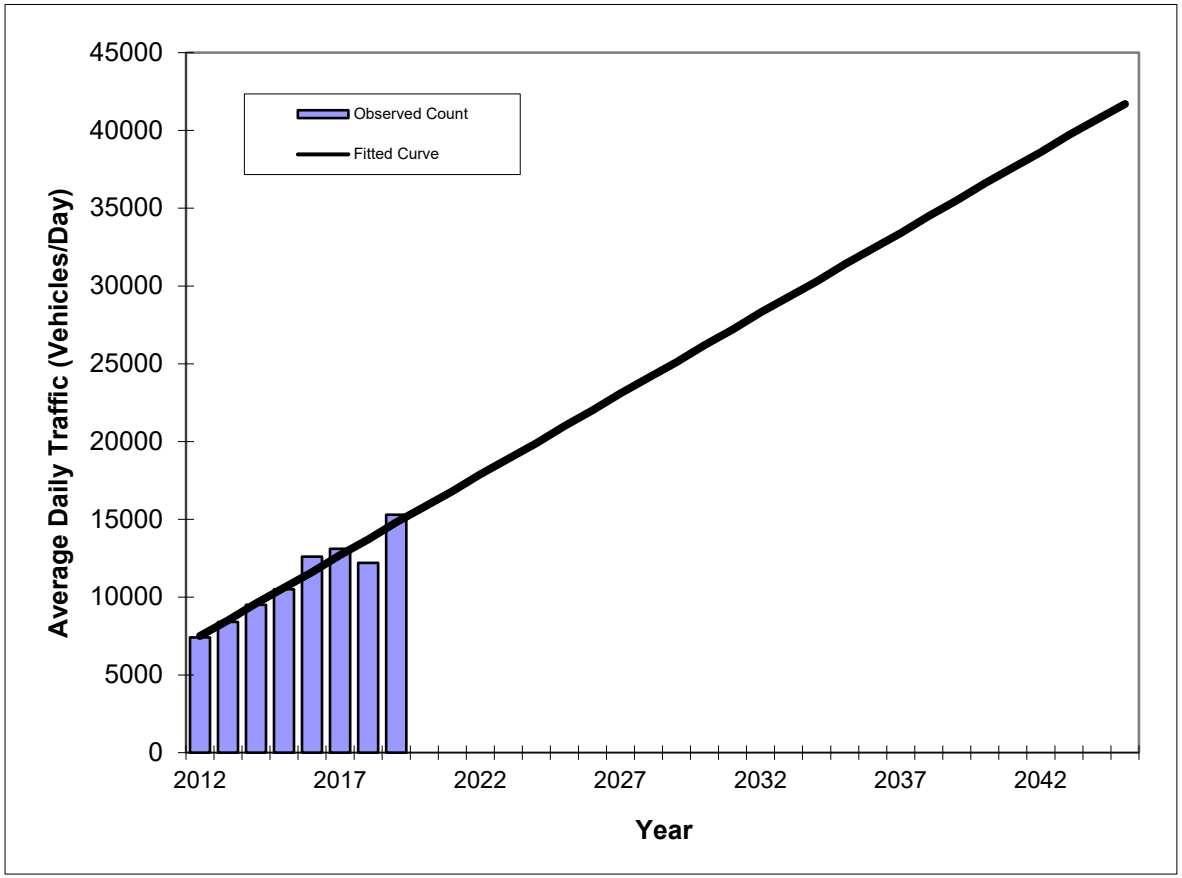
Straight Line Growth Option

Traffic Trends - V3.0

Austin Tyndell Park to Narcoossee Road

FIN#	**Boggy Creek Road PTAR**
Location	**3**

County:	Osceola (92)
Station #:	475
Highway:	BOGGY CREEK ROAD



Year	Traffic (ADT/AADT) Count*	Trend**
2012	7400	7500
2013	8400	8500
2014	9500	9600
2015	10500	10600
2016	12600	11600
2017	13100	12700
2018	12200	13700
2019	15300	14800
2025 Opening Year Trend		
2025	N/A	21000
2035 Mid-Year Trend		
2035	N/A	31400
2045 Design Year Trend		
2045	N/A	41700
TRANPLAN Forecasts/Trends		

*Axle-Adjusted

** Annual Trend Increase:	1,038
Trend R-squared:	92.38%
Trend Annual Historic Growth Rate:	13.90%
Trend Growth Rate (2019 to Design Year):	6.99%
Printed:	28-Oct-20

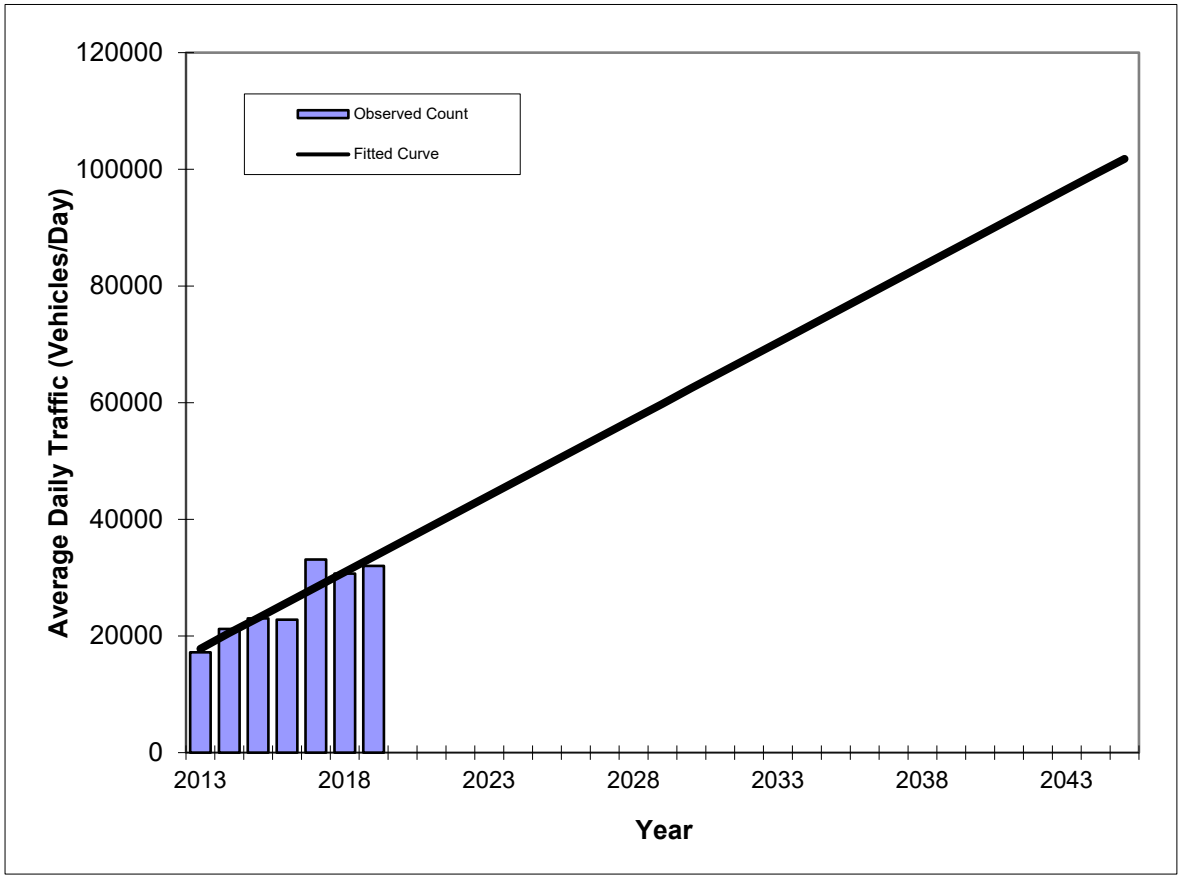
Straight Line Growth Option

Traffic Trends - V3.0

North of Simpson Road

FIN#	**Boggy Creek Road PTAR**
Location	**1**

County:	Orange (75)
Station #:	8064
Highway:	BOGGY CREEK RD



Year	Traffic (ADT/AADT) Count*	Trend**
2013	17200	17800
2014	21200	20500
2015	23000	23100
2016	22800	25700
2017	33100	28300
2018	30700	31000
2019	32000	33600
2025 Opening Year Trend		
2025	N/A	49300
2035 Mid-Year Trend		
2035	N/A	75600
2045 Design Year Trend		
2045	N/A	101800
TRANPLAN Forecasts/Trends		

** Annual Trend Increase:	2,625
Trend R-squared:	84.75%
Trend Annual Historic Growth Rate:	14.79%
Trend Growth Rate (2019 to Design Year):	7.81%
Printed:	28-Oct-20

Straight Line Growth Option

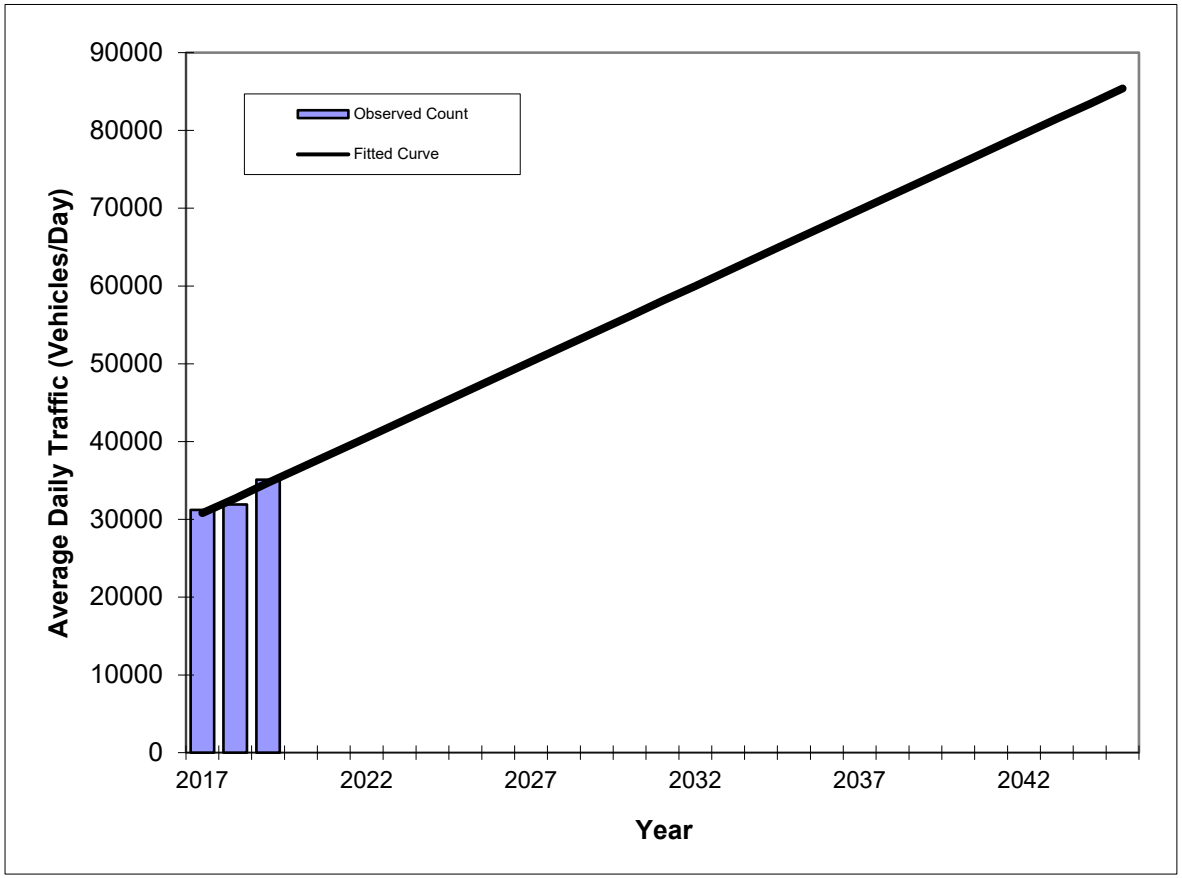
*Axle-Adjusted

Traffic Trends - V3.0

South of Boggy Creek Road

FIN#	**Boggy Creek Road PTAR**
Location	**1**

County:	Orange (75)
Station #:	551
Highway:	NARCOOSSEE RD



Year	Traffic (ADT/AADT) Count*	Trend**
2017	31200	30800
2018	31900	32700
2019	35100	34700
2025 Opening Year Trend		
2025	N/A	46400
2035 Mid-Year Trend		
2035	N/A	65900
2045 Design Year Trend		
2045	N/A	85400
TRANPLAN Forecasts/Trends		

*Axle-Adjusted

** Annual Trend Increase:	1,950
Trend R-squared:	87.95%
Trend Annual Historic Growth Rate:	6.33%
Trend Growth Rate (2019 to Design Year):	5.62%
Printed:	28-Oct-20

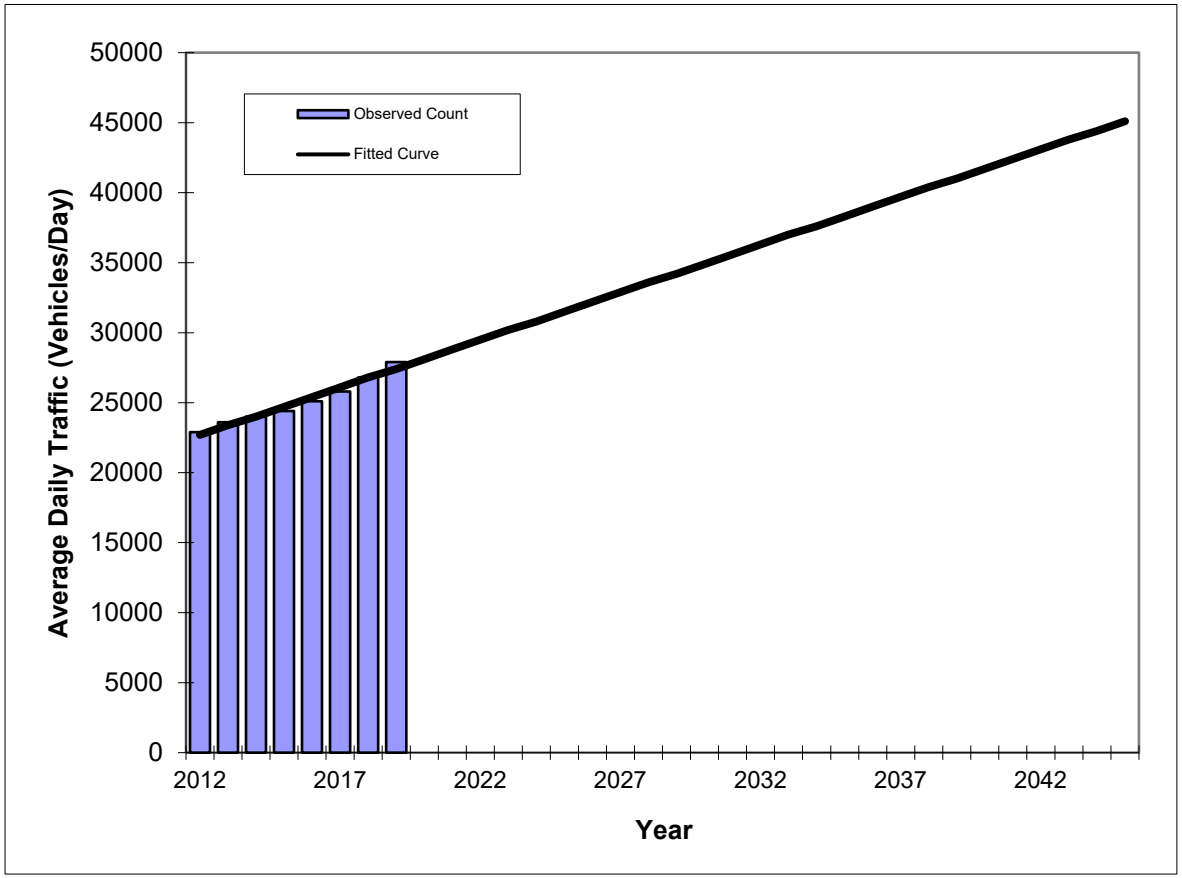
Straight Line Growth Option

Traffic Trends - V3.0

Simpson Road to Austin Tyndell Park

FIN#	Boggy Creek Road PTAR
Location	2

County:	Osceola (92)
Station #:	479
Highway:	SIMPSON ROAD



Year	Traffic (ADT/AADT) Count*	Trend**
2012	22900	22700
2013	23600	23400
2014	24000	24000
2015	24400	24700
2016	25100	25400
2017	25800	26100
2018	26800	26800
2019	27900	27400
2025 Opening Year Trend		
2025	N/A	31500
2035 Mid-Year Trend		
2035	N/A	38300
2045 Design Year Trend		
2045	N/A	45100
TRANPLAN Forecasts/Trends		

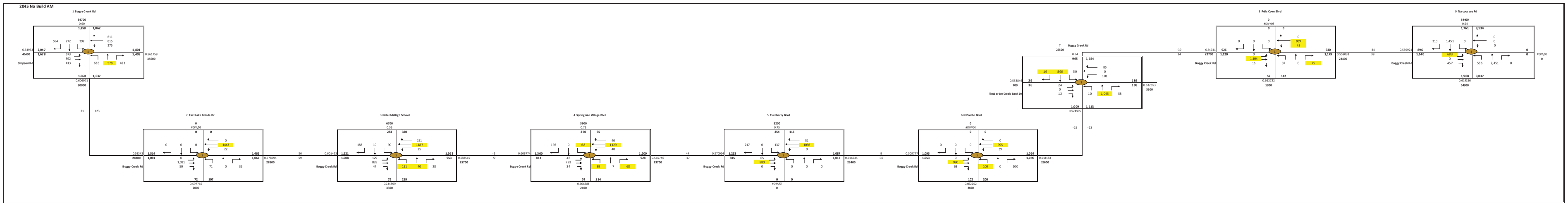
*Axle-Adjusted

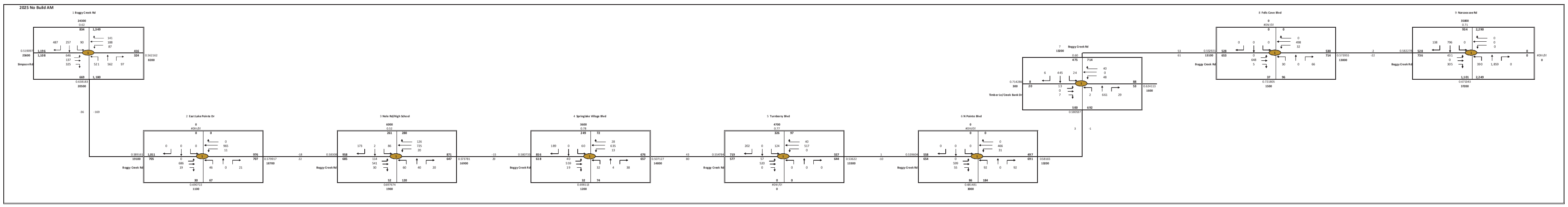
** Annual Trend Increase:	680
Trend R-squared:	97.04%
Trend Annual Historic Growth Rate:	2.96%
Trend Growth Rate (2019 to Design Year):	2.48%
Printed:	28-Oct-20

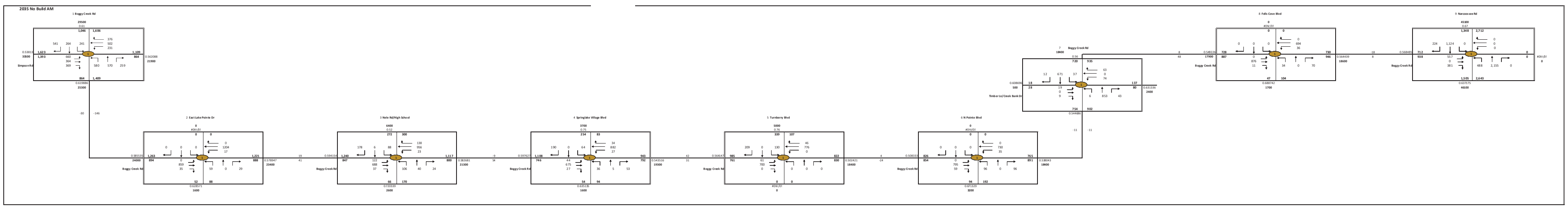
Straight Line Growth Option

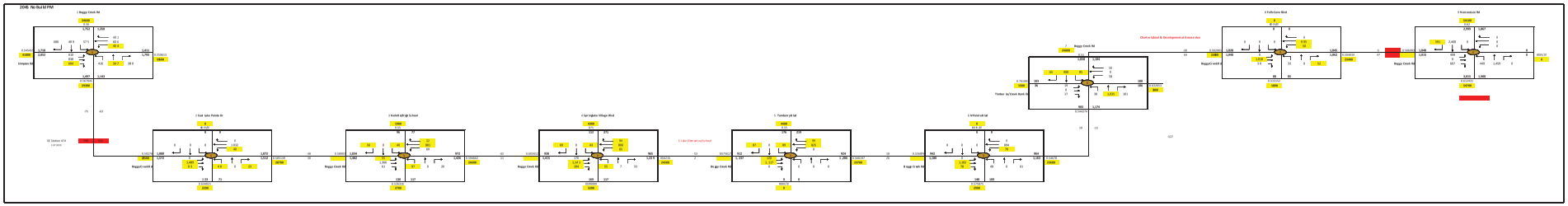
Appendix I

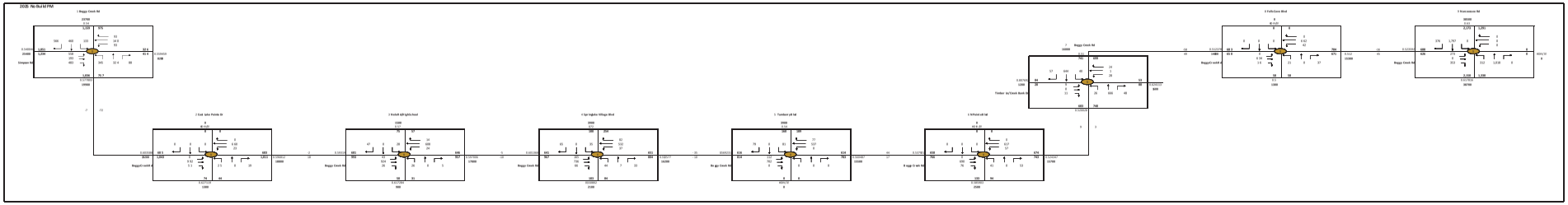
TURNS5 Output Sheets

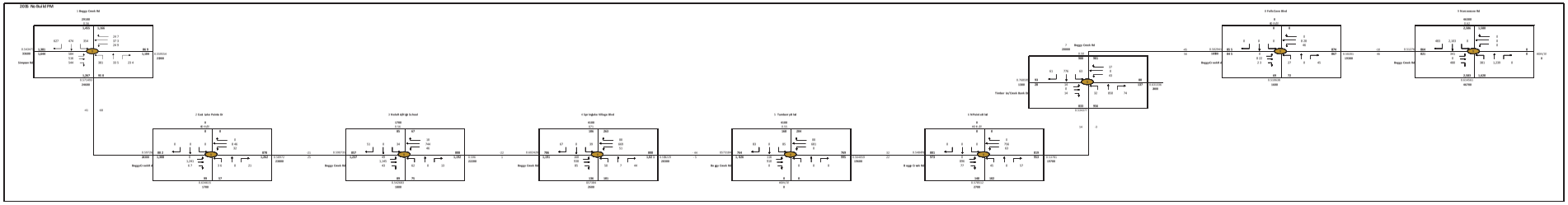

2045 No Build AM
1 Boggy Creek Rd
Simpson Rd
Boggy Creek Rd


2025 No Build AM
1 Boggy Creek Rd
Simpson Rd
Boggy Creek Rd


2035 No Build AM
1 Boggy Creek Rd
Simpson Rd
Boggy Creek Rd


2040: No Bui ld PM
1 Roggy Creek Rd
2 Fort John Pointe Dr
3 Kickoff Alfrgh School
4 Spr Ingbake Village Blvd
5 Turnbuer yll Rd
6 N Point ush Rd
7 Roggy Creek Rd
Timber Ivy Creek Bank Rd
8 Forks Cross Blvd
9 Rvercrossroa Rd
Chool or School & Development at 6 mave Ave
6 Lake View ale yclo hool
OE Station 474
Corridor


2020: No Bui ld PM
1 Roggy Creek Rd
2 Fort John Pointe Dr
3 Kickoff Alfrgh School
4 Spr Ingbake Village Blvd
5 Turnbuer yll Rd
6 N Point ush Rd
7 Roggy Creek Rd
Timber Ivy Creek Bank Rd
8 Forks Cross Blvd
9 Rvercrossroa Rd


2035: No Bui ld PM
1 Roggy Creek Rd
2 Fort John Pointe Dr
3 Kickoff Alfrgh School
4 Spr Ingbake Village Blvd
5 Turnbuer yll Rd
6 N Point ush Rd
7 Roggy Creek Rd
Timber Ivy Creek Bank Rd
8 Forks Cross Blvd
9 Rvercrossroa Rd

TURNS5 ANALYSIS SHEET - INPUT

Analyst:	VHB
Date:	15-Dec-20
Highway:	BOGGY CREEK RD
Intersection:	SIMPSON RD- No Build AM
Project:	Boggy Creek Rd from Simpson Rd to Narcoossee Rd
County:	Osceola

Is this a 4 way intersection?
- (●) Yes, my intersection has four approaches

If not, which 3 approaches exist in the intersection?
- ( ) EB, WB, and SB
- ( ) EB, WB, and NB
- ( ) EB, SB, and NB
- ( ) WB, SB, and NB

Is the Mainline Oriented North/South? Enter Yes or No
- (●) Yes
- ( ) No

K Factors	Mainline
	9.00%
	Side street
	9.00%

D Factors	*Mainline*
Northbound (NB)	58.9%
Southbound (SB)	41.1%
	Side street
Westbound (WB)	55.6%
Eastbound (EB)	44.4%

Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N)

Enter Yes or No
- (●) Yes
- ( ) No

If "Yes" go to cell C47 — If "No" go to cell C31

Enter Year and Growth Rates from Base Year:

	Year	*Rate* (1.0% = 0.01) Mainline	Side Street
Base			
Opening			
Mid			
Design			

Mainline Growth Function
- (●) Linear
- ( ) Exponential
- ( ) Decaying

Side Street Growth Function
- (●) Linear
- ( ) Exponential
- ( ) Decaying

Enter Base Year AADTs for Volume Comparison:
(growth rates are used to calculate other project years)

From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
0	0	0	0	0

Enter Project and Model Years

	Year
Base	2020
Opening	2025
Mid	2035
Design	2045
Model	2045

Enter Base and Model Year AADTs for Volume Comparison:
(volumes for other project years are calculated by interpolation)

	From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
2020	34000	100	31000	20000	85100
2045	42000	36000	34000	29000	141000

		1st Guess Turning %'s for AADT Balancing	**Actual/Counted Traffic for 2020**
(EB LT)	*West-to-North*	41.8%	0
(EB THRU)	*West-to-East*	33.3%	0
(EB RT)	*West-to-South*	24.9%	0
(WB LT)	*East-to-South*	21.6%	0
(WB THRU)	*East-to-West*	42.2%	0
(WB RT)	*East-to-North*	36.2%	0
(SB LT)	*North-to-East*	31.2%	0
(SB THRU)	*North-to-South*	23.2%	0
(SB RT)	*North-to-West*	45.6%	0
(NB LT)	*South-to-West*	39.3%	0
(NB THRU)	*South-to-North*	33.8%	0
(NB RT)	*South-to-East*	26.9%	0

Desired Closure: 0.50

Existing Year AADTs

Existing Turning Movement Counts

FSUTMS Model Year AADTs

First Guess Turning % Option Used FSUTMS Model Year AADTs

Only the existing year total departure volumes [AADT*K*(1-D)] will be used to calculate the turning percentages first guess.

The turning percentages first guess is the same as the ***actual distribution of turning volumes entered***. No balancing technique is used.

Only the FSUTMS model year departure volumes [AADT*K*(1-D)] will be used to calculate the

TURNS5 INITIAL TURNING VOLUME SUMMARY

Highway:	BOGGY CREEK RD	**County:**	Osceola
Intersection:	SIMPSON RD- No Build AM		
Project:	Boggy Creek Rd from Simpson Rd to Narcoossee Rd	**Analyst:**	VHB
		Date:	15-Dec-20

Approach-To-Approach	2020 Initial Estimate	2020 Final Estimate	2020 Calculated Volume	2025 Final Estimate	2025 Calculated Volume	2035 Final Estimate	2035 Calculated Volume	2045 Final Estimate	2045 Calculated Volume
West-To-North (LT)	0.418	0.719	977	0.638	908	0.504	781	0.401	673
West-To-East (Thru)	0.333	0.001	1	0.083	118	0.230	357	0.353	592
West-To-South (RT)	0.249	0.280	381	0.279	397	0.266	412	0.246	413
Total Flow From West:			**1359**		**1423**		**1550**		**1678**
East-To-South (LT)	0.216	0.146	1	0.160	58	0.186	201	0.208	375
East-To-West (Thru)	0.422	0.480	2	0.474	173	0.461	500	0.453	815
East-To-North (RT)	0.362	0.374	2	0.366	133	0.353	382	0.339	611
Total Flow From East:			**5**		**364**		**1083**		**1801**
North-To-East (LT)	0.312	0.001	1	0.070	82	0.200	243	0.312	392
North-To-South (Thru)	0.232	0.232	266	0.234	273	0.229	277	0.216	272
North-To-West (RT)	0.456	0.767	880	0.696	814	0.571	693	0.472	594
Total Flow From North:			**1147**		**1169**		**1213**		**1258**
South-To-West (LT)	0.393	0.560	594	0.533	616	0.472	635	0.415	638
South-To-North (Thru)	0.338	0.439	465	0.413	478	0.363	489	0.311	478
South-To-East (RT)	0.269	0.001	1	0.054	62	0.165	222	0.274	421
Total Flow From South:			**1060**		**1156**		**1346**		**1537**

TURNS5 ANALYSIS SHEET - INPUT

Analyst: VHB
Date: 15-Dec-20
Highway: BOGGY CREEK RD
Intersection: SIMPSON RD- No Build PM
Project: Boggy Creek Rd from Simpson Rd to Narcoossee Rd
County: Osceola

Is this a 4 way intersection?
- (●) Yes, my intersection has four approaches

If not, which 3 approaches exist in the intersection?
- ( ) EB, WB, and SB
- ( ) EB, WB, and NB
- ( ) EB, SB, and NB
- ( ) WB, SB, and NB

Is the Mainline Oriented North/South? Enter Yes or No: (●) Yes ( ) No

K Factors	
Mainline	9.00%
Side street	9.00%

D Factors	*Mainline*
Northbound (NB)	41.1%
Southbound (SB)	58.9%
	Side street
Westbound (WB)	44.4%
Eastbound (EB)	55.6%

Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N) Enter Yes or No: (●) Yes ( ) No

If "Yes" go to cell C47 If "No" go to cell C31

Enter Year and Growth Rates from Base Year:

	Year	*Rate* (1.0% = 0.01) Mainline	Side Street
Base			
Opening			
Mid			
Design			

Mainline Growth Function: (●) Linear ( ) Exponential ( ) Decaying

Side Street Growth Function: (●) Linear ( ) Exponential ( ) Decaying

Enter Base Year AADTs for Volume Comparison:
(growth rates are used to calculate other project years)

From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
0	0	0	0	0

Enter Project and Model Years

	Year
Base	2020
Opening	2025
Mid	2035
Design	2045
Model	2045

Enter Base and Model Year AADTs for Volume Comparison:
(volumes for other project years are calculated by interpolation)

	From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
2020	34000	100	31000	20000	85100
2045	42000	36000	34000	29000	141000

		1st Guess Turning %'s for AADT Balancing	**Actual/Counted Traffic for 2020**
(EB LT)	*West-to-North*	27.4%	0
(EB THRU)	*West-to-East*	39.2%	0
(EB RT)	*West-to-South*	33.4%	0
(WB LT)	*East-to-South*	34.4%	0
(WB THRU)	*East-to-West*	37.5%	0
(WB RT)	*East-to-North*	28.1%	0
(SB LT)	*North-to-East*	35.9%	0
(SB THRU)	*North-to-South*	30.6%	0
(SB RT)	*North-to-West*	33.5%	0
(NB LT)	*South-to-West*	35.4%	0
(NB THRU)	*South-to-North*	26.6%	0
(NB RT)	*South-to-East*	38.0%	0

Desired Closure: 0.50

Existing Year AADTs

Existing Turning Movement Counts

FSUTMS Model Year AADTs

First Guess Turning % Option Used FSUTMS Model Year AADTs

Only the existing year total departure volumes [AADT*K*(1-D)] will be used to calculate the turning percentages first guess.

The turning percentages first guess is the same as the ***actual distribution of turning volumes entered***. No balancing technique is used.

Only the FSUTMS model year departure volumes [AADT*K*(1-D)] will be used to calculate the

TURNS5 INITIAL TURNING VOLUME SUMMARY

Highway:	BOGGY CREEK RD	**County:**	Osceola
Intersection:	SIMPSON RD- No Build PM		
Project:	Boggy Creek Rd from Simpson Rd to Narcoossee Rd	**Analyst:**	VHB
		Date:	15-Dec-20

Approach-To-Approach	2020 Initial Estimate	2020 Final Estimate	2020 Calculated Volume	2025 Final Estimate	2025 Calculated Volume	2035 Final Estimate	2035 Calculated Volume	2045 Final Estimate	2045 Calculated Volume
West-To-North (LT)	0.274	0.596	1014	0.508	905	0.379	736	0.290	610
West-To-East (Thru)	0.392	0.002	3	0.107	190	0.273	530	0.399	838
West-To-South (RT)	0.334	0.402	684	0.385	686	0.348	676	0.311	654
Total Flow From West:			**1701**		**1781**		**1942**		**2102**
East-To-South (LT)	0.344	0.219	1	0.238	69	0.273	236	0.300	432
East-To-West (Thru)	0.375	0.457	2	0.450	131	0.432	374	0.421	606
East-To-North (RT)	0.281	0.324	1	0.312	91	0.295	255	0.279	401
Total Flow From East:			**4**		**291**		**865**		**1439**
North-To-East (LT)	0.359	0.001	2	0.088	147	0.232	403	0.347	625
North-To-South (Thru)	0.306	0.323	530	0.315	528	0.297	517	0.271	489
North-To-West (RT)	0.335	0.676	1111	0.597	1000	0.471	819	0.382	688
Total Flow From North:			**1643**		**1675**		**1739**		**1802**
South-To-West (LT)	0.354	0.584	432	0.542	437	0.459	431	0.388	416
South-To-North (Thru)	0.266	0.415	307	0.378	305	0.314	296	0.258	277
South-To-East (RT)	0.380	0.001	1	0.080	64	0.227	213	0.354	380
Total Flow From South:			**740**		**806**		**940**		**1073**

TURNS5 ANALYSIS SHEET - INPUT

Analyst: VHB
Date: 15-Dec-20
Highway: Boggy Creek Rd - No Build AM
Intersection: E lake Point Dr
Project: Boggy Creek Rd from Simpson Rd to Narcoossee Rd
County: Osceola

Is this a 4 way intersection?
- ○ Yes, my intersection has four approaches

If not, which 3 approaches exist in the intersection?
- ○ EB, WB, and SB
- ◉ EB, WB, and NB
- ○ EB, SB, and NB
- ○ WB, SB, and NB

Is the Mainline Oriented North/South? Enter Yes or No
- ○ Yes
- ◉ No

K Factors	
Mainline	9.00%
Side street	8.50%

D Factors	*Mainline*
Westbound (WB)	58.9%
Eastbound (EB)	41.1%
	Side street
Northbound (NB)	70.0%
Southbound (SB)	0.0%

Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N) Enter Yes or No
- ◉ Yes
- ○ No

If "Yes" go to cell C47 If "No" go to cell C31

Enter Year and Growth Rates from Base Year:

	Year	*Rate* (1.0% = 0.01) Mainline	Side Street
Base			
Opening			
Mid			
Design			

Mainline Growth Function
- ◉ Linear
- ○ Exponential
- ○ Decaying

Side Street Growth Function
- ◉ Linear
- ○ Exponential
- ○ Decaying

Enter Base Year AADTs for Volume Comparison:
(growth rates are used to calculate other project years)

From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
0	0	0	0	0

Enter Project and Model Years

	Year
Base	2019
Opening	2025
Mid	2035
Design	2045
Model	2045

Enter Base and Model Year AADTs for Volume Comparison:
(volumes for other project years are calculated by interpolation)

	From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
2019	20000	19000	0	1100	40100
2045	29000	27500	0	2200	58700

		1st Guess Turning %'s for AADT Balancing	**Actual/Counted Traffic for 2019**
(EB LT)	*West-to-North*	0.0%	0
(EB THRU)	*West-to-East*	98.3%	583
(EB RT)	*West-to-South*	1.7%	10
(WB LT)	*East-to-South*	1.0%	8
(WB THRU)	*East-to-West*	99.0%	821
(WB RT)	*East-to-North*	0.0%	0
(SB LT)	*North-to-East*	0.0%	0
(SB THRU)	*North-to-South*	0.0%	0
(SB RT)	*North-to-West*	0.0%	0
(NB LT)	*South-to-West*	69.6%	39
(NB THRU)	*South-to-North*	0.0%	0
(NB RT)	*South-to-East*	30.4%	17

Desired Closure: 0.50

Existing Year AADTs

Existing Turning Movement Counts

FSUTMS Model Year AADTs

First Guess Turning % Option Used
Existing Turning Movement Counts

Only the existing year total departure volumes [AADT*K*(1-D)] will be used to calculate the turning percentages first guess.

The turning percentages first guess is the same as the ***actual distribution of turning volumes entered***. No balancing technique is used.

Only the FSUTMS model year departure volumes [AADT*K*(1-D)] will be used to calculate the

TURNS5 INITIAL TURNING VOLUME SUMMARY

Highway:	Boggy Creek Rd - No Build AM	**County:**	Osceola
Intersection:	E lake Point Dr		
Project:	Boggy Creek Rd from Simpson Rd to Narcoossee Rd	**Analyst:**	VHB
		Date:	15-Dec-20

Approach-To-Approach	2019 Initial Estimate	2019 Final Estimate	2019 Calculated Volume	2025 Final Estimate	2025 Calculated Volume	2035 Final Estimate	2035 Calculated Volume	2045 Final Estimate	2045 Calculated Volume
West-To-North (LT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
West-To-East (Thru)	0.983	0.964	713	0.964	788	0.963	910	0.961	1031
West-To-South (RT)	0.017	0.036	27	0.036	29	0.037	35	0.039	42
Total Flow From West:			**740**		**817**		**945**		**1073**
East-To-South (LT)	0.010	0.003	3	0.006	7	0.008	10	0.010	15
East-To-West (Thru)	0.990	0.997	1004	0.994	1104	0.992	1274	0.990	1443
East-To-North (RT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
Total Flow From East:			**1007**		**1111**		**1284**		**1458**
North-To-East (LT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
North-To-South (Thru)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
North-To-West (RT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
Total Flow From North:			**0**		**0**		**0**		**0**
South-To-West (LT)	0.696	0.944	61	0.893	72	0.860	91	0.839	110
South-To-North (Thru)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
South-To-East (RT)	0.304	0.056	4	0.107	9	0.140	15	0.161	21
Total Flow From South:			**65**		**81**		**106**		**131**

TURNS5 ANALYSIS SHEET - INPUT

Analyst:	VHB
Date:	15-Dec-20
Highway:	Boggy Creek Rd - No Build PM
Intersection:	E lake Point Dr
Project:	Boggy Creek Rd from Simpson Rd to Narcoossee Rd
County:	Osceola

Is this a 4 way intersection?
- ○ Yes, my intersection has four approaches

If not, which 3 approaches exist in the intersection?
- ○ EB, WB, and SB
- ◉ EB, WB, and NB
- ○ EB, SB, and NB
- ○ WB, SB, and NB

Is the Mainline Oriented North/South? Enter Yes or No
- ○ Yes
- ◉ No

K Factors	Mainline
	9.00%
	Side street
	8.50%

D Factors	*Mainline*
Westbound (WB)	41.1%
Eastbound (EB)	58.9%
	Side street
Northbound (NB)	70.0%
Southbound (SB)	0.0%

Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N) Enter Yes or No
- ◉ Yes
- ○ No

If "Yes" go to cell C47 If "No" go to cell C31

Enter Year and Growth Rates from Base Year:

	Year	*Rate* (1.0% = 0.01) Mainline	Side Street
Base			
Opening			
Mid			
Design			

Mainline Growth Function
- ◉ Linear
- ○ Exponential
- ○ Decaying

Side Street Growth Function
- ◉ Linear
- ○ Exponential
- ○ Decaying

Enter Base Year AADTs for Volume Comparison:
(growth rates are used to calculate other project years)

From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
0	0	0	0	0

Enter Project and Model Years

	Year
Base	2019
Opening	2025
Mid	2035
Design	2045
Model	2045

Enter Base and Model Year AADTs for Volume Comparison:
(volumes for other project years are calculated by interpolation)

	From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
2019	20000	19000	0	1100	40100
2045	29000	27500	0	2200	58700

		1st Guess Turning %'s for AADT Balancing	**Actual/Counted Traffic for 2019**
(EB LT)	*West-to-North*	0.0%	0
(EB THRU)	*West-to-East*	95.4%	843
(EB RT)	*West-to-South*	4.6%	41
(WB LT)	*East-to-South*	3.2%	18
(WB THRU)	*East-to-West*	96.8%	549
(WB RT)	*East-to-North*	0.0%	0
(SB LT)	*North-to-East*	0.0%	0
(SB THRU)	*North-to-South*	0.0%	0
(SB RT)	*North-to-West*	0.0%	0
(NB LT)	*South-to-West*	50.0%	18
(NB THRU)	*South-to-North*	0.0%	0
(NB RT)	*South-to-East*	50.0%	18

Desired Closure: 0.50

Existing Year AADTs

Existing Turning Movement Counts

FSUTMS Model Year AADTs

First Guess Turning % Option Used
Existing Turning Movement Counts

Only the existing year total departure volumes [AADT*K*(1-D)] will be used to calculate the turning percentages first guess.

The turning percentages first guess is the same as the ***actual distribution of turning volumes entered***. No balancing technique is used.

Only the FSUTMS model year departure volumes [AADT*K*(1-D)] will be used to calculate the

TURNS5 INITIAL TURNING VOLUME SUMMARY

Highway:	Boggy Creek Rd - No Build PM	**County:**	Osceola
Intersection:	E lake Point Dr		
Project:	Boggy Creek Rd from Simpson Rd to Narcoossee Rd	**Analyst:**	VHB
		Date:	15-Dec-20

Approach-To-Approach	2019 Initial Estimate	2019 Final Estimate	2019 Calculated Volume	2025 Final Estimate	2025 Calculated Volume	2035 Final Estimate	2035 Calculated Volume	2045 Final Estimate	2045 Calculated Volume
West-To-North (LT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
West-To-East (Thru)	0.954	0.976	1035	0.974	1140	0.971	1315	0.969	1489
West-To-South (RT)	0.046	0.024	25	0.026	30	0.029	39	0.031	48
Total Flow From West:			**1060**		**1170**		**1354**		**1537**
East-To-South (LT)	0.032	0.005	4	0.007	5	0.009	8	0.010	10
East-To-West (Thru)	0.968	0.995	699	0.993	770	0.991	888	0.990	1007
East-To-North (RT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
Total Flow From East:			**703**		**775**		**896**		**1017**
North-To-East (LT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
North-To-South (Thru)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
North-To-West (RT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
Total Flow From North:			**0**		**0**		**0**		**0**
South-To-West (LT)	0.500	0.767	50	0.725	59	0.702	74	0.685	90
South-To-North (Thru)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
South-To-East (RT)	0.500	0.233	15	0.275	22	0.298	32	0.315	41
Total Flow From South:			**65**		**81**		**106**		**131**

TURNS5 ANALYSIS SHEET - INPUT

Analyst: VHB
Date: 15-Dec-20
Highway: Boggy Creek Rd - No Build AM
Intersection: Nele Rd
Project: Boggy Creek Rd from Simpson Rd to Narcoossee Rd
County: Osceola

Is this a 4 way intersection?
- (●) Yes, my intersection has four approaches

If not, which 3 approaches exist in the intersection?
- ( ) EB, WB, and SB
- ( ) EB, WB, and NB
- ( ) EB, SB, and NB
- ( ) WB, SB, and NB

Is the Mainline Oriented North/South? Enter Yes or No
- ( ) Yes
- (●) No

K Factors	
Mainline	9.00%
Side street	9.00%

D Factors	*Mainline*
Westbound (WB)	58.9%
Eastbound (EB)	41.1%
	Side street
Northbound (NB)	54.0%
Southbound (SB)	46.0%

Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N) Enter Yes or No
- (●) Yes
- ( ) No

If "Yes" go to cell C47 If "No" go to cell C31

Enter Year and Growth Rates from Base Year:

	Year	*Rate* (1.0% = 0.01) Mainline	Side Street
Base			
Opening			
Mid			
Design			

Mainline Growth Function
- (●) Linear
- ( ) Exponential
- ( ) Decaying

Side Street Growth Function
- (●) Linear
- ( ) Exponential
- ( ) Decaying

Enter Base Year AADTs for Volume Comparison:
(growth rates are used to calculate other project years)

From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
0	0	0	0	0

Enter Project and Model Years

	Year
Base	2019
Opening	2025
Mid	2035
Design	2045
Model	2045

Enter Base and Model Year AADTs for Volume Comparison:
(volumes for other project years are calculated by interpolation)

	From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
2019	19000	18000	5800	600	43400
2045	27500	26000	6600	2300	62400

		1st Guess Turning %'s for AADT Balancing	**Actual/Counted Traffic for 2019**
(EB LT)	*West-to-North*	18.7%	110
(EB THRU)	*West-to-East*	76.9%	453
(EB RT)	*West-to-South*	4.4%	26
(WB LT)	*East-to-South*	2.6%	19
(WB THRU)	*East-to-West*	81.1%	587
(WB RT)	*East-to-North*	16.3%	118
(SB LT)	*North-to-East*	33.3%	85
(SB THRU)	*North-to-South*	0.0%	0
(SB RT)	*North-to-West*	66.7%	170
(NB LT)	*South-to-West*	36.7%	33
(NB THRU)	*South-to-North*	44.4%	40
(NB RT)	*South-to-East*	18.9%	17

Desired Closure: 0.50

Existing Year AADTs

Existing Turning Movement Counts

FSUTMS Model Year AADTs

First Guess Turning % Option Used
Existing Turning Movement Counts

Only the existing year total departure volumes [AADT*K*(1-D)] will be used to calculate the turning percentages first guess.

The turning percentages first guess is the same as the ***actual distribution of turning volumes entered***. No balancing technique is used.

Only the FSUTMS model year departure volumes [AADT*K*(1-D)] will be used to calculate the

TURNS5 INITIAL TURNING VOLUME SUMMARY

Highway:	Boggy Creek Rd - No Build AM	**County:**	Osceola
Intersection:	Nele Rd		
Project:	Boggy Creek Rd from Simpson Rd to Narcoossee Rd	**Analyst:**	VHB
		Date:	15-Dec-20

Approach-To-Approach	2019 Initial Estimate	2019 Final Estimate	2019 Calculated Volume	2025 Final Estimate	2025 Calculated Volume	2035 Final Estimate	2035 Calculated Volume	2045 Final Estimate	2045 Calculated Volume
West-To-North (LT)	0.187	0.174	122	0.159	123	0.141	126	0.127	129
West-To-East (Thru)	0.769	0.807	568	0.812	630	0.817	732	0.821	835
West-To-South (RT)	0.044	0.019	13	0.029	22	0.042	38	0.052	53
Total Flow From West:			**703**		**775**		**896**		**1017**
East-To-South (LT)	0.026	0.011	10	0.017	18	0.024	29	0.030	41
East-To-West (Thru)	0.811	0.840	802	0.846	890	0.855	1039	0.861	1187
East-To-North (RT)	0.163	0.149	142	0.137	144	0.121	147	0.109	150
Total Flow From East:			**954**		**1052**		**1215**		**1378**
North-To-East (LT)	0.333	0.332	80	0.332	82	0.331	86	0.331	90
North-To-South (Thru)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
North-To-West (RT)	0.667	0.668	160	0.668	166	0.669	174	0.669	183
Total Flow From North:			**240**		**248**		**260**		**273**
South-To-West (LT)	0.367	0.387	11	0.402	19	0.423	34	0.440	49
South-To-North (Thru)	0.444	0.414	12	0.392	19	0.361	29	0.336	38
South-To-East (RT)	0.189	0.199	6	0.206	10	0.216	17	0.224	25
Total Flow From South:			**29**		**48**		**80**		**112**

TURNS5 ANALYSIS SHEET - INPUT

Analyst: VHB
Date: 15-Dec-20
Highway: Boggy Creek Rd - No Build PM
Intersection: Nele Rd
Project: Boggy Creek Rd from Simpson Rd to Narcoossee Rd
County: Osceola

Is this a 4 way intersection?
(●) Yes, my intersection has four approaches

If not, which 3 approaches exist in the intersection?
( ) EB, WB, and SB
( ) EB, WB, and NB
( ) EB, SB, and NB
( ) WB, SB, and NB

Is the Mainline Oriented North/South? Enter Yes or No
( ) Yes
(●) No

K Factors	
Mainline	9.00%
Side street	9.00%

D Factors	*Mainline*
Westbound (WB)	41.1%
Eastbound (EB)	58.9%
	Side street
Northbound (NB)	46.0%
Southbound (SB)	54.0%

Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N) Enter Yes or No
(●) Yes
( ) No

If "Yes" go to cell C47 If "No" go to cell C31

Enter Year and Growth Rates from Base Year:

	Year	*Rate* (1.0% = 0.01) Mainline	Side Street
Base			
Opening			
Mid			
Design			

Mainline Growth Function
(●) Linear
( ) Exponential
( ) Decaying

Side Street Growth Function
(●) Linear
( ) Exponential
( ) Decaying

Enter Base Year AADTs for Volume Comparison:
(growth rates are used to calculate other project years)

From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
0	0	0	0	0

Enter Project and Model Years

	Year
Base	2019
Opening	2025
Mid	2035
Design	2045
Model	2045

Enter Base and Model Year AADTs for Volume Comparison:
(volumes for other project years are calculated by interpolation)

	From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
2019	19000	18000	5800	600	43400
2045	27500	26000	6600	2300	62400

		1st Guess Turning %'s for AADT Balancing	**Actual/Counted Traffic for 2019**
(EB LT)	*West-to-North*	4.6%	39
(EB THRU)	*West-to-East*	93.6%	792
(EB RT)	*West-to-South*	1.8%	15
(WB LT)	*East-to-South*	1.8%	10
(WB THRU)	*East-to-West*	96.0%	526
(WB RT)	*East-to-North*	2.2%	12
(SB LT)	*North-to-East*	35.3%	24
(SB THRU)	*North-to-South*	0.0%	0
(SB RT)	*North-to-West*	64.7%	44
(NB LT)	*South-to-West*	83.3%	5
(NB THRU)	*South-to-North*	0.0%	0
(NB RT)	*South-to-East*	16.7%	1

Desired Closure: 0.50

Existing Year AADTs

Existing Turning Movement Counts

FSUTMS Model Year AADTs

First Guess Turning % Option Used
Existing Turning Movement Counts

Only the existing year total departure volumes [AADT*K*(1-D)] will be used to calculate the turning percentages first guess.

The turning percentages first guess is the same as the ***actual distribution of turning volumes entered***. No balancing technique is used.

Only the FSUTMS model year departure volumes [AADT*K*(1-D)] will be used to calculate the

TURNS5 INITIAL TURNING VOLUME SUMMARY

Highway:	Boggy Creek Rd - No Build PM	**County:**	Osceola
Intersection:	Nele Rd		
Project:	Boggy Creek Rd from Simpson Rd to Narcoossee Rd	**Analyst:**	VHB
		Date:	15-Dec-20

Approach-To-Approach	2019 Initial Estimate	2019 Final Estimate	2019 Calculated Volume	2025 Final Estimate	2025 Calculated Volume	2035 Final Estimate	2035 Calculated Volume	2045 Final Estimate	2045 Calculated Volume
West-To-North (LT)	0.046	0.162	163	0.150	167	0.137	176	0.127	185
West-To-East (Thru)	0.936	0.824	830	0.829	921	0.832	1068	0.834	1216
West-To-South (RT)	0.018	0.014	14	0.021	23	0.031	40	0.039	57
Total Flow From West:			**1007**		**1111**		**1284**		**1458**
East-To-South (LT)	0.018	0.022	15	0.035	26	0.050	42	0.061	59
East-To-West (Thru)	0.960	0.854	568	0.848	622	0.845	717	0.843	811
East-To-North (RT)	0.022	0.124	83	0.117	86	0.105	89	0.096	92
Total Flow From East:			**666**		**734**		**848**		**962**
North-To-East (LT)	0.353	0.464	131	0.471	137	0.470	144	0.468	150
North-To-South (Thru)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
North-To-West (RT)	0.647	0.536	151	0.529	154	0.530	162	0.532	171
Total Flow From North:			**282**		**291**		**306**		**321**
South-To-West (LT)	0.833	0.759	19	0.753	31	0.754	51	0.755	72
South-To-North (Thru)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
South-To-East (RT)	0.167	0.241	6	0.247	10	0.246	17	0.245	23
Total Flow From South:			**25**		**41**		**68**		**95**

TURNS5 ANALYSIS SHEET - INPUT

Analyst:	VHB
Date:	15-Dec-20
Highway:	Boggy Creek Rd - No Build AM
Intersection:	Springlake Village Blvd
Project:	Boggy Creek Rd from Simpson Rd to Narcoossee Rd
County:	Osceola

Is this a 4 way intersection?
- (●) Yes, my intersection has four approaches

If not, which 3 approaches exist in the intersection?
- ( ) EB, WB, and SB
- ( ) EB, WB, and NB
- ( ) EB, SB, and NB
- ( ) WB, SB, and NB

Is the Mainline Oriented North/South? Enter Yes or No
- ( ) Yes
- (●) No

K Factors	Mainline
	9.00%
	Side street
	8.60%

D Factors	*Mainline*
Westbound (WB)	58.9%
Eastbound (EB)	41.1%
	Side street
Northbound (NB)	25.0%
Southbound (SB)	75.0%

Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N) Enter Yes or No
- (●) Yes
- ( ) No

If "Yes" go to cell C47 — If "No" go to cell C31

Enter Year and Growth Rates from Base Year:

	Year	*Rate* (1.0% = 0.01) Mainline	Side Street
Base			
Opening			
Mid			
Design			

Mainline Growth Function
- (●) Linear
- ( ) Exponential
- ( ) Decaying

Side Street Growth Function
- (●) Linear
- ( ) Exponential
- ( ) Decaying

Enter Base Year AADTs for Volume Comparison:
(growth rates are used to calculate other project years)

From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
0	0	0	0	0

Enter Project and Model Years

	Year
Base	2019
Opening	2025
Mid	2035
Design	2045
Model	2045

Enter Base and Model Year AADTs for Volume Comparison:
(volumes for other project years are calculated by interpolation)

	From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
2019	18000	16000	3800	1700	39500
2045	26000	23000	4300	2600	55900

		1st Guess Turning %'s for AADT Balancing	**Actual/Counted Traffic for 2019**
(EB LT)	*West-to-North*	7.0%	38
(EB THRU)	*West-to-East*	90.2%	489
(EB RT)	*West-to-South*	2.8%	15
(WB LT)	*East-to-South*	1.0%	5
(WB THRU)	*East-to-West*	94.2%	487
(WB RT)	*East-to-North*	4.8%	25
(SB LT)	*North-to-East*	23.3%	57
(SB THRU)	*North-to-South*	0.0%	0
(SB RT)	*North-to-West*	76.7%	188
(NB LT)	*South-to-West*	48.4%	30
(NB THRU)	*South-to-North*	4.8%	3
(NB RT)	*South-to-East*	46.8%	29

Desired Closure: 0.50

Existing Year AADTs

Existing Turning Movement Counts

FSUTMS Model Year AADTs

First Guess Turning % Option Used
Existing Turning Movement Counts

Only the existing year total departure volumes [AADT*K*(1-D)] will be used to calculate the turning percentages first guess.

The turning percentages first guess is the same as the ***actual distribution of turning volumes entered***. No balancing technique is used.

Only the FSUTMS model year departure volumes [AADT*K*(1-D)] will be used to calculate the

TURNS5 INITIAL TURNING VOLUME SUMMARY

Highway:	Boggy Creek Rd - No Build AM	**County:**	Osceola
Intersection:	Springlake Village Blvd		
Project:	Boggy Creek Rd from Simpson Rd to Narcoossee Rd	**Analyst:**	VHB
		Date:	15-Dec-20

Approach-To-Approach	2019 Initial Estimate	2019 Final Estimate	2019 Calculated Volume	2025 Final Estimate	2025 Calculated Volume	2035 Final Estimate	2035 Calculated Volume	2045 Final Estimate	2045 Calculated Volume
West-To-North (LT)	0.070	0.067	45	0.062	46	0.056	47	0.052	50
West-To-East (Thru)	0.902	0.816	543	0.819	601	0.823	698	0.823	792
West-To-South (RT)	0.028	0.117	78	0.119	87	0.121	103	0.125	120
Total Flow From West:			**666**		**734**		**848**		**962**
East-To-South (LT)	0.010	0.041	35	0.042	39	0.042	45	0.041	50
East-To-West (Thru)	0.942	0.914	775	0.917	857	0.921	992	0.926	1129
East-To-North (RT)	0.048	0.045	38	0.041	38	0.037	40	0.033	40
Total Flow From East:			**848**		**934**		**1077**		**1219**
North-To-East (LT)	0.233	0.219	54	0.218	55	0.215	57	0.208	58
North-To-South (Thru)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
North-To-West (RT)	0.767	0.781	191	0.782	198	0.785	208	0.792	219
Total Flow From North:			**245**		**253**		**265**		**277**
South-To-West (LT)	0.484	0.503	19	0.507	21	0.512	25	0.525	29
South-To-North (Thru)	0.048	0.048	1	0.044	2	0.041	2	0.037	2
South-To-East (RT)	0.468	0.449	17	0.449	18	0.447	21	0.438	25
Total Flow From South:			**37**		**41**		**48**		**56**

TURNS5 ANALYSIS SHEET - INPUT

Analyst: VHB
Date: 15-Dec-20
Highway: Boggy Creek Rd - No Build PM
Intersection: Springlake Village Blvd
Project: Boggy Creek Rd from Simpson Rd to Narcoossee Rd
County: Osceola

Is this a 4 way intersection?
(●) Yes, my intersection has four approaches

If not, which 3 approaches exist in the intersection?
( ) EB, WB, and SB
( ) EB, WB, and NB
( ) EB, SB, and NB
( ) WB, SB, and NB

Is the Mainline Oriented North/South? Enter Yes or No: ( ) Yes (●) No

K Factors	
Mainline	9.00%
Side street	8.60%

D Factors	*Mainline*
Westbound (WB)	41.1%
Eastbound (EB)	58.9%
	Side street
Northbound (NB)	75.0%
Southbound (SB)	25.0%

Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N) Enter Yes or No: (●) Yes ( ) No

If "Yes" go to cell C47 — If "No" go to cell C31

Enter Year and Growth Rates from Base Year:

	Year	*Rate* (1.0% = 0.01) Mainline	Side Street
Base			
Opening			
Mid			
Design			

Mainline Growth Function: (●) Linear ( ) Exponential ( ) Decaying

Side Street Growth Function: (●) Linear ( ) Exponential ( ) Decaying

Enter Base Year AADTs for Volume Comparison:
(growth rates are used to calculate other project years)

From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
0	0	0	0	0

Enter Project and Model Years

	Year
Base	2019
Opening	2025
Mid	2035
Design	2045
Model	2045

Enter Base and Model Year AADTs for Volume Comparison:
(volumes for other project years are calculated by interpolation)

	From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
2019	18000	16000	3800	1700	39500
2045	26000	23000	4300	2600	55900

		1st Guess Turning %'s for AADT Balancing	**Actual/Counted Traffic for 2019**
(EB LT)	*West-to-North*	19.7%	164
(EB THRU)	*West-to-East*	73.8%	614
(EB RT)	*West-to-South*	6.5%	54
(WB LT)	*East-to-South*	5.0%	28
(WB THRU)	*East-to-West*	81.0%	450
(WB RT)	*East-to-North*	14.0%	78
(SB LT)	*North-to-East*	34.0%	33
(SB THRU)	*North-to-South*	0.0%	0
(SB RT)	*North-to-West*	66.0%	64
(NB LT)	*South-to-West*	54.7%	41
(NB THRU)	*South-to-North*	9.3%	7
(NB RT)	*South-to-East*	36.0%	27

Desired Closure: 0.50

Existing Year AADTs

Existing Turning Movement Counts

FSUTMS Model Year AADTs

First Guess Turning % Option Used
Existing Turning Movement Counts

Only the existing year total departure volumes [AADT*K*(1-D)] will be used to calculate the turning percentages first guess.

The turning percentages first guess is the same as the ***actual distribution of turning volumes entered***. No balancing technique is used.

Only the FSUTMS model year departure volumes [AADT*K*(1-D)] will be used to calculate the

TURNS5 INITIAL TURNING VOLUME SUMMARY

Highway:	Boggy Creek Rd - No Build PM	**County:**	Osceola
Intersection:	Springlake Village Blvd		
Project:	Boggy Creek Rd from Simpson Rd to Narcoossee Rd	**Analyst:**	VHB
		Date:	15-Dec-20

Approach-To-Approach	2019 Initial Estimate	2019 Final Estimate	2019 Calculated Volume	2025 Final Estimate	2025 Calculated Volume	2035 Final Estimate	2035 Calculated Volume	2045 Final Estimate	2045 Calculated Volume
West-To-North (LT)	0.197	0.171	163	0.162	170	0.151	183	0.143	197
West-To-East (Thru)	0.738	0.803	766	0.811	854	0.821	998	0.828	1141
West-To-South (RT)	0.065	0.026	25	0.027	28	0.028	34	0.029	40
Total Flow From West:			**954**		**1052**		**1215**		**1378**
East-To-South (LT)	0.050	0.019	11	0.019	12	0.018	14	0.018	15
East-To-West (Thru)	0.810	0.868	514	0.876	572	0.890	668	0.900	766
East-To-North (RT)	0.140	0.113	67	0.105	68	0.092	69	0.082	70
Total Flow From East:			**592**		**652**		**751**		**851**
North-To-East (LT)	0.340	0.326	27	0.323	27	0.309	27	0.296	27
North-To-South (Thru)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
North-To-West (RT)	0.660	0.674	55	0.677	57	0.691	61	0.704	65
Total Flow From North:			**82**		**84**		**88**		**92**
South-To-West (LT)	0.547	0.573	63	0.578	71	0.598	87	0.614	103
South-To-North (Thru)	0.093	0.073	8	0.069	9	0.061	9	0.055	9
South-To-East (RT)	0.360	0.354	39	0.353	43	0.341	49	0.331	56
Total Flow From South:			**110**		**123**		**145**		**168**

TURNS5 ANALYSIS SHEET - INPUT

Analyst: VHB
Date: 15-Dec-20
Highway: Boggy Creek Rd - No Build AM
Intersection: Turnberry Blvd
Project: Boggy Creek Rd from Simpson Rd to Narcoossee Rd
County: Osceola

Is this a 4 way intersection?
- ○ Yes, my intersection has four approaches

If not, which 3 approaches exist in the intersection?
- ◉ EB, WB, and SB
- ○ EB, WB, and NB
- ○ EB, SB, and NB
- ○ WB, SB, and NB

Is the Mainline Oriented North/South? Enter Yes or No
- ○ Yes
- ◉ No

K Factors	Mainline
	9.00%
	Side street
	8.30%

D Factors	*Mainline*
Westbound (WB)	58.9%
Eastbound (EB)	41.1%
	Side street
Northbound (NB)	0.0%
Southbound (SB)	66.0%

Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N)

Enter Yes or No
- ◉ Yes
- ○ No

If "Yes" go to cell C47 — If "No" go to cell C31

Enter Year and Growth Rates from Base Year:

	Year	*Rate* (1.0% = 0.01) Mainline	Side Street
Base			
Opening			
Mid			
Design			

Mainline Growth Function
- ◉ Linear
- ○ Exponential
- ○ Decaying

Side Street Growth Function
- ◉ Linear
- ○ Exponential
- ○ Decaying

Enter Base Year AADTs for Volume Comparison:
(growth rates are used to calculate other project years)

From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
0	0	0	0	0

Enter Project and Model Years

	Year
Base	2019
Opening	2025
Mid	2035
Design	2045
Model	2045

Enter Base and Model Year AADTs for Volume Comparison:
(volumes for other project years are calculated by interpolation)

	From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
2019	16000	16000	4500	0	36500
2045	23000	23000	5100	0	51100

		1st Guess Turning %'s for AADT Balancing	**Actual/Counted Traffic for 2019**
(EB LT)	*West-to-North*	11.8%	55
(EB THRU)	*West-to-East*	88.2%	412
(EB RT)	*West-to-South*	0.0%	0
(WB LT)	*East-to-South*	0.0%	0
(WB THRU)	*East-to-West*	90.7%	361
(WB RT)	*East-to-North*	9.3%	37
(SB LT)	*North-to-East*	37.9%	120
(SB THRU)	*North-to-South*	0.0%	0
(SB RT)	*North-to-West*	62.1%	197
(NB LT)	*South-to-West*	0.0%	0
(NB THRU)	*South-to-North*	0.0%	0
(NB RT)	*South-to-East*	0.0%	0

Desired Closure: 0.50

Existing Year AADTs

Existing Turning Movement Counts

FSUTMS Model Year AADTs

First Guess Turning % Option Used
Existing Turning Movement Counts

Only the existing year total departure volumes [AADT*K*(1-D)] will be used to calculate the turning percentages first guess.

The turning percentages first guess is the same as the ***actual distribution of turning volumes entered***. No balancing technique is used.

Only the FSUTMS model year departure volumes [AADT*K*(1-D)] will be used to calculate the

TURNS5 INITIAL TURNING VOLUME SUMMARY

Highway:	Boggy Creek Rd - No Build AM	**County:**	Osceola
Intersection:	Turnberry Blvd		
Project:	Boggy Creek Rd from Simpson Rd to Narcoossee Rd	**Analyst:**	VHB
		Date:	15-Dec-20

Approach-To-Approach	2019 Initial Estimate	2019 Final Estimate	2019 Calculated Volume	2025 Final Estimate	2025 Calculated Volume	2035 Final Estimate	2035 Calculated Volume	2045 Final Estimate	2045 Calculated Volume
West-To-North (LT)	0.118	0.106	63	0.099	65	0.090	68	0.083	71
West-To-East (Thru)	0.882	0.894	529	0.901	587	0.910	683	0.917	780
West-To-South (RT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
Total Flow From West:			**592**		**652**		**751**		**851**
East-To-South (LT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
East-To-West (Thru)	0.907	0.913	774	0.919	858	0.927	998	0.932	1136
East-To-North (RT)	0.093	0.087	74	0.081	76	0.073	79	0.068	83
Total Flow From East:			**848**		**934**		**1077**		**1219**
North-To-East (LT)	0.379	0.389	96	0.389	99	0.389	104	0.389	109
North-To-South (Thru)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
North-To-West (RT)	0.621	0.611	151	0.611	155	0.611	163	0.611	170
Total Flow From North:			**247**		**254**		**267**		**279**
South-To-West (LT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
South-To-North (Thru)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
South-To-East (RT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
Total Flow From South:			**0**		**0**		**0**		**0**

TURNS5 ANALYSIS SHEET - INPUT

Analyst: VHB
Date: 15-Dec-20
Highway: Boggy Creek Rd - No Build PM
Intersection: Turnberry Blvd
Project: Boggy Creek Rd from Simpson Rd to Narcoossee Rd
County: Osceola

Is this a 4 way intersection?
- ○ Yes, my intersection has four approaches

If not, which 3 approaches exist in the intersection?
- ◉ EB, WB, and SB
- ○ EB, WB, and NB
- ○ EB, SB, and NB
- ○ WB, SB, and NB

Is the Mainline Oriented North/South? Enter Yes or No
- ○ Yes
- ◉ No

K Factors	Mainline
	9.00%
	Side street
	8.30%

D Factors	*Mainline*
Westbound (WB)	41.1%
Eastbound (EB)	58.9%
	Side street
Northbound (NB)	0.0%
Southbound (SB)	66.0%

Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N)

Enter Yes or No
- ◉ Yes
- ○ No

If "Yes" go to cell C47 — If "No" go to cell C31

Enter Year and Growth Rates from Base Year:

	Year	*Rate* (1.0% = 0.01) Mainline	Side Street
Base			
Opening			
Mid			
Design			

Mainline Growth Function
- ◉ Linear
- ○ Exponential
- ○ Decaying

Side Street Growth Function
- ◉ Linear
- ○ Exponential
- ○ Decaying

Enter Base Year AADTs for Volume Comparison:
(growth rates are used to calculate other project years)

From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
0	0	0	0	0

Enter Project and Model Years

	Year
Base	2019
Opening	2025
Mid	2035
Design	2045
Model	2045

Enter Base and Model Year AADTs for Volume Comparison:
(volumes for other project years are calculated by interpolation)

	From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
2019	16000	16000	4500	0	36500
2045	23000	23000	5100	0	51100

		1st Guess Turning %'s for AADT Balancing	**Actual/Counted Traffic for 2019**
(EB LT)	*West-to-North*	15.9%	109
(EB THRU)	*West-to-East*	84.1%	578
(EB RT)	*West-to-South*	0.0%	0
(WB LT)	*East-to-South*	0.0%	0
(WB THRU)	*East-to-West*	86.4%	451
(WB RT)	*East-to-North*	13.6%	71
(SB LT)	*North-to-East*	50.6%	79
(SB THRU)	*North-to-South*	0.0%	0
(SB RT)	*North-to-West*	49.4%	77
(NB LT)	*South-to-West*	0.0%	0
(NB THRU)	*South-to-North*	0.0%	0
(NB RT)	*South-to-East*	0.0%	0

Desired Closure: 0.01

Existing Year AADTs

Existing Turning Movement Counts

FSUTMS Model Year AADTs

First Guess Turning % Option Used
Existing Turning Movement Counts

Only the existing year total departure volumes [AADT*K*(1-D)] will be used to calculate the turning percentages first guess.

The turning percentages first guess is the same as the ***actual distribution of turning volumes entered***. No balancing technique is used.

Only the FSUTMS model year departure volumes [AADT*K*(1-D)] will be used to calculate the

TURNS5 INITIAL TURNING VOLUME SUMMARY

Highway:	Boggy Creek Rd - No Build PM	**County:**	Osceola
Intersection:	Turnberry Blvd		
Project:	Boggy Creek Rd from Simpson Rd to Narcoossee Rd	**Analyst:**	VHB
		Date:	15-Dec-20

Approach-To-Approach	2019 Initial Estimate	2019 Final Estimate	2019 Calculated Volume	2025 Final Estimate	2025 Calculated Volume	2035 Final Estimate	2035 Calculated Volume	2045 Final Estimate	2045 Calculated Volume
West-To-North (LT)	0.159	0.092	78	0.085	79	0.077	83	0.071	87
West-To-East (Thru)	0.841	0.908	770	0.915	855	0.923	994	0.929	1132
West-To-South (RT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
Total Flow From West:			**848**		**934**		**1077**		**1219**
East-To-South (LT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
East-To-West (Thru)	0.864	0.900	533	0.907	591	0.916	688	0.922	785
East-To-North (RT)	0.136	0.100	59	0.093	61	0.084	63	0.078	66
Total Flow From East:			**592**		**652**		**751**		**851**
North-To-East (LT)	0.506	0.576	142	0.575	146	0.575	154	0.575	160
North-To-South (Thru)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
North-To-West (RT)	0.494	0.424	105	0.425	108	0.425	113	0.425	119
Total Flow From North:			**247**		**254**		**267**		**279**
South-To-West (LT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
South-To-North (Thru)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
South-To-East (RT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
Total Flow From South:			**0**		**0**		**0**		**0**

TURNS5 ANALYSIS SHEET - INPUT

Analyst: VHB
Date: 15-Dec-20
Highway: Boggy Creek Rd - No Build AM
Intersection: North Point
Project: Boggy Creek Rd from Simpson Rd to Narcoossee Rd
County: Osceola

Is this a 4 way intersection?
- ○ Yes, my intersection has four approaches

If not, which 3 approaches exist in the intersection?
- ○ EB, WB, and SB
- ◉ EB, WB, and NB
- ○ EB, SB, and NB
- ○ WB, SB, and NB

Is the Mainline Oriented North/South? Enter Yes or No
- ○ Yes
- ◉ No

K Factors	
Mainline	9.00%
Side street	8.00%

D Factors	*Mainline*
Westbound (WB)	41.1%
Eastbound (EB)	58.9%
	Side street
Northbound (NB)	63.9%
Southbound (SB)	0.0%

Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N) Enter Yes or No
- ◉ Yes
- ○ No

If "Yes" go to cell C47 If "No" go to cell C31

Enter Year and Growth Rates from Base Year:

	Year	*Rate* (1.0% = 0.01) Mainline	Side Street
Base			
Opening			
Mid			
Design			

Mainline Growth Function
- ◉ Linear
- ○ Exponential
- ○ Decaying

Side Street Growth Function
- ◉ Linear
- ○ Exponential
- ○ Decaying

Enter Base Year AADTs for Volume Comparison:
(growth rates are used to calculate other project years)

From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
0	0	0	0	0

Enter Project and Model Years

	Year
Base	2019
Opening	2025
Mid	2035
Design	2045
Model	2045

Enter Base and Model Year AADTs for Volume Comparison:
(volumes for other project years are calculated by interpolation)

	From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
2019	16000	16000	0	3100	35100
2045	23000	23000	0	3500	49500

		1st Guess Turning %'s for AADT Balancing	**Actual/Counted Traffic for 2019**
(EB LT)	*West-to-North*	0.0%	0
(EB THRU)	*West-to-East*	90.1%	482
(EB RT)	*West-to-South*	9.9%	53
(WB LT)	*East-to-South*	8.6%	29
(WB THRU)	*East-to-West*	91.4%	307
(WB RT)	*East-to-North*	0.0%	0
(SB LT)	*North-to-East*	0.0%	0
(SB THRU)	*North-to-South*	0.0%	0
(SB RT)	*North-to-West*	0.0%	0
(NB LT)	*South-to-West*	50.0%	90
(NB THRU)	*South-to-North*	0.0%	0
(NB RT)	*South-to-East*	50.0%	90

Desired Closure: 0.01

Existing Year AADTs

Existing Turning Movement Counts

FSUTMS Model Year AADTs

First Guess Turning % Option Used
Existing Turning Movement Counts

Only the existing year total departure volumes [AADT*K*(1-D)] will be used to calculate the turning percentages first guess.

The turning percentages first guess is the same as the ***actual distribution of turning volumes entered***. No balancing technique is used.

Only the FSUTMS model year departure volumes [AADT*K*(1-D)] will be used to calculate the

TURNS5 INITIAL TURNING VOLUME SUMMARY

Highway:	Boggy Creek Rd - No Build AM	**County:**	Osceola
Intersection:	North Point		
Project:	Boggy Creek Rd from Simpson Rd to Narcoossee Rd	**Analyst:**	VHB
		Date:	15-Dec-20

Approach-To-Approach	2019 Initial Estimate	2019 Final Estimate	2019 Calculated Volume	2025 Final Estimate	2025 Calculated Volume	2035 Final Estimate	2035 Calculated Volume	2045 Final Estimate	2045 Calculated Volume
West-To-North (LT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
West-To-East (Thru)	0.901	0.938	795	0.943	881	0.947	1020	0.952	1160
West-To-South (RT)	0.099	0.062	53	0.057	53	0.053	57	0.048	59
Total Flow From West:			**848**		**934**		**1077**		**1219**
East-To-South (LT)	0.086	0.070	41	0.064	42	0.059	44	0.054	46
East-To-West (Thru)	0.914	0.930	551	0.936	610	0.941	707	0.946	805
East-To-North (RT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
Total Flow From East:			**592**		**652**		**751**		**851**
North-To-East (LT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
North-To-South (Thru)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
North-To-West (RT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
Total Flow From North:			**0**		**0**		**0**		**0**
South-To-West (LT)	0.500	0.429	68	0.430	70	0.431	74	0.431	77
South-To-North (Thru)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
South-To-East (RT)	0.500	0.571	90	0.570	93	0.569	97	0.569	102
Total Flow From South:			**158**		**163**		**171**		**179**

TURNS5 ANALYSIS SHEET - INPUT

Analyst: VHB
Date: 15-Dec-20
Highway: Boggy Creek Rd - No Build PM
Intersection: North Point
Project: Boggy Creek Rd from Simpson Rd to Narcoossee Rd
County: Osceola

Is this a 4 way intersection?
- ○ Yes, my intersection has four approaches

If not, which 3 approaches exist in the intersection?
- ○ EB, WB, and SB
- ◉ EB, WB, and NB
- ○ EB, SB, and NB
- ○ WB, SB, and NB

Is the Mainline Oriented North/South? Enter Yes or No
- ○ Yes
- ◉ No

K Factors	
Mainline	9.00%
Side street	8.00%

D Factors	*Mainline*
Westbound (WB)	41.1%
Eastbound (EB)	58.9%
	Side street
Northbound (NB)	63.9%
Southbound (SB)	0.0%

Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N) Enter Yes or No
- ◉ Yes
- ○ No

If "Yes" go to cell C47 If "No" go to cell C31

Enter Year and Growth Rates from Base Year:

	Year	*Rate* (1.0% = 0.01) Mainline	Side Street
Base			
Opening			
Mid			
Design			

Mainline Growth Function
- ◉ Linear
- ○ Exponential
- ○ Decaying

Side Street Growth Function
- ◉ Linear
- ○ Exponential
- ○ Decaying

Enter Base Year AADTs for Volume Comparison:
(growth rates are used to calculate other project years)

From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
0	0	0	0	0

Enter Project and Model Years

	Year
Base	2019
Opening	2025
Mid	2035
Design	2045
Model	2045

Enter Base and Model Year AADTs for Volume Comparison:
(volumes for other project years are calculated by interpolation)

	From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
2019	16000	16000	0	3100	35100
2045	23000	23000	0	3500	49500

		1st Guess Turning %'s for AADT Balancing	**Actual/Counted Traffic for 2019**
(EB LT)	*West-to-North*	0.0%	0
(EB THRU)	*West-to-East*	88.2%	566
(EB RT)	*West-to-South*	11.8%	76
(WB LT)	*East-to-South*	9.0%	53
(WB THRU)	*East-to-West*	91.0%	534
(WB RT)	*East-to-North*	0.0%	0
(SB LT)	*North-to-East*	0.0%	0
(SB THRU)	*North-to-South*	0.0%	0
(SB RT)	*North-to-West*	0.0%	0
(NB LT)	*South-to-West*	43.8%	39
(NB THRU)	*South-to-North*	0.0%	0
(NB RT)	*South-to-East*	56.2%	50

Desired Closure: 0.50

Existing Year AADTs

Existing Turning Movement Counts

FSUTMS Model Year AADTs

First Guess Turning % Option Used
Existing Turning Movement Counts

Only the existing year total departure volumes [AADT*K*(1-D)] will be used to calculate the turning percentages first guess.

The turning percentages first guess is the same as the ***actual distribution of turning volumes entered***. No balancing technique is used.

Only the FSUTMS model year departure volumes [AADT*K*(1-D)] will be used to calculate the

TURNS5 INITIAL TURNING VOLUME SUMMARY

Highway:	Boggy Creek Rd - No Build PM	**County:**	Osceola
Intersection:	North Point		
Project:	Boggy Creek Rd from Simpson Rd to Narcoossee Rd	**Analyst:**	VHB
		Date:	15-Dec-20

Approach-To-Approach	2019 Initial Estimate	2019 Final Estimate	2019 Calculated Volume	2025 Final Estimate	2025 Calculated Volume	2035 Final Estimate	2035 Calculated Volume	2045 Final Estimate	2045 Calculated Volume
West-To-North (LT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
West-To-East (Thru)	0.882	0.928	787	0.934	872	0.939	1011	0.945	1152
West-To-South (RT)	0.118	0.072	61	0.066	62	0.061	66	0.055	67
Total Flow From West:			**848**		**934**		**1077**		**1219**
East-To-South (LT)	0.090	0.056	33	0.052	34	0.048	36	0.043	37
East-To-West (Thru)	0.910	0.944	559	0.948	618	0.952	715	0.957	814
East-To-North (RT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
Total Flow From East:			**592**		**652**		**751**		**851**
North-To-East (LT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
North-To-South (Thru)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
North-To-West (RT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
Total Flow From North:			**0**		**0**		**0**		**0**
South-To-West (LT)	0.438	0.428	68	0.428	70	0.429	73	0.429	77
South-To-North (Thru)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
South-To-East (RT)	0.562	0.572	90	0.572	93	0.571	98	0.571	102
Total Flow From South:			**158**		**163**		**171**		**179**

TURNS5 ANALYSIS SHEET - INPUT

Analyst: VHB
Date: 15-Dec-20
Highway: Boggy Creek Rd
Intersection: Timber Ln - No Build AM
Project: Boggy Creek Rd from Simpson Rd to Narcoossee Rd
County: Osceola

Is this a 4 way intersection?
(●) Yes, my intersection has four approaches

If not, which 3 approaches exist in the intersection?
( ) EB, WB, and SB
( ) EB, WB, and NB
( ) EB, SB, and NB
( ) WB, SB, and NB

Is the Mainline Oriented North/South? Enter Yes or No: (●) Yes ( ) No

K Factors	
Mainline	9.00%
Side street	8.60%

D Factors	*Mainline*
Northbound (NB)	58.9%
Southbound (SB)	41.1%
	Side street
Westbound (WB)	62.1%
Eastbound (EB)	37.9%

Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N) Enter Yes or No: (●) Yes ( ) No

If "Yes" go to cell C47 If "No" go to cell C31

Enter Year and Growth Rates from Base Year:

	Year	*Rate* (1.0% = 0.01) Mainline	Side Street
Base			
Opening			
Mid			
Design			

Mainline Growth Function: (●) Linear ( ) Exponential ( ) Decaying

Side Street Growth Function: (●) Linear ( ) Exponential ( ) Decaying

Enter Base Year AADTs for Volume Comparison:
(growth rates are used to calculate other project years)

From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
0	0	0	0	0

Enter Project and Model Years

	Year
Base	2019
Opening	2025
Mid	2035
Design	2045
Model	2045

Enter Base and Model Year AADTs for Volume Comparison:
(volumes for other project years are calculated by interpolation)

	From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
2019	1000	1100	16000	16000	34100
2045	1100	3000	23000	23000	50100

		1st Guess Turning %'s for AADT Balancing	**Actual/Counted Traffic for 2019**
(EB LT)	*West-to-North*	66.7%	10
(EB THRU)	*West-to-East*	0.0%	0
(EB RT)	*West-to-South*	33.3%	5
(WB LT)	*East-to-South*	54.2%	32
(WB THRU)	*East-to-West*	0.0%	0
(WB RT)	*East-to-North*	45.8%	27
(SB LT)	*North-to-East*	4.9%	16
(SB THRU)	*North-to-South*	94.5%	310
(SB RT)	*North-to-West*	0.6%	2
(NB LT)	*South-to-West*	0.0%	0
(NB THRU)	*South-to-North*	96.5%	546
(NB RT)	*South-to-East*	3.5%	20

Desired Closure: 0.50

Existing Year AADTs

Existing Turning Movement Counts

FSUTMS Model Year AADTs

First Guess Turning % Option Used
Existing Turning Movement Counts

Only the existing year total departure volumes [AADT*K*(1-D)] will be used to calculate the turning percentages first guess.

The turning percentages first guess is the same as the ***actual distribution of turning volumes entered***. No balancing technique is used.

Only the FSUTMS model year departure volumes [AADT*K*(1-D)] will be used to calculate the

TURNS5 INITIAL TURNING VOLUME SUMMARY

Highway:	Boggy Creek Rd	**County:**	Osceola
Intersection:	Timber Ln - No Build AM		
Project:	Boggy Creek Rd from Simpson Rd to Narcoossee Rd	**Analyst:**	VHB
		Date:	15-Dec-20

Approach-To-Approach	2019 Initial Estimate	2019 Final Estimate	2019 Calculated Volume	2025 Final Estimate	2025 Calculated Volume	2035 Final Estimate	2035 Calculated Volume	2045 Final Estimate	2045 Calculated Volume
West-To-North (LT)	0.667	0.568	19	0.603	20	0.636	22	0.651	23
West-To-East (Thru)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
West-To-South (RT)	0.333	0.432	14	0.397	13	0.364	13	0.349	13
Total Flow From West:			**33**		**33**		**35**		**36**
East-To-South (LT)	0.542	0.643	38	0.609	50	0.576	70	0.560	90
East-To-West (Thru)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
East-To-North (RT)	0.458	0.357	21	0.391	32	0.424	51	0.440	70
Total Flow From East:			**59**		**82**		**121**		**160**
North-To-East (LT)	0.049	0.023	14	0.031	20	0.044	33	0.054	46
North-To-South (Thru)	0.945	0.890	526	0.887	579	0.881	662	0.877	746
North-To-West (RT)	0.006	0.087	52	0.082	53	0.075	56	0.069	59
Total Flow From North:			**592**		**652**		**751**		**851**
South-To-West (LT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
South-To-North (Thru)	0.965	0.973	825	0.968	904	0.961	1035	0.956	1165
South-To-East (RT)	0.035	0.027	23	0.032	30	0.039	42	0.044	54
Total Flow From South:			**848**		**934**		**1077**		**1219**

TURNS5 ANALYSIS SHEET - INPUT

Analyst: VHB
Date: 15-Dec-20
Highway: Boggy Creek Rd
Intersection: Timber Ln - No Build PM
Project: Boggy Creek Rd from Simpson Rd to Narcoossee Rd
County: Osceola

Is this a 4 way intersection?
- (●) Yes, my intersection has four approaches

If not, which 3 approaches exist in the intersection?
- ( ) EB, WB, and SB
- ( ) EB, WB, and NB
- ( ) EB, SB, and NB
- ( ) WB, SB, and NB

Is the Mainline Oriented North/South? Enter Yes or No
- (●) Yes
- ( ) No

K Factors	Mainline
	9.00%
	Side street
	8.60%

D Factors	*Mainline*
Northbound (NB)	41.1%
Southbound (SB)	58.9%
	Side street
Westbound (WB)	62.1%
Eastbound (EB)	37.9%

Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N) Enter Yes or No
- (●) Yes
- ( ) No

If "Yes" go to cell C47 — If "No" go to cell C31

Enter Year and Growth Rates from Base Year:

	Year	*Rate* (1.0% = 0.01) Mainline	Side Street
Base			
Opening			
Mid			
Design			

Mainline Growth Function
- (●) Linear
- ( ) Exponential
- ( ) Decaying

Side Street Growth Function
- (●) Linear
- ( ) Exponential
- ( ) Decaying

Enter Base Year AADTs for Volume Comparison:
(growth rates are used to calculate other project years)

From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
0	0	0	0	0

Enter Project and Model Years

	Year
Base	2019
Opening	2025
Mid	2035
Design	2045
Model	2045

Enter Base and Model Year AADTs for Volume Comparison:
(volumes for other project years are calculated by interpolation)

	From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
2019	1000	1100	16000	16000	34100
2045	1100	3000	23000	23000	50100

		1st Guess Turning %'s for AADT Balancing	**Actual/Counted Traffic for 2019**
(EB LT)	*West-to-North*	40.0%	6
(EB THRU)	*West-to-East*	0.0%	0
(EB RT)	*West-to-South*	60.0%	9
(WB LT)	*East-to-South*	52.8%	19
(WB THRU)	*East-to-West*	2.8%	1
(WB RT)	*East-to-North*	44.4%	16
(SB LT)	*North-to-East*	4.2%	27
(SB THRU)	*North-to-South*	87.3%	565
(SB RT)	*North-to-West*	8.5%	55
(NB LT)	*South-to-West*	20.9%	23
(NB THRU)	*South-to-North*	50.0%	55
(NB RT)	*South-to-East*	29.1%	32

Desired Closure: 0.50

Existing Year AADTs

Existing Turning Movement Counts

FSUTMS Model Year AADTs

First Guess Turning % Option Used
Existing Turning Movement Counts

Only the existing year total departure volumes [AADT*K*(1-D)] will be used to calculate the turning percentages first guess.

The turning percentages first guess is the same as the ***actual distribution of turning volumes entered***. No balancing technique is used.

Only the FSUTMS model year departure volumes [AADT*K*(1-D)] will be used to calculate the

TURNS5 INITIAL TURNING VOLUME SUMMARY

Highway:	Boggy Creek Rd	**County:**	Osceola
Intersection:	Timber Ln - No Build PM		
Project:	Boggy Creek Rd from Simpson Rd to Narcoossee Rd	**Analyst:**	VHB
		Date:	15-Dec-20

Approach-To-Approach	2019 Initial Estimate	2019 Final Estimate	2019 Calculated Volume	2025 Final Estimate	2025 Calculated Volume	2035 Final Estimate	2035 Calculated Volume	2045 Final Estimate	2045 Calculated Volume
West-To-North (LT)	0.400	0.532	18	0.531	18	0.530	19	0.538	19
West-To-East (Thru)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
West-To-South (RT)	0.600	0.468	15	0.469	15	0.470	16	0.462	17
Total Flow From West:			**33**		**33**		**35**		**36**
East-To-South (LT)	0.528	0.408	24	0.410	34	0.411	50	0.403	64
East-To-West (Thru)	0.028	0.006	0	0.005	0	0.004	0	0.004	1
East-To-North (RT)	0.444	0.586	35	0.585	48	0.585	71	0.593	95
Total Flow From East:			**59**		**82**		**121**		**160**
North-To-East (LT)	0.042	0.008	7	0.010	9	0.012	13	0.015	18
North-To-South (Thru)	0.873	0.968	821	0.968	904	0.968	1042	0.966	1178
North-To-West (RT)	0.085	0.024	20	0.022	21	0.020	22	0.019	23
Total Flow From North:			**848**		**934**		**1077**		**1219**
South-To-West (LT)	0.209	0.055	33	0.051	33	0.047	35	0.042	36
South-To-North (Thru)	0.500	0.896	530	0.887	579	0.873	656	0.864	735
South-To-East (RT)	0.291	0.049	29	0.062	40	0.080	60	0.094	80
Total Flow From South:			**592**		**652**		**751**		**851**

TURNS5 ANALYSIS SHEET - INPUT

Analyst: VHB
Date: 15-Dec-20
Highway: Boggy Creek - No Build AM
Intersection: Fells Cove Blvd
Project: Boggy Creek Rd from Simpson Rd to Narcoossee Rd
County: Osceola

Is this a 4 way intersection?
- ○ Yes, my intersection has four approaches

If not, which 3 approaches exist in the intersection?
- ○ EB, WB, and SB
- ◉ EB, WB, and NB
- ○ EB, SB, and NB
- ○ WB, SB, and NB

Is the Mainline Oriented North/South? Enter Yes or No
- ○ Yes
- ◉ No

K Factors	Mainline
	9.00%
	Side street
	6.40%

D Factors	*Mainline*
Westbound (WB)	41.1%
Eastbound (EB)	58.9%
	Side street
Northbound (NB)	63.0%
Southbound (SB)	0.0%

Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N) Enter Yes or No
- ◉ Yes
- ○ No

If "Yes" go to cell C47 If "No" go to cell C31

Enter Year and Growth Rates from Base Year:

	Year	*Rate* (1.0% = 0.01) Mainline	Side Street
Base			
Opening			
Mid			
Design			

Mainline Growth Function
- ◉ Linear
- ○ Exponential
- ○ Decaying

Side Street Growth Function
- ◉ Linear
- ○ Exponential
- ○ Decaying

Enter Base Year AADTs for Volume Comparison:
(growth rates are used to calculate other project years)

From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
0	0	0	0	0

Enter Project and Model Years

	Year
Base	2019
Opening	2025
Mid	2035
Design	2045
Model	2045

Enter Base and Model Year AADTs for Volume Comparison:
(volumes for other project years are calculated by interpolation)

	From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
2019	16000	15000	0	1900	32900
2045	23000	21500	0	2100	46600

		1st Guess Turning %'s for AADT Balancing	**Actual/Counted Traffic for 2019**
(EB LT)	*West-to-North*	0.0%	0
(EB THRU)	*West-to-East*	99.6%	511
(EB RT)	*West-to-South*	0.4%	2
(WB LT)	*East-to-South*	7.1%	29
(WB THRU)	*East-to-West*	92.9%	381
(WB RT)	*East-to-North*	0.0%	0
(SB LT)	*North-to-East*	0.0%	0
(SB THRU)	*North-to-South*	0.0%	0
(SB RT)	*North-to-West*	0.0%	0
(NB LT)	*South-to-West*	30.8%	28
(NB THRU)	*South-to-North*	0.0%	0
(NB RT)	*South-to-East*	69.2%	63

Desired Closure: 0.50

Existing Year AADTs

Existing Turning Movement Counts

FSUTMS Model Year AADTs

First Guess Turning % Option Used
Existing Turning Movement Counts

Only the existing year total departure volumes [AADT*K*(1-D)] will be used to calculate the turning percentages first guess.

The turning percentages first guess is the same as the ***actual distribution of turning volumes entered***. No balancing technique is used.

Only the FSUTMS model year departure volumes [AADT*K*(1-D)] will be used to calculate the

TURNS5 INITIAL TURNING VOLUME SUMMARY

Highway:	Boggy Creek - No Build AM	**County:**	Osceola
Intersection:	Fells Cove Blvd		
Project:	Boggy Creek Rd from Simpson Rd to Narcoossee Rd	**Analyst:**	VHB
		Date:	15-Dec-20

Approach-To-Approach	2019 Initial Estimate	2019 Final Estimate	2019 Calculated Volume	2025 Final Estimate	2025 Calculated Volume	2035 Final Estimate	2035 Calculated Volume	2045 Final Estimate	2045 Calculated Volume
West-To-North (LT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
West-To-East (Thru)	0.996	0.966	819	0.965	901	0.964	1038	0.963	1174
West-To-South (RT)	0.004	0.034	29	0.035	33	0.036	39	0.037	45
Total Flow From West:			**848**		**934**		**1077**		**1219**
East-To-South (LT)	0.071	0.032	18	0.025	15	0.016	11	0.008	6
East-To-West (Thru)	0.929	0.968	537	0.975	595	0.984	692	0.992	789
East-To-North (RT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
Total Flow From East:			**555**		**610**		**703**		**795**
North-To-East (LT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
North-To-South (Thru)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
North-To-West (RT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
Total Flow From North:			**0**		**0**		**0**		**0**
South-To-West (LT)	0.308	0.900	69	0.925	72	0.951	78	0.976	83
South-To-North (Thru)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
South-To-East (RT)	0.692	0.100	8	0.075	6	0.049	4	0.024	2
Total Flow From South:			**77**		**78**		**82**		**85**

TURNS5 ANALYSIS SHEET - INPUT

Analyst: VHB
Date: 15-Dec-20
Highway: Boggy Creek - No Build PM
Intersection: Fells Cove Blvd
Project: Boggy Creek Rd from Simpson Rd to Narcoossee Rd
County: Osceola

Is this a 4 way intersection?
- ○ Yes, my intersection has four approaches

If not, which 3 approaches exist in the intersection?
- ○ EB, WB, and SB
- ◉ EB, WB, and NB
- ○ EB, SB, and NB
- ○ WB, SB, and NB

Is the Mainline Oriented North/South? Enter Yes or No
- ○ Yes
- ◉ No

K Factors	Mainline
	9.00%
	Side street
	6.40%

D Factors	*Mainline*
Westbound (WB)	58.9%
Eastbound (EB)	41.1%
	Side street
Northbound (NB)	51.0%
Southbound (SB)	0.0%

Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N) Enter Yes or No
- ◉ Yes
- ○ No

If "Yes" go to cell C47 If "No" go to cell C31

Enter Year and Growth Rates from Base Year:

	Year	*Rate* (1.0% = 0.01) Mainline	Side Street
Base			
Opening			
Mid			
Design			

Mainline Growth Function
- ◉ Linear
- ○ Exponential
- ○ Decaying

Side Street Growth Function
- ◉ Linear
- ○ Exponential
- ○ Decaying

Enter Base Year AADTs for Volume Comparison:
(growth rates are used to calculate other project years)

From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
0	0	0	0	0

Enter Project and Model Years

	Year
Base	2019
Opening	2025
Mid	2035
Design	2045
Model	2045

Enter Base and Model Year AADTs for Volume Comparison:
(volumes for other project years are calculated by interpolation)

	From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
2019	16000	15000	0	1900	32900
2045	23000	21500	0	2100	46600

		1st Guess Turning %'s for AADT Balancing	**Actual/Counted Traffic for 2019**
(EB LT)	*West-to-North*	0.0%	0
(EB THRU)	*West-to-East*	97.7%	521
(EB RT)	*West-to-South*	2.3%	12
(WB LT)	*East-to-South*	6.6%	40
(WB THRU)	*East-to-West*	93.4%	562
(WB RT)	*East-to-North*	0.0%	0
(SB LT)	*North-to-East*	0.0%	0
(SB THRU)	*North-to-South*	0.0%	0
(SB RT)	*North-to-West*	0.0%	0
(NB LT)	*South-to-West*	34.0%	17
(NB THRU)	*South-to-North*	0.0%	0
(NB RT)	*South-to-East*	66.0%	33

Desired Closure: 1.00

Existing Year AADTs

Existing Turning Movement Counts

FSUTMS Model Year AADTs

First Guess Turning % Option Used
Existing Turning Movement Counts

Only the existing year total departure volumes [AADT*K*(1-D)] will be used to calculate the turning percentages first guess.

The turning percentages first guess is the same as the ***actual distribution of turning volumes entered***. No balancing technique is used.

Only the FSUTMS model year departure volumes [AADT*K*(1-D)] will be used to calculate the

TURNS5 INITIAL TURNING VOLUME SUMMARY

Highway:	Boggy Creek - No Build PM	**County:**	Osceola
Intersection:	Fells Cove Blvd		
Project:	Boggy Creek Rd from Simpson Rd to Narcoossee Rd	**Analyst:**	VHB
		Date:	15-Dec-20

Approach-To-Approach	2019 Initial Estimate	2019 Final Estimate	2019 Calculated Volume	2025 Final Estimate	2025 Calculated Volume	2035 Final Estimate	2035 Calculated Volume	2045 Final Estimate	2045 Calculated Volume
West-To-North (LT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
West-To-East (Thru)	0.977	0.927	549	0.928	605	0.928	697	0.928	790
West-To-South (RT)	0.023	0.073	43	0.072	47	0.072	54	0.072	61
Total Flow From West:			**592**		**652**		**751**		**851**
East-To-South (LT)	0.066	0.021	17	0.016	14	0.009	9	0.004	5
East-To-West (Thru)	0.934	0.979	778	0.984	861	0.991	998	0.996	1135
East-To-North (RT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
Total Flow From East:			**795**		**875**		**1007**		**1140**
North-To-East (LT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
North-To-South (Thru)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
North-To-West (RT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
Total Flow From North:			**0**		**0**		**0**		**0**
South-To-West (LT)	0.340	0.848	53	0.882	56	0.931	61	0.971	67
South-To-North (Thru)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
South-To-East (RT)	0.660	0.152	9	0.118	8	0.069	5	0.029	2
Total Flow From South:			**62**		**64**		**66**		**69**

TURNS5 ANALYSIS SHEET - INPUT

Analyst: VHB
Date: 15-Dec-20
Highway: Narcoossee Rd
Intersection: Boggy Creek Rd - No Build AM
Project: Boggy Creek Rd from Simpson Rd to Narcoossee Rd
County: Osceola

Is this a 4 way intersection?
- ○ Yes, my intersection has four approaches

If not, which 3 approaches exist in the intersection?
- ○ EB, WB, and SB
- ○ EB, WB, and NB
- ◉ EB, SB, and NB
- ○ WB, SB, and NB

Is the Mainline Oriented North/South? Enter Yes or No: ◉ Yes ○ No

K Factors	
Mainline	9.00%
Side street	9.00%

D Factors	*Mainline*
Northbound (NB)	64.8%
Southbound (SB)	35.2%
	Side street
Westbound (WB)	0.0%
Eastbound (EB)	58.9%

Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N) Enter Yes or No: ◉ Yes ○ No

If "Yes" go to cell C47 If "No" go to cell C31

Enter Year and Growth Rates from Base Year:

	Year	*Rate* (1.0% = 0.01) Mainline	Side Street
Base			
Opening			
Mid			
Design			

Mainline Growth Function: ◉ Linear ○ Exponential ○ Decaying

Side Street Growth Function: ◉ Linear ○ Exponential ○ Decaying

Enter Base Year AADTs for Volume Comparison:
(growth rates are used to calculate other project years)

From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
0	0	0	0	0

Enter Project and Model Years

	Year
Base	2019
Opening	2025
Mid	2035
Design	2045
Model	2045

Enter Base and Model Year AADTs for Volume Comparison:
(volumes for other project years are calculated by interpolation)

	From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
2019	15000	0	32000	33000	80000
2045	21500	0	54000	55500	131000

		1st Guess Turning %'s for AADT Balancing	**Actual/Counted Traffic for 2019**
(EB LT)	*West-to-North*	57.8%	356
(EB THRU)	*West-to-East*	0.0%	0
(EB RT)	*West-to-South*	42.2%	260
(WB LT)	*East-to-South*	0.0%	0
(WB THRU)	*East-to-West*	0.0%	0
(WB RT)	*East-to-North*	0.0%	0
(SB LT)	*North-to-East*	0.0%	0
(SB THRU)	*North-to-South*	87.3%	600
(SB RT)	*North-to-West*	12.7%	87
(NB LT)	*South-to-West*	16.4%	331
(NB THRU)	*South-to-North*	83.6%	1682
(NB RT)	*South-to-East*	0.0%	0

Desired Closure: 0.50

Existing Year AADTs

Existing Turning Movement Counts

FSUTMS Model Year AADTs

First Guess Turning % Option Used
Existing Turning Movement Counts

Only the existing year total departure volumes [AADT*K*(1-D)] will be used to calculate the turning percentages first guess.

The turning percentages first guess is the same as the ***actual distribution of turning volumes entered***. No balancing technique is used.

Only the FSUTMS model year departure volumes [AADT*K*(1-D)] will be used to calculate the

TURNS5 INITIAL TURNING VOLUME SUMMARY

Highway:	Narcoossee Rd	**County:**	Osceola
Intersection:	Boggy Creek Rd - No Build AM		
Project:	Boggy Creek Rd from Simpson Rd to Narcoossee Rd	**Analyst:**	VHB
		Date:	15-Dec-20

Approach-To-Approach	2019 Initial Estimate	2019 Final Estimate	2019 Calculated Volume	2025 Final Estimate	2025 Calculated Volume	2035 Final Estimate	2035 Calculated Volume	2045 Final Estimate	2045 Calculated Volume
West-To-North (LT)	0.578	0.601	478	0.601	526	0.600	604	0.599	683
West-To-East (Thru)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
West-To-South (RT)	0.422	0.399	317	0.399	349	0.400	403	0.401	457
Total Flow From West:			**795**		**875**		**1007**		**1140**
East-To-South (LT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
East-To-West (Thru)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
East-To-North (RT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
Total Flow From East:			**0**		**0**		**0**		**0**
North-To-East (LT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
North-To-South (Thru)	0.873	0.818	829	0.828	973	0.840	1212	0.848	1451
North-To-West (RT)	0.127	0.182	185	0.172	202	0.160	231	0.152	260
Total Flow From North:			**1014**		**1175**		**1443**		**1711**
South-To-West (LT)	0.164	0.214	412	0.203	452	0.190	519	0.181	586
South-To-North (Thru)	0.836	0.786	1513	0.797	1775	0.810	2213	0.819	2651
South-To-East (RT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
Total Flow From South:			**1925**		**2227**		**2732**		**3237**

TURNS5 ANALYSIS SHEET - INPUT

Analyst: VHB
Date: 15-Dec-20
Highway: Narcoossee Rd
Intersection: Boggy Creek Rd - No Build PM
Project: Boggy Creek Rd from Simpson Rd to Narcoossee Rd
County: Osceola

Is this a 4 way intersection?
- ○ Yes, my intersection has four approaches

If not, which 3 approaches exist in the intersection?
- ○ EB, WB, and SB
- ○ EB, WB, and NB
- ◉ EB, SB, and NB
- ○ WB, SB, and NB

Is the Mainline Oriented North/South? Enter Yes or No: ◉ Yes ○ No

K Factors	
Mainline	9.00%
Side street	9.00%

D Factors	*Mainline*
Northbound (NB)	35.2%
Southbound (SB)	64.8%
	Side street
Westbound (WB)	0.0%
Eastbound (EB)	58.9%

Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N) Enter Yes or No: ◉ Yes ○ No

If "Yes" go to cell C47 If "No" go to cell C31

Enter Year and Growth Rates from Base Year:

	Year	*Rate* (1.0% = 0.01) Mainline	Side Street
Base			
Opening			
Mid			
Design			

Mainline Growth Function: ◉ Linear ○ Exponential ○ Decaying

Side Street Growth Function: ◉ Linear ○ Exponential ○ Decaying

Enter Base Year AADTs for Volume Comparison:
(growth rates are used to calculate other project years)

From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
0	0	0	0	0

Enter Project and Model Years

	Year
Base	2019
Opening	2025
Mid	2035
Design	2045
Model	2045

Enter Base and Model Year AADTs for Volume Comparison:
(volumes for other project years are calculated by interpolation)

	From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
2019	15000	0	32000	33000	80000
2045	21500	0	54000	55500	131000

		1st Guess Turning %'s for AADT Balancing	**Actual/Counted Traffic for 2019**
(EB LT)	*West-to-North*	45.7%	233
(EB THRU)	*West-to-East*	0.0%	0
(EB RT)	*West-to-South*	54.3%	277
(WB LT)	*East-to-South*	0.0%	0
(WB THRU)	*East-to-West*	0.0%	0
(WB RT)	*East-to-North*	0.0%	0
(SB LT)	*North-to-East*	0.0%	0
(SB THRU)	*North-to-South*	83.8%	1614
(SB RT)	*North-to-West*	16.2%	311
(NB LT)	*South-to-West*	23.4%	271
(NB THRU)	*South-to-North*	76.6%	886
(NB RT)	*South-to-East*	0.0%	0

Desired Closure: 1.00

Existing Year AADTs

Existing Turning Movement Counts

FSUTMS Model Year AADTs

First Guess Turning % Option Used
Existing Turning Movement Counts

Only the existing year total departure volumes [AADT*K*(1-D)] will be used to calculate the turning percentages first guess.

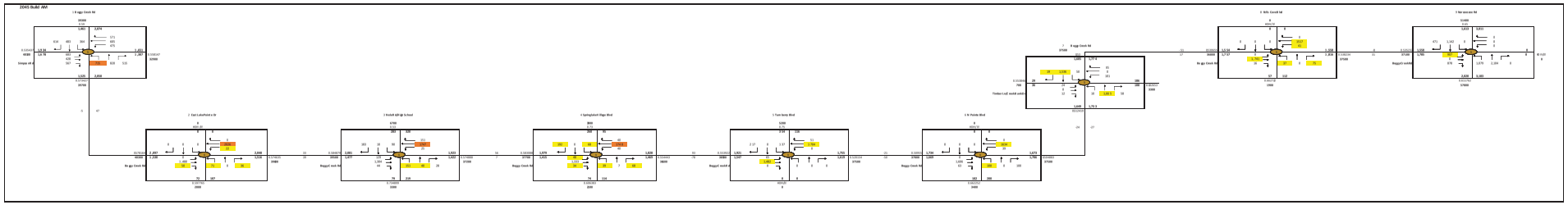
The turning percentages first guess is the same as the ***actual distribution of turning volumes entered***. No balancing technique is used.

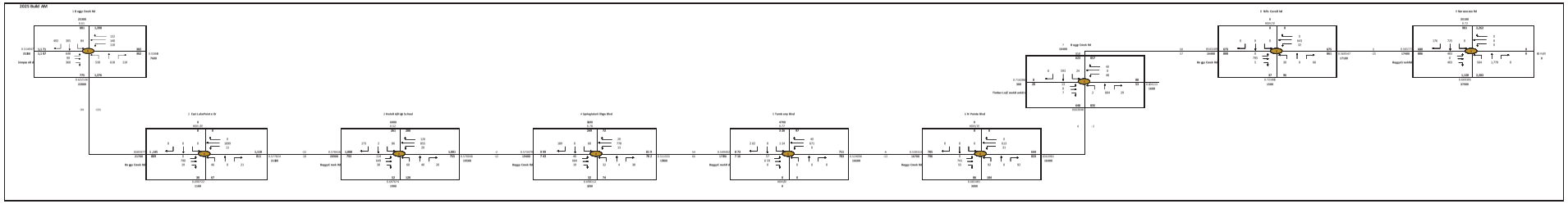
Only the FSUTMS model year departure volumes [AADT*K*(1-D)] will be used to calculate the

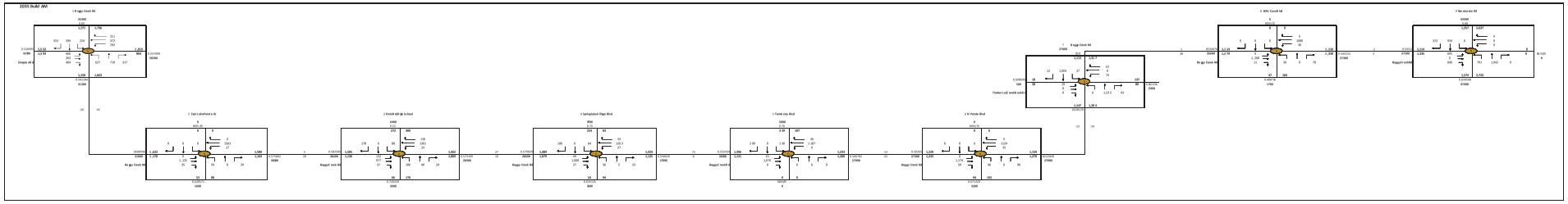
TURNS5 INITIAL TURNING VOLUME SUMMARY

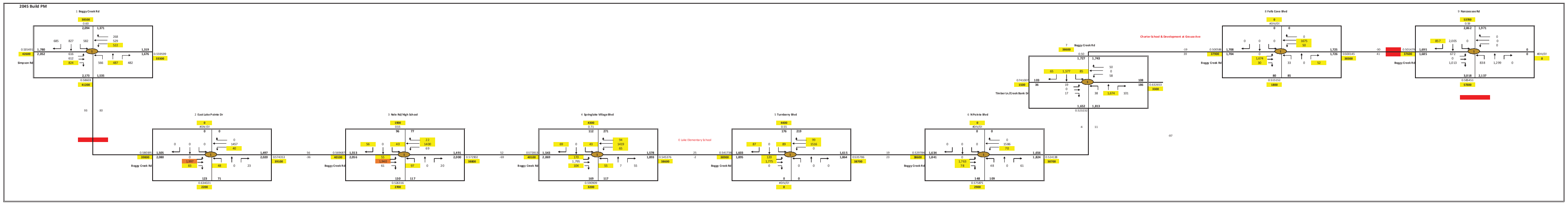
Highway:	Narcoossee Rd	**County:**	Osceola
Intersection:	Boggy Creek Rd - No Build PM		
Project:	Boggy Creek Rd from Simpson Rd to Narcoossee Rd	**Analyst:**	VHB
		Date:	15-Dec-20

Approach-To-Approach	2019 Initial Estimate	2019 Final Estimate	2019 Calculated Volume	2025 Final Estimate	2025 Calculated Volume	2035 Final Estimate	2035 Calculated Volume	2045 Final Estimate	2045 Calculated Volume
West-To-North (LT)	0.457	0.432	343	0.434	380	0.422	425	0.424	483
West-To-East (Thru)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
West-To-South (RT)	0.543	0.568	452	0.566	495	0.578	582	0.576	657
Total Flow From West:			**795**		**875**		**1007**		**1140**
East-To-South (LT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
East-To-West (Thru)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
East-To-North (RT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
Total Flow From East:			**0**		**0**		**0**		**0**
North-To-East (LT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
North-To-South (Thru)	0.838	0.831	1551	0.839	1814	0.853	2266	0.860	2708
North-To-West (RT)	0.162	0.169	315	0.161	348	0.147	390	0.140	441
Total Flow From North:			**1866**		**2162**		**2656**		**3149**
South-To-West (LT)	0.234	0.262	274	0.249	301	0.239	355	0.227	399
South-To-North (Thru)	0.766	0.738	771	0.751	909	0.761	1129	0.773	1359
South-To-East (RT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
Total Flow From South:			**1045**		**1210**		**1484**		**1758**

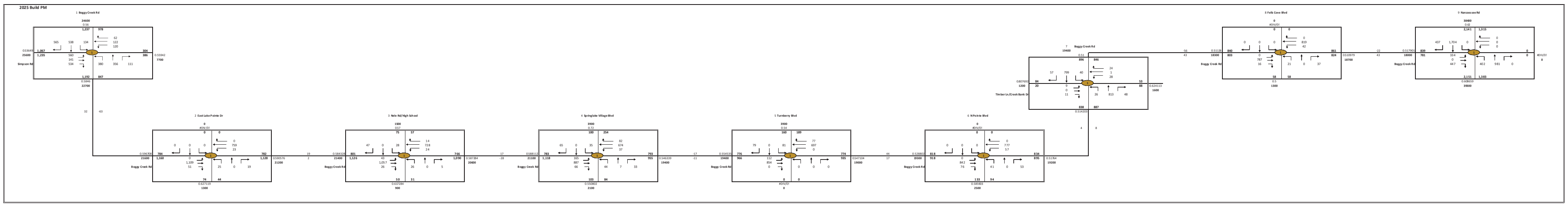

2045 Build AM
1 Riggs Creek Rd
2 East Lake Point e Dr
3 Iredell Alt Sgh School
4 Springhaven Village Blvd
5 Tom Jenny Blvd
6 N Pointe Blvd
7 Riggs Creek Rd
8 Mills Cornell Rd
9 Harmons Rd


2025 Build AM
1 Riggs Creek Rd
2 East Lake Point e Dr
3 Iredell Alt Sgh School
4 Springhaven Village Blvd
5 Tom Jenny Blvd
6 N Pointe Blvd
7 Riggs Creek Rd
8 Mills Cornell Rd
9 Harmons Rd

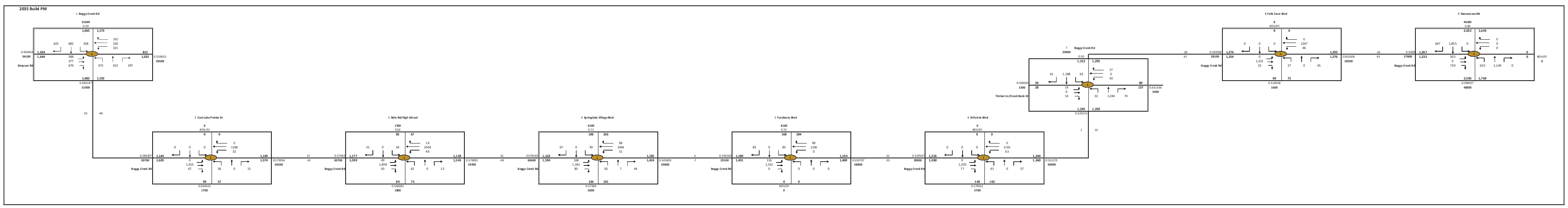

2035 Build AM
1 Riggs Creek Rd
2 East Lake Point e Dr
3 Iredell Alt Sgh School
4 Springhaven Village Blvd
5 Tom Jenny Blvd
6 N Pointe Blvd
7 Riggs Creek Rd
8 Mills Cornell Rd
9 Harmons Rd



2045 Build PM
1 Boggy Creek Rd
Simpson Rd
2 East Lake Pointe Dr
3 Nele Rd/High School
4 Springlake Village Blvd
5 Turnberry Blvd
6 N Pointe Blvd
7 Boggy Creek Rd
Timber Ln/Creek Bank Dr
8 Fells Cove Blvd
9 Narcoossee Rd
Boggy Creek Rd
Charter School & Development at Grouse Ave



2025 Build PM
1 Boggy Creek Rd
Simpson Rd
2 East Lake Pointe Dr
3 Nele Rd/High School
4 Springlake Village Blvd
5 Turnberry Blvd
6 N Pointe Blvd
7 Boggy Creek Rd
Timber Ln/Creek Bank Dr
8 Fells Cove Blvd
9 Narcoossee Rd
Boggy Creek Rd



2035 Build PM
1 Boggy Creek Rd
Simpson Rd
2 East Lake Pointe Dr
3 Nele Rd/High School
4 Springlake Village Blvd
5 Turnberry Blvd
6 N Pointe Blvd
7 Boggy Creek Rd
Timber Ln/Creek Bank Dr
8 Fells Cove Blvd
9 Narcoossee Rd
Boggy Creek Rd

TURNS5 ANALYSIS SHEET - INPUT

Analyst: VHB
Date: 15-Dec-20
Highway: BOGGY CREEK RD
Intersection: SIMPSON RD- Build AM
Project: Boggy Creek Rd from Simpson Rd to Narcoossee Rd
County: Osceola

Is this a 4 way intersection?
- (•) Yes, my intersection has four approaches

If not, which 3 approaches exist in the intersection?
- ( ) EB, WB, and SB
- ( ) EB, WB, and NB
- ( ) EB, SB, and NB
- ( ) WB, SB, and NB

Is the Mainline Oriented North/South? Enter Yes or No: (•) Yes ( ) No

K Factors	
Mainline	9.00%
Side street	9.00%

D Factors	*Mainline*
Northbound (NB)	58.9%
Southbound (SB)	41.1%
	Side street
Westbound (WB)	55.6%
Eastbound (EB)	44.4%

Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N)

Enter Yes or No: (•) Yes ( ) No

If "Yes" go to cell C47 — If "No" go to cell C31

Enter Year and Growth Rates from Base Year:

	Year	*Rate* (1.0% = 0.01) Mainline	Side Street
Base			
Opening			
Mid			
Design			

Mainline Growth Function: (•) Linear ( ) Exponential ( ) Decaying

Side Street Growth Function: (•) Linear ( ) Exponential ( ) Decaying

Enter Base Year AADTs for Volume Comparison:
(growth rates are used to calculate other project years)

From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
0	0	0	0	0

Enter Project and Model Years

	Year
Base	2020
Opening	2025
Mid	2035
Design	2045
Model	2045

Enter Base and Model Year AADTs for Volume Comparison:
(volumes for other project years are calculated by interpolation)

	From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
2020	34000	100	31000	20000	85100
2045	42000	33000	39500	41500	156000

		1st Guess Turning %'s for AADT Balancing	**Actual/Counted Traffic for 2020**
(EB LT)	*West-to-North*	42.3%	0
(EB THRU)	*West-to-East*	26.7%	0
(EB RT)	*West-to-South*	31.0%	0
(WB LT)	*East-to-South*	26.8%	0
(WB THRU)	*East-to-West*	36.7%	0
(WB RT)	*East-to-North*	36.5%	0
(SB LT)	*North-to-East*	26.6%	0
(SB THRU)	*North-to-South*	31.0%	0
(SB RT)	*North-to-West*	42.4%	0
(NB LT)	*South-to-West*	38.1%	0
(NB THRU)	*South-to-North*	38.0%	0
(NB RT)	*South-to-East*	23.9%	0

Desired Closure: 0.50

Existing Year AADTs

Existing Turning Movement Counts

FSUTMS Model Year AADTs

First Guess Turning % Option Used FSUTMS Model Year AADTs

Only the existing year total departure volumes [AADT*K*(1-D)] will be used to calculate the turning percentages first guess.

The turning percentages first guess is the same as the ***actual distribution of turning volumes entered***. No balancing technique is used.

Only the FSUTMS model year departure volumes [AADT*K*(1-D)] will be used to calculate the

TURNS5 INITIAL TURNING VOLUME SUMMARY

Highway:	BOGGY CREEK RD	**County:**	Osceola
Intersection:	SIMPSON RD- Build AM		
Project:	Boggy Creek Rd from Simpson Rd to Narcoossee Rd	**Analyst:**	VHB
		Date:	15-Dec-20

Approach-To-Approach	2020 Initial Estimate	2020 Final Estimate	2020 Calculated Volume	2025 Final Estimate	2025 Calculated Volume	2035 Final Estimate	2035 Calculated Volume	2045 Final Estimate	2045 Calculated Volume
West-To-North (LT)	0.423	0.720	978	0.627	892	0.493	764	0.407	683
West-To-East (Thru)	0.267	0.001	2	0.071	101	0.179	278	0.255	428
West-To-South (RT)	0.310	0.279	379	0.302	430	0.328	508	0.338	567
Total Flow From West:			**1359**		**1423**		**1550**		**1678**
East-To-South (LT)	0.268	0.146	1	0.181	60	0.242	240	0.288	475
East-To-West (Thru)	0.367	0.478	2	0.443	148	0.396	394	0.366	605
East-To-North (RT)	0.365	0.376	2	0.376	126	0.362	359	0.346	571
Total Flow From East:			**5**		**334**		**993**		**1651**
North-To-East (LT)	0.266	0.001	1	0.064	77	0.170	227	0.249	364
North-To-South (Thru)	0.310	0.234	269	0.272	330	0.315	420	0.331	483
North-To-West (RT)	0.424	0.765	877	0.664	803	0.515	688	0.420	614
Total Flow From North:			**1147**		**1210**		**1335**		**1461**
South-To-West (LT)	0.381	0.559	593	0.514	662	0.445	776	0.393	865
South-To-North (Thru)	0.380	0.440	466	0.436	562	0.408	712	0.373	820
South-To-East (RT)	0.239	0.001	1	0.050	64	0.147	256	0.234	515
Total Flow From South:			**1060**		**1288**		**1744**		**2200**

TURNS5 ANALYSIS SHEET - INPUT

Analyst: VHB
Date: 15-Dec-20
Highway: BOGGY CREEK RD
Intersection: SIMPSON RD- Build PM
Project: Boggy Creek Rd from Simpson Rd to Narcoossee Rd
County: Osceola

Is this a 4 way intersection?
- (•) Yes, my intersection has four approaches

If not, which 3 approaches exist in the intersection?
- ( ) EB, WB, and SB
- ( ) EB, WB, and NB
- ( ) EB, SB, and NB
- ( ) WB, SB, and NB

Is the Mainline Oriented North/South? Enter Yes or No: (•) Yes ( ) No

K Factors	Mainline
	9.00%
	Side street
	9.00%

D Factors	*Mainline*
Northbound (NB)	41.1%
Southbound (SB)	58.9%
	Side street
Westbound (WB)	44.4%
Eastbound (EB)	55.6%

Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N) Enter Yes or No: (•) Yes ( ) No

If "Yes" go to cell C47 — If "No" go to cell C31

Enter Year and Growth Rates from Base Year:

	Year	*Rate* (1.0% = 0.01) Mainline	Side Street
Base			
Opening			
Mid			
Design			

Mainline Growth Function: (•) Linear ( ) Exponential ( ) Decaying

Side Street Growth Function: (•) Linear ( ) Exponential ( ) Decaying

Enter Base Year AADTs for Volume Comparison:
(growth rates are used to calculate other project years)

From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
0	0	0	0	0

Enter Project and Model Years

	Year
Base	2020
Opening	2025
Mid	2035
Design	2045
Model	2045

Enter Base and Model Year AADTs for Volume Comparison:
(volumes for other project years are calculated by interpolation)

	From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
2020	34000	100	31000	20000	85100
2045	42000	33000	39500	41500	156000

		1st Guess Turning %'s for AADT Balancing	**Actual/Counted Traffic for 2020**
(EB LT)	*West-to-North*	27.5%	0
(EB THRU)	*West-to-East*	31.1%	0
(EB RT)	*West-to-South*	41.4%	0
(WB LT)	*East-to-South*	41.2%	0
(WB THRU)	*East-to-West*	31.4%	0
(WB RT)	*East-to-North*	27.4%	0
(SB LT)	*North-to-East*	29.9%	0
(SB THRU)	*North-to-South*	39.7%	0
(SB RT)	*North-to-West*	30.4%	0
(NB LT)	*South-to-West*	35.0%	0
(NB THRU)	*South-to-North*	30.5%	0
(NB RT)	*South-to-East*	34.5%	0

Desired Closure: 0.50

Existing Year AADTs

Existing Turning Movement Counts

FSUTMS Model Year AADTs

First Guess Turning % Option Used FSUTMS Model Year AADTs

Only the existing year total departure volumes [AADT*K*(1-D)] will be used to calculate the turning percentages first guess.

The turning percentages first guess is the same as the ***actual distribution of turning volumes entered***. No balancing technique is used.

Only the FSUTMS model year departure volumes [AADT*K*(1-D)] will be used to calculate the

TURNS5 INITIAL TURNING VOLUME SUMMARY

Highway:	BOGGY CREEK RD	**County:**	Osceola
Intersection:	SIMPSON RD- Build PM		
Project:	Boggy Creek Rd from Simpson Rd to Narcoossee Rd	**Analyst:**	VHB
		Date:	15-Dec-20

Approach-To-Approach	2020 Initial Estimate	2020 Final Estimate	2020 Calculated Volume	2025 Final Estimate	2025 Calculated Volume	2035 Final Estimate	2035 Calculated Volume	2045 Final Estimate	2045 Calculated Volume
West-To-North (LT)	0.275	0.597	1015	0.498	887	0.370	719	0.293	616
West-To-East (Thru)	0.311	0.002	4	0.092	164	0.211	409	0.291	612
West-To-South (RT)	0.414	0.401	682	0.410	730	0.419	814	0.416	874
Total Flow From West:			**1701**		**1781**		**1942**		**2102**
East-To-South (LT)	0.412	0.219	1	0.264	70	0.339	269	0.396	522
East-To-West (Thru)	0.314	0.454	2	0.415	111	0.361	286	0.325	429
East-To-North (RT)	0.274	0.327	1	0.321	86	0.300	238	0.279	368
Total Flow From East:			**4**		**267**		**793**		**1319**
North-To-East (LT)	0.299	0.001	2	0.080	139	0.196	375	0.278	582
North-To-South (Thru)	0.397	0.325	534	0.356	617	0.389	745	0.395	827
North-To-West (RT)	0.304	0.674	1107	0.564	977	0.415	794	0.327	685
Total Flow From North:			**1643**		**1733**		**1914**		**2094**
South-To-West (LT)	0.350	0.581	430	0.523	470	0.434	528	0.369	566
South-To-North (Thru)	0.305	0.418	309	0.403	362	0.360	438	0.317	487
South-To-East (RT)	0.345	0.001	1	0.074	67	0.206	251	0.314	482
Total Flow From South:			**740**		**899**		**1217**		**1535**

TURNS5 ANALYSIS SHEET - INPUT

Analyst: VHB
Date: 15-Dec-20
Highway: Boggy Creek Rd - Build AM
Intersection: E lake Point Dr
Project: Boggy Creek Rd from Simpson Rd to Narcoossee Rd
County: Osceola

Is this a 4 way intersection?
- ○ Yes, my intersection has four approaches

If not, which 3 approaches exist in the intersection?
- ○ EB, WB, and SB
- ◉ EB, WB, and NB
- ○ EB, SB, and NB
- ○ WB, SB, and NB

Is the Mainline Oriented North/South? Enter Yes or No
- ○ Yes
- ◉ No

K Factors	
Mainline	9.00%
Side street	8.50%

D Factors	*Mainline*
Westbound (WB)	58.9%
Eastbound (EB)	41.1%
	Side street
Northbound (NB)	70.0%
Southbound (SB)	0.0%

Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N) Enter Yes or No
- ◉ Yes
- ○ No

If "Yes" go to cell C47 — If "No" go to cell C31

Enter Year and Growth Rates from Base Year:

	Year	*Rate* (1.0% = 0.01) Mainline	Side Street
Base			
Opening			
Mid			
Design			

Mainline Growth Function
- ◉ Linear
- ○ Exponential
- ○ Decaying

Side Street Growth Function
- ◉ Linear
- ○ Exponential
- ○ Decaying

Enter Base Year AADTs for Volume Comparison:
(growth rates are used to calculate other project years)

From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
0	0	0	0	0

Enter Project and Model Years

	Year
Base	2019
Opening	2025
Mid	2035
Design	2045
Model	2045

Enter Base and Model Year AADTs for Volume Comparison:
(volumes for other project years are calculated by interpolation)

	From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
2019	20000	19000	0	1100	40100
2045	41500	39500	0	2200	83200

		1st Guess Turning %'s for AADT Balancing	**Actual/Counted Traffic for 2019**
(EB LT)	*West-to-North*	0.0%	0
(EB THRU)	*West-to-East*	98.3%	583
(EB RT)	*West-to-South*	1.7%	10
(WB LT)	*East-to-South*	1.0%	8
(WB THRU)	*East-to-West*	99.0%	821
(WB RT)	*East-to-North*	0.0%	0
(SB LT)	*North-to-East*	0.0%	0
(SB THRU)	*North-to-South*	0.0%	0
(SB RT)	*North-to-West*	0.0%	0
(NB LT)	*South-to-West*	69.6%	39
(NB THRU)	*South-to-North*	0.0%	0
(NB RT)	*South-to-East*	30.4%	17

Desired Closure: 0.50

Existing Year AADTs

Existing Turning Movement Counts

FSUTMS Model Year AADTs

First Guess Turning % Option Used
Existing Turning Movement Counts

Only the existing year total departure volumes [AADT*K*(1-D)] will be used to calculate the turning percentages first guess.

The turning percentages first guess is the same as the ***actual distribution of turning volumes entered***. No balancing technique is used.

Only the FSUTMS model year departure volumes [AADT*K*(1-D)] will be used to calculate the

TURNS5 INITIAL TURNING VOLUME SUMMARY

Highway:	Boggy Creek Rd - Build AM	**County:**	Osceola
Intersection:	E lake Point Dr		
Project:	Boggy Creek Rd from Simpson Rd to Narcoossee Rd	**Analyst:**	VHB
		Date:	15-Dec-20

Approach-To-Approach	2019 Initial Estimate	2019 Final Estimate	2019 Calculated Volume	2025 Final Estimate	2025 Calculated Volume	2035 Final Estimate	2035 Calculated Volume	2045 Final Estimate	2045 Calculated Volume
West-To-North (LT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
West-To-East (Thru)	0.983	0.964	713	0.965	891	0.964	1185	0.964	1480
West-To-South (RT)	0.017	0.036	27	0.035	32	0.036	44	0.036	55
Total Flow From West:			**740**		**923**		**1229**		**1535**
East-To-South (LT)	0.010	0.003	3	0.003	4	0.001	2	0.001	2
East-To-West (Thru)	0.990	0.997	1004	0.997	1254	0.999	1674	0.999	2092
East-To-North (RT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
Total Flow From East:			**1007**		**1258**		**1676**		**2094**
North-To-East (LT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
North-To-South (Thru)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
North-To-West (RT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
Total Flow From North:			**0**		**0**		**0**		**0**
South-To-West (LT)	0.696	0.944	61	0.941	76	0.986	105	0.976	128
South-To-North (Thru)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
South-To-East (RT)	0.304	0.056	4	0.059	5	0.014	1	0.024	3
Total Flow From South:			**65**		**81**		**106**		**131**

TURNS5 ANALYSIS SHEET - INPUT

Analyst: VHB
Date: 15-Dec-20
Highway: Boggy Creek Rd - Build PM
Intersection: E lake Point Dr
Project: Boggy Creek Rd from Simpson Rd to Narcoossee Rd
County: Osceola

Is this a 4 way intersection?
- ○ Yes, my intersection has four approaches

If not, which 3 approaches exist in the intersection?
- ○ EB, WB, and SB
- ◉ EB, WB, and NB
- ○ EB, SB, and NB
- ○ WB, SB, and NB

Is the Mainline Oriented North/South? Enter Yes or No
- ○ Yes
- ◉ No

K Factors	Mainline
	9.00%
	Side street
	8.50%

D Factors	*Mainline*
Westbound (WB)	41.1%
Eastbound (EB)	58.9%
	Side street
Northbound (NB)	70.0%
Southbound (SB)	0.0%

Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N) Enter Yes or No
- ◉ Yes
- ○ No

If "Yes" go to cell C47 If "No" go to cell C31

Enter Year and Growth Rates from Base Year:

	Year	*Rate* (1.0% = 0.01) Mainline	Side Street
Base			
Opening			
Mid			
Design			

Mainline Growth Function
- ◉ Linear
- ○ Exponential
- ○ Decaying

Side Street Growth Function
- ◉ Linear
- ○ Exponential
- ○ Decaying

Enter Base Year AADTs for Volume Comparison:
(growth rates are used to calculate other project years)

From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
0	0	0	0	0

Enter Project and Model Years

	Year
Base	2019
Opening	2025
Mid	2035
Design	2045
Model	2045

Enter Base and Model Year AADTs for Volume Comparison:
(volumes for other project years are calculated by interpolation)

	From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
2019	20000	19000	0	1100	40100
2045	41500	39500	0	2200	83200

		1st Guess Turning %'s for AADT Balancing	**Actual/Counted Traffic for 2019**
(EB LT)	*West-to-North*	0.0%	0
(EB THRU)	*West-to-East*	95.4%	843
(EB RT)	*West-to-South*	4.6%	41
(WB LT)	*East-to-South*	3.2%	18
(WB THRU)	*East-to-West*	96.8%	549
(WB RT)	*East-to-North*	0.0%	0
(SB LT)	*North-to-East*	0.0%	0
(SB THRU)	*North-to-South*	0.0%	0
(SB RT)	*North-to-West*	0.0%	0
(NB LT)	*South-to-West*	50.0%	18
(NB THRU)	*South-to-North*	0.0%	0
(NB RT)	*South-to-East*	50.0%	18

Desired Closure: 0.50

Existing Year AADTs

Existing Turning Movement Counts

FSUTMS Model Year AADTs

First Guess Turning % Option Used
Existing Turning Movement Counts

Only the existing year total departure volumes [AADT*K*(1-D)] will be used to calculate the turning percentages first guess.

The turning percentages first guess is the same as the ***actual distribution of turning volumes entered***. No balancing technique is used.

Only the FSUTMS model year departure volumes [AADT*K*(1-D)] will be used to calculate the

TURNS5 INITIAL TURNING VOLUME SUMMARY

Highway:	Boggy Creek Rd - Build PM	**County:**	Osceola
Intersection:	E lake Point Dr		
Project:	Boggy Creek Rd from Simpson Rd to Narcoossee Rd	**Analyst:**	VHB
		Date:	15-Dec-20

Approach-To-Approach	2019 Initial Estimate	2019 Final Estimate	2019 Calculated Volume	2025 Final Estimate	2025 Calculated Volume	2035 Final Estimate	2035 Calculated Volume	2045 Final Estimate	2045 Calculated Volume
West-To-North (LT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
West-To-East (Thru)	0.954	0.976	1035	0.975	1290	0.976	1720	0.976	2147
West-To-South (RT)	0.046	0.024	25	0.025	33	0.024	42	0.024	53
Total Flow From West:			**1060**		**1323**		**1762**		**2200**
East-To-South (LT)	0.032	0.005	4	0.005	4	0.004	5	0.003	4
East-To-West (Thru)	0.968	0.995	699	0.995	874	0.996	1164	0.997	1457
East-To-North (RT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
Total Flow From East:			**703**		**878**		**1169**		**1461**
North-To-East (LT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
North-To-South (Thru)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
North-To-West (RT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
Total Flow From North:			**0**		**0**		**0**		**0**
South-To-West (LT)	0.500	0.767	50	0.770	62	0.809	86	0.828	108
South-To-North (Thru)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
South-To-East (RT)	0.500	0.233	15	0.230	19	0.191	20	0.172	23
Total Flow From South:			**65**		**81**		**106**		**131**

TURNS5 ANALYSIS SHEET - INPUT

Analyst: VHB
Date: 15-Dec-20
Highway: Boggy Creek Rd - Build AM
Intersection: Nele Rd
Project: Boggy Creek Rd from Simpson Rd to Narcoossee Rd
County: Osceola

Is this a 4 way intersection?
- (●) Yes, my intersection has four approaches

If not, which 3 approaches exist in the intersection?
- ( ) EB, WB, and SB
- ( ) EB, WB, and NB
- ( ) EB, SB, and NB
- ( ) WB, SB, and NB

Is the Mainline Oriented North/South? Enter Yes or No
- ( ) Yes
- (●) No

K Factors	
Mainline	9.00%
Side street	9.00%

D Factors	*Mainline*
Westbound (WB)	58.9%
Eastbound (EB)	41.1%
	Side street
Northbound (NB)	54.0%
Southbound (SB)	46.0%

Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N) Enter Yes or No
- (●) Yes
- ( ) No

If "Yes" go to cell C47 — If "No" go to cell C31

Enter Year and Growth Rates from Base Year:

	Year	*Rate* (1.0% = 0.01) Mainline	Side Street
Base			
Opening			
Mid			
Design			

Mainline Growth Function
- (●) Linear
- ( ) Exponential
- ( ) Decaying

Side Street Growth Function
- (●) Linear
- ( ) Exponential
- ( ) Decaying

Enter Base Year AADTs for Volume Comparison:
(growth rates are used to calculate other project years)

From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
0	0	0	0	0

Enter Project and Model Years

	Year
Base	2019
Opening	2025
Mid	2035
Design	2045
Model	2045

Enter Base and Model Year AADTs for Volume Comparison:
(volumes for other project years are calculated by interpolation)

	From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
2019	19000	18000	5800	600	43400
2045	39500	37500	6600	2300	85900

		1st Guess Turning %'s for AADT Balancing	**Actual/Counted Traffic for 2019**
(EB LT)	*West-to-North*	18.7%	110
(EB THRU)	*West-to-East*	76.9%	453
(EB RT)	*West-to-South*	4.4%	26
(WB LT)	*East-to-South*	2.6%	19
(WB THRU)	*East-to-West*	81.1%	587
(WB RT)	*East-to-North*	16.3%	118
(SB LT)	*North-to-East*	33.3%	85
(SB THRU)	*North-to-South*	0.0%	0
(SB RT)	*North-to-West*	66.7%	170
(NB LT)	*South-to-West*	36.7%	33
(NB THRU)	*South-to-North*	44.4%	40
(NB RT)	*South-to-East*	18.9%	17

Desired Closure: 0.50

Existing Year AADTs

Existing Turning Movement Counts

FSUTMS Model Year AADTs

First Guess Turning % Option Used
Existing Turning Movement Counts

Only the existing year total departure volumes [AADT*K*(1-D)] will be used to calculate the turning percentages first guess.

The turning percentages first guess is the same as the ***actual distribution of turning volumes entered***. No balancing technique is used.

Only the FSUTMS model year departure volumes [AADT*K*(1-D)] will be used to calculate the

TURNS5 INITIAL TURNING VOLUME SUMMARY

Highway:	Boggy Creek Rd - Build AM	**County:**	Osceola
Intersection:	Nele Rd		
Project:	Boggy Creek Rd from Simpson Rd to Narcoossee Rd	**Analyst:**	VHB
		Date:	15-Dec-20

Approach-To-Approach	2019 Initial Estimate	2019 Final Estimate	2019 Calculated Volume	2025 Final Estimate	2025 Calculated Volume	2035 Final Estimate	2035 Calculated Volume	2045 Final Estimate	2045 Calculated Volume
West-To-North (LT)	0.187	0.174	122	0.143	126	0.112	131	0.093	136
West-To-East (Thru)	0.769	0.807	568	0.831	729	0.856	1001	0.870	1271
West-To-South (RT)	0.044	0.019	13	0.026	23	0.032	37	0.037	54
Total Flow From West:			**703**		**878**		**1169**		**1461**
East-To-South (LT)	0.026	0.011	10	0.015	18	0.019	30	0.020	40
East-To-West (Thru)	0.811	0.840	802	0.863	1029	0.886	1409	0.904	1797
East-To-North (RT)	0.163	0.149	142	0.122	146	0.095	151	0.076	151
Total Flow From East:			**954**		**1193**		**1590**		**1988**
North-To-East (LT)	0.333	0.332	80	0.331	82	0.330	86	0.322	88
North-To-South (Thru)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
North-To-West (RT)	0.667	0.668	160	0.669	166	0.670	174	0.678	185
Total Flow From North:			**240**		**248**		**260**		**273**
South-To-West (LT)	0.367	0.387	11	0.424	20	0.465	37	0.501	56
South-To-North (Thru)	0.444	0.414	12	0.359	18	0.299	24	0.253	28
South-To-East (RT)	0.189	0.199	6	0.217	10	0.236	19	0.246	28
Total Flow From South:			**29**		**48**		**80**		**112**

TURNS5 ANALYSIS SHEET - INPUT

Analyst: VHB
Date: 15-Dec-20
Highway: Boggy Creek Rd - Build PM
Intersection: Nele Rd
Project: Boggy Creek Rd from Simpson Rd to Narcoossee Rd
County: Osceola

Is this a 4 way intersection?
- (●) Yes, my intersection has four approaches

If not, which 3 approaches exist in the intersection?
- ( ) EB, WB, and SB
- ( ) EB, WB, and NB
- ( ) EB, SB, and NB
- ( ) WB, SB, and NB

Is the Mainline Oriented North/South? Enter Yes or No
- ( ) Yes
- (●) No

K Factors	
Mainline	9.00%
Side street	9.00%

D Factors	*Mainline*
Westbound (WB)	41.1%
Eastbound (EB)	58.9%
	Side street
Northbound (NB)	46.0%
Southbound (SB)	54.0%

Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N) Enter Yes or No
- (●) Yes
- ( ) No

If "Yes" go to cell C47 — If "No" go to cell C31

Enter Year and Growth Rates from Base Year:

	Year	*Rate* (1.0% = 0.01) Mainline	Side Street
Base			
Opening			
Mid			
Design			

Mainline Growth Function
- (●) Linear
- ( ) Exponential
- ( ) Decaying

Side Street Growth Function
- (●) Linear
- ( ) Exponential
- ( ) Decaying

Enter Base Year AADTs for Volume Comparison:
(growth rates are used to calculate other project years)

From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
0	0	0	0	0

Enter Project and Model Years

	Year
Base	2019
Opening	2025
Mid	2035
Design	2045
Model	2045

Enter Base and Model Year AADTs for Volume Comparison:
(volumes for other project years are calculated by interpolation)

	From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
2019	19000	18000	5800	600	43400
2045	39500	37500	6600	2300	85900

		1st Guess Turning %'s for AADT Balancing	**Actual/Counted Traffic for 2019**
(EB LT)	*West-to-North*	4.6%	39
(EB THRU)	*West-to-East*	93.6%	792
(EB RT)	*West-to-South*	1.8%	15
(WB LT)	*East-to-South*	1.8%	10
(WB THRU)	*East-to-West*	96.0%	526
(WB RT)	*East-to-North*	2.2%	12
(SB LT)	*North-to-East*	35.3%	24
(SB THRU)	*North-to-South*	0.0%	0
(SB RT)	*North-to-West*	64.7%	44
(NB LT)	*South-to-West*	83.3%	5
(NB THRU)	*South-to-North*	0.0%	0
(NB RT)	*South-to-East*	16.7%	1

Desired Closure: 0.50

Existing Year AADTs

Existing Turning Movement Counts

FSUTMS Model Year AADTs

First Guess Turning % Option Used
Existing Turning Movement Counts

Only the existing year total departure volumes [AADT*K*(1-D)] will be used to calculate the turning percentages first guess.

The turning percentages first guess is the same as the ***actual distribution of turning volumes entered***. No balancing technique is used.

Only the FSUTMS model year departure volumes [AADT*K*(1-D)] will be used to calculate the

TURNS5 INITIAL TURNING VOLUME SUMMARY

Highway:	Boggy Creek Rd - Build PM	**County:**	Osceola
Intersection:	Nele Rd		
Project:	Boggy Creek Rd from Simpson Rd to Narcoossee Rd	**Analyst:**	VHB
		Date:	15-Dec-20

Approach-To-Approach	2019 Initial Estimate	2019 Final Estimate	2019 Calculated Volume	2025 Final Estimate	2025 Calculated Volume	2035 Final Estimate	2035 Calculated Volume	2045 Final Estimate	2045 Calculated Volume
West-To-North (LT)	0.046	0.162	163	0.135	170	0.108	181	0.092	193
West-To-East (Thru)	0.936	0.824	830	0.846	1064	0.867	1453	0.879	1840
West-To-South (RT)	0.018	0.014	14	0.019	24	0.025	42	0.029	61
Total Flow From West:			**1007**		**1258**		**1676**		**2094**
East-To-South (LT)	0.018	0.022	15	0.030	25	0.036	40	0.039	54
East-To-West (Thru)	0.960	0.854	568	0.870	724	0.889	987	0.901	1250
East-To-North (RT)	0.022	0.124	83	0.100	83	0.075	83	0.060	83
Total Flow From East:			**666**		**832**		**1110**		**1387**
North-To-East (LT)	0.353	0.464	131	0.458	133	0.440	135	0.427	137
North-To-South (Thru)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
North-To-West (RT)	0.647	0.536	151	0.542	158	0.560	171	0.573	184
Total Flow From North:			**282**		**291**		**306**		**321**
South-To-West (LT)	0.833	0.759	19	0.763	31	0.776	53	0.785	75
South-To-North (Thru)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
South-To-East (RT)	0.167	0.241	6	0.237	10	0.224	15	0.215	20
Total Flow From South:			**25**		**41**		**68**		**95**

TURNS5 ANALYSIS SHEET - INPUT

Analyst: VHB
Date: 15-Dec-20
Highway: Boggy Creek Rd - Build AM
Intersection: Springlake Village Blvd
Project: Boggy Creek Rd from Simpson Rd to Narcoossee Rd
County: Osceola

Is this a 4 way intersection?
(●) Yes, my intersection has four approaches

If not, which 3 approaches exist in the intersection?
( ) EB, WB, and SB
( ) EB, WB, and NB
( ) EB, SB, and NB
( ) WB, SB, and NB

Is the Mainline Oriented North/South? Enter Yes or No: ( ) Yes (●) No

K Factors	
Mainline	9.00%
Side street	8.60%

D Factors	*Mainline*
Westbound (WB)	58.9%
Eastbound (EB)	41.1%
	Side street
Northbound (NB)	25.0%
Southbound (SB)	75.0%

Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N)

Enter Yes or No: (●) Yes ( ) No

If "Yes" go to cell C47 — If "No" go to cell C31

Enter Year and Growth Rates from Base Year:

	Year	*Rate* (1.0% = 0.01) Mainline	Side Street
Base			
Opening			
Mid			
Design			

Mainline Growth Function: (●) Linear ( ) Exponential ( ) Decaying

Side Street Growth Function: (●) Linear ( ) Exponential ( ) Decaying

Enter Base Year AADTs for Volume Comparison:
(growth rates are used to calculate other project years)

From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
0	0	0	0	0

Enter Project and Model Years

	Year
Base	2019
Opening	2025
Mid	2035
Design	2045
Model	2045

Enter Base and Model Year AADTs for Volume Comparison:
(volumes for other project years are calculated by interpolation)

	From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
2019	18000	16000	3800	1700	39500
2045	37500	39000	4300	2600	83400

		1st Guess Turning %'s for AADT Balancing	**Actual/Counted Traffic for 2019**
(EB LT)	*West-to-North*	7.0%	38
(EB THRU)	*West-to-East*	90.2%	489
(EB RT)	*West-to-South*	2.8%	15
(WB LT)	*East-to-South*	1.0%	5
(WB THRU)	*East-to-West*	94.2%	487
(WB RT)	*East-to-North*	4.8%	25
(SB LT)	*North-to-East*	23.3%	57
(SB THRU)	*North-to-South*	0.0%	0
(SB RT)	*North-to-West*	76.7%	188
(NB LT)	*South-to-West*	48.4%	30
(NB THRU)	*South-to-North*	4.8%	3
(NB RT)	*South-to-East*	46.8%	29

Desired Closure: 0.50

Existing Year AADTs

Existing Turning Movement Counts

FSUTMS Model Year AADTs

First Guess Turning % Option Used
Existing Turning Movement Counts

Only the existing year total departure volumes [AADT*K*(1-D)] will be used to calculate the turning percentages first guess.

The turning percentages first guess is the same as the ***actual distribution of turning volumes entered***. No balancing technique is used.

Only the FSUTMS model year departure volumes [AADT*K*(1-D)] will be used to calculate the

TURNS5 INITIAL TURNING VOLUME SUMMARY

Highway:	Boggy Creek Rd - Build AM	**County:**	Osceola
Intersection:	Springlake Village Blvd		
Project:	Boggy Creek Rd from Simpson Rd to Narcoossee Rd	**Analyst:**	VHB
		Date:	15-Dec-20

Approach-To-Approach	2019 Initial Estimate	2019 Final Estimate	2019 Calculated Volume	2025 Final Estimate	2025 Calculated Volume	2035 Final Estimate	2035 Calculated Volume	2045 Final Estimate	2045 Calculated Volume
West-To-North (LT)	0.070	0.067	45	0.050	42	0.028	31	0.018	25
West-To-East (Thru)	0.902	0.816	543	0.852	708	0.903	1002	0.932	1293
West-To-South (RT)	0.028	0.117	78	0.098	82	0.069	77	0.050	69
Total Flow From West:			**666**		**832**		**1110**		**1387**
East-To-South (LT)	0.010	0.041	35	0.039	44	0.046	74	0.049	101
East-To-West (Thru)	0.942	0.914	775	0.923	1043	0.918	1466	0.918	1898
East-To-North (RT)	0.048	0.045	38	0.038	43	0.036	58	0.033	68
Total Flow From East:			**848**		**1130**		**1598**		**2067**
North-To-East (LT)	0.233	0.219	54	0.246	62	0.367	97	0.470	130
North-To-South (Thru)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
North-To-West (RT)	0.767	0.781	191	0.754	191	0.633	168	0.530	147
Total Flow From North:			**245**		**253**		**265**		**277**
South-To-West (LT)	0.484	0.503	19	0.471	19	0.342	16	0.257	14
South-To-North (Thru)	0.048	0.048	1	0.039	2	0.026	2	0.018	1
South-To-East (RT)	0.468	0.449	17	0.490	20	0.632	30	0.725	41
Total Flow From South:			**37**		**41**		**48**		**56**

TURNS5 ANALYSIS SHEET - INPUT

Analyst: VHB
Date: 15-Dec-20
Highway: Boggy Creek Rd - Build PM
Intersection: Springlake Village Blvd
Project: Boggy Creek Rd from Simpson Rd to Narcoossee Rd
County: Osceola

Is this a 4 way intersection?
(●) Yes, my intersection has four approaches

If not, which 3 approaches exist in the intersection?
( ) EB, WB, and SB
( ) EB, WB, and NB
( ) EB, SB, and NB
( ) WB, SB, and NB

Is the Mainline Oriented North/South? Enter Yes or No
( ) Yes
(●) No

K Factors	Mainline
	9.00%
	Side street
	8.60%

D Factors	*Mainline*
Westbound (WB)	41.1%
Eastbound (EB)	58.9%
	Side street
Northbound (NB)	75.0%
Southbound (SB)	25.0%

Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N) Enter Yes or No
(●) Yes
( ) No

If "Yes" go to cell C47 If "No" go to cell C31

Enter Year and Growth Rates from Base Year:

	Year	*Rate* (1.0% = 0.01) Mainline	Side Street
Base			
Opening			
Mid			
Design			

Mainline Growth Function
(●) Linear
( ) Exponential
( ) Decaying

Side Street Growth Function
(●) Linear
( ) Exponential
( ) Decaying

Enter Base Year AADTs for Volume Comparison:
(growth rates are used to calculate other project years)

From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
0	0	0	0	0

Enter Project and Model Years

	Year
Base	2019
Opening	2025
Mid	2035
Design	2045
Model	2045

Enter Base and Model Year AADTs for Volume Comparison:
(volumes for other project years are calculated by interpolation)

	From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
2019	18000	16000	3800	1700	39500
2045	37500	39000	4300	2600	83400

		1st Guess Turning %'s for AADT Balancing	**Actual/Counted Traffic for 2019**
(EB LT)	*West-to-North*	19.7%	164
(EB THRU)	*West-to-East*	73.8%	614
(EB RT)	*West-to-South*	6.5%	54
(WB LT)	*East-to-South*	5.0%	28
(WB THRU)	*East-to-West*	81.0%	450
(WB RT)	*East-to-North*	14.0%	78
(SB LT)	*North-to-East*	34.0%	33
(SB THRU)	*North-to-South*	0.0%	0
(SB RT)	*North-to-West*	66.0%	64
(NB LT)	*South-to-West*	54.7%	41
(NB THRU)	*South-to-North*	9.3%	7
(NB RT)	*South-to-East*	36.0%	27

Desired Closure: 0.50

Existing Year AADTs

Existing Turning Movement Counts

FSUTMS Model Year AADTs

First Guess Turning % Option Used
Existing Turning Movement Counts

Only the existing year total departure volumes [AADT*K*(1-D)] will be used to calculate the turning percentages first guess.

The turning percentages first guess is the same as the ***actual distribution of turning volumes entered***. No balancing technique is used.

Only the FSUTMS model year departure volumes [AADT*K*(1-D)] will be used to calculate the

TURNS5 INITIAL TURNING VOLUME SUMMARY

Highway:	Boggy Creek Rd - Build PM	**County:**	Osceola
Intersection:	Springlake Village Blvd		
Project:	Boggy Creek Rd from Simpson Rd to Narcoossee Rd	**Analyst:**	VHB
		Date:	15-Dec-20

Approach-To-Approach	2019 Initial Estimate	2019 Final Estimate	2019 Calculated Volume	2025 Final Estimate	2025 Calculated Volume	2035 Final Estimate	2035 Calculated Volume	2045 Final Estimate	2045 Calculated Volume
West-To-North (LT)	0.197	0.171	163	0.135	161	0.089	142	0.060	119
West-To-East (Thru)	0.738	0.803	766	0.843	1006	0.895	1423	0.928	1845
West-To-South (RT)	0.065	0.026	25	0.022	26	0.016	25	0.012	24
Total Flow From West:			**954**		**1193**		**1590**		**1988**
East-To-South (LT)	0.050	0.019	11	0.017	13	0.019	21	0.021	30
East-To-West (Thru)	0.810	0.868	514	0.884	697	0.884	986	0.879	1269
East-To-North (RT)	0.140	0.113	67	0.099	78	0.097	108	0.100	144
Total Flow From East:			**592**		**788**		**1115**		**1443**
North-To-East (LT)	0.340	0.326	27	0.358	30	0.468	41	0.581	53
North-To-South (Thru)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
North-To-West (RT)	0.660	0.674	55	0.642	54	0.532	47	0.419	39
Total Flow From North:			**82**		**84**		**88**		**92**
South-To-West (LT)	0.547	0.573	63	0.548	67	0.448	65	0.347	58
South-To-North (Thru)	0.093	0.073	8	0.061	8	0.049	7	0.038	7
South-To-East (RT)	0.360	0.354	39	0.391	48	0.503	73	0.615	103
Total Flow From South:			**110**		**123**		**145**		**168**

TURNS5 ANALYSIS SHEET - INPUT

Analyst: VHB
Date: 15-Dec-20
Highway: Boggy Creek Rd - Build AM
Intersection: Turnberry Blvd
Project: Boggy Creek Rd from Simpson Rd to Narcoossee Rd
County: Osceola

Is this a 4 way intersection?
- ○ Yes, my intersection has four approaches

If not, which 3 approaches exist in the intersection?
- ◉ EB, WB, and SB
- ○ EB, WB, and NB
- ○ EB, SB, and NB
- ○ WB, SB, and NB

Is the Mainline Oriented North/South? Enter Yes or No
- ○ Yes
- ◉ No

K Factors	Mainline
	9.00%
	Side street
	8.30%

D Factors	*Mainline*
Westbound (WB)	52.0%
Eastbound (EB)	48.0%
	Side street
Northbound (NB)	0.0%
Southbound (SB)	66.0%

Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N) Enter Yes or No
- ◉ Yes
- ○ No

If "Yes" go to cell C47 If "No" go to cell C31

Enter Year and Growth Rates from Base Year:

	Year	*Rate* (1.0% = 0.01) Mainline	Side Street
Base			
Opening			
Mid			
Design			

Mainline Growth Function
- ◉ Linear
- ○ Exponential
- ○ Decaying

Side Street Growth Function
- ◉ Linear
- ○ Exponential
- ○ Decaying

Enter Base Year AADTs for Volume Comparison:
(growth rates are used to calculate other project years)

From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
0	0	0	0	0

Enter Project and Model Years

	Year
Base	2019
Opening	2025
Mid	2035
Design	2045
Model	2045

Enter Base and Model Year AADTs for Volume Comparison:
(volumes for other project years are calculated by interpolation)

	From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
2019	16000	16000	4500	0	36500
2045	39000	39000	5100	0	83100

		1st Guess Turning %'s for AADT Balancing	**Actual/Counted Traffic for 2019**
(EB LT)	*West-to-North*	11.8%	55
(EB THRU)	*West-to-East*	88.2%	412
(EB RT)	*West-to-South*	0.0%	0
(WB LT)	*East-to-South*	0.0%	0
(WB THRU)	*East-to-West*	90.7%	361
(WB RT)	*East-to-North*	9.3%	37
(SB LT)	*North-to-East*	37.9%	120
(SB THRU)	*North-to-South*	0.0%	0
(SB RT)	*North-to-West*	62.1%	197
(NB LT)	*South-to-West*	0.0%	0
(NB THRU)	*South-to-North*	0.0%	0
(NB RT)	*South-to-East*	0.0%	0

Desired Closure: 0.50

Existing Year AADTs

Existing Turning Movement Counts

FSUTMS Model Year AADTs

First Guess Turning % Option Used
Existing Turning Movement Counts

Only the existing year total departure volumes [AADT*K*(1-D)] will be used to calculate the turning percentages first guess.

The turning percentages first guess is the same as the ***actual distribution of turning volumes entered***. No balancing technique is used.

Only the FSUTMS model year departure volumes [AADT*K*(1-D)] will be used to calculate the

TURNS5 INITIAL TURNING VOLUME SUMMARY

Highway:	Boggy Creek Rd - Build AM	**County:**	Osceola
Intersection:	Turnberry Blvd		
Project:	Boggy Creek Rd from Simpson Rd to Narcoossee Rd	**Analyst:**	VHB
		Date:	15-Dec-20

Approach-To-Approach	2019 Initial Estimate	2019 Final Estimate	2019 Calculated Volume	2025 Final Estimate	2025 Calculated Volume	2035 Final Estimate	2035 Calculated Volume	2045 Final Estimate	2045 Calculated Volume
West-To-North (LT)	0.118	0.098	68	0.076	70	0.056	73	0.046	78
West-To-East (Thru)	0.882	0.902	623	0.924	851	0.944	1230	0.954	1607
West-To-South (RT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
Total Flow From West:			**691**		**921**		**1303**		**1685**
East-To-South (LT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
East-To-West (Thru)	0.907	0.907	679	0.931	928	0.950	1340	0.961	1754
East-To-North (RT)	0.093	0.093	70	0.069	69	0.050	71	0.039	71
Total Flow From East:			**749**		**997**		**1411**		**1825**
North-To-East (LT)	0.379	0.428	106	0.420	107	0.413	110	0.401	112
North-To-South (Thru)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
North-To-West (RT)	0.621	0.572	141	0.580	147	0.587	157	0.599	167
Total Flow From North:			**247**		**254**		**267**		**279**
South-To-West (LT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
South-To-North (Thru)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
South-To-East (RT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
Total Flow From South:			**0**		**0**		**0**		**0**

TURNS5 ANALYSIS SHEET - INPUT

Analyst: VHB
Date: 15-Dec-20
Highway: Boggy Creek Rd - Build PM
Intersection: Turnberry Blvd
Project: Boggy Creek Rd from Simpson Rd to Narcoossee Rd
County: Osceola

Is this a 4 way intersection?
- ○ Yes, my intersection has four approaches

If not, which 3 approaches exist in the intersection?
- ◉ EB, WB, and SB
- ○ EB, WB, and NB
- ○ EB, SB, and NB
- ○ WB, SB, and NB

Is the Mainline Oriented North/South? Enter Yes or No
- ○ Yes
- ◉ No

K Factors	Mainline
	9.00%
	Side street
	8.30%

D Factors	*Mainline*
Westbound (WB)	48.0%
Eastbound (EB)	52.0%
	Side street
Northbound (NB)	0.0%
Southbound (SB)	66.0%

Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N) Enter Yes or No
- ◉ Yes
- ○ No

If "Yes" go to cell C47 — If "No" go to cell C31

Enter Year and Growth Rates from Base Year:

	Year	*Rate* (1.0% = 0.01) Mainline	Side Street
Base			
Opening			
Mid			
Design			

Mainline Growth Function
- ◉ Linear
- ○ Exponential
- ○ Decaying

Side Street Growth Function
- ◉ Linear
- ○ Exponential
- ○ Decaying

Enter Base Year AADTs for Volume Comparison:
(growth rates are used to calculate other project years)

From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
0	0	0	0	0

Enter Project and Model Years

	Year
Base	2019
Opening	2025
Mid	2035
Design	2045
Model	2045

Enter Base and Model Year AADTs for Volume Comparison:
(volumes for other project years are calculated by interpolation)

	From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
2019	16000	16000	4500	0	36500
2045	39000	39000	5100	0	83100

		1st Guess Turning %'s for AADT Balancing	**Actual/Counted Traffic for 2019**
(EB LT)	*West-to-North*	15.9%	109
(EB THRU)	*West-to-East*	84.1%	578
(EB RT)	*West-to-South*	0.0%	0
(WB LT)	*East-to-South*	0.0%	0
(WB THRU)	*East-to-West*	86.4%	451
(WB RT)	*East-to-North*	13.6%	71
(SB LT)	*North-to-East*	50.6%	79
(SB THRU)	*North-to-South*	0.0%	0
(SB RT)	*North-to-West*	49.4%	77
(NB LT)	*South-to-West*	0.0%	0
(NB THRU)	*South-to-North*	0.0%	0
(NB RT)	*South-to-East*	0.0%	0

Desired Closure: 0.01

Existing Year AADTs

Existing Turning Movement Counts

FSUTMS Model Year AADTs

First Guess Turning % Option Used
Existing Turning Movement Counts

Only the existing year total departure volumes [AADT*K*(1-D)] will be used to calculate the turning percentages first guess.

The turning percentages first guess is the same as the ***actual distribution of turning volumes entered***. No balancing technique is used.

Only the FSUTMS model year departure volumes [AADT*K*(1-D)] will be used to calculate the

TURNS5 INITIAL TURNING VOLUME SUMMARY

Highway:	Boggy Creek Rd - Build PM	**County:**	Osceola
Intersection:	Turnberry Blvd		
Project:	Boggy Creek Rd from Simpson Rd to Narcoossee Rd	**Analyst:**	VHB
		Date:	15-Dec-20

Approach-To-Approach	2019 Initial Estimate	2019 Final Estimate	2019 Calculated Volume	2025 Final Estimate	2025 Calculated Volume	2035 Final Estimate	2035 Calculated Volume	2045 Final Estimate	2045 Calculated Volume
West-To-North (LT)	0.159	0.099	74	0.075	75	0.055	78	0.044	80
West-To-East (Thru)	0.841	0.901	675	0.925	922	0.945	1333	0.956	1745
West-To-South (RT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
Total Flow From West:			**749**		**997**		**1411**		**1825**
East-To-South (LT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
East-To-West (Thru)	0.864	0.909	628	0.931	857	0.949	1237	0.959	1616
East-To-North (RT)	0.136	0.091	63	0.069	64	0.051	66	0.041	69
Total Flow From East:			**691**		**921**		**1303**		**1685**
North-To-East (LT)	0.506	0.529	131	0.530	135	0.530	142	0.529	148
North-To-South (Thru)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
North-To-West (RT)	0.494	0.471	116	0.470	119	0.470	125	0.471	131
Total Flow From North:			**247**		**254**		**267**		**279**
South-To-West (LT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
South-To-North (Thru)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
South-To-East (RT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
Total Flow From South:			**0**		**0**		**0**		**0**

TURNS5 ANALYSIS SHEET - INPUT

Analyst: VHB
Date: 15-Dec-20
Highway: Boggy Creek Rd - Build AM
Intersection: North Point
Project: Boggy Creek Rd from Simpson Rd to Narcoossee Rd
County: Osceola

Is this a 4 way intersection?
- ○ Yes, my intersection has four approaches

If not, which 3 approaches exist in the intersection?
- ○ EB, WB, and SB
- ◉ EB, WB, and NB
- ○ EB, SB, and NB
- ○ WB, SB, and NB

Is the Mainline Oriented North/South? Enter Yes or No
- ○ Yes
- ◉ No

K Factors	Mainline
	9.00%
	Side street
	8.00%

D Factors	*Mainline*
Westbound (WB)	52.0%
Eastbound (EB)	48.0%
	Side street
Northbound (NB)	63.9%
Southbound (SB)	0.0%

Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N) Enter Yes or No
- ◉ Yes
- ○ No

If "Yes" go to cell C47 If "No" go to cell C31

Enter Year and Growth Rates from Base Year:

	Year	*Rate* (1.0% = 0.01) Mainline	Side Street
Base			
Opening			
Mid			
Design			

Mainline Growth Function
- ◉ Linear
- ○ Exponential
- ○ Decaying

Side Street Growth Function
- ◉ Linear
- ○ Exponential
- ○ Decaying

Enter Base Year AADTs for Volume Comparison:
(growth rates are used to calculate other project years)

From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
0	0	0	0	0

Enter Project and Model Years

	Year
Base	2019
Opening	2025
Mid	2035
Design	2045
Model	2045

Enter Base and Model Year AADTs for Volume Comparison:
(volumes for other project years are calculated by interpolation)

	From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
2019	16000	16000	0	3100	35100
2045	39000	39000	0	3500	81500

		1st Guess Turning %'s for AADT Balancing	**Actual/Counted Traffic for 2019**
(EB LT)	*West-to-North*	0.0%	0
(EB THRU)	*West-to-East*	90.1%	482
(EB RT)	*West-to-South*	9.9%	53
(WB LT)	*East-to-South*	8.6%	29
(WB THRU)	*East-to-West*	91.4%	307
(WB RT)	*East-to-North*	0.0%	0
(SB LT)	*North-to-East*	0.0%	0
(SB THRU)	*North-to-South*	0.0%	0
(SB RT)	*North-to-West*	0.0%	0
(NB LT)	*South-to-West*	50.0%	90
(NB THRU)	*South-to-North*	0.0%	0
(NB RT)	*South-to-East*	50.0%	90

Desired Closure: 0.01

Existing Year AADTs

Existing Turning Movement Counts

FSUTMS Model Year AADTs

First Guess Turning % Option Used
Existing Turning Movement Counts

Only the existing year total departure volumes [AADT*K*(1-D)] will be used to calculate the turning percentages first guess.

The turning percentages first guess is the same as the ***actual distribution of turning volumes entered***. No balancing technique is used.

Only the FSUTMS model year departure volumes [AADT*K*(1-D)] will be used to calculate the

TURNS5 INITIAL TURNING VOLUME SUMMARY

Highway:	Boggy Creek Rd - Build AM	**County:**	Osceola
Intersection:	North Point		
Project:	Boggy Creek Rd from Simpson Rd to Narcoossee Rd	**Analyst:**	VHB
		Date:	15-Dec-20

Approach-To-Approach	2019 Initial Estimate	2019 Final Estimate	2019 Calculated Volume	2025 Final Estimate	2025 Calculated Volume	2035 Final Estimate	2035 Calculated Volume	2045 Final Estimate	2045 Calculated Volume
West-To-North (LT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
West-To-East (Thru)	0.901	0.930	643	0.947	872	0.960	1251	0.968	1631
West-To-South (RT)	0.099	0.070	48	0.053	49	0.040	52	0.032	54
Total Flow From West:			**691**		**921**		**1303**		**1685**
East-To-South (LT)	0.086	0.061	46	0.046	46	0.034	48	0.028	51
East-To-West (Thru)	0.914	0.939	703	0.954	951	0.966	1363	0.972	1774
East-To-North (RT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
Total Flow From East:			**749**		**997**		**1411**		**1825**
North-To-East (LT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
North-To-South (Thru)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
North-To-West (RT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
Total Flow From North:			**0**		**0**		**0**		**0**
South-To-West (LT)	0.500	0.499	79	0.498	81	0.498	85	0.498	89
South-To-North (Thru)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
South-To-East (RT)	0.500	0.501	79	0.502	82	0.502	86	0.502	90
Total Flow From South:			**158**		**163**		**171**		**179**

TURNS5 ANALYSIS SHEET - INPUT

Analyst: VHB
Date: 15-Dec-20
Highway: Boggy Creek Rd - Build PM
Intersection: North Point
Project: Boggy Creek Rd from Simpson Rd to Narcoossee Rd
County: Osceola

Is this a 4 way intersection?
- ○ Yes, my intersection has four approaches

If not, which 3 approaches exist in the intersection?
- ○ EB, WB, and SB
- ◉ EB, WB, and NB
- ○ EB, SB, and NB
- ○ WB, SB, and NB

Is the Mainline Oriented North/South? Enter Yes or No
- ○ Yes
- ◉ No

K Factors	
Mainline	9.00%
Side street	8.00%

D Factors	*Mainline*
Westbound (WB)	48.0%
Eastbound (EB)	52.0%
	Side street
Northbound (NB)	63.9%
Southbound (SB)	0.0%

Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N) Enter Yes or No
- ◉ Yes
- ○ No

If "Yes" go to cell C47 If "No" go to cell C31

Enter Year and Growth Rates from Base Year:

	Year	*Rate* (1.0% = 0.01) Mainline	Side Street
Base			
Opening			
Mid			
Design			

Mainline Growth Function
- ◉ Linear
- ○ Exponential
- ○ Decaying

Side Street Growth Function
- ◉ Linear
- ○ Exponential
- ○ Decaying

Enter Base Year AADTs for Volume Comparison:
(growth rates are used to calculate other project years)

From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
0	0	0	0	0

Enter Project and Model Years

	Year
Base	2019
Opening	2025
Mid	2035
Design	2045
Model	2045

Enter Base and Model Year AADTs for Volume Comparison:
(volumes for other project years are calculated by interpolation)

	From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
2019	16000	16000	0	3100	35100
2045	39000	39000	0	3500	81500

		1st Guess Turning %'s for AADT Balancing	**Actual/Counted Traffic for 2019**
(EB LT)	*West-to-North*	0.0%	0
(EB THRU)	*West-to-East*	88.2%	566
(EB RT)	*West-to-South*	11.8%	76
(WB LT)	*East-to-South*	9.0%	53
(WB THRU)	*East-to-West*	91.0%	534
(WB RT)	*East-to-North*	0.0%	0
(SB LT)	*North-to-East*	0.0%	0
(SB THRU)	*North-to-South*	0.0%	0
(SB RT)	*North-to-West*	0.0%	0
(NB LT)	*South-to-West*	43.8%	39
(NB THRU)	*South-to-North*	0.0%	0
(NB RT)	*South-to-East*	56.2%	50

Desired Closure: 0.50

Existing Year AADTs

Existing Turning Movement Counts

FSUTMS Model Year AADTs

First Guess Turning % Option Used
Existing Turning Movement Counts

Only the existing year total departure volumes [AADT*K*(1-D)] will be used to calculate the turning percentages first guess.

The turning percentages first guess is the same as the ***actual distribution of turning volumes entered***. No balancing technique is used.

Only the FSUTMS model year departure volumes [AADT*K*(1-D)] will be used to calculate the

TURNS5 INITIAL TURNING VOLUME SUMMARY

Highway:	Boggy Creek Rd - Build PM	**County:**	Osceola
Intersection:	North Point		
Project:	Boggy Creek Rd from Simpson Rd to Narcoossee Rd	**Analyst:**	VHB
		Date:	15-Dec-20

Approach-To-Approach	2019 Initial Estimate	2019 Final Estimate	2019 Calculated Volume	2025 Final Estimate	2025 Calculated Volume	2035 Final Estimate	2035 Calculated Volume	2045 Final Estimate	2045 Calculated Volume
West-To-North (LT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
West-To-East (Thru)	0.882	0.926	694	0.944	941	0.958	1352	0.966	1763
West-To-South (RT)	0.118	0.074	55	0.056	56	0.042	59	0.034	62
Total Flow From West:			**749**		**997**		**1411**		**1825**
East-To-South (LT)	0.090	0.056	39	0.043	40	0.032	42	0.026	44
East-To-West (Thru)	0.910	0.944	652	0.957	881	0.968	1261	0.974	1641
East-To-North (RT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
Total Flow From East:			**691**		**921**		**1303**		**1685**
North-To-East (LT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
North-To-South (Thru)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
North-To-West (RT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
Total Flow From North:			**0**		**0**		**0**		**0**
South-To-West (LT)	0.438	0.436	69	0.435	71	0.434	74	0.433	78
South-To-North (Thru)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
South-To-East (RT)	0.562	0.564	89	0.565	92	0.566	97	0.567	101
Total Flow From South:			**158**		**163**		**171**		**179**

TURNS5 ANALYSIS SHEET - INPUT

Analyst: VHB
Date: 15-Dec-20
Highway: Boggy Creek Rd
Intersection: Timber Ln - Build AM
Project: Boggy Creek Rd from Simpson Rd to Narcoossee Rd
County: Osceola

Is this a 4 way intersection?
- (●) Yes, my intersection has four approaches

If not, which 3 approaches exist in the intersection?
- ( ) EB, WB, and SB
- ( ) EB, WB, and NB
- ( ) EB, SB, and NB
- ( ) WB, SB, and NB

Is the Mainline Oriented North/South? Enter Yes or No: (●) Yes ( ) No

K Factors	
Mainline	9.00%
Side street	8.60%

D Factors	*Mainline*
Northbound (NB)	58.9%
Southbound (SB)	41.1%
	Side street
Westbound (WB)	62.1%
Eastbound (EB)	37.9%

Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N) Enter Yes or No: (●) Yes ( ) No

If "Yes" go to cell C47 If "No" go to cell C31

Enter Year and Growth Rates from Base Year:

	Year	*Rate* (1.0% = 0.01) Mainline	Side Street
Base			
Opening			
Mid			
Design			

Mainline Growth Function: (●) Linear ( ) Exponential ( ) Decaying

Side Street Growth Function: (●) Linear ( ) Exponential ( ) Decaying

Enter Base Year AADTs for Volume Comparison:
(growth rates are used to calculate other project years)

From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
0	0	0	0	0

Enter Project and Model Years

	Year
Base	2019
Opening	2025
Mid	2035
Design	2045
Model	2045

Enter Base and Model Year AADTs for Volume Comparison:
(volumes for other project years are calculated by interpolation)

	From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
2019	1000	1100	16000	16000	34100
2045	1100	3000	39000	39000	82100

		1st Guess Turning %'s for AADT Balancing	**Actual/Counted Traffic for 2019**
(EB LT)	*West-to-North*	66.7%	10
(EB THRU)	*West-to-East*	0.0%	0
(EB RT)	*West-to-South*	33.3%	5
(WB LT)	*East-to-South*	54.2%	32
(WB THRU)	*East-to-West*	0.0%	0
(WB RT)	*East-to-North*	45.8%	27
(SB LT)	*North-to-East*	4.9%	16
(SB THRU)	*North-to-South*	94.5%	310
(SB RT)	*North-to-West*	0.6%	2
(NB LT)	*South-to-West*	0.0%	0
(NB THRU)	*South-to-North*	96.5%	546
(NB RT)	*South-to-East*	3.5%	20

Desired Closure: 0.50

Existing Year AADTs

Existing Turning Movement Counts

FSUTMS Model Year AADTs

First Guess Turning % Option Used
Existing Turning Movement Counts

Only the existing year total departure volumes [AADT*K*(1-D)] will be used to calculate the turning percentages first guess.

The turning percentages first guess is the same as the ***actual distribution of turning volumes entered***. No balancing technique is used.

Only the FSUTMS model year departure volumes [AADT*K*(1-D)] will be used to calculate the

TURNS5 INITIAL TURNING VOLUME SUMMARY

Highway:	Boggy Creek Rd	**County:**	Osceola
Intersection:	Timber Ln - Build AM		
Project:	Boggy Creek Rd from Simpson Rd to Narcoossee Rd	**Analyst:**	VHB
		Date:	15-Dec-20

Approach-To-Approach	2019 Initial Estimate	2019 Final Estimate	2019 Calculated Volume	2025 Final Estimate	2025 Calculated Volume	2035 Final Estimate	2035 Calculated Volume	2045 Final Estimate	2045 Calculated Volume
West-To-North (LT)	0.667	0.568	19	0.621	20	0.659	23	0.667	24
West-To-East (Thru)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
West-To-South (RT)	0.333	0.432	14	0.379	13	0.341	12	0.333	12
Total Flow From West:			**33**		**33**		**35**		**36**
East-To-South (LT)	0.542	0.643	38	0.592	49	0.551	67	0.542	87
East-To-West (Thru)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
East-To-North (RT)	0.458	0.357	21	0.408	33	0.449	54	0.458	73
Total Flow From East:			**59**		**82**		**121**		**160**
North-To-East (LT)	0.049	0.023	14	0.027	21	0.032	36	0.033	48
North-To-South (Thru)	0.945	0.890	526	0.905	713	0.917	1022	0.926	1336
North-To-West (RT)	0.006	0.087	52	0.068	54	0.051	57	0.041	59
Total Flow From North:			**592**		**788**		**1115**		**1443**
South-To-West (LT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
South-To-North (Thru)	0.965	0.973	825	0.975	1102	0.975	1558	0.975	2015
South-To-East (RT)	0.035	0.027	23	0.025	28	0.025	40	0.025	52
Total Flow From South:			**848**		**1130**		**1598**		**2067**

TURNS5 ANALYSIS SHEET - INPUT

Analyst: VHB
Date: 15-Dec-20
Highway: Boggy Creek Rd
Intersection: Timber Ln - Build PM
Project: Boggy Creek Rd from Simpson Rd to Narcoossee Rd
County: Osceola

Is this a 4 way intersection?
(●) Yes, my intersection has four approaches

If not, which 3 approaches exist in the intersection?
( ) EB, WB, and SB
( ) EB, WB, and NB
( ) EB, SB, and NB
( ) WB, SB, and NB

Is the Mainline Oriented North/South? Enter Yes or No: (●) Yes ( ) No

K Factors	
Mainline	9.00%
Side street	8.60%

D Factors	*Mainline*
Northbound (NB)	41.1%
Southbound (SB)	58.9%
	Side street
Westbound (WB)	62.1%
Eastbound (EB)	37.9%

Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N)

Enter Yes or No: (●) Yes ( ) No

If "Yes" go to cell C47 — If "No" go to cell C31

Enter Year and Growth Rates from Base Year:

	Year	*Rate* (1.0% = 0.01) Mainline	Side Street
Base			
Opening			
Mid			
Design			

Mainline Growth Function: (●) Linear ( ) Exponential ( ) Decaying

Side Street Growth Function: (●) Linear ( ) Exponential ( ) Decaying

Enter Base Year AADTs for Volume Comparison:
(growth rates are used to calculate other project years)

From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
0	0	0	0	0

Enter Project and Model Years

	Year
Base	2019
Opening	2025
Mid	2035
Design	2045
Model	2045

Enter Base and Model Year AADTs for Volume Comparison:
(volumes for other project years are calculated by interpolation)

	From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
2019	1000	1100	16000	16000	34100
2045	1100	3000	39000	39000	82100

		1st Guess Turning %'s for AADT Balancing	**Actual/Counted Traffic for 2019**
(EB LT)	*West-to-North*	40.0%	6
(EB THRU)	*West-to-East*	0.0%	0
(EB RT)	*West-to-South*	60.0%	9
(WB LT)	*East-to-South*	52.8%	19
(WB THRU)	*East-to-West*	2.8%	1
(WB RT)	*East-to-North*	44.4%	16
(SB LT)	*North-to-East*	4.2%	27
(SB THRU)	*North-to-South*	87.3%	565
(SB RT)	*North-to-West*	8.5%	55
(NB LT)	*South-to-West*	20.9%	23
(NB THRU)	*South-to-North*	50.0%	55
(NB RT)	*South-to-East*	29.1%	32

Desired Closure: 0.50

Existing Year AADTs

Existing Turning Movement Counts

FSUTMS Model Year AADTs

First Guess Turning % Option Used
Existing Turning Movement Counts

Only the existing year total departure volumes [AADT*K*(1-D)] will be used to calculate the turning percentages first guess.

The turning percentages first guess is the same as the ***actual distribution of turning volumes entered***. No balancing technique is used.

Only the FSUTMS model year departure volumes [AADT*K*(1-D)] will be used to calculate the

TURNS5 INITIAL TURNING VOLUME SUMMARY

Highway:	Boggy Creek Rd	**County:**	Osceola
Intersection:	Timber Ln - Build PM		
Project:	Boggy Creek Rd from Simpson Rd to Narcoossee Rd	**Analyst:**	VHB
		Date:	15-Dec-20

Approach-To-Approach	2019 Initial Estimate	2019 Final Estimate	2019 Calculated Volume	2025 Final Estimate	2025 Calculated Volume	2035 Final Estimate	2035 Calculated Volume	2045 Final Estimate	2045 Calculated Volume
West-To-North (LT)	0.400	0.532	18	0.532	18	0.532	19	0.531	19
West-To-East (Thru)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
West-To-South (RT)	0.600	0.468	15	0.468	15	0.468	16	0.469	17
Total Flow From West:			**33**		**33**		**35**		**36**
East-To-South (LT)	0.528	0.408	24	0.409	34	0.410	50	0.411	66
East-To-West (Thru)	0.028	0.006	0	0.004	0	0.003	0	0.002	0
East-To-North (RT)	0.444	0.586	35	0.587	48	0.587	71	0.587	94
Total Flow From East:			**59**		**82**		**121**		**160**
North-To-East (LT)	0.042	0.008	7	0.008	9	0.008	13	0.008	17
North-To-South (Thru)	0.873	0.968	821	0.974	1101	0.978	1563	0.981	2027
North-To-West (RT)	0.085	0.024	20	0.018	20	0.014	22	0.011	23
Total Flow From North:			**848**		**1130**		**1598**		**2067**
South-To-West (LT)	0.209	0.055	33	0.043	34	0.032	36	0.026	38
South-To-North (Thru)	0.500	0.896	530	0.905	713	0.913	1018	0.918	1324
South-To-East (RT)	0.291	0.049	29	0.052	41	0.055	61	0.056	81
Total Flow From South:			**592**		**788**		**1115**		**1443**

TURNS5 ANALYSIS SHEET - INPUT

Analyst: VHB
Date: 15-Dec-20
Highway: Boggy Creek - Build AM
Intersection: Fells Cove Blvd
Project: Boggy Creek Rd from Simpson Rd to Narcoossee Rd
County: Osceola

Is this a 4 way intersection?
- ○ Yes, my intersection has four approaches

If not, which 3 approaches exist in the intersection?
- ○ EB, WB, and SB
- ◉ EB, WB, and NB
- ○ EB, SB, and NB
- ○ WB, SB, and NB

Is the Mainline Oriented North/South? Enter Yes or No
- ○ Yes
- ◉ No

K Factors	
Mainline	9.00%
Side street	6.40%

D Factors	*Mainline*
Westbound (WB)	41.1%
Eastbound (EB)	58.9%
	Side street
Northbound (NB)	63.0%
Southbound (SB)	0.0%

Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N) Enter Yes or No
- ◉ Yes
- ○ No

If "Yes" go to cell C47 If "No" go to cell C31

Enter Year and Growth Rates from Base Year:

	Year	*Rate* (1.0% = 0.01) Mainline	Side Street
Base			
Opening			
Mid			
Design			

Mainline Growth Function
- ◉ Linear
- ○ Exponential
- ○ Decaying

Side Street Growth Function
- ◉ Linear
- ○ Exponential
- ○ Decaying

Enter Base Year AADTs for Volume Comparison:
(growth rates are used to calculate other project years)

From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
0	0	0	0	0

Enter Project and Model Years

	Year
Base	2019
Opening	2025
Mid	2035
Design	2045
Model	2045

Enter Base and Model Year AADTs for Volume Comparison:
(volumes for other project years are calculated by interpolation)

	From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
2019	16000	15000	0	1900	32900
2045	39000	36500	0	2600	78100

		1st Guess Turning %'s for AADT Balancing	**Actual/Counted Traffic for 2019**
(EB LT)	*West-to-North*	0.0%	0
(EB THRU)	*West-to-East*	99.6%	511
(EB RT)	*West-to-South*	0.4%	2
(WB LT)	*East-to-South*	7.1%	29
(WB THRU)	*East-to-West*	92.9%	381
(WB RT)	*East-to-North*	0.0%	0
(SB LT)	*North-to-East*	0.0%	0
(SB THRU)	*North-to-South*	0.0%	0
(SB RT)	*North-to-West*	0.0%	0
(NB LT)	*South-to-West*	30.8%	28
(NB THRU)	*South-to-North*	0.0%	0
(NB RT)	*South-to-East*	69.2%	63

Desired Closure: 5.00

Existing Year AADTs

Existing Turning Movement Counts

FSUTMS Model Year AADTs

First Guess Turning % Option Used
Existing Turning Movement Counts

Only the existing year total departure volumes [AADT*K*(1-D)] will be used to calculate the turning percentages first guess.

The turning percentages first guess is the same as the ***actual distribution of turning volumes entered***. No balancing technique is used.

Only the FSUTMS model year departure volumes [AADT*K*(1-D)] will be used to calculate the

TURNS5 INITIAL TURNING VOLUME SUMMARY

Highway:	Boggy Creek - Build AM	**County:**	Osceola
Intersection:	Fells Cove Blvd		
Project:	Boggy Creek Rd from Simpson Rd to Narcoossee Rd	**Analyst:**	VHB
		Date:	15-Dec-20

Approach-To-Approach	2019 Initial Estimate	2019 Final Estimate	2019 Calculated Volume	2025 Final Estimate	2025 Calculated Volume	2035 Final Estimate	2035 Calculated Volume	2045 Final Estimate	2045 Calculated Volume
West-To-North (LT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
West-To-East (Thru)	0.996	0.995	844	0.996	1125	0.997	1593	0.997	2061
West-To-South (RT)	0.004	0.005	4	0.004	5	0.003	5	0.003	6
Total Flow From West:			**848**		**1130**		**1598**		**2067**
East-To-South (LT)	0.071	0.068	38	0.057	42	0.044	46	0.039	53
East-To-West (Thru)	0.929	0.932	517	0.943	696	0.956	998	0.961	1297
East-To-North (RT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
Total Flow From East:			**555**		**738**		**1044**		**1350**
North-To-East (LT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
North-To-South (Thru)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
North-To-West (RT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
Total Flow From North:			**0**		**0**		**0**		**0**
South-To-West (LT)	0.308	0.356	27	0.355	29	0.355	33	0.355	37
South-To-North (Thru)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
South-To-East (RT)	0.692	0.644	50	0.645	54	0.645	61	0.645	68
Total Flow From South:			**77**		**83**		**94**		**105**

TURNS5 ANALYSIS SHEET - INPUT

Analyst: VHB
Date: 15-Dec-20
Highway: Boggy Creek - Build PM
Intersection: Fells Cove Blvd
Project: Boggy Creek Rd from Simpson Rd to Narcoossee Rd
County: Osceola

Is this a 4 way intersection?
- ○ Yes, my intersection has four approaches

If not, which 3 approaches exist in the intersection?
- ○ EB, WB, and SB
- ◉ EB, WB, and NB
- ○ EB, SB, and NB
- ○ WB, SB, and NB

Is the Mainline Oriented North/South? Enter Yes or No
- ○ Yes
- ◉ No

K Factors	
Mainline	9.00%
Side street	6.40%

D Factors	*Mainline*
Westbound (WB)	58.9%
Eastbound (EB)	41.1%
	Side street
Northbound (NB)	51.0%
Southbound (SB)	0.0%

Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N) Enter Yes or No
- ◉ Yes
- ○ No

If "Yes" go to cell C47 If "No" go to cell C31

Enter Year and Growth Rates from Base Year:

	Year	*Rate* (1.0% = 0.01) Mainline	Side Street
Base			
Opening			
Mid			
Design			

Mainline Growth Function
- ◉ Linear
- ○ Exponential
- ○ Decaying

Side Street Growth Function
- ◉ Linear
- ○ Exponential
- ○ Decaying

Enter Base Year AADTs for Volume Comparison:
(growth rates are used to calculate other project years)

From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
0	0	0	0	0

Enter Project and Model Years

	Year
Base	2019
Opening	2025
Mid	2035
Design	2045
Model	2045

Enter Base and Model Year AADTs for Volume Comparison:
(volumes for other project years are calculated by interpolation)

	From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
2019	16000	15000	0	1900	32900
2045	39000	36500	0	2600	78100

		1st Guess Turning %'s for AADT Balancing	**Actual/Counted Traffic for 2019**
(EB LT)	*West-to-North*	0.0%	0
(EB THRU)	*West-to-East*	97.7%	521
(EB RT)	*West-to-South*	2.3%	12
(WB LT)	*East-to-South*	6.6%	40
(WB THRU)	*East-to-West*	93.4%	562
(WB RT)	*East-to-North*	0.0%	0
(SB LT)	*North-to-East*	0.0%	0
(SB THRU)	*North-to-South*	0.0%	0
(SB RT)	*North-to-West*	0.0%	0
(NB LT)	*South-to-West*	34.0%	17
(NB THRU)	*South-to-North*	0.0%	0
(NB RT)	*South-to-East*	66.0%	33

Desired Closure: 5.00

Existing Year AADTs

Existing Turning Movement Counts

FSUTMS Model Year AADTs

First Guess Turning % Option Used
Existing Turning Movement Counts

Only the existing year total departure volumes [AADT*K*(1-D)] will be used to calculate the turning percentages first guess.

The turning percentages first guess is the same as the ***actual distribution of turning volumes entered***. No balancing technique is used.

Only the FSUTMS model year departure volumes [AADT*K*(1-D)] will be used to calculate the

TURNS5 INITIAL TURNING VOLUME SUMMARY

Highway:	Boggy Creek - Build PM	**County:**	Osceola
Intersection:	Fells Cove Blvd		
Project:	Boggy Creek Rd from Simpson Rd to Narcoossee Rd	**Analyst:**	VHB
		Date:	15-Dec-20

Approach-To-Approach	2019 Initial Estimate	2019 Final Estimate	2019 Calculated Volume	2025 Final Estimate	2025 Calculated Volume	2035 Final Estimate	2035 Calculated Volume	2045 Final Estimate	2045 Calculated Volume
West-To-North (LT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
West-To-East (Thru)	0.977	0.977	578	0.981	773	0.985	1098	0.987	1424
West-To-South (RT)	0.023	0.023	14	0.019	15	0.015	17	0.013	19
Total Flow From West:			**592**		**788**		**1115**		**1443**
East-To-South (LT)	0.066	0.055	44	0.045	48	0.036	54	0.031	60
East-To-West (Thru)	0.934	0.945	751	0.955	1010	0.964	1443	0.969	1875
East-To-North (RT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
Total Flow From East:			**795**		**1058**		**1497**		**1935**
North-To-East (LT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
North-To-South (Thru)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
North-To-West (RT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
Total Flow From North:			**0**		**0**		**0**		**0**
South-To-West (LT)	0.340	0.390	24	0.388	26	0.387	29	0.386	33
South-To-North (Thru)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
South-To-East (RT)	0.660	0.610	38	0.612	41	0.613	47	0.614	52
Total Flow From South:			**62**		**67**		**76**		**85**

TURNS5 ANALYSIS SHEET - INPUT

Analyst: VHB
Date: 15-Dec-20
Highway: Narcoossee Rd
Intersection: Boggy Creek Rd - Build AM
Project: Boggy Creek Rd from Simpson Rd to Narcoossee Rd
County: Osceola

Is this a 4 way intersection?
- ○ Yes, my intersection has four approaches

If not, which 3 approaches exist in the intersection?
- ○ EB, WB, and SB
- ○ EB, WB, and NB
- ◉ EB, SB, and NB
- ○ WB, SB, and NB

Is the Mainline Oriented North/South? Enter Yes or No: ◉ Yes ○ No

K Factors	
Mainline	9.00%
Side street	9.00%

D Factors	*Mainline*
Northbound (NB)	64.8%
Southbound (SB)	35.2%
	Side street
Westbound (WB)	0.0%
Eastbound (EB)	58.9%

Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N) Enter Yes or No: ◉ Yes ○ No

If "Yes" go to cell C47 If "No" go to cell C31

Enter Year and Growth Rates from Base Year:

	Year	*Rate* (1.0% = 0.01) Mainline	Side Street
Base			
Opening			
Mid			
Design			

Mainline Growth Function: ◉ Linear ○ Exponential ○ Decaying

Side Street Growth Function: ◉ Linear ○ Exponential ○ Decaying

Enter Base Year AADTs for Volume Comparison:
(growth rates are used to calculate other project years)

From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
0	0	0	0	0

Enter Project and Model Years

	Year
Base	2019
Opening	2025
Mid	2035
Design	2045
Model	2045

Enter Base and Model Year AADTs for Volume Comparison:
(volumes for other project years are calculated by interpolation)

	From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
2019	15000	0	32000	33000	80000
2045	36500	0	52500	58000	147000

		1st Guess Turning %'s for AADT Balancing	**Actual/Counted Traffic for 2019**
(EB LT)	*West-to-North*	57.8%	356
(EB THRU)	*West-to-East*	0.0%	0
(EB RT)	*West-to-South*	42.2%	260
(WB LT)	*East-to-South*	0.0%	0
(WB THRU)	*East-to-West*	0.0%	0
(WB RT)	*East-to-North*	0.0%	0
(SB LT)	*North-to-East*	0.0%	0
(SB THRU)	*North-to-South*	87.3%	600
(SB RT)	*North-to-West*	12.7%	87
(NB LT)	*South-to-West*	16.4%	331
(NB THRU)	*South-to-North*	83.6%	1682
(NB RT)	*South-to-East*	0.0%	0

Desired Closure: 0.50

Existing Year AADTs

Existing Turning Movement Counts

FSUTMS Model Year AADTs

First Guess Turning % Option Used
Existing Turning Movement Counts

Only the existing year total departure volumes [AADT*K*(1-D)] will be used to calculate the turning percentages first guess.

The turning percentages first guess is the same as the ***actual distribution of turning volumes entered***. No balancing technique is used.

Only the FSUTMS model year departure volumes [AADT*K*(1-D)] will be used to calculate the

TURNS5 INITIAL TURNING VOLUME SUMMARY

Highway:	Narcoossee Rd	**County:**	Osceola
Intersection:	Boggy Creek Rd - Build AM		
Project:	Boggy Creek Rd from Simpson Rd to Narcoossee Rd	**Analyst:**	VHB
		Date:	15-Dec-20

Approach-To-Approach	2019 Initial Estimate	2019 Final Estimate	2019 Calculated Volume	2025 Final Estimate	2025 Calculated Volume	2035 Final Estimate	2035 Calculated Volume	2045 Final Estimate	2045 Calculated Volume
West-To-North (LT)	0.578	0.601	478	0.591	625	0.579	867	0.572	1107
West-To-East (Thru)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
West-To-South (RT)	0.422	0.399	317	0.409	433	0.421	630	0.428	828
Total Flow From West:			**795**		**1058**		**1497**		**1935**
East-To-South (LT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
East-To-West (Thru)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
East-To-North (RT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
Total Flow From East:			**0**		**0**		**0**		**0**
North-To-East (LT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
North-To-South (Thru)	0.873	0.818	829	0.794	924	0.766	1082	0.747	1242
North-To-West (RT)	0.127	0.182	185	0.206	240	0.234	331	0.253	421
Total Flow From North:			**1014**		**1164**		**1413**		**1663**
South-To-West (LT)	0.164	0.214	412	0.249	563	0.291	821	0.319	1079
South-To-North (Thru)	0.836	0.786	1513	0.751	1698	0.709	2001	0.681	2304
South-To-East (RT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
Total Flow From South:			**1925**		**2261**		**2822**		**3383**

TURNS5 ANALYSIS SHEET - INPUT

Analyst: VHB
Date: 15-Dec-20
Highway: Narcoossee Rd
Intersection: Boggy Creek Rd - Build PM
Project: Boggy Creek Rd from Simpson Rd to Narcoossee Rd
County: Osceola

Is this a 4 way intersection?
- ○ Yes, my intersection has four approaches

If not, which 3 approaches exist in the intersection?
- ○ EB, WB, and SB
- ○ EB, WB, and NB
- ◉ EB, SB, and NB
- ○ WB, SB, and NB

Is the Mainline Oriented North/South? Enter Yes or No: ◉ Yes ○ No

K Factors	Mainline
	9.00%
	Side street
	9.00%

D Factors	*Mainline*
Northbound (NB)	35.2%
Southbound (SB)	64.8%
	Side street
Westbound (WB)	0.0%
Eastbound (EB)	58.9%

Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N) Enter Yes or No: ◉ Yes ○ No

If "Yes" go to cell C47 If "No" go to cell C31

Enter Year and Growth Rates from Base Year:

	Year	*Rate* (1.0% = 0.01) Mainline	Side Street
Base			
Opening			
Mid			
Design			

Mainline Growth Function: ◉ Linear ○ Exponential ○ Decaying

Side Street Growth Function: ◉ Linear ○ Exponential ○ Decaying

Enter Base Year AADTs for Volume Comparison:
(growth rates are used to calculate other project years)

From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
0	0	0	0	0

Enter Project and Model Years

	Year
Base	2019
Opening	2025
Mid	2035
Design	2045
Model	2045

Enter Base and Model Year AADTs for Volume Comparison:
(volumes for other project years are calculated by interpolation)

	From West: EB Approach	*From East: WB Approach*	*From North: SB Approach*	*From South: NB Approach*	***TOTAL***
2019	15000	0	32000	33000	80000
2045	36500	0	52500	58000	147000

		1st Guess Turning %'s for AADT Balancing	**Actual/Counted Traffic for 2019**
(EB LT)	*West-to-North*	45.7%	233
(EB THRU)	*West-to-East*	0.0%	0
(EB RT)	*West-to-South*	54.3%	277
(WB LT)	*East-to-South*	0.0%	0
(WB THRU)	*East-to-West*	0.0%	0
(WB RT)	*East-to-North*	0.0%	0
(SB LT)	*North-to-East*	0.0%	0
(SB THRU)	*North-to-South*	83.8%	1614
(SB RT)	*North-to-West*	16.2%	311
(NB LT)	*South-to-West*	23.4%	271
(NB THRU)	*South-to-North*	76.6%	886
(NB RT)	*South-to-East*	0.0%	0

Desired Closure: 1.00

Existing Year AADTs

Existing Turning Movement Counts

FSUTMS Model Year AADTs

First Guess Turning % Option Used
Existing Turning Movement Counts

Only the existing year total departure volumes [AADT*K*(1-D)] will be used to calculate the turning percentages first guess.

The turning percentages first guess is the same as the ***actual distribution of turning volumes entered***. No balancing technique is used.

Only the FSUTMS model year departure volumes [AADT*K*(1-D)] will be used to calculate the

TURNS5 INITIAL TURNING VOLUME SUMMARY

Highway:	Narcoossee Rd	**County:**	Osceola
Intersection:	Boggy Creek Rd - Build PM		
Project:	Boggy Creek Rd from Simpson Rd to Narcoossee Rd	**Analyst:**	VHB
		Date:	15-Dec-20

Approach-To-Approach	2019 Initial Estimate	2019 Final Estimate	2019 Calculated Volume	2025 Final Estimate	2025 Calculated Volume	2035 Final Estimate	2035 Calculated Volume	2045 Final Estimate	2045 Calculated Volume
West-To-North (LT)	0.457	0.432	343	0.401	424	0.383	573	0.373	722
West-To-East (Thru)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
West-To-South (RT)	0.543	0.568	452	0.599	634	0.617	924	0.627	1213
Total Flow From West:			**795**		**1058**		**1497**		**1935**
East-To-South (LT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
East-To-West (Thru)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
East-To-North (RT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
Total Flow From East:			**0**		**0**		**0**		**0**
North-To-East (LT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
North-To-South (Thru)	0.838	0.831	1551	0.812	1739	0.786	2045	0.769	2355
North-To-West (RT)	0.162	0.169	315	0.188	403	0.214	557	0.231	707
Total Flow From North:			**1866**		**2142**		**2602**		**3062**
South-To-West (LT)	0.234	0.262	274	0.315	387	0.367	563	0.402	738
South-To-North (Thru)	0.766	0.738	771	0.685	841	0.633	970	0.598	1099
South-To-East (RT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
Total Flow From South:			**1045**		**1228**		**1533**		**1837**

Appendix J

No Build Conditions Synchro Intersection Analysis Outputs

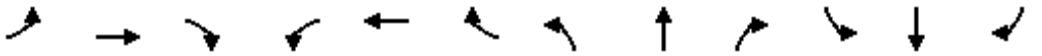
Intersection	
Int Delay, s/veh	3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	686	19	11	965	49	21
Future Vol, veh/h	686	19	11	965	49	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	225	240	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	4	4	4	4	2	2
Mvmt Flow	722	20	12	1016	52	22

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	742	0	1762	722
Stage 1	-	-	-	-	722	-
Stage 2	-	-	-	-	1040	-
Critical Hdwy	-	-	4.14	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.236	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	856	-	93	427
Stage 1	-	-	-	-	481	-
Stage 2	-	-	-	-	341	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	856	-	92	427
Mov Cap-2 Maneuver	-	-	-	-	92	-
Stage 1	-	-	-	-	481	-
Stage 2	-	-	-	-	336	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	74
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	120	-	-	856	-
HCM Lane V/C Ratio	0.614	-	-	0.014	-
HCM Control Delay (s)	74	-	-	9.3	-
HCM Lane LOS	F	-	-	A	-
HCM 95th %tile Q(veh)	3.1	-	-	0	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	114	541	30	20	725	126	60	40	20	86	2	173
Future Volume (veh/h)	114	541	30	20	725	126	60	40	20	86	2	173
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	1841	1841	1841	1841	1841	1841	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	139	660	37	24	884	154	73	49	24	105	2	211
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	4	4	4	4	4	4	2	2	2	2	2	2
Cap, veh/h	322	1131	959	444	1046	886	77	29	9	207	2	191
Arrive On Green	0.09	0.61	0.61	0.04	0.57	0.57	0.12	0.12	0.12	0.12	0.12	0.12
Sat Flow, veh/h	1753	1841	1560	1753	1841	1560	136	244	75	1057	20	1585
Grp Volume(v), veh/h	139	660	37	24	884	154	146	0	0	107	0	211
Grp Sat Flow(s),veh/h/ln	1753	1841	1560	1753	1841	1560	455	0	0	1077	0	1585
Q Serve(g_s), s	2.7	19.3	0.8	0.5	35.8	4.2	2.1	0.0	0.0	0.0	0.0	10.8
Cycle Q Clear(g_c), s	2.7	19.3	0.8	0.5	35.8	4.2	10.8	0.0	0.0	8.7	0.0	10.8
Prop In Lane	1.00		1.00	1.00		1.00	0.50		0.16	0.98		1.00
Lane Grp Cap(c), veh/h	322	1131	959	444	1046	886	115	0	0	209	0	191
V/C Ratio(X)	0.43	0.58	0.04	0.05	0.85	0.17	1.27	0.00	0.00	0.51	0.00	1.11
Avail Cap(c_a), veh/h	327	1131	959	530	1046	886	115	0	0	209	0	191
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	15.5	10.4	6.8	8.3	16.1	9.3	42.6	0.0	0.0	38.6	0.0	39.5
Incr Delay (d2), s/veh	0.7	2.2	0.1	0.0	8.4	0.4	173.3	0.0	0.0	0.9	0.0	96.5
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	2.3	11.2	0.4	0.3	21.0	2.4	13.9	0.0	0.0	4.2	0.0	14.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.1	12.6	6.9	8.3	24.5	9.7	215.9	0.0	0.0	39.5	0.0	136.0
LnGrp LOS	B	B	A	A	C	A	F	A	A	D	A	F
Approach Vol, veh/h		836			1062			146			318	
Approach Delay, s/veh		12.9			22.0			215.9			103.5	
Approach LOS		B			C			F			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.1	62.6		16.0	15.2	58.5		16.0				
Change Period (Y+Rc), s	7.5	7.5		* 5.2	7.5	7.5		* 5.2				
Max Green Setting (Gmax), s	8.0	51.0		* 11	8.0	51.0		* 11				
Max Q Clear Time (g_c+I1), s	2.5	21.3		12.8	4.7	37.8		12.8				
Green Ext Time (p_c), s	0.0	9.3		0.0	0.1	8.7		0.0				

Intersection Summary		
HCM 6th Ctrl Delay	41.7	
HCM 6th LOS	D	

Notes

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

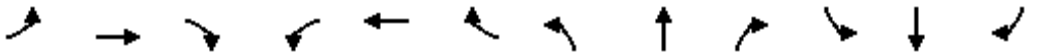
Intersection	
Int Delay, s/veh	3.9

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	92	92	599	55	31	466
Future Vol, veh/h	92	92	599	55	31	466
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	295	390	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	4	4	4	4
Mvmt Flow	97	97	631	58	33	491

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1188	631	0	0	689	0
Stage 1	631	-	-	-	-	-
Stage 2	557	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.14	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.236	-
Pot Cap-1 Maneuver	208	481	-	-	896	-
Stage 1	530	-	-	-	-	-
Stage 2	574	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	200	481	-	-	896	-
Mov Cap-2 Maneuver	200	-	-	-	-	-
Stage 1	530	-	-	-	-	-
Stage 2	553	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	26.6	0	0.6
HCM LOS	D		

Minor Lane/Major Mvmt	NET	NER	NWLn1	NWLn2	SWL	SWT
Capacity (veh/h)	-	-	200	481	896	-
HCM Lane V/C Ratio	-	-	0.484	0.201	0.036	-
HCM Control Delay (s)	-	-	38.8	14.4	9.2	-
HCM Lane LOS	-	-	E	B	A	-
HCM 95th %tile Q(veh)	-	-	2.4	0.7	0.1	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	57	520	0	0	517	40	0	0	0	124	0	202
Future Volume (veh/h)	57	520	0	0	517	40	0	0	0	124	0	202
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	1841	1841	0	0	1841	1841	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	60	547	0	0	544	42	0	0	0	131	0	213
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	0	0	4	4	2	2	2	2	2	2
Cap, veh/h	546	1357	0	0	1115	945	1	2	1	274	0	244
Arrive On Green	0.07	0.74	0.00	0.00	0.61	0.61	0.00	0.00	0.00	0.15	0.00	0.15
Sat Flow, veh/h	1753	1841	0	0	1841	1560	1781	1870	1585	1781	0	1585
Grp Volume(v), veh/h	60	547	0	0	544	42	0	0	0	131	0	213
Grp Sat Flow(s),veh/h/ln	1753	1841	0	0	1841	1560	1781	1870	1585	1781	0	1585
Q Serve(g_s), s	1.3	13.3	0.0	0.0	19.8	1.3	0.0	0.0	0.0	8.1	0.0	15.8
Cycle Q Clear(g_c), s	1.3	13.3	0.0	0.0	19.8	1.3	0.0	0.0	0.0	8.1	0.0	15.8
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	546	1357	0	0	1115	945	1	2	1	274	0	244
V/C Ratio(X)	0.11	0.40	0.00	0.00	0.49	0.04	0.00	0.00	0.00	0.48	0.00	0.87
Avail Cap(c_a), veh/h	566	1357	0	0	1115	945	445	468	396	341	0	304
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	7.9	5.9	0.0	0.0	13.2	9.6	0.0	0.0	0.0	46.4	0.0	49.6
Incr Delay (d2), s/veh	0.1	0.9	0.0	0.0	1.5	0.1	0.0	0.0	0.0	1.3	0.0	20.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.7	7.3	0.0	0.0	12.0	0.8	0.0	0.0	0.0	6.6	0.0	12.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.0	6.8	0.0	0.0	14.8	9.7	0.0	0.0	0.0	47.7	0.0	69.7
LnGrp LOS	A	A	A	A	B	A	A	A	A	D	A	E
Approach Vol, veh/h		607			586			0			344	
Approach Delay, s/veh		6.9			14.4			0.0			61.3	
Approach LOS		A			B						E	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		95.5		24.5	15.7	79.8		0.0				
Change Period (Y+Rc), s		7.1		6.0	7.1	7.1		6.0				
Max Green Setting (Gmax), s		47.9		23.0	10.0	30.8		30.0				
Max Q Clear Time (g_c+I1), s		15.3		17.8	3.3	21.8		0.0				
Green Ext Time (p_c), s		6.8		0.7	0.0	3.6		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			21.9									
HCM 6th LOS			C									

Intersection	
Int Delay, s/veh	3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	13	0	7	48	0	40	2	661	29	24	445	6
Future Vol, veh/h	13	0	7	48	0	40	2	661	29	24	445	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	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	240	-	300	425	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	4	4	4	4	4	4
Mvmt Flow	14	0	7	51	0	42	2	696	31	25	468	6

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1258	1252	471	1225	1224	696	474	0	0	727	0	0
Stage 1	521	521	-	700	700	-	-	-	-	-	-	-
Stage 2	737	731	-	525	524	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.236	-	-	2.236	-	-
Pot Cap-1 Maneuver	148	172	593	156	179	442	1078	-	-	867	-	-
Stage 1	539	532	-	430	441	-	-	-	-	-	-	-
Stage 2	410	427	-	536	530	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	131	167	593	150	173	442	1078	-	-	867	-	-
Mov Cap-2 Maneuver	131	167	-	150	173	-	-	-	-	-	-	-
Stage 1	538	517	-	429	440	-	-	-	-	-	-	-
Stage 2	370	426	-	514	515	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	27.6	34.1	0	0.5
HCM LOS	D	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1078	-	-	180	214	867	-	-
HCM Lane V/C Ratio	0.002	-	-	0.117	0.433	0.029	-	-
HCM Control Delay (s)	8.3	-	-	27.6	34.1	9.3	-	-
HCM Lane LOS	A	-	-	D	D	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.4	2	0.1	-	-

Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Volume (veh/h)	431	305	796	138	390	1859
Future Volume (veh/h)	431	305	796	138	390	1859
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	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	454	321	838	0	411	1957
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4
Cap, veh/h	434	387	2077		470	3026
Arrive On Green	0.25	0.25	0.41	0.00	0.11	0.60
Sat Flow, veh/h	1753	1560	5191	1560	1753	5191
Grp Volume(v), veh/h	454	321	838	0	411	1957
Grp Sat Flow(s),veh/h/ln	1753	1560	1675	1560	1753	1675
Q Serve(g_s), s	22.3	17.5	10.6	0.0	10.2	22.8
Cycle Q Clear(g_c), s	22.3	17.5	10.6	0.0	10.2	22.8
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	434	387	2077		470	3026
V/C Ratio(X)	1.05	0.83	0.40		0.88	0.65
Avail Cap(c_a), veh/h	434	387	2077		470	3026
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	1.00
Uniform Delay (d), s/veh	33.8	32.1	18.6	0.0	17.4	11.7
Incr Delay (d2), s/veh	55.5	13.8	0.6	0.0	16.1	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	22.2	11.9	6.9	0.0	10.3	11.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	89.3	45.9	19.2	0.0	33.5	12.7
LnGrp LOS	F	D	B		C	B
Approach Vol, veh/h	775		838	A		2368
Approach Delay, s/veh	71.3		19.2			16.3
Approach LOS	E		B			B

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	17.0	44.0			61.0	29.0
Change Period (Y+Rc), s	6.8	6.8			6.8	6.7
Max Green Setting (Gmax), s	10.2	37.2			54.2	22.3
Max Q Clear Time (g_c+I1), s	12.2	12.6			24.8	24.3
Green Ext Time (p_c), s	0.0	6.7			19.9	0.0

Intersection Summary	
HCM 6th Ctrl Delay	27.6
HCM 6th LOS	C

Notes

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

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	465	-	-	0	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	4	4	4	4	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1	0	-	0	1	1
Stage 1	-	-	-	-	1	-
Stage 2	-	-	-	-	0	-
Critical Hdwy	4.14	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.236	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1609	-	-	-	1022	1084
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1609	-	-	-	1022	1084
Mov Cap-2 Maneuver	-	-	-	-	1022	-
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1609	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0	0
HCM Lane LOS	A	-	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	-	-	-

Intersection	
Int Delay, s/veh	1.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	648	5	32	498	30	66
Future Vol, veh/h	648	5	32	498	30	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	-	400	415	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	4	4	4	4	2	2
Mvmt Flow	682	5	34	524	32	69

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	687	0	1274	682
Stage 1	-	-	-	-	682	-
Stage 2	-	-	-	-	592	-
Critical Hdwy	-	-	4.14	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.236	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	898	-	184	450
Stage 1	-	-	-	-	502	-
Stage 2	-	-	-	-	553	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	898	-	177	450
Mov Cap-2 Maneuver	-	-	-	-	177	-
Stage 1	-	-	-	-	502	-
Stage 2	-	-	-	-	532	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.6	19.3
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	177	450	-	-	898	-
HCM Lane V/C Ratio	0.178	0.154	-	-	0.038	-
HCM Control Delay (s)	29.7	14.5	-	-	9.2	-
HCM Lane LOS	D	B	-	-	A	-
HCM 95th %tile Q(veh)	0.6	0.5	-	-	0.1	-

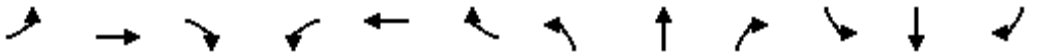
Intersection	
Int Delay, s/veh	10.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	40	559	19	13	635	28	32	4	38	60	0	189
Future Vol, veh/h	40	559	19	13	635	28	32	4	38	60	0	189
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	460	-	250	345	-	400	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	4	4	4	4	4	4	2	2	2	2	2	2
Mvmt Flow	42	588	20	14	668	29	34	4	40	63	0	199

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	697	0	0	608	0	0	1482	1397	588	1400	1388	668
Stage 1	-	-	-	-	-	-	672	672	-	696	696	-
Stage 2	-	-	-	-	-	-	810	725	-	704	692	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.236	-	-	2.236	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	890	-	-	961	-	-	103	141	509	118	143	458
Stage 1	-	-	-	-	-	-	445	454	-	432	443	-
Stage 2	-	-	-	-	-	-	374	430	-	428	445	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	890	-	-	961	-	-	56	132	509	101	134	458
Mov Cap-2 Maneuver	-	-	-	-	-	-	56	132	-	101	134	-
Stage 1	-	-	-	-	-	-	424	433	-	412	436	-
Stage 2	-	-	-	-	-	-	208	424	-	372	424	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	0.2	95.2	35.3
HCM LOS			F	E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	109	890	-	-	961	-	-	101	458
HCM Lane V/C Ratio	0.715	0.047	-	-	0.014	-	-	0.625	0.434
HCM Control Delay (s)	95.2	9.2	-	-	8.8	-	-	87.2	18.8
HCM Lane LOS	F	A	-	-	A	-	-	F	C
HCM 95th %tile Q(veh)	3.8	0.1	-	-	0	-	-	3	2.2



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	646	137	325	87	188	141	521	562	97	90	257	487
Future Volume (veh/h)	646	137	325	87	188	141	521	562	97	90	257	487
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	1826	1841	1826	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	680	144	342	92	198	148	548	592	102	95	271	513
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	5	4	5	4	4	4	4	4	4	4	4	4
Cap, veh/h	610	1117	494	211	210	94	473	771	653	213	940	920
Arrive On Green	0.32	0.32	0.32	0.06	0.06	0.06	0.16	0.42	0.42	0.03	0.27	0.27
Sat Flow, veh/h	1739	3497	1547	1753	3497	1560	1753	1841	1560	1753	3497	1560
Grp Volume(v), veh/h	680	144	342	92	198	148	548	592	102	95	271	513
Grp Sat Flow(s),veh/h/ln	1739	1749	1547	1753	1749	1560	1753	1841	1560	1753	1749	1560
Q Serve(g_s), s	48.2	4.4	29.0	7.3	8.5	9.0	24.3	41.3	6.1	5.1	9.2	30.1
Cycle Q Clear(g_c), s	48.2	4.4	29.0	7.3	8.5	9.0	24.3	41.3	6.1	5.1	9.2	30.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	610	1117	494	211	210	94	473	771	653	213	940	920
V/C Ratio(X)	1.11	0.13	0.69	0.44	0.94	1.58	1.16	0.77	0.16	0.45	0.29	0.56
Avail Cap(c_a), veh/h	610	1145	507	223	210	94	473	771	653	213	940	920
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.9	36.2	44.6	61.0	70.2	70.5	37.7	37.4	27.1	42.2	43.5	18.8
Incr Delay (d2), s/veh	71.9	0.1	3.9	1.4	46.3	306.3	93.0	7.2	0.5	1.5	0.8	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	44.9	3.4	17.0	5.9	8.8	19.2	27.3	26.8	4.2	1.3	7.3	16.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	114.7	36.3	48.5	62.4	116.6	376.8	130.7	44.6	27.6	43.7	44.3	21.2
LnGrp LOS	F	D	D	E	F	F	F	D	C	D	D	C
Approach Vol, veh/h		1166			438			1242			879	
Approach Delay, s/veh		85.6			193.1			81.2			30.8	
Approach LOS		F			F			F			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	32.1	47.1	16.1	54.7	9.6	69.6	55.0	15.8
Change Period (Y+Rc), s	7.8	6.8	6.8	* 6.8	4.5	6.8	6.8	6.8
Max Green Setting (Gmax), s	24.3	40.3	10.4	* 49	5.1	62.8	48.2	9.0
Max Q Clear Time (g_c+I1), s	26.3	32.1	9.3	31.0	7.1	43.3	50.2	11.0
Green Ext Time (p_c), s	0.0	2.3	0.0	1.8	0.0	3.8	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	83.8
HCM 6th LOS	F

Notes

User approved ignoring U-Turning movement.

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

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	160	-	400	310	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	4	4	4	4
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1	0	0	0	0	0
Stage 1	0	-	-	-	-	-
Stage 2	1	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.18	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.24	-
Pot Cap-1 Maneuver	1021	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	1022	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	1021	-	-	-	-	-
Mov Cap-2 Maneuver	1021	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	1022	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	0	-
HCM Lane LOS	-	-	A	A	A	-
HCM 95th %tile Q(veh)	-	-	-	-	-	-

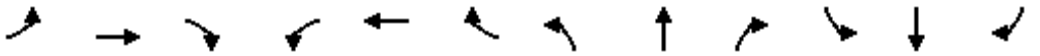
Intersection	
Int Delay, s/veh	1.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	992	51	23	660	25	19
Future Vol, veh/h	992	51	23	660	25	19
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	225	240	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	4	4	4	4	2	2
Mvmt Flow	1044	54	24	695	26	20

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1098	0	1787	1044
Stage 1	-	-	-	-	1044	-
Stage 2	-	-	-	-	743	-
Critical Hdwy	-	-	4.14	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.236	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	628	-	89	278
Stage 1	-	-	-	-	339	-
Stage 2	-	-	-	-	470	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	628	-	86	278
Mov Cap-2 Maneuver	-	-	-	-	86	-
Stage 1	-	-	-	-	339	-
Stage 2	-	-	-	-	452	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	51
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	123	-	-	628	-
HCM Lane V/C Ratio	0.377	-	-	0.039	-
HCM Control Delay (s)	51	-	-	11	-
HCM Lane LOS	F	-	-	B	-
HCM 95th %tile Q(veh)	1.6	-	-	0.1	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	924	26	24	608	14	26	0	5	28	0	47
Future Volume (veh/h)	43	924	26	24	608	14	26	0	5	28	0	47
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	1841	1841	1841	1841	1841	1841	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	45	973	27	25	640	15	27	0	5	29	0	49
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	2	2	2	2	2	2
Cap, veh/h	510	1177	998	287	1142	968	159	7	17	216	0	136
Arrive On Green	0.06	0.64	0.64	0.04	0.62	0.62	0.09	0.00	0.09	0.09	0.00	0.09
Sat Flow, veh/h	1753	1841	1560	1753	1841	1560	964	76	193	1546	0	1585
Grp Volume(v), veh/h	45	973	27	25	640	15	32	0	0	29	0	49
Grp Sat Flow(s),veh/h/ln	1753	1841	1560	1753	1841	1560	1233	0	0	1547	0	1585
Q Serve(g_s), s	0.7	35.0	0.6	0.4	17.6	0.3	1.4	0.0	0.0	0.0	0.0	2.5
Cycle Q Clear(g_c), s	0.7	35.0	0.6	0.4	17.6	0.3	2.7	0.0	0.0	1.3	0.0	2.5
Prop In Lane	1.00		1.00	1.00		1.00	0.84		0.16	1.00		1.00
Lane Grp Cap(c), veh/h	510	1177	998	287	1142	968	182	0	0	216	0	136
V/C Ratio(X)	0.09	0.83	0.03	0.09	0.56	0.02	0.18	0.00	0.00	0.13	0.00	0.36
Avail Cap(c_a), veh/h	565	1177	998	375	1142	968	191	0	0	225	0	146
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	6.4	11.9	5.7	11.7	9.6	6.3	37.7	0.0	0.0	36.8	0.0	37.4
Incr Delay (d2), s/veh	0.1	6.7	0.1	0.1	2.0	0.0	0.5	0.0	0.0	0.1	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.4	18.6	0.3	0.3	10.2	0.2	1.2	0.0	0.0	1.0	0.0	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	6.5	18.6	5.8	11.8	11.6	6.3	38.1	0.0	0.0	37.0	0.0	38.0
LnGrp LOS	A	B	A	B	B	A	D	A	A	D	A	D
Approach Vol, veh/h		1045			680			32			78	
Approach Delay, s/veh		17.8			11.5			38.1			37.6	
Approach LOS		B			B			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.1	63.0		12.6	12.8	61.3		12.6				
Change Period (Y+Rc), s	7.5	7.5		* 5.2	7.5	7.5		* 5.2				
Max Green Setting (Gmax), s	8.0	53.8		* 8	8.0	53.8		* 8				
Max Q Clear Time (g_c+I1), s	2.4	37.0		4.5	2.7	19.6		4.7				
Green Ext Time (p_c), s	0.0	10.9		0.0	0.0	9.2		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		16.6	
HCM 6th LOS		B	

Notes

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

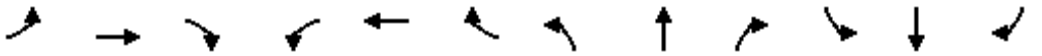
Intersection	
Int Delay, s/veh	2.2

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	41	53	690	76	57	617
Future Vol, veh/h	41	53	690	76	57	617
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	295	390	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	4	4	4	4
Mvmt Flow	43	56	726	80	60	649

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1495	726	0	0	806	0
Stage 1	726	-	-	-	-	-
Stage 2	769	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.14	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.236	-
Pot Cap-1 Maneuver	135	425	-	-	810	-
Stage 1	479	-	-	-	-	-
Stage 2	457	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	125	425	-	-	810	-
Mov Cap-2 Maneuver	125	-	-	-	-	-
Stage 1	479	-	-	-	-	-
Stage 2	423	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	29.4	0	0.8
HCM LOS	D		

Minor Lane/Major Mvmt	NET	NER	NWLn1	NWLn2	SWL	SWT
Capacity (veh/h)	-	-	125	425	810	-
HCM Lane V/C Ratio	-	-	0.345	0.131	0.074	-
HCM Control Delay (s)	-	-	48.3	14.7	9.8	-
HCM Lane LOS	-	-	E	B	A	-
HCM 95th %tile Q(veh)	-	-	1.4	0.4	0.2	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	112	702	0	0	537	77	0	0	0	81	0	79
Future Volume (veh/h)	112	702	0	0	537	77	0	0	0	81	0	79
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	0	0	1841	1841	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	118	739	0	0	565	81	0	0	0	85	0	83
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	0	0	4	4	2	2	2	2	2	2
Cap, veh/h	589	1455	0	0	1174	995	2	2	1	161	0	143
Arrive On Green	0.09	0.79	0.00	0.00	0.64	0.64	0.00	0.00	0.00	0.09	0.00	0.09
Sat Flow, veh/h	1753	1841	0	0	1841	1560	1781	1870	1585	1781	0	1585
Grp Volume(v), veh/h	118	739	0	0	565	81	0	0	0	85	0	83
Grp Sat Flow(s),veh/h/ln	1753	1841	0	0	1841	1560	1781	1870	1585	1781	0	1585
Q Serve(g_s), s	2.0	15.5	0.0	0.0	17.7	2.2	0.0	0.0	0.0	5.0	0.0	5.5
Cycle Q Clear(g_c), s	2.0	15.5	0.0	0.0	17.7	2.2	0.0	0.0	0.0	5.0	0.0	5.5
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	589	1455	0	0	1174	995	2	2	1	161	0	143
V/C Ratio(X)	0.20	0.51	0.00	0.00	0.48	0.08	0.00	0.00	0.00	0.53	0.00	0.58
Avail Cap(c_a), veh/h	593	1455	0	0	1174	995	486	510	432	162	0	144
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	5.9	4.0	0.0	0.0	10.4	7.6	0.0	0.0	0.0	47.8	0.0	48.0
Incr Delay (d2), s/veh	0.1	1.3	0.0	0.0	1.4	0.2	0.0	0.0	0.0	3.1	0.0	5.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.9	6.2	0.0	0.0	10.3	1.2	0.0	0.0	0.0	4.3	0.0	4.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	6.1	5.3	0.0	0.0	11.8	7.8	0.0	0.0	0.0	50.9	0.0	53.7
LnGrp LOS	A	A	A	A	B	A	A	A	A	D	A	D
Approach Vol, veh/h		857			646			0			168	
Approach Delay, s/veh		5.4			11.3			0.0			52.3	
Approach LOS		A			B						D	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		94.1		15.9	16.8	77.2		0.0				
Change Period (Y+Rc), s		7.1		6.0	7.1	7.1		6.0				
Max Green Setting (Gmax), s		50.9		10.0	10.0	33.8		30.0				
Max Q Clear Time (g_c+I1), s		17.5		7.5	4.0	19.7		0.0				
Green Ext Time (p_c), s		10.5		0.1	0.1	5.4		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			12.4									
HCM 6th LOS			B									

Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	0	11	28	1	24	26	666	48	40	644	57
Future Vol, veh/h	9	0	11	28	1	24	26	666	48	40	644	57
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	-	-	-	-	-	-	240	-	300	425	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	4	4	4	4	4	4
Mvmt Flow	9	0	12	29	1	25	27	701	51	42	678	60

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1586	1598	708	1553	1577	701	738	0	0	752	0	0
Stage 1	792	792	-	755	755	-	-	-	-	-	-	-
Stage 2	794	806	-	798	822	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.236	-	-	2.236	-	-
Pot Cap-1 Maneuver	87	106	435	92	110	439	859	-	-	849	-	-
Stage 1	382	401	-	401	417	-	-	-	-	-	-	-
Stage 2	381	395	-	380	388	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	76	98	435	84	101	439	859	-	-	849	-	-
Mov Cap-2 Maneuver	76	98	-	84	101	-	-	-	-	-	-	-
Stage 1	370	381	-	389	404	-	-	-	-	-	-	-
Stage 2	347	383	-	352	369	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	35.5	50.3	0.3	0.5
HCM LOS	E	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	859	-	-	139	133	849	-	-
HCM Lane V/C Ratio	0.032	-	-	0.151	0.419	0.05	-	-
HCM Control Delay (s)	9.3	-	-	35.5	50.3	9.5	-	-
HCM Lane LOS	A	-	-	E	F	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.5	1.8	0.2	-	-

Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Volume (veh/h)	273	353	1797	376	312	1018
Future Volume (veh/h)	273	353	1797	376	312	1018
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	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	287	372	1892	0	328	1072
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4
Cap, veh/h	337	300	2184		361	3305
Arrive On Green	0.19	0.19	0.43	0.00	0.15	0.66
Sat Flow, veh/h	1753	1560	5191	1560	1753	5191
Grp Volume(v), veh/h	287	372	1892	0	328	1072
Grp Sat Flow(s),veh/h/ln	1753	1560	1675	1560	1753	1675
Q Serve(g_s), s	14.2	17.3	30.7	0.0	11.2	8.4
Cycle Q Clear(g_c), s	14.2	17.3	30.7	0.0	11.2	8.4
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	337	300	2184		361	3305
V/C Ratio(X)	0.85	1.24	0.87		0.91	0.32
Avail Cap(c_a), veh/h	337	300	2184		379	3305
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	1.00
Uniform Delay (d), s/veh	35.1	36.3	23.1	0.0	24.4	6.7
Incr Delay (d2), s/veh	18.1	133.4	4.9	0.0	23.9	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	11.7	26.5	17.3	0.0	13.9	4.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	53.2	169.7	28.0	0.0	48.3	7.0
LnGrp LOS	D	F	C		D	A
Approach Vol, veh/h	659		1892	A		1400
Approach Delay, s/veh	119.0		28.0			16.6
Approach LOS	F		C			B

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	20.1	45.9			66.0	24.0
Change Period (Y+Rc), s	6.8	6.8			6.8	6.7
Max Green Setting (Gmax), s	14.2	38.2			59.2	17.3
Max Q Clear Time (g_c+I1), s	13.2	32.7			10.4	19.3
Green Ext Time (p_c), s	0.1	4.8			10.8	0.0

Intersection Summary	
HCM 6th Ctrl Delay	39.1
HCM 6th LOS	D

Notes

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

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	465	-	-	0	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	4	4	4	4	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1	0	-	0	1	1
Stage 1	-	-	-	-	1	-
Stage 2	-	-	-	-	0	-
Critical Hdwy	4.14	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.236	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1609	-	-	-	1022	1084
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1609	-	-	-	1022	1084
Mov Cap-2 Maneuver	-	-	-	-	1022	-
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1609	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0	0
HCM Lane LOS	A	-	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	-	-	-

Intersection	
Int Delay, s/veh	1.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	634	16	42	662	21	37
Future Vol, veh/h	634	16	42	662	21	37
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	400	415	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	4	4	4	4	2	2
Mvmt Flow	667	17	44	697	22	39

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	684	0	1452	667
Stage 1	-	-	-	-	667	-
Stage 2	-	-	-	-	785	-
Critical Hdwy	-	-	4.14	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.236	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	900	-	144	459
Stage 1	-	-	-	-	510	-
Stage 2	-	-	-	-	449	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	900	-	137	459
Mov Cap-2 Maneuver	-	-	-	-	137	-
Stage 1	-	-	-	-	510	-
Stage 2	-	-	-	-	427	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	21.8
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	137	459	-	-	900	-
HCM Lane V/C Ratio	0.161	0.085	-	-	0.049	-
HCM Control Delay (s)	36.3	13.6	-	-	9.2	-
HCM Lane LOS	E	B	-	-	A	-
HCM 95th %tile Q(veh)	0.6	0.3	-	-	0.2	-

Intersection	
Int Delay, s/veh	21.7

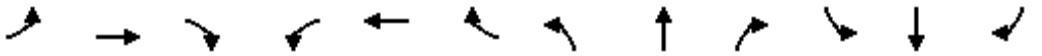
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	165	736	66	37	532	82	44	7	33	35	0	65
Future Vol, veh/h	165	736	66	37	532	82	44	7	33	35	0	65
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	460	-	250	345	-	400	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	4	4	4	4	4	4	2	2	2	2	2	2
Mvmt Flow	174	775	69	39	560	86	46	7	35	37	0	68

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	646	0	0	844	0	0	1838	1847	775	1817	1830	560
Stage 1	-	-	-	-	-	-	1123	1123	-	638	638	-
Stage 2	-	-	-	-	-	-	715	724	-	1179	1192	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.236	-	-	2.236	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	930	-	-	784	-	-	58	75	398	60	76	528
Stage 1	-	-	-	-	-	-	250	281	-	465	471	-
Stage 2	-	-	-	-	-	-	422	430	-	232	261	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	930	-	-	784	-	-	~ 42	58	398	41	59	528
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 42	58	-	41	59	-
Stage 1	-	-	-	-	-	-	203	228	-	378	447	-
Stage 2	-	-	-	-	-	-	349	409	-	167	212	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.7	0.6	$ 323.2	99.3
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	67	930	-	-	784	-	-	41	528
HCM Lane V/C Ratio	1.32	0.187	-	-	0.05	-	-	0.899	0.13
HCM Control Delay (s)	$ 323.2	9.8	-	-	9.8	-	-	259.8	12.8
HCM Lane LOS	F	A	-	-	A	-	-	F	B
HCM 95th %tile Q(veh)	7.3	0.7	-	-	0.2	-	-	3.5	0.4

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	558	193	483	93	140	93	345	324	88	133	460	566
Future Volume (veh/h)	558	193	483	93	140	93	345	324	88	133	460	566
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	1826	1870	1826	1870	1870	1870	1841	1841	1870	1870	1841	1841
Adj Flow Rate, veh/h	587	203	508	98	147	98	363	341	93	140	484	596
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	5	2	5	2	2	2	4	4	2	2	4	4
Cap, veh/h	590	1045	455	242	305	136	535	1459	1257	832	2580	1580
Arrive On Green	0.28	0.29	0.29	0.07	0.09	0.09	0.07	0.79	0.79	0.04	0.74	0.74
Sat Flow, veh/h	1739	3554	1547	1781	3554	1585	1753	1841	1585	1781	3497	1560
Grp Volume(v), veh/h	587	203	508	98	147	98	363	341	93	140	484	596
Grp Sat Flow(s),veh/h/ln	1739	1777	1547	1781	1777	1585	1753	1841	1585	1781	1749	1560
Q Serve(g_s), s	33.0	5.1	35.3	5.9	4.7	7.2	5.8	5.7	1.5	2.3	5.1	0.0
Cycle Q Clear(g_c), s	33.0	5.1	35.3	5.9	4.7	7.2	5.8	5.7	1.5	2.3	5.1	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	590	1045	455	242	305	136	535	1459	1257	832	2580	1580
V/C Ratio(X)	1.00	0.19	1.12	0.40	0.48	0.72	0.68	0.23	0.07	0.17	0.19	0.38
Avail Cap(c_a), veh/h	590	1045	455	242	305	136	583	1459	1257	858	2580	1580
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.3	31.7	42.3	45.6	52.3	53.4	3.3	3.2	2.7	3.2	4.8	0.0
Incr Delay (d2), s/veh	35.9	0.1	77.8	1.1	1.2	16.9	2.1	0.4	0.1	0.1	0.2	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	28.6	3.9	32.6	4.7	3.8	6.2	2.7	2.8	0.7	1.1	2.7	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	72.2	31.8	120.1	46.7	53.5	70.3	5.4	3.5	2.8	3.3	5.0	0.7
LnGrp LOS	E	C	F	D	D	E	A	A	A	A	A	A
Approach Vol, veh/h		1298			343			797			1220	
Approach Delay, s/veh		84.6			56.4			4.3			2.7	
Approach LOS		F			E			A			A	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.0	96.0	14.8	42.1	9.5	102.5	39.8	17.1
Change Period (Y+Rc), s	7.8	6.8	6.8	* 6.8	4.5	6.8	6.8	6.8
Max Green Setting (Gmax), s	11.6	39.2	8.0	* 35	6.7	47.4	33.0	8.0
Max Q Clear Time (g_c+I1), s	7.8	7.1	7.9	37.3	4.3	7.7	35.0	9.2
Green Ext Time (p_c), s	0.2	5.8	0.0	0.0	0.1	2.2	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	37.1
HCM 6th LOS	D

Notes

User approved ignoring U-Turning movement.

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

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	160	-	400	310	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	4	4	4	4
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1	0	0	0	0	0
Stage 1	0	-	-	-	-	-
Stage 2	1	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.18	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.24	-
Pot Cap-1 Maneuver	1021	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	1022	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	1021	-	-	-	-	-
Mov Cap-2 Maneuver	1021	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	1022	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	0	-
HCM Lane LOS	-	-	A	A	A	-
HCM 95th %tile Q(veh)	-	-	-	-	-	-

Intersection	
Int Delay, s/veh	17.8

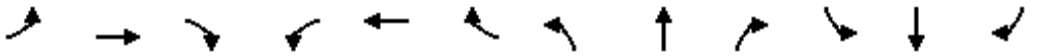
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	859	35	17	1204	66	29
Future Vol, veh/h	859	35	17	1204	66	29
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	225	240	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	4	4	4	4	2	2
Mvmt Flow	904	37	18	1267	69	31

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	941	0	2207	904
Stage 1	-	-	-	-	904	-
Stage 2	-	-	-	-	1303	-
Critical Hdwy	-	-	4.14	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.236	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	720	-	~ 49	335
Stage 1	-	-	-	-	395	-
Stage 2	-	-	-	-	254	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	720	-	~ 48	335
Mov Cap-2 Maneuver	-	-	-	-	~ 48	-
Stage 1	-	-	-	-	395	-
Stage 2	-	-	-	-	248	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	$ 411.8
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	65	-	-	720	-
HCM Lane V/C Ratio	1.538	-	-	0.025	-
HCM Control Delay (s)	$ 411.8	-	-	10.1	-
HCM Lane LOS	F	-	-	B	-
HCM 95th %tile Q(veh)	8.7	-	-	0.1	-

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	122	688	37	23	956	138	106	40	24	88	6	178
Future Volume (veh/h)	122	688	37	23	956	138	106	40	24	88	6	178
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	1841	1841	1841	1841	1841	1841	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	149	839	45	28	1166	168	129	49	29	107	7	217
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	4	4	4	4	4	4	2	2	2	2	2	2
Cap, veh/h	158	1202	1018	342	1160	983	105	26	15	235	12	262
Arrive On Green	0.06	0.65	0.65	0.04	0.63	0.63	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	1753	1841	1560	1753	1841	1560	386	157	88	1122	73	1585
Grp Volume(v), veh/h	149	839	45	28	1166	168	207	0	0	114	0	217
Grp Sat Flow(s),veh/h/ln	1753	1841	1560	1753	1841	1560	631	0	0	1195	0	1585
Q Serve(g_s), s	7.7	40.7	1.4	0.8	88.2	6.3	10.8	0.0	0.0	0.0	0.0	18.5
Cycle Q Clear(g_c), s	7.7	40.7	1.4	0.8	88.2	6.3	23.1	0.0	0.0	12.3	0.0	18.5
Prop In Lane	1.00		1.00	1.00		1.00	0.62		0.14	0.94		1.00
Lane Grp Cap(c), veh/h	158	1202	1018	342	1160	983	146	0	0	247	0	262
V/C Ratio(X)	0.94	0.70	0.04	0.08	1.01	0.17	1.42	0.00	0.00	0.46	0.00	0.83
Avail Cap(c_a), veh/h	158	1202	1018	375	1160	983	146	0	0	247	0	262
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	49.1	15.5	8.7	13.1	25.9	10.7	65.9	0.0	0.0	54.0	0.0	56.5
Incr Delay (d2), s/veh	54.8	3.4	0.1	0.1	27.8	0.4	223.7	0.0	0.0	0.5	0.0	18.5
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	12.1	23.1	0.9	0.5	53.9	3.9	23.5	0.0	0.0	6.8	0.0	13.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	103.9	18.9	8.8	13.2	53.7	11.1	289.6	0.0	0.0	54.5	0.0	75.1
LnGrp LOS	F	B	A	B	F	B	F	A	A	D	A	E
Approach Vol, veh/h		1033			1362			207			331	
Approach Delay, s/veh		30.7			47.6			289.6			68.0	
Approach LOS		C			D			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.8	98.9		28.3	16.0	95.7		28.3				
Change Period (Y+Rc), s	7.5	7.5		* 5.2	7.5	7.5		* 5.2				
Max Green Setting (Gmax), s	8.0	88.7		* 23	8.5	88.2		* 23				
Max Q Clear Time (g_c+I1), s	2.8	42.7		20.5	9.7	90.2		25.1				
Green Ext Time (p_c), s	0.0	15.7		0.2	0.0	0.0		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		61.0	
HCM 6th LOS		E	

Notes

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

Intersection	
Int Delay, s/veh	10.5

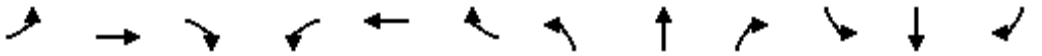
Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	96	96	795	59	35	730
Future Vol, veh/h	96	96	795	59	35	730
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	295	390	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	4	4	4	4
Mvmt Flow	101	101	837	62	37	768

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1679	837	0	0	899	0
Stage 1	837	-	-	-	-	-
Stage 2	842	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.14	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.236	-
Pot Cap-1 Maneuver	104	367	-	-	747	-
Stage 1	425	-	-	-	-	-
Stage 2	423	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 99	367	-	-	747	-
Mov Cap-2 Maneuver	~ 99	-	-	-	-	-
Stage 1	425	-	-	-	-	-
Stage 2	402	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	97	0	0.5
HCM LOS	F		

Minor Lane/Major Mvmt	NET	NER	NWLn1	NWLn2	SWL	SWT
Capacity (veh/h)	-	-	99	367	747	-
HCM Lane V/C Ratio	-	-	1.021	0.275	0.049	-
HCM Control Delay (s)	-	-	175.4	18.5	10.1	-
HCM Lane LOS	-	-	F	C	B	-
HCM 95th %tile Q(veh)	-	-	6.3	1.1	0.2	-

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	61	700	0	0	776	46	0	0	0	130	0	209
Future Volume (veh/h)	61	700	0	0	776	46	0	0	0	130	0	209
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	1841	1841	0	0	1841	1841	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	64	737	0	0	817	48	0	0	0	137	0	220
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	0	0	4	4	2	2	2	2	2	2
Cap, veh/h	381	1380	0	0	1166	989	1	1	1	279	0	248
Arrive On Green	0.07	0.75	0.00	0.00	0.63	0.63	0.00	0.00	0.00	0.16	0.00	0.16
Sat Flow, veh/h	1753	1841	0	0	1841	1560	1781	1870	1585	1781	0	1585
Grp Volume(v), veh/h	64	737	0	0	817	48	0	0	0	137	0	220
Grp Sat Flow(s),veh/h/ln	1753	1841	0	0	1841	1560	1781	1870	1585	1781	0	1585
Q Serve(g_s), s	1.5	23.4	0.0	0.0	40.9	1.6	0.0	0.0	0.0	9.8	0.0	19.0
Cycle Q Clear(g_c), s	1.5	23.4	0.0	0.0	40.9	1.6	0.0	0.0	0.0	9.8	0.0	19.0
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	381	1380	0	0	1166	989	1	1	1	279	0	248
V/C Ratio(X)	0.17	0.53	0.00	0.00	0.70	0.05	0.00	0.00	0.00	0.49	0.00	0.89
Avail Cap(c_a), veh/h	392	1380	0	0	1166	989	382	401	340	356	0	317
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.3	7.3	0.0	0.0	16.9	9.7	0.0	0.0	0.0	54.0	0.0	57.8
Incr Delay (d2), s/veh	0.2	1.5	0.0	0.0	3.5	0.1	0.0	0.0	0.0	1.3	0.0	20.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.0	12.1	0.0	0.0	22.8	1.0	0.0	0.0	0.0	8.0	0.0	14.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.4	8.8	0.0	0.0	20.4	9.8	0.0	0.0	0.0	55.3	0.0	78.8
LnGrp LOS	B	A	A	A	C	A	A	A	A	E	A	E
Approach Vol, veh/h		801			865			0			357	
Approach Delay, s/veh		9.2			19.8			0.0			69.8	
Approach LOS		A			B						E	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		112.1		27.9	16.3	95.8		0.0				
Change Period (Y+Rc), s		7.1		6.0	7.1	7.1		6.0				
Max Green Setting (Gmax), s		62.9		28.0	10.0	45.8		30.0				
Max Q Clear Time (g_c+I1), s		25.4		21.0	3.5	42.9		0.0				
Green Ext Time (p_c), s		10.9		0.9	0.0	2.0		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			24.4									
HCM 6th LOS			C									

Intersection	
Int Delay, s/veh	23.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	19	0	9	74	0	63	6	853	43	37	671	12
Future Vol, veh/h	19	0	9	74	0	63	6	853	43	37	671	12
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	-	-	-	-	-	-	240	-	300	425	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	4	4	4	4	4	4
Mvmt Flow	20	0	9	78	0	66	6	898	45	39	706	13

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1757	1746	713	1705	1707	898	719	0	0	943	0	0
Stage 1	791	791	-	910	910	-	-	-	-	-	-	-
Stage 2	966	955	-	795	797	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.236	-	-	2.236	-	-
Pot Cap-1 Maneuver	66	86	432	~ 72	91	338	873	-	-	719	-	-
Stage 1	383	401	-	329	353	-	-	-	-	-	-	-
Stage 2	306	337	-	381	399	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	51	81	432	~ 67	85	338	873	-	-	719	-	-
Mov Cap-2 Maneuver	51	81	-	~ 67	85	-	-	-	-	-	-	-
Stage 1	380	379	-	327	351	-	-	-	-	-	-	-
Stage 2	244	335	-	352	377	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	87.8	285.5	0.1	0.5
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	873	-	-	71	106	719	-	-
HCM Lane V/C Ratio	0.007	-	-	0.415	1.36	0.054	-	-
HCM Control Delay (s)	9.2	-	-	87.8	285.5	10.3	-	-
HCM Lane LOS	A	-	-	F	F	B	-	-
HCM 95th %tile Q(veh)	0	-	-	1.6	10.1	0.2	-	-

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

Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Volume (veh/h)	557	381	1124	224	488	2155
Future Volume (veh/h)	557	381	1124	224	488	2155
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	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	586	401	1183	0	514	2268
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4
Cap, veh/h	558	497	1450		503	2903
Arrive On Green	0.32	0.32	0.29	0.00	0.24	0.58
Sat Flow, veh/h	1753	1560	5191	1560	1753	5191
Grp Volume(v), veh/h	586	401	1183	0	514	2268
Grp Sat Flow(s),veh/h/ln	1753	1560	1675	1560	1753	1675
Q Serve(g_s), s	41.4	30.7	28.5	0.0	30.8	45.2
Cycle Q Clear(g_c), s	41.4	30.7	28.5	0.0	30.8	45.2
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	558	497	1450		503	2903
V/C Ratio(X)	1.05	0.81	0.82		1.02	0.78
Avail Cap(c_a), veh/h	558	497	1450		503	2903
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	1.00
Uniform Delay (d), s/veh	44.3	40.6	43.0	0.0	36.2	21.1
Incr Delay (d2), s/veh	51.8	9.3	5.2	0.0	45.7	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	34.2	18.2	17.8	0.0	30.2	23.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	96.1	49.9	48.2	0.0	82.0	23.3
LnGrp LOS	F	D	D		F	C
Approach Vol, veh/h	987		1183	A		2782
Approach Delay, s/veh	77.3		48.2			34.1
Approach LOS	E		D			C

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	37.6	44.3			81.9	48.1
Change Period (Y+Rc), s	6.8	6.8			6.8	6.7
Max Green Setting (Gmax), s	30.8	37.5			75.1	41.4
Max Q Clear Time (g_c+I1), s	32.8	30.5			47.2	43.4
Green Ext Time (p_c), s	0.0	4.4			22.1	0.0

Intersection Summary	
HCM 6th Ctrl Delay	46.1
HCM 6th LOS	D

Notes

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

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	465	-	-	0	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	4	4	4	4	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1	0	-	0	1	1
Stage 1	-	-	-	-	1	-
Stage 2	-	-	-	-	0	-
Critical Hdwy	4.14	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.236	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1609	-	-	-	1022	1084
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1609	-	-	-	1022	1084
Mov Cap-2 Maneuver	-	-	-	-	1022	-
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1609	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0	0
HCM Lane LOS	A	-	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	-	-	-

Intersection	
Int Delay, s/veh	2.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	876	11	36	694	34	70
Future Vol, veh/h	876	11	36	694	34	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	-	400	415	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	4	4	4	4	2	2
Mvmt Flow	922	12	38	731	36	74

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	934	0	1729	922
Stage 1	-	-	-	-	922	-
Stage 2	-	-	-	-	807	-
Critical Hdwy	-	-	4.14	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.236	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	725	-	97	327
Stage 1	-	-	-	-	387	-
Stage 2	-	-	-	-	439	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	725	-	92	327
Mov Cap-2 Maneuver	-	-	-	-	92	-
Stage 1	-	-	-	-	387	-
Stage 2	-	-	-	-	416	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	34.9
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	92	327	-	-	725	-
HCM Lane V/C Ratio	0.389	0.225	-	-	0.052	-
HCM Control Delay (s)	67.1	19.2	-	-	10.2	-
HCM Lane LOS	F	C	-	-	B	-
HCM 95th %tile Q(veh)	1.6	0.8	-	-	0.2	-

Intersection	
Int Delay, s/veh	52

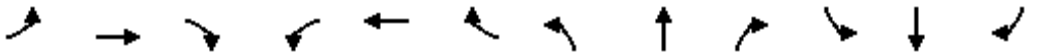
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	44	675	27	27	882	34	36	5	53	64	0	190
Future Vol, veh/h	44	675	27	27	882	34	36	5	53	64	0	190
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	460	-	250	345	-	400	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	4	4	4	4	4	4	2	2	2	2	2	2
Mvmt Flow	46	711	28	28	928	36	38	5	56	67	0	200

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	964	0	0	739	0	0	1905	1823	711	1832	1815	928
Stage 1	-	-	-	-	-	-	803	803	-	984	984	-
Stage 2	-	-	-	-	-	-	1102	1020	-	848	831	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.236	-	-	2.236	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	706	-	-	858	-	-	52	77	433	~ 59	78	325
Stage 1	-	-	-	-	-	-	377	396	-	299	327	-
Stage 2	-	-	-	-	-	-	257	314	-	356	384	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	706	-	-	858	-	-	~ 19	70	433	~ 45	71	325
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 19	70	-	~ 45	71	-
Stage 1	-	-	-	-	-	-	352	370	-	280	316	-
Stage 2	-	-	-	-	-	-	96	304	-	286	359	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	0.3	$ 744.5	138.7
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	45	706	-	-	858	-	-	45	325
HCM Lane V/C Ratio	2.199	0.066	-	-	0.033	-	-	1.497	0.615
HCM Control Delay (s)	$ 744.5	10.5	-	-	9.3	-	-	$ 454.5	32.3
HCM Lane LOS	F	B	-	-	A	-	-	F	D
HCM 95th %tile Q(veh)	10.3	0.2	-	-	0.1	-	-	6.6	3.9

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	660	364	369	231	502	376	580	570	259	241	264	541
Future Volume (veh/h)	660	364	369	231	502	376	580	570	259	241	264	541
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	1826	1841	1826	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	695	383	388	243	528	396	611	600	273	254	278	569
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	5	4	5	4	4	4	4	4	4	4	4	4
Cap, veh/h	526	915	405	367	424	189	417	653	553	221	1007	878
Arrive On Green	0.27	0.26	0.26	0.13	0.12	0.12	0.13	0.35	0.35	0.08	0.29	0.29
Sat Flow, veh/h	1739	3497	1547	1753	3497	1560	1753	1841	1560	1753	3497	1560
Grp Volume(v), veh/h	695	383	388	243	528	396	611	600	273	254	278	569
Grp Sat Flow(s),veh/h/ln	1739	1749	1547	1753	1749	1560	1753	1841	1560	1753	1749	1560
Q Serve(g_s), s	41.2	13.6	37.1	18.0	18.2	18.2	19.2	46.8	20.5	12.5	9.2	37.7
Cycle Q Clear(g_c), s	41.2	13.6	37.1	18.0	18.2	18.2	19.2	46.8	20.5	12.5	9.2	37.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	526	915	405	367	424	189	417	653	553	221	1007	878
V/C Ratio(X)	1.32	0.42	0.96	0.66	1.24	2.09	1.46	0.92	0.49	1.15	0.28	0.65
Avail Cap(c_a), veh/h	526	915	405	403	424	189	417	653	553	221	1007	878
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.4	45.9	54.6	48.2	65.9	65.9	39.6	46.3	37.9	41.9	41.3	22.6
Incr Delay (d2), s/veh	157.9	0.3	34.1	3.6	128.4	509.1	221.6	20.2	3.1	107.3	0.7	3.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	57.2	9.9	24.9	12.8	24.0	53.6	48.2	32.5	12.9	19.0	7.3	20.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	202.3	46.2	88.7	51.8	194.3	575.0	261.2	66.5	41.0	149.2	42.0	26.3
LnGrp LOS	F	D	F	D	F	F	F	E	D	F	D	C
Approach Vol, veh/h		1466			1167			1484			1101	
Approach Delay, s/veh		131.5			293.8			142.0			58.6	
Approach LOS		F			F			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	27.0	50.0	27.0	46.0	17.0	60.0	48.0	25.0
Change Period (Y+Rc), s	7.8	6.8	6.8	* 6.8	4.5	6.8	6.8	6.8
Max Green Setting (Gmax), s	19.2	43.2	23.2	* 39	12.5	53.2	41.2	18.2
Max Q Clear Time (g_c+I1), s	21.2	39.7	20.0	39.1	14.5	48.8	43.2	20.2
Green Ext Time (p_c), s	0.0	1.4	0.2	0.0	0.0	1.9	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	155.4
HCM 6th LOS	F

Notes

User approved ignoring U-Turning movement.

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

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	160	-	400	310	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	4	4	4	4
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1	0	0	0	0	0
Stage 1	0	-	-	-	-	-
Stage 2	1	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.18	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.24	-
Pot Cap-1 Maneuver	1021	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	1022	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	1021	-	-	-	-	-
Mov Cap-2 Maneuver	1021	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	1022	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	0	-
HCM Lane LOS	-	-	A	A	A	-
HCM 95th %tile Q(veh)	-	-	-	-	-	-

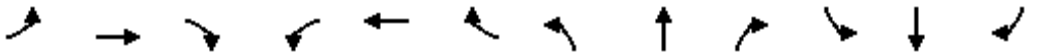
Intersection	
Int Delay, s/veh	6.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1241	67	32	846	36	21
Future Vol, veh/h	1241	67	32	846	36	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	225	240	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	4	4	4	4	2	2
Mvmt Flow	1306	71	34	891	38	22

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1377	0	2265	1306
Stage 1	-	-	-	-	1306	-
Stage 2	-	-	-	-	959	-
Critical Hdwy	-	-	4.14	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.236	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	492	-	45	195
Stage 1	-	-	-	-	254	-
Stage 2	-	-	-	-	372	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	492	-	42	195
Mov Cap-2 Maneuver	-	-	-	-	42	-
Stage 1	-	-	-	-	254	-
Stage 2	-	-	-	-	346	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	237
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	59	-	-	492	-
HCM Lane V/C Ratio	1.017	-	-	0.068	-
HCM Control Delay (s)	237	-	-	12.9	-
HCM Lane LOS	F	-	-	B	-
HCM 95th %tile Q(veh)	4.8	-	-	0.2	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	49	1145	43	46	744	18	62	0	13	34	0	51
Future Volume (veh/h)	49	1145	43	46	744	18	62	0	13	34	0	51
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	1841	1841	1841	1841	1841	1841	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	52	1205	45	48	783	19	65	0	14	36	0	54
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	2	2	2	2	2	2
Cap, veh/h	443	1202	1018	178	1198	1015	136	5	16	202	0	129
Arrive On Green	0.06	0.65	0.65	0.06	0.65	0.65	0.08	0.00	0.08	0.08	0.00	0.08
Sat Flow, veh/h	1753	1841	1560	1753	1841	1560	843	62	195	1570	0	1585
Grp Volume(v), veh/h	52	1205	45	48	783	19	79	0	0	36	0	54
Grp Sat Flow(s),veh/h/ln	1753	1841	1560	1753	1841	1560	1100	0	0	1570	0	1585
Q Serve(g_s), s	0.9	64.0	1.0	0.8	25.4	0.4	5.1	0.0	0.0	0.0	0.0	3.2
Cycle Q Clear(g_c), s	0.9	64.0	1.0	0.8	25.4	0.4	7.2	0.0	0.0	2.1	0.0	3.2
Prop In Lane	1.00		1.00	1.00		1.00	0.82		0.18	1.00		1.00
Lane Grp Cap(c), veh/h	443	1202	1018	178	1198	1015	157	0	0	202	0	129
V/C Ratio(X)	0.12	1.00	0.04	0.27	0.65	0.02	0.50	0.00	0.00	0.18	0.00	0.42
Avail Cap(c_a), veh/h	478	1202	1018	216	1198	1015	157	0	0	202	0	129
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	7.7	17.0	6.1	25.0	10.4	6.1	45.3	0.0	0.0	42.3	0.0	42.8
Incr Delay (d2), s/veh	0.1	26.6	0.1	0.6	2.8	0.0	2.6	0.0	0.0	0.2	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.4	38.3	0.5	1.3	14.0	0.2	3.6	0.0	0.0	1.5	0.0	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.8	43.6	6.2	25.6	13.2	6.1	47.9	0.0	0.0	42.5	0.0	43.6
LnGrp LOS	A	F	A	C	B	A	D	A	A	D	A	D
Approach Vol, veh/h		1302			850			79			90	
Approach Delay, s/veh		40.9			13.7			47.9			43.2	
Approach LOS		D			B			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.3	71.5		13.2	13.6	71.3		13.2				
Change Period (Y+Rc), s	7.5	7.5		* 5.2	7.5	7.5		* 5.2				
Max Green Setting (Gmax), s	8.0	63.8		* 8	8.0	63.8		* 8				
Max Q Clear Time (g_c+I1), s	2.8	66.0		5.2	2.9	27.4		9.2				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	12.7		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		31.3
HCM 6th LOS		C

Notes

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

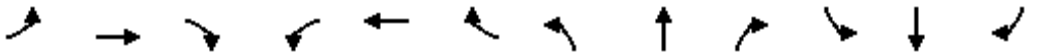
Intersection	
Int Delay, s/veh	3.9

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	45	57	896	77	63	756
Future Vol, veh/h	45	57	896	77	63	756
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	295	390	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	4	4	4	4
Mvmt Flow	47	60	943	81	66	796

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1871	943	0	0	1024	0
Stage 1	943	-	-	-	-	-
Stage 2	928	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.14	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.236	-
Pot Cap-1 Maneuver	79	318	-	-	670	-
Stage 1	379	-	-	-	-	-
Stage 2	385	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	71	318	-	-	670	-
Mov Cap-2 Maneuver	71	-	-	-	-	-
Stage 1	379	-	-	-	-	-
Stage 2	347	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	65.8	0	0.8
HCM LOS	F		

Minor Lane/Major Mvmt	NET	NER	NWLn1	NWLn2	SWL	SWT
Capacity (veh/h)	-	-	71	318	670	-
HCM Lane V/C Ratio	-	-	0.667	0.189	0.099	-
HCM Control Delay (s)	-	-	125.1	18.9	11	-
HCM Lane LOS	-	-	F	C	B	-
HCM 95th %tile Q(veh)	-	-	3	0.7	0.3	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	116	910	0	0	681	88	0	0	0	85	0	83
Future Volume (veh/h)	116	910	0	0	681	88	0	0	0	85	0	83
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	1841	1841	0	0	1841	1841	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	122	958	0	0	717	93	0	0	0	89	0	87
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	0	0	4	4	2	2	2	2	2	2
Cap, veh/h	504	1487	0	0	1227	1040	1	2	1	148	0	132
Arrive On Green	0.08	0.81	0.00	0.00	0.67	0.67	0.00	0.00	0.00	0.08	0.00	0.08
Sat Flow, veh/h	1753	1841	0	0	1841	1560	1781	1870	1585	1781	0	1585
Grp Volume(v), veh/h	122	958	0	0	717	93	0	0	0	89	0	87
Grp Sat Flow(s),veh/h/ln	1753	1841	0	0	1841	1560	1781	1870	1585	1781	0	1585
Q Serve(g_s), s	2.1	25.0	0.0	0.0	25.5	2.5	0.0	0.0	0.0	5.8	0.0	6.4
Cycle Q Clear(g_c), s	2.1	25.0	0.0	0.0	25.5	2.5	0.0	0.0	0.0	5.8	0.0	6.4
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	504	1487	0	0	1227	1040	1	2	1	148	0	132
V/C Ratio(X)	0.24	0.64	0.00	0.00	0.58	0.09	0.00	0.00	0.00	0.60	0.00	0.66
Avail Cap(c_a), veh/h	507	1487	0	0	1227	1040	445	468	396	148	0	132
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	7.4	4.6	0.0	0.0	10.9	7.1	0.0	0.0	0.0	53.1	0.0	53.4
Incr Delay (d2), s/veh	0.2	2.2	0.0	0.0	2.0	0.2	0.0	0.0	0.0	6.6	0.0	11.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.0	9.6	0.0	0.0	14.0	1.4	0.0	0.0	0.0	5.2	0.0	5.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.6	6.8	0.0	0.0	13.0	7.3	0.0	0.0	0.0	59.7	0.0	64.9
LnGrp LOS	A	A	A	A	B	A	A	A	A	E	A	E
Approach Vol, veh/h		1080			810			0			176	
Approach Delay, s/veh		6.9			12.3			0.0			62.2	
Approach LOS		A			B						E	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		104.0		16.0	16.9	87.1		0.0				
Change Period (Y+Rc), s		7.1		6.0	7.1	7.1		6.0				
Max Green Setting (Gmax), s		60.9		10.0	10.0	43.8		30.0				
Max Q Clear Time (g_c+I1), s		27.0		8.4	4.1	27.5		0.0				
Green Ext Time (p_c), s		15.9		0.1	0.1	7.6		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			13.7									
HCM 6th LOS			B									

Intersection	
Int Delay, s/veh	13.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	14	0	14	43	0	37	32	850	74	63	776	61
Future Vol, veh/h	14	0	14	43	0	37	32	850	74	63	776	61
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	-	-	-	-	-	-	240	-	300	425	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	4	4	4	4	4	4
Mvmt Flow	15	0	15	45	0	39	34	895	78	66	817	64

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2003	2022	849	1952	1976	895	881	0	0	973	0	0
Stage 1	981	981	-	963	963	-	-	-	-	-	-	-
Stage 2	1022	1041	-	989	1013	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.236	-	-	2.236	-	-
Pot Cap-1 Maneuver	44	58	361	48	62	339	759	-	-	701	-	-
Stage 1	300	328	-	307	334	-	-	-	-	-	-	-
Stage 2	285	307	-	297	316	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	35	50	361	~ 41	54	339	759	-	-	701	-	-
Mov Cap-2 Maneuver	35	50	-	~ 41	54	-	-	-	-	-	-	-
Stage 1	287	297	-	293	319	-	-	-	-	-	-	-
Stage 2	241	293	-	258	286	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	102.3	283.2	0.3	0.7
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	759	-	-	64	69	701	-	-
HCM Lane V/C Ratio	0.044	-	-	0.461	1.22	0.095	-	-
HCM Control Delay (s)	10	-	-	102.3	283.2	10.7	-	-
HCM Lane LOS	A	-	-	F	F	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	1.8	6.7	0.3	-	-

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

Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Volume (veh/h)	341	480	2103	483	381	1239
Future Volume (veh/h)	341	480	2103	483	381	1239
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	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	359	505	2214	0	401	1304
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4
Cap, veh/h	363	323	2250		389	3463
Arrive On Green	0.21	0.21	0.45	0.00	0.19	0.69
Sat Flow, veh/h	1753	1560	5191	1560	1753	5191
Grp Volume(v), veh/h	359	505	2214	0	401	1304
Grp Sat Flow(s),veh/h/ln	1753	1560	1675	1560	1753	1675
Q Serve(g_s), s	26.6	26.9	56.5	0.0	24.6	14.2
Cycle Q Clear(g_c), s	26.6	26.9	56.5	0.0	24.6	14.2
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	363	323	2250		389	3463
V/C Ratio(X)	0.99	1.56	0.98		1.03	0.38
Avail Cap(c_a), veh/h	363	323	2250		389	3463
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	1.00
Uniform Delay (d), s/veh	51.4	51.6	35.4	0.0	44.2	8.5
Incr Delay (d2), s/veh	44.3	268.6	15.6	0.0	53.5	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	22.1	53.0	33.0	0.0	24.7	8.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	95.7	320.2	51.0	0.0	97.7	8.8
LnGrp LOS	F	F	D		F	A
Approach Vol, veh/h	864		2214	A		1705
Approach Delay, s/veh	226.9		51.0			29.7
Approach LOS	F		D			C

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	31.4	65.0			96.4	33.6
Change Period (Y+Rc), s	6.8	6.8			6.8	6.7
Max Green Setting (Gmax), s	24.6	58.2			89.6	26.9
Max Q Clear Time (g_c+I1), s	26.6	58.5			16.2	28.9
Green Ext Time (p_c), s	0.0	0.0			15.4	0.0

Intersection Summary	
HCM 6th Ctrl Delay	75.2
HCM 6th LOS	E

Notes

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

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	465	-	-	0	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	4	4	4	4	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1	0	-	0	1	1
Stage 1	-	-	-	-	1	-
Stage 2	-	-	-	-	0	-
Critical Hdwy	4.14	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.236	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1609	-	-	-	1022	1084
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1609	-	-	-	1022	1084
Mov Cap-2 Maneuver	-	-	-	-	1022	-
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1609	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0	0
HCM Lane LOS	A	-	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	-	-	-

Intersection	
Int Delay, s/veh	1.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	822	23	46	828	27	45
Future Vol, veh/h	822	23	46	828	27	45
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	400	415	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	4	4	4	4	2	2
Mvmt Flow	865	24	48	872	28	47

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	889	0	1833	865
Stage 1	-	-	-	-	865	-
Stage 2	-	-	-	-	968	-
Critical Hdwy	-	-	4.14	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.236	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	754	-	84	353
Stage 1	-	-	-	-	412	-
Stage 2	-	-	-	-	368	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	754	-	79	353
Mov Cap-2 Maneuver	-	-	-	-	79	-
Stage 1	-	-	-	-	412	-
Stage 2	-	-	-	-	344	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	38.3
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	79	353	-	-	754	-
HCM Lane V/C Ratio	0.36	0.134	-	-	0.064	-
HCM Control Delay (s)	74.2	16.8	-	-	10.1	-
HCM Lane LOS	F	C	-	-	B	-
HCM 95th %tile Q(veh)	1.4	0.5	-	-	0.2	-

Intersection	
Int Delay, s/veh	74.2

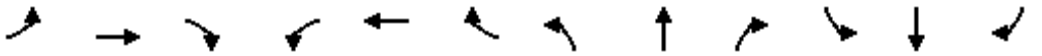
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	168	938	85	51	669	88	50	7	44	39	0	67
Future Vol, veh/h	168	938	85	51	669	88	50	7	44	39	0	67
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	460	-	250	345	-	400	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	4	4	4	4	4	4	2	2	2	2	2	2
Mvmt Flow	177	987	89	54	704	93	53	7	46	41	0	71

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	797	0	0	1076	0	0	2235	2246	987	2224	2242	704
Stage 1	-	-	-	-	-	-	1341	1341	-	812	812	-
Stage 2	-	-	-	-	-	-	894	905	-	1412	1430	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.236	-	-	2.236	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	816	-	-	640	-	-	~ 30	42	300	~ 31	42	437
Stage 1	-	-	-	-	-	-	188	221	-	373	392	-
Stage 2	-	-	-	-	-	-	336	355	-	171	200	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	816	-	-	640	-	-	~ 20	30	300	~ 17	30	437
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 20	30	-	~ 17	30	-
Stage 1	-	-	-	-	-	-	147	173	-	292	359	-
Stage 2	-	-	-	-	-	-	258	325	-	108	157	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.5	0.7	$ 1158.6	$ 418
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	35	816	-	-	640	-	-	17	437
HCM Lane V/C Ratio	3.038	0.217	-	-	0.084	-	-	2.415	0.161
HCM Control Delay (s)	$ 1158.6	10.6	-	-	11.1	-	-	$ 1110.8	14.8
HCM Lane LOS	F	B	-	-	B	-	-	F	B
HCM 95th %tile Q(veh)	12.2	0.8	-	-	0.3	-	-	5.7	0.6

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	584	516	544	249	373	247	381	335	234	354	474	627
Future Volume (veh/h)	584	516	544	249	373	247	381	335	234	354	474	627
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	1826	1870	1826	1870	1870	1870	1841	1841	1870	1870	1841	1841
Adj Flow Rate, veh/h	615	543	573	262	393	260	401	353	246	373	499	660
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	5	2	5	2	2	2	4	4	2	2	4	4
Cap, veh/h	583	1038	452	348	441	197	473	1046	900	625	1885	1311
Arrive On Green	0.30	0.29	0.29	0.13	0.12	0.12	0.12	0.57	0.57	0.11	0.54	0.54
Sat Flow, veh/h	1739	3554	1547	1781	3554	1585	1753	1841	1585	1781	3497	1560
Grp Volume(v), veh/h	615	543	573	262	393	260	401	353	246	373	499	660
Grp Sat Flow(s),veh/h/ln	1739	1777	1547	1781	1777	1585	1753	1841	1585	1781	1749	1560
Q Serve(g_s), s	45.2	19.2	43.8	19.2	16.3	18.6	15.3	15.4	11.9	14.0	11.5	17.6
Cycle Q Clear(g_c), s	45.2	19.2	43.8	19.2	16.3	18.6	15.3	15.4	11.9	14.0	11.5	17.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	583	1038	452	348	441	197	473	1046	900	625	1885	1311
V/C Ratio(X)	1.05	0.52	1.27	0.75	0.89	1.32	0.85	0.34	0.27	0.60	0.26	0.50
Avail Cap(c_a), veh/h	583	1038	452	348	441	197	500	1046	900	671	1885	1311
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.5	44.4	53.1	48.5	64.7	65.7	14.3	17.3	16.6	12.5	18.6	3.3
Incr Delay (d2), s/veh	52.3	0.5	137.2	8.9	19.9	176.2	11.5	0.9	0.7	1.3	0.3	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	37.0	13.1	49.6	14.3	13.3	26.5	11.5	10.8	7.8	9.3	8.2	7.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	93.8	44.9	190.3	57.4	84.6	241.9	25.8	18.2	17.3	13.7	18.9	4.7
LnGrp LOS	F	D	F	E	F	F	C	B	B	B	B	A
Approach Vol, veh/h		1731			915			1000			1532	
Approach Delay, s/veh		110.4			121.5			21.0			11.5	
Approach LOS		F			F			C			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.3	87.7	26.8	50.6	20.9	92.0	52.0	25.4
Change Period (Y+Rc), s	7.8	6.8	6.8	* 6.8	4.5	6.8	6.8	6.8
Max Green Setting (Gmax), s	19.8	40.5	20.0	* 44	20.3	43.3	45.2	16.3
Max Q Clear Time (g_c+I1), s	17.3	19.6	21.2	45.8	16.0	17.4	47.2	20.6
Green Ext Time (p_c), s	0.2	5.8	0.0	0.0	0.5	2.8	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	65.9
HCM 6th LOS	E

Notes

User approved ignoring U-Turning movement.

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

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	160	-	400	310	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	4	4	4	4
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1	0	0	0	0	0
Stage 1	0	-	-	-	-	-
Stage 2	1	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.18	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.24	-
Pot Cap-1 Maneuver	1021	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	1022	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	1021	-	-	-	-	-
Mov Cap-2 Maneuver	1021	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	1022	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	0	-
HCM Lane LOS	-	-	A	A	A	-
HCM 95th %tile Q(veh)	-	-	-	-	-	-

Intersection	
Int Delay, s/veh	67.4

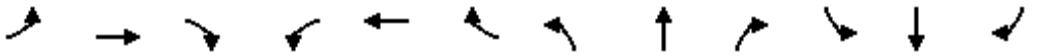
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1031	50	22	1443	83	36
Future Vol, veh/h	1031	50	22	1443	83	36
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	225	240	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	4	4	4	4	2	2
Mvmt Flow	1085	53	23	1519	87	38

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1138	0	2650	1085
Stage 1	-	-	-	-	1085	-
Stage 2	-	-	-	-	1565	-
Critical Hdwy	-	-	4.14	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.236	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	607	-	~ 25	263
Stage 1	-	-	-	-	324	-
Stage 2	-	-	-	-	189	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	607	-	~ 24	263
Mov Cap-2 Maneuver	-	-	-	-	~ 24	-
Stage 1	-	-	-	-	324	-
Stage 2	-	-	-	-	182	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	$ 1506.1
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	33	-	-	607	-
HCM Lane V/C Ratio	3.796	-	-	0.038	-
HCM Control Delay (s)	$ 1506.1	-	-	11.2	-
HCM Lane LOS	F	-	-	B	-
HCM 95th %tile Q(veh)	14.7	-	-	0.1	-

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	129	835	44	25	1187	151	151	40	28	90	10	183
Future Volume (veh/h)	129	835	44	25	1187	151	151	40	28	90	10	183
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	1841	1841	1841	1841	1841	1841	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	157	1018	54	30	1448	184	184	49	34	110	12	223
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	4	4	4	4	4	4	2	2	2	2	2	2
Cap, veh/h	141	1194	1012	225	1166	988	125	23	16	260	23	283
Arrive On Green	0.05	0.65	0.65	0.04	0.63	0.63	0.18	0.18	0.18	0.18	0.18	0.18
Sat Flow, veh/h	1753	1841	1560	1753	1841	1560	473	126	87	1199	131	1585
Grp Volume(v), veh/h	157	1018	54	30	1448	184	267	0	0	122	0	223
Grp Sat Flow(s),veh/h/ln	1753	1841	1560	1753	1841	1560	687	0	0	1330	0	1585
Q Serve(g_s), s	8.0	65.2	1.9	0.9	95.0	7.4	14.4	0.0	0.0	0.0	0.0	20.2
Cycle Q Clear(g_c), s	8.0	65.2	1.9	0.9	95.0	7.4	26.8	0.0	0.0	12.4	0.0	20.2
Prop In Lane	1.00		1.00	1.00		1.00	0.69		0.13	0.90		1.00
Lane Grp Cap(c), veh/h	141	1194	1012	225	1166	988	163	0	0	283	0	283
V/C Ratio(X)	1.11	0.85	0.05	0.13	1.24	0.19	1.64	0.00	0.00	0.43	0.00	0.79
Avail Cap(c_a), veh/h	141	1194	1012	252	1166	988	163	0	0	283	0	283
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	53.7	20.7	9.6	22.3	27.5	11.4	69.6	0.0	0.0	55.7	0.0	58.9
Incr Delay (d2), s/veh	108.1	7.8	0.1	0.2	116.4	0.4	312.2	0.0	0.0	0.4	0.0	12.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	12.3	36.5	1.2	0.8	105.8	4.6	33.5	0.0	0.0	7.7	0.0	14.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	161.8	28.5	9.7	22.4	143.9	11.8	381.8	0.0	0.0	56.1	0.0	71.5
LnGrp LOS	F	C	A	C	F	B	F	A	A	E	A	E
Approach Vol, veh/h		1229			1662			267			345	
Approach Delay, s/veh		44.7			127.0			381.8			66.1	
Approach LOS		D			F			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.2	104.8		32.0	15.5	102.5		32.0				
Change Period (Y+Rc), s	7.5	7.5		* 5.2	7.5	7.5		* 5.2				
Max Green Setting (Gmax), s	8.0	95.0		* 27	8.0	95.0		* 27				
Max Q Clear Time (g_c+I1), s	2.9	67.2		22.2	10.0	97.0		28.8				
Green Ext Time (p_c), s	0.0	16.6		0.4	0.0	0.0		0.0				

Intersection Summary		
HCM 6th Ctrl Delay	111.6	
HCM 6th LOS	F	

Notes

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

Intersection	
Int Delay, s/veh	33.2

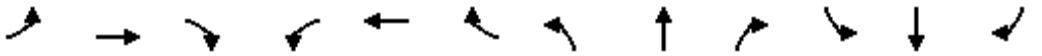
Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	100	100	990	63	39	995
Future Vol, veh/h	100	100	990	63	39	995
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	295	390	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	4	4	4	4
Mvmt Flow	105	105	1042	66	41	1047

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2171	1042	0	0	1108	0
Stage 1	1042	-	-	-	-	-
Stage 2	1129	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.14	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.236	-
Pot Cap-1 Maneuver	~ 51	279	-	-	623	-
Stage 1	340	-	-	-	-	-
Stage 2	309	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 48	279	-	-	623	-
Mov Cap-2 Maneuver	~ 48	-	-	-	-	-
Stage 1	340	-	-	-	-	-
Stage 2	289	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	$ 378.1	0	0.4
HCM LOS	F		

Minor Lane/Major Mvmt	NET	NER	NWLn1	NWLn2	SWL	SWT
Capacity (veh/h)	-	-	48	279	623	-
HCM Lane V/C Ratio	-	-	2.193	0.377	0.066	-
HCM Control Delay (s)	-	-	$ 730.6	25.5	11.2	-
HCM Lane LOS	-	-	F	D	B	-
HCM 95th %tile Q(veh)	-	-	10.8	1.7	0.2	-

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	880	0	0	1036	51	0	0	0	137	0	217
Future Volume (veh/h)	65	880	0	0	1036	51	0	0	0	137	0	217
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	1841	1841	0	0	1841	1841	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	68	926	0	0	1091	54	0	0	0	144	0	228
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	0	0	4	4	2	2	2	2	2	2
Cap, veh/h	215	1381	0	0	1179	999	1	1	1	289	0	257
Arrive On Green	0.06	0.75	0.00	0.00	0.64	0.64	0.00	0.00	0.00	0.16	0.00	0.16
Sat Flow, veh/h	1753	1841	0	0	1841	1560	1781	1870	1585	1781	0	1585
Grp Volume(v), veh/h	68	926	0	0	1091	54	0	0	0	144	0	228
Grp Sat Flow(s),veh/h/ln	1753	1841	0	0	1841	1560	1781	1870	1585	1781	0	1585
Q Serve(g_s), s	1.7	37.9	0.0	0.0	78.5	1.9	0.0	0.0	0.0	11.1	0.0	21.1
Cycle Q Clear(g_c), s	1.7	37.9	0.0	0.0	78.5	1.9	0.0	0.0	0.0	11.1	0.0	21.1
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	215	1381	0	0	1179	999	1	1	1	289	0	257
V/C Ratio(X)	0.32	0.67	0.00	0.00	0.93	0.05	0.00	0.00	0.00	0.50	0.00	0.89
Avail Cap(c_a), veh/h	222	1381	0	0	1179	999	356	374	317	404	0	359
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	31.4	9.4	0.0	0.0	23.8	10.0	0.0	0.0	0.0	57.3	0.0	61.5
Incr Delay (d2), s/veh	0.6	2.6	0.0	0.0	13.5	0.1	0.0	0.0	0.0	1.3	0.0	17.5
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	2.7	18.8	0.0	0.0	43.4	1.2	0.0	0.0	0.0	8.8	0.0	14.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.0	12.0	0.0	0.0	37.3	10.1	0.0	0.0	0.0	58.6	0.0	79.0
LnGrp LOS	C	B	A	A	D	B	A	A	A	E	A	E
Approach Vol, veh/h		994			1145			0			372	
Approach Delay, s/veh		13.4			36.0			0.0			71.1	
Approach LOS		B			D						E	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		119.7		30.3	16.5	103.2		0.0				
Change Period (Y+Rc), s		7.1		6.0	7.1	7.1		6.0				
Max Green Setting (Gmax), s		66.9		34.0	10.0	49.8		30.0				
Max Q Clear Time (g_c+I1), s		39.9		23.1	3.7	80.5		0.0				
Green Ext Time (p_c), s		13.4		1.2	0.0	0.0		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			32.3									
HCM 6th LOS			C									

Intersection	
Int Delay, s/veh	132.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	24	0	12	101	0	85	10	1045	58	50	896	19
Future Vol, veh/h	24	0	12	101	0	85	10	1045	58	50	896	19
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	-	-	-	-	-	-	240	-	300	425	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	4	4	4	4	4	4
Mvmt Flow	25	0	13	106	0	89	11	1100	61	53	943	20

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2256	2242	953	2188	2191	1100	963	0	0	1161	0	0
Stage 1	1059	1059	-	1122	1122	-	-	-	-	-	-	-
Stage 2	1197	1183	-	1066	1069	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.236	-	-	2.236	-	-
Pot Cap-1 Maneuver	29	42	314	~ 33	45	258	707	-	-	595	-	-
Stage 1	271	301	-	250	281	-	-	-	-	-	-	-
Stage 2	227	263	-	269	298	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 17	38	314	~ 29	40	258	707	-	-	595	-	-
Mov Cap-2 Maneuver	~ 17	38	-	~ 29	40	-	-	-	-	-	-	-
Stage 1	267	274	-	246	277	-	-	-	-	-	-	-
Stage 2	146	259	-	235	271	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	$ 599.3	$ 1518.3	0.1	0.6
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	707	-	-	25	49	595	-	-
HCM Lane V/C Ratio	0.015	-	-	1.516	3.996	0.088	-	-
HCM Control Delay (s)	10.2	-	-	$ 599.3	$ 1518.3	11.6	-	-
HCM Lane LOS	B	-	-	F	F	B	-	-
HCM 95th %tile Q(veh)	0	-	-	4.7	21.7	0.3	-	-

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

Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Volume (veh/h)	683	457	1451	310	586	2451
Future Volume (veh/h)	683	457	1451	310	586	2451
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	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	719	481	1527	0	617	2580
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4
Cap, veh/h	516	459	1600		450	2982
Arrive On Green	0.29	0.29	0.32	0.00	0.22	0.59
Sat Flow, veh/h	1753	1560	5191	1560	1753	5191
Grp Volume(v), veh/h	719	481	1527	0	617	2580
Grp Sat Flow(s),veh/h/ln	1753	1560	1675	1560	1753	1675
Q Serve(g_s), s	35.3	35.3	35.7	0.0	26.2	51.5
Cycle Q Clear(g_c), s	35.3	35.3	35.7	0.0	26.2	51.5
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	516	459	1600		450	2982
V/C Ratio(X)	1.39	1.05	0.95		1.37	0.87
Avail Cap(c_a), veh/h	516	459	1600		450	2982
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	1.00
Uniform Delay (d), s/veh	42.3	42.3	40.1	0.0	36.9	20.4
Incr Delay (d2), s/veh	189.0	55.2	14.0	0.0	181.0	3.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	62.0	27.8	22.7	0.0	46.1	25.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	231.3	97.6	54.1	0.0	218.0	24.1
LnGrp LOS	F	F	D		F	C
Approach Vol, veh/h	1200		1527	A		3197
Approach Delay, s/veh	177.7		54.1			61.5
Approach LOS	F		D			E

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	33.0	45.0			78.0	42.0
Change Period (Y+Rc), s	6.8	6.8			6.8	6.7
Max Green Setting (Gmax), s	26.2	38.2			71.2	35.3
Max Q Clear Time (g_c+I1), s	28.2	37.7			53.5	37.3
Green Ext Time (p_c), s	0.0	0.4			16.1	0.0

Intersection Summary	
HCM 6th Ctrl Delay	83.1
HCM 6th LOS	F

Notes

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

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	465	-	-	0	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	4	4	4	4	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1	0	-	0	1	1
Stage 1	-	-	-	-	1	-
Stage 2	-	-	-	-	0	-
Critical Hdwy	4.14	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.236	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1609	-	-	-	1022	1084
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1609	-	-	-	1022	1084
Mov Cap-2 Maneuver	-	-	-	-	1022	-
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1609	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0	0
HCM Lane LOS	A	-	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	-	-	-

Intersection	
Int Delay, s/veh	5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1104	16	41	889	37	75
Future Vol, veh/h	1104	16	41	889	37	75
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	400	415	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	4	4	4	4	2	2
Mvmt Flow	1162	17	43	936	39	79

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1179	0	2184	1162
Stage 1	-	-	-	-	1162	-
Stage 2	-	-	-	-	1022	-
Critical Hdwy	-	-	4.14	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.236	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	585	-	50	237
Stage 1	-	-	-	-	298	-
Stage 2	-	-	-	-	347	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	585	-	46	237
Mov Cap-2 Maneuver	-	-	-	-	46	-
Stage 1	-	-	-	-	298	-
Stage 2	-	-	-	-	321	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	92.8
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	46	237	-	-	585	-
HCM Lane V/C Ratio	0.847	0.333	-	-	0.074	-
HCM Control Delay (s)	224.9	27.6	-	-	11.6	-
HCM Lane LOS	F	D	-	-	B	-
HCM 95th %tile Q(veh)	3.4	1.4	-	-	0.2	-

Intersection	
Int Delay, s/veh	350.5

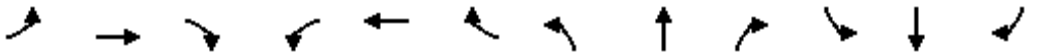
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	48	792	34	40	1129	40	39	7	68	68	0	192
Future Vol, veh/h	48	792	34	40	1129	40	39	7	68	68	0	192
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	460	-	250	345	-	400	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	4	4	4	4	4	4	2	2	2	2	2	2
Mvmt Flow	51	834	36	42	1188	42	41	7	72	72	0	202

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1230	0	0	870	0	0	2330	2250	834	2266	2244	1188
Stage 1	-	-	-	-	-	-	936	936	-	1272	1272	-
Stage 2	-	-	-	-	-	-	1394	1314	-	994	972	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.236	-	-	2.236	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	560	-	-	766	-	-	~ 26	42	368	~ 29	42	229
Stage 1	-	-	-	-	-	-	318	344	-	206	239	-
Stage 2	-	-	-	-	-	-	175	228	-	295	331	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	560	-	-	766	-	-	~ 3	36	368	~ 18	36	229
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 3	36	-	~ 18	36	-
Stage 1	-	-	-	-	-	-	289	313	-	187	226	-
Stage 2	-	-	-	-	-	-	~ 19	215	-	211	301	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.7	0.3	$ 6358.1	$ 521
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	9	560	-	-	766	-	-	18	229
HCM Lane V/C Ratio	13.333	0.09	-	-	0.055	-	-	3.977	0.883
HCM Control Delay (s)	$ 6358.1	12.1	-	-	10	-	-	$ 1772.8	77.6
HCM Lane LOS	F	B	-	-	A	-	-	F	F
HCM 95th %tile Q(veh)	16.6	0.3	-	-	0.2	-	-	9.5	7.2

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	673	592	413	375	815	611	638	578	421	392	272	594
Future Volume (veh/h)	673	592	413	375	815	611	638	578	421	392	272	594
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	1826	1841	1826	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	708	623	435	395	858	643	672	608	443	413	286	625
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	5	4	5	4	4	4	4	4	4	4	4	4
Cap, veh/h	456	725	321	416	601	268	484	810	686	359	1492	1032
Arrive On Green	0.23	0.21	0.21	0.20	0.17	0.17	0.12	0.44	0.44	0.13	0.43	0.43
Sat Flow, veh/h	1739	3497	1547	1753	3497	1560	1753	1841	1560	1753	3497	1560
Grp Volume(v), veh/h	708	623	435	395	858	643	672	608	443	413	286	625
Grp Sat Flow(s),veh/h/ln	1739	1749	1547	1753	1749	1560	1753	1841	1560	1753	1749	1560
Q Serve(g_s), s	35.2	25.8	31.1	27.6	25.8	25.8	18.2	41.4	33.3	19.5	7.7	34.0
Cycle Q Clear(g_c), s	35.2	25.8	31.1	27.6	25.8	25.8	18.2	41.4	33.3	19.5	7.7	34.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	456	725	321	416	601	268	484	810	686	359	1492	1032
V/C Ratio(X)	1.55	0.86	1.36	0.95	1.43	2.40	1.39	0.75	0.65	1.15	0.19	0.61
Avail Cap(c_a), veh/h	456	725	321	436	601	268	484	810	686	359	1492	1032
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.2	57.3	59.4	40.8	62.1	62.1	30.0	35.1	32.8	34.8	26.8	14.4
Incr Delay (d2), s/veh	259.2	10.2	179.2	30.1	202.3	641.4	186.6	6.3	4.6	95.6	0.3	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	72.3	17.9	42.3	21.5	42.9	90.7	50.7	26.6	19.1	25.8	5.8	17.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	305.4	67.5	238.7	70.9	264.5	703.5	216.6	41.4	37.5	130.3	27.1	17.0
LnGrp LOS	F	E	F	E	F	F	F	D	D	F	C	B
Approach Vol, veh/h		1766			1896			1723			1324	
Approach Delay, s/veh		205.1			373.0			108.8			54.5	
Approach LOS		F			F			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	26.0	71.4	36.7	37.9	24.0	73.4	42.0	32.6
Change Period (Y+Rc), s	7.8	6.8	6.8	* 6.8	4.5	6.8	6.8	6.8
Max Green Setting (Gmax), s	18.2	43.2	31.6	* 31	19.5	45.2	35.2	25.2
Max Q Clear Time (g_c+I1), s	20.2	36.0	29.6	33.1	21.5	43.4	37.2	27.8
Green Ext Time (p_c), s	0.0	2.5	0.3	0.0	0.0	1.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	198.1
HCM 6th LOS	F

Notes

User approved ignoring U-Turning movement.

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

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	160	-	400	310	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	4	4	4	4
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1	0	0	0	0	0
Stage 1	0	-	-	-	-	-
Stage 2	1	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.18	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.24	-
Pot Cap-1 Maneuver	1021	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	1022	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	1021	-	-	-	-	-
Mov Cap-2 Maneuver	1021	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	1022	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	0	-
HCM Lane LOS	-	-	A	A	A	-
HCM 95th %tile Q(veh)	-	-	-	-	-	-

Intersection	
Int Delay, s/veh	27.8

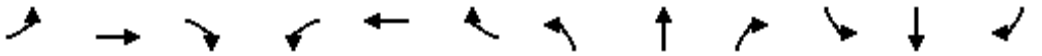
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1489	83	40	1032	48	23
Future Vol, veh/h	1489	83	40	1032	48	23
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	225	240	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	4	4	4	4	2	2
Mvmt Flow	1567	87	42	1086	51	24

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1654	0	2737	1567
Stage 1	-	-	-	-	1567	-
Stage 2	-	-	-	-	1170	-
Critical Hdwy	-	-	4.14	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.236	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	385	-	~ 22	137
Stage 1	-	-	-	-	189	-
Stage 2	-	-	-	-	295	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	385	-	~ 20	137
Mov Cap-2 Maneuver	-	-	-	-	~ 20	-
Stage 1	-	-	-	-	189	-
Stage 2	-	-	-	-	263	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.6	$ 1052.7
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	28	-	-	385	-
HCM Lane V/C Ratio	2.669	-	-	0.109	-
HCM Control Delay (s)	$ 1052.7	-	-	15.5	-
HCM Lane LOS	F	-	-	C	-
HCM 95th %tile Q(veh)	9	-	-	0.4	-

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	1366	61	69	881	22	97	0	20	40	0	56
Future Volume (veh/h)	55	1366	61	69	881	22	97	0	20	40	0	56
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	1841	1841	1841	1841	1841	1841	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	58	1438	64	73	927	23	102	0	21	42	0	59
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	2	2	2	2	2	2
Cap, veh/h	437	1400	1187	137	1404	1190	76	0	7	133	0	85
Arrive On Green	0.05	0.76	0.76	0.05	0.76	0.76	0.05	0.00	0.05	0.05	0.00	0.05
Sat Flow, veh/h	1753	1841	1560	1753	1841	1560	592	0	122	1582	0	1585
Grp Volume(v), veh/h	58	1438	64	73	927	23	123	0	0	42	0	59
Grp Sat Flow(s),veh/h/ln	1753	1841	1560	1753	1841	1560	714	0	0	1582	0	1585
Q Serve(g_s), s	1.0	113.8	1.5	1.9	36.0	0.5	4.1	0.0	0.0	0.0	0.0	5.5
Cycle Q Clear(g_c), s	1.0	113.8	1.5	1.9	36.0	0.5	8.0	0.0	0.0	3.9	0.0	5.5
Prop In Lane	1.00		1.00	1.00		1.00	0.83		0.17	1.00		1.00
Lane Grp Cap(c), veh/h	437	1400	1187	137	1404	1190	82	0	0	133	0	85
V/C Ratio(X)	0.13	1.03	0.05	0.53	0.66	0.02	1.50	0.00	0.00	0.32	0.00	0.70
Avail Cap(c_a), veh/h	445	1400	1187	142	1404	1190	82	0	0	133	0	85
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	7.5	17.9	4.5	49.1	8.5	4.3	73.8	0.0	0.0	68.8	0.0	69.6
Incr Delay (d2), s/veh	0.1	31.2	0.1	2.7	2.5	0.0	276.8	0.0	0.0	0.5	0.0	18.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.8	62.8	0.8	3.9	18.5	0.3	16.1	0.0	0.0	2.9	0.0	4.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.6	49.1	4.6	51.8	10.9	4.3	350.7	0.0	0.0	69.4	0.0	88.5
LnGrp LOS	A	F	A	D	B	A	F	A	A	E	A	F
Approach Vol, veh/h		1560			1023			123			101	
Approach Delay, s/veh		45.8			13.7			350.7			80.5	
Approach LOS		D			B			F			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.1	121.3		13.2	14.8	121.6		13.2				
Change Period (Y+Rc), s	7.5	7.5		* 5.2	7.5	7.5		* 5.2				
Max Green Setting (Gmax), s	8.0	113.8		* 8	8.0	113.8		* 8				
Max Q Clear Time (g_c+I1), s	3.9	115.8		7.5	3.0	38.0		10.0				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	21.3		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		48.7	
HCM 6th LOS		D	

Notes

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

Intersection	
Int Delay, s/veh	9.3

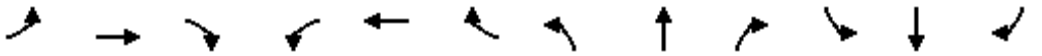
Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	48	61	1102	78	70	894
Future Vol, veh/h	48	61	1102	78	70	894
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	295	390	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	4	4	4	4
Mvmt Flow	51	64	1160	82	74	941

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2249	1160	0	0	1242	0
Stage 1	1160	-	-	-	-	-
Stage 2	1089	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.14	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.236	-
Pot Cap-1 Maneuver	~ 46	238	-	-	554	-
Stage 1	298	-	-	-	-	-
Stage 2	323	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 40	238	-	-	554	-
Mov Cap-2 Maneuver	~ 40	-	-	-	-	-
Stage 1	298	-	-	-	-	-
Stage 2	280	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	185.2	0	0.9
HCM LOS	F		

Minor Lane/Major Mvmt	NET	NER	NWLn1	NWLn2	SWL	SWT
Capacity (veh/h)	-	-	40	238	554	-
HCM Lane V/C Ratio	-	-	1.263	0.27	0.133	-
HCM Control Delay (s)	-	-	$ 388	25.6	12.5	-
HCM Lane LOS	-	-	F	D	B	-
HCM 95th %tile Q(veh)	-	-	5.1	1.1	0.5	-

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	1117	0	0	825	99	0	0	0	89	0	87
Future Volume (veh/h)	120	1117	0	0	825	99	0	0	0	89	0	87
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	1841	1841	0	0	1841	1841	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	126	1176	0	0	868	104	0	0	0	94	0	92
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	0	0	4	4	2	2	2	2	2	2
Cap, veh/h	437	1544	0	0	1335	1131	1	1	1	132	0	117
Arrive On Green	0.07	0.84	0.00	0.00	0.73	0.73	0.00	0.00	0.00	0.07	0.00	0.07
Sat Flow, veh/h	1753	1841	0	0	1841	1560	1781	1870	1585	1781	0	1585
Grp Volume(v), veh/h	126	1176	0	0	868	104	0	0	0	94	0	92
Grp Sat Flow(s),veh/h/ln	1753	1841	0	0	1841	1560	1781	1870	1585	1781	0	1585
Q Serve(g_s), s	2.3	42.8	0.0	0.0	36.8	2.9	0.0	0.0	0.0	7.7	0.0	8.6
Cycle Q Clear(g_c), s	2.3	42.8	0.0	0.0	36.8	2.9	0.0	0.0	0.0	7.7	0.0	8.6
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	437	1544	0	0	1335	1131	1	1	1	132	0	117
V/C Ratio(X)	0.29	0.76	0.00	0.00	0.65	0.09	0.00	0.00	0.00	0.71	0.00	0.79
Avail Cap(c_a), veh/h	438	1544	0	0	1335	1131	356	374	317	249	0	222
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.5	5.4	0.0	0.0	10.7	6.1	0.0	0.0	0.0	67.9	0.0	68.3
Incr Delay (d2), s/veh	0.3	3.6	0.0	0.0	2.5	0.2	0.0	0.0	0.0	7.0	0.0	10.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.0	15.6	0.0	0.0	19.1	1.6	0.0	0.0	0.0	6.8	0.0	6.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.8	9.0	0.0	0.0	13.2	6.2	0.0	0.0	0.0	74.9	0.0	79.2
LnGrp LOS	A	A	A	A	B	A	A	A	A	E	A	E
Approach Vol, veh/h		1302			972			0			186	
Approach Delay, s/veh		9.1			12.4			0.0			77.0	
Approach LOS		A			B						E	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		132.9		17.1	17.0	115.9		0.0				
Change Period (Y+Rc), s		7.1		6.0	7.1	7.1		6.0				
Max Green Setting (Gmax), s		79.9		21.0	10.0	62.8		30.0				
Max Q Clear Time (g_c+I1), s		44.8		10.6	4.3	38.8		0.0				
Green Ext Time (p_c), s		22.7		0.5	0.1	12.2		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			15.5									
HCM 6th LOS			B									

Intersection	
Int Delay, s/veh	65.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	19	0	17	58	0	50	38	1035	101	85	908	65
Future Vol, veh/h	19	0	17	58	0	50	38	1035	101	85	908	65
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	-	-	-	-	-	-	240	-	300	425	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	4	4	4	4	4	4
Mvmt Flow	20	0	18	61	0	53	40	1089	106	89	956	68

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2417	2443	990	2346	2371	1089	1024	0	0	1195	0	0
Stage 1	1168	1168	-	1169	1169	-	-	-	-	-	-	-
Stage 2	1249	1275	-	1177	1202	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.236	-	-	2.236	-	-
Pot Cap-1 Maneuver	22	31	299	~ 25	35	262	670	-	-	577	-	-
Stage 1	236	267	-	235	267	-	-	-	-	-	-	-
Stage 2	212	238	-	233	258	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 15	25	299	~ 20	28	262	670	-	-	577	-	-
Mov Cap-2 Maneuver	~ 15	25	-	~ 20	28	-	-	-	-	-	-	-
Stage 1	222	226	-	221	251	-	-	-	-	-	-	-
Stage 2	159	224	-	185	218	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	$ 533.2	$ 1251	0.3	1
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	670	-	-	27	35	577	-	-
HCM Lane V/C Ratio	0.06	-	-	1.404	3.248	0.155	-	-
HCM Control Delay (s)	10.7	-	-	$ 533.2	$ 1251	12.4	-	-
HCM Lane LOS	B	-	-	F	F	B	-	-
HCM 95th %tile Q(veh)	0.2	-	-	4.5	13.1	0.5	-	-

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

Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Volume (veh/h)	408	607	2408	591	449	1459
Future Volume (veh/h)	408	607	2408	591	449	1459
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	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	429	639	2535	0	473	1536
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4
Cap, veh/h	366	326	2318		389	3524
Arrive On Green	0.21	0.21	0.46	0.00	0.19	0.70
Sat Flow, veh/h	1753	1560	5191	1560	1753	5191
Grp Volume(v), veh/h	429	639	2535	0	473	1536
Grp Sat Flow(s),veh/h/ln	1753	1560	1675	1560	1753	1675
Q Serve(g_s), s	31.3	31.3	69.2	0.0	29.2	19.7
Cycle Q Clear(g_c), s	31.3	31.3	69.2	0.0	29.2	19.7
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	366	326	2318		389	3524
V/C Ratio(X)	1.17	1.96	1.09		1.22	0.44
Avail Cap(c_a), veh/h	366	326	2318		389	3524
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	1.00
Uniform Delay (d), s/veh	59.3	59.3	40.4	0.0	52.5	9.6
Incr Delay (d2), s/veh	103.0	444.4	49.7	0.0	118.2	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	34.7	81.9	51.2	0.0	39.5	10.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	162.3	503.7	90.1	0.0	170.7	10.0
LnGrp LOS	F	F	F		F	B
Approach Vol, veh/h	1068		2535	A		2009
Approach Delay, s/veh	366.6		90.1			47.9
Approach LOS	F		F			D

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	36.0	76.0			112.0	38.0
Change Period (Y+Rc), s	6.8	6.8			6.8	6.7
Max Green Setting (Gmax), s	29.2	69.2			105.2	31.3
Max Q Clear Time (g_c+I1), s	31.2	71.2			21.7	33.3
Green Ext Time (p_c), s	0.0	0.0			21.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	127.6
HCM 6th LOS	F

Notes

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

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	465	-	-	0	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	4	4	4	4	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1	0	-	0	1	1
Stage 1	-	-	-	-	1	-
Stage 2	-	-	-	-	0	-
Critical Hdwy	4.14	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.236	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1609	-	-	-	1022	1084
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1609	-	-	-	1022	1084
Mov Cap-2 Maneuver	-	-	-	-	1022	-
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1609	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0	0
HCM Lane LOS	A	-	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	-	-	-

Intersection	
Int Delay, s/veh	4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1010	30	50	995	33	52
Future Vol, veh/h	1010	30	50	995	33	52
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	400	415	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	4	4	4	4	2	2
Mvmt Flow	1063	32	53	1047	35	55

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1095	0	2216	1063
Stage 1	-	-	-	-	1063	-
Stage 2	-	-	-	-	1153	-
Critical Hdwy	-	-	4.14	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.236	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	630	-	48	271
Stage 1	-	-	-	-	332	-
Stage 2	-	-	-	-	301	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	630	-	44	271
Mov Cap-2 Maneuver	-	-	-	-	44	-
Stage 1	-	-	-	-	332	-
Stage 2	-	-	-	-	276	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	97.2
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	44	271	-	-	630	-
HCM Lane V/C Ratio	0.789	0.202	-	-	0.084	-
HCM Control Delay (s)	216.4	21.6	-	-	11.2	-
HCM Lane LOS	F	C	-	-	B	-
HCM 95th %tile Q(veh)	3.1	0.7	-	-	0.3	-

Intersection	
Int Delay, s/veh	230.4

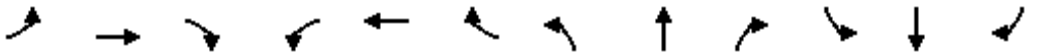
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	170	1141	104	65	806	94	55	7	55	43	0	69
Future Vol, veh/h	170	1141	104	65	806	94	55	7	55	43	0	69
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	460	-	250	345	-	400	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	4	4	4	4	4	4	2	2	2	2	2	2
Mvmt Flow	179	1201	109	68	848	99	58	7	58	45	0	73

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	947	0	0	1310	0	0	2629	2642	1201	2630	2652	848
Stage 1	-	-	-	-	-	-	1559	1559	-	984	984	-
Stage 2	-	-	-	-	-	-	1070	1083	-	1646	1668	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.236	-	-	2.236	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	717	-	-	522	-	-	~ 16	23	225	~ 16	23	361
Stage 1	-	-	-	-	-	-	141	173	-	299	327	-
Stage 2	-	-	-	-	-	-	268	293	-	125	153	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	717	-	-	522	-	-	~ 9	15	225	~ 5	15	361
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 9	15	-	~ 5	15	-
Stage 1	-	-	-	-	-	-	106	130	-	224	284	-
Stage 2	-	-	-	-	-	-	186	255	-	66	115	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.4	0.9	$ 3254.1	$ 1941.9
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	17	717	-	-	522	-	-	5	361
HCM Lane V/C Ratio	7.245	0.25	-	-	0.131	-	-	9.053	0.201
HCM Control Delay (s)	$ 3254.1	11.7	-	-	12.9	-	-	$ 5030	17.5
HCM Lane LOS	F	B	-	-	B	-	-	F	C
HCM 95th %tile Q(veh)	16.1	1	-	-	0.4	-	-	7.3	0.7

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	610	838	604	404	606	401	416	347	380	575	489	688
Future Volume (veh/h)	610	838	604	404	606	401	416	347	380	575	489	688
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	1826	1870	1826	1870	1870	1870	1841	1841	1870	1870	1841	1841
Adj Flow Rate, veh/h	642	882	636	425	638	422	438	365	400	605	515	724
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	5	2	5	2	2	2	4	4	2	2	4	4
Cap, veh/h	468	888	387	312	557	248	486	1141	983	670	2216	1365
Arrive On Green	0.24	0.25	0.25	0.15	0.16	0.16	0.11	0.62	0.62	0.14	0.63	0.63
Sat Flow, veh/h	1739	3554	1547	1781	3554	1585	1753	1841	1585	1781	3497	1560
Grp Volume(v), veh/h	642	882	636	425	638	422	438	365	400	605	515	724
Grp Sat Flow(s),veh/h/ln	1739	1777	1547	1781	1777	1585	1753	1841	1585	1781	1749	1560
Q Serve(g_s), s	36.2	37.1	37.5	22.2	23.5	23.5	13.7	14.1	19.2	18.4	9.5	16.2
Cycle Q Clear(g_c), s	36.2	37.1	37.5	22.2	23.5	23.5	13.7	14.1	19.2	18.4	9.5	16.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	468	888	387	312	557	248	486	1141	983	670	2216	1365
V/C Ratio(X)	1.37	0.99	1.64	1.36	1.15	1.70	0.90	0.32	0.41	0.90	0.23	0.53
Avail Cap(c_a), veh/h	468	888	387	312	557	248	513	1141	983	708	2216	1365
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.0	56.1	56.3	45.9	63.2	63.3	11.7	13.5	14.5	11.2	11.8	2.2
Incr Delay (d2), s/veh	180.9	28.3	301.3	181.5	85.2	331.4	17.7	0.7	1.3	14.5	0.2	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	57.5	27.0	72.3	38.3	25.3	50.3	11.3	9.8	11.2	13.3	6.5	5.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	226.9	84.4	357.5	227.4	148.5	394.7	29.4	14.2	15.7	25.7	12.0	3.7
LnGrp LOS	F	F	F	F	F	F	C	B	B	C	B	A
Approach Vol, veh/h		2160			1485			1203			1844	
Approach Delay, s/veh		207.2			241.0			20.3			13.2	
Approach LOS		F			F			C			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.7	101.9	29.0	44.3	25.8	99.8	43.0	30.3
Change Period (Y+Rc), s	7.8	6.8	6.8	* 6.8	4.5	6.8	6.8	6.8
Max Green Setting (Gmax), s	18.2	46.2	22.2	* 38	24.5	43.2	36.2	21.2
Max Q Clear Time (g_c+I1), s	15.7	18.2	24.2	39.5	20.4	21.2	38.2	25.5
Green Ext Time (p_c), s	0.2	6.8	0.0	0.0	0.9	3.4	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	127.6
HCM 6th LOS	F

Notes

User approved ignoring U-Turning movement.

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

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	160	-	400	310	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	4	4	4	4
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1	0	0	0	0	0
Stage 1	0	-	-	-	-	-
Stage 2	1	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.18	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.24	-
Pot Cap-1 Maneuver	1021	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	1022	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	1021	-	-	-	-	-
Mov Cap-2 Maneuver	1021	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	1022	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	0	-
HCM Lane LOS	-	-	A	A	A	-
HCM 95th %tile Q(veh)	-	-	-	-	-	-

Appendix K

Build Conditions Synchro Intersection Analysis Outputs

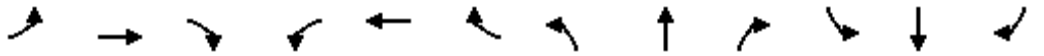
Intersection	
Int Delay, s/veh	0.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	790	19	11	1114	49	21
Future Vol, veh/h	790	19	11	1114	49	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	225	240	-	0	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	4	4	4	4	2	2
Mvmt Flow	832	20	12	1173	52	22

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	852	0	1443	416
Stage 1	-	-	-	-	832	-
Stage 2	-	-	-	-	611	-
Critical Hdwy	-	-	4.18	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.24	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	770	-	123	585
Stage 1	-	-	-	-	388	-
Stage 2	-	-	-	-	504	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	770	-	121	585
Mov Cap-2 Maneuver	-	-	-	-	253	-
Stage 1	-	-	-	-	388	-
Stage 2	-	-	-	-	496	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	20.5
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	305	-	-	770	-
HCM Lane V/C Ratio	0.242	-	-	0.015	-
HCM Control Delay (s)	20.5	-	-	9.7	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	0.9	-	-	0	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	114	649	30	20	866	126	60	40	20	86	2	173
Future Volume (veh/h)	114	649	30	20	866	126	60	40	20	86	2	173
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	1841	1841	1841	1841	1841	1841	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	139	791	37	24	1056	154	73	49	24	105	2	211
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	4	4	4	4	4	4	2	2	2	2	2	2
Cap, veh/h	392	1896	846	436	1689	753	133	172	84	237	4	230
Arrive On Green	0.10	0.54	0.54	0.04	0.48	0.48	0.14	0.14	0.14	0.14	0.14	0.14
Sat Flow, veh/h	1753	3497	1560	1753	3497	1560	1168	1185	581	976	25	1585
Grp Volume(v), veh/h	139	791	37	24	1056	154	73	0	73	107	0	211
Grp Sat Flow(s),veh/h/ln	1753	1749	1560	1753	1749	1560	1168	0	1766	1001	0	1585
Q Serve(g_s), s	2.7	10.0	0.8	0.5	16.7	4.2	2.3	0.0	2.7	5.7	0.0	9.8
Cycle Q Clear(g_c), s	2.7	10.0	0.8	0.5	16.7	4.2	10.8	0.0	2.7	8.5	0.0	9.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.33	0.98		1.00
Lane Grp Cap(c), veh/h	392	1896	846	436	1689	753	133	0	256	241	0	230
V/C Ratio(X)	0.35	0.42	0.04	0.06	0.63	0.20	0.55	0.00	0.29	0.44	0.00	0.92
Avail Cap(c_a), veh/h	403	1896	846	551	1689	753	133	0	256	241	0	230
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.7	10.1	8.0	8.7	14.3	11.1	36.7	0.0	28.4	32.2	0.0	31.4
Incr Delay (d2), s/veh	0.4	0.7	0.1	0.0	1.8	0.6	4.8	0.0	0.6	0.5	0.0	37.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.4	5.8	0.4	0.3	9.8	2.4	2.7	0.0	2.1	3.4	0.0	10.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.1	10.8	8.1	8.8	16.0	11.7	41.5	0.0	29.0	32.6	0.0	68.8
LnGrp LOS	B	B	A	A	B	B	D	A	C	C	A	E
Approach Vol, veh/h		967			1234			146			318	
Approach Delay, s/veh		10.6			15.4			35.2			56.6	
Approach LOS		B			B			D			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.6	47.9		16.0	15.1	43.5		16.0				
Change Period (Y+Rc), s	7.5	7.5		* 5.2	7.5	7.5		* 5.2				
Max Green Setting (Gmax), s	8.0	36.0		* 11	8.0	36.0		* 11				
Max Q Clear Time (g_c+I1), s	2.5	12.0		11.8	4.7	18.7		12.8				
Green Ext Time (p_c), s	0.0	9.8		0.0	0.1	11.3		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			19.6									
HCM 6th LOS			B									

Notes

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

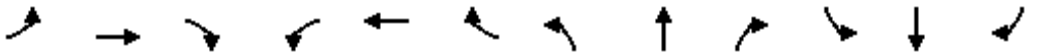
Intersection	
Int Delay, s/veh	2.1

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	92	92	741	55	31	613
Future Vol, veh/h	92	92	741	55	31	613
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	295	390	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	4	4	4	4
Mvmt Flow	97	97	780	58	33	645

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1169	390	0	0	838	0
Stage 1	780	-	-	-	-	-
Stage 2	389	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.18	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.24	-
Pot Cap-1 Maneuver	186	609	-	-	779	-
Stage 1	412	-	-	-	-	-
Stage 2	654	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	178	609	-	-	779	-
Mov Cap-2 Maneuver	303	-	-	-	-	-
Stage 1	412	-	-	-	-	-
Stage 2	627	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	17.2	0	0.5
HCM LOS	C		

Minor Lane/Major Mvmt	NET	NER	NWLn1	NWLn2	SWL	SWT
Capacity (veh/h)	-	-	303	609	779	-
HCM Lane V/C Ratio	-	-	0.32	0.159	0.042	-
HCM Control Delay (s)	-	-	22.4	12	9.8	-
HCM Lane LOS	-	-	C	B	A	-
HCM 95th %tile Q(veh)	-	-	1.3	0.6	0.1	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	57	659	0	0	671	40	0	0	0	124	0	202
Future Volume (veh/h)	57	659	0	0	671	40	0	0	0	124	0	202
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	1841	1841	0	0	1841	1841	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	60	694	0	0	706	42	0	0	0	131	0	213
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	0	0	4	4	2	2	2	2	2	2
Cap, veh/h	542	2578	0	0	2119	945	1	2	1	274	0	244
Arrive On Green	0.07	0.74	0.00	0.00	0.61	0.61	0.00	0.00	0.00	0.15	0.00	0.15
Sat Flow, veh/h	1753	3589	0	0	3589	1560	1781	1870	1585	1781	0	1585
Grp Volume(v), veh/h	60	694	0	0	706	42	0	0	0	131	0	213
Grp Sat Flow(s),veh/h/ln	1753	1749	0	0	1749	1560	1781	1870	1585	1781	0	1585
Q Serve(g_s), s	1.3	7.8	0.0	0.0	12.0	1.3	0.0	0.0	0.0	8.1	0.0	15.8
Cycle Q Clear(g_c), s	1.3	7.8	0.0	0.0	12.0	1.3	0.0	0.0	0.0	8.1	0.0	15.8
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	542	2578	0	0	2119	945	1	2	1	274	0	244
V/C Ratio(X)	0.11	0.27	0.00	0.00	0.33	0.04	0.00	0.00	0.00	0.48	0.00	0.87
Avail Cap(c_a), veh/h	562	2578	0	0	2119	945	445	468	396	341	0	304
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	6.7	5.2	0.0	0.0	11.7	9.6	0.0	0.0	0.0	46.4	0.0	49.6
Incr Delay (d2), s/veh	0.1	0.3	0.0	0.0	0.4	0.1	0.0	0.0	0.0	1.3	0.0	20.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.7	3.9	0.0	0.0	7.5	0.8	0.0	0.0	0.0	6.6	0.0	12.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	6.7	5.4	0.0	0.0	12.1	9.7	0.0	0.0	0.0	47.7	0.0	69.7
LnGrp LOS	A	A	A	A	B	A	A	A	A	D	A	E
Approach Vol, veh/h		754			748			0			344	
Approach Delay, s/veh		5.5			12.0			0.0			61.3	
Approach LOS		A			B						E	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		95.5		24.5	15.7	79.8		0.0				
Change Period (Y+Rc), s		7.1		6.0	7.1	7.1		6.0				
Max Green Setting (Gmax), s		47.9		23.0	10.0	30.8		30.0				
Max Q Clear Time (g_c+I1), s		9.8		17.8	3.3	14.0		0.0				
Green Ext Time (p_c), s		9.3		0.7	0.0	7.0		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			18.5									
HCM 6th LOS			B									

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	13	0	7	48	0	40	2	804	29	24	593	6
Future Vol, veh/h	13	0	7	48	0	40	2	804	29	24	593	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	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	240	-	300	425	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	4	4	4	4	4	4
Mvmt Flow	14	0	7	51	0	42	2	846	31	25	624	6

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1104	1558	315	1212	1530	423	630	0	0	877	0	0
Stage 1	677	677	-	850	850	-	-	-	-	-	-	-
Stage 2	427	881	-	362	680	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.18	-	-	4.18	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.24	-	-	2.24	-	-
Pot Cap-1 Maneuver	166	111	681	138	116	579	935	-	-	753	-	-
Stage 1	409	450	-	322	375	-	-	-	-	-	-	-
Stage 2	576	363	-	629	449	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	150	107	681	133	112	579	935	-	-	753	-	-
Mov Cap-2 Maneuver	274	221	-	244	234	-	-	-	-	-	-	-
Stage 1	408	435	-	321	374	-	-	-	-	-	-	-
Stage 2	533	362	-	602	434	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	16.1	20	0	0.4
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	935	-	-	346	331	753	-	-
HCM Lane V/C Ratio	0.002	-	-	0.061	0.28	0.034	-	-
HCM Control Delay (s)	8.9	-	-	16.1	20	9.9	-	-
HCM Lane LOS	A	-	-	C	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	1.1	0.1	-	-

Movement	EBL	EBR	SET	SER	NWL	NWT	
Lane Configurations							
Traffic Volume (veh/h)	483	403	725	176	504	1779	
Future Volume (veh/h)	483	403	725	176	504	1779	
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	1841	1841	1841	1841	1841	1841	
Adj Flow Rate, veh/h	508	424	763	185	531	1873	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	
Percent Heavy Veh, %	4	4	4	4	4	4	
Cap, veh/h	587	956	2142	1170	597	3404	
Arrive On Green	0.17	0.17	0.43	0.43	0.18	0.68	
Sat Flow, veh/h	3401	2745	5191	2745	3401	5191	
Grp Volume(v), veh/h	508	424	763	185	531	1873	
Grp Sat Flow(s),veh/h/ln	1700	1373	1675	1373	1700	1675	
Q Serve(g_s), s	13.1	10.7	9.2	3.7	13.7	17.2	
Cycle Q Clear(g_c), s	13.1	10.7	9.2	3.7	13.7	17.2	
Prop In Lane	1.00	1.00		1.00	1.00		
Lane Grp Cap(c), veh/h	587	956	2142	1170	597	3404	
V/C Ratio(X)	0.87	0.44	0.36	0.16	0.89	0.55	
Avail Cap(c_a), veh/h	616	979	2142	1170	612	3404	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	36.2	22.6	17.5	15.9	36.2	7.5	
Incr Delay (d2), s/veh	11.7	0.2	0.5	0.3	14.2	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	9.9	5.6	6.0	2.0	10.7	8.2	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	47.9	22.9	17.9	16.2	50.5	8.1	
LnGrp LOS	D	C	B	B	D	A	
Approach Vol, veh/h	932		948			2404	
Approach Delay, s/veh	36.5		17.6			17.5	
Approach LOS	D		B			B	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	22.6	45.2				67.8	22.2
Change Period (Y+Rc), s	6.8	6.8				6.8	6.7
Max Green Setting (Gmax), s	16.2	37.2				60.2	16.3
Max Q Clear Time (g_c+I1), s	15.7	11.2				19.2	15.1
Green Ext Time (p_c), s	0.1	7.2				23.3	0.5

Intersection Summary		
HCM 6th Ctrl Delay		21.6
HCM 6th LOS		C

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	465	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	4	4	4	4	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1	0	-	0	1	1
Stage 1	-	-	-	-	1	-
Stage 2	-	-	-	-	0	-
Critical Hdwy	4.18	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.24	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1606	-	-	0	1021	1083
Stage 1	-	-	-	0	1022	-
Stage 2	-	-	-	0	-	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	1606	-	-	-	1021	1083
Mov Cap-2 Maneuver	-	-	-	-	933	-
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	SBLn1	SBLn2
Capacity (veh/h)	1606	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Int Delay, s/veh	1.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	795	5	32	643	30	66
Future Vol, veh/h	795	5	32	643	30	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	-	400	415	-	0	0
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	4	4	4	4	2	2
Mvmt Flow	837	5	34	677	32	69

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	842	0	1244	419
Stage 1	-	-	-	-	837	-
Stage 2	-	-	-	-	407	-
Critical Hdwy	-	-	4.18	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.24	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	777	-	166	583
Stage 1	-	-	-	-	385	-
Stage 2	-	-	-	-	641	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	777	-	159	583
Mov Cap-2 Maneuver	-	-	-	-	283	-
Stage 1	-	-	-	-	385	-
Stage 2	-	-	-	-	613	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	14.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	283	583	-	-	777	-
HCM Lane V/C Ratio	0.112	0.119	-	-	0.043	-
HCM Control Delay (s)	19.3	12	-	-	9.8	-
HCM Lane LOS	C	B	-	-	A	-
HCM 95th %tile Q(veh)	0.4	0.4	-	-	0.1	-

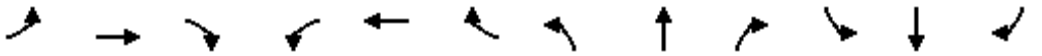
Intersection	
Int Delay, s/veh	3.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	40	684	19	13	790	28	32	4	38	60	0	189
Future Vol, veh/h	40	684	19	13	790	28	32	4	38	60	0	189
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	460	-	250	345	-	400	-	-	-	0	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	4	4	4	4	4	4	2	2	2	2	2	2
Mvmt Flow	42	720	20	14	832	29	34	4	40	63	0	199

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	861	0	0	740	0	0	1248	1693	360	1306	-	416
Stage 1	-	-	-	-	-	-	804	804	-	860	-	-
Stage 2	-	-	-	-	-	-	444	889	-	446	-	-
Critical Hdwy	4.18	-	-	4.18	-	-	7.54	6.54	6.94	7.54	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	-	-
Follow-up Hdwy	2.24	-	-	2.24	-	-	3.52	4.02	3.32	3.52	-	3.32
Pot Cap-1 Maneuver	764	-	-	849	-	-	130	92	637	117	0	585
Stage 1	-	-	-	-	-	-	343	394	-	317	0	-
Stage 2	-	-	-	-	-	-	563	360	-	561	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	764	-	-	849	-	-	81	86	637	102	-	585
Mov Cap-2 Maneuver	-	-	-	-	-	-	185	194	-	211	-	-
Stage 1	-	-	-	-	-	-	324	372	-	300	-	-
Stage 2	-	-	-	-	-	-	365	354	-	491	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0.1	21.8	17.9
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	292	764	-	-	849	-	-	211	585
HCM Lane V/C Ratio	0.267	0.055	-	-	0.016	-	-	0.299	0.34
HCM Control Delay (s)	21.8	10	-	-	9.3	-	-	29.2	14.3
HCM Lane LOS	C	A	-	-	A	-	-	D	B
HCM 95th %tile Q(veh)	1.1	0.2	-	-	0	-	-	1.2	1.5



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	648	99	360	110	140	132	573	618	136	84	305	492
Future Volume (veh/h)	648	99	360	110	140	132	573	618	136	84	305	492
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	1826	1841	1826	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	682	104	379	116	147	139	603	651	143	88	321	518
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	5	4	5	4	4	4	4	4	4	4	4	4
Cap, veh/h	628	795	1063	209	359	222	555	1617	817	134	1158	1420
Arrive On Green	0.19	0.23	0.23	0.06	0.10	0.10	0.16	0.46	0.46	0.04	0.33	0.33
Sat Flow, veh/h	3374	3497	2723	3401	3497	1560	3401	3497	1560	3401	3497	2745
Grp Volume(v), veh/h	682	104	379	116	147	139	603	651	143	88	321	518
Grp Sat Flow(s),veh/h/ln	1687	1749	1362	1700	1749	1560	1700	1749	1560	1700	1749	1373
Q Serve(g_s), s	24.2	3.1	12.8	4.3	5.1	10.9	21.2	16.0	6.2	3.3	8.8	14.6
Cycle Q Clear(g_c), s	24.2	3.1	12.8	4.3	5.1	10.9	21.2	16.0	6.2	3.3	8.8	14.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	628	795	1063	209	359	222	555	1617	817	134	1158	1420
V/C Ratio(X)	1.09	0.13	0.36	0.55	0.41	0.63	1.09	0.40	0.17	0.66	0.28	0.36
Avail Cap(c_a), veh/h	628	861	1114	241	457	266	555	1617	817	199	1158	1420
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.9	40.0	28.1	59.3	54.6	52.5	54.4	23.1	16.2	61.6	32.0	18.7
Incr Delay (d2), s/veh	61.5	0.1	0.2	2.3	0.7	3.4	64.0	0.7	0.5	5.3	0.6	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	22.7	2.4	7.4	3.4	4.0	7.8	20.7	10.7	4.0	2.7	6.7	8.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	114.4	40.1	28.3	61.6	55.4	55.9	118.4	23.8	16.7	66.9	32.6	19.4
LnGrp LOS	F	D	C	E	E	E	F	C	B	E	C	B
Approach Vol, veh/h		1165			402			1397			927	
Approach Delay, s/veh		79.7			57.3			63.9			28.5	
Approach LOS		E			E			E			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	29.0	49.8	14.8	36.4	11.9	66.9	31.0	20.2
Change Period (Y+Rc), s	7.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
Max Green Setting (Gmax), s	21.2	39.4	9.2	32.0	7.6	54.0	24.2	17.0
Max Q Clear Time (g_c+I1), s	23.2	16.6	6.3	14.8	5.3	18.0	26.2	12.9
Green Ext Time (p_c), s	0.0	4.1	0.1	1.9	0.0	5.0	0.0	0.5

Intersection Summary	
HCM 6th Ctrl Delay	59.5
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.
User approved ignoring U-Turning movement.

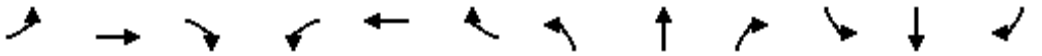
Intersection	
Int Delay, s/veh	0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1125	51	23	759	25	19
Future Vol, veh/h	1125	51	23	759	25	19
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	225	240	-	0	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	4	4	4	4	2	2
Mvmt Flow	1184	54	24	799	26	20

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1238	0	1632	592
Stage 1	-	-	-	-	1184	-
Stage 2	-	-	-	-	448	-
Critical Hdwy	-	-	4.18	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.24	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	547	-	92	449
Stage 1	-	-	-	-	253	-
Stage 2	-	-	-	-	611	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	547	-	88	449
Mov Cap-2 Maneuver	-	-	-	-	193	-
Stage 1	-	-	-	-	253	-
Stage 2	-	-	-	-	584	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	22.1
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	256	-	-	547	-
HCM Lane V/C Ratio	0.181	-	-	0.044	-
HCM Control Delay (s)	22.1	-	-	11.9	-
HCM Lane LOS	C	-	-	B	-
HCM 95th %tile Q(veh)	0.6	-	-	0.1	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	1068	26	24	728	14	26	0	5	28	0	47
Future Volume (veh/h)	43	1068	26	24	728	14	26	0	5	28	0	47
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	1841	1841	1841	1841	1841	1841	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	52	1302	32	29	888	17	32	0	6	34	0	57
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	4	4	4	4	4	4	2	2	2	2	2	2
Cap, veh/h	461	1978	882	311	1897	846	205	0	164	241	0	164
Arrive On Green	0.07	0.57	0.57	0.05	0.54	0.54	0.10	0.00	0.10	0.10	0.00	0.10
Sat Flow, veh/h	1753	3497	1560	1753	3497	1560	1346	0	1585	1363	0	1585
Grp Volume(v), veh/h	52	1302	32	29	888	17	32	0	6	34	0	57
Grp Sat Flow(s),veh/h/ln	1753	1749	1560	1753	1749	1560	1346	0	1585	1363	0	1585
Q Serve(g_s), s	0.8	18.4	0.7	0.5	11.1	0.4	1.6	0.0	0.2	1.6	0.0	2.4
Cycle Q Clear(g_c), s	0.8	18.4	0.7	0.5	11.1	0.4	3.4	0.0	0.2	1.8	0.0	2.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	461	1978	882	311	1897	846	205	0	164	241	0	164
V/C Ratio(X)	0.11	0.66	0.04	0.09	0.47	0.02	0.16	0.00	0.04	0.14	0.00	0.35
Avail Cap(c_a), veh/h	531	1978	882	421	1897	846	217	0	177	254	0	177
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	6.4	10.8	6.9	8.2	10.0	7.6	31.2	0.0	28.9	29.7	0.0	29.8
Incr Delay (d2), s/veh	0.1	1.7	0.1	0.1	0.8	0.0	0.4	0.0	0.1	0.1	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.4	9.6	0.3	0.3	6.3	0.2	0.9	0.0	0.2	1.0	0.0	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	6.5	12.5	7.0	8.3	10.9	7.6	31.5	0.0	29.0	29.8	0.0	30.3
LnGrp LOS	A	B	A	A	B	A	C	A	C	C	A	C
Approach Vol, veh/h		1386			934			38			91	
Approach Delay, s/veh		12.1			10.7			31.1			30.1	
Approach LOS		B			B			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.0	47.9		12.6	12.7	46.3		12.6				
Change Period (Y+Rc), s	7.5	7.5		* 5.2	7.5	7.5		* 5.2				
Max Green Setting (Gmax), s	8.0	38.8		* 8	8.0	38.8		* 8				
Max Q Clear Time (g_c+I1), s	2.5	20.4		4.4	2.8	13.1		5.4				
Green Ext Time (p_c), s	0.0	13.3		0.0	0.0	11.4		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		12.6	
HCM 6th LOS		B	

Notes

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

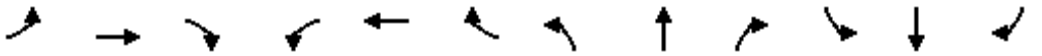
Intersection	
Int Delay, s/veh	1.2

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	41	53	842	76	57	777
Future Vol, veh/h	41	53	842	76	57	777
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	295	390	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	4	4	4	4
Mvmt Flow	43	56	886	80	60	818

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1415	443	0	0	966	0
Stage 1	886	-	-	-	-	-
Stage 2	529	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.18	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.24	-
Pot Cap-1 Maneuver	128	562	-	-	697	-
Stage 1	363	-	-	-	-	-
Stage 2	555	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	117	562	-	-	697	-
Mov Cap-2 Maneuver	244	-	-	-	-	-
Stage 1	363	-	-	-	-	-
Stage 2	507	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	16.8	0	0.7
HCM LOS	C		

Minor Lane/Major Mvmt	NET	NER	NWLn1	NWLn2	SWL	SWT
Capacity (veh/h)	-	-	244	562	697	-
HCM Lane V/C Ratio	-	-	0.177	0.099	0.086	-
HCM Control Delay (s)	-	-	22.9	12.1	10.7	-
HCM Lane LOS	-	-	C	B	B	-
HCM 95th %tile Q(veh)	-	-	0.6	0.3	0.3	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	112	854	0	0	697	77	0	0	0	81	0	79
Future Volume (veh/h)	112	854	0	0	697	77	0	0	0	81	0	79
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	0	0	1841	1841	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	118	899	0	0	734	81	0	0	0	85	0	83
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	0	0	4	4	2	2	2	2	2	2
Cap, veh/h	578	2765	0	0	2230	995	2	2	1	161	0	143
Arrive On Green	0.09	0.79	0.00	0.00	0.64	0.64	0.00	0.00	0.00	0.09	0.00	0.09
Sat Flow, veh/h	1753	3589	0	0	3589	1560	1781	1870	1585	1781	0	1585
Grp Volume(v), veh/h	118	899	0	0	734	81	0	0	0	85	0	83
Grp Sat Flow(s),veh/h/ln	1753	1749	0	0	1749	1560	1781	1870	1585	1781	0	1585
Q Serve(g_s), s	2.0	8.0	0.0	0.0	10.6	2.2	0.0	0.0	0.0	5.0	0.0	5.5
Cycle Q Clear(g_c), s	2.0	8.0	0.0	0.0	10.6	2.2	0.0	0.0	0.0	5.0	0.0	5.5
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	578	2765	0	0	2230	995	2	2	1	161	0	143
V/C Ratio(X)	0.20	0.33	0.00	0.00	0.33	0.08	0.00	0.00	0.00	0.53	0.00	0.58
Avail Cap(c_a), veh/h	582	2765	0	0	2230	995	486	510	432	178	0	159
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	4.7	3.2	0.0	0.0	9.1	7.6	0.0	0.0	0.0	47.8	0.0	48.0
Incr Delay (d2), s/veh	0.1	0.3	0.0	0.0	0.4	0.2	0.0	0.0	0.0	2.7	0.0	4.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.9	2.8	0.0	0.0	6.1	1.2	0.0	0.0	0.0	4.2	0.0	4.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.9	3.6	0.0	0.0	9.5	7.8	0.0	0.0	0.0	50.5	0.0	52.3
LnGrp LOS	A	A	A	A	A	A	A	A	A	D	A	D
Approach Vol, veh/h		1017			815			0			168	
Approach Delay, s/veh		3.7			9.4			0.0			51.4	
Approach LOS		A			A						D	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		94.1		15.9	16.8	77.2		0.0				
Change Period (Y+Rc), s		7.1		6.0	7.1	7.1		6.0				
Max Green Setting (Gmax), s		49.9		11.0	10.0	32.8		30.0				
Max Q Clear Time (g_c+I1), s		10.0		7.5	4.0	12.6		0.0				
Green Ext Time (p_c), s		13.2		0.0	0.1	8.3		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			10.0									
HCM 6th LOS			B									

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	0	11	28	1	24	26	813	48	40	799	57
Future Vol, veh/h	9	0	11	28	1	24	26	813	48	40	799	57
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	-	-	-	-	-	-	240	-	300	425	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	4	4	4	4	4	4
Mvmt Flow	9	0	12	29	1	25	27	856	51	42	841	60

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1438	1916	451	1415	1895	428	901	0	0	907	0	0
Stage 1	955	955	-	910	910	-	-	-	-	-	-	-
Stage 2	483	961	-	505	985	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.18	-	-	4.18	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.24	-	-	2.24	-	-
Pot Cap-1 Maneuver	94	67	556	97	69	575	738	-	-	734	-	-
Stage 1	278	335	-	296	352	-	-	-	-	-	-	-
Stage 2	534	333	-	518	324	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	83	61	556	88	63	575	738	-	-	734	-	-
Mov Cap-2 Maneuver	188	163	-	197	168	-	-	-	-	-	-	-
Stage 1	268	316	-	285	339	-	-	-	-	-	-	-
Stage 2	490	321	-	478	306	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	18.1	21.1	0.3	0.5
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	738	-	-	296	279	734	-	-
HCM Lane V/C Ratio	0.037	-	-	0.071	0.2	0.057	-	-
HCM Control Delay (s)	10.1	-	-	18.1	21.1	10.2	-	-
HCM Lane LOS	B	-	-	C	C	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.2	0.7	0.2	-	-

Movement	EBL	EBR	SET	SER	NWL	NWT	
Lane Configurations							
Traffic Volume (veh/h)	334	447	1704	437	402	981	
Future Volume (veh/h)	334	447	1704	437	402	981	
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	1841	1841	1841	1841	1841	1841	
Adj Flow Rate, veh/h	352	471	1794	460	423	1033	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	
Percent Heavy Veh, %	4	4	4	4	4	4	
Cap, veh/h	438	757	2365	1292	500	3530	
Arrive On Green	0.13	0.13	0.47	0.47	0.15	0.70	
Sat Flow, veh/h	3401	2745	5191	2745	3401	5191	
Grp Volume(v), veh/h	352	471	1794	460	423	1033	
Grp Sat Flow(s),veh/h/ln	1700	1373	1675	1373	1700	1675	
Q Serve(g_s), s	8.0	10.3	23.5	8.5	9.7	6.2	
Cycle Q Clear(g_c), s	8.0	10.3	23.5	8.5	9.7	6.2	
Prop In Lane	1.00	1.00		1.00	1.00		
Lane Grp Cap(c), veh/h	438	757	2365	1292	500	3530	
V/C Ratio(X)	0.80	0.62	0.76	0.36	0.85	0.29	
Avail Cap(c_a), veh/h	438	757	2365	1292	519	3530	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	33.9	25.3	17.4	13.5	33.2	4.5	
Incr Delay (d2), s/veh	10.1	1.4	2.3	0.8	11.3	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	6.5	6.5	12.8	4.3	8.0	2.5	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	44.0	26.8	19.8	14.2	44.5	4.7	
LnGrp LOS	D	C	B	B	D	A	
Approach Vol, veh/h	823		2254			1456	
Approach Delay, s/veh	34.1		18.6			16.3	
Approach LOS	C		B			B	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	18.6	44.4				63.0	17.0
Change Period (Y+Rc), s	6.8	6.8				6.8	6.7
Max Green Setting (Gmax), s	12.2	37.2				56.2	10.3
Max Q Clear Time (g_c+I1), s	11.7	25.5				8.2	12.3
Green Ext Time (p_c), s	0.1	9.9				10.2	0.0

Intersection Summary		
HCM 6th Ctrl Delay	20.7	
HCM 6th LOS	C	

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	465	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	4	4	4	4	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1	0	-	0	1	1
Stage 1	-	-	-	-	1	-
Stage 2	-	-	-	-	0	-
Critical Hdwy	4.18	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.24	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1606	-	-	0	1021	1083
Stage 1	-	-	-	0	1022	-
Stage 2	-	-	-	0	-	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	1606	-	-	-	1021	1083
Mov Cap-2 Maneuver	-	-	-	-	933	-
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	SBLn1	SBLn2
Capacity (veh/h)	1606	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	787	16	42	819	21	37
Future Vol, veh/h	787	16	42	819	21	37
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	400	415	-	0	0
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	4	4	4	4	2	2
Mvmt Flow	828	17	44	862	22	39

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	845	0	1347	414
Stage 1	-	-	-	-	828	-
Stage 2	-	-	-	-	519	-
Critical Hdwy	-	-	4.18	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.24	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	775	-	142	587
Stage 1	-	-	-	-	389	-
Stage 2	-	-	-	-	562	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	775	-	134	587
Mov Cap-2 Maneuver	-	-	-	-	264	-
Stage 1	-	-	-	-	389	-
Stage 2	-	-	-	-	530	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	14.6
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	264	587	-	-	775	-
HCM Lane V/C Ratio	0.084	0.066	-	-	0.057	-
HCM Control Delay (s)	19.9	11.6	-	-	9.9	-
HCM Lane LOS	C	B	-	-	A	-
HCM 95th %tile Q(veh)	0.3	0.2	-	-	0.2	-

Intersection	
Int Delay, s/veh	4.5

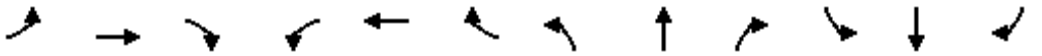
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	165	887	66	37	674	82	44	7	33	35	0	65
Future Vol, veh/h	165	887	66	37	674	82	44	7	33	35	0	65
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	460	-	250	345	-	400	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	4	4	4	4	4	4	2	2	2	2	2	2
Mvmt Flow	174	934	69	39	709	86	46	7	35	37	0	68

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	795	0	0	1003	0	0	1715	2155	467	1606	2138	355
Stage 1	-	-	-	-	-	-	1282	1282	-	787	787	-
Stage 2	-	-	-	-	-	-	433	873	-	819	1351	-
Critical Hdwy	4.18	-	-	4.18	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.24	-	-	2.24	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	809	-	-	674	-	-	58	47	542	70	48	641
Stage 1	-	-	-	-	-	-	175	234	-	351	401	-
Stage 2	-	-	-	-	-	-	571	366	-	336	217	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	809	-	-	674	-	-	~ 41	35	542	49	35	641
Mov Cap-2 Maneuver	-	-	-	-	-	-	102	97	-	127	100	-
Stage 1	-	-	-	-	-	-	137	184	-	276	378	-
Stage 2	-	-	-	-	-	-	481	345	-	237	170	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.6	0.5	59.4	22.9
HCM LOS			F	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	149	809	-	-	674	-	-	127	641
HCM Lane V/C Ratio	0.593	0.215	-	-	0.058	-	-	0.29	0.107
HCM Control Delay (s)	59.4	10.7	-	-	10.7	-	-	44.5	11.3
HCM Lane LOS	F	B	-	-	B	-	-	E	B
HCM 95th %tile Q(veh)	3.1	0.8	-	-	0.2	-	-	1.1	0.4

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	560	141	546	120	122	62	380	356	111	134	538	565
Future Volume (veh/h)	560	141	546	120	122	62	380	356	111	134	538	565
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	1826	1841	1826	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	589	148	575	126	128	65	400	375	117	141	566	595
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	5	4	5	4	4	4	4	4	4	4	4	4
Cap, veh/h	596	739	904	227	354	248	411	1531	787	196	1281	1491
Arrive On Green	0.18	0.21	0.21	0.07	0.10	0.10	0.12	0.44	0.44	0.06	0.37	0.37
Sat Flow, veh/h	3374	3497	2723	3401	3497	1560	3401	3497	1560	3401	3497	2745
Grp Volume(v), veh/h	589	148	575	126	128	65	400	375	117	141	566	595
Grp Sat Flow(s),veh/h/ln	1687	1749	1362	1700	1749	1560	1700	1749	1560	1700	1749	1373
Q Serve(g_s), s	20.9	4.2	21.5	4.3	4.1	4.4	14.1	8.1	4.8	4.9	14.7	15.2
Cycle Q Clear(g_c), s	20.9	4.2	21.5	4.3	4.1	4.4	14.1	8.1	4.8	4.9	14.7	15.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	596	739	904	227	354	248	411	1531	787	196	1281	1491
V/C Ratio(X)	0.99	0.20	0.64	0.56	0.36	0.26	0.97	0.24	0.15	0.72	0.44	0.40
Avail Cap(c_a), veh/h	596	880	1014	255	495	311	411	1531	787	278	1281	1491
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.3	39.0	33.9	54.3	50.3	44.3	52.6	21.2	15.9	55.6	28.7	16.0
Incr Delay (d2), s/veh	33.8	0.1	1.1	2.1	0.6	0.6	37.1	0.4	0.4	5.1	1.1	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	16.8	3.2	11.3	3.4	3.2	3.1	12.6	5.9	3.1	3.9	10.2	8.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	83.0	39.1	35.0	56.4	50.9	44.8	89.7	21.6	16.3	60.7	29.9	16.8
LnGrp LOS	F	D	D	E	D	D	F	C	B	E	C	B
Approach Vol, veh/h		1312			319			892			1302	
Approach Delay, s/veh		57.0			51.9			51.5			27.2	
Approach LOS		E			D			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.3	50.8	14.8	32.1	13.7	59.3	28.0	18.9
Change Period (Y+Rc), s	7.8	6.8	6.8	* 6.8	6.8	6.8	6.8	6.8
Max Green Setting (Gmax), s	14.5	39.1	9.0	* 30	9.8	44.8	21.2	17.0
Max Q Clear Time (g_c+I1), s	16.1	17.2	6.3	23.5	6.9	10.1	22.9	6.4
Green Ext Time (p_c), s	0.0	6.2	0.1	1.9	0.1	2.7	0.0	0.6

Intersection Summary	
HCM 6th Ctrl Delay	45.2
HCM 6th LOS	D

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.

Intersection	
Int Delay, s/veh	1.5

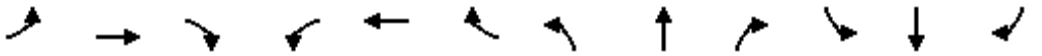
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1135	35	17	1603	66	29
Future Vol, veh/h	1135	35	17	1603	66	29
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	225	240	-	0	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	4	4	4	4	2	2
Mvmt Flow	1195	37	18	1687	69	31

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1232	0	2075	598
Stage 1	-	-	-	-	1195	-
Stage 2	-	-	-	-	880	-
Critical Hdwy	-	-	4.18	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.24	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	550	-	~ 46	445
Stage 1	-	-	-	-	250	-
Stage 2	-	-	-	-	366	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	550	-	~ 44	445
Mov Cap-2 Maneuver	-	-	-	-	153	-
Stage 1	-	-	-	-	250	-
Stage 2	-	-	-	-	354	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	42.9
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	191	-	-	550	-
HCM Lane V/C Ratio	0.524	-	-	0.033	-
HCM Control Delay (s)	42.9	-	-	11.8	-
HCM Lane LOS	E	-	-	B	-
HCM 95th %tile Q(veh)	2.7	-	-	0.1	-

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	122	977	37	23	1332	138	106	40	24	88	6	178
Future Volume (veh/h)	122	977	37	23	1332	138	106	40	24	88	6	178
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	1841	1841	1841	1841	1841	1841	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	149	1191	45	28	1624	168	129	49	29	107	7	217
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	4	4	4	4	4	4	2	2	2	2	2	2
Cap, veh/h	275	1909	852	310	1733	773	131	170	101	233	13	245
Arrive On Green	0.10	0.55	0.55	0.05	0.50	0.50	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	1753	3497	1560	1753	3497	1560	1157	1101	652	940	81	1585
Grp Volume(v), veh/h	149	1191	45	28	1624	168	129	0	78	114	0	217
Grp Sat Flow(s),veh/h/ln	1753	1749	1560	1753	1749	1560	1157	0	1753	1022	0	1585
Q Serve(g_s), s	3.0	18.7	1.1	0.6	34.9	4.9	2.8	0.0	3.1	6.3	0.0	10.7
Cycle Q Clear(g_c), s	3.0	18.7	1.1	0.6	34.9	4.9	12.3	0.0	3.1	9.5	0.0	10.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.37	0.94		1.00
Lane Grp Cap(c), veh/h	275	1909	852	310	1733	773	131	0	271	245	0	245
V/C Ratio(X)	0.54	0.62	0.05	0.09	0.94	0.22	0.98	0.00	0.29	0.46	0.00	0.89
Avail Cap(c_a), veh/h	281	1909	852	404	1733	773	131	0	271	245	0	245
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	16.8	12.5	8.5	9.9	18.9	11.4	39.4	0.0	29.8	33.9	0.0	33.0
Incr Delay (d2), s/veh	1.6	1.5	0.1	0.1	11.1	0.6	72.7	0.0	0.6	0.5	0.0	29.1
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	2.2	10.4	0.6	0.3	20.4	2.8	8.9	0.0	2.4	3.8	0.0	10.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.4	14.0	8.6	10.0	30.0	12.0	112.1	0.0	30.4	34.4	0.0	62.2
LnGrp LOS	B	B	A	B	C	B	F	A	C	C	A	E
Approach Vol, veh/h		1385			1820			207			331	
Approach Delay, s/veh		14.3			28.1			81.3			52.6	
Approach LOS		B			C			F			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.2	51.0		17.5	15.2	47.0		17.5				
Change Period (Y+Rc), s	7.5	7.5		* 5.2	7.5	7.5		* 5.2				
Max Green Setting (Gmax), s	8.0	39.5		* 12	8.0	39.5		* 12				
Max Q Clear Time (g_c+I1), s	2.6	20.7		12.7	5.0	36.9		14.3				
Green Ext Time (p_c), s	0.0	12.6		0.0	0.1	2.5		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		28.1	
HCM 6th LOS		C	

Notes

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

Intersection	
Int Delay, s/veh	2.9

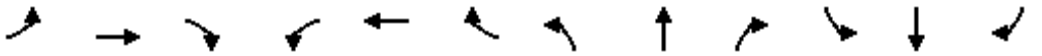
Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	96	96	1174	59	35	1124
Future Vol, veh/h	96	96	1174	59	35	1124
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	295	390	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	4	4	4	4
Mvmt Flow	101	101	1236	62	37	1183

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1902	618	0	0	1298	0
Stage 1	1236	-	-	-	-	-
Stage 2	666	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.18	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.24	-
Pot Cap-1 Maneuver	~ 61	432	-	-	519	-
Stage 1	237	-	-	-	-	-
Stage 2	472	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 57	432	-	-	519	-
Mov Cap-2 Maneuver	164	-	-	-	-	-
Stage 1	237	-	-	-	-	-
Stage 2	438	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	36.5	0	0.4
HCM LOS	E		

Minor Lane/Major Mvmt	NET	NER	NWLn1	NWLn2	SWL	SWT
Capacity (veh/h)	-	-	164	432	519	-
HCM Lane V/C Ratio	-	-	0.616	0.234	0.071	-
HCM Control Delay (s)	-	-	57	15.9	12.5	-
HCM Lane LOS	-	-	F	C	B	-
HCM 95th %tile Q(veh)	-	-	3.4	0.9	0.2	-

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	61	1070	0	0	1187	46	0	0	0	130	0	209
Future Volume (veh/h)	61	1070	0	0	1187	46	0	0	0	130	0	209
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	1841	1841	0	0	1841	1841	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	64	1126	0	0	1249	48	0	0	0	137	0	220
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	0	0	4	4	2	2	2	2	2	2
Cap, veh/h	350	2577	0	0	2113	943	1	2	1	274	0	244
Arrive On Green	0.07	0.74	0.00	0.00	0.60	0.60	0.00	0.00	0.00	0.15	0.00	0.15
Sat Flow, veh/h	1753	3589	0	0	3589	1560	1781	1870	1585	1781	0	1585
Grp Volume(v), veh/h	64	1126	0	0	1249	48	0	0	0	137	0	220
Grp Sat Flow(s),veh/h/ln	1753	1749	0	0	1749	1560	1781	1870	1585	1781	0	1585
Q Serve(g_s), s	1.4	15.0	0.0	0.0	26.4	1.5	0.0	0.0	0.0	8.5	0.0	16.4
Cycle Q Clear(g_c), s	1.4	15.0	0.0	0.0	26.4	1.5	0.0	0.0	0.0	8.5	0.0	16.4
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	350	2577	0	0	2113	943	1	2	1	274	0	244
V/C Ratio(X)	0.18	0.44	0.00	0.00	0.59	0.05	0.00	0.00	0.00	0.50	0.00	0.90
Avail Cap(c_a), veh/h	367	2577	0	0	2113	943	445	468	396	282	0	251
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.8	6.1	0.0	0.0	14.6	9.7	0.0	0.0	0.0	46.5	0.0	49.9
Incr Delay (d2), s/veh	0.2	0.5	0.0	0.0	1.2	0.1	0.0	0.0	0.0	1.4	0.0	31.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.8	7.5	0.0	0.0	14.3	0.9	0.0	0.0	0.0	7.0	0.0	13.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.0	6.7	0.0	0.0	15.8	9.8	0.0	0.0	0.0	47.9	0.0	81.6
LnGrp LOS	A	A	A	A	B	A	A	A	A	D	A	F
Approach Vol, veh/h		1190			1297			0			357	
Approach Delay, s/veh		6.8			15.6			0.0			68.7	
Approach LOS		A			B						E	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		95.5		24.5	15.9	79.6		0.0				
Change Period (Y+Rc), s		7.1		6.0	7.1	7.1		6.0				
Max Green Setting (Gmax), s		51.9		19.0	10.0	34.8		30.0				
Max Q Clear Time (g_c+I1), s		17.0		18.4	3.4	28.4		0.0				
Green Ext Time (p_c), s		16.7		0.1	0.0	5.2		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			18.6									
HCM 6th LOS			B									

Intersection	
Int Delay, s/veh	4.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	19	0	9	74	0	63	6	1235	43	37	1064	12
Future Vol, veh/h	19	0	9	74	0	63	6	1235	43	37	1064	12
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	-	-	-	-	-	-	240	-	300	425	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	4	4	4	4	4	4
Mvmt Flow	20	0	9	78	0	66	6	1300	45	39	1120	13

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1867	2562	567	1950	2523	650	1133	0	0	1345	0	0
Stage 1	1205	1205	-	1312	1312	-	-	-	-	-	-	-
Stage 2	662	1357	-	638	1211	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.18	-	-	4.18	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.24	-	-	2.24	-	-
Pot Cap-1 Maneuver	45	26	467	~ 39	27	412	601	-	-	498	-	-
Stage 1	195	255	-	167	227	-	-	-	-	-	-	-
Stage 2	417	215	-	431	253	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	35	24	467	~ 36	25	412	601	-	-	498	-	-
Mov Cap-2 Maneuver	123	102	-	119	115	-	-	-	-	-	-	-
Stage 1	193	235	-	165	225	-	-	-	-	-	-	-
Stage 2	346	213	-	389	233	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	32.3	79.5	0.1	0.4
HCM LOS	D	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	601	-	-	161	177	498	-	-
HCM Lane V/C Ratio	0.011	-	-	0.183	0.815	0.078	-	-
HCM Control Delay (s)	11.1	-	-	32.3	79.5	12.8	-	-
HCM Lane LOS	B	-	-	D	F	B	-	-
HCM 95th %tile Q(veh)	0	-	-	0.6	5.6	0.3	-	-

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

Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Volume (veh/h)	695	640	934	323	791	1942
Future Volume (veh/h)	695	640	934	323	791	1942
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	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	732	674	983	340	833	2044
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4
Cap, veh/h	690	1167	1869	1021	755	3327
Arrive On Green	0.20	0.20	0.37	0.37	0.22	0.66
Sat Flow, veh/h	3401	2745	5191	2745	3401	5191
Grp Volume(v), veh/h	732	674	983	340	833	2044
Grp Sat Flow(s),veh/h/ln	1700	1373	1675	1373	1700	1675
Q Serve(g_s), s	20.3	18.7	15.3	8.9	22.2	23.2
Cycle Q Clear(g_c), s	20.3	18.7	15.3	8.9	22.2	23.2
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	690	1167	1869	1021	755	3327
V/C Ratio(X)	1.06	0.58	0.53	0.33	1.10	0.61
Avail Cap(c_a), veh/h	690	1167	1869	1021	755	3327
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.8	21.9	24.5	22.5	38.9	9.6
Incr Delay (d2), s/veh	51.3	0.6	1.1	0.9	64.8	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	19.2	9.3	9.8	5.1	23.2	11.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	91.2	22.5	25.6	23.4	103.7	10.5
LnGrp LOS	F	C	C	C	F	B
Approach Vol, veh/h	1406		1323			2877
Approach Delay, s/veh	58.3		25.0			37.5
Approach LOS	E		C			D

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	29.0	44.0				73.0	27.0
Change Period (Y+Rc), s	6.8	6.8				6.8	6.7
Max Green Setting (Gmax), s	22.2	37.2				66.2	20.3
Max Q Clear Time (g_c+I1), s	24.2	17.3				25.2	22.3
Green Ext Time (p_c), s	0.0	9.2				26.2	0.0

Intersection Summary	
HCM 6th Ctrl Delay	39.7
HCM 6th LOS	D

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	465	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	4	4	4	4	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1	0	-	0	1	1
Stage 1	-	-	-	-	1	-
Stage 2	-	-	-	-	0	-
Critical Hdwy	4.18	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.24	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1606	-	-	0	1021	1083
Stage 1	-	-	-	0	1022	-
Stage 2	-	-	-	0	-	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	1606	-	-	-	1021	1083
Mov Cap-2 Maneuver	-	-	-	-	933	-
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	SBLn1	SBLn2
Capacity (veh/h)	1606	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Int Delay, s/veh	1.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1268	11	36	1080	34	70
Future Vol, veh/h	1268	11	36	1080	34	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	-	400	415	-	0	0
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	4	4	4	4	2	2
Mvmt Flow	1335	12	38	1137	36	74

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1347	0	1980	668
Stage 1	-	-	-	-	1335	-
Stage 2	-	-	-	-	645	-
Critical Hdwy	-	-	4.18	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.24	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	497	-	54	401
Stage 1	-	-	-	-	210	-
Stage 2	-	-	-	-	484	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	497	-	50	401
Mov Cap-2 Maneuver	-	-	-	-	150	-
Stage 1	-	-	-	-	210	-
Stage 2	-	-	-	-	447	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	22.7
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	150	401	-	-	497	-
HCM Lane V/C Ratio	0.239	0.184	-	-	0.076	-
HCM Control Delay (s)	36.4	16	-	-	12.8	-
HCM Lane LOS	E	C	-	-	B	-
HCM 95th %tile Q(veh)	0.9	0.7	-	-	0.2	-

Intersection	
Int Delay, s/veh	6.6

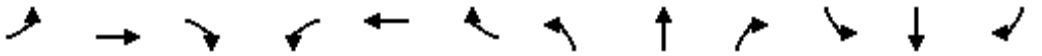
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	44	1008	27	27	1294	34	36	5	53	64	0	190
Future Vol, veh/h	44	1008	27	27	1294	34	36	5	53	64	0	190
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	460	-	250	345	-	400	-	-	-	0	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	4	4	4	4	4	4	2	2	2	2	2	2
Mvmt Flow	46	1061	28	28	1362	36	38	5	56	67	0	200

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1398	0	0	1089	0	0	1890	2607	531	2043	-	681
Stage 1	-	-	-	-	-	-	1153	1153	-	1418	-	-
Stage 2	-	-	-	-	-	-	737	1454	-	625	-	-
Critical Hdwy	4.18	-	-	4.18	-	-	7.54	6.54	6.94	7.54	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	-	-
Follow-up Hdwy	2.24	-	-	2.24	-	-	3.52	4.02	3.32	3.52	-	3.32
Pot Cap-1 Maneuver	475	-	-	625	-	-	43	24	493	~ 33	0	393
Stage 1	-	-	-	-	-	-	210	270	-	144	0	-
Stage 2	-	-	-	-	-	-	376	193	-	439	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	475	-	-	625	-	-	~ 19	21	493	~ 25	-	393
Mov Cap-2 Maneuver	-	-	-	-	-	-	79	89	-	93	-	-
Stage 1	-	-	-	-	-	-	190	244	-	130	-	-
Stage 2	-	-	-	-	-	-	176	184	-	344	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0.2	64.6	45.1
HCM LOS			F	E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	152	475	-	-	625	-	-	93	393
HCM Lane V/C Ratio	0.651	0.098	-	-	0.045	-	-	0.724	0.509
HCM Control Delay (s)	64.6	13.4	-	-	11	-	-	110	23.3
HCM Lane LOS	F	B	-	-	B	-	-	F	C
HCM 95th %tile Q(veh)	3.6	0.3	-	-	0.1	-	-	3.7	2.8

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	666	263	464	292	372	351	719	719	363	224	394	553
Future Volume (veh/h)	666	263	464	292	372	351	719	719	363	224	394	553
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	1826	1841	1826	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	701	277	488	307	392	369	757	757	382	236	415	582
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	5	4	5	4	4	4	4	4	4	4	4	4
Cap, veh/h	702	759	1194	359	401	313	753	1435	804	292	937	1307
Arrive On Green	0.21	0.22	0.22	0.11	0.11	0.11	0.22	0.41	0.41	0.09	0.27	0.27
Sat Flow, veh/h	3374	3497	2723	3401	3497	1560	3401	3497	1560	3401	3497	2745
Grp Volume(v), veh/h	701	277	488	307	392	369	757	757	382	236	415	582
Grp Sat Flow(s),veh/h/ln	1687	1749	1362	1700	1749	1560	1700	1749	1560	1700	1749	1373
Q Serve(g_s), s	31.2	10.1	18.4	13.3	16.8	17.2	33.2	24.4	23.6	10.2	14.8	21.1
Cycle Q Clear(g_c), s	31.2	10.1	18.4	13.3	16.8	17.2	33.2	24.4	23.6	10.2	14.8	21.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	702	759	1194	359	401	313	753	1435	804	292	937	1307
V/C Ratio(X)	1.00	0.36	0.41	0.86	0.98	1.18	1.01	0.53	0.47	0.81	0.44	0.45
Avail Cap(c_a), veh/h	702	759	1194	476	401	313	753	1435	804	621	937	1307
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.4	49.9	28.8	66.0	66.2	60.0	58.4	33.3	23.3	67.4	45.6	26.1
Incr Delay (d2), s/veh	33.7	0.3	0.2	11.2	38.9	109.1	34.2	1.4	2.0	5.3	1.5	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	22.9	7.8	9.9	10.3	14.6	30.8	24.5	15.7	13.7	8.1	10.7	11.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	93.1	50.2	29.0	77.2	105.1	169.0	92.6	34.7	25.3	72.7	47.1	27.2
LnGrp LOS	F	D	C	E	F	F	F	C	C	E	D	C
Approach Vol, veh/h		1466			1068			1896			1233	
Approach Delay, s/veh		63.7			119.2			55.9			42.6	
Approach LOS		E			F			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	41.0	47.0	22.6	39.4	19.7	68.3	38.0	24.0
Change Period (Y+Rc), s	7.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
Max Green Setting (Gmax), s	33.2	40.2	21.0	27.4	27.4	47.0	31.2	17.2
Max Q Clear Time (g_c+I1), s	35.2	23.1	15.3	20.4	12.2	26.4	33.2	19.2
Green Ext Time (p_c), s	0.0	4.6	0.5	2.2	0.6	6.2	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	67.0
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.
User approved ignoring U-Turning movement.

Intersection	
Int Delay, s/veh	1.2

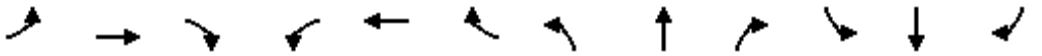
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1596	67	32	1108	36	21
Future Vol, veh/h	1596	67	32	1108	36	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	225	240	-	0	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	4	4	4	4	2	2
Mvmt Flow	1680	71	34	1166	38	22

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1751	0	2331	840
Stage 1	-	-	-	-	1680	-
Stage 2	-	-	-	-	651	-
Critical Hdwy	-	-	4.18	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.24	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	345	-	~ 31	309
Stage 1	-	-	-	-	136	-
Stage 2	-	-	-	-	481	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	345	-	~ 28	309
Mov Cap-2 Maneuver	-	-	-	-	103	-
Stage 1	-	-	-	-	136	-
Stage 2	-	-	-	-	433	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	50.3
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	137	-	-	345	-
HCM Lane V/C Ratio	0.438	-	-	0.098	-
HCM Control Delay (s)	50.3	-	-	16.6	-
HCM Lane LOS	F	-	-	C	-
HCM 95th %tile Q(veh)	1.9	-	-	0.3	-

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	49	1529	43	46	1064	18	62	0	13	34	0	51
Future Volume (veh/h)	49	1529	43	46	1064	18	62	0	13	34	0	51
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	1841	1841	1841	1841	1841	1841	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	60	1865	52	56	1298	22	76	0	16	41	0	62
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	4	4	4	4	4	4	2	2	2	2	2	2
Cap, veh/h	348	1978	882	235	1969	878	181	0	163	223	0	163
Arrive On Green	0.07	0.57	0.57	0.07	0.56	0.56	0.10	0.00	0.10	0.10	0.00	0.10
Sat Flow, veh/h	1753	3497	1560	1753	3497	1560	1340	0	1585	1273	0	1585
Grp Volume(v), veh/h	60	1865	52	56	1298	22	76	0	16	41	0	62
Grp Sat Flow(s),veh/h/ln	1753	1749	1560	1753	1749	1560	1340	0	1585	1273	0	1585
Q Serve(g_s), s	1.0	38.6	1.2	0.9	20.1	0.5	4.4	0.0	0.7	2.1	0.0	2.8
Cycle Q Clear(g_c), s	1.0	38.6	1.2	0.9	20.1	0.5	7.2	0.0	0.7	2.8	0.0	2.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	348	1978	882	235	1969	878	181	0	163	223	0	163
V/C Ratio(X)	0.17	0.94	0.06	0.24	0.66	0.03	0.42	0.00	0.10	0.18	0.00	0.38
Avail Cap(c_a), veh/h	398	1978	882	289	1969	878	181	0	163	223	0	163
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.3	15.7	7.6	16.9	11.8	7.5	36.0	0.0	31.6	32.9	0.0	32.6
Incr Delay (d2), s/veh	0.2	10.7	0.1	0.4	1.7	0.1	1.5	0.0	0.3	0.1	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.5	20.9	0.6	0.9	10.8	0.3	2.6	0.0	0.5	1.3	0.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.5	26.4	7.7	17.3	13.6	7.6	37.5	0.0	31.9	33.1	0.0	33.1
LnGrp LOS	A	C	A	B	B	A	D	A	C	C	A	C
Approach Vol, veh/h		1977			1376			92			103	
Approach Delay, s/veh		25.4			13.6			36.5			33.1	
Approach LOS		C			B			D			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.1	51.5		13.2	13.3	51.3		13.2				
Change Period (Y+Rc), s	7.5	7.5		* 5.2	7.5	7.5		* 5.2				
Max Green Setting (Gmax), s	8.0	43.8		* 8	8.0	43.8		* 8				
Max Q Clear Time (g_c+I1), s	2.9	40.6		4.8	3.0	22.1		9.2				
Green Ext Time (p_c), s	0.0	3.0		0.1	0.0	15.0		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		21.3	
HCM 6th LOS		C	

Notes

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

Intersection	
Int Delay, s/veh	1.4

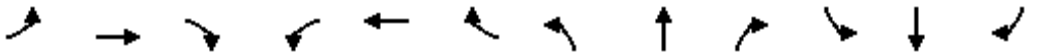
Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	45	57	1303	77	63	1181
Future Vol, veh/h	45	57	1303	77	63	1181
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	295	390	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	4	4	4	4
Mvmt Flow	47	60	1372	81	66	1243

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2126	686	0	0	1453	0
Stage 1	1372	-	-	-	-	-
Stage 2	754	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.18	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.24	-
Pot Cap-1 Maneuver	~ 43	390	-	-	452	-
Stage 1	201	-	-	-	-	-
Stage 2	425	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 37	390	-	-	452	-
Mov Cap-2 Maneuver	133	-	-	-	-	-
Stage 1	201	-	-	-	-	-
Stage 2	363	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	29.3	0	0.7
HCM LOS	D		

Minor Lane/Major Mvmt	NET	NER	NWLn1	NWLn2	SWL	SWT
Capacity (veh/h)	-	-	133	390	452	-
HCM Lane V/C Ratio	-	-	0.356	0.154	0.147	-
HCM Control Delay (s)	-	-	46.3	15.9	14.3	-
HCM Lane LOS	-	-	E	C	B	-
HCM 95th %tile Q(veh)	-	-	1.5	0.5	0.5	-

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	116	1315	0	0	1106	88	0	0	0	85	0	83
Future Volume (veh/h)	116	1315	0	0	1106	88	0	0	0	85	0	83
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	1841	1841	0	0	1841	1841	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	122	1384	0	0	1164	93	0	0	0	89	0	87
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	0	0	4	4	2	2	2	2	2	2
Cap, veh/h	419	2764	0	0	2228	994	2	2	1	161	0	143
Arrive On Green	0.09	0.79	0.00	0.00	0.64	0.64	0.00	0.00	0.00	0.09	0.00	0.09
Sat Flow, veh/h	1753	3589	0	0	3589	1560	1781	1870	1585	1781	0	1585
Grp Volume(v), veh/h	122	1384	0	0	1164	93	0	0	0	89	0	87
Grp Sat Flow(s),veh/h/ln	1753	1749	0	0	1749	1560	1781	1870	1585	1781	0	1585
Q Serve(g_s), s	2.1	15.1	0.0	0.0	19.9	2.5	0.0	0.0	0.0	5.3	0.0	5.8
Cycle Q Clear(g_c), s	2.1	15.1	0.0	0.0	19.9	2.5	0.0	0.0	0.0	5.3	0.0	5.8
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	419	2764	0	0	2228	994	2	2	1	161	0	143
V/C Ratio(X)	0.29	0.50	0.00	0.00	0.52	0.09	0.00	0.00	0.00	0.55	0.00	0.61
Avail Cap(c_a), veh/h	423	2764	0	0	2228	994	486	510	432	162	0	144
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	6.9	4.0	0.0	0.0	10.9	7.7	0.0	0.0	0.0	47.9	0.0	48.1
Incr Delay (d2), s/veh	0.3	0.7	0.0	0.0	0.9	0.2	0.0	0.0	0.0	4.0	0.0	7.0
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	1.0	5.4	0.0	0.0	10.6	1.4	0.0	0.0	0.0	4.5	0.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.2	4.6	0.0	0.0	11.7	7.9	0.0	0.0	0.0	51.9	0.0	55.2
LnGrp LOS	A	A	A	A	B	A	A	A	A	D	A	E
Approach Vol, veh/h		1506			1257			0			176	
Approach Delay, s/veh		4.9			11.4			0.0			53.5	
Approach LOS		A			B						D	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		94.0		16.0	16.9	77.2		0.0				
Change Period (Y+Rc), s		7.1		6.0	7.1	7.1		6.0				
Max Green Setting (Gmax), s		50.9		10.0	10.0	33.8		30.0				
Max Q Clear Time (g_c+I1), s		17.1		7.8	4.1	21.9		0.0				
Green Ext Time (p_c), s		21.0		0.0	0.1	8.6		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			10.6									
HCM 6th LOS			B									

Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	14	0	14	43	0	37	32	1244	74	63	1188	61
Future Vol, veh/h	14	0	14	43	0	37	32	1244	74	63	1188	61
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	-	-	-	-	-	-	240	-	300	425	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	4	4	4	4	4	4
Mvmt Flow	15	0	15	45	0	39	34	1309	78	66	1251	64

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2138	2870	658	2135	2824	655	1315	0	0	1387	0	0
Stage 1	1415	1415	-	1377	1377	-	-	-	-	-	-	-
Stage 2	723	1455	-	758	1447	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.18	-	-	4.18	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.24	-	-	2.24	-	-
Pot Cap-1 Maneuver	28	16	407	~ 28	17	409	511	-	-	479	-	-
Stage 1	144	202	-	153	211	-	-	-	-	-	-	-
Stage 2	384	193	-	365	195	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	22	13	407	~ 23	14	409	511	-	-	479	-	-
Mov Cap-2 Maneuver	89	69	-	95	79	-	-	-	-	-	-	-
Stage 1	134	174	-	143	197	-	-	-	-	-	-	-
Stage 2	324	180	-	303	168	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	35.8	58.1	0.3	0.7
HCM LOS	E	F		

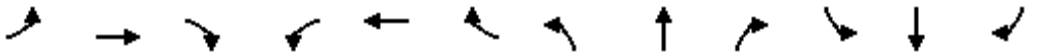
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	511	-	-	146	147	479	-	-
HCM Lane V/C Ratio	0.066	-	-	0.202	0.573	0.138	-	-
HCM Control Delay (s)	12.5	-	-	35.8	58.1	13.7	-	-
HCM Lane LOS	B	-	-	E	F	B	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.7	2.9	0.5	-	-

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

Movement	EBL	EBR	SET	SER	NWL	NWT	
Lane Configurations							
Traffic Volume (veh/h)	503	730	1855	647	620	1140	
Future Volume (veh/h)	503	730	1855	647	620	1140	
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	1841	1841	1841	1841	1841	1841	
Adj Flow Rate, veh/h	529	768	1953	681	653	1200	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	
Percent Heavy Veh, %	4	4	4	4	4	4	
Cap, veh/h	571	1022	2021	1104	695	3428	
Arrive On Green	0.17	0.17	0.40	0.40	0.20	0.68	
Sat Flow, veh/h	3401	2745	5191	2745	3401	5191	
Grp Volume(v), veh/h	529	768	1953	681	653	1200	
Grp Sat Flow(s),veh/h/ln	1700	1373	1675	1373	1700	1675	
Q Serve(g_s), s	13.8	15.1	34.2	17.7	17.0	9.0	
Cycle Q Clear(g_c), s	13.8	15.1	34.2	17.7	17.0	9.0	
Prop In Lane	1.00	1.00		1.00	1.00		
Lane Grp Cap(c), veh/h	571	1022	2021	1104	695	3428	
V/C Ratio(X)	0.93	0.75	0.97	0.62	0.94	0.35	
Avail Cap(c_a), veh/h	571	1022	2021	1104	695	3428	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	36.9	24.6	26.3	21.4	35.2	6.0	
Incr Delay (d2), s/veh	21.3	3.0	13.5	2.6	20.4	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	11.3	10.9	20.9	9.4	13.4	4.3	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	58.2	27.6	39.8	24.0	55.6	6.3	
LnGrp LOS	E	C	D	C	E	A	
Approach Vol, veh/h	1297		2634			1853	
Approach Delay, s/veh	40.1		35.7			23.6	
Approach LOS	D		D			C	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	25.2	43.0				68.2	21.8
Change Period (Y+Rc), s	6.8	6.8				6.8	6.7
Max Green Setting (Gmax), s	18.4	36.2				61.4	15.1
Max Q Clear Time (g_c+I1), s	19.0	36.2				11.0	17.1
Green Ext Time (p_c), s	0.0	0.0				12.8	0.0

Intersection Summary			
HCM 6th Ctrl Delay		32.8	
HCM 6th LOS		C	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	588	377	710	321	326	165	473	422	297	358	682	625
Future Volume (veh/h)	588	377	710	321	326	165	473	422	297	358	682	625
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	1826	1841	1826	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	619	397	747	338	343	174	498	444	313	377	718	658
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	5	4	5	4	4	4	4	4	4	4	4	4
Cap, veh/h	654	677	950	398	408	379	528	1238	735	429	1109	1403
Arrive On Green	0.19	0.19	0.19	0.12	0.12	0.12	0.16	0.35	0.35	0.13	0.32	0.32
Sat Flow, veh/h	3374	3497	2723	3401	3497	1560	3401	3497	1560	3401	3497	2745
Grp Volume(v), veh/h	619	397	747	338	343	174	498	444	313	377	718	658
Grp Sat Flow(s),veh/h/ln	1687	1749	1362	1700	1749	1560	1700	1749	1560	1700	1749	1373
Q Serve(g_s), s	23.6	13.4	25.2	12.7	12.5	12.4	18.8	12.2	17.3	14.2	22.9	20.0
Cycle Q Clear(g_c), s	23.6	13.4	25.2	12.7	12.5	12.4	18.8	12.2	17.3	14.2	22.9	20.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	654	677	950	398	408	379	528	1238	735	429	1109	1403
V/C Ratio(X)	0.95	0.59	0.79	0.85	0.84	0.46	0.94	0.36	0.43	0.88	0.65	0.47
Avail Cap(c_a), veh/h	654	677	950	518	457	401	528	1238	735	468	1109	1403
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.7	47.7	38.0	56.3	56.2	41.9	54.3	31.1	22.8	55.8	38.1	20.4
Incr Delay (d2), s/veh	22.9	1.3	4.4	10.1	12.1	0.9	25.2	0.8	1.8	16.2	2.9	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	17.4	9.8	16.3	9.8	10.1	8.3	14.8	8.9	10.6	11.2	15.2	10.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	74.6	49.0	42.4	66.4	68.4	42.8	79.6	31.9	24.6	72.0	41.1	21.6
LnGrp LOS	E	D	D	E	E	D	E	C	C	E	D	C
Approach Vol, veh/h		1763			855			1255			1753	
Approach Delay, s/veh		55.2			62.4			49.0			40.4	
Approach LOS		E			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	28.0	48.0	22.0	32.0	23.2	52.8	32.0	22.0
Change Period (Y+Rc), s	7.8	6.8	6.8	* 6.8	6.8	6.8	6.8	6.8
Max Green Setting (Gmax), s	20.2	39.4	19.8	* 23	17.9	42.7	25.2	17.0
Max Q Clear Time (g_c+I1), s	20.8	24.9	14.7	27.2	16.2	19.3	25.6	14.5
Green Ext Time (p_c), s	0.0	6.4	0.5	0.0	0.3	3.8	0.0	0.7

Intersection Summary	
HCM 6th Ctrl Delay	50.3
HCM 6th LOS	D

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.

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	465	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	4	4	4	4	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1	0	-	0	1	1
Stage 1	-	-	-	-	1	-
Stage 2	-	-	-	-	0	-
Critical Hdwy	4.18	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.24	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1606	-	-	0	1021	1083
Stage 1	-	-	-	0	1022	-
Stage 2	-	-	-	0	-	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	1606	-	-	-	1021	1083
Mov Cap-2 Maneuver	-	-	-	-	933	-
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	SBLn1	SBLn2
Capacity (veh/h)	1606	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Int Delay, s/veh	0.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1231	23	46	1247	27	45
Future Vol, veh/h	1231	23	46	1247	27	45
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	400	415	-	0	0
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	4	4	4	4	2	2
Mvmt Flow	1296	24	48	1313	28	47

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1320	0	2049	648
Stage 1	-	-	-	-	1296	-
Stage 2	-	-	-	-	753	-
Critical Hdwy	-	-	4.18	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.24	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	509	-	48	413
Stage 1	-	-	-	-	220	-
Stage 2	-	-	-	-	426	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	509	-	43	413
Mov Cap-2 Maneuver	-	-	-	-	146	-
Stage 1	-	-	-	-	220	-
Stage 2	-	-	-	-	386	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	22.6
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	146	413	-	-	509	-
HCM Lane V/C Ratio	0.195	0.115	-	-	0.095	-
HCM Control Delay (s)	35.5	14.8	-	-	12.8	-
HCM Lane LOS	E	B	-	-	B	-
HCM 95th %tile Q(veh)	0.7	0.4	-	-	0.3	-

Intersection	
Int Delay, s/veh	21.6

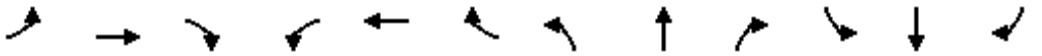
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	168	1341	85	51	1046	88	50	7	44	39	0	67
Future Vol, veh/h	168	1341	85	51	1046	88	50	7	44	39	0	67
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	460	-	250	345	-	400	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	4	4	4	4	4	4	2	2	2	2	2	2
Mvmt Flow	177	1412	89	54	1101	93	53	7	46	41	0	71

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1194	0	0	1501	0	0	2425	3068	706	2273	3064	551
Stage 1	-	-	-	-	-	-	1766	1766	-	1209	1209	-
Stage 2	-	-	-	-	-	-	659	1302	-	1064	1855	-
Critical Hdwy	4.18	-	-	4.18	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.24	-	-	2.24	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	569	-	-	433	-	-	~ 17	12	378	~ 22	12	478
Stage 1	-	-	-	-	-	-	87	135	-	194	254	-
Stage 2	-	-	-	-	-	-	419	229	-	238	122	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	569	-	-	433	-	-	~ 10	~ 7	378	~ 10	7	478
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 42	19	-	49	25	-
Stage 1	-	-	-	-	-	-	60	93	-	134	222	-
Stage 2	-	-	-	-	-	-	313	200	-	132	84	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.5	0.6	$ 518	86.9
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	60	569	-	-	433	-	-	49	478
HCM Lane V/C Ratio	1.772	0.311	-	-	0.124	-	-	0.838	0.148
HCM Control Delay (s)	$ 518	14.2	-	-	14.5	-	-	212.4	13.8
HCM Lane LOS	F	B	-	-	B	-	-	F	B
HCM 95th %tile Q(veh)	9.8	1.3	-	-	0.4	-	-	3.5	0.5

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	588	377	710	321	326	165	473	422	297	358	682	625
Future Volume (veh/h)	588	377	710	321	326	165	473	422	297	358	682	625
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	1826	1841	1826	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	619	397	747	338	343	174	498	444	313	377	718	658
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	5	4	5	4	4	4	4	4	4	4	4	4
Cap, veh/h	654	677	950	398	408	379	528	1238	735	429	1109	1403
Arrive On Green	0.19	0.19	0.19	0.12	0.12	0.12	0.16	0.35	0.35	0.13	0.32	0.32
Sat Flow, veh/h	3374	3497	2723	3401	3497	1560	3401	3497	1560	3401	3497	2745
Grp Volume(v), veh/h	619	397	747	338	343	174	498	444	313	377	718	658
Grp Sat Flow(s),veh/h/ln	1687	1749	1362	1700	1749	1560	1700	1749	1560	1700	1749	1373
Q Serve(g_s), s	23.6	13.4	25.2	12.7	12.5	12.4	18.8	12.2	17.3	14.2	22.9	20.0
Cycle Q Clear(g_c), s	23.6	13.4	25.2	12.7	12.5	12.4	18.8	12.2	17.3	14.2	22.9	20.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	654	677	950	398	408	379	528	1238	735	429	1109	1403
V/C Ratio(X)	0.95	0.59	0.79	0.85	0.84	0.46	0.94	0.36	0.43	0.88	0.65	0.47
Avail Cap(c_a), veh/h	654	677	950	518	457	401	528	1238	735	468	1109	1403
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.7	47.7	38.0	56.3	56.2	41.9	54.3	31.1	22.8	55.8	38.1	20.4
Incr Delay (d2), s/veh	22.9	1.3	4.4	10.1	12.1	0.9	25.2	0.8	1.8	16.2	2.9	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	17.4	9.8	16.3	9.8	10.1	8.3	14.8	8.9	10.6	11.2	15.2	10.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	74.6	49.0	42.4	66.4	68.4	42.8	79.6	31.9	24.6	72.0	41.1	21.6
LnGrp LOS	E	D	D	E	E	D	E	C	C	E	D	C
Approach Vol, veh/h		1763			855			1255			1753	
Approach Delay, s/veh		55.2			62.4			49.0			40.4	
Approach LOS		E			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	28.0	48.0	22.0	32.0	23.2	52.8	32.0	22.0
Change Period (Y+Rc), s	7.8	6.8	6.8	* 6.8	6.8	6.8	6.8	6.8
Max Green Setting (Gmax), s	20.2	39.4	19.8	* 23	17.9	42.7	25.2	17.0
Max Q Clear Time (g_c+I1), s	20.8	24.9	14.7	27.2	16.2	19.3	25.6	14.5
Green Ext Time (p_c), s	0.0	6.4	0.5	0.0	0.3	3.8	0.0	0.7

Intersection Summary	
HCM 6th Ctrl Delay	50.3
HCM 6th LOS	D

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.

Intersection	
Int Delay, s/veh	3.5

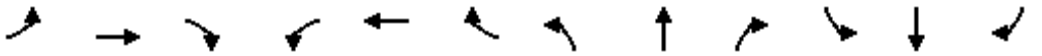
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1480	50	22	2026	71	36
Future Vol, veh/h	1480	50	22	2026	71	36
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	225	240	-	0	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	4	4	4	4	2	2
Mvmt Flow	1558	53	23	2133	75	38

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1611	0	2671	779
Stage 1	-	-	-	-	1558	-
Stage 2	-	-	-	-	1113	-
Critical Hdwy	-	-	4.18	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.24	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	392	-	~ 18	339
Stage 1	-	-	-	-	159	-
Stage 2	-	-	-	-	276	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	392	-	~ 17	339
Mov Cap-2 Maneuver	-	-	-	-	97	-
Stage 1	-	-	-	-	159	-
Stage 2	-	-	-	-	260	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	115
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	128	-	-	392	-
HCM Lane V/C Ratio	0.88	-	-	0.059	-
HCM Control Delay (s)	115	-	-	14.8	-
HCM Lane LOS	F	-	-	B	-
HCM 95th %tile Q(veh)	5.6	-	-	0.2	-

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	129	1304	44	25	1747	151	151	40	28	90	10	183
Future Volume (veh/h)	129	1304	44	25	1747	151	151	40	28	90	10	183
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	1841	1841	1841	1841	1841	1841	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	157	1590	54	30	2130	184	184	49	34	110	12	223
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	4	4	4	4	4	4	2	2	2	2	2	2
Cap, veh/h	152	2086	930	198	2023	903	169	226	157	270	27	349
Arrive On Green	0.06	0.60	0.60	0.04	0.58	0.58	0.22	0.22	0.22	0.22	0.22	0.22
Sat Flow, veh/h	1753	3497	1560	1753	3497	1560	1145	1028	714	1005	123	1585
Grp Volume(v), veh/h	157	1590	54	30	2130	184	184	0	83	122	0	223
Grp Sat Flow(s),veh/h/ln	1753	1749	1560	1753	1749	1560	1145	0	1742	1128	0	1585
Q Serve(g_s), s	8.0	47.1	2.0	0.9	81.0	7.9	14.3	0.0	5.5	11.0	0.0	17.9
Cycle Q Clear(g_c), s	8.0	47.1	2.0	0.9	81.0	7.9	30.8	0.0	5.5	16.5	0.0	17.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.41	0.90		1.00
Lane Grp Cap(c), veh/h	152	2086	930	198	2023	903	169	0	383	297	0	349
V/C Ratio(X)	1.04	0.76	0.06	0.15	1.05	0.20	1.09	0.00	0.22	0.41	0.00	0.64
Avail Cap(c_a), veh/h	152	2086	930	229	2023	903	169	0	383	297	0	349
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	47.3	20.9	11.8	18.3	29.5	14.1	65.0	0.0	44.7	51.2	0.0	49.6
Incr Delay (d2), s/veh	82.8	2.7	0.1	0.3	35.5	0.5	95.9	0.0	0.3	0.3	0.0	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	10.6	25.5	1.3	0.6	53.6	5.0	16.6	0.0	4.4	7.1	0.0	11.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	130.2	23.6	11.9	18.6	65.0	14.6	160.9	0.0	45.0	51.5	0.0	52.6
LnGrp LOS	F	C	B	B	F	B	F	A	D	D	A	D
Approach Vol, veh/h		1801			2344			267			345	
Approach Delay, s/veh		32.5			60.5			124.9			52.2	
Approach LOS		C			E			F			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.0	91.0		36.0	15.5	88.5		36.0				
Change Period (Y+Rc), s	7.5	7.5		* 5.2	7.5	7.5		* 5.2				
Max Green Setting (Gmax), s	8.0	81.0		* 31	8.0	81.0		* 31				
Max Q Clear Time (g_c+I1), s	2.9	49.1		19.9	10.0	83.0		32.8				
Green Ext Time (p_c), s	0.0	24.2		0.7	0.0	0.0		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			52.9									
HCM 6th LOS			D									

Notes

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

Intersection	
Int Delay, s/veh	7.1

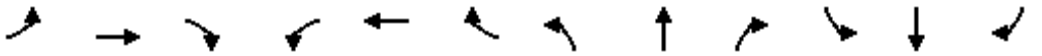
Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	100	100	1606	63	39	1634
Future Vol, veh/h	100	100	1606	63	39	1634
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	295	390	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	4	4	4	4
Mvmt Flow	105	105	1691	66	41	1720

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2633	846	0	0	1757	0
Stage 1	1691	-	-	-	-	-
Stage 2	942	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.18	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.24	-
Pot Cap-1 Maneuver	~ 19	306	-	-	344	-
Stage 1	135	-	-	-	-	-
Stage 2	340	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 17	306	-	-	344	-
Mov Cap-2 Maneuver	~ 92	-	-	-	-	-
Stage 1	135	-	-	-	-	-
Stage 2	300	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	122.5	0	0.4
HCM LOS	F		

Minor Lane/Major Mvmt	NET	NER	NWLn1	NWLn2	SWL	SWT
Capacity (veh/h)	-	-	92	306	344	-
HCM Lane V/C Ratio	-	-	1.144	0.344	0.119	-
HCM Control Delay (s)	-	-	222.2	22.8	16.9	-
HCM Lane LOS	-	-	F	C	C	-
HCM 95th %tile Q(veh)	-	-	7.2	1.5	0.4	-

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	1482	0	0	1704	51	0	0	0	137	0	217
Future Volume (veh/h)	65	1482	0	0	1704	51	0	0	0	137	0	217
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	1841	1841	0	0	1841	1841	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	68	1560	0	0	1794	54	0	0	0	144	0	228
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	0	0	4	4	2	2	2	2	2	2
Cap, veh/h	222	2620	0	0	2235	997	1	1	1	291	0	259
Arrive On Green	0.06	0.75	0.00	0.00	0.64	0.64	0.00	0.00	0.00	0.16	0.00	0.16
Sat Flow, veh/h	1753	3589	0	0	3589	1560	1781	1870	1585	1781	0	1585
Grp Volume(v), veh/h	68	1560	0	0	1794	54	0	0	0	144	0	228
Grp Sat Flow(s),veh/h/ln	1753	1749	0	0	1749	1560	1781	1870	1585	1781	0	1585
Q Serve(g_s), s	1.7	30.3	0.0	0.0	57.0	1.9	0.0	0.0	0.0	11.0	0.0	21.1
Cycle Q Clear(g_c), s	1.7	30.3	0.0	0.0	57.0	1.9	0.0	0.0	0.0	11.0	0.0	21.1
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	222	2620	0	0	2235	997	1	1	1	291	0	259
V/C Ratio(X)	0.31	0.60	0.00	0.00	0.80	0.05	0.00	0.00	0.00	0.49	0.00	0.88
Avail Cap(c_a), veh/h	228	2620	0	0	2235	997	356	374	317	475	0	423
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	22.4	8.5	0.0	0.0	20.1	10.1	0.0	0.0	0.0	57.1	0.0	61.3
Incr Delay (d2), s/veh	0.6	1.0	0.0	0.0	3.2	0.1	0.0	0.0	0.0	1.3	0.0	11.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.2	14.5	0.0	0.0	28.9	1.2	0.0	0.0	0.0	8.8	0.0	14.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.0	9.5	0.0	0.0	23.2	10.2	0.0	0.0	0.0	58.4	0.0	72.9
LnGrp LOS	C	A	A	A	C	B	A	A	A	E	A	E
Approach Vol, veh/h		1628			1848			0			372	
Approach Delay, s/veh		10.1			22.9			0.0			67.3	
Approach LOS		B			C						E	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		119.5		30.5	16.5	102.9		0.0				
Change Period (Y+Rc), s		7.1		6.0	7.1	7.1		6.0				
Max Green Setting (Gmax), s		60.9		40.0	10.0	43.8		30.0				
Max Q Clear Time (g_c+I1), s		32.3		23.1	3.7	59.0		0.0				
Green Ext Time (p_c), s		21.0		1.5	0.0	0.0		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			21.7									
HCM 6th LOS			C									

Intersection	
Int Delay, s/veh	33

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	24	0	12	101	0	85	10	1665	58	50	1536	19
Future Vol, veh/h	24	0	12	101	0	85	10	1665	58	50	1536	19
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	-	-	-	-	-	-	240	-	300	425	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	4	4	4	4	4	4
Mvmt Flow	25	0	13	106	0	89	11	1753	61	53	1617	20

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2632	3569	819	2690	3518	877	1637	0	0	1814	0	0
Stage 1	1733	1733	-	1775	1775	-	-	-	-	-	-	-
Stage 2	899	1836	-	915	1743	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.18	-	-	4.18	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.24	-	-	2.24	-	-
Pot Cap-1 Maneuver	~ 11	6	319	~ 10	6	292	383	-	-	326	-	-
Stage 1	91	141	-	~ 86	134	-	-	-	-	-	-	-
Stage 2	300	125	-	294	139	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 7	5	319	~ 8	5	292	383	-	-	326	-	-
Mov Cap-2 Maneuver	53	41	-	~ 59	55	-	-	-	-	-	-	-
Stage 1	88	118	-	~ 84	130	-	-	-	-	-	-	-
Stage 2	202	121	-	236	116	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	98.5	$ 606.3	0.1	0.6
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	383	-	-	73	93	326	-	-
HCM Lane V/C Ratio	0.027	-	-	0.519	2.105	0.161	-	-
HCM Control Delay (s)	14.7	-	-	98.5	$ 606.3	18.2	-	-
HCM Lane LOS	B	-	-	F	F	C	-	-
HCM 95th %tile Q(veh)	0.1	-	-	2.2	17.1	0.6	-	-

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

Movement	EBL	EBR	SET	SER	NWL	NWT	
Lane Configurations							
Traffic Volume (veh/h)	907	878	1142	471	1079	2104	
Future Volume (veh/h)	907	878	1142	471	1079	2104	
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	1841	1841	1841	1841	1841	1841	
Adj Flow Rate, veh/h	955	924	1202	496	1136	2215	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	
Percent Heavy Veh, %	4	4	4	4	4	4	
Cap, veh/h	906	1618	1335	730	1098	3202	
Arrive On Green	0.27	0.27	0.27	0.27	0.32	0.64	
Sat Flow, veh/h	3401	2745	5191	2745	3401	5191	
Grp Volume(v), veh/h	955	924	1202	496	1136	2215	
Grp Sat Flow(s),veh/h/ln	1700	1373	1675	1373	1700	1675	
Q Serve(g_s), s	37.3	29.2	32.3	22.7	45.2	40.0	
Cycle Q Clear(g_c), s	37.3	29.2	32.3	22.7	45.2	40.0	
Prop In Lane	1.00	1.00		1.00	1.00		
Lane Grp Cap(c), veh/h	906	1618	1335	730	1098	3202	
V/C Ratio(X)	1.05	0.57	0.90	0.68	1.03	0.69	
Avail Cap(c_a), veh/h	906	1618	1335	730	1098	3202	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	51.3	17.8	49.6	46.1	47.4	16.5	
Incr Delay (d2), s/veh	45.1	0.4	10.0	5.1	36.5	1.3	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(95%),veh/ln	29.2	13.2	20.6	12.7	32.8	20.5	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	96.5	18.2	59.6	51.1	83.9	17.7	
LnGrp LOS	F	B	E	D	F	B	
Approach Vol, veh/h	1879		1698			3351	
Approach Delay, s/veh	58.0		57.1			40.2	
Approach LOS	E		E			D	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	52.0	44.0				96.0	44.0
Change Period (Y+Rc), s	6.8	6.8				6.8	6.7
Max Green Setting (Gmax), s	45.2	37.2				89.2	37.3
Max Q Clear Time (g_c+I1), s	47.2	34.3				42.0	39.3
Green Ext Time (p_c), s	0.0	2.4				31.8	0.0

Intersection Summary		
HCM 6th Ctrl Delay	49.1	
HCM 6th LOS	D	

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	465	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	4	4	4	4	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1	0	-	0	1	1
Stage 1	-	-	-	-	1	-
Stage 2	-	-	-	-	0	-
Critical Hdwy	4.18	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.24	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1606	-	-	0	1021	1083
Stage 1	-	-	-	0	1022	-
Stage 2	-	-	-	0	-	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	1606	-	-	-	1021	1083
Mov Cap-2 Maneuver	-	-	-	-	933	-
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	SBLn1	SBLn2
Capacity (veh/h)	1606	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Int Delay, s/veh	1.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1741	16	41	1517	37	75
Future Vol, veh/h	1741	16	41	1517	37	75
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	400	415	-	0	0
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	4	4	4	4	2	2
Mvmt Flow	1833	17	43	1597	39	79

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1850	0	2718	917
Stage 1	-	-	-	-	1833	-
Stage 2	-	-	-	-	885	-
Critical Hdwy	-	-	4.18	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.24	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	316	-	~ 17	274
Stage 1	-	-	-	-	112	-
Stage 2	-	-	-	-	364	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	316	-	~ 15	274
Mov Cap-2 Maneuver	-	-	-	-	81	-
Stage 1	-	-	-	-	112	-
Stage 2	-	-	-	-	314	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	43.8
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	81	274	-	-	316	-
HCM Lane V/C Ratio	0.481	0.288	-	-	0.137	-
HCM Control Delay (s)	85.2	23.4	-	-	18.2	-
HCM Lane LOS	F	C	-	-	C	-
HCM 95th %tile Q(veh)	2	1.2	-	-	0.5	-

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

Intersection	
Int Delay, s/veh	80.3

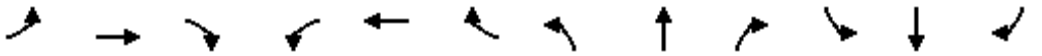
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	48	1333	34	40	1748	40	39	7	68	68	0	192
Future Vol, veh/h	48	1333	34	40	1748	40	39	7	68	68	0	192
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	460	-	250	345	-	400	-	-	-	0	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	4	4	4	4	4	4	2	2	2	2	2	2
Mvmt Flow	51	1403	36	42	1840	42	41	7	72	72	0	202

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1882	0	0	1439	0	0	2509	3471	702	2731	-	920
Stage 1	-	-	-	-	-	-	1505	1505	-	1924	-	-
Stage 2	-	-	-	-	-	-	1004	1966	-	807	-	-
Critical Hdwy	4.18	-	-	4.18	-	-	7.54	6.54	6.94	7.54	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	-	-
Follow-up Hdwy	2.24	-	-	2.24	-	-	3.52	4.02	3.32	3.52	-	3.32
Pot Cap-1 Maneuver	307	-	-	458	-	-	~ 14	~ 6	381	~ 10	0	273
Stage 1	-	-	-	-	-	-	127	182	-	~ 69	0	-
Stage 2	-	-	-	-	-	-	259	107	-	341	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	307	-	-	458	-	-	~ 3	~ 5	381	~ 6	-	273
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 9	34	-	~ 42	-	-
Stage 1	-	-	-	-	-	-	106	152	-	~ 58	-	-
Stage 2	-	-	-	-	-	-	61	97	-	220	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	0.3	$ 2126.2	179.5
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	24	307	-	-	458	-	-	42	273
HCM Lane V/C Ratio	5	0.165	-	-	0.092	-	-	1.704	0.74
HCM Control Delay (s)	$ 2126.2	19	-	-	13.7	-	-	$ 550.6	48.1
HCM Lane LOS	F	C	-	-	B	-	-	F	E
HCM 95th %tile Q(veh)	15	0.6	-	-	0.3	-	-	7.3	5.3

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	683	428	567	475	605	571	715	820	515	364	483	614
Future Volume (veh/h)	683	428	567	475	605	571	715	820	515	364	483	614
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	1826	1841	1826	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	719	451	597	500	637	601	753	863	542	383	508	646
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	5	4	5	4	4	4	4	4	4	4	4	4
Cap, veh/h	697	875	1322	555	723	522	800	1077	735	434	681	1102
Arrive On Green	0.21	0.25	0.25	0.16	0.21	0.21	0.24	0.31	0.31	0.13	0.19	0.19
Sat Flow, veh/h	3374	3497	2723	3401	3497	1560	3401	3497	1560	3401	3497	2745
Grp Volume(v), veh/h	719	451	597	500	637	601	753	863	542	383	508	646
Grp Sat Flow(s),veh/h/ln	1687	1749	1362	1700	1749	1560	1700	1749	1560	1700	1749	1373
Q Serve(g_s), s	37.2	20.0	26.0	26.0	31.8	37.2	39.1	40.8	50.7	19.9	24.6	33.2
Cycle Q Clear(g_c), s	37.2	20.0	26.0	26.0	31.8	37.2	39.1	40.8	50.7	19.9	24.6	33.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	697	875	1322	555	723	522	800	1077	735	434	681	1102
V/C Ratio(X)	1.03	0.52	0.45	0.90	0.88	1.15	0.94	0.80	0.74	0.88	0.75	0.59
Avail Cap(c_a), veh/h	697	875	1322	741	723	522	967	1077	735	650	681	1102
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	71.4	58.1	30.5	73.9	69.3	59.9	67.6	57.2	38.6	77.2	68.3	42.2
Incr Delay (d2), s/veh	42.4	0.5	0.2	11.5	12.2	88.7	13.9	6.3	6.5	9.4	7.3	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	27.8	13.7	13.3	17.8	21.7	49.8	25.3	25.8	27.7	14.2	17.2	17.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	113.8	58.6	30.8	85.4	81.5	148.6	81.5	63.6	45.1	86.5	75.6	44.5
LnGrp LOS	F	E	C	F	F	F	F	E	D	F	E	D
Approach Vol, veh/h		1767			1738			2158			1537	
Approach Delay, s/veh		71.6			105.8			65.2			65.2	
Approach LOS		E			F			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	50.2	41.8	36.2	51.8	29.8	62.2	44.0	44.0
Change Period (Y+Rc), s	7.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
Max Green Setting (Gmax), s	51.2	26.2	39.2	35.2	34.4	44.0	37.2	37.2
Max Q Clear Time (g_c+I1), s	41.1	35.2	28.0	28.0	21.9	52.7	39.2	39.2
Green Ext Time (p_c), s	1.2	0.0	1.4	3.1	1.1	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	76.6
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.
User approved ignoring U-Turning movement.

Intersection	
Int Delay, s/veh	3.6

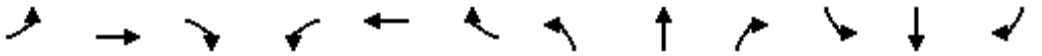
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1997	83	40	1457	48	23
Future Vol, veh/h	1997	83	40	1457	48	23
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	225	240	-	0	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	4	4	4	4	2	2
Mvmt Flow	2102	87	42	1534	51	24

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	2189	0	2953	1051
Stage 1	-	-	-	-	2102	-
Stage 2	-	-	-	-	851	-
Critical Hdwy	-	-	4.18	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.24	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	232	-	~ 11	223
Stage 1	-	-	-	-	80	-
Stage 2	-	-	-	-	379	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	232	-	~ 9	223
Mov Cap-2 Maneuver	-	-	-	-	61	-
Stage 1	-	-	-	-	80	-
Stage 2	-	-	-	-	310	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.6	173.5
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	80	-	-	232	-
HCM Lane V/C Ratio	0.934	-	-	0.181	-
HCM Control Delay (s)	173.5	-	-	23.9	-
HCM Lane LOS	F	-	-	C	-
HCM 95th %tile Q(veh)	5	-	-	0.6	-

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	1940	61	69	1400	22	97	0	20	40	0	56
Future Volume (veh/h)	55	1940	61	69	1400	22	97	0	20	40	0	56
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	1841	1841	1841	1841	1841	1841	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	67	2366	74	84	1707	27	118	0	24	49	0	68
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	4	4	4	4	4	4	2	2	2	2	2	2
Cap, veh/h	237	2308	1029	148	2315	1032	179	0	224	229	0	224
Arrive On Green	0.05	0.66	0.66	0.05	0.66	0.66	0.14	0.00	0.14	0.14	0.00	0.14
Sat Flow, veh/h	1753	3497	1560	1753	3497	1560	1333	0	1585	1257	0	1585
Grp Volume(v), veh/h	67	2366	74	84	1707	27	118	0	24	49	0	68
Grp Sat Flow(s),veh/h/ln	1753	1749	1560	1753	1749	1560	1333	0	1585	1257	0	1585
Q Serve(g_s), s	1.6	92.5	2.4	2.4	45.2	0.8	12.3	0.0	1.9	4.5	0.0	5.4
Cycle Q Clear(g_c), s	1.6	92.5	2.4	2.4	45.2	0.8	18.6	0.0	1.9	6.3	0.0	5.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	237	2308	1029	148	2315	1032	179	0	224	229	0	224
V/C Ratio(X)	0.28	1.03	0.07	0.57	0.74	0.03	0.66	0.00	0.11	0.21	0.00	0.30
Avail Cap(c_a), veh/h	626	2308	1029	158	2315	1032	179	0	224	229	0	224
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	15.5	23.8	8.5	38.6	15.7	8.2	62.8	0.0	52.5	55.3	0.0	54.0
Incr Delay (d2), s/veh	0.5	25.5	0.1	3.4	2.1	0.0	8.5	0.0	0.2	0.2	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.5	52.7	1.4	3.6	23.4	0.5	8.1	0.0	1.4	2.9	0.0	3.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.0	49.4	8.7	42.0	17.8	8.2	71.3	0.0	52.7	55.4	0.0	54.3
LnGrp LOS	B	F	A	D	B	A	E	A	D	E	A	D
Approach Vol, veh/h		2507			1818			142			117	
Approach Delay, s/veh		47.3			18.8			68.1			54.8	
Approach LOS		D			B			E			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.2	100.0		25.0	14.9	100.3		25.0				
Change Period (Y+Rc), s	7.5	7.5		* 5.2	7.5	7.5		* 5.2				
Max Green Setting (Gmax), s	8.5	92.5		* 20	38.5	62.5		* 20				
Max Q Clear Time (g_c+I1), s	4.4	94.5		8.3	3.6	47.2		20.6				
Green Ext Time (p_c), s	0.0	0.0		0.2	0.1	13.4		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		36.8
HCM 6th LOS		D

Notes

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

Intersection	
Int Delay, s/veh	2.5

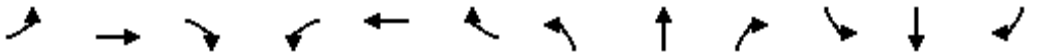
Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	48	61	1763	78	70	1586
Future Vol, veh/h	48	61	1763	78	70	1586
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	295	390	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	4	4	4	4
Mvmt Flow	51	64	1856	82	74	1669

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2839	928	0	0	1938	0
Stage 1	1856	-	-	-	-	-
Stage 2	983	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.18	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.24	-
Pot Cap-1 Maneuver	~ 14	270	-	-	292	-
Stage 1	109	-	-	-	-	-
Stage 2	323	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 10	270	-	-	292	-
Mov Cap-2 Maneuver	72	-	-	-	-	-
Stage 1	109	-	-	-	-	-
Stage 2	241	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	69.9	0	0.9
HCM LOS	F		

Minor Lane/Major Mvmt	NET	NER	NWLn1	NWLn2	SWL	SWT
Capacity (veh/h)	-	-	72	270	292	-
HCM Lane V/C Ratio	-	-	0.702	0.238	0.252	-
HCM Control Delay (s)	-	-	130.3	22.4	21.4	-
HCM Lane LOS	-	-	F	C	C	-
HCM 95th %tile Q(veh)	-	-	3.2	0.9	1	-

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	1775	0	0	1516	99	0	0	0	89	0	87
Future Volume (veh/h)	120	1775	0	0	1516	99	0	0	0	89	0	87
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	1841	1841	0	0	1841	1841	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	126	1868	0	0	1596	104	0	0	0	94	0	92
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	0	0	4	4	2	2	2	2	2	2
Cap, veh/h	310	2919	0	0	2493	1112	1	1	1	128	0	114
Arrive On Green	0.07	0.83	0.00	0.00	0.71	0.71	0.00	0.00	0.00	0.07	0.00	0.07
Sat Flow, veh/h	1753	3589	0	0	3589	1560	1781	1870	1585	1781	0	1585
Grp Volume(v), veh/h	126	1868	0	0	1596	104	0	0	0	94	0	92
Grp Sat Flow(s),veh/h/ln	1753	1749	0	0	1749	1560	1781	1870	1585	1781	0	1585
Q Serve(g_s), s	2.2	26.6	0.0	0.0	33.7	2.9	0.0	0.0	0.0	7.2	0.0	8.0
Cycle Q Clear(g_c), s	2.2	26.6	0.0	0.0	33.7	2.9	0.0	0.0	0.0	7.2	0.0	8.0
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	310	2919	0	0	2493	1112	1	1	1	128	0	114
V/C Ratio(X)	0.41	0.64	0.00	0.00	0.64	0.09	0.00	0.00	0.00	0.73	0.00	0.81
Avail Cap(c_a), veh/h	311	2919	0	0	2493	1112	382	401	340	242	0	215
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	11.3	4.1	0.0	0.0	10.6	6.2	0.0	0.0	0.0	63.6	0.0	64.0
Incr Delay (d2), s/veh	0.6	1.1	0.0	0.0	1.3	0.2	0.0	0.0	0.0	7.8	0.0	12.5
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	2.5	9.1	0.0	0.0	16.4	1.5	0.0	0.0	0.0	6.4	0.0	6.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.9	5.2	0.0	0.0	11.9	6.3	0.0	0.0	0.0	71.5	0.0	76.5
LnGrp LOS	B	A	A	A	B	A	A	A	A	E	A	E
Approach Vol, veh/h		1994			1700			0			186	
Approach Delay, s/veh		5.6			11.6			0.0			73.9	
Approach LOS		A			B						E	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		123.9		16.1	17.0	106.9		0.0				
Change Period (Y+Rc), s		7.1		6.0	7.1	7.1		6.0				
Max Green Setting (Gmax), s		71.9		19.0	10.0	54.8		30.0				
Max Q Clear Time (g_c+I1), s		28.6		10.0	4.2	35.7		0.0				
Green Ext Time (p_c), s		34.2		0.1	0.1	15.7		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			11.5									
HCM 6th LOS			B									

Intersection	
Int Delay, s/veh	13.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	19	0	17	58	0	50	38	1674	101	85	1577	65
Future Vol, veh/h	19	0	17	58	0	50	38	1674	101	85	1577	65
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	-	-	-	-	-	-	240	-	300	425	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	4	4	4	4	4	4
Mvmt Flow	20	0	18	61	0	53	40	1762	106	89	1660	68

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2833	3820	864	2850	3748	881	1728	0	0	1868	0	0
Stage 1	1872	1872	-	1842	1842	-	-	-	-	-	-	-
Stage 2	961	1948	-	1008	1906	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.18	-	-	4.18	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.24	-	-	2.24	-	-
Pot Cap-1 Maneuver	~ 8	4	297	~ 8	4	290	353	-	-	311	-	-
Stage 1	74	120	-	78	124	-	-	-	-	-	-	-
Stage 2	275	110	-	258	115	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 5	3	297	~ 5	3	290	353	-	-	311	-	-
Mov Cap-2 Maneuver	40	8	-	~ 44	29	-	-	-	-	-	-	-
Stage 1	66	86	-	69	110	-	-	-	-	-	-	-
Stage 2	200	98	-	173	82	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	110.6	$ 414.4	0.3	1
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	353	-	-	68	72	311	-	-
HCM Lane V/C Ratio	0.113	-	-	0.557	1.579	0.288	-	-
HCM Control Delay (s)	16.5	-	-	110.6	$ 414.4	21.2	-	-
HCM Lane LOS	C	-	-	F	F	C	-	-
HCM 95th %tile Q(veh)	0.4	-	-	2.3	9.6	1.2	-	-

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

Movement	EBL	EBR	SET	SER	NWL	NWT	
Lane Configurations							
Traffic Volume (veh/h)	672	1013	2005	857	838	1299	
Future Volume (veh/h)	672	1013	2005	857	838	1299	
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	1841	1841	1841	1841	1841	1841	
Adj Flow Rate, veh/h	707	1066	2111	902	882	1367	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	
Percent Heavy Veh, %	4	4	4	4	4	4	
Cap, veh/h	639	1206	2089	1141	855	3597	
Arrive On Green	0.19	0.19	0.42	0.42	0.25	0.72	
Sat Flow, veh/h	3401	2745	5191	2745	3401	5191	
Grp Volume(v), veh/h	707	1066	2111	902	882	1367	
Grp Sat Flow(s),veh/h/ln	1700	1373	1675	1373	1700	1675	
Q Serve(g_s), s	26.3	26.3	58.2	40.0	35.2	14.9	
Cycle Q Clear(g_c), s	26.3	26.3	58.2	40.0	35.2	14.9	
Prop In Lane	1.00	1.00		1.00	1.00		
Lane Grp Cap(c), veh/h	639	1206	2089	1141	855	3597	
V/C Ratio(X)	1.11	0.88	1.01	0.79	1.03	0.38	
Avail Cap(c_a), veh/h	639	1206	2089	1141	855	3597	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	56.8	36.0	40.9	35.6	52.4	7.8	
Incr Delay (d2), s/veh	68.5	7.9	22.3	5.6	39.1	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	24.9	23.6	35.9	19.8	26.9	8.4	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	125.3	43.9	63.2	41.2	91.5	8.1	
LnGrp LOS	F	D	F	D	F	A	
Approach Vol, veh/h	1773		3013			2249	
Approach Delay, s/veh	76.4		56.6			40.8	
Approach LOS	E		E			D	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	42.0	65.0				107.0	33.0
Change Period (Y+Rc), s	6.8	6.8				6.8	6.7
Max Green Setting (Gmax), s	35.2	58.2				100.2	26.3
Max Q Clear Time (g_c+I1), s	37.2	60.2				16.9	28.3
Green Ext Time (p_c), s	0.0	0.0				16.9	0.0

Intersection Summary		
HCM 6th Ctrl Delay	56.5	
HCM 6th LOS	E	

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	465	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	4	4	4	4	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1	0	-	0	1	1
Stage 1	-	-	-	-	1	-
Stage 2	-	-	-	-	0	-
Critical Hdwy	4.18	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.24	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1606	-	-	0	1021	1083
Stage 1	-	-	-	0	1022	-
Stage 2	-	-	-	0	-	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	1606	-	-	-	1021	1083
Mov Cap-2 Maneuver	-	-	-	-	933	-
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	SBLn1	SBLn2
Capacity (veh/h)	1606	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Int Delay, s/veh	1.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1674	30	50	1675	33	52
Future Vol, veh/h	1674	30	50	1675	33	52
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	400	415	-	0	0
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	4	4	4	4	2	2
Mvmt Flow	1762	32	53	1763	35	55

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1794	0	2750	881
Stage 1	-	-	-	-	1762	-
Stage 2	-	-	-	-	988	-
Critical Hdwy	-	-	4.18	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.24	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	332	-	~ 16	290
Stage 1	-	-	-	-	123	-
Stage 2	-	-	-	-	321	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	332	-	~ 13	290
Mov Cap-2 Maneuver	-	-	-	-	82	-
Stage 1	-	-	-	-	123	-
Stage 2	-	-	-	-	270	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	42.7
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	82	290	-	-	332	-
HCM Lane V/C Ratio	0.424	0.189	-	-	0.159	-
HCM Control Delay (s)	77.9	20.3	-	-	17.9	-
HCM Lane LOS	F	C	-	-	C	-
HCM 95th %tile Q(veh)	1.7	0.7	-	-	0.6	-

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

Intersection	
Int Delay, s/veh	224.1

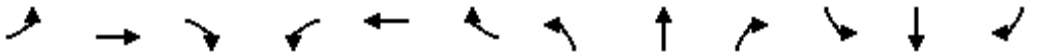
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	170	1795	104	65	1419	94	55	7	55	43	0	69
Future Vol, veh/h	170	1795	104	65	1419	94	55	7	55	43	0	69
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	460	-	250	345	-	400	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	4	4	4	4	4	4	2	2	2	2	2	2
Mvmt Flow	179	1889	109	68	1494	99	58	7	58	45	0	73

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1593	0	0	1998	0	0	3130	3976	945	2936	3986	747
Stage 1	-	-	-	-	-	-	2247	2247	-	1630	1630	-
Stage 2	-	-	-	-	-	-	883	1729	-	1306	2356	-
Critical Hdwy	4.18	-	-	4.18	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.24	-	-	2.24	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	398	-	-	276	-	-	~ 5	~ 3	263	~ 7	3	355
Stage 1	-	-	-	-	-	-	~ 43	77	-	106	158	-
Stage 2	-	-	-	-	-	-	307	141	-	169	68	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	398	-	-	276	-	-	~ 2	~ 1	263	~ 3	1	355
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 4	85	-	~ -10	~ -39	-
Stage 1	-	-	-	-	-	-	~ 24	42	-	58	119	-
Stage 2	-	-	-	-	-	-	184	106	-	60	37	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.7	0.9	$ 7382.6	
HCM LOS			F	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	8	398	-	-	276	-	-	+	355
HCM Lane V/C Ratio	15.395	0.45	-	-	0.248	-	-	-	0.205
HCM Control Delay (s)	$ 7382.6	21.2	-	-	22.3	-	-	-	17.7
HCM Lane LOS	F	C	-	-	C	-	-	-	C
HCM 95th %tile Q(veh)	17.1	2.3	-	-	1	-	-	-	0.8

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	616	612	824	522	529	268	566	487	482	582	827	685
Future Volume (veh/h)	616	612	824	522	529	268	566	487	482	582	827	685
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	1826	1841	1826	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	648	644	867	549	557	282	596	513	507	613	871	721
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	5	4	5	4	4	4	4	4	4	4	4	4
Cap, veh/h	677	716	1058	578	609	566	626	1686	1017	642	1679	1869
Arrive On Green	0.20	0.20	0.20	0.17	0.17	0.17	0.18	0.48	0.48	0.19	0.48	0.48
Sat Flow, veh/h	3374	3497	2723	3401	3497	1560	3401	3497	1560	3401	3497	2745
Grp Volume(v), veh/h	648	644	867	549	557	282	596	513	507	613	871	721
Grp Sat Flow(s),veh/h/ln	1687	1749	1362	1700	1749	1560	1700	1749	1560	1700	1749	1373
Q Serve(g_s), s	28.5	26.9	30.7	24.0	23.5	21.1	26.0	13.4	25.1	26.8	25.9	17.1
Cycle Q Clear(g_c), s	28.5	26.9	30.7	24.0	23.5	21.1	26.0	13.4	25.1	26.8	25.9	17.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	677	716	1058	578	609	566	626	1686	1017	642	1679	1869
V/C Ratio(X)	0.96	0.90	0.82	0.95	0.92	0.50	0.95	0.30	0.50	0.96	0.52	0.39
Avail Cap(c_a), veh/h	677	716	1058	578	609	566	626	1686	1017	642	1679	1869
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.3	58.1	41.1	61.6	60.9	37.2	60.6	23.6	13.5	60.2	27.0	10.4
Incr Delay (d2), s/veh	24.4	14.4	5.2	25.4	18.6	0.7	24.5	0.5	1.7	24.9	1.2	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	20.4	19.0	21.0	17.9	17.4	12.7	19.1	9.4	13.5	19.5	16.2	8.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	83.8	72.6	46.3	87.1	79.5	37.9	85.1	24.0	15.2	85.1	28.2	11.0
LnGrp LOS	F	E	D	F	E	D	F	C	B	F	C	B
Approach Vol, veh/h		2159			1388			1616			2205	
Approach Delay, s/veh		65.4			74.0			43.8			38.4	
Approach LOS		E			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	35.4	79.8	32.3	37.5	35.1	80.1	36.9	32.9
Change Period (Y+Rc), s	7.8	6.8	6.8	* 6.8	6.8	6.8	6.8	6.8
Max Green Setting (Gmax), s	27.6	39.0	25.5	* 31	28.3	39.3	30.1	25.1
Max Q Clear Time (g_c+I1), s	28.0	27.9	26.0	32.7	28.8	27.1	30.5	25.5
Green Ext Time (p_c), s	0.0	6.3	0.0	0.0	0.0	4.1	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	54.2
HCM 6th LOS	D

Notes

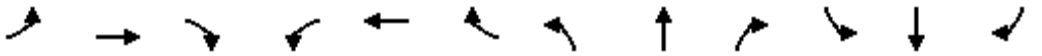
User approved pedestrian interval to be less than phase max green.

User approved ignoring U-Turning movement.

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

Appendix K

Build Synchro with Signals



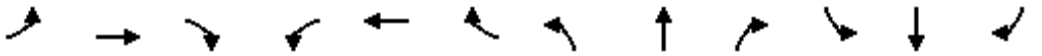
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	44	1008	27	27	1294	34	36	5	53	64	0	190
Future Volume (veh/h)	44	1008	27	27	1294	34	36	5	53	64	0	190
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	46	1061	28	28	1362	36	38	5	56	67	0	200
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	2	2	2	2	2	2
Cap, veh/h	300	2286	1020	385	2286	1020	140	31	176	350	0	405
Arrive On Green	1.00	1.00	1.00	1.00	1.00	1.00	0.26	0.26	0.26	0.26	0.00	0.26
Sat Flow, veh/h	380	3497	1560	510	3497	1560	410	120	690	1168	0	1585
Grp Volume(v), veh/h	46	1061	28	28	1362	36	99	0	0	67	0	200
Grp Sat Flow(s),veh/h/ln	380	1749	1560	510	1749	1560	1220	0	0	1168	0	1585
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	4.4	0.0	0.0	0.0	0.0	15.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	13.1	0.0	0.0	8.7	0.0	15.0
Prop In Lane	1.00		1.00	1.00		1.00	0.38		0.57	1.00		1.00
Lane Grp Cap(c), veh/h	300	2286	1020	385	2286	1020	347	0	0	350	0	405
V/C Ratio(X)	0.15	0.46	0.03	0.07	0.60	0.04	0.28	0.00	0.00	0.19	0.00	0.49
Avail Cap(c_a), veh/h	300	2286	1020	385	2286	1020	347	0	0	350	0	405
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.86	0.86	0.86	0.84	0.84	0.84	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	43.6	0.0	0.0	42.0	0.0	44.4
Incr Delay (d2), s/veh	0.9	0.6	0.0	0.3	1.0	0.1	2.1	0.0	0.0	1.2	0.0	4.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.1	0.3	0.0	0.1	0.6	0.0	5.7	0.0	0.0	3.6	0.0	10.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.9	0.6	0.0	0.3	1.0	0.1	45.7	0.0	0.0	43.2	0.0	48.6
LnGrp LOS	A	A	A	A	A	A	D	A	A	D	A	D
Approach Vol, veh/h		1135			1426			99			267	
Approach Delay, s/veh		0.6			0.9			45.7			47.3	
Approach LOS		A			A			D			D	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		41.0		99.0		41.0		99.0				
Change Period (Y+Rc), s		* 5.2		7.5		* 5.2		7.5				
Max Green Setting (Gmax), s		* 36		91.5		* 36		91.5				
Max Q Clear Time (g_c+I1), s		15.1		2.0		17.0		2.0				
Green Ext Time (p_c), s		0.5		10.7		1.0		13.6				

Intersection Summary												
HCM 6th Ctrl Delay			6.5									
HCM 6th LOS			A									

Notes

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



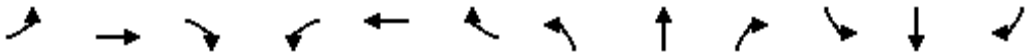
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	168	1341	85	51	1046	88	50	7	44	39	0	67
Future Volume (veh/h)	168	1341	85	51	1046	88	50	7	44	39	0	67
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		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	1841	1841	1841	1841	1841	1841	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	177	1412	89	54	1101	93	53	7	46	41	0	71
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	2	2	2	2	2	2
Cap, veh/h	376	2483	1108	292	2483	1108	162	30	119	300	0	325
Arrive On Green	1.00	1.00	1.00	1.00	1.00	1.00	0.21	0.21	0.21	0.21	0.00	0.21
Sat Flow, veh/h	461	3497	1560	344	3497	1560	613	145	581	1228	0	1585
Grp Volume(v), veh/h	177	1412	89	54	1101	93	106	0	0	41	0	71
Grp Sat Flow(s),veh/h/ln	461	1749	1560	344	1749	1560	1340	0	0	1228	0	1585
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	7.2	0.0	0.0	0.0	0.0	5.6
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	12.1	0.0	0.0	4.9	0.0	5.6
Prop In Lane	1.00		1.00	1.00		1.00	0.50		0.43	1.00		1.00
Lane Grp Cap(c), veh/h	376	2483	1108	292	2483	1108	311	0	0	300	0	325
V/C Ratio(X)	0.47	0.57	0.08	0.18	0.44	0.08	0.34	0.00	0.00	0.14	0.00	0.22
Avail Cap(c_a), veh/h	376	2483	1108	292	2483	1108	311	0	0	300	0	325
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.63	0.63	0.63	0.89	0.89	0.89	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	52.7	0.0	0.0	49.3	0.0	49.6
Incr Delay (d2), s/veh	2.7	0.6	0.1	1.2	0.5	0.1	3.0	0.0	0.0	0.9	0.0	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.5	0.4	0.0	0.2	0.3	0.1	6.9	0.0	0.0	2.5	0.0	4.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	2.7	0.6	0.1	1.2	0.5	0.1	55.6	0.0	0.0	50.3	0.0	51.1
LnGrp LOS	A	A	A	A	A	A	E	A	A	D	A	D
Approach Vol, veh/h		1678			1248			106			112	
Approach Delay, s/veh		0.8			0.5			55.6			50.8	
Approach LOS		A			A			E			D	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		36.0		114.0		36.0		114.0				
Change Period (Y+Rc), s		* 5.2		7.5		* 5.2		7.5				
Max Green Setting (Gmax), s		* 31		106.5		* 31		106.5				
Max Q Clear Time (g_c+I1), s		14.1		2.0		7.6		2.0				
Green Ext Time (p_c), s		0.5		23.0		0.4		11.2				

Intersection Summary												
HCM 6th Ctrl Delay			4.3									
HCM 6th LOS			A									

Notes

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



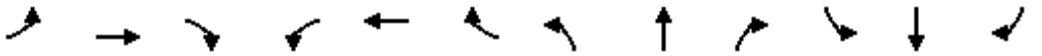
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	0	12	101	0	85	10	1665	58	50	1536	19
Future Volume (veh/h)	24	0	12	101	0	85	10	1665	58	50	1536	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	25	0	13	106	0	89	11	1753	61	53	1617	20
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	4	4	4	4	4	4
Cap, veh/h	234	19	83	209	14	113	212	2226	993	182	2252	28
Arrive On Green	0.16	0.00	0.16	0.16	0.00	0.16	0.64	0.64	0.64	0.64	0.64	0.64
Sat Flow, veh/h	856	115	505	739	82	689	302	3497	1560	254	3538	44
Grp Volume(v), veh/h	38	0	0	195	0	0	11	1753	61	53	798	839
Grp Sat Flow(s),veh/h/ln	1475	0	0	1510	0	0	302	1749	1560	254	1749	1833
Q Serve(g_s), s	0.0	0.0	0.0	6.6	0.0	0.0	1.6	23.3	0.9	12.2	19.5	19.5
Cycle Q Clear(g_c), s	1.2	0.0	0.0	7.8	0.0	0.0	21.2	23.3	0.9	35.5	19.5	19.5
Prop In Lane	0.66		0.34	0.54		0.46	1.00		1.00	1.00		0.02
Lane Grp Cap(c), veh/h	336	0	0	335	0	0	212	2226	993	182	1113	1166
V/C Ratio(X)	0.11	0.00	0.00	0.58	0.00	0.00	0.05	0.79	0.06	0.29	0.72	0.72
Avail Cap(c_a), veh/h	566	0	0	580	0	0	216	2266	1011	185	1133	1187
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	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.8	0.0	0.0	25.4	0.0	0.0	14.9	8.4	4.4	21.4	7.8	7.8
Incr Delay (d2), s/veh	0.1	0.0	0.0	1.6	0.0	0.0	0.1	1.9	0.0	0.9	2.2	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.9	0.0	0.0	5.1	0.0	0.0	0.2	8.5	0.3	1.2	7.6	7.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.9	0.0	0.0	27.0	0.0	0.0	15.0	10.3	4.4	22.3	9.9	9.9
LnGrp LOS	C	A	A	C	A	A	B	B	A	C	A	A
Approach Vol, veh/h		38			195			1825			1690	
Approach Delay, s/veh		22.9			27.0			10.2			10.3	
Approach LOS		C			C			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		48.1		15.7		48.1		15.7				
Change Period (Y+Rc), s		7.5		* 5.2		7.5		* 5.2				
Max Green Setting (Gmax), s		41.3		* 21		41.3		* 21				
Max Q Clear Time (g_c+I1), s		25.3		3.2		37.5		9.8				
Green Ext Time (p_c), s		10.7		0.1		3.0		0.8				

Intersection Summary	
HCM 6th Ctrl Delay	11.2
HCM 6th LOS	B

Notes

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



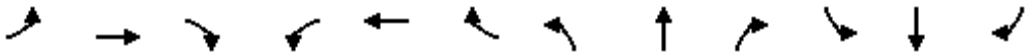
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	1333	34	40	1748	40	39	7	68	68	0	192
Future Volume (veh/h)	48	1333	34	40	1748	40	39	7	68	68	0	192
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		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	1841	1841	1841	1841	1841	1841	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	51	1403	36	42	1840	42	41	7	72	72	0	202
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	2	2	2	2	2	2
Cap, veh/h	220	2523	1125	311	2523	1125	82	26	113	216	0	307
Arrive On Green	1.00	1.00	1.00	1.00	1.00	1.00	0.19	0.19	0.19	0.19	0.00	0.19
Sat Flow, veh/h	238	3497	1560	365	3497	1560	255	133	582	865	0	1585
Grp Volume(v), veh/h	51	1403	36	42	1840	42	120	0	0	72	0	202
Grp Sat Flow(s),veh/h/ln	238	1749	1560	365	1749	1560	970	0	0	865	0	1585
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	7.4	0.0	0.0	0.0	0.0	17.7
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	21.3	0.0	0.0	13.9	0.0	17.7
Prop In Lane	1.00		1.00	1.00		1.00	0.34		0.60	1.00		1.00
Lane Grp Cap(c), veh/h	220	2523	1125	311	2523	1125	220	0	0	216	0	307
V/C Ratio(X)	0.23	0.56	0.03	0.13	0.73	0.04	0.54	0.00	0.00	0.33	0.00	0.66
Avail Cap(c_a), veh/h	220	2523	1125	311	2523	1125	220	0	0	216	0	307
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.66	0.66	0.66	0.66	0.66	0.66	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	58.2	0.0	0.0	54.3	0.0	55.8
Incr Delay (d2), s/veh	1.6	0.6	0.0	0.6	1.3	0.0	9.3	0.0	0.0	4.1	0.0	10.5
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	0.2	0.4	0.0	0.1	0.8	0.0	8.6	0.0	0.0	4.9	0.0	12.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	1.6	0.6	0.0	0.6	1.3	0.0	67.6	0.0	0.0	58.5	0.0	66.3
LnGrp LOS	A	A	A	A	A	A	E	A	A	E	A	E
Approach Vol, veh/h		1490			1924			120			274	
Approach Delay, s/veh		0.6			1.2			67.6			64.3	
Approach LOS		A			A			E			E	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		34.3		115.7		34.3		115.7				
Change Period (Y+Rc), s		* 5.2		7.5		* 5.2		7.5				
Max Green Setting (Gmax), s		* 29		108.2		* 29		108.2				
Max Q Clear Time (g_c+I1), s		23.3		2.0		19.7		2.0				
Green Ext Time (p_c), s		0.3		19.1		0.7		27.6				

Intersection Summary	
HCM 6th Ctrl Delay	7.6
HCM 6th LOS	A

Notes

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



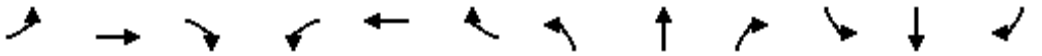
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	0	17	58	0	50	38	1674	101	85	1577	65
Future Volume (veh/h)	19	0	17	58	0	50	38	1674	101	85	1577	65
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		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	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	20	0	18	61	0	53	40	1762	106	89	1660	68
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	4	4	4	4	4	4
Cap, veh/h	142	21	80	147	9	71	228	2550	1137	207	2496	102
Arrive On Green	0.10	0.00	0.10	0.10	0.00	0.10	0.73	0.73	0.73	0.73	0.73	0.73
Sat Flow, veh/h	684	208	802	731	92	715	276	3497	1560	241	3425	140
Grp Volume(v), veh/h	38	0	0	114	0	0	40	1762	106	89	844	884
Grp Sat Flow(s),veh/h/ln	1693	0	0	1538	0	0	276	1749	1560	241	1749	1816
Q Serve(g_s), s	0.0	0.0	0.0	3.7	0.0	0.0	6.6	20.4	1.5	23.7	18.7	19.0
Cycle Q Clear(g_c), s	1.5	0.0	0.0	5.2	0.0	0.0	25.7	20.4	1.5	44.0	18.7	19.0
Prop In Lane	0.53		0.47	0.54		0.46	1.00		1.00	1.00		0.08
Lane Grp Cap(c), veh/h	243	0	0	228	0	0	228	2550	1137	207	1275	1324
V/C Ratio(X)	0.16	0.00	0.00	0.50	0.00	0.00	0.18	0.69	0.09	0.43	0.66	0.67
Avail Cap(c_a), veh/h	510	0	0	500	0	0	236	2659	1186	214	1330	1381
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	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.7	0.0	0.0	32.3	0.0	0.0	12.1	5.5	2.9	17.5	5.3	5.3
Incr Delay (d2), s/veh	0.3	0.0	0.0	1.7	0.0	0.0	0.4	0.7	0.0	1.4	1.2	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.1	0.0	0.0	3.7	0.0	0.0	0.6	5.4	0.3	2.0	5.3	5.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.0	0.0	0.0	34.0	0.0	0.0	12.4	6.2	3.0	18.9	6.4	6.5
LnGrp LOS	C	A	A	C	A	A	B	A	A	B	A	A
Approach Vol, veh/h		38			114			1908			1817	
Approach Delay, s/veh		31.0			34.0			6.2			7.1	
Approach LOS		C			C			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		61.5		12.6		61.5		12.6				
Change Period (Y+Rc), s		7.5		* 5.2		7.5		* 5.2				
Max Green Setting (Gmax), s		56.3		* 21		56.3		* 21				
Max Q Clear Time (g_c+I1), s		27.7		3.5		46.0		7.2				
Green Ext Time (p_c), s		16.8		0.1		7.9		0.5				

Intersection Summary												
HCM 6th Ctrl Delay			7.7									
HCM 6th LOS			A									

Notes

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	170	1795	104	65	1419	94	55	7	55	43	0	69
Future Volume (veh/h)	170	1795	104	65	1419	94	55	7	55	43	0	69
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	1841	1841	1841	1841	1841	1841	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	179	1889	109	68	1494	99	58	7	58	45	0	73
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	2	2	2	2	2	2
Cap, veh/h	210	2525	1126	201	2525	1126	141	26	118	268	0	306
Arrive On Green	1.00	1.00	1.00	0.72	0.72	0.72	0.19	0.19	0.19	0.19	0.00	0.19
Sat Flow, veh/h	315	3497	1560	212	3497	1560	547	136	610	1140	0	1585
Grp Volume(v), veh/h	179	1889	109	68	1494	99	123	0	0	45	0	73
Grp Sat Flow(s),veh/h/ln	315	1749	1560	212	1749	1560	1294	0	0	1140	0	1585
Q Serve(g_s), s	77.2	0.0	0.0	19.7	31.1	2.8	8.8	0.0	0.0	0.0	0.0	5.8
Cycle Q Clear(g_c), s	108.3	0.0	0.0	19.7	31.1	2.8	14.8	0.0	0.0	6.0	0.0	5.8
Prop In Lane	1.00		1.00	1.00		1.00	0.47		0.47	1.00		1.00
Lane Grp Cap(c), veh/h	210	2525	1126	201	2525	1126	285	0	0	268	0	306
V/C Ratio(X)	0.85	0.75	0.10	0.34	0.59	0.09	0.43	0.00	0.00	0.17	0.00	0.24
Avail Cap(c_a), veh/h	210	2525	1126	201	2525	1126	285	0	0	268	0	306
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.15	0.15	0.15	0.74	0.74	0.74	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.2	0.0	0.0	8.5	10.1	6.2	55.5	0.0	0.0	51.2	0.0	51.2
Incr Delay (d2), s/veh	6.7	0.3	0.0	3.3	0.8	0.1	4.7	0.0	0.0	1.3	0.0	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.9	0.2	0.0	1.7	14.6	1.5	8.2	0.0	0.0	2.8	0.0	4.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.9	0.3	0.0	11.9	10.9	6.3	60.2	0.0	0.0	52.6	0.0	53.0
LnGrp LOS	C	A	A	B	B	A	E	A	A	D	A	D
Approach Vol, veh/h		2177			1661			123			118	
Approach Delay, s/veh		2.4			10.6			60.2			52.8	
Approach LOS		A			B			E			D	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		34.2		115.8		34.2		115.8				
Change Period (Y+Rc), s		* 5.2		7.5		* 5.2		7.5				
Max Green Setting (Gmax), s		* 29		108.3		* 29		108.3				
Max Q Clear Time (g_c+I1), s		16.8		110.3		8.0		33.1				
Green Ext Time (p_c), s		0.5		0.0		0.4		21.7				

Intersection Summary												
HCM 6th Ctrl Delay			9.0									
HCM 6th LOS			A									

Notes

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

Appendix K

Signal Warrant Analysis

TRAFFIC SIGNAL WARRANT SUMMARY

City: **NA** Engineer: **NA**
County: **Osceola** Date: **December 15, 2020**

Major Street: **Boggy Creek Road** Lanes: **2** Critical Approach Speed: **45**
Minor Street: **Springslake Village Boulevard** Lanes: **1**
Interim Year 2035 - Build

Volume Level Criteria

1. Is the critical speed of major street traffic > 70 km/h (40 mph) ? ☟ Yes ☐ No
2. Is the intersection in a built-up area of isolated community of <10,000 population? ☟ Yes ☐ No

If Question 1 or 2 above is answered "Yes", then use "70%" volume level ☟ 70% ☐ 100%

WARRANT 1 - EIGHT-HOUR VEHICULAR VOLUME

Applicable: ☟ Yes ☐ No
Satisfied: ☟ Yes ☐ No

Warrant 1 is satisfied if Condition A or Condition B is "100%" satisfied.
Warrant is also satisfied if both Condition A and Condition B are "80%" satisfied for major streets 40 mph or less, or "56%" satisfied for major streets greater than 40 mph.

Condition A - Minimum Vehicular Volume*

100% (70%) Satisfied: ☟ Yes ☐ No
56% or 80% Satisfied: ☐ Yes ☐ No

(volumes in veh/hr)	Minimum Requirements (80% Shown in Brackets)				Eight Highest Hours							
Approach Lanes	1		2 or more		8-9 AM	7-8 AM	6-7 AM	9-10 AM	5-6 PM	2-3 PM	6-7 PM	3-4 PM
Volume Level	100%	70%	100%	70%								
Both Approaches on Major Street	500 (400) [280]	350	600 (480) [336]	420	1,661	1,772	1,954	1,233	2,556	2,204	2,347	2,326
Highest Approach on Minor Street	150 (120) [84]	105	200 (160) [112]	140	255	219	211	151	129	128	123	116

Record 8 highest hours and the corresponding volumes in boxes provided. Condition is 100% satisfied if the minimum volumes are met for eight hours . Condition is 80% satisfied if (parenthetical) volumes are met for eight hours. Condition is 56% satisfied if [bracketed] volumes are met for eight hours.

Condition B - Interruption of Continuous Traffic

Condition B is intended for application where the traffic volume is so heavy that traffic on the minor street suffers excessive delay.

Applicable: ☟ Yes ☐ No
Excessive Delay: ☟ Yes ☐ No
100% (70%) Satisfied: ☟ Yes ☐ No
56% or 80% Satisfied: ☐ Yes ☐ No

(volumes in veh/hr)	Minimum Requirements (80% Shown in Brackets)				Eight Highest Hours							
Approach Lanes	1		2 or more		8-9 AM	7-8 AM	6-7 AM	9-10 AM	5-6 PM	2-3 PM	6-7 PM	3-4 PM
Volume Level	100%	70%	100%	70%								
Both Approaches on Major Street	750 (600) [420]	525	900 (720) [504]	630	1,661	1,772	1,954	1,233	2,556	2,204	2,347	2,326
Highest Approach on Minor Street	75 (60) [42]	53	100 (80) [56]	70	255	219	211	151	129	128	123	116

Record 8 highest hours and the corresponding volumes in boxes provided. Condition is 100% satisfied if the minimum volumes are met for eight hours . Condition is 80% satisfied if (parenthetical) volumes are met for eight hours. Condition is 56% satisfied if [bracketed] volumes are met for eight hours.

Source: Revised from NCHRP Report 457

TRAFFIC SIGNAL WARRANT SUMMARY

City: **NA** Engineer: **NA**
County: **Osceola** Date: **December 15, 2020**

Major Street: **Boggy Creek Road** Lanes: **2** Critical Approach Speed: **45**
Minor Street: **Timber Lane** Lanes: **1**
Design Year 2045 - Build

Volume Level Criteria

1. Is the critical speed of major street traffic > 70 km/h (40 mph) ? ☟ Yes ☐ No
2. Is the intersection in a built-up area of isolated community of <10,000 population? ☟ Yes ☐ No

If Question 1 or 2 above is answered "Yes", then use "70%" volume level ☟ 70% ☐ 100%

WARRANT 1 - EIGHT-HOUR VEHICULAR VOLUME

Applicable: ☟ Yes ☐ No
Satisfied: ☐ Yes ☟ No

Warrant 1 is satisfied if Condition A or Condition B is "100%" satisfied.
Warrant is also satisfied if both Condition A and Condition B are "80%" satisfied for major streets 40 mph or less, or "56%" satisfied for major streets greater than 40 mph.

Condition A - Minimum Vehicular Volume*

100% (70%) Satisfied: ☐ Yes ☟ No
56% or 80% Satisfied: ☐ Yes ☐ No

(volumes in veh/hr)	Minimum Requirements (80% Shown in Brackets)				Eight Highest Hours							
Approach Lanes	1		2 or more		8-9 AM	6-7 AM	7-8 AM	9-10 AM	5-6 PM	2-3 PM	6-7 PM	3-4 PM
Volume Level	100%	70%	100%	70%								
Both Approaches on Major Street	500 (400) [280]	350	600 (480) [336]	420	2,159	2,303	2,540	1,603	3,322	2,865	3,051	3,024
Highest Approach on Minor Street	150 (120) [84]	105	200 (160) [112]	140	186	160	154	110	95	94	90	85

Record 8 highest hours and the corresponding volumes in boxes provided. Condition is 100% satisfied if the minimum volumes are met for eight hours . Condition is 80% satisfied if (parenthetical) volumes are met for eight hours. Condition is 56% satisfied if [bracketed] volumes are met for eight hours.

Condition B - Interruption of Continuous Traffic

Condition B is intended for application where the traffic volume is so heavy that traffic on the minor street suffers excessive delay.

Applicable: ☟ Yes ☐ No
Excessive Delay: ☟ Yes ☐ No
100% (70%) Satisfied: ☟ Yes ☐ No
56% or 80% Satisfied: ☐ Yes ☐ No

(volumes in veh/hr)	Minimum Requirements (80% Shown in Brackets)				Eight Highest Hours							
Approach Lanes	1		2 or more		8-9 AM	6-7 AM	7-8 AM	9-10 AM	5-6 PM	2-3 PM	6-7 PM	3-4 PM
Volume Level	100%	70%	100%	70%								
Both Approaches on Major Street	750 (600) [420]	525	900 (720) [504]	630	2,159	2,303	2,540	1,603	3,322	2,865	3,051	3,024
Highest Approach on Minor Street	75 (60) [42]	53	100 (80) [56]	70	186	160	154	110	95	94	90	85

Record 8 highest hours and the corresponding volumes in boxes provided. Condition is 100% satisfied if the minimum volumes are met for eight hours . Condition is 80% satisfied if (parenthetical) volumes are met for eight hours. Condition is 56% satisfied if [bracketed] volumes are met for eight hours.

Source: Revised from NCHRP Report 457

Appendix L

HSM Predictive Analysis

Worksheet 1A -- General Information and Input Data for Urban and Suburban Roadway Segments

General Information		Location Information	
Analyst	RDW	Roadway	Boggy Creek Road NO BUILD
Agency or Company	VHB	Roadway Section	Simpson Road to E Lake Pointe Dr
Date Performed	12/11/20	Jurisdiction	Osceola County, FL
		Analysis Year	2045

Input Data		Base Conditions	Site Conditions
Roadway type (2U, 3T, 4U, 4D, ST)		--	2U
Length of segment, L (mi)		--	1.29
AADT (veh/day)	$AADT_{MAX}$ = 32,600 (veh/day)	--	29,500
Type of on-street parking (none/parallel/angle)		None	None
Proportion of curb length with on-street parking		--	0
Median width (ft) - for divided only		15	Not Present
Lighting (present / not present)		Not Present	Not Present
Auto speed enforcement (present / not present)		Not Present	Not Present
Major commercial driveways (number)		--	0
Minor commercial driveways (number)		--	5
Major industrial / institutional driveways (number)		--	0
Minor industrial / institutional driveways (number)		--	0
Major residential driveways (number)		--	4
Minor residential driveways (number)		--	39
Other driveways (number)		--	0
Speed Category		--	Posted Speed Greater than 30 mph
Roadside fixed object density (fixed objects / mi)		0	30
Offset to roadside fixed objects (ft) [If greater than 30 or Not Present, input 30]		30	30
Calibration Factor, Cr		1.00	1.00

Worksheet 1B -- Crash Modification Factors for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
CMF for On-Street Parking	CMF for Roadside Fixed Objects	CMF for Median Width	CMF for Lighting	CMF for Automated Speed Enforcement	Combined CMF
CMF 1r	*CMF 2r*	*CMF 3r*	*CMF 4r*	*CMF 5r*	*CMF comb*
from Equation 12-32	from Equation 12-33	from Table 12-22	from Equation 12-34	from Section 12.7.1	(1)*(2)*(3)*(4)*(5)
1.00	1.02	1.00	1.00	1.00	1.02

Worksheet 1C -- Multiple-Vehicle Nondriveway Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**		**Overdispersion Parameter, k**	**Initial N_{brmv}**	**Proportion of Total Crashes**	**Adjusted N_{brmv}**	**Combined CMFs**	**Calibration Factor, Cr**	**Predicted N_{brmv}**
	from Table 12-3		from Table 12-3	from Equation 12-10		$(4)_{TOTAL}$*(5)	(6) from Worksheet 1B		(6)*(7)*(8)
	a	b							
Total	-15.22	1.68	0.84	10.231	1.000	10.231	1.02	1.00	10.428
Fatal and Injury (FI)	-16.22	1.66	0.65	3.064	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.287	2.939	1.02	1.00	2.995
Property Damage Only (PDO)	-15.62	1.69	0.87	7.602	$(5)_{TOTAL}-(5)_{FI}$ = 0.713	7.292	1.02	1.00	7.432

Worksheet 1D -- Multiple-Vehicle Nondriveway Collisions by Collision Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{brmv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{brmv\ (PDO)}$ (crashes/year)**	**Predicted N $_{brmv\ (TOTAL)}$ (crashes/year)**
	from Table 12-4	$(9)_{FI}$ from Worksheet 1C	from Table 12-4	$(9)_{PDO}$ from Worksheet 1C	$(9)_{TOTAL}$ from Worksheet 1C
Total	1.000	2.995	1.000	7.432	10.428
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Rear-end collision	0.730	2.187	0.778	5.782	7.969
Head-on collision	0.068	0.204	0.004	0.030	0.233
Angle collision	0.085	0.255	0.079	0.587	0.842
Sideswipe, same direction	0.015	0.045	0.031	0.230	0.275
Sideswipe, opposite direction	0.073	0.219	0.055	0.409	0.627
Other multiple-vehicle collision	0.029	0.087	0.053	0.394	0.481

Worksheet 1E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**		**Overdispersion Parameter, k**	**Initial N_{brsv}**	**Proportion of Total Crashes**	**Adjusted N_{brsv}**	**Combined CMFs**	**Calibration Factor, Cr**	**Predicted N_{brsv}**
	from Table 12-5		from Table 12-5	from Equation 12-13		$(4)_{TOTAL}*(5)$	(6) from Worksheet 1B		(6)*(7)*(8)
	a	b							
Total	-5.47	0.56	0.81	1.730	1.000	1.730	1.02	1.00	1.763
Fatal and Injury (FI)	-3.96	0.23	0.50	0.262	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.158	0.274	1.02	1.00	0.279
Property Damage Only (PDO)	-6.51	0.64	0.87	1.393	$(5)_{TOTAL}-(5)_{FI}$ = 0.842	1.456	1.02	1.00	1.484

Worksheet 1F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{brsv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{brsv\ (PDO)}$ (crashes/year)**	**Predicted N $_{brsv\ (TOTAL)}$ (crashes/year)**
	from Table 12-6	$(9)_{FI}$ from Worksheet 1E	from Table 12-6	$(9)_{PDO}$ from Worksheet 1E	$(9)_{TOTAL}$ from Worksheet 1E
Total	1.000	0.279	1.000	1.484	1.763
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Collision with animal	0.026	0.007	0.066	0.098	0.105
Collision with fixed object	0.723	0.202	0.759	1.126	1.328
Collision with other object	0.010	0.003	0.013	0.019	0.022
Other single-vehicle collision	0.241	0.067	0.162	0.240	0.308

Worksheet 1G -- Multiple-Vehicle Driveway-Related Collisions by Driveway Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Driveway Type	**Number of driveways, n_j**	**Crashes per driveway per year, N_j**	**Coefficient for traffic adjustment, t**	**Initial N_{brdwy}**	**Overdispersion parameter, k**
		from Table 12-7	from Table 12-7	Equation 12-16 $n_j * N_j * (AADT/15,000)^t$	from Table 12-7
Major commercial	0	0.158	1.000	0.000	
Minor commercial	5	0.050	1.000	0.492	
Major industrial/institutional	0	0.172	1.000	0.000	
Minor industrial/institutional	0	0.023	1.000	0.000	--
Major residential	4	0.083	1.000	0.653	
Minor residential	39	0.016	1.000	1.227	
Other	0	0.025	1.000	0.000	
Total	--	--	--	2.372	0.81

Worksheet 1H -- Multiple-Vehicle Driveway-Related Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Initial N_{brdwy}**	**Proportion of total crashes (f_{dwy})**	**Adjusted N_{brdwy}**	**Combined CMFs**	**Calibration factor, C_r**	**Predicted N_{brdwy}**
	$(5)_{TOTAL}$ from Worksheet 1G	from Table 12-7	$(2)_{TOTAL} * (3)$	(6) from Worksheet 1B		(4)*(5)*(6)
Total	2.372	1.000	2.372	1.02	1.00	2.417
Fatal and injury (FI)	--	0.323	0.766	1.02	1.00	0.781
Property damage only (PDO)	--	0.677	1.606	1.02	1.00	1.637

Worksheet 1I -- Vehicle-Pedestrian Collisions for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Crash Severity Level	**Predicted N_{brmv}**	**Predicted N_{brsv}**	**Predicted N_{brdwy}**	**Predicted N_{br}**	**f_{pedr}**	**Calibration factor, C_r**	**Predicted N_{pedr}**
	(9) from Worksheet 1C	(9) from Worksheet 1E	(7) from Worksheet 1H	(2)+(3)+(4)	from Table 12-8		(5)*(6)*(7)
Total	10.428	1.763	2.417	14.608	0.005	1.00	0.073
Fatal and injury (FI)	--	--	--	--	--	1.00	0.073

Worksheet 1J -- Vehicle-Bicycle Collisions for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Crash Severity Level	**Predicted N_{brmv}**	**Predicted N_{brsv}**	**Predicted N_{brdwy}**	**Predicted N_{br}**	**f_{biker}**	**Calibration factor, C_r**	**Predicted N_{biker}**
	(9) from Worksheet 1C	(9) from Worksheet 1E	(7) from Worksheet 1H	(2)+(3)+(4)	from Table 12-9		(5)*(6)*(7)
Total	10.428	1.763	2.417	14.608	0.004	1.00	0.058
Fatal and injury (FI)	--	--	--	--	--	1.00	0.058

Worksheet 1K -- Crash Severity Distribution for Urban and Suburban Roadway Segments			
(1)	(2)	(3)	(4)
Collision type	**Fatal and injury (FI)**	**Property damage only (PDO)**	**Total**
	(3) from Worksheet 1D and 1F; (7) from Worksheet 1H; and (8) from Worksheet 1I and 1J	(5) from Worksheet 1D and 1F; and (7) from Worksheet 1H	(6) from Worksheet 1D and 1F; (7) from Worksheet 1H; and (8) from Worksheet 1I and 1J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 1D)	2.187	5.782	7.969
Head-on collisions (from Worksheet 1D)	0.204	0.030	0.233
Angle collisions (from Worksheet 1D)	0.255	0.587	0.842
Sideswipe, same direction (from Worksheet 1D)	0.045	0.230	0.275
Sideswipe, opposite direction (from Worksheet 1D)	0.219	0.409	0.627
Driveway-related collisions (from Worksheet 1H)	0.781	1.637	2.417
Other multiple-vehicle collision (from Worksheet 1D)	0.087	0.394	0.481
Subtotal	3.776	9.069	12.845
SINGLE-VEHICLE			
Collision with animal (from Worksheet 1F)	0.007	0.098	0.105
Collision with fixed object (from Worksheet 1F)	0.202	1.126	1.328
Collision with other object (from Worksheet 1F)	0.003	0.019	0.022
Other single-vehicle collision (from Worksheet 1F)	0.067	0.240	0.308
Collision with pedestrian (from Worksheet 1I)	0.073	0.000	0.073
Collision with bicycle (from Worksheet 1J)	0.058	0.000	0.058
Subtotal	0.411	1.484	1.895
Total	4.187	10.553	14.740

Worksheet 1L -- Summary Results for Urban and Suburban Roadway Segments			
(1)	(2)	(3)	(4)
Crash Severity Level	**Predicted average crash frequency, $N_{predicted\ rs}$ (crashes/year)**	**Roadway segment length, L (mi)**	**Crash rate (crashes/mi/year)**
	(Total) from Worksheet 1K		(2) / (3)
Total	14.7	1.29	11.4
Fatal and injury (FI)	4.2	1.29	3.2
Property damage only (PDO)	10.6	1.29	8.2

Worksheet 1A -- General Information and Input Data for Urban and Suburban Roadway Segments

General Information		Location Information	
Analyst	RDW	Roadway	Boggy Creek Road NO BUILD
Agency or Company	VHB	Roadway Section	E Lake Pointe Dr to Nele Road
Date Performed	12/11/20	Jurisdiction	Osceola County, FL
		Analysis Year	2045

Input Data		Base Conditions	Site Conditions
Roadway type (2U, 3T, 4U, 4D, ST)		--	3T
Length of segment, L (mi)		--	0.18
AADT (veh/day)	$AADT_{MAX}$ = 32,900 (veh/day)	--	28,700
Type of on-street parking (none/parallel/angle)		None	None
Proportion of curb length with on-street parking		--	0
Median width (ft) - for divided only		15	Not Present
Lighting (present / not present)		Not Present	Not Present
Auto speed enforcement (present / not present)		Not Present	Not Present
Major commercial driveways (number)		--	0
Minor commercial driveways (number)		--	0
Major industrial / institutional driveways (number)		--	1
Minor industrial / institutional driveways (number)		--	0
Major residential driveways (number)		--	1
Minor residential driveways (number)		--	1
Other driveways (number)		--	0
Speed Category		--	Posted Speed Greater than 30 mph
Roadside fixed object density (fixed objects / mi)		0	30
Offset to roadside fixed objects (ft) [If greater than 30 or Not Present, input 30]		30	30
Calibration Factor, Cr		1.00	1.00

Worksheet 1B -- Crash Modification Factors for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
CMF for On-Street Parking	CMF for Roadside Fixed Objects	CMF for Median Width	CMF for Lighting	CMF for Automated Speed Enforcement	Combined CMF
CMF 1r	*CMF 2r*	*CMF 3r*	*CMF 4r*	*CMF 5r*	*CMF comb*
from Equation 12-32	from Equation 12-33	from Table 12-22	from Equation 12-34	from Section 12.7.1	(1)*(2)*(3)*(4)*(5)
1.00	1.01	1.00	1.00	1.00	1.01

Worksheet 1C -- Multiple-Vehicle Nondriveway Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**		**Overdispersion Parameter, k**	**Initial N_{brmv}**	**Proportion of Total Crashes**	**Adjusted N_{brmv}**	**Combined CMFs**	**Calibration Factor, Cr**	**Predicted N_{brmv}**
	from Table 12-3		from Table 12-3	from Equation 12-10		$(4)_{TOTAL}$*(5)	(6) from Worksheet 1B		(6)*(7)*(8)
	a	b							
Total	-12.40	1.41	0.66	1.431	1.000	1.431	1.01	1.00	1.447
Fatal and Injury (FI)	-16.45	1.69	0.59	0.442	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.309	0.442	1.01	1.00	0.447
Property Damage Only (PDO)	-11.95	1.33	0.59	0.987	$(5)_{TOTAL}-(5)_{FI}$ = 0.691	0.989	1.01	1.00	1.000

Worksheet 1D -- Multiple-Vehicle Nondriveway Collisions by Collision Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{brmv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{brmv\ (PDO)}$ (crashes/year)**	**Predicted N $_{brmv\ (TOTAL)}$ (crashes/year)**
	from Table 12-4	$(9)_{FI}$ from Worksheet 1C	from Table 12-4	$(9)_{PDO}$ from Worksheet 1C	$(9)_{TOTAL}$ from Worksheet 1C
Total	1.000	0.447	1.000	1.000	1.447
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Rear-end collision	0.845	0.378	0.842	0.842	1.220
Head-on collision	0.034	0.015	0.020	0.020	0.035
Angle collision	0.069	0.031	0.020	0.020	0.051
Sideswipe, same direction	0.001	0.000	0.078	0.078	0.078
Sideswipe, opposite direction	0.017	0.008	0.020	0.020	0.028
Other multiple-vehicle collision	0.034	0.015	0.020	0.020	0.035

Worksheet 1E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**		**Overdispersion Parameter, k**	**Initial N_{brsv}**	**Proportion of Total Crashes**	**Adjusted N_{brsv}**	**Combined CMFs**	**Calibration Factor, Cr**	**Predicted N_{brsv}**
	from Table 12-5		from Table 12-5	from Equation 12-13		$(4)_{TOTAL}*(5)$	(6) from Worksheet 1B		(6)*(7)*(8)
	a	b							
Total	-5.74	0.54	1.37	0.148	1.000	0.148	1.01	1.00	0.149
Fatal and Injury (FI)	-6.37	0.47	1.06	0.038	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.268	0.040	1.01	1.00	0.040
Property Damage Only (PDO)	-6.29	0.56	1.93	0.105	$(5)_{TOTAL}-(5)_{FI}$ = 0.732	0.108	1.01	1.00	0.109

Worksheet 1F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{brsv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{brsv\ (PDO)}$ (crashes/year)**	**Predicted N $_{brsv\ (TOTAL)}$ (crashes/year)**
	from Table 12-6	$(9)_{FI}$ from Worksheet 1E	from Table 12-6	$(9)_{PDO}$ from Worksheet 1E	$(9)_{TOTAL}$ from Worksheet 1E
Total	1.000	0.040	1.000	0.109	0.149
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Collision with animal	0.001	0.000	0.001	0.000	0.000
Collision with fixed object	0.688	0.028	0.963	0.105	0.133
Collision with other object	0.001	0.000	0.001	0.000	0.000
Other single-vehicle collision	0.310	0.012	0.035	0.004	0.016

Worksheet 1G -- Multiple-Vehicle Driveway-Related Collisions by Driveway Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Driveway Type	**Number of driveways, n_j**	**Crashes per driveway per year, N_j**	**Coefficient for traffic adjustment, t**	**Initial N_{brdwy}**	**Overdispersion parameter, k**
		from Table 12-7	from Table 12-7	Equation 12-16 $n_j * N_j * (AADT/15,000)^t$	from Table 12-7
Major commercial	0	0.102	1.000	0.000	
Minor commercial	0	0.032	1.000	0.000	
Major industrial/institutional	1	0.110	1.000	0.210	
Minor industrial/institutional	0	0.015	1.000	0.000	--
Major residential	1	0.053	1.000	0.101	
Minor residential	1	0.010	1.000	0.019	
Other	0	0.016	1.000	0.000	
Total	--	--	--	0.331	1.10

Worksheet 1H -- Multiple-Vehicle Driveway-Related Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Initial N_{brdwy}**	**Proportion of total crashes (f_{dwy})**	**Adjusted N_{brdwy}**	**Combined CMFs**	**Calibration factor, C_r**	**Predicted N_{brdwy}**
	$(5)_{TOTAL}$ from Worksheet 1G	from Table 12-7	$(2)_{TOTAL}$ * (3)	(6) from Worksheet 1B		(4)*(5)*(6)
Total	0.331	1.000	0.331	1.01	1.00	0.335
Fatal and injury (FI)	--	0.243	0.080	1.01	1.00	0.081
Property damage only (PDO)	--	0.757	0.251	1.01	1.00	0.253

Worksheet 1I -- Vehicle-Pedestrian Collisions for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Crash Severity Level	**Predicted N_{brmv}**	**Predicted N_{brsv}**	**Predicted N_{brdwy}**	**Predicted N_{br}**	**f_{pedr}**	**Calibration factor, C_r**	**Predicted N_{pedr}**
	(9) from Worksheet 1C	(9) from Worksheet 1E	(7) from Worksheet 1H	(2)+(3)+(4)	from Table 12-8		(5)*(6)*(7)
Total	1.447	0.149	0.335	1.931	0.013	1.00	0.025
Fatal and injury (FI)	--	--	--	--	--	1.00	0.025

Worksheet 1J -- Vehicle-Bicycle Collisions for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Crash Severity Level	**Predicted N_{brmv}**	**Predicted N_{brsv}**	**Predicted N_{brdwy}**	**Predicted N_{br}**	**f_{biker}**	**Calibration factor, C_r**	**Predicted N_{biker}**
	(9) from Worksheet 1C	(9) from Worksheet 1E	(7) from Worksheet 1H	(2)+(3)+(4)	from Table 12-9		(5)*(6)*(7)
Total	1.447	0.149	0.335	1.931	0.007	1.00	0.014
Fatal and injury (FI)	--	--	--	--	--	1.00	0.014

Worksheet 1K -- Crash Severity Distribution for Urban and Suburban Roadway Segments			
(1)	(2)	(3)	(4)
Collision type	**Fatal and injury (FI)**	**Property damage only (PDO)**	**Total**
	(3) from Worksheet 1D and 1F; (7) from Worksheet 1H; and (8) from Worksheet 1I and 1J	(5) from Worksheet 1D and 1F; and (7) from Worksheet 1H	(6) from Worksheet 1D and 1F; (7) from Worksheet 1H; and (8) from Worksheet 1I and 1J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 1D)	0.378	0.842	1.220
Head-on collisions (from Worksheet 1D)	0.015	0.020	0.035
Angle collisions (from Worksheet 1D)	0.031	0.020	0.051
Sideswipe, same direction (from Worksheet 1D)	0.000	0.078	0.078
Sideswipe, opposite direction (from Worksheet 1D)	0.008	0.020	0.028
Driveway-related collisions (from Worksheet 1H)	0.081	0.253	0.335
Other multiple-vehicle collision (from Worksheet 1D)	0.015	0.020	0.035
Subtotal	0.528	1.253	1.781
SINGLE-VEHICLE			
Collision with animal (from Worksheet 1F)	0.000	0.000	0.000
Collision with fixed object (from Worksheet 1F)	0.028	0.105	0.133
Collision with other object (from Worksheet 1F)	0.000	0.000	0.000
Other single-vehicle collision (from Worksheet 1F)	0.012	0.004	0.016
Collision with pedestrian (from Worksheet 1I)	0.025	0.000	0.025
Collision with bicycle (from Worksheet 1J)	0.014	0.000	0.014
Subtotal	0.079	0.109	0.188
Total	0.607	1.362	1.970

Worksheet 1L -- Summary Results for Urban and Suburban Roadway Segments			
(1)	(2)	(3)	(4)
Crash Severity Level	**Predicted average crash frequency, $N_{predicted\ rs}$ (crashes/year)**	**Roadway segment length, L (mi)**	**Crash rate (crashes/mi/year)**
	(Total) from Worksheet 1K		(2) / (3)
Total	2.0	0.18	10.9
Fatal and injury (FI)	0.6	0.18	3.4
Property damage only (PDO)	1.4	0.18	7.6

Worksheet 1A -- General Information and Input Data for Urban and Suburban Roadway Segments

General Information		Location Information	
Analyst	RDW	Roadway	Boggy Creek Road NO BUILD
Agency or Company	VHB	Roadway Section	Nele Road to Springlake Village Blvd
Date Performed	12/11/20	Jurisdiction	Osceola County, FL
		Analysis Year	2045

Input Data		Base Conditions	Site Conditions
Roadway type (2U, 3T, 4U, 4D, ST)		--	3T
Length of segment, L (mi)		--	0.39
AADT (veh/day)	$AADT_{MAX}$ = 32,900 (veh/day)	--	26,600
Type of on-street parking (none/parallel/angle)		None	None
Proportion of curb length with on-street parking		--	0
Median width (ft) - for divided only		15	Not Present
Lighting (present / not present)		Not Present	Not Present
Auto speed enforcement (present / not present)		Not Present	Not Present
Major commercial driveways (number)		--	0
Minor commercial driveways (number)		--	0
Major industrial / institutional driveways (number)		--	1
Minor industrial / institutional driveways (number)		--	0
Major residential driveways (number)		--	1
Minor residential driveways (number)		--	0
Other driveways (number)		--	0
Speed Category		--	Posted Speed Greater than 30 mph
Roadside fixed object density (fixed objects / mi)		0	90
Offset to roadside fixed objects (ft) [If greater than 30 or Not Present, input 30]		30	30
Calibration Factor, Cr		1.00	1.00

Worksheet 1B -- Crash Modification Factors for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
CMF for On-Street Parking	CMF for Roadside Fixed Objects	CMF for Median Width	CMF for Lighting	CMF for Automated Speed Enforcement	Combined CMF
CMF 1r	*CMF 2r*	*CMF 3r*	*CMF 4r*	*CMF 5r*	*CMF comb*
from Equation 12-32	from Equation 12-33	from Table 12-22	from Equation 12-34	from Section 12.7.1	(1)*(2)*(3)*(4)*(5)
1.00	1.10	1.00	1.00	1.00	1.10

Worksheet 1C -- Multiple-Vehicle Nondriveway Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**		**Overdispersion Parameter, k**	**Initial N_{brmv}**	**Proportion of Total Crashes**	**Adjusted N_{brmv}**	**Combined CMFs**	**Calibration Factor, Cr**	**Predicted N_{brmv}**
	from Table 12-3		from Table 12-3	from Equation 12-10		$(4)_{TOTAL}$*(5)	(6) from Worksheet 1B		(6)*(7)*(8)
	a	b							
Total	-12.40	1.41	0.66	2.785	1.000	2.785	1.10	1.00	3.067
Fatal and Injury (FI)	-16.45	1.69	0.59	0.841	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.303	0.845	1.10	1.00	0.930
Property Damage Only (PDO)	-11.95	1.33	0.59	1.933	$(5)_{TOTAL}-(5)_{FI}$ = 0.697	1.941	1.10	1.00	2.137

Worksheet 1D -- Multiple-Vehicle Nondriveway Collisions by Collision Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{brmv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{brmv\ (PDO)}$ (crashes/year)**	**Predicted N $_{brmv\ (TOTAL)}$ (crashes/year)**
	from Table 12-4	$(9)_{FI}$ from Worksheet 1C	from Table 12-4	$(9)_{PDO}$ from Worksheet 1C	$(9)_{TOTAL}$ from Worksheet 1C
Total	1.000	0.930	1.000	2.137	3.067
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Rear-end collision	0.845	0.786	0.842	1.800	2.585
Head-on collision	0.034	0.032	0.020	0.043	0.074
Angle collision	0.069	0.064	0.020	0.043	0.107
Sideswipe, same direction	0.001	0.001	0.078	0.167	0.168
Sideswipe, opposite direction	0.017	0.016	0.020	0.043	0.059
Other multiple-vehicle collision	0.034	0.032	0.020	0.043	0.074

Worksheet 1E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**		**Overdispersion Parameter, k**	**Initial N_{brsv}**	**Proportion of Total Crashes**	**Adjusted N_{brsv}**	**Combined CMFs**	**Calibration Factor, Cr**	**Predicted N_{brsv}**
	from Table 12-5		from Table 12-5	from Equation 12-13		$(4)_{TOTAL}*(5)$	(6) from Worksheet 1B		(6)*(7)*(8)
	a	b							
Total	-5.74	0.54	1.37	0.307	1.000	0.307	1.10	1.00	0.338
Fatal and Injury (FI)	-6.37	0.47	1.06	0.080	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.270	0.083	1.10	1.00	0.091
Property Damage Only (PDO)	-6.29	0.56	1.93	0.217	$(5)_{TOTAL}-(5)_{FI}$ = 0.730	0.225	1.10	1.00	0.247

Worksheet 1F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{brsv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{brsv\ (PDO)}$ (crashes/year)**	**Predicted N $_{brsv\ (TOTAL)}$ (crashes/year)**
	from Table 12-6	$(9)_{FI}$ from Worksheet 1E	from Table 12-6	$(9)_{PDO}$ from Worksheet 1E	$(9)_{TOTAL}$ from Worksheet 1E
Total	1.000	0.091	1.000	0.247	0.338
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Collision with animal	0.001	0.000	0.001	0.000	0.000
Collision with fixed object	0.688	0.063	0.963	0.238	0.301
Collision with other object	0.001	0.000	0.001	0.000	0.000
Other single-vehicle collision	0.310	0.028	0.035	0.009	0.037

Worksheet 1G -- Multiple-Vehicle Driveway-Related Collisions by Driveway Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Driveway Type	**Number of driveways, n_j**	**Crashes per driveway per year, N_j**	**Coefficient for traffic adjustment, t**	**Initial N_{brdwy}**	**Overdispersion parameter, k**
		from Table 12-7	from Table 12-7	Equation 12-16 $n_j * N_j * (AADT/15,000)^t$	from Table 12-7
Major commercial	0	0.102	1.000	0.000	
Minor commercial	0	0.032	1.000	0.000	
Major industrial/institutional	1	0.110	1.000	0.195	
Minor industrial/institutional	0	0.015	1.000	0.000	--
Major residential	1	0.053	1.000	0.094	
Minor residential	0	0.010	1.000	0.000	
Other	0	0.016	1.000	0.000	
Total	--	--	--	0.289	1.10

Worksheet 1H -- Multiple-Vehicle Driveway-Related Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Initial N_{brdwy}**	**Proportion of total crashes (f_{dwy})**	**Adjusted N_{brdwy}**	**Combined CMFs**	**Calibration factor, C_r**	**Predicted N_{brdwy}**
	$(5)_{TOTAL}$ from Worksheet 1G	from Table 12-7	$(2)_{TOTAL} * (3)$	(6) from Worksheet 1B		(4)*(5)*(6)
Total	0.289	1.000	0.289	1.10	1.00	0.318
Fatal and injury (FI)	--	0.243	0.070	1.10	1.00	0.077
Property damage only (PDO)	--	0.757	0.219	1.10	1.00	0.241

Worksheet 1I -- Vehicle-Pedestrian Collisions for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Crash Severity Level	**Predicted N_{brmv}**	**Predicted N_{brsv}**	**Predicted N_{brdwy}**	**Predicted N_{br}**	**f_{pedr}**	**Calibration factor, C_r**	**Predicted N_{pedr}**
	(9) from Worksheet 1C	(9) from Worksheet 1E	(7) from Worksheet 1H	(2)+(3)+(4)	from Table 12-8		(5)*(6)*(7)
Total	3.067	0.338	0.318	3.724	0.013	1.00	0.048
Fatal and injury (FI)	--	--	--	--	--	1.00	0.048

Worksheet 1J -- Vehicle-Bicycle Collisions for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Crash Severity Level	**Predicted N_{brmv}**	**Predicted N_{brsv}**	**Predicted N_{brdwy}**	**Predicted N_{br}**	**f_{biker}**	**Calibration factor, C_r**	**Predicted N_{biker}**
	(9) from Worksheet 1C	(9) from Worksheet 1E	(7) from Worksheet 1H	(2)+(3)+(4)	from Table 12-9		(5)*(6)*(7)
Total	3.067	0.338	0.318	3.724	0.007	1.00	0.026
Fatal and injury (FI)	--	--	--	--	--	1.00	0.026

Worksheet 1K -- Crash Severity Distribution for Urban and Suburban Roadway Segments			
(1)	(2)	(3)	(4)
Collision type	**Fatal and injury (FI)**	**Property damage only (PDO)**	**Total**
	(3) from Worksheet 1D and 1F; (7) from Worksheet 1H; and (8) from Worksheet 1I and 1J	(5) from Worksheet 1D and 1F; and (7) from Worksheet 1H	(6) from Worksheet 1D and 1F; (7) from Worksheet 1H; and (8) from Worksheet 1I and 1J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 1D)	0.786	1.800	2.585
Head-on collisions (from Worksheet 1D)	0.032	0.043	0.074
Angle collisions (from Worksheet 1D)	0.064	0.043	0.107
Sideswipe, same direction (from Worksheet 1D)	0.001	0.167	0.168
Sideswipe, opposite direction (from Worksheet 1D)	0.016	0.043	0.059
Driveway-related collisions (from Worksheet 1H)	0.077	0.241	0.318
Other multiple-vehicle collision (from Worksheet 1D)	0.032	0.043	0.074
Subtotal	1.007	2.378	3.386
SINGLE-VEHICLE			
Collision with animal (from Worksheet 1F)	0.000	0.000	0.000
Collision with fixed object (from Worksheet 1F)	0.063	0.238	0.301
Collision with other object (from Worksheet 1F)	0.000	0.000	0.000
Other single-vehicle collision (from Worksheet 1F)	0.028	0.009	0.037
Collision with pedestrian (from Worksheet 1I)	0.048	0.000	0.048
Collision with bicycle (from Worksheet 1J)	0.026	0.000	0.026
Subtotal	0.166	0.247	0.413
Total	1.173	2.625	3.799

Worksheet 1L -- Summary Results for Urban and Suburban Roadway Segments			
(1)	(2)	(3)	(4)
Crash Severity Level	**Predicted average crash frequency, $N_{predicted\ rs}$ (crashes/year)**	**Roadway segment length, L (mi)**	**Crash rate (crashes/mi/year)**
	(Total) from Worksheet 1K		(2) / (3)
Total	3.8	0.39	9.7
Fatal and injury (FI)	1.2	0.39	3.0
Property damage only (PDO)	2.6	0.39	6.7

Worksheet 1A -- General Information and Input Data for Urban and Suburban Roadway Segments

General Information		Location Information	
Analyst	RDW	Roadway	Boggy Creek Road NO BUILD
Agency or Company	VHB	Roadway Section	Springlake Village Blvd to Turnberry Blvd
Date Performed	12/11/20	Jurisdiction	Osceola County, FL
		Analysis Year	2045

Input Data		Base Conditions	Site Conditions
Roadway type (2U, 3T, 4U, 4D, ST)		--	3T
Length of segment, L (mi)		--	0.57
AADT (veh/day)	$AADT_{MAX}$ = 32,900 (veh/day)	--	24,500
Type of on-street parking (none/parallel/angle)		None	None
Proportion of curb length with on-street parking		--	0
Median width (ft) - for divided only		15	Not Present
Lighting (present / not present)		Not Present	Not Present
Auto speed enforcement (present / not present)		Not Present	Not Present
Major commercial driveways (number)		--	0
Minor commercial driveways (number)		--	0
Major industrial / institutional driveways (number)		--	2
Minor industrial / institutional driveways (number)		--	0
Major residential driveways (number)		--	1
Minor residential driveways (number)		--	0
Other driveways (number)		--	0
Speed Category		--	Posted Speed Greater than 30 mph
Roadside fixed object density (fixed objects / mi)		0	60
Offset to roadside fixed objects (ft) [If greater than 30 or Not Present, input 30]		30	30
Calibration Factor, Cr		1.00	1.00

Worksheet 1B -- Crash Modification Factors for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
CMF for On-Street Parking	CMF for Roadside Fixed Objects	CMF for Median Width	CMF for Lighting	CMF for Automated Speed Enforcement	Combined CMF
CMF 1r	*CMF 2r*	*CMF 3r*	*CMF 4r*	*CMF 5r*	*CMF comb*
from Equation 12-32	from Equation 12-33	from Table 12-22	from Equation 12-34	from Section 12.7.1	(1)*(2)*(3)*(4)*(5)
1.00	1.06	1.00	1.00	1.00	1.06

Worksheet 1C -- Multiple-Vehicle Nondriveway Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**		**Overdispersion Parameter, k**	**Initial N_{brmv}**	**Proportion of Total Crashes**	**Adjusted N_{brmv}**	**Combined CMFs**	**Calibration Factor, Cr**	**Predicted N_{brmv}**
	from Table 12-3		from Table 12-3	from Equation 12-10		$(4)_{TOTAL}$*(5)	(6) from Worksheet 1B		(6)*(7)*(8)
	a	b							
Total	-12.40	1.41	0.66	3.625	1.000	3.625	1.06	1.00	3.829
Fatal and Injury (FI)	-16.45	1.69	0.59	1.070	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.297	1.077	1.06	1.00	1.137
Property Damage Only (PDO)	-11.95	1.33	0.59	2.533	$(5)_{TOTAL}-(5)_{FI}$ = 0.703	2.549	1.06	1.00	2.692

Worksheet 1D -- Multiple-Vehicle Nondriveway Collisions by Collision Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{brmv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{brmv\ (PDO)}$ (crashes/year)**	**Predicted N $_{brmv\ (TOTAL)}$ (crashes/year)**
	from Table 12-4	$(9)_{FI}$ from Worksheet 1C	from Table 12-4	$(9)_{PDO}$ from Worksheet 1C	$(9)_{TOTAL}$ from Worksheet 1C
Total	1.000	1.137	1.000	2.692	3.829
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Rear-end collision	0.845	0.961	0.842	2.266	3.227
Head-on collision	0.034	0.039	0.020	0.054	0.092
Angle collision	0.069	0.078	0.020	0.054	0.132
Sideswipe, same direction	0.001	0.001	0.078	0.210	0.211
Sideswipe, opposite direction	0.017	0.019	0.020	0.054	0.073
Other multiple-vehicle collision	0.034	0.039	0.020	0.054	0.092

Worksheet 1E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**		**Overdispersion Parameter, k**	**Initial N_{brsv}**	**Proportion of Total Crashes**	**Adjusted N_{brsv}**	**Combined CMFs**	**Calibration Factor, Cr**	**Predicted N_{brsv}**
	from Table 12-5		from Table 12-5	from Equation 12-13		$(4)_{TOTAL}*(5)$	(6) from Worksheet 1B		(6)*(7)*(8)
	a	b							
Total	-5.74	0.54	1.37	0.430	1.000	0.430	1.06	1.00	0.454
Fatal and Injury (FI)	-6.37	0.47	1.06	0.113	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.271	0.116	1.06	1.00	0.123
Property Damage Only (PDO)	-6.29	0.56	1.93	0.303	$(5)_{TOTAL}-(5)_{FI}$ = 0.729	0.313	1.06	1.00	0.331

Worksheet 1F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{brsv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{brsv\ (PDO)}$ (crashes/year)**	**Predicted N $_{brsv\ (TOTAL)}$ (crashes/year)**
	from Table 12-6	$(9)_{FI}$ from Worksheet 1E	from Table 12-6	$(9)_{PDO}$ from Worksheet 1E	$(9)_{TOTAL}$ from Worksheet 1E
Total	1.000	0.123	1.000	0.331	0.454
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Collision with animal	0.001	0.000	0.001	0.000	0.000
Collision with fixed object	0.688	0.085	0.963	0.319	0.403
Collision with other object	0.001	0.000	0.001	0.000	0.000
Other single-vehicle collision	0.310	0.038	0.035	0.012	0.050

Worksheet 1G -- Multiple-Vehicle Driveway-Related Collisions by Driveway Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Driveway Type	**Number of driveways, n_j**	**Crashes per driveway per year, N_j**	**Coefficient for traffic adjustment, t**	**Initial N_{brdwy}**	**Overdispersion parameter, k**
		from Table 12-7	from Table 12-7	Equation 12-16 $n_j * N_j * (AADT/15,000)^t$	from Table 12-7
Major commercial	0	0.102	1.000	0.000	
Minor commercial	0	0.032	1.000	0.000	
Major industrial/institutional	2	0.110	1.000	0.359	
Minor industrial/institutional	0	0.015	1.000	0.000	--
Major residential	1	0.053	1.000	0.087	
Minor residential	0	0.010	1.000	0.000	
Other	0	0.016	1.000	0.000	
Total	--	--	--	0.446	1.10

Worksheet 1H -- Multiple-Vehicle Driveway-Related Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Initial N_{brdwy}**	**Proportion of total crashes (f_{dwy})**	**Adjusted N_{brdwy}**	**Combined CMFs**	**Calibration factor, C_r**	**Predicted N_{brdwy}**
	$(5)_{TOTAL}$ from Worksheet 1G	from Table 12-7	$(2)_{TOTAL} * (3)$	(6) from Worksheet 1B		(4)*(5)*(6)
Total	0.446	1.000	0.446	1.06	1.00	0.471
Fatal and injury (FI)	--	0.243	0.108	1.06	1.00	0.114
Property damage only (PDO)	--	0.757	0.338	1.06	1.00	0.356

Worksheet 1I -- Vehicle-Pedestrian Collisions for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Crash Severity Level	**Predicted N_{brmv}**	**Predicted N_{brsv}**	**Predicted N_{brdwy}**	**Predicted N_{br}**	**f_{pedr}**	**Calibration factor, C_r**	**Predicted N_{pedr}**
	(9) from Worksheet 1C	(9) from Worksheet 1E	(7) from Worksheet 1H	(2)+(3)+(4)	from Table 12-8		(5)*(6)*(7)
Total	3.829	0.454	0.471	4.754	0.013	1.00	0.062
Fatal and injury (FI)	--	--	--	--	--	1.00	0.062

Worksheet 1J -- Vehicle-Bicycle Collisions for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Crash Severity Level	**Predicted N_{brmv}**	**Predicted N_{brsv}**	**Predicted N_{brdwy}**	**Predicted N_{br}**	**f_{biker}**	**Calibration factor, C_r**	**Predicted N_{biker}**
	(9) from Worksheet 1C	(9) from Worksheet 1E	(7) from Worksheet 1H	(2)+(3)+(4)	from Table 12-9		(5)*(6)*(7)
Total	3.829	0.454	0.471	4.754	0.007	1.00	0.033
Fatal and injury (FI)	--	--	--	--	--	1.00	0.033

Worksheet 1K -- Crash Severity Distribution for Urban and Suburban Roadway Segments			
(1)	(2)	(3)	(4)
Collision type	**Fatal and injury (FI)**	**Property damage only (PDO)**	**Total**
	(3) from Worksheet 1D and 1F; (7) from Worksheet 1H; and (8) from Worksheet 1I and 1J	(5) from Worksheet 1D and 1F; and (7) from Worksheet 1H	(6) from Worksheet 1D and 1F; (7) from Worksheet 1H; and (8) from Worksheet 1I and 1J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 1D)	0.961	2.266	3.227
Head-on collisions (from Worksheet 1D)	0.039	0.054	0.092
Angle collisions (from Worksheet 1D)	0.078	0.054	0.132
Sideswipe, same direction (from Worksheet 1D)	0.001	0.210	0.211
Sideswipe, opposite direction (from Worksheet 1D)	0.019	0.054	0.073
Driveway-related collisions (from Worksheet 1H)	0.114	0.356	0.471
Other multiple-vehicle collision (from Worksheet 1D)	0.039	0.054	0.092
Subtotal	1.252	3.048	4.300
SINGLE-VEHICLE			
Collision with animal (from Worksheet 1F)	0.000	0.000	0.000
Collision with fixed object (from Worksheet 1F)	0.085	0.319	0.403
Collision with other object (from Worksheet 1F)	0.000	0.000	0.000
Other single-vehicle collision (from Worksheet 1F)	0.038	0.012	0.050
Collision with pedestrian (from Worksheet 1I)	0.062	0.000	0.062
Collision with bicycle (from Worksheet 1J)	0.033	0.000	0.033
Subtotal	0.218	0.331	0.549
Total	1.470	3.379	4.849

Worksheet 1L -- Summary Results for Urban and Suburban Roadway Segments			
(1)	(2)	(3)	(4)
Crash Severity Level	**Predicted average crash frequency, $N_{predicted\ rs}$ (crashes/year)**	**Roadway segment length, L (mi)**	**Crash rate (crashes/mi/year)**
	(Total) from Worksheet 1K		(2) / (3)
Total	4.8	0.57	8.5
Fatal and injury (FI)	1.5	0.57	2.6
Property damage only (PDO)	3.4	0.57	5.9

Worksheet 1A -- General Information and Input Data for Urban and Suburban Roadway Segments

General Information		Location Information	
Analyst	RDW	Roadway	Boggy Creek Road NO BUILD
Agency or Company	VHB	Roadway Section	Turnberry Blvd to N Pointe Blvd
Date Performed	12/11/20	Jurisdiction	Osceola County, FL
		Analysis Year	2045

Input Data		Base Conditions	Site Conditions
Roadway type (2U, 3T, 4U, 4D, ST)		--	2U
Length of segment, L (mi)		--	0.51
AADT (veh/day)	$AADT_{MAX}$ = 32,600 (veh/day)	--	23,700
Type of on-street parking (none/parallel/angle)		None	None
Proportion of curb length with on-street parking		--	0
Median width (ft) - for divided only		15	Not Present
Lighting (present / not present)		Not Present	Not Present
Auto speed enforcement (present / not present)		Not Present	Not Present
Major commercial driveways (number)		--	0
Minor commercial driveways (number)		--	0
Major industrial / institutional driveways (number)		--	1
Minor industrial / institutional driveways (number)		--	0
Major residential driveways (number)		--	0
Minor residential driveways (number)		--	7
Other driveways (number)		--	0
Speed Category		--	Posted Speed Greater than 30 mph
Roadside fixed object density (fixed objects / mi)		0	30
Offset to roadside fixed objects (ft) [If greater than 30 or Not Present, input 30]		30	30
Calibration Factor, Cr		1.00	1.00

Worksheet 1B -- Crash Modification Factors for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
CMF for On-Street Parking	CMF for Roadside Fixed Objects	CMF for Median Width	CMF for Lighting	CMF for Automated Speed Enforcement	Combined CMF
CMF 1r	*CMF 2r*	*CMF 3r*	*CMF 4r*	*CMF 5r*	*CMF comb*
from Equation 12-32	from Equation 12-33	from Table 12-22	from Equation 12-34	from Section 12.7.1	(1)*(2)*(3)*(4)*(5)
1.00	1.02	1.00	1.00	1.00	1.02

Worksheet 1C -- Multiple-Vehicle Nondriveway Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**		**Overdispersion Parameter, k**	**Initial N_{brmv}**	**Proportion of Total Crashes**	**Adjusted N_{brmv}**	**Combined CMFs**	**Calibration Factor, Cr**	**Predicted N_{brmv}**
	from Table 12-3		from Table 12-3	from Equation 12-10		$(4)_{TOTAL}$*(5)	(6) from Worksheet 1B		(6)*(7)*(8)
	a	b							
Total	-15.22	1.68	0.84	2.800	1.000	2.800	1.02	1.00	2.854
Fatal and Injury (FI)	-16.22	1.66	0.65	0.842	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.289	0.808	1.02	1.00	0.824
Property Damage Only (PDO)	-15.62	1.69	0.87	2.076	$(5)_{TOTAL}-(5)_{FI}$ = 0.711	1.992	1.02	1.00	2.030

Worksheet 1D -- Multiple-Vehicle Nondriveway Collisions by Collision Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{brmv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{brmv\ (PDO)}$ (crashes/year)**	**Predicted N $_{brmv\ (TOTAL)}$ (crashes/year)**
	from Table 12-4	$(9)_{FI}$ from Worksheet 1C	from Table 12-4	$(9)_{PDO}$ from Worksheet 1C	$(9)_{TOTAL}$ from Worksheet 1C
Total	1.000	0.824	1.000	2.030	2.854
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Rear-end collision	0.730	0.601	0.778	1.580	2.181
Head-on collision	0.068	0.056	0.004	0.008	0.064
Angle collision	0.085	0.070	0.079	0.160	0.230
Sideswipe, same direction	0.015	0.012	0.031	0.063	0.075
Sideswipe, opposite direction	0.073	0.060	0.055	0.112	0.172
Other multiple-vehicle collision	0.029	0.024	0.053	0.108	0.131

Worksheet 1E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**		**Overdispersion Parameter, k**	**Initial N_{brsv}**	**Proportion of Total Crashes**	**Adjusted N_{brsv}**	**Combined CMFs**	**Calibration Factor, Cr**	**Predicted N_{brsv}**
	from Table 12-5		from Table 12-5	from Equation 12-13		$(4)_{TOTAL}*(5)$	(6) from Worksheet 1B		(6)*(7)*(8)
	a	b							
Total	-5.47	0.56	0.81	0.605	1.000	0.605	1.02	1.00	0.617
Fatal and Injury (FI)	-3.96	0.23	0.50	0.099	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.171	0.103	1.02	1.00	0.105
Property Damage Only (PDO)	-6.51	0.64	0.87	0.479	$(5)_{TOTAL}-(5)_{FI}$ = 0.829	0.502	1.02	1.00	0.511

Worksheet 1F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{brsv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{brsv\ (PDO)}$ (crashes/year)**	**Predicted N $_{brsv\ (TOTAL)}$ (crashes/year)**
	from Table 12-6	$(9)_{FI}$ from Worksheet 1E	from Table 12-6	$(9)_{PDO}$ from Worksheet 1E	$(9)_{TOTAL}$ from Worksheet 1E
Total	1.000	0.105	1.000	0.511	0.617
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Collision with animal	0.026	0.003	0.066	0.034	0.036
Collision with fixed object	0.723	0.076	0.759	0.388	0.464
Collision with other object	0.010	0.001	0.013	0.007	0.008
Other single-vehicle collision	0.241	0.025	0.162	0.083	0.108

Worksheet 1G -- Multiple-Vehicle Driveway-Related Collisions by Driveway Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Driveway Type	**Number of driveways, n_j**	**Crashes per driveway per year, N_j**	**Coefficient for traffic adjustment, t**	**Initial N_{brdwy}**	**Overdispersion parameter, k**
		from Table 12-7	from Table 12-7	Equation 12-16 $n_j * N_j * (AADT/15,000)^t$	from Table 12-7
Major commercial	0	0.158	1.000	0.000	
Minor commercial	0	0.050	1.000	0.000	
Major industrial/institutional	1	0.172	1.000	0.272	
Minor industrial/institutional	0	0.023	1.000	0.000	--
Major residential	0	0.083	1.000	0.000	
Minor residential	7	0.016	1.000	0.177	
Other	0	0.025	1.000	0.000	
Total	--	--	--	0.449	0.81

Worksheet 1H -- Multiple-Vehicle Driveway-Related Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Initial N_{brdwy}**	**Proportion of total crashes (f_{dwy})**	**Adjusted N_{brdwy}**	**Combined CMFs**	**Calibration factor, C_r**	**Predicted N_{brdwy}**
	$(5)_{TOTAL}$ from Worksheet 1G	from Table 12-7	$(2)_{TOTAL} * (3)$	(6) from Worksheet 1B		(4)*(5)*(6)
Total	0.449	1.000	0.449	1.02	1.00	0.457
Fatal and injury (FI)	--	0.323	0.145	1.02	1.00	0.148
Property damage only (PDO)	--	0.677	0.304	1.02	1.00	0.310

Worksheet 1I -- Vehicle-Pedestrian Collisions for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Crash Severity Level	**Predicted N_{brmv}**	**Predicted N_{brsv}**	**Predicted N_{brdwy}**	**Predicted N_{br}**	**f_{pedr}**	**Calibration factor, C_r**	**Predicted N_{pedr}**
	(9) from Worksheet 1C	(9) from Worksheet 1E	(7) from Worksheet 1H	(2)+(3)+(4)	from Table 12-8		(5)*(6)*(7)
Total	2.854	0.617	0.457	3.928	0.005	1.00	0.020
Fatal and injury (FI)	--	--	--	--	--	1.00	0.020

Worksheet 1J -- Vehicle-Bicycle Collisions for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Crash Severity Level	**Predicted N_{brmv}**	**Predicted N_{brsv}**	**Predicted N_{brdwy}**	**Predicted N_{br}**	**f_{biker}**	**Calibration factor, C_r**	**Predicted N_{biker}**
	(9) from Worksheet 1C	(9) from Worksheet 1E	(7) from Worksheet 1H	(2)+(3)+(4)	from Table 12-9		(5)*(6)*(7)
Total	2.854	0.617	0.457	3.928	0.004	1.00	0.016
Fatal and injury (FI)	--	--	--	--	--	1.00	0.016

Worksheet 1K -- Crash Severity Distribution for Urban and Suburban Roadway Segments			
(1)	(2)	(3)	(4)
Collision type	**Fatal and injury (FI)**	**Property damage only (PDO)**	**Total**
	(3) from Worksheet 1D and 1F; (7) from Worksheet 1H; and (8) from Worksheet 1I and 1J	(5) from Worksheet 1D and 1F; and (7) from Worksheet 1H	(6) from Worksheet 1D and 1F; (7) from Worksheet 1H; and (8) from Worksheet 1I and 1J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 1D)	0.601	1.580	2.181
Head-on collisions (from Worksheet 1D)	0.056	0.008	0.064
Angle collisions (from Worksheet 1D)	0.070	0.160	0.230
Sideswipe, same direction (from Worksheet 1D)	0.012	0.063	0.075
Sideswipe, opposite direction (from Worksheet 1D)	0.060	0.112	0.172
Driveway-related collisions (from Worksheet 1H)	0.148	0.310	0.457
Other multiple-vehicle collision (from Worksheet 1D)	0.024	0.108	0.131
Subtotal	0.971	2.340	3.311
SINGLE-VEHICLE			
Collision with animal (from Worksheet 1F)	0.003	0.034	0.036
Collision with fixed object (from Worksheet 1F)	0.076	0.388	0.464
Collision with other object (from Worksheet 1F)	0.001	0.007	0.008
Other single-vehicle collision (from Worksheet 1F)	0.025	0.083	0.108
Collision with pedestrian (from Worksheet 1I)	0.020	0.000	0.020
Collision with bicycle (from Worksheet 1J)	0.016	0.000	0.016
Subtotal	0.141	0.511	0.652
Total	1.112	2.851	3.963

Worksheet 1L -- Summary Results for Urban and Suburban Roadway Segments			
(1)	(2)	(3)	(4)
Crash Severity Level	**Predicted average crash frequency, $N_{predicted\ rs}$ (crashes/year)**	**Roadway segment length, L (mi)**	**Crash rate (crashes/mi/year)**
	(Total) from Worksheet 1K		(2) / (3)
Total	4.0	0.51	7.8
Fatal and injury (FI)	1.1	0.51	2.2
Property damage only (PDO)	2.9	0.51	5.6

Worksheet 1A -- General Information and Input Data for Urban and Suburban Roadway Segments

General Information		Location Information	
Analyst	RDW	Roadway	Boggy Creek Road NO BUILD
Agency or Company	VHB	Roadway Section	N Pointe Blvd to Timber Lane
Date Performed	12/11/20	Jurisdiction	Osceola County, FL
		Analysis Year	2045

Input Data		Base Conditions	Site Conditions
Roadway type (2U, 3T, 4U, 4D, ST)		--	2U
Length of segment, L (mi)		--	0.54
AADT (veh/day)	$AADT_{MAX}$ = 32,600 (veh/day)	--	23,600
Type of on-street parking (none/parallel/angle)		None	None
Proportion of curb length with on-street parking		--	0
Median width (ft) - for divided only		15	Not Present
Lighting (present / not present)		Not Present	Not Present
Auto speed enforcement (present / not present)		Not Present	Not Present
Major commercial driveways (number)		--	0
Minor commercial driveways (number)		--	0
Major industrial / institutional driveways (number)		--	0
Minor industrial / institutional driveways (number)		--	0
Major residential driveways (number)		--	9
Minor residential driveways (number)		--	0
Other driveways (number)		--	0
Speed Category		--	Posted Speed Greater than 30 mph
Roadside fixed object density (fixed objects / mi)		0	60
Offset to roadside fixed objects (ft) [If greater than 30 or Not Present, input 30]		30	25
Calibration Factor, Cr		1.00	1.00

Worksheet 1B -- Crash Modification Factors for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
CMF for On-Street Parking	CMF for Roadside Fixed Objects	CMF for Median Width	CMF for Lighting	CMF for Automated Speed Enforcement	Combined CMF
CMF 1r	*CMF 2r*	*CMF 3r*	*CMF 4r*	*CMF 5r*	*CMF comb*
from Equation 12-32	from Equation 12-33	from Table 12-22	from Equation 12-34	from Section 12.7.1	(1)*(2)*(3)*(4)*(5)
1.00	1.12	1.00	1.00	1.00	1.12

Worksheet 1C -- Multiple-Vehicle Nondriveway Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**		**Overdispersion Parameter, k**	**Initial N_{brmv}**	**Proportion of Total Crashes**	**Adjusted N_{brmv}**	**Combined CMFs**	**Calibration Factor, Cr**	**Predicted N_{brmv}**
	from Table 12-3		from Table 12-3	from Equation 12-10		$(4)_{TOTAL}$*(5)	(6) from Worksheet 1B		(6)*(7)*(8)
	a	b							
Total	-15.22	1.68	0.84	2.944	1.000	2.944	1.12	1.00	3.285
Fatal and Injury (FI)	-16.22	1.66	0.65	0.885	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.289	0.850	1.12	1.00	0.948
Property Damage Only (PDO)	-15.62	1.69	0.87	2.182	$(5)_{TOTAL}-(5)_{FI}$ = 0.711	2.094	1.12	1.00	2.337

Worksheet 1D -- Multiple-Vehicle Nondriveway Collisions by Collision Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{brmv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{brmv\ (PDO)}$ (crashes/year)**	**Predicted N $_{brmv\ (TOTAL)}$ (crashes/year)**
	from Table 12-4	$(9)_{FI}$ from Worksheet 1C	from Table 12-4	$(9)_{PDO}$ from Worksheet 1C	$(9)_{TOTAL}$ from Worksheet 1C
Total	1.000	0.948	1.000	2.337	3.285
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Rear-end collision	0.730	0.692	0.778	1.818	2.510
Head-on collision	0.068	0.064	0.004	0.009	0.074
Angle collision	0.085	0.081	0.079	0.185	0.265
Sideswipe, same direction	0.015	0.014	0.031	0.072	0.087
Sideswipe, opposite direction	0.073	0.069	0.055	0.129	0.198
Other multiple-vehicle collision	0.029	0.027	0.053	0.124	0.151

Worksheet 1E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**		**Overdispersion Parameter, k**	**Initial N_{brsv}**	**Proportion of Total Crashes**	**Adjusted N_{brsv}**	**Combined CMFs**	**Calibration Factor, Cr**	**Predicted N_{brsv}**
	from Table 12-5		from Table 12-5	from Equation 12-13		$(4)_{TOTAL}*(5)$	(6) from Worksheet 1B		(6)*(7)*(8)
	a	b							
Total	-5.47	0.56	0.81	0.639	1.000	0.639	1.12	1.00	0.713
Fatal and Injury (FI)	-3.96	0.23	0.50	0.104	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.171	0.109	1.12	1.00	0.122
Property Damage Only (PDO)	-6.51	0.64	0.87	0.506	$(5)_{TOTAL}-(5)_{FI}$ = 0.829	0.530	1.12	1.00	0.591

Worksheet 1F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{brsv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{brsv\ (PDO)}$ (crashes/year)**	**Predicted N $_{brsv\ (TOTAL)}$ (crashes/year)**
	from Table 12-6	$(9)_{FI}$ from Worksheet 1E	from Table 12-6	$(9)_{PDO}$ from Worksheet 1E	$(9)_{TOTAL}$ from Worksheet 1E
Total	1.000	0.122	1.000	0.591	0.713
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Collision with animal	0.026	0.003	0.066	0.039	0.042
Collision with fixed object	0.723	0.088	0.759	0.449	0.537
Collision with other object	0.010	0.001	0.013	0.008	0.009
Other single-vehicle collision	0.241	0.029	0.162	0.096	0.125

Worksheet 1G -- Multiple-Vehicle Driveway-Related Collisions by Driveway Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Driveway Type	**Number of driveways, n_j**	**Crashes per driveway per year, N_j**	**Coefficient for traffic adjustment, t**	**Initial N_{brdwy}**	**Overdispersion parameter, k**
		from Table 12-7	from Table 12-7	Equation 12-16 $n_j * N_j * (AADT/15,000)^t$	from Table 12-7
Major commercial	0	0.158	1.000	0.000	
Minor commercial	0	0.050	1.000	0.000	
Major industrial/institutional	0	0.172	1.000	0.000	
Minor industrial/institutional	0	0.023	1.000	0.000	--
Major residential	9	0.083	1.000	1.175	
Minor residential	0	0.016	1.000	0.000	
Other	0	0.025	1.000	0.000	
Total	--	--	--	1.175	0.81

Worksheet 1H -- Multiple-Vehicle Driveway-Related Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Initial N_{brdwy}**	**Proportion of total crashes (f_{dwy})**	**Adjusted N_{brdwy}**	**Combined CMFs**	**Calibration factor, C_r**	**Predicted N_{brdwy}**
	$(5)_{TOTAL}$ from Worksheet 1G	from Table 12-7	$(2)_{TOTAL} * (3)$	(6) from Worksheet 1B		(4)*(5)*(6)
Total	1.175	1.000	1.175	1.12	1.00	1.312
Fatal and injury (FI)	--	0.323	0.380	1.12	1.00	0.424
Property damage only (PDO)	--	0.677	0.796	1.12	1.00	0.888

Worksheet 1I -- Vehicle-Pedestrian Collisions for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Crash Severity Level	**Predicted N_{brmv}**	**Predicted N_{brsv}**	**Predicted N_{brdwy}**	**Predicted N_{br}**	**f_{pedr}**	**Calibration factor, C_r**	**Predicted N_{pedr}**
	(9) from Worksheet 1C	(9) from Worksheet 1E	(7) from Worksheet 1H	(2)+(3)+(4)	from Table 12-8		(5)*(6)*(7)
Total	3.285	0.713	1.312	5.310	0.005	1.00	0.027
Fatal and injury (FI)	--	--	--	--	--	1.00	0.027

Worksheet 1J -- Vehicle-Bicycle Collisions for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Crash Severity Level	**Predicted N_{brmv}**	**Predicted N_{brsv}**	**Predicted N_{brdwy}**	**Predicted N_{br}**	**f_{biker}**	**Calibration factor, C_r**	**Predicted N_{biker}**
	(9) from Worksheet 1C	(9) from Worksheet 1E	(7) from Worksheet 1H	(2)+(3)+(4)	from Table 12-9		(5)*(6)*(7)
Total	3.285	0.713	1.312	5.310	0.004	1.00	0.021
Fatal and injury (FI)	--	--	--	--	--	1.00	0.021

Worksheet 1K -- Crash Severity Distribution for Urban and Suburban Roadway Segments			
(1)	(2)	(3)	(4)
Collision type	**Fatal and injury (FI)**	**Property damage only (PDO)**	**Total**
	(3) from Worksheet 1D and 1F; (7) from Worksheet 1H; and (8) from Worksheet 1I and 1J	(5) from Worksheet 1D and 1F; and (7) from Worksheet 1H	(6) from Worksheet 1D and 1F; (7) from Worksheet 1H; and (8) from Worksheet 1I and 1J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 1D)	0.692	1.818	2.510
Head-on collisions (from Worksheet 1D)	0.064	0.009	0.074
Angle collisions (from Worksheet 1D)	0.081	0.185	0.265
Sideswipe, same direction (from Worksheet 1D)	0.014	0.072	0.087
Sideswipe, opposite direction (from Worksheet 1D)	0.069	0.129	0.198
Driveway-related collisions (from Worksheet 1H)	0.424	0.888	1.312
Other multiple-vehicle collision (from Worksheet 1D)	0.027	0.124	0.151
Subtotal	1.372	3.225	4.597
SINGLE-VEHICLE			
Collision with animal (from Worksheet 1F)	0.003	0.039	0.042
Collision with fixed object (from Worksheet 1F)	0.088	0.449	0.537
Collision with other object (from Worksheet 1F)	0.001	0.008	0.009
Other single-vehicle collision (from Worksheet 1F)	0.029	0.096	0.125
Collision with pedestrian (from Worksheet 1I)	0.027	0.000	0.027
Collision with bicycle (from Worksheet 1J)	0.021	0.000	0.021
Subtotal	0.170	0.591	0.761
Total	1.542	3.816	5.358

Worksheet 1L -- Summary Results for Urban and Suburban Roadway Segments			
(1)	(2)	(3)	(4)
Crash Severity Level	**Predicted average crash frequency, $N_{predicted\ rs}$ (crashes/year)**	**Roadway segment length, L (mi)**	**Crash rate (crashes/mi/year)**
	(Total) from Worksheet 1K		(2) / (3)
Total	5.4	0.54	9.9
Fatal and injury (FI)	1.5	0.54	2.9
Property damage only (PDO)	3.8	0.54	7.1

Worksheet 1A -- General Information and Input Data for Urban and Suburban Roadway Segments

General Information		Location Information	
Analyst	RDW	Roadway	Boggy Creek Road NO BUILD
Agency or Company	VHB	Roadway Section	Timber Lane to Fells Cove Blvd
Date Performed	12/11/20	Jurisdiction	Osceola County, FL
		Analysis Year	2045

Input Data		Base Conditions	Site Conditions
Roadway type (2U, 3T, 4U, 4D, ST)		--	2U
Length of segment, L (mi)		--	1.65
AADT (veh/day)	$AADT_{MAX}$ = 32,600 (veh/day)	--	24,000
Type of on-street parking (none/parallel/angle)		None	None
Proportion of curb length with on-street parking		--	0
Median width (ft) - for divided only		15	Not Present
Lighting (present / not present)		Not Present	Not Present
Auto speed enforcement (present / not present)		Not Present	Not Present
Major commercial driveways (number)		--	0
Minor commercial driveways (number)		--	0
Major industrial / institutional driveways (number)		--	1
Minor industrial / institutional driveways (number)		--	0
Major residential driveways (number)		--	6
Minor residential driveways (number)		--	17
Other driveways (number)		--	0
Speed Category		--	Posted Speed Greater than 30 mph
Roadside fixed object density (fixed objects / mi)		0	30
Offset to roadside fixed objects (ft) [If greater than 30 or Not Present, input 30]		30	30
Calibration Factor, Cr		1.00	1.00

Worksheet 1B -- Crash Modification Factors for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
CMF for On-Street Parking	CMF for Roadside Fixed Objects	CMF for Median Width	CMF for Lighting	CMF for Automated Speed Enforcement	Combined CMF
CMF 1r	*CMF 2r*	*CMF 3r*	*CMF 4r*	*CMF 5r*	*CMF comb*
from Equation 12-32	from Equation 12-33	from Table 12-22	from Equation 12-34	from Section 12.7.1	(1)*(2)*(3)*(4)*(5)
1.00	1.02	1.00	1.00	1.00	1.02

Worksheet 1C -- Multiple-Vehicle Nondriveway Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**		**Overdispersion Parameter, k**	**Initial N_{brmv}**	**Proportion of Total Crashes**	**Adjusted N_{brmv}**	**Combined CMFs**	**Calibration Factor, Cr**	**Predicted N_{brmv}**
	from Table 12-3		from Table 12-3	from Equation 12-10		$(4)_{TOTAL}$*(5)	(6) from Worksheet 1B		(6)*(7)*(8)
	a	b							
Total	-15.22	1.68	0.84	9.253	1.000	9.253	1.02	1.00	9.431
Fatal and Injury (FI)	-16.22	1.66	0.65	2.782	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.289	2.670	1.02	1.00	2.721
Property Damage Only (PDO)	-15.62	1.69	0.87	6.861	$(5)_{TOTAL}-(5)_{FI}$ = 0.711	6.583	1.02	1.00	6.710

Worksheet 1D -- Multiple-Vehicle Nondriveway Collisions by Collision Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{brmv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{brmv\ (PDO)}$ (crashes/year)**	**Predicted N $_{brmv\ (TOTAL)}$ (crashes/year)**
	from Table 12-4	$(9)_{FI}$ from Worksheet 1C	from Table 12-4	$(9)_{PDO}$ from Worksheet 1C	$(9)_{TOTAL}$ from Worksheet 1C
Total	1.000	2.721	1.000	6.710	9.431
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Rear-end collision	0.730	1.986	0.778	5.220	7.206
Head-on collision	0.068	0.185	0.004	0.027	0.212
Angle collision	0.085	0.231	0.079	0.530	0.761
Sideswipe, same direction	0.015	0.041	0.031	0.208	0.249
Sideswipe, opposite direction	0.073	0.199	0.055	0.369	0.568
Other multiple-vehicle collision	0.029	0.079	0.053	0.356	0.435

Worksheet 1E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**		**Overdispersion Parameter, k**	**Initial N_{brsv}**	**Proportion of Total Crashes**	**Adjusted N_{brsv}**	**Combined CMFs**	**Calibration Factor, Cr**	**Predicted N_{brsv}**
	from Table 12-5		from Table 12-5	from Equation 12-13		$(4)_{TOTAL}*(5)$	(6) from Worksheet 1B		(6)*(7)*(8)
	a	b							
Total	-5.47	0.56	0.81	1.972	1.000	1.972	1.02	1.00	2.009
Fatal and Injury (FI)	-3.96	0.23	0.50	0.320	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.170	0.335	1.02	1.00	0.342
Property Damage Only (PDO)	-6.51	0.64	0.87	1.562	$(5)_{TOTAL}-(5)_{FI}$ = 0.830	1.636	1.02	1.00	1.668

Worksheet 1F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{brsv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{brsv\ (PDO)}$ (crashes/year)**	**Predicted N $_{brsv\ (TOTAL)}$ (crashes/year)**
	from Table 12-6	$(9)_{FI}$ from Worksheet 1E	from Table 12-6	$(9)_{PDO}$ from Worksheet 1E	$(9)_{TOTAL}$ from Worksheet 1E
Total	1.000	0.342	1.000	1.668	2.009
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Collision with animal	0.026	0.009	0.066	0.110	0.119
Collision with fixed object	0.723	0.247	0.759	1.266	1.513
Collision with other object	0.010	0.003	0.013	0.022	0.025
Other single-vehicle collision	0.241	0.082	0.162	0.270	0.353

Worksheet 1G -- Multiple-Vehicle Driveway-Related Collisions by Driveway Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Driveway Type	**Number of driveways, n_j**	**Crashes per driveway per year, N_j**	**Coefficient for traffic adjustment, t**	**Initial N_{brdwy}**	**Overdispersion parameter, k**
		from Table 12-7	from Table 12-7	Equation 12-16 $n_j * N_j * (AADT/15,000)^t$	from Table 12-7
Major commercial	0	0.158	1.000	0.000	
Minor commercial	0	0.050	1.000	0.000	
Major industrial/institutional	1	0.172	1.000	0.275	
Minor industrial/institutional	0	0.023	1.000	0.000	--
Major residential	6	0.083	1.000	0.797	
Minor residential	17	0.016	1.000	0.435	
Other	0	0.025	1.000	0.000	
Total	--	--	--	1.507	0.81

Worksheet 1H -- Multiple-Vehicle Driveway-Related Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Initial N_{brdwy}**	**Proportion of total crashes (f_{dwy})**	**Adjusted N_{brdwy}**	**Combined CMFs**	**Calibration factor, C_r**	**Predicted N_{brdwy}**
	$(5)_{TOTAL}$ from Worksheet 1G	from Table 12-7	$(2)_{TOTAL} * (3)$	(6) from Worksheet 1B		(4)*(5)*(6)
Total	1.507	1.000	1.507	1.02	1.00	1.536
Fatal and injury (FI)	--	0.323	0.487	1.02	1.00	0.496
Property damage only (PDO)	--	0.677	1.020	1.02	1.00	1.040

Worksheet 1I -- Vehicle-Pedestrian Collisions for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Crash Severity Level	**Predicted N_{brmv}**	**Predicted N_{brsv}**	**Predicted N_{brdwy}**	**Predicted N_{br}**	**f_{pedr}**	**Calibration factor, C_r**	**Predicted N_{pedr}**
	(9) from Worksheet 1C	(9) from Worksheet 1E	(7) from Worksheet 1H	(2)+(3)+(4)	from Table 12-8		(5)*(6)*(7)
Total	9.431	2.009	1.536	12.976	0.005	1.00	0.065
Fatal and injury (FI)	--	--	--	--	--	1.00	0.065

Worksheet 1J -- Vehicle-Bicycle Collisions for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Crash Severity Level	**Predicted N_{brmv}**	**Predicted N_{brsv}**	**Predicted N_{brdwy}**	**Predicted N_{br}**	**f_{biker}**	**Calibration factor, C_r**	**Predicted N_{biker}**
	(9) from Worksheet 1C	(9) from Worksheet 1E	(7) from Worksheet 1H	(2)+(3)+(4)	from Table 12-9		(5)*(6)*(7)
Total	9.431	2.009	1.536	12.976	0.004	1.00	0.052
Fatal and injury (FI)	--	--	--	--	--	1.00	0.052

Worksheet 1K -- Crash Severity Distribution for Urban and Suburban Roadway Segments			
(1)	(2)	(3)	(4)
Collision type	**Fatal and injury (FI)**	**Property damage only (PDO)**	**Total**
	(3) from Worksheet 1D and 1F; (7) from Worksheet 1H; and (8) from Worksheet 1I and 1J	(5) from Worksheet 1D and 1F; and (7) from Worksheet 1H	(6) from Worksheet 1D and 1F; (7) from Worksheet 1H; and (8) from Worksheet 1I and 1J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 1D)	1.986	5.220	7.206
Head-on collisions (from Worksheet 1D)	0.185	0.027	0.212
Angle collisions (from Worksheet 1D)	0.231	0.530	0.761
Sideswipe, same direction (from Worksheet 1D)	0.041	0.208	0.249
Sideswipe, opposite direction (from Worksheet 1D)	0.199	0.369	0.568
Driveway-related collisions (from Worksheet 1H)	0.496	1.040	1.536
Other multiple-vehicle collision (from Worksheet 1D)	0.079	0.356	0.435
Subtotal	3.217	7.750	10.967
SINGLE-VEHICLE			
Collision with animal (from Worksheet 1F)	0.009	0.110	0.119
Collision with fixed object (from Worksheet 1F)	0.247	1.266	1.513
Collision with other object (from Worksheet 1F)	0.003	0.022	0.025
Other single-vehicle collision (from Worksheet 1F)	0.082	0.270	0.353
Collision with pedestrian (from Worksheet 1I)	0.065	0.000	0.065
Collision with bicycle (from Worksheet 1J)	0.052	0.000	0.052
Subtotal	0.459	1.668	2.126
Total	3.676	9.417	13.093

Worksheet 1L -- Summary Results for Urban and Suburban Roadway Segments			
(1)	(2)	(3)	(4)
Crash Severity Level	**Predicted average crash frequency, $N_{predicted\ rs}$ (crashes/year)**	**Roadway segment length, L (mi)**	**Crash rate (crashes/mi/year)**
	(Total) from Worksheet 1K		(2) / (3)
Total	13.1	1.65	7.9
Fatal and injury (FI)	3.7	1.65	2.2
Property damage only (PDO)	9.4	1.65	5.7

Worksheet 1A -- General Information and Input Data for Urban and Suburban Roadway Segments

General Information		Location Information	
Analyst	RDW	Roadway	Boggy Creek Road NO BUILD
Agency or Company	VHB	Roadway Section	Fells Cove Blvd to Narcoosee Road
Date Performed	12/11/20	Jurisdiction	Osceola County, FL
		Analysis Year	2045

Input Data		Base Conditions	Site Conditions
Roadway type (2U, 3T, 4U, 4D, ST)		--	3T
Length of segment, L (mi)		--	0.76
AADT (veh/day)	$AADT_{MAX}$ = 32,900 (veh/day)	--	23,400
Type of on-street parking (none/parallel/angle)		None	None
Proportion of curb length with on-street parking		--	0
Median width (ft) - for divided only		15	Not Present
Lighting (present / not present)		Not Present	Not Present
Auto speed enforcement (present / not present)		Not Present	Not Present
Major commercial driveways (number)		--	2
Minor commercial driveways (number)		--	1
Major industrial / institutional driveways (number)		--	0
Minor industrial / institutional driveways (number)		--	0
Major residential driveways (number)		--	5
Minor residential driveways (number)		--	0
Other driveways (number)		--	0
Speed Category		--	Posted Speed Greater than 30 mph
Roadside fixed object density (fixed objects / mi)		0	30
Offset to roadside fixed objects (ft) [If greater than 30 or Not Present, input 30]		30	30
Calibration Factor, Cr		1.00	1.00

Worksheet 1B -- Crash Modification Factors for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
CMF for On-Street Parking	CMF for Roadside Fixed Objects	CMF for Median Width	CMF for Lighting	CMF for Automated Speed Enforcement	Combined CMF
CMF 1r	*CMF 2r*	*CMF 3r*	*CMF 4r*	*CMF 5r*	*CMF comb*
from Equation 12-32	from Equation 12-33	from Table 12-22	from Equation 12-34	from Section 12.7.1	(1)*(2)*(3)*(4)*(5)
1.00	1.01	1.00	1.00	1.00	1.01

Worksheet 1C -- Multiple-Vehicle Nondriveway Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**		**Overdispersion Parameter, k**	**Initial N_{brmv}**	**Proportion of Total Crashes**	**Adjusted N_{brmv}**	**Combined CMFs**	**Calibration Factor, Cr**	**Predicted N_{brmv}**
	from Table 12-3		from Table 12-3	from Equation 12-10		$(4)_{TOTAL}$*(5)	(6) from Worksheet 1B		(6)*(7)*(8)
	a	b							
Total	-12.40	1.41	0.66	4.531	1.000	4.531	1.01	1.00	4.581
Fatal and Injury (FI)	-16.45	1.69	0.59	1.320	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.294	1.330	1.01	1.00	1.345
Property Damage Only (PDO)	-11.95	1.33	0.59	3.177	$(5)_{TOTAL}-(5)_{FI}$ = 0.706	3.201	1.01	1.00	3.236

Worksheet 1D -- Multiple-Vehicle Nondriveway Collisions by Collision Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{brmv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{brmv\ (PDO)}$ (crashes/year)**	**Predicted N $_{brmv\ (TOTAL)}$ (crashes/year)**
	from Table 12-4	$(9)_{FI}$ from Worksheet 1C	from Table 12-4	$(9)_{PDO}$ from Worksheet 1C	$(9)_{TOTAL}$ from Worksheet 1C
Total	1.000	1.345	1.000	3.236	4.581
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Rear-end collision	0.845	1.136	0.842	2.725	3.861
Head-on collision	0.034	0.046	0.020	0.065	0.110
Angle collision	0.069	0.093	0.020	0.065	0.158
Sideswipe, same direction	0.001	0.001	0.078	0.252	0.254
Sideswipe, opposite direction	0.017	0.023	0.020	0.065	0.088
Other multiple-vehicle collision	0.034	0.046	0.020	0.065	0.110

Worksheet 1E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**		**Overdispersion Parameter, k**	**Initial N_{brsv}**	**Proportion of Total Crashes**	**Adjusted N_{brsv}**	**Combined CMFs**	**Calibration Factor, Cr**	**Predicted N_{brsv}**
	from Table 12-5		from Table 12-5	from Equation 12-13		$(4)_{TOTAL}*(5)$	(6) from Worksheet 1B		(6)*(7)*(8)
	a	b							
Total	-5.74	0.54	1.37	0.559	1.000	0.559	1.01	1.00	0.565
Fatal and Injury (FI)	-6.37	0.47	1.06	0.147	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.272	0.152	1.01	1.00	0.154
Property Damage Only (PDO)	-6.29	0.56	1.93	0.394	$(5)_{TOTAL}-(5)_{FI}$ = 0.728	0.407	1.01	1.00	0.411

Worksheet 1F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{brsv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{brsv\ (PDO)}$ (crashes/year)**	**Predicted N $_{brsv\ (TOTAL)}$ (crashes/year)**
	from Table 12-6	$(9)_{FI}$ from Worksheet 1E	from Table 12-6	$(9)_{PDO}$ from Worksheet 1E	$(9)_{TOTAL}$ from Worksheet 1E
Total	1.000	0.154	1.000	0.411	0.565
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Collision with animal	0.001	0.000	0.001	0.000	0.001
Collision with fixed object	0.688	0.106	0.963	0.396	0.502
Collision with other object	0.001	0.000	0.001	0.000	0.001
Other single-vehicle collision	0.310	0.048	0.035	0.014	0.062

Worksheet 1G -- Multiple-Vehicle Driveway-Related Collisions by Driveway Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Driveway Type	**Number of driveways, n_j**	**Crashes per driveway per year, N_j**	**Coefficient for traffic adjustment, t**	**Initial N_{brdwy}**	**Overdispersion parameter, k**
		from Table 12-7	from Table 12-7	Equation 12-16 $n_j * N_j * (AADT/15,000)^t$	from Table 12-7
Major commercial	2	0.102	1.000	0.318	--
Minor commercial	1	0.032	1.000	0.050	
Major industrial/institutional	0	0.110	1.000	0.000	
Minor industrial/institutional	0	0.015	1.000	0.000	
Major residential	5	0.053	1.000	0.413	
Minor residential	0	0.010	1.000	0.000	
Other	0	0.016	1.000	0.000	
Total	--	--	--	0.782	1.10

Worksheet 1H -- Multiple-Vehicle Driveway-Related Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Initial N_{brdwy}**	**Proportion of total crashes (f_{dwy})**	**Adjusted N_{brdwy}**	**Combined CMFs**	**Calibration factor, C_r**	**Predicted N_{brdwy}**
	$(5)_{TOTAL}$ from Worksheet 1G	from Table 12-7	$(2)_{TOTAL}$ * (3)	(6) from Worksheet 1B		(4)*(5)*(6)
Total	0.782	1.000	0.782	1.01	1.00	0.790
Fatal and injury (FI)	--	0.243	0.190	1.01	1.00	0.192
Property damage only (PDO)	--	0.757	0.592	1.01	1.00	0.598

Worksheet 1I -- Vehicle-Pedestrian Collisions for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Crash Severity Level	**Predicted N_{brmv}**	**Predicted N_{brsv}**	**Predicted N_{brdwy}**	**Predicted N_{br}**	**f_{pedr}**	**Calibration factor, C_r**	**Predicted N_{pedr}**
	(9) from Worksheet 1C	(9) from Worksheet 1E	(7) from Worksheet 1H	(2)+(3)+(4)	from Table 12-8		(5)*(6)*(7)
Total	4.581	0.565	0.790	5.936	0.013	1.00	0.077
Fatal and injury (FI)	--	--	--	--	--	1.00	0.077

Worksheet 1J -- Vehicle-Bicycle Collisions for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Crash Severity Level	**Predicted N_{brmv}**	**Predicted N_{brsv}**	**Predicted N_{brdwy}**	**Predicted N_{br}**	**f_{biker}**	**Calibration factor, C_r**	**Predicted N_{biker}**
	(9) from Worksheet 1C	(9) from Worksheet 1E	(7) from Worksheet 1H	(2)+(3)+(4)	from Table 12-9		(5)*(6)*(7)
Total	4.581	0.565	0.790	5.936	0.007	1.00	0.042
Fatal and injury (FI)	--	--	--	--	--	1.00	0.042

Worksheet 1K -- Crash Severity Distribution for Urban and Suburban Roadway Segments			
(1)	(2)	(3)	(4)
Collision type	**Fatal and injury (FI)**	**Property damage only (PDO)**	**Total**
	(3) from Worksheet 1D and 1F; (7) from Worksheet 1H; and (8) from Worksheet 1I and 1J	(5) from Worksheet 1D and 1F; and (7) from Worksheet 1H	(6) from Worksheet 1D and 1F; (7) from Worksheet 1H; and (8) from Worksheet 1I and 1J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 1D)	1.136	2.725	3.861
Head-on collisions (from Worksheet 1D)	0.046	0.065	0.110
Angle collisions (from Worksheet 1D)	0.093	0.065	0.158
Sideswipe, same direction (from Worksheet 1D)	0.001	0.252	0.254
Sideswipe, opposite direction (from Worksheet 1D)	0.023	0.065	0.088
Driveway-related collisions (from Worksheet 1H)	0.192	0.598	0.790
Other multiple-vehicle collision (from Worksheet 1D)	0.046	0.065	0.110
Subtotal	1.537	3.834	5.371
SINGLE-VEHICLE			
Collision with animal (from Worksheet 1F)	0.000	0.000	0.001
Collision with fixed object (from Worksheet 1F)	0.106	0.396	0.502
Collision with other object (from Worksheet 1F)	0.000	0.000	0.001
Other single-vehicle collision (from Worksheet 1F)	0.048	0.014	0.062
Collision with pedestrian (from Worksheet 1I)	0.077	0.000	0.077
Collision with bicycle (from Worksheet 1J)	0.042	0.000	0.042
Subtotal	0.272	0.411	0.684
Total	1.809	4.246	6.055

Worksheet 1L -- Summary Results for Urban and Suburban Roadway Segments			
(1)	(2)	(3)	(4)
Crash Severity Level	**Predicted average crash frequency, $N_{predicted\ rs}$ (crashes/year)**	**Roadway segment length, L (mi)**	**Crash rate (crashes/mi/year)**
	(Total) from Worksheet 1K		(2) / (3)
Total	6.1	0.76	8.0
Fatal and injury (FI)	1.8	0.76	2.4
Property damage only (PDO)	4.2	0.76	5.6

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections

General Information		Location Information	
Analyst	RDW	Roadway	Boggy Creek Road NO BUILD
Agency or Company	VHB	Intersection	Simpson Road
Date Performed	12/11/20	Jurisdiction	Osceola County, FL
		Analysis Year	2045

Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	4SG
AADT $_{major}$ (veh/day)	$AADT_{MAX}$ = 67,700 (veh/day)	--	41,800
AADT $_{minor}$ (veh/day)	$AADT_{MAX}$ = 33,400 (veh/day)	--	**34,600**
Intersection lighting (present/not present)		Not Present	Not Present
Calibration factor, C_i		1.00	1.00
Data for unsignalized intersections only:		--	--
Number of major-road approaches with left-turn lanes (0,1,2)		0	
Number of major-road approaches with right-turn lanes (0,1,2)		0	
Data for signalized intersections only:		--	--
Number of approaches with left-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	4
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	4
Number of approaches with left-turn signal phasing [for 3SG, use maximum value of 3]		--	4
Type of left-turn signal phasing for Leg #1		Permissive	Protected / Permissive
Type of left-turn signal phasing for Leg #2		--	Protected / Permissive
Type of left-turn signal phasing for Leg #3		--	Protected / Permissive
Type of left-turn signal phasing for Leg #4 (if applicable)		--	Protected / Permissive
Number of approaches with right-turn-on-red prohibited [for 3SG, use maximum value of 3]		0	0
Intersection red light cameras (present/not present)		Not Present	Not Present
Sum of all pedestrian crossing volumes (PedVol) -- Signalized intersections only			10
Maximum number of lanes crossed by a pedestrian (n_{lanesx})		--	6
Number of bus stops within 300 m (1,000 ft) of the intersection		0	0
Schools within 300 m (1,000 ft) of the intersection (present/not present)		Not Present	Not Present
Number of alcohol sales establishments within 300 m (1,000 ft) of the intersection		0	1

Worksheet 2B -- Crash Modification Factors for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)	(7)
CMF for Left-Turn Lanes	CMF for Left-Turn Signal Phasing	CMF for Right-Turn Lanes	CMF for Right Turn on Red	CMF for Lighting	CMF for Red Light Cameras	Combined CMF
CMF 1i	*CMF 2i*	*CMF 3i*	*CMF 4i*	*CMF 5i*	*CMF 6i*	*CMF $_{COMB}$*
from Table 12-24	from Table 12-25	from Table 12-26	from Equation 12-35	from Equation 12-36	from Equation 12-37	(1)*(2)*(3)*(4)*(5)*(6)
0.66	0.96	0.85	1.00	1.00	1.00	0.54

Worksheet 2C -- Multiple-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**			**Overdispersion Parameter, k**	**Initial N_{bimv}**	**Proportion of Total Crashes**	**Adjusted N_{bimv}**	**Combined CMFs**	**Calibration Factor, C_i**	**Predicted N_{bimv}**
	from Table 12-10			from Table 12-10	from Equation 12-21		$(4)_{TOTAL}$*(5)	(7) from Worksheet 2B		(6)*(7)*(8)
	a	b	c							
Total	-10.99	1.07	0.23	0.39	16.434	1.000	16.434	0.54	1.00	8.850
Fatal and Injury (FI)	-13.14	1.18	0.22	0.33	5.558	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.348	5.724	0.54	1.00	3.082
Property Damage Only (PDO)	-11.02	1.02	0.24	0.44	10.400	$(5)_{TOTAL}-(5)_{FI}$ = 0.652	10.710	0.54	1.00	5.767

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{bimv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{bimv\ (PDO)}$ (crashes/year)**	**Predicted N $_{bimv\ (TOTAL)}$ (crashes/year)**
	from Table 12-11	$(9)_{FI}$ from Worksheet 2C	from Table 12-11	$(9)_{PDO}$ from Worksheet 2C	$(9)_{PDO}$ from Worksheet 2C
Total	1.000	3.082	1.000	5.767	8.850
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Rear-end collision	0.450	1.387	0.483	2.786	4.173
Head-on collision	0.049	0.151	0.030	0.173	0.324
Angle collision	0.347	1.070	0.244	1.407	2.477
Sideswipe	0.099	0.305	0.032	0.185	0.490
Other multiple-vehicle collision	0.055	0.170	0.211	1.217	1.386

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**			**Overdispersion Parameter, k**	**Initial N_{bisv}**	**Proportion of Total Crashes**	**Adjusted N_{bimv}**	**Combined CMFs**	**Calibration Factor, C_i**	**Predicted N_{bisv}**
	from Table 12-12			from Table 12-12	from Eqn. 12-24; (FI) from Eqn. 12-24 or 12-27		$(4)_{TOTAL}$*(5)	(7) from Worksheet 2B		(6)*(7)*(8)
	a	b	c							
Total	-10.21	0.68	0.27	0.36	0.859	1.000	0.859	0.54	1.00	0.462
Fatal and Injury (FI)	-9.25	0.43	0.29	0.09	0.193	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.229	0.196	0.54	1.00	0.106
Property Damage Only (PDO)	-11.34	0.78	0.25	0.44	0.652	$(5)_{TOTAL}-(5)_{FI}$ = 0.771	0.662	0.54	1.00	0.357

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{bisv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{bisv\ (PDO)}$ (crashes/year)**	**Predicted N $_{bisv\ (TOTAL)}$ (crashes/year)**
	from Table 12-13	$(9)_{FI}$ from Worksheet 2E	from Table 12-13	$(9)_{PDO}$ from Worksheet 2E	$(9)_{PDO}$ from Worksheet 2E
Total	1.000	0.106	1.000	0.357	0.462
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Collision with parked vehicle	0.001	0.000	0.001	0.000	0.000
Collision with animal	0.002	0.000	0.002	0.001	0.001
Collision with fixed object	0.744	0.079	0.870	0.310	0.389
Collision with other object	0.072	0.008	0.070	0.025	0.033
Other single-vehicle collision	0.040	0.004	0.023	0.008	0.012
Single-vehicle noncollision	0.141	0.015	0.034	0.012	0.027

Worksheet 2G -- Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Stop-Controlled Intersections

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Predicted N_{bimv}**	**Predicted N_{bisv}**	**Predicted N_{bi}**	**f_{pedi}**	**Calibration factor, C_i**	**Predicted N_{pedi}**
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-16		(4)*(5)*(6)
Total	--	--	--	--	1.00	--
Fatal and injury (FI)	--	--	--	--	1.00	--

Worksheet 2H -- Crash Modification Factors for Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Signalized Intersections

(1)	(2)	(3)	(4)
CMF for Bus Stops	CMF for Schools	CMF for Alcohol Sales Establishments	Combined CMF
CMF_{1p}	CMF_{2p}	CMF_{3p}	
from Table 12-28	from Table 12-29	from Table 12-30	(1)*(2)*(3)
1.00	1.00	1.12	1.12

Worksheet 2I -- Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Signalized Intersections

(1)	(2)					(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**SPF Coefficients**					**Overdispersion Parameter, k**	**$N_{pedbase}$**	**Combined CMF**	**Calibration factor, C_i**	**Predicted N_{pedi}**
	from Table 12-14						from Equation 12-29	(4) from Worksheet 2H		(4)*(5)*(6)
	a	b	c	d	e					
Total	-9.53	0.40	0.26	0.45	0.04	0.24	0.022	1.12	1.00	0.025
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	1.00	0.025

Worksheet 2J -- Vehicle-Bicycle Collisions for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Predicted N_{bimv}**	**Predicted N_{bisv}**	**Predicted N_{bi}**	**f_{bikei}**	**Calibration factor, C_i**	**Predicted N_{bikei}**
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-17		(4)*(5)*(6)
Total	8.850	0.462	9.312	0.015	1.00	0.140
Fatal and injury (FI)	--	--	--	--	1.00	0.140

Worksheet 2K -- Crash Severity Distribution for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)
Collision type	**Fatal and injury (FI)**	**Property damage only (PDO)**	**Total**
	(3) from Worksheet 2D and 2F; (7) from 2G or 2I and 2J	(5) from Worksheet 2D and 2F	(6) from Worksheet 2D and 2F; (7) from 2G or 2I and 2J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 2D)	1.387	2.786	4.173
Head-on collisions (from Worksheet 2D)	0.151	0.173	0.324
Angle collisions (from Worksheet 2D)	1.070	1.407	2.477
Sideswipe (from Worksheet 2D)	0.305	0.185	0.490
Other multiple-vehicle collision (from Worksheet 2D)	0.170	1.217	1.386
Subtotal	3.082	5.767	8.850
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.000	0.000
Collision with animal (from Worksheet 2F)	0.000	0.001	0.001
Collision with fixed object (from Worksheet 2F)	0.079	0.310	0.389
Collision with other object (from Worksheet 2F)	0.008	0.025	0.033
Other single-vehicle collision (from Worksheet 2F)	0.004	0.008	0.012
Single-vehicle noncollision (from Worksheet 2F)	0.015	0.012	0.027
Collision with pedestrian (from Worksheet 2G or 2I)	0.025	0.000	0.025
Collision with bicycle (from Worksheet 2J)	0.140	0.000	0.140
Subtotal	0.270	0.357	0.627
Total	3.353	6.124	9.476

Worksheet 2L -- Summary Results for Urban and Suburban Arterial Intersections

(1)	(2)
Crash severity level	**Predicted average crash frequency, $N_{predicted\ int}$ (crashes/year)**
	(Total) from Worksheet 2K
Total	9.5
Fatal and injury (FI)	3.4
Property damage only (PDO)	6.1

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections

General Information		Location Information	
Analyst	RDW	Roadway	Boggy Creek Road NO BUILD
Agency or Company	VHB	Intersection	E Lake Pointe Dr
Date Performed	12/11/20	Jurisdiction	Osceola County, FL
		Analysis Year	2045

Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	3ST
AADT $_{major}$ (veh/day)	$AADT_{MAX}$ = 45,700 (veh/day)	--	29,500
AADT $_{minor}$ (veh/day)	$AADT_{MAX}$ = 9,300 (veh/day)	--	2,200
Intersection lighting (present/not present)		Not Present	Not Present
Calibration factor, C_i		1.00	1.00
Data for unsignalized intersections only:		--	--
Number of major-road approaches with left-turn lanes (0,1,2)		0	1
Number of major-road approaches with right-turn lanes (0,1,2)		0	1
Data for signalized intersections only:		--	--
Number of approaches with left-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	
Number of approaches with left-turn signal phasing [for 3SG, use maximum value of 3]		--	
Type of left-turn signal phasing for Leg #1		Permissive	
Type of left-turn signal phasing for Leg #2		--	
Type of left-turn signal phasing for Leg #3		--	
Type of left-turn signal phasing for Leg #4 (if applicable)		--	
Number of approaches with right-turn-on-red prohibited [for 3SG, use maximum value of 3]		0	
Intersection red light cameras (present/not present)		Not Present	
Sum of all pedestrian crossing volumes (PedVol) -- Signalized intersections only			
Maximum number of lanes crossed by a pedestrian (n_{lanesx})		--	
Number of bus stops within 300 m (1,000 ft) of the intersection		0	
Schools within 300 m (1,000 ft) of the intersection (present/not present)		Not Present	
Number of alcohol sales establishments within 300 m (1,000 ft) of the intersection		0	

Worksheet 2B -- Crash Modification Factors for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)	(7)
CMF for Left-Turn Lanes	CMF for Left-Turn Signal Phasing	CMF for Right-Turn Lanes	CMF for Right Turn on Red	CMF for Lighting	CMF for Red Light Cameras	Combined CMF
CMF 1i	*CMF 2i*	*CMF 3i*	*CMF 4i*	*CMF 5i*	*CMF 6i*	*CMF $_{COMB}$*
from Table 12-24	from Table 12-25	from Table 12-26	from Equation 12-35	from Equation 12-36	from Equation 12-37	(1)*(2)*(3)*(4)*(5)*(6)
0.67	1.00	0.86	1.00	1.00	1.00	0.58

Worksheet 2C -- Multiple-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**			**Overdispersion Parameter, k**	**Initial N_{bimv}**	**Proportion of Total Crashes**	**Adjusted N_{bimv}**	**Combined CMFs**	**Calibration Factor, C_i**	**Predicted N_{bimv}**
	from Table 12-10			from Table 12-10	from Equation 12-21		$(4)_{TOTAL}$*(5)	(7) from Worksheet 2B		(6)*(7)*(8)
	a	b	c							
Total	-13.36	1.11	0.41	0.80	3.386	1.000	3.386	0.58	1.00	1.956
Fatal and Injury (FI)	-14.01	1.16	0.30	0.69	1.268	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.341	1.155	0.58	1.00	0.667
Property Damage Only (PDO)	-15.38	1.20	0.51	0.77	2.449	$(5)_{TOTAL}-(5)_{FI}$ = 0.659	2.231	0.58	1.00	1.289

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{bimv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{bimv\ (PDO)}$ (crashes/year)**	**Predicted N $_{bimv\ (TOTAL)}$ (crashes/year)**
	from Table 12-11	$(9)_{FI}$ from Worksheet 2C	from Table 12-11	$(9)_{PDO}$ from Worksheet 2C	$(9)_{PDO}$ from Worksheet 2C
Total	1.000	0.667	1.000	1.289	1.956
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Rear-end collision	0.421	0.281	0.440	0.567	0.848
Head-on collision	0.045	0.030	0.023	0.030	0.060
Angle collision	0.343	0.229	0.262	0.338	0.567
Sideswipe	0.126	0.084	0.040	0.052	0.136
Other multiple-vehicle collision	0.065	0.043	0.235	0.303	0.346

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**			**Overdispersion Parameter, k**	**Initial N_{bisv}**	**Proportion of Total Crashes**	**Adjusted N_{bimv}**	**Combined CMFs**	**Calibration Factor, C_i**	**Predicted N_{bisv}**
	from Table 12-12			from Table 12-12	from Eqn. 12-24; (FI) from Eqn. 12-24 or 12-27		$(4)_{TOTAL}$*(5)	(7) from Worksheet 2B		(6)*(7)*(8)
	a	b	c							
Total	-6.81	0.16	0.51	1.14	0.290	1.000	0.290	0.58	1.00	0.167
Fatal and Injury (FI)	--	--	--	--	0.090	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.298	0.086	0.58	1.00	0.050
Property Damage Only (PDO)	-8.36	0.25	0.55	1.29	0.211	$(5)_{TOTAL}-(5)_{FI}$ = 0.702	0.203	0.58	1.00	0.118

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{bisv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{bisv\ (PDO)}$ (crashes/year)**	**Predicted N $_{bisv\ (TOTAL)}$ (crashes/year)**
	from Table 12-13	$(9)_{FI}$ from Worksheet 2E	from Table 12-13	$(9)_{PDO}$ from Worksheet 2E	$(9)_{PDO}$ from Worksheet 2E
Total	1.000	0.050	1.000	0.118	0.167
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Collision with parked vehicle	0.001	0.000	0.003	0.000	0.000
Collision with animal	0.003	0.000	0.018	0.002	0.002
Collision with fixed object	0.762	0.038	0.834	0.098	0.136
Collision with other object	0.090	0.004	0.092	0.011	0.015
Other single-vehicle collision	0.039	0.002	0.023	0.003	0.005
Single-vehicle noncollision	0.105	0.005	0.030	0.004	0.009

Worksheet 2G -- Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Stop-Controlled Intersections

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Predicted N_{bimv}**	**Predicted N_{bisv}**	**Predicted N_{bi}**	**f_{pedi}**	**Calibration factor, C_i**	**Predicted N_{pedi}**
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-16		(4)*(5)*(6)
Total	1.956	0.167	2.124	0.021	1.00	0.045
Fatal and injury (FI)	--	--	--	--	1.00	0.045

Worksheet 2H -- Crash Modification Factors for Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Signalized Intersections

(1)	(2)	(3)	(4)
CMF for Bus Stops	CMF for Schools	CMF for Alcohol Sales Establishments	Combined CMF
CMF_{1p}	CMF_{2p}	CMF_{3p}	
from Table 12-28	from Table 12-29	from Table 12-30	(1)*(2)*(3)
--	--	--	--

Worksheet 2I -- Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Signalized Intersections

(1)	(2)					(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**SPF Coefficients**					**Overdispersion Parameter, k**	**$N_{pedbase}$**	**Combined CMF**	**Calibration factor, C_i**	**Predicted N_{pedi}**
	from Table 12-14						from Equation 12-29	(4) from Worksheet 2H		(4)*(5)*(6)
	a	b	c	d	e					
Total	--	--	--	--	--	--	--	--	1.00	--
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	1.00	--

Worksheet 2J -- Vehicle-Bicycle Collisions for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Predicted N_{bimv}**	**Predicted N_{bisv}**	**Predicted N_{bi}**	**f_{bikei}**	**Calibration factor, C_i**	**Predicted N_{bikei}**
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-17		(4)*(5)*(6)
Total	1.956	0.167	2.124	0.016	1.00	0.034
Fatal and injury (FI)	--	--	--	--	1.00	0.034

Worksheet 2K -- Crash Severity Distribution for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)
Collision type	**Fatal and injury (FI)**	**Property damage only (PDO)**	**Total**
	(3) from Worksheet 2D and 2F; (7) from 2G or 2I and 2J	(5) from Worksheet 2D and 2F	(6) from Worksheet 2D and 2F; (7) from 2G or 2I and 2J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 2D)	0.281	0.567	0.848
Head-on collisions (from Worksheet 2D)	0.030	0.030	0.060
Angle collisions (from Worksheet 2D)	0.229	0.338	0.567
Sideswipe (from Worksheet 2D)	0.084	0.052	0.136
Other multiple-vehicle collision (from Worksheet 2D)	0.043	0.303	0.346
Subtotal	0.667	1.289	1.956
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.000	0.000
Collision with animal (from Worksheet 2F)	0.000	0.002	0.002
Collision with fixed object (from Worksheet 2F)	0.038	0.098	0.136
Collision with other object (from Worksheet 2F)	0.004	0.011	0.015
Other single-vehicle collision (from Worksheet 2F)	0.002	0.003	0.005
Single-vehicle noncollision (from Worksheet 2F)	0.005	0.004	0.009
Collision with pedestrian (from Worksheet 2G or 2I)	0.045	0.000	0.045
Collision with bicycle (from Worksheet 2J)	0.034	0.000	0.034
Subtotal	0.129	0.118	0.246
Total	0.796	1.406	2.202

Worksheet 2L -- Summary Results for Urban and Suburban Arterial Intersections

(1)	(2)
Crash severity level	**Predicted average crash frequency, $N_{predicted\ int}$ (crashes/year)**
	(Total) from Worksheet 2K
Total	2.2
Fatal and injury (FI)	0.8
Property damage only (PDO)	1.4

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections

General Information		Location Information	
Analyst	RDW	Roadway	Boggy Creek Road NO BUILD
Agency or Company	VHB	Intersection	Nele Road
Date Performed	12/11/20	Jurisdiction	Osceola County, FL
		Analysis Year	2045

Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	4SG
AADT $_{major}$ (veh/day)	$AADT_{MAX}$ = 67,700 (veh/day)	--	28,000
AADT $_{minor}$ (veh/day)	$AADT_{MAX}$ = 33,400 (veh/day)	--	2,700
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C_i		1.00	1.00
Data for unsignalized intersections only:		--	--
Number of major-road approaches with left-turn lanes (0,1,2)		0	1
Number of major-road approaches with right-turn lanes (0,1,2)		0	1
Data for signalized intersections only:		--	--
Number of approaches with left-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	2
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	3
Number of approaches with left-turn signal phasing [for 3SG, use maximum value of 3]		--	4
Type of left-turn signal phasing for Leg #1		Permissive	Protected / Permissive
Type of left-turn signal phasing for Leg #2		--	Protected / Permissive
Type of left-turn signal phasing for Leg #3		--	Permissive
Type of left-turn signal phasing for Leg #4 (if applicable)		--	Permissive
Number of approaches with right-turn-on-red prohibited [for 3SG, use maximum value of 3]		0	0
Intersection red light cameras (present/not present)		Not Present	Not Present
Sum of all pedestrian crossing volumes (PedVol) -- Signalized intersections only			10
Maximum number of lanes crossed by a pedestrian (n_{lanesx})		--	4
Number of bus stops within 300 m (1,000 ft) of the intersection		0	0
Schools within 300 m (1,000 ft) of the intersection (present/not present)		Not Present	Present
Number of alcohol sales establishments within 300 m (1,000 ft) of the intersection		0	0

Worksheet 2B -- Crash Modification Factors for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)	(7)
CMF for Left-Turn Lanes	CMF for Left-Turn Signal Phasing	CMF for Right-Turn Lanes	CMF for Right Turn on Red	CMF for Lighting	CMF for Red Light Cameras	Combined CMF
CMF 1i	*CMF 2i*	*CMF 3i*	*CMF 4i*	*CMF 5i*	*CMF 6i*	*CMF $_{COMB}$*
from Table 12-24	from Table 12-25	from Table 12-26	from Equation 12-35	from Equation 12-36	from Equation 12-37	(1)*(2)*(3)*(4)*(5)*(6)
0.81	0.98	0.88	1.00	0.91	1.00	0.64

Worksheet 2C -- Multiple-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**			**Overdispersion Parameter, k**	**Initial N_{bimv}**	**Proportion of Total Crashes**	**Adjusted N_{bimv}**	**Combined CMFs**	**Calibration Factor, C_i**	**Predicted N_{bimv}**
	from Table 12-10			from Table 12-10	from Equation 12-21		$(4)_{TOTAL}$*(5)	(7) from Worksheet 2B		(6)*(7)*(8)
	a	b	c							
Total	-10.99	1.07	0.23	0.39	5.954	1.000	5.954	0.64	1.00	3.808
Fatal and Injury (FI)	-13.14	1.18	0.22	0.33	1.977	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.345	2.056	0.64	1.00	1.315
Property Damage Only (PDO)	-11.02	1.02	0.24	0.44	3.747	$(5)_{TOTAL}-(5)_{FI}$ = 0.655	3.898	0.64	1.00	2.493

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{bimv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{bimv\ (PDO)}$ (crashes/year)**	**Predicted N $_{bimv\ (TOTAL)}$ (crashes/year)**
	from Table 12-11	$(9)_{FI}$ from Worksheet 2C	from Table 12-11	$(9)_{PDO}$ from Worksheet 2C	$(9)_{PDO}$ from Worksheet 2C
Total	1.000	1.315	1.000	2.493	3.808
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Rear-end collision	0.450	0.592	0.483	1.204	1.796
Head-on collision	0.049	0.064	0.030	0.075	0.139
Angle collision	0.347	0.456	0.244	0.608	1.065
Sideswipe	0.099	0.130	0.032	0.080	0.210
Other multiple-vehicle collision	0.055	0.072	0.211	0.526	0.598

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**			**Overdispersion Parameter, k**	**Initial N_{bisv}**	**Proportion of Total Crashes**	**Adjusted N_{bimv}**	**Combined CMFs**	**Calibration Factor, C_i**	**Predicted N_{bisv}**
	from Table 12-12			from Table 12-12	from Eqn. 12-24; (FI) from Eqn. 12-24 or 12-27		$(4)_{TOTAL}$*(5)	(7) from Worksheet 2B		(6)*(7)*(8)
	a	b	c							
Total	-10.21	0.68	0.27	0.36	0.328	1.000	0.328	0.64	1.00	0.210
Fatal and Injury (FI)	-9.25	0.43	0.29	0.09	0.078	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.235	0.077	0.64	1.00	0.049
Property Damage Only (PDO)	-11.34	0.78	0.25	0.44	0.252	$(5)_{TOTAL}-(5)_{FI}$ = 0.765	0.251	0.64	1.00	0.161

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{bisv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{bisv\ (PDO)}$ (crashes/year)**	**Predicted N $_{bisv\ (TOTAL)}$ (crashes/year)**
	from Table 12-13	$(9)_{FI}$ from Worksheet 2E	from Table 12-13	$(9)_{PDO}$ from Worksheet 2E	$(9)_{PDO}$ from Worksheet 2E
Total	1.000	0.049	1.000	0.161	0.210
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Collision with parked vehicle	0.001	0.000	0.001	0.000	0.000
Collision with animal	0.002	0.000	0.002	0.000	0.000
Collision with fixed object	0.744	0.037	0.870	0.140	0.177
Collision with other object	0.072	0.004	0.070	0.011	0.015
Other single-vehicle collision	0.040	0.002	0.023	0.004	0.006
Single-vehicle noncollision	0.141	0.007	0.034	0.005	0.012

Worksheet 2G -- Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Stop-Controlled Intersections

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Predicted N_{bimv}**	**Predicted N_{bisv}**	**Predicted N_{bi}**	**f_{pedi}**	**Calibration factor, C_i**	**Predicted N_{pedi}**
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-16		(4)*(5)*(6)
Total	--	--	--	--	1.00	--
Fatal and injury (FI)	--	--	--	--	1.00	--

Worksheet 2H -- Crash Modification Factors for Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Signalized Intersections

(1)	(2)	(3)	(4)
CMF for Bus Stops	CMF for Schools	CMF for Alcohol Sales Establishments	Combined CMF
CMF_{1p}	CMF_{2p}	CMF_{3p}	
from Table 12-28	from Table 12-29	from Table 12-30	(1)*(2)*(3)
1.00	1.35	1.00	1.35

Worksheet 2I -- Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Signalized Intersections

(1)	(2)					(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**SPF Coefficients**					**Overdispersion Parameter, k**	**$N_{pedbase}$**	**Combined CMF**	**Calibration factor, C_i**	**Predicted N_{pedi}**
	from Table 12-14						from Equation 12-29	(4) from Worksheet 2H		(4)*(5)*(6)
	a	b	c	d	e					
Total	-9.53	0.40	0.26	0.45	0.04	0.24	0.008	1.35	1.00	0.011
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	1.00	0.011

Worksheet 2J -- Vehicle-Bicycle Collisions for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Predicted N_{bimv}**	**Predicted N_{bisv}**	**Predicted N_{bi}**	**f_{bikei}**	**Calibration factor, C_i**	**Predicted N_{bikei}**
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-17		(4)*(5)*(6)
Total	3.808	0.210	4.018	0.015	1.00	0.060
Fatal and injury (FI)	--	--	--	--	1.00	0.060

Worksheet 2K -- Crash Severity Distribution for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)
	Fatal and injury (FI)	**Property damage only (PDO)**	**Total**
Collision type	(3) from Worksheet 2D and 2F; (7) from 2G or 2I and 2J	(5) from Worksheet 2D and 2F	(6) from Worksheet 2D and 2F; (7) from 2G or 2I and 2J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 2D)	0.592	1.204	1.796
Head-on collisions (from Worksheet 2D)	0.064	0.075	0.139
Angle collisions (from Worksheet 2D)	0.456	0.608	1.065
Sideswipe (from Worksheet 2D)	0.130	0.080	0.210
Other multiple-vehicle collision (from Worksheet 2D)	0.072	0.526	0.598
Subtotal	1.315	2.493	3.808
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.000	0.000
Collision with animal (from Worksheet 2F)	0.000	0.000	0.000
Collision with fixed object (from Worksheet 2F)	0.037	0.140	0.177
Collision with other object (from Worksheet 2F)	0.004	0.011	0.015
Other single-vehicle collision (from Worksheet 2F)	0.002	0.004	0.006
Single-vehicle noncollision (from Worksheet 2F)	0.007	0.005	0.012
Collision with pedestrian (from Worksheet 2G or 2I)	0.011	0.000	0.011
Collision with bicycle (from Worksheet 2J)	0.060	0.000	0.060
Subtotal	0.121	0.161	0.281
Total	1.436	2.654	4.090

Worksheet 2L -- Summary Results for Urban and Suburban Arterial Intersections

(1)	(2)
Crash severity level	**Predicted average crash frequency, $N_{predicted\ int}$ (crashes/year)**
	(Total) from Worksheet 2K
Total	4.1
Fatal and injury (FI)	1.4
Property damage only (PDO)	2.7

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections

General Information		Location Information	
Analyst	RDW	Roadway	Boggy Creek Road NO BUILD
Agency or Company	VHB	Intersection	Springlake Village Blvd
Date Performed	12/11/20	Jurisdiction	Osceola County, FL
		Analysis Year	2045

Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	4ST
AADT $_{major}$ (veh/day)	$AADT_{MAX}$ = 46,800 (veh/day)	--	26,100
AADT $_{minor}$ (veh/day)	$AADT_{MAX}$ = 5,900 (veh/day)	--	4,300
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C_i		1.00	1.00
Data for unsignalized intersections only:		--	--
Number of major-road approaches with left-turn lanes (0,1,2)		0	2
Number of major-road approaches with right-turn lanes (0,1,2)		0	2
Data for signalized intersections only:		--	--
Number of approaches with left-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	
Number of approaches with left-turn signal phasing [for 3SG, use maximum value of 3]		--	
Type of left-turn signal phasing for Leg #1		Permissive	
Type of left-turn signal phasing for Leg #2		--	
Type of left-turn signal phasing for Leg #3		--	
Type of left-turn signal phasing for Leg #4 (if applicable)		--	
Number of approaches with right-turn-on-red prohibited [for 3SG, use maximum value of 3]		0	
Intersection red light cameras (present/not present)		Not Present	
Sum of all pedestrian crossing volumes (PedVol) -- Signalized intersections only			
Maximum number of lanes crossed by a pedestrian (n_{lanesx})		--	
Number of bus stops within 300 m (1,000 ft) of the intersection		0	
Schools within 300 m (1,000 ft) of the intersection (present/not present)		Not Present	
Number of alcohol sales establishments within 300 m (1,000 ft) of the intersection		0	

Worksheet 2B -- Crash Modification Factors for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)	(7)
CMF for Left-Turn Lanes	CMF for Left-Turn Signal Phasing	CMF for Right-Turn Lanes	CMF for Right Turn on Red	CMF for Lighting	CMF for Red Light Cameras	Combined CMF
CMF 1i	*CMF 2i*	*CMF 3i*	*CMF 4i*	*CMF 5i*	*CMF 6i*	*CMF $_{COMB}$*
from Table 12-24	from Table 12-25	from Table 12-26	from Equation 12-35	from Equation 12-36	from Equation 12-37	(1)*(2)*(3)*(4)*(5)*(6)
0.53	1.00	0.74	1.00	0.91	0.97	0.35

Worksheet 2C -- Multiple-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**			**Overdispersion Parameter, k**	**Initial N_{bimv}**	**Proportion of Total Crashes**	**Adjusted N_{bimv}**	**Combined CMFs**	**Calibration Factor, C_i**	**Predicted N_{bimv}**
	from Table 12-10			from Table 12-10	from Equation 12-21		$(4)_{TOTAL}$*(5)	(7) from Worksheet 2B		(6)*(7)*(8)
	a	b	c							
Total	-8.90	0.82	0.25	0.40	4.622	1.000	4.622	0.35	1.00	1.602
Fatal and Injury (FI)	-11.13	0.93	0.28	0.48	1.955	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.415	1.917	0.35	1.00	0.664
Property Damage Only (PDO)	-8.74	0.77	0.23	0.40	2.759	$(5)_{TOTAL}-(5)_{FI}$ = 0.585	2.705	0.35	1.00	0.938

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{bimv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{bimv\ (PDO)}$ (crashes/year)**	**Predicted N $_{bimv\ (TOTAL)}$ (crashes/year)**
	from Table 12-11	$(9)_{FI}$ from Worksheet 2C	from Table 12-11	$(9)_{PDO}$ from Worksheet 2C	$(9)_{PDO}$ from Worksheet 2C
Total	1.000	0.664	1.000	0.938	1.602
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Rear-end collision	0.338	0.225	0.374	0.351	0.575
Head-on collision	0.041	0.027	0.030	0.028	0.055
Angle collision	0.440	0.292	0.335	0.314	0.607
Sideswipe	0.121	0.080	0.044	0.041	0.122
Other multiple-vehicle collision	0.060	0.040	0.217	0.204	0.243

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**			**Overdispersion Parameter, k**	**Initial N_{bisv}**	**Proportion of Total Crashes**	**Adjusted N_{bimv}**	**Combined CMFs**	**Calibration Factor, C_i**	**Predicted N_{bisv}**
	from Table 12-12			from Table 12-12	from Eqn. 12-24; (FI) from Eqn. 12-24 or 12-27		$(4)_{TOTAL}$*(5)	(7) from Worksheet 2B		(6)*(7)*(8)
	a	b	c							
Total	-5.33	0.33	0.12	0.65	0.379	1.000	0.379	0.35	1.00	0.131
Fatal and Injury (FI)	--	--	--	--	0.106	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.278	0.105	0.35	1.00	0.037
Property Damage Only (PDO)	-7.04	0.36	0.25	0.54	0.276	$(5)_{TOTAL}-(5)_{FI}$ = 0.722	0.274	0.35	1.00	0.095

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{bisv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{bisv\ (PDO)}$ (crashes/year)**	**Predicted N $_{bisv\ (TOTAL)}$ (crashes/year)**
	from Table 12-13	$(9)_{FI}$ from Worksheet 2E	from Table 12-13	$(9)_{PDO}$ from Worksheet 2E	$(9)_{PDO}$ from Worksheet 2E
Total	1.000	0.037	1.000	0.095	0.131
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Collision with parked vehicle	0.001	0.000	0.001	0.000	0.000
Collision with animal	0.001	0.000	0.026	0.002	0.003
Collision with fixed object	0.679	0.025	0.847	0.080	0.105
Collision with other object	0.089	0.003	0.070	0.007	0.010
Other single-vehicle collision	0.051	0.002	0.007	0.001	0.003
Single-vehicle noncollision	0.179	0.007	0.049	0.005	0.011

Worksheet 2G -- Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Stop-Controlled Intersections

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Predicted N_{bimv}**	**Predicted N_{bisv}**	**Predicted N_{bi}**	**f_{pedi}**	**Calibration factor, C_i**	**Predicted N_{pedi}**
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-16		(4)*(5)*(6)
Total	1.602	0.131	1.734	0.022	1.00	0.038
Fatal and injury (FI)	--	--	--	--	1.00	0.038

Worksheet 2H -- Crash Modification Factors for Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Signalized Intersections

(1)	(2)	(3)	(4)
CMF for Bus Stops	CMF for Schools	CMF for Alcohol Sales Establishments	Combined CMF
CMF_{1p}	CMF_{2p}	CMF_{3p}	
from Table 12-28	from Table 12-29	from Table 12-30	(1)*(2)*(3)
--	--	--	--

Worksheet 2I -- Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Signalized Intersections

(1)	(2)					(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**SPF Coefficients**					**Overdispersion Parameter, k**	**$N_{pedbase}$**	**Combined CMF**	**Calibration factor, C_i**	**Predicted N_{pedi}**
	from Table 12-14						from Equation 12-29	(4) from Worksheet 2H		(4)*(5)*(6)
	a	b	c	d	e					
Total	--	--	--	--	--	--	--	--	1.00	--
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	1.00	--

Worksheet 2J -- Vehicle-Bicycle Collisions for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Predicted N_{bimv}**	**Predicted N_{bisv}**	**Predicted N_{bi}**	**f_{bikei}**	**Calibration factor, C_i**	**Predicted N_{bikei}**
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-17		(4)*(5)*(6)
Total	1.602	0.131	1.734	0.018	1.00	0.031
Fatal and injury (FI)	--	--	--	--	1.00	0.031

Worksheet 2K -- Crash Severity Distribution for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)
Collision type	**Fatal and injury (FI)**	**Property damage only (PDO)**	**Total**
	(3) from Worksheet 2D and 2F; (7) from 2G or 2I and 2J	(5) from Worksheet 2D and 2F	(6) from Worksheet 2D and 2F; (7) from 2G or 2I and 2J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 2D)	0.225	0.351	0.575
Head-on collisions (from Worksheet 2D)	0.027	0.028	0.055
Angle collisions (from Worksheet 2D)	0.292	0.314	0.607
Sideswipe (from Worksheet 2D)	0.080	0.041	0.122
Other multiple-vehicle collision (from Worksheet 2D)	0.040	0.204	0.243
Subtotal	0.664	0.938	1.602
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.000	0.000
Collision with animal (from Worksheet 2F)	0.000	0.002	0.003
Collision with fixed object (from Worksheet 2F)	0.025	0.080	0.105
Collision with other object (from Worksheet 2F)	0.003	0.007	0.010
Other single-vehicle collision (from Worksheet 2F)	0.002	0.001	0.003
Single-vehicle noncollision (from Worksheet 2F)	0.007	0.005	0.011
Collision with pedestrian (from Worksheet 2G or 2I)	0.038	0.000	0.038
Collision with bicycle (from Worksheet 2J)	0.031	0.000	0.031
Subtotal	0.106	0.095	0.201
Total	0.770	1.033	1.803

Worksheet 2L -- Summary Results for Urban and Suburban Arterial Intersections

(1)	(2)
Crash severity level	**Predicted average crash frequency, $N_{predicted\ int}$ (crashes/year)**
	(Total) from Worksheet 2K
Total	1.8
Fatal and injury (FI)	0.8
Property damage only (PDO)	1.0

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections

General Information		Location Information	
Analyst	RDW	Roadway	Boggy Creek Road NO BUILD
Agency or Company	VHB	Intersection	Turnberry Blvd
Date Performed	12/11/20	Jurisdiction	Osceola County, FL
		Analysis Year	2045

Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	4SG
AADT $_{major}$ (veh/day)	$AADT_{MAX}$ = 67,700 (veh/day)	--	23,900
AADT $_{minor}$ (veh/day)	$AADT_{MAX}$ = 33,400 (veh/day)	--	4,400
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C_i		1.00	1.00
Data for unsignalized intersections only:		--	--
Number of major-road approaches with left-turn lanes (0,1,2)		0	
Number of major-road approaches with right-turn lanes (0,1,2)		0	
Data for signalized intersections only:		--	--
Number of approaches with left-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	3
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	3
Number of approaches with left-turn signal phasing [for 3SG, use maximum value of 3]		--	4
Type of left-turn signal phasing for Leg #1		Permissive	Protected / Permissive
Type of left-turn signal phasing for Leg #2		--	Protected
Type of left-turn signal phasing for Leg #3		--	Protected
Type of left-turn signal phasing for Leg #4 (if applicable)		--	
Number of approaches with right-turn-on-red prohibited [for 3SG, use maximum value of 3]		0	0
Intersection red light cameras (present/not present)		Not Present	Not Present
Sum of all pedestrian crossing volumes (PedVol) -- Signalized intersections only			10
Maximum number of lanes crossed by a pedestrian (n_{lanesx})		--	3
Number of bus stops within 300 m (1,000 ft) of the intersection		0	0
Schools within 300 m (1,000 ft) of the intersection (present/not present)		Not Present	Present
Number of alcohol sales establishments within 300 m (1,000 ft) of the intersection		0	0

Worksheet 2B -- Crash Modification Factors for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)	(7)
CMF for Left-Turn Lanes	CMF for Left-Turn Signal Phasing	CMF for Right-Turn Lanes	CMF for Right Turn on Red	CMF for Lighting	CMF for Red Light Cameras	Combined CMF
CMF 1i	*CMF 2i*	*CMF 3i*	*CMF 4i*	*CMF 5i*	*CMF 6i*	*CMF $_{COMB}$*
from Table 12-24	from Table 12-25	from Table 12-26	from Equation 12-35	from Equation 12-36	from Equation 12-37	(1)*(2)*(3)*(4)*(5)*(6)
0.73	0.87	0.88	1.00	0.91	1.00	0.51

Worksheet 2C -- Multiple-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**			**Overdispersion Parameter, k**	**Initial N_{bimv}**	**Proportion of Total Crashes**	**Adjusted N_{bimv}**	**Combined CMFs**	**Calibration Factor, C_i**	**Predicted N_{bimv}**
	from Table 12-10			from Table 12-10	from Equation 12-21		$(4)_{TOTAL}$*(5)	(7) from Worksheet 2B		(6)*(7)*(8)
	a	b	c							
Total	-10.99	1.07	0.23	0.39	5.623	1.000	5.623	0.51	1.00	2.864
Fatal and Injury (FI)	-13.14	1.18	0.22	0.33	1.826	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.337	1.897	0.51	1.00	0.967
Property Damage Only (PDO)	-11.02	1.02	0.24	0.44	3.585	$(5)_{TOTAL}-(5)_{FI}$ = 0.663	3.726	0.51	1.00	1.898

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{bimv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{bimv\ (PDO)}$ (crashes/year)**	**Predicted N $_{bimv\ (TOTAL)}$ (crashes/year)**
	from Table 12-11	$(9)_{FI}$ from Worksheet 2C	from Table 12-11	$(9)_{PDO}$ from Worksheet 2C	$(9)_{PDO}$ from Worksheet 2C
Total	1.000	0.967	1.000	1.898	2.864
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Rear-end collision	0.450	0.435	0.483	0.917	1.352
Head-on collision	0.049	0.047	0.030	0.057	0.104
Angle collision	0.347	0.335	0.244	0.463	0.798
Sideswipe	0.099	0.096	0.032	0.061	0.156
Other multiple-vehicle collision	0.055	0.053	0.211	0.400	0.454

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**			**Overdispersion Parameter, k**	**Initial N_{bisv}**	**Proportion of Total Crashes**	**Adjusted N_{bimv}**	**Combined CMFs**	**Calibration Factor, C_i**	**Predicted N_{bisv}**
	from Table 12-12			from Table 12-12	from Eqn. 12-24; (FI) from Eqn. 12-24 or 12-27		$(4)_{TOTAL}$*(5)	(7) from Worksheet 2B		(6)*(7)*(8)
	a	b	c							
Total	-10.21	0.68	0.27	0.36	0.336	1.000	0.336	0.51	1.00	0.171
Fatal and Injury (FI)	-9.25	0.43	0.29	0.09	0.084	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.249	0.084	0.51	1.00	0.043
Property Damage Only (PDO)	-11.34	0.78	0.25	0.44	0.252	$(5)_{TOTAL}-(5)_{FI}$ = 0.751	0.253	0.51	1.00	0.129

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{bisv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{bisv\ (PDO)}$ (crashes/year)**	**Predicted N $_{bisv\ (TOTAL)}$ (crashes/year)**
	from Table 12-13	$(9)_{FI}$ from Worksheet 2E	from Table 12-13	$(9)_{PDO}$ from Worksheet 2E	$(9)_{PDO}$ from Worksheet 2E
Total	1.000	0.043	1.000	0.129	0.171
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Collision with parked vehicle	0.001	0.000	0.001	0.000	0.000
Collision with animal	0.002	0.000	0.002	0.000	0.000
Collision with fixed object	0.744	0.032	0.870	0.112	0.144
Collision with other object	0.072	0.003	0.070	0.009	0.012
Other single-vehicle collision	0.040	0.002	0.023	0.003	0.005
Single-vehicle noncollision	0.141	0.006	0.034	0.004	0.010

Worksheet 2G -- Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Stop-Controlled Intersections

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Predicted N_{bimv}**	**Predicted N_{bisv}**	**Predicted N_{bi}**	**f_{pedi}**	**Calibration factor, C_i**	**Predicted N_{pedi}**
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-16		(4)*(5)*(6)
Total	--	--	--	--	1.00	--
Fatal and injury (FI)	--	--	--	--	1.00	--

Worksheet 2H -- Crash Modification Factors for Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Signalized Intersections

(1)	(2)	(3)	(4)
CMF for Bus Stops	CMF for Schools	CMF for Alcohol Sales Establishments	Combined CMF
CMF_{1p}	CMF_{2p}	CMF_{3p}	
from Table 12-28	from Table 12-29	from Table 12-30	(1)*(2)*(3)
1.00	1.35	1.00	1.35

Worksheet 2I -- Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Signalized Intersections

(1)	(2)					(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**SPF Coefficients**					**Overdispersion Parameter, k**	**$N_{pedbase}$**	**Combined CMF**	**Calibration factor, C_i**	**Predicted N_{pedi}**
	from Table 12-14						from Equation 12-29	(4) from Worksheet 2H		(4)*(5)*(6)
	a	b	c	d	e					
Total	-9.53	0.40	0.26	0.45	0.04	0.24	0.009	1.35	1.00	0.012
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	1.00	0.012

Worksheet 2J -- Vehicle-Bicycle Collisions for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Predicted N_{bimv}**	**Predicted N_{bisv}**	**Predicted N_{bi}**	**f_{bikei}**	**Calibration factor, C_i**	**Predicted N_{bikei}**
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-17		(4)*(5)*(6)
Total	2.864	0.171	3.036	0.015	1.00	0.046
Fatal and injury (FI)	--	--	--	--	1.00	0.046

Worksheet 2K -- Crash Severity Distribution for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)
	Fatal and injury (FI)	**Property damage only (PDO)**	**Total**
Collision type	(3) from Worksheet 2D and 2F; (7) from 2G or 2I and 2J	(5) from Worksheet 2D and 2F	(6) from Worksheet 2D and 2F; (7) from 2G or 2I and 2J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 2D)	0.435	0.917	1.352
Head-on collisions (from Worksheet 2D)	0.047	0.057	0.104
Angle collisions (from Worksheet 2D)	0.335	0.463	0.798
Sideswipe (from Worksheet 2D)	0.096	0.061	0.156
Other multiple-vehicle collision (from Worksheet 2D)	0.053	0.400	0.454
Subtotal	0.967	1.898	2.864
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.000	0.000
Collision with animal (from Worksheet 2F)	0.000	0.000	0.000
Collision with fixed object (from Worksheet 2F)	0.032	0.112	0.144
Collision with other object (from Worksheet 2F)	0.003	0.009	0.012
Other single-vehicle collision (from Worksheet 2F)	0.002	0.003	0.005
Single-vehicle noncollision (from Worksheet 2F)	0.006	0.004	0.010
Collision with pedestrian (from Worksheet 2G or 2I)	0.012	0.000	0.012
Collision with bicycle (from Worksheet 2J)	0.046	0.000	0.046
Subtotal	0.100	0.129	0.229
Total	1.067	2.026	3.093

Worksheet 2L -- Summary Results for Urban and Suburban Arterial Intersections

(1)	(2)
Crash severity level	**Predicted average crash frequency, $N_{predicted\ int}$ (crashes/year)**
	(Total) from Worksheet 2K
Total	3.1
Fatal and injury (FI)	1.1
Property damage only (PDO)	2.0

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections

General Information		Location Information	
Analyst	RDW	Roadway	Boggy Creek Road NO BUILD
Agency or Company	VHB	Intersection	N Pointe Blvd
Date Performed	12/11/20	Jurisdiction	Osceola County, FL
		Analysis Year	2045

Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	3ST
AADT $_{major}$ (veh/day)	$AADT_{MAX}$ = 45,700 (veh/day)	--	23,600
AADT $_{minor}$ (veh/day)	$AADT_{MAX}$ = 9,300 (veh/day)	--	2,900
Intersection lighting (present/not present)		Not Present	Not Present
Calibration factor, C_i		1.00	1.00
Data for unsignalized intersections only:		--	--
Number of major-road approaches with left-turn lanes (0,1,2)		0	1
Number of major-road approaches with right-turn lanes (0,1,2)		0	1
Data for signalized intersections only:		--	--
Number of approaches with left-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	
Number of approaches with left-turn signal phasing [for 3SG, use maximum value of 3]		--	
Type of left-turn signal phasing for Leg #1		Permissive	
Type of left-turn signal phasing for Leg #2		--	
Type of left-turn signal phasing for Leg #3		--	
Type of left-turn signal phasing for Leg #4 (if applicable)		--	
Number of approaches with right-turn-on-red prohibited [for 3SG, use maximum value of 3]		0	
Intersection red light cameras (present/not present)		Not Present	
Sum of all pedestrian crossing volumes (PedVol) -- Signalized intersections only			
Maximum number of lanes crossed by a pedestrian (n_{lanesx})		--	
Number of bus stops within 300 m (1,000 ft) of the intersection		0	
Schools within 300 m (1,000 ft) of the intersection (present/not present)		Not Present	
Number of alcohol sales establishments within 300 m (1,000 ft) of the intersection		0	

Worksheet 2B -- Crash Modification Factors for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)	(7)
CMF for Left-Turn Lanes	CMF for Left-Turn Signal Phasing	CMF for Right-Turn Lanes	CMF for Right Turn on Red	CMF for Lighting	CMF for Red Light Cameras	Combined CMF
CMF 1i	*CMF 2i*	*CMF 3i*	*CMF 4i*	*CMF 5i*	*CMF 6i*	*CMF $_{COMB}$*
from Table 12-24	from Table 12-25	from Table 12-26	from Equation 12-35	from Equation 12-36	from Equation 12-37	(1)*(2)*(3)*(4)*(5)*(6)
0.67	1.00	0.86	1.00	1.00	1.00	0.58

Worksheet 2C -- Multiple-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**			**Overdispersion Parameter, k**	**Initial N_{bimv}**	**Proportion of Total Crashes**	**Adjusted N_{bimv}**	**Combined CMFs**	**Calibration Factor, C_i**	**Predicted N_{bimv}**
	from Table 12-10			from Table 12-10	from Equation 12-21		$(4)_{TOTAL}$*(5)	(7) from Worksheet 2B		(6)*(7)*(8)
	a	b	c							
Total	-13.36	1.11	0.41	0.80	2.960	1.000	2.960	0.58	1.00	1.710
Fatal and Injury (FI)	-14.01	1.16	0.30	0.69	1.064	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.330	0.978	0.58	1.00	0.565
Property Damage Only (PDO)	-15.38	1.20	0.51	0.77	2.157	$(5)_{TOTAL}-(5)_{FI}$ = 0.670	1.983	0.58	1.00	1.145

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{bimv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{bimv\ (PDO)}$ (crashes/year)**	**Predicted N $_{bimv\ (TOTAL)}$ (crashes/year)**
	from Table 12-11	$(9)_{FI}$ from Worksheet 2C	from Table 12-11	$(9)_{PDO}$ from Worksheet 2C	$(9)_{PDO}$ from Worksheet 2C
Total	1.000	0.565	1.000	1.145	1.710
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Rear-end collision	0.421	0.238	0.440	0.504	0.742
Head-on collision	0.045	0.025	0.023	0.026	0.052
Angle collision	0.343	0.194	0.262	0.300	0.494
Sideswipe	0.126	0.071	0.040	0.046	0.117
Other multiple-vehicle collision	0.065	0.037	0.235	0.269	0.306

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**			**Overdispersion Parameter, k**	**Initial N_{bisv}**	**Proportion of Total Crashes**	**Adjusted N_{bimv}**	**Combined CMFs**	**Calibration Factor, C_i**	**Predicted N_{bisv}**
	from Table 12-12			from Table 12-12	from Eqn. 12-24; (FI) from Eqn. 12-24 or 12-27		$(4)_{TOTAL}$*(5)	(7) from Worksheet 2B		(6)*(7)*(8)
	a	b	c							
Total	-6.81	0.16	0.51	1.14	0.322	1.000	0.322	0.58	1.00	0.186
Fatal and Injury (FI)	--	--	--	--	0.100	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.300	0.097	0.58	1.00	0.056
Property Damage Only (PDO)	-8.36	0.25	0.55	1.29	0.233	$(5)_{TOTAL}-(5)_{FI}$ = 0.700	0.225	0.58	1.00	0.130

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{bisv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{bisv\ (PDO)}$ (crashes/year)**	**Predicted N $_{bisv\ (TOTAL)}$ (crashes/year)**
	from Table 12-13	$(9)_{FI}$ from Worksheet 2E	from Table 12-13	$(9)_{PDO}$ from Worksheet 2E	$(9)_{PDO}$ from Worksheet 2E
Total	1.000	0.056	1.000	0.130	0.186
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Collision with parked vehicle	0.001	0.000	0.003	0.000	0.000
Collision with animal	0.003	0.000	0.018	0.002	0.003
Collision with fixed object	0.762	0.043	0.834	0.109	0.151
Collision with other object	0.090	0.005	0.092	0.012	0.017
Other single-vehicle collision	0.039	0.002	0.023	0.003	0.005
Single-vehicle noncollision	0.105	0.006	0.030	0.004	0.010

Worksheet 2G -- Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Stop-Controlled Intersections

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Predicted N_{bimv}**	**Predicted N_{bisv}**	**Predicted N_{bi}**	**f_{pedi}**	**Calibration factor, C_i**	**Predicted N_{pedi}**
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-16		(4)*(5)*(6)
Total	1.710	0.186	1.896	0.021	1.00	0.040
Fatal and injury (FI)	--	--	--	--	1.00	0.040

Worksheet 2H -- Crash Modification Factors for Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Signalized Intersections

(1)	(2)	(3)	(4)
CMF for Bus Stops	CMF for Schools	CMF for Alcohol Sales Establishments	Combined CMF
CMF_{1p}	CMF_{2p}	CMF_{3p}	
from Table 12-28	from Table 12-29	from Table 12-30	(1)*(2)*(3)
--	--	--	--

Worksheet 2I -- Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Signalized Intersections

(1)	(2)					(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**SPF Coefficients**					**Overdispersion Parameter, k**	**$N_{pedbase}$**	**Combined CMF**	**Calibration factor, C_i**	**Predicted N_{pedi}**
	from Table 12-14						from Equation 12-29	(4) from Worksheet 2H		(4)*(5)*(6)
	a	b	c	d	e					
Total	--	--	--	--	--	--	--	--	1.00	--
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	1.00	--

Worksheet 2J -- Vehicle-Bicycle Collisions for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Predicted N_{bimv}**	**Predicted N_{bisv}**	**Predicted N_{bi}**	**f_{bikei}**	**Calibration factor, C_i**	**Predicted N_{bikei}**
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-17		(4)*(5)*(6)
Total	1.710	0.186	1.896	0.016	1.00	0.030
Fatal and injury (FI)	--	--	--	--	1.00	0.030

Worksheet 2K -- Crash Severity Distribution for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)
Collision type	**Fatal and injury (FI)**	**Property damage only (PDO)**	**Total**
	(3) from Worksheet 2D and 2F; (7) from 2G or 2I and 2J	(5) from Worksheet 2D and 2F	(6) from Worksheet 2D and 2F; (7) from 2G or 2I and 2J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 2D)	0.238	0.504	0.742
Head-on collisions (from Worksheet 2D)	0.025	0.026	0.052
Angle collisions (from Worksheet 2D)	0.194	0.300	0.494
Sideswipe (from Worksheet 2D)	0.071	0.046	0.117
Other multiple-vehicle collision (from Worksheet 2D)	0.037	0.269	0.306
Subtotal	0.565	1.145	1.710
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.000	0.000
Collision with animal (from Worksheet 2F)	0.000	0.002	0.003
Collision with fixed object (from Worksheet 2F)	0.043	0.109	0.151
Collision with other object (from Worksheet 2F)	0.005	0.012	0.017
Other single-vehicle collision (from Worksheet 2F)	0.002	0.003	0.005
Single-vehicle noncollision (from Worksheet 2F)	0.006	0.004	0.010
Collision with pedestrian (from Worksheet 2G or 2I)	0.040	0.000	0.040
Collision with bicycle (from Worksheet 2J)	0.030	0.000	0.030
Subtotal	0.126	0.130	0.256
Total	0.691	1.276	1.967

Worksheet 2L -- Summary Results for Urban and Suburban Arterial Intersections

(1)	(2)
Crash severity level	**Predicted average crash frequency, $N_{predicted\ int}$ (crashes/year)**
	(Total) from Worksheet 2K
Total	2.0
Fatal and injury (FI)	0.7
Property damage only (PDO)	1.3

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections

General Information		Location Information	
Analyst	RDW	Roadway	Boggy Creek Road NO BUILD
Agency or Company	VHB	Intersection	Timber Lane
Date Performed	12/11/20	Jurisdiction	Osceola County, FL
		Analysis Year	2045

Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	4ST
AADT $_{major}$ (veh/day)	$AADT_{MAX}$ = 46,800 (veh/day)	--	24,000
AADT $_{minor}$ (veh/day)	$AADT_{MAX}$ = 5,900 (veh/day)	--	3,300
Intersection lighting (present/not present)		Not Present	Not Present
Calibration factor, C_i		1.00	1.00
Data for unsignalized intersections only:		--	--
Number of major-road approaches with left-turn lanes (0,1,2)		0	2
Number of major-road approaches with right-turn lanes (0,1,2)		0	1
Data for signalized intersections only:		--	--
Number of approaches with left-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	
Number of approaches with left-turn signal phasing [for 3SG, use maximum value of 3]		--	
Type of left-turn signal phasing for Leg #1		Permissive	
Type of left-turn signal phasing for Leg #2		--	
Type of left-turn signal phasing for Leg #3		--	
Type of left-turn signal phasing for Leg #4 (if applicable)		--	
Number of approaches with right-turn-on-red prohibited [for 3SG, use maximum value of 3]		0	
Intersection red light cameras (present/not present)		Not Present	
Sum of all pedestrian crossing volumes (PedVol) -- Signalized intersections only			
Maximum number of lanes crossed by a pedestrian (n_{lanesx})		--	
Number of bus stops within 300 m (1,000 ft) of the intersection		0	
Schools within 300 m (1,000 ft) of the intersection (present/not present)		Not Present	
Number of alcohol sales establishments within 300 m (1,000 ft) of the intersection		0	

Worksheet 2B -- Crash Modification Factors for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)	(7)
CMF for Left-Turn Lanes	CMF for Left-Turn Signal Phasing	CMF for Right-Turn Lanes	CMF for Right Turn on Red	CMF for Lighting	CMF for Red Light Cameras	Combined CMF
CMF 1i	*CMF 2i*	*CMF 3i*	*CMF 4i*	*CMF 5i*	*CMF 6i*	*CMF $_{COMB}$*
from Table 12-24	from Table 12-25	from Table 12-26	from Equation 12-35	from Equation 12-36	from Equation 12-37	(1)*(2)*(3)*(4)*(5)*(6)
0.53	1.00	0.86	1.00	1.00	0.97	0.44

Worksheet 2C -- Multiple-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**			**Overdispersion Parameter, k**	**Initial N_{bimv}**	**Proportion of Total Crashes**	**Adjusted N_{bimv}**	**Combined CMFs**	**Calibration Factor, C_i**	**Predicted N_{bimv}**
	from Table 12-10			from Table 12-10	from Equation 12-21		$(4)_{TOTAL}$*(5)	(7) from Worksheet 2B		(6)*(7)*(8)
	a	b	c							
Total	-8.90	0.82	0.25	0.40	4.038	1.000	4.038	0.44	1.00	1.784
Fatal and Injury (FI)	-11.13	0.93	0.28	0.48	1.679	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.408	1.649	0.44	1.00	0.728
Property Damage Only (PDO)	-8.74	0.77	0.23	0.40	2.434	$(5)_{TOTAL}-(5)_{FI}$ = 0.592	2.390	0.44	1.00	1.056

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{bimv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{bimv\ (PDO)}$ (crashes/year)**	**Predicted N $_{bimv\ (TOTAL)}$ (crashes/year)**
	from Table 12-11	$(9)_{FI}$ from Worksheet 2C	from Table 12-11	$(9)_{PDO}$ from Worksheet 2C	$(9)_{PDO}$ from Worksheet 2C
Total	1.000	0.728	1.000	1.056	1.784
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Rear-end collision	0.338	0.246	0.374	0.395	0.641
Head-on collision	0.041	0.030	0.030	0.032	0.062
Angle collision	0.440	0.320	0.335	0.354	0.674
Sideswipe	0.121	0.088	0.044	0.046	0.135
Other multiple-vehicle collision	0.060	0.044	0.217	0.229	0.273

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**			**Overdispersion Parameter, k**	**Initial N_{bisv}**	**Proportion of Total Crashes**	**Adjusted N_{bimv}**	**Combined CMFs**	**Calibration Factor, C_i**	**Predicted N_{bisv}**
	from Table 12-12			from Table 12-12	from Eqn. 12-24; (FI) from Eqn. 12-24 or 12-27		$(4)_{TOTAL}$*(5)	(7) from Worksheet 2B		(6)*(7)*(8)
	a	b	c							
Total	-5.33	0.33	0.12	0.65	0.357	1.000	0.357	0.44	1.00	0.158
Fatal and Injury (FI)	--	--	--	--	0.100	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.285	0.102	0.44	1.00	0.045
Property Damage Only (PDO)	-7.04	0.36	0.25	0.54	0.251	$(5)_{TOTAL}-(5)_{FI}$ = 0.715	0.255	0.44	1.00	0.113

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{bisv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{bisv\ (PDO)}$ (crashes/year)**	**Predicted N $_{bisv\ (TOTAL)}$ (crashes/year)**
	from Table 12-13	$(9)_{FI}$ from Worksheet 2E	from Table 12-13	$(9)_{PDO}$ from Worksheet 2E	$(9)_{PDO}$ from Worksheet 2E
Total	1.000	0.045	1.000	0.113	0.158
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Collision with parked vehicle	0.001	0.000	0.001	0.000	0.000
Collision with animal	0.001	0.000	0.026	0.003	0.003
Collision with fixed object	0.679	0.031	0.847	0.096	0.126
Collision with other object	0.089	0.004	0.070	0.008	0.012
Other single-vehicle collision	0.051	0.002	0.007	0.001	0.003
Single-vehicle noncollision	0.179	0.008	0.049	0.006	0.014

Worksheet 2G -- Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Stop-Controlled Intersections

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Predicted N_{bimv}**	**Predicted N_{bisv}**	**Predicted N_{bi}**	**f_{pedi}**	**Calibration factor, C_i**	**Predicted N_{pedi}**
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-16		(4)*(5)*(6)
Total	1.784	0.158	1.942	0.022	1.00	0.043
Fatal and injury (FI)	--	--	--	--	1.00	0.043

Worksheet 2H -- Crash Modification Factors for Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Signalized Intersections

(1)	(2)	(3)	(4)
CMF for Bus Stops	CMF for Schools	CMF for Alcohol Sales Establishments	Combined CMF
CMF_{1p}	CMF_{2p}	CMF_{3p}	
from Table 12-28	from Table 12-29	from Table 12-30	(1)*(2)*(3)
--	--	--	--

Worksheet 2I -- Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Signalized Intersections

(1)	(2)					(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**SPF Coefficients**					**Overdispersion Parameter, k**	**$N_{pedbase}$**	**Combined CMF**	**Calibration factor, C_i**	**Predicted N_{pedi}**
	from Table 12-14						from Equation 12-29	(4) from Worksheet 2H		(4)*(5)*(6)
	a	b	c	d	e					
Total	--	--	--	--	--	--	--	--	1.00	--
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	1.00	--

Worksheet 2J -- Vehicle-Bicycle Collisions for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Predicted N_{bimv}**	**Predicted N_{bisv}**	**Predicted N_{bi}**	**f_{bikei}**	**Calibration factor, C_i**	**Predicted N_{bikei}**
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-17		(4)*(5)*(6)
Total	1.784	0.158	1.942	0.018	1.00	0.035
Fatal and injury (FI)	--	--	--	--	1.00	0.035

Worksheet 2K -- Crash Severity Distribution for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)
Collision type	**Fatal and injury (FI)**	**Property damage only (PDO)**	**Total**
	(3) from Worksheet 2D and 2F; (7) from 2G or 2I and 2J	(5) from Worksheet 2D and 2F	(6) from Worksheet 2D and 2F; (7) from 2G or 2I and 2J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 2D)	0.246	0.395	0.641
Head-on collisions (from Worksheet 2D)	0.030	0.032	0.062
Angle collisions (from Worksheet 2D)	0.320	0.354	0.674
Sideswipe (from Worksheet 2D)	0.088	0.046	0.135
Other multiple-vehicle collision (from Worksheet 2D)	0.044	0.229	0.273
Subtotal	0.728	1.056	1.784
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.000	0.000
Collision with animal (from Worksheet 2F)	0.000	0.003	0.003
Collision with fixed object (from Worksheet 2F)	0.031	0.096	0.126
Collision with other object (from Worksheet 2F)	0.004	0.008	0.012
Other single-vehicle collision (from Worksheet 2F)	0.002	0.001	0.003
Single-vehicle noncollision (from Worksheet 2F)	0.008	0.006	0.014
Collision with pedestrian (from Worksheet 2G or 2I)	0.043	0.000	0.043
Collision with bicycle (from Worksheet 2J)	0.035	0.000	0.035
Subtotal	0.123	0.113	0.235
Total	0.851	1.168	2.019

Worksheet 2L -- Summary Results for Urban and Suburban Arterial Intersections

(1)	(2)
Crash severity level	**Predicted average crash frequency, $N_{predicted\ int}$ (crashes/year)**
	(Total) from Worksheet 2K
Total	2.0
Fatal and injury (FI)	0.9
Property damage only (PDO)	1.2

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections

General Information		Location Information	
Analyst	RDW	Roadway	Boggy Creek Road NO BUILD
Agency or Company	VHB	Intersection	Fells Cove Blvd
Date Performed	12/11/20	Jurisdiction	Osceola County, FL
		Analysis Year	2045

Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	3ST
AADT $_{major}$ (veh/day)	$AADT_{MAX}$ = 45,700 (veh/day)	--	23,400
AADT $_{minor}$ (veh/day)	$AADT_{MAX}$ = 9,300 (veh/day)	--	1,800
Intersection lighting (present/not present)		Not Present	Not Present
Calibration factor, C_i		1.00	1.00
Data for unsignalized intersections only:		--	--
Number of major-road approaches with left-turn lanes (0,1,2)		0	1
Number of major-road approaches with right-turn lanes (0,1,2)		0	1
Data for signalized intersections only:		--	--
Number of approaches with left-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	
Number of approaches with left-turn signal phasing [for 3SG, use maximum value of 3]		--	
Type of left-turn signal phasing for Leg #1		Permissive	
Type of left-turn signal phasing for Leg #2		--	
Type of left-turn signal phasing for Leg #3		--	
Type of left-turn signal phasing for Leg #4 (if applicable)		--	
Number of approaches with right-turn-on-red prohibited [for 3SG, use maximum value of 3]		0	
Intersection red light cameras (present/not present)		Not Present	
Sum of all pedestrian crossing volumes (PedVol) -- Signalized intersections only			
Maximum number of lanes crossed by a pedestrian (n_{lanesx})		--	
Number of bus stops within 300 m (1,000 ft) of the intersection		0	
Schools within 300 m (1,000 ft) of the intersection (present/not present)		Not Present	
Number of alcohol sales establishments within 300 m (1,000 ft) of the intersection		0	

Worksheet 2B -- Crash Modification Factors for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)	(7)
CMF for Left-Turn Lanes	CMF for Left-Turn Signal Phasing	CMF for Right-Turn Lanes	CMF for Right Turn on Red	CMF for Lighting	CMF for Red Light Cameras	Combined CMF
CMF 1i	*CMF 2i*	*CMF 3i*	*CMF 4i*	*CMF 5i*	*CMF 6i*	*CMF $_{COMB}$*
from Table 12-24	from Table 12-25	from Table 12-26	from Equation 12-35	from Equation 12-36	from Equation 12-37	(1)*(2)*(3)*(4)*(5)*(6)
0.67	1.00	0.86	1.00	1.00	1.00	0.58

Worksheet 2C -- Multiple-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**			**Overdispersion Parameter, k**	**Initial N_{bimv}**	**Proportion of Total Crashes**	**Adjusted N_{bimv}**	**Combined CMFs**	**Calibration Factor, C_i**	**Predicted N_{bimv}**
	from Table 12-10			from Table 12-10	from Equation 12-21		$(4)_{TOTAL}$*(5)	(7) from Worksheet 2B		(6)*(7)*(8)
	a	b	c							
Total	-13.36	1.11	0.41	0.80	2.412	1.000	2.412	0.58	1.00	1.393
Fatal and Injury (FI)	-14.01	1.16	0.30	0.69	0.913	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.353	0.851	0.58	1.00	0.491
Property Damage Only (PDO)	-15.38	1.20	0.51	0.77	1.674	$(5)_{TOTAL}-(5)_{FI}$ = 0.647	1.561	0.58	1.00	0.901

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{bimv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{bimv\ (PDO)}$ (crashes/year)**	**Predicted N $_{bimv\ (TOTAL)}$ (crashes/year)**
	from Table 12-11	$(9)_{FI}$ from Worksheet 2C	from Table 12-11	$(9)_{PDO}$ from Worksheet 2C	$(9)_{PDO}$ from Worksheet 2C
Total	1.000	0.491	1.000	0.901	1.393
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Rear-end collision	0.421	0.207	0.440	0.397	0.603
Head-on collision	0.045	0.022	0.023	0.021	0.043
Angle collision	0.343	0.169	0.262	0.236	0.405
Sideswipe	0.126	0.062	0.040	0.036	0.098
Other multiple-vehicle collision	0.065	0.032	0.235	0.212	0.244

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**			**Overdispersion Parameter, k**	**Initial N_{bisv}**	**Proportion of Total Crashes**	**Adjusted N_{bimv}**	**Combined CMFs**	**Calibration Factor, C_i**	**Predicted N_{bisv}**
	from Table 12-12			from Table 12-12	from Eqn. 12-24; (FI) from Eqn. 12-24 or 12-27		$(4)_{TOTAL}$*(5)	(7) from Worksheet 2B		(6)*(7)*(8)
	a	b	c							
Total	-6.81	0.16	0.51	1.14	0.252	1.000	0.252	0.58	1.00	0.146
Fatal and Injury (FI)	--	--	--	--	0.078	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.304	0.077	0.58	1.00	0.044
Property Damage Only (PDO)	-8.36	0.25	0.55	1.29	0.179	$(5)_{TOTAL}-(5)_{FI}$ = 0.696	0.175	0.58	1.00	0.101

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{bisv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{bisv\ (PDO)}$ (crashes/year)**	**Predicted N $_{bisv\ (TOTAL)}$ (crashes/year)**
	from Table 12-13	$(9)_{FI}$ from Worksheet 2E	from Table 12-13	$(9)_{PDO}$ from Worksheet 2E	$(9)_{PDO}$ from Worksheet 2E
Total	1.000	0.044	1.000	0.101	0.146
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Collision with parked vehicle	0.001	0.000	0.003	0.000	0.000
Collision with animal	0.003	0.000	0.018	0.002	0.002
Collision with fixed object	0.762	0.034	0.834	0.084	0.118
Collision with other object	0.090	0.004	0.092	0.009	0.013
Other single-vehicle collision	0.039	0.002	0.023	0.002	0.004
Single-vehicle noncollision	0.105	0.005	0.030	0.003	0.008

Worksheet 2G -- Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Stop-Controlled Intersections

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Predicted N_{bimv}**	**Predicted N_{bisv}**	**Predicted N_{bi}**	**f_{pedi}**	**Calibration factor, C_i**	**Predicted N_{pedi}**
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-16		(4)*(5)*(6)
Total	1.393	0.146	1.538	0.021	1.00	0.032
Fatal and injury (FI)	--	--	--	--	1.00	0.032

Worksheet 2H -- Crash Modification Factors for Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Signalized Intersections

(1)	(2)	(3)	(4)
CMF for Bus Stops	CMF for Schools	CMF for Alcohol Sales Establishments	Combined CMF
CMF_{1p}	CMF_{2p}	CMF_{3p}	
from Table 12-28	from Table 12-29	from Table 12-30	(1)*(2)*(3)
--	--	--	--

Worksheet 2I -- Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Signalized Intersections

(1)	(2)					(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**SPF Coefficients**					**Overdispersion Parameter, k**	**$N_{pedbase}$**	**Combined CMF**	**Calibration factor, C_i**	**Predicted N_{pedi}**
	from Table 12-14						from Equation 12-29	(4) from Worksheet 2H		(4)*(5)*(6)
	a	b	c	d	e					
Total	--	--	--	--	--	--	--	--	1.00	--
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	1.00	--

Worksheet 2J -- Vehicle-Bicycle Collisions for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Predicted N_{bimv}**	**Predicted N_{bisv}**	**Predicted N_{bi}**	**f_{bikei}**	**Calibration factor, C_i**	**Predicted N_{bikei}**
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-17		(4)*(5)*(6)
Total	1.393	0.146	1.538	0.016	1.00	0.025
Fatal and injury (FI)	--	--	--	--	1.00	0.025

Worksheet 2K -- Crash Severity Distribution for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)
	Fatal and injury (FI)	**Property damage only (PDO)**	**Total**
Collision type	(3) from Worksheet 2D and 2F; (7) from 2G or 2I and 2J	(5) from Worksheet 2D and 2F	(6) from Worksheet 2D and 2F; (7) from 2G or 2I and 2J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 2D)	0.207	0.397	0.603
Head-on collisions (from Worksheet 2D)	0.022	0.021	0.043
Angle collisions (from Worksheet 2D)	0.169	0.236	0.405
Sideswipe (from Worksheet 2D)	0.062	0.036	0.098
Other multiple-vehicle collision (from Worksheet 2D)	0.032	0.212	0.244
Subtotal	0.491	0.901	1.393
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.000	0.000
Collision with animal (from Worksheet 2F)	0.000	0.002	0.002
Collision with fixed object (from Worksheet 2F)	0.034	0.084	0.118
Collision with other object (from Worksheet 2F)	0.004	0.009	0.013
Other single-vehicle collision (from Worksheet 2F)	0.002	0.002	0.004
Single-vehicle noncollision (from Worksheet 2F)	0.005	0.003	0.008
Collision with pedestrian (from Worksheet 2G or 2I)	0.032	0.000	0.032
Collision with bicycle (from Worksheet 2J)	0.025	0.000	0.025
Subtotal	0.101	0.101	0.203
Total	0.593	1.003	1.595

Worksheet 2L -- Summary Results for Urban and Suburban Arterial Intersections

(1)	(2)
Crash severity level	**Predicted average crash frequency, $N_{predicted\ int}$ (crashes/year)**
	(Total) from Worksheet 2K
Total	1.6
Fatal and injury (FI)	0.6
Property damage only (PDO)	1.0

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections

General Information		Location Information	
Analyst	RDW	Roadway	Boggy Creek Road NO BUILD
Agency or Company	VHB	Intersection	Narcoosee Road
Date Performed	12/11/20	Jurisdiction	Osceola County, FL
		Analysis Year	2045

Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	3SG
AADT $_{major}$ (veh/day)	$AADT_{MAX}$ = 58,100 (veh/day)	--	54,700
AADT $_{minor}$ (veh/day)	$AADT_{MAX}$ = 16,400 (veh/day)	--	**22,800**
Intersection lighting (present/not present)		Not Present	Not Present
Calibration factor, C_i		1.00	1.00
Data for unsignalized intersections only:		--	--
Number of major-road approaches with left-turn lanes (0,1,2)		0	0
Number of major-road approaches with right-turn lanes (0,1,2)		0	0
Data for signalized intersections only:		--	--
Number of approaches with left-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	2
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	2
Number of approaches with left-turn signal phasing [for 3SG, use maximum value of 3]		--	3
Type of left-turn signal phasing for Leg #1		Permissive	Protected / Permissive
Type of left-turn signal phasing for Leg #2		--	Protected
Type of left-turn signal phasing for Leg #3		--	
Type of left-turn signal phasing for Leg #4 (if applicable)		--	
Number of approaches with right-turn-on-red prohibited [for 3SG, use maximum value of 3]		0	0
Intersection red light cameras (present/not present)		Not Present	Not Present
Sum of all pedestrian crossing volumes (PedVol) -- Signalized intersections only			10
Maximum number of lanes crossed by a pedestrian (n_{lanesx})		--	7
Number of bus stops within 300 m (1,000 ft) of the intersection		0	0
Schools within 300 m (1,000 ft) of the intersection (present/not present)		Not Present	Not Present
Number of alcohol sales establishments within 300 m (1,000 ft) of the intersection		0	2

Worksheet 2B -- Crash Modification Factors for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)	(7)
CMF for Left-Turn Lanes	CMF for Left-Turn Signal Phasing	CMF for Right-Turn Lanes	CMF for Right Turn on Red	CMF for Lighting	CMF for Red Light Cameras	Combined CMF
CMF 1i	*CMF 2i*	*CMF 3i*	*CMF 4i*	*CMF 5i*	*CMF 6i*	*CMF $_{COMB}$*
from Table 12-24	from Table 12-25	from Table 12-26	from Equation 12-35	from Equation 12-36	from Equation 12-37	(1)*(2)*(3)*(4)*(5)*(6)
0.86	0.92	0.92	1.00	1.00	1.00	0.73

Worksheet 2C -- Multiple-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**			**Overdispersion Parameter, k**	**Initial N_{bimv}**	**Proportion of Total Crashes**	**Adjusted N_{bimv}**	**Combined CMFs**	**Calibration Factor, C_i**	**Predicted N_{bimv}**
	from Table 12-10			from Table 12-10	from Equation 12-21		$(4)_{TOTAL}$*(5)	(7) from Worksheet 2B		(6)*(7)*(8)
	a	b	c							
Total	-12.13	1.11	0.26	0.33	13.312	1.000	13.312	0.73	1.00	9.720
Fatal and Injury (FI)	-11.58	1.02	0.17	0.30	3.503	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.278	3.703	0.73	1.00	2.704
Property Damage Only (PDO)	-13.24	1.14	0.30	0.36	9.091	$(5)_{TOTAL}-(5)_{FI}$ = 0.722	9.609	0.73	1.00	7.017

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{bimv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{bimv\ (PDO)}$ (crashes/year)**	**Predicted N $_{bimv\ (TOTAL)}$ (crashes/year)**
	from Table 12-11	$(9)_{FI}$ from Worksheet 2C	from Table 12-11	$(9)_{PDO}$ from Worksheet 2C	$(9)_{PDO}$ from Worksheet 2C
Total	1.000	2.704	1.000	7.017	9.720
		(2)*$(3)_{FI}$		(4)*$(5)_{PDO}$	(3)+(5)
Rear-end collision	0.549	1.484	0.546	3.831	5.315
Head-on collision	0.038	0.103	0.020	0.140	0.243
Angle collision	0.280	0.757	0.204	1.431	2.188
Sideswipe	0.076	0.205	0.032	0.225	0.430
Other multiple-vehicle collision	0.057	0.154	0.198	1.389	1.543

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**			**Overdispersion Parameter, k**	**Initial N_{bisv}**	**Proportion of Total Crashes**	**Adjusted N_{bimv}**	**Combined CMFs**	**Calibration Factor, C_i**	**Predicted N_{bisv}**
	from Table 12-12			from Table 12-12	from Eqn. 12-24; (FI) from Eqn. 12-24 or 12-27		$(4)_{TOTAL}$*(5)	(7) from Worksheet 2B		(6)*(7)*(8)
	a	b	c							
Total	-9.02	0.42	0.40	0.36	0.654	1.000	0.654	0.73	1.00	0.478
Fatal and Injury (FI)	-9.75	0.27	0.51	0.24	0.185	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.304	0.199	0.73	1.00	0.145
Property Damage Only (PDO)	-9.08	0.45	0.33	0.53	0.423	$(5)_{TOTAL}-(5)_{FI}$ = 0.696	0.455	0.73	1.00	0.332

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{bisv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{bisv\ (PDO)}$ (crashes/year)**	**Predicted N $_{bisv\ (TOTAL)}$ (crashes/year)**
	from Table 12-13	$(9)_{FI}$ from Worksheet 2E	from Table 12-13	$(9)_{PDO}$ from Worksheet 2E	$(9)_{PDO}$ from Worksheet 2E
Total	1.000	0.145	1.000	0.332	0.478
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Collision with parked vehicle	0.001	0.000	0.001	0.000	0.000
Collision with animal	0.001	0.000	0.003	0.001	0.001
Collision with fixed object	0.653	0.095	0.895	0.298	0.392
Collision with other object	0.091	0.013	0.069	0.023	0.036
Other single-vehicle collision	0.045	0.007	0.018	0.006	0.013
Single-vehicle noncollision	0.209	0.030	0.014	0.005	0.035

Worksheet 2G -- Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Stop-Controlled Intersections

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Predicted N_{bimv}**	**Predicted N_{bisv}**	**Predicted N_{bi}**	**f_{pedi}**	**Calibration factor, C_i**	**Predicted N_{pedi}**
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-16		(4)*(5)*(6)
Total	--	--	--	--	1.00	--
Fatal and injury (FI)	--	--	--	--	1.00	--

Worksheet 2H -- Crash Modification Factors for Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Signalized Intersections

(1)	(2)	(3)	(4)
CMF for Bus Stops	CMF for Schools	CMF for Alcohol Sales Establishments	Combined CMF
CMF_{1p}	CMF_{2p}	CMF_{3p}	
from Table 12-28	from Table 12-29	from Table 12-30	(1)*(2)*(3)
1.00	1.00	1.12	1.12

Worksheet 2I -- Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Signalized Intersections

(1)	(2)					(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**SPF Coefficients**					**Overdispersion Parameter, k**	**$N_{pedbase}$**	**Combined CMF**	**Calibration factor, C_i**	**Predicted N_{pedi}**
	from Table 12-14						from Equation 12-29	(4) from Worksheet 2H		(4)*(5)*(6)
	a	b	c	d	e					
Total	-6.60	0.05	0.24	0.41	0.09	0.52	0.009	1.12	1.00	0.010
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	1.00	0.010

Worksheet 2J -- Vehicle-Bicycle Collisions for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Predicted N_{bimv}**	**Predicted N_{bisv}**	**Predicted N_{bi}**	**f_{bikei}**	**Calibration factor, C_i**	**Predicted N_{bikei}**
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-17		(4)*(5)*(6)
Total	9.720	0.478	10.198	0.011	1.00	0.112
Fatal and injury (FI)	--	--	--	--	1.00	0.112

Worksheet 2K -- Crash Severity Distribution for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)
Collision type	**Fatal and injury (FI)**	**Property damage only (PDO)**	**Total**
	(3) from Worksheet 2D and 2F; (7) from 2G or 2I and 2J	(5) from Worksheet 2D and 2F	(6) from Worksheet 2D and 2F; (7) from 2G or 2I and 2J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 2D)	1.484	3.831	5.315
Head-on collisions (from Worksheet 2D)	0.103	0.140	0.243
Angle collisions (from Worksheet 2D)	0.757	1.431	2.188
Sideswipe (from Worksheet 2D)	0.205	0.225	0.430
Other multiple-vehicle collision (from Worksheet 2D)	0.154	1.389	1.543
Subtotal	2.704	7.017	9.720
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.000	0.000
Collision with animal (from Worksheet 2F)	0.000	0.001	0.001
Collision with fixed object (from Worksheet 2F)	0.095	0.298	0.392
Collision with other object (from Worksheet 2F)	0.013	0.023	0.036
Other single-vehicle collision (from Worksheet 2F)	0.007	0.006	0.013
Single-vehicle noncollision (from Worksheet 2F)	0.030	0.005	0.035
Collision with pedestrian (from Worksheet 2G or 2I)	0.010	0.000	0.010
Collision with bicycle (from Worksheet 2J)	0.112	0.000	0.112
Subtotal	0.268	0.332	0.600
Total	2.972	7.349	10.321

Worksheet 2L -- Summary Results for Urban and Suburban Arterial Intersections

(1)	(2)
Crash severity level	**Predicted average crash frequency, $N_{predicted\ int}$ (crashes/year)**
	(Total) from Worksheet 2K
Total	10.3
Fatal and injury (FI)	3.0
Property damage only (PDO)	7.3

Worksheet 1A -- General Information and Input Data for Urban and Suburban Roadway Segments

General Information		Location Information	
Analyst	RDW	Roadway	Boggy Creek Road BUILD
Agency or Company	VHB	Roadway Section	Simpson Road to E Lake Pointe Dr
Date Performed	12/11/20	Jurisdiction	Osceola County, FL
		Analysis Year	2045

Input Data		Base Conditions	Site Conditions
Roadway type (2U, 3T, 4U, 4D, ST)		--	4D
Length of segment, L (mi)		--	1.29
AADT (veh/day)	$AADT_{MAX}$ = 66,000 (veh/day)	--	40,300
Type of on-street parking (none/parallel/angle)		None	None
Proportion of curb length with on-street parking		--	0
Median width (ft) - for divided only		15	20
Lighting (present / not present)		Not Present	Present
Auto speed enforcement (present / not present)		Not Present	Not Present
Major commercial driveways (number)		--	0
Minor commercial driveways (number)		--	5
Major industrial / institutional driveways (number)		--	0
Minor industrial / institutional driveways (number)		--	0
Major residential driveways (number)		--	4
Minor residential driveways (number)		--	39
Other driveways (number)		--	0
Speed Category		--	Posted Speed Greater than 30 mph
Roadside fixed object density (fixed objects / mi)		0	30
Offset to roadside fixed objects (ft) [If greater than 30 or Not Present, input 30]		30	15
Calibration Factor, Cr		1.00	1.00

Worksheet 1B -- Crash Modification Factors for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
CMF for On-Street Parking	CMF for Roadside Fixed Objects	CMF for Median Width	CMF for Lighting	CMF for Automated Speed Enforcement	Combined CMF
CMF 1r	*CMF 2r*	*CMF 3r*	*CMF 4r*	*CMF 5r*	*CMF comb*
from Equation 12-32	from Equation 12-33	from Table 12-22	from Equation 12-34	from Section 12.7.1	(1)*(2)*(3)*(4)*(5)
1.00	1.04	0.99	0.91	1.00	0.94

Worksheet 1C -- Multiple-Vehicle Nondriveway Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**		**Overdispersion Parameter, k**	**Initial N_{brmv}**	**Proportion of Total Crashes**	**Adjusted N_{brmv}**	**Combined CMFs**	**Calibration Factor, Cr**	**Predicted N_{brmv}**
	from Table 12-3		from Table 12-3	from Equation 12-10		$(4)_{TOTAL}$*(5)	(6) from Worksheet 1B		(6)*(7)*(8)
	a	b							
Total	-12.34	1.36	1.32	10.342	1.000	10.342	0.94	1.00	9.703
Fatal and Injury (FI)	-12.76	1.28	1.31	2.909	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.267	2.760	0.94	1.00	2.590
Property Damage Only (PDO)	-12.81	1.38	1.34	7.991	$(5)_{TOTAL}-(5)_{FI}$ = 0.733	7.582	0.94	1.00	7.114

Worksheet 1D -- Multiple-Vehicle Nondriveway Collisions by Collision Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{brmv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{brmv\ (PDO)}$ (crashes/year)**	**Predicted N $_{brmv\ (TOTAL)}$ (crashes/year)**
	from Table 12-4	$(9)_{FI}$ from Worksheet 1C	from Table 12-4	$(9)_{PDO}$ from Worksheet 1C	$(9)_{TOTAL}$ from Worksheet 1C
Total	1.000	2.590	1.000	7.114	9.703
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Rear-end collision	0.832	2.155	0.662	4.709	6.864
Head-on collision	0.020	0.052	0.007	0.050	0.102
Angle collision	0.040	0.104	0.036	0.256	0.360
Sideswipe, same direction	0.050	0.129	0.223	1.586	1.716
Sideswipe, opposite direction	0.010	0.026	0.001	0.007	0.033
Other multiple-vehicle collision	0.048	0.124	0.071	0.505	0.629

Worksheet 1E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**		**Overdispersion Parameter, k**	**Initial N_{brsv}**	**Proportion of Total Crashes**	**Adjusted N_{brsv}**	**Combined CMFs**	**Calibration Factor, Cr**	**Predicted N_{brsv}**
	from Table 12-5		from Table 12-5	from Equation 12-13		$(4)_{TOTAL}*(5)$	(6) from Worksheet 1B		(6)*(7)*(8)
	a	b							
Total	-5.05	0.47	0.86	1.208	1.000	1.208	0.94	1.00	1.133
Fatal and Injury (FI)	-8.71	0.66	0.28	0.233	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.191	0.231	0.94	1.00	0.216
Property Damage Only (PDO)	-5.04	0.45	1.06	0.987	$(5)_{TOTAL}-(5)_{FI}$ = 0.809	0.977	0.94	1.00	0.916

Worksheet 1F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{brsv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{brsv\ (PDO)}$ (crashes/year)**	**Predicted N $_{brsv\ (TOTAL)}$ (crashes/year)**
	from Table 12-6	$(9)_{FI}$ from Worksheet 1E	from Table 12-6	$(9)_{PDO}$ from Worksheet 1E	$(9)_{TOTAL}$ from Worksheet 1E
Total	1.000	0.216	1.000	0.916	1.133
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Collision with animal	0.001	0.000	0.063	0.058	0.058
Collision with fixed object	0.500	0.108	0.813	0.745	0.853
Collision with other object	0.028	0.006	0.016	0.015	0.021
Other single-vehicle collision	0.471	0.102	0.108	0.099	0.201

Worksheet 1G -- Multiple-Vehicle Driveway-Related Collisions by Driveway Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Driveway Type	**Number of driveways, n_j**	**Crashes per driveway per year, N_j**	**Coefficient for traffic adjustment, t**	**Initial N_{brdwy}**	**Overdispersion parameter, k**
		from Table 12-7	from Table 12-7	Equation 12-16 $n_j * N_j * (AADT/15,000)^t$	from Table 12-7
Major commercial	0	0.033	1.106	0.000	
Minor commercial	5	0.011	1.106	0.164	
Major industrial/institutional	0	0.036	1.106	0.000	
Minor industrial/institutional	0	0.005	1.106	0.000	--
Major residential	4	0.018	1.106	0.215	
Minor residential	39	0.003	1.106	0.349	
Other	0	0.005	1.106	0.000	
Total	--	--	--	0.728	1.39

Worksheet 1H -- Multiple-Vehicle Driveway-Related Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Initial N_{brdwy}**	**Proportion of total crashes (f_{dwy})**	**Adjusted N_{brdwy}**	**Combined CMFs**	**Calibration factor, C_r**	**Predicted N_{brdwy}**
	$(5)_{TOTAL}$ from Worksheet 1G	from Table 12-7	$(2)_{TOTAL} * (3)$	(6) from Worksheet 1B		(4)*(5)*(6)
Total	0.728	1.000	0.728	0.94	1.00	0.683
Fatal and injury (FI)	--	0.284	0.207	0.94	1.00	0.194
Property damage only (PDO)	--	0.716	0.521	0.94	1.00	0.489

Worksheet 1I -- Vehicle-Pedestrian Collisions for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Crash Severity Level	**Predicted N_{brmv}**	**Predicted N_{brsv}**	**Predicted N_{brdwy}**	**Predicted N_{br}**	**f_{pedr}**	**Calibration factor, C_r**	**Predicted N_{pedr}**
	(9) from Worksheet 1C	(9) from Worksheet 1E	(7) from Worksheet 1H	(2)+(3)+(4)	from Table 12-8		(5)*(6)*(7)
Total	9.703	1.133	0.683	11.519	0.019	1.00	0.219
Fatal and injury (FI)	--	--	--	--	--	1.00	0.219

Worksheet 1J -- Vehicle-Bicycle Collisions for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Crash Severity Level	**Predicted N_{brmv}**	**Predicted N_{brsv}**	**Predicted N_{brdwy}**	**Predicted N_{br}**	**f_{biker}**	**Calibration factor, C_r**	**Predicted N_{biker}**
	(9) from Worksheet 1C	(9) from Worksheet 1E	(7) from Worksheet 1H	(2)+(3)+(4)	from Table 12-9		(5)*(6)*(7)
Total	9.703	1.133	0.683	11.519	0.005	1.00	0.058
Fatal and injury (FI)	--	--	--	--	--	1.00	0.058

Worksheet 1K -- Crash Severity Distribution for Urban and Suburban Roadway Segments			
(1)	(2)	(3)	(4)
Collision type	**Fatal and injury (FI)**	**Property damage only (PDO)**	**Total**
	(3) from Worksheet 1D and 1F; (7) from Worksheet 1H; and (8) from Worksheet 1I and 1J	(5) from Worksheet 1D and 1F; and (7) from Worksheet 1H	(6) from Worksheet 1D and 1F; (7) from Worksheet 1H; and (8) from Worksheet 1I and 1J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 1D)	2.155	4.709	6.864
Head-on collisions (from Worksheet 1D)	0.052	0.050	0.102
Angle collisions (from Worksheet 1D)	0.104	0.256	0.360
Sideswipe, same direction (from Worksheet 1D)	0.129	1.586	1.716
Sideswipe, opposite direction (from Worksheet 1D)	0.026	0.007	0.033
Driveway-related collisions (from Worksheet 1H)	0.194	0.489	0.683
Other multiple-vehicle collision (from Worksheet 1D)	0.124	0.505	0.629
Subtotal	2.784	7.603	10.386
SINGLE-VEHICLE			
Collision with animal (from Worksheet 1F)	0.000	0.058	0.058
Collision with fixed object (from Worksheet 1F)	0.108	0.745	0.853
Collision with other object (from Worksheet 1F)	0.006	0.015	0.021
Other single-vehicle collision (from Worksheet 1F)	0.102	0.099	0.201
Collision with pedestrian (from Worksheet 1I)	0.219	0.000	0.219
Collision with bicycle (from Worksheet 1J)	0.058	0.000	0.058
Subtotal	0.493	0.916	1.409
Total	3.277	8.519	11.796

Worksheet 1L -- Summary Results for Urban and Suburban Roadway Segments			
(1)	(2)	(3)	(4)
Crash Severity Level	**Predicted average crash frequency, $N_{predicted\ rs}$ (crashes/year)**	**Roadway segment length, L (mi)**	**Crash rate (crashes/mi/year)**
	(Total) from Worksheet 1K		(2) / (3)
Total	11.8	1.29	9.1
Fatal and injury (FI)	3.3	1.29	2.5
Property damage only (PDO)	8.5	1.29	6.6

Worksheet 1A -- General Information and Input Data for Urban and Suburban Roadway Segments

General Information		Location Information	
Analyst	RDW	Roadway	Boggy Creek Road BUILD
Agency or Company	VHB	Roadway Section	E Lake Pointe Dr to Nele Road
Date Performed	12/11/20	Jurisdiction	Osceola County, FL
		Analysis Year	2045

Input Data		Base Conditions	Site Conditions
Roadway type (2U, 3T, 4U, 4D, ST)		--	4D
Length of segment, L (mi)		--	0.18
AADT (veh/day)	$AADT_{MAX}$ = 66,000 (veh/day)	--	39,600
Type of on-street parking (none/parallel/angle)		None	None
Proportion of curb length with on-street parking		--	0
Median width (ft) - for divided only		15	20
Lighting (present / not present)		Not Present	Present
Auto speed enforcement (present / not present)		Not Present	Not Present
Major commercial driveways (number)		--	0
Minor commercial driveways (number)		--	0
Major industrial / institutional driveways (number)		--	1
Minor industrial / institutional driveways (number)		--	0
Major residential driveways (number)		--	1
Minor residential driveways (number)		--	1
Other driveways (number)		--	0
Speed Category		--	Posted Speed Greater than 30 mph
Roadside fixed object density (fixed objects / mi)		0	30
Offset to roadside fixed objects (ft) [If greater than 30 or Not Present, input 30]		30	15
Calibration Factor, Cr		1.00	1.00

Worksheet 1B -- Crash Modification Factors for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
CMF for On-Street Parking	CMF for Roadside Fixed Objects	CMF for Median Width	CMF for Lighting	CMF for Automated Speed Enforcement	Combined CMF
CMF 1r	*CMF 2r*	*CMF 3r*	*CMF 4r*	*CMF 5r*	*CMF comb*
from Equation 12-32	from Equation 12-33	from Table 12-22	from Equation 12-34	from Section 12.7.1	(1)*(2)*(3)*(4)*(5)
1.00	1.04	0.99	0.91	1.00	0.94

Worksheet 1C -- Multiple-Vehicle Nondriveway Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**		**Overdispersion Parameter, k**	**Initial N_{brmv}**	**Proportion of Total Crashes**	**Adjusted N_{brmv}**	**Combined CMFs**	**Calibration Factor, Cr**	**Predicted N_{brmv}**
	from Table 12-3		from Table 12-3	from Equation 12-10		$(4)_{TOTAL}$*(5)	(6) from Worksheet 1B		(6)*(7)*(8)
	a	b							
Total	-12.34	1.36	1.32	1.409	1.000	1.409	0.94	1.00	1.322
Fatal and Injury (FI)	-12.76	1.28	1.31	0.397	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.267	0.377	0.94	1.00	0.353
Property Damage Only (PDO)	-12.81	1.38	1.34	1.088	$(5)_{TOTAL}-(5)_{FI}$ = 0.733	1.033	0.94	1.00	0.969

Worksheet 1D -- Multiple-Vehicle Nondriveway Collisions by Collision Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{brmv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{brmv\ (PDO)}$ (crashes/year)**	**Predicted N $_{brmv\ (TOTAL)}$ (crashes/year)**
	from Table 12-4	$(9)_{FI}$ from Worksheet 1C	from Table 12-4	$(9)_{PDO}$ from Worksheet 1C	$(9)_{TOTAL}$ from Worksheet 1C
Total	1.000	0.353	1.000	0.969	1.322
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Rear-end collision	0.832	0.294	0.662	0.641	0.935
Head-on collision	0.020	0.007	0.007	0.007	0.014
Angle collision	0.040	0.014	0.036	0.035	0.049
Sideswipe, same direction	0.050	0.018	0.223	0.216	0.234
Sideswipe, opposite direction	0.010	0.004	0.001	0.001	0.005
Other multiple-vehicle collision	0.048	0.017	0.071	0.069	0.086

Worksheet 1E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**		**Overdispersion Parameter, k**	**Initial N_{brsv}**	**Proportion of Total Crashes**	**Adjusted N_{brsv}**	**Combined CMFs**	**Calibration Factor, Cr**	**Predicted N_{brsv}**
	from Table 12-5		from Table 12-5	from Equation 12-13		$(4)_{TOTAL}*(5)$	(6) from Worksheet 1B		(6)*(7)*(8)
	a	b							
Total	-5.05	0.47	0.86	0.167	1.000	0.167	0.94	1.00	0.157
Fatal and Injury (FI)	-8.71	0.66	0.28	0.032	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.190	0.032	0.94	1.00	0.030
Property Damage Only (PDO)	-5.04	0.45	1.06	0.137	$(5)_{TOTAL}-(5)_{FI}$ = 0.810	0.135	0.94	1.00	0.127

Worksheet 1F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{brsv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{brsv\ (PDO)}$ (crashes/year)**	**Predicted N $_{brsv\ (TOTAL)}$ (crashes/year)**
	from Table 12-6	$(9)_{FI}$ from Worksheet 1E	from Table 12-6	$(9)_{PDO}$ from Worksheet 1E	$(9)_{TOTAL}$ from Worksheet 1E
Total	1.000	0.030	1.000	0.127	0.157
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Collision with animal	0.001	0.000	0.063	0.008	0.008
Collision with fixed object	0.500	0.015	0.813	0.103	0.118
Collision with other object	0.028	0.001	0.016	0.002	0.003
Other single-vehicle collision	0.471	0.014	0.108	0.014	0.028

Worksheet 1G -- Multiple-Vehicle Driveway-Related Collisions by Driveway Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Driveway Type	**Number of driveways, n_j**	**Crashes per driveway per year, N_j**	**Coefficient for traffic adjustment, t**	**Initial N_{brdwy}**	**Overdispersion parameter, k**
		from Table 12-7	from Table 12-7	Equation 12-16 $n_j * N_j * (AADT/15{,}000)^t$	from Table 12-7
Major commercial	0	0.033	1.106	0.000	
Minor commercial	0	0.011	1.106	0.000	
Major industrial/institutional	1	0.036	1.106	0.105	
Minor industrial/institutional	0	0.005	1.106	0.000	--
Major residential	1	0.018	1.106	0.053	
Minor residential	1	0.003	1.106	0.009	
Other	0	0.005	1.106	0.000	
Total	--	--	--	0.167	1.39

Worksheet 1H -- Multiple-Vehicle Driveway-Related Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Initial N_{brdwy}**	**Proportion of total crashes (f_{dwy})**	**Adjusted N_{brdwy}**	**Combined CMFs**	**Calibration factor, C_r**	**Predicted N_{brdwy}**
	$(5)_{TOTAL}$ from Worksheet 1G	from Table 12-7	$(2)_{TOTAL} * (3)$	(6) from Worksheet 1B		(4)*(5)*(6)
Total	0.167	1.000	0.167	0.94	1.00	0.156
Fatal and injury (FI)	--	0.284	0.047	0.94	1.00	0.044
Property damage only (PDO)	--	0.716	0.119	0.94	1.00	0.112

Worksheet 1I -- Vehicle-Pedestrian Collisions for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Crash Severity Level	**Predicted N_{brmv}**	**Predicted N_{brsv}**	**Predicted N_{brdwy}**	**Predicted N_{br}**	**f_{pedr}**	**Calibration factor, C_r**	**Predicted N_{pedr}**
	(9) from Worksheet 1C	(9) from Worksheet 1E	(7) from Worksheet 1H	(2)+(3)+(4)	from Table 12-8		(5)*(6)*(7)
Total	1.322	0.157	0.156	1.635	0.019	1.00	0.031
Fatal and injury (FI)	--	--	--	--	--	1.00	0.031

Worksheet 1J -- Vehicle-Bicycle Collisions for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Crash Severity Level	**Predicted N_{brmv}**	**Predicted N_{brsv}**	**Predicted N_{brdwy}**	**Predicted N_{br}**	**f_{biker}**	**Calibration factor, C_r**	**Predicted N_{biker}**
	(9) from Worksheet 1C	(9) from Worksheet 1E	(7) from Worksheet 1H	(2)+(3)+(4)	from Table 12-9		(5)*(6)*(7)
Total	1.322	0.157	0.156	1.635	0.005	1.00	0.008
Fatal and injury (FI)	--	--	--	--	--	1.00	0.008

Worksheet 1K -- Crash Severity Distribution for Urban and Suburban Roadway Segments			
(1)	(2)	(3)	(4)
Collision type	**Fatal and injury (FI)**	**Property damage only (PDO)**	**Total**
	(3) from Worksheet 1D and 1F; (7) from Worksheet 1H; and (8) from Worksheet 1I and 1J	(5) from Worksheet 1D and 1F; and (7) from Worksheet 1H	(6) from Worksheet 1D and 1F; (7) from Worksheet 1H; and (8) from Worksheet 1I and 1J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 1D)	0.294	0.641	0.935
Head-on collisions (from Worksheet 1D)	0.007	0.007	0.014
Angle collisions (from Worksheet 1D)	0.014	0.035	0.049
Sideswipe, same direction (from Worksheet 1D)	0.018	0.216	0.234
Sideswipe, opposite direction (from Worksheet 1D)	0.004	0.001	0.005
Driveway-related collisions (from Worksheet 1H)	0.044	0.112	0.156
Other multiple-vehicle collision (from Worksheet 1D)	0.017	0.069	0.086
Subtotal	0.398	1.081	1.479
SINGLE-VEHICLE			
Collision with animal (from Worksheet 1F)	0.000	0.008	0.008
Collision with fixed object (from Worksheet 1F)	0.015	0.103	0.118
Collision with other object (from Worksheet 1F)	0.001	0.002	0.003
Other single-vehicle collision (from Worksheet 1F)	0.014	0.014	0.028
Collision with pedestrian (from Worksheet 1I)	0.031	0.000	0.031
Collision with bicycle (from Worksheet 1J)	0.008	0.000	0.008
Subtotal	0.069	0.127	0.196
Total	0.467	1.208	1.675

Worksheet 1L -- Summary Results for Urban and Suburban Roadway Segments			
(1)	(2)	(3)	(4)
Crash Severity Level	**Predicted average crash frequency, $N_{predicted\ rs}$ (crashes/year)**	**Roadway segment length, L (mi)**	**Crash rate (crashes/mi/year)**
	(Total) from Worksheet 1K		(2) / (3)
Total	1.7	0.18	9.3
Fatal and injury (FI)	0.5	0.18	2.6
Property damage only (PDO)	1.2	0.18	6.7

Worksheet 1A -- General Information and Input Data for Urban and Suburban Roadway Segments

General Information		Location Information	
Analyst	RDW	Roadway	Boggy Creek Road BUILD
Agency or Company	VHB	Roadway Section	Nele Road to Springlake Village Blvd
Date Performed	12/11/20	Jurisdiction	Osceola County, FL
		Analysis Year	2045

Input Data		Base Conditions	Site Conditions
Roadway type (2U, 3T, 4U, 4D, ST)		--	4D
Length of segment, L (mi)		--	0.39
AADT (veh/day)	$AADT_{MAX}$ = 66,000 (veh/day)	--	37,700
Type of on-street parking (none/parallel/angle)		None	None
Proportion of curb length with on-street parking		--	0
Median width (ft) - for divided only		15	20
Lighting (present / not present)		Not Present	Present
Auto speed enforcement (present / not present)		Not Present	Not Present
Major commercial driveways (number)		--	0
Minor commercial driveways (number)		--	0
Major industrial / institutional driveways (number)		--	1
Minor industrial / institutional driveways (number)		--	0
Major residential driveways (number)		--	1
Minor residential driveways (number)		--	0
Other driveways (number)		--	0
Speed Category		--	Posted Speed Greater than 30 mph
Roadside fixed object density (fixed objects / mi)		0	90
Offset to roadside fixed objects (ft) [If greater than 30 or Not Present, input 30]		30	15
Calibration Factor, Cr		1.00	1.00

Worksheet 1B -- Crash Modification Factors for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
CMF for On-Street Parking	CMF for Roadside Fixed Objects	CMF for Median Width	CMF for Lighting	CMF for Automated Speed Enforcement	Combined CMF
CMF 1r	*CMF 2r*	*CMF 3r*	*CMF 4r*	*CMF 5r*	*CMF comb*
from Equation 12-32	from Equation 12-33	from Table 12-22	from Equation 12-34	from Section 12.7.1	(1)*(2)*(3)*(4)*(5)
1.00	1.18	0.99	0.91	1.00	1.07

Worksheet 1C -- Multiple-Vehicle Nondriveway Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**		**Overdispersion Parameter, k**	**Initial N_{brmv}**	**Proportion of Total Crashes**	**Adjusted N_{brmv}**	**Combined CMFs**	**Calibration Factor, Cr**	**Predicted N_{brmv}**
	from Table 12-3		from Table 12-3	from Equation 12-10		$(4)_{TOTAL}$*(5)	(6) from Worksheet 1B		(6)*(7)*(8)
	a	b							
Total	-12.34	1.36	1.32	2.856	1.000	2.856	1.07	1.00	3.057
Fatal and Injury (FI)	-12.76	1.28	1.31	0.808	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.268	0.766	1.07	1.00	0.820
Property Damage Only (PDO)	-12.81	1.38	1.34	2.203	$(5)_{TOTAL}-(5)_{FI}$ = 0.732	2.090	1.07	1.00	2.237

Worksheet 1D -- Multiple-Vehicle Nondriveway Collisions by Collision Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{brmv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{brmv\ (PDO)}$ (crashes/year)**	**Predicted N $_{brmv\ (TOTAL)}$ (crashes/year)**
	from Table 12-4	$(9)_{FI}$ from Worksheet 1C	from Table 12-4	$(9)_{PDO}$ from Worksheet 1C	$(9)_{TOTAL}$ from Worksheet 1C
Total	1.000	0.820	1.000	2.237	3.057
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Rear-end collision	0.832	0.682	0.662	1.481	2.163
Head-on collision	0.020	0.016	0.007	0.016	0.032
Angle collision	0.040	0.033	0.036	0.081	0.113
Sideswipe, same direction	0.050	0.041	0.223	0.499	0.540
Sideswipe, opposite direction	0.010	0.008	0.001	0.002	0.010
Other multiple-vehicle collision	0.048	0.039	0.071	0.159	0.198

Worksheet 1E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**		**Overdispersion Parameter, k**	**Initial N_{brsv}**	**Proportion of Total Crashes**	**Adjusted N_{brsv}**	**Combined CMFs**	**Calibration Factor, Cr**	**Predicted N_{brsv}**
	from Table 12-5		from Table 12-5	from Equation 12-13		$(4)_{TOTAL}*(5)$	(6) from Worksheet 1B		$(6)*(7)*(8)$
	a	b							
Total	-5.05	0.47	0.86	0.354	1.000	0.354	1.07	1.00	0.379
Fatal and Injury (FI)	-8.71	0.66	0.28	0.067	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.189	0.067	1.07	1.00	0.072
Property Damage Only (PDO)	-5.04	0.45	1.06	0.289	$(5)_{TOTAL}-(5)_{FI}$ = 0.811	0.287	1.07	1.00	0.307

Worksheet 1F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{brsv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{brsv\ (PDO)}$ (crashes/year)**	**Predicted N $_{brsv\ (TOTAL)}$ (crashes/year)**
	from Table 12-6	$(9)_{FI}$ from Worksheet 1E	from Table 12-6	$(9)_{PDO}$ from Worksheet 1E	$(9)_{TOTAL}$ from Worksheet 1E
Total	1.000	0.072	1.000	0.307	0.379
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Collision with animal	0.001	0.000	0.063	0.019	0.019
Collision with fixed object	0.500	0.036	0.813	0.250	0.285
Collision with other object	0.028	0.002	0.016	0.005	0.007
Other single-vehicle collision	0.471	0.034	0.108	0.033	0.067

Worksheet 1G -- Multiple-Vehicle Driveway-Related Collisions by Driveway Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Driveway Type	**Number of driveways, n_j**	**Crashes per driveway per year, N_j**	**Coefficient for traffic adjustment, t**	**Initial N_{brdwy}**	**Overdispersion parameter, k**
		from Table 12-7	from Table 12-7	Equation 12-16 $n_j * N_j * (AADT/15,000)^t$	from Table 12-7
Major commercial	0	0.033	1.106	0.000	
Minor commercial	0	0.011	1.106	0.000	
Major industrial/institutional	1	0.036	1.106	0.100	
Minor industrial/institutional	0	0.005	1.106	0.000	--
Major residential	1	0.018	1.106	0.050	
Minor residential	0	0.003	1.106	0.000	
Other	0	0.005	1.106	0.000	
Total	--	--	--	0.150	1.39

Worksheet 1H -- Multiple-Vehicle Driveway-Related Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Initial N_{brdwy}**	**Proportion of total crashes (f_{dwy})**	**Adjusted N_{brdwy}**	**Combined CMFs**	**Calibration factor, C_r**	**Predicted N_{brdwy}**
	$(5)_{TOTAL}$ from Worksheet 1G	from Table 12-7	$(2)_{TOTAL} * (3)$	(6) from Worksheet 1B		(4)*(5)*(6)
Total	0.150	1.000	0.150	1.07	1.00	0.160
Fatal and injury (FI)	--	0.284	0.042	1.07	1.00	0.045
Property damage only (PDO)	--	0.716	0.107	1.07	1.00	0.115

Worksheet 1I -- Vehicle-Pedestrian Collisions for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Crash Severity Level	**Predicted N_{brmv}**	**Predicted N_{brsv}**	**Predicted N_{brdwy}**	**Predicted N_{br}**	**f_{pedr}**	**Calibration factor, C_r**	**Predicted N_{pedr}**
	(9) from Worksheet 1C	(9) from Worksheet 1E	(7) from Worksheet 1H	(2)+(3)+(4)	from Table 12-8		(5)*(6)*(7)
Total	3.057	0.379	0.160	3.595	0.019	1.00	0.068
Fatal and injury (FI)	--	--	--	--	--	1.00	0.068

Worksheet 1J -- Vehicle-Bicycle Collisions for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Crash Severity Level	**Predicted N_{brmv}**	**Predicted N_{brsv}**	**Predicted N_{brdwy}**	**Predicted N_{br}**	**f_{biker}**	**Calibration factor, C_r**	**Predicted N_{biker}**
	(9) from Worksheet 1C	(9) from Worksheet 1E	(7) from Worksheet 1H	(2)+(3)+(4)	from Table 12-9		(5)*(6)*(7)
Total	3.057	0.379	0.160	3.595	0.005	1.00	0.018
Fatal and injury (FI)	--	--	--	--	--	1.00	0.018

Worksheet 1K -- Crash Severity Distribution for Urban and Suburban Roadway Segments			
(1)	(2)	(3)	(4)
Collision type	**Fatal and injury (FI)**	**Property damage only (PDO)**	**Total**
	(3) from Worksheet 1D and 1F; (7) from Worksheet 1H; and (8) from Worksheet 1I and 1J	(5) from Worksheet 1D and 1F; and (7) from Worksheet 1H	(6) from Worksheet 1D and 1F; (7) from Worksheet 1H; and (8) from Worksheet 1I and 1J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 1D)	0.682	1.481	2.163
Head-on collisions (from Worksheet 1D)	0.016	0.016	0.032
Angle collisions (from Worksheet 1D)	0.033	0.081	0.113
Sideswipe, same direction (from Worksheet 1D)	0.041	0.499	0.540
Sideswipe, opposite direction (from Worksheet 1D)	0.008	0.002	0.010
Driveway-related collisions (from Worksheet 1H)	0.045	0.115	0.160
Other multiple-vehicle collision (from Worksheet 1D)	0.039	0.159	0.198
Subtotal	0.865	2.351	3.217
SINGLE-VEHICLE			
Collision with animal (from Worksheet 1F)	0.000	0.019	0.019
Collision with fixed object (from Worksheet 1F)	0.036	0.250	0.285
Collision with other object (from Worksheet 1F)	0.002	0.005	0.007
Other single-vehicle collision (from Worksheet 1F)	0.034	0.033	0.067
Collision with pedestrian (from Worksheet 1I)	0.068	0.000	0.068
Collision with bicycle (from Worksheet 1J)	0.018	0.000	0.018
Subtotal	0.158	0.307	0.465
Total	1.023	2.659	3.682

Worksheet 1L -- Summary Results for Urban and Suburban Roadway Segments			
(1)	(2)	(3)	(4)
Crash Severity Level	**Predicted average crash frequency, $N_{predicted\ rs}$ (crashes/year)**	**Roadway segment length, L (mi)**	**Crash rate (crashes/mi/year)**
	(Total) from Worksheet 1K		(2) / (3)
Total	3.7	0.39	9.4
Fatal and injury (FI)	1.0	0.39	2.6
Property damage only (PDO)	2.7	0.39	6.8

Worksheet 1A -- General Information and Input Data for Urban and Suburban Roadway Segments

General Information		Location Information	
Analyst	RDW	Roadway	Boggy Creek Road BUILD
Agency or Company	VHB	Roadway Section	Springlake Village Blvd to Turnberry Blvd
Date Performed	12/11/20	Jurisdiction	Osceola County, FL
		Analysis Year	2045

Input Data		Base Conditions	Site Conditions
Roadway type (2U, 3T, 4U, 4D, ST)		--	4D
Length of segment, L (mi)		--	0.57
AADT (veh/day)	$AADT_{MAX}$ = 66,000 (veh/day)	--	38,500
Type of on-street parking (none/parallel/angle)		None	None
Proportion of curb length with on-street parking		--	0
Median width (ft) - for divided only		15	20
Lighting (present / not present)		Not Present	Present
Auto speed enforcement (present / not present)		Not Present	Not Present
Major commercial driveways (number)		--	0
Minor commercial driveways (number)		--	0
Major industrial / institutional driveways (number)		--	2
Minor industrial / institutional driveways (number)		--	0
Major residential driveways (number)		--	1
Minor residential driveways (number)		--	0
Other driveways (number)		--	0
Speed Category		--	Posted Speed Greater than 30 mph
Roadside fixed object density (fixed objects / mi)		0	60
Offset to roadside fixed objects (ft) [If greater than 30 or Not Present, input 30]		30	15
Calibration Factor, Cr		1.00	1.00

Worksheet 1B -- Crash Modification Factors for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
CMF for On-Street Parking	CMF for Roadside Fixed Objects	CMF for Median Width	CMF for Lighting	CMF for Automated Speed Enforcement	Combined CMF
CMF 1r	*CMF 2r*	*CMF 3r*	*CMF 4r*	*CMF 5r*	*CMF comb*
from Equation 12-32	from Equation 12-33	from Table 12-22	from Equation 12-34	from Section 12.7.1	(1)*(2)*(3)*(4)*(5)
1.00	1.11	0.99	0.91	1.00	1.00

Worksheet 1C -- Multiple-Vehicle Nondriveway Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**		**Overdispersion Parameter, k**	**Initial N_{brmv}**	**Proportion of Total Crashes**	**Adjusted N_{brmv}**	**Combined CMFs**	**Calibration Factor, Cr**	**Predicted N_{brmv}**
	from Table 12-3		from Table 12-3	from Equation 12-10		$(4)_{TOTAL}$*(5)	(6) from Worksheet 1B		(6)*(7)*(8)
	a	b							
Total	-12.34	1.36	1.32	4.294	1.000	4.294	1.00	1.00	4.313
Fatal and Injury (FI)	-12.76	1.28	1.31	1.212	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.268	1.150	1.00	1.00	1.155
Property Damage Only (PDO)	-12.81	1.38	1.34	3.315	$(5)_{TOTAL}-(5)_{FI}$ = 0.732	3.144	1.00	1.00	3.158

Worksheet 1D -- Multiple-Vehicle Nondriveway Collisions by Collision Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{brmv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{brmv\ (PDO)}$ (crashes/year)**	**Predicted N $_{brmv\ (TOTAL)}$ (crashes/year)**
	from Table 12-4	$(9)_{FI}$ from Worksheet 1C	from Table 12-4	$(9)_{PDO}$ from Worksheet 1C	$(9)_{TOTAL}$ from Worksheet 1C
Total	1.000	1.155	1.000	3.158	4.313
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Rear-end collision	0.832	0.961	0.662	2.091	3.052
Head-on collision	0.020	0.023	0.007	0.022	0.045
Angle collision	0.040	0.046	0.036	0.114	0.160
Sideswipe, same direction	0.050	0.058	0.223	0.704	0.762
Sideswipe, opposite direction	0.010	0.012	0.001	0.003	0.015
Other multiple-vehicle collision	0.048	0.055	0.071	0.224	0.280

Worksheet 1E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**		**Overdispersion Parameter, k**	**Initial N_{brsv}**	**Proportion of Total Crashes**	**Adjusted N_{brsv}**	**Combined CMFs**	**Calibration Factor, Cr**	**Predicted N_{brsv}**
	from Table 12-5		from Table 12-5	from Equation 12-13		$(4)_{TOTAL}*(5)$	(6) from Worksheet 1B		(6)*(7)*(8)
	a	b							
Total	-5.05	0.47	0.86	0.522	1.000	0.522	1.00	1.00	0.524
Fatal and Injury (FI)	-8.71	0.66	0.28	0.100	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.190	0.099	1.00	1.00	0.099
Property Damage Only (PDO)	-5.04	0.45	1.06	0.427	$(5)_{TOTAL}-(5)_{FI}$ = 0.810	0.423	1.00	1.00	0.425

Worksheet 1F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{brsv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{brsv\ (PDO)}$ (crashes/year)**	**Predicted N $_{brsv\ (TOTAL)}$ (crashes/year)**
	from Table 12-6	$(9)_{FI}$ from Worksheet 1E	from Table 12-6	$(9)_{PDO}$ from Worksheet 1E	$(9)_{TOTAL}$ from Worksheet 1E
Total	1.000	0.099	1.000	0.425	0.524
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Collision with animal	0.001	0.000	0.063	0.027	0.027
Collision with fixed object	0.500	0.050	0.813	0.346	0.395
Collision with other object	0.028	0.003	0.016	0.007	0.010
Other single-vehicle collision	0.471	0.047	0.108	0.046	0.093

Worksheet 1G -- Multiple-Vehicle Driveway-Related Collisions by Driveway Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Driveway Type	**Number of driveways, n_j**	**Crashes per driveway per year, N_j**	**Coefficient for traffic adjustment, t**	**Initial N_{brdwy}**	**Overdispersion parameter, k**
		from Table 12-7	from Table 12-7	Equation 12-16 $n_j * N_j * (AADT/15,000)^t$	from Table 12-7
Major commercial	0	0.033	1.106	0.000	
Minor commercial	0	0.011	1.106	0.000	
Major industrial/institutional	2	0.036	1.106	0.204	
Minor industrial/institutional	0	0.005	1.106	0.000	--
Major residential	1	0.018	1.106	0.051	
Minor residential	0	0.003	1.106	0.000	
Other	0	0.005	1.106	0.000	
Total	--	--	--	0.255	1.39

Worksheet 1H -- Multiple-Vehicle Driveway-Related Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Initial N_{brdwy}**	**Proportion of total crashes (f_{dwy})**	**Adjusted N_{brdwy}**	**Combined CMFs**	**Calibration factor, C_r**	**Predicted N_{brdwy}**
	$(5)_{TOTAL}$ from Worksheet 1G	from Table 12-7	$(2)_{TOTAL} * (3)$	(6) from Worksheet 1B		(4)*(5)*(6)
Total	0.255	1.000	0.255	1.00	1.00	0.256
Fatal and injury (FI)	--	0.284	0.072	1.00	1.00	0.073
Property damage only (PDO)	--	0.716	0.183	1.00	1.00	0.184

Worksheet 1I -- Vehicle-Pedestrian Collisions for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Crash Severity Level	**Predicted N_{brmv}**	**Predicted N_{brsv}**	**Predicted N_{brdwy}**	**Predicted N_{br}**	**f_{pedr}**	**Calibration factor, C_r**	**Predicted N_{pedr}**
	(9) from Worksheet 1C	(9) from Worksheet 1E	(7) from Worksheet 1H	(2)+(3)+(4)	from Table 12-8		(5)*(6)*(7)
Total	4.313	0.524	0.256	5.094	0.019	1.00	0.097
Fatal and injury (FI)	--	--	--	--	--	1.00	0.097

Worksheet 1J -- Vehicle-Bicycle Collisions for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Crash Severity Level	**Predicted N_{brmv}**	**Predicted N_{brsv}**	**Predicted N_{brdwy}**	**Predicted N_{br}**	**f_{biker}**	**Calibration factor, C_r**	**Predicted N_{biker}**
	(9) from Worksheet 1C	(9) from Worksheet 1E	(7) from Worksheet 1H	(2)+(3)+(4)	from Table 12-9		(5)*(6)*(7)
Total	4.313	0.524	0.256	5.094	0.005	1.00	0.025
Fatal and injury (FI)	--	--	--	--	--	1.00	0.025

Worksheet 1K -- Crash Severity Distribution for Urban and Suburban Roadway Segments			
(1)	(2)	(3)	(4)
Collision type	**Fatal and injury (FI)**	**Property damage only (PDO)**	**Total**
	(3) from Worksheet 1D and 1F; (7) from Worksheet 1H; and (8) from Worksheet 1I and 1J	(5) from Worksheet 1D and 1F; and (7) from Worksheet 1H	(6) from Worksheet 1D and 1F; (7) from Worksheet 1H; and (8) from Worksheet 1I and 1J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 1D)	0.961	2.091	3.052
Head-on collisions (from Worksheet 1D)	0.023	0.022	0.045
Angle collisions (from Worksheet 1D)	0.046	0.114	0.160
Sideswipe, same direction (from Worksheet 1D)	0.058	0.704	0.762
Sideswipe, opposite direction (from Worksheet 1D)	0.012	0.003	0.015
Driveway-related collisions (from Worksheet 1H)	0.073	0.184	0.256
Other multiple-vehicle collision (from Worksheet 1D)	0.055	0.224	0.280
Subtotal	1.228	3.342	4.569
SINGLE-VEHICLE			
Collision with animal (from Worksheet 1F)	0.000	0.027	0.027
Collision with fixed object (from Worksheet 1F)	0.050	0.346	0.395
Collision with other object (from Worksheet 1F)	0.003	0.007	0.010
Other single-vehicle collision (from Worksheet 1F)	0.047	0.046	0.093
Collision with pedestrian (from Worksheet 1I)	0.097	0.000	0.097
Collision with bicycle (from Worksheet 1J)	0.025	0.000	0.025
Subtotal	0.222	0.425	0.647
Total	1.449	3.767	5.216

Worksheet 1L -- Summary Results for Urban and Suburban Roadway Segments			
(1)	(2)	(3)	(4)
Crash Severity Level	**Predicted average crash frequency, $N_{predicted\ rs}$ (crashes/year)**	**Roadway segment length, L (mi)**	**Crash rate (crashes/mi/year)**
	(Total) from Worksheet 1K		(2) / (3)
Total	5.2	0.57	9.2
Fatal and injury (FI)	1.4	0.57	2.5
Property damage only (PDO)	3.8	0.57	6.6

Worksheet 1A -- General Information and Input Data for Urban and Suburban Roadway Segments

General Information		Location Information	
Analyst	RDW	Roadway	Boggy Creek Road BUILD
Agency or Company	VHB	Roadway Section	Turnberry Blvd to N Pointe Blvd
Date Performed	12/11/20	Jurisdiction	Osceola County, FL
		Analysis Year	2045

Input Data		Base Conditions	Site Conditions
Roadway type (2U, 3T, 4U, 4D, ST)		--	4D
Length of segment, L (mi)		--	0.51
AADT (veh/day)	$AADT_{MAX}$ = 66,000 (veh/day)	--	37,800
Type of on-street parking (none/parallel/angle)		None	None
Proportion of curb length with on-street parking		--	0
Median width (ft) - for divided only		15	20
Lighting (present / not present)		Not Present	Present
Auto speed enforcement (present / not present)		Not Present	Not Present
Major commercial driveways (number)		--	0
Minor commercial driveways (number)		--	0
Major industrial / institutional driveways (number)		--	1
Minor industrial / institutional driveways (number)		--	0
Major residential driveways (number)		--	0
Minor residential driveways (number)		--	7
Other driveways (number)		--	0
Speed Category		--	Posted Speed Greater than 30 mph
Roadside fixed object density (fixed objects / mi)		0	30
Offset to roadside fixed objects (ft) [If greater than 30 or Not Present, input 30]		30	15
Calibration Factor, Cr		1.00	1.00

Worksheet 1B -- Crash Modification Factors for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
CMF for On-Street Parking	CMF for Roadside Fixed Objects	CMF for Median Width	CMF for Lighting	CMF for Automated Speed Enforcement	Combined CMF
CMF 1r	*CMF 2r*	*CMF 3r*	*CMF 4r*	*CMF 5r*	*CMF comb*
from Equation 12-32	from Equation 12-33	from Table 12-22	from Equation 12-34	from Section 12.7.1	(1)*(2)*(3)*(4)*(5)
1.00	1.04	0.99	0.91	1.00	0.94

Worksheet 1C -- Multiple-Vehicle Nondriveway Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**		**Overdispersion Parameter, k**	**Initial N_{brmv}**	**Proportion of Total Crashes**	**Adjusted N_{brmv}**	**Combined CMFs**	**Calibration Factor, Cr**	**Predicted N_{brmv}**
	from Table 12-3		from Table 12-3	from Equation 12-10		$(4)_{TOTAL}$*(5)	(6) from Worksheet 1B		(6)*(7)*(8)
	a	b							
Total	-12.34	1.36	1.32	3.748	1.000	3.748	0.94	1.00	3.516
Fatal and Injury (FI)	-12.76	1.28	1.31	1.060	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.268	1.005	0.94	1.00	0.943
Property Damage Only (PDO)	-12.81	1.38	1.34	2.892	$(5)_{TOTAL}-(5)_{FI}$ = 0.732	2.743	0.94	1.00	2.573

Worksheet 1D -- Multiple-Vehicle Nondriveway Collisions by Collision Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{brmv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{brmv\ (PDO)}$ (crashes/year)**	**Predicted N $_{brmv\ (TOTAL)}$ (crashes/year)**
	from Table 12-4	$(9)_{FI}$ from Worksheet 1C	from Table 12-4	$(9)_{PDO}$ from Worksheet 1C	$(9)_{TOTAL}$ from Worksheet 1C
Total	1.000	0.943	1.000	2.573	3.516
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Rear-end collision	0.832	0.784	0.662	1.704	2.488
Head-on collision	0.020	0.019	0.007	0.018	0.037
Angle collision	0.040	0.038	0.036	0.093	0.130
Sideswipe, same direction	0.050	0.047	0.223	0.574	0.621
Sideswipe, opposite direction	0.010	0.009	0.001	0.003	0.012
Other multiple-vehicle collision	0.048	0.045	0.071	0.183	0.228

Worksheet 1E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**		**Overdispersion Parameter, k**	**Initial N_{brsv}**	**Proportion of Total Crashes**	**Adjusted N_{brsv}**	**Combined CMFs**	**Calibration Factor, Cr**	**Predicted N_{brsv}**
	from Table 12-5		from Table 12-5	from Equation 12-13		$(4)_{TOTAL}*(5)$	(6) from Worksheet 1B		(6)*(7)*(8)
	a	b							
Total	-5.05	0.47	0.86	0.463	1.000	0.463	0.94	1.00	0.435
Fatal and Injury (FI)	-8.71	0.66	0.28	0.088	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.189	0.088	0.94	1.00	0.082
Property Damage Only (PDO)	-5.04	0.45	1.06	0.379	$(5)_{TOTAL}-(5)_{FI}$ = 0.811	0.376	0.94	1.00	0.352

Worksheet 1F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{brsv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{brsv\ (PDO)}$ (crashes/year)**	**Predicted N $_{brsv\ (TOTAL)}$ (crashes/year)**
	from Table 12-6	$(9)_{FI}$ from Worksheet 1E	from Table 12-6	$(9)_{PDO}$ from Worksheet 1E	$(9)_{TOTAL}$ from Worksheet 1E
Total	1.000	0.082	1.000	0.352	0.435
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Collision with animal	0.001	0.000	0.063	0.022	0.022
Collision with fixed object	0.500	0.041	0.813	0.287	0.328
Collision with other object	0.028	0.002	0.016	0.006	0.008
Other single-vehicle collision	0.471	0.039	0.108	0.038	0.077

Worksheet 1G -- Multiple-Vehicle Driveway-Related Collisions by Driveway Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Driveway Type	**Number of driveways, n_j**	**Crashes per driveway per year, N_j**	**Coefficient for traffic adjustment, t**	**Initial N_{brdwy}**	**Overdispersion parameter, k**
		from Table 12-7	from Table 12-7	Equation 12-16 $n_j * N_j * (AADT/15,000)^t$	from Table 12-7
Major commercial	0	0.033	1.106	0.000	
Minor commercial	0	0.011	1.106	0.000	
Major industrial/institutional	1	0.036	1.106	0.100	
Minor industrial/institutional	0	0.005	1.106	0.000	--
Major residential	0	0.018	1.106	0.000	
Minor residential	7	0.003	1.106	0.058	
Other	0	0.005	1.106	0.000	
Total	--	--	--	0.158	1.39

Worksheet 1H -- Multiple-Vehicle Driveway-Related Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Initial N_{brdwy}**	**Proportion of total crashes (f_{dwy})**	**Adjusted N_{brdwy}**	**Combined CMFs**	**Calibration factor, C_r**	**Predicted N_{brdwy}**
	$(5)_{TOTAL}$ from Worksheet 1G	from Table 12-7	$(2)_{TOTAL}$ * (3)	(6) from Worksheet 1B		(4)*(5)*(6)
Total	0.158	1.000	0.158	0.94	1.00	0.149
Fatal and injury (FI)	--	0.284	0.045	0.94	1.00	0.042
Property damage only (PDO)	--	0.716	0.113	0.94	1.00	0.106

Worksheet 1I -- Vehicle-Pedestrian Collisions for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Crash Severity Level	**Predicted N_{brmv}**	**Predicted N_{brsv}**	**Predicted N_{brdwy}**	**Predicted N_{br}**	**f_{pedr}**	**Calibration factor, C_r**	**Predicted N_{pedr}**
	(9) from Worksheet 1C	(9) from Worksheet 1E	(7) from Worksheet 1H	(2)+(3)+(4)	from Table 12-8		(5)*(6)*(7)
Total	3.516	0.435	0.149	4.100	0.019	1.00	0.078
Fatal and injury (FI)	--	--	--	--	--	1.00	0.078

Worksheet 1J -- Vehicle-Bicycle Collisions for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Crash Severity Level	**Predicted N_{brmv}**	**Predicted N_{brsv}**	**Predicted N_{brdwy}**	**Predicted N_{br}**	**f_{biker}**	**Calibration factor, C_r**	**Predicted N_{biker}**
	(9) from Worksheet 1C	(9) from Worksheet 1E	(7) from Worksheet 1H	(2)+(3)+(4)	from Table 12-9		(5)*(6)*(7)
Total	3.516	0.435	0.149	4.100	0.005	1.00	0.020
Fatal and injury (FI)	--	--	--	--	--	1.00	0.020

Worksheet 1K -- Crash Severity Distribution for Urban and Suburban Roadway Segments			
(1)	(2)	(3)	(4)
Collision type	**Fatal and injury (FI)**	**Property damage only (PDO)**	**Total**
	(3) from Worksheet 1D and 1F; (7) from Worksheet 1H; and (8) from Worksheet 1I and 1J	(5) from Worksheet 1D and 1F; and (7) from Worksheet 1H	(6) from Worksheet 1D and 1F; (7) from Worksheet 1H; and (8) from Worksheet 1I and 1J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 1D)	0.784	1.704	2.488
Head-on collisions (from Worksheet 1D)	0.019	0.018	0.037
Angle collisions (from Worksheet 1D)	0.038	0.093	0.130
Sideswipe, same direction (from Worksheet 1D)	0.047	0.574	0.621
Sideswipe, opposite direction (from Worksheet 1D)	0.009	0.003	0.012
Driveway-related collisions (from Worksheet 1H)	0.042	0.106	0.149
Other multiple-vehicle collision (from Worksheet 1D)	0.045	0.183	0.228
Subtotal	0.985	2.680	3.665
SINGLE-VEHICLE			
Collision with animal (from Worksheet 1F)	0.000	0.022	0.022
Collision with fixed object (from Worksheet 1F)	0.041	0.287	0.328
Collision with other object (from Worksheet 1F)	0.002	0.006	0.008
Other single-vehicle collision (from Worksheet 1F)	0.039	0.038	0.077
Collision with pedestrian (from Worksheet 1I)	0.078	0.000	0.078
Collision with bicycle (from Worksheet 1J)	0.020	0.000	0.020
Subtotal	0.181	0.352	0.533
Total	1.166	3.032	4.198

Worksheet 1L -- Summary Results for Urban and Suburban Roadway Segments			
(1)	(2)	(3)	(4)
Crash Severity Level	**Predicted average crash frequency, $N_{predicted\ rs}$ (crashes/year)**	**Roadway segment length, L (mi)**	**Crash rate (crashes/mi/year)**
	(Total) from Worksheet 1K		(2) / (3)
Total	4.2	0.51	8.2
Fatal and injury (FI)	1.2	0.51	2.3
Property damage only (PDO)	3.0	0.51	5.9

Worksheet 1A -- General Information and Input Data for Urban and Suburban Roadway Segments

General Information		Location Information	
Analyst	RDW	Roadway	Boggy Creek Road BUILD
Agency or Company	VHB	Roadway Section	N Pointe Blvd to Timber Lane
Date Performed	12/11/20	Jurisdiction	Osceola County, FL
		Analysis Year	2045

Input Data		Base Conditions	Site Conditions
Roadway type (2U, 3T, 4U, 4D, ST)		--	4D
Length of segment, L (mi)		--	0.54
AADT (veh/day)	$AADT_{MAX}$ = 66,000 (veh/day)	--	37,500
Type of on-street parking (none/parallel/angle)		None	None
Proportion of curb length with on-street parking		--	0
Median width (ft) - for divided only		15	20
Lighting (present / not present)		Not Present	Present
Auto speed enforcement (present / not present)		Not Present	Not Present
Major commercial driveways (number)		--	0
Minor commercial driveways (number)		--	0
Major industrial / institutional driveways (number)		--	0
Minor industrial / institutional driveways (number)		--	0
Major residential driveways (number)		--	9
Minor residential driveways (number)		--	0
Other driveways (number)		--	0
Speed Category		--	Posted Speed Greater than 30 mph
Roadside fixed object density (fixed objects / mi)		0	60
Offset to roadside fixed objects (ft) [If greater than 30 or Not Present, input 30]		30	10
Calibration Factor, Cr		1.00	1.00

Worksheet 1B -- Crash Modification Factors for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
CMF for On-Street Parking	CMF for Roadside Fixed Objects	CMF for Median Width	CMF for Lighting	CMF for Automated Speed Enforcement	Combined CMF
CMF 1r	*CMF 2r*	*CMF 3r*	*CMF 4r*	*CMF 5r*	*CMF comb*
from Equation 12-32	from Equation 12-33	from Table 12-22	from Equation 12-34	from Section 12.7.1	(1)*(2)*(3)*(4)*(5)
1.00	1.15	0.99	0.91	1.00	1.04

Worksheet 1C -- Multiple-Vehicle Nondriveway Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**		**Overdispersion Parameter, k**	**Initial N_{brmv}**	**Proportion of Total Crashes**	**Adjusted N_{brmv}**	**Combined CMFs**	**Calibration Factor, Cr**	**Predicted N_{brmv}**
	from Table 12-3		from Table 12-3	from Equation 12-10		$(4)_{TOTAL}$*(5)	(6) from Worksheet 1B		(6)*(7)*(8)
	a	b							
Total	-12.34	1.36	1.32	3.925	1.000	3.925	1.04	1.00	4.089
Fatal and Injury (FI)	-12.76	1.28	1.31	1.111	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.268	1.053	1.04	1.00	1.097
Property Damage Only (PDO)	-12.81	1.38	1.34	3.029	$(5)_{TOTAL}-(5)_{FI}$ = 0.732	2.872	1.04	1.00	2.992

Worksheet 1D -- Multiple-Vehicle Nondriveway Collisions by Collision Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{brmv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{brmv\ (PDO)}$ (crashes/year)**	**Predicted N $_{brmv\ (TOTAL)}$ (crashes/year)**
	from Table 12-4	$(9)_{FI}$ from Worksheet 1C	from Table 12-4	$(9)_{PDO}$ from Worksheet 1C	$(9)_{TOTAL}$ from Worksheet 1C
Total	1.000	1.097	1.000	2.992	4.089
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Rear-end collision	0.832	0.913	0.662	1.981	2.893
Head-on collision	0.020	0.022	0.007	0.021	0.043
Angle collision	0.040	0.044	0.036	0.108	0.152
Sideswipe, same direction	0.050	0.055	0.223	0.667	0.722
Sideswipe, opposite direction	0.010	0.011	0.001	0.003	0.014
Other multiple-vehicle collision	0.048	0.053	0.071	0.212	0.265

Worksheet 1E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**		**Overdispersion Parameter, k**	**Initial N_{brsv}**	**Proportion of Total Crashes**	**Adjusted N_{brsv}**	**Combined CMFs**	**Calibration Factor, Cr**	**Predicted N_{brsv}**
	from Table 12-5		from Table 12-5	from Equation 12-13		$(4)_{TOTAL}*(5)$	(6) from Worksheet 1B		(6)*(7)*(8)
	a	b							
Total	-5.05	0.47	0.86	0.489	1.000	0.489	1.04	1.00	0.509
Fatal and Injury (FI)	-8.71	0.66	0.28	0.093	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.189	0.092	1.04	1.00	0.096
Property Damage Only (PDO)	-5.04	0.45	1.06	0.400	$(5)_{TOTAL}-(5)_{FI}$ = 0.811	0.396	1.04	1.00	0.413

Worksheet 1F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{brsv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{brsv\ (PDO)}$ (crashes/year)**	**Predicted N $_{brsv\ (TOTAL)}$ (crashes/year)**
	from Table 12-6	$(9)_{FI}$ from Worksheet 1E	from Table 12-6	$(9)_{PDO}$ from Worksheet 1E	$(9)_{TOTAL}$ from Worksheet 1E
Total	1.000	0.096	1.000	0.413	0.509
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Collision with animal	0.001	0.000	0.063	0.026	0.026
Collision with fixed object	0.500	0.048	0.813	0.336	0.384
Collision with other object	0.028	0.003	0.016	0.007	0.009
Other single-vehicle collision	0.471	0.045	0.108	0.045	0.090

Worksheet 1G -- Multiple-Vehicle Driveway-Related Collisions by Driveway Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Driveway Type	**Number of driveways, n_j**	**Crashes per driveway per year, N_j**	**Coefficient for traffic adjustment, t**	**Initial N_{brdwy}**	**Overdispersion parameter, k**
		from Table 12-7	from Table 12-7	Equation 12-16 $n_j * N_j * (AADT/15,000)^t$	from Table 12-7
Major commercial	0	0.033	1.106	0.000	
Minor commercial	0	0.011	1.106	0.000	
Major industrial/institutional	0	0.036	1.106	0.000	
Minor industrial/institutional	0	0.005	1.106	0.000	--
Major residential	9	0.018	1.106	0.446	
Minor residential	0	0.003	1.106	0.000	
Other	0	0.005	1.106	0.000	
Total	--	--	--	0.446	1.39

Worksheet 1H -- Multiple-Vehicle Driveway-Related Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Initial N_{brdwy}**	**Proportion of total crashes (f_{dwy})**	**Adjusted N_{brdwy}**	**Combined CMFs**	**Calibration factor, C_r**	**Predicted N_{brdwy}**
	$(5)_{TOTAL}$ from Worksheet 1G	from Table 12-7	$(2)_{TOTAL}$ * (3)	(6) from Worksheet 1B		(4)*(5)*(6)
Total	0.446	1.000	0.446	1.04	1.00	0.465
Fatal and injury (FI)	--	0.284	0.127	1.04	1.00	0.132
Property damage only (PDO)	--	0.716	0.320	1.04	1.00	0.333

Worksheet 1I -- Vehicle-Pedestrian Collisions for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Crash Severity Level	**Predicted N_{brmv}**	**Predicted N_{brsv}**	**Predicted N_{brdwy}**	**Predicted N_{br}**	**f_{pedr}**	**Calibration factor, C_r**	**Predicted N_{pedr}**
	(9) from Worksheet 1C	(9) from Worksheet 1E	(7) from Worksheet 1H	(2)+(3)+(4)	from Table 12-8		(5)*(6)*(7)
Total	4.089	0.509	0.465	5.063	0.019	1.00	0.096
Fatal and injury (FI)	--	--	--	--	--	1.00	0.096

Worksheet 1J -- Vehicle-Bicycle Collisions for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Crash Severity Level	**Predicted N_{brmv}**	**Predicted N_{brsv}**	**Predicted N_{brdwy}**	**Predicted N_{br}**	**f_{biker}**	**Calibration factor, C_r**	**Predicted N_{biker}**
	(9) from Worksheet 1C	(9) from Worksheet 1E	(7) from Worksheet 1H	(2)+(3)+(4)	from Table 12-9		(5)*(6)*(7)
Total	4.089	0.509	0.465	5.063	0.005	1.00	0.025
Fatal and injury (FI)	--	--	--	--	--	1.00	0.025

Worksheet 1K -- Crash Severity Distribution for Urban and Suburban Roadway Segments			
(1)	(2)	(3)	(4)
Collision type	**Fatal and injury (FI)**	**Property damage only (PDO)**	**Total**
	(3) from Worksheet 1D and 1F; (7) from Worksheet 1H; and (8) from Worksheet 1I and 1J	(5) from Worksheet 1D and 1F; and (7) from Worksheet 1H	(6) from Worksheet 1D and 1F; (7) from Worksheet 1H; and (8) from Worksheet 1I and 1J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 1D)	0.913	1.981	2.893
Head-on collisions (from Worksheet 1D)	0.022	0.021	0.043
Angle collisions (from Worksheet 1D)	0.044	0.108	0.152
Sideswipe, same direction (from Worksheet 1D)	0.055	0.667	0.722
Sideswipe, opposite direction (from Worksheet 1D)	0.011	0.003	0.014
Driveway-related collisions (from Worksheet 1H)	0.132	0.333	0.465
Other multiple-vehicle collision (from Worksheet 1D)	0.053	0.212	0.265
Subtotal	1.229	3.325	4.554
SINGLE-VEHICLE			
Collision with animal (from Worksheet 1F)	0.000	0.026	0.026
Collision with fixed object (from Worksheet 1F)	0.048	0.336	0.384
Collision with other object (from Worksheet 1F)	0.003	0.007	0.009
Other single-vehicle collision (from Worksheet 1F)	0.045	0.045	0.090
Collision with pedestrian (from Worksheet 1I)	0.096	0.000	0.096
Collision with bicycle (from Worksheet 1J)	0.025	0.000	0.025
Subtotal	0.218	0.413	0.631
Total	1.447	3.738	5.184

Worksheet 1L -- Summary Results for Urban and Suburban Roadway Segments			
(1)	(2)	(3)	(4)
Crash Severity Level	**Predicted average crash frequency, $N_{predicted\ rs}$ (crashes/year)**	**Roadway segment length, L (mi)**	**Crash rate (crashes/mi/year)**
	(Total) from Worksheet 1K		(2) / (3)
Total	5.2	0.54	9.6
Fatal and injury (FI)	1.4	0.54	2.7
Property damage only (PDO)	3.7	0.54	6.9

Worksheet 1A -- General Information and Input Data for Urban and Suburban Roadway Segments

General Information		Location Information	
Analyst	RDW	Roadway	Boggy Creek Road BUILD
Agency or Company	VHB	Roadway Section	Timber Lane to Fells Cove Blvd
Date Performed	12/11/20	Jurisdiction	Osceola County, FL
		Analysis Year	2045

Input Data		Base Conditions	Site Conditions
Roadway type (2U, 3T, 4U, 4D, ST)		--	4D
Length of segment, L (mi)		--	1.65
AADT (veh/day)	$AADT_{MAX}$ = 66,000 (veh/day)	--	37,500
Type of on-street parking (none/parallel/angle)		None	None
Proportion of curb length with on-street parking		--	0
Median width (ft) - for divided only		15	20
Lighting (present / not present)		Not Present	Present
Auto speed enforcement (present / not present)		Not Present	Not Present
Major commercial driveways (number)		--	0
Minor commercial driveways (number)		--	0
Major industrial / institutional driveways (number)		--	1
Minor industrial / institutional driveways (number)		--	0
Major residential driveways (number)		--	6
Minor residential driveways (number)		--	17
Other driveways (number)		--	0
Speed Category		--	Posted Speed Greater than 30 mph
Roadside fixed object density (fixed objects / mi)		0	30
Offset to roadside fixed objects (ft) [If greater than 30 or Not Present, input 30]		30	15
Calibration Factor, Cr		1.00	1.00

Worksheet 1B -- Crash Modification Factors for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
CMF for On-Street Parking	CMF for Roadside Fixed Objects	CMF for Median Width	CMF for Lighting	CMF for Automated Speed Enforcement	Combined CMF
CMF 1r	*CMF 2r*	*CMF 3r*	*CMF 4r*	*CMF 5r*	*CMF comb*
from Equation 12-32	from Equation 12-33	from Table 12-22	from Equation 12-34	from Section 12.7.1	(1)*(2)*(3)*(4)*(5)
1.00	1.04	0.99	0.91	1.00	0.94

Worksheet 1C -- Multiple-Vehicle Nondriveway Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**		**Overdispersion Parameter, k**	**Initial N_{brmv}**	**Proportion of Total Crashes**	**Adjusted N_{brmv}**	**Combined CMFs**	**Calibration Factor, Cr**	**Predicted N_{brmv}**
	from Table 12-3		from Table 12-3	from Equation 12-10		$(4)_{TOTAL}$*(5)	(6) from Worksheet 1B		(6)*(7)*(8)
	a	b							
Total	-12.34	1.36	1.32	11.994	1.000	11.994	0.94	1.00	11.254
Fatal and Injury (FI)	-12.76	1.28	1.31	3.393	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.268	3.218	0.94	1.00	3.019
Property Damage Only (PDO)	-12.81	1.38	1.34	9.254	$(5)_{TOTAL}-(5)_{FI}$ = 0.732	8.776	0.94	1.00	8.234

Worksheet 1D -- Multiple-Vehicle Nondriveway Collisions by Collision Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{brmv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{brmv\ (PDO)}$ (crashes/year)**	**Predicted N $_{brmv\ (TOTAL)}$ (crashes/year)**
	from Table 12-4	$(9)_{FI}$ from Worksheet 1C	from Table 12-4	$(9)_{PDO}$ from Worksheet 1C	$(9)_{TOTAL}$ from Worksheet 1C
Total	1.000	3.019	1.000	8.234	11.254
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Rear-end collision	0.832	2.512	0.662	5.451	7.963
Head-on collision	0.020	0.060	0.007	0.058	0.118
Angle collision	0.040	0.121	0.036	0.296	0.417
Sideswipe, same direction	0.050	0.151	0.223	1.836	1.987
Sideswipe, opposite direction	0.010	0.030	0.001	0.008	0.038
Other multiple-vehicle collision	0.048	0.145	0.071	0.585	0.730

Worksheet 1E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**		**Overdispersion Parameter, k**	**Initial N_{brsv}**	**Proportion of Total Crashes**	**Adjusted N_{brsv}**	**Combined CMFs**	**Calibration Factor, Cr**	**Predicted N_{brsv}**
	from Table 12-5		from Table 12-5	from Equation 12-13		$(4)_{TOTAL}*(5)$	(6) from Worksheet 1B		(6)*(7)*(8)
	a	b							
Total	-5.05	0.47	0.86	1.493	1.000	1.493	0.94	1.00	1.401
Fatal and Injury (FI)	-8.71	0.66	0.28	0.284	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.189	0.282	0.94	1.00	0.264
Property Damage Only (PDO)	-5.04	0.45	1.06	1.222	$(5)_{TOTAL}-(5)_{FI}$ = 0.811	1.211	0.94	1.00	1.137

Worksheet 1F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{brsv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{brsv\ (PDO)}$ (crashes/year)**	**Predicted N $_{brsv\ (TOTAL)}$ (crashes/year)**
	from Table 12-6	$(9)_{FI}$ from Worksheet 1E	from Table 12-6	$(9)_{PDO}$ from Worksheet 1E	$(9)_{TOTAL}$ from Worksheet 1E
Total	1.000	0.264	1.000	1.137	1.401
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Collision with animal	0.001	0.000	0.063	0.072	0.072
Collision with fixed object	0.500	0.132	0.813	0.924	1.056
Collision with other object	0.028	0.007	0.016	0.018	0.026
Other single-vehicle collision	0.471	0.125	0.108	0.123	0.247

Worksheet 1G -- Multiple-Vehicle Driveway-Related Collisions by Driveway Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Driveway Type	**Number of driveways, n_j**	**Crashes per driveway per year, N_j**	**Coefficient for traffic adjustment, t**	**Initial N_{brdwy}**	**Overdispersion parameter, k**
		from Table 12-7	from Table 12-7	Equation 12-16 $n_j * N_j * (AADT/15,000)^t$	from Table 12-7
Major commercial	0	0.033	1.106	0.000	
Minor commercial	0	0.011	1.106	0.000	
Major industrial/institutional	1	0.036	1.106	0.099	
Minor industrial/institutional	0	0.005	1.106	0.000	--
Major residential	6	0.018	1.106	0.298	
Minor residential	17	0.003	1.106	0.141	
Other	0	0.005	1.106	0.000	
Total	--	--	--	0.537	1.39

Worksheet 1H -- Multiple-Vehicle Driveway-Related Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Initial N_{brdwy}**	**Proportion of total crashes (f_{dwy})**	**Adjusted N_{brdwy}**	**Combined CMFs**	**Calibration factor, C_r**	**Predicted N_{brdwy}**
	$(5)_{TOTAL}$ from Worksheet 1G	from Table 12-7	$(2)_{TOTAL} * (3)$	(6) from Worksheet 1B		(4)*(5)*(6)
Total	0.537	1.000	0.537	0.94	1.00	0.504
Fatal and injury (FI)	--	0.284	0.153	0.94	1.00	0.143
Property damage only (PDO)	--	0.716	0.385	0.94	1.00	0.361

Worksheet 1I -- Vehicle-Pedestrian Collisions for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Crash Severity Level	**Predicted N_{brmv}**	**Predicted N_{brsv}**	**Predicted N_{brdwy}**	**Predicted N_{br}**	**f_{pedr}**	**Calibration factor, C_r**	**Predicted N_{pedr}**
	(9) from Worksheet 1C	(9) from Worksheet 1E	(7) from Worksheet 1H	(2)+(3)+(4)	from Table 12-8		(5)*(6)*(7)
Total	11.254	1.401	0.504	13.158	0.019	1.00	0.250
Fatal and injury (FI)	--	--	--	--	--	1.00	0.250

Worksheet 1J -- Vehicle-Bicycle Collisions for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Crash Severity Level	**Predicted N_{brmv}**	**Predicted N_{brsv}**	**Predicted N_{brdwy}**	**Predicted N_{br}**	**f_{biker}**	**Calibration factor, C_r**	**Predicted N_{biker}**
	(9) from Worksheet 1C	(9) from Worksheet 1E	(7) from Worksheet 1H	(2)+(3)+(4)	from Table 12-9		(5)*(6)*(7)
Total	11.254	1.401	0.504	13.158	0.005	1.00	0.066
Fatal and injury (FI)	--	--	--	--	--	1.00	0.066

Worksheet 1K -- Crash Severity Distribution for Urban and Suburban Roadway Segments			
(1)	(2)	(3)	(4)
Collision type	**Fatal and injury (FI)**	**Property damage only (PDO)**	**Total**
	(3) from Worksheet 1D and 1F; (7) from Worksheet 1H; and (8) from Worksheet 1I and 1J	(5) from Worksheet 1D and 1F; and (7) from Worksheet 1H	(6) from Worksheet 1D and 1F; (7) from Worksheet 1H; and (8) from Worksheet 1I and 1J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 1D)	2.512	5.451	7.963
Head-on collisions (from Worksheet 1D)	0.060	0.058	0.118
Angle collisions (from Worksheet 1D)	0.121	0.296	0.417
Sideswipe, same direction (from Worksheet 1D)	0.151	1.836	1.987
Sideswipe, opposite direction (from Worksheet 1D)	0.030	0.008	0.038
Driveway-related collisions (from Worksheet 1H)	0.143	0.361	0.504
Other multiple-vehicle collision (from Worksheet 1D)	0.145	0.585	0.730
Subtotal	3.163	8.595	11.758
SINGLE-VEHICLE			
Collision with animal (from Worksheet 1F)	0.000	0.072	0.072
Collision with fixed object (from Worksheet 1F)	0.132	0.924	1.056
Collision with other object (from Worksheet 1F)	0.007	0.018	0.026
Other single-vehicle collision (from Worksheet 1F)	0.125	0.123	0.247
Collision with pedestrian (from Worksheet 1I)	0.250	0.000	0.250
Collision with bicycle (from Worksheet 1J)	0.066	0.000	0.066
Subtotal	0.580	1.137	1.717
Total	3.743	9.731	13.474

Worksheet 1L -- Summary Results for Urban and Suburban Roadway Segments			
(1)	(2)	(3)	(4)
Crash Severity Level	**Predicted average crash frequency, $N_{predicted\ rs}$ (crashes/year)**	**Roadway segment length, L (mi)**	**Crash rate (crashes/mi/year)**
	(Total) from Worksheet 1K		(2) / (3)
Total	13.5	1.65	8.2
Fatal and injury (FI)	3.7	1.65	2.3
Property damage only (PDO)	9.7	1.65	5.9

Worksheet 1A -- General Information and Input Data for Urban and Suburban Roadway Segments

General Information		Location Information	
Analyst	RDW	Roadway	Boggy Creek Road BUILD
Agency or Company	VHB	Roadway Section	Fells Cove Blvd to Narcoosee Road
Date Performed	12/11/20	Jurisdiction	Osceola County, FL
		Analysis Year	2045

Input Data		Base Conditions	Site Conditions
Roadway type (2U, 3T, 4U, 4D, ST)		--	4D
Length of segment, L (mi)		--	0.76
AADT (veh/day)	$AADT_{MAX}$ = 66,000 (veh/day)	--	37,500
Type of on-street parking (none/parallel/angle)		None	None
Proportion of curb length with on-street parking		--	0
Median width (ft) - for divided only		15	20
Lighting (present / not present)		Not Present	Present
Auto speed enforcement (present / not present)		Not Present	Not Present
Major commercial driveways (number)		--	2
Minor commercial driveways (number)		--	1
Major industrial / institutional driveways (number)		--	0
Minor industrial / institutional driveways (number)		--	0
Major residential driveways (number)		--	5
Minor residential driveways (number)		--	0
Other driveways (number)		--	0
Speed Category		--	Posted Speed Greater than 30 mph
Roadside fixed object density (fixed objects / mi)		0	30
Offset to roadside fixed objects (ft) [If greater than 30 or Not Present, input 30]		30	15
Calibration Factor, Cr		1.00	1.00

Worksheet 1B -- Crash Modification Factors for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
CMF for On-Street Parking	CMF for Roadside Fixed Objects	CMF for Median Width	CMF for Lighting	CMF for Automated Speed Enforcement	Combined CMF
CMF 1r	*CMF 2r*	*CMF 3r*	*CMF 4r*	*CMF 5r*	*CMF comb*
from Equation 12-32	from Equation 12-33	from Table 12-22	from Equation 12-34	from Section 12.7.1	(1)*(2)*(3)*(4)*(5)
1.00	1.04	0.99	0.91	1.00	0.94

Worksheet 1C -- Multiple-Vehicle Nondriveway Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**		**Overdispersion Parameter, k**	**Initial N_{brmv}**	**Proportion of Total Crashes**	**Adjusted N_{brmv}**	**Combined CMFs**	**Calibration Factor, Cr**	**Predicted N_{brmv}**
	from Table 12-3		from Table 12-3	from Equation 12-10		$(4)_{TOTAL}$*(5)	(6) from Worksheet 1B		(6)*(7)*(8)
	a	b							
Total	-12.34	1.36	1.32	5.525	1.000	5.525	0.94	1.00	5.183
Fatal and Injury (FI)	-12.76	1.28	1.31	1.563	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.268	1.482	0.94	1.00	1.391
Property Damage Only (PDO)	-12.81	1.38	1.34	4.263	$(5)_{TOTAL}-(5)_{FI}$ = 0.732	4.042	0.94	1.00	3.793

Worksheet 1D -- Multiple-Vehicle Nondriveway Collisions by Collision Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{brmv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{brmv\ (PDO)}$ (crashes/year)**	**Predicted N $_{brmv\ (TOTAL)}$ (crashes/year)**
	from Table 12-4	$(9)_{FI}$ from Worksheet 1C	from Table 12-4	$(9)_{PDO}$ from Worksheet 1C	$(9)_{TOTAL}$ from Worksheet 1C
Total	1.000	1.391	1.000	3.793	5.183
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Rear-end collision	0.832	1.157	0.662	2.511	3.668
Head-on collision	0.020	0.028	0.007	0.027	0.054
Angle collision	0.040	0.056	0.036	0.137	0.192
Sideswipe, same direction	0.050	0.070	0.223	0.846	0.915
Sideswipe, opposite direction	0.010	0.014	0.001	0.004	0.018
Other multiple-vehicle collision	0.048	0.067	0.071	0.269	0.336

Worksheet 1E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**		**Overdispersion Parameter, k**	**Initial N_{brsv}**	**Proportion of Total Crashes**	**Adjusted N_{brsv}**	**Combined CMFs**	**Calibration Factor, Cr**	**Predicted N_{brsv}**
	from Table 12-5		from Table 12-5	from Equation 12-13		$(4)_{TOTAL}*(5)$	(6) from Worksheet 1B		(6)*(7)*(8)
	a	b							
Total	-5.05	0.47	0.86	0.688	1.000	0.688	0.94	1.00	0.645
Fatal and Injury (FI)	-8.71	0.66	0.28	0.131	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.189	0.130	0.94	1.00	0.122
Property Damage Only (PDO)	-5.04	0.45	1.06	0.563	$(5)_{TOTAL}-(5)_{FI}$ = 0.811	0.558	0.94	1.00	0.523

Worksheet 1F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{brsv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{brsv\ (PDO)}$ (crashes/year)**	**Predicted N $_{brsv\ (TOTAL)}$ (crashes/year)**
	from Table 12-6	$(9)_{FI}$ from Worksheet 1E	from Table 12-6	$(9)_{PDO}$ from Worksheet 1E	$(9)_{TOTAL}$ from Worksheet 1E
Total	1.000	0.122	1.000	0.523	0.645
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Collision with animal	0.001	0.000	0.063	0.033	0.033
Collision with fixed object	0.500	0.061	0.813	0.426	0.486
Collision with other object	0.028	0.003	0.016	0.008	0.012
Other single-vehicle collision	0.471	0.057	0.108	0.057	0.114

Worksheet 1G -- Multiple-Vehicle Driveway-Related Collisions by Driveway Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Driveway Type	**Number of driveways, n_j**	**Crashes per driveway per year, N_j**	**Coefficient for traffic adjustment, t**	**Initial N_{brdwy}**	**Overdispersion parameter, k**
		from Table 12-7	from Table 12-7	Equation 12-16 $n_j * N_j * (AADT/15,000)^t$	from Table 12-7
Major commercial	2	0.033	1.106	0.182	
Minor commercial	1	0.011	1.106	0.030	
Major industrial/institutional	0	0.036	1.106	0.000	
Minor industrial/institutional	0	0.005	1.106	0.000	--
Major residential	5	0.018	1.106	0.248	
Minor residential	0	0.003	1.106	0.000	
Other	0	0.005	1.106	0.000	
Total	--	--	--	0.460	1.39

Worksheet 1H -- Multiple-Vehicle Driveway-Related Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Initial N_{brdwy}**	**Proportion of total crashes (f_{dwy})**	**Adjusted N_{brdwy}**	**Combined CMFs**	**Calibration factor, C_r**	**Predicted N_{brdwy}**
	$(5)_{TOTAL}$ from Worksheet 1G	from Table 12-7	$(2)_{TOTAL} * (3)$	(6) from Worksheet 1B		(4)*(5)*(6)
Total	0.460	1.000	0.460	0.94	1.00	0.432
Fatal and injury (FI)	--	0.284	0.131	0.94	1.00	0.123
Property damage only (PDO)	--	0.716	0.329	0.94	1.00	0.309

Worksheet 1I -- Vehicle-Pedestrian Collisions for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Crash Severity Level	**Predicted N_{brmv}**	**Predicted N_{brsv}**	**Predicted N_{brdwy}**	**Predicted N_{br}**	**f_{pedr}**	**Calibration factor, C_r**	**Predicted N_{pedr}**
	(9) from Worksheet 1C	(9) from Worksheet 1E	(7) from Worksheet 1H	(2)+(3)+(4)	from Table 12-8		(5)*(6)*(7)
Total	5.183	0.645	0.432	6.260	0.019	1.00	0.119
Fatal and injury (FI)	--	--	--	--	--	1.00	0.119

Worksheet 1J -- Vehicle-Bicycle Collisions for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Crash Severity Level	**Predicted N_{brmv}**	**Predicted N_{brsv}**	**Predicted N_{brdwy}**	**Predicted N_{br}**	**f_{biker}**	**Calibration factor, C_r**	**Predicted N_{biker}**
	(9) from Worksheet 1C	(9) from Worksheet 1E	(7) from Worksheet 1H	(2)+(3)+(4)	from Table 12-9		(5)*(6)*(7)
Total	5.183	0.645	0.432	6.260	0.005	1.00	0.031
Fatal and injury (FI)	--	--	--	--	--	1.00	0.031

Worksheet 1K -- Crash Severity Distribution for Urban and Suburban Roadway Segments			
(1)	(2)	(3)	(4)
Collision type	**Fatal and injury (FI)**	**Property damage only (PDO)**	**Total**
	(3) from Worksheet 1D and 1F; (7) from Worksheet 1H; and (8) from Worksheet 1I and 1J	(5) from Worksheet 1D and 1F; and (7) from Worksheet 1H	(6) from Worksheet 1D and 1F; (7) from Worksheet 1H; and (8) from Worksheet 1I and 1J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 1D)	1.157	2.511	3.668
Head-on collisions (from Worksheet 1D)	0.028	0.027	0.054
Angle collisions (from Worksheet 1D)	0.056	0.137	0.192
Sideswipe, same direction (from Worksheet 1D)	0.070	0.846	0.915
Sideswipe, opposite direction (from Worksheet 1D)	0.014	0.004	0.018
Driveway-related collisions (from Worksheet 1H)	0.123	0.309	0.432
Other multiple-vehicle collision (from Worksheet 1D)	0.067	0.269	0.336
Subtotal	1.513	4.102	5.615
SINGLE-VEHICLE			
Collision with animal (from Worksheet 1F)	0.000	0.033	0.033
Collision with fixed object (from Worksheet 1F)	0.061	0.426	0.486
Collision with other object (from Worksheet 1F)	0.003	0.008	0.012
Other single-vehicle collision (from Worksheet 1F)	0.057	0.057	0.114
Collision with pedestrian (from Worksheet 1I)	0.119	0.000	0.119
Collision with bicycle (from Worksheet 1J)	0.031	0.000	0.031
Subtotal	0.272	0.523	0.796
Total	1.785	4.625	6.411

Worksheet 1L -- Summary Results for Urban and Suburban Roadway Segments			
(1)	(2)	(3)	(4)
Crash Severity Level	**Predicted average crash frequency, $N_{predicted\ rs}$ (crashes/year)**	**Roadway segment length, L (mi)**	**Crash rate (crashes/mi/year)**
	(Total) from Worksheet 1K		(2) / (3)
Total	6.4	0.76	8.4
Fatal and injury (FI)	1.8	0.76	2.3
Property damage only (PDO)	4.6	0.76	6.1

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections

General Information		Location Information	
Analyst	RDW	Roadway	Boggy Creek Road BUILD
Agency or Company	VHB	Intersection	Simpson Road
Date Performed	12/11/20	Jurisdiction	Osceola County, FL
		Analysis Year	2045

Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	4SG
AADT $_{major}$ (veh/day)	$AADT_{MAX}$ = 67,700 (veh/day)	--	40,100
AADT $_{minor}$ (veh/day)	$AADT_{MAX}$ = 33,400 (veh/day)	--	**39,700**
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C_i		1.00	1.00
Data for unsignalized intersections only:		--	--
Number of major-road approaches with left-turn lanes (0,1,2)		0	
Number of major-road approaches with right-turn lanes (0,1,2)		0	
Data for signalized intersections only:		--	--
Number of approaches with left-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	4
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	4
Number of approaches with left-turn signal phasing [for 3SG, use maximum value of 3]		--	4
Type of left-turn signal phasing for Leg #1		Permissive	Protected
Type of left-turn signal phasing for Leg #2		--	Protected
Type of left-turn signal phasing for Leg #3		--	Protected
Type of left-turn signal phasing for Leg #4 (if applicable)		--	Protected
Number of approaches with right-turn-on-red prohibited [for 3SG, use maximum value of 3]		0	4
Intersection red light cameras (present/not present)		Not Present	Not Present
Sum of all pedestrian crossing volumes (PedVol) -- Signalized intersections only			10
Maximum number of lanes crossed by a pedestrian (n_{anesx})		--	8
Number of bus stops within 300 m (1,000 ft) of the intersection		0	0
Schools within 300 m (1,000 ft) of the intersection (present/not present)		Not Present	Not Present
Number of alcohol sales establishments within 300 m (1,000 ft) of the intersection		0	1

Worksheet 2B -- Crash Modification Factors for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)	(7)
CMF for Left-Turn Lanes	CMF for Left-Turn Signal Phasing	CMF for Right-Turn Lanes	CMF for Right Turn on Red	CMF for Lighting	CMF for Red Light Cameras	Combined CMF
CMF 1i	*CMF 2i*	*CMF 3i*	*CMF 4i*	*CMF 5i*	*CMF 6i*	*CMF $_{COMB}$*
from Table 12-24	from Table 12-25	from Table 12-26	from Equation 12-35	from Equation 12-36	from Equation 12-37	(1)*(2)*(3)*(4)*(5)*(6)
0.66	0.78	0.85	0.92	0.91	1.00	0.37

Worksheet 2C -- Multiple-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**			**Overdispersion Parameter, k**	**Initial N_{bimv}**	**Proportion of Total Crashes**	**Adjusted N_{bimv}**	**Combined CMFs**	**Calibration Factor, C_i**	**Predicted N_{bimv}**
	from Table 12-10			from Table 12-10	from Equation 12-21		$(4)_{TOTAL}$*(5)	(7) from Worksheet 2B		(6)*(7)*(8)
	a	b	c							
Total	-10.99	1.07	0.23	0.39	16.225	1.000	16.225	0.37	1.00	5.965
Fatal and Injury (FI)	-13.14	1.18	0.22	0.33	5.455	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.346	5.617	0.37	1.00	2.065
Property Damage Only (PDO)	-11.02	1.02	0.24	0.44	10.304	$(5)_{TOTAL}-(5)_{FI}$ = 0.654	10.609	0.37	1.00	3.900

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{bimv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{bimv\ (PDO)}$ (crashes/year)**	**Predicted N $_{bimv\ (TOTAL)}$ (crashes/year)**
	from Table 12-11	$(9)_{FI}$ from Worksheet 2C	from Table 12-11	$(9)_{PDO}$ from Worksheet 2C	$(9)_{PDO}$ from Worksheet 2C
Total	1.000	2.065	1.000	3.900	5.965
		(2)*$(3)_{FI}$		(4)*$(5)_{PDO}$	(3)+(5)
Rear-end collision	0.450	0.929	0.483	1.884	2.813
Head-on collision	0.049	0.101	0.030	0.117	0.218
Angle collision	0.347	0.717	0.244	0.952	1.668
Sideswipe	0.099	0.204	0.032	0.125	0.329
Other multiple-vehicle collision	0.055	0.114	0.211	0.823	0.936

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**			**Overdispersion Parameter, k**	**Initial N_{bisv}**	**Proportion of Total Crashes**	**Adjusted N_{bimv}**	**Combined CMFs**	**Calibration Factor, C_i**	**Predicted N_{bisv}**
	from Table 12-12			from Table 12-12	from Eqn. 12-24; (FI) from Eqn. 12-24 or 12-27		$(4)_{TOTAL}$*(5)	(7) from Worksheet 2B		(6)*(7)*(8)
	a	b	c							
Total	-10.21	0.68	0.27	0.36	0.866	1.000	0.866	0.37	1.00	0.318
Fatal and Injury (FI)	-9.25	0.43	0.29	0.09	0.198	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.232	0.201	0.37	1.00	0.074
Property Damage Only (PDO)	-11.34	0.78	0.25	0.44	0.654	$(5)_{TOTAL}-(5)_{FI}$ = 0.768	0.665	0.37	1.00	0.245

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{bisv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{bisv\ (PDO)}$ (crashes/year)**	**Predicted N $_{bisv\ (TOTAL)}$ (crashes/year)**
	from Table 12-13	$(9)_{FI}$ from Worksheet 2E	from Table 12-13	$(9)_{PDO}$ from Worksheet 2E	$(9)_{PDO}$ from Worksheet 2E
Total	1.000	0.074	1.000	0.245	0.318
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Collision with parked vehicle	0.001	0.000	0.001	0.000	0.000
Collision with animal	0.002	0.000	0.002	0.000	0.001
Collision with fixed object	0.744	0.055	0.870	0.213	0.268
Collision with other object	0.072	0.005	0.070	0.017	0.022
Other single-vehicle collision	0.040	0.003	0.023	0.006	0.009
Single-vehicle noncollision	0.141	0.010	0.034	0.008	0.019

Worksheet 2G -- Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Stop-Controlled Intersections

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Predicted N_{bimv}**	**Predicted N_{bisv}**	**Predicted N_{bi}**	**f_{pedi}**	**Calibration factor, C_i**	**Predicted N_{pedi}**
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-16		(4)*(5)*(6)
Total	--	--	--	--	1.00	--
Fatal and injury (FI)	--	--	--	--	1.00	--

Worksheet 2H -- Crash Modification Factors for Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Signalized Intersections

(1)	(2)	(3)	(4)
CMF for Bus Stops	CMF for Schools	CMF for Alcohol Sales Establishments	Combined CMF
CMF_{1p}	CMF_{2p}	CMF_{3p}	
from Table 12-28	from Table 12-29	from Table 12-30	(1)*(2)*(3)
1.00	1.00	1.12	1.12

Worksheet 2I -- Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Signalized Intersections

(1)	(2)					(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**SPF Coefficients**					**Overdispersion Parameter, k**	**$N_{pedbase}$**	**Combined CMF**	**Calibration factor, C_i**	**Predicted N_{pedi}**
	from Table 12-14						from Equation 12-29	(4) from Worksheet 2H		(4)*(5)*(6)
	a	b	c	d	e					
Total	-9.53	0.40	0.26	0.45	0.04	0.24	0.026	1.12	1.00	0.029
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	1.00	0.029

Worksheet 2J -- Vehicle-Bicycle Collisions for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Predicted N_{bimv}**	**Predicted N_{bisv}**	**Predicted N_{bi}**	**f_{bikei}**	**Calibration factor, C_i**	**Predicted N_{bikei}**
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-17		(4)*(5)*(6)
Total	5.965	0.318	6.283	0.015	1.00	0.094
Fatal and injury (FI)	--	--	--	--	1.00	0.094

Worksheet 2K -- Crash Severity Distribution for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)
	Fatal and injury (FI)	**Property damage only (PDO)**	**Total**
Collision type	(3) from Worksheet 2D and 2F; (7) from 2G or 2I and 2J	(5) from Worksheet 2D and 2F	(6) from Worksheet 2D and 2F; (7) from 2G or 2I and 2J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 2D)	0.929	1.884	2.813
Head-on collisions (from Worksheet 2D)	0.101	0.117	0.218
Angle collisions (from Worksheet 2D)	0.717	0.952	1.668
Sideswipe (from Worksheet 2D)	0.204	0.125	0.329
Other multiple-vehicle collision (from Worksheet 2D)	0.114	0.823	0.936
Subtotal	2.065	3.900	5.965
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.000	0.000
Collision with animal (from Worksheet 2F)	0.000	0.000	0.001
Collision with fixed object (from Worksheet 2F)	0.055	0.213	0.268
Collision with other object (from Worksheet 2F)	0.005	0.017	0.022
Other single-vehicle collision (from Worksheet 2F)	0.003	0.006	0.009
Single-vehicle noncollision (from Worksheet 2F)	0.010	0.008	0.019
Collision with pedestrian (from Worksheet 2G or 2I)	0.029	0.000	0.029
Collision with bicycle (from Worksheet 2J)	0.094	0.000	0.094
Subtotal	0.197	0.245	0.442
Total	2.262	4.145	6.407

Worksheet 2L -- Summary Results for Urban and Suburban Arterial Intersections

(1)	(2)
Crash severity level	**Predicted average crash frequency, $N_{predicted\ int}$ (crashes/year)**
	(Total) from Worksheet 2K
Total	6.4
Fatal and injury (FI)	2.3
Property damage only (PDO)	4.1

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections

General Information		Location Information	
Analyst	RDW	Roadway	Boggy Creek Road BUILD
Agency or Company	VHB	Intersection	E Lake Pointe Dr
Date Performed	12/11/20	Jurisdiction	Osceola County, FL
		Analysis Year	2045

Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	3ST
AADT $_{major}$ (veh/day)	$AADT_{MAX}$ = 45,700 (veh/day)	--	40,300
AADT $_{minor}$ (veh/day)	$AADT_{MAX}$ = 9,300 (veh/day)	--	2,000
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C_i		1.00	1.00
Data for unsignalized intersections only:		--	--
Number of major-road approaches with left-turn lanes (0,1,2)		0	1
Number of major-road approaches with right-turn lanes (0,1,2)		0	1
Data for signalized intersections only:		--	--
Number of approaches with left-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	
Number of approaches with left-turn signal phasing [for 3SG, use maximum value of 3]		--	
Type of left-turn signal phasing for Leg #1		Permissive	
Type of left-turn signal phasing for Leg #2		--	
Type of left-turn signal phasing for Leg #3		--	
Type of left-turn signal phasing for Leg #4 (if applicable)		--	
Number of approaches with right-turn-on-red prohibited [for 3SG, use maximum value of 3]		0	
Intersection red light cameras (present/not present)		Not Present	
Sum of all pedestrian crossing volumes (PedVol) -- Signalized intersections only			
Maximum number of lanes crossed by a pedestrian (n_{anesx})		--	
Number of bus stops within 300 m (1,000 ft) of the intersection		0	
Schools within 300 m (1,000 ft) of the intersection (present/not present)		Not Present	
Number of alcohol sales establishments within 300 m (1,000 ft) of the intersection		0	

Worksheet 2B -- Crash Modification Factors for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)	(7)
CMF for Left-Turn Lanes	CMF for Left-Turn Signal Phasing	CMF for Right-Turn Lanes	CMF for Right Turn on Red	CMF for Lighting	CMF for Red Light Cameras	Combined CMF
CMF 1i	*CMF 2i*	*CMF 3i*	*CMF 4i*	*CMF 5i*	*CMF 6i*	*CMF $_{COMB}$*
from Table 12-24	from Table 12-25	from Table 12-26	from Equation 12-35	from Equation 12-36	from Equation 12-37	(1)*(2)*(3)*(4)*(5)*(6)
0.67	1.00	0.86	1.00	0.91	1.00	0.53

Worksheet 2C -- Multiple-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**			**Overdispersion Parameter, k**	**Initial N_{bimv}**	**Proportion of Total Crashes**	**Adjusted N_{bimv}**	**Combined CMFs**	**Calibration Factor, C_i**	**Predicted N_{bimv}**
	from Table 12-10			from Table 12-10	from Equation 12-21		$(4)_{TOTAL}$*(5)	(7) from Worksheet 2B		(6)*(7)*(8)
	a	b	c							
Total	-13.36	1.11	0.41	0.80	4.604	1.000	4.604	0.53	1.00	2.419
Fatal and Injury (FI)	-14.01	1.16	0.30	0.69	1.770	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.343	1.579	0.53	1.00	0.830
Property Damage Only (PDO)	-15.38	1.20	0.51	0.77	3.392	$(5)_{TOTAL}-(5)_{FI}$ = 0.657	3.025	0.53	1.00	1.590

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{bimv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{bimv\ (PDO)}$ (crashes/year)**	**Predicted N $_{bimv\ (TOTAL)}$ (crashes/year)**
	from Table 12-11	$(9)_{FI}$ from Worksheet 2C	from Table 12-11	$(9)_{PDO}$ from Worksheet 2C	$(9)_{PDO}$ from Worksheet 2C
Total	1.000	0.830	1.000	1.590	2.419
		(2)*$(3)_{FI}$		(4)*$(5)_{PDO}$	(3)+(5)
Rear-end collision	0.421	0.349	0.440	0.699	1.049
Head-on collision	0.045	0.037	0.023	0.037	0.074
Angle collision	0.343	0.285	0.262	0.416	0.701
Sideswipe	0.126	0.105	0.040	0.064	0.168
Other multiple-vehicle collision	0.065	0.054	0.235	0.374	0.427

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**			**Overdispersion Parameter, k**	**Initial N_{bisv}**	**Proportion of Total Crashes**	**Adjusted N_{bimv}**	**Combined CMFs**	**Calibration Factor, C_i**	**Predicted N_{bisv}**
	from Table 12-12			from Table 12-12	from Eqn. 12-24; (FI) from Eqn. 12-24 or 12-27		$(4)_{TOTAL}$*(5)	(7) from Worksheet 2B		(6)*(7)*(8)
	a	b	c							
Total	-6.81	0.16	0.51	1.14	0.290	1.000	0.290	0.53	1.00	0.153
Fatal and Injury (FI)	--	--	--	--	0.090	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.293	0.085	0.53	1.00	0.045
Property Damage Only (PDO)	-8.36	0.25	0.55	1.29	0.217	$(5)_{TOTAL}-(5)_{FI}$ = 0.707	0.205	0.53	1.00	0.108

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{bisv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{bisv\ (PDO)}$ (crashes/year)**	**Predicted N $_{bisv\ (TOTAL)}$ (crashes/year)**
	from Table 12-13	$(9)_{FI}$ from Worksheet 2E	from Table 12-13	$(9)_{PDO}$ from Worksheet 2E	$(9)_{PDO}$ from Worksheet 2E
Total	1.000	0.045	1.000	0.108	0.153
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Collision with parked vehicle	0.001	0.000	0.003	0.000	0.000
Collision with animal	0.003	0.000	0.018	0.002	0.002
Collision with fixed object	0.762	0.034	0.834	0.090	0.124
Collision with other object	0.090	0.004	0.092	0.010	0.014
Other single-vehicle collision	0.039	0.002	0.023	0.002	0.004
Single-vehicle noncollision	0.105	0.005	0.030	0.003	0.008

Worksheet 2G -- Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Stop-Controlled Intersections

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Predicted N_{bimv}**	**Predicted N_{bisv}**	**Predicted N_{bi}**	**f_{pedi}**	**Calibration factor, C_i**	**Predicted N_{pedi}**
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-16		(4)*(5)*(6)
Total	2.419	0.153	2.572	0.021	1.00	0.054
Fatal and injury (FI)	--	--	--	--	1.00	0.054

Worksheet 2H -- Crash Modification Factors for Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Signalized Intersections

(1)	(2)	(3)	(4)
CMF for Bus Stops	CMF for Schools	CMF for Alcohol Sales Establishments	Combined CMF
CMF_{1p}	CMF_{2p}	CMF_{3p}	
from Table 12-28	from Table 12-29	from Table 12-30	(1)*(2)*(3)
--	--	--	--

Worksheet 2I -- Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Signalized Intersections

(1)	(2)					(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**SPF Coefficients**					**Overdispersion Parameter, k**	**$N_{pedbase}$**	**Combined CMF**	**Calibration factor, C_i**	**Predicted N_{pedi}**
	from Table 12-14						from Equation 12-29	(4) from Worksheet 2H		(4)*(5)*(6)
	a	b	c	d	e					
Total	--	--	--	--	--	--	--	--	1.00	--
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	1.00	--

Worksheet 2J -- Vehicle-Bicycle Collisions for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Predicted N_{bimv}**	**Predicted N_{bisv}**	**Predicted N_{bi}**	**f_{bikei}**	**Calibration factor, C_i**	**Predicted N_{bikei}**
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-17		(4)*(5)*(6)
Total	2.419	0.153	2.572	0.016	1.00	0.041
Fatal and injury (FI)	--	--	--	--	1.00	0.041

Worksheet 2K -- Crash Severity Distribution for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)
	Fatal and injury (FI)	**Property damage only (PDO)**	**Total**
Collision type	(3) from Worksheet 2D and 2F; (7) from 2G or 2I and 2J	(5) from Worksheet 2D and 2F	(6) from Worksheet 2D and 2F; (7) from 2G or 2I and 2J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 2D)	0.349	0.699	1.049
Head-on collisions (from Worksheet 2D)	0.037	0.037	0.074
Angle collisions (from Worksheet 2D)	0.285	0.416	0.701
Sideswipe (from Worksheet 2D)	0.105	0.064	0.168
Other multiple-vehicle collision (from Worksheet 2D)	0.054	0.374	0.427
Subtotal	0.830	1.590	2.419
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.000	0.000
Collision with animal (from Worksheet 2F)	0.000	0.002	0.002
Collision with fixed object (from Worksheet 2F)	0.034	0.090	0.124
Collision with other object (from Worksheet 2F)	0.004	0.010	0.014
Other single-vehicle collision (from Worksheet 2F)	0.002	0.002	0.004
Single-vehicle noncollision (from Worksheet 2F)	0.005	0.003	0.008
Collision with pedestrian (from Worksheet 2G or 2I)	0.054	0.000	0.054
Collision with bicycle (from Worksheet 2J)	0.041	0.000	0.041
Subtotal	0.140	0.108	0.248
Total	0.969	1.697	2.667

Worksheet 2L -- Summary Results for Urban and Suburban Arterial Intersections

(1)	(2)
Crash severity level	**Predicted average crash frequency, $N_{predicted\ int}$ (crashes/year)**
	(Total) from Worksheet 2K
Total	2.7
Fatal and injury (FI)	1.0
Property damage only (PDO)	1.7

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections

General Information		Location Information	
Analyst	RDW	Roadway	Boggy Creek Road BUILD
Agency or Company	VHB	Intersection	Nele Road
Date Performed	12/11/20	Jurisdiction	Osceola County, FL
		Analysis Year	2045

Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	4SG
AADT $_{major}$ (veh/day)	$AADT_{MAX}$ = 67,700 (veh/day)	--	39,500
AADT $_{minor}$ (veh/day)	$AADT_{MAX}$ = 33,400 (veh/day)	--	6,700
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C_i		1.00	1.00
Data for unsignalized intersections only:		--	--
Number of major-road approaches with left-turn lanes (0,1,2)		0	
Number of major-road approaches with right-turn lanes (0,1,2)		0	
Data for signalized intersections only:		--	--
Number of approaches with left-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	3
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	3
Number of approaches with left-turn signal phasing [for 3SG, use maximum value of 3]		--	4
Type of left-turn signal phasing for Leg #1		Permissive	Protected / Permissive
Type of left-turn signal phasing for Leg #2		--	Protected / Permissive
Type of left-turn signal phasing for Leg #3		--	Permissive
Type of left-turn signal phasing for Leg #4 (if applicable)		--	Permissive
Number of approaches with right-turn-on-red prohibited [for 3SG, use maximum value of 3]		0	0
Intersection red light cameras (present/not present)		Not Present	Not Present
Sum of all pedestrian crossing volumes (PedVol) -- Signalized intersections only			10
Maximum number of lanes crossed by a pedestrian (n_{lanesx})		--	6
Number of bus stops within 300 m (1,000 ft) of the intersection		0	0
Schools within 300 m (1,000 ft) of the intersection (present/not present)		Not Present	Present
Number of alcohol sales establishments within 300 m (1,000 ft) of the intersection		0	0

Worksheet 2B -- Crash Modification Factors for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)	(7)
CMF for Left-Turn Lanes	CMF for Left-Turn Signal Phasing	CMF for Right-Turn Lanes	CMF for Right Turn on Red	CMF for Lighting	CMF for Red Light Cameras	Combined CMF
CMF 1i	*CMF 2i*	*CMF 3i*	*CMF 4i*	*CMF 5i*	*CMF 6i*	*CMF $_{COMB}$*
from Table 12-24	from Table 12-25	from Table 12-26	from Equation 12-35	from Equation 12-36	from Equation 12-37	(1)*(2)*(3)*(4)*(5)*(6)
0.73	0.98	0.88	1.00	0.91	1.00	0.58

Worksheet 2C -- Multiple-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**			**Overdispersion Parameter, k**	**Initial N_{bimv}**	**Proportion of Total Crashes**	**Adjusted N_{bimv}**	**Combined CMFs**	**Calibration Factor, C_i**	**Predicted N_{bimv}**
	from Table 12-10			from Table 12-10	from Equation 12-21		$(4)_{TOTAL}$*(5)	(7) from Worksheet 2B		(6)*(7)*(8)
	a	b	c							
Total	-10.99	1.07	0.23	0.39	10.604	1.000	10.604	0.58	1.00	6.113
Fatal and Injury (FI)	-13.14	1.18	0.22	0.33	3.623	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.354	3.751	0.58	1.00	2.162
Property Damage Only (PDO)	-11.02	1.02	0.24	0.44	6.620	$(5)_{TOTAL}-(5)_{FI}$ = 0.646	6.853	0.58	1.00	3.951

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{bimv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{bimv\ (PDO)}$ (crashes/year)**	**Predicted N $_{bimv\ (TOTAL)}$ (crashes/year)**
	from Table 12-11	$(9)_{FI}$ from Worksheet 2C	from Table 12-11	$(9)_{PDO}$ from Worksheet 2C	$(9)_{PDO}$ from Worksheet 2C
Total	1.000	2.162	1.000	3.951	6.113
		(2)*$(3)_{FI}$		(4)*$(5)_{PDO}$	(3)+(5)
Rear-end collision	0.450	0.973	0.483	1.908	2.881
Head-on collision	0.049	0.106	0.030	0.119	0.224
Angle collision	0.347	0.750	0.244	0.964	1.714
Sideswipe	0.099	0.214	0.032	0.126	0.340
Other multiple-vehicle collision	0.055	0.119	0.211	0.834	0.953

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**			**Overdispersion Parameter, k**	**Initial N_{bisv}**	**Proportion of Total Crashes**	**Adjusted N_{bimv}**	**Combined CMFs**	**Calibration Factor, C_i**	**Predicted N_{bisv}**
	from Table 12-12			from Table 12-12	from Eqn. 12-24; (FI) from Eqn. 12-24 or 12-27		$(4)_{TOTAL}$*(5)	(7) from Worksheet 2B		(6)*(7)*(8)
	a	b	c							
Total	-10.21	0.68	0.27	0.36	0.530	1.000	0.530	0.58	1.00	0.306
Fatal and Injury (FI)	-9.25	0.43	0.29	0.09	0.117	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.221	0.117	0.58	1.00	0.067
Property Damage Only (PDO)	-11.34	0.78	0.25	0.44	0.414	$(5)_{TOTAL}-(5)_{FI}$ = 0.779	0.413	0.58	1.00	0.238

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{bisv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{bisv\ (PDO)}$ (crashes/year)**	**Predicted N $_{bisv\ (TOTAL)}$ (crashes/year)**
	from Table 12-13	$(9)_{FI}$ from Worksheet 2E	from Table 12-13	$(9)_{PDO}$ from Worksheet 2E	$(9)_{PDO}$ from Worksheet 2E
Total	1.000	0.067	1.000	0.238	0.306
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Collision with parked vehicle	0.001	0.000	0.001	0.000	0.000
Collision with animal	0.002	0.000	0.002	0.000	0.001
Collision with fixed object	0.744	0.050	0.870	0.207	0.258
Collision with other object	0.072	0.005	0.070	0.017	0.022
Other single-vehicle collision	0.040	0.003	0.023	0.005	0.008
Single-vehicle noncollision	0.141	0.010	0.034	0.008	0.018

Worksheet 2G -- Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Stop-Controlled Intersections

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Predicted N_{bimv}**	**Predicted N_{bisv}**	**Predicted N_{bi}**	**f_{pedi}**	**Calibration factor, C_i**	**Predicted N_{pedi}**
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-16		(4)*(5)*(6)
Total	--	--	--	--	1.00	--
Fatal and injury (FI)	--	--	--	--	1.00	--

Worksheet 2H -- Crash Modification Factors for Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Signalized Intersections

(1)	(2)	(3)	(4)
CMF for Bus Stops	CMF for Schools	CMF for Alcohol Sales Establishments	Combined CMF
CMF_{1p}	CMF_{2p}	CMF_{3p}	
from Table 12-28	from Table 12-29	from Table 12-30	(1)*(2)*(3)
1.00	1.35	1.00	1.35

Worksheet 2I -- Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Signalized Intersections

(1)	(2)					(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**SPF Coefficients**					**Overdispersion Parameter, k**	**$N_{pedbase}$**	**Combined CMF**	**Calibration factor, C_i**	**Predicted N_{pedi}**
	from Table 12-14						from Equation 12-29	(4) from Worksheet 2H		(4)*(5)*(6)
	a	b	c	d	e					
Total	-9.53	0.40	0.26	0.45	0.04	0.24	0.012	1.35	1.00	0.016
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	1.00	0.016

Worksheet 2J -- Vehicle-Bicycle Collisions for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Predicted N_{bimv}**	**Predicted N_{bisv}**	**Predicted N_{bi}**	**f_{bikei}**	**Calibration factor, C_i**	**Predicted N_{bikei}**
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-17		(4)*(5)*(6)
Total	6.113	0.306	6.419	0.015	1.00	0.096
Fatal and injury (FI)	--	--	--	--	1.00	0.096

Worksheet 2K -- Crash Severity Distribution for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)
	Fatal and injury (FI)	**Property damage only (PDO)**	**Total**
Collision type	(3) from Worksheet 2D and 2F; (7) from 2G or 2I and 2J	(5) from Worksheet 2D and 2F	(6) from Worksheet 2D and 2F; (7) from 2G or 2I and 2J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 2D)	0.973	1.908	2.881
Head-on collisions (from Worksheet 2D)	0.106	0.119	0.224
Angle collisions (from Worksheet 2D)	0.750	0.964	1.714
Sideswipe (from Worksheet 2D)	0.214	0.126	0.340
Other multiple-vehicle collision (from Worksheet 2D)	0.119	0.834	0.953
Subtotal	2.162	3.951	6.113
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.000	0.000
Collision with animal (from Worksheet 2F)	0.000	0.000	0.001
Collision with fixed object (from Worksheet 2F)	0.050	0.207	0.258
Collision with other object (from Worksheet 2F)	0.005	0.017	0.022
Other single-vehicle collision (from Worksheet 2F)	0.003	0.005	0.008
Single-vehicle noncollision (from Worksheet 2F)	0.010	0.008	0.018
Collision with pedestrian (from Worksheet 2G or 2I)	0.016	0.000	0.016
Collision with bicycle (from Worksheet 2J)	0.096	0.000	0.096
Subtotal	0.180	0.238	0.418
Total	2.342	4.189	6.531

Worksheet 2L -- Summary Results for Urban and Suburban Arterial Intersections

(1)	(2)
Crash severity level	**Predicted average crash frequency, $N_{predicted\ int}$ (crashes/year)**
	(Total) from Worksheet 2K
Total	6.5
Fatal and injury (FI)	2.3
Property damage only (PDO)	4.2

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections

General Information		Location Information	
Analyst	RDW	Roadway	Boggy Creek Road BUILD
Agency or Company	VHB	Intersection	Springlake Village Blvd
Date Performed	12/11/20	Jurisdiction	Osceola County, FL
		Analysis Year	2045

Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	4ST
AADT $_{major}$ (veh/day)	$AADT_{MAX}$ = 46,800 (veh/day)	--	37,700
AADT $_{minor}$ (veh/day)	$AADT_{MAX}$ = 5,900 (veh/day)	--	3,900
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C_i		1.00	1.00
Data for unsignalized intersections only:		--	--
Number of major-road approaches with left-turn lanes (0,1,2)		0	2
Number of major-road approaches with right-turn lanes (0,1,2)		0	2
Data for signalized intersections only:		--	--
Number of approaches with left-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	
Number of approaches with left-turn signal phasing [for 3SG, use maximum value of 3]		--	
Type of left-turn signal phasing for Leg #1		Permissive	
Type of left-turn signal phasing for Leg #2		--	
Type of left-turn signal phasing for Leg #3		--	
Type of left-turn signal phasing for Leg #4 (if applicable)		--	
Number of approaches with right-turn-on-red prohibited [for 3SG, use maximum value of 3]		0	
Intersection red light cameras (present/not present)		Not Present	
Sum of all pedestrian crossing volumes (PedVol) -- Signalized intersections only			
Maximum number of lanes crossed by a pedestrian (n_{anesx})		--	
Number of bus stops within 300 m (1,000 ft) of the intersection		0	
Schools within 300 m (1,000 ft) of the intersection (present/not present)		Not Present	
Number of alcohol sales establishments within 300 m (1,000 ft) of the intersection		0	

Worksheet 2B -- Crash Modification Factors for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)	(7)
CMF for Left-Turn Lanes	CMF for Left-Turn Signal Phasing	CMF for Right-Turn Lanes	CMF for Right Turn on Red	CMF for Lighting	CMF for Red Light Cameras	Combined CMF
CMF 1i	*CMF 2i*	*CMF 3i*	*CMF 4i*	*CMF 5i*	*CMF 6i*	*CMF $_{COMB}$*
from Table 12-24	from Table 12-25	from Table 12-26	from Equation 12-35	from Equation 12-36	from Equation 12-37	(1)*(2)*(3)*(4)*(5)*(6)
0.53	1.00	0.74	1.00	0.91	0.97	0.35

Worksheet 2C -- Multiple-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**			**Overdispersion Parameter, k**	**Initial N_{bimv}**	**Proportion of Total Crashes**	**Adjusted N_{bimv}**	**Combined CMFs**	**Calibration Factor, C_i**	**Predicted N_{bimv}**
	from Table 12-10			from Table 12-10	from Equation 12-21		$(4)_{TOTAL}$*(5)	(7) from Worksheet 2B		(6)*(7)*(8)
	a	b	c							
Total	-8.90	0.82	0.25	0.40	6.097	1.000	6.097	0.35	1.00	2.112
Fatal and Injury (FI)	-11.13	0.93	0.28	0.48	2.678	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.428	2.609	0.35	1.00	0.904
Property Damage Only (PDO)	-8.74	0.77	0.23	0.40	3.581	$(5)_{TOTAL}-(5)_{FI}$ = 0.572	3.489	0.35	1.00	1.209

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{bimv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{bimv\ (PDO)}$ (crashes/year)**	**Predicted N $_{bimv\ (TOTAL)}$ (crashes/year)**
	from Table 12-11	$(9)_{FI}$ from Worksheet 2C	from Table 12-11	$(9)_{PDO}$ from Worksheet 2C	$(9)_{PDO}$ from Worksheet 2C
Total	1.000	0.904	1.000	1.209	2.112
		(2)*$(3)_{FI}$		(4)*$(5)_{PDO}$	(3)+(5)
Rear-end collision	0.338	0.305	0.374	0.452	0.757
Head-on collision	0.041	0.037	0.030	0.036	0.073
Angle collision	0.440	0.398	0.335	0.405	0.803
Sideswipe	0.121	0.109	0.044	0.053	0.163
Other multiple-vehicle collision	0.060	0.054	0.217	0.262	0.316

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**			**Overdispersion Parameter, k**	**Initial N_{bisv}**	**Proportion of Total Crashes**	**Adjusted N_{bimv}**	**Combined CMFs**	**Calibration Factor, C_i**	**Predicted N_{bisv}**
	from Table 12-12			from Table 12-12	from Eqn. 12-24; (FI) from Eqn. 12-24 or 12-27		$(4)_{TOTAL}$*(5)	(7) from Worksheet 2B		(6)*(7)*(8)
	a	b	c							
Total	-5.33	0.33	0.12	0.65	0.423	1.000	0.423	0.35	1.00	0.147
Fatal and Injury (FI)	--	--	--	--	0.118	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.278	0.118	0.35	1.00	0.041
Property Damage Only (PDO)	-7.04	0.36	0.25	0.54	0.307	$(5)_{TOTAL}-(5)_{FI}$ = 0.722	0.305	0.35	1.00	0.106

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{bisv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{bisv\ (PDO)}$ (crashes/year)**	**Predicted N $_{bisv\ (TOTAL)}$ (crashes/year)**
	from Table 12-13	$(9)_{FI}$ from Worksheet 2E	from Table 12-13	$(9)_{PDO}$ from Worksheet 2E	$(9)_{PDO}$ from Worksheet 2E
Total	1.000	0.041	1.000	0.106	0.147
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Collision with parked vehicle	0.001	0.000	0.001	0.000	0.000
Collision with animal	0.001	0.000	0.026	0.003	0.003
Collision with fixed object	0.679	0.028	0.847	0.090	0.117
Collision with other object	0.089	0.004	0.070	0.007	0.011
Other single-vehicle collision	0.051	0.002	0.007	0.001	0.003
Single-vehicle noncollision	0.179	0.007	0.049	0.005	0.012

Worksheet 2G -- Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Stop-Controlled Intersections

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Predicted N_{bimv}**	**Predicted N_{bisv}**	**Predicted N_{bi}**	**f_{pedi}**	**Calibration factor, C_i**	**Predicted N_{pedi}**
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-16		(4)*(5)*(6)
Total	2.112	0.147	2.259	0.022	1.00	0.050
Fatal and injury (FI)	--	--	--	--	1.00	0.050

Worksheet 2H -- Crash Modification Factors for Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Signalized Intersections

(1)	(2)	(3)	(4)
CMF for Bus Stops	CMF for Schools	CMF for Alcohol Sales Establishments	Combined CMF
CMF_{1p}	CMF_{2p}	CMF_{3p}	
from Table 12-28	from Table 12-29	from Table 12-30	(1)*(2)*(3)
--	--	--	--

Worksheet 2I -- Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Signalized Intersections

(1)	(2)					(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**SPF Coefficients**					**Overdispersion Parameter, k**	**$N_{pedbase}$**	**Combined CMF**	**Calibration factor, C_i**	**Predicted N_{pedi}**
	from Table 12-14						from Equation 12-29	(4) from Worksheet 2H		(4)*(5)*(6)
	a	b	c	d	e					
Total	--	--	--	--	--	--	--	--	1.00	--
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	1.00	--

Worksheet 2J -- Vehicle-Bicycle Collisions for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Predicted N_{bimv}**	**Predicted N_{bisv}**	**Predicted N_{bi}**	**f_{bikei}**	**Calibration factor, C_i**	**Predicted N_{bikei}**
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-17		(4)*(5)*(6)
Total	2.112	0.147	2.259	0.018	1.00	0.041
Fatal and injury (FI)	--	--	--	--	1.00	0.041

Worksheet 2K -- Crash Severity Distribution for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)
	Fatal and injury (FI)	**Property damage only (PDO)**	**Total**
Collision type	(3) from Worksheet 2D and 2F; (7) from 2G or 2I and 2J	(5) from Worksheet 2D and 2F	(6) from Worksheet 2D and 2F; (7) from 2G or 2I and 2J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 2D)	0.305	0.452	0.757
Head-on collisions (from Worksheet 2D)	0.037	0.036	0.073
Angle collisions (from Worksheet 2D)	0.398	0.405	0.803
Sideswipe (from Worksheet 2D)	0.109	0.053	0.163
Other multiple-vehicle collision (from Worksheet 2D)	0.054	0.262	0.316
Subtotal	0.904	1.209	2.112
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.000	0.000
Collision with animal (from Worksheet 2F)	0.000	0.003	0.003
Collision with fixed object (from Worksheet 2F)	0.028	0.090	0.117
Collision with other object (from Worksheet 2F)	0.004	0.007	0.011
Other single-vehicle collision (from Worksheet 2F)	0.002	0.001	0.003
Single-vehicle noncollision (from Worksheet 2F)	0.007	0.005	0.012
Collision with pedestrian (from Worksheet 2G or 2I)	0.050	0.000	0.050
Collision with bicycle (from Worksheet 2J)	0.041	0.000	0.041
Subtotal	0.131	0.106	0.237
Total	1.035	1.314	2.349

Worksheet 2L -- Summary Results for Urban and Suburban Arterial Intersections

(1)	(2)
Crash severity level	**Predicted average crash frequency, $N_{predicted\ int}$ (crashes/year)**
	(Total) from Worksheet 2K
Total	2.3
Fatal and injury (FI)	1.0
Property damage only (PDO)	1.3

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections

General Information		Location Information	
Analyst	RDW	Roadway	Boggy Creek Road BUILD
Agency or Company	VHB	Intersection	Turnberry Blvd
Date Performed	12/11/20	Jurisdiction	Osceola County, FL
		Analysis Year	2045

Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	4SG
AADT $_{major}$ (veh/day)	$AADT_{MAX}$ = 67,700 (veh/day)	--	38,500
AADT $_{minor}$ (veh/day)	$AADT_{MAX}$ = 33,400 (veh/day)	--	5,200
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C_i		1.00	1.00
Data for unsignalized intersections only:		--	--
Number of major-road approaches with left-turn lanes (0,1,2)		0	
Number of major-road approaches with right-turn lanes (0,1,2)		0	
Data for signalized intersections only:		--	--
Number of approaches with left-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	3
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	3
Number of approaches with left-turn signal phasing [for 3SG, use maximum value of 3]		--	4
Type of left-turn signal phasing for Leg #1		Permissive	Protected / Permissive
Type of left-turn signal phasing for Leg #2		--	Protected
Type of left-turn signal phasing for Leg #3		--	Protected
Type of left-turn signal phasing for Leg #4 (if applicable)		--	
Number of approaches with right-turn-on-red prohibited [for 3SG, use maximum value of 3]		0	0
Intersection red light cameras (present/not present)		Not Present	Not Present
Sum of all pedestrian crossing volumes (PedVol) -- Signalized intersections only			10
Maximum number of lanes crossed by a pedestrian (n_{lanesx})		--	5
Number of bus stops within 300 m (1,000 ft) of the intersection		0	0
Schools within 300 m (1,000 ft) of the intersection (present/not present)		Not Present	Present
Number of alcohol sales establishments within 300 m (1,000 ft) of the intersection		0	0

Worksheet 2B -- Crash Modification Factors for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)	(7)
CMF for Left-Turn Lanes	CMF for Left-Turn Signal Phasing	CMF for Right-Turn Lanes	CMF for Right Turn on Red	CMF for Lighting	CMF for Red Light Cameras	Combined CMF
CMF 1i	*CMF 2i*	*CMF 3i*	*CMF 4i*	*CMF 5i*	*CMF 6i*	*CMF $_{COMB}$*
from Table 12-24	from Table 12-25	from Table 12-26	from Equation 12-35	from Equation 12-36	from Equation 12-37	(1)*(2)*(3)*(4)*(5)*(6)
0.73	0.87	0.88	1.00	0.91	1.00	0.51

Worksheet 2C -- Multiple-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**			**Overdispersion Parameter, k**	**Initial N_{bimv}**	**Proportion of Total Crashes**	**Adjusted N_{bimv}**	**Combined CMFs**	**Calibration Factor, C_i**	**Predicted N_{bimv}**
	from Table 12-10			from Table 12-10	from Equation 12-21		$(4)_{TOTAL}$*(5)	(7) from Worksheet 2B		(6)*(7)*(8)
	a	b	c							
Total	-10.99	1.07	0.23	0.39	9.733	1.000	9.733	0.51	1.00	4.958
Fatal and Injury (FI)	-13.14	1.18	0.22	0.33	3.325	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.354	3.445	0.51	1.00	1.755
Property Damage Only (PDO)	-11.02	1.02	0.24	0.44	6.069	$(5)_{TOTAL}-(5)_{FI}$ = 0.646	6.288	0.51	1.00	3.203

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{bimv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{bimv\ (PDO)}$ (crashes/year)**	**Predicted N $_{bimv\ (TOTAL)}$ (crashes/year)**
	from Table 12-11	$(9)_{FI}$ from Worksheet 2C	from Table 12-11	$(9)_{PDO}$ from Worksheet 2C	$(9)_{PDO}$ from Worksheet 2C
Total	1.000	1.755	1.000	3.203	4.958
		(2)*$(3)_{FI}$		(4)*$(5)_{PDO}$	(3)+(5)
Rear-end collision	0.450	0.790	0.483	1.547	2.337
Head-on collision	0.049	0.086	0.030	0.096	0.182
Angle collision	0.347	0.609	0.244	0.782	1.390
Sideswipe	0.099	0.174	0.032	0.102	0.276
Other multiple-vehicle collision	0.055	0.097	0.211	0.676	0.772

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**			**Overdispersion Parameter, k**	**Initial N_{bisv}**	**Proportion of Total Crashes**	**Adjusted N_{bimv}**	**Combined CMFs**	**Calibration Factor, C_i**	**Predicted N_{bisv}**
	from Table 12-12			from Table 12-12	from Eqn. 12-24; (FI) from Eqn. 12-24 or 12-27		$(4)_{TOTAL}$*(5)	(7) from Worksheet 2B		(6)*(7)*(8)
	a	b	c							
Total	-10.21	0.68	0.27	0.36	0.487	1.000	0.487	0.51	1.00	0.248
Fatal and Injury (FI)	-9.25	0.43	0.29	0.09	0.108	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.220	0.107	0.51	1.00	0.055
Property Damage Only (PDO)	-11.34	0.78	0.25	0.44	0.381	$(5)_{TOTAL}-(5)_{FI}$ = 0.780	0.379	0.51	1.00	0.193

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{bisv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{bisv\ (PDO)}$ (crashes/year)**	**Predicted N $_{bisv\ (TOTAL)}$ (crashes/year)**
	from Table 12-13	$(9)_{FI}$ from Worksheet 2E	from Table 12-13	$(9)_{PDO}$ from Worksheet 2E	$(9)_{PDO}$ from Worksheet 2E
Total	1.000	0.055	1.000	0.193	0.248
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Collision with parked vehicle	0.001	0.000	0.001	0.000	0.000
Collision with animal	0.002	0.000	0.002	0.000	0.000
Collision with fixed object	0.744	0.041	0.870	0.168	0.209
Collision with other object	0.072	0.004	0.070	0.014	0.017
Other single-vehicle collision	0.040	0.002	0.023	0.004	0.007
Single-vehicle noncollision	0.141	0.008	0.034	0.007	0.014

Worksheet 2G -- Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Stop-Controlled Intersections

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Predicted N_{bimv}**	**Predicted N_{bisv}**	**Predicted N_{bi}**	**f_{pedi}**	**Calibration factor, C_i**	**Predicted N_{pedi}**
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-16		(4)*(5)*(6)
Total	--	--	--	--	1.00	--
Fatal and injury (FI)	--	--	--	--	1.00	--

Worksheet 2H -- Crash Modification Factors for Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Signalized Intersections

(1)	(2)	(3)	(4)
CMF for Bus Stops	CMF for Schools	CMF for Alcohol Sales Establishments	Combined CMF
CMF_{1p}	CMF_{2p}	CMF_{3p}	
from Table 12-28	from Table 12-29	from Table 12-30	(1)*(2)*(3)
1.00	1.35	1.00	1.35

Worksheet 2I -- Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Signalized Intersections

(1)	(2)					(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**SPF Coefficients**					**Overdispersion Parameter, k**	**$N_{pedbase}$**	**Combined CMF**	**Calibration factor, C_i**	**Predicted N_{pedi}**
	from Table 12-14						from Equation 12-29	(4) from Worksheet 2H		(4)*(5)*(6)
	a	b	c	d	e					
Total	-9.53	0.40	0.26	0.45	0.04	0.24	0.011	1.35	1.00	0.014
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	1.00	0.014

Worksheet 2J -- Vehicle-Bicycle Collisions for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Predicted N_{bimv}**	**Predicted N_{bisv}**	**Predicted N_{bi}**	**f_{bikei}**	**Calibration factor, C_i**	**Predicted N_{bikei}**
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-17		(4)*(5)*(6)
Total	4.958	0.248	5.205	0.015	1.00	0.078
Fatal and injury (FI)	--	--	--	--	1.00	0.078

Worksheet 2K -- Crash Severity Distribution for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)
	Fatal and injury (FI)	**Property damage only (PDO)**	**Total**
Collision type	(3) from Worksheet 2D and 2F; (7) from 2G or 2I and 2J	(5) from Worksheet 2D and 2F	(6) from Worksheet 2D and 2F; (7) from 2G or 2I and 2J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 2D)	0.790	1.547	2.337
Head-on collisions (from Worksheet 2D)	0.086	0.096	0.182
Angle collisions (from Worksheet 2D)	0.609	0.782	1.390
Sideswipe (from Worksheet 2D)	0.174	0.102	0.276
Other multiple-vehicle collision (from Worksheet 2D)	0.097	0.676	0.772
Subtotal	1.755	3.203	4.958
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.000	0.000
Collision with animal (from Worksheet 2F)	0.000	0.000	0.000
Collision with fixed object (from Worksheet 2F)	0.041	0.168	0.209
Collision with other object (from Worksheet 2F)	0.004	0.014	0.017
Other single-vehicle collision (from Worksheet 2F)	0.002	0.004	0.007
Single-vehicle noncollision (from Worksheet 2F)	0.008	0.007	0.014
Collision with pedestrian (from Worksheet 2G or 2I)	0.014	0.000	0.014
Collision with bicycle (from Worksheet 2J)	0.078	0.000	0.078
Subtotal	0.147	0.193	0.340
Total	1.902	3.396	5.298

Worksheet 2L -- Summary Results for Urban and Suburban Arterial Intersections

(1)	(2)
Crash severity level	**Predicted average crash frequency, $N_{predicted\ int}$ (crashes/year)**
	(Total) from Worksheet 2K
Total	5.3
Fatal and injury (FI)	1.9
Property damage only (PDO)	3.4

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections

General Information		Location Information	
Analyst	RDW	Roadway	Boggy Creek Road BUILD
Agency or Company	VHB	Intersection	N Pointe Blvd
Date Performed	12/11/20	Jurisdiction	Osceola County, FL
		Analysis Year	2045

Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	3ST
AADT $_{major}$ (veh/day)	$AADT_{MAX}$ = 45,700 (veh/day)	--	37,800
AADT $_{minor}$ (veh/day)	$AADT_{MAX}$ = 9,300 (veh/day)	--	3,400
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C_i		1.00	1.00
Data for unsignalized intersections only:		--	--
Number of major-road approaches with left-turn lanes (0,1,2)		0	1
Number of major-road approaches with right-turn lanes (0,1,2)		0	1
Data for signalized intersections only:		--	--
Number of approaches with left-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	
Number of approaches with left-turn signal phasing [for 3SG, use maximum value of 3]		--	
Type of left-turn signal phasing for Leg #1		Permissive	
Type of left-turn signal phasing for Leg #2		--	
Type of left-turn signal phasing for Leg #3		--	
Type of left-turn signal phasing for Leg #4 (if applicable)		--	
Number of approaches with right-turn-on-red prohibited [for 3SG, use maximum value of 3]		0	
Intersection red light cameras (present/not present)		Not Present	
Sum of all pedestrian crossing volumes (PedVol) -- Signalized intersections only			
Maximum number of lanes crossed by a pedestrian (n_{anesx})		--	
Number of bus stops within 300 m (1,000 ft) of the intersection		0	
Schools within 300 m (1,000 ft) of the intersection (present/not present)		Not Present	
Number of alcohol sales establishments within 300 m (1,000 ft) of the intersection		0	

Worksheet 2B -- Crash Modification Factors for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)	(7)
CMF for Left-Turn Lanes	CMF for Left-Turn Signal Phasing	CMF for Right-Turn Lanes	CMF for Right Turn on Red	CMF for Lighting	CMF for Red Light Cameras	Combined CMF
CMF 1i	*CMF 2i*	*CMF 3i*	*CMF 4i*	*CMF 5i*	*CMF 6i*	*CMF $_{COMB}$*
from Table 12-24	from Table 12-25	from Table 12-26	from Equation 12-35	from Equation 12-36	from Equation 12-37	(1)*(2)*(3)*(4)*(5)*(6)
0.67	1.00	0.86	1.00	0.91	1.00	0.53

Worksheet 2C -- Multiple-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**			**Overdispersion Parameter, k**	**Initial N_{bimv}**	**Proportion of Total Crashes**	**Adjusted N_{bimv}**	**Combined CMFs**	**Calibration Factor, C_i**	**Predicted N_{bimv}**
	from Table 12-10			from Table 12-10	from Equation 12-21		$(4)_{TOTAL}$*(5)	(7) from Worksheet 2B		(6)*(7)*(8)
	a	b	c							
Total	-13.36	1.11	0.41	0.80	5.330	1.000	5.330	0.53	1.00	2.802
Fatal and Injury (FI)	-14.01	1.16	0.30	0.69	1.927	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.319	1.699	0.53	1.00	0.893
Property Damage Only (PDO)	-15.38	1.20	0.51	0.77	4.117	$(5)_{TOTAL}-(5)_{FI}$ = 0.681	3.631	0.53	1.00	1.909

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{bimv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{bimv\ (PDO)}$ (crashes/year)**	**Predicted N $_{bimv\ (TOTAL)}$ (crashes/year)**
	from Table 12-11	$(9)_{FI}$ from Worksheet 2C	from Table 12-11	$(9)_{PDO}$ from Worksheet 2C	$(9)_{PDO}$ from Worksheet 2C
Total	1.000	0.893	1.000	1.909	2.802
		(2)*$(3)_{FI}$		(4)*$(5)_{PDO}$	(3)+(5)
Rear-end collision	0.421	0.376	0.440	0.840	1.216
Head-on collision	0.045	0.040	0.023	0.044	0.084
Angle collision	0.343	0.306	0.262	0.500	0.807
Sideswipe	0.126	0.113	0.040	0.076	0.189
Other multiple-vehicle collision	0.065	0.058	0.235	0.449	0.507

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**			**Overdispersion Parameter, k**	**Initial N_{bisv}**	**Proportion of Total Crashes**	**Adjusted N_{bimv}**	**Combined CMFs**	**Calibration Factor, C_i**	**Predicted N_{bisv}**
	from Table 12-12			from Table 12-12	from Eqn. 12-24; (FI) from Eqn. 12-24 or 12-27		$(4)_{TOTAL}$*(5)	(7) from Worksheet 2B		(6)*(7)*(8)
	a	b	c							
Total	-6.81	0.16	0.51	1.14	0.377	1.000	0.377	0.53	1.00	0.198
Fatal and Injury (FI)	--	--	--	--	0.117	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.290	0.109	0.53	1.00	0.057
Property Damage Only (PDO)	-8.36	0.25	0.55	1.29	0.286	$(5)_{TOTAL}-(5)_{FI}$ = 0.710	0.267	0.53	1.00	0.141

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{bisv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{bisv\ (PDO)}$ (crashes/year)**	**Predicted N $_{bisv\ (TOTAL)}$ (crashes/year)**
	from Table 12-13	$(9)_{FI}$ from Worksheet 2E	from Table 12-13	$(9)_{PDO}$ from Worksheet 2E	$(9)_{PDO}$ from Worksheet 2E
Total	1.000	0.057	1.000	0.141	0.198
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Collision with parked vehicle	0.001	0.000	0.003	0.000	0.000
Collision with animal	0.003	0.000	0.018	0.003	0.003
Collision with fixed object	0.762	0.044	0.834	0.117	0.161
Collision with other object	0.090	0.005	0.092	0.013	0.018
Other single-vehicle collision	0.039	0.002	0.023	0.003	0.005
Single-vehicle noncollision	0.105	0.006	0.030	0.004	0.010

Worksheet 2G -- Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Stop-Controlled Intersections

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Predicted N_{bimv}**	**Predicted N_{bisv}**	**Predicted N_{bi}**	**f_{pedi}**	**Calibration factor, C_i**	**Predicted N_{pedi}**
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-16		(4)*(5)*(6)
Total	2.802	0.198	3.000	0.021	1.00	0.063
Fatal and injury (FI)	--	--	--	--	1.00	0.063

Worksheet 2H -- Crash Modification Factors for Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Signalized Intersections

(1)	(2)	(3)	(4)
CMF for Bus Stops	CMF for Schools	CMF for Alcohol Sales Establishments	Combined CMF
CMF_{1p}	CMF_{2p}	CMF_{3p}	
from Table 12-28	from Table 12-29	from Table 12-30	(1)*(2)*(3)
--	--	--	--

Worksheet 2I -- Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Signalized Intersections

(1)	(2)					(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**SPF Coefficients**					**Overdispersion Parameter, k**	**$N_{pedbase}$**	**Combined CMF**	**Calibration factor, C_i**	**Predicted N_{pedi}**
	from Table 12-14						from Equation 12-29	(4) from Worksheet 2H		(4)*(5)*(6)
	a	b	c	d	e					
Total	--	--	--	--	--	--	--	--	1.00	--
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	1.00	--

Worksheet 2J -- Vehicle-Bicycle Collisions for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Predicted N_{bimv}**	**Predicted N_{bisv}**	**Predicted N_{bi}**	**f_{bikei}**	**Calibration factor, C_i**	**Predicted N_{bikei}**
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-17		(4)*(5)*(6)
Total	2.802	0.198	3.000	0.016	1.00	0.048
Fatal and injury (FI)	--	--	--	--	1.00	0.048

Worksheet 2K -- Crash Severity Distribution for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)
Collision type	**Fatal and injury (FI)**	**Property damage only (PDO)**	**Total**
	(3) from Worksheet 2D and 2F; (7) from 2G or 2I and 2J	(5) from Worksheet 2D and 2F	(6) from Worksheet 2D and 2F; (7) from 2G or 2I and 2J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 2D)	0.376	0.840	1.216
Head-on collisions (from Worksheet 2D)	0.040	0.044	0.084
Angle collisions (from Worksheet 2D)	0.306	0.500	0.807
Sideswipe (from Worksheet 2D)	0.113	0.076	0.189
Other multiple-vehicle collision (from Worksheet 2D)	0.058	0.449	0.507
Subtotal	0.893	1.909	2.802
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.000	0.000
Collision with animal (from Worksheet 2F)	0.000	0.003	0.003
Collision with fixed object (from Worksheet 2F)	0.044	0.117	0.161
Collision with other object (from Worksheet 2F)	0.005	0.013	0.018
Other single-vehicle collision (from Worksheet 2F)	0.002	0.003	0.005
Single-vehicle noncollision (from Worksheet 2F)	0.006	0.004	0.010
Collision with pedestrian (from Worksheet 2G or 2I)	0.063	0.000	0.063
Collision with bicycle (from Worksheet 2J)	0.048	0.000	0.048
Subtotal	0.168	0.141	0.309
Total	1.062	2.049	3.111

Worksheet 2L -- Summary Results for Urban and Suburban Arterial Intersections

(1)	(2)
Crash severity level	**Predicted average crash frequency, $N_{predicted\ int}$ (crashes/year)**
	(Total) from Worksheet 2K
Total	3.1
Fatal and injury (FI)	1.1
Property damage only (PDO)	2.0

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections

General Information		Location Information	
Analyst	RDW	Roadway	Boggy Creek Road BUILD
Agency or Company	VHB	Intersection	Timber Lane
Date Performed	12/11/20	Jurisdiction	Osceola County, FL
		Analysis Year	2045

Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	4ST
AADT $_{major}$ (veh/day)	$AADT_{MAX}$ = 46,800 (veh/day)	--	37,500
AADT $_{minor}$ (veh/day)	$AADT_{MAX}$ = 5,900 (veh/day)	--	3,300
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C_i		1.00	1.00
Data for unsignalized intersections only:		--	--
Number of major-road approaches with left-turn lanes (0,1,2)		0	2
Number of major-road approaches with right-turn lanes (0,1,2)		0	1
Data for signalized intersections only:		--	--
Number of approaches with left-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	
Number of approaches with left-turn signal phasing [for 3SG, use maximum value of 3]		--	
Type of left-turn signal phasing for Leg #1		Permissive	
Type of left-turn signal phasing for Leg #2		--	
Type of left-turn signal phasing for Leg #3		--	
Type of left-turn signal phasing for Leg #4 (if applicable)		--	
Number of approaches with right-turn-on-red prohibited [for 3SG, use maximum value of 3]		0	
Intersection red light cameras (present/not present)		Not Present	
Sum of all pedestrian crossing volumes (PedVol) -- Signalized intersections only			
Maximum number of lanes crossed by a pedestrian (n_{lanesx})		--	
Number of bus stops within 300 m (1,000 ft) of the intersection		0	
Schools within 300 m (1,000 ft) of the intersection (present/not present)		Not Present	
Number of alcohol sales establishments within 300 m (1,000 ft) of the intersection		0	

Worksheet 2B -- Crash Modification Factors for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)	(7)
CMF for Left-Turn Lanes	CMF for Left-Turn Signal Phasing	CMF for Right-Turn Lanes	CMF for Right Turn on Red	CMF for Lighting	CMF for Red Light Cameras	Combined CMF
CMF 1i	*CMF 2i*	*CMF 3i*	*CMF 4i*	*CMF 5i*	*CMF 6i*	*CMF $_{COMB}$*
from Table 12-24	from Table 12-25	from Table 12-26	from Equation 12-35	from Equation 12-36	from Equation 12-37	(1)*(2)*(3)*(4)*(5)*(6)
0.53	1.00	0.86	1.00	0.91	0.97	0.40

Worksheet 2C -- Multiple-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**			**Overdispersion Parameter, k**	**Initial N_{bimv}**	**Proportion of Total Crashes**	**Adjusted N_{bimv}**	**Combined CMFs**	**Calibration Factor, C_i**	**Predicted N_{bimv}**
	from Table 12-10			from Table 12-10	from Equation 12-21		$(4)_{TOTAL}$*(5)	(7) from Worksheet 2B		(6)*(7)*(8)
	a	b	c							
Total	-8.90	0.82	0.25	0.40	5.823	1.000	5.823	0.40	1.00	2.346
Fatal and Injury (FI)	-11.13	0.93	0.28	0.48	2.543	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.426	2.478	0.40	1.00	0.998
Property Damage Only (PDO)	-8.74	0.77	0.23	0.40	3.432	$(5)_{TOTAL}-(5)_{FI}$ = 0.574	3.344	0.40	1.00	1.347

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{bimv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{bimv\ (PDO)}$ (crashes/year)**	**Predicted N $_{bimv\ (TOTAL)}$ (crashes/year)**
	from Table 12-11	$(9)_{FI}$ from Worksheet 2C	from Table 12-11	$(9)_{PDO}$ from Worksheet 2C	$(9)_{PDO}$ from Worksheet 2C
Total	1.000	0.998	1.000	1.347	2.346
		(2)*$(3)_{FI}$		(4)*$(5)_{PDO}$	(3)+(5)
Rear-end collision	0.338	0.337	0.374	0.504	0.841
Head-on collision	0.041	0.041	0.030	0.040	0.081
Angle collision	0.440	0.439	0.335	0.451	0.891
Sideswipe	0.121	0.121	0.044	0.059	0.180
Other multiple-vehicle collision	0.060	0.060	0.217	0.292	0.352

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**			**Overdispersion Parameter, k**	**Initial N_{bisv}**	**Proportion of Total Crashes**	**Adjusted N_{bimv}**	**Combined CMFs**	**Calibration Factor, C_i**	**Predicted N_{bisv}**
	from Table 12-12			from Table 12-12	from Eqn. 12-24; (FI) from Eqn. 12-24 or 12-27		$(4)_{TOTAL}$*(5)	(7) from Worksheet 2B		(6)*(7)*(8)
	a	b	c							
Total	-5.33	0.33	0.12	0.65	0.414	1.000	0.414	0.40	1.00	0.167
Fatal and Injury (FI)	--	--	--	--	0.116	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.282	0.117	0.40	1.00	0.047
Property Damage Only (PDO)	-7.04	0.36	0.25	0.54	0.294	$(5)_{TOTAL}-(5)_{FI}$ = 0.718	0.297	0.40	1.00	0.120

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{bisv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{bisv\ (PDO)}$ (crashes/year)**	**Predicted N $_{bisv\ (TOTAL)}$ (crashes/year)**
	from Table 12-13	$(9)_{FI}$ from Worksheet 2E	from Table 12-13	$(9)_{PDO}$ from Worksheet 2E	$(9)_{PDO}$ from Worksheet 2E
Total	1.000	0.047	1.000	0.120	0.167
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Collision with parked vehicle	0.001	0.000	0.001	0.000	0.000
Collision with animal	0.001	0.000	0.026	0.003	0.003
Collision with fixed object	0.679	0.032	0.847	0.101	0.133
Collision with other object	0.089	0.004	0.070	0.008	0.013
Other single-vehicle collision	0.051	0.002	0.007	0.001	0.003
Single-vehicle noncollision	0.179	0.008	0.049	0.006	0.014

Worksheet 2G -- Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Stop-Controlled Intersections

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Predicted N_{bimv}**	**Predicted N_{bisv}**	**Predicted N_{bi}**	**f_{pedi}**	**Calibration factor, C_i**	**Predicted N_{pedi}**
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-16		(4)*(5)*(6)
Total	2.346	0.167	2.512	0.022	1.00	0.055
Fatal and injury (FI)	--	--	--	--	1.00	0.055

Worksheet 2H -- Crash Modification Factors for Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Signalized Intersections

(1)	(2)	(3)	(4)
CMF for Bus Stops	CMF for Schools	CMF for Alcohol Sales Establishments	Combined CMF
CMF_{1p}	CMF_{2p}	CMF_{3p}	
from Table 12-28	from Table 12-29	from Table 12-30	(1)*(2)*(3)
--	--	--	--

Worksheet 2I -- Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Signalized Intersections

(1)	(2)					(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**SPF Coefficients**					**Overdispersion Parameter, k**	**$N_{pedbase}$**	**Combined CMF**	**Calibration factor, C_i**	**Predicted N_{pedi}**
	from Table 12-14						from Equation 12-29	(4) from Worksheet 2H		(4)*(5)*(6)
	a	b	c	d	e					
Total	--	--	--	--	--	--	--	--	1.00	--
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	1.00	--

Worksheet 2J -- Vehicle-Bicycle Collisions for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Predicted N_{bimv}**	**Predicted N_{bisv}**	**Predicted N_{bi}**	**f_{bikei}**	**Calibration factor, C_i**	**Predicted N_{bikei}**
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-17		(4)*(5)*(6)
Total	2.346	0.167	2.512	0.018	1.00	0.045
Fatal and injury (FI)	--	--	--	--	1.00	0.045

Worksheet 2K -- Crash Severity Distribution for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)
	Fatal and injury (FI)	**Property damage only (PDO)**	**Total**
Collision type	(3) from Worksheet 2D and 2F; (7) from 2G or 2I and 2J	(5) from Worksheet 2D and 2F	(6) from Worksheet 2D and 2F; (7) from 2G or 2I and 2J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 2D)	0.337	0.504	0.841
Head-on collisions (from Worksheet 2D)	0.041	0.040	0.081
Angle collisions (from Worksheet 2D)	0.439	0.451	0.891
Sideswipe (from Worksheet 2D)	0.121	0.059	0.180
Other multiple-vehicle collision (from Worksheet 2D)	0.060	0.292	0.352
Subtotal	0.998	1.347	2.346
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.000	0.000
Collision with animal (from Worksheet 2F)	0.000	0.003	0.003
Collision with fixed object (from Worksheet 2F)	0.032	0.101	0.133
Collision with other object (from Worksheet 2F)	0.004	0.008	0.013
Other single-vehicle collision (from Worksheet 2F)	0.002	0.001	0.003
Single-vehicle noncollision (from Worksheet 2F)	0.008	0.006	0.014
Collision with pedestrian (from Worksheet 2G or 2I)	0.055	0.000	0.055
Collision with bicycle (from Worksheet 2J)	0.045	0.000	0.045
Subtotal	0.148	0.120	0.267
Total	1.146	1.467	2.613

Worksheet 2L -- Summary Results for Urban and Suburban Arterial Intersections

(1)	(2)
Crash severity level	**Predicted average crash frequency, $N_{predicted\ int}$ (crashes/year)**
	(Total) from Worksheet 2K
Total	2.6
Fatal and injury (FI)	1.1
Property damage only (PDO)	1.5

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections

General Information		Location Information	
Analyst	RDW	Roadway	Boggy Creek Road BUILD
Agency or Company	VHB	Intersection	Fells Cove Blvd
Date Performed	12/11/20	Jurisdiction	Osceola County, FL
		Analysis Year	2045

Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	3ST
AADT $_{major}$ (veh/day)	$AADT_{MAX}$ = 45,700 (veh/day)	--	37,500
AADT $_{minor}$ (veh/day)	$AADT_{MAX}$ = 9,300 (veh/day)	--	1,900
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C_i		1.00	1.00
Data for unsignalized intersections only:		--	--
Number of major-road approaches with left-turn lanes (0,1,2)		0	1
Number of major-road approaches with right-turn lanes (0,1,2)		0	1
Data for signalized intersections only:		--	--
Number of approaches with left-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	
Number of approaches with left-turn signal phasing [for 3SG, use maximum value of 3]		--	
Type of left-turn signal phasing for Leg #1		Permissive	
Type of left-turn signal phasing for Leg #2		--	
Type of left-turn signal phasing for Leg #3		--	
Type of left-turn signal phasing for Leg #4 (if applicable)		--	
Number of approaches with right-turn-on-red prohibited [for 3SG, use maximum value of 3]		0	
Intersection red light cameras (present/not present)		Not Present	
Sum of all pedestrian crossing volumes (PedVol) -- Signalized intersections only			
Maximum number of lanes crossed by a pedestrian (n_{lanesx})		--	
Number of bus stops within 300 m (1,000 ft) of the intersection		0	
Schools within 300 m (1,000 ft) of the intersection (present/not present)		Not Present	
Number of alcohol sales establishments within 300 m (1,000 ft) of the intersection		0	

Worksheet 2B -- Crash Modification Factors for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)	(7)
CMF for Left-Turn Lanes	CMF for Left-Turn Signal Phasing	CMF for Right-Turn Lanes	CMF for Right Turn on Red	CMF for Lighting	CMF for Red Light Cameras	Combined CMF
CMF 1i	*CMF 2i*	*CMF 3i*	*CMF 4i*	*CMF 5i*	*CMF 6i*	*CMF $_{COMB}$*
from Table 12-24	from Table 12-25	from Table 12-26	from Equation 12-35	from Equation 12-36	from Equation 12-37	(1)*(2)*(3)*(4)*(5)*(6)
0.67	1.00	0.86	1.00	0.91	1.00	0.53

Worksheet 2C -- Multiple-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**			**Overdispersion Parameter, k**	**Initial N_{bimv}**	**Proportion of Total Crashes**	**Adjusted N_{bimv}**	**Combined CMFs**	**Calibration Factor, C_i**	**Predicted N_{bimv}**
	from Table 12-10			from Table 12-10	from Equation 12-21		$(4)_{TOTAL}$*(5)	(7) from Worksheet 2B		(6)*(7)*(8)
	a	b	c							
Total	-13.36	1.11	0.41	0.80	4.162	1.000	4.162	0.53	1.00	2.187
Fatal and Injury (FI)	-14.01	1.16	0.30	0.69	1.603	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.346	1.440	0.53	1.00	0.757
Property Damage Only (PDO)	-15.38	1.20	0.51	0.77	3.031	$(5)_{TOTAL}-(5)_{FI}$ = 0.654	2.722	0.53	1.00	1.430

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{bimv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{bimv\ (PDO)}$ (crashes/year)**	**Predicted N $_{bimv\ (TOTAL)}$ (crashes/year)**
	from Table 12-11	$(9)_{FI}$ from Worksheet 2C	from Table 12-11	$(9)_{PDO}$ from Worksheet 2C	$(9)_{PDO}$ from Worksheet 2C
Total	1.000	0.757	1.000	1.430	2.187
		(2)*$(3)_{FI}$		(4)*$(5)_{PDO}$	(3)+(5)
Rear-end collision	0.421	0.318	0.440	0.629	0.948
Head-on collision	0.045	0.034	0.023	0.033	0.067
Angle collision	0.343	0.259	0.262	0.375	0.634
Sideswipe	0.126	0.095	0.040	0.057	0.153
Other multiple-vehicle collision	0.065	0.049	0.235	0.336	0.385

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**			**Overdispersion Parameter, k**	**Initial N_{bisv}**	**Proportion of Total Crashes**	**Adjusted N_{bimv}**	**Combined CMFs**	**Calibration Factor, C_i**	**Predicted N_{bisv}**
	from Table 12-12			from Table 12-12	from Eqn. 12-24; (FI) from Eqn. 12-24 or 12-27		$(4)_{TOTAL}$*(5)	(7) from Worksheet 2B		(6)*(7)*(8)
	a	b	c							
Total	-6.81	0.16	0.51	1.14	0.280	1.000	0.280	0.53	1.00	0.147
Fatal and Injury (FI)	--	--	--	--	0.087	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.295	0.082	0.53	1.00	0.043
Property Damage Only (PDO)	-8.36	0.25	0.55	1.29	0.207	$(5)_{TOTAL}-(5)_{FI}$ = 0.705	0.197	0.53	1.00	0.104

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{bisv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{bisv\ (PDO)}$ (crashes/year)**	**Predicted N $_{bisv\ (TOTAL)}$ (crashes/year)**
	from Table 12-13	$(9)_{FI}$ from Worksheet 2E	from Table 12-13	$(9)_{PDO}$ from Worksheet 2E	$(9)_{PDO}$ from Worksheet 2E
Total	1.000	0.043	1.000	0.104	0.147
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Collision with parked vehicle	0.001	0.000	0.003	0.000	0.000
Collision with animal	0.003	0.000	0.018	0.002	0.002
Collision with fixed object	0.762	0.033	0.834	0.086	0.119
Collision with other object	0.090	0.004	0.092	0.010	0.013
Other single-vehicle collision	0.039	0.002	0.023	0.002	0.004
Single-vehicle noncollision	0.105	0.005	0.030	0.003	0.008

Worksheet 2G -- Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Stop-Controlled Intersections

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Predicted N_{bimv}**	**Predicted N_{bisv}**	**Predicted N_{bi}**	**f_{pedi}**	**Calibration factor, C_i**	**Predicted N_{pedi}**
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-16		(4)*(5)*(6)
Total	2.187	0.147	2.333	0.021	1.00	0.049
Fatal and injury (FI)	--	--	--	--	1.00	0.049

Worksheet 2H -- Crash Modification Factors for Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Signalized Intersections

(1)	(2)	(3)	(4)
CMF for Bus Stops	CMF for Schools	CMF for Alcohol Sales Establishments	Combined CMF
CMF_{1p}	CMF_{2p}	CMF_{3p}	
from Table 12-28	from Table 12-29	from Table 12-30	(1)*(2)*(3)
--	--	--	--

Worksheet 2I -- Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Signalized Intersections

(1)	(2)					(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**SPF Coefficients**					**Overdispersion Parameter, k**	**$N_{pedbase}$**	**Combined CMF**	**Calibration factor, C_i**	**Predicted N_{pedi}**
	from Table 12-14						from Equation 12-29	(4) from Worksheet 2H		(4)*(5)*(6)
	a	b	c	d	e					
Total	--	--	--	--	--	--	--	--	1.00	--
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	1.00	--

Worksheet 2J -- Vehicle-Bicycle Collisions for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Predicted N_{bimv}**	**Predicted N_{bisv}**	**Predicted N_{bi}**	**f_{bikei}**	**Calibration factor, C_i**	**Predicted N_{bikei}**
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-17		(4)*(5)*(6)
Total	2.187	0.147	2.333	0.016	1.00	0.037
Fatal and injury (FI)	--	--	--	--	1.00	0.037

Worksheet 2K -- Crash Severity Distribution for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)
	Fatal and injury (FI)	**Property damage only (PDO)**	**Total**
Collision type	(3) from Worksheet 2D and 2F; (7) from 2G or 2I and 2J	(5) from Worksheet 2D and 2F	(6) from Worksheet 2D and 2F; (7) from 2G or 2I and 2J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 2D)	0.318	0.629	0.948
Head-on collisions (from Worksheet 2D)	0.034	0.033	0.067
Angle collisions (from Worksheet 2D)	0.259	0.375	0.634
Sideswipe (from Worksheet 2D)	0.095	0.057	0.153
Other multiple-vehicle collision (from Worksheet 2D)	0.049	0.336	0.385
Subtotal	0.757	1.430	2.187
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.000	0.000
Collision with animal (from Worksheet 2F)	0.000	0.002	0.002
Collision with fixed object (from Worksheet 2F)	0.033	0.086	0.119
Collision with other object (from Worksheet 2F)	0.004	0.010	0.013
Other single-vehicle collision (from Worksheet 2F)	0.002	0.002	0.004
Single-vehicle noncollision (from Worksheet 2F)	0.005	0.003	0.008
Collision with pedestrian (from Worksheet 2G or 2I)	0.049	0.000	0.049
Collision with bicycle (from Worksheet 2J)	0.037	0.000	0.037
Subtotal	0.130	0.104	0.233
Total	0.886	1.534	2.420

Worksheet 2L -- Summary Results for Urban and Suburban Arterial Intersections

(1)	(2)
Crash severity level	**Predicted average crash frequency, $N_{predicted\ int}$ (crashes/year)**
	(Total) from Worksheet 2K
Total	2.4
Fatal and injury (FI)	0.9
Property damage only (PDO)	1.5

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections

General Information		Location Information	
Analyst	RDW	Roadway	Boggy Creek Road BUILD
Agency or Company	VHB	Intersection	Narcoosee Road
Date Performed	12/11/20	Jurisdiction	Osceola County, FL
		Analysis Year	2045

Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	3SG
AADT $_{major}$ (veh/day)	$AADT_{MAX}$ = 58,100 (veh/day)	--	57,800
AADT $_{minor}$ (veh/day)	$AADT_{MAX}$ = 16,400 (veh/day)	--	**37,100**
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C_i		1.00	1.00
Data for unsignalized intersections only:		--	--
Number of major-road approaches with left-turn lanes (0,1,2)		0	0
Number of major-road approaches with right-turn lanes (0,1,2)		0	0
Data for signalized intersections only:		--	--
Number of approaches with left-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	2
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	2
Number of approaches with left-turn signal phasing [for 3SG, use maximum value of 3]		--	3
Type of left-turn signal phasing for Leg #1		Permissive	Protected
Type of left-turn signal phasing for Leg #2		--	Protected
Type of left-turn signal phasing for Leg #3		--	
Type of left-turn signal phasing for Leg #4 (if applicable)		--	
Number of approaches with right-turn-on-red prohibited [for 3SG, use maximum value of 3]		0	0
Intersection red light cameras (present/not present)		Not Present	Not Present
Sum of all pedestrian crossing volumes (PedVol) -- Signalized intersections only			10
Maximum number of lanes crossed by a pedestrian (n_{anesx})		--	8
Number of bus stops within 300 m (1,000 ft) of the intersection		0	0
Schools within 300 m (1,000 ft) of the intersection (present/not present)		Not Present	Not Present
Number of alcohol sales establishments within 300 m (1,000 ft) of the intersection		0	2

Worksheet 2B -- Crash Modification Factors for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)	(7)
CMF for Left-Turn Lanes	CMF for Left-Turn Signal Phasing	CMF for Right-Turn Lanes	CMF for Right Turn on Red	CMF for Lighting	CMF for Red Light Cameras	Combined CMF
CMF 1i	*CMF 2i*	*CMF 3i*	*CMF 4i*	*CMF 5i*	*CMF 6i*	*CMF $_{COMB}$*
from Table 12-24	from Table 12-25	from Table 12-26	from Equation 12-35	from Equation 12-36	from Equation 12-37	(1)*(2)*(3)*(4)*(5)*(6)
0.86	0.87	0.92	1.00	0.91	1.00	0.63

Worksheet 2C -- Multiple-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**			**Overdispersion Parameter, k**	**Initial N_{bimv}**	**Proportion of Total Crashes**	**Adjusted N_{bimv}**	**Combined CMFs**	**Calibration Factor, C_i**	**Predicted N_{bimv}**
	from Table 12-10			from Table 12-10	from Equation 12-21		$(4)_{TOTAL}$*(5)	(7) from Worksheet 2B		(6)*(7)*(8)
	a	b	c							
Total	-12.13	1.11	0.26	0.33	16.061	1.000	16.061	0.63	1.00	10.141
Fatal and Injury (FI)	-11.58	1.02	0.17	0.30	4.026	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.264	4.246	0.63	1.00	2.681
Property Damage Only (PDO)	-13.24	1.14	0.30	0.36	11.203	$(5)_{TOTAL}-(5)_{FI}$ = 0.736	11.816	0.63	1.00	7.461

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{bimv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{bimv\ (PDO)}$ (crashes/year)**	**Predicted N $_{bimv\ (TOTAL)}$ (crashes/year)**
	from Table 12-11	$(9)_{FI}$ from Worksheet 2C	from Table 12-11	$(9)_{PDO}$ from Worksheet 2C	$(9)_{PDO}$ from Worksheet 2C
Total	1.000	2.681	1.000	7.461	10.141
		(2)*$(3)_{FI}$		(4)*$(5)_{PDO}$	(3)+(5)
Rear-end collision	0.549	1.472	0.546	4.073	5.545
Head-on collision	0.038	0.102	0.020	0.149	0.251
Angle collision	0.280	0.751	0.204	1.522	2.273
Sideswipe	0.076	0.204	0.032	0.239	0.442
Other multiple-vehicle collision	0.057	0.153	0.198	1.477	1.630

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**			**Overdispersion Parameter, k**	**Initial N_{bisv}**	**Proportion of Total Crashes**	**Adjusted N_{bimv}**	**Combined CMFs**	**Calibration Factor, C_i**	**Predicted N_{bisv}**
	from Table 12-12			from Table 12-12	from Eqn. 12-24; (FI) from Eqn. 12-24 or 12-27		$(4)_{TOTAL}$*(5)	(7) from Worksheet 2B		(6)*(7)*(8)
	a	b	c							
Total	-9.02	0.42	0.40	0.36	0.814	1.000	0.814	0.63	1.00	0.514
Fatal and Injury (FI)	-9.75	0.27	0.51	0.24	0.241	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.321	0.261	0.63	1.00	0.165
Property Damage Only (PDO)	-9.08	0.45	0.33	0.53	0.510	$(5)_{TOTAL}-(5)_{FI}$ = 0.679	0.553	0.63	1.00	0.349

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{bisv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{bisv\ (PDO)}$ (crashes/year)**	**Predicted N $_{bisv\ (TOTAL)}$ (crashes/year)**
	from Table 12-13	$(9)_{FI}$ from Worksheet 2E	from Table 12-13	$(9)_{PDO}$ from Worksheet 2E	$(9)_{PDO}$ from Worksheet 2E
Total	1.000	0.165	1.000	0.349	0.514
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Collision with parked vehicle	0.001	0.000	0.001	0.000	0.001
Collision with animal	0.001	0.000	0.003	0.001	0.001
Collision with fixed object	0.653	0.108	0.895	0.312	0.420
Collision with other object	0.091	0.015	0.069	0.024	0.039
Other single-vehicle collision	0.045	0.007	0.018	0.006	0.014
Single-vehicle noncollision	0.209	0.034	0.014	0.005	0.039

Worksheet 2G -- Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Stop-Controlled Intersections

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Predicted N_{bimv}**	**Predicted N_{bisv}**	**Predicted N_{bi}**	**f_{pedi}**	**Calibration factor, C_i**	**Predicted N_{pedi}**
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-16		(4)*(5)*(6)
Total	--	--	--	--	1.00	--
Fatal and injury (FI)	--	--	--	--	1.00	--

Worksheet 2H -- Crash Modification Factors for Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Signalized Intersections

(1)	(2)	(3)	(4)
CMF for Bus Stops	CMF for Schools	CMF for Alcohol Sales Establishments	Combined CMF
CMF_{1p}	CMF_{2p}	CMF_{3p}	
from Table 12-28	from Table 12-29	from Table 12-30	(1)*(2)*(3)
1.00	1.00	1.12	1.12

Worksheet 2I -- Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Signalized Intersections

(1)	(2)					(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**SPF Coefficients**					**Overdispersion Parameter, k**	**$N_{pedbase}$**	**Combined CMF**	**Calibration factor, C_i**	**Predicted N_{pedi}**
	from Table 12-14						from Equation 12-29	(4) from Worksheet 2H		(4)*(5)*(6)
	a	b	c	d	e					
Total	-6.60	0.05	0.24	0.41	0.09	0.52	0.011	1.12	1.00	0.013
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	1.00	0.013

Worksheet 2J -- Vehicle-Bicycle Collisions for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Predicted N_{bimv}**	**Predicted N_{bisv}**	**Predicted N_{bi}**	**f_{bikei}**	**Calibration factor, C_i**	**Predicted N_{bikei}**
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-17		(4)*(5)*(6)
Total	10.141	0.514	10.655	0.011	1.00	0.117
Fatal and injury (FI)	--	--	--	--	1.00	0.117

Worksheet 2K -- Crash Severity Distribution for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)
	Fatal and injury (FI)	**Property damage only (PDO)**	**Total**
Collision type	(3) from Worksheet 2D and 2F; (7) from 2G or 2I and 2J	(5) from Worksheet 2D and 2F	(6) from Worksheet 2D and 2F; (7) from 2G or 2I and 2J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 2D)	1.472	4.073	5.545
Head-on collisions (from Worksheet 2D)	0.102	0.149	0.251
Angle collisions (from Worksheet 2D)	0.751	1.522	2.273
Sideswipe (from Worksheet 2D)	0.204	0.239	0.442
Other multiple-vehicle collision (from Worksheet 2D)	0.153	1.477	1.630
Subtotal	2.681	7.461	10.141
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.000	0.001
Collision with animal (from Worksheet 2F)	0.000	0.001	0.001
Collision with fixed object (from Worksheet 2F)	0.108	0.312	0.420
Collision with other object (from Worksheet 2F)	0.015	0.024	0.039
Other single-vehicle collision (from Worksheet 2F)	0.007	0.006	0.014
Single-vehicle noncollision (from Worksheet 2F)	0.034	0.005	0.039
Collision with pedestrian (from Worksheet 2G or 2I)	0.013	0.000	0.013
Collision with bicycle (from Worksheet 2J)	0.117	0.000	0.117
Subtotal	0.295	0.349	0.644
Total	2.976	7.809	10.785

Worksheet 2L -- Summary Results for Urban and Suburban Arterial Intersections

(1)	(2)
Crash severity level	**Predicted average crash frequency, $N_{predicted\ int}$ (crashes/year)**
	(Total) from Worksheet 2K
Total	10.8
Fatal and injury (FI)	3.0
Property damage only (PDO)	7.8

Appendix M

Noise Analysis Traffic Data

TRAFFIC DATA FOR NOISE STUDIES - SUMMARY OUTPUT
Osceola County

Federal Aid Number(s):	
FPID Number(s):	0
State/Federal Route No.:	
Road Name:	Boggy Creek Road
Project Description:	Boggy Creek Road Widening- Project Traffic Report
Segment Description:	Boggy Creek Road from S. of Simpson Road to Narcoossee Road
Section Number:	0
Mile Post To/From:	0

Existing Facility:		D =	**58.90%**	%
		T24 =	**7.50%**	% of 24 Hour Volume
Year:	**2019**	Tpeak =	**4.00%**	% of Design Hour Volume
		MT =	**2.04%**	% of Design Hour Volume
LOS C Peak Hour Directional Volume:	**830**	HT =	**1.57%**	% of Design Hour Volume
Demand Peak Hour Volume:	**1043**	B =	**0.38%**	% of Design Hour Volume
Posted Speed:	**45**	MC =	**0.39%**	% of Design Hour Volume

No Build Alternative (Design Year):		D =	**58.90%**	%
		T24 =	**7.50%**	% of 24 Hour Volume
Year:	**2045**	Tpeak =	**4.00%**	% of Design Hour Volume
		MT =	**2.04%**	% of Design Hour Volume
LOS C Peak Hour Directional Volume:	**830**	HT =	**1.57%**	% of Design Hour Volume
Demand Peak Hour Volume:	**1637**	B =	**0.38%**	% of Design Hour Volume
Posted Speed:	**45**	MC =	**0.39%**	% of Design Hour Volume

Build Alternative (Design Year):		D =	**58.90%**	%
		T24 =	**7.50%**	% of 24 Hour Volume
Year:	**2045**	Tpeak =	**4.00%**	% of Design Hour Volume
		MT =	**2.04%**	% of Design Hour Volume
LOS C Peak Hour Directional Volume:	**2005**	HT =	**1.57%**	% of Design Hour Volume
Demand Peak Hour Volume:	**2097**	B =	**0.38%**	% of Design Hour Volume
Posted Speed:	**45**	MC =	**0.39%**	% of Design Hour Volume

I certify that the above information is accurate and appropriate for use with the traffic noise analysis.

Prepared By: Srinivas Kandala Date: 12/28/2020

Print Name Signature

I have reviewed and concur that the above information is appropriate for use with the traffic noise analysis.

FDOT Reviewer: Date:

Print Name Signature

Appendix N

Air Quality Analysis Traffic Data

TRAFFIC DATA FOR AIR QUALITY ANALYSIS

Date: 12/16/2020 Prepared by: VHB, Inc

Financial Management Number(s): _____

Federal Aid Number(s): _____

Project Description: **Boggy Creek Road Widening - Project Traffic Analysis Report**

NOTE: Traffic data should be provided for the intersection that is forecast to have the highest total approach traffic volume. Notably, the intersection may not be the same for the Build and No-Build alternatives. The number of lanes should be the number of intersection approach through lanes. The traffic volumes should be representative of vehicles per hour (vph) and vehicle speeds should be representative of posted speeds if intersection cruise approach speeds are unknown. This traffic data sheet was prepared to assist in obtaining appropriate traffic data for the FDOT CO Florida 2004 Intersection Screening Model. Notably, additional traffic data is required for diamond interchanges (see User's Guide).

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Opening Year: 2025

Land Use: Urban X, Suburban_____, or Rural _____

Build/No Build	Boggy Creek Rd - EB			Boggy Creek Rd - WB			E. Lake Pointe Dr - NB			SB		
	No. of Lanes	VPH	Speed	No. of Lanes	VPH	Speed	No. of Lanes	VPH	Speed	No. of Lanes	VPH	Speed
Build	2	809	45	2	1,110	45	1	67	30	-	-	-
No Build	1	705	45	1	976	45	1	67	30	-	-	-

==========

Design Year: **2045**

Build/No Build	Boggy Creek Rd - EB			Boggy Creek Rd - WB			E. Lake Pointe Dr - NB			SB		
	No. of Lanes	VPH	Speed	No. of Lanes	VPH	Speed	No. of Lanes	VPH	Speed	No. of Lanes	VPH	Speed
Build	2	1,530	45	2	2,048	45	1	107	30	-	-	-
No Build	1	1,081	45	1	1,465	45	1	107	30	-	-	-

Figure 16-4 Example Traffic Data Input Sheet