

Interchange Modification Report

Eastbound Selmon Expressway (SR 618) at Downtown East/West Interchange

Hillsborough County, Florida

THEA Project Number: HI-0141-P-07

Prepared For:

Tampa Hillsborough Expressway Authority
1104 E Twiggs Street, #300, Tampa, FL 33602



May 2022

Interchange Modification Report (IMR)



Eastbound Selmon Expressway Downtown East/West Interchange

THEA Project Number: HI-0141-P-07

Florida Department of Transportation

Determination of Safety, Operational and Engineering Acceptability

Acceptance of this document indicates successful completion of the review and determination of safety, operational and engineering acceptability of the Interchange Access Request. Approval of the access request is contingent upon compliance with applicable Federal requirements, specifically the National Environmental Policy Act (NEPA) or Department's Project Development and Environment (PD&E) Procedures. Completion of the NEPA/PD&E process is considered approval of the project location design concept described in the environmental document.

Requestor

Bob Frey, AICP
Tampa Hillsborough Expressway Authority

Date

Executive Director

Greg Slater
Executive Director and CEO of THEA

Date

Professional Engineer's Certification


I hereby certify that I am a registered professional engineer in the State of Florida practicing with H.W. Lochner, Inc., a Florida Corporation authorized as an engineering business under provisions of Chapter 471, Florida Statutes, by the State of Florida Department of Business and Professional Regulation, Board of Professional Engineers, and I have prepared or approved the evaluation, findings, opinions, conclusions or technical advice hereby reported for:

Project: Selmon Expressway at Downtown East/West Interchange
Modification Report (IMR)

County/State: Hillsborough, Florida

Project Manager: Anna Quinones, Tampa Hillsborough Expressway Authority
(THEA)

I acknowledge that the procedures and references used to develop the results contained in this report are standard to the professional practice of transportation engineering as applied through professional judgement and experience.

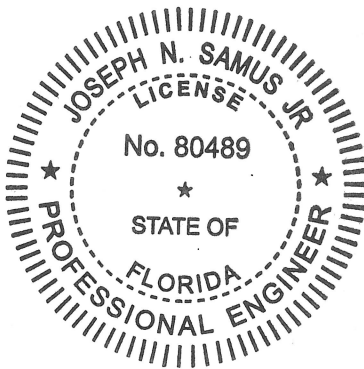
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Executive Summary

The Tampa Hillsborough Expressway Authority (THEA) is preparing an Interchange Modification Report (IMR) to document the need for improvements for access from the eastbound Selmon Expressway (SR 618) at the Downtown East/West interchange within Downtown Tampa. A Build Alternative with proposed improvements is tested based on results of THEA's Whiting Street Project Development and Environment (PD&E) Study and are as follows:

- Realignment of the eastbound Selmon Expressway off-ramp to Downtown West (Exit 6A) to only access Florida Avenue.
- Relocation of the eastbound Selmon Expressway off-ramp to Downtown East (Exit 6B) from its existing access at Channelside Drive to new access at Whiting Street.
- Realignment of the eastbound Selmon Expressway on-ramp at Jefferson Street to accommodate the new overhead off-ramp to Whiting Street.
- Addition of through connection from the Selmon Expressway off-ramp to Downtown East (Whiting Street) to Meridian Avenue.
- An add-lane (from 3 to 4 lanes) from the Jefferson Street on-ramp is added and will be further studied in the on-going Selmon East PD&E study.

Currently, the Selmon Expressway provides off-ramp access to Florida Avenue and Channelside Drive within the project limits, and Whiting Street is a two-lane, non-continuous roadway that terminates at Brush Street. The proposed improvements are needed to mitigate future safety, accessibility, and circulation concerns along the Selmon Expressway and throughout Downtown Tampa and the Channelside District, particularly the east side of Downtown, as increased traffic demand is anticipated within and around the area of influence (AOI). The AOI for this project extends along eastbound Selmon Expressway from the Plant Avenue on-ramp to the Nebraska Avenue on-ramp, along Florida Avenue from Channelside Drive to Brorein Street, and includes the proposed Whiting Street connection from Jefferson Street to Meridian Avenue.

The following summarizes the findings and results of this IMR:

Existing Conditions

The Selmon Expressway is a limited access facility through the Downtown East/West interchange area, with a posted speed limit of 55 miles per hour (mph). Additionally, the Selmon Expressway is part of the Florida Department of Transportation (FDOT) Strategic Intermodal System (SIS). At the Downtown East/West interchange, Florida Avenue has a 30-mph posted speed limit and Channelside Drive has a posted speed limit of 40 mph.

Channelside Drive provides access to Amalie Arena, the Channelside District, and the Port Tampa Bay Cruise Terminals from the eastbound Selmon Expressway off-ramp to Downtown East (Exit 6B). Whiting

Street is currently an east-west arterial with discontinuity from Brush Street to Meridian Avenue. East of Meridian Avenue, Whiting Street picks up again, providing access to the Channelside District.

Tables E.1 and E.2 show the results of the existing year (2019) freeway segment and intersection analyses, respectively, for the AM and PM peak hours. The results of the freeway segment analysis indicate that the freeway segments from the Plant Avenue on-ramp to the Downtown East/West off-ramp and from the Downtown East/West off-ramp to the Jefferson Street on-ramp currently do not meet the level of service (LOS) target D in the PM peak hour. However, the results of the intersection analysis indicate that each of the study intersections do meet the LOS target D during both the AM and PM peak hours. Overall, higher congestion was observed for movements associated with inbound traffic into Downtown Tampa during the AM peak hour and higher congestion was observed for movements associated with outbound traffic from Downtown Tampa during the PM peak hour.

Table E.1: Existing Year (2019) Freeway Segment Analysis

Segment	AM Peak Hour		PM Peak Hour	
	Estimated Density (pc/mi/ln)	LOS	Estimated Density (pc/mi/ln)	LOS
Plant Ave On-Ramp to Florida Ave/Channelside Dr Off-Ramp	27	D	41	E
Florida Ave/Channelside Dr Off-Ramp to Jefferson St On-Ramp	26	C	40	E
Jefferson St On-Ramp to Nebraska Ave On-Ramp	24	C	36	D

Table E.2: Existing Year (2019) Intersection Analysis

ID	Intersection	AM Peak Hour		PM Peak Hour	
		Delay (s/veh)	LOS	Delay (s/veh)	LOS
1	Channelside Dr and Florida Ave	14.9	B	17.8	B
2	Channelside Dr and Morgan St	28.0	C	15.5	B
4	Brorein St and Florida Ave	27.2	C	25.3	C
6	Whiting St and Jefferson St	12.6	B	10.6	B
7	Whiting St and Nebraska Ave (Northbound)*	6.2	A	5.7	A
8	Whiting St and Meridian Ave	3.5	A	6.0	A

*Only stop-controlled approaches have been summarized.

Five years of crash data was analyzed for the AOI, from 2014 to 2018. During the five-year analysis period, there were 82 reported crashes. However, no location within the AOI was found to have a crash rate greater than or equal to the expected range of the statewide average based on annual traffic volume. The most common crash type was angle crashes, followed by sideswipe and rear end crashes. Additionally, there was one bicycle related crash that took place during the five-year analysis period and that occurred at the Florida Avenue and Brorein Street intersection. There were no reported pedestrian related crashes during the analysis period. The most common contributing cause for crashes was careless/negligent driving, followed by running a red light and failure to yield right-of-way. The majority of crashes took place on dry surface conditions, in clear weather, and/or during daytime hours. Of the 82 reported crashes,

there were 28 injury-type crashes and one fatal crash. The total comprehensive crash cost of all 82 crashes in the AOI was approximately \$15,679,000.

Future Impacts within the AOI

The City of Tampa has experienced significant development and economic growth over the past 20 years, which is expected to continue with ongoing developments, such as Water Street Tampa, a 56-acre redevelopment project, and Port Tampa Bay, which is also undergoing a major redevelopment. As a result, the traffic demand is expected to increase by the design year (2046), which will require improvements to the Downtown roadway network, including improvements to the Selmon Expressway off-ramps.

Additionally, the study limits of THEA's South Selmon PD&E Study lie within the AOI for this IMR. The purpose of the South Selmon Study is to evaluate capacity improvements along the southernmost section of the Selmon Expressway. The study limits extend from east of the Gandy Boulevard interchange to the overpass at Whiting Street, a distance of approximately 4.5 miles. Various roadway and ramp improvements are being evaluated as part of the study to improve the efficiency and capacity of the Selmon Expressway into the future.

No-Build Alternative

In order to quantify the benefit of the proposed improvements, a No-Build Alternative was also assessed for the AOI. The No-Build Alternative assumes that no changes will be made to the existing lane geometry or traffic control operations of the AOI, with the exception of the proposed improvements from the South Selmon PD&E Study and the new street connections constructed for the Water Street Tampa development.

In the No-Build Alternative by the design year (2046), significant congestion occurs on the freeway segment between Plant Avenue and Channelside Drive, resulting in an F grade in the Level of Service (LOS) according to the Highway Capacity Manual (HCM), 6th Edition. Likewise, two of the intersections in the AOI also fall below the minimum D grade-threshold. **Tables E.3** and **E.4** summarize the results of the No-Build Alternative freeway segment and intersection analyses, respectively, in the design year (2046) for the AM and PM peak hours. The intersection analysis is partly impacted by congestion on the Selmon Expressway prior to the Florida Avenue off-ramp which reduces the amount of traffic processed at these intersections.

Table E.3: No-Build Alternative Design Year (2046) Freeway Segment Analysis

Segment	AM Peak Hour		PM Peak Hour	
	Estimated Density (pc/mi/ln)	LOS	Estimated Density (pc/mi/ln)	LOS
Plant Ave On-Ramp to Florida Ave/Channelside Dr Off-Ramp	142	F	70	F
Florida Ave/Channelside Dr Off-Ramp to Jefferson St On-Ramp	19	B	14	B
Jefferson St On-Ramp to Nebraska Ave On-Ramp	23	C	20	C

Table E.4: No-Build Alternative Design Year (2046) Intersection Analysis

ID	Intersection	AM Peak Hour		PM Peak Hour	
		Delay (s/veh)	LOS	Delay (s/veh)	LOS
1	Channelside Dr and Florida Ave	41.7	D	155.0	F
2	Channelside Dr and Morgan St	85.4	F	119.7	F
4	Brorein St and Florida Ave	33.2	C	33.2	C
6	Whiting St and Jefferson St	45.2	D	54.3	D
7	Whiting St and Nebraska Ave (Northbound)*	135.3	F	121.7	F
8	Whiting St and Meridian Ave	12.5	B	15.4	B

*Only stop-controlled approaches have been summarized.

Design Alternative

A Build Alternative has been developed to meet the needs of the proposed improvements for the eastbound Selmon Expressway and Downtown East/West interchange. The Build Alternative consists of the following improvements and is shown in **Figure E.1**. Intersection Lane Geometry for the Build Alternative is shown in **Figure E.2**.

1. Realigning and widening the eastbound Selmon Expressway off-ramp to Downtown West (Exit 6A) with two lanes off of the Selmon Expressway and three lanes at the Florida Avenue intersection, operating under signal control with no right-turn-on-red (RTOR).
2. Clustering the new signal at the Florida Avenue off-ramp with the Channelside Drive at Florida Avenue signal to improve safety for all users.
3. Accommodating two left turn and two through lanes on the eastbound approach of the Channelside Drive at Florida Avenue intersection to remove the split phasing of the approach.
4. Providing a pedestrian underpass at the location of the existing Channelside Drive off-ramp.
5. Relocating the eastbound Selmon Expressway off-ramp to Downtown East (Exit 6B) from its existing access at the Channelside Drive and Morgan Street intersection to new access at Whiting Street with the new ramp terminal intersection operating under signal control with no RTOR.
6. Realigning the eastbound Selmon Expressway on-ramp at Jefferson Street to accommodate the new overhead off-ramp to Whiting Street.
7. Connecting Whiting Street from Jefferson Street to Meridian Avenue with a four-lane typical section.
8. Providing a traffic signal at the Whiting Street at Brush Street intersection.

9. Providing two T-intersections at the Whiting Street at Meridian Avenue intersection that operate under a single signal controller.

In addition to these improvements, an additional lane is added to the Selmon Expressway to the east of Jefferson Street. This lane is included in the operational analysis but will be further studied as part of the on-going Selmon East PD&E Study. This improvement will only be included in this study as part of the operational analysis and will be fully analyzed under the Selmon East PD&E Study.

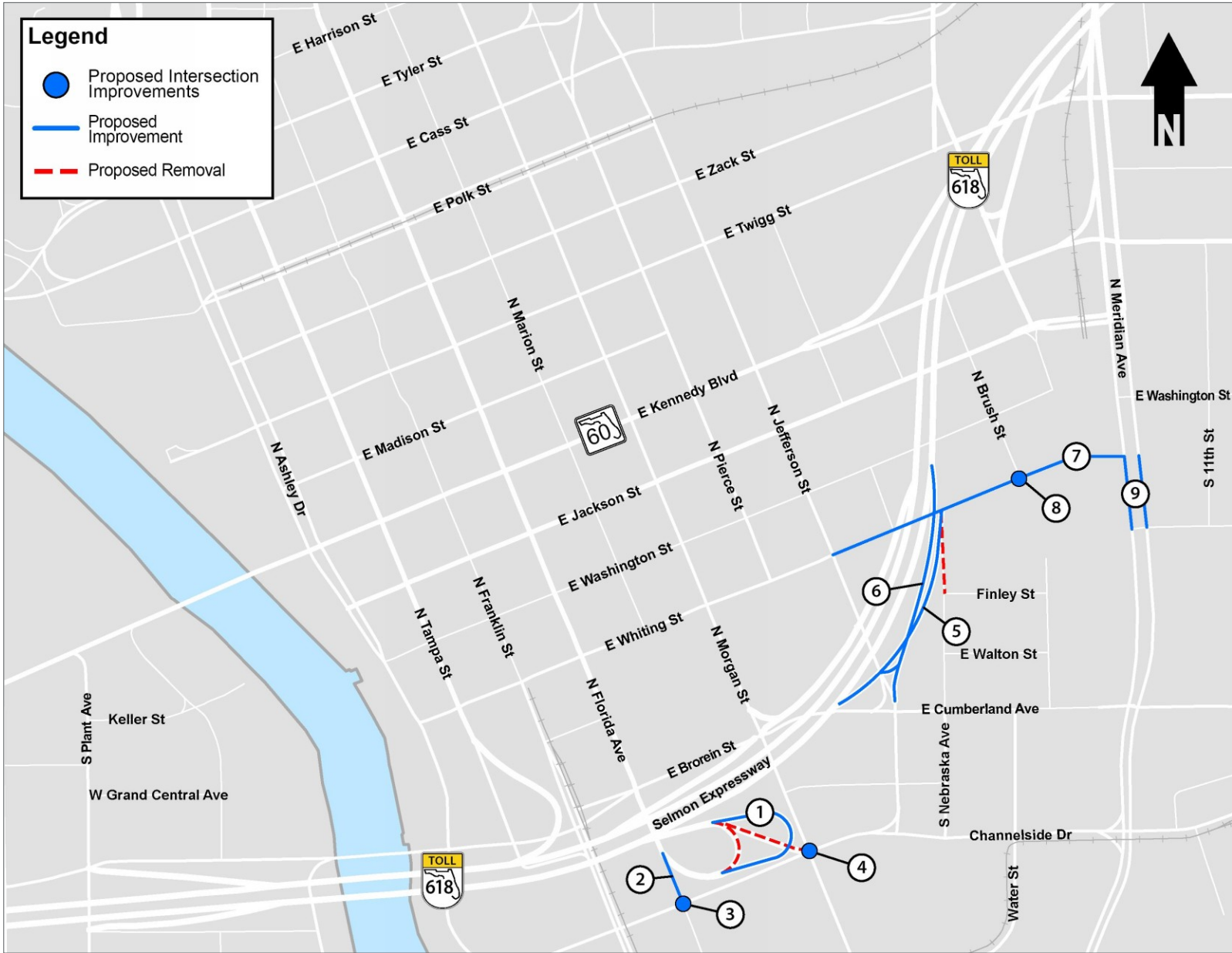


Figure E.1: Build Alternative Improvements

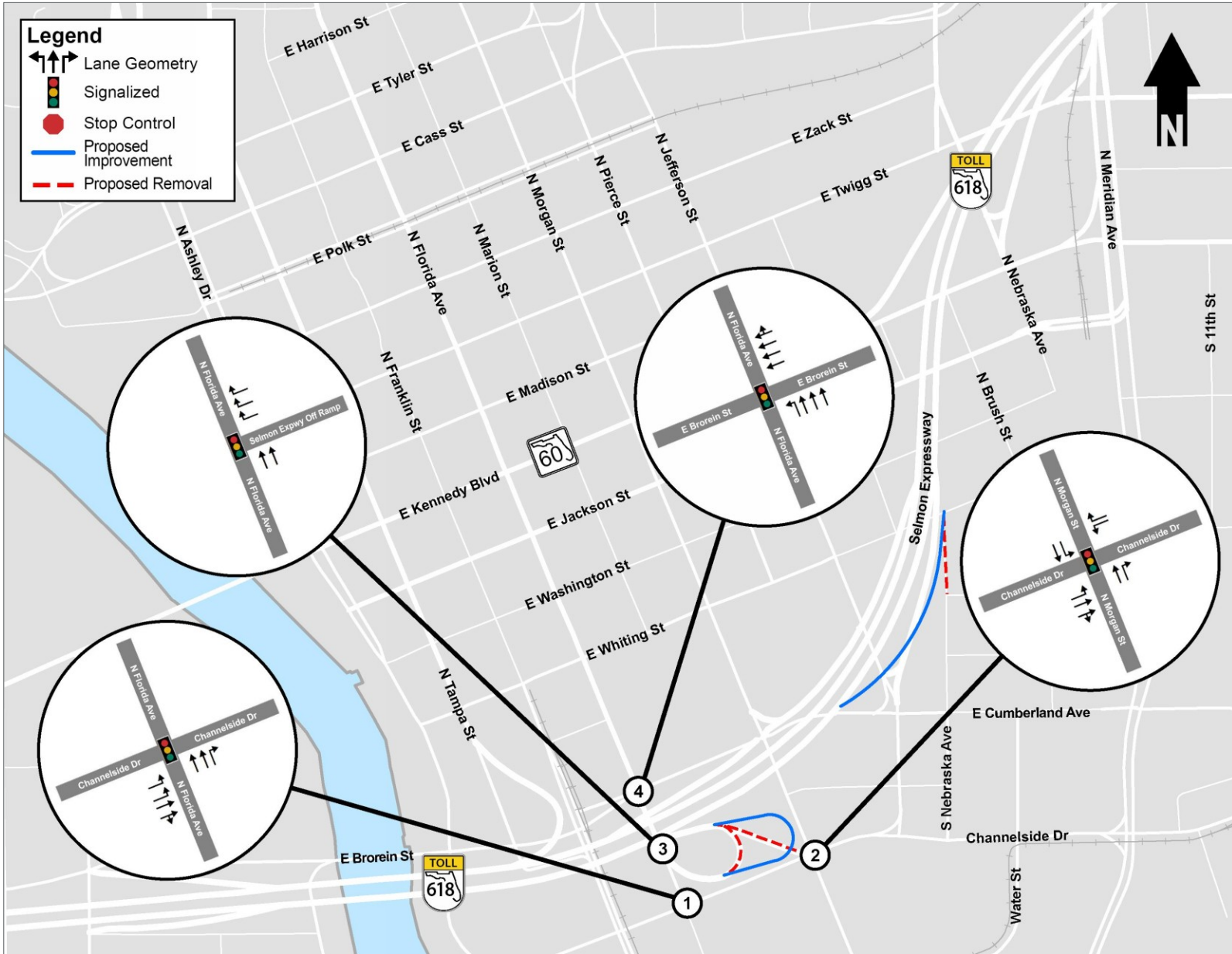


Figure E.2a: Build Alternative Lane Geometry

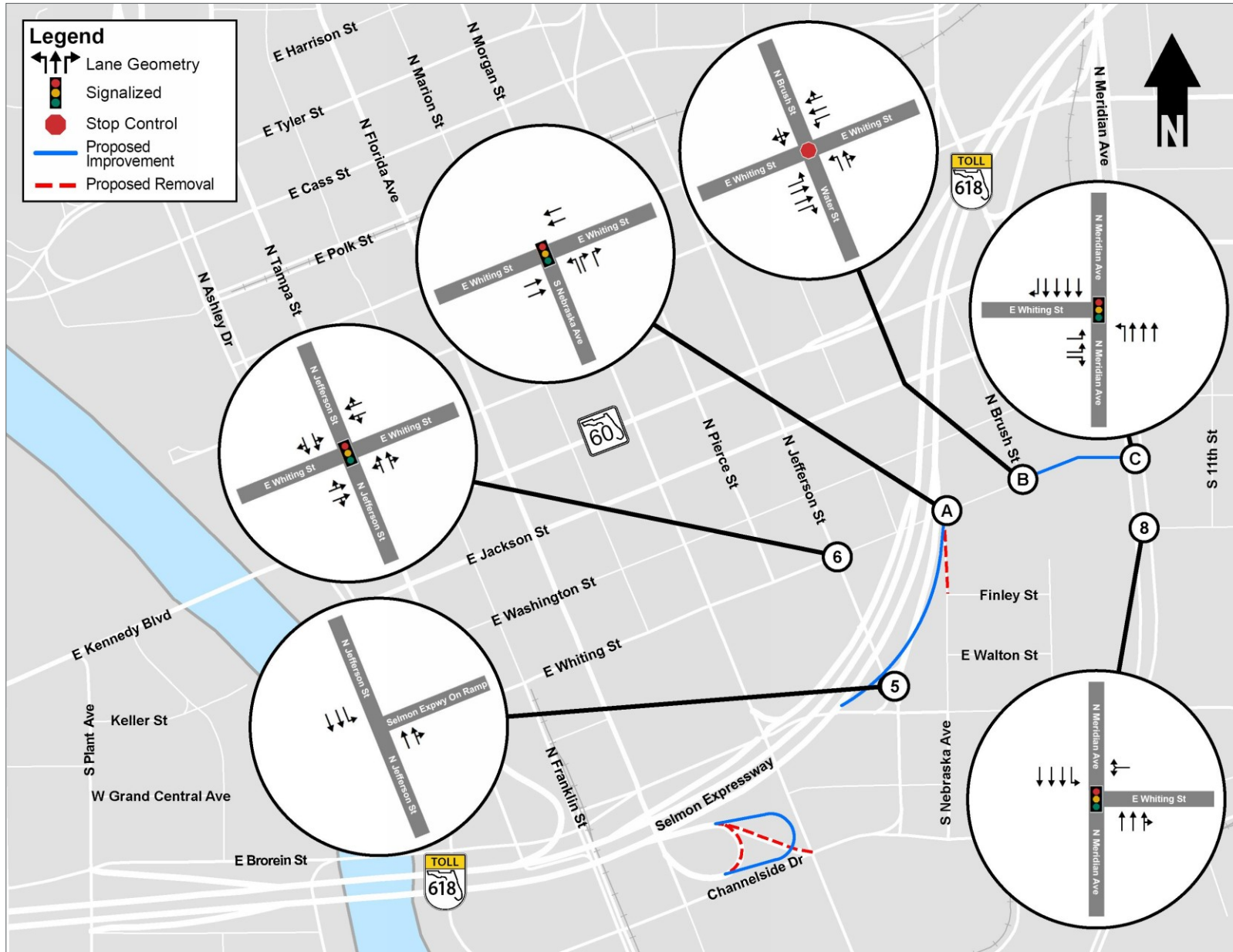


Figure E.2b: Build Alternative Lane Geometry

Future Operations of the Design Alternative

Tables E.5 and E.6 show the results of the Build Alternative freeway segment and intersection analyses, respectively, in the design year (2046) for the AM and PM peak hours. The results of the freeway segment analysis indicate that the mainline is not anticipated to meet the LOS target D by the design year (2046). However, by separating the Downtown West (Exit 6A) and Downtown East (Exit 6B) off-ramps, the heavy demand expected at the interchange is able to be staggered across two diverge points, rather than one. When compared to the No-Build Alternative during design year (2046), the Build Alternative processes more vehicles, from 46 percent entering the network from the west to 101 percent during the AM peak hour and from 44 percent to 100 percent during the PM peak hour. The results of the intersection analysis indicate that each of the study intersections, except for Channelside Drive at Florida Avenue, are anticipated to meet the LOS target D. Overall, rerouting the traffic for the Downtown East (Exit 6B) off-ramp from the Channelside Drive at Morgan Street intersection to Whiting Street, as well as the extension of Whiting Street to Meridian Avenue, is expected to improve operations of the study area as a whole, as compared to the No-Build Alternative.

Table E.5: Build Alternative Design Year (2046) Freeway Segment Analysis

Segment	AM Peak Hour		PM Peak Hour	
	Estimated Density (pc/mi/ln)	LOS	Estimated Density (pc/mi/ln)	LOS
Plant Ave On-Ramp to Florida Ave Off-Ramp	45	F	27	D
Florida Ave Off-Ramp to Whiting St Off-Ramp	51	F	29	D
Whiting St Off-Ramp to Jefferson St On-Ramp	46	F	30	D
Jefferson St On-Ramp to Nebraska Ave On-Ramp	41	E	28	D

Table E.6: Build Alternative Design Year (2046) Intersection Analysis

ID	Intersection	AM Peak Hour		PM Peak Hour	
		Delay (s/veh)	LOS	Delay (s/veh)	LOS
1,3	Channelside Dr/Selmon Off-Ramp and Florida Ave	28.5	C	65.1	E
2	Channelside Dr and Morgan St	27.9	C	28.6	C
4	Brorein St and Florida Ave	28.0	C	30.4	C
6	Whiting St and Jefferson St	36.4	D	34.4	C
A	Whiting St and Selmon Off-Ramp	15.4	B	24.7	C
B	Whiting St and Brush St	33.7	C	49.5	D
C	Whiting St and Meridian Ave (North)	39.5	D	15.7	B
8	Whiting St and Meridian Ave (South)	48.1	D	43.3	D

Future Safety Impacts of the Design Alternative

The Build Alternative for this IMR provides great benefit for the area, from increased pedestrian safety to an anticipated reduction in crashes at heavily congested locations. The following summarizes the anticipated safety benefits of the Build Alternative at several intersections within the AOI:

Channelside Drive and Florida Avenue Intersection

- Coordinating the signal with the eastbound Selmon Expressway off-ramp to Downtown West (Exit 6A) has an anticipated 58 percent crash reduction factor for crashes involving serious, minor, and/or possible injuries (see Crash Modification Factors Clearinghouse ID: 9857 in **Appendix I**).
- It also provides the opportunity for a reduction in red light running and aggressive driving behaviors.

Channelside Drive and Morgan Street Intersection

- Removing the eastbound Selmon Expressway off-ramp to Downtown East (Exit 6B) reduces the number of conflict points at the intersection.
- Reducing the number of conflict points also increases pedestrian and bicycle safety, which can tend to be serious injury or fatal crashes when they occur.

Florida Avenue Off-Ramp (Exit 6A)

- Signalizing the off-ramp is anticipated to help in managing queue spillback along the off-ramp by providing a dedicated signal phase to clear any stacked vehicles on the ramp.
- Prohibiting RTOR is anticipated to increase pedestrian safety as they cross the off-ramp by providing them with a protected pedestrian phase at the signal.

Future Conditions and Plans for the Design Alternative

The following summarizes the cost, drainage, environmental, and design related impacts anticipated for the Build Alternative, as well as the project schedule and funding plan:

- The Build Alternative is estimated to cost \$35.4 million to construct. This estimate does not include the cost for design or right-of-way acquisition.
- Stormwater management facilities will be required to meet Southwest Florida Water Management District (SWFWMD) permitting requirements for a stormwater pond located within the existing right-of-way of the Florida Avenue off-ramp and for the relocation of the existing stormwater pond constructed under SWFWMD Environmental Resource Permit (ERP) Number 441660.032.
- Existing flow patterns will be maintained, and stormwater management facilities will be utilized to provide the necessary stormwater management. It is assumed that any existing offsite stormwater runoff will be “passed through” the proposed ponds, where necessary, with no additional treatment required. Weir structures and pipes must be sized to accommodate the additional offsite flows passing through the proposed ponds. Since the entire study area is located outside of the base (100-year) floodplain, there will be no impacts to the base floodplain. Therefore, floodplain compensation is not required.

- The proposed improvements will not result in any impacts to natural habitats or jurisdictional wetlands. No long-term adverse effects are anticipated for functions and values associated with wetland and surface water systems in the region. The project will not adversely affect public health, safety, or welfare. Water supplies will not be affected, and no flood or storm hazards are anticipated.
- There are two design exceptions anticipated for the proposed Build Alternative, which include design speed and stopping sight distance. Design variations are needed for border width, horizontal curve length, curve radius, ramp spacing, and sag curve length. These exceptions and variations will be processed by THEA.
- The proposed improvements and this IMR meet the Federal Highway Administration's (FHWA's) Policy on Access to the Interstate System requirements for the justification and documentation necessary to substantiate any proposed changes in access to the Interstate System.
- THEA plans to complete the planning, design, right-of-way acquisition, and construction phases by fiscal year (FY) 2025. THEA has allocated \$51 million to all of the above-mentioned phases for the Build Alternative, to be completed by the opening year (2026). This allocation of funding is currently under review by THEA for inclusion in the THEA Work Program.

Conclusion

Considering the overall operations along the eastbound Selmon Expressway and at each of the study intersections, the Build Alternative is projected to provide better operating conditions than the No-Build Alternative. The Build Alternative was developed, under the Whiting Street PD&E Study, with the intent to improve operations, safety, and traffic circulation of the eastbound Selmon Expressway at the Downtown East/West interchange and within the study area. It is recommended to construct the Build Alternative by the opening year (2026). As previously stated, THEA will be responsible for all planning, design, right-of-way acquisition, and construction costs for the implementation of the Build Alternative.

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Glossary of Terms

Term	Definition
AADT	Annual Average Daily Traffic
AASHTO	American Association of State Highway and Transportation Officials
AOI	Area of Influence
BMP	Best Management Practice
CARS	Crash Analysis Reporting System
CBD	Central Business District
CD	Channel District
CDMS	Crash Data Management System
CFR	Code of Federal Regulations
CMF	Crash Modification Factor
CRF	Crash Reduction Factor
CSX	Chessie-Seaboard
DDHV	Directional Design Hour Volume
DIRC	District Interchange Review Coordination
ERP	Environmental Resource Permit
FDEP	Florida Department of Environmental Protection
FDOT	Florida Department of Transportation
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FLUCFCS	Florida Land Use, Cover and Forms Classification System
FTA	Federal Transit Administration
FTO	Florida Traffic Online
FY	Fiscal Year
HCM	Highway Capacity Manual
HSM	Highway Safety Manual
IAR	Interchange Access Request
IARUG	Interchange Access Request User's Guide
IMR	Interchange Modification Report
ISATe	Enhanced Interchange Safety Analysis Tool
LOS	Level of Service
LRE	Long Range Estimate
L RTP	Long Range Transportation Plan
MLOU	Methodology Letter of Understanding
MOE	Measure of Effectiveness
MPH	Miles per Hour
NCHRP	National Cooperative Highway Research Program
NEPA	National Environmental Policy Act
NWI	National Wetlands Inventory

OD	Origin-Destination
OFW	Outstanding Florida Waters
PD&E	Project Development and Environment
REL	Reversible Express Lanes
RTOR	Right-Turn-on-Red
SIO	Systems Implementation Office
SIS	Strategic Intermodal System
SPF	Safety Performance Function
SWFWMD	Southwest Florida Water Management District
TBRPM	Tampa Bay Regional Planning Model
THEA	Tampa Hillsborough Expressway Authority
TMC	Turning Movement Count
USC	United States Code
USFWS	United States Fish and Wildlife Service
VMT	Vehicle-Miles Traveled
WBID	Water Body Identification

1.0 Introduction

1.1 Project Overview

An Interchange Modification Report (IMR) was conducted in support of the Whiting Street Project Development and Environment (PD&E) study undertaken by the Tampa Hillsborough Expressway Authority (THEA). This IMR is evaluating the need for improvements for access from the eastbound Selmon Expressway (SR 618) at the Downtown East/West interchange within Downtown Tampa. Only the eastbound portion of the Selmon Expressway in this area is under consideration for this study.

The Selmon Expressway is a tolled, limited access facility that is part of the Florida Department of Transportation's (FDOT's) Strategic Intermodal System (SIS) and plays a major role in the Tampa Bay area's economy and mobility. Operating east-west within the City of Tampa, it serves a key role in the movement of people, freight, and goods in a safe and effective manner between its western terminus at Gandy Boulevard (US 92/SR 600) and its eastern terminus at I-75 and Brandon Parkway/Town Center Boulevard. The Selmon Expressway and Downtown East/West interchange serve as a major access point for commuter traffic to and from Downtown Tampa. The Selmon Expressway within the study area currently transitions from a six-lane, to a four-lane, then back to a six-lane urban principal arterial expressway with a posted speed limit of 55 miles per hour (mph).

Figure 1.1 graphically displays the location of the Selmon Expressway and Downtown East/West interchange within Downtown Tampa. This project is proposing the reconfiguration of the eastbound off-ramp to Florida Avenue (Exit 6A) and the relocation of the Channelside Drive off-ramp (Exit 6B) to Whiting Street. Additionally, Whiting Street would be extended to connect to Meridian Avenue and the eastbound on-ramp at Jefferson Street would be shifted slightly north to accommodate the proposed new overhead off-ramp to Whiting Street. Improvements proposed through this project will have little to no effect on the westbound Selmon Expressway ramps, within close proximity to the study area (Exits 4, 5, 7, and 8). This project will improve safety, accessibility, and circulation along the Selmon Expressway and throughout Downtown Tampa and the Channelside District, particularly the east side of Downtown.

This IMR documents traffic and safety analyses undertaken to evaluate the impacts of the anticipated increase in traffic demand within the study area and identifies any necessary improvements to enhance the operations of the eastbound Selmon Expressway Downtown East/West Interchange. This IMR is developed in accordance with the FDOT's 2020 *Interchange Access Request User's Guide* (IARUG) prepared by the Systems Implementation Office (SIO).

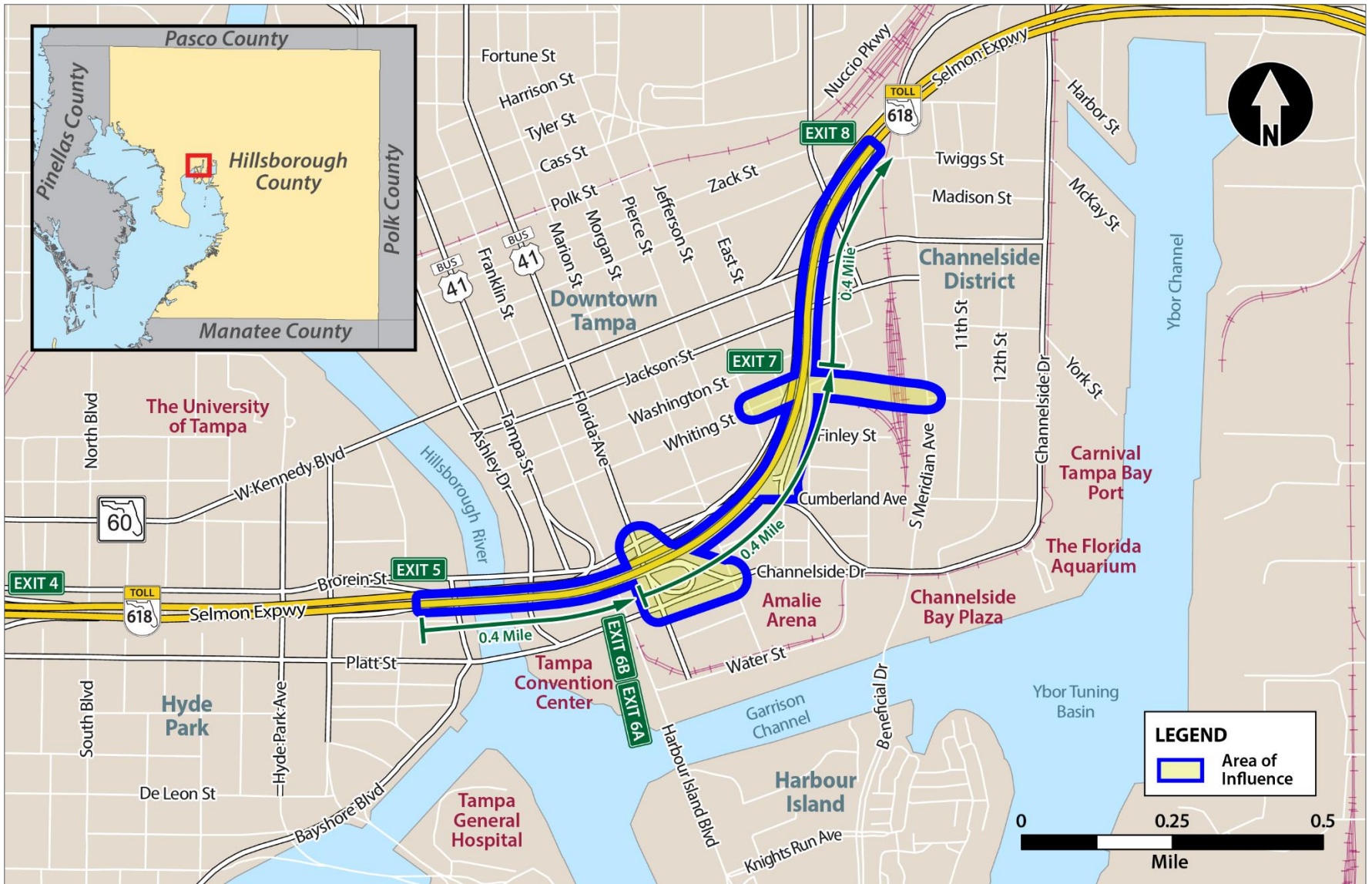


Figure 1.1: Project Location Map

1.2 Project Background

Downtown Tampa has experienced an enormous amount of development and redevelopment over the past 20 years. Office, commercial, and residential development, along with attractions like the Tampa Riverwalk, have made the southern portion of Downtown Tampa a desired area for recreation, entertainment, business, and residential properties. Along with these attractions, mobility needs have also grown, creating a desire to provide safe mobility choices for the area.

Within proximity to the Selmon Expressway and Downtown East/West interchange is Water Street Tampa, a 56-acre redevelopment project. Water Street Tampa will construct up to 9 million square feet of mixed-use development that will include residential buildings, office buildings, and hotels, as well as retail spaces. The Water Street Tampa development area is shown in **Figure 1.2**. Construction on this development has already begun, with expected completion by 2027.



Figure 1.2: Water Street Tampa Development Area

Additionally, Port Tampa Bay, which is also undergoing a major redevelopment as part of the Port Tampa Bay Master Plan, is located just east of the Selmon Expressway along Channelside Drive. Within the Port Tampa Bay Master Plan, the Channelside Master Plan includes increasing the Port's attraction and maximizing capacity for all cruise vessels, while integrating it with the redevelopment of the Channelside District and evaluating longer-term solutions to serve the new generation cruise fleet. The Channelside

Master Plan also includes creating a community with a working waterfront integrated with residential, commercial, and retail uses.

1.3 Purpose & Need

The purpose of this project is to provide a direct connection of Whiting Street to North Meridian Avenue to improve traffic flow and safety for all transportation modes, increase capacity on the adjacent street network, and offer additional connections within the street network. The project will also reconfigure the on-ramp to the Selmon Expressway at Jefferson Street and the off-ramps at Florida Avenue and Channelside Drive to provide a direct connection from the Selmon Expressway to improve safety, traffic circulation, and access to Whiting Street and North Meridian Avenue.

The need for the project is based on the following criteria:

SYSTEM LINKAGE

Based upon the Tampa Bay Regional Planning Model (TBRPM) Version 8.2, the existing roadway network will be over capacity by the model 2045 horizon year. Additional network connectivity, such as the Whiting Street extension and ramp reconfigurations, are necessary to provide additional route choices and access to alleviate congestion.

SAFETY

Safety and operational concerns with the existing Florida Avenue and Channelside Drive off-ramps include substandard radius and a free-flow merge movement onto Florida Avenue with a sidewalk/crosswalk conflict. The ramp termini onto Channelside Drive currently terminates into a 5-leg intersection at Channelside Drive and Morgan Street, which is a major pedestrian access point to the Amalie Arena. Five years of data (2014 to 2018) were reviewed, and 9 crashes have occurred at this ramp. As the Water Street Project builds out to the east of the ramp system, thereby also converting Channelside Drive to a two-way arterial east of Morgan Street, the adverse impact of geometric issues and pedestrian conflicts are expected to be exacerbated. In addition, the increase of traffic from the Downtown development and redevelopment from Water Street Tampa and the Port Tampa Bay Master Plan will result in congestion issues and more conflicts with pedestrians and bicyclists. As such, improving the ramp geometry, eliminating pedestrian conflicts, and redirecting Downtown East traffic beyond the Water Street District is critical to proactively addressing safety concerns as both the Selmon Expressway and Downtown Tampa continue to develop.

TRANSPORTATION DEMAND

Based upon the TBRPM Version 8.2, Jefferson Street (39,000 AADT) and Kennedy Boulevard (AADT 34,000) are expected to reach their operational capacity by 2040. As the Water Street Project develops, the vehicle demand is expected to increase. The proposed connection of Whiting Street could carry up to 14,800 AADT, providing valuable route divergence and congestion relief to the parallel facilities.

1.4 Study Methodology

THEA has prepared a Methodology Letter of Understanding (MLOU), which was signed November 18, 2020, in preparation for this IMR, and is provided in **Appendix A**. A FDOT District Seven District Interchange Review Coordination (DIRC) meeting was held on March 21, 2021. The DIRC meeting minutes are provided in **Appendix B**. The analysis years for this study are as follows:

- Existing Year: 2019.
- Opening Year: 2026.
- Design Year: 2046.

The area of influence (AOI) along eastbound Selmon Expressway is from the Plant Avenue on-ramp to the Nebraska Avenue on-ramp. Along Florida Avenue, the AOI extends from Channelside Drive to Brorein Street. The AOI also includes the proposed Whiting Street connection from Jefferson Street to Meridian Avenue. The overall project location, study intersections, and AOI are shown in **Figure 1.3**. The AOI includes the following ramps and intersections:

Selmon Expressway Ramps

- Eastbound Selmon Expressway Plant Avenue on-ramp (Merge).
- Eastbound Selmon Expressway Florida Avenue/Channelside Drive off-ramp (Diverge).
- Eastbound Selmon Expressway Jefferson Street on-ramp (Merge).
- Eastbound Selmon Expressway Nebraska Avenue on-ramp (Merge).

Intersections along the Arterials

- Florida Avenue at Channelside Drive (Signalized)
- Florida Avenue at Selmon Expressway off-ramp (Un-signalized).
- Florida Avenue at Brorein Street (Signalized).
- Channelside Drive at Selmon Expressway off-ramp/Morgan Street (Existing Connection) (Signalized).
- Jefferson Street at Selmon Expressway on-ramp (Un-signalized).
- Whiting Street at Jefferson Street (Signalized).
- Whiting Street at Selmon Expressway off-ramp (Proposed Connection) (Signalized).
- Whiting Street at Meridian Avenue (Signalized).



Figure 1.3: Area of Influence and Study Intersections

2.0 Existing Conditions

2.1 Roadway Characteristics

Table 2.1 describes the roadway characteristics of each roadway being analyzed in the study area.

Table 2.1: Roadway Characteristics

Segment	Functional Classification	Length (mi)	Speed Limit (mph)	Typical Section	Directionality
<i>Selmon Expressway</i>					
Plant Ave to Florida Ave	Principal Arterial - Freeway and Expressway Urban	0.4	55	Four-Lane Divided w/ Auxiliary Lanes	Two-Way
Florida Ave to Jefferson St	Principal Arterial - Freeway and Expressway Urban	0.3	55	Four-Lane Divided	Two-Way
Jefferson St to Nebraska Ave	Principal Arterial - Freeway and Expressway Urban	0.4	55	Four-Lane Divided w/ Auxiliary Lanes	Two-Way
<i>Channelside Drive</i>					
Florida Ave to Morgan St	Major Collector Urban	0.1	40	Three-Lane	One-Way
<i>Whiting Street</i>					
Jefferson St to Brush St	Local Road	0.2	*	Two-Lane Undivided	Two-Way
Meridian Ave to Channelside Dr	Local Road	0.2	*	Two-Lane Undivided	Two-Way
<i>Florida Avenue</i>					
Channelside Dr to Brorein St	Minor Arterial Urban	0.1	30	Three-Lane	One-Way
<i>Jefferson Street</i>					
Selmon Expwy On-Ramp to Whiting St	Major Collector Urban	0.1	30	Four-Lane Undivided	Two-Way
<i>Meridian Avenue</i>					
Cumberland Ave to Jackson St	Major Collector Urban	0.3	40	Six-Lane Divided	Two-Way

*There is no speed limit posted along this corridor. For analysis purposes, a speed limit of 25 miles per hour (mph) was assumed.

The Selmon Expressway is a limited access facility through the Downtown East/West interchange area, with a posted speed limit of 55 mph. The Selmon Expressway transitions from a six-lane, to a four-lane, and back to a six-lane typical section within the study area. The Selmon Expressway is also part of the FDOT SIS, making it one of Florida's high priority transportation facilities for Florida's economy and mobility.

The Downtown East/West interchange of the Selmon Expressway currently provides access to Florida Avenue (Exit 6A) and Channelside Drive (Exit 6B) on the eastbound exit. Within the study area, Florida

Avenue is a three-lane, one-way, northbound urban minor arterial with a 30-mph posted speed limit. Channelside Drive is a one-way, three-lane eastbound collector that transitions to a four-lane, two-way collector 0.1 miles east of the Selmon Expressway off-ramp and then to a two-lane, two-way corridor 0.3 miles from the off-ramp. Channelside Drive has a posted speed limit of 40-mph and provides access to Amalie Arena, the Channelside District, and the Port Tampa Bay Cruise Terminals.

Whiting Street is a four-lane, east-west local road west of Jefferson Street and transitions to a two-lane local road east of Jefferson Street, with discontinuity from Brush Street to Meridian Avenue. East of Meridian Avenue, Whiting Street picks up again as is a two-lane local road. Whiting Street provides access to various City of Tampa parking garages and parking lots for daily Downtown commuters to the west and access to the Channelside District to the east.

Figure 2.1 shows the existing lane geometry for each of the study intersections within the study area.

2.2 Data Collection

2.2.1 Traffic Count Data

Traffic counts were collected between May 2019 and February 2020 at the Selmon Expressway ramps and cross streets, as part of the traffic count program for the Whiting Street PD&E Study. Traffic volumes along the Selmon Expressway mainline were obtained from the FDOT Florida Traffic Online (FTO) database. There were seven 6-hour turning movement counts (TMCs) between 6:30 AM to 9:30 AM and 4:00 PM to 7:00 PM, three 48-hour directional ramp counts, one 72-hour directional ramp count, and seventeen 72-hour bi-directional traffic volumes along the cross streets, as shown in **Figure 2.2**. **Table 2.2** provides a list of all data collection efforts, which can be found in **Appendix C**.

2.2.2 Speed Data

Three-day speed data was collected over 3-hour AM (6:30 to 9:30) and 3-hour PM (4:00 to 7:00) peak periods in October and November of 2019 for each of the following study corridors:

- Florida Avenue from Channelside Drive to Brorein Street.
- Whiting Street from Jefferson Street to Nebraska Avenue.
- Jefferson Street from the Selmon Expressway on-ramp to Whiting Street.

Regular and reliable speed data could not be obtained along Channelside Drive due to construction, as well as along the Selmon Expressway mainline, which was added to the study area after the start of the COVID-19 pandemic. Raw (2019) speed data can be found in **Appendix D**.

2.2.3 Signal Timing Plans

Existing signal timing plans have been obtained from the City of Tampa for each of the following traffic signals within the study area, and can be found in **Appendix E**:

- Channelside Drive and Florida Avenue.
- Channelside Drive and Morgan Street.

- Brorein Street and Florida Avenue.
- Whiting Street and Jefferson Avenue.
- Whiting Street and Meridian Avenue.

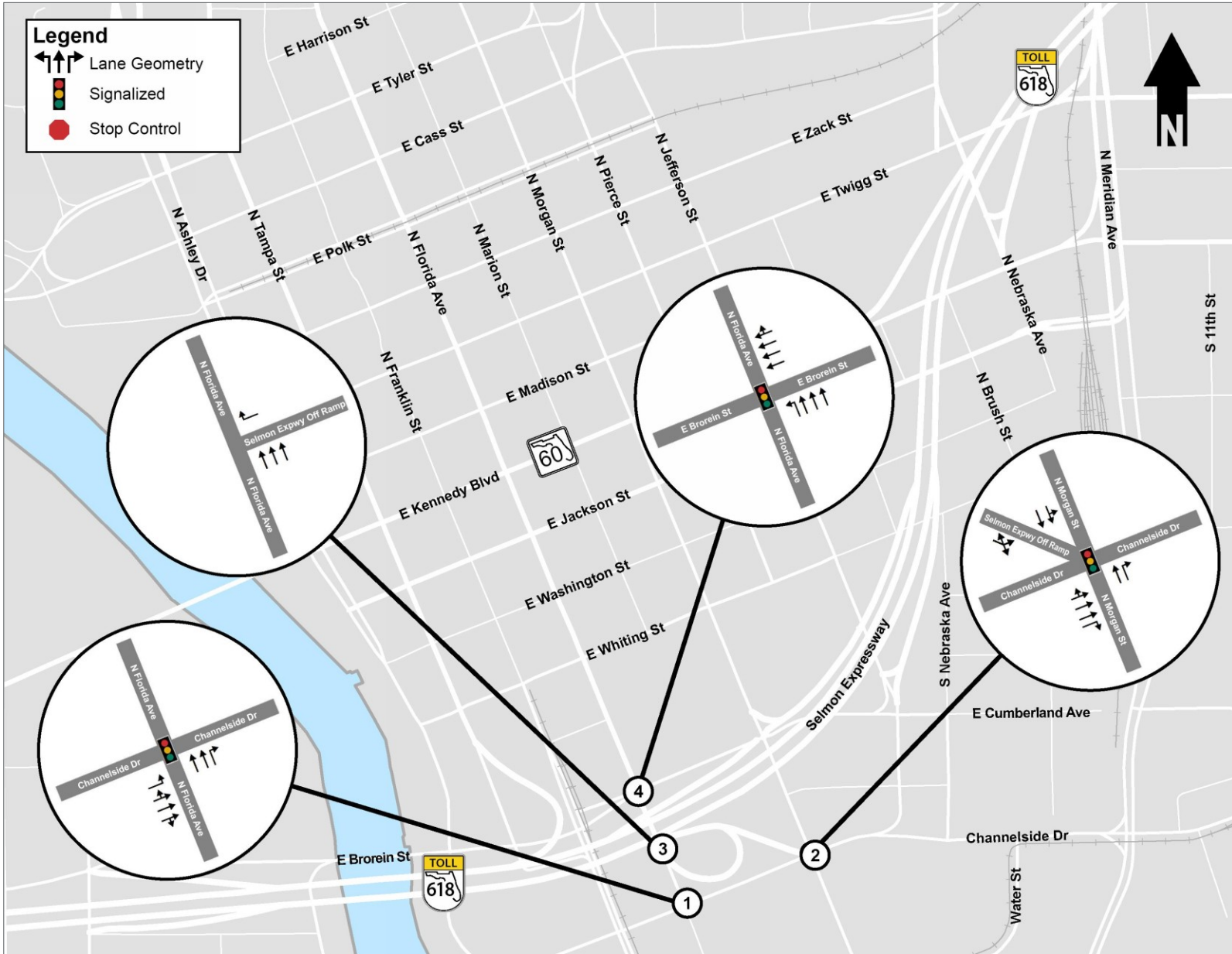


Figure 2.1a: Existing Lane Geometry

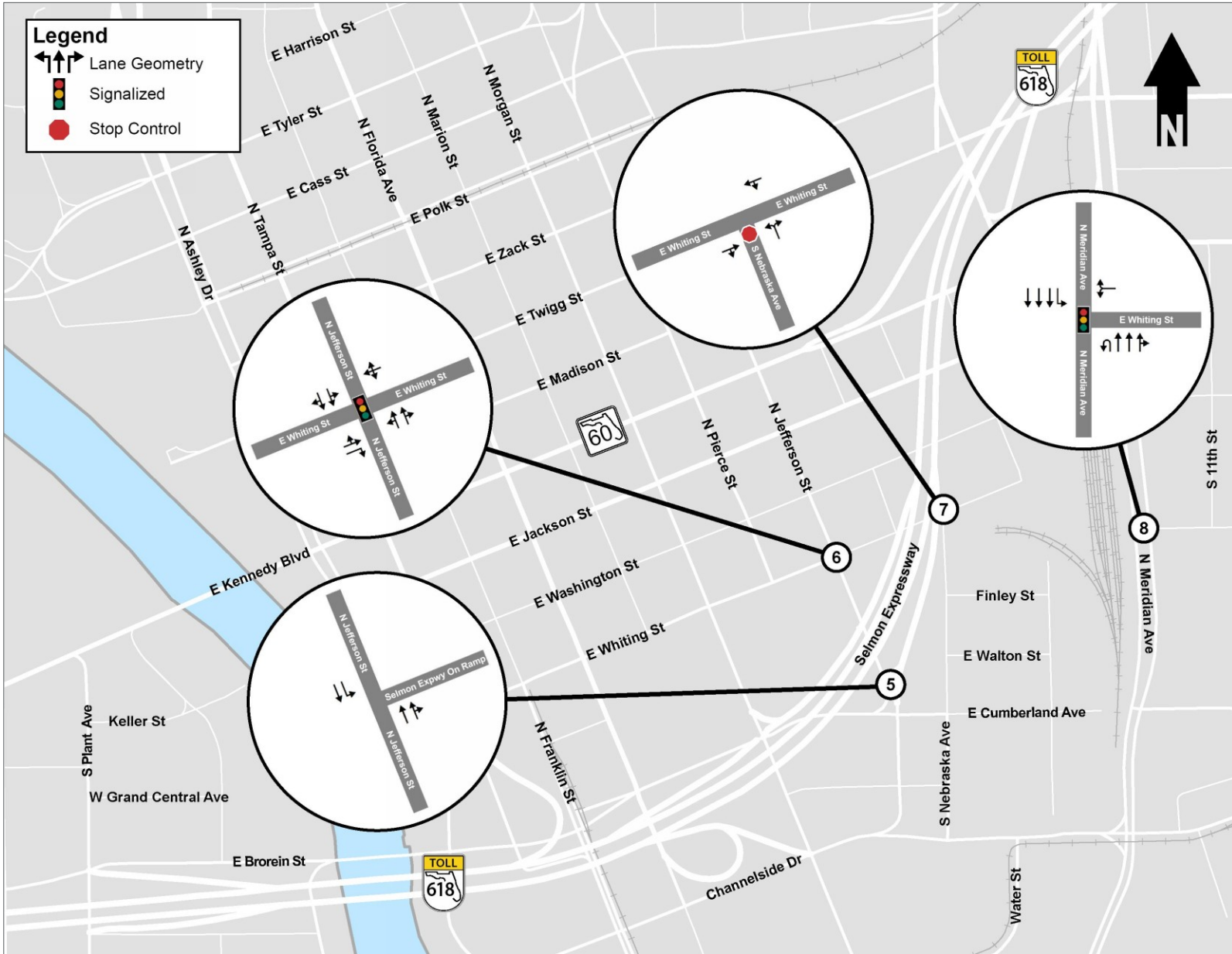


Figure 2.1b: Existing Lane Geometry

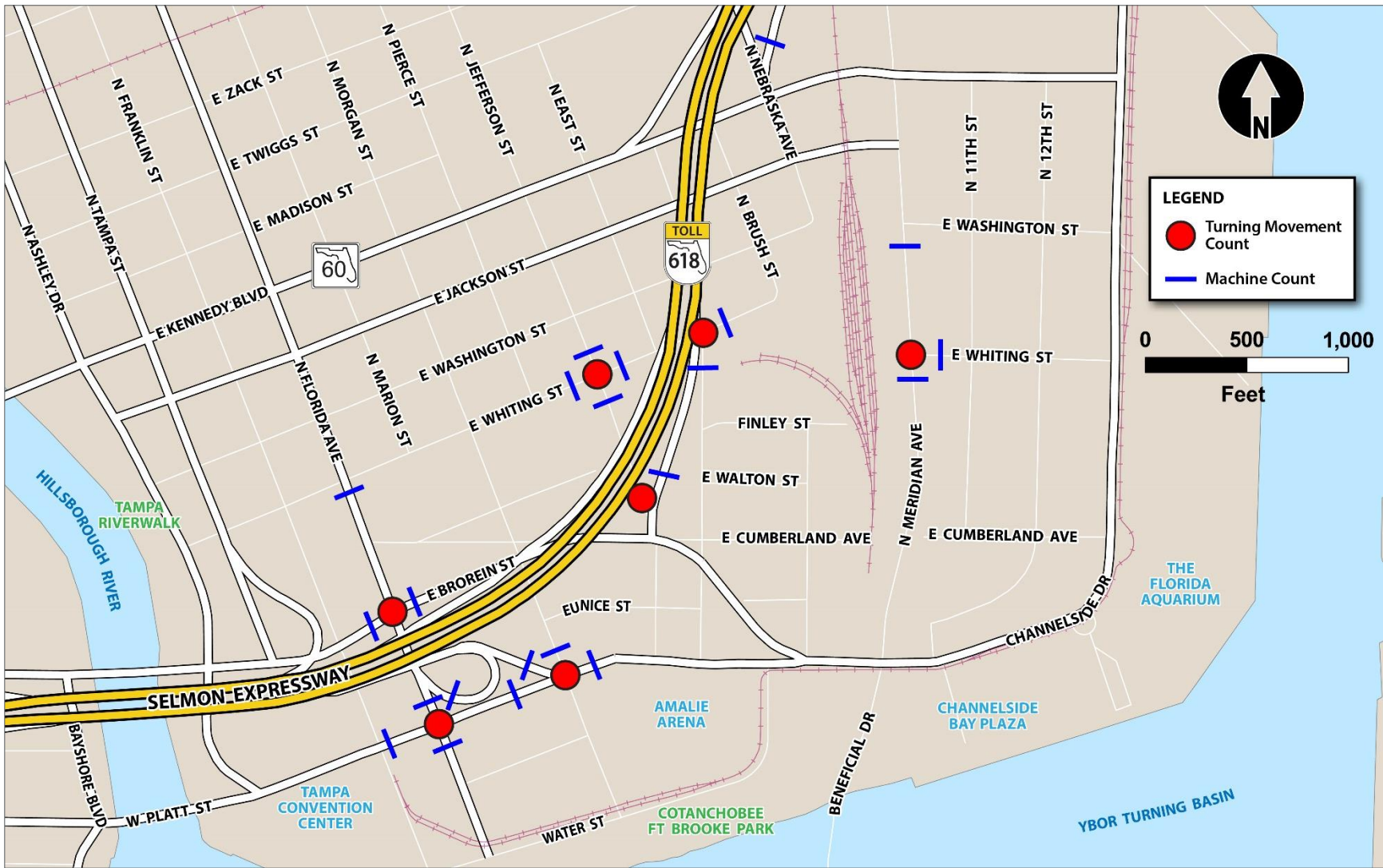


Figure 2.2: Traffic Count Locations

Table 2.2: Traffic Data Collection

Location	Type of Count
<i>Selmon Expressway</i>	
Eastbound Selmon Expressway	Florida Traffic Online*
<i>Selmon Expressway Ramps</i>	
Eastbound on-ramp from Plant Ave	Florida Traffic Online*
Eastbound off-ramp to Florida Ave	48-Hour Volume Count
Eastbound off-ramp to Channelside Dr	48-Hour Volume Count
Eastbound on-ramp from Jefferson St	48-Hour Volume Count
Eastbound on-ramp from Nebraska Ave	72-Hour Volume Count
<i>Along Cross Streets</i>	
Florida Ave south of Channelside Dr	72-Hour Volume Count
Florida Ave north of Channelside Dr	72-Hour Volume Count
Florida Ave south of Whiting St	72-Hour Volume Count
Brorein St west of Florida Ave	72-Hour Volume Count
Brorein St east of Florida Ave	72-Hour Volume Count
Channelside Dr east of Franklin St	72-Hour Volume Count
Channelside Dr west of Morgan St	72-Hour Volume Count
Channelside Dr east of Morgan St	72-Hour Volume Count
Morgan St north of Channelside Dr	72-Hour Volume Count
Jefferson St south of Whiting St	72-Hour Volume Count
Jefferson St north of Whiting St	72-Hour Volume Count
Nebraska Ave south of Whiting St	72-Hour Volume Count
Meridian Ave south of Whiting St	72-Hour Volume Count
Meridian Ave south of Washington St	72-Hour Volume Count
Whiting St west of Jefferson St	72-Hour Volume Count
Whiting St east of Jefferson St	72-Hour Volume Count
Whiting St east of Nebraska Ave	72-Hour Volume Count
Whiting St east of Meridian Ave	72-Hour Volume Count
<i>Intersections</i>	
Florida Ave at Channelside Dr	TMC
Florida Ave at Brorein St	TMC
Channelside Dr at Selmon Expwy off-ramp/Morgan St	TMC
Jefferson St at Selmon Expwy on-ramp**	TMC
Whiting St at Jefferson St	TMC
Whiting St at Nebraska Ave	TMC
Whiting St at Meridian Ave	TMC

*The FTO Synopsis Report is not available. The hourly volumes were calculated as the difference between the upstream and downstream FTO Synopsis reports.

**The count for the on-ramp was derived from the TMC taken at the Brorein Street and Jefferson Street.

2.3 Land Use

The existing land use (ELU) and future land use (FLU) within and directly adjacent to the Selmon Expressway and Downtown East/West interchange study area were obtained from the *“Existing Land Use Map for Hillsborough County, 2019 and Urban Area Future Land Use Map, 2040”*, found on the Hillsborough County Planning Department webpage. The existing land use map is shown in **Figure 2.3**. The existing land uses are predominately Central Business District (CBD) and Channel District (CD). Other surrounding land uses include planned development, commercial, industrial, and residential. The future land uses will be mainly CBD, mixed use, recreational, and industrial, and are illustrated in **Figure 2.4**.

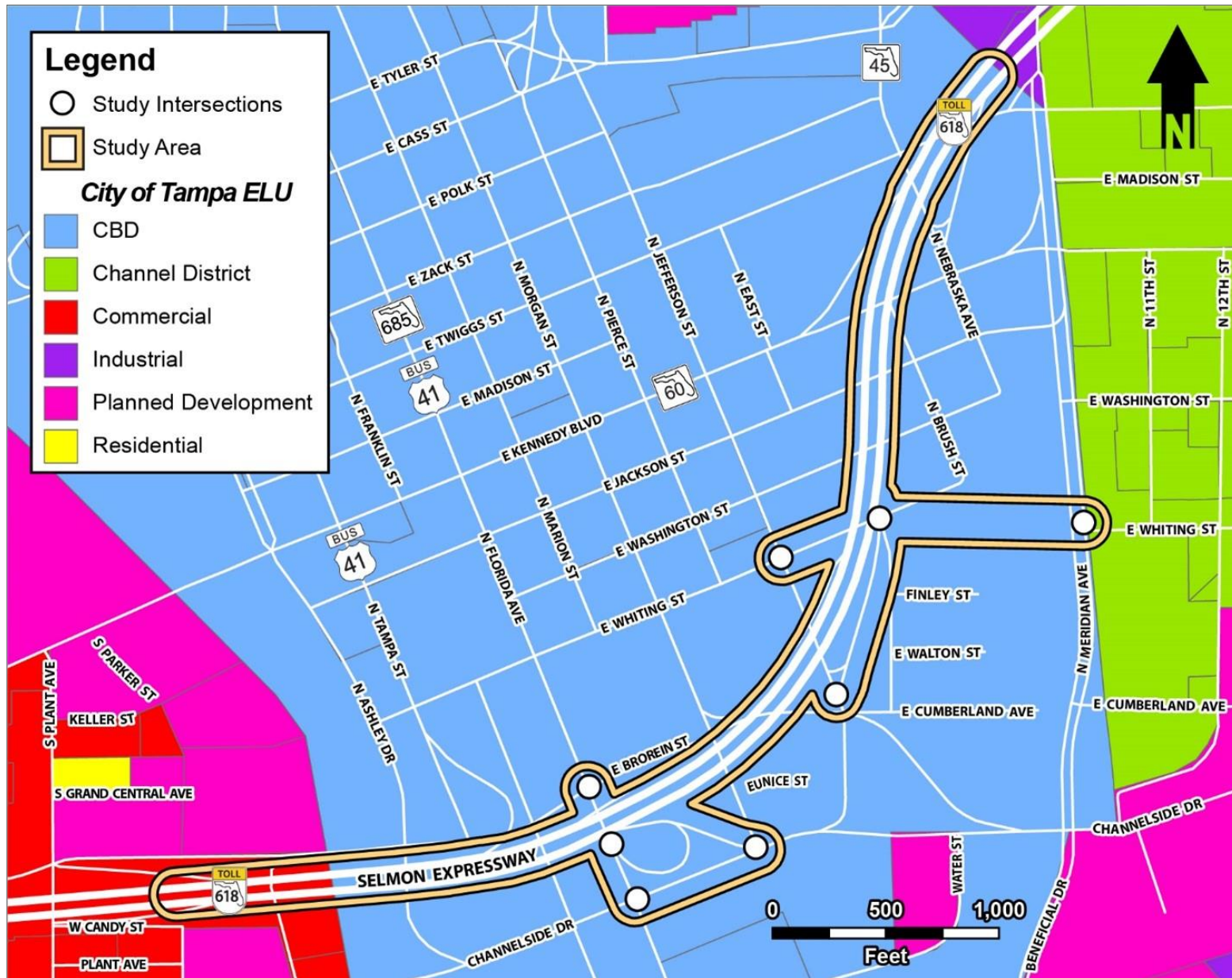


Figure 2.3: Existing (2019) Land Use

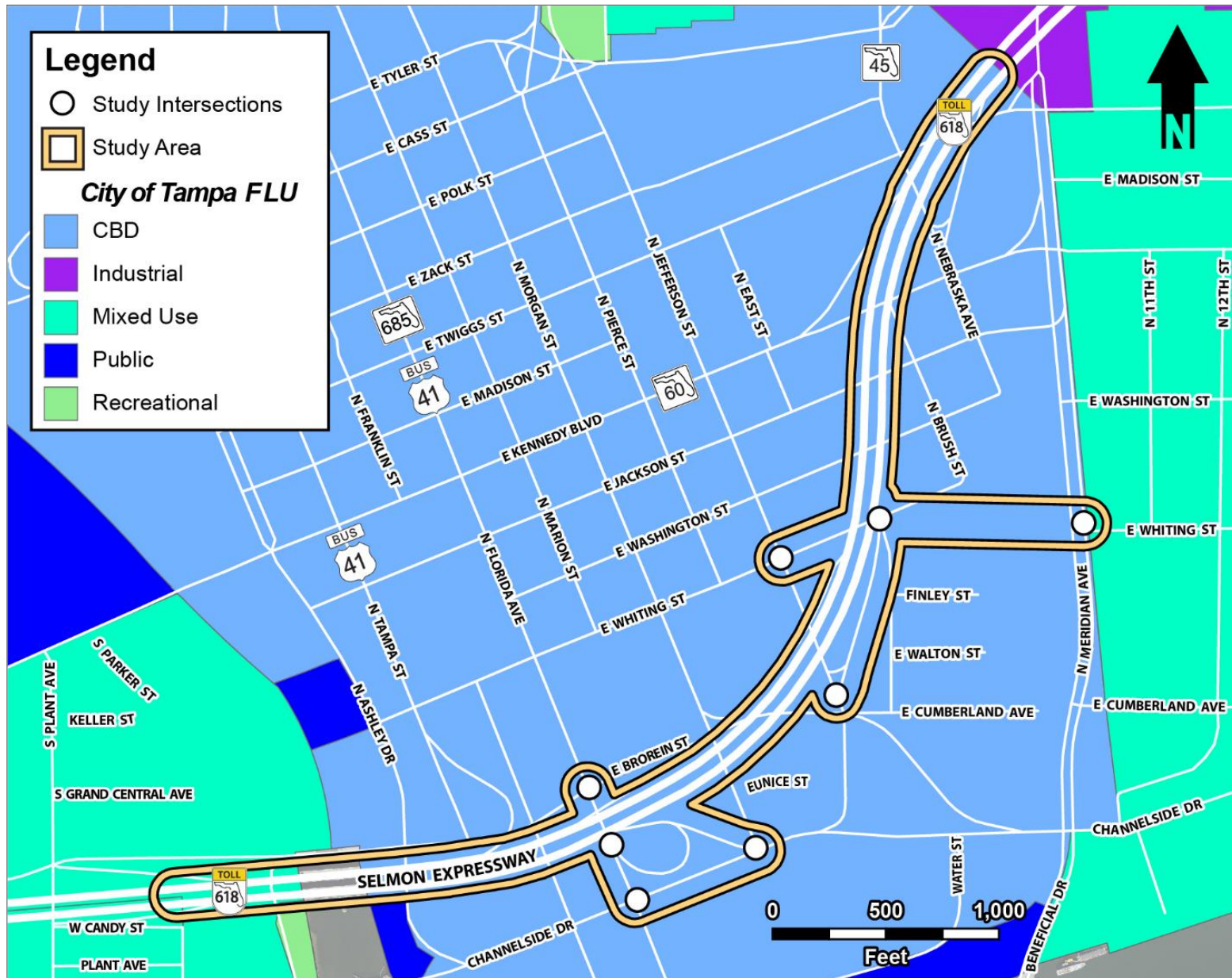


Figure 2.4: Future (2040) Land Use

2.4 Environmental Conditions

The study area is located within Downtown Tampa, which is rapidly developing and has limited natural habitat. Based on the National Wetlands Inventory (NWI) land use and cover data, and field reviews of the project area, one wetland and surface water community type was identified in the project study area. This wetland, located at the corner of Brush Street and Whiting Street, is classified as a reservoir less than 10 acres (FLUCFCS: 534; USFWS code: POWx) and is considered a manmade stormwater management facility associated with the existing surface water management system. Therefore, this reservoir is non-jurisdictional because it is a permitted stormwater management facility (SWFWMD Permit No. 4001660.032).

3.0 Existing Year (2019) Volumes

3.1 Design Traffic Factors

Design traffic factors were determined for the eastbound Selmon Expressway at Downtown East/West AOI based on the collected traffic data, historically observed factors, and forecasted factors from the TBRPM Version 8.2 developed specifically for THEA, with base year 2015, interim year 2030, and forecast year 2040. The factors were developed based on the procedures outlined in the FDOT *Project Traffic Forecasting Handbook, 2019*. **Table 3.1** summarizes the recommended design traffic factors that were used in the development of the existing year (2019) design hour turning movement volumes.

Table 3.1: Recommended Design Traffic Factors

Factor	Value
Peak Hour Factor	AM: 0.47 to 0.99 (0.92 weighted average) PM: 0.78 to 0.96 (0.95 weighted average)
Peak-to-Daily Ratio (K Factor)	9.0%
Directional Factor	Selmon Expressway: 52.3% to 61.2% Surface Streets: 50.1% to 67.1%
Design Hour Truck Factor	Roadways: 2.0%

Source: Whiting Street PD&E Study

3.2 Volume Development Methodology

The following summarizes the steps that were taken to convert the existing year (2019) annual average daily traffic (AADT) for the eastbound Selmon Expressway at the Downtown East/West interchange to existing year (2019) turning movement volumes.

- 1 Seasonal and axle correction factors were obtained from FTO (2018) and applied to the 48-hour and 72-hour counts to obtain existing year (2019) AADT for the surface streets. AADTs from FTO (2019) were directly used for the Selmon Expressway.
- 2 The recommended standard K-factor and D-factors, defined in **Table 3.1**, were then applied to the AADTs to determine directional design hour volumes (DDHVs) for each of the external nodes of the study area.
- 3 The external DDHVs were used as inputs to the TFlow Fuzzy methodology of Visum 17 to determine the existing year (2019) turning movement volumes. The existing turning movement percentages from the data collection effort were used as targets within the Visum network.

3.3 Sink/Sources

Traffic volumes were balanced where traffic volume breaks could not be validated based on roadway features, such as side streets and driveways. Where imbalances could be validated, the following sinks/sources, summarized in **Table 3.2** and shown in **Figure 3.1**, were added to the existing year (2019) traffic volumes.

Table 3.2: Sink/Sources

ID	Sink/Source
101	Premium Parking/Parkway Parking Lot
102	Selmon Expwy CAMLS Lot
103	Selmon Expwy 2 Lot
116	Aurora Apartments
117	Seven One Seven Parking Lot
122	East St/Raymond O. Shelton School Administration Center Parking

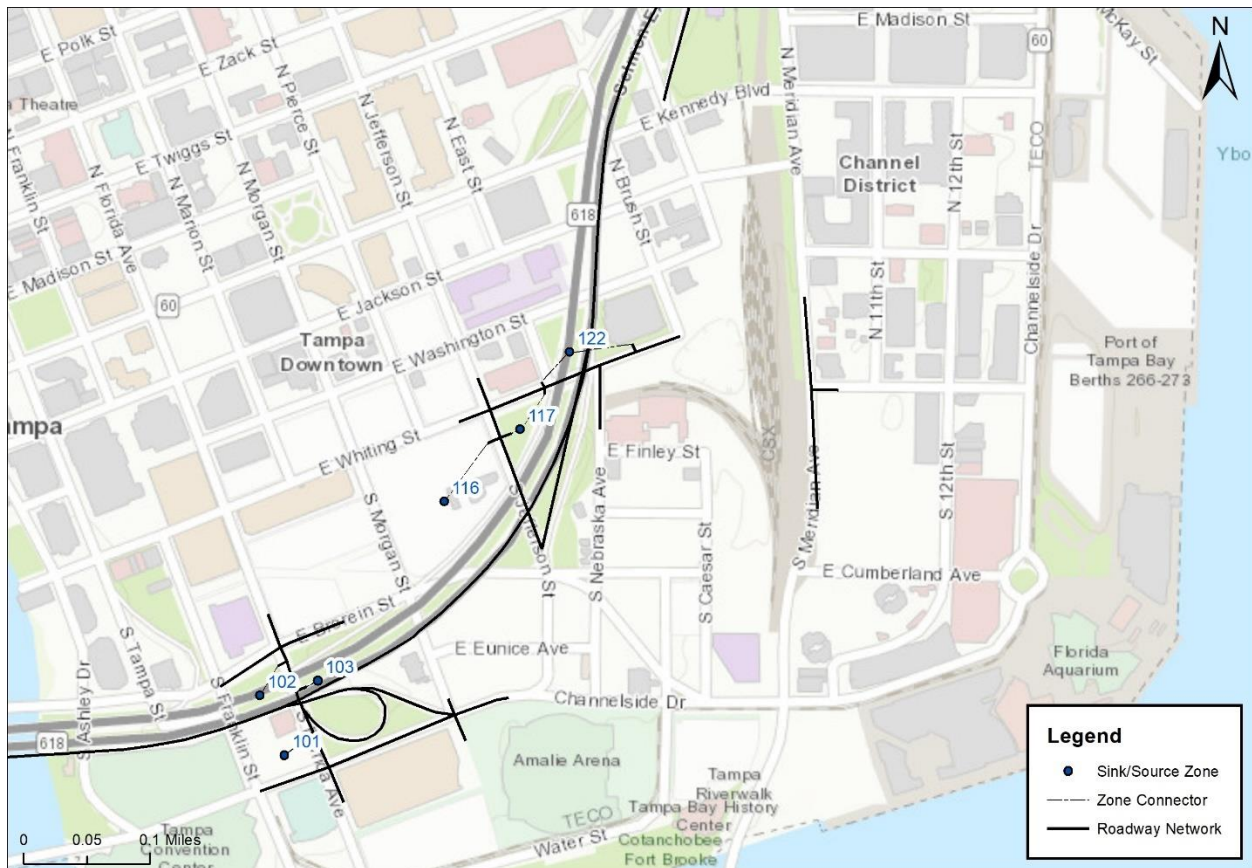


Figure 3.1: Sink/Source Locations

3.4 Existing Year (2019) Traffic Volumes

Based on the existing traffic counts, the AM and PM peak hours were determined to occur from 7:30 AM to 8:30 AM and from 4:30 PM to 5:30 PM, respectively. **Figures 3.2** and **3.3** show the existing year (2019) AADT and peak hour turning movement volumes for the eastbound Selmon Expressway at Downtown East/West study area.

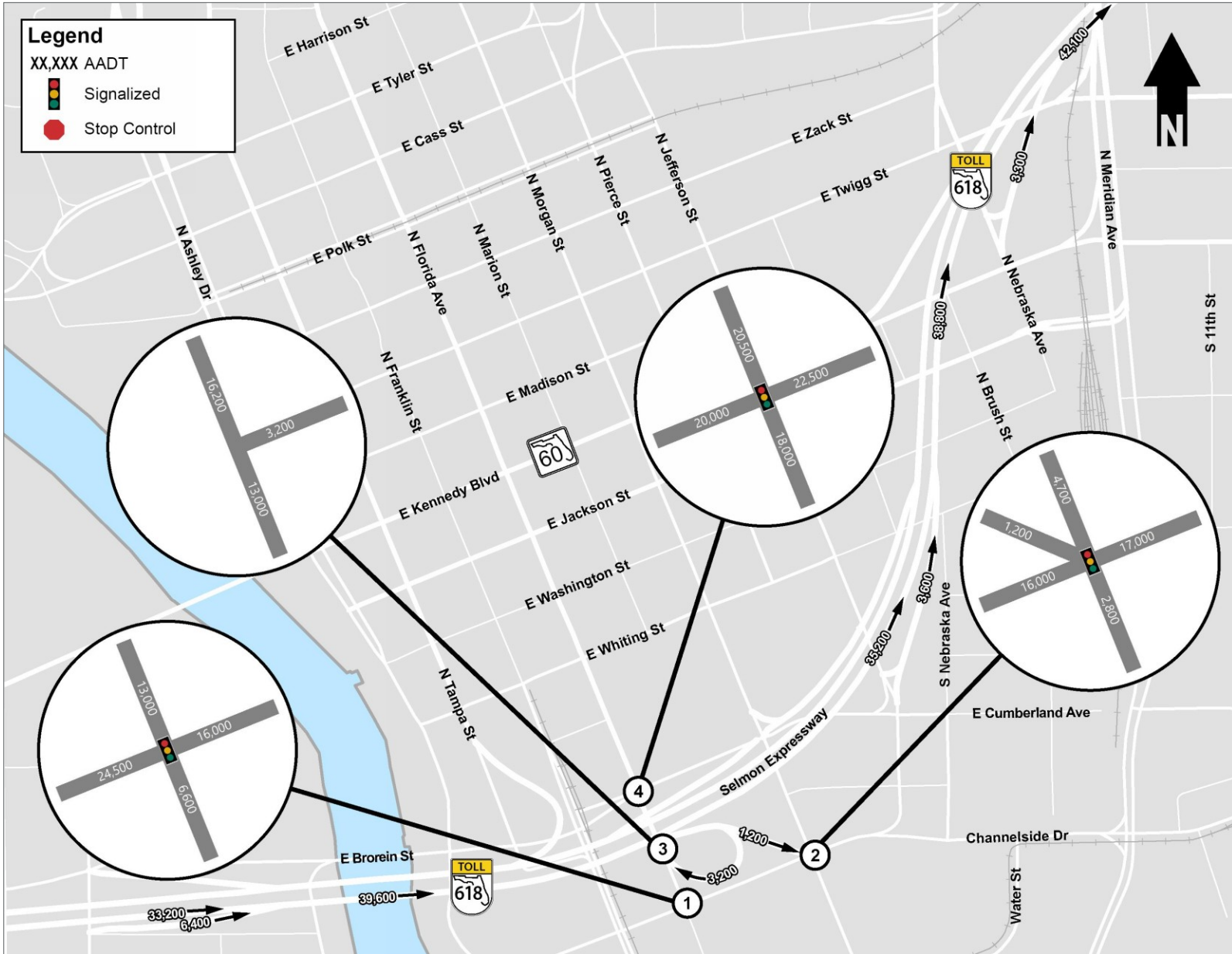


Figure 3.2a: Existing Year (2019) AADT

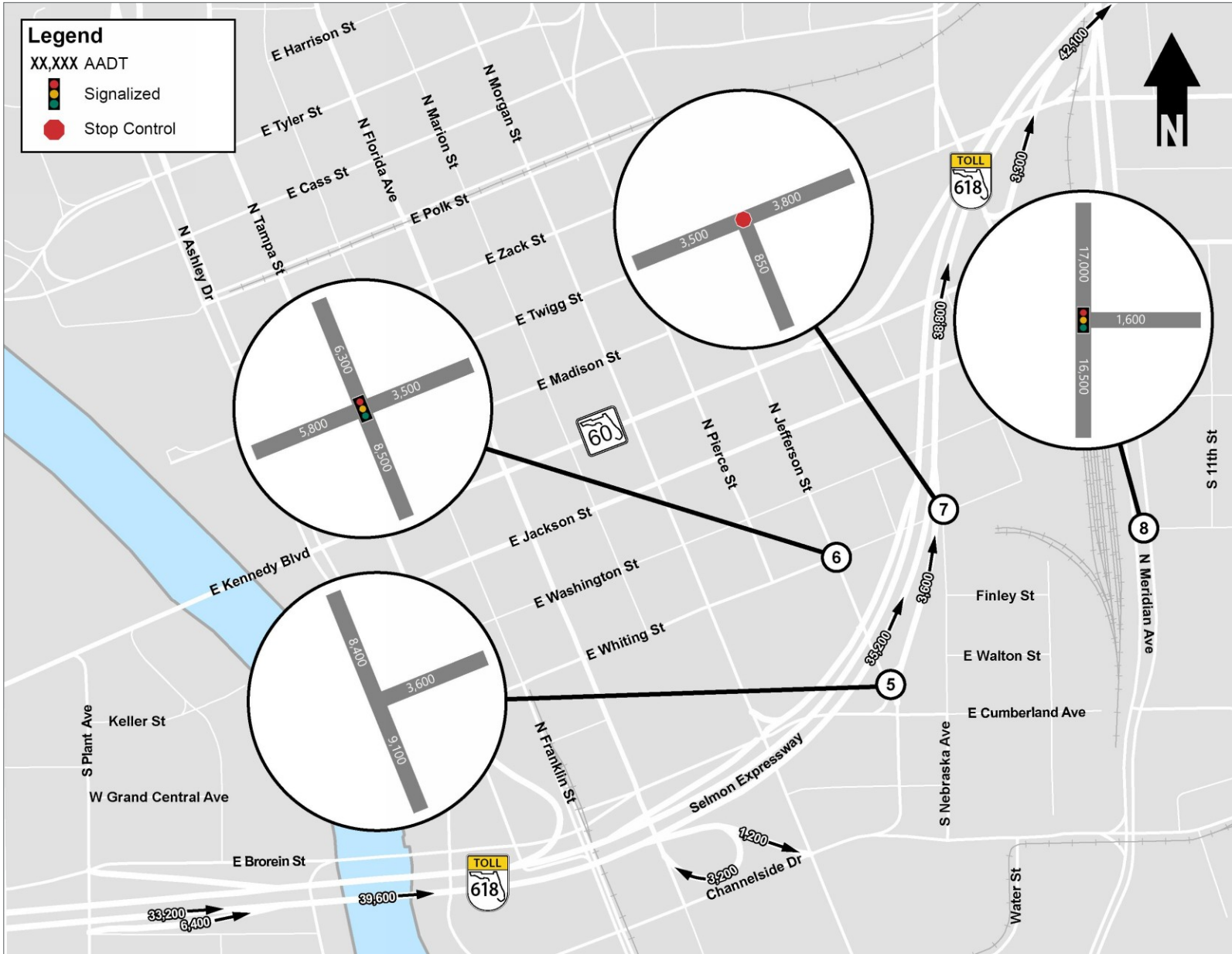


Figure 3.2b: Existing Year (2019) AADT

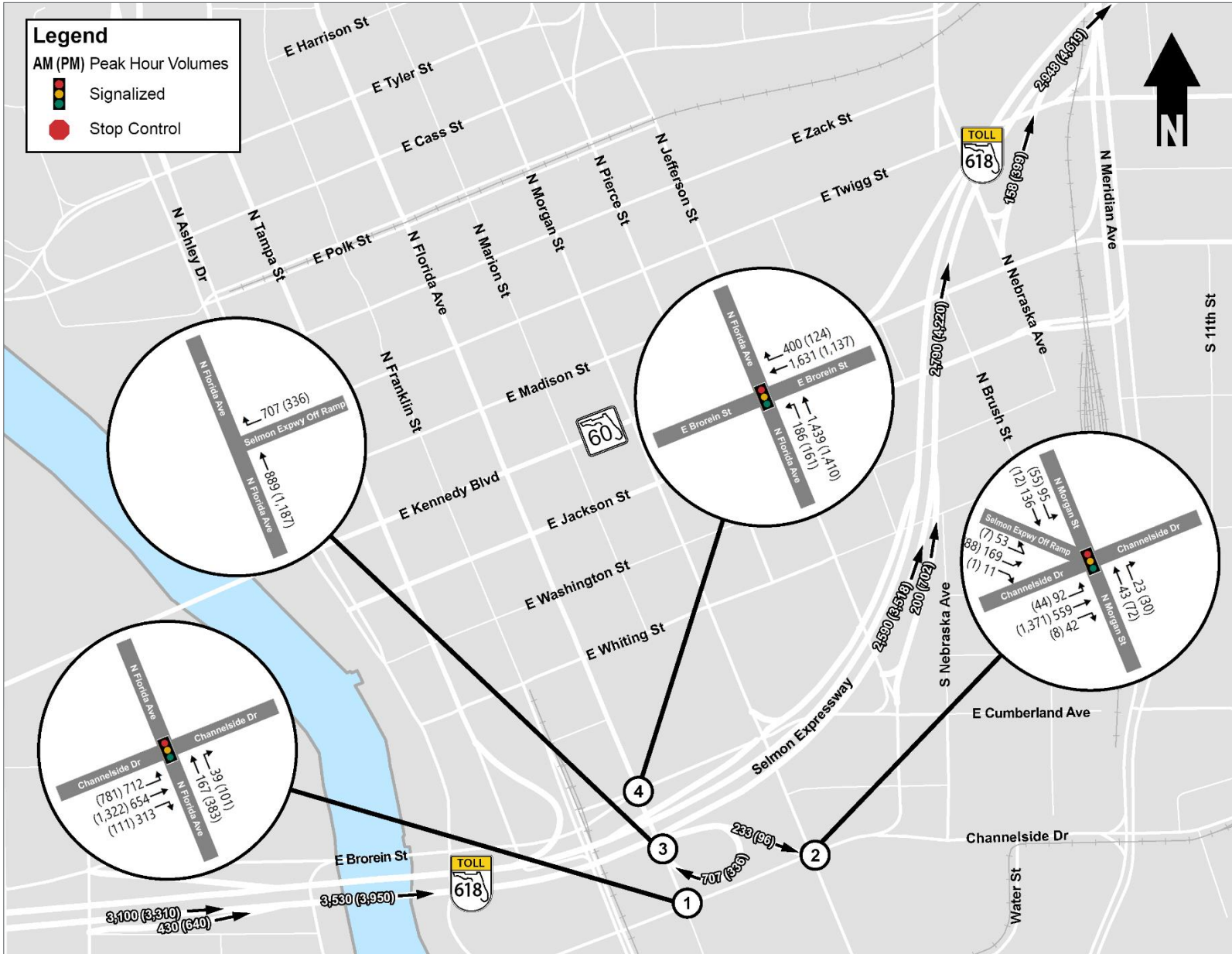


Figure 3.3a: Existing Year (2019) Peak Hour Volumes

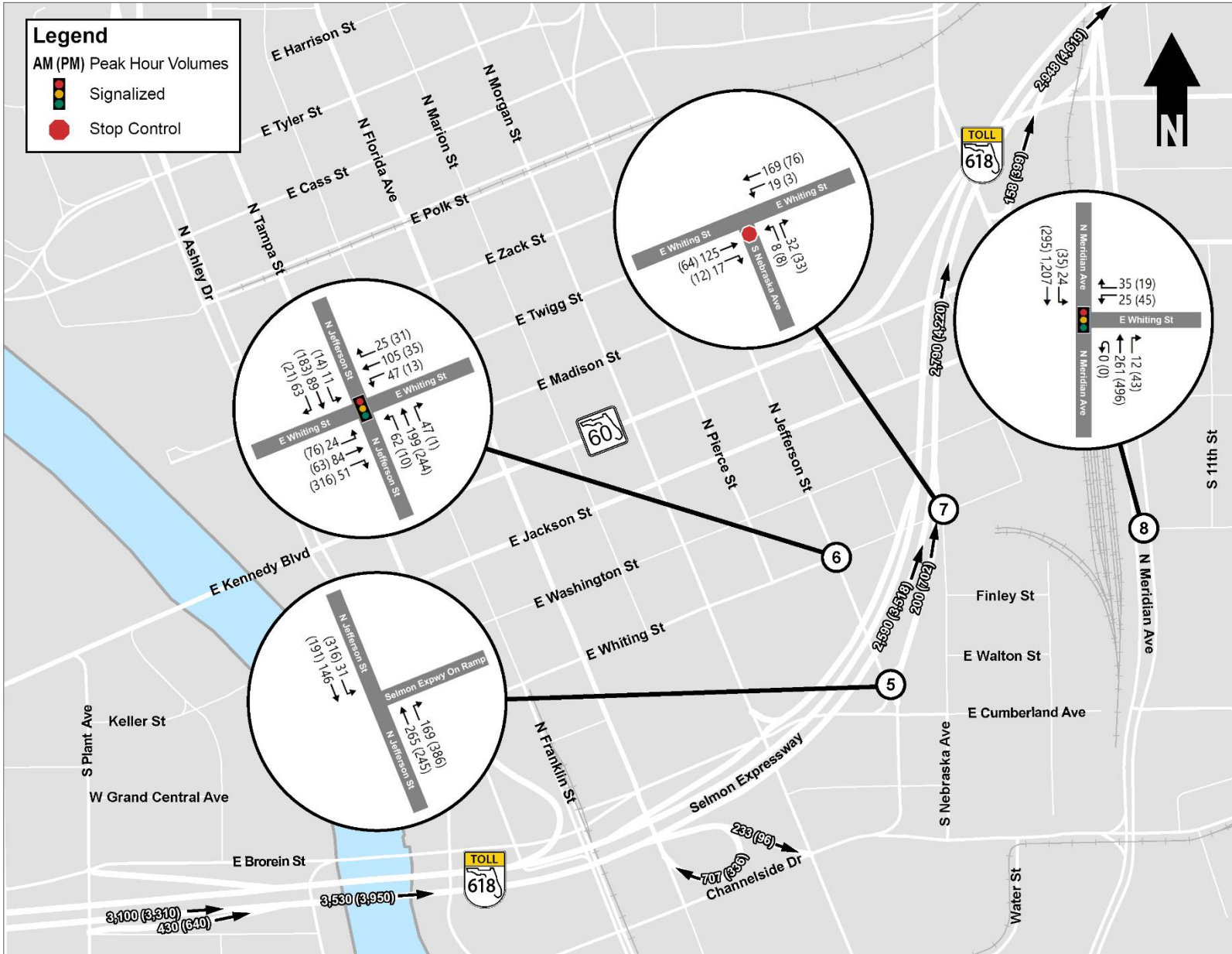


Figure 3.3b: Existing Year (2019) Peak Hour Volumes

4.0 Existing Year (2019) Operational Analysis

4.1 Vissim Model Development and Calibration

Existing year (2019) traffic operations for the eastbound Selmon Expressway and Downtown East/West IMR were evaluated using PTV Vissim 2020. Vissim tracks individual vehicle movements and interactions more realistically than typical *Highway Capacity Manual* (HCM) methods and quantifies the performance of individual movements, overall delays, and queue lengths for freeways, ramps, and intersections. Vissim models for the AM and PM peak periods were constructed and calibrated to the traffic count and speed data collection efforts summarized previously in **Section 2.2**. The 2021 FDOT *Traffic Analysis Handbook* was used as guideline for the development of the Vissim models. The development of the Vissim models and the calibration process are documented within the *Vissim Calibration and Validation Report* dated February 2021, and is included in **Appendix F**.

The Vissim models were utilized to evaluate traffic operations for the existing year (2019). All simulation outputs are based on the average data from ten simulation runs. Consistent with the approved MLOU, the Measures of Effectiveness (MOEs) that were assessed from the simulation analysis include the following:

- Intersection Node Evaluation: Traffic volume, delay, and maximum queue length for the study area intersections for all movements.
- Link Evaluation Segments: Demand versus simulated traffic volume, vehicle Estimated Density, and average speed within the study area.
- Network-Wide Output: Traffic volume including latent volume, total travel time, total delay time, average speed, and vehicle-miles traveled (VMT).

To evaluate congestion level thresholds, the following colors, from the *FDOT 2021 Traffic Analysis Handbook*, *Table 9-12* will be used and are provided in **Table 4.1**. Per this handbook, speeds will be evaluated against the posted speed.

Table 4.1: Congestion Level Thresholds

Segment	Posted Speed (55 mph)
Uncongested	>=53
Lightly Congested	< 53-48
Moderately Congested	< 48-43
Heavily Congested	< 43

4.2 Freeway Segment Analysis

Freeway segment analysis was conducted along each segment of eastbound Selmon Expressway for the existing year (2019). The results for the existing year (2019) freeway segment analysis for the AM and PM peak hours are shown in **Table 4.2**. The results of the analysis indicate that the segments from the Plant Avenue on-ramp to the Downtown East/West off-ramp and from the Downtown East/West off-ramp to the Jefferson Street on-ramp currently do not meet the level of service (LOS) target D.

Table 4.2: Existing Year (2019) Freeway Segment Analysis

Segment	Segment Type	Number of Lanes	Demand Volume (veh/hr)	Simulated Volume (veh/hr)	Percent Demand Processed	Simulated Speed (mph)	Estimated Density (pc/mi/ln)	Estimated LOS
<i>AM Peak Hour</i>								
Plant Ave On-Ramp to Florida Ave/ Channelside Dr Off-Ramp	Weave	3	3,530	3,509	99%	49	27	D
Florida Ave/Channelside Dr Off-Ramp to Jefferson St On-Ramp	Basic	2	2,590	2,569	99%	50	26	C
Jefferson St On-Ramp to Nebraska Ave On-Ramp	Merge	3	2,790	2,759	99%	50	24	C
<i>PM Peak Hour</i>								
Plant Ave On-Ramp to Florida Ave/ Channelside Dr Off-Ramp	Weave	3	3,950	4,194	106%	44	41	E
Florida Ave/Channelside Dr Off-Ramp to Jefferson St On-Ramp	Basic	2	3,518	3,758	107%	47	40	E
Jefferson St On-Ramp to Nebraska Ave On-Ramp	Merge	3	4,220	4,453	106%	47	36	D

4.3 Intersection Analysis

Intersection operational analysis was conducted at each of the signalized and stop-controlled intersections within the study area for the existing year (2019). The results of the existing year (2019) intersection analysis for the AM and PM peak hours are shown in **Table 4.3** and **Table 4.4**. The results of the analysis indicate that each of the study intersections meet the LOS target D in the AM and PM peak hours. Only the Selmon Expressway off-ramp movement at the Channelside Drive and Morgan Street intersection does not currently meet the LOS target D, likely due to the reduced amount of green time given to the ramp as compared to the other approaches at the intersection.

Table 4.3: Existing Year (2019) AM Peak Hour Intersection Analysis

ID	Intersection	Eastbound		Westbound		Northbound		Southbound		Off-Ramp		Overall	
		Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS
<i>AM Peak Hour</i>													
1	Channelside Dr and Florida Ave	12.7	B	-	-	33.4	C	-	-	-	-	14.9	B
2	Channelside Dr and Morgan St	13.8	B	-	-	26.7	C	44.4	D	56.6	E	28.0	C
4	Brorein St and Florida Ave	-	-	34.3	C	18.4	B	-	-	-	-	27.2	C
5	Whiting St and Jefferson St	17.6	B	25.2	C	6.8	A	4.9	A	-	-	12.6	B
6	Whiting St and Nebraska Ave*	-	-	-	-	6.2	A	-	-	-	-	-	-
7	Whiting St and Meridian Ave	-	-	34.9	C	2.4	A	2.2	A	-	-	3.5	A

*Only stop-controlled approaches have been summarized.

Table 4.4: Existing Year (2019) PM Peak Hour Intersection Analysis

ID	Intersection	Eastbound		Westbound		Northbound		Southbound		Off-Ramp		Overall	
		Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS
<i>PM Peak Hour</i>													
1	Channelside Dr and Florida Ave	14.2	B	-	-	35.1	C	-	-	-	-	17.8	B
2	Channelside Dr and Morgan St	9.9	A	-	-	31.7	C	41.8	D	61.8	E	15.5	B
4	Brorein St and Florida Ave	-	-	29.9	C	21.7	C	-	-	-	-	25.3	C
5	Whiting St and Jefferson St	14.2	B	20.5	C	5.1	A	5.6	A	-	-	10.6	B
6	Whiting St and Nebraska Ave*	-	-	-	-	5.7	A	-	-	-	-	-	-
7	Whiting St and Meridian Ave	-	-	49.9	D	3.0	A	2.4	A	-	-	6.0	A

*Only stop-controlled approaches have been summarized.

4.4 Queue Analysis

Queue analysis was conducted at each of the signalized and stop-controlled intersections within the study area, as well as along the Selmon Expressway off-ramps, for the existing year (2019). The results of the existing year (2019) queue analysis for the AM and PM peak hours are shown in **Table 4.5**. The results of the analysis indicate that the eastbound approach of the Channelside Drive at Florida Avenue intersection has an observed maximum queue length that spills back to the upstream intersection. However, the upstream intersection traffic control at Channelside Drive at Franklin Street has not been taken into account during the simulation, as it falls outside of the study area. Therefore, the queue may otherwise be stopped by the upstream traffic signal. The results also indicate that the westbound approach of the Brorein Street at Florida Avenue intersection spills back to the upstream intersection in the AM peak hour. Additionally, the results indicate that the off-ramp queue at the Channelside Drive at Morgan Street inte

rsection exceeds the available storage length. The storage lengths of the off-ramps from the Selmon Expressway include the length from gore point to stop bar minus the deceleration length.

Table 4.5: Existing Year (2019) Queue Analysis

ID	Intersection	Eastbound			Westbound			Northbound			Southbound			Off-Ramp		
		L	T	R	L	T	R	L	T	R	L	T	R	L	T	R
Storage Length (ft)																
1	Channelside Dr and Florida Ave	200	200	+	-	-	-	-	450	200	-	-	-	-	-	-
2	Channelside Dr and Morgan St	+	450	350	-	-	-	-	550	550	+	450	-	+	190	+
3	Selmon Off-Ramp to Florida Ave	-	-	-	-	-	-	-	-	-	-	-	-	-	360	-
4	Brerein St and Florida Ave	-	-	-	-	500	+	450	450	-	-	-	-	-	-	-
5	Whiting St and Jefferson St	+	500	500	+	450	+	+	600	+	+	500	+	-	-	-
6	Whiting St and Nebraska Ave*	-	-	-	-	-	-	850	-	+	-	-	-	-	-	-
7	Whiting St and Meridian Ave	-	-	-	200	-	+	-	650	+	250	500	-	-	-	-
AM Peak Hour Maximum Queue Length (ft)																
1	Channelside Dr and Florida Ave	580	580	+	-	-	-	-	127	65	-	-	-	-	-	-
2	Channelside Dr and Morgan St	+	149	82	-	-	-	-	75	69	+	251	-	+	317	+
3	Selmon Off-Ramp to Florida Ave	-	-	-	-	-	-	-	-	-	-	-	-	-	159	-
4	Brerein St and Florida Ave	-	-	-	-	524	+	367	367	-	-	-	-	-	-	-
5	Whiting St and Jefferson St	+	105	+	+	183	+	+	122	+	+	80	+	-	-	-
6	Whiting St and Nebraska Ave*	-	-	-	-	-	-	56	-	+	-	-	-	-	-	-
7	Whiting St and Meridian Ave	-	-	-	112	-	+	-	57	+	13	124	-	-	-	-
PM Peak Hour Maximum Queue Length (ft)																
1	Channelside Dr and Florida Ave	623	623	+	-	-	-	-	228	91	-	-	-	-	-	-
2	Channelside Dr and Morgan St	+	218	40	-	-	-	-	118	71	+	94	-	164	164	+
3	Selmon Off-Ramp to Florida Ave	-	-	-	-	-	-	-	-	-	-	-	-	-	23	-
4	Brerein St and Florida Ave	-	-	-	-	305	+	373	373	-	-	-	-	-	-	-
5	Whiting St and Jefferson St	+	157	+	+	109	+	+	122	+	+	103	+	-	-	-
6	Whiting St and Nebraska Ave*	-	-	-	-	-	-	47	-	+	-	-	-	-	-	-
7	Whiting St and Meridian Ave	-	-	-	49	-	+	-	82	+	33	49	-	-	-	-

Note: Red highlight indicates locations where the queue length exceeds the available storage length.

Off-ramp storage length equals the length from the stop bar to the gore point minus the deceleration length.

*Only stop-controlled approaches have been summarized.

+Shared lane.

4.5 Existing Congestion Patterns

Figures 4.1 and 4.2 illustrate the existing simulated speeds observed within the VISSIM model within the study area for the 2019 AM and PM peak hours, respectively. As can be expected, operational speeds are reduced at the approach to each signalized and stop-controlled intersection. During the AM peak hour, slightly longer queue lengths can be observed for movements associated with inbound traffic into Downtown Tampa. Conversely, slightly longer queue lengths can be observed for movements associated with outbound traffic from Downtown Tampa.

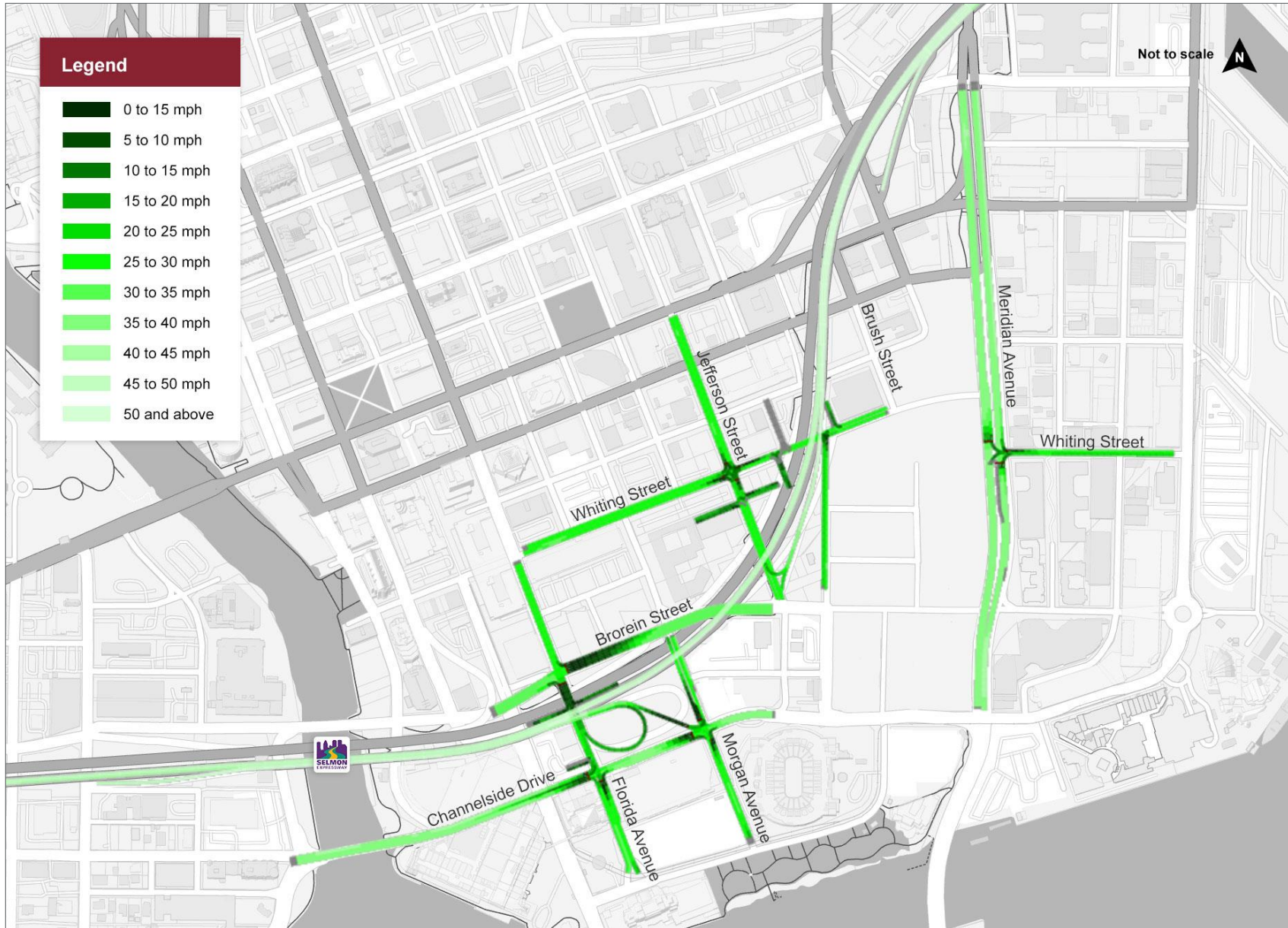


Figure 4.1: Existing Simulated Speed - AM Peak Hour

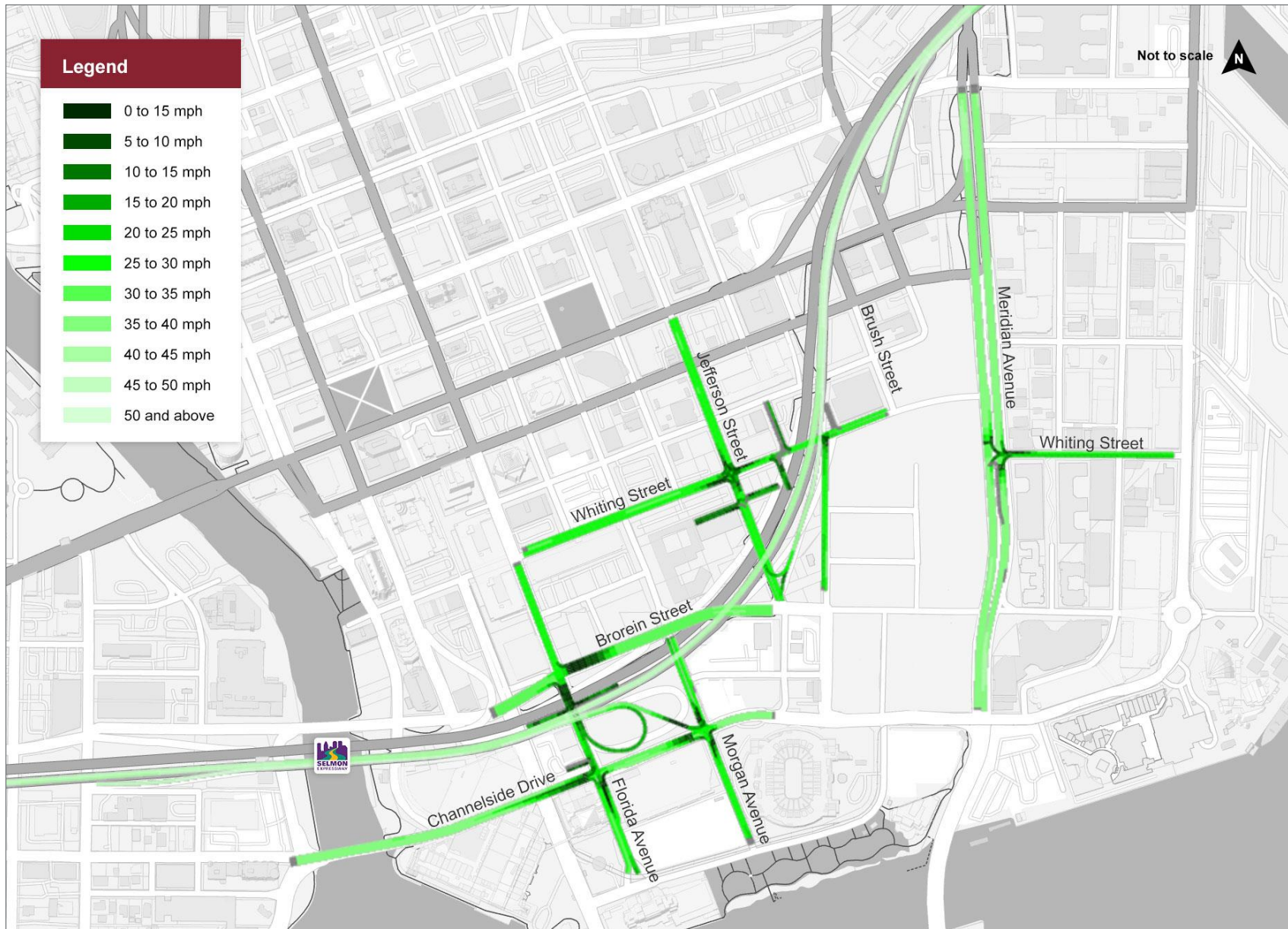


Figure 4.2: Existing Simulated Speed - PM Peak Hour

5.0 Historical Crash Analysis

Five years of validated historical crash data (2014 to 2018) was obtained for the AOI from the FDOT Crash Analysis Reporting (CAR) System Online database and the Crash Data Management System (CDMS).

Descriptive statistics for the entire study area are provided for the following crash attributes:

- Frequency of crashes.
- Crash type.
- Lighting condition.
- Weather conditions.
- Road surface conditions.
- Crash severity and comprehensive crash cost.

Descriptive statistics are provided for each individual study location for the following crash attributes:

- Crash frequency, crash rate, and high crash confidence.
- Most frequent crash type.
- Most common driver contributing cause.
- Crash severity and comprehensive crash cost.
- A comparison of the proportion of bicycle and pedestrian crashes to the statewide average.

As shown in **Figure 5.1**, the individual study locations are classified by intersections and segments, identified by “I” and “E”, respectively. The intersection locations include a 250-foot influence area from the center of the intersection, based on FDOT’s spot location crash rate calculations. The expressway segments are located in between the at the center of the ramp gore points of the on and off-ramps.

A crash history summary indicating the number of crashes, vehicles, fatalities, and injuries that occurred during each of the analysis years is shown in **Table 5.1**. There were 82 reported crashes within the study area during the five-year period. The raw crash data can be found in **Appendix G**. Most crashes occurred between 2015 and 2017 at intersections, with a sharp increase from 2014 to 2015. This increase is due to a large increase in angle type crashes at the Florida Avenue and Brorein Street intersection, increasing from zero crashes to nine. Five of these crashes were related to running the red light, two were related to failing to yield right-of-way, and two were related to careless/negligent driving. However, the frequency of angle crashes at this location decreased from nine crashes in 2015 to two crashes in 2016 and remained below four crashes per year through the rest of the analysis period. Similarly, from 2017 to 2018, there was a decrease in crash frequency at multiple intersections resulting in a large overall decrease within the study area. Crashes along the Selmon Expressway segments were generally less frequent and varied in frequency from year to year.

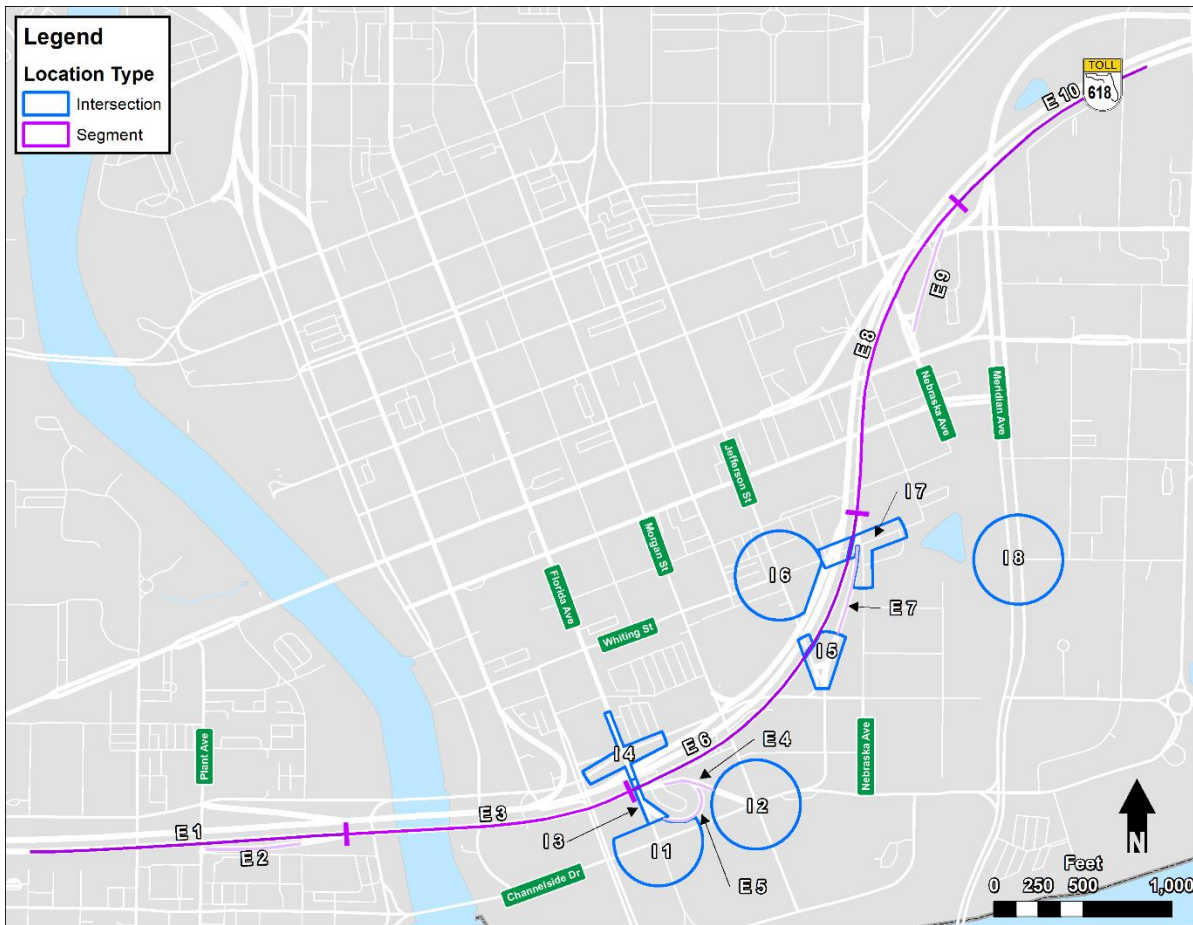


Figure 5.1: Crash Analysis Study Locations

Table 5.1: Crash History Summary

Year	Number of Crashes	Number of Vehicles	Number of Fatalities	Number of Injuries
Intersections				
2014	5	9	0	0
2015	21	45	1	17
2016	14	30	0	7
2017	18	37	0	9
2018	4	8	0	8
Intersection Total	62	129	1	41
Segments				
2014	3	6	0	0
2015	2	3	0	0
2016	6	9	0	1
2017	3	6	0	2
2018	6	8	0	6
Segment Total	20	32	0	9
Grand Total	82	161	1	50

5.1 Crash Rates

The crash rate, expressed as crashes per million entering vehicles (MEV), at each location was calculated using the FHWA's crash rate formula adapted for million vehicle miles traveled as follows¹:

$$\text{Crash Rate} = \frac{1,000,000 * C}{365 * N * V * L}$$

Where

C = Total number of crashes for the analysis period.

N = Number of years in the analysis period.

V = AADT per year on the roadway segment or entering the intersection during the analysis period.

L = The length of the roadway segment in miles when analyzing roadway segments, or 1 when analyzing intersections.

Each crash rate was then compared to the statewide average for that facility type, using the procedure detailed in the FDOT *CAR Online User Manual* Appendix H, to determine the level of confidence that a location's crash rate is higher than the statewide average (i.e., the high crash confidence). This calculation is based not only on the difference between the actual and average crash rates, but also the AADT at a location. After the initial calculation, the confidence level is reduced if the actual crash rate is lower than the statewide average and then reduced again if a location has fewer than eight crashes. Instead of only providing a yes/no comparison of the actual crash rate being higher than the statewide average, the high crash confidence is a quantitative metric that accounts for level of exposure and total crashes at a location, which provides a more granular and holistic measure of whether a location should be considered a high crash location.

A summary of the crash rates for the arterial intersections and Selmon Expressway segments are shown in **Tables 5.2** and **5.3**, respectively. Locations that do not have statewide average crash rates associated with their facility type (e.g., ramp locations) have a statewide average crash rate and high crash confidence percentage listed as N/A. Standard statistical analysis practices dictate that a 95 percent confidence level is sufficiently high to reject the null hypothesis. In our analysis, the null hypothesis is that a location's crash rate is the same or lower than the statewide average. Therefore, locations with a 95 percent high crash confidence level or higher are considered to be significantly higher than the statewide averages. However, no locations in the study area have a high crash confidence level of 95 percent or higher.

Figure 5.2 shows a heat map of crashes for the study area. Crashes cluster primarily at the study area intersections, especially along Florida Avenue.

¹ FHWA calculates crash rate in terms of 100 million vehicle-miles traveled. FDOT calculates crash rate in terms of million vehicle-miles traveled, so the constant is adjusted accordingly.

Table 5.2: Arterial Intersection Crash Rates

Map ID	Location	Total Crashes	5-Year Average AADT	Actual Crash Rate	Statewide Average Crash Rate	Crashes Per Year	High Crash Confidence
I 1	Channelside Dr and Florida Ave	17	26,500	0.352	1.129	3.4	15.59%
I 2	Channelside Dr and Morgan St	9	26,100	0.189	4.146	1.8	2.28%
I 3	Selmon Off-Ramp to Florida Ave	1	20,900	0.026	1.534	0.2	0.11%
I 4	Florida Ave and Brorein St	21	28,300	0.407	1.129	4.2	18.02%
I 5	Jefferson St and Selmon On-Ramp	2	6,200	0.177	1.534	0.4	1.44%
I 6	Whiting St and Jefferson St	6	9,900	0.332	0.835	1.2	14.91%
I 7	Whiting St and Nebraska Ave	2	4,100	0.267	0.343	0.4	9.73%
I 8	Whiting St and Meridian Ave	4	20,900	0.105	0.51	0.8	5.15%

Table 5.3: Segment Crash Rates

Map ID	Location	Total Crashes	5-Year Average AADT	Segment Length (mi)	Actual Crash Rate	Statewide Average Crash Rate	Crashes Per Year	High Crash Confidence
<i>Eastbound Selmon Expressway</i>								
E 1	West of On-Ramp from Plant Ave	5	21,700	0.34	0.371	0.775	1.0	14.96%
E 3	On-Ramp from Plant Ave to Off-Ramp to Downtown East/West	3	29,100	0.30	0.187	0.775	0.6	4.52%
E 6	Off-Ramp to Downtown East/West to On-Ramp from Jefferson St	3	27,100	0.41	0.149	0.775	0.6	3.60%
E 8	On-Ramp from Jefferson St to On-Ramp from Nebraska Ave	3	27,100	0.35	0.173	0.775	0.6	4.19%
<i>Off-Ramps</i>								
E 4	Off-Ramp to Morgan St	2	2,200	0.06	9.057	N/A	0.4	N/A
E 5	Off-Ramp to Florida Ave	1	3,200	0.07	2.518	N/A	0.2	N/A
<i>On-Ramps</i>								
E 2	On-Ramp from Plant Ave	0	2,200	0.10	0	N/A	0	N/A
E 7	On-Ramp from Jefferson St	0	2,800	0.10	0	N/A	0	N/A
E 9	On-Ramp from Nebraska Ave	2	2,800	0.11	3.464	N/A	0.4	N/A

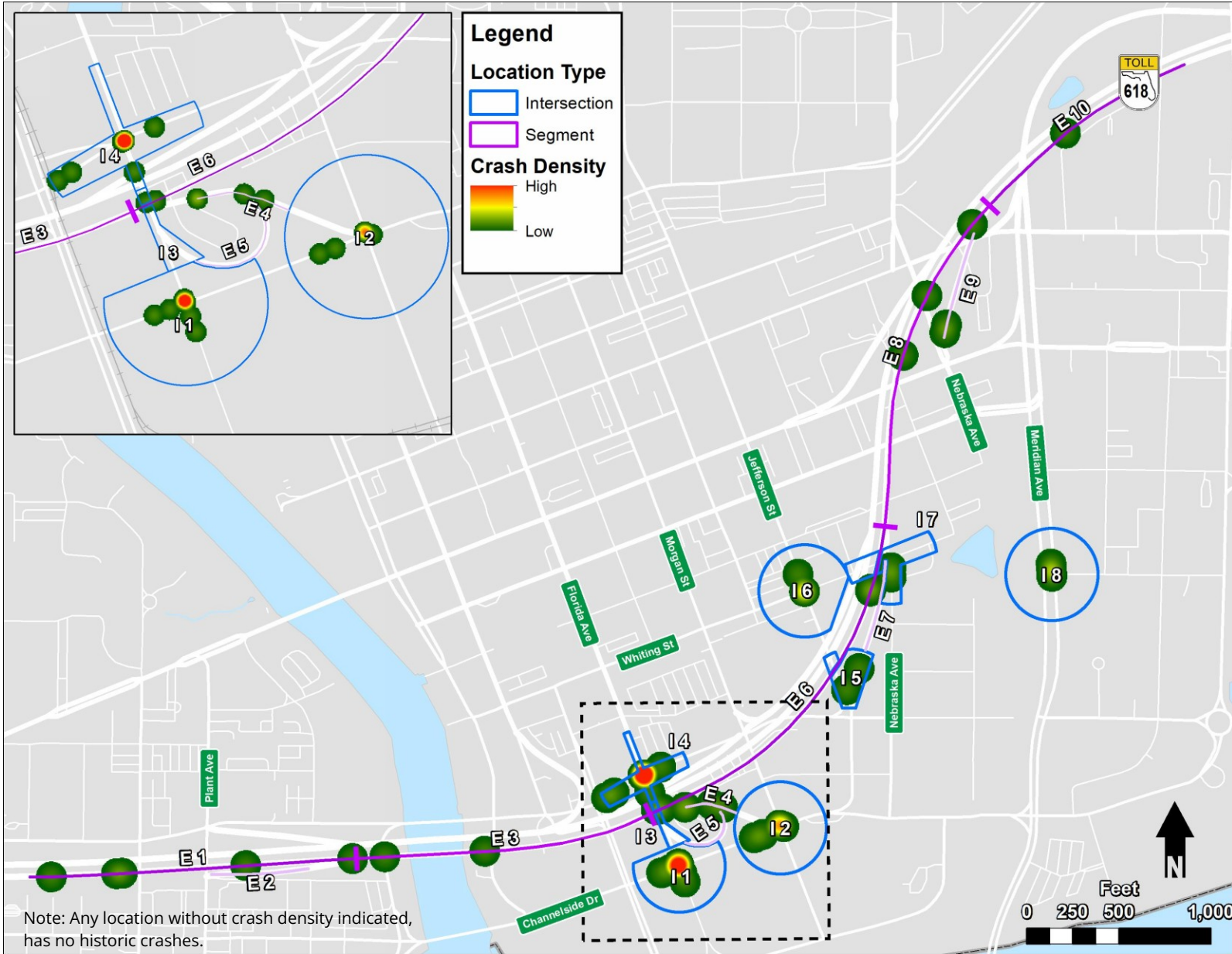


Figure 5.2: Crash Heat Map

5.2 Most Frequent Crash Type

A summary of the crash types for the entire study area is shown in **Table 5.4**. The crash types with the highest frequencies were angle (29 crashes, 35.4 percent), sideswipe (17 crashes, 20.7 percent), and rear end (14 crashes, 17.1 percent).

Table 5.4: Crash Type Summary

Category	2014	2015	2016	2017	2018	Total	Mean	Percentage
Angle	2	11	5	8	3	29	5.8	35.4%
Bicycle	0	0	1	0	0	1	0.2	1.2%
Head On	0	0	0	0	0	0	0.0	0.0%
Hit Fixed Object	1	1	2	1	4	9	1.8	11.0%
Hit Non-Fixed Object	0	2	1	1	0	4	0.8	4.9%
Left Turn	0	3	0	2	1	6	1.2	7.3%
Other	0	0	0	0	0	0	0.0	0.0%
Overturn/Rollover	1	0	0	0	0	1	0.2	1.2%
Pedestrian	0	0	0	0	0	0	0.0	0.0%
Ran Off Road	0	0	0	0	0	0	0.0	0.0%
Rear End	0	1	7	6	0	14	2.8	17.1%
Right Turn	0	0	0	0	0	0	0.0	0.0%
Sideswipe	3	5	4	3	2	17	3.4	20.7%
Single Vehicle	1	0	0	0	0	1	0.2	1.2%
Unknown	0	0	0	0	0	0	0.0	0.0%
Total	8	23	20	21	10	82	20.5	100.0%

Angle crashes were the most common within the study area. The most common contributing factor to these crashes was drivers running the red light (55 percent). Sideswipe crashes were the second most common within the study area. The most common contributing factor to these crashes was improper turning (35 percent). Rear end crashes were the third most common within the study area. The most common contributing factor to these crashes was careless/negligent driving (57 percent).

The most common crash type for each location on the Selmon Expressway segments and the arterial intersections are shown in **Tables 5.5** and **5.6**, respectively. In general, hit fixed object crashes were most common on the Selmon Expressway. According to the *Highway Safety Manual* (HSM), contributing factors for these crashes include obstruction in or near the roadway; inadequate pavement markings; inadequate signs, delineators, guardrail; slippery pavement; roadside design (e.g., inadequate clear distance); inadequate roadway geometry; and excessive speed. At the arterial intersections, the most common crashes were angle crashes.

Table 5.5: Most Common Crash Type – Segments

Map ID	Location	Most Common Crash Type	Total of Crash Type	Percentage of Location Total
<i>Eastbound Selmon Expressway</i>				
E 1	On-Ramp from Plant Ave	Rear End	2	40.0%
E 3	Off-Ramp to Downtown East/West	Hit Fixed Object	2	66.7%
E 6	On-Ramp from Jefferson St	Hit Non-Fixed Object	2	66.7%
E 8	On-Ramp from Nebraska Ave	Angle	2	66.7%
<i>Off-Ramps</i>				
E 4	Off-Ramp to Morgan St	Hit Fixed Object	2	100.0%
E 5	Off-Ramp to Florida Ave	Hit Fixed Object	1	100.0%
<i>On-Ramps</i>				
E 2	On-Ramp from Plant Ave	None	0	0.0%
E 7	On-Ramp from Jefferson St	None	0	0.0%
E 9	On-Ramp from Nebraska Ave	Hit Fixed Object Rear End	1	50.0%

Table 5.6: Most Common Crash Type – Intersections

Map ID	Location	Most Common Crash Type	Total of Crash Type	Percentage of Location Total
I 1	Channelside Dr and Florida Ave	Sideswipe	8	47.1%
I 2	Channelside Dr and Morgan St	Angle/Sideswipe	3	33.3%
I 3	Selmon Off-Ramp to Florida Ave	Sideswipe	1	100.0%
I 4	Florida Ave and Brorein St	Angle	15	71.4%
I 5	Jefferson St and Selmon On-Ramp	Left Turn/Sideswipe	1	50.0%
I 6	Whiting St and Jefferson St	Angle	3	50.0%
I 7	Whiting St and Nebraska Ave	Rear End	2	100.0%
I 8	Whiting St and Meridian Ave	Left Turn/Rear End	2	50.0%

A map of crash locations by crash type is shown in **Figure 5.3**. Note that the bicycle crash on Florida Avenue has been depicted with a star for emphasis. No pedestrian crash incidents were reported for the analysis period. Crash types without any associated crashes were excluded from the legend.

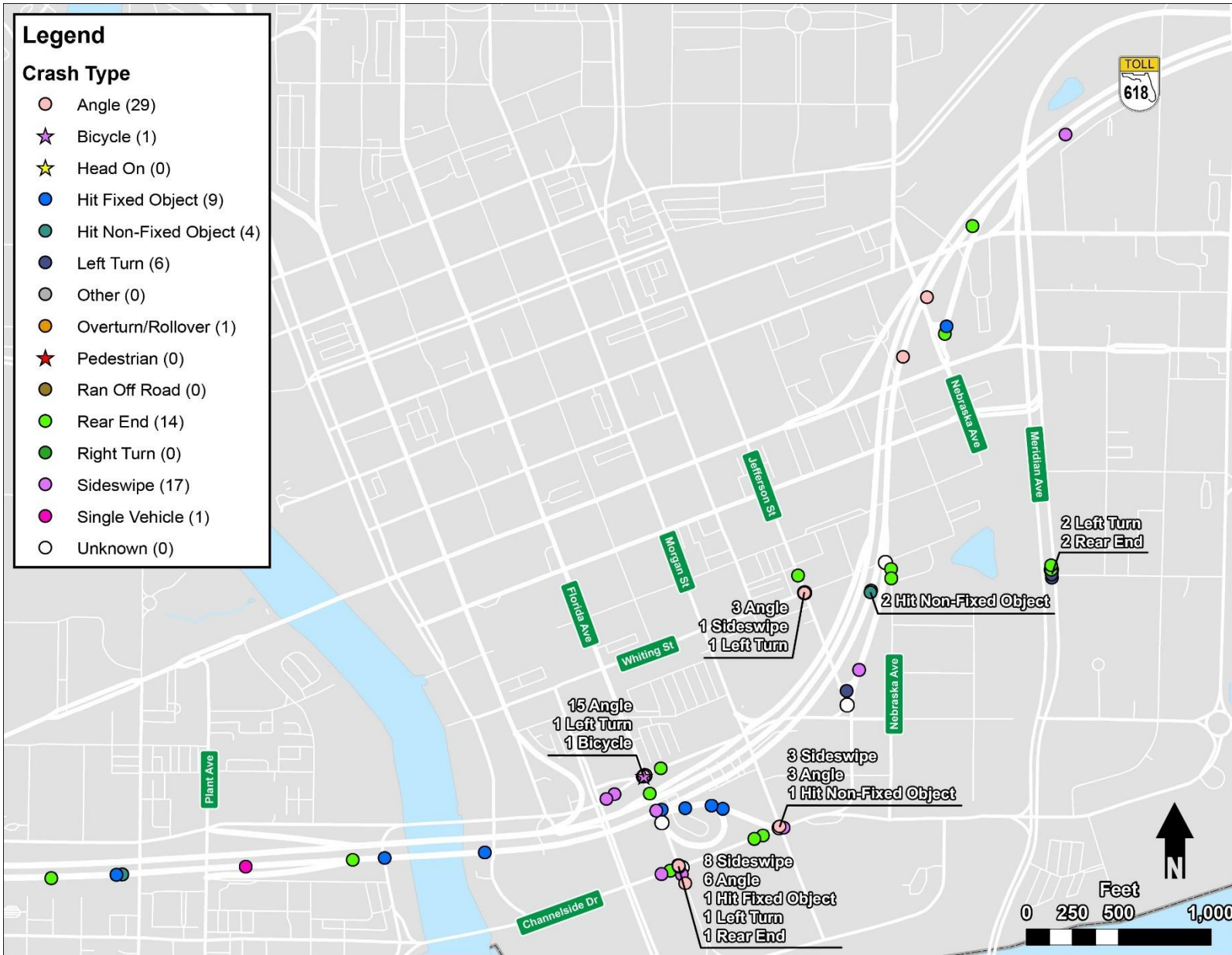


Figure 5.3: Map of Crash Locations by Type

5.3 Driver Contributing Causes

A summary of crashes by driver contributing cause for the entire study area is shown in **Table 5.7**. Among the contributing causes documented in the crash data, careless/negligent driving (22 crashes, 26.8 percent), running a red light (17 crashes, 20.7 percent), and failure to yield right-of-way (10 crashes, 12.2 percent) were among the highest.

Table 5.7: Driver Contributing Cause Summary

Category	2014	2015	2016	2017	2018	Total	Mean	Percentage
Careless/ Negligent Driving	0	7	7	4	4	22	4.4	26.8%
Ran Red Light	0	7	3	5	2	17	3.4	20.7%
Failed to Yield Right-of-Way	1	4	1	2	2	10	2.0	12.2%
No Contributing Action	2	1	2	1	0	6	1.2	7.3%
Improper Turn	1	2	2	1	0	6	1.2	7.3%
Failed to Keep in Proper Lane	1	1	2	1	0	5	1.0	6.1%
Followed too Closely	0	0	1	3	0	4	0.8	4.9%
Improper Backing	0	0	0	3	0	3	0.6	3.7%
Other Contributing Action	1	1	0	0	0	2	0.4	2.4%
Drove too Fast for Conditions	0	0	1	0	1	2	0.4	2.4%
Hydroplaned	0	0	1	0	1	2	0.4	2.4%
Ran off Roadway	1	0	0	0	0	1	0.2	1.2%
Disregarded other Traffic Sign	0	0	0	1	0	1	0.2	1.2%
Unknown	0	0	0	0	0	0	0.0	0.0%
Improper Passing	0	0	0	0	0	0	0.0	0.0%
Wrong Side of Wrong Way	0	0	0	0	0	0	0.0	0.0%
Exceeded Posted Speed	0	0	0	0	0	0	0.0	0.0%
Ran Stop Sign	0	0	0	0	0	0	0.0	0.0%
Disregarded Other Road Markings	0	0	0	0	0	0	0.0	0.0%
Over-Correcting/ Oversteering	1	0	0	0	0	1	0.2	1.2%
Swerved Due To Weather/Hazard	0	0	0	0	0	0	0.0	0.0%
Erratic/Reckless Driving	0	0	0	0	0	0	0.0	0.0%
Total	8	23	20	21	10	82	16.4	100.0%

5.4 Lighting, Weather, and Road Surface Conditions

The HSM indicates that crashes that take place during nighttime or on wet pavement may have design related contributing causes. **Table 5.8** summarizes crashes by lighting, roadway surface, and weather condition for the entire study area. There were 25 (30.5 percent) night/dusk/dawn crashes reported, which is lower than the statewide average for all roadways of 35 percent, and 11 (13.4 percent) of the total crashes occurred under wet/slippery pavement conditions, which is lower than the statewide average for all roadways of 25 percent. Statewide crash averages for lighting conditions and surface conditions were provided by request from the FDOT Central Office Safety Engineering Department.

Table 5.8: Crash Conditions Summary

Category	2014	2015	2016	2017	2018	Total	Mean	Percentage
<i>Surface Condition</i>								
Dry	8	22	16	17	8	71	14.2	86.6%
Wet	0	1	4	4	2	11	2.2	13.4%
Standing Water	0	0	0	0	0	0	0.0	0.0%
Unpaved (Mud, Dirt, Gravel, Sand)	0	0	0	0	0	0	0.0	0.0%
Slick (Ice, Frost, Oil)	0	0	0	0	0	0	0.0	0.0%
Other	0	0	0	0	0	0	0.0	0.0%
Unknown	0	0	0	0	0	0	0.0	0.0%
Total	8	23	20	21	10	82	16.4	100.0%
<i>Weather</i>								
Clear	7	21	16	15	7	66	13.2	80.5%
Cloudy	1	2	0	2	1	6	1.2	7.3%
Rain	0	0	4	4	2	10	2.0	12.2%
Other Inclement Weather	0	0	0	0	0	0	0.0	0.0%
Unknown	0	0	0	0	0	0	0.0	0.0%
Total	8	23	20	21	10	82	16.4	100.0%
<i>Lighting Condition</i>								
Day	4	16	16	15	6	57	11.4	69.5%
Dawn	0	0	0	0	0	0	0.0	0.0%
Dusk	2	1	0	0	0	3	0.6	3.7%
Dark - Lighted	2	5	4	6	4	21	4.2	25.6%
Dark - Not Lighted	0	0	0	0	0	0	0.0	0.0%
Dark - Unknown	0	1	0	0	0	1	0.2	1.2%
Other	0	0	0	0	0	0	0.0	0.0%
Unknown	0	0	0	0	0	0	0.0	0.0%
Total	8	23	20	21	10	82	16.4	100.0%

5.5 Crash Severity

A summary of crashes for the study area by severity is shown in **Table 5.9**. Of the 82 reported crashes, 53 (64.6 percent) were property-damage-only crashes, 28 (34.2 percent) were injury-type crashes, and one (1.2 percent) was a fatal crash. The FDOT KABCO crash costs, from the FDOT *Florida Design Manual* (FDM) 2022 edition, are summarized in **Table 5.10**. Using these crash costs, the total comprehensive crash cost of all crashes in the study area was approximately \$15,679,000.

Table 5.9: Crash Severity Summary

Category	2014	2015	2016	2017	2018	Total	Percentage
Fatal	0	1	0	0	0	1	1.2%
Severe Injury	0	0	0	0	1	1	1.2%
Moderate Injury	0	1	4	2	2	9	11.0%
Minor Injury	0	8	2	4	4	18	22.0%
Property Damage Only	8	13	14	15	3	53	64.6%
Total Crashes	8	23	20	21	10	82	100.0%
Total Cost (\$1,000s)	62	12,002	1,036	892	1,687	15,679	

Table 5.10: FDOT KABCO Crash Costs

Crash Severity	Comprehensive Crash Cost
Fatal (K)	\$10,890,000
Severe Injury (A)	\$888,030
Moderate Injury (B)	\$180,180
Minor Injury (C)	\$103,950
Property Damage Only (O)	\$7,700

A summary of crash severity and economic cost by location for Selmon Expressway segments and arterial intersections is shown in **Tables 5.11** and **5.12**, respectively. Locations without crashes are excluded from these tables. The average cost per crash at each location was calculated by dividing the total crash cost by the total crashes. This was then compared to the facility's statewide average cost per crash, based on the FDOT average crash cost by facility type, or the overall statewide average cost per crash if the location's facility type did not have a specific cost per crash. This table is included in **Appendix G** for reference. Overall, two locations had a cost per crash higher than the facility type's statewide average. However, one of these locations had fewer than eight crashes. The *CAR Online User Manual* requires a reduction to the high crash confidence calculation if the total number of crashes at a location is fewer than eight. Similarly, there may not be enough crashes at these locations to determine if a crash severity issue is of practical significance.

Table 5.11: Crash Severity – Segments

Map ID	Location	Fatal	Severe Injury	Moderate Injury	Minor Injury	Property Damage Only	Total Crashes	Total Crash Cost	Location Average Cost Per Crash	State Average Cost Per Crash
<i>Eastbound Selmon Expressway</i>										
E 1	On-Ramp from Plant Ave	0	0	0	1	4	5	\$134,750	\$26,950	\$159,093
E 3	Off-Ramp to Downtown East/West	0	0	1	0	2	3	\$195,580	\$65,193	\$159,093
E 6	On-Ramp from Jefferson St	0	0	1	0	2	3	\$195,580	\$65,193	\$159,093
E 8	On-Ramp from Nebraska Ave	0	1	0	0	2	3	\$903,430	\$301,143	\$159,093
<i>Off-Ramps</i>										
E 4	Off-Ramp to Morgan St	0	0	0	0	2	2	\$15,400	\$7,700	\$159,093
E 5	Off-Ramp to Florida Ave	0	0	0	0	1	1	\$7,700	\$7,700	\$159,093
<i>On-Ramps</i>										
E 9	On-Ramp from Nebraska Ave	0	0	0	0	2	2	\$15,400	\$7,700	\$159,093
Total Crashes		0	1	1	2	16	20	\$1,571,790	\$78,590	-

Note: Locations with fewer than eight crashes, but a cost per crash greater than the location's statewide average, are highlighted in yellow.

Table 5.12: Crash Severity – Intersection

Map ID	Location	Fatal	Severe Injury	Moderate Injury	Minor Injury	Property Damage Only	Total Crashes	Total Crash Cost	Location Average Cost Per Crash	State Average Cost Per Crash
I 1	Channelside Dr and Florida Ave	0	0	1	2	14	17	\$495,880	\$29,169	\$159,093
I 2	Channelside Dr and Morgan St	1	0	2	0	6	9	\$11,296,560	\$1,255,173	\$159,093
I 3	Selmon Off-Ramp to Florida Ave	0	0	0	1	0	1	\$103,950	\$103,950	\$159,093
I 4	Florida Ave and Brorein St	0	0	2	7	12	21	\$1,180,410	\$56,210	\$159,093
I 5	Jefferson St and Selmon On-Ramp	0	0	1	1	0	2	\$284,130	\$142,065	\$159,093
I 6	Whiting St and Jefferson St	0	0	0	2	4	6	\$238,700	\$39,783	\$112,896
I 7	Whiting St and Nebraska Ave	0	0	0	0	2	2	\$15,400	\$7,700	\$124,618
I 8	Whiting St and Meridian Ave	0	0	1	3	0	4	\$492,030	\$123,008	\$123,598
Total Crashes		1	0	7	16	38	62	\$14,107,060	\$227,533	-

Note: Locations with a cost per crash greater than the statewide average are highlighted in red.

Figure 5.4 shows the location of fatal and severe crashes, as well as the crash severity priority for each location, within the study area. Low priority locations have a crash cost that is lower than the statewide average. Medium priority locations have a crash cost that is higher than the statewide average, but fewer than eight crashes. High priority locations have a crash cost that is higher than the statewide average and more than eight crashes. The location with the highest comprehensive crash cost was Channelside Drive at Morgan Street, with an estimated total 5-year crash cost of \$11,296,560. This location also had the highest average cost per crash of \$1,255,173.

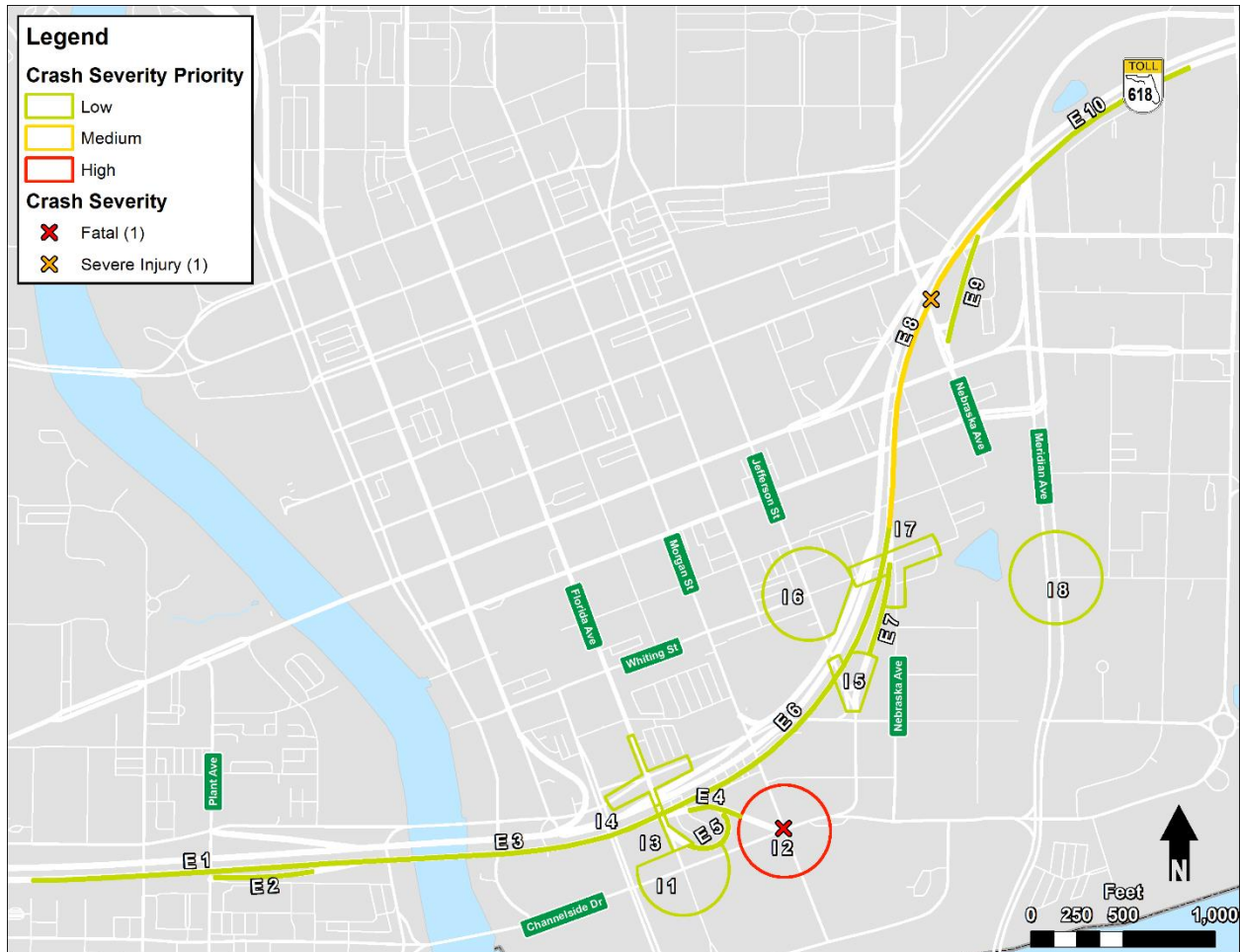


Figure 5.4: Severe Crashes and Crash Severity Priority Map

5.6 Bicycle and Pedestrian Crashes

According to the *2017 Florida Pedestrian and Bicycle Strategic Safety Plan*, 4.8 percent of crashes throughout the state were bicycle or pedestrian related. However, the only location with any bicycle or pedestrian crashes within the AOI is the Florida Avenue at Brorein Street intersection. This location had only one bicycle/pedestrian related crash out of 21 crashes, resulting in a bicycle/pedestrian related crash percentage of 4.76 percent. Therefore, no locations in the study area have a proportion of bicycle and pedestrian crashes in excess of the statewide average.

6.0 Design Alternatives

6.1 No-Build Alternative

The No-Build Alternative assumes existing year (2019) lane geometry and traffic control features at the eastbound Selmon Expressway and Downtown East/West interchange. All committed and programmed projects listed as being funded for construction in the 2040 Cost Feasible Plan were incorporated, including the Water Street Tampa development and THEA Comprehensive Downtown Channelside Improvement Plans. Additionally, the impacts of the South Selmon PD&E Study have been taken into account. This alternative is viable if the cost savings of not constructing the improvements outweigh the safety and operational benefits associated with implementing the Build Alternative. The following improvements are made to the existing conditions:

- Extend Cumberland Avenue from Meridian Avenue to Morgan Street.
- Convert Channelside Drive to a two-way roadway from Morgan Street to Meridian Avenue.

Figure 6.1 shows the lane geometry of the No-Build Alternative for the study area.

6.2 Build Alternative

The primary objective of the Build Alternative is to alleviate future traffic congestion that is anticipated from the surrounding developments within Downtown Tampa, to improve safety along the Selmon Expressway and at the Downtown East/West interchange, and to provide additional route choice for vehicular traffic. The Build Alternative consists of the following improvements, and is shown in Figure 6.2:

- Realigning and widening the eastbound Selmon Expressway off-ramp to Downtown West (Exit 6A) with two lanes off of the Selmon Expressway and three lanes at the Florida Avenue intersection, operating under signal control with no right-turn-on-red (RTOR).
- Clustering the new signal at the Florida Avenue off-ramp with the Channelside Drive at Florida Avenue signal to improve safety for all users.
- Accommodating two left turn and two through lanes on the eastbound approach of the Channelside Drive at Florida Avenue intersection to remove the split phasing of the approach.
- Providing a pedestrian underpass at the location of the existing Channelside Drive off-ramp.
- Relocating the eastbound Selmon Expressway off-ramp to Downtown East (Exit 6B) from its existing access at the Channelside Drive and Morgan Street intersection to new access at Whiting Street with the new ramp terminal intersection operating under signal control with no RTOR.
- Realigning the eastbound Selmon Expressway on-ramp at Jefferson Street to accommodate the new overhead off-ramp to Whiting Street.
- Connecting Whiting Street from Jefferson Street to Meridian Avenue with a four-lane typical section.
- Providing a traffic signal at the Whiting Street at Brush Street intersection.

- Providing two T-intersections at the Whiting Street at Meridian Avenue intersection that operate under a single signal controller.

Design concepts for the Build Alternative can be found in **Appendix H**. The concept plans provided in this IMR are conceptual in nature and not intended for use in design for construction. There is a stub link in the concept plans for the west leg of the southern intersection of Whiting Street and Meridian Avenue. This stub link is not modeled in the safety or VISSIM models as the road will not be opened under this alternative.

In addition to these improvements, an additional lane is added to the Selmon Expressway to the east of Jefferson Street. This lane is included in the operational analysis but will be further studied as part of the on-going Selmon East PD&E Study. This project will only be included in this study as part of the operational analysis.

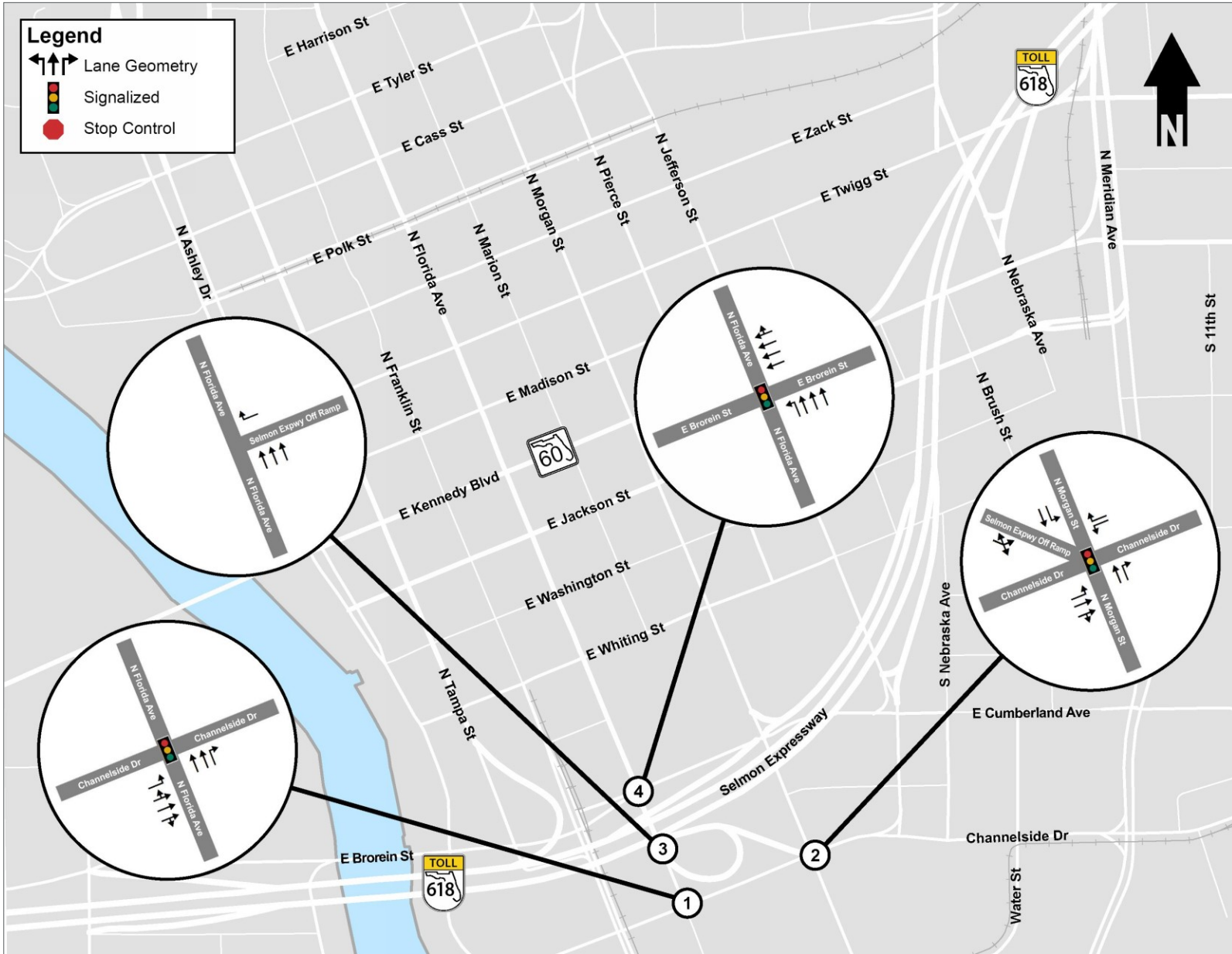


Figure 6.1a: No-Build Alternative Lane Geometry

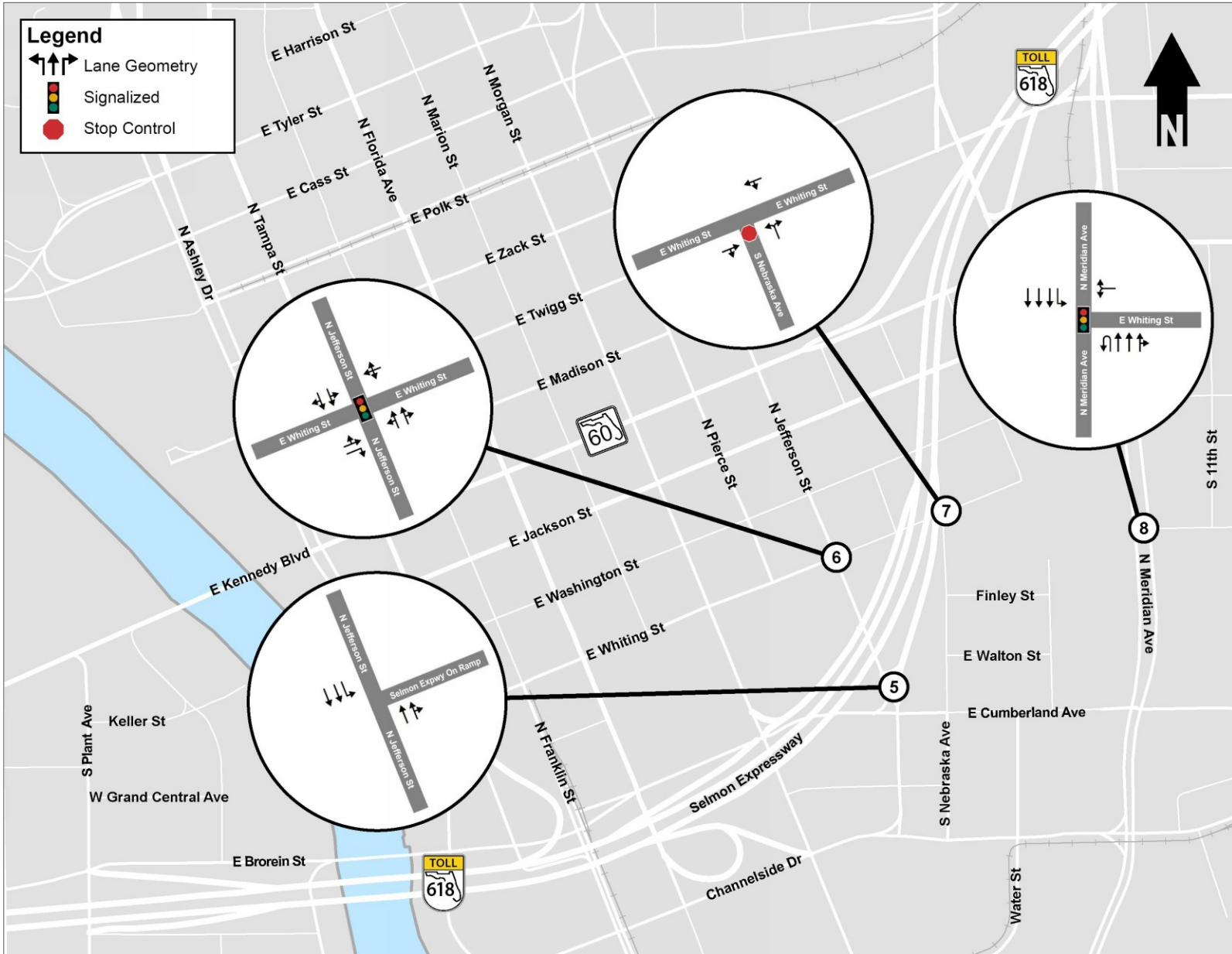


Figure 6.1b: No-Build Alternative Lane Geometry

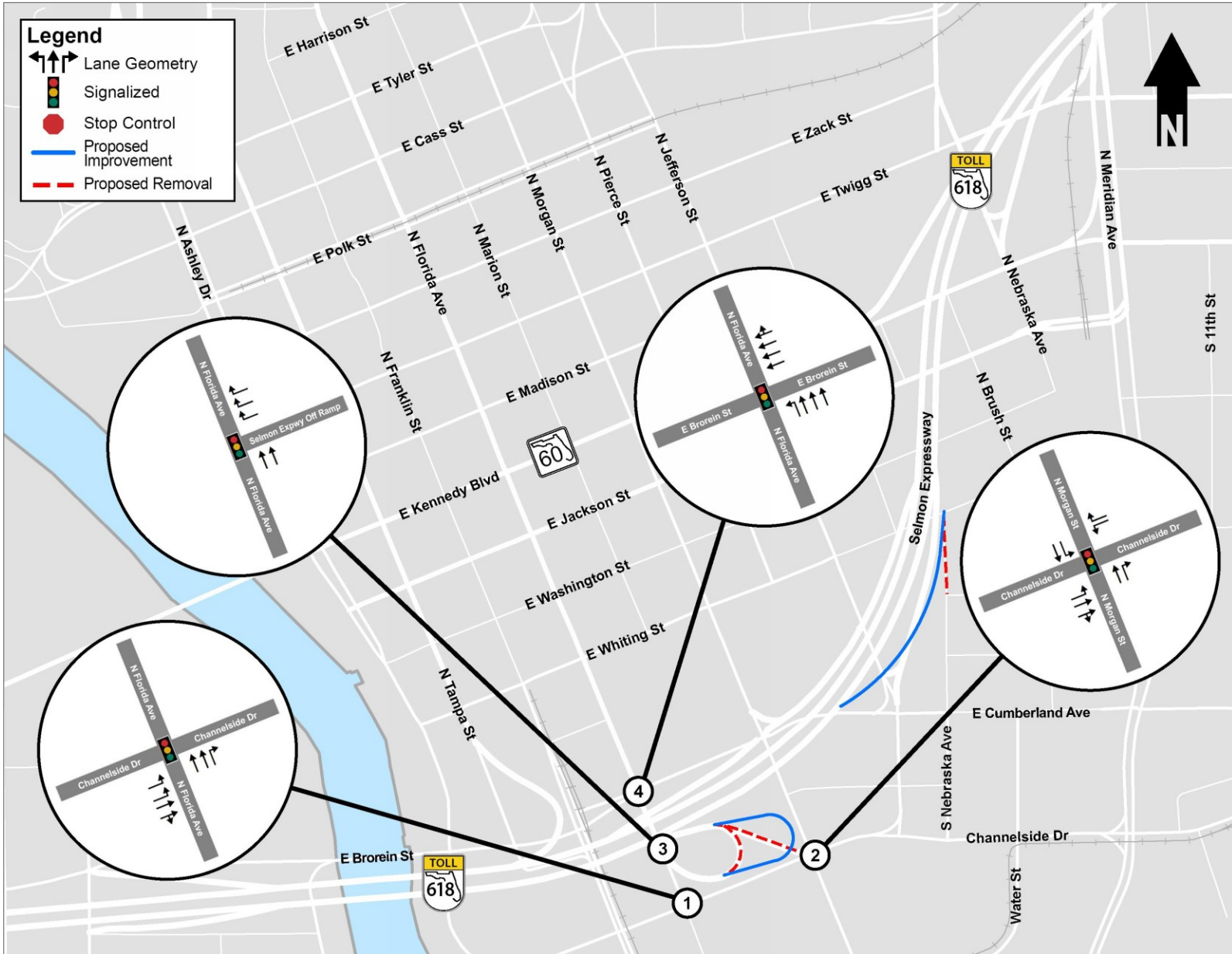


Figure 6.2a: Build Alternative Lane Geometry

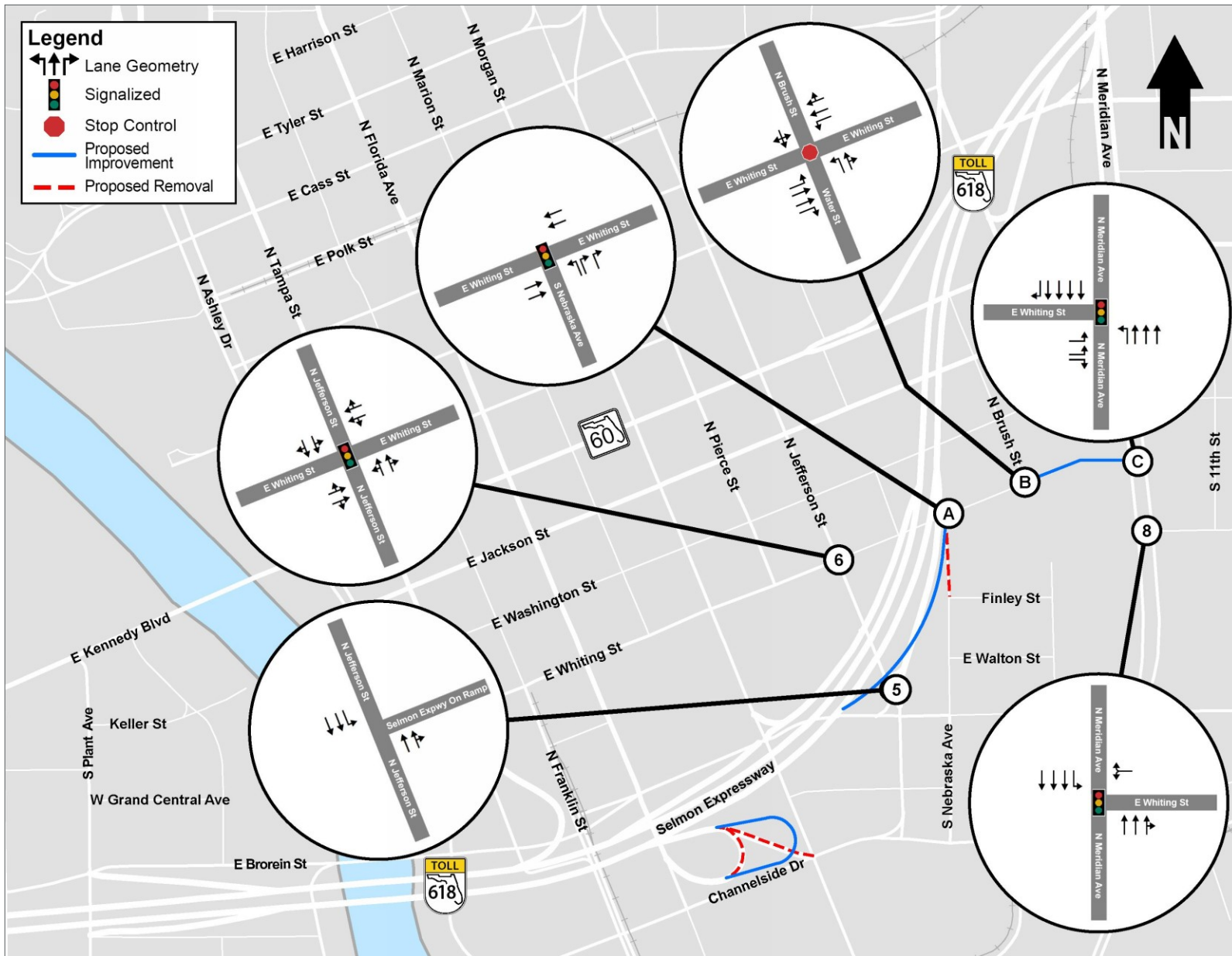


Figure 6.2b: Build Alternative Lane Geometry

7.0 Development of Future Traffic

The following sections summarize the development of the opening year (2026) and design year (2046) traffic volumes for the eastbound Selmon Expressway and Downtown East/West interchange study area. The development of future traffic for the study area requires the analysis of the historical growth in the area, an understanding of the traffic patterns of the surrounding facilities, and an understanding of the travel characteristics of the area. Taking into account such analyses, future travel demand was determined for the study area. This section discusses the methodology for determining the opening year (2026) and design year (2046) design traffic for the No-Build and Build Alternatives.

7.1 Travel Demand Model

The travel demand model used for forecasting is a modified version of the TBRPM v8.2 (TBRPM) created for THEA with a base year of 2015, interim year of 2030, and a horizon year of 2040. This model was previously validated and provided by THEA.

7.2 Methodology for Development of Future Traffic Volumes

Traffic volumes were developed for both the No-Build and Build scenarios using the same inputs (productions and attractions from the external zones) for the design year (2046). The No-Build scenario includes roadway improvements which have been committed as part of the on-going Downtown Tampa redevelopment of Water Street Tampa. The Build scenario includes additional roadway improvements proposed by this study.

AADTs developed through the forecasting process were used in conjunction with the K and D-factors, discussed in **Section 3.1** to develop design year network inputs at each of the external zones. A design year (2046) seed origin-destination (OD) matrix was developed using the existing year (2019) OD matrix and an OD matrix for the Phase 1, 2, and 3 Water Street Tampa development trips found in the THEA *Comprehensive Downtown Channelside Traffic Study Technical Memorandum*. The Water Street Tampa trips OD matrix was developed by distributing the trips generated in the THEA *Comprehensive Downtown Channelside Traffic Study Technical Memorandum* using distribution patterns found in the TBRPM.

Following the development of the design year (2046) OD matrix, trips along the Selmon Expressway were reviewed and adjustments were made as necessary to better match the horizon year TBRPM traffic patterns and past and on-going studies including the on-going Meridian Improvements at Twiggs Street, the Selmon Greenway Enhancements Project, the Selmon East PD&E Study, the South Selmon PD&E Study, the Whiting Street PD&E Study, and the Nebraska Avenue PD&E Study. The volumes on the western edge of the study area on the Selmon Expressway were compared with the South Selmon PD&E Study to ensure consistency.

Opening year (2026) peak hour volumes were subsequently derived by interpolating between the existing year (2019) and design year (2046) peak hour volumes at the network periphery. The volumes were then again assigned utilizing the calibrated existing Visum network.

7.3 Growth Rates

To establish model growth rates at each external zone, methods from *National Cooperative Highway Research Program (NCHRP) Report 765* defined in the 2019 FDOT *Project Traffic Forecasting Handbook* were used to smooth forecasted model volumes. The 2015 and 2040 model AADTs were used as endpoints to interpolate 2019 AADTs, and then were compared to the actual 2019 AADTs. A recommended growth rate was then defined between the smoothed 2040 model AADT and the actual 2019 volumes. This growth rate was applied to the actual 2019 volume to derive opening year (2026) and design year (2046) AADT for all external network zones. The recommended growth rates for background traffic can be found in **Table 7.1**. Where no model link was available to forecast an external network link, a weighted average growth rate of all external network links on surface streets was used (2.1 percent). These growth rates were used to forecast the external zones. The final AADTs provided in the following section have been smoothed and adjusted to match the volumes provided in the South Selmon PD&E Study.

Table 7.1: Forecasts of External Network Links

Location	Model Outputs				Existing 2019 AADT	NCHRP Adjusted 2040 AADT**	Recommended Growth Rate
	2015 AADT	2019 AADT	2040 AADT	Annual Growth			
<i>Eastbound Selmon Expressway</i>							
West of Plant Ave	29,000	33,000	53,500	3.0%	33,000	54,000	2.9%
North of Kennedy Blvd	40,000	45,000	71,000	2.9%	42,500	68,000	2.8%
On-Ramp from Plant Ave	5,700	6,400	10,000	3.0%	6,400	10,000	2.7%
<i>Surface Streets</i>							
Florida Ave, north of Brorein St	17,000	17,500	22,500	1.3%	20,500	26,000	1.3%
Brorein St, east of Florida Ave	12,000	13,500	20,500	2.8%	22,500	32,000	2.0%
Brorein St, west of Florida Ave	10,500	12,000	19,000	3.1%	20,000	29,500	2.2%
Morgan St, north of Channelside Dr	3,300	3,600	5,100	2.2%	4,700	6,400	1.8%
Channelside Dr, east of Morgan St	16,500	16,500	19,000	0.6%	17,000	19,500	0.7%
Morgan St, south of Channelside Dr*	N/A	N/A	N/A	N/A	2,800	4,000	2.1%
Florida Ave, south of Channelside Dr*	N/A	N/A	N/A	N/A	6,600	9,500	2.1%
Channelside Dr, west of Florida Ave	25,000	26,000	32,500	1.2%	24,500	31,000	1.2%
Whiting St, west of Jefferson St	5,300	7,600	19,500	10.7%	5,800	16,500	8.6%
Jefferson St, north of Whiting St	8,700	10,500	19,000	4.7%	6,300	13,000	5.1%
Brush St, north of Whiting St*	N/A	N/A	N/A	N/A	3,800	5,500	2.1%
Meridian Ave, north of Whiting St	12,500	15,000	28,000	5.0%	17,000	31,000	3.9%
Whiting St, east of Meridian Ave*	N/A	N/A	N/A	N/A	1,600	2,300	2.1%
Meridian Ave, south of Whiting St	11,500	13,000	19,000	2.6%	16,500	23,500	2.0%
Jefferson St, south of Selmon On-Ramp*	N/A	N/A	N/A	N/A	9,100	13,000	2.1%

*Where no link exists in the TBRPM, a 2.1% surface street average was used.

**Calculated using the average of difference and ratio methods. If no model link available, calculated using the 2.1% surface street average.

7.4 Future Year AADT

Opening year (2026) and design year (2046) AADT were derived from the application of the standard peak-to-daily ratio (9.0 percent) to the maximum of the AM or PM bi-directional peak hour volumes and then rounded, as guided by the FDOT's *Project Traffic Forecasting Handbook (2019)*. The opening year (2026) and design year (2046) AADT volumes for the No-Build and Build Alternatives are shown in **Figures 7.1** through **7.4**.

7.5 Future Year Peak Hour Volumes

The opening year (2026) and design year (2046) AM and PM peak hour volumes were developed utilizing the calibrated existing Visum network for the study area. Initial AADTs developed through the forecasting process, outlined previously, were used in conjunction with the standard K and D-factors, discussed in

Section 3.1, to assign demand to the network. The resulting assignment was checked for reasonableness between the existing year (2019) and design year (2046) by ensuring the OD relationships either remained the same or increased over time. Due to improvements in the No-Build Alternative and further improvements in the Build Alternative, paths between OD pairs will change and it is possible for some individual movements to decrease, despite total volume increasing. Opening year (2026) and design year (2046) peak hour volumes for the No-Build and Build Alternatives are shown in **Figures 7.5** through **7.8**.

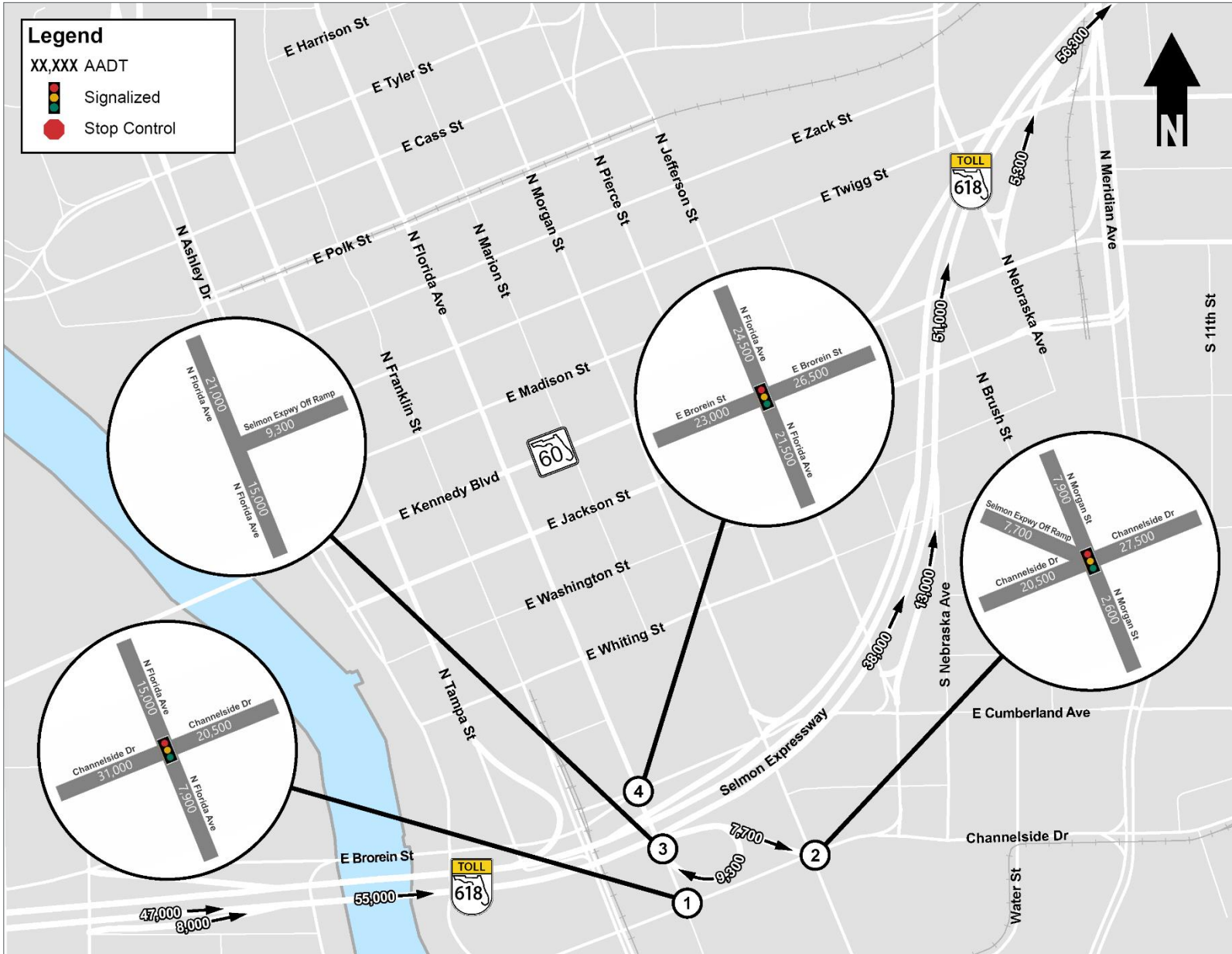


Figure 7.1a: Opening Year (2026) No-Build Alternative AADTs

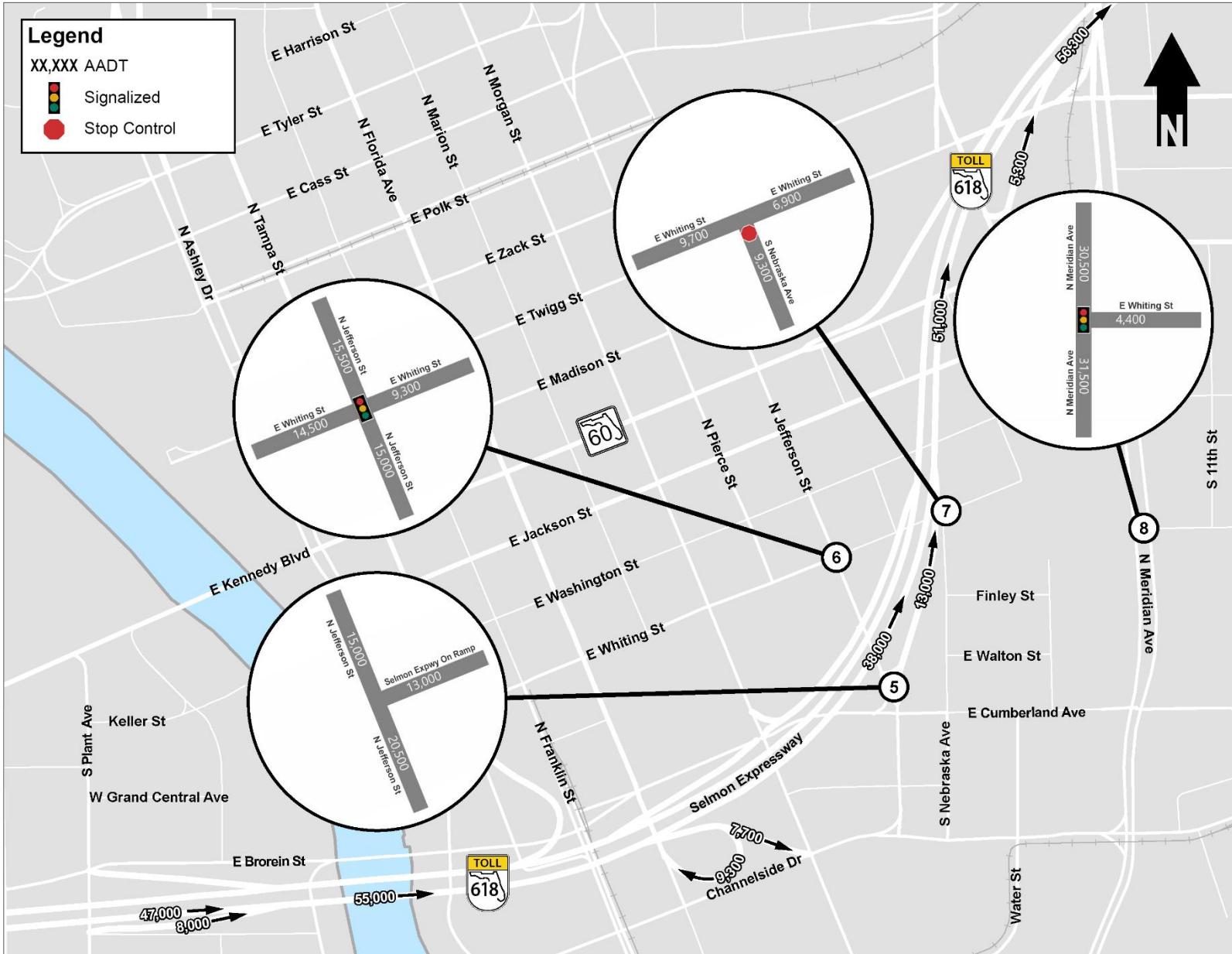


Figure 7.1b: Opening Year (2026) No-Build Alternative AADTs

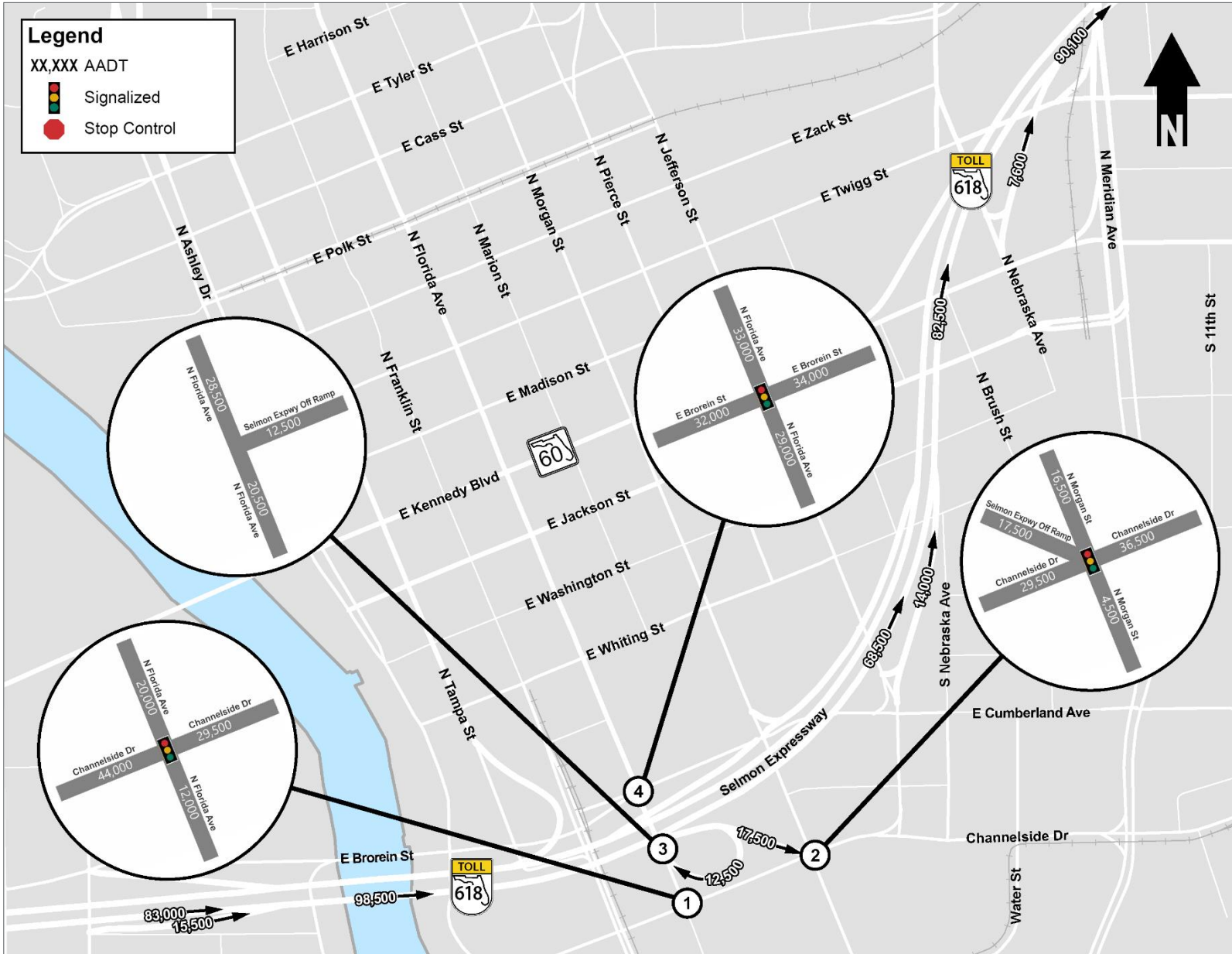


Figure 7.2a: Design Year (2046) No-Build Alternative AADTs

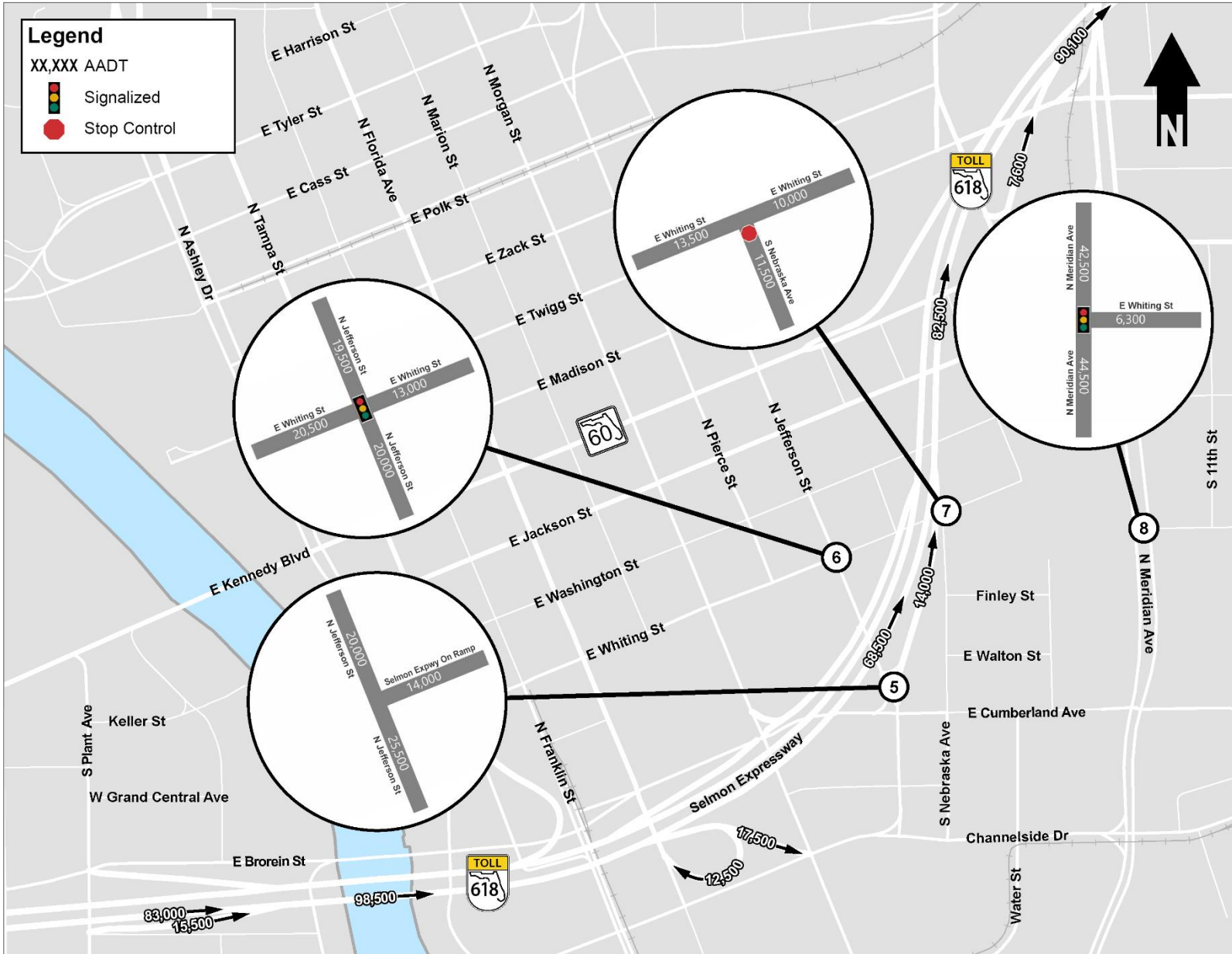


Figure 7.2b: Design Year (2046) No-Build Alternative AADTs

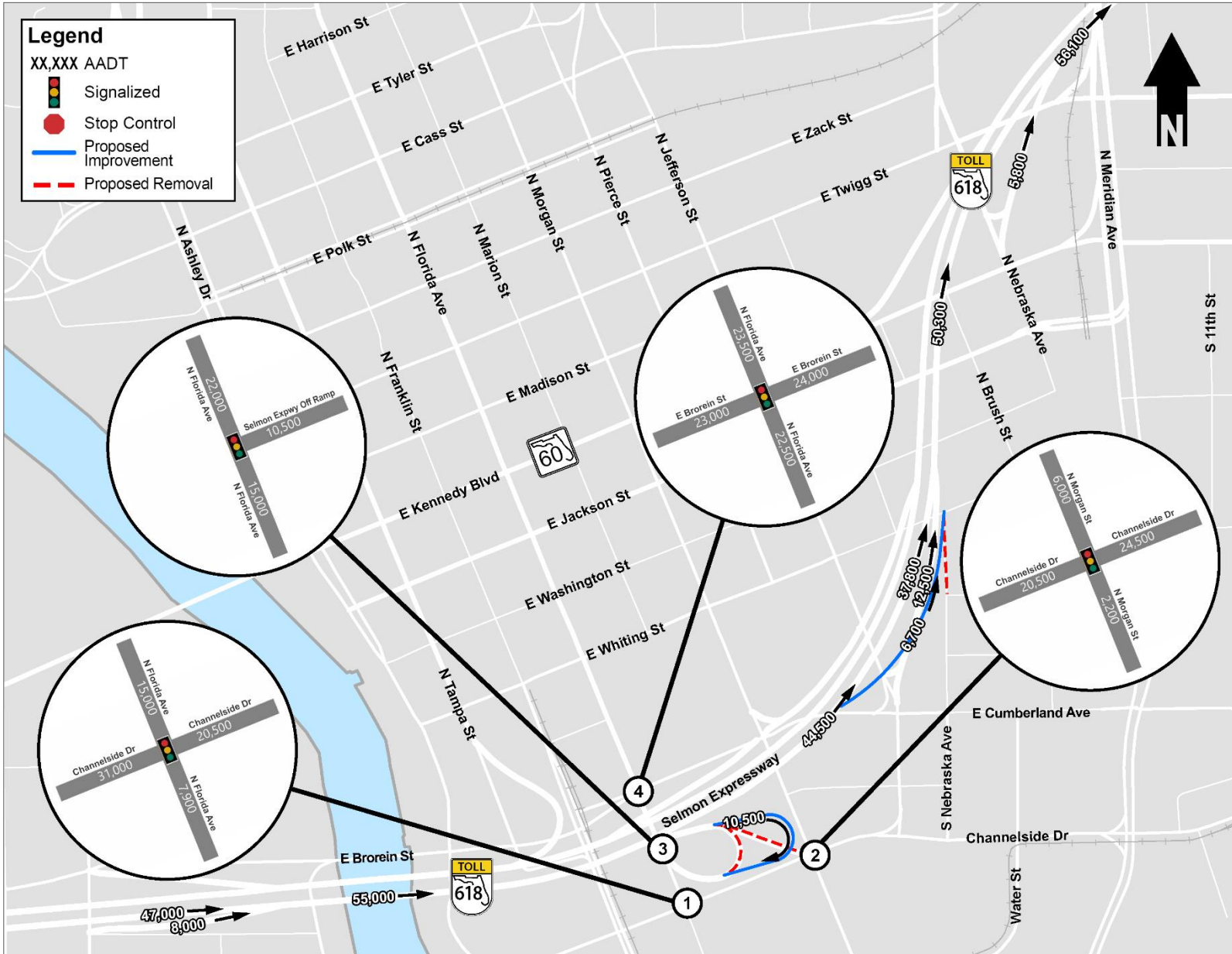


Figure 7.3a: Opening Year (2026) Build Alternative AADTs

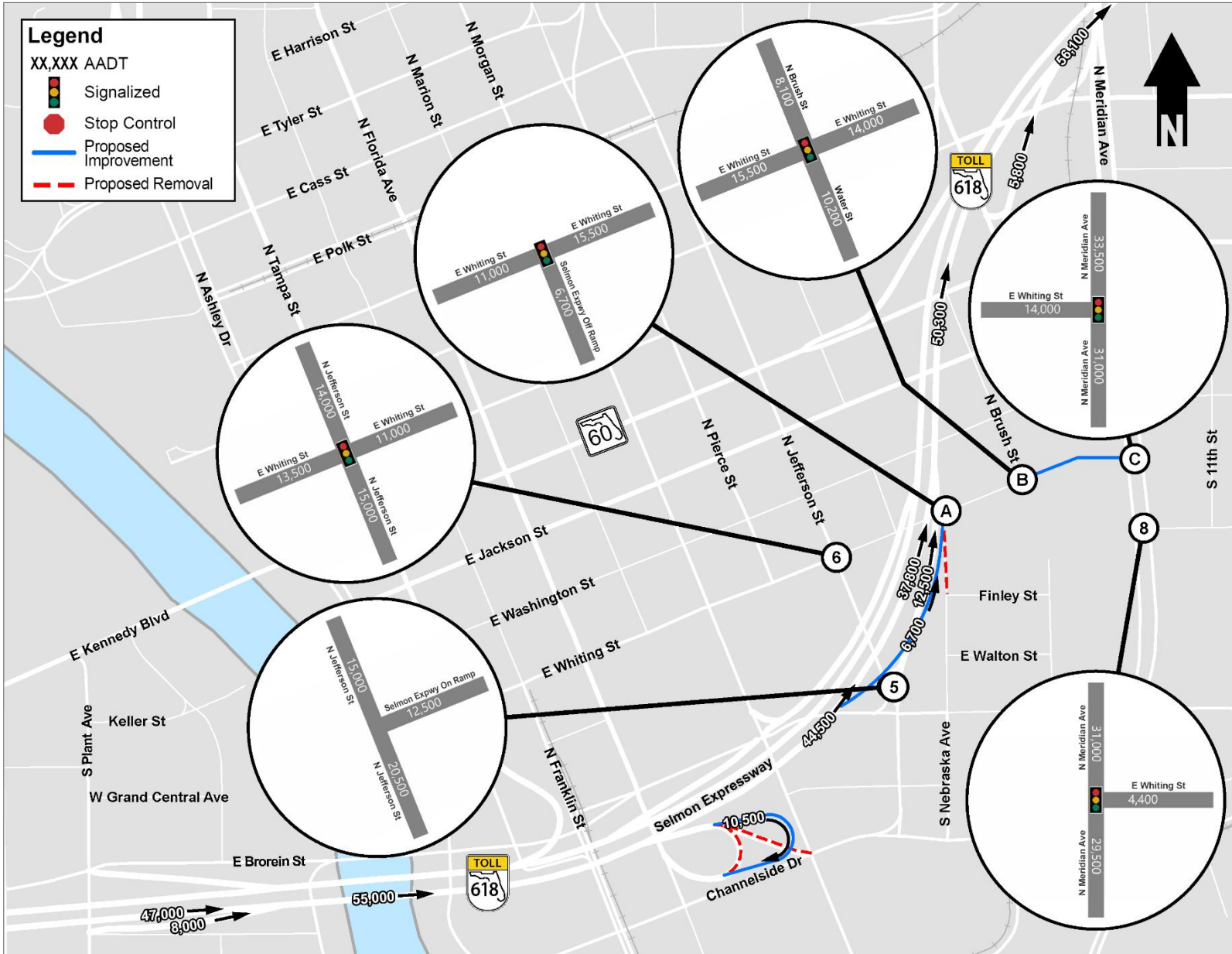


Figure 7.3b: Opening Year (2026) Build Alternative AADTs

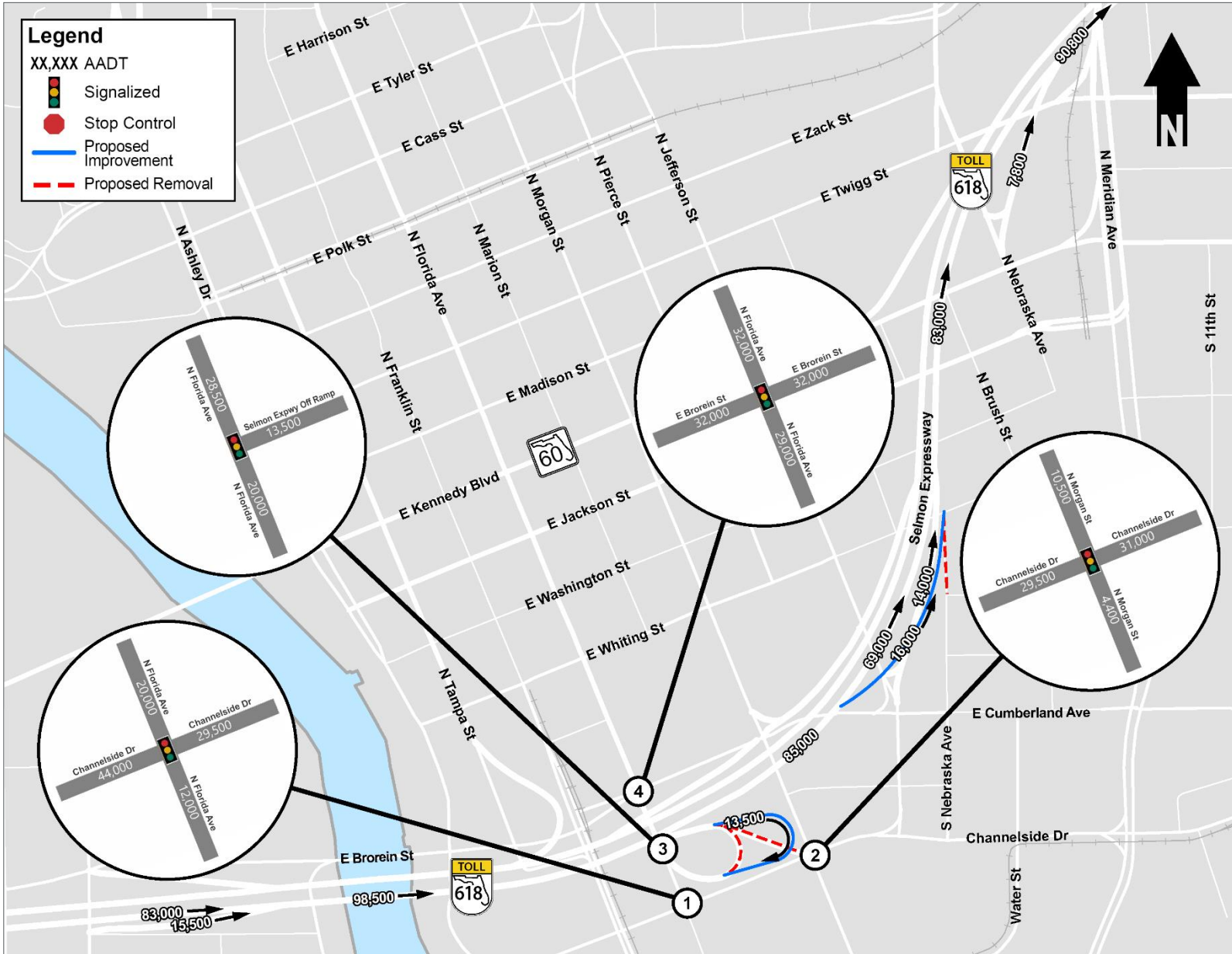


Figure 7.4a: Design Year (2046) Build Alternative AADTs

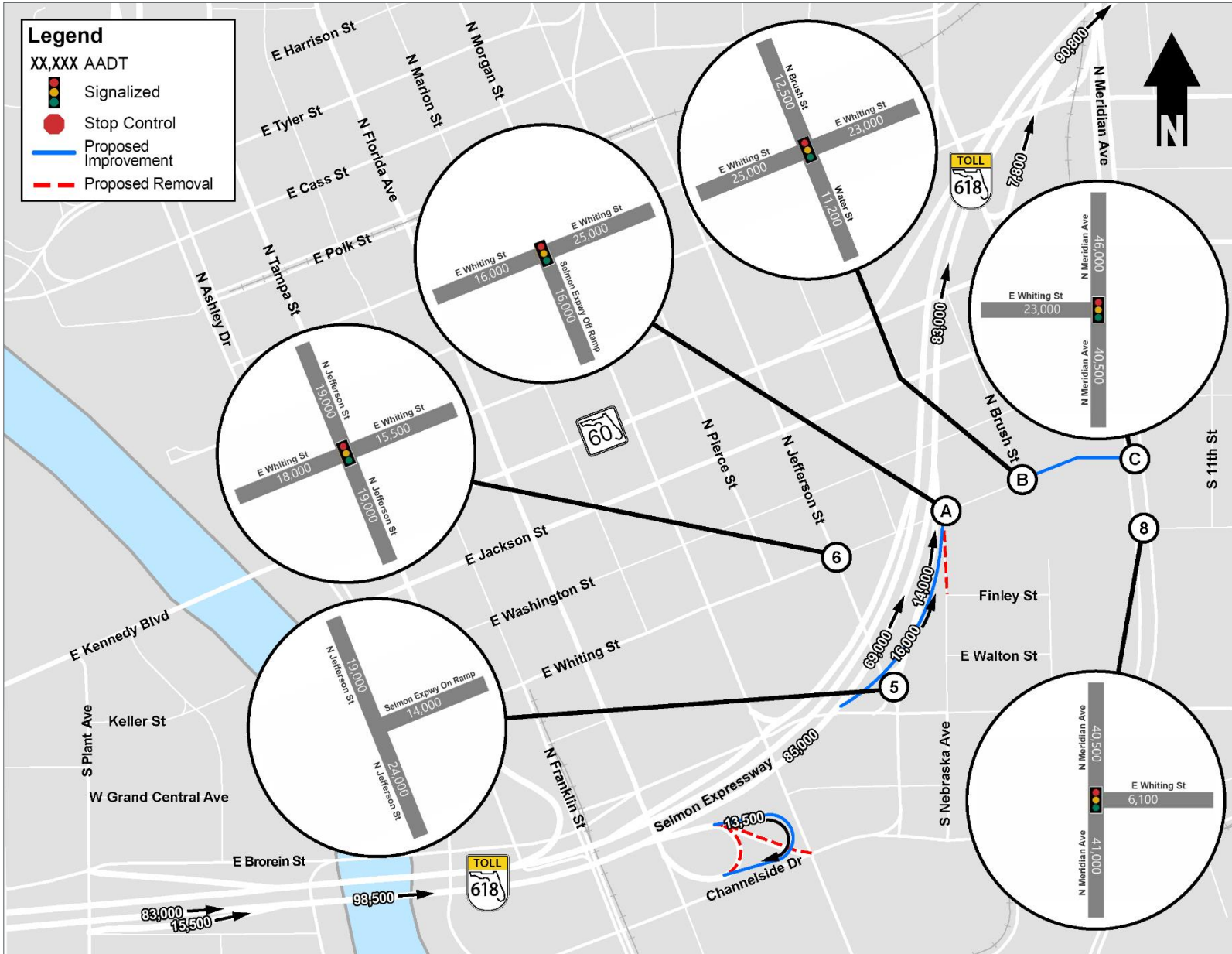


Figure 7.4b: Design Year (2046) Build Alternative AADTs

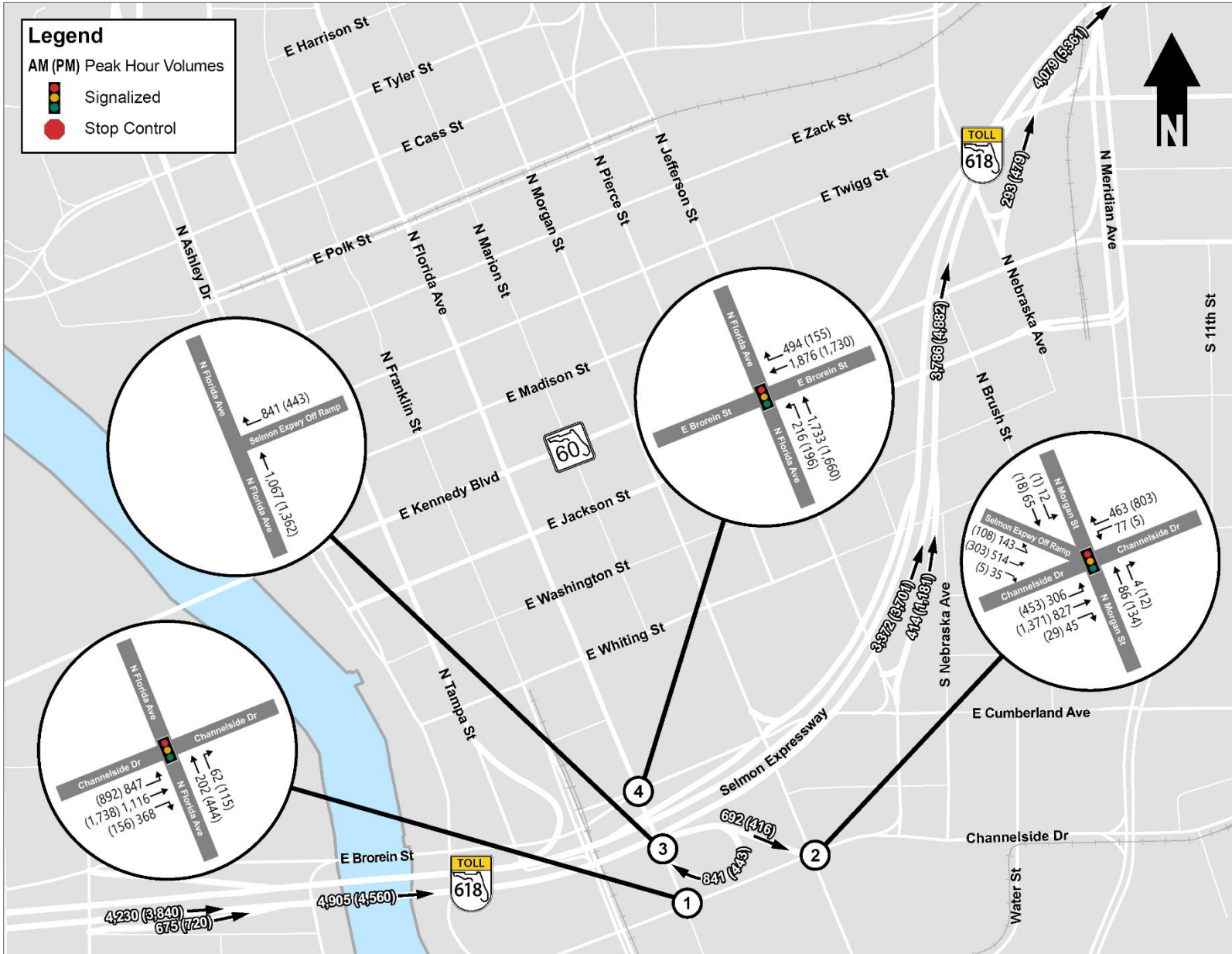


Figure 7.5a: Opening Year (2026) No-Build Alternative Turning Movement Volumes

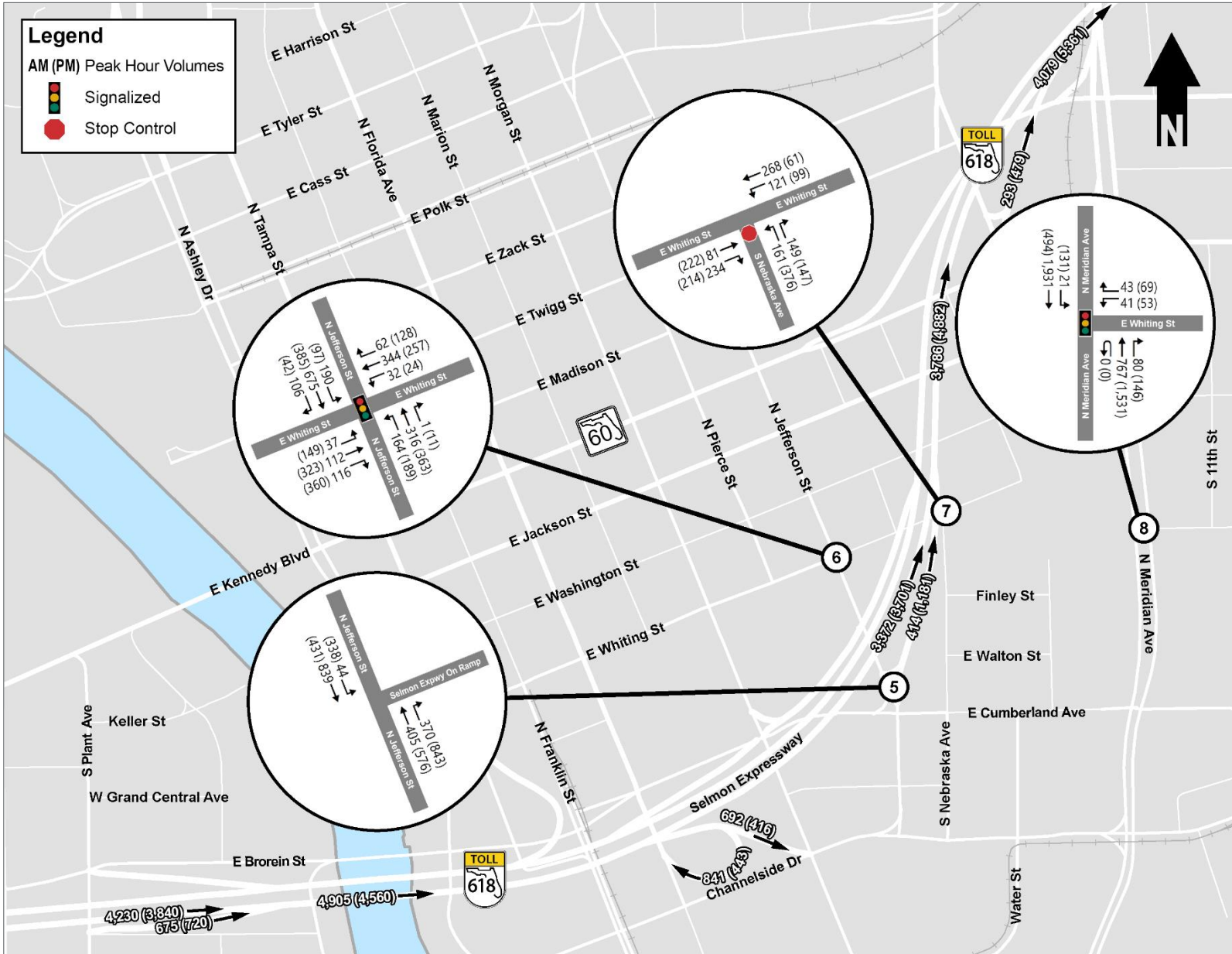


Figure 7.5b: Opening Year (2026) No-Build Alternative Turning Movement Volumes

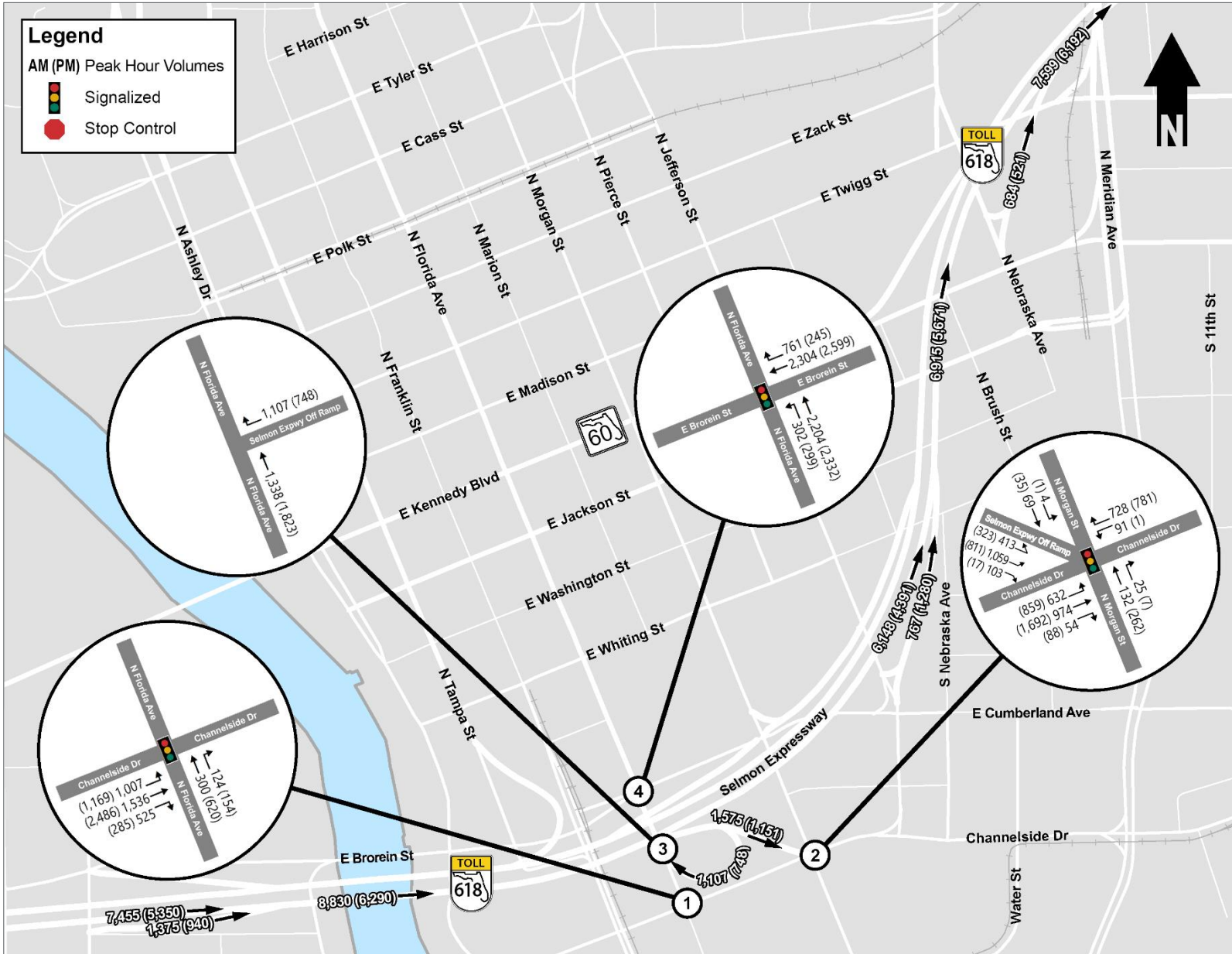


Figure 7.6a: Design Year (2046) No-Build Alternative Turning Movement Volumes

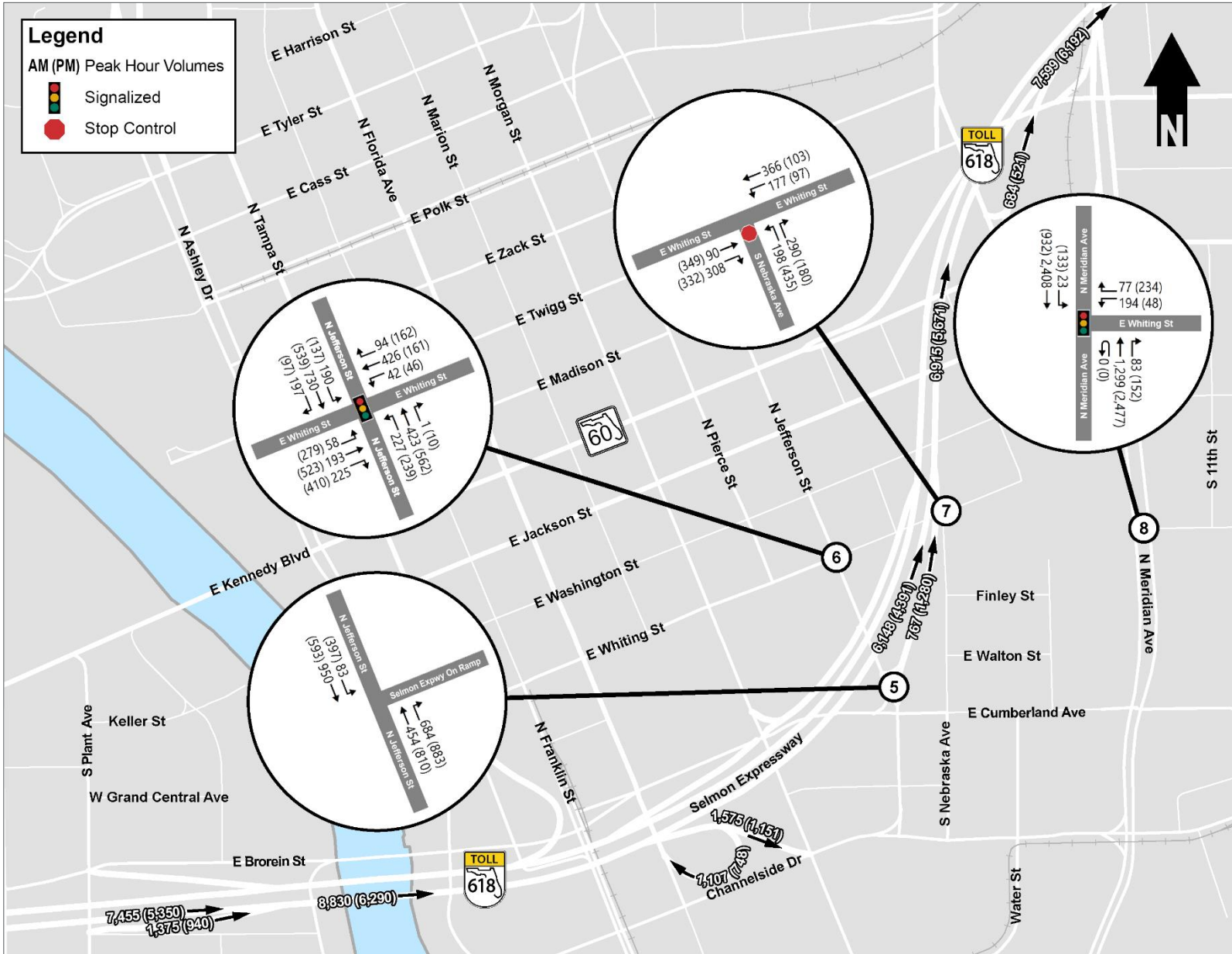


Figure 7.6b: Design Year (2046) No-Build Alternative Turning Movement Volumes

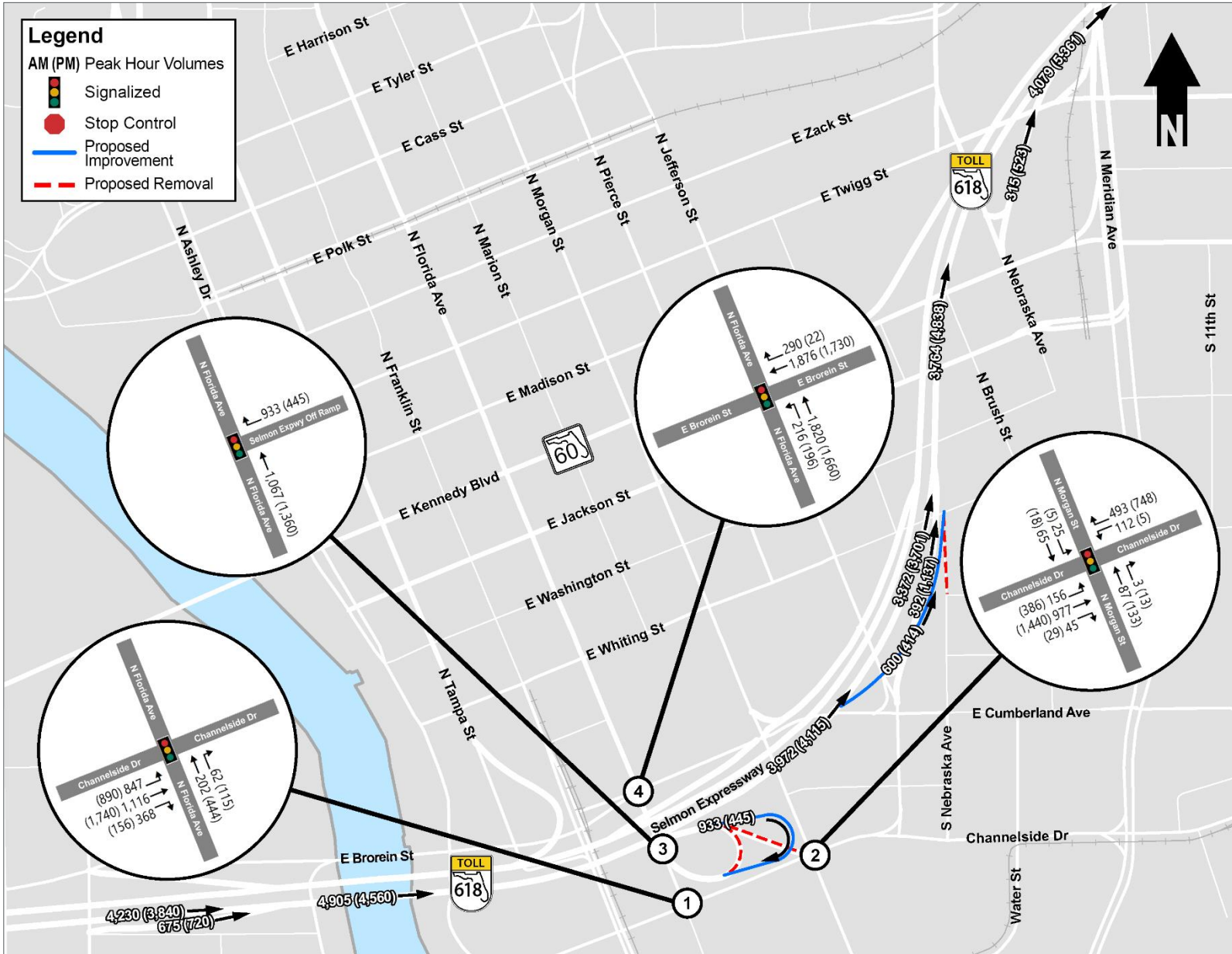


Figure 7.7a: Opening Year (2026) Build Alternative Turning Movement Volumes

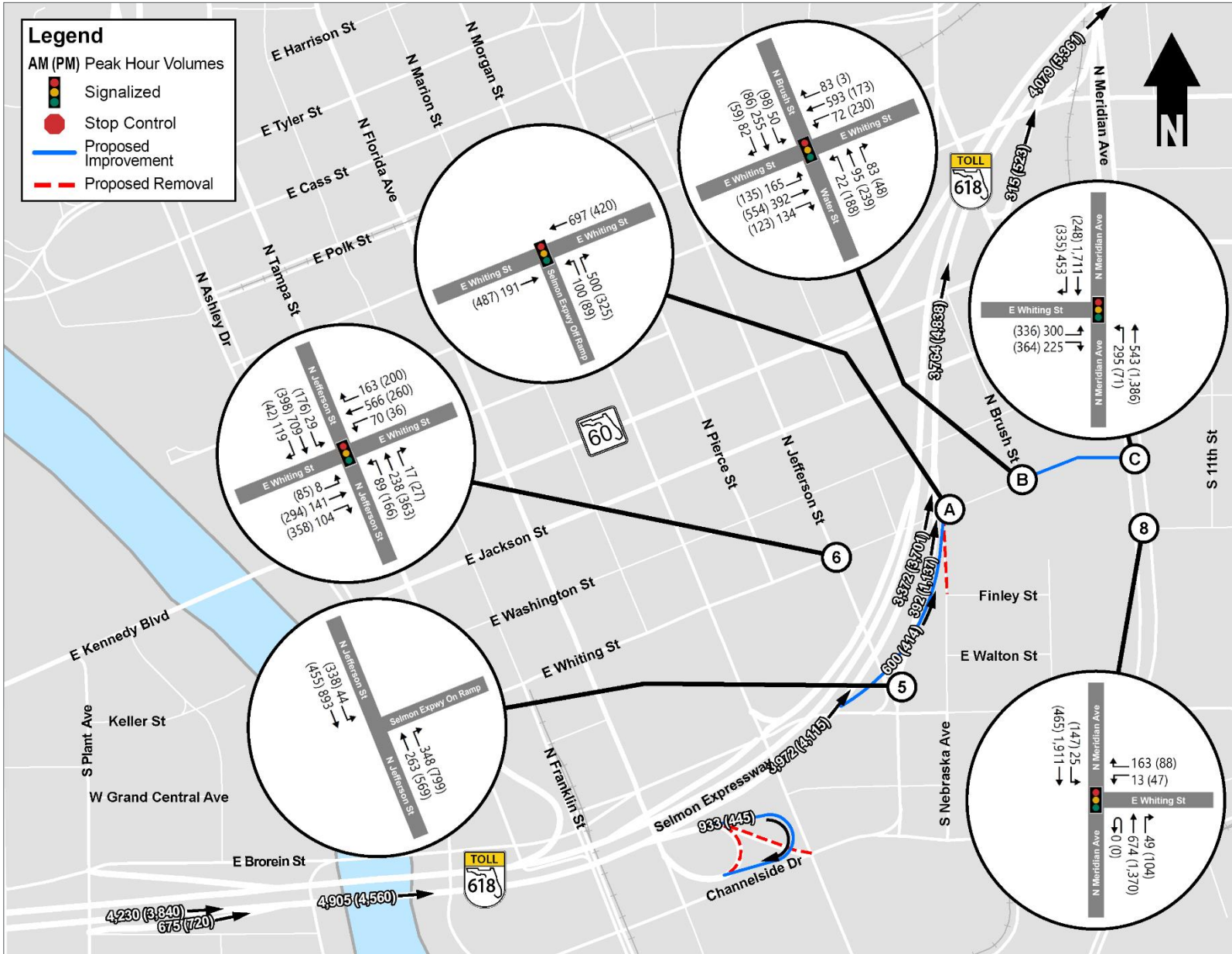


Figure 7.7b: Opening Year (2026) Build Alternative Turning Movement Volumes

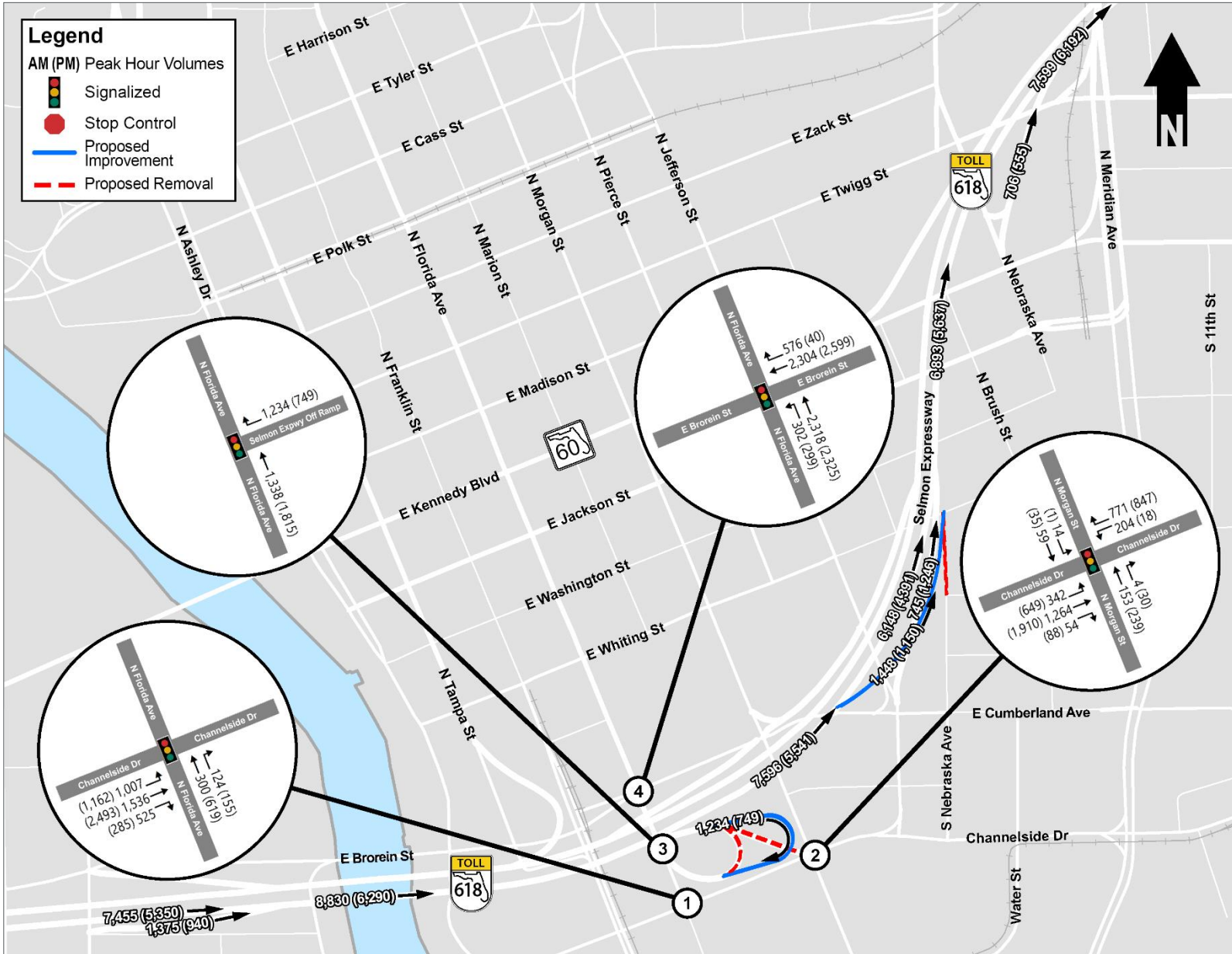


Figure 7.8a: Design Year (2046) Build Alternative Turning Movement Volumes

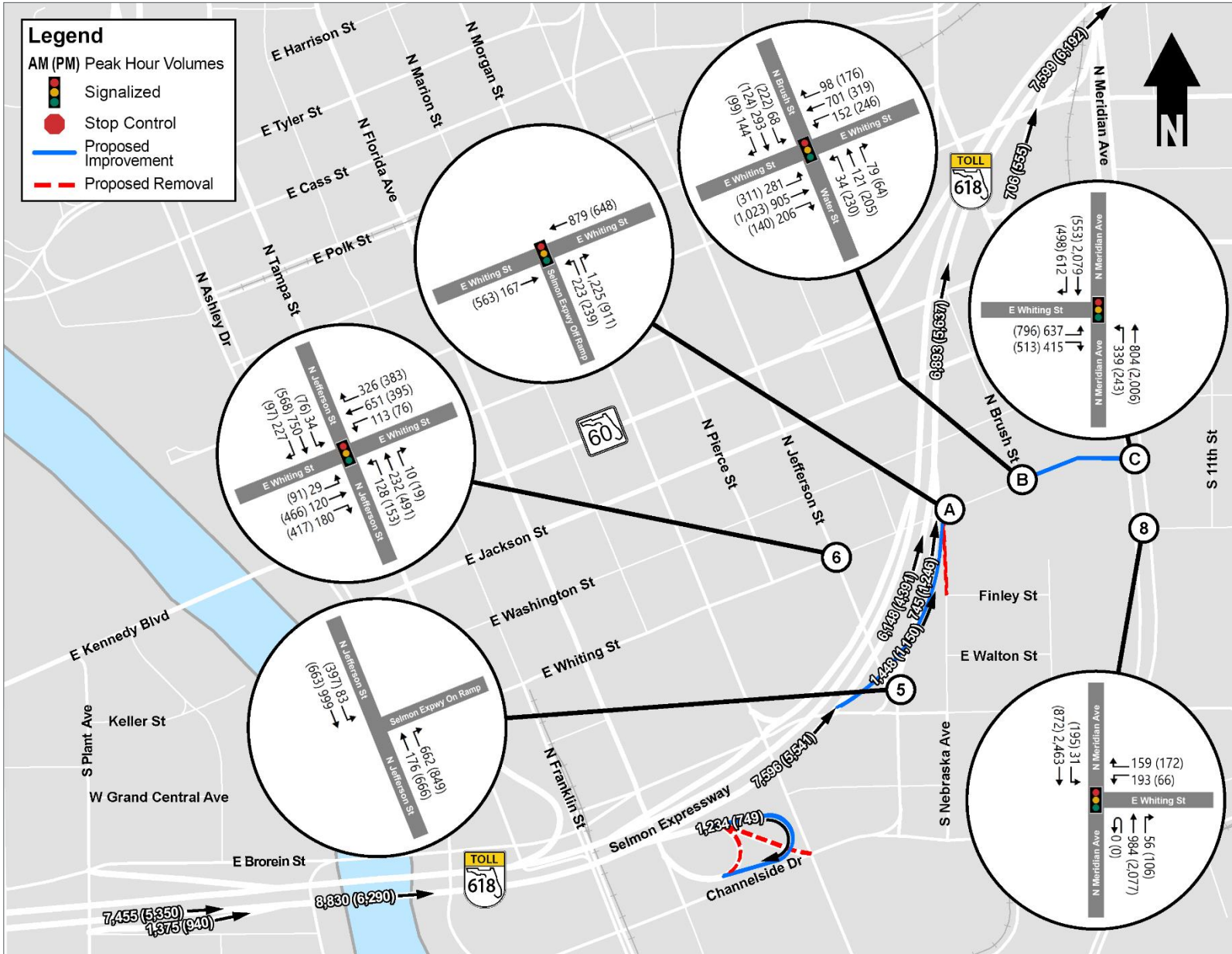


Figure 7.8b: Design Year (2046) Build Alternative Turning Movement Volumes

8.0 Future Operational Analysis

Traffic operational analysis was conducted for both the No-Build and Build Alternatives for the opening year (2026) and design year (2046). Analysis for the No-Build and Build Alternatives consists of freeway segment analysis, intersection analysis, queue analysis, and overall congestion through the system. Vissim 2020 was used for the operational analysis and HCM methodologies were utilized to estimate the LOS for the intersection analyses. The results of the future traffic operational analysis are summarized in the following sections.

8.1 No-Build Alternative

The No-Build Alternative assumes that no changes will be made to the existing lane geometry or traffic control operations of the study area with the exception of the new street connections from the Water Street Tampa development and the proposed improvements from the South Selmon PD&E Study.

8.1.1 Freeway Segment Analysis

Freeway segment analysis was conducted along each segment of eastbound Selmon Expressway for the No-Build Alternative in the opening year (2026). To evaluate congestion level thresholds, the following colors, from the *FDOT 2021 Traffic Analysis Handbook, Table 9-12* will be used and are provided in **Table 8.1**. Per this handbook, speeds will be evaluated against the posted speed. The results of the freeway segment analysis for the AM and PM peak hours are shown in **Table 8.2**. The results of the analysis indicate that all freeway segments are anticipated to meet the LOS target D in the opening year (2026). Operations are expected to improve, as compared to the existing condition, due to the proposed improvements from the South Selmon PD&E Study that have been taken into account in the No-Build Alternative.

Table 8.1: Congestion Level Thresholds

Segment	Posted Speed (55 mph)
Uncongested	≥ 53
Lightly Congested	$< 53-48$
Moderately Congested	$< 48-43$
Heavily Congested	< 43

Table 8.2: No-Build Alternative Opening Year (2026) Freeway Segment Analysis

Segment	Segment Type	Number of Lanes	Demand Volume (veh/hr)	Simulated Volume (veh/hr)	Percent Demand Processed	Simulated Speed (mph)	Estimated Density (pc/mi/ln)	Estimated LOS
<i>AM Peak Hour</i>								
Plant Ave On-Ramp to Florida Ave/ Channelside Dr Off-Ramp	Weave	5	4,905	4,987	102%	51	21	C
Florida Ave/Channelside Dr Off-Ramp to Jefferson St On-Ramp	Basic	3	3,372	3,454	102%	53	22	C
Jefferson St On-Ramp to Nebraska Ave On-Ramp	Merge	3	3,786	3,861	102%	51	24	C
<i>PM Peak Hour</i>								
Plant Ave On-Ramp to Florida Ave/ Channelside Dr Off-Ramp	Weave	5	4,560	4,596	101%	53	20	C
Florida Ave/Channelside Dr Off-Ramp to Jefferson St On-Ramp	Basic	3	3,701	3,735	101%	52	24	C
Jefferson St On-Ramp to Nebraska Ave On-Ramp	Merge	3	4,882	4,884	100%	49	31	D

Freeway segment analysis was also conducted along each segment of eastbound Selmon Expressway for the No-Build Alternative in the design year (2046). The results of the freeway segment analysis for the AM and PM peak hours are shown in **Table 8.3**. The results of the analysis indicate that the segment from the Plant Avenue on-ramp to the Downtown East/West off-ramp is not anticipated to meet the LOS target D by the design year (2046). The heavy demand expected at Downtown East/West interchange is likely to cause operational breakdown leading up to the exit ramps leading to significant un-served demand. While it does appear that conditions improve between 2026 and 2046, this is due to bottlenecking in the system, as indicated by the worsening demand processed.

Table 8.3: No-Build Alternative Design Year (2046) Freeway Segment Analysis

Segment	Segment Type	Number of Lanes	Demand Volume (veh/hr)	Simulated Volume (veh/hr)	Percent Demand Processed	Simulated Speed (mph)	Estimated Density (pc/mi/ln)	Estimated LOS
<i>AM Peak Hour</i>								
Plant Ave On-Ramp to Florida Ave/ Channelside Dr Off-Ramp	Weave	5	8,830	4,034	46%	9	142	F
Florida Ave/Channelside Dr Off-Ramp to Jefferson St On-Ramp	Basic	3	6,148	2,928	48%	53	19	B
Jefferson St On-Ramp to Nebraska Ave On-Ramp	Merge	3	6,915	3,690	53%	51	23	C
<i>PM Peak Hour</i>								
Plant Ave On-Ramp to Florida Ave/ Channelside Dr Off-Ramp	Weave	5	6,290	2,774	44%	26	70	F
Florida Ave/Channelside Dr Off-Ramp to Jefferson St On-Ramp	Basic	3	4,391	2,054	47%	50	14	B
Jefferson St On-Ramp to Nebraska Ave On-Ramp	Merge	3	5,671	3,132	55%	52	20	C

8.1.2 Intersection Analysis

Intersection operational analysis was conducted at each of the signalized and stop-controlled intersections within the study area for the No-Build Alternative in the opening year (2026). The results of the intersection analysis for the AM and PM peak hours are shown in **Table 8.4**. The results of the analysis indicate that the intersections of Channelside Drive at Morgan Street, Channelside Drive at Florida Avenue, and Whiting Street at Nebraska Avenue are expected to fail to meet the LOS target D in the PM peak hour by the opening year (2026). The operational breakdown at the both of the intersections along Channelside Drive is likely due to the increased demand from the Selmon Expressway off-ramp and through the study area.

Table 8.4: No-Build Alternative Opening Year (2026) Intersection Analysis

ID	Intersection	Eastbound		Westbound		Northbound		Southbound		Off-Ramp		Overall	
		Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS
<i>AM Peak Hour</i>													
1	Channelside Dr and Florida Ave	4.9	A	-	-	44.0	D	-	-	-	-	8.9	A
2	Channelside Dr and Morgan St	34.7	C	87.0	F	55.9	E	61.7	E	55.3	E	51.5	D
4	Brorein St and Florida Ave	-	-	33.9	C	20.7	C	-	-	-	-	28.0	C
6	Whiting St and Jefferson St	21.0	C	27.1	C	44.4	D	16.6	B	-	-	25.4	C
7	Whiting St and Nebraska Ave*	-	-	-	-	29.9	C	-	-	-	-	-	-
8	Whiting St and Meridian Ave	-	-	39.3	D	2.8	A	3.3	A	-	-	4.2	A
<i>PM Peak Hour</i>													
1	Channelside Dr and Florida Ave	64.5	E	-	-	112.8	F	-	-	-	-	74.4	E
2	Channelside Dr and Morgan St	95.3	F	61.6	E	59.8	E	58.8	E	61.9	E	79.4	E
4	Brorein St and Florida Ave	-	-	32.8	C	27.8	C	-	-	-	-	30.4	C
6	Whiting St and Jefferson St	57.3	E	25.7	C	17.3	B	15.8	B	-	-	32.3	C
7	Whiting St and Nebraska Ave*	-	-	-	-	115.8	F	-	-	-	-	-	-
8	Whiting St and Meridian Ave	-	-	44.3	D	7.5	A	5.6	A	-	-	8.9	A

*Only stop-controlled approaches have been summarized.

Intersection operational analysis was also conducted at each of the signalized and stop-controlled intersections within the study area for the No-Build Alternative in the design year (2046). The results of the intersection analysis for the AM and PM peak hours are shown in **Table 8.5**. The results of the analysis indicate that by the design year (2046), the Channelside Drive at Morgan Street intersection is anticipated to fail to meet the LOS target D in both the AM and PM peak hours. Increased operational breakdown at the Channelside Drive at Morgan Street intersection is expected, as compared to the opening year (2026) operations, as the 5-leg intersection operations become inefficient at servicing the heavy traffic demand, thereby also causing operational breakdown of the upstream intersection of Channelside Drive and Florida Avenue.

Table 8.5: No-Build Alternative Design Year (2046) Intersection Analysis

ID	Intersection	Eastbound		Westbound		Northbound		Southbound		Off-Ramp		Overall	
		Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS
<i>AM Peak Hour</i>													
1	Channelside Dr and Florida Ave	36.9	D	-	-	71.6	E	-	-	-	-	41.7	D
2	Channelside Dr and Morgan St	86.9	F	151.0	F	54.7	D	62.3	E	60.9	E	85.4	F
4	Brorein St and Florida Ave	-	-	38.6	D	23.6	C	-	-	-	-	33.2	C
6	Whiting St and Jefferson St	34.4	C	35.6	D	83.8	F	35.6	D	-	-	45.2	D
7	Whiting St and Nebraska Ave*	-	-	-	-	135.3	F	-	-	-	-	-	-
8	Whiting St and Meridian Ave	-	-	54.9	D	9.0	A	9.8	A	-	-	12.5	B
<i>PM Peak Hour</i>													
1	Channelside Dr and Florida Ave	131.2	F	-	-	228.7	F	-	-	-	-	155.0	F
2	Channelside Dr and Morgan St	169.6	F	68.4	E	101.8	F	54.9	D	103.0	F	119.7	F
4	Brorein St and Florida Ave	-	-	35.3	D	28.0	C	-	-	-	-	33.2	C
6	Whiting St and Jefferson St	83.1	F	40.4	D	35.1	D	57.1	E	-	-	54.3	D
7	Whiting St and Nebraska Ave*	-	-	-	-	121.7	F	-	-	-	-	-	-
8	Whiting St and Meridian Ave	-	-	35.5	D	15.4	B	9.9	A	-	-	15.4	B

*Only stop-controlled approaches have been summarized.

8.1.3 Queue Analysis

Queue analysis was conducted at each of the signalized and stop-controlled intersections within the study area, as well as along the Selmon Expressway off-ramps, for the No-Build Alternative in the opening year (2026). The results of the queue analysis for the AM and PM peak hours are shown in **Table 8.6**. The results of the analysis indicate that several movements throughout the network are expected to have an observed maximum queue length that spillbacks into the upstream intersections. Additionally, the Downtown East (Exit 6B) off-ramp to the Channelside Drive at Morgan Street intersection is anticipated to spillback past the diverge of the 6A and 6B off-ramps. The storage lengths of the off-ramps from the Selmon Expressway include the length from gore point to stop bar minus the deceleration length.

Table 8.6: No-Build Alternative Opening Year (2026) Queue Analysis

ID	Intersection	Eastbound			Westbound			Northbound			Southbound			Off-Ramp		
		L	T	R	L	T	R	L	T	R	L	T	R	L	T	R
<i>Storage Length (ft)</i>																
1	Channelside Dr and Florida Ave	200	200	+	-	-	-	-	450	200	-	-	-	-	-	-
2	Channelside Dr and Morgan St	450	450	+	300	-	+	-	550	550	100	450	-	+	190	+
3	Selmon Off-Ramp to Florida Ave	-	-	-	-	-	-	-	-	-	-	-	-	-	360	-
4	Brorein St and Florida Ave	-	-	-	-	500	+	450	450	-	-	-	-	-	-	-
6	Whiting St and Jefferson St	+	500	500	+	450	+	+	600	+	+	500	+	-	-	-
7	Whiting St and Nebraska Ave*	-	-	-	-	-	-	850	-	+	-	-	-	-	-	-
8	Whiting St and Meridian Ave	-	-	-	200	-	+	-	650	+	250	500	-	-	-	-
<i>AM Peak Hour Maximum Queue Length (ft)</i>																
1	Channelside Dr and Florida Ave	260	260	+	-	-	-	-	180	74	-	-	-	-	-	-
2	Channelside Dr and Morgan St	410	458	+	442	-	+	-	138	49	32	122	-	+	1,517	+
3	Selmon Off-Ramp to Florida Ave	-	-	-	-	-	-	-	-	-	-	-	-	-	1,332	-
4	Brorein St and Florida Ave	-	-	-	-	723	+	395	395	-	-	-	-	-	-	-
6	Whiting St and Jefferson St	+	162	162	+	413	+	+	410	+	+	278	+	-	-	-
7	Whiting St and Nebraska Ave*	-	-	-	-	-	-	266	-	+	-	-	-	-	-	-
8	Whiting St and Meridian Ave	-	-	-	145	-	+	-	110	+	13	210	-	-	-	-
<i>PM Peak Hour Maximum Queue Length (ft)</i>																
1	Channelside Dr and Florida Ave	1,558	1,558	+	-	-	-	-	390	407	-	-	-	-	-	-
2	Channelside Dr and Morgan St	593	641	+	452	-	+	-	225	66	12	50	-	+	624	+
3	Selmon Off-Ramp to Florida Ave	-	-	-	-	-	-	-	-	-	-	-	-	-	116	-
4	Brorein St and Florida Ave	-	-	-	-	478	+	395	395	-	-	-	-	-	-	-
6	Whiting St and Jefferson St	+	1,079	1,079	+	389	+	+	296	+	+	167	+	-	-	-
7	Whiting St and Nebraska Ave*	-	-	-	-	-	-	773	-	+	-	-	-	-	-	-
8	Whiting St and Meridian Ave	-	-	-	187	-	+	-	286	+	90	66	-	-	-	-

Note: Red highlight indicates locations where the queue length exceeds the available storage length.
 Off-ramp storage length equals the length from the stop bar to the gore point minus the deceleration length.
 *Only stop-controlled approaches have been summarized.
 +Shared lane.

Queue analysis was also conducted at each of the signalized and stop-controlled intersections within the study area, as well as along the Selmon Expressway off-ramps, for the No-Build Alternative in the design year (2046). The results of the queue analysis for the AM and PM peak hours are shown in **Table 8.7**. The results of the analysis indicate that observed queue lengths are expected to increase, as compared to the opening year (2026) operations, with several additional intersection movements spilling back into the upstream intersections. The Downtown East (Exit 6B) off-ramp is anticipated to spillback into the Selmon

Expressway mainline. The Downtown West (Exit 6A) is not expected to spillback, however this is due to upstream bottlenecks.

Table 8.7: No-Build Alternative Design Year (2046) Queue Analysis

ID	Intersection	Eastbound			Westbound			Northbound			Southbound			Off-Ramp		
		L	T	R	L	T	R	L	T	R	L	T	R	L	T	R
Storage Length (ft)																
1	Channelside Dr and Florida Ave	200	200	+	-	-	-	-	450	200	-	-	-	-	-	-
2	Channelside Dr and Morgan St	450	450	+	300	-	+	-	550	550	100	450	-	+	190	+
3	Selmon Off-Ramp to Florida Ave	-	-	-	-	-	-	-	-	-	-	-	-	-	360	-
4	Brorein St and Florida Ave	-	-	-	-	500	+	450	450	-	-	-	-	-	-	-
6	Whiting St and Jefferson St	+	500	500	+	450	+	+	600	+	+	500	+	-	-	-
7	Whiting St and Nebraska Ave*	-	-	-	-	-	-	850	-	+	-	-	-	-	-	-
8	Whiting St and Meridian Ave	-	-	-	200	-	+	-	650	+	250	500	-	-	-	-
AM Peak Hour Maximum Queue Length (ft)																
1	Channelside Dr and Florida Ave	1,566	1,566	+	-	-	-	-	274	273	-	-	-	-	-	-
2	Channelside Dr and Morgan St	596	644	+	442	-	+	-	212	104	23	125	-	+	1,704	+
3	Selmon Off-Ramp to Florida Ave	-	-	-	-	-	-	-	-	-	-	-	-	-	426	-
4	Brorein St and Florida Ave	-	-	-	-	1,317	+	385	385	-	-	-	-	-	-	-
6	Whiting St and Jefferson St	+	393	393	+	516	+	+	489	+	+	651	+	-	-	-
7	Whiting St and Nebraska Ave*	-	-	-	-	-	-	772	-	+	-	-	-	-	-	-
8	Whiting St and Meridian Ave	-	-	-	386	-	+	-	260	+	27	502	-	-	-	-
PM Peak Hour Maximum Queue Length (ft)																
1	Channelside Dr and Florida Ave	1,562	1,562	+	-	-	-	-	511	541	-	-	-	-	-	-
2	Channelside Dr and Morgan St	599	647	+	448	-	+	-	421	107	14	71	-	+	1,699	+
3	Selmon Off-Ramp to Florida Ave	-	-	-	-	-	-	-	-	-	-	-	-	-	372	-
4	Brorein St and Florida Ave	-	-	-	-	856	+	348	348	-	-	-	-	-	-	-
6	Whiting St and Jefferson St	+	1,085	1,085	+	448	+	+	514	+	+	539	+	-	-	-
7	Whiting St and Nebraska Ave*	-	-	-	-	-	-	779	-	+	-	-	-	-	-	-
8	Whiting St and Meridian Ave	-	-	-	380	-	+	-	947	+	133	157	-	-	-	-

Note: Red highlight indicates locations where the queue length exceeds the available storage length.
 Off-ramp storage length equals the length from the stop bar to the gore point minus the deceleration length.
 +Shared lane.
 *Only stop-controlled approaches have been summarized.

8.1.4 Future Congestion Patterns

Figures 8.1 through 8.4 illustrate the anticipated simulated speeds within the study area for the No-Build Alternative in the opening year (2026) and design year (2046), during the AM and PM peak hours, respectively. In the opening year (2026), congestion is expected to become more severe, as compared to the existing conditions, likely due to the increased demand within the study area. By the design year (2046), operational breakdown within the study area is expected to cause backup along the Selmon Expressway off-ramps and upstream into the mainline, west of the Downtown East/West interchange.

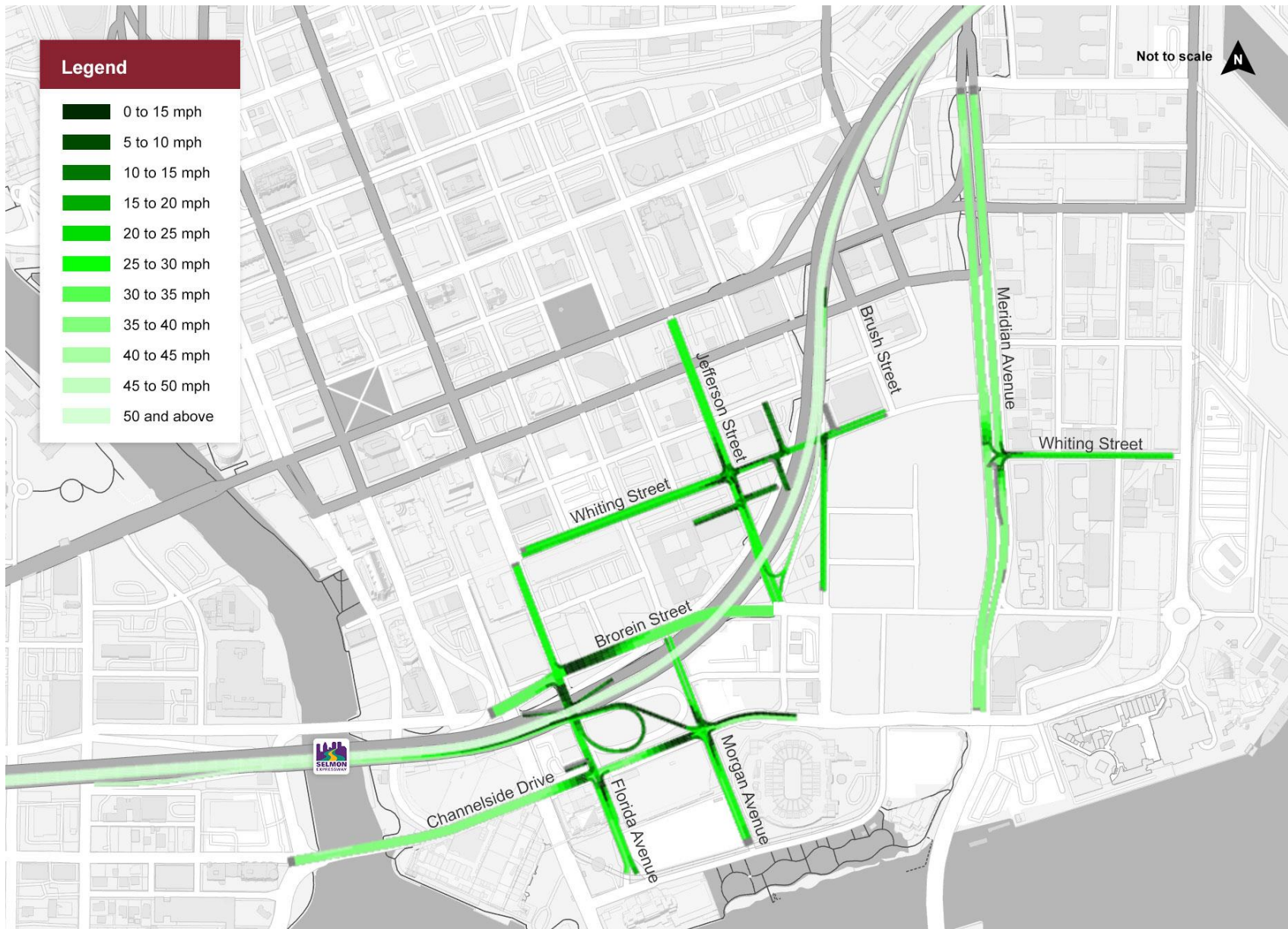


Figure 8.1: No-Build Alternative Opening Year (2026) Simulated Speed – AM Peak Hour

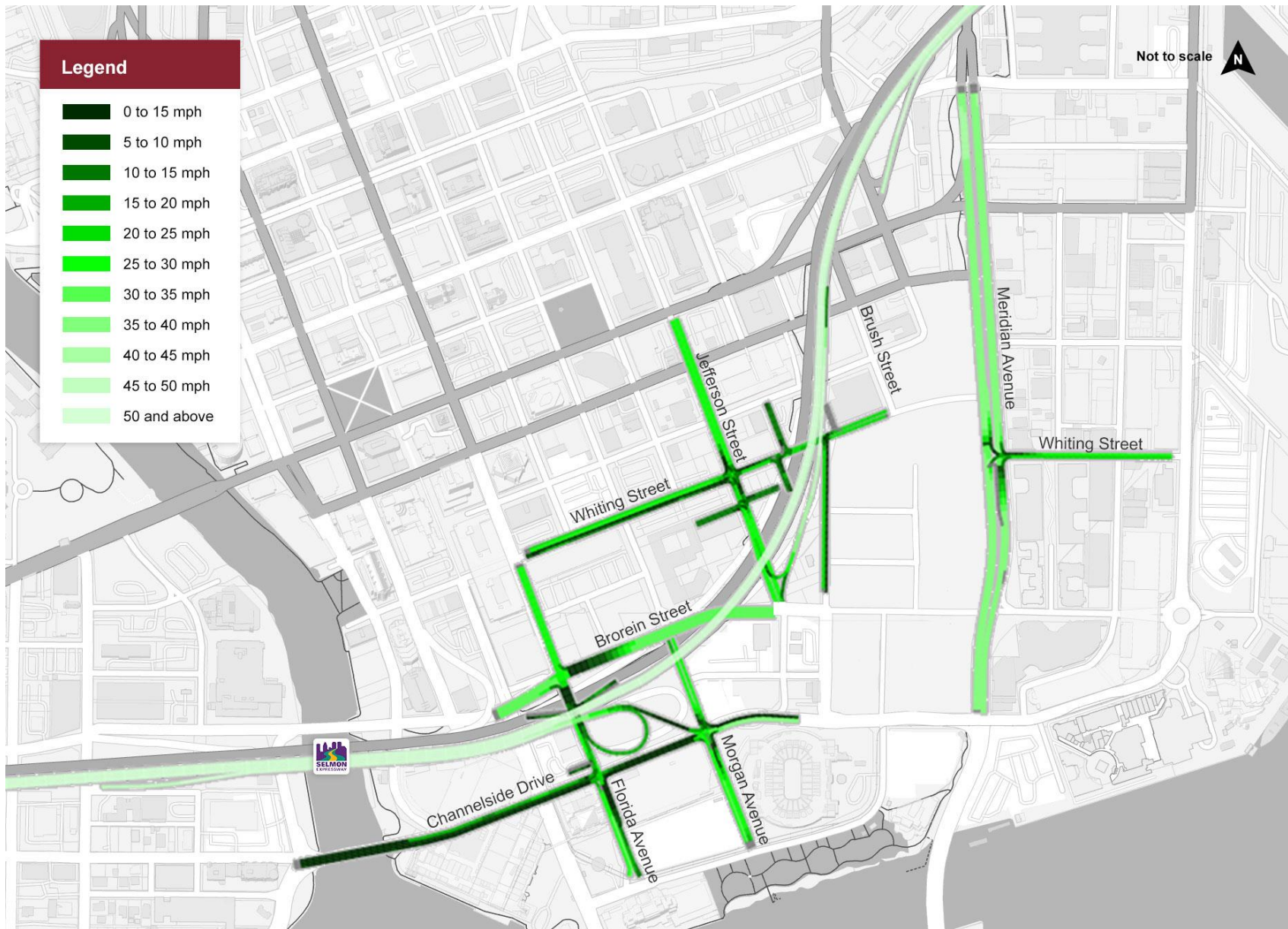


Figure 8.2: No-Build Alternative Opening Year (2026) Simulated Speed – PM Peak Hour

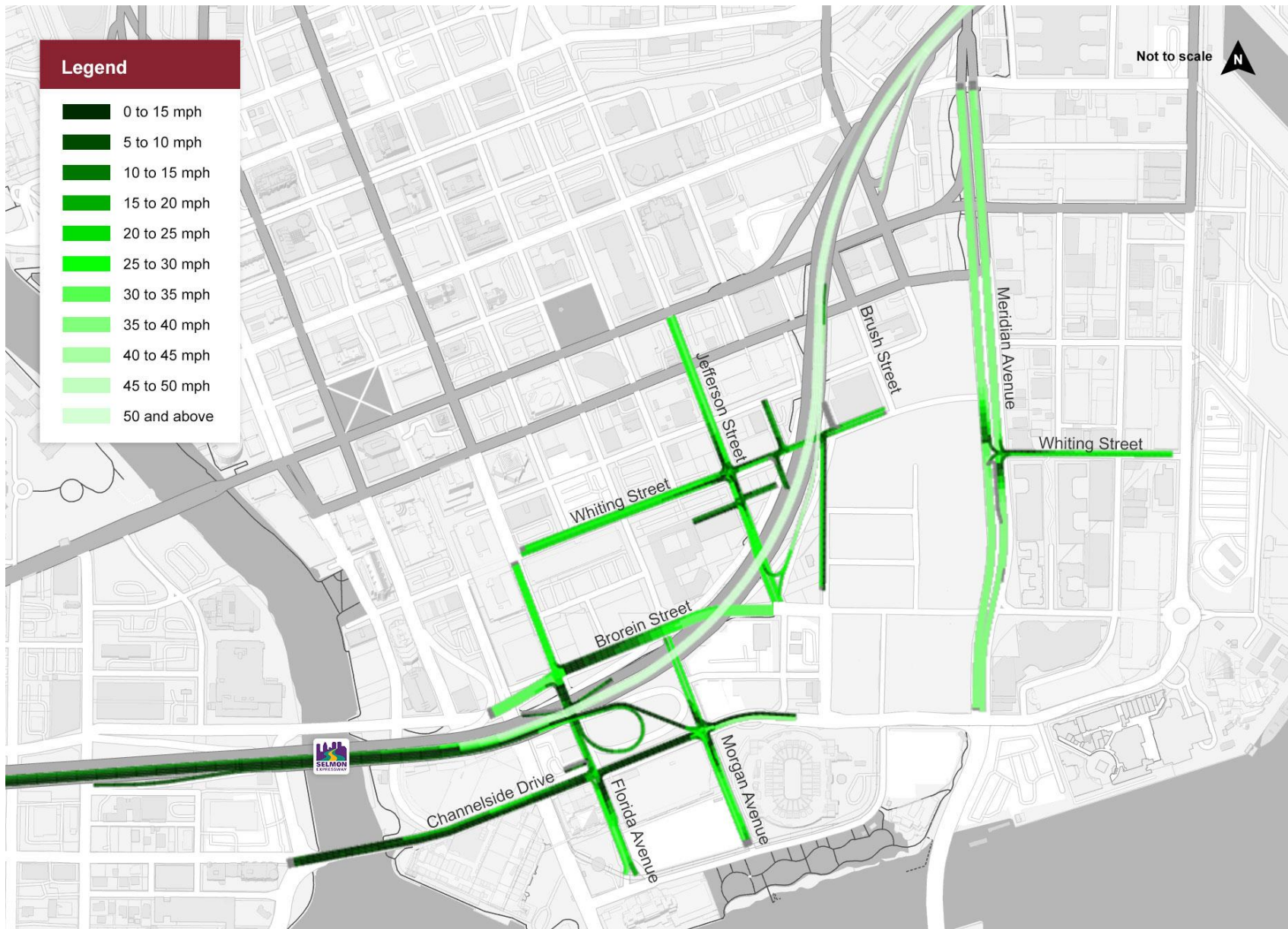


Figure 8.3: No-Build Alternative Design Year (2046) Simulated Speed – AM Peak Hour

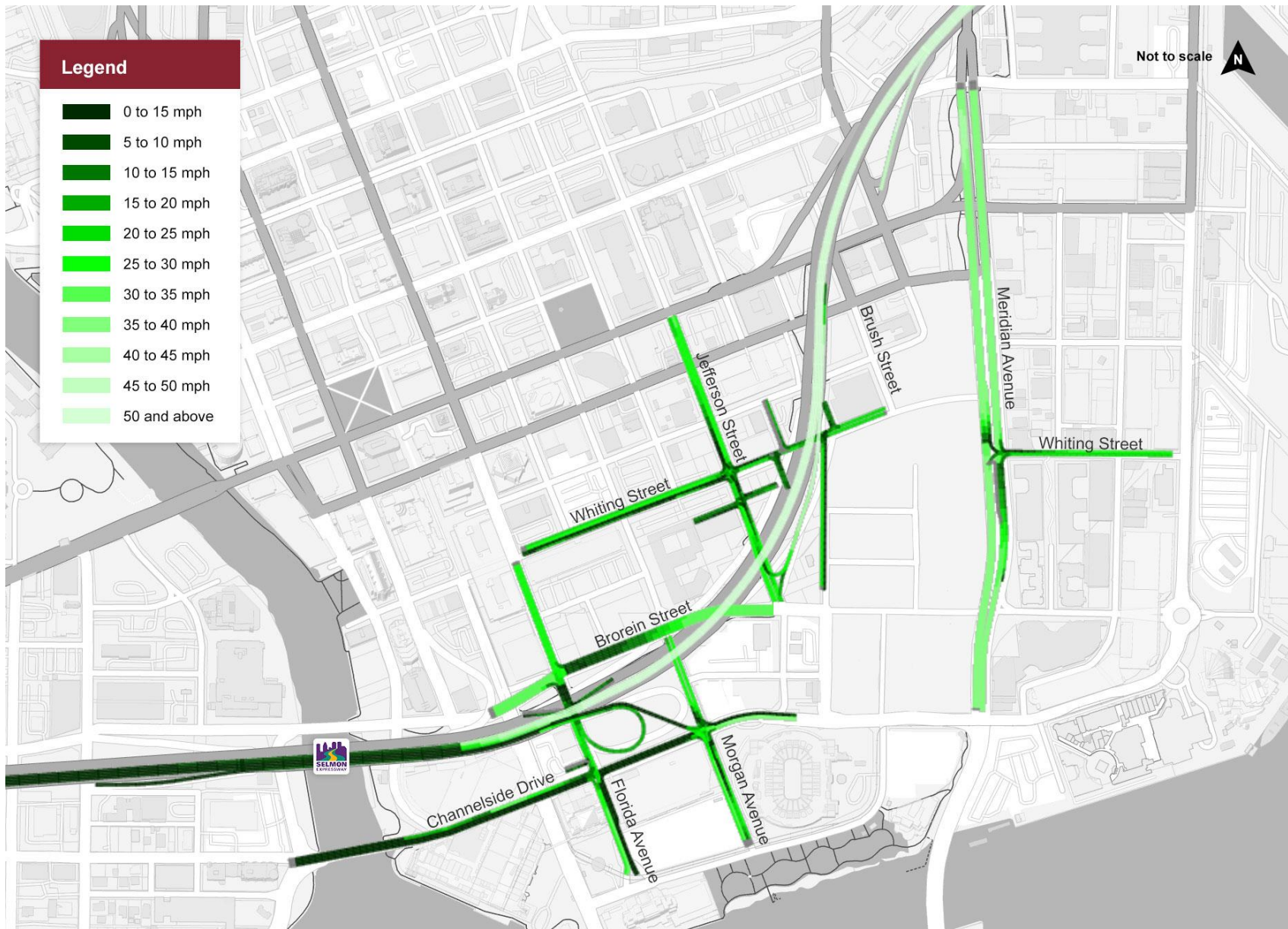


Figure 8.4: No-Build Alternative Design Year (2046) Simulated Speed – PM Peak Hour

8.2 Build Alternative

The Build Alternative includes proposed lane geometry improvements, as well as the new street connections from the Water Street Tampa development and proposed improvements from the South Selmon PD&E Study. The proposed improvements include the Whiting Street extension and the modifications to the eastbound Selmon Expressway and Downtown East/West interchange. Details of this alternative are provided in **Section 6.2**.

In the VISSIM model, three new driver behaviors were added to better model the Build Alternative:

- Driver Behavior 20: Interaction Objections changed from 2 to 4 to better handle additional reduced speed areas, stop signs, priority rules, and red signal heads to resolve odd driver behaviors along Whiting Street around the new ramp.
- Driver Behavior 21: Waiting time before diffusion was changed from 9999 seconds to 200 seconds to avoid vehicles becoming stuck in the congested system.
- Driver Behavior 22: Cooperative lane changed turn on with a max speed difference of 25 miles per hour and max collision time of 20 seconds.

Driver Behavior 20 was used for the improved area of Whiting Street east of Jefferson Street, the new Whiting off-ramp, Brush Street, and along Meridian Avenue north and south of Whiting Street. Driver Behavior 21 is used for the merge point of the reconfigured Florida Avenue Loop Ramp. Driver Behavior 22 is used for Channelside Drive eastbound right turn lane onto Florida Avenue.

Table 8.8 provides the locations where lane change modifications were made between the No-Build and Build alternatives to better represent the expected conditions under the Build alternative.

Table 8.8: Build Alternative Lane Change Modifications

Link ID	Description	No-Build Lane Change Distance	Build Lane Change Distance
10000	Westbound East Whiting Street to Northbound Whiting Street Garage	656	1500
10001	Southbound Whiting Street Garage to Westbound Whiting Street	656	1500
10051	Northbound Florida Avenue to Westbound Brorein Street	1500	656
10060	Eastbound Channelside Drive to Northbound Morgan Street	500	1500

8.2.1 Freeway Segment Analysis

Freeway segment analysis was conducted along each segment of eastbound Selmon Expressway for the Build Alternative in the opening year (2026). To evaluate congestion level thresholds, the following colors, from the *FDOT 2021 Traffic Analysis Handbook, Table 9-12* will be used and are provided in **Table 8.9**. Per this handbook, speeds will be evaluated against the posted speed. The results of the freeway segment analysis for the AM and PM peak hours are shown in **Table 8.10**. The results of the analysis indicate that all freeway segments are anticipated to meet the LOS target D in the opening year (2026). Operations are expected to improve, as compared to the No-Build Alternative opening year (2026) operations due to the proposed improvements from the South Selmon PD&E Study that have been taken into account in the No-Build and Build Alternative and the additional add-lane east of the Jefferson Street on-ramp in the Build Alternative.

Table 8.9: Congestion Level Thresholds

Segment	Posted Speed (55 mph)
Uncongested	>=53
Lightly Congested	< 53-48
Moderately Congested	< 48-43
Heavily Congested	< 43

Table 8.10: Build Alternative Opening Year (2026) Freeway Segment Analysis

Segment	Segment Type	Number of Lanes	Demand Volume (veh/hr)	Simulated Volume (veh/hr)	Processed Demand Volume	Simulated Speed (mph)	Estimated Density (pc/mi/ln)	Estimated LOS
AM Peak Hour								
Plant Ave On-Ramp to Florida Ave Off-Ramp	Weave	5	4,905	4,989	102%	53	20	C
Florida Ave Off-Ramp to Whiting St Off-Ramp	Diverge	4	3,972	4,054	102%	53	21	C
Whiting St Off-Ramp to Jefferson St On-Ramp	Basic	3	3,372	3,455	102%	53	22	C
Jefferson St On-Ramp to Nebraska Ave On-Ramp	Merge	4	3,764	3,837	102%	53	20	C
PM Peak Hour								
Plant Ave On-Ramp to Florida Ave Off-Ramp	Weave	5	4,560	4,594	101%	53	20	C
Florida Ave Off-Ramp to Whiting St Off-Ramp	Diverge	4	4,115	4,145	101%	52	22	C
Whiting St Off-Ramp to Jefferson St On-Ramp	Basic	3	3,701	3,733	101%	52	24	C
Jefferson St On-Ramp to Nebraska Ave On-Ramp	Merge	4	4,838	4,858	100%	52	24	C

Freeway segment analysis was also conducted along each segment of eastbound Selmon Expressway for the Build Alternative in the design year (2046). The results of the freeway segment analysis for the AM and PM peak hours are shown in **Table 8.11**. The results of the analysis indicate that the mainline is not

anticipated to meet the LOS target D in the AM peak hour by the design year (2046). Operational breakdown is expected as heavy demand volumes are anticipated to merge onto the Selmon Expressway at the closely spaced Jefferson Street and Nebraska Avenue on-ramps. However, by separating the Downtown West (Exit 6A) and Downtown East (Exit 6B) off-ramps, the heavy demand expected at the interchange is able to be staggered across two diverge points, rather than one. When compared to the No-Build Alternative during design year (2046), the Build Alternative processes more vehicles, from 46 percent entering the network from the west to 101 percent during the AM peak hour and from 44 percent to 100 percent during the PM peak hour. While the No-Build Alternative shows better performance east of the Channelside ramp, this is due to bottlenecking in the system that is relieved in the Build Alternative.

Table 8.11: Build Alternative Design Year (2046) Freeway Segment Analysis

Segment	Segment Type	Number of Lanes	Demand Volume (veh/hr)	Simulated Volume (veh/hr)	Processed Demand Volume	Simulated Speed (mph)	Estimated Density (pc/mi/ln)	Estimated LOS
<i>AM Peak Hour</i>								
Plant Ave On-Ramp to Florida Ave Off-Ramp	Weave	5	8,830	8,884	101%	43	45	F
Florida Ave Off-Ramp to Whiting St Off-Ramp	Diverge	4	7,596	7,607	100%	40	51	F
Whiting St Off-Ramp to Jefferson St On-Ramp	Basic	3	6,148	6,169	100%	45	46	F
Jefferson St On-Ramp to Nebraska Ave On-Ramp	Merge	4	6,893	6,896	100%	47	41	E
<i>PM Peak Hour</i>								
Plant Ave On-Ramp to Florida Ave Off-Ramp	Weave	5	6,290	6,320	100%	51	27	D
Florida Ave Off-Ramp to Whiting St Off-Ramp	Diverge	4	5,541	5,561	100%	49	29	D
Whiting St Off-Ramp to Jefferson St On-Ramp	Basic	3	4,391	4,414	101%	50	30	D
Jefferson St On-Ramp to Nebraska Ave On-Ramp	Merge	4	5,637	5,642	100%	51	28	D

8.2.2 Intersection Analysis

Intersection operational analysis was conducted at each of the signalized and stop-controlled intersections within the study area for the Build Alternative in the opening year (2026). The results of the intersection analysis for the AM and PM peak hours are shown in **Table 8.12**. The results of the analysis indicate that each of the study intersections are anticipated to meet the LOS target D in the opening year (2026). The failing LOS on the southbound approach at Brush Street and Whiting Street and Meridian Avenue at Whiting Street and the east leg of Whiting Street at Meridian Avenue occurs as more green time is given to the east/west movements on Whiting Street to ensure good operations at the Whiting Street off-ramp. The intersections of Channelside Drive at Florida Avenue and Channelside Drive at Morgan Street are no longer failing when compared to the No-Build Alternative.

Table 8.12: Build Alternative Opening Year (2026) Intersection Analysis

ID	Intersection	Eastbound		Westbound		Northbound		Southbound		Off-Ramp		Overall	
		Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS
<i>AM Peak Hour</i>													
1, 3	Channelside Dr/Selmon Off-Ramp and Florida Ave	15.4	B	-	-	47.2	D	-	-	36.8	D	23.5	C
2	Channelside Dr and Morgan St	8.2	A	20.0	B	47.2	D	50.8	D	-	-	15.6	B
4	Brorein St and Florida Ave	-	-	34.0	C	13.4	B	-	-	-	-	24.1	C
6	Whiting St and Jefferson St	34.0	C	26.4	C	20.0	C	25.5	C	-	-	25.9	C
A	Whiting St and Selmon Off-Ramp	22.6	C	12.9	B	-	-	-	-	9.2	A	14.8	B
B	Whiting St and Brush St	9.8	A	24.4	C	33.4	C	51.6	D	-	-	25.6	C
C	Whiting St and Meridian Ave (North)	26.9	C	-	-	26.3	C	56.8	E	-	-	45.1	D
8	Whiting St and Meridian Ave (South)	-	-	581.2	F	37.7	D	1.7	A	-	-	30.4	C
<i>PM Peak Hour</i>													
1, 3	Channelside Dr/Selmon Off-Ramp and Florida Ave	24.2	C	-	-	46.7	D	-	-	46.4	D	30.2	C
2	Channelside Dr and Morgan St	11.0	B	56.0	E	48.6	D	57.1	E	-	-	24.9	C
4	Brorein St and Florida Ave	-	-	32.6	C	26.1	C	-	-	-	-	29.3	C
6	Whiting St and Jefferson St	36.1	D	24.9	C	20.4	C	35.3	D	-	-	30.0	C
A	Whiting St and Selmon Off-Ramp	20.7	C	13.9	B	-	-	-	-	21.5	C	19.7	B
B	Whiting St and Brush St	24.3	C	26.8	C	52.1	D	264.5	F	-	-	54.8	D
C	Whiting St and Meridian Ave (North)	20.7	C	-	-	5.5	A	9.3	A	-	-	10.0	B
8	Whiting St and Meridian Ave (South)	-	-	44.7	D	16.5	B	5.2	A	-	-	15.3	B

Intersection operational analysis was also conducted at each of the signalized and stop-controlled intersections within the study area for the Build Alternative in the design year (2046). The results of the intersection analysis for the AM and PM peak hours are shown in **Table 8.13**. The results of the analysis indicate that the Channelside Drive at Florida Avenue/Selmon Off-Ramp intersection will fail in the PM peak hour, driven by the northbound approach on Florida Avenue. More approaches will breakdown as more volume is expected. Preventing breakdown at the ramps was important so these movements were favored at the expense of some cross-streets. The intersections of Channelside Drive and Morgan Street is no longer failing when compared to the No-Build Alternative. The intersection of Channelside Drive and Florida Avenue does still fail, however delay is reduced and this intersection now includes the signalization at the Florida Avenue off-ramp.

Table 8.13: Build Alternative Design Year (2046) Intersection Analysis

ID	Intersection	Eastbound		Westbound		Northbound		Southbound		Off-Ramp		Overall	
		Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS
<i>AM Peak Hour</i>													
1, 3	Channelside Dr/Selmon Off-Ramp and Florida Ave	20.2	C	-	-	57.1	E	-	-	39.1	D	28.5	C
2	Channelside Dr and Morgan St	9.2	A	70.3	E	51.4	D	51.2	D	-	-	27.9	C
4	Brorein St and Florida Ave	-	-	36.9	D	18.1	B	-	-	-	-	28.0	C
6	Whiting St and Jefferson St	29.9	C	30.3	C	67.1	E	33.2	C	-	-	36.4	D
A	Whiting St and Selmon Off-Ramp	14.3	B	16.5	B	-	-	-	-	15.6	B	15.4	B
B	Whiting St and Brush St	17.7	B	35.2	D	35.5	D	75.2	E	-	-	33.7	C
C	Whiting St and Meridian Ave (North)	29.1	C	-	-	21.8	C	52.1	D	-	-	39.5	D
8	Whiting St and Meridian Ave (South)	-	-	781.9	F	84.2	F	7.0	A	-	-	48.1	D
<i>PM Peak Hour</i>													
1, 3	Channelside Dr/Selmon Off-Ramp and Florida Ave	56.8	E	-	-	109.6	F	-	-	51.2	D	65.1	E
2	Channelside Dr and Morgan St	10.8	B	68.7	E	53.0	D	51.7	D	-	-	28.6	C
4	Brorein St and Florida Ave	-	-	35.4	D	24.5	C	-	-	-	-	30.4	C
6	Whiting St and Jefferson St	37.1	D	27.1	C	30.5	C	42.1	D	-	-	34.4	C
A	Whiting St and Selmon Off-Ramp	25.0	C	18.3	B	-	-	-	-	27.6	C	24.7	C
B	Whiting St and Brush St	16.8	B	52.7	D	55.5	E	290.1	F	-	-	49.5	D
C	Whiting St and Meridian Ave (North)	15.1	B	-	-	9.5	A	29.4	C	-	-	15.7	B
8	Whiting St and Meridian Ave (South)	-	-	298.1	F	35.4	D	10.2	B	-	-	43.3	D

8.2.3 Queue Analysis

Queue analysis was conducted at each of the signalized and stop-controlled intersections within the study area, as well as along the Selmon Expressway off-ramps, for the Build Alternative in the opening year (2026). The results of the queue analysis for the AM and PM peak hours are shown in **Table 8.14**. The results of the analysis indicate that several movements throughout the network are expected to have an observed maximum queue length that spillbacks into the upstream intersections. However, neither the Downtown West (Exit 6A) nor Downtown East (Exit 6B) off-ramp queues are anticipated to spillback beyond the storage lengths of either right turns or left turns or into the Selmon Expressway mainline. The storage lengths of the Downtown West (Exit 6A) off-ramp includes the length from gore point to stop bar minus the deceleration length.

Table 8.14: Build Alternative Opening Year (2026) Queue Analysis

ID	Intersection	Eastbound			Westbound			Northbound			Southbound			Off-Ramp		
		L	T	R	L	T	R	L	T	R	L	T	R	L	T	R
Storage Length (ft)																
1, 3	Channelside Dr/Selmon Off-Ramp and Florida Ave	200	200	+	-	-	-	-	450	200	-	-	-	-	-	1,350
2	Channelside Dr and Morgan St	450	450	+	300	-	+	-	550	550	100	450	-	-	-	-
4	Brorein St and Florida Ave	-	-	-	-	500	+	450	450	-	-	-	-	-	-	-
6	Whiting St and Jefferson St	+	500	+	+	450	+	+	600	+	+	500	+	-	-	-
A	Whiting St and Selmon Off-Ramp*	-	450	-	-	300	-	-	-	-	-	-	-	205 (860)	240 (895)	
B	Whiting St and Brush St	100	300	-	-	350	+	100	500	-	200	-	+	-	-	-
C	Whiting St and Meridian Ave (North)	350	-	250	-	-	-	200	200	-	-	500	400	-	-	-
8	Whiting St and Meridian Ave (South)	-	-	-	200	-	+	-	650	+	200	200	-	-	-	-
AM Peak Hour Maximum Queue Length (ft)																
1, 3	Channelside Dr/Selmon Off-Ramp and Florida Ave	423	423	+	-	-	-	-	172	69	-	-	-	-	-	367
2	Channelside Dr and Morgan St	313	313	+	441	-	+	-	141	37	57	119	-	-	-	-
4	Brorein St and Florida Ave	-	-	-	-	595	+	383	383	-	-	-	-	-	-	-
6	Whiting St and Jefferson St	+	223	+	+	451	+	+	272	+	+	413	+	-	-	-
A	Whiting St and Selmon Off-Ramp	-	184	-	-	164	-	-	-	-	-	-	-	139	-	121
B	Whiting St and Brush St	201	217	-	-	379	+	90	244	-	402	-	+	-	-	-
C	Whiting St and Meridian Ave (North)	168	-	284	-	-	-	317	47	-	-	1,485	18	-	-	-
8	Whiting St and Meridian Ave (South)	-	-	-	866	-	+	-	248	+	20	73	-	-	-	-
PM Peak Hour Maximum Queue Length (ft)																
1, 3	Channelside Dr/Selmon Off-Ramp and Florida Ave	692	692	+	-	-	-	-	316	116	-	-	-	-	-	226
2	Channelside Dr and Morgan St	541	541	+	484	-	+	-	208	66	22	54	-	-	-	-
4	Brorein St and Florida Ave	-	-	-	-	429	+	429	429	-	-	-	-	-	-	-
6	Whiting St and Jefferson St	+	547	+	+	314	+	+	313	+	+	351	+	-	-	-
A	Whiting St and Selmon Off-Ramp	-	395	-	-	138	-	-	-	-	-	-	-	112	-	125
B	Whiting St and Brush St	358	363	-	-	148	+	419	419	417	432	-	+	-	-	-
C	Whiting St and Meridian Ave (North)	220	-	383	-	-	-	131	76	-	-	99	47	-	-	-
8	Whiting St and Meridian Ave (South)	-	-	-	222	-	+	-	373	+	80	71	-	-	-	-

Note: Red highlight indicates locations where the queue length exceeds the available storage length.

*Storage length is the length of storage for the turn. The length in parentheses is the total length of the ramp from stop bar to gore point minus the deceleration length..

+Shared lane.

Queue analysis was also conducted at each of the signalized and stop-controlled intersections within the study area, as well as along the Selmon Expressway off-ramps, for the Build Alternative in the design year (2046). The results of the queue analysis for the AM and PM peak hours are shown in **Table 8.15**. The results of the analysis indicate that observed queue lengths are expected to increase, as compared to the opening year (2026) operations, with several additional intersection movements spilling back into the upstream intersections. The Downtown West (Exit 6A) off-ramp queues are not anticipated to spillback into the Selmon Expressway mainline. The maximum queues for the left turns and right turns at the Downtown East (Exist 6B) ramp will spillback beyond the diverge point of the two movements, which may lead to some additional delays on the ramp however none of the queues are expected to reach the Selmon Expressway mainline, as verified by a visual audit of the model. The remaining queues would be expected due to congestion in a typical downtown core area.

Table 8.15: Build Alternative Design Year (2046) Queue Analysis

ID	Intersection	Eastbound			Westbound			Northbound			Southbound			Off-Ramp		
		L	T	R	L	T	R	L	T	R	L	T	R	L	T	R
Storage Length (ft)																
1, 3	Channelside Dr/Selmon Off-Ramp and Florida Ave	200	200	+	-	-	-	-	450	200	-	-	-	-	-	910
2	Channelside Dr and Morgan St	450	450	+	300	-	+	-	550	550	100	450	-	-	-	-
4	Brorein St and Florida Ave	-	-	-	-	500	+	450	450	-	-	-	-	-	-	-
6	Whiting St and Jefferson St	+	500	+	+	450	+	+	600	+	+	500	+	-	-	-
A	Whiting St and Selmon Off-Ramp*	-	450	-	-	300	-	-	-	-	-	-	-	205 (860)	240 (895)	
B	Whiting St and Brush St	100	300	-	-	350	+	-	-	-	200	-	+	-	-	-
C	Whiting St and Meridian Ave (North)	350	-	250	-	-	-	200	200	-	-	250	250	-	-	-
8	Whiting St and Meridian Ave (South)	-	-	-	200	-	+	-	650	+	200	200	-	-	-	-
AM Peak Hour Maximum Queue Length (ft)																
1, 3	Channelside Dr/Selmon Off-Ramp and Florida Ave	614	614	+	-	-	-	-	267	94	-	-	-	-	-	498
2	Channelside Dr and Morgan St	441	441	+	479	-	+	-	209	50	35	104	-	-	-	-
4	Brorein St and Florida Ave	-	-	-	-	981	+	508	508	-	-	-	-	-	-	-
6	Whiting St and Jefferson St	+	238	+	+	483	+	+	417	+	+	536	+	-	-	-
A	Whiting St and Selmon Off-Ramp	-	205	-	-	233	-	-	-	-	-	-	-	360	661	
B	Whiting St and Brush St	330	364	-	-	422	+	168	307	-	427	-	+	-	-	-
C	Whiting St and Meridian Ave (North)	420	-	463	-	-	-	364	79	-	-	1,490	22	-	-	-
8	Whiting St and Meridian Ave (South)	-	-	-	866	-	+	-	868	+	102	158	-	-	-	-

Note: Red highlight indicates locations where the queue length exceeds the available storage length.

*Storage length is the length of storage for the turn. The length in parentheses is the total length of the ramp from stop bar to gore point minus the deceleration length.

+Shared lane.

Table 8.15 (Continued): Build Alternative Design Year (2046) Queue Analysis

ID	Intersection	Eastbound			Westbound			Northbound			Southbound			Off-Ramp		
		L	T	R	L	T	R	L	T	R	L	T	R	L	T	R
<i>PM Peak Hour Maximum Queue Length (ft)</i>																
1, 3	Channelside Dr/Selmon Off-Ramp and Florida Ave	1,563	1,563	+	-	-	-	-	499	413	-	-	-	-	-	338
2	Channelside Dr and Morgan St	534	534	+	482	-	+	-	347	129	5	83	-	-	-	-
4	Brorein St and Florida Ave	-	-	-	-	746	+	473	473	-	-	-	-	-	-	-
6	Whiting St and Jefferson St	+	649	+	+	464	+	+	435	+	+	431	+	-	-	-
A	Whiting St and Selmon Off-Ramp	-	433	-	-	262	-	-	-	-	-	-	-	369	-	643
B	Whiting St and Brush St	370	365	-	-	438	+	416	416	415	426	-	+	-	-	-
C	Whiting St and Meridian Ave (North)	377	-	435	-	-	-	297	162	-	-	207	436	-	-	-
8	Whiting St and Meridian Ave (South)	-	-	-	871	-	+	-	765	+	125	102	-	-	-	-

Note: Red highlight indicates locations where the queue length exceeds the available storage length.
+Shared lane.

8.2.4 Future Congestion Patterns

Figures 8.5 through 8.8 illustrate the anticipated simulated speeds within the study area for the Build Alternative in the opening year (2026) and design year (2046), during the AM and PM peak hours, respectively. Congestion along the Selmon Expressway is expected to improve, as compared to the No-Build condition. Additionally, congestion at the Channelside Drive and Morgan Street intersection is expected to improve due to the relocation of the Downtown East (Exit 6B) off-ramp to Whiting Street. As can be expected, congestion along Whiting Street and at the Meridian Avenue intersection is expected to increase with the additional demand from the Downtown East (Exit 6B) off-ramp being relocated to Whiting Street. Overall, rerouting the traffic for the Downtown East (Exit 6B) off-ramp from the Channelside Drive at Morgan Street intersection to Whiting Street, as well as the extension of Whiting Street to Meridian Avenue, is expected to improve operations of the study area as a whole.

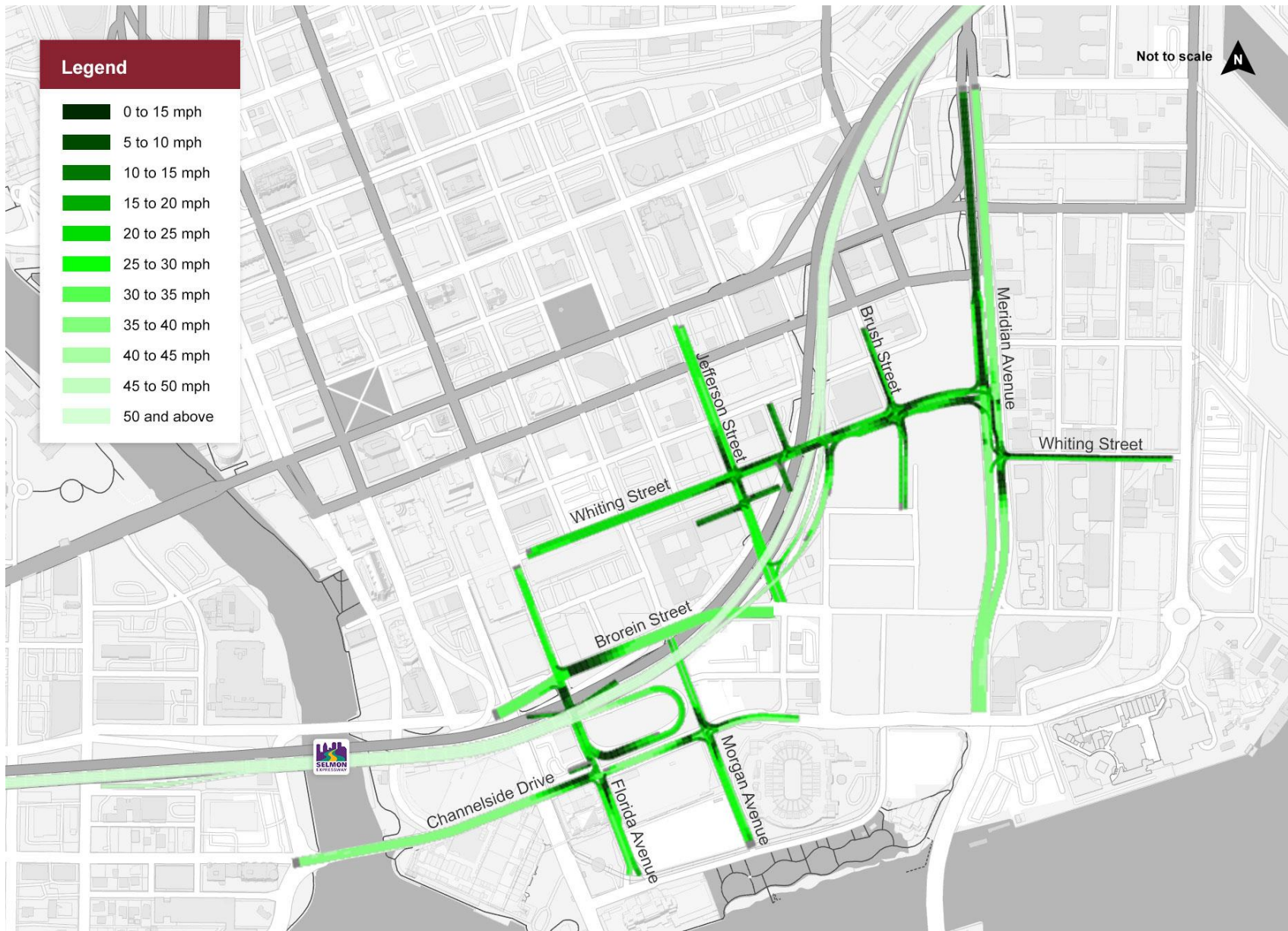


Figure 8.5: Build Alternative Opening Year (2026) Simulated Speed – AM Peak Hour

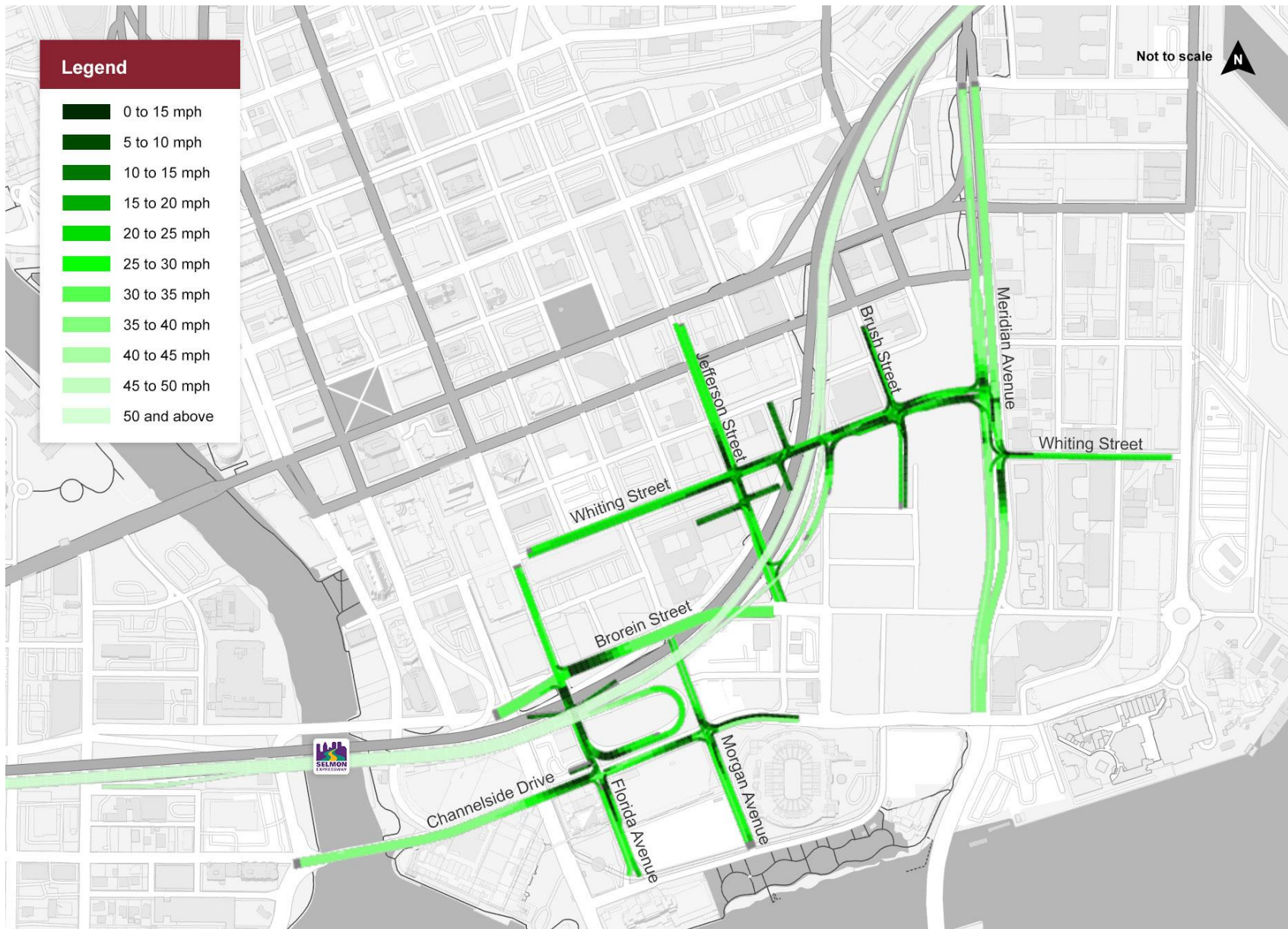


Figure 8.6: Build Alternative Opening Year (2026) Simulated Speed – PM Peak Hour

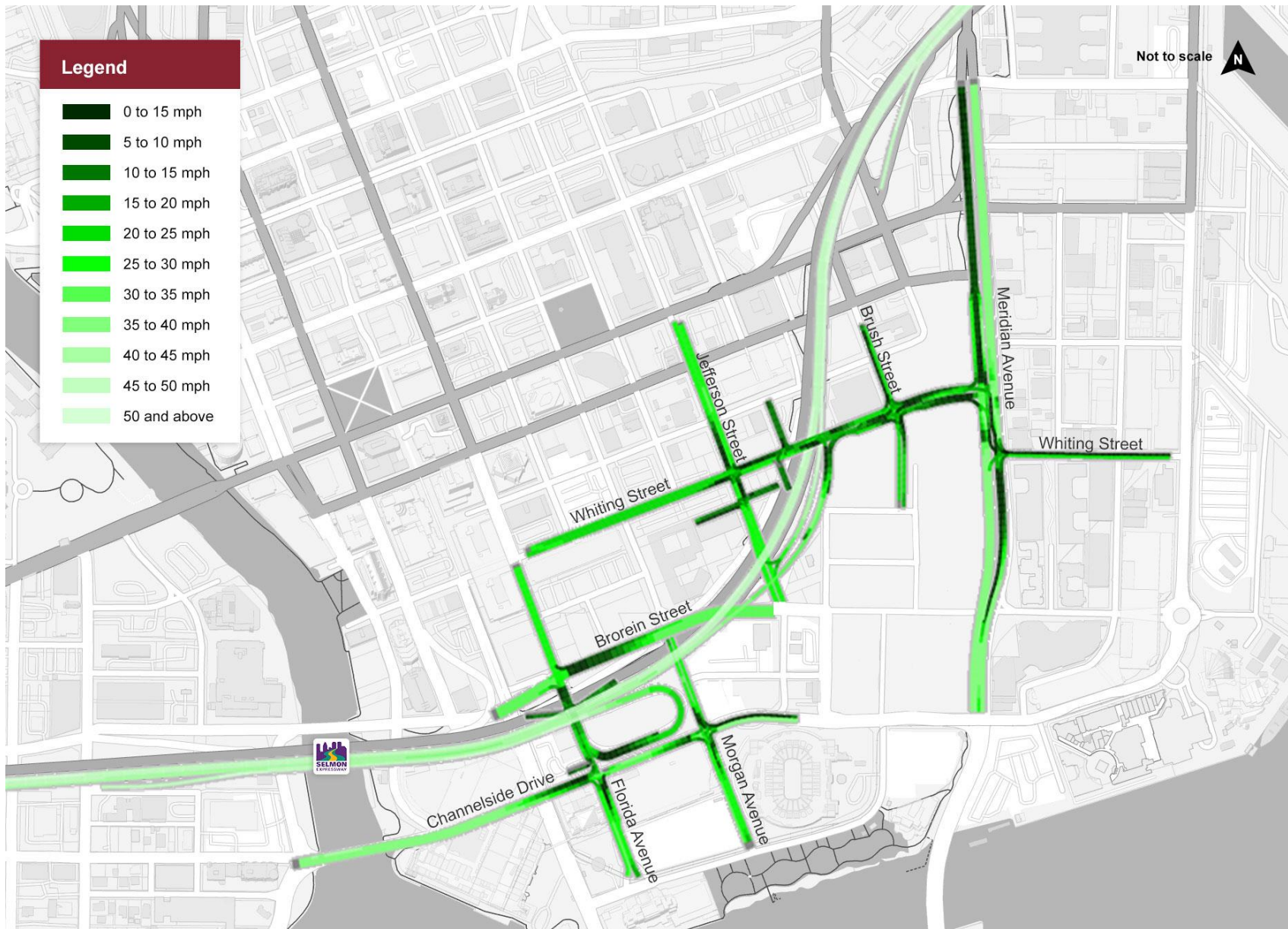


Figure 8.7: Build Alternative Design Year (2046) Simulated Speed – AM Peak Hour

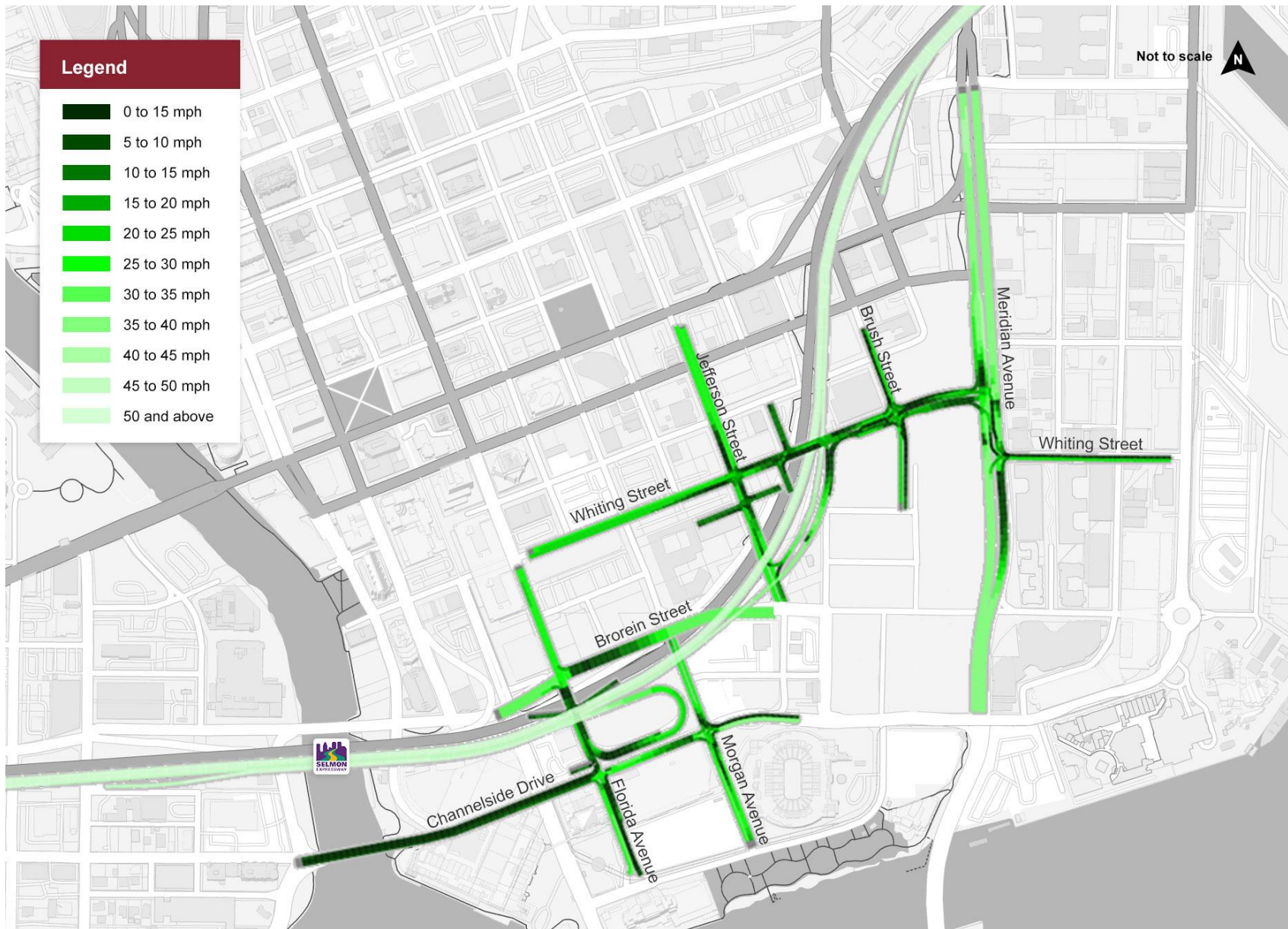


Figure 8.8: Build Alternative Design Year (2046) Simulated Speed – PM Peak Hour

8.3 Network-wide Analysis

As a final comparison of operations between the No-Build and Build Alternatives, opening year (2026) and design year (2046) measures of effectiveness in the network, as defined in Table 9-7 of the *FDOT Traffic Analysis Handbook* were compared for each of the peak hours. This analysis is provided in **Table 8.16** and indicates that the Build Alternative significantly improves the network's performance. In the opening year (2026) AM peak hour, the delay, latent demand, and total stops show an increase and the average speed and vehicles arrived show a decrease compared to the No-Build Alternative. This is likely due to the increased demand along Whiting Street and Meridian Avenue due to the new off-ramp to Whiting Street and the new Whiting Street and Meridian Avenue connection. However, by the design year (2046), the improvements under the Build Alternative are expected to improve network conditions across all measures by mitigating congestion along the Selmon Expressway. In the design year (2046), the Build alternative shows decreased delay, increased vehicles serviced, reduced total, increased average speed, and increased vehicle miles traveled.

Table 8.16: Network-wide Measures of Effectiveness

Network-wide MOE	Time of Day	Opening Year (2026)			Design Year (2046)		
		No-Build	Build	% Difference	No-Build	Build	% Difference
Total Delay (hours)	AM	144	237	64.39%	861	445	-48.36%
	PM	323	182	-43.67%	1,102	467	-57.66%
Average Delay (s/veh)	AM	30	51	67.43%	153	67	-56.47%
	PM	69	38	-45.42%	221	75	-65.92%
Total Travel Time (hours)	AM	451	549	21.74%	1,185	925	-21.94%
	PM	624	499	-20.06%	1,371	884	-35.57%
Latent Delay (hours)	AM	37	34	-8.23%	4,525	510	-88.73%
	PM	574	56	-90.27%	9,637	1,371	-85.78%
Latent Demand (veh)	AM	83	96	15.14%	7,734	1,094	-85.86%
	PM	1,172	128	-89.12%	13,433	2,253	-83.23%
Vehicles Arrived (veh)	AM	16,535	16,104	-2.61%	19,092	23,043	20.69%
	PM	16,106	16,797	4.29%	16,565	21,406	29.22%
Total Stops (number)	AM	15,072	17,699	17.43%	352,656	31,804	-90.98%
	PM	43,929	18,034	-58.95%	501,853	45,860	-90.86%
Average Speed (mph)	AM	30	25	-16.63%	12	24	105.21%
	PM	22	29	29.96%	8	21	155.37%
Vehicle Miles Traveled (miles)	AM	13,680	13,877	1.44%	13,880	22,227	60.13%
	PM	13,650	14,220	4.17%	11,247	18,499	64.48%

9.0 Future Safety Analysis

Per the MLOU, the safety AOI was determined to be only the eastbound direction of the Selmon Expressway from the Plant Avenue on-ramp to the Nebraska Avenue on-ramp, as well as the following intersections, also shown in **Figure 9.1**:

- Channelside Drive at Florida Avenue.
- Channelside Drive at Morgan Street.
- Florida Avenue at Selmon Expressway off-ramp.
- Brorein Street at Florida Avenue.
- Jefferson Street at Selmon Expressway on-ramp.
- Whiting Street at Jefferson Street.
- Whiting Street at Nebraska Avenue.
- Whiting Street at Brush Street (future intersection only).
- Whiting Street at Meridian Avenue (additional “North” intersection in the future).

9.1 Description of Alternatives

A future safety analysis was performed for the project alternatives in accordance with the FDOT IARUG Safety Guidelines. Three methodologies were implemented to evaluate and compare the potential safety impacts associated with the two proposed alternatives: A No-Build Alternative and Build Alternative. The planned improvements for the two alternatives are as follows:

- 1 The No-Build Alternative includes the planned widening of the Selmon Expressway through the South Selmon PD&E Study without any ramp or access changes.
- 2 The Build Alternative includes the following improvements:
 - a **Relocating the existing Downtown East (Exit 6B) off-ramp to the new Whiting Street connection, operating under signal control.** This improvement involves removing the existing connection of Nebraska Avenue to Whiting Street to build an eastbound off-ramp from the Selmon Expressway that connects to Whiting Street at this location.
 - b **Widening the eastbound off-ramp to accommodate three-lanes at the Florida Avenue intersection, operating under signal control with no RTOR, and clustering the new signal with the Florida Avenue at Channelside Drive signal.** This modification includes removing the off-ramp at the Channelside Drive at Morgan Street intersection, converting it to a four-legged, signalized arterial intersection, while widening the existing loop ramp and signalizing the connection to Florida Avenue.
 - c **Providing a pedestrian underpass at the location of the existing Channelside Drive off-ramp access.**
 - d **Connecting Whiting Street from Jefferson Street to Meridian Avenue with a four-lane typical section.** This improvement includes widening Whiting Street from two to four lanes from Jefferson Street to Brush Street and connecting Brush Street with Meridian Avenue

by installing a new three-legged signalized intersection at Meridian Avenue. Intersection lane configurations at Whiting Street and Meridian Avenue consist of two eastbound left-turn only lanes and a channelized eastbound right-turn lane operating under yield conditions.

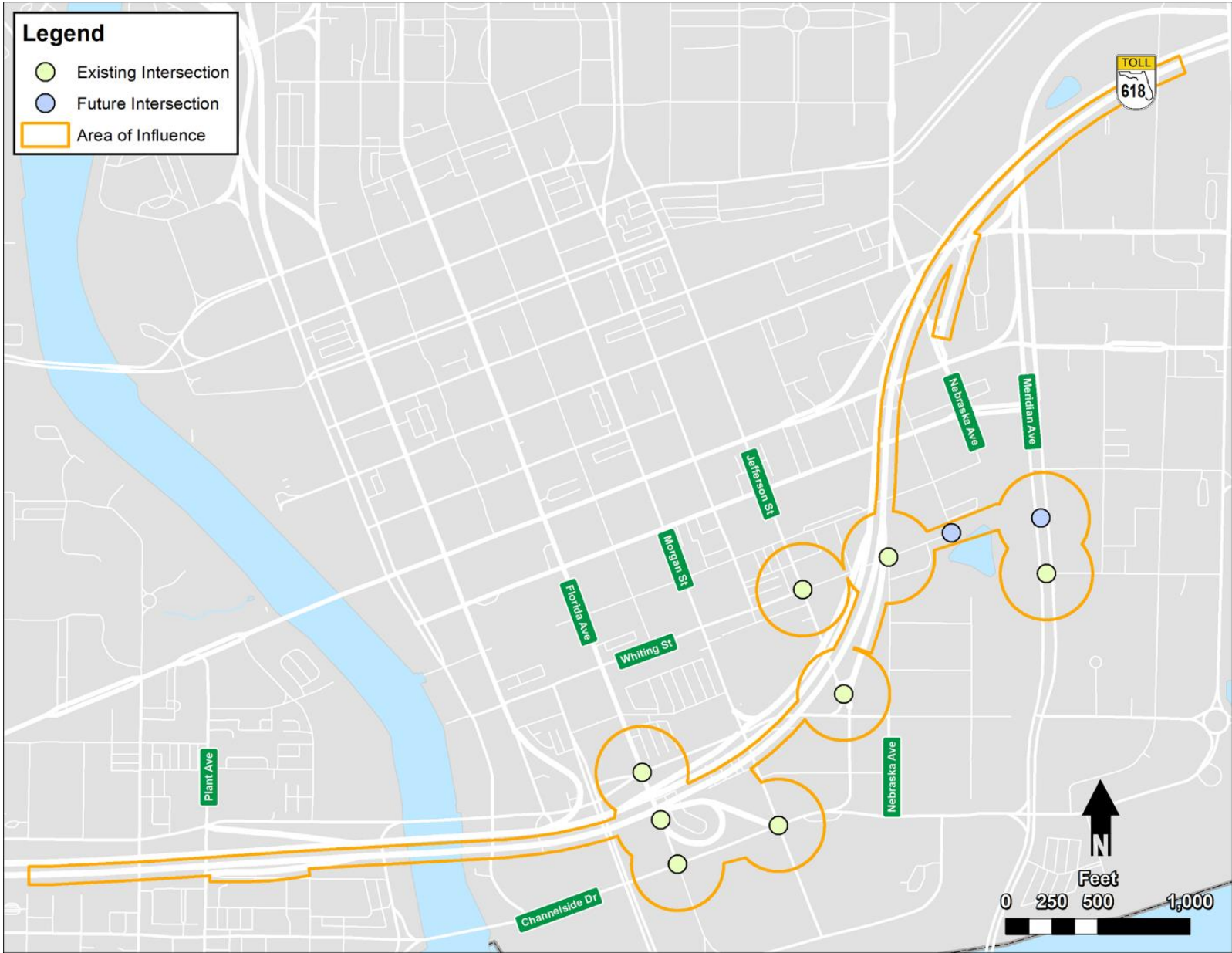


Figure 9.1: Safety Area of Influence

9.2 HSM Part C Methodology

The HSM Part C methodology uses a substantive approach to safety, where expected frequencies and outcomes can be predicted and analyzed for the proposed design alternatives. This predictive safety analysis was performed per Chapter 18 of the HSM Supplement, using the Enhanced Interchange Safety Analysis Tool (ISATe) and FDOT Form 750-020-21. Due to the unique design characteristics of certain locations, some locations could not be analyzed with the HSM predictive method. A countermeasure-based Crash Modification Factor (CMF) methodology was used to measure the safety implications at these locations. Safety treatments were selected from the FHWA's CMF Clearinghouse website to evaluate the computed amount of expected number of crashes potentially reduced after implementing the countermeasure. A qualitative methodology provided a supplemental analysis based on collected data from Google Maps, conceptual design plans, topographical information, and FDOT straight line diagrams information about the relevant geometric design features, traffic control features, and other site characteristics. ISATe, FDOT forms and applicable CMF Clearinghouse countermeasures are provided in Appendix H.

Figure 1 from the FDOT IARUG 2020, reproduced below in **Figure 9.2**, was used to determine which safety analysis method to use at each location for each alternative. The HSM Part C is a predictive method that uses Safety Performance Functions (SPFs) to predict the expected average crash frequency of freeway segments, ramps (including segments and terminals), arterial segments, and intersections. This SPF methodology evaluates the existing and proposed conditions, at a specific site by facility type, as a function of roadway characteristics, traffic volumes, and crash data.

9.2.1 Study Area Segmentation

In addition to the intersections within the area of influence, the eastbound Selmon Expressway was segmented according to HSM principles for analysis in the ISATe. There were no segments along the arterials that fell within the minimum appropriate length (0.1 miles) for analysis with the predictive method. The segmentation of the expressway in the No-Build condition is shown in **Figure 9.3**.

Because the area of influence does not include the westbound Selmon Expressway, but the predictive method for freeways assume the analysis of a bidirectional facility, the westbound direction of the Selmon Expressway was treated as if there were no ramp exits or entrances. The segmentation of the freeway in the Build condition is shown in **Figure 9.4**.

9.2.2 Traffic AADT

To be compatible with the assumptions with the HSM Predictive Method for freeways, the bidirectional AADT was calculated for the Selmon Expressway for purposes of this analysis, rather than using only the directional AADT. The improvements on the Selmon Expressway and the AADT for each segment for each alternative and analysis year can be seen in **Figures 9.5** through **9.8**. AADTs at intersections are identical to what is shown in **Section 7.4**. To calculate the AADT of the intermediate years, a simple interpolation was performed in both ISATe and the relevant HSM spreadsheets for urban arterial intersections.

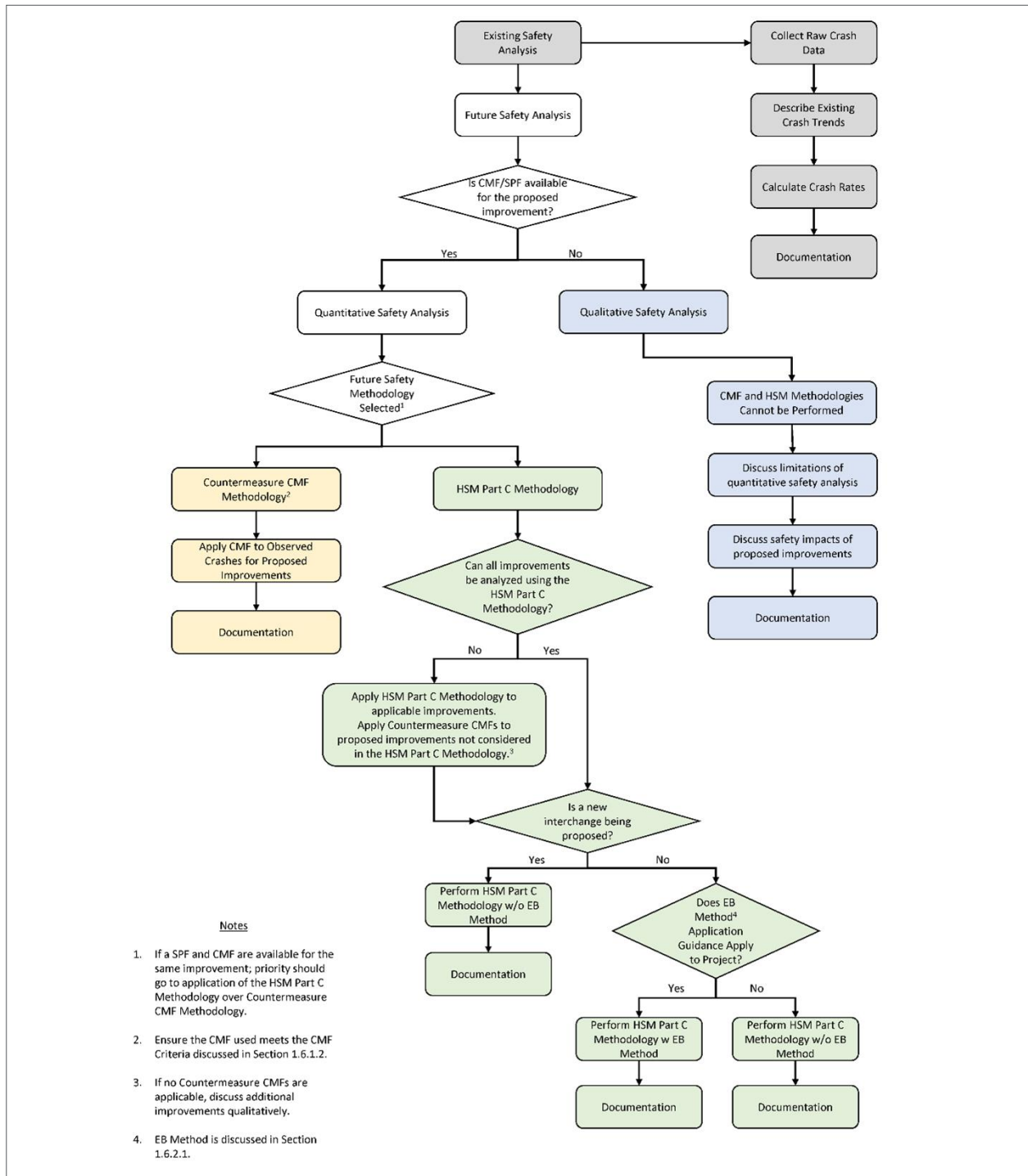


Figure 9.2: IARUG (Figure 1) Safety Analysis Process Flow Chart

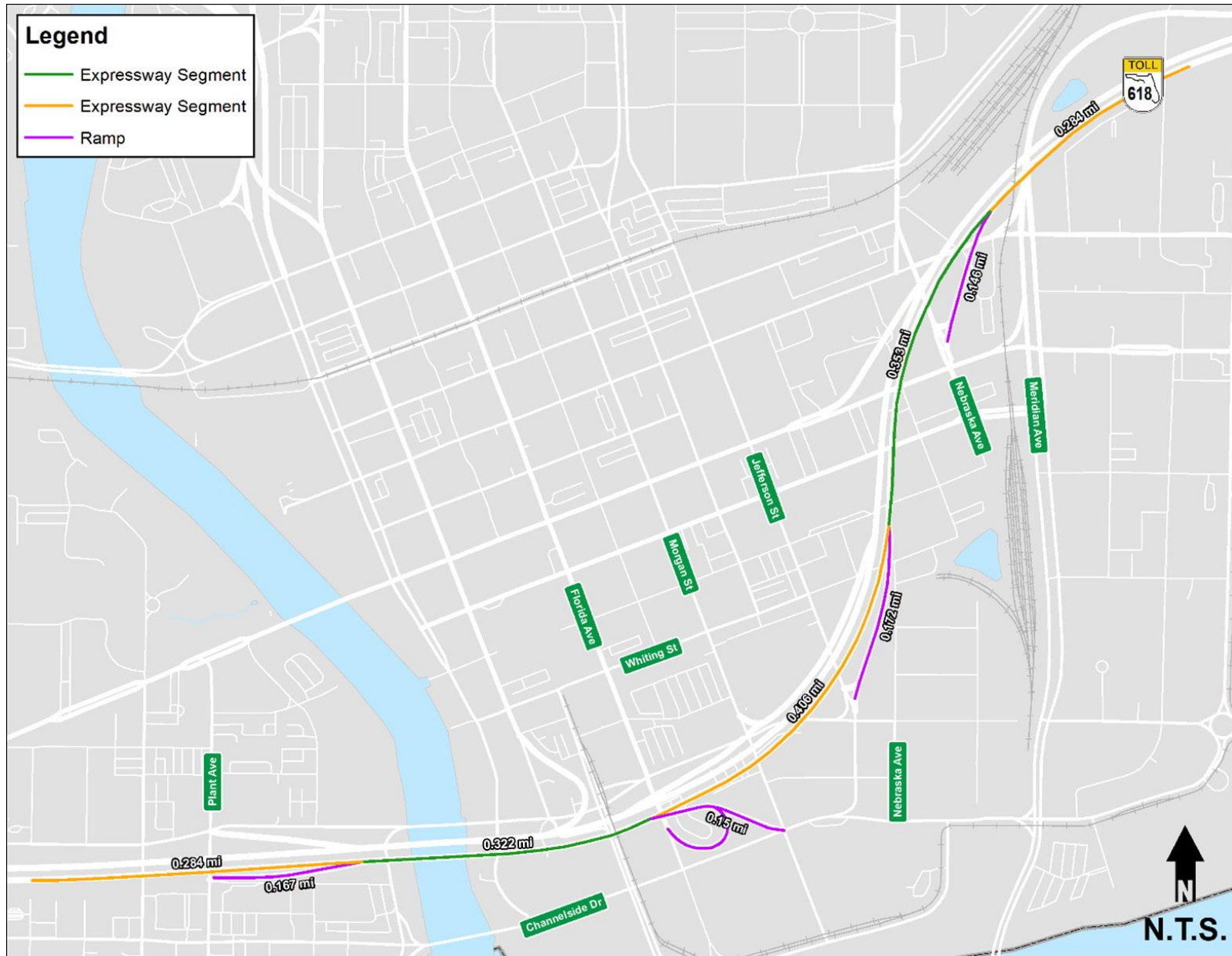


Figure 9.3: No-Build Segmentation

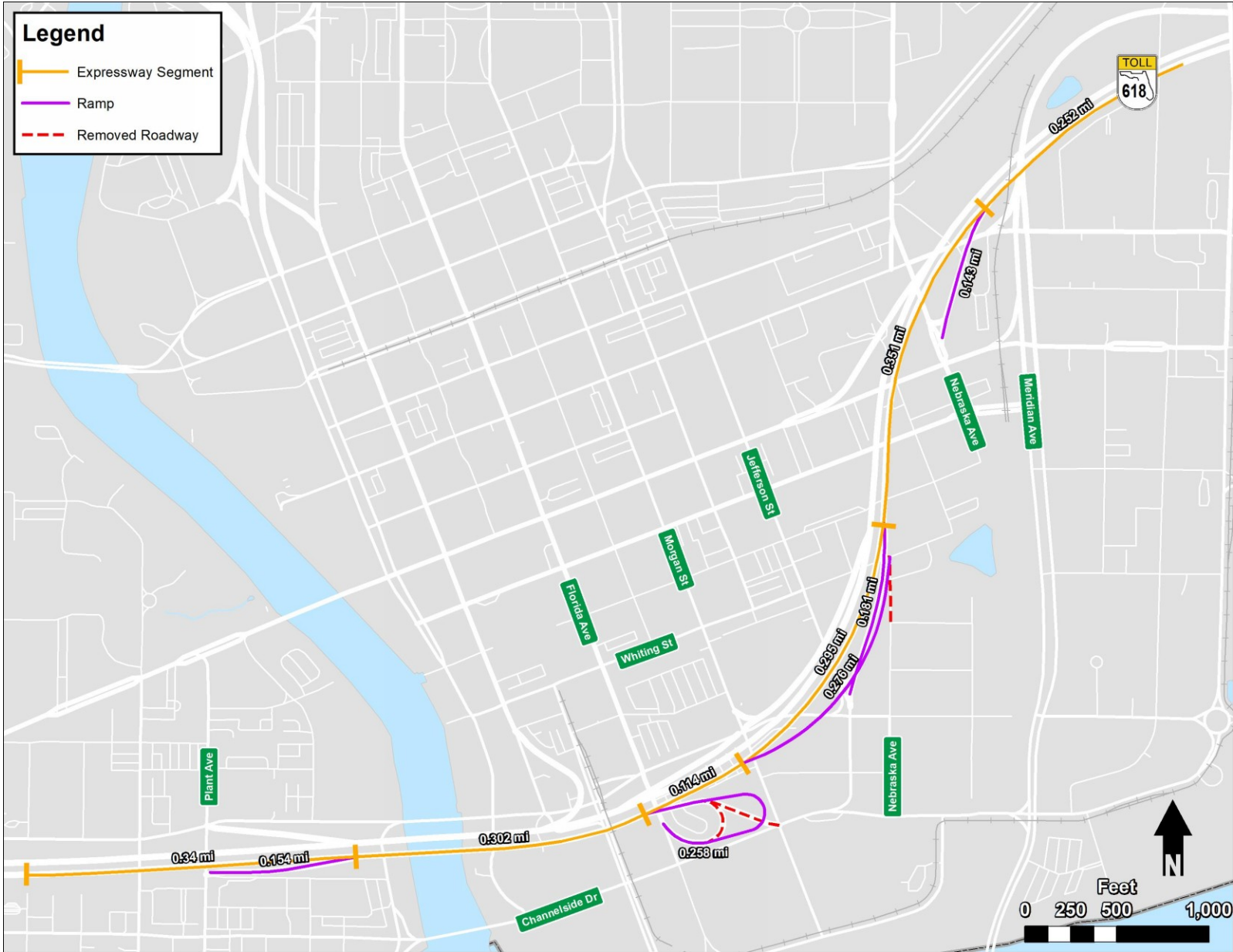


Figure 9.4: Build Segmentation

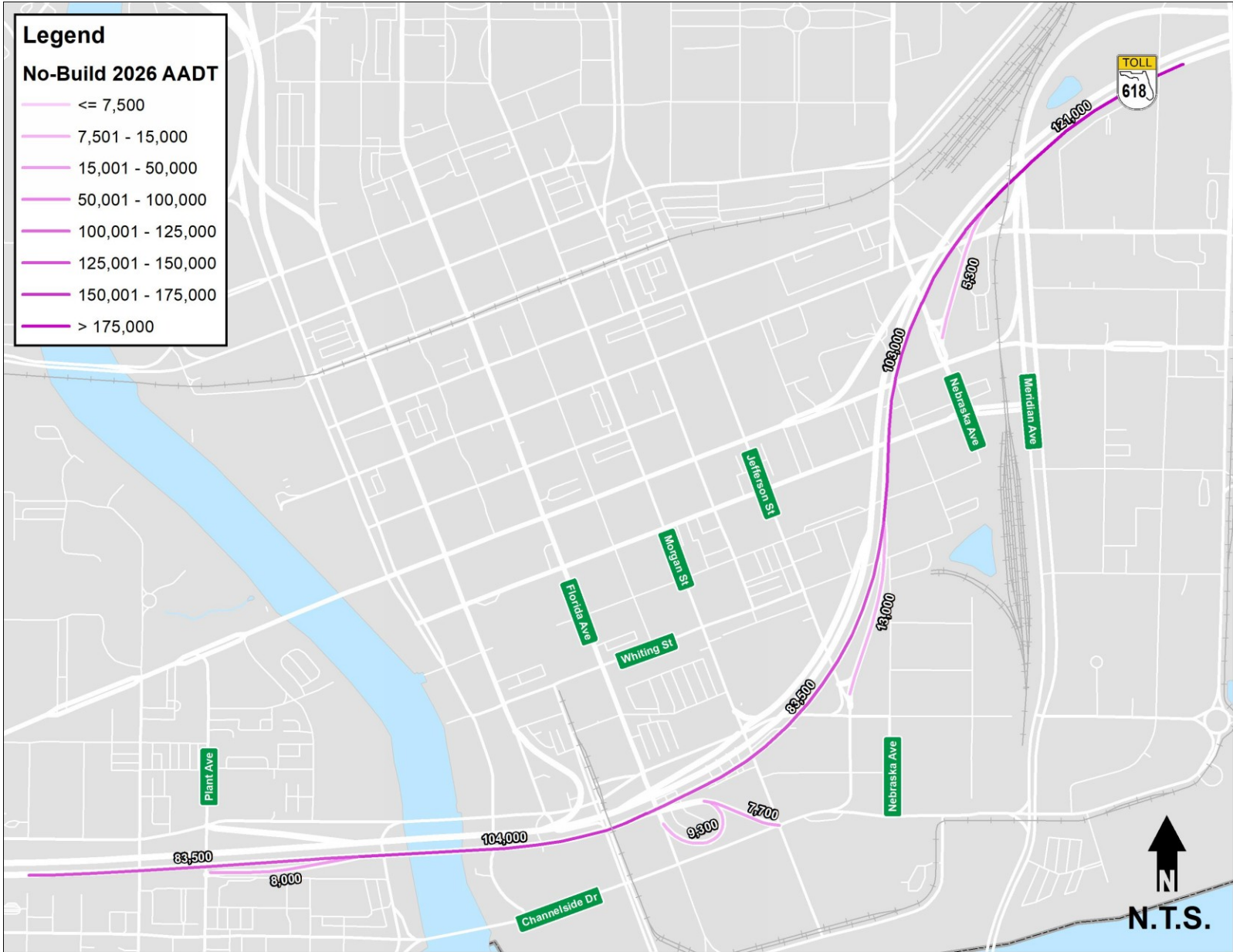


Figure 9.5: Opening Year (2026) No-Build Alternative AADTs

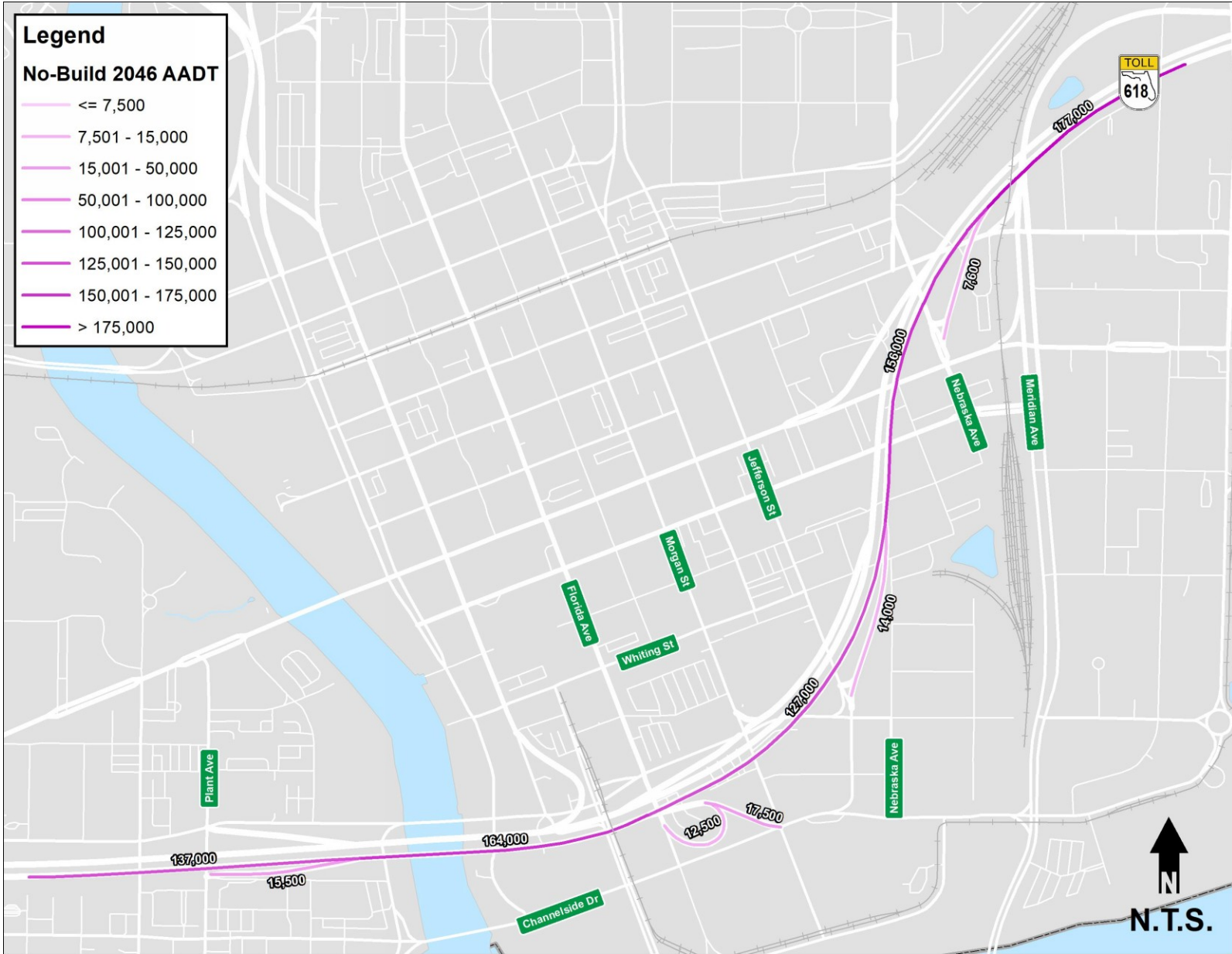


Figure 9.6: Design Year (2046) No-Build Alternative AADTs

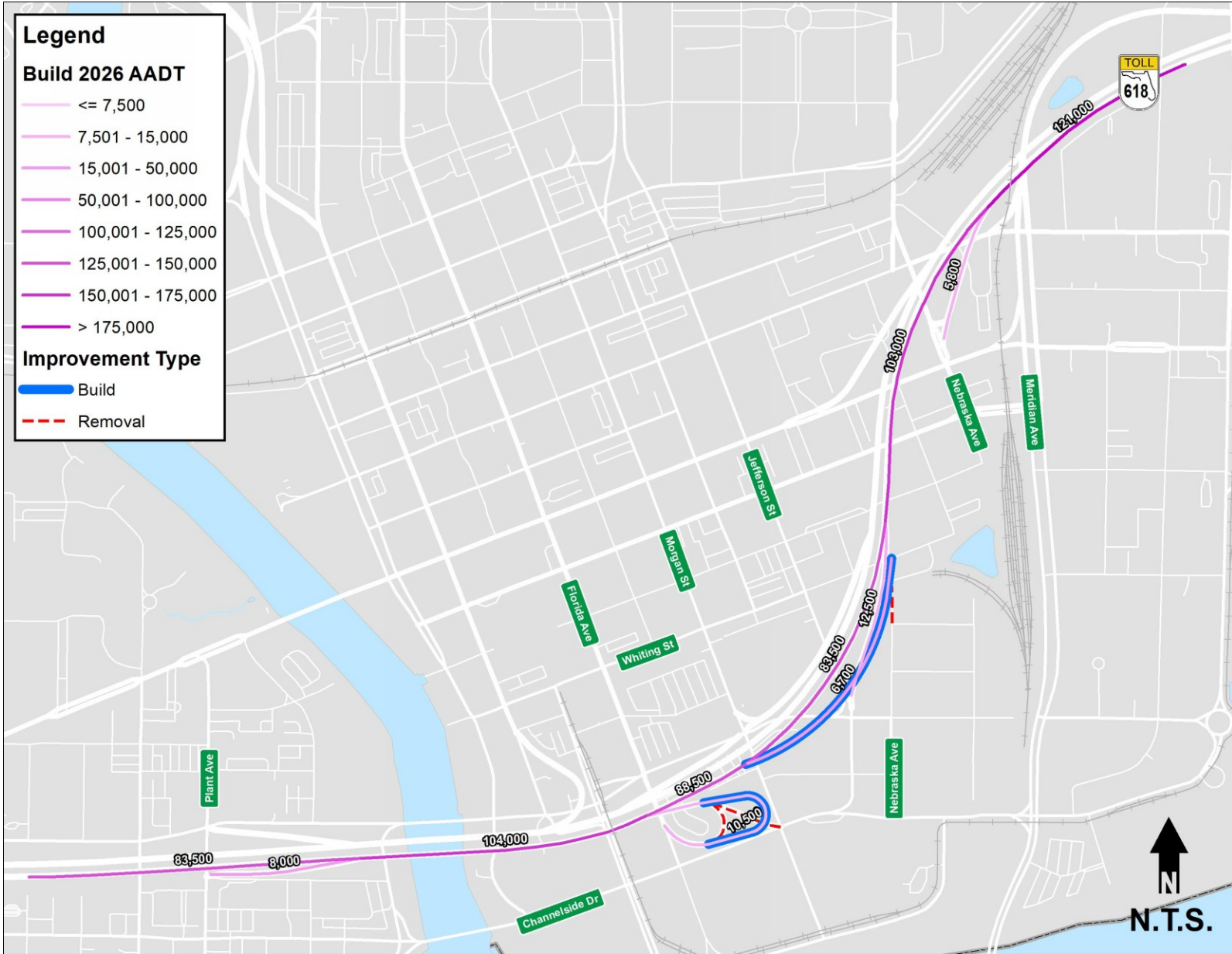


Figure 9.7: Opening Year (2026) Build Alternative AADTs

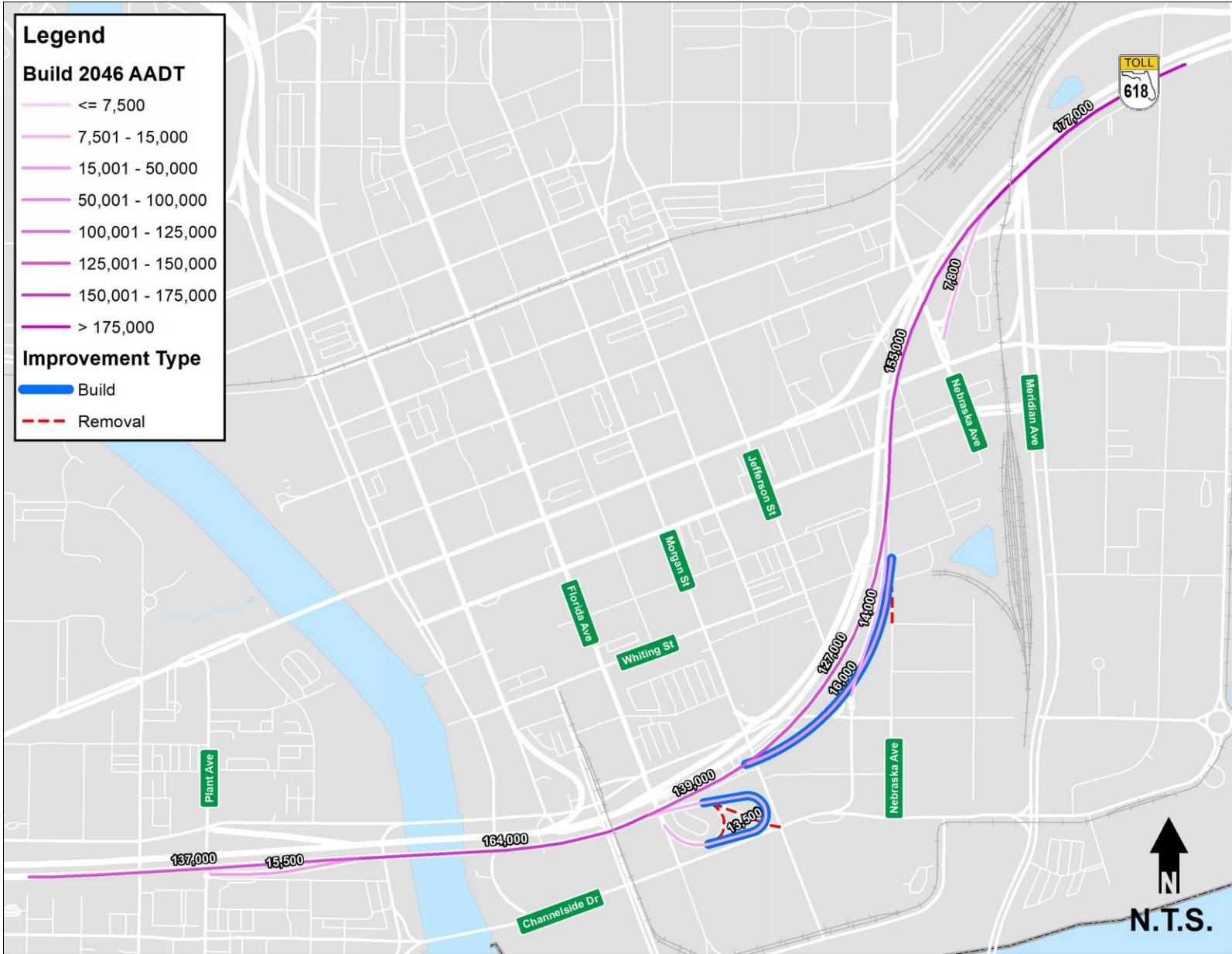


Figure 9.8: Design Year (2046) Build Alternative AADTs

9.2.3 Empirical-Bayes Method

Since the Build Alternative require significant changes in the geometric design, the predictive method using the Empirical-Bayes Method was not applied to any alternatives so that results between alternatives would be comparable.

9.2.4 Evaluation of Alternatives

Predicted yearly crash frequencies during the study period (2026-2046) have been summarized for seven freeway segments, five ramp segments, two terminals, and five arterial intersections. Crash frequencies for the Selmon Expressway, eastbound ramp segments, and eastbound terminals within the AOI were estimated utilizing ISATe. It should be noted that HSM SPFs are not able to predict crash frequency for a freeway mainline in one direction. Therefore, bidirectional AADTs were used for the mainline. The arterial intersections of Meridian Avenue at Whiting Street, Whiting Street at Nebraska Avenue, Whiting Street at Jefferson Street, and Whiting Street at Brush Street were analyzed utilizing the FDOT Form 750-020-21c.

The summary of the alternatives analysis is discussed in the following sections. The tables in the following sections identify the lowest yearly crash frequency and the highest yearly crash frequency for each analyzed segment comparing location and applicable models (multi-vehicle [Multi-Vehicle], single vehicle [Single Vehicle], on-ramp [Entrance Ramp], off-ramp [Exit Ramp]) and crash severity (fatal/injury [Fatal / Injury] and property damage only [Property Damage Only]) for each alternative.

9.2.4.1 *Predicted Freeway Crash Frequencies*

Due to the proposed widening of the Selmon Expressway in both alternatives, there is not a distinct difference in the estimated crash frequencies per year. The No-Build Alternative proposes widening from four to six lanes, while the Build Alternative proposes widening from four to seven lanes (four eastbound and three westbound) to account for the proposed off-ramp to Whiting Street. The crash frequency summary for the Selmon Expressway mainline crashes per year is shown in **Table 9.1**.

Table 9.1: Summary of Selmon Expressway Mainline Crashes Per Year

Alternative	Property Damage Only		Fatal/Injury	
	Multi-Vehicle	Single Vehicle	Multi-Vehicle	Single Vehicle
<i>West of Plant Avenue On-Ramp</i>				
No-Build	4.083	3.092	1.922	1.641
Build	4.084	3.092	1.922	1.641
<i>Between Plant Avenue On-Ramp and Florida Avenue Off-Ramp</i>				
No-Build	7.259	4.852	3.077	2.581
Build	7.335	4.852	3.110	2.581
<i>Between Florida Avenue Off-Ramp and Jefferson Street On-Ramp</i>				
No-Build	7.240	4.932	2.876	2.413
<i>Between Florida Avenue Off-Ramp and Proposed Whiting Street Off-Ramp</i>				
Build	2.189	1.291	0.933	0.629
<i>Between Proposed Whiting Street Off-Ramp and Jefferson Street On-Ramp</i>				
Build	5.179	3.413	2.067	1.698
<i>Between Jefferson Street On-Ramp and Nebraska Avenue On-Ramp</i>				
No-Build	9.681	3.535	3.609	1.788
Build	9.599	3.530	3.584	1.784
<i>East of Nebraska Avenue On-Ramp</i>				
No-Build	7.050	1.912	2.526	0.968
Build	7.042	1.912	2.523	0.968

9.2.4.2 Predicted Ramp Segment Crash Frequencies

Planned improvements for ramp segments are only proposed in the Build Alternative. In addition, there are no improvements being proposed at the Plant Avenue or Nebraska Avenue on-ramps for either of the alternatives. Safety improvements for the relevant ramp segments are described below:

- **Eastbound Florida Avenue Off-Ramp** (Lengthen off-ramp, increase radius, and remove Morgan Street connection): Lengthening the off-ramp will increase ramp capacity. Increasing the ramp radius will improve driver comfort and maneuverability, reducing the chance of losing control within the curve. Removing the Morgan Street connection ramp will increase departure capacity at the off-ramp terminal and increase pedestrian and bicyclist safety at the Morgan Street and Florida Avenue traffic signals.
- **Proposed Eastbound Whiting Street Off-Ramp** (Build one-lane off-ramp from the Selmon Expressway, currently at Morgan Street, to Whiting Street): This improvement will increase the departure capacity of the Selmon Expressway and alleviate anticipated traffic growth at the Florida Avenue off-ramp.
- **Eastbound Jefferson Street On-Ramp** (Shift alignment to accommodate new Whiting Street off-ramp overhead): This improvement serves to improve the connectivity of the roadway network affiliated with the Selmon Expressway.

The crash frequency summary for the eastbound on- and off-ramp crashes per year is shown in **Table 9.2**. No applicable CMF Clearinghouse countermeasures were selected for the safety improvements being proposed at the ramp segments.

Table 9.2: Summary of Eastbound On- and Off-Ramp Crashes Per Year

Alternative	Property Damage Only		Fatal/Injury	
	Multi-Vehicle	Single Vehicle	Multi-Vehicle	Single Vehicle
<i>Eastbound Plant Avenue On-Ramp</i>				
No-Build	0.055	0.180	0.102	0.210
Build	0.055	0.180	0.102	0.210
<i>Eastbound Florida Avenue/Morgan Street Off-Ramp</i>				
No-Build	0.261	3.653	0.556	6.299
<i>Eastbound Florida Avenue Off-Ramp</i>				
Build	0.119	3.578	0.417	7.314
<i>Eastbound Whiting Street Off-Ramp</i>				
Build	0.016	0.371	0.063	0.596
<i>Eastbound Jefferson Street On-Ramp</i>				
No-Build	0.067	0.208	0.148	0.296
Build	0.065	0.210	0.145	0.300
<i>Eastbound Nebraska Avenue On-Ramp</i>				
No-Build	0.029	0.139	0.053	0.183
Build	0.031	0.145	0.057	0.190

9.2.4.3 Predicted Ramp Terminal Crash Frequencies

Improvements for ramp terminals are only proposed in the Build Alternative. In addition, there are no improvements being proposed at the Jefferson Street on-ramp for either of the alternatives. The safety improvement for the proposed Whiting Street ramp terminal is described below:

- **Proposed Whiting Street Ramp Terminal** (Remove Whiting Street connection from Nebraska Avenue and add connection from proposed off-ramp): This improvement will increase the departure capacity of the Selmon Expressway and alleviate anticipated traffic growth at the Florida Avenue off-ramp. The alternative concept plans can be found in **Appendix H**.

The crash frequency summary for the ramp terminal crashes per year is shown in **Table 9.3**. No applicable CMF Clearinghouse countermeasures were selected for the safety improvements being proposed at the ramp terminals.

Table 9.3: Summary of Ramp Terminal Crashes Per Year

Alternative	Property Damage Only	Fatal/Injury
<i>Jefferson Street On-Ramp</i>		
No-Build	1.538	3.033
Build	1.832	3.258
<i>Whiting Street Ramp Terminal</i>		
Build	3.312	4.130

9.2.4.4 Predicted Arterial Intersection Crash Frequencies

Improvements for arterial intersections are only proposed in the Build Alternative. These improvements will alleviate anticipated traffic growth expected from new development in the area and improve the connectivity of the proposed roadway network.

Safety improvements for the Build Alternative are described below:

- **Whiting Street at Jefferson Street:** Widen the east leg from a two-lane to a four-lane typical section.
- **Whiting Street at Brush Street:** New three-legged signalized intersection.
- **Meridian Avenue at Whiting Street (North):** Extending Whiting Street to connect to Meridian Avenue.

The crash frequency summary for the arterial intersection crashes per year were calculated using the HSM spreadsheet and is shown in **Table 9.4**. No applicable CMF Clearinghouse countermeasures were selected for the safety improvements being proposed for arterial intersections. Applied calibration factors were referenced from the Florida Design Manual Table 122.6.3.

Table 9.4: Summary of Arterial Intersection Crashes Per Year

Alternative	Property Damage Only	Fatal/Injury
<i>Whiting Street at Jefferson Street</i>		
No-Build	2.959	3.344
Build	5.013	7.693
<i>Whiting Street at Nebraska Avenue</i>		
No-Build	0.828	1.850
<i>Whiting Street at Brush Street</i>		
Build	4.045	6.496
<i>Meridian Avenue at Whiting Street (South)</i>		
No-Build	2.040	3.426
Build	4.792	7.488
<i>Meridian Avenue at Whiting Street (North)</i>		
Build	5.884	10.348

9.2.4.5 Comparison Results

Following the FDOT IARUG Safety Guidance, local calibration factors were not applied. The Build Alternative predicted higher overall crash frequencies primarily due to the large increase in traffic volumes, methodology limitations, the incorporation of two new intersections, and the lack of proposed improvements at the freeway segment between exit ramp to Florida Avenue and entrance ramp from Jefferson Street and the intersection of Whiting Street and Nebraska Avenue. However, the Build Alternative provided crash reductions at improved intersections and the freeway segment between entrance ramp from Jefferson Street and entrance ramp from Nebraska Avenue. The summary of the crash frequency totals is presented in **Table 9.5**.

9.3 Qualitative Safety Analysis

A qualitative safety analysis was performed for four intersections. These locations were not feasible for a quantitative safety analysis utilizing the HSM Part C or CMF Methodologies. **Table 9.6** summarizes the alternative improvements, limitations of the quantitative safety analysis techniques, and anticipated impacts on safety due to the recommended modifications. Crash reduction factors (CRFs) used in this section were not utilized with the CMF methodology due to the star ratings of the selected countermeasures.

Table 9.5: Summary of Crash Frequencies per Alternative

Location	No Build		Build	
	Fatal/Injury	Property Damage Only	Fatal/Injury	Property Damage Only
	Per Year	Per Year	Per Year	Per Year
Freeway	36.961	56.745	25.057	56.626
Between Proposed exit ramp to Whiting Street and entrance ramp from Jefferson Avenue	-	-	3.765	8.592
East of Nebraska Avenue entrance ramp	4.868	11.908	4.880	11.900
West of Plant Avenue	3.562	7.175	3.562	7.176
Between entrance ramp from Plant Avenue and exit ramp to Florida Avenue	5.886	12.274	5.920	12.350
Between exit ramp to Florida Avenue and entrance ramp from Jefferson Street	5.290	12.172	-	-
Between exit ramp to Florida Avenue and Proposed exit ramp to Whiting Street	-	-	1.592	3.480
Between entrance ramp from Jefferson Street and entrance ramp from Nebraska Avenue	5.396	13.216	5.368	13.129
Ramp	4.592	7.847	4.770	9.394
EB entrance ramp from Plant Avenue	0.236	0.312	0.236	0.312
EB exit ramp to Florida Avenue/Morgan Street	3.914	6.855	-	-
EB exit ramp from Selmon Expressway to Florida Avenue	-	-	3.697	7.731
Proposed EB exit ramp from Selmon Expressway at Whiting Street	-	-	0.387	0.659
EB entrance ramp from Nebraska Avenue	0.168	0.237	0.175	0.247
EB entrance ramp from Jefferson Street	0.275	0.444	0.275	0.445
Terminal	1.538	3.033	5.144	7.731
Proposed Whiting Street ramp terminal	-	-	3.312	4.130
Jefferson Street at entrance ramp to EB Selmon Expressway	1.538	3.033	1.832	3.258
Intersection	5.828	8.619	19.734	32.025
Whiting Street at Jefferson Street	2.959	3.344	5.013	7.693
Whiting Street at Nebraska Avenue	0.828	1.850	-	-
Whiting Street at Brush Street	-	-	4.045	6.496
Meridian Avenue at Whiting Street (East)	2.040	3.426	4.792	7.488
Meridian Avenue at Whiting Street (West)	-	-	5.884	10.348
Total	36.961	76.244	54.705	105.434

Table 9.6: Summary of Qualitative Analysis

Alternative	Improvement Description	Methodology Limitations	Safety Assessment
<i>Channelside Drive at Florida Avenue</i>			
Build	<p>Coordinate operations with signal at Florida Avenue exit ramp.</p> <p>Update eastbound approach to two left-turn lanes and two through lanes.</p>	<p>AADT is too high to be analyzed with one-way Urban arterial SPFs (Maximum is 24,300 major/16,900 minor). Two-way SPFs are not appropriate at this location.</p>	<p>Coordinating the proposed signal with the arterial signals on Florida Avenue has a 58% crash reduction factor involving all crash types involving serious, minor and/or possible injuries. Added benefits include reducing red light running and aggressive driving (see CMF ID: 9857).</p>
<i>Channelside Drive at Morgan Street</i>			
Build	<p>Remove the connection from the Selmon Expressway exit ramp in the northwest to change this from a five-legged to four-legged intersection.</p> <p>All future scenarios also involve making Channelside east of this intersection two-way and west of the intersection one way (eastbound only).</p>	<p>No HSM methodology allows for intersections that are one-way on one leg and two-way on another leg. ISATe cannot handle five-legged ramp terminals.</p>	<p>By changing the intersection from a five-legged to a four-legged intersection, conflict points are reduced. This aids in the reduction of pedestrian and bicycle related crashes that often result in fatal or serious injuries (see CMF ID: 3081).</p>
<i>Florida Avenue at Selmon Off-Ramp</i>			
Build	<p>Widen exit ramp from one lane to three lanes at intersection, add signal (with no RTOR).</p>	<p>ISATe cannot analyze ramp terminals where the crossroad does not allow for two-way travel.</p>	<p>Benefits often seen from widening lanes and signalizing ramp terminals include a reduction in queue lengths and aggressive driving behaviors.</p>
<i>Florida Avenue at Brorein Street</i>			
No-Build and Build	<p>None</p>	<p>AADT is too high to be analyzed with one-way Urban arterial SPFs (Maximum is 24,300 major/16,900 minor). Two-way SPFs are not appropriate at this location.</p>	<p>No safety improvements are expected at this location. Best safety practices to consider include refurbishing pavement markings, enhancing pedestrian features and wayfinding signage with appropriate arrows and pavement markings.</p>

10.0 Cost of Improvement

Cost estimates for construction have been determined for the Build Alternative using the FDOT's Long Range Estimating (LRE) System, found in **Appendix J**, and are summarized in **Table 10.1**. This estimate is based on the conceptual design plans found in **Appendix H**. The total project cost in present day (2021) dollars to construct the recommended improvement is estimated to be \$55.227 million.

Table 10.1: Construction Cost Estimates

Project Phase	Cost
Design (10% of construction)	\$3,986,522.46
Right-of-Way	\$5,395,500.00
Construction	\$39,865,224.60
CEI (15% of construction)	\$5,979,783.69
Total	\$55,227,030.75

11.0 Coordination/Consistency with Other Plans/Projects

This IMR considered programmed and planned roadway improvements in the area and is consistent with regional transportation plans including the following:

- FDOT Five Year Work Program.
- FDOT SIS plans.
- THEA Work Program.
- Committed improvements from local and private sources.
- Adopted Long Range Transportation Plans (LRTPs) and Comprehensive Plans.

Several planned and programmed projects are located within the influence area of the Selmon Expressway and Downtown East/West interchange. The following projects, identified within the THEA Work Program, are in varying stages and listed as follows:

- The ongoing Meridian Improvements at Twiggs Street Project is constructing an additional right turn lane on westbound Twiggs Street to northbound Nebraska Avenue to improve safety and operations for traffic traveling from the Selmon Expressway Reversible Express Lanes (REL) into Downtown Tampa.
- The ongoing Selmon Greenway Enhancements Project is improving the Selmon Greenway by providing connectivity and safe mobility for pedestrians and bicyclists within and adjacent to the Selmon Expressway right-of-way from Ashley Drive to 19th Street.
- The ongoing Selmon East PD&E Study is evaluating the need for capacity improvements along the Selmon Expressway from Brorein Street to I-75.
- The ongoing South Selmon PD&E Study is evaluating the need for capacity improvements along the Selmon Expressway from the new Selmon West Extension to Downtown Tampa.
- The ongoing Whiting Street PD&E Study is evaluating the need and effects of extending Whiting Street to Meridian Avenue, reconfiguring the eastbound on-ramp of the Selmon Expressway at Jefferson Street, reconfiguring the eastbound off-ramp at Florida Avenue, and reconfiguring the current eastbound off-ramp to Channelside Drive to instead provide a new connection to Whiting Street. The Build Alternative of the IMR is based on the analysis currently being conducted by the Whiting Street PD&E Study.
- The ongoing Nebraska Avenue PD&E Study is analyzing the need for safety, capacity, and operational improvements along Nebraska Avenue from Twiggs Street to north of Cass Street to optimize traffic flow and improve safety. Additionally, the study is looking at the possibility of extending Nebraska Avenue south to Whiting Street.

Hillsborough County has also identified in their 2045 LRTP the widening of the Selmon Expressway from Gandy Boulevard to Whiting Street from the existing 4-lane typical section to a 6-lane typical section as a First Five Years Cost Feasible Roadway Project, adopted June 2019.

The City of Tampa has recently completed a PD&E Study for the InVision: Tampa Streetcar in April 2020 and is currently seeking funding from the Federal Transit Administration (FTA), with a request submitted in August 2020. The project will expand and modernize the Tampa Streetcar system with connections in Downtown Tampa, the Channelside District, and the Ybor City historic district. A portion of this project will pass through the Florida Avenue at Brorein Street intersection, part of the AOI for this IMR.

There are no other existing Interchange Access Requests (IARs), either approved or pending approval, currently located within the area of influence.

12.0 Environmental Considerations

Based on the existing environmental conditions of the study area, the proposed improvements will not result in any impacts to natural habitats or jurisdictional wetlands. No long-term adverse effects are anticipated for functions and values associated with wetland and surface water systems in the region, as a result of the proposed improvements. There is no loss of wetlands and surface waters, thus the project will not adversely affect public health, safety, or welfare. Water supplies will not be affected, and no flood or storm hazards are anticipated.

Specific permit conditions and a project specific erosion control plan will be followed to minimize construction-related water quality impacts. Furthermore, Best Management Practices (BMPs) will be employed during construction to reduce short-term degradation of water quality. A pre-application meeting with SWFWMD should be held in the design phase to verify the permitting requirements.

As there are no wetland impacts associated with the project, no Section 404 permit would be required. Additional right-of-way will be required for the connection of Whiting Street and Meridian Avenue.

13.0 Anticipated Design Exceptions or Variations

Tables 14.1 and 14.2 summarize the design standards outlined in the FDM, 2022 Edition and anticipated exceptions and variations for the Florida Avenue and Whiting Street off-ramps. There are two exceptions anticipated for the proposed Build Alternative, which include design speed and stopping sight distance. Design variations are needed for border width, horizontal curve length, curve radius, ramp spacing, and sag curve length. These exceptions and variations will be processed by THEA.

Table 13.1: Design Exceptions and Variations for the Florida Avenue Off-Ramp

Criteria	Standard and Reference	Meets (Yes/No)
Loop Ramp Design Speed - E	25 mph, AASHTO Page 10-90	No (20 mph)
Superelevation transition - V	1:175, FDM Table 210.9.3	TBD
Border Width - V	10 ft, FDM Section 211.6.1	No (6.23 ft)
Curve Length - V	400 ft, FDM Table 211.7.1	No (329 ft)
Curve Radius - V	72 ft, AASHTO Table 122.5.5	Yes (105 ft)
Stopping Sight Distance - E	120 ft, AASHTO Table 3-2	No (114.82 ft)
Ramp Spacing - V	1,000 ft, FDM Figure 211.12.1	No (825 ft)

Note: Red highlights indicate the need for a design exception/variation.

E = Exception
V = Variation

Table 13.2: Design Exceptions and Variations for the Whiting Street Off-Ramp

Criteria	Standard and Reference	Meets (Yes/No)
Direct Connect Ramp Design Speed - E	40 mph, AASHTO Page 10-90	No (35 mph)
Crest Curve K Value - V	29, AASHTO Table 3-34	Yes (48)
Sag Curve Minimum Length - V	105 ft, FDM Table 211.9.3	No (85)

Note: Red highlights indicate the need for a design exception/variation.

E = Exception
V = Variation

14.0 Conceptual Signing Plan

A conceptual signing and marking plan in accordance with FHWA guidelines was prepared for the Build Alternative and is shown in **Appendix K**. The purpose of the signing plan is to demonstrate that advanced signing will be provided to safely guide drivers traveling through the Downtown East/West interchange and along the Selmon Expressway under the proposed Build configuration. The conceptual signing plan also identifies existing signs that will need to be removed and new signs to be installed as a result of the proposed alternative construction. The signing plan provided in this IMR is conceptual in nature and not intended for use in design for construction.

15.0 Access Management Plan

The access management within the AOI will not be negatively impacted by the proposed operational and safety improvements. Access will not be removed, only shifted. Shifting direct access from the eastbound Selmon Expressway at Channelside Drive to the new Whiting Street off-ramp provides the same access to downtown Tampa from the Selmon Expressway and will enhance mobility and safety. From a mobility standpoint this will shift vehicular traffic from the congested Channelside Drive to newly constructed section of Whiting Street. From a safety standpoint, this will reduce the amount of conflict between vehicles and bicyclists and pedestrians as Channelside Drive undergoes redevelopment through the Water Street district. Therefore, an Access Management Plan was not needed for this IMR.

16.0 FHWA Policy Points

The FHWA's Policy on Access to the Interstate System provides the requirements for the justification and documentation necessary to substantiate any proposed changes in access to the Interstate System. This policy also facilitates decision-making regarding proposed changes in access to the Interstate System in a manner that considers and is consistent with the vision, goals, and long-range transportation plans of a metropolitan area, region, and State. All new or modified points of access must be approved by FHWA and developed in accordance with federal laws and regulations (as specified in 23 U.S.C. 109 and 111, 23 C.F.R. 625.4, and 49 C.F.R. 1.48(b)(1)). The following documents the adherence of the proposed eastbound Selmon Expressway and Downtown East/West interchange improvements to FHWA's two Policy Points:

FHWA Policy Points 1

An operational and safety analysis has concluded that the proposed change in access does not have a significant adverse impact on the safety and operation of the Interstate facility (which includes mainline lanes, existing, new, or modified ramps, and ramp intersections with crossroad) or on the local street network based on both the current and the planned future traffic projections. The analysis should, particularly in urbanized areas, include at least the first adjacent existing or proposed interchange on either side of the proposed change in access (Title 23, Code of Federal Regulations (CFR), paragraphs 625.2(a), 655.603(d) and 771.111(f)). The crossroads and the local street network, to at least the first major intersection on either side of the proposed change in access, should be included in this analysis to the extent necessary to fully evaluate the safety and operational impacts that the proposed change in access and other transportation improvements may have on the local street network (23 CFR 625.2(a) and 655.603(d)). Requests for a proposed change in access should include a description and assessment of the impacts and ability of the proposed changes to safely and efficiently collect, distribute, and accommodate traffic on the Interstate facility, ramps, intersection of ramps with crossroad, and local street network (23 CFR 625.2(a) and 655.603(d)). Each request should also include a conceptual plan of the type and location of the signs proposed to support each design alternative (23 U.S.C. 109(d) and 23 CFR 655.603(d)).

An operational and safety analysis was conducted to evaluate the impacts of the future alternatives. Under the No-Build Alternative, the Downtown East (Exit 6B) ramp terminal intersection at Channelside Drive and Morgan Street is expected to operate at LOS F by the design year (2046), causing queue spillback of the off-ramp onto the Selmon Expressway mainline and LOS F operations along the Selmon Expressway, upstream of the interchange.

Under the Build Alternative, each of the ramp terminal and adjacent intersections at the eastbound Selmon Expressway and Downtown East/West interchange are expected to operate at the LOS target D or better through the design year (2046). Additionally, queue lengths along the off-ramps are not anticipated to spillback into the Selmon Expressway mainline. Compared to the No-Build Alternative, the congestion and delay of the proposed improvements will be significantly improved under the Build Alternative during both the AM and PM peak hours through the design year (2046).

Although the safety analysis did not suggest that there are any locations with a crash rate higher than the statewide average within the study area, the proposed improvements of the Build Alternative will decrease the congestion along the Selmon Expressway and surface streets, which will ultimately improve the safety conditions of the study area. Additionally, signalization of the Florida Avenue off-ramp and relocation of the Downtown East (Exit 6B) off-ramp to Whiting Street are anticipated to help with the management of queue spillback along the off-ramps, provide protected pedestrian crossings at the signals, and reduce the number of conflict points for both off-ramps.

In conclusion, the recommended improvements will provide better traffic operation, reduced congestion, and enhanced safety of the interchange and nearby intersections. The conceptual signing plan has been included in the IMR in **Appendix K**.

FHWA Policy Points 2

The proposed access connects to a public road only and will provide for all traffic movements. Less than "full interchanges" may be considered on a case-by-case basis for applications requiring special access, such as managed lanes (e.g., transit or high occupancy vehicle and high occupancy toll lanes) or park and ride lots. The proposed access will be designed to meet or exceed current standards (23 CFR 625.2(a), 625.4(a)(2), and 655.603(d)). In rare instances where all basic movements are not provided by the proposed design, the report should include a full-interchange option with a comparison of the operational and safety analyses to the partial-interchange option. The report should also include the mitigation proposed to compensate for the missing movements, including wayfinding signage, impacts on local intersections, mitigation of driver expectation leading to wrong-way movements on ramps, etc. The report should describe whether future provision of a full interchange is precluded by the proposed design.

The proposed Build Alternative will provide the same access to the Downtown West (Exit 6A) off-ramp as under the existing configuration. Access of the Downtown East (Exit 6B) off-ramp will be relocated from the Channelside Drive at Morgan Street intersection to Whiting Street, at the location of the existing Whiting Street at Nebraska Avenue intersection. Full access will be provided for all traffic movements using the Downtown East off-ramp to access Whiting Street in the eastbound and westbound directions. Wayfinding signage will be provided to inform drivers of the new traffic circulation of the Downtown East (Exit 6B) off-ramp.

The design will meet current standards for the projects on the interstate system and comply with the American Association of State Highway and Transportation Officials (AASHTO) and FDOT design standards. In cases where design exceptions and variations may be required, they will be processed by THEA.

17.0 Project Schedule/Funding Plan

THEA is to fully fund the proposed improvements associated with the Build Alternative from planning through construction via the Whiting Street Improvement project. The Whiting Street PD&E Study is currently underway and will be completed in advance of construction. **Table 18.1** summarizes the THEA six-year Work Program schedule (Fiscal Year (FY) 2020 through FY 2025) for the Whiting Street Improvement project. Estimated project costs are in thousands. This funding schedule is currently under review and revision from THEA to match updated LRE estimates provided in **Section 10**.

Table 17.1: Project Schedule and Funding Plan

Phase	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	Total
Planning	\$978	\$1,425	\$91	-	-	-	\$2,494
Design	-	-	\$49	\$476	-	-	\$525
Right-of-Way	-	\$586	\$1,407	\$235	-	-	\$2,228
Construction	-	-	-	\$7,865	\$15,864	\$7,982	\$31,711
Total	\$978	\$2,011	\$1,547	\$8,576	\$15,864	\$7,982	\$36,958

Source: Tampa Hillsborough Expressway Authority, FY 21 Work Program, dated June 2020.

18.0 Summary and Recommendations

The purpose of this IMR is to evaluate the need for improvements to the access of the eastbound Selmon Expressway at the Downtown East/West interchange and along Whiting Street within Downtown Tampa. The significant development and economic growth of the City of Tampa over the past 20 years is expected to continue with ongoing developments, such as Water Street Tampa, a 56-acre redevelopment project, and Port Tampa Bay, which is also undergoing a major redevelopment. As a result, the traffic demand is expected to increase by the design year (2046), which will require improvements to the Downtown roadway network, including improvements to the Selmon Expressway off-ramps.

The most concerning existing operational and safety issues of the study area are as follows:

- There is a high potential for queue spillback onto the eastbound Selmon Expressway mainline from the Downtown East/West off-ramps by the design year (2046) if the interchange is maintained in its current configuration.
- Currently, pedestrian accommodations across the Downtown West (Exit 6A) ramp at Florida Avenue are at a free-flow off-ramp, with no protected pedestrian phasing.
- The lack of network connectivity in the study area is likely to result in severe congestion by the design year (2046).

The Build Alternative proposes improvements that will be necessary by the design year (2046). Based on the analyses documented in this IMR, the following summarizes the operational and safety results of the Build Alternative:

- Relocating the existing Downtown East (Exit 6B) off-ramp to the new Whiting Street connection, operating under signal control, will decrease the potential for queue spillback to extend onto the Selmon Expressway.
- Widening the eastbound off-ramp to accommodate three-lanes at the Florida Avenue intersection, operating under signal control with no RTOR, and clustering the new signal with the Florida Avenue at Channelside Drive signal will improve safety for all users and allow pedestrians to safely cross Florida Avenue and the Selmon Expressway off-ramp.
- Providing a pedestrian underpass at the location of the existing Channelside Drive off-ramp access will offer improved network connectivity for pedestrians to access the new Water Street Tampa development, as well as existing attractions such as Amalie Arena.
- Connecting Whiting Street from Jefferson Street to Meridian Avenue with a four-lane typical section will provide another connection for vehicular traffic to reach the east side of Downtown Tampa, thereby providing additional route choice and reducing overall network congestion.

Considering the overall operations along the eastbound Selmon Expressway and at each of the study intersections, the Build Alternative is projected to provide better operating conditions than the No-Build Alternative. The Build Alternative was developed, under the Whiting Street PD&E Study, with the intent to improve operations, safety, and traffic circulation of the eastbound Selmon Expressway at the Downtown East/West interchange and within the study area. It is recommended to construct the Build Alternative by the opening year (2026). THEA will be responsible for all planning, design, right-of-way acquisition, and construction costs for the implementation of the Build Alternative.

Appendices



Appendix A

Methodology Letter of Understanding



Florida Department of Transportation Interchange Access Request Methodology Letter of Understanding (MLOU)

Type of Request: IJR IMR IOAR SIMR
Type of Process: Programmatic Non-Programmatic

Eastbound Selmon Expressway (SR 618) at Downtown East/West Interchange Modification Report

THEA Project Number: HI-0141-P-07

Coordination of assumptions, procedures, data, networks, and outputs for project traffic review during the access request process will be maintained throughout the evaluation process.

Full compliance with all MLOU requirements does not obligate the Acceptance Authorities to accept the IAR.

The Requestor shall inform the approval authorities of any changes to the approved methodology in the MLOU and an amendment shall be prepared if determined to be necessary.

Requestor

Bob Frey
Director of Planning and Innovation of THEA

Date

Executive Director

Joe Waggoner
Executive Director and CEO of THEA

Date

1.0 Project Description

The Tampa Hillsborough Expressway Authority (THEA) is evaluating the need for improvements for access from the eastbound Selmon Expressway (SR 618) to Whiting Street within Downtown Tampa. The Selmon Expressway is a tolled, limited access facility that is part of the Strategic Intermodal System (SIS) and plays a major role in the Tampa Bay area's economy and mobility. Operating east-west within the City of Tampa, it serves a key role in the movement of people, freight, and goods in a safe and effective manner between its western terminus at Gandy Boulevard (US 92/SR 600) and its eastern terminus at I-75 and Brandon Parkway/Town Center Boulevard. The Selmon Expressway and Downtown East/West interchange serves as a major access point for commuter traffic to and from Downtown Tampa. The Selmon Expressway Downtown East/West interchange transitions from a six-lane, to a four-lane, and back to a six-lane urban principal arterial expressway with a posted speed limit of 55 miles per hour (mph).

The Downtown East/West interchange of the Selmon Expressway currently provides access to Florida Avenue and Channelside Drive on the eastbound exit. Florida Avenue is a three-lane, one-way, northbound urban minor arterial with a 30 mph posted speed limit and transitions to BUS US 41/SR 658 0.3 miles north of the westbound Selmon Expressway off-ramp. Channelside Drive is a one-way, three-lane eastbound arterial that transitions to a four-lane, two-way arterial 0.1 miles east of the Selmon Expressway off-ramp and then to a two-lane, two-way corridor 0.3 miles from the off-ramp. Channelside Drive has a posted speed limit of 40 mph and provides access to Amalie Arena, the Channelside District, and the Port Tampa Bay Cruise Terminals.

Whiting Street is a four-lane, east-west arterial west of Jefferson Street and transitions to a two-lane arterial east of Jefferson Street, with discontinuity from Brush Street to Meridian Avenue. Whiting Street provides access to various City of Tampa parking garages and parking lots for daily Downtown commuters to the west and access to the Channelside District to the east.

Downtown Tampa has experienced an enormous amount of development and redevelopment over the past 20 years. Office, commercial, and residential development, along with attractions like the Tampa Riverwalk, have made the southern portion of Downtown Tampa a desired area for recreation, entertainment, business, and residential properties. Along with these attractions, mobility needs have also grown, with a desire to provide safe mobility choices for the area.

Within close proximity to the Selmon Expressway and Downtown East/West interchange is Water Street Tampa, a 56-acre redevelopment project. Water Street Tampa will construct up to 9 million square feet of mixed-use development that will include residential buildings, office buildings, and hotels, as well as retail spaces. Construction on this development has already begun, with expected completion by 2027.

Additionally, Port Tampa Bay, which is also undergoing a major redevelopment as part of the Port Tampa Bay Master Plan, is located just east of the Selmon Expressway along Channelside Drive. Within the Port Tampa Bay Master Plan, the Channelside Master Plan includes increasing the Port's attraction and maximizing capacity for all cruise vessels, while integrating it with the redevelopment of the Channel District and evaluating longer-term solutions to serve the new generation cruise fleet. The Channelside Master Plan also includes creating a community with a working waterfront integrated with residential, commercial, and retail uses.

The MLOU is developed in accordance with the Florida Department of Transportation's (FDOT's) Interchange Access Request User's Guide (IARUG) and documents the methodology and procedures that will be employed to develop this Interchange Modification Report (IMR).

A. *Purpose and Need Statement*

The purpose of this project is to provide a direct connection of the Whiting Street corridor to North Meridian Avenue to improve traffic flow and safety for all transportation modes, increase capacity on the adjacent street network, and offer additional connections within the street network. The project will also reconfigure the on-ramps to the Selmon Expressway at Jefferson Street and the off-ramps at Florida Avenue and

Channelside Drive to provide a direct connection from the Selmon Expressway to improve safety, traffic circulation and access to Whiting Street and North Meridian Avenue.

The need for the project is based on the following criteria:

SYSTEM LINKAGE

Based upon the Tampa Bay Regional Planning Model (TBRPM) Version 8.2, the existing roadway network will be over capacity by the model 2045 horizon year. Additional network connectivity such as the Whiting Street extension and ramp reconfigurations are necessary to provide additional route choices and access to alleviate the congestion.

SAFETY

Safety and operational concerns with the Florida Avenue and Channelside Drive off-ramps include substandard radius and a free-flow merge movement onto Florida Avenue with a sidewalk/crosswalk conflict. The ramp termini onto Channelside Drive terminates into a 5-leg intersection at Channelside Drive and Morgan Street, which is a major pedestrian access point to the Amalie Arena. Six (6) years of data (2013-2018) were reviewed, and 14 crashes have occurred at this ramp. As the Water Street Project builds out to the east of the ramp system, thereby also converting Channelside Drive to a two-way arterial east of Morgan Street, the adverse impact of geometric issues and pedestrian conflicts are expected to be exacerbated. In addition, the increase of traffic from the Downtown development and redevelopment from Water Street Tampa and the Port Tampa Bay Master Plan will result in congestion issues and more conflicts with pedestrians and bicyclists. As such, improving the ramp geometry, eliminating pedestrian conflicts, and redirecting Downtown east traffic beyond the Water Street District is critical to proactively address safety concerns as both the Selmon Expressway and Downtown Tampa continue to develop.

TRANSPORTATION DEMAND

Based upon the Tampa Bay Regional Planning Model (TBRPM) Version 8.2, Jefferson Street (39,000 AADT) and Kennedy Boulevard (AADT 34,000) are expected to reach their operational capacity by 2040. As the Water Street Project develops, the vehicle demand is expected to increase. The proposed connection of Whiting Street could carry up to 14,800 AADT, providing valuable route divergence and congestion relief to the parallel facilities.

B. Project Location

The Selmon Expressway and Downtown East/West interchange is in Hillsborough County, 0.4 miles east of the Plant Avenue on-ramp and 0.4 miles west of the Nebraska Avenue on-ramp. **Figure 1** graphically displays the location of the Selmon Expressway and Downtown East/West interchange within Downtown Tampa.

C. Area of Influence

The area of influence (AOI), as indicated in **Figure 2**, for this IMR includes the eastbound Selmon Expressway from the Plant Avenue on-ramp to the Nebraska Avenue on-ramp, as well as Florida Avenue from Channelside Drive to Brorein Street and the new Whiting Street connection from Jefferson Street to Meridian Avenue.

The following expressway segments will be analyzed:

- Eastbound Selmon Expressway from Plant Avenue on-ramp to Downtown East/West off-ramp;
- Eastbound Selmon Expressway from Downtown East/West interchange off-ramp to Jefferson Street on-ramp;
- Eastbound Selmon Expressway from Jefferson Street on-ramp to Nebraska Avenue on-ramp; and
- Eastbound Selmon Expressway east of Nebraska Avenue on-ramp.

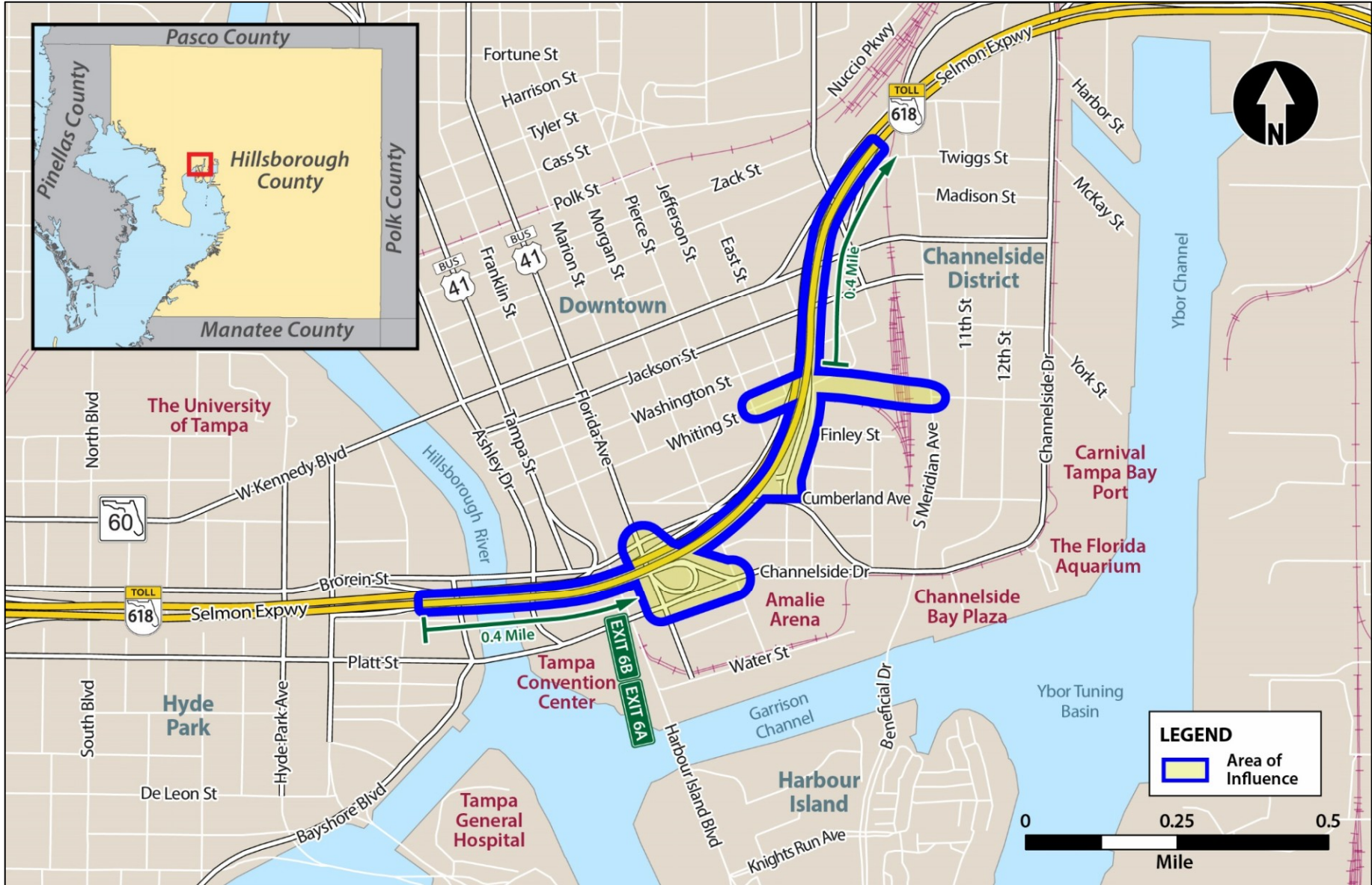


Figure 1 - Project Location Map



Figure 2 - Area of Influence Map

The following ramps will be analyzed:

- Eastbound Selmon Expressway Plant Avenue on-ramp (Merge);
- Eastbound Selmon Expressway Florida Avenue/Channelside Drive off-ramp (Diverge);
- Eastbound Selmon Expressway Jefferson Street on-ramp (Merge); and
- Eastbound Selmon Expressway Nebraska Avenue on-ramp (Merge).

The following intersections will be analyzed:

- Florida Avenue at Channelside Drive;
- Florida Avenue at Selmon Expressway off-ramp;
- Florida Avenue at Brorein Street;
- Channelside Drive at Selmon Expressway off-ramp/Morgan Street (Existing Connection);
- Jefferson Street at Selmon Expressway on-ramp;
- Whiting Street at Jefferson Street;
- Whiting Street at Selmon Expressway off-ramp (Proposed Connection); and
- Whiting Street at Meridian Avenue.

D. Project Schedule

An IMR will be prepared to document the safety, operational, and engineering acceptability of the improvements proposed for the Selmon Expressway and Downtown East/West interchange. The Whiting Street Project Development and Environment (PD&E) Study is currently underway and will be completed in advance of construction. **Table 1** summarizes the THEA six-year Work Program schedule (FY 2020 through FY 2025) for the Whiting Street Improvement project. Estimated project costs are in thousands and are to be funded through THEA.

Table 1 – THEA Six-Year Work Program (FY 2020 to 2025)

Phase	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	Total
Planning	\$978	\$1,425	\$91	-	-	-	\$2,494
Design	-	-	\$49	\$476	-	-	\$525
Right of Way	-	\$586	\$1,407	\$235	-	-	\$2,228
Construction	-	-	-	\$7,865	\$15,864	\$7,982	\$31,711
Total	\$978	\$2,011	\$1,547	\$8,576	\$15,864	\$7,982	\$36,958

Source: Tampa Hillsborough Expressway Authority, FY 21 Work Program, dated June 2020.

2.0 Analysis Years

A. Travel Demand Model

- Base year – 2015
- Horizon year – 2040

B. Traffic Operational Analysis

- Existing year – 2019
- Opening year – 2026
- Design year – 2046

A year of failure analysis shall be performed for the Preferred Alternative, in case a failing LOS is obtained in the Design Year.

3.0 Alternatives

The IMR will document the future traffic operations of the No-Build and Build Alternatives and will include a description of the proposed pedestrian and bicycle accommodations, as described below:

- No Build Alternative – Existing year (2019) lane geometry and traffic control with any existing plus committed improvements.

- Build Alternative – The Build Alternative will evaluate traffic operational and safety improvements for the eastbound portion of the Selmon Expressway and Downtown East/West interchange, as well as the relocation of the eastbound Downtown East off-ramp to Whiting Street, along with the extension of the Whiting Street corridor to Meridian Avenue.

4.0 Data Collection

A. Transportation System Data

FDOT Straight-Line Diagrams (SLDs), Roadway Characteristic Inventory (RCI), and field observations will be used along with the historical crash data, prior reports, and prior studies. Data will be collected from various sources including THEA, FDOT District Seven, City of Tampa, and other agencies. Field visits will be conducted to collect information on existing geometry, 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 the maintaining agencies.

B. Existing and Historical Traffic Data

Traffic counts will be obtained for the Selmon Expressway mainline, Selmon Expressway ramps, and the cross streets from the FDOT Florida Traffic Online (FTO) database and the Hillsborough County count program where available. The following resources will be utilized for this effort:

- FDOT District Seven Traffic Counts;
- Florida Traffic Online (FTO) database; and
- Hillsborough County Traffic Counts.

Existing year (2019) traffic volumes shall be developed using the traffic count data collected from May 2019 to February 2020, as part of the traffic count program for the Whiting Street PD&E Study. The type and location of each count is shown in **Figure 3** and is listed as follows:

6-hour (6:30 AM to 9:30 AM and 4:00 PM to 7:00 PM) Turning Movement Counts (7 Locations):

- Florida Avenue at Channelside Drive;
- Florida Avenue at Brorein Street;
- Channelside Drive at Selmon Expressway off-ramp/Morgan Street;
- Jefferson Street at Selmon Expressway on-ramp;
- Whiting Street at Jefferson Street;
- Whiting Street at Nebraska Avenue; and
- Whiting Street at Meridian Avenue.

48-Hour Directional Selmon Expressway Ramp Counts (3 Locations):

- Eastbound Selmon Expressway off-ramp to Florida Avenue;
- Eastbound Selmon Expressway off-ramp to Channelside Drive; and
- Eastbound Selmon Expressway on-ramp from Jefferson Street.

72-Hour Directional Selmon Expressway Ramp Counts (1 Location):

- Eastbound Selmon Expressway on-ramp from Nebraska Avenue.

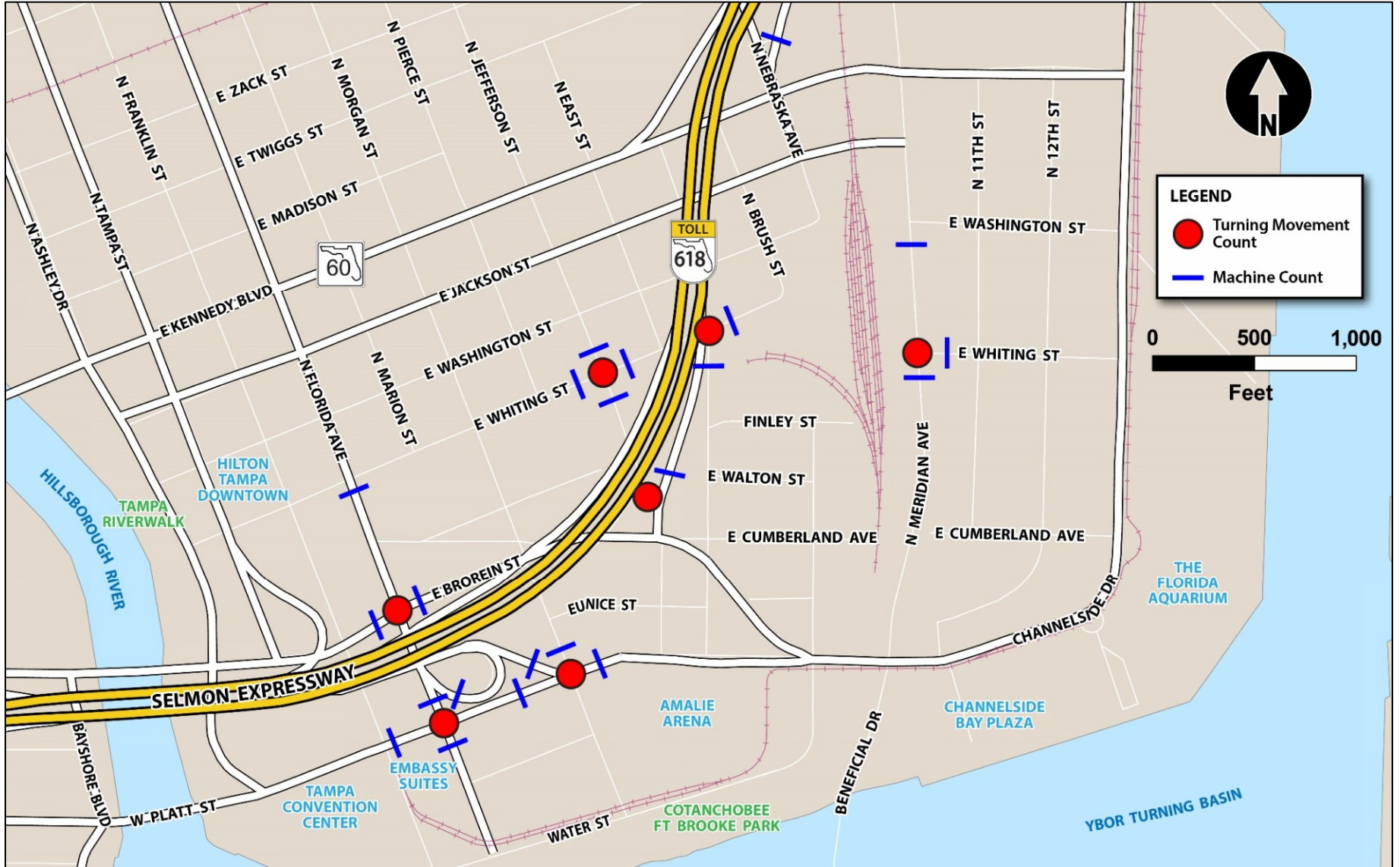


Figure 3 – Count Location Map

72-Hour Bi-Directional Traffic Volumes on Cross Streets (17 Locations):

- Florida Avenue south of Channelside Drive;
- Florida Avenue north of Channelside Drive;
- Florida Avenue south of Whiting Street;
- Brorein Street west of Florida Avenue;
- Brorein Street east of Florida Avenue;
- Channelside Drive east of Franklin Street;
- Channelside Drive west of Morgan Street;
- Channelside Drive east of Morgan Street;
- Jefferson Street south of Whiting Street;
- Jefferson Street north of Whiting Street;
- Nebraska Avenue south of Whiting Street;
- Meridian Avenue south of Whiting Street;
- Meridian Avenue south of Washington Street;
- Whiting Street west of Jefferson Street;
- Whiting Street east of Jefferson Street;
- Whiting Street east of Nebraska Avenue; and
- Whiting Street east of Meridian Avenue.

A manual smoothing process shall be applied to the resulting design hour turning movement volumes in order to ensure that traffic flows balance (i.e., volume in equals volume out) between successive intersections on the cross streets that are not separated by access and will be consistent with balancing efforts from the Whiting Street PD&E Study.

C. Land Use Data

The existing and future land uses within and directly adjacent to the Selmon Expressway and Downtown East/West interchange shall be documented in this IMR. Geographic Information System (GIS) shape files obtained from Hillsborough County shall be used to graphically display the existing and future land uses.

D. Environmental Data

This IMR will document any fatal flaw impacts associated with implementing the proposed alternative.

E. Planned and Programmed Projects

Several planned and programmed projects exist within the area of influence of the Selmon Expressway and the Downtown East/West interchange and could influence the traffic characteristics within the study area. These projects are in various stages of the THEA Work Program and are listed as follows:

- The ongoing Meridian Improvements at Twiggs Street Project is constructing an additional right turn lane on westbound Twiggs Street to northbound Nebraska Avenue to improve safety and operations for traffic traveling from the Selmon Expressway Reversible Express Lanes (REL) into Downtown Tampa.
- The ongoing Selmon Greenway Enhancements Project is improving the Selmon Greenway by providing connectivity and safe mobility for pedestrians and bicyclists within and adjacent to the Selmon Expressway right-of-way from Ashley Drive to 19th Street.
- The ongoing Selmon East PD&E Study is evaluating the need for capacity improvements along the Selmon Expressway from Brorein Street to I-75.
- The ongoing South Selmon PD&E Study is evaluating the need for capacity improvements along the Selmon Expressway from the new Selmon West Extension to Downtown Tampa.
- The ongoing Whiting Street PD&E Study is evaluating the need and effects of extending Whiting Street and Washington Street to Meridian Avenue, reconfiguring the eastbound on-ramp of the Selmon Expressway at Jefferson Street, reconfiguring the eastbound off-ramp at Florida Avenue,

and reconfiguring the current eastbound off-ramp to Channelside Drive to instead provide a new connection to Whiting Street. The Build Alternative of the IMR is based on the analysis currently being conducted by the Whiting Street PD&E Study.

- The ongoing Nebraska Avenue PD&E Study will analyze the need for safety, capacity, and operational improvements along Nebraska Avenue from Twiggs Street to north of Cass Street to optimize traffic flow and improve safety. Additionally, the study will look at the possibility of extending Nebraska Avenue south to Whiting Street.

Hillsborough County has also identified in their 2045 Long Range Transportation Plan (LRTP) the widening of the Selmon Expressway from Gandy Boulevard to Whiting Street from the existing 4-lane typical to a 6-lane typical as a First Five Years Cost Feasible Roadway Project, adopted June 2019.

The City of Tampa has recently completed a PD&E Study for the InVision: Tampa Streetcar in April 2020 and is currently seeking funding from the Federal Transit Administration (FTA), with a request submitted in August 2020. The project will expand and modernize the Tampa Streetcar system with connections in Downtown Tampa, the Channelside District, and the Ybor City historic district. A portion of this project will pass through the Florida Avenue and Brorein Street intersection, part of the AOI for this IMR.

Additionally, roadway network improvements, demand traffic, and associated impacts from the Water Street Tampa and Port Tampa Bay, Channelside Master Plan, mentioned in **Section 1.0**, will be taken into account in the No-Build and Build Alternatives for the IMR.

5.0 Travel Demand Forecasting

A. *Selected Travel Demand Model(s)*

A modified version of the Tampa Bay Regional Planning Model (TBRPM), Version 8.2 created for THEA is being used as the primary source for developing traffic forecasts for the Whiting Street PD&E Study. For consistency, forecasts developed for those efforts will be extracted for use in the Selmon Expressway and Downtown East/West interchange IMR. The following sections reflect the methodology utilized and approved for use under the Whiting Street PD&E Study and only serve to document the methodology.

B. *Project Traffic Forecast Development Methodology*

Traffic forecasts generated from the travel demand model were reviewed for reasonableness and were compared to traffic forecasts generated from a historical trend analysis of available counts where applicable. In addition, the Base Year (2015) and Horizon Year (2040) peak season weekday average daily traffic (PSWADT) were converted to annual average daily traffic (AADT) using a model output conversion factor (MOCF). These 2015 and 2040 AADTs were used to estimate 2019 model AADT volumes, which were compared to actual 2019 count volumes to ensure growth rates are reasonable. The Design Year (2046) model AADTs were extrapolated from the 2015 and 2040 model AADTs.

After Design Year (2046) AADTs were established, the recommended K- and D-factors for this project were applied to derive directional design hourly volumes (DDHVs). The future peak direction of traffic flow followed existing traffic conditions. In general, the peak direction of traffic flow in the AM peak period is off of the Selmon Expressway (into Downtown Tampa), while the peak direction of traffic flow in the PM peak period is onto the Selmon Expressway (out of Downtown Tampa). Linear interpolation between Existing Year (2019) and Design Year (2046) traffic volumes was employed to estimate Opening Year (2026) and Interim Year (2036) traffic volumes.

C. *Validation Methodology*

The modified version of the TBRPM was previously validated and provided by THEA. The 2015 Base Year volume to count ratios were reviewed to ensure that the Selmon Expressway and Downtown East/West interchange volumes are within targeted ranges as prescribed in the FDOT's 2019 Project Traffic Forecasting Handbook (525-030-120).

D. *Adjustment Procedures*

The modified version of the TBRPM was previously validated and provided by THEA. The guidelines of the FDOT’s 2019 Project Traffic Forecasting Handbook and Procedure (525-030-120) were used as the criteria for evaluating model validity.

E. *Traffic Factors*

- Utilizing recommended ranges identified in the Project Traffic Forecasting Handbook and Procedure (525-030-120).
- Utilizing other factors, identified below:

Table 2 – Recommended Design Traffic Factors

Factor	Value
Peak Hour Factor	AM: 0.47 to 0.99 (0.92 weighted average) PM: 0.78 to 0.96 (0.95 weighted average)
Peak-to-Daily Ratio (K Factor)	9.0%
Directional Factor	Selmon Expressway: 52.3% to 61.2% Surface Streets: 50.1% to 67.1%
Design Hour Truck Factor	Roadways: 2.0%

Source: Whiting Street PD&E Study

If any of the above traffic factors are modified during the IAR due to additional information becoming available, then THEA will be informed and supporting information will be provided in the IAR.

6.0 Traffic Operational Analysis

The area type, traffic conditions, and analysis tools to be used are summarized in this section.

A. *Existing Area Type/Traffic Conditions*

Table 3 – Existing Area Type and Traffic Conditions

Area Type	Conditions	
	Under Saturated	Saturated
Rural	<input type="checkbox"/>	<input type="checkbox"/>
Urban Area/Transitioning Area	<input checked="" type="checkbox"/>	<input type="checkbox"/>

B. *Traffic Analysis Software Used*

Table 4 – Traffic Analysis Software Selection

Software		System Component					
		Freeway				Crossroad	
Name	Version	Basic Segment	Weaving	Ramp Merge	Ramp Diverge	Arterials	Intersections
HCS/HCM	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Synchro	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Corsim	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vissim	2020	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Other	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

C. *Calibration Methodology*

The Vissim microsimulation model will be calibrated with travel time runs already collected in the field (through the Whiting Street and South Selmon PD&E Studies) for existing conditions. The Vissim

microsimulation model will be calibrated to the existing year traffic counts and speeds observed in the field. A 3.5-hour AM and a 3.5-hour PM peak period Vissim analysis will be conducted using 60-minute flow rates, with a 30-minute network loading time interval. The extended period of microsimulation analysis will demonstrate the “build-up” of traffic congestion, the duration of traffic congestion, and the dissipation of traffic congestion. The evaluation of existing traffic operations will be based on the results of a minimum of ten (10) runs of the AM and PM Vissim microsimulation models using varying random seed numbers. The microsimulation will be performed consistent with guidelines provided in the Federal Highway Administration (FHWA) Traffic Analysis Toolbox Volume III and the FDOT 2014 Traffic Analysis Handbook, A Reference for Planning and Operations. Selmon Expressway ramp and mainline volumes, and all Vissim entry volumes, will be calibrated to be within the thresholds specified below, as outlined in the FDOT 2014 Traffic Analysis Handbook:

- Low volume links – Individual link flows < 700 vehicles/hours – Threshold is to be within 100 vehicles/hour of field flows for more than 85 percent of the links;
- Medium volumes links – Individual link flows between 700 and 2,700 vehicles/hour – Threshold is to be within 15 percent of field flows for more than 85 percent of links;
- High volume links – Individual link flows > 2,700 vehicles/hour – Threshold is to be within 400 vehicles/hour of field flows for more than 85 percent of the links; and
- Sum of all link flows across the network – Threshold to be within 5 percent of the sum of all link counts.

Speed will be calibrated within 15% or up to a variance of 10 miles per hour (mph) of field measured values, and speed profiles will be prepared to document this information. Field observed vehicle queue lengths will be accurately reflected in the existing conditions Vissim models. Visual audits will be conducted for on- and off-ramp vehicle queuing, vehicle weaving maneuvers, and to determine the extent of vehicle queuing at intersections. The observed traffic congestion for Vissim links, and the location of bottlenecks for both model and field conditions, will be documented in the Selmon Expressway and Downtown East/West interchange IMR.

D. Selection of Measures of Effectiveness (MOE)

A target LOS “D” shall be established for the Selmon Expressway and Downtown East/West interchange study area. Roadway geometric and traffic control improvements will be recommended to achieve a future LOS of D or better for each highway element within the area of influence: Selmon Expressway mainline, Selmon Expressway ramp merge and diverge areas, Selmon Expressway ramps proper, Selmon Expressway and Downtown East/West interchange ramp terminal intersections, Florida Avenue and Whiting Street arterial roadway, and side street intersections. Measures of Effectiveness (MOEs) [i.e., density, speed, and delay] from the Highway Capacity Manual, 6th Edition shall be used to estimate existing and future LOS with and without the proposed improvements. The Vissim networkwide MOEs that will be used to evaluate the operational performance of the No-Build and Build Alternatives are listed as follows:

Node and Link-Based MOEs:

- Ramp terminal and cross-street intersections – vehicle delay for each approach and 95th percentile vehicle queue lengths for all traffic movements at each study intersection;
- Arterial roadway segments – demand versus simulated traffic volume and average vehicle speed; and
- Freeway segments, weaving sections, ramp merge and diverge areas – demand versus simulated traffic volume, vehicle density, and vehicle speed.

Network Wide MOEs:

- Traffic volume summary including unserved traffic demand, total travel time, total travel delay, average speed, and vehicle-miles of travel.

7.0 Safety Analysis

- A. *Detailed crash data within the study area will be analyzed and documented. The latest five year of crash data shall be used.*

Years: 2014 – 2018

Source: FDOT Crash Analysis Reporting System (CARS) along mainline eastbound Selmon Expressway and state facilities and from State Safety Office GIS (SSOGIS) web application for non-state roads

For purposes of the existing conditions safety analysis, the crash data will be assigned to analysis areas and will fall into one of the following location types:

- Intersections;
- Arterial Facilities;
- Merge/Diverge Influence Areas;
- Ramp Areas; and
- Limited Access Facilities.

If necessary, locations will be further subdivided based on changes in area and/or facility type reflected in FDOT's Roadway Characteristics Inventory (RCI).

Each of these analysis areas will include the following for each location:

Safety Analysis (Tabular):

- Total crashes;
- Crashes per year;
- Calculated crash rate;
- Statewide average crash rate for the facility type; and
- High crash confidence intervals (per CARS user manual).

Crash Characteristics (Tabular):

- Crash type frequency;
- Bike/Pedestrian crashes;
- Lighting condition;
- Roadway surface condition; and
- Crashes by severity and KABCO cost (Using most recent FDOT KABCO costs).

Crash Characteristics (Graphical):

- Crashes by type;
- Crashes by severity; and
- AOI crash density.

- B. *Identify the level of safety analysis to be performed, along with any software and tools to be used.*

Per the IARUG, a quantitative safety analysis will be included for all IMRs. A benefit-cost analysis will be conducted comparing the safety impact of the preferred alternatives to the no build condition. The following tools will be used to implement Empirical Bayes analysis to adjust historical crash frequency based on applicable Safety Performance Functions (SPFs) described in the Highway Safety Manual (HSM) and to apply any applicable Crash Modification Factors (CMFs) based on site conditions or proposed improvements:

- FDOT Present Worth Analysis spreadsheets updated with the most recent KABCO distribution and cost information (Forms 750-020-21A, B, and C); and
- AASHTO's Enhanced Interchange Safety Analysis Tool (ISATe).

Where applicable, Florida specific calibration factors will be included to adjust SPFs to local conditions. The analysis results of all locations will be summarized to determine an overall benefit-cost ratio for all proposed changes in each alternative compared to the no build scenario.

HSM methodologies will be utilized to assess the geometric and traffic control operations of the roadway intersection/segments in the study area.

8.0 Consistency with Other Plans/Projects

- A. *The request will be reviewed for consistency with facility Master Plans, Actions Plans, SIS Plan, MPO Long Range Transportation Plans, Local Government Comprehensive Plans or development applications, etc.*
This study will incorporate all planned projects proposed under the recently adopted Hillsborough County 2045 Long Range Transportation plan and the THEA Work Program. These projects were identified in **Section 4.E**.
- B. *Where the request is inconsistent with any plan, steps to bring the plan into consistency will be developed.*
If plan inconsistency is identified, appropriate coordination will be conducted, and the analysis will be updated to maintain consistency.
- C. *The operational relationship of this request to the other interchanges will be reviewed and documented. The following other IARs are located within the area of influence.*
There are no other IARs located within the proposed area of influence.

9.0 Environmental Considerations

- A. *Status of Environmental Approval and permitting process.*
Southwest Florida Water Management District (SWFWMD) and US Army Corp of Engineers (USACOE) permits may be required for the proposed construction. Information concerning the status of the Environmental Approval and the permitting process will be included in the IMR.
- B. *Identify the environmental considerations that could influence the outcome of the alternative development and selection process.*
The Whiting Street PD&E Study is ongoing and appropriate improvements from the PD&E Study will be included in the IMR. Key environmental findings from the PD&E Study will be added to the IMR. Additional right-of-way is required for the connection of Whiting Street to Meridian Avenue.

10.0 Coordination

Table 5 – Coordination Commitments

Yes	No*	N/A*	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	An appropriate effort of coordination will be made with appropriate proposed developments in the area.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Request will identify and include (if applicable) a commitment to complete the other non-interchange/non-intersection improvements that are necessary for the interchange/intersection to function as proposed.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Request will document whether the project requires financial or infrastructure commitments from other agencies, organizations, or private entities.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Request will document any pre-condition contingencies required in regards to the timing of other improvements and their inclusion in a TIP/STIP/LRTP prior to the Interstate access approval (final approval of NEPA document).
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Request will document the funding and phasing.

11.0 Anticipated Design Exceptions and Variations

- Design exceptions/variations are not anticipated, but if an exception/variation should arise it will be processed per FHWA and FDOT standards.*
- The following exceptions/variations to FDOT, AASHTO or FHWA rules, policies, standards, criteria or procedures have been identified:*
 - Ramp design speed;
 - Clear zone;
 - Border width;
 - Bicycle lane width; and
 - Others may arise as well as the design concepts are finalized.

12.0 Conceptual Signing Plan

A conceptual signing and marking plan shall be prepared and included in the access request.

13.0 Access Management Plan

- Access management plan within the area of influence will not be changed by the proposed improvements to the interchange.*
- The improvement will affect access management within the area of influence will be changed. An access management plan will be developed within the area of influence to complement the improvements to the interchange:*

14.0 FHWA Policy Points

The two FHWA policy points will be addressed within the access request.

Appendix B

District Seven District Interchange Review Coordination (DIRC) Meeting Minutes

District Seven District Interchange Review Coordination (DIRC) Meeting #2
March 2, 2021 11:00 AM – 12:00 PM
Microsoft Teams Meeting Minutes

Attendees: Kirk Bogen, Amy Causseaux, Ron Chin, Rosana Correa, Jason Dahlvik, Kevin Dunn, Chris Edmonston, Waddah Farah, Elizabeth Fernandez, Bob Frey, Bren George, Mary Lou Godfrey, JoEllen Guthrie, Tracy Hood, Bill Howell, Peter Hsu, Brian Hunter, Satya Kolluru, Peter Maass, Lori Marable, Elaine Martino, Richard Moss, Anna Quinones, Don Skelton, Allan Urbonas, Bikram Wadhawan, Matthew Wey, David Winkle

Invited but did not attend Jenna Bowman, Joe Bugel, Daniel Buidens, Justin Hall, Michael Kopotic, Ken Spitz

1. Welcome and Introductions – Waddah Farah introduced today’s agenda and turned it over to Don Skelton with Lochner.

2. Eastbound Selmon Expressway (SR 618) at Downtown East/West Interchange – Don Skeleton

This is a Tampa Hillsborough County Expressway Authority (THEA) project. The Lee Roy Selmon Expressway is entirely owned and maintained by THEA. It is designated SR 618 in name only. All the cross streets in the south end of downtown are City of Tampa roads.

Project Need:

- System Linkage
 - According to TBRPM, the roadway network will likely be severely congested and overcapacity by 2045.
- Safety
 - Downtown East/West Off-Ramp:
 - ♣ Substandard radius
 - ♣ Free-flow movement onto Florida Avenue – Pedestrian vulnerability
 - Channelside Drive and Morgan Street: 5-leg intersection in a major pedestrian concern.
 - Future Developments (i.e.: Water Street Project, Port Tampa Bay Master Plan) will worsen congestion and pedestrian safety.
- Transportation Demand
 - Whiting Street will serve as an alternative facility to Jefferson Street and Meridian Avenue.

Project Concept:

- Florida Avenue (Downtown West) off-ramp – Dual lane off ramp to North Florida Avenue, stoplight at end of ramp, working with City on pedestrian area near Channelside at the ramp. There would be no eastbound exit – it would move to Whiting Street.
 - Whiting Street (Downtown East) Off-Ramp – extend off ramp, no change on main line, Whiting would connect to Meridian Avenue. There will be a new light at Whiting off-ramp.
- Interchange Access Request:
 - Type of Request: Interchange Modification Report (IMR)
 - Analysis will follow the Interchange Access Request Users Guide.

Questions:

- What is DOT's Role? Review only? Signatures? – Amy Causseaux concurred that the District would review the interchange document to make sure there are no fatal flaws. Periodic meetings are anticipated to speed the process along. THEA has signature on the document.

3. I-275 from I-375 to North of 4th Street (TBNext Section 2) Follow-up – Satya Kolluru/Peter Maass

- Interchange Access Request:
 - Type of Request: Systems Interchange Modification Report (SIMR)
 - Type of Process: Programmatic Access Request

Limits are from N of I-375 to Roosevelt Blvd and covers all 5 service Interchanges within those limits.

Per discussion with Central Office new traffic data will be collected. With analysis years being opening year 2030 and design year 2050.

- Next Steps:
 - Execute MLOU – April-May 2021
 - Complete Data Collection (need ASAP due to summer patterns)
 - Complete Existing Conditions calibration and Traffic forecasting
 - Complete Operation and Safety Analysis – SIMR – Completion Fall 2022
- Suggestions/Comments:
 - Elaine stated that the latest model version is – TBRPMv9.2
 - Bikram Wadhawan confirmed that LOS target for the general use lanes is D and Express Lanes will be capped at is LOS C.
 - George Bren stated that everything was okay. He had no further comments.

- This project also provides lane continuity which will reduce the changing of lanes in the corridor.

4. Ongoing Interchange Status Update – Peter Maass

- a. I-4/Branch Forbes Rd IOAR – MLOU approved 8/17/20 | Anticipated IOAR submittal May 2021.
 - b. I-4/Thonotosassa Rd IOAR – MLOU approved 8/17/20 | Anticipated IOAR submittal May 2021.
 - c. TBNext Section 4/5 SIMR – MLOU approved 1/21/20 | MLOU Addendum approved 9/24/20 | Anticipated SIMR submittal July 2021.
 - d. TBNext Section 6 SIMR – MLOU approved 10/19/20 | Anticipated SIMR submittal October 2021.
 - e. I-75/Gibson Dr IMR – MLOU under review
 - f. TBNext Section 2 SIMR – MLOU underway
 - g. I-275 @ Hillsborough (status question from Ron Chin) – Ready for MLOU but waiting to finish more on Segment 7. This project is currently not funded.
5. Future DIRC Meeting Agenda Items – Waddah Farah stated that we have several interchange modifications (mostly Non-IARs) that are forth coming due to project advancements. Future DIRC meetings will be scheduled accordingly.
6. Closing Remarks – Waddah Farah thanked everyone for their attendance.

Appendix C

Traffic Count Data



Volume Count Report

Start Date: May 14, 2019 Start Time: 0:00
 Stop Date: May 15, 2019 Stop Time: 0:00
 City: Tampa County: Hillsborough
 Location: Selmon Expy Off Ramp to Channelside Dr

Eastbound Volume

Tuesday, May 14, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	2	0	5	0	1	4	12	37	41	51	24	18
30	1	0	2	0	1	4	7	34	60	23	23	18
45	0	3	0	1	5	0	10	55	44	26	23	16
00	0	1	2	0	1	4	20	47	49	23	17	29
Hr Total	3	4	9	1	8	12	49	173	194	123	87	81

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	26	24	21	15	31	24	29	14	14	3	7	2
30	25	29	30	27	21	26	27	16	11	10	3	2
45	22	25	20	29	20	27	16	13	17	10	2	1
00	22	18	24	23	21	23	10	10	4	7	2	3
Hr Total	95	96	95	94	93	100	82	53	46	30	14	8

24 Hour Total: 1,550
 AM Peak Hour begins: 8:15 AM Peak Volume: 204 AM Peak Hour Factor: 0.85
 PM Peak Hour begins: 15:15 PM Peak Volume: 110 PM Peak Hour Factor: 0.89

N/A

Tuesday, May 14, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

24 Hour Total: 0
 AM Peak Hour begins: 0:00 AM Peak Volume: 0 AM Peak Hour Factor: 0.00
 PM Peak Hour begins: 12:00 PM Peak Volume: 0 PM Peak Hour Factor: 0.00

Total Volume

Tuesday, May 14, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	2	0	5	0	1	4	12	37	41	51	24	18
30	1	0	2	0	1	4	7	34	60	23	23	18
45	0	3	0	1	5	0	10	55	44	26	23	16
00	0	1	2	0	1	4	20	47	49	23	17	29
Hr Total	3	4	9	1	8	12	49	173	194	123	87	81

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	26	24	21	15	31	24	29	14	14	3	7	2
30	25	29	30	27	21	26	27	16	11	10	3	2
45	22	25	20	29	20	27	16	13	17	10	2	1
00	22	18	24	23	21	23	10	10	4	7	2	3
Hr Total	95	96	95	94	93	100	82	53	46	30	14	8

24 Hour Total: 1,550
 AM Peak Hour begins: 8:15 AM Peak Volume: 204 AM Peak Hour Factor: 0.85
 PM Peak Hour begins: 15:15 PM Peak Volume: 110 PM Peak Hour Factor: 0.89

Volume Count Report

Start Date: May 15, 2019 Start Time: 0:00
 Stop Date: May 16, 2019 Stop Time: 0:00
 City: Tampa County: Hillsborough
 Location: Selmon Expy Off Ramp to Channelside Dr

Eastbound Volume

Wednesday, May 15, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	1	1	0	0	1	1	10	28	50	36	15	17
30	2	1	0	0	1	2	12	23	68	26	33	12
45	0	0	1	1	2	3	21	45	41	30	14	13
00	2	3	3	0	3	6	23	66	49	31	16	14
Hr Total	5	5	4	1	7	12	66	162	208	123	78	56

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	9	34	28	23	15	26	28	16	14	13	5	4
30	19	19	30	32	24	22	33	15	5	16	8	1
45	17	14	22	18	16	26	18	11	16	3	2	0
00	16	20	21	34	32	21	30	15	14	10	7	1
Hr Total	61	87	101	107	87	95	109	57	49	42	22	6

24 Hour Total: 1,550
 AM Peak Hour begins: 7:30 AM Peak Volume: 229 AM Peak Hour Factor: 0.84
 PM Peak Hour begins: 18:00 PM Peak Volume: 109 PM Peak Hour Factor: 0.83

N/A

Wednesday, May 15, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

24 Hour Total: 0
 AM Peak Hour begins: 0:00 AM Peak Volume: 0 AM Peak Hour Factor: 0.00
 PM Peak Hour begins: 12:00 PM Peak Volume: 0 PM Peak Hour Factor: 0.00

Total Volume

Wednesday, May 15, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	1	1	0	0	1	1	10	28	50	36	15	17
30	2	1	0	0	1	2	12	23	68	26	33	12
45	0	0	1	1	2	3	21	45	41	30	14	13
00	2	3	3	0	3	6	23	66	49	31	16	14
Hr Total	5	5	4	1	7	12	66	162	208	123	78	56

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	9	34	28	23	15	26	28	16	14	13	5	4
30	19	19	30	32	24	22	33	15	5	16	8	1
45	17	14	22	18	16	26	18	11	16	3	2	0
00	16	20	21	34	32	21	30	15	14	10	7	1
Hr Total	61	87	101	107	87	95	109	57	49	42	22	6

24 Hour Total: 1,550
 AM Peak Hour begins: 7:30 AM Peak Volume: 229 AM Peak Hour Factor: 0.84
 PM Peak Hour begins: 18:00 PM Peak Volume: 109 PM Peak Hour Factor: 0.83

Volume Count Report

Start Date: May 14, 2019	Start Time: 0:00	
Stop Date: May 15, 2019	Stop Time: 0:00	
City: Tampa	County: Hillsborough	
Location: Selmon Expy Off Ramp to Florida Ave		

Northbound Volume

Tuesday, May 14, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	8	2	4	0	2	8	27	83	168	155	59	42
30	1	2	2	0	3	4	41	134	169	103	50	62
45	1	2	2	0	5	12	55	168	129	81	42	54
00	0	3	1	5	6	18	62	173	161	61	38	64
Hr Total	10	9	9	5	16	42	185	558	627	400	189	222

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	70	52	57	72	58	53	77	37	23	22	16	10
30	60	46	52	54	77	66	66	42	15	16	9	7
45	44	36	49	69	61	62	43	32	13	15	5	3
00	56	47	52	65	63	89	51	35	19	11	9	5
Hr Total	230	181	210	260	259	270	237	146	70	64	39	25

24 Hour Total:	4,263	AM Peak Volume:	678	AM Peak Hour Factor:	0.98
AM Peak Hour begins:	7:30	PM Peak Volume:	294	PM Peak Hour Factor:	0.83
PM Peak Hour begins:	17:15				

N/A

Tuesday, May 14, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

24 Hour Total:	0	AM Peak Volume:	0	AM Peak Hour Factor:	0.00
AM Peak Hour begins:	0:00	PM Peak Volume:	0	PM Peak Hour Factor:	0.00
PM Peak Hour begins:	12:00				

Total Volume

Tuesday, May 14, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	8	2	4	0	2	8	27	83	168	155	59	42
30	1	2	2	0	3	4	41	134	169	103	50	62
45	1	2	2	0	5	12	55	168	129	81	42	54
00	0	3	1	5	6	18	62	173	161	61	38	64
Hr Total	10	9	9	5	16	42	185	558	627	400	189	222

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	70	52	57	72	58	53	77	37	23	22	16	10
30	60	46	52	54	77	66	66	42	15	16	9	7
45	44	36	49	69	61	62	43	32	13	15	5	3
00	56	47	52	65	63	89	51	35	19	11	9	5
Hr Total	230	181	210	260	259	270	237	146	70	64	39	25

24 Hour Total:	4,263	AM Peak Volume:	678	AM Peak Hour Factor:	0.98
AM Peak Hour begins:	7:30	PM Peak Volume:	294	PM Peak Hour Factor:	0.83
PM Peak Hour begins:	17:15				

Volume Count Report

Start Date: May 15, 2019	Start Time: 0:00	
Stop Date: May 16, 2019	Stop Time: 0:00	
City: Tampa	County: Hillsborough	
Location: Selmon Expy Off Ramp to Florida Ave		

Northbound Volume

Wednesday, May 15, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	0	2	6	4	5	4	26	85	159	114	51	48
30	3	3	2	0	5	9	32	115	164	111	59	50
45	1	1	3	2	6	16	42	151	180	73	59	50
00	3	3	1	1	5	25	67	187	159	66	49	44
Hr Total	7	9	12	7	21	54	167	538	662	364	218	192

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	40	55	49	49	56	77	67	54	28	23	23	4
30	63	57	55	64	63	75	61	42	29	12	14	7
45	45	50	45	55	76	78	60	28	24	22	9	7
00	80	63	69	67	74	59	59	24	12	19	10	4
Hr Total	228	225	218	235	269	289	247	148	93	76	56	22

24 Hour Total:	4,357	AM Peak Volume:	690	AM Peak Hour Factor:	0.92
AM Peak Hour begins:	7:45	PM Peak Volume:	304	PM Peak Hour Factor:	0.97
PM Peak Hour begins:	16:45				

N/A

Wednesday, May 15, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

24 Hour Total:	0	AM Peak Volume:	0	AM Peak Hour Factor:	0.00
AM Peak Hour begins:	0:00	PM Peak Volume:	0	PM Peak Hour Factor:	0.00
PM Peak Hour begins:	12:00				

Total Volume

Wednesday, May 15, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	0	2	6	4	5	4	26	85	159	114	51	48
30	3	3	2	0	5	9	32	115	164	111	59	50
45	1	1	3	2	6	16	42	151	180	73	59	50
00	3	3	1	1	5	25	67	187	159	66	49	44
Hr Total	7	9	12	7	21	54	167	538	662	364	218	192

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	40	55	49	49	56	77	67	54	28	23	23	4
30	63	57	55	64	63	75	61	42	29	12	14	7
45	45	50	45	55	76	78	60	28	24	22	9	7
00	80	63	69	67	74	59	59	24	12	19	10	4
Hr Total	228	225	218	235	269	289	247	148	93	76	56	22

24 Hour Total:	4,357	AM Peak Volume:	690	AM Peak Hour Factor:	0.92
AM Peak Hour begins:	7:45	PM Peak Volume:	304	PM Peak Hour Factor:	0.97
PM Peak Hour begins:	16:45				

Volume Count Report

Start Date: May 14, 2019 Start Time: 0:00
 Stop Date: May 15, 2019 Stop Time: 0:00
 City: Tampa County: Hillsborough
 Location: Selmon Expy On Ramp from Brorein St/Jefferson St

Northbound Volume

Tuesday, May 14, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	3	5	3	4	0	3	14	37	58	26	32	28
30	4	2	4	1	0	5	17	47	24	35	34	22
45	4	6	0	2	0	7	26	52	37	50	23	35
00	0	3	3	6	6	6	22	60	27	37	39	34
Hr Total	11	16	10	13	6	21	79	196	146	148	128	119

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	34	44	52	113	141	224	96	40	15	13	6	7
30	30	30	42	111	128	159	93	32	12	14	10	9
45	33	47	44	113	191	147	42	30	21	12	8	1
00	37	33	73	112	166	114	39	26	12	11	4	7
Hr Total	134	154	211	449	626	644	270	128	60	50	28	24

24 Hour Total: 3,671
 AM Peak Hour begins: 7:15 AM Peak Volume: 217 AM Peak Hour Factor: 0.90
 PM Peak Hour begins: 16:30 PM Peak Volume: 740 PM Peak Hour Factor: 0.83

N/A

Tuesday, May 14, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

24 Hour Total: 0
 AM Peak Hour begins: 0:00 AM Peak Volume: 0 AM Peak Hour Factor: 0.00
 PM Peak Hour begins: 12:00 PM Peak Volume: 0 PM Peak Hour Factor: 0.00

Total Volume

Tuesday, May 14, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	3	5	3	4	0	3	14	37	58	26	32	28
30	4	2	4	1	0	5	17	47	24	35	34	22
45	4	6	0	2	0	7	26	52	37	50	23	35
00	0	3	3	6	6	6	22	60	27	37	39	34
Hr Total	11	16	10	13	6	21	79	196	146	148	128	119

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	34	44	52	113	141	224	96	40	15	13	6	7
30	30	30	42	111	128	159	93	32	12	14	10	9
45	33	47	44	113	191	147	42	30	21	12	8	1
00	37	33	73	112	166	114	39	26	12	11	4	7
Hr Total	134	154	211	449	626	644	270	128	60	50	28	24

24 Hour Total: 3,671
 AM Peak Hour begins: 7:15 AM Peak Volume: 217 AM Peak Hour Factor: 0.90
 PM Peak Hour begins: 16:30 PM Peak Volume: 740 PM Peak Hour Factor: 0.83

Volume Count Report

Start Date: May 15, 2019 Start Time: 0:00
 Stop Date: May 16, 2019 Stop Time: 0:00
 City: Tampa County: Hillsborough
 Location: Selmon Expy On Ramp from Brorein St/Jefferson St

Northbound Volume

Wednesday, May 15, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	5	2	1	2	4	4	13	27	52	34	30	33
30	6	0	3	5	0	1	19	44	35	32	13	35
45	2	0	3	0	3	3	26	62	33	30	22	31
00	1	5	2	10	2	7	30	59	34	29	39	44
Hr Total	14	7	9	17	9	15	88	192	154	125	104	143

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	32	42	52	114	145	186	97	44	25	15	14	7
30	34	49	43	104	141	177	65	38	30	5	6	3
45	41	55	69	109	187	135	69	41	18	16	11	3
00	46	52	64	127	149	97	43	32	25	14	4	5
Hr Total	153	198	228	454	622	595	274	155	98	50	35	18

24 Hour Total: 3,757
 AM Peak Hour begins: 7:15 AM Peak Volume: 217 AM Peak Hour Factor: 0.88
 PM Peak Hour begins: 16:30 PM Peak Volume: 699 PM Peak Hour Factor: 0.93

N/A

Wednesday, May 15, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

24 Hour Total: 0
 AM Peak Hour begins: 0:00 AM Peak Volume: 0 AM Peak Hour Factor: 0.00
 PM Peak Hour begins: 12:00 PM Peak Volume: 0 PM Peak Hour Factor: 0.00

Total Volume

Wednesday, May 15, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	5	2	1	2	4	4	13	27	52	34	30	33
30	6	0	3	5	0	1	19	44	35	32	13	35
45	2	0	3	0	3	3	26	62	33	30	22	31
00	1	5	2	10	2	7	30	59	34	29	39	44
Hr Total	14	7	9	17	9	15	88	192	154	125	104	143

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	32	42	52	114	145	186	97	44	25	15	14	7
30	34	49	43	104	141	177	65	38	30	5	6	3
45	41	55	69	109	187	135	69	41	18	16	11	3
00	46	52	64	127	149	97	43	32	25	14	4	5
Hr Total	153	198	228	454	622	595	274	155	98	50	35	18

24 Hour Total: 3,757
 AM Peak Hour begins: 7:15 AM Peak Volume: 217 AM Peak Hour Factor: 0.88
 PM Peak Hour begins: 16:30 PM Peak Volume: 699 PM Peak Hour Factor: 0.93

Station Name: # 38 B
Description: Selmon Expressway On Ramp from Nebraska Ave EB
City: Tampa
County: Hillsborough
Start Date/Time: 02-25-2020 00:00
End Date/Time: 02-26-2020 00:00

Date: 02-25-2020		Station Name: Eastbound												
End Time	00	01	02	03	04	05	06	07	08	09	10	11		
15	2	2	3	1	1	2	17	29	51	48	55	54		
30	1	3	1	0	0	7	32	43	44	40	48	55		
45	1	0	1	3	0	8	24	36	58	48	47	49		
00	5	3	1	0	0	16	33	28	44	40	51	60		
Hr Total	9	8	6	4	1	33	106	136	197	176	201	218		
End Time	12	13	14	15	16	17	18	19	20	21	22	23		
15	60	33	49	80	131	134	85	41	28	27	114	7		
30	59	35	51	77	116	128	73	37	19	20	22	8		
45	60	39	47	80	117	112	49	24	22	81	12	2		
00	45	25	54	83	126	97	48	22	22	158	14	5		
Hr Total	224	132	201	320	490	471	255	124	91	286	162	22		
24 Hour Total :			3873											
AM Peak Hour Begins :			10:45			AM Peak Volume :		209		AM Peak Hour Factor :			0.87	
PM Peak Hour Begins :			16:30			PM Peak Volume :		505		PM Peak Hour Factor :			0.8	

Station Name: # 38 B
Description: Selmon Expressway On Ramp from Nebraska Ave EB
City: Tampa
County: Hillsborough
Start Date/Time: 02-26-2020 00:00
End Date/Time: 02-27-2020 00:00

Date: 02-26-2020		Station Name: Eastbound												
End Time	00	01	02	03	04	05	06	07	08	09	10	11		
15	4	3	0	4	2	1	19	28	32	41	47	56		
30	0	2	1	0	2	6	23	50	49	37	47	52		
45	5	2	1	4	1	6	19	44	42	49	53	61		
00	3	0	0	2	2	10	33	48	36	47	49	43		
Hr Total	12	7	2	10	7	23	94	170	159	174	196	212		
End Time	12	13	14	15	16	17	18	19	20	21	22	23		
15	66	39	56	70	109	123	86	32	25	15	6	6		
30	55	53	47	67	84	104	55	34	21	16	10	5		
45	49	47	73	89	106	101	52	34	20	10	4	11		
00	49	43	76	62	118	93	32	26	14	10	4	8		
Hr Total	219	182	252	288	417	421	225	126	80	51	24	30		
24 Hour Total :			3381											
AM Peak Hour Begins :			10:45		AM Peak Volume :			218		AM Peak Hour Factor :			0.89	
PM Peak Hour Begins :			16:30		PM Peak Volume :			451		PM Peak Hour Factor :			0.92	

Station Name: # 38 B
Description: Selmon Expressway On Ramp from Nebraska Ave EB
City: Tampa
County: Hillsborough
Start Date/Time: 02-27-2020 00:00
End Date/Time: 02-28-2020 00:00

Date: 02-27-2020		Station Name: Eastbound												
End Time	00	01	02	03	04	05	06	07	08	09	10	11		
15	2	0	1	1	0	1	16	23	45	54	37	61		
30	0	3	0	0	0	2	25	42	54	36	48	43		
45	2	6	3	1	1	12	19	44	45	60	53	58		
00	1	1	5	2	2	11	34	41	50	63	41	55		
Hr Total	5	10	9	4	3	26	94	150	194	213	179	217		
End Time	12	13	14	15	16	17	18	19	20	21	22	23		
15	56	40	37	74	112	118	59	29	23	19	97	6		
30	46	31	54	86	93	114	63	28	19	36	29	7		
45	68	39	46	69	101	105	42	27	16	119	18	1		
00	43	38	49	81	88	73	47	28	27	137	14	3		
Hr Total	213	148	186	310	394	410	211	112	85	311	158	17		
24 Hour Total :			3659											
AM Peak Hour Begins :			9:00			AM Peak Volume :		213		AM Peak Hour Factor :			0.85	
PM Peak Hour Begins :			16:45			PM Peak Volume :		425		PM Peak Hour Factor :			0.78	

Start Time	1	2	Total
0:00	9		9
0:15	5		5
0:30	12		12
0:45	5		5
1:00	8		8
1:15	17		17
1:30	7		7
1:45	5		5
2:00	3		3
2:15	9		9
2:30	1		1
2:45	9		9
3:00	6		6
3:15	11		11
3:30	11		11
3:45	11		11
4:00	11		11
4:15	20		20
4:30	36		36
4:45	44		44
5:00	73		73
5:15	127		127
5:30	160		160
5:45	202		202
6:00	240		240
6:15	310		310
6:30	392		392
6:45	371		371
7:00	494		494
7:15	491		491
7:30	500		500
7:45	510		510
8:00	545		545
8:15	627		627
8:30	540		540
8:45	577		577
9:00	382		382
9:15	356		356
9:30	283		283
9:45	203		203
10:00	161		161
10:15	136		136
10:30	139		139
10:45	154		154
11:00	137		137
11:15	172		172
11:30	190		190
11:45	214		214
12:00	126		126
12:15	209		209
12:30	183		183
12:45	178		178
13:00	155		155
13:15	182		182
13:30	159		159
13:45	188		188
14:00	137		137
14:15	146		146
14:30	160		160
14:45	186		186
15:00	188		188
15:15	202		202
15:30	243		243
15:45	219		219
16:00	266		266
16:15	246		246
16:30	260		260
16:45	282		282
17:00	298		298
17:15	411		411
17:30	298		298
17:45	261		261
18:00	220		220
18:15	232		232
18:30	184		184
18:45	175		175
19:00	150		150
19:15	131		131
19:30	111		111
19:45	80		80
20:00	86		86
20:15	102		102
20:30	83		83
20:45	66		66
21:00	53		53
21:15	65		65
21:30	66		66
21:45	44		44
22:00	45		45
22:15	33		33
22:30	32		32
22:45	29		29
23:00	26		26
23:15	24		24
23:30	24		24
23:45	17		17

Start Date	September 10, 2019	
End Date	September 11, 2019	
Location	Brerein St east of Florida Ave	
City	Tampa	
County	Hillsborough	
Lane 1	WB	
Lane 2	N/A	

Start Time	1	2	Total
0:00	22		22
0:15	10		10
0:30	6		6
0:45	10		10
1:00	5		5
1:15	6		6
1:30	8		8
1:45	20		20
2:00	7		7
2:15	4		4
2:30	4		4
2:45	6		6
3:00	4		4
3:15	6		6
3:30	6		6
3:45	10		10
4:00	15		15
4:15	16		16
4:30	23		23
4:45	50		50
5:00	60		60
5:15	109		109
5:30	133		133
5:45	175		175
6:00	205		205
6:15	314		314
6:30	320		320
6:45	400		400
7:00	432		432
7:15	532		532
7:30	522		522
7:45	585		585
8:00	625		625
8:15	624		624
8:30	615		615
8:45	575		575
9:00	418		418
9:15	310		310
9:30	238		238
9:45	220		220
10:00	195		195
10:15	192		192
10:30	155		155
10:45	184		184
11:00	156		156
11:15	166		166
11:30	190		190
11:45	238		238
12:00	208		208
12:15	216		216
12:30	185		185
12:45	198		198
13:00	159		159
13:15	152		152
13:30	140		140
13:45	195		195
14:00	123		123
14:15	166		166
14:30	128		128
14:45	166		166
15:00	191		191
15:15	225		225
15:30	227		227
15:45	188		188
16:00	224		224
16:15	221		221
16:30	249		249
16:45	252		252
17:00	353		353
17:15	355		355
17:30	285		285
17:45	338		338
18:00	248		248
18:15	202		202
18:30	182		182
18:45	171		171
19:00	121		121
19:15	118		118
19:30	110		110
19:45	127		127
20:00	89		89
20:15	91		91
20:30	74		74
20:45	80		80
21:00	58		58
21:15	109		109
21:30	63		63
21:45	43		43
22:00	51		51
22:15	48		48
22:30	43		43
22:45	33		33
23:00	21		21
23:15	21		21
23:30	19		19
23:45	15		15

Start Date	September 11, 2019
End Date	September 12, 2019

Station	
ID	
Location	Brorain St east of Florida Ave

City	Tampa
County	Hillsborough
Lane 1	WB
Lane 2	N/A

Start Time	1	2	Total
0:00	13		13
0:15	20		20
0:30	9		9
0:45	10		10
1:00	5		5
1:15	6		6
1:30	14		14
1:45	2		2
2:00	5		5
2:15	5		5
2:30	10		10
2:45	7		7
3:00	9		9
3:15	11		11
3:30	4		4
3:45	13		13
4:00	11		11
4:15	15		15
4:30	28		28
4:45	48		48
5:00	72		72
5:15	121		121
5:30	144		144
5:45	201		201
6:00	244		244
6:15	316		316
6:30	362		362
6:45	362		362
7:00	470		470
7:15	551		551
7:30	498		498
7:45	608		608
8:00	582		582
8:15	638		638
8:30	532		532
8:45	518		518
9:00	295		295
9:15	251		251
9:30	215		215
9:45	228		228
10:00	181		181
10:15	183		183
10:30	163		163
10:45	161		161
11:00	167		167
11:15	193		193
11:30	209		209
11:45	215		215
12:00	194		194
12:15	178		178
12:30	166		166
12:45	172		172
13:00	152		152
13:15	173		173
13:30	161		161
13:45	155		155
14:00	151		151
14:15	176		176
14:30	155		155
14:45	165		165
15:00	199		199
15:15	257		257
15:30	251		251
15:45	210		210
16:00	220		220
16:15	204		204
16:30	260		260
16:45	263		263
17:00	366		366
17:15	343		343
17:30	314		314
17:45	262		262
18:00	246		246
18:15	222		222
18:30	208		208
18:45	176		176
19:00	129		129
19:15	145		145
19:30	123		123
19:45	97		97
20:00	102		102
20:15	122		122
20:30	111		111
20:45	89		89
21:00	72		72
21:15	56		56
21:30	76		76
21:45	58		58
22:00	47		47
22:15	43		43
22:30	40		40
22:45	42		42
23:00	24		24
23:15	29		29
23:30	15		15
23:45	20		20

Start Date	September 12, 2019
End Date	September 13, 2019

Station	
ID	
Location	Brerein St east of Florida Ave

City	Tampa
County	Hillsborough
Lane 1	WB
Lane 2	N/A

Volume Count Report

Start Date: September 10, 2019
 Stop Date: September 10, 2019
 City: Tampa
 Location: Broroin St east of Florida Ave

Start Time: 00:00
 Stop Time: 24:00
 County: Hillsborough

Westbound Volume

Tuesday, September 10, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	9	8	3	6	11	73	240	494	545	382	161	137
30	5	17	9	11	20	127	310	491	627	356	136	172
45	12	7	1	11	36	160	392	500	540	283	139	190
00	5	5	9	11	44	202	371	510	577	203	154	214
Hr Total	31	37	22	39	111	562	1,313	1,995	2,289	1,224	590	713

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	126	155	137	188	266	298	220	150	86	53	45	26
30	209	182	146	202	246	411	232	131	102	65	33	24
45	183	159	160	243	260	298	184	111	83	66	32	24
00	178	188	186	219	282	261	175	80	66	44	29	17
Hr Total	696	684	629	852	1,054	1,268	811	472	337	228	139	91

24 Hour Total: 16,187
 AM Peak Hour begins: 8:00 AM Peak Volume: 2,289 AM Peak Hour Factor: 0.91
 PM Peak Hour begins: 16:45 PM Peak Volume: 1,289 PM Peak Hour Factor: 0.78

N/A

Tuesday, September 10, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

24 Hour Total: 0
 AM Peak Hour begins: 0:00 AM Peak Volume: 0 AM Peak Hour Factor: #DIV/0!
 PM Peak Hour begins: 12:00 PM Peak Volume: 0 PM Peak Hour Factor: #DIV/0!

Total Volume for All Lanes

Tuesday, September 10, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	9	8	3	6	11	73	240	494	545	382	161	137
30	5	17	9	11	20	127	310	491	627	356	136	172
45	12	7	1	11	36	160	392	500	540	283	139	190
00	5	5	9	11	44	202	371	510	577	203	154	214
Hr Total	31	37	22	39	111	562	1,313	1,995	2,289	1,224	590	713

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	126	155	137	188	266	298	220	150	86	53	45	26
30	209	182	146	202	246	411	232	131	102	65	33	24
45	183	159	160	243	260	298	184	111	83	66	32	24
00	178	188	186	219	282	261	175	80	66	44	29	17
Hr Total	696	684	629	852	1,054	1,268	811	472	337	228	139	91

24 Hour Total: 16,187
 AM Peak Hour begins: 8:00 AM Peak Volume: 2,289 AM Peak Hour Factor: 0.91
 PM Peak Hour begins: 16:45 PM Peak Volume: 1,289 PM Peak Hour Factor: 0.78

Volume Count Report

Start Date: September 11, 2019
 Stop Date: September 11, 2019
 City: Tampa
 Location: Broroin St east of Florida Ave

Start Time: 00:00
 Stop Time: 24:00
 County: Hillsborough

Westbound Volume

Wednesday, September 11, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	22	5	7	4	15	60	205	432	625	418	195	156
30	10	6	4	6	16	109	314	532	624	310	192	166
45	6	8	4	6	23	133	320	522	615	238	155	190
00	10	20	6	10	50	175	400	585	575	220	184	238
Hr Total	48	39	21	26	104	477	1,239	2,071	2,439	1,186	726	750

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	208	159	123	191	224	353	248	121	89	58	51	21
30	216	152	166	225	221	355	202	118	91	109	48	21
45	185	140	128	227	249	285	182	110	74	63	43	19
00	198	195	166	188	252	338	171	127	80	43	33	15
Hr Total	807	646	583	831	946	1,331	803	476	334	273	175	76

24 Hour Total: 16,407
 AM Peak Hour begins: 7:45 AM Peak Volume: 2,449 AM Peak Hour Factor: 0.98
 PM Peak Hour begins: 17:00 PM Peak Volume: 1,331 PM Peak Hour Factor: 0.94

N/A

Wednesday, September 11, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

24 Hour Total: 0
 AM Peak Hour begins: 0:00 AM Peak Volume: 0 AM Peak Hour Factor: #DIV/0!
 PM Peak Hour begins: 12:00 PM Peak Volume: 0 PM Peak Hour Factor: #DIV/0!

Total Volume for All Lanes

Wednesday, September 11, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	22	5	7	4	15	60	205	432	625	418	195	156
30	10	6	4	6	16	109	314	532	624	310	192	166
45	6	8	4	6	23	133	320	522	615	238	155	190
00	10	20	6	10	50	175	400	585	575	220	184	238
Hr Total	48	39	21	26	104	477	1,239	2,071	2,439	1,186	726	750

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	208	159	123	191	224	353	248	121	89	58	51	21
30	216	152	166	225	221	355	202	118	91	109	48	21
45	185	140	128	227	249	285	182	110	74	63	43	19
00	198	195	166	188	252	338	171	127	80	43	33	15
Hr Total	807	646	583	831	946	1,331	803	476	334	273	175	76

24 Hour Total: 16,407
 AM Peak Hour begins: 7:45 AM Peak Volume: 2,449 AM Peak Hour Factor: 0.98
 PM Peak Hour begins: 17:00 PM Peak Volume: 1,331 PM Peak Hour Factor: 0.94

Volume Count Report

Start Date: September 12, 2019
 Stop Date: September 12, 2019
 City: Tampa
 Location: Broroin St east of Florida Ave

Start Time: 00:00
 Stop Time: 24:00
 County: Hillsborough

Westbound Volume

Thursday, September 12, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	13	5	5	9	11	72	244	470	582	295	181	167
30	20	6	5	11	15	121	316	551	638	251	183	193
45	9	14	10	4	28	144	362	498	532	215	163	209
00	10	2	7	13	48	201	362	608	518	228	161	215
Hr Total	52	27	27	37	102	538	1,284	2,127	2,270	989	688	784

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	194	152	151	199	220	366	246	129	102	72	47	24
30	178	173	176	257	204	343	222	145	122	56	43	29
45	166	161	155	251	260	314	208	123	111	76	40	15
00	172	155	165	210	263	262	176	97	89	58	42	20
Hr Total	710	641	647	917	947	1,285	852	494	424	262	172	88

24 Hour Total: 16,364
 AM Peak Hour begins: 7:45 AM Peak Volume: 2,360 AM Peak Hour Factor: 0.92
 PM Peak Hour begins: 16:45 PM Peak Volume: 1,286 PM Peak Hour Factor: 0.88

N/A

Thursday, September 12, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

24 Hour Total: 0
 AM Peak Hour begins: 0:00 AM Peak Volume: 0 AM Peak Hour Factor: #DIV/0!
 PM Peak Hour begins: 12:00 PM Peak Volume: 0 PM Peak Hour Factor: #DIV/0!

Total Volume for All Lanes

Thursday, September 12, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	13	5	5	9	11	72	244	470	582	295	181	167
30	20	6	5	11	15	121	316	551	638	251	183	193
45	9	14	10	4	28	144	362	498	532	215	163	209
00	10	2	7	13	48	201	362	608	518	228	161	215
Hr Total	52	27	27	37	102	538	1,284	2,127	2,270	989	688	784

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	194	152	151	199	220	366	246	129	102	72	47	24
30	178	173	176	257	204	343	222	145	122	56	43	29
45	166	161	155	251	260	314	208	123	111	76	40	15
00	172	155	165	210	263	262	176	97	89	58	42	20
Hr Total	710	641	647	917	947	1,285	852	494	424	262	172	88

24 Hour Total: 16,364
 AM Peak Hour begins: 7:45 AM Peak Volume: 2,360 AM Peak Hour Factor: 0.92
 PM Peak Hour begins: 16:45 PM Peak Volume: 1,286 PM Peak Hour Factor: 0.88

Volume Count Report 3-Day Average

Start Date: September 10, 2019
 Stop Date: September 12, 2019
 City: Tampa
 Location: Brorein St east of Florida Ave

Start Time: 00:00
 Stop Time: 24:00
 County: Hillsborough

Westbound Volume

3-Day Average

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	15	6	5	6	12	68	230	465	584	365	179	153
30	12	10	6	9	17	119	313	525	630	306	170	177
45	9	10	5	7	29	146	358	507	562	245	152	196
00	8	9	7	11	47	193	378	568	557	217	166	222
Hr Total	44	34	23	34	106	526	1,279	2,064	2,333	1,133	668	749

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	176	155	137	193	237	339	238	133	92	61	48	24
30	201	169	163	228	224	370	219	131	105	77	41	25
45	178	153	148	240	256	299	191	115	89	68	38	19
00	183	179	172	206	266	287	174	101	78	48	35	17
Hr Total	738	657	620	867	982	1,295	822	481	365	254	162	85

24 Hour Total: 16,319
 AM Peak Hour begins: 7:45
 PM Peak Hour begins: 17:00

AM Peak Volume: 2,344
 PM Peak Volume: 1,295
 AM Peak Hour Factor: 0.93
 PM Peak Hour Factor: 0.88

N/A

3-Day Average

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

24 Hour Total: 0
 AM Peak Hour begins: 0:00
 PM Peak Hour begins: 12:00

AM Peak Volume: 0
 PM Peak Volume: 0
 AM Peak Hour Factor: #DIV/0!
 PM Peak Hour Factor: #DIV/0!

Total Volume for All Lanes

3-Day Average

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	15	6	5	6	12	68	230	465	584	365	179	153
30	12	10	6	9	17	119	313	525	630	306	170	177
45	9	10	5	7	29	146	358	507	562	245	152	196
00	8	9	7	11	47	193	378	568	557	217	166	222
Hr Total	44	34	23	34	106	526	1,279	2,064	2,333	1,133	668	749

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	176	155	137	193	237	339	238	133	92	61	48	24
30	201	169	163	228	224	370	219	131	105	77	41	25
45	178	153	148	240	256	299	191	115	89	68	38	19
00	183	179	172	206	266	287	174	101	78	48	35	17
Hr Total	738	657	620	867	982	1,295	822	481	365	254	162	85

24 Hour Total: 16,319
 AM Peak Hour begins: 7:45
 PM Peak Hour begins: 17:00

AM Peak Volume: 2,344
 PM Peak Volume: 1,295
 AM Peak Hour Factor: 0.93
 PM Peak Hour Factor: 0.88

Start Time	1	2	Total
0:00	12		12
0:15	4		4
0:30	9		9
0:45	7		7
1:00	9		9
1:15	6		6
1:30	13		13
1:45	3		3
2:00	4		4
2:15	6		6
2:30	2		2
2:45	6		6
3:00	9		9
3:15	9		9
3:30	9		9
3:45	10		10
4:00	9		9
4:15	15		15
4:30	27		27
4:45	39		39
5:00	45		45
5:15	113		113
5:30	119		119
5:45	149		149
6:00	171		171
6:15	256		256
6:30	266		266
6:45	307		307
7:00	305		305
7:15	359		359
7:30	358		358
7:45	324		324
8:00	370		370
8:15	399		399
8:30	439		439
8:45	345		345
9:00	322		322
9:15	243		243
9:30	184		184
9:45	170		170
10:00	119		119
10:15	118		118
10:30	112		112
10:45	140		140
11:00	129		129
11:15	141		141
11:30	140		140
11:45	179		179
12:00	128		128
12:15	167		167
12:30	168		168
12:45	134		134
13:00	144		144
13:15	154		154
13:30	144		144
13:45	140		140
14:00	121		121
14:15	124		124
14:30	123		123
14:45	150		150
15:00	144		144
15:15	139		139
15:30	167		167
15:45	169		169
16:00	188		188
16:15	231		231
16:30	205		205
16:45	248		248
17:00	227		227
17:15	344		344
17:30	299		299
17:45	250		250
18:00	224		224
18:15	175		175
18:30	211		211
18:45	181		181
19:00	158		158
19:15	113		113
19:30	103		103
19:45	84		84
20:00	69		69
20:15	89		89
20:30	79		79
20:45	63		63
21:00	56		56
21:15	52		52
21:30	60		60
21:45	52		52
22:00	40		40
22:15	33		33
22:30	33		33
22:45	24		24
23:00	28		28
23:15	22		22
23:30	18		18
23:45	25		25

Start Date	September 10, 2019	
End Date	September 11, 2019	
Location	Brerein St west of Florida Ave	
City	Tampa	
County	Hillsborough	
Lane 1	WB	
Lane 2	N/A	

Start Time	1	2	Total
0:00	17		17
0:15	14		14
0:30	8		8
0:45	9		9
1:00	6		6
1:15	5		5
1:30	11		11
1:45	12		12
2:00	5		5
2:15	6		6
2:30	4		4
2:45	8		8
3:00	3		3
3:15	3		3
3:30	6		6
3:45	8		8
4:00	12		12
4:15	16		16
4:30	23		23
4:45	29		29
5:00	67		67
5:15	84		84
5:30	104		104
5:45	145		145
6:00	173		173
6:15	263		263
6:30	253		253
6:45	285		285
7:00	285		285
7:15	350		350
7:30	372		372
7:45	333		333
8:00	440		440
8:15	415		415
8:30	376		376
8:45	328		328
9:00	290		290
9:15	223		223
9:30	194		194
9:45	159		159
10:00	166		166
10:15	131		131
10:30	135		135
10:45	127		127
11:00	155		155
11:15	152		152
11:30	160		160
11:45	193		193
12:00	188		188
12:15	181		181
12:30	168		168
12:45	172		172
13:00	144		144
13:15	129		129
13:30	121		121
13:45	155		155
14:00	121		121
14:15	127		127
14:30	121		121
14:45	139		139
15:00	148		148
15:15	177		177
15:30	163		163
15:45	163		163
16:00	156		156
16:15	201		201
16:30	177		177
16:45	255		255
17:00	228		228
17:15	371		371
17:30	273		273
17:45	258		258
18:00	251		251
18:15	195		195
18:30	180		180
18:45	151		151
19:00	110		110
19:15	104		104
19:30	108		108
19:45	95		95
20:00	83		83
20:15	89		89
20:30	69		69
20:45	68		68
21:00	58		58
21:15	77		77
21:30	62		62
21:45	53		53
22:00	34		34
22:15	41		41
22:30	33		33
22:45	36		36
23:00	15		15
23:15	19		19
23:30	16		16
23:45	14		14

Start Date	September 11, 2019
End Date	September 12, 2019

Station	
ID	
Location	Brorein St west of Florida Ave

City	Tampa
County	Hillsborough
Lane 1	WB
Lane 2	N/A

Start Time	1	2	Total
0:00	13		13
0:15	16		16
0:30	7		7
0:45	14		14
1:00	7		7
1:15	4		4
1:30	9		9
1:45	3		3
2:00	4		4
2:15	4		4
2:30	13		13
2:45	4		4
3:00	8		8
3:15	10		10
3:30	9		9
3:45	12		12
4:00	12		12
4:15	11		11
4:30	21		21
4:45	35		35
5:00	60		60
5:15	95		95
5:30	108		108
5:45	156		156
6:00	164		164
6:15	244		244
6:30	261		261
6:45	267		267
7:00	323		323
7:15	366		366
7:30	372		372
7:45	378		378
8:00	431		431
8:15	401		401
8:30	385		385
8:45	369		369
9:00	249		249
9:15	191		191
9:30	176		176
9:45	159		159
10:00	143		143
10:15	146		146
10:30	156		156
10:45	136		136
11:00	135		135
11:15	152		152
11:30	177		177
11:45	179		179
12:00	156		156
12:15	172		172
12:30	170		170
12:45	135		135
13:00	124		124
13:15	134		134
13:30	145		145
13:45	142		142
14:00	127		127
14:15	138		138
14:30	126		126
14:45	117		117
15:00	151		151
15:15	166		166
15:30	173		173
15:45	167		167
16:00	176		176
16:15	195		195
16:30	204		204
16:45	236		236
17:00	266		266
17:15	347		347
17:30	252		252
17:45	251		251
18:00	238		238
18:15	184		184
18:30	198		198
18:45	151		151
19:00	124		124
19:15	106		106
19:30	135		135
19:45	84		84
20:00	83		83
20:15	116		116
20:30	76		76
20:45	79		79
21:00	75		75
21:15	45		45
21:30	60		60
21:45	50		50
22:00	48		48
22:15	46		46
22:30	32		32
22:45	38		38
23:00	32		32
23:15	25		25
23:30	11		11
23:45	21		21

Start Date	September 12, 2019
End Date	September 13, 2019

Station	
ID	
Location	Brorein St west of Florida Ave

City	Tampa
County	Hillsborough
Lane 1	WB
Lane 2	N/A

Volume Count Report

Start Date: September 10, 2019
 Stop Date: September 10, 2019
 City: Tampa
 Location: Broroin St west of Florida Ave

Start Time: 00:00
 Stop Time: 24:00
 County: Hillsborough

Westbound Volume

Tuesday, September 10, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	12	9	4	9	9	45	171	305	370	322	119	129
30	4	6	6	9	15	113	256	359	399	243	118	141
45	9	13	2	9	27	119	266	358	439	184	112	140
00	7	3	6	10	39	149	307	324	345	170	140	179
Hr Total	32	31	18	37	90	426	1,000	1,346	1,553	919	489	589

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	128	144	121	144	188	227	224	158	69	56	40	28
30	167	154	124	139	231	344	175	113	89	52	33	22
45	168	144	123	167	205	299	211	103	79	60	33	18
00	134	140	150	169	248	250	181	84	63	52	24	25
Hr Total	597	582	518	619	872	1,120	791	458	300	220	130	93

24 Hour Total: 12,830
 AM Peak Hour begins: 8:00 AM Peak Volume: 1,553 AM Peak Hour Factor: 0.88
 PM Peak Hour begins: 17:00 PM Peak Volume: 1,120 PM Peak Hour Factor: 0.81

N/A

Tuesday, September 10, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

24 Hour Total: 0
 AM Peak Hour begins: 0:00 AM Peak Volume: 0 AM Peak Hour Factor: #DIV/0!
 PM Peak Hour begins: 12:00 PM Peak Volume: 0 PM Peak Hour Factor: #DIV/0!

Total Volume for All Lanes

Tuesday, September 10, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	12	9	4	9	9	45	171	305	370	322	119	129
30	4	6	6	9	15	113	256	359	399	243	118	141
45	9	13	2	9	27	119	266	358	439	184	112	140
00	7	3	6	10	39	149	307	324	345	170	140	179
Hr Total	32	31	18	37	90	426	1,000	1,346	1,553	919	489	589

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	128	144	121	144	188	227	224	158	69	56	40	28
30	167	154	124	139	231	344	175	113	89	52	33	22
45	168	144	123	167	205	299	211	103	79	60	33	18
00	134	140	150	169	248	250	181	84	63	52	24	25
Hr Total	597	582	518	619	872	1,120	791	458	300	220	130	93

24 Hour Total: 12,830
 AM Peak Hour begins: 8:00 AM Peak Volume: 1,553 AM Peak Hour Factor: 0.88
 PM Peak Hour begins: 17:00 PM Peak Volume: 1,120 PM Peak Hour Factor: 0.81

Volume Count Report

Start Date: September 11, 2019
 Stop Date: September 11, 2019
 City: Tampa
 Location: Broroin St west of Florida Ave

Start Time: 00:00
 Stop Time: 24:00
 County: Hillsborough

Westbound Volume

Wednesday, September 11, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	17	6	5	3	12	67	173	285	440	290	166	155
30	14	5	6	3	16	84	263	350	415	223	131	152
45	8	11	4	6	23	104	253	372	376	194	135	160
00	9	12	8	8	29	145	285	333	328	159	127	193
Hr Total	48	34	23	20	80	400	974	1,340	1,559	866	559	660

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	188	144	121	148	156	228	251	110	83	58	34	15
30	181	129	127	177	201	371	195	104	89	77	41	19
45	168	121	121	163	177	273	180	108	69	62	33	16
00	172	155	139	163	255	258	151	95	68	53	36	14
Hr Total	709	549	508	651	789	1,130	777	417	309	250	144	64

24 Hour Total: 12,860
 AM Peak Hour begins: 7:45 AM Peak Volume: 1,564 AM Peak Hour Factor: 0.89
 PM Peak Hour begins: 17:15 PM Peak Volume: 1,153 PM Peak Hour Factor: 0.78

N/A

Wednesday, September 11, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

24 Hour Total: 0
 AM Peak Hour begins: 0:00 AM Peak Volume: 0 AM Peak Hour Factor: #DIV/0!
 PM Peak Hour begins: 12:00 PM Peak Volume: 0 PM Peak Hour Factor: #DIV/0!

Total Volume for All Lanes

Wednesday, September 11, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	17	6	5	3	12	67	173	285	440	290	166	155
30	14	5	6	3	16	84	263	350	415	223	131	152
45	8	11	4	6	23	104	253	372	376	194	135	160
00	9	12	8	8	29	145	285	333	328	159	127	193
Hr Total	48	34	23	20	80	400	974	1,340	1,559	866	559	660

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	188	144	121	148	156	228	251	110	83	58	34	15
30	181	129	127	177	201	371	195	104	89	77	41	19
45	168	121	121	163	177	273	180	108	69	62	33	16
00	172	155	139	163	255	258	151	95	68	53	36	14
Hr Total	709	549	508	651	789	1,130	777	417	309	250	144	64

24 Hour Total: 12,860
 AM Peak Hour begins: 7:45 AM Peak Volume: 1,564 AM Peak Hour Factor: 0.89
 PM Peak Hour begins: 17:15 PM Peak Volume: 1,153 PM Peak Hour Factor: 0.78

Volume Count Report

Start Date: September 12, 2019
 Stop Date: September 12, 2019
 City: Tampa
 Location: Broroin St west of Florida Ave

Start Time: 00:00
 Stop Time: 24:00
 County: Hillsborough

Westbound Volume

Thursday, September 12, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	13	7	4	8	12	60	164	323	431	249	143	135
30	16	4	4	10	11	95	244	366	401	191	146	152
45	7	9	13	9	21	108	261	372	385	176	156	177
00	14	3	4	12	35	156	267	378	369	159	136	179
Hr Total	50	23	25	39	79	419	936	1,439	1,586	775	581	643

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	156	124	127	151	176	266	238	124	83	75	48	32
30	172	134	138	166	195	347	184	106	116	45	46	25
45	170	145	126	173	204	252	198	135	76	60	32	11
00	135	142	117	167	236	251	151	84	79	50	38	21
Hr Total	633	545	508	657	811	1,116	771	449	354	230	164	89

24 Hour Total: 12,922
 AM Peak Hour begins: 7:45 AM Peak Volume: 1,595 AM Peak Hour Factor: 0.93
 PM Peak Hour begins: 17:00 PM Peak Volume: 1,116 PM Peak Hour Factor: 0.80

N/A

Thursday, September 12, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

24 Hour Total: 0
 AM Peak Hour begins: 0:00 AM Peak Volume: 0 AM Peak Hour Factor: #DIV/0!
 PM Peak Hour begins: 12:00 PM Peak Volume: 0 PM Peak Hour Factor: #DIV/0!

Total Volume for All Lanes

Thursday, September 12, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	13	7	4	8	12	60	164	323	431	249	143	135
30	16	4	4	10	11	95	244	366	401	191	146	152
45	7	9	13	9	21	108	261	372	385	176	156	177
00	14	3	4	12	35	156	267	378	369	159	136	179
Hr Total	50	23	25	39	79	419	936	1,439	1,586	775	581	643

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	156	124	127	151	176	266	238	124	83	75	48	32
30	172	134	138	166	195	347	184	106	116	45	46	25
45	170	145	126	173	204	252	198	135	76	60	32	11
00	135	142	117	167	236	251	151	84	79	50	38	21
Hr Total	633	545	508	657	811	1,116	771	449	354	230	164	89

24 Hour Total: 12,922
 AM Peak Hour begins: 7:45 AM Peak Volume: 1,595 AM Peak Hour Factor: 0.93
 PM Peak Hour begins: 17:00 PM Peak Volume: 1,116 PM Peak Hour Factor: 0.80

Volume Count Report 3-Day Average

Start Date: September 10, 2019
 Stop Date: September 12, 2019
 City: Tampa
 Location: Brorein St west of Florida Ave

Start Time: 00:00
 Stop Time: 24:00
 County: Hillsborough

Westbound Volume

3-Day Average

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	14	7	4	7	11	57	169	304	414	287	143	140
30	11	5	5	7	14	97	254	358	405	219	132	148
45	8	11	6	8	24	110	260	367	400	185	134	159
00	10	6	6	10	34	150	286	345	347	163	134	184
Hr Total	43	29	22	32	83	415	970	1,375	1,566	853	543	631

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	157	137	123	148	173	240	238	131	78	63	41	25
30	173	139	130	161	209	354	185	108	98	58	40	22
45	169	137	123	168	195	275	196	115	75	61	33	15
00	147	146	135	166	246	253	161	88	70	52	33	20
Hr Total	646	559	511	642	824	1,122	780	441	321	233	146	82

24 Hour Total: 12,871
 AM Peak Hour begins: 8:00 AM Peak Volume: 1,566 AM Peak Hour Factor: 0.95
 PM Peak Hour begins: 17:00 PM Peak Volume: 1,122 PM Peak Hour Factor: 0.79

N/A

3-Day Average

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

24 Hour Total: 0
 AM Peak Hour begins: 0:00 AM Peak Volume: 0 AM Peak Hour Factor: #DIV/0!
 PM Peak Hour begins: 12:00 PM Peak Volume: 0 PM Peak Hour Factor: #DIV/0!

Total Volume for All Lanes

3-Day Average

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	14	7	4	7	11	57	169	304	414	287	143	140
30	11	5	5	7	14	97	254	358	405	219	132	148
45	8	11	6	8	24	110	260	367	400	185	134	159
00	10	6	6	10	34	150	286	345	347	163	134	184
Hr Total	43	29	22	32	83	415	970	1,375	1,566	853	543	631

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	157	137	123	148	173	240	238	131	78	63	41	25
30	173	139	130	161	209	354	185	108	98	58	40	22
45	169	137	123	168	195	275	196	115	75	61	33	15
00	147	146	135	166	246	253	161	88	70	52	33	20
Hr Total	646	559	511	642	824	1,122	780	441	321	233	146	82

24 Hour Total: 12,871
 AM Peak Hour begins: 8:00 AM Peak Volume: 1,566 AM Peak Hour Factor: 0.95
 PM Peak Hour begins: 17:00 PM Peak Volume: 1,122 PM Peak Hour Factor: 0.79

Start Time	1	2	Total
0:00	39		39
0:15	35		35
0:30	28		28
0:45	36		36
1:00	28		28
1:15	15		15
1:30	23		23
1:45	10		10
2:00	19		19
2:15	9		9
2:30	11		11
2:45	27		27
3:00	17		17
3:15	9		9
3:30	15		15
3:45	19		19
4:00	17		17
4:15	13		13
4:30	23		23
4:45	38		38
5:00	43		43
5:15	49		49
5:30	60		60
5:45	93		93
6:00	143		143
6:15	156		156
6:30	242		242
6:45	222		222
7:00	295		295
7:15	349		349
7:30	424		424
7:45	451		451
8:00	376		376
8:15	405		405
8:30	338		338
8:45	387		387
9:00	300		300
9:15	275		275
9:30	256		256
9:45	261		261
10:00	218		218
10:15	237		237
10:30	257		257
10:45	274		274
11:00	224		224
11:15	262		262
11:30	265		265
11:45	293		293
12:00	296		296
12:15	297		297
12:30	280		280
12:45	332		332
13:00	306		306
13:15	364		364
13:30	318		318
13:45	310		310
14:00	302		302
14:15	352		352
14:30	385		385
14:45	437		437
15:00	405		405
15:15	442		442
15:30	481		481
15:45	480		480
16:00	552		552
16:15	548		548
16:30	596		596
16:45	549		549
17:00	597		597
17:15	535		535
17:30	509		509
17:45	474		474
18:00	433		433
18:15	424		424
18:30	403		403
18:45	405		405
19:00	434		434
19:15	372		372
19:30	342		342
19:45	252		252
20:00	258		258
20:15	238		238
20:30	227		227
20:45	204		204
21:00	166		166
21:15	174		174
21:30	128		128
21:45	196		196
22:00	191		191
22:15	130		130
22:30	129		129
22:45	118		118
23:00	95		95
23:15	110		110
23:30	97		97
23:45	65		65

Start Date	September 17, 2019	
End Date	September 18, 2019	
Location	Channelside Dr east of Franklin St	
City	Tampa	
County	Hillsborough	
Lane 1	EB	
Lane 2	N/A	

Start Time	1	2	Total
0:00	51		51
0:15	41		41
0:30	34		34
0:45	30		30
1:00	25		25
1:15	25		25
1:30	23		23
1:45	21		21
2:00	22		22
2:15	22		22
2:30	11		11
2:45	18		18
3:00	14		14
3:15	12		12
3:30	22		22
3:45	10		10
4:00	21		21
4:15	21		21
4:30	28		28
4:45	28		28
5:00	39		39
5:15	62		62
5:30	78		78
5:45	106		106
6:00	140		140
6:15	172		172
6:30	221		221
6:45	242		242
7:00	277		277
7:15	355		355
7:30	370		370
7:45	432		432
8:00	404		404
8:15	418		418
8:30	387		387
8:45	360		360
9:00	288		288
9:15	278		278
9:30	251		251
9:45	277		277
10:00	214		214
10:15	258		258
10:30	225		225
10:45	272		272
11:00	204		204
11:15	270		270
11:30	287		287
11:45	278		278
12:00	282		282
12:15	293		293
12:30	323		323
12:45	331		331
13:00	296		296
13:15	340		340
13:30	351		351
13:45	295		295
14:00	287		287
14:15	368		368
14:30	291		291
14:45	377		377
15:00	396		396
15:15	422		422
15:30	438		438
15:45	412		412
16:00	529		529
16:15	464		464
16:30	491		491
16:45	535		535
17:00	537		537
17:15	530		530
17:30	398		398
17:45	381		381
18:00	312		312
18:15	408		408
18:30	320		320
18:45	313		313
19:00	294		294
19:15	300		300
19:30	234		234
19:45	205		205
20:00	170		170
20:15	206		206
20:30	158		158
20:45	175		175
21:00	139		139
21:15	159		159
21:30	121		121
21:45	124		124
22:00	114		114
22:15	113		113
22:30	79		79
22:45	85		85
23:00	80		80
23:15	66		66
23:30	83		83
23:45	60		60

Start Date	September 18, 2019
End Date	September 19, 2019

Station	
ID	
Location	Channelside Dr east of Franklin St

City	Tampa
County	Hillsborough
Lane 1	EB
Lane 2	N/A

Start Time	1	2	Total
0:00	39		39
0:15	41		41
0:30	34		34
0:45	31		31
1:00	25		25
1:15	20		20
1:30	23		23
1:45	11		11
2:00	15		15
2:15	15		15
2:30	18		18
2:45	12		12
3:00	8		8
3:15	8		8
3:30	15		15
3:45	14		14
4:00	20		20
4:15	18		18
4:30	30		30
4:45	27		27
5:00	38		38
5:15	72		72
5:30	70		70
5:45	105		105
6:00	124		124
6:15	175		175
6:30	200		200
6:45	225		225
7:00	284		284
7:15	351		351
7:30	414		414
7:45	473		473
8:00	396		396
8:15	415		415
8:30	362		362
8:45	379		379
9:00	305		305
9:15	319		319
9:30	236		236
9:45	249		249
10:00	233		233
10:15	238		238
10:30	259		259
10:45	247		247
11:00	209		209
11:15	252		252
11:30	259		259
11:45	284		284
12:00	298		298
12:15	345		345
12:30	298		298
12:45	325		325
13:00	310		310
13:15	320		320
13:30	308		308
13:45	349		349
14:00	321		321
14:15	352		352
14:30	366		366
14:45	399		399
15:00	427		427
15:15	442		442
15:30	496		496
15:45	467		467
16:00	494		494
16:15	466		466
16:30	512		512
16:45	494		494
17:00	503		503
17:15	585		585
17:30	449		449
17:45	445		445
18:00	423		423
18:15	331		331
18:30	331		331
18:45	314		314
19:00	261		261
19:15	329		329
19:30	249		249
19:45	276		276
20:00	218		218
20:15	229		229
20:30	198		198
20:45	200		200
21:00	169		169
21:15	142		142
21:30	172		172
21:45	135		135
22:00	119		119
22:15	126		126
22:30	134		134
22:45	96		96
23:00	85		85
23:15	86		86
23:30	99		99
23:45	72		72

Start Date	September 19, 2019
End Date	September 20, 2019

Station	
ID	
Location	Channelside Dr east of Franklin St

City	Tampa
County	Hillsborough
Lane 1	EB
Lane 2	N/A

Volume Count Report

Start Date: September 17, 2019
 Stop Date: September 17, 2019
 City: Tampa
 Location: Channelside Dr east of Franklin St

Start Time: 00:00
 Stop Time: 24:00
 County: Hillsborough

Eastbound Volume

Tuesday, September 17, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	39	28	19	17	17	43	143	295	376	300	218	224
30	35	15	9	9	13	49	156	349	405	275	237	262
45	28	23	11	15	23	60	242	424	338	256	257	265
00	36	10	27	19	38	93	222	451	387	261	274	293
Hr Total	138	76	66	60	91	245	763	1,519	1,506	1,092	986	1,044

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	296	306	302	405	552	597	433	434	258	166	191	95
30	297	364	352	442	548	535	424	372	238	174	130	110
45	280	318	385	481	596	509	403	342	227	128	129	97
00	332	310	437	480	549	474	405	252	204	196	118	65
Hr Total	1,205	1,298	1,476	1,808	2,245	2,115	1,665	1,400	927	664	568	367

24 Hour Total: 23,324
 AM Peak Hour begins: 7:30 AM Peak Volume: 1,656 AM Peak Hour Factor: 0.92
 PM Peak Hour begins: 16:15 PM Peak Volume: 2,290 PM Peak Hour Factor: 0.96

N/A

Tuesday, September 17, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

24 Hour Total: 0
 AM Peak Hour begins: 0:00 AM Peak Volume: 0 AM Peak Hour Factor: #DIV/0!
 PM Peak Hour begins: 12:00 PM Peak Volume: 0 PM Peak Hour Factor: #DIV/0!

Total Volume for All Lanes

Tuesday, September 17, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	39	28	19	17	17	43	143	295	376	300	218	224
30	35	15	9	9	13	49	156	349	405	275	237	262
45	28	23	11	15	23	60	242	424	338	256	257	265
00	36	10	27	19	38	93	222	451	387	261	274	293
Hr Total	138	76	66	60	91	245	763	1,519	1,506	1,092	986	1,044

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	296	306	302	405	552	597	433	434	258	166	191	95
30	297	364	352	442	548	535	424	372	238	174	130	110
45	280	318	385	481	596	509	403	342	227	128	129	97
00	332	310	437	480	549	474	405	252	204	196	118	65
Hr Total	1,205	1,298	1,476	1,808	2,245	2,115	1,665	1,400	927	664	568	367

24 Hour Total: 23,324
 AM Peak Hour begins: 7:30 AM Peak Volume: 1,656 AM Peak Hour Factor: 0.92
 PM Peak Hour begins: 16:15 PM Peak Volume: 2,290 PM Peak Hour Factor: 0.96

Volume Count Report

Start Date: September 18, 2019
 Stop Date: September 18, 2019
 City: Tampa
 Location: Channelside Dr east of Franklin St

Start Time: 00:00
 Stop Time: 24:00
 County: Hillsborough

Eastbound Volume

Wednesday, September 18, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	51	25	22	14	21	39	140	277	404	288	214	204
30	41	25	22	12	21	62	172	355	418	278	258	270
45	34	23	11	22	28	78	221	370	387	251	225	287
00	30	21	18	10	28	106	242	432	360	277	272	278
Hr Total	156	94	73	58	98	285	775	1,434	1,569	1,094	969	1,039

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	282	296	287	396	529	537	312	294	170	139	114	80
30	293	340	368	422	464	530	408	300	206	159	113	66
45	323	351	291	438	491	398	320	234	158	121	79	83
00	331	295	377	412	535	381	313	205	175	124	85	60
Hr Total	1,229	1,282	1,323	1,668	2,019	1,846	1,353	1,033	709	543	391	289

24 Hour Total: 21,329
 AM Peak Hour begins: 7:45 AM Peak Volume: 1,641 AM Peak Hour Factor: 0.95
 PM Peak Hour begins: 16:30 PM Peak Volume: 2,093 PM Peak Hour Factor: 0.97

N/A

Wednesday, September 18, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

24 Hour Total: 0
 AM Peak Hour begins: 0:00 AM Peak Volume: 0 AM Peak Hour Factor: #DIV/0!
 PM Peak Hour begins: 12:00 PM Peak Volume: 0 PM Peak Hour Factor: #DIV/0!

Total Volume for All Lanes

Wednesday, September 18, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	51	25	22	14	21	39	140	277	404	288	214	204
30	41	25	22	12	21	62	172	355	418	278	258	270
45	34	23	11	22	28	78	221	370	387	251	225	287
00	30	21	18	10	28	106	242	432	360	277	272	278
Hr Total	156	94	73	58	98	285	775	1,434	1,569	1,094	969	1,039

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	282	296	287	396	529	537	312	294	170	139	114	80
30	293	340	368	422	464	530	408	300	206	159	113	66
45	323	351	291	438	491	398	320	234	158	121	79	83
00	331	295	377	412	535	381	313	205	175	124	85	60
Hr Total	1,229	1,282	1,323	1,668	2,019	1,846	1,353	1,033	709	543	391	289

24 Hour Total: 21,329
 AM Peak Hour begins: 7:45 AM Peak Volume: 1,641 AM Peak Hour Factor: 0.95
 PM Peak Hour begins: 16:30 PM Peak Volume: 2,093 PM Peak Hour Factor: 0.97

Volume Count Report

Start Date: September 19, 2019
 Stop Date: September 19, 2019
 City: Tampa
 Location: Channelside Dr east of Franklin St

Start Time: 00:00
 Stop Time: 24:00
 County: Hillsborough

Eastbound Volume

Thursday, September 19, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	39	25	15	8	20	38	124	284	396	305	233	209
30	41	20	15	8	18	72	175	351	415	319	238	252
45	34	23	18	15	30	70	200	414	362	236	259	259
00	31	11	12	14	27	105	225	473	379	249	247	284
Hr Total	145	79	60	45	95	285	724	1,522	1,552	1,109	977	1,004

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	298	310	321	427	494	503	423	261	218	169	119	85
30	345	320	352	442	466	585	331	329	229	142	126	86
45	298	308	366	496	512	449	331	249	198	172	134	99
00	325	349	399	467	494	445	314	276	200	135	96	72
Hr Total	1,266	1,287	1,438	1,832	1,966	1,982	1,399	1,115	845	618	475	342

24 Hour Total: 22,162
 AM Peak Hour begins: 7:30 AM Peak Volume: 1,698 AM Peak Hour Factor: 0.90
 PM Peak Hour begins: 16:30 PM Peak Volume: 2,094 PM Peak Hour Factor: 0.89

N/A

Thursday, September 19, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

24 Hour Total: 0
 AM Peak Hour begins: 0:00 AM Peak Volume: 0 AM Peak Hour Factor: #DIV/0!
 PM Peak Hour begins: 12:00 PM Peak Volume: 0 PM Peak Hour Factor: #DIV/0!

Total Volume for All Lanes

Thursday, September 19, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	39	25	15	8	20	38	124	284	396	305	233	209
30	41	20	15	8	18	72	175	351	415	319	238	252
45	34	23	18	15	30	70	200	414	362	236	259	259
00	31	11	12	14	27	105	225	473	379	249	247	284
Hr Total	145	79	60	45	95	285	724	1,522	1,552	1,109	977	1,004

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	298	310	321	427	494	503	423	261	218	169	119	85
30	345	320	352	442	466	585	331	329	229	142	126	86
45	298	308	366	496	512	449	331	249	198	172	134	99
00	325	349	399	467	494	445	314	276	200	135	96	72
Hr Total	1,266	1,287	1,438	1,832	1,966	1,982	1,399	1,115	845	618	475	342

24 Hour Total: 22,162
 AM Peak Hour begins: 7:30 AM Peak Volume: 1,698 AM Peak Hour Factor: 0.90
 PM Peak Hour begins: 16:30 PM Peak Volume: 2,094 PM Peak Hour Factor: 0.89

Volume Count Report

3-Day Average

Start Date: September 17, 2019
 Stop Date: September 19, 2019
 City: Tampa
 Location: Channelside Dr east of Franklin St

Start Time: 00:00
 Stop Time: 24:00
 County: Hillsborough

Eastbound Volume

3-Day Average

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	43	26	19	13	19	40	136	285	392	298	222	212
30	39	20	15	10	17	61	168	352	413	291	244	261
45	32	23	13	17	27	69	221	403	362	248	247	270
00	32	14	19	14	31	101	230	452	375	262	264	285
Hr Total	146	83	66	54	95	272	754	1,492	1,542	1,098	977	1,029

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	292	304	303	409	525	546	389	330	215	158	141	87
30	312	341	357	435	493	550	388	334	224	158	123	87
45	300	326	347	472	533	452	351	275	194	140	114	93
00	329	318	404	453	526	433	344	244	193	152	100	66
Hr Total	1,233	1,289	1,412	1,769	2,077	1,981	1,472	1,183	827	608	478	333

24 Hour Total: 22,272

AM Peak Hour begins: 7:30

AM Peak Volume: 1,659

AM Peak Hour Factor: 0.92

PM Peak Hour begins: 16:30

PM Peak Volume: 2,155

PM Peak Hour Factor: 0.98

N/A

3-Day Average

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

24 Hour Total: 0

AM Peak Hour begins: 0:00

AM Peak Volume: 0

AM Peak Hour Factor: #DIV/0!

PM Peak Hour begins: 12:00

PM Peak Volume: 0

PM Peak Hour Factor: #DIV/0!

Total Volume for All Lanes

3-Day Average

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	43	26	19	13	19	40	136	285	392	298	222	212
30	39	20	15	10	17	61	168	352	413	291	244	261
45	32	23	13	17	27	69	221	403	362	248	247	270
00	32	14	19	14	31	101	230	452	375	262	264	285
Hr Total	146	83	66	54	95	272	754	1,492	1,542	1,098	977	1,029

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	292	304	303	409	525	546	389	330	215	158	141	87
30	312	341	357	435	493	550	388	334	224	158	123	87
45	300	326	347	472	533	452	351	275	194	140	114	93
00	329	318	404	453	526	433	344	244	193	152	100	66
Hr Total	1,233	1,289	1,412	1,769	2,077	1,981	1,472	1,183	827	608	478	333

24 Hour Total: 22,272

AM Peak Hour begins: 7:30

AM Peak Volume: 1,659

AM Peak Hour Factor: 0.92

PM Peak Hour begins: 16:30

PM Peak Volume: 2,155

PM Peak Hour Factor: 0.98

Start Time	1	2	Total
0:00	17		17
0:15	22		22
0:30	17		17
0:45	17		17
1:00	13		13
1:15	6		6
1:30	13		13
1:45	10		10
2:00	13		13
2:15	9		9
2:30	6		6
2:45	12		12
3:00	13		13
3:15	8		8
3:30	7		7
3:45	13		13
4:00	13		13
4:15	12		12
4:30	13		13
4:45	25		25
5:00	16		16
5:15	27		27
5:30	31		31
5:45	67		67
6:00	78		78
6:15	129		129
6:30	136		136
6:45	138		138
7:00	134		134
7:15	208		208
7:30	222		222
7:45	230		230
8:00	194		194
8:15	187		187
8:30	176		176
8:45	180		180
9:00	153		153
9:15	181		181
9:30	143		143
9:45	157		157
10:00	122		122
10:15	144		144
10:30	163		163
10:45	162		162
11:00	134		134
11:15	162		162
11:30	168		168
11:45	181		181
12:00	191		191
12:15	184		184
12:30	157		157
12:45	207		207
13:00	204		204
13:15	212		212
13:30	191		191
13:45	186		186
14:00	192		192
14:15	242		242
14:30	268		268
14:45	244		244
15:00	259		259
15:15	302		302
15:30	322		322
15:45	341		341
16:00	379		379
16:15	409		409
16:30	396		396
16:45	383		383
17:00	408		408
17:15	371		371
17:30	323		323
17:45	297		297
18:00	264		264
18:15	231		231
18:30	268		268
18:45	249		249
19:00	227		227
19:15	222		222
19:30	217		217
19:45	157		157
20:00	135		135
20:15	144		144
20:30	152		152
20:45	123		123
21:00	29		29
21:15	5		5
21:30	1		1
21:45	131		131
22:00	149		149
22:15	84		84
22:30	81		81
22:45	73		73
23:00	44		44
23:15	73		73
23:30	47		47
23:45	39		39

Start Date	September 17, 2019	
End Date	September 18, 2019	
Location	Channelside Dr east of Morgan St	
City	Tampa	
County	Hillsborough	
Lane 1	EB	
Lane 2	N/A	

Start Time	1	2	Total
0:00	28		28
0:15	21		21
0:30	18		18
0:45	20		20
1:00	14		14
1:15	14		14
1:30	18		18
1:45	17		17
2:00	19		19
2:15	14		14
2:30	12		12
2:45	7		7
3:00	8		8
3:15	11		11
3:30	23		23
3:45	8		8
4:00	14		14
4:15	11		11
4:30	15		15
4:45	21		21
5:00	16		16
5:15	40		40
5:30	34		34
5:45	66		66
6:00	65		65
6:15	109		109
6:30	122		122
6:45	138		138
7:00	125		125
7:15	182		182
7:30	208		208
7:45	216		216
8:00	202		202
8:15	176		176
8:30	190		190
8:45	180		180
9:00	142		142
9:15	155		155
9:30	135		135
9:45	179		179
10:00	123		123
10:15	160		160
10:30	141		141
10:45	154		154
11:00	132		132
11:15	157		157
11:30	156		156
11:45	166		166
12:00	160		160
12:15	173		173
12:30	185		185
12:45	187		187
13:00	167		167
13:15	206		206
13:30	214		214
13:45	182		182
14:00	178		178
14:15	210		210
14:30	193		193
14:45	219		219
15:00	279		279
15:15	273		273
15:30	275		275
15:45	277		277
16:00	330		330
16:15	331		331
16:30	323		323
16:45	381		381
17:00	350		350
17:15	361		361
17:30	278		278
17:45	256		256
18:00	234		234
18:15	256		256
18:30	248		248
18:45	212		212
19:00	175		175
19:15	198		198
19:30	138		138
19:45	117		117
20:00	118		118
20:15	128		128
20:30	93		93
20:45	111		111
21:00	90		90
21:15	101		101
21:30	71		71
21:45	72		72
22:00	66		66
22:15	67		67
22:30	52		52
22:45	43		43
23:00	41		41
23:15	38		38
23:30	53		53
23:45	27		27

Start Date	September 18, 2019
End Date	September 19, 2019

Station	
ID	
Location	Channelside Dr east of Morgan St

City	Tampa
County	Hillsborough
Lane 1	EB
Lane 2	N/A

Start Time	1	2	Total
0:00	18		18
0:15	19		19
0:30	24		24
0:45	14		14
1:00	11		11
1:15	10		10
1:30	13		13
1:45	5		5
2:00	11		11
2:15	9		9
2:30	10		10
2:45	10		10
3:00	7		7
3:15	6		6
3:30	11		11
3:45	15		15
4:00	11		11
4:15	8		8
4:30	19		19
4:45	17		17
5:00	17		17
5:15	42		42
5:30	39		39
5:45	68		68
6:00	70		70
6:15	118		118
6:30	127		127
6:45	115		115
7:00	133		133
7:15	200		200
7:30	224		224
7:45	225		225
8:00	196		196
8:15	194		194
8:30	190		190
8:45	157		157
9:00	163		163
9:15	178		178
9:30	132		132
9:45	152		152
10:00	136		136
10:15	141		141
10:30	152		152
10:45	164		164
11:00	157		157
11:15	161		161
11:30	155		155
11:45	193		193
12:00	183		183
12:15	215		215
12:30	193		193
12:45	181		181
13:00	199		199
13:15	207		207
13:30	199		199
13:45	209		209
14:00	176		176
14:15	233		233
14:30	236		236
14:45	263		263
15:00	308		308
15:15	321		321
15:30	340		340
15:45	326		326
16:00	308		308
16:15	348		348
16:30	333		333
16:45	378		378
17:00	333		333
17:15	391		391
17:30	305		305
17:45	275		275
18:00	290		290
18:15	224		224
18:30	238		238
18:45	219		219
19:00	201		201
19:15	209		209
19:30	169		169
19:45	159		159
20:00	133		133
20:15	155		155
20:30	124		124
20:45	103		103
21:00	114		114
21:15	86		86
21:30	94		94
21:45	86		86
22:00	64		64
22:15	76		76
22:30	75		75
22:45	58		58
23:00	51		51
23:15	47		47
23:30	55		55
23:45	39		39

Start Date	September 19, 2019
End Date	September 20, 2019

Station	
ID	
Location	Channelside Dr east of Morgan St

City	Tampa
County	Hillsborough
Lane 1	EB
Lane 2	N/A

Volume Count Report

Start Date: September 17, 2019
 Stop Date: September 17, 2019
 City: Tampa
 Location: Channelside Dr east of Morgan St

Start Time: 00:00
 Stop Time: 24:00
 County: Hillsborough

Eastbound Volume

Tuesday, September 17, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	17	13	13	13	13	16	78	134	194	153	122	134
30	22	6	9	8	12	27	129	208	187	181	144	162
45	17	13	6	7	13	31	136	222	176	143	163	168
00	17	10	12	13	25	67	138	230	180	157	162	181
Hr Total	73	42	40	41	63	141	481	794	737	634	591	645

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	191	204	192	259	379	408	264	227	135	29	149	44
30	184	212	242	302	409	371	231	222	144	5	84	73
45	157	191	268	322	396	323	268	217	152	1	81	47
00	207	186	244	341	383	297	249	157	123	131	73	39
Hr Total	739	793	946	1,224	1,567	1,399	1,012	823	554	166	387	203

24 Hour Total: 14,095
 AM Peak Hour begins: 7:15 AM Peak Volume: 854 AM Peak Hour Factor: 0.93
 PM Peak Hour begins: 16:15 PM Peak Volume: 1,596 PM Peak Hour Factor: 0.98

N/A

Tuesday, September 17, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

24 Hour Total: 0
 AM Peak Hour begins: 0:00 AM Peak Volume: 0 AM Peak Hour Factor: #DIV/0!
 PM Peak Hour begins: 12:00 PM Peak Volume: 0 PM Peak Hour Factor: #DIV/0!

Total Volume for All Lanes

Tuesday, September 17, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	17	13	13	13	13	16	78	134	194	153	122	134
30	22	6	9	8	12	27	129	208	187	181	144	162
45	17	13	6	7	13	31	136	222	176	143	163	168
00	17	10	12	13	25	67	138	230	180	157	162	181
Hr Total	73	42	40	41	63	141	481	794	737	634	591	645

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	191	204	192	259	379	408	264	227	135	29	149	44
30	184	212	242	302	409	371	231	222	144	5	84	73
45	157	191	268	322	396	323	268	217	152	1	81	47
00	207	186	244	341	383	297	249	157	123	131	73	39
Hr Total	739	793	946	1,224	1,567	1,399	1,012	823	554	166	387	203

24 Hour Total: 14,095
 AM Peak Hour begins: 7:15 AM Peak Volume: 854 AM Peak Hour Factor: 0.93
 PM Peak Hour begins: 16:15 PM Peak Volume: 1,596 PM Peak Hour Factor: 0.98

Volume Count Report

Start Date: September 18, 2019
 Stop Date: September 18, 2019
 City: Tampa
 Location: Channelside Dr east of Morgan St

Start Time: 00:00
 Stop Time: 24:00
 County: Hillsborough

Eastbound Volume

Wednesday, September 18, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	28	14	19	8	14	16	65	125	202	142	123	132
30	21	14	14	11	11	40	109	182	176	155	160	157
45	18	18	12	23	15	34	122	208	190	135	141	156
00	20	17	7	8	21	66	138	216	180	179	154	166
Hr Total	87	63	52	50	61	156	434	731	748	611	578	611

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	160	167	178	279	330	350	234	175	118	90	66	41
30	173	206	210	273	331	361	256	198	128	101	67	38
45	185	214	193	275	323	278	248	138	93	71	52	53
00	187	182	219	277	381	256	212	117	111	72	43	27
Hr Total	705	769	800	1,104	1,365	1,245	950	628	450	334	228	159

24 Hour Total: 12,919
 AM Peak Hour begins: 7:15 AM Peak Volume: 808 AM Peak Hour Factor: 0.94
 PM Peak Hour begins: 16:30 PM Peak Volume: 1,415 PM Peak Hour Factor: 0.93

N/A

Wednesday, September 18, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

24 Hour Total: 0
 AM Peak Hour begins: 0:00 AM Peak Volume: 0 AM Peak Hour Factor: #DIV/0!
 PM Peak Hour begins: 12:00 PM Peak Volume: 0 PM Peak Hour Factor: #DIV/0!

Total Volume for All Lanes

Wednesday, September 18, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	28	14	19	8	14	16	65	125	202	142	123	132
30	21	14	14	11	11	40	109	182	176	155	160	157
45	18	18	12	23	15	34	122	208	190	135	141	156
00	20	17	7	8	21	66	138	216	180	179	154	166
Hr Total	87	63	52	50	61	156	434	731	748	611	578	611

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	160	167	178	279	330	350	234	175	118	90	66	41
30	173	206	210	273	331	361	256	198	128	101	67	38
45	185	214	193	275	323	278	248	138	93	71	52	53
00	187	182	219	277	381	256	212	117	111	72	43	27
Hr Total	705	769	800	1,104	1,365	1,245	950	628	450	334	228	159

24 Hour Total: 12,919
 AM Peak Hour begins: 7:15 AM Peak Volume: 808 AM Peak Hour Factor: 0.94
 PM Peak Hour begins: 16:30 PM Peak Volume: 1,415 PM Peak Hour Factor: 0.93

Volume Count Report

Start Date: September 19, 2019
 Stop Date: September 19, 2019
 City: Tampa
 Location: Channelside Dr east of Morgan St

Start Time: 00:00
 Stop Time: 24:00
 County: Hillsborough

Eastbound Volume

Thursday, September 19, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	18	11	11	7	11	17	70	133	196	163	136	157
30	19	10	9	6	8	42	118	200	194	178	141	161
45	24	13	10	11	19	39	127	224	190	132	152	155
00	14	5	10	15	17	68	115	225	157	152	164	193
Hr Total	75	39	40	39	55	166	430	782	737	625	593	666

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	183	199	176	308	308	333	290	201	133	114	64	51
30	215	207	233	321	348	391	224	209	155	86	76	47
45	193	199	236	340	333	305	238	169	124	94	75	55
00	181	209	263	326	378	275	219	159	103	86	58	39
Hr Total	772	814	908	1,295	1,367	1,304	971	738	515	380	273	192

24 Hour Total: 13,776
 AM Peak Hour begins: 7:15 AM Peak Volume: 845 AM Peak Hour Factor: 0.94
 PM Peak Hour begins: 16:30 PM Peak Volume: 1,435 PM Peak Hour Factor: 0.92

N/A

Thursday, September 19, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

24 Hour Total: 0
 AM Peak Hour begins: 0:00 AM Peak Volume: 0 AM Peak Hour Factor: #DIV/0!
 PM Peak Hour begins: 12:00 PM Peak Volume: 0 PM Peak Hour Factor: #DIV/0!

Total Volume for All Lanes

Thursday, September 19, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	18	11	11	7	11	17	70	133	196	163	136	157
30	19	10	9	6	8	42	118	200	194	178	141	161
45	24	13	10	11	19	39	127	224	190	132	152	155
00	14	5	10	15	17	68	115	225	157	152	164	193
Hr Total	75	39	40	39	55	166	430	782	737	625	593	666

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	183	199	176	308	308	333	290	201	133	114	64	51
30	215	207	233	321	348	391	224	209	155	86	76	47
45	193	199	236	340	333	305	238	169	124	94	75	55
00	181	209	263	326	378	275	219	159	103	86	58	39
Hr Total	772	814	908	1,295	1,367	1,304	971	738	515	380	273	192

24 Hour Total: 13,776
 AM Peak Hour begins: 7:15 AM Peak Volume: 845 AM Peak Hour Factor: 0.94
 PM Peak Hour begins: 16:30 PM Peak Volume: 1,435 PM Peak Hour Factor: 0.92

Volume Count Report

3-Day Average

Start Date: September 17, 2019
 Stop Date: September 19, 2019
 City: Tampa
 Location: Channelside Dr east of Morgan St

Start Time: 00:00
 Stop Time: 24:00
 County: Hillsborough

Eastbound Volume

3-Day Average

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	21	13	14	9	13	16	71	131	197	153	127	141
30	21	10	11	8	10	36	119	197	186	171	148	160
45	20	15	9	14	16	35	128	218	185	137	152	160
00	17	11	10	12	21	67	130	224	172	163	160	180
Hr Total	78	48	44	43	60	154	448	769	741	623	587	641

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	178	190	182	282	339	364	263	201	129	78	93	45
30	191	208	228	299	363	374	237	210	142	64	76	53
45	178	201	232	312	351	302	251	175	123	55	69	52
00	192	192	242	315	381	276	227	144	112	96	58	35
Hr Total	739	792	885	1,208	1,433	1,316	978	730	506	293	296	185

24 Hour Total: 13,597
 AM Peak Hour begins: 7:15
 PM Peak Hour begins: 16:30

AM Peak Volume: 836
 PM Peak Volume: 1,469
 AM Peak Hour Factor: 0.93
 PM Peak Hour Factor: 0.96

N/A

3-Day Average

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

24 Hour Total: 0
 AM Peak Hour begins: 0:00
 PM Peak Hour begins: 12:00

AM Peak Volume: 0
 PM Peak Volume: 0
 AM Peak Hour Factor: #DIV/0!
 PM Peak Hour Factor: #DIV/0!

Total Volume for All Lanes

3-Day Average

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	21	13	14	9	13	16	71	131	197	153	127	141
30	21	10	11	8	10	36	119	197	186	171	148	160
45	20	15	9	14	16	35	128	218	185	137	152	160
00	17	11	10	12	21	67	130	224	172	163	160	180
Hr Total	78	48	44	43	60	154	448	769	741	623	587	641

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	178	190	182	282	339	364	263	201	129	78	93	45
30	191	208	228	299	363	374	237	210	142	64	76	53
45	178	201	232	312	351	302	251	175	123	55	69	52
00	192	192	242	315	381	276	227	144	112	96	58	35
Hr Total	739	792	885	1,208	1,433	1,316	978	730	506	293	296	185

24 Hour Total: 13,597
 AM Peak Hour begins: 7:15
 PM Peak Hour begins: 16:30

AM Peak Volume: 836
 PM Peak Volume: 1,469
 AM Peak Hour Factor: 0.93
 PM Peak Hour Factor: 0.96

Start Time	1	2	Total
0:00	16		16
0:15	14		14
0:30	15		15
0:45	16		16
1:00	12		12
1:15	6		6
1:30	11		11
1:45	7		7
2:00	10		10
2:15	4		4
2:30	6		6
2:45	13		13
3:00	15		15
3:15	10		10
3:30	10		10
3:45	13		13
4:00	17		17
4:15	9		9
4:30	13		13
4:45	24		24
5:00	25		25
5:15	26		26
5:30	37		37
5:45	65		65
6:00	90		90
6:15	111		111
6:30	138		138
6:45	121		121
7:00	149		149
7:15	190		190
7:30	232		232
7:45	249		249
8:00	191		191
8:15	196		196
8:30	152		152
8:45	193		193
9:00	137		137
9:15	163		163
9:30	128		128
9:45	123		123
10:00	105		105
10:15	109		109
10:30	143		143
10:45	136		136
11:00	123		123
11:15	130		130
11:30	144		144
11:45	144		144
12:00	156		156
12:15	155		155
12:30	150		150
12:45	188		188
13:00	182		182
13:15	182		182
13:30	178		178
13:45	161		161
14:00	176		176
14:15	207		207
14:30	225		225
14:45	247		247
15:00	217		217
15:15	278		278
15:30	283		283
15:45	296		296
16:00	347		347
16:15	342		342
16:30	387		387
16:45	377		377
17:00	376		376
17:15	363		363
17:30	297		297
17:45	299		299
18:00	247		247
18:15	270		270
18:30	231		231
18:45	228		228
19:00	226		226
19:15	250		250
19:30	178		178
19:45	175		175
20:00	132		132
20:15	146		146
20:30	149		149
20:45	117		117
21:00	31		31
21:15	12		12
21:30	1		1
21:45	148		148
22:00	133		133
22:15	77		77
22:30	66		66
22:45	65		65
23:00	46		46
23:15	66		66
23:30	48		48
23:45	34		34

Start Date	September 17, 2019	
End Date	September 18, 2019	
Location	Channelside Dr west of Morgan St	
City	Tampa	
County	Hillsborough	
Lane 1	EB	
Lane 2	N/A	

Start Time	1	2	Total
0:00	32		32
0:15	23		23
0:30	21		21
0:45	16		16
1:00	17		17
1:15	12		12
1:30	17		17
1:45	12		12
2:00	19		19
2:15	13		13
2:30	11		11
2:45	10		10
3:00	11		11
3:15	12		12
3:30	23		23
3:45	5		5
4:00	17		17
4:15	14		14
4:30	19		19
4:45	17		17
5:00	21		21
5:15	34		34
5:30	40		40
5:45	67		67
6:00	75		75
6:15	122		122
6:30	154		154
6:45	117		117
7:00	148		148
7:15	187		187
7:30	208		208
7:45	233		233
8:00	217		217
8:15	194		194
8:30	188		188
8:45	169		169
9:00	135		135
9:15	149		149
9:30	107		107
9:45	163		163
10:00	106		106
10:15	140		140
10:30	116		116
10:45	139		139
11:00	125		125
11:15	133		133
11:30	133		133
11:45	132		132
12:00	134		134
12:15	151		151
12:30	162		162
12:45	156		156
13:00	157		157
13:15	183		183
13:30	207		207
13:45	148		148
14:00	161		161
14:15	195		195
14:30	171		171
14:45	192		192
15:00	244		244
15:15	251		251
15:30	256		256
15:45	258		258
16:00	325		325
16:15	273		273
16:30	323		323
16:45	332		332
17:00	335		335
17:15	335		335
17:30	234		234
17:45	246		246
18:00	186		186
18:15	248		248
18:30	207		207
18:45	199		199
19:00	184		184
19:15	200		200
19:30	145		145
19:45	110		110
20:00	129		129
20:15	119		119
20:30	99		99
20:45	108		108
21:00	89		89
21:15	92		92
21:30	82		82
21:45	70		70
22:00	71		71
22:15	61		61
22:30	63		63
22:45	44		44
23:00	52		52
23:15	32		32
23:30	57		57
23:45	24		24

Start Date	September 18, 2019
End Date	September 19, 2019

Station	
ID	
Location	Channelside Dr west of Morgan St

City	Tampa
County	Hillsborough
Lane 1	EB
Lane 2	N/A

Start Time	1	2	Total
0:00	19		19
0:15	18		18
0:30	23		23
0:45	18		18
1:00	12		12
1:15	9		9
1:30	11		11
1:45	5		5
2:00	12		12
2:15	8		8
2:30	12		12
2:45	9		9
3:00	9		9
3:15	5		5
3:30	11		11
3:45	14		14
4:00	13		13
4:15	9		9
4:30	22		22
4:45	15		15
5:00	23		23
5:15	37		37
5:30	44		44
5:45	72		72
6:00	86		86
6:15	114		114
6:30	150		150
6:45	112		112
7:00	146		146
7:15	194		194
7:30	256		256
7:45	248		248
8:00	203		203
8:15	194		194
8:30	185		185
8:45	174		174
9:00	133		133
9:15	172		172
9:30	134		134
9:45	127		127
10:00	124		124
10:15	125		125
10:30	129		129
10:45	127		127
11:00	115		115
11:15	141		141
11:30	135		135
11:45	163		163
12:00	164		164
12:15	192		192
12:30	181		181
12:45	153		153
13:00	168		168
13:15	189		189
13:30	173		173
13:45	182		182
14:00	158		158
14:15	227		227
14:30	214		214
14:45	251		251
15:00	263		263
15:15	312		312
15:30	307		307
15:45	296		296
16:00	300		300
16:15	296		296
16:30	324		324
16:45	334		334
17:00	364		364
17:15	394		394
17:30	265		265
17:45	262		262
18:00	238		238
18:15	217		217
18:30	182		182
18:45	179		179
19:00	179		179
19:15	194		194
19:30	151		151
19:45	147		147
20:00	123		123
20:15	133		133
20:30	135		135
20:45	87		87
21:00	106		106
21:15	75		75
21:30	104		104
21:45	74		74
22:00	67		67
22:15	77		77
22:30	71		71
22:45	60		60
23:00	57		57
23:15	49		49
23:30	56		56
23:45	34		34

Start Date	September 19, 2019
End Date	September 20, 2019

Station	
ID	
Location	Channelside Dr west of Morgan St

City	Tampa
County	Hillsborough
Lane 1	EB
Lane 2	N/A

Volume Count Report

Start Date: September 17, 2019
 Stop Date: September 17, 2019
 City: Tampa
 Location: Channelside Dr west of Morgan St

Start Time: 00:00
 Stop Time: 24:00
 County: Hillsborough

Eastbound Volume

Tuesday, September 17, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	16	12	10	15	17	25	90	149	191	137	105	123
30	14	6	4	10	9	26	111	190	196	163	109	130
45	15	11	6	10	13	37	138	232	152	128	143	144
00	16	7	13	13	24	65	121	249	193	123	136	144
Hr Total	61	36	33	48	63	153	460	820	732	551	493	541

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	156	182	176	217	347	376	247	226	132	31	133	46
30	155	182	207	278	342	363	270	250	146	12	77	66
45	150	178	225	283	387	297	231	178	149	1	66	48
00	188	161	247	296	377	299	228	175	117	148	65	34
Hr Total	649	703	855	1,074	1,453	1,335	976	829	544	192	341	194

24 Hour Total: 13,136
 AM Peak Hour begins: 7:30 AM Peak Volume: 868 AM Peak Hour Factor: 0.87
 PM Peak Hour begins: 16:30 PM Peak Volume: 1,503 PM Peak Hour Factor: 0.97

N/A

Tuesday, September 17, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

24 Hour Total: 0
 AM Peak Hour begins: 0:00 AM Peak Volume: 0 AM Peak Hour Factor: #DIV/0!
 PM Peak Hour begins: 12:00 PM Peak Volume: 0 PM Peak Hour Factor: #DIV/0!

Total Volume for All Lanes

Tuesday, September 17, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	16	12	10	15	17	25	90	149	191	137	105	123
30	14	6	4	10	9	26	111	190	196	163	109	130
45	15	11	6	10	13	37	138	232	152	128	143	144
00	16	7	13	13	24	65	121	249	193	123	136	144
Hr Total	61	36	33	48	63	153	460	820	732	551	493	541

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	156	182	176	217	347	376	247	226	132	31	133	46
30	155	182	207	278	342	363	270	250	146	12	77	66
45	150	178	225	283	387	297	231	178	149	1	66	48
00	188	161	247	296	377	299	228	175	117	148	65	34
Hr Total	649	703	855	1,074	1,453	1,335	976	829	544	192	341	194

24 Hour Total: 13,136
 AM Peak Hour begins: 7:30 AM Peak Volume: 868 AM Peak Hour Factor: 0.87
 PM Peak Hour begins: 16:30 PM Peak Volume: 1,503 PM Peak Hour Factor: 0.97

Volume Count Report

Start Date: September 18, 2019
 Stop Date: September 18, 2019
 City: Tampa
 Location: Channelside Dr west of Morgan St

Start Time: 00:00
 Stop Time: 24:00
 County: Hillsborough

Eastbound Volume

Wednesday, September 18, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	32	17	19	11	17	21	75	148	217	135	106	125
30	23	12	13	12	14	34	122	187	194	149	140	133
45	21	17	11	23	19	40	154	208	188	107	116	133
00	16	12	10	5	17	67	117	233	169	163	139	132
Hr Total	92	58	53	51	67	162	468	776	768	554	501	523

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	134	157	161	244	325	335	186	184	129	89	71	52
30	151	183	195	251	273	335	248	200	119	92	61	32
45	162	207	171	256	323	234	207	145	99	82	63	57
00	156	148	192	258	332	246	199	110	108	70	44	24
Hr Total	603	695	719	1,009	1,253	1,150	840	639	455	333	239	165

24 Hour Total: 12,173
 AM Peak Hour begins: 7:30 AM Peak Volume: 852 AM Peak Hour Factor: 0.91
 PM Peak Hour begins: 16:30 PM Peak Volume: 1,325 PM Peak Hour Factor: 0.99

N/A

Wednesday, September 18, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

24 Hour Total: 0
 AM Peak Hour begins: 0:00 AM Peak Volume: 0 AM Peak Hour Factor: #DIV/0!
 PM Peak Hour begins: 12:00 PM Peak Volume: 0 PM Peak Hour Factor: #DIV/0!

Total Volume for All Lanes

Wednesday, September 18, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	32	17	19	11	17	21	75	148	217	135	106	125
30	23	12	13	12	14	34	122	187	194	149	140	133
45	21	17	11	23	19	40	154	208	188	107	116	133
00	16	12	10	5	17	67	117	233	169	163	139	132
Hr Total	92	58	53	51	67	162	468	776	768	554	501	523

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	134	157	161	244	325	335	186	184	129	89	71	52
30	151	183	195	251	273	335	248	200	119	92	61	32
45	162	207	171	256	323	234	207	145	99	82	63	57
00	156	148	192	258	332	246	199	110	108	70	44	24
Hr Total	603	695	719	1,009	1,253	1,150	840	639	455	333	239	165

24 Hour Total: 12,173
 AM Peak Hour begins: 7:30 AM Peak Volume: 852 AM Peak Hour Factor: 0.91
 PM Peak Hour begins: 16:30 PM Peak Volume: 1,325 PM Peak Hour Factor: 0.99

Volume Count Report

Start Date: September 19, 2019
 Stop Date: September 19, 2019
 City: Tampa
 Location: Channelside Dr west of Morgan St

Start Time: 00:00
 Stop Time: 24:00
 County: Hillsborough

Eastbound Volume

Thursday, September 19, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	19	12	12	9	13	23	86	146	203	133	124	115
30	18	9	8	5	9	37	114	194	194	172	125	141
45	23	11	12	11	22	44	150	256	185	134	129	135
00	18	5	9	14	15	72	112	248	174	127	127	163
Hr Total	78	37	41	39	59	176	462	844	756	566	505	554

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	164	168	158	263	300	364	238	179	123	106	67	57
30	192	189	227	312	296	394	217	194	133	75	77	49
45	181	173	214	307	324	265	182	151	135	104	71	56
00	153	182	251	296	334	262	179	147	87	74	60	34
Hr Total	690	712	850	1,178	1,254	1,285	816	671	478	359	275	196

24 Hour Total: 12,881
 AM Peak Hour begins: 7:15 AM Peak Volume: 901 AM Peak Hour Factor: 0.88
 PM Peak Hour begins: 16:30 PM Peak Volume: 1,416 PM Peak Hour Factor: 0.90

N/A

Thursday, September 19, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

24 Hour Total: 0
 AM Peak Hour begins: 0:00 AM Peak Volume: 0 AM Peak Hour Factor: #DIV/0!
 PM Peak Hour begins: 12:00 PM Peak Volume: 0 PM Peak Hour Factor: #DIV/0!

Total Volume for All Lanes

Thursday, September 19, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	19	12	12	9	13	23	86	146	203	133	124	115
30	18	9	8	5	9	37	114	194	194	172	125	141
45	23	11	12	11	22	44	150	256	185	134	129	135
00	18	5	9	14	15	72	112	248	174	127	127	163
Hr Total	78	37	41	39	59	176	462	844	756	566	505	554

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	164	168	158	263	300	364	238	179	123	106	67	57
30	192	189	227	312	296	394	217	194	133	75	77	49
45	181	173	214	307	324	265	182	151	135	104	71	56
00	153	182	251	296	334	262	179	147	87	74	60	34
Hr Total	690	712	850	1,178	1,254	1,285	816	671	478	359	275	196

24 Hour Total: 12,881
 AM Peak Hour begins: 7:15 AM Peak Volume: 901 AM Peak Hour Factor: 0.88
 PM Peak Hour begins: 16:30 PM Peak Volume: 1,416 PM Peak Hour Factor: 0.90

Volume Count Report

3-Day Average

Start Date: September 17, 2019
 Stop Date: September 19, 2019
 City: Tampa
 Location: Channelside Dr west of Morgan St

Start Time: 00:00
 Stop Time: 24:00
 County: Hillsborough

Eastbound Volume

3-Day Average

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	22	14	14	12	16	23	84	148	204	135	112	121
30	18	9	8	9	11	32	116	190	195	161	125	135
45	20	13	10	15	18	40	147	232	175	123	129	137
00	17	8	11	11	19	68	117	243	179	138	134	146
Hr Total	77	44	42	46	63	164	463	813	752	557	500	539

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	151	169	165	241	324	358	224	196	128	75	90	52
30	166	185	210	280	304	364	245	215	133	60	72	49
45	164	186	203	282	345	265	207	158	128	62	67	54
00	166	164	230	283	348	269	202	144	104	97	56	31
Hr Total	647	703	808	1,087	1,320	1,257	877	713	492	295	285	185

24 Hour Total: 12,730
 AM Peak Hour begins: 7:30
 PM Peak Hour begins: 16:30

AM Peak Volume: 874
 PM Peak Volume: 1,415
 AM Peak Hour Factor: 0.90
 PM Peak Hour Factor: 0.97

N/A

3-Day Average

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

24 Hour Total: 0
 AM Peak Hour begins: 0:00
 PM Peak Hour begins: 12:00

AM Peak Volume: 0
 PM Peak Volume: 0
 AM Peak Hour Factor: #DIV/0!
 PM Peak Hour Factor: #DIV/0!

Total Volume for All Lanes

3-Day Average

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	22	14	14	12	16	23	84	148	204	135	112	121
30	18	9	8	9	11	32	116	190	195	161	125	135
45	20	13	10	15	18	40	147	232	175	123	129	137
00	17	8	11	11	19	68	117	243	179	138	134	146
Hr Total	77	44	42	46	63	164	463	813	752	557	500	539

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	151	169	165	241	324	358	224	196	128	75	90	52
30	166	185	210	280	304	364	245	215	133	60	72	49
45	164	186	203	282	345	265	207	158	128	62	67	54
00	166	164	230	283	348	269	202	144	104	97	56	31
Hr Total	647	703	808	1,087	1,320	1,257	877	713	492	295	285	185

24 Hour Total: 12,730
 AM Peak Hour begins: 7:30
 PM Peak Hour begins: 16:30

AM Peak Volume: 874
 PM Peak Volume: 1,415
 AM Peak Hour Factor: 0.90
 PM Peak Hour Factor: 0.97

Start Time	1	2	Total
0:00	31		31
0:15	24		24
0:30	18		18
0:45	21		21
1:00	16		16
1:15	12		12
1:30	14		14
1:45	6		6
2:00	10		10
2:15	4		4
2:30	10		10
2:45	13		13
3:00	6		6
3:15	5		5
3:30	7		7
3:45	2		2
4:00	5		5
4:15	7		7
4:30	9		9
4:45	17		17
5:00	18		18
5:15	27		27
5:30	35		35
5:45	36		36
6:00	61		61
6:15	61		61
6:30	98		98
6:45	118		118
7:00	148		148
7:15	173		173
7:30	217		217
7:45	238		238
8:00	223		223
8:15	203		203
8:30	205		205
8:45	195		195
9:00	157		157
9:15	124		124
9:30	151		151
9:45	126		126
10:00	127		127
10:15	122		122
10:30	129		129
10:45	136		136
11:00	131		131
11:15	127		127
11:30	165		165
11:45	151		151
12:00	168		168
12:15	149		149
12:30	161		161
12:45	159		159
13:00	156		156
13:15	163		163
13:30	160		160
13:45	158		158
14:00	167		167
14:15	175		175
14:30	177		177
14:45	211		211
15:00	220		220
15:15	250		250
15:30	248		248
15:45	222		222
16:00	246		246
16:15	265		265
16:30	248		248
16:45	245		245
17:00	280		280
17:15	219		219
17:30	226		226
17:45	177		177
18:00	179		179
18:15	176		176
18:30	172		172
18:45	136		136
19:00	151		151
19:15	130		130
19:30	147		147
19:45	115		115
20:00	155		155
20:15	107		107
20:30	133		133
20:45	150		150
21:00	181		181
21:15	280		280
21:30	356		356
21:45	143		143
22:00	119		119
22:15	74		74
22:30	74		74
22:45	66		66
23:00	54		54
23:15	54		54
23:30	56		56
23:45	26		26

Start Date	September 17, 2019	
End Date	September 18, 2019	
Location	Florida Ave north of Channelside Dr	
City	Tampa	
County	Hillsborough	
Lane 1	NB	
Lane 2	N/A	

Start Time	1	2	Total
0:00	32		32
0:15	18		18
0:30	18		18
0:45	15		15
1:00	16		16
1:15	12		12
1:30	12		12
1:45	8		8
2:00	13		13
2:15	12		12
2:30	2		2
2:45	7		7
3:00	6		6
3:15	3		3
3:30	5		5
3:45	5		5
4:00	8		8
4:15	7		7
4:30	12		12
4:45	19		19
5:00	23		23
5:15	34		34
5:30	39		39
5:45	44		44
6:00	74		74
6:15	68		68
6:30	84		84
6:45	136		136
7:00	147		147
7:15	191		191
7:30	205		205
7:45	214		214
8:00	233		233
8:15	222		222
8:30	212		212
8:45	197		197
9:00	163		163
9:15	136		136
9:30	154		154
9:45	134		134
10:00	135		135
10:15	133		133
10:30	136		136
10:45	140		140
11:00	105		105
11:15	148		148
11:30	162		162
11:45	154		154
12:00	190		190
12:15	154		154
12:30	172		172
12:45	162		162
13:00	171		171
13:15	152		152
13:30	166		166
13:45	144		144
14:00	165		165
14:15	156		156
14:30	174		174
14:45	168		168
15:00	209		209
15:15	210		210
15:30	193		193
15:45	202		202
16:00	222		222
16:15	216		216
16:30	237		237
16:45	231		231
17:00	260		260
17:15	200		200
17:30	233		233
17:45	148		148
18:00	169		169
18:15	172		172
18:30	154		154
18:45	119		119
19:00	161		161
19:15	113		113
19:30	124		124
19:45	97		97
20:00	88		88
20:15	91		91
20:30	85		85
20:45	81		81
21:00	62		62
21:15	67		67
21:30	59		59
21:45	65		65
22:00	52		52
22:15	56		56
22:30	38		38
22:45	39		39
23:00	44		44
23:15	33		33
23:30	45		45
23:45	40		40

Start Date	September 18, 2019
End Date	September 19, 2019

Station	
ID	
Location	Florida Ave north of Channelside Dr

City	Tampa
County	Hillsborough
Lane 1	NB
Lane 2	N/A

Start Time	1	2	Total
0:00	22		22
0:15	21		21
0:30	15		15
0:45	22		22
1:00	18		18
1:15	6		6
1:30	17		17
1:45	9		9
2:00	7		7
2:15	7		7
2:30	10		10
2:45	5		5
3:00	4		4
3:15	4		4
3:30	0		0
3:45	4		4
4:00	6		6
4:15	10		10
4:30	14		14
4:45	8		8
5:00	21		21
5:15	34		34
5:30	31		31
5:45	39		39
6:00	51		51
6:15	69		69
6:30	76		76
6:45	116		116
7:00	153		153
7:15	182		182
7:30	212		212
7:45	186		186
8:00	238		238
8:15	183		183
8:30	199		199
8:45	195		195
9:00	173		173
9:15	143		143
9:30	110		110
9:45	129		129
10:00	122		122
10:15	113		113
10:30	139		139
10:45	116		116
11:00	141		141
11:15	119		119
11:30	132		132
11:45	154		154
12:00	159		159
12:15	174		174
12:30	180		180
12:45	182		182
13:00	163		163
13:15	141		141
13:30	151		151
13:45	157		157
14:00	183		183
14:15	155		155
14:30	189		189
14:45	169		169
15:00	208		208
15:15	200		200
15:30	221		221
15:45	232		232
16:00	241		241
16:15	225		225
16:30	244		244
16:45	210		210
17:00	239		239
17:15	259		259
17:30	233		233
17:45	194		194
18:00	185		185
18:15	161		161
18:30	159		159
18:45	148		148
19:00	135		135
19:15	134		134
19:30	126		126
19:45	128		128
20:00	111		111
20:15	103		103
20:30	105		105
20:45	108		108
21:00	86		86
21:15	74		74
21:30	94		94
21:45	57		57
22:00	84		84
22:15	61		61
22:30	72		72
22:45	42		42
23:00	55		55
23:15	40		40
23:30	56		56
23:45	32		32

Start Date	September 19, 2019
End Date	September 20, 2019

Station	
ID	
Location	Florida Ave north of Channelside Dr

City	Tampa
County	Hillsborough
Lane 1	NB
Lane 2	N/A

Volume Count Report

Start Date: September 17, 2019
 Stop Date: September 17, 2019
 City: Tampa
 Location: Florida Ave north of Channelside Dr

Start Time: 00:00
 Stop Time: 24:00
 County: Hillsborough

Northbound Volume

Tuesday, September 17, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	31	16	10	6	5	18	61	148	223	157	127	131
30	24	12	4	5	7	27	61	173	203	124	122	127
45	18	14	10	7	9	35	98	217	205	151	129	165
00	21	6	13	2	17	36	118	238	195	126	136	151
Hr Total	94	48	37	20	38	116	338	776	826	558	514	574

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	168	156	167	220	246	280	179	151	155	181	119	54
30	149	163	175	250	265	219	176	130	107	280	74	54
45	161	160	177	248	248	226	172	147	133	356	74	56
00	159	158	211	222	245	177	136	115	150	143	66	26
Hr Total	637	637	730	940	1,004	902	663	543	545	960	333	190

24 Hour Total: 12,023
 AM Peak Hour begins: 7:30 AM Peak Volume: 881 AM Peak Hour Factor: 0.93
 PM Peak Hour begins: 16:15 PM Peak Volume: 1,038 PM Peak Hour Factor: 0.93

N/A

Tuesday, September 17, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

24 Hour Total: 0
 AM Peak Hour begins: 0:00 AM Peak Volume: 0 AM Peak Hour Factor: #DIV/0!
 PM Peak Hour begins: 12:00 PM Peak Volume: 0 PM Peak Hour Factor: #DIV/0!

Total Volume for All Lanes

Tuesday, September 17, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	31	16	10	6	5	18	61	148	223	157	127	131
30	24	12	4	5	7	27	61	173	203	124	122	127
45	18	14	10	7	9	35	98	217	205	151	129	165
00	21	6	13	2	17	36	118	238	195	126	136	151
Hr Total	94	48	37	20	38	116	338	776	826	558	514	574

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	168	156	167	220	246	280	179	151	155	181	119	54
30	149	163	175	250	265	219	176	130	107	280	74	54
45	161	160	177	248	248	226	172	147	133	356	74	56
00	159	158	211	222	245	177	136	115	150	143	66	26
Hr Total	637	637	730	940	1,004	902	663	543	545	960	333	190

24 Hour Total: 12,023
 AM Peak Hour begins: 7:30 AM Peak Volume: 881 AM Peak Hour Factor: 0.93
 PM Peak Hour begins: 16:15 PM Peak Volume: 1,038 PM Peak Hour Factor: 0.93

Volume Count Report

Start Date: September 18, 2019
 Stop Date: September 18, 2019
 City: Tampa
 Location: Florida Ave north of Channelside Dr

Start Time: 00:00
 Stop Time: 24:00
 County: Hillsborough

Northbound Volume

Wednesday, September 18, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	32	16	13	6	8	23	74	147	233	163	135	105
30	18	12	12	3	7	34	68	191	222	136	133	148
45	18	12	2	5	12	39	84	205	212	154	136	162
00	15	8	7	5	19	44	136	214	197	134	140	154
Hr Total	83	48	34	19	46	140	362	757	864	587	544	569

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	190	171	165	209	222	260	169	161	88	62	52	44
30	154	152	156	210	216	200	172	113	91	67	56	33
45	172	166	174	193	237	233	154	124	85	59	38	45
00	162	144	168	202	231	148	119	97	81	65	39	40
Hr Total	678	633	663	814	906	841	614	495	345	253	185	162

24 Hour Total: 10,642
 AM Peak Hour begins: 7:45 AM Peak Volume: 881 AM Peak Hour Factor: 0.95
 PM Peak Hour begins: 16:15 PM Peak Volume: 944 PM Peak Hour Factor: 0.91

N/A

Wednesday, September 18, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

24 Hour Total: 0
 AM Peak Hour begins: 0:00 AM Peak Volume: 0 AM Peak Hour Factor: #DIV/0!
 PM Peak Hour begins: 12:00 PM Peak Volume: 0 PM Peak Hour Factor: #DIV/0!

Total Volume for All Lanes

Wednesday, September 18, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	32	16	13	6	8	23	74	147	233	163	135	105
30	18	12	12	3	7	34	68	191	222	136	133	148
45	18	12	2	5	12	39	84	205	212	154	136	162
00	15	8	7	5	19	44	136	214	197	134	140	154
Hr Total	83	48	34	19	46	140	362	757	864	587	544	569

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	190	171	165	209	222	260	169	161	88	62	52	44
30	154	152	156	210	216	200	172	113	91	67	56	33
45	172	166	174	193	237	233	154	124	85	59	38	45
00	162	144	168	202	231	148	119	97	81	65	39	40
Hr Total	678	633	663	814	906	841	614	495	345	253	185	162

24 Hour Total: 10,642
 AM Peak Hour begins: 7:45 AM Peak Volume: 881 AM Peak Hour Factor: 0.95
 PM Peak Hour begins: 16:15 PM Peak Volume: 944 PM Peak Hour Factor: 0.91

Volume Count Report

Start Date: September 19, 2019
 Stop Date: September 19, 2019
 City: Tampa
 Location: Florida Ave north of Channelside Dr

Start Time: 00:00
 Stop Time: 24:00
 County: Hillsborough

Northbound Volume

Thursday, September 19, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	22	18	7	4	6	21	51	153	238	173	122	141
30	21	6	7	4	10	34	69	182	183	143	113	119
45	15	17	10	0	14	31	76	212	199	110	139	132
00	22	9	5	4	8	39	116	186	195	129	116	154
Hr Total	80	50	29	12	38	125	312	733	815	555	490	546

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	159	163	183	208	241	239	185	135	111	86	84	55
30	174	141	155	200	225	259	161	134	103	74	61	40
45	180	151	189	221	244	233	159	126	105	94	72	56
00	182	157	169	232	210	194	148	128	108	57	42	32
Hr Total	695	612	696	861	920	925	653	523	427	311	259	183

24 Hour Total: 10,850
 AM Peak Hour begins: 7:30 AM Peak Volume: 819 AM Peak Hour Factor: 0.86
 PM Peak Hour begins: 16:30 PM Peak Volume: 952 PM Peak Hour Factor: 0.92

N/A

Thursday, September 19, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

24 Hour Total: 0
 AM Peak Hour begins: 0:00 AM Peak Volume: 0 AM Peak Hour Factor: #DIV/0!
 PM Peak Hour begins: 12:00 PM Peak Volume: 0 PM Peak Hour Factor: #DIV/0!

Total Volume for All Lanes

Thursday, September 19, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	22	18	7	4	6	21	51	153	238	173	122	141
30	21	6	7	4	10	34	69	182	183	143	113	119
45	15	17	10	0	14	31	76	212	199	110	139	132
00	22	9	5	4	8	39	116	186	195	129	116	154
Hr Total	80	50	29	12	38	125	312	733	815	555	490	546

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	159	163	183	208	241	239	185	135	111	86	84	55
30	174	141	155	200	225	259	161	134	103	74	61	40
45	180	151	189	221	244	233	159	126	105	94	72	56
00	182	157	169	232	210	194	148	128	108	57	42	32
Hr Total	695	612	696	861	920	925	653	523	427	311	259	183

24 Hour Total: 10,850
 AM Peak Hour begins: 7:30 AM Peak Volume: 819 AM Peak Hour Factor: 0.86
 PM Peak Hour begins: 16:30 PM Peak Volume: 952 PM Peak Hour Factor: 0.92

Volume Count Report 3-Day Average

Start Date: September 17, 2019
 Stop Date: September 19, 2019
 City: Tampa
 Location: Florida Ave north of Channelside Dr

Start Time: 00:00
 Stop Time: 24:00
 County: Hillsborough

Northbound Volume

3-Day Average

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	28	17	10	5	6	21	62	149	231	164	128	126
30	21	10	8	4	8	32	66	182	203	134	123	131
45	17	14	7	4	12	35	86	211	205	138	135	153
00	19	8	8	4	15	40	123	213	196	130	131	153
Hr Total	86	49	33	17	41	127	337	755	835	567	516	563

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	172	163	172	212	236	260	178	149	118	110	85	51
30	159	152	162	220	235	226	170	126	100	140	64	42
45	171	159	180	221	243	231	162	132	108	170	61	52
00	168	153	183	219	229	173	134	113	113	88	49	33
Hr Total	670	627	696	872	943	889	643	520	439	508	259	178

24 Hour Total: 11,172

AM Peak Hour begins: 7:30

AM Peak Volume: 858

AM Peak Hour Factor: 0.93

PM Peak Hour begins: 16:15

PM Peak Volume: 967

PM Peak Hour Factor: 0.93

N/A

3-Day Average

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

24 Hour Total: 0

AM Peak Hour begins: 0:00

AM Peak Volume: 0

AM Peak Hour Factor: #DIV/0!

PM Peak Hour begins: 12:00

PM Peak Volume: 0

PM Peak Hour Factor: #DIV/0!

Total Volume for All Lanes

3-Day Average

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	28	17	10	5	6	21	62	149	231	164	128	126
30	21	10	8	4	8	32	66	182	203	134	123	131
45	17	14	7	4	12	35	86	211	205	138	135	153
00	19	8	8	4	15	40	123	213	196	130	131	153
Hr Total	86	49	33	17	41	127	337	755	835	567	516	563

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	172	163	172	212	236	260	178	149	118	110	85	51
30	159	152	162	220	235	226	170	126	100	140	64	42
45	171	159	180	221	243	231	162	132	108	170	61	52
00	168	153	183	219	229	173	134	113	113	88	49	33
Hr Total	670	627	696	872	943	889	643	520	439	508	259	178

24 Hour Total: 11,172

AM Peak Hour begins: 7:30

AM Peak Volume: 858

AM Peak Hour Factor: 0.93

PM Peak Hour begins: 16:15

PM Peak Volume: 967

PM Peak Hour Factor: 0.93

Start Time	1	2	Total
0:00	7	1	8
0:15	3	1	4
0:30	3	0	3
0:45	6	4	10
1:00	3	6	9
1:15	1	1	2
1:30	2	0	2
1:45	3	0	3
2:00	1	1	2
2:15	2	1	3
2:30	2	2	4
2:45	2	1	3
3:00	2	1	3
3:15	2	0	2
3:30	2	0	2
3:45	1	4	5
4:00	1	2	3
4:15	3	0	3
4:30	5	4	9
4:45	1	2	3
5:00	9	7	16
5:15	11	5	16
5:30	8	7	15
5:45	12	7	19
6:00	9	13	22
6:15	8	9	17
6:30	13	11	24
6:45	21	19	40
7:00	19	20	39
7:15	19	19	38
7:30	15	21	36
7:45	34	20	54
8:00	25	29	54
8:15	17	26	43
8:30	17	26	43
8:45	17	26	43
9:00	15	17	32
9:15	24	8	32
9:30	29	16	45
9:45	25	22	47
10:00	30	23	53
10:15	26	23	49
10:30	28	14	42
10:45	31	26	57
11:00	18	10	28
11:15	18	7	25
11:30	25	12	37
11:45	27	11	38
12:00	26	20	46
12:15	37	18	55
12:30	31	16	47
12:45	37	13	50
13:00	19	15	34
13:15	21	21	42
13:30	18	10	28
13:45	25	18	43
14:00	23	11	34
14:15	26	16	42
14:30	30	28	58
14:45	36	32	68
15:00	29	15	44
15:15	57	20	77
15:30	38	16	54
15:45	28	38	66
16:00	46	22	68
16:15	52	32	84
16:30	49	25	74
16:45	47	34	81
17:00	63	30	93
17:15	59	37	96
17:30	39	39	78
17:45	41	44	85
18:00	38	36	74
18:15	39	47	86
18:30	67	63	130
18:45	37	65	102
19:00	28	51	79
19:15	19	33	52
19:30	32	18	50
19:45	40	8	48
20:00	33	19	52
20:15	29	3	32
20:30	50	10	60
20:45	70	19	89
21:00	52	20	72
21:15	113	21	134
21:30	164	44	208
21:45	93	11	104
22:00	54	7	61
22:15	23	7	30
22:30	21	4	25
22:45	18	7	25
23:00	14	6	20
23:15	11	4	15
23:30	14	5	19
23:45	2	1	3

Start Date	September 17, 2019	
End Date	September 18, 2019	
Location	Florida Ave south of Channelside Dr	
City	Tampa	
County	Hillsborough	
Lane 1	NB	
Lane 2	SB	

Start Time	1	2	Total
0:00	8	3	11
0:15	3	2	5
0:30	1	1	2
0:45	3	1	4
1:00	3	2	5
1:15	3	1	4
1:30	1	1	2
1:45	1	0	1
2:00	8	0	8
2:15	0	0	0
2:30	0	0	0
2:45	0	1	1
3:00	2	2	4
3:15	2	0	2
3:30	1	1	2
3:45	2	0	2
4:00	3	1	4
4:15	1	2	3
4:30	2	4	6
4:45	9	4	13
5:00	6	8	14
5:15	10	7	17
5:30	13	18	31
5:45	6	8	14
6:00	15	14	29
6:15	13	12	25
6:30	10	13	23
6:45	19	22	41
7:00	30	23	53
7:15	23	16	39
7:30	18	15	33
7:45	14	20	34
8:00	28	23	51
8:15	22	37	59
8:30	20	37	57
8:45	16	15	31
9:00	24	27	51
9:15	23	12	35
9:30	26	19	45
9:45	23	16	39
10:00	34	16	50
10:15	25	12	37
10:30	21	18	39
10:45	30	12	42
11:00	22	17	39
11:15	24	18	42
11:30	15	13	28
11:45	14	14	28
12:00	34	20	54
12:15	28	12	40
12:30	18	17	35
12:45	20	27	47
13:00	19	20	39
13:15	28	18	46
13:30	17	14	31
13:45	31	17	48
14:00	17	14	31
14:15	19	17	36
14:30	18	16	34
14:45	30	17	47
15:00	22	11	33
15:15	24	19	43
15:30	27	13	40
15:45	20	11	31
16:00	40	15	55
16:15	32	16	48
16:30	28	10	38
16:45	25	16	41
17:00	33	12	45
17:15	39	9	48
17:30	37	11	48
17:45	22	8	30
18:00	25	10	35
18:15	23	7	30
18:30	32	7	39
18:45	19	3	22
19:00	19	15	34
19:15	14	9	23
19:30	12	3	15
19:45	9	6	15
20:00	11	2	13
20:15	15	7	22
20:30	11	8	19
20:45	14	7	21
21:00	11	7	18
21:15	16	10	26
21:30	10	14	24
21:45	14	7	21
22:00	7	11	18
22:15	11	8	19
22:30	5	3	8
22:45	7	7	14
23:00	7	2	9
23:15	7	6	13
23:30	4	4	8
23:45	9	2	11

Start Date	September 18, 2019
End Date	September 19, 2019

Station	
ID	
Location	Florida Ave south of Channelside Dr

City	Tampa
County	Hillsborough
Lane 1	NB
Lane 2	SB

Start Time	1	2	Total
0:00	1	3	4
0:15	6	7	13
0:30	1	1	2
0:45	5	1	6
1:00	2	2	4
1:15	0	0	0
1:30	3	1	4
1:45	3	0	3
2:00	1	1	2
2:15	2	0	2
2:30	1	4	5
2:45	6	0	6
3:00	1	0	1
3:15	2	1	3
3:30	1	5	6
3:45	1	0	1
4:00	2	2	4
4:15	0	1	1
4:30	3	5	8
4:45	2	3	5
5:00	5	5	10
5:15	6	6	12
5:30	7	11	18
5:45	7	10	17
6:00	11	11	22
6:15	10	10	20
6:30	8	12	20
6:45	10	15	25
7:00	15	23	38
7:15	24	25	49
7:30	21	40	61
7:45	19	33	52
8:00	20	56	76
8:15	12	32	44
8:30	20	25	45
8:45	18	36	54
9:00	17	24	41
9:15	17	23	40
9:30	15	18	33
9:45	21	8	29
10:00	16	23	39
10:15	16	11	27
10:30	19	18	37
10:45	18	10	28
11:00	25	18	43
11:15	26	10	36
11:30	28	24	52
11:45	27	8	35
12:00	29	12	41
12:15	34	13	47
12:30	41	11	52
12:45	27	12	39
13:00	20	17	37
13:15	18	11	29
13:30	12	8	20
13:45	20	21	41
14:00	13	20	33
14:15	24	6	30
14:30	20	16	36
14:45	20	19	39
15:00	22	9	31
15:15	24	15	39
15:30	32	6	38
15:45	25	11	36
16:00	44	9	53
16:15	29	9	38
16:30	31	10	41
16:45	20	4	24
17:00	43	3	46
17:15	47	12	59
17:30	26	12	38
17:45	21	13	34
18:00	28	15	43
18:15	30	7	37
18:30	19	8	27
18:45	26	8	34
19:00	19	9	28
19:15	20	9	29
19:30	10	12	22
19:45	16	5	21
20:00	17	12	29
20:15	16	6	22
20:30	14	9	23
20:45	21	4	25
21:00	16	7	23
21:15	14	4	18
21:30	17	7	24
21:45	12	7	19
22:00	26	6	32
22:15	11	2	13
22:30	13	5	18
22:45	7	7	14
23:00	20	5	25
23:15	6	1	7
23:30	10	1	11
23:45	7	2	9

Start Date	September 19, 2019
End Date	September 20, 2019

Station	
ID	
Location	Florida Ave south of Channelside Dr

City	Tampa
County	Hillsborough
Lane 1	NB
Lane 2	SB

Volume Count Report

Start Date: September 17, 2019
 Stop Date: September 17, 2019
 City: Tampa
 Location: Florida Ave south of Channelside Dr

Start Time: 00:00
 Stop Time: 24:00
 County: Hillsborough

Northbound Volume

Tuesday, September 17, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	7	3	1	2	1	9	9	19	25	15	30	18
30	3	1	2	2	3	11	8	19	17	24	26	18
45	3	2	2	2	5	8	13	15	17	29	28	25
00	6	3	2	1	1	12	21	34	17	25	31	27
Hr Total	19	9	7	7	10	40	51	87	76	93	115	88

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	26	19	23	29	46	63	38	28	33	52	54	14
30	37	21	26	57	52	59	39	19	29	113	23	11
45	31	18	30	38	49	39	67	32	50	164	21	14
00	37	25	36	28	47	41	37	40	70	93	18	2
Hr Total	131	83	115	152	194	202	181	119	182	422	116	41

24 Hour Total: 2,540
 AM Peak Hour begins: 10:00 AM Peak Volume: 115 AM Peak Hour Factor: 0.93
 PM Peak Hour begins: 21:15 PM Peak Volume: 424 PM Peak Hour Factor: 0.65

Southbound Volume

Tuesday, September 17, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	1	6	1	1	2	7	13	20	29	17	23	10
30	1	1	1	0	0	5	9	19	26	8	23	7
45	0	0	2	0	4	7	11	21	26	16	14	12
00	4	0	1	4	2	7	19	20	26	22	26	11
Hr Total	6	7	5	5	8	26	52	80	107	63	86	40

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	20	15	11	15	22	30	36	51	19	20	7	6
30	18	21	16	20	32	37	47	33	3	21	7	4
45	16	10	28	16	25	39	63	18	10	44	4	5
00	13	18	32	38	34	44	65	8	19	11	7	1
Hr Total	67	64	87	89	113	150	211	110	51	96	25	16

24 Hour Total: 1,564
 AM Peak Hour begins: 8:00 AM Peak Volume: 107 AM Peak Hour Factor: 0.92
 PM Peak Hour begins: 18:15 PM Peak Volume: 226 PM Peak Hour Factor: 0.87

Total Volume for All Lanes

Tuesday, September 17, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	8	9	2	3	3	16	22	39	54	32	53	28
30	4	2	3	2	3	16	17	38	43	32	49	25
45	3	2	4	2	9	15	24	36	43	45	42	37
00	10	3	3	5	3	19	40	54	43	47	57	38
Hr Total	25	16	12	12	18	66	103	167	183	156	201	128

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	46	34	34	44	68	93	74	79	52	72	61	20
30	55	42	42	77	84	96	86	52	32	134	30	15
45	47	28	58	54	74	78	130	50	60	208	25	19
00	50	43	68	66	81	85	102	48	89	104	25	3
Hr Total	198	147	202	241	307	352	392	229	233	518	141	57

24 Hour Total: 4,104
 AM Peak Hour begins: 10:00 AM Peak Volume: 201 AM Peak Hour Factor: 0.88
 PM Peak Hour begins: 21:00 PM Peak Volume: 518 PM Peak Hour Factor: 0.62

Volume Count Report

Start Date: September 18, 2019
 Stop Date: September 18, 2019
 City: Tampa
 Location: Florida Ave south of Channelside Dr

Start Time: 00:00
 Stop Time: 24:00
 County: Hillsborough

Northbound Volume

Wednesday, September 18, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	8	3	8	2	3	6	15	30	28	24	34	22
30	3	3	0	2	1	10	13	23	22	23	25	24
45	1	1	0	1	2	13	10	18	20	26	21	15
00	3	1	0	2	9	6	19	14	16	23	30	14
Hr Total	15	8	8	7	15	35	57	85	86	96	110	75

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	34	19	17	22	40	33	25	19	11	11	7	7
30	28	28	19	24	32	39	23	14	15	16	11	7
45	18	17	18	27	28	37	32	12	11	10	5	4
00	20	31	30	20	25	22	19	9	14	14	7	9
Hr Total	100	95	84	93	125	131	99	54	51	51	30	27

24 Hour Total: 1,537
 AM Peak Hour begins: 10:00 AM Peak Volume: 110 AM Peak Hour Factor: 0.81
 PM Peak Hour begins: 16:45 PM Peak Volume: 134 PM Peak Hour Factor: 0.86

Southbound Volume

Wednesday, September 18, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	3	2	0	2	1	8	14	23	23	27	16	17
30	2	1	0	0	2	7	12	16	37	12	12	18
45	1	1	0	1	4	18	13	15	37	19	18	13
00	1	0	1	0	4	8	22	20	15	16	12	14
Hr Total	7	4	1	3	11	41	61	74	112	74	58	62

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	20	20	14	11	15	12	10	15	2	7	11	2
30	12	18	17	19	16	9	7	9	7	10	8	6
45	17	14	16	13	10	11	7	3	8	14	3	4
00	27	17	17	11	16	8	3	6	7	7	7	2
Hr Total	76	69	64	54	57	40	27	33	24	38	29	14

24 Hour Total: 1,033
 AM Peak Hour begins: 7:45 AM Peak Volume: 117 AM Peak Hour Factor: 0.79
 PM Peak Hour begins: 12:30 PM Peak Volume: 82 PM Peak Hour Factor: 0.76

Total Volume for All Lanes

Wednesday, September 18, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	11	5	8	4	4	14	29	53	51	51	50	39
30	5	4	0	2	3	17	25	39	59	35	37	42
45	2	2	0	2	6	31	23	33	57	45	39	28
00	4	1	1	2	13	14	41	34	31	39	42	28
Hr Total	22	12	9	10	26	76	118	159	198	170	168	137

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	54	39	31	33	55	45	35	34	13	18	18	9
30	40	46	36	43	48	48	30	23	22	26	19	13
45	35	31	34	40	38	48	39	15	19	24	8	8
00	47	48	47	31	41	30	22	15	21	21	14	11
Hr Total	176	164	148	147	182	171	126	87	75	89	59	41

24 Hour Total: 2,570
 AM Peak Hour begins: 7:45 AM Peak Volume: 201 AM Peak Hour Factor: 0.85
 PM Peak Hour begins: 16:00 PM Peak Volume: 182 PM Peak Hour Factor: 0.83

Volume Count Report

Start Date: September 19, 2019
 Stop Date: September 19, 2019
 City: Tampa
 Location: Florida Ave south of Channelside Dr

Start Time: 00:00
 Stop Time: 24:00
 County: Hillsborough

Northbound Volume

Thursday, September 19, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	1	2	1	1	2	5	11	15	20	17	16	25
30	6	0	2	2	0	6	10	24	12	17	16	26
45	1	3	1	1	3	7	8	21	20	15	19	28
00	5	3	6	1	2	7	10	19	18	21	18	27
Hr Total	13	8	10	5	7	25	39	79	70	70	69	106

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	29	20	13	22	44	43	28	19	17	16	26	20
30	34	18	24	24	29	47	30	20	16	14	11	6
45	41	12	20	32	31	26	19	10	14	17	13	10
00	27	20	20	25	20	21	26	16	21	12	7	7
Hr Total	131	70	77	103	124	137	103	65	68	59	57	43

24 Hour Total: 1,538
 AM Peak Hour begins: 11:30 AM Peak Volume: 118 AM Peak Hour Factor: 0.87
 PM Peak Hour begins: 16:30 PM Peak Volume: 141 PM Peak Hour Factor: 0.75

Southbound Volume

Thursday, September 19, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	3	2	1	0	2	5	11	23	56	24	23	18
30	7	0	0	1	1	6	10	25	32	23	11	10
45	1	1	4	5	5	11	12	40	25	18	18	24
00	1	0	0	0	3	10	15	33	36	8	10	8
Hr Total	12	3	5	6	11	32	48	121	149	73	62	60

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	12	17	20	9	9	3	15	9	12	7	6	5
30	13	11	6	15	9	12	7	9	6	4	2	1
45	11	8	16	6	10	12	8	12	9	7	5	1
00	12	21	19	11	4	13	8	5	4	7	7	2
Hr Total	48	57	61	41	32	40	38	35	31	25	20	9

24 Hour Total: 1,019
 AM Peak Hour begins: 7:30 AM Peak Volume: 161 AM Peak Hour Factor: 0.72
 PM Peak Hour begins: 13:45 PM Peak Volume: 63 PM Peak Hour Factor: 0.75

Total Volume for All Lanes

Thursday, September 19, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	4	4	2	1	4	10	22	38	76	41	39	43
30	13	0	2	3	1	12	20	49	44	40	27	36
45	2	4	5	6	8	18	20	61	45	33	37	52
00	6	3	6	1	5	17	25	52	54	29	28	35
Hr Total	25	11	15	11	18	57	87	200	219	143	131	166

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	41	37	33	31	53	46	43	28	29	23	32	25
30	47	29	30	39	38	59	37	29	22	18	13	7
45	52	20	36	38	41	38	27	22	23	24	18	11
00	39	41	39	36	24	34	34	21	25	19	14	9
Hr Total	179	127	138	144	156	177	141	100	99	84	77	52

24 Hour Total: 2,557
 AM Peak Hour begins: 7:15 AM Peak Volume: 238 AM Peak Hour Factor: 0.78
 PM Peak Hour begins: 12:00 PM Peak Volume: 179 PM Peak Hour Factor: 0.86

Volume Count Report 3-Day Average

Start Date: September 17, 2019
 Stop Date: September 19, 2019
 City: Tampa
 Location: Florida Ave south of Channelside Dr

Start Time: 00:00
 Stop Time: 24:00
 County: Hillsborough

Northbound Volume

3-Day Average

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	5	3	3	2	2	7	12	21	24	19	27	22
30	4	1	1	2	1	9	10	22	17	21	22	23
45	2	2	1	1	3	9	10	18	19	23	23	23
00	5	2	3	1	4	8	17	22	17	23	26	23
Hr Total	16	8	8	6	11	33	49	84	77	86	98	90

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	30	19	18	24	43	46	30	22	20	26	29	14
30	33	22	23	35	38	48	31	18	20	48	15	8
45	30	16	23	32	36	34	39	18	25	64	13	9
00	28	25	29	24	31	28	27	22	35	40	11	6
Hr Total	121	83	92	116	148	157	128	79	100	177	68	37

24 Hour Total: 1,872
 AM Peak Hour begins: 11:30 AM Peak Volume: 108 AM Peak Hour Factor: 0.82
 PM Peak Hour begins: 21:15 PM Peak Volume: 180 PM Peak Hour Factor: 0.71

Southbound Volume

3-Day Average

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	2	3	1	1	2	7	13	22	36	23	21	15
30	3	1	0	0	1	6	10	20	32	14	15	12
45	1	1	2	2	4	12	12	25	29	18	17	16
00	2	0	1	1	3	8	19	24	26	15	16	11
Hr Total	8	5	4	5	10	33	54	92	123	70	69	54

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	17	17	15	12	15	15	20	25	11	11	8	4
30	14	17	13	18	19	19	20	17	5	12	6	4
45	15	11	20	12	15	21	26	11	9	22	4	3
00	17	19	23	20	18	22	25	6	10	8	7	2
Hr Total	64	63	71	61	67	77	92	59	35	53	25	13

24 Hour Total: 1,205
 AM Peak Hour begins: 8:00 AM Peak Volume: 123 AM Peak Hour Factor: 0.85
 PM Peak Hour begins: 18:15 PM Peak Volume: 97 PM Peak Hour Factor: 0.93

Total Volume for All Lanes

3-Day Average

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	8	6	4	3	4	13	24	43	60	41	47	37
30	7	2	2	2	2	15	21	42	49	36	38	34
45	2	3	3	3	8	21	22	43	48	41	39	39
00	7	2	3	3	7	17	35	47	43	38	42	34
Hr Total	24	13	12	11	21	66	103	175	200	156	167	144

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	47	37	33	36	59	61	51	47	31	38	37	18
30	47	39	36	53	57	68	51	35	25	59	21	12
45	45	26	43	44	51	55	65	29	34	85	17	13
00	45	44	51	44	49	50	53	28	45	48	18	8
Hr Total	184	146	163	177	215	233	220	139	136	230	92	50

24 Hour Total: 3,077
 AM Peak Hour begins: 7:45 AM Peak Volume: 204 AM Peak Hour Factor: 0.85
 PM Peak Hour begins: 17:00 PM Peak Volume: 233 PM Peak Hour Factor: 0.86

Start Time	1	2	Total
0:00	26		26
0:15	20		20
0:30	18		18
0:45	15		15
1:00	16		16
1:15	14		14
1:30	10		10
1:45	15		15
2:00	10		10
2:15	12		12
2:30	4		4
2:45	12		12
3:00	6		6
3:15	11		11
3:30	2		2
3:45	13		13
4:00	9		9
4:15	11		11
4:30	22		22
4:45	22		22
5:00	25		25
5:15	49		49
5:30	48		48
5:45	72		72
6:00	81		81
6:15	103		103
6:30	166		166
6:45	237		237
7:00	320		320
7:15	432		432
7:30	491		491
7:45	567		567
8:00	495		495
8:15	536		536
8:30	495		495
8:45	503		503
9:00	466		466
9:15	352		352
9:30	238		238
9:45	245		245
10:00	214		214
10:15	220		220
10:30	177		177
10:45	226		226
11:00	193		193
11:15	192		192
11:30	211		211
11:45	256		256
12:00	223		223
12:15	248		248
12:30	216		216
12:45	223		223
13:00	254		254
13:15	305		305
13:30	215		215
13:45	256		256
14:00	227		227
14:15	268		268
14:30	264		264
14:45	304		304
15:00	329		329
15:15	369		369
15:30	426		426
15:45	401		401
16:00	398		398
16:15	394		394
16:30	369		369
16:45	290		290
17:00	357		357
17:15	320		320
17:30	317		317
17:45	301		301
18:00	262		262
18:15	254		254
18:30	194		194
18:45	213		213
19:00	155		155
19:15	179		179
19:30	141		141
19:45	169		169
20:00	125		125
20:15	125		125
20:30	92		92
20:45	104		104
21:00	96		96
21:15	105		105
21:30	57		57
21:45	70		70
22:00	66		66
22:15	57		57
22:30	57		57
22:45	58		58
23:00	55		55
23:15	56		56
23:30	49		49
23:45	38		38

Start Date	September 24, 2019	
End Date	September 25, 2019	
Location	Florida Ave south of Whiting St	
City	Tampa	
County	Hillsborough	
Lane 1	NB	
Lane 2	N/A	

Start Time	1	2	Total
0:00	27		27
0:15	21		21
0:30	13		13
0:45	28		28
1:00	16		16
1:15	17		17
1:30	11		11
1:45	20		20
2:00	21		21
2:15	16		16
2:30	10		10
2:45	10		10
3:00	10		10
3:15	10		10
3:30	10		10
3:45	7		7
4:00	11		11
4:15	16		16
4:30	12		12
4:45	20		20
5:00	26		26
5:15	38		38
5:30	47		47
5:45	72		72
6:00	87		87
6:15	101		101
6:30	169		169
6:45	190		190
7:00	280		280
7:15	352		352
7:30	464		464
7:45	545		545
8:00	544		544
8:15	544		544
8:30	441		441
8:45	522		522
9:00	413		413
9:15	357		357
9:30	276		276
9:45	284		284
10:00	213		213
10:15	197		197
10:30	180		180
10:45	195		195
11:00	194		194
11:15	246		246
11:30	239		239
11:45	235		235
12:00	199		199
12:15	257		257
12:30	237		237
12:45	242		242
13:00	216		216
13:15	229		229
13:30	205		205
13:45	206		206
14:00	225		225
14:15	263		263
14:30	250		250
14:45	258		258
15:00	259		259
15:15	335		335
15:30	383		383
15:45	359		359
16:00	348		348
16:15	328		328
16:30	338		338
16:45	307		307
17:00	409		409
17:15	345		345
17:30	305		305
17:45	264		264
18:00	270		270
18:15	245		245
18:30	206		206
18:45	214		214
19:00	190		190
19:15	190		190
19:30	143		143
19:45	162		162
20:00	117		117
20:15	139		139
20:30	133		133
20:45	83		83
21:00	110		110
21:15	113		113
21:30	78		78
21:45	73		73
22:00	81		81
22:15	71		71
22:30	55		55
22:45	57		57
23:00	62		62
23:15	52		52
23:30	64		64
23:45	56		56

Start Date	September 25, 2019
End Date	September 26, 2019

Station	
ID	
Location	Florida Ave south of Whiting St

City	Tampa
County	Hillsborough
Lane 1	NB
Lane 2	N/A

Start Time	1	2	Total
0:00	33		33
0:15	30		30
0:30	23		23
0:45	16		16
1:00	22		22
1:15	17		17
1:30	21		21
1:45	15		15
2:00	17		17
2:15	9		9
2:30	9		9
2:45	8		8
3:00	8		8
3:15	16		16
3:30	7		7
3:45	13		13
4:00	14		14
4:15	22		22
4:30	14		14
4:45	27		27
5:00	35		35
5:15	48		48
5:30	58		58
5:45	65		65
6:00	83		83
6:15	107		107
6:30	177		177
6:45	189		189
7:00	319		319
7:15	372		372
7:30	458		458
7:45	527		527
8:00	510		510
8:15	517		517
8:30	487		487
8:45	463		463
9:00	356		356
9:15	312		312
9:30	261		261
9:45	298		298
10:00	213		213
10:15	197		197
10:30	187		187
10:45	199		199
11:00	198		198
11:15	238		238
11:30	204		204
11:45	265		265
12:00	216		216
12:15	244		244
12:30	233		233
12:45	244		244
13:00	242		242
13:15	262		262
13:30	232		232
13:45	276		276
14:00	213		213
14:15	254		254
14:30	283		283
14:45	287		287
15:00	271		271
15:15	344		344
15:30	366		366
15:45	385		385
16:00	358		358
16:15	290		290
16:30	323		323
16:45	318		318
17:00	318		318
17:15	366		366
17:30	391		391
17:45	362		362
18:00	332		332
18:15	358		358
18:30	304		304
18:45	335		335
19:00	327		327
19:15	337		337
19:30	369		369
19:45	303		303
20:00	231		231
20:15	157		157
20:30	142		142
20:45	130		130
21:00	117		117
21:15	125		125
21:30	99		99
21:45	135		135
22:00	157		157
22:15	252		252
22:30	438		438
22:45	458		458
23:00	182		182
23:15	104		104
23:30	71		71
23:45	68		68

Start Date	September 26, 2019
End Date	September 27, 2019

Station	
ID	
Location	Florida Ave south of Whiting St

City	Tampa
County	Hillsborough
Lane 1	NB
Lane 2	N/A

Volume Count Report

Start Date: September 24, 2019
 Stop Date: September 24, 2019
 City: Tampa
 Location: Florida Ave south of Whiting St

Start Time: 00:00
 Stop Time: 24:00
 County: Hillsborough

Northbound Volume

Tuesday, September 24, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	26	16	10	6	9	25	81	320	495	466	214	193
30	20	14	12	11	11	49	103	432	536	352	220	192
45	18	10	4	2	22	48	166	491	495	238	177	211
00	15	15	12	13	22	72	237	567	503	245	226	256
Hr Total	79	55	38	32	64	194	587	1,810	2,029	1,301	837	852

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	223	254	227	329	398	357	262	155	125	96	66	55
30	248	305	268	369	394	320	254	179	125	105	57	56
45	216	215	264	426	369	317	194	141	92	57	57	49
00	223	256	304	401	290	301	213	169	104	70	58	38
Hr Total	910	1,030	1,063	1,525	1,451	1,295	923	644	446	328	238	198

24 Hour Total: 17,929
 AM Peak Hour begins: 7:45 AM Peak Volume: 2,093 AM Peak Hour Factor: 0.92
 PM Peak Hour begins: 15:30 PM Peak Volume: 1,619 PM Peak Hour Factor: 0.95

N/A

Tuesday, September 24, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

24 Hour Total: 0
 AM Peak Hour begins: 0:00 AM Peak Volume: 0 AM Peak Hour Factor: #DIV/0!
 PM Peak Hour begins: 12:00 PM Peak Volume: 0 PM Peak Hour Factor: #DIV/0!

Total Volume for All Lanes

Tuesday, September 24, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	26	16	10	6	9	25	81	320	495	466	214	193
30	20	14	12	11	11	49	103	432	536	352	220	192
45	18	10	4	2	22	48	166	491	495	238	177	211
00	15	15	12	13	22	72	237	567	503	245	226	256
Hr Total	79	55	38	32	64	194	587	1,810	2,029	1,301	837	852

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	223	254	227	329	398	357	262	155	125	96	66	55
30	248	305	268	369	394	320	254	179	125	105	57	56
45	216	215	264	426	369	317	194	141	92	57	57	49
00	223	256	304	401	290	301	213	169	104	70	58	38
Hr Total	910	1,030	1,063	1,525	1,451	1,295	923	644	446	328	238	198

24 Hour Total: 17,929
 AM Peak Hour begins: 7:45 AM Peak Volume: 2,093 AM Peak Hour Factor: 0.92
 PM Peak Hour begins: 15:30 PM Peak Volume: 1,619 PM Peak Hour Factor: 0.95

Volume Count Report

Start Date: September 25, 2019
 Stop Date: September 25, 2019
 City: Tampa
 Location: Florida Ave south of Whiting St

Start Time: 00:00
 Stop Time: 24:00
 County: Hillsborough

Northbound Volume

Wednesday, September 25, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	27	16	21	10	11	26	87	280	544	413	213	194
30	21	17	16	10	16	38	101	352	544	357	197	246
45	13	11	10	10	12	47	169	464	441	276	180	239
00	28	20	10	7	20	72	190	545	522	284	195	235
Hr Total	89	64	57	37	59	183	547	1,641	2,051	1,330	785	914

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	199	216	225	259	348	409	270	190	117	110	81	62
30	257	229	263	335	328	345	245	190	139	113	71	52
45	237	205	250	383	338	305	206	143	133	78	55	64
00	242	206	258	359	307	264	214	162	83	73	57	56
Hr Total	935	856	996	1,336	1,321	1,323	935	685	472	374	264	234

24 Hour Total: 17,488
 AM Peak Hour begins: 7:30 AM Peak Volume: 2,097 AM Peak Hour Factor: 0.96
 PM Peak Hour begins: 15:15 PM Peak Volume: 1,425 PM Peak Hour Factor: 0.93

N/A

Wednesday, September 25, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

24 Hour Total: 0
 AM Peak Hour begins: 0:00 AM Peak Volume: 0 AM Peak Hour Factor: #DIV/0!
 PM Peak Hour begins: 12:00 PM Peak Volume: 0 PM Peak Hour Factor: #DIV/0!

Total Volume for All Lanes

Wednesday, September 25, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	27	16	21	10	11	26	87	280	544	413	213	194
30	21	17	16	10	16	38	101	352	544	357	197	246
45	13	11	10	10	12	47	169	464	441	276	180	239
00	28	20	10	7	20	72	190	545	522	284	195	235
Hr Total	89	64	57	37	59	183	547	1,641	2,051	1,330	785	914

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	199	216	225	259	348	409	270	190	117	110	81	62
30	257	229	263	335	328	345	245	190	139	113	71	52
45	237	205	250	383	338	305	206	143	133	78	55	64
00	242	206	258	359	307	264	214	162	83	73	57	56
Hr Total	935	856	996	1,336	1,321	1,323	935	685	472	374	264	234

24 Hour Total: 17,488
 AM Peak Hour begins: 7:30 AM Peak Volume: 2,097 AM Peak Hour Factor: 0.96
 PM Peak Hour begins: 15:15 PM Peak Volume: 1,425 PM Peak Hour Factor: 0.93

Volume Count Report

Start Date: September 26, 2019
 Stop Date: September 26, 2019
 City: Tampa
 Location: Florida Ave south of Whiting St

Start Time: 00:00
 Stop Time: 24:00
 County: Hillsborough

Northbound Volume

Thursday, September 26, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	33	22	17	8	14	35	83	319	510	356	213	198
30	30	17	9	16	22	48	107	372	517	312	197	238
45	23	21	9	7	14	58	177	458	487	261	187	204
00	16	15	8	13	27	65	189	527	463	298	199	265
Hr Total	102	75	43	44	77	206	556	1,676	1,977	1,227	796	905

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	216	242	213	271	358	318	332	327	231	117	157	182
30	244	262	254	344	290	366	358	337	157	125	252	104
45	233	232	283	366	323	391	304	369	142	99	438	71
00	244	276	287	385	318	362	335	303	130	135	458	68
Hr Total	937	1,012	1,037	1,366	1,289	1,437	1,329	1,336	660	476	1,305	425

24 Hour Total: 20,293
 AM Peak Hour begins: 7:45 AM Peak Volume: 2,041 AM Peak Hour Factor: 0.97
 PM Peak Hour begins: 15:15 PM Peak Volume: 1,453 PM Peak Hour Factor: 0.94

N/A

Thursday, September 26, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

24 Hour Total: 0
 AM Peak Hour begins: 0:00 AM Peak Volume: 0 AM Peak Hour Factor: #DIV/0!
 PM Peak Hour begins: 12:00 PM Peak Volume: 0 PM Peak Hour Factor: #DIV/0!

Total Volume for All Lanes

Thursday, September 26, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	33	22	17	8	14	35	83	319	510	356	213	198
30	30	17	9	16	22	48	107	372	517	312	197	238
45	23	21	9	7	14	58	177	458	487	261	187	204
00	16	15	8	13	27	65	189	527	463	298	199	265
Hr Total	102	75	43	44	77	206	556	1,676	1,977	1,227	796	905

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	216	242	213	271	358	318	332	327	231	117	157	182
30	244	262	254	344	290	366	358	337	157	125	252	104
45	233	232	283	366	323	391	304	369	142	99	438	71
00	244	276	287	385	318	362	335	303	130	135	458	68
Hr Total	937	1,012	1,037	1,366	1,289	1,437	1,329	1,336	660	476	1,305	425

24 Hour Total: 20,293
 AM Peak Hour begins: 7:45 AM Peak Volume: 2,041 AM Peak Hour Factor: 0.97
 PM Peak Hour begins: 15:15 PM Peak Volume: 1,453 PM Peak Hour Factor: 0.94

Volume Count Report

3-Day Average

Start Date: September 24, 2019
 Stop Date: September 26, 2019
 City: Tampa
 Location: Florida Ave south of Whiting St

Start Time: 00:00
 Stop Time: 24:00
 County: Hillsborough

Northbound Volume

3-Day Average

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	29	18	16	8	11	29	84	306	516	412	213	195
30	24	16	12	12	16	45	104	385	532	340	205	225
45	18	14	8	6	16	51	171	471	474	258	181	218
00	20	17	10	11	23	70	205	546	496	276	207	252
Hr Total	90	65	46	38	67	194	563	1,709	2,019	1,286	806	890

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	213	237	222	286	368	361	288	224	158	108	101	100
30	250	265	262	349	337	344	286	235	140	114	127	71
45	229	217	266	392	343	338	235	218	122	78	183	61
00	236	246	283	382	305	309	254	211	106	93	191	54
Hr Total	927	966	1,032	1,409	1,354	1,352	1,062	888	526	393	602	286

24 Hour Total: 18,570
 AM Peak Hour begins: 7:45
 PM Peak Hour begins: 15:15

AM Peak Volume: 2,069
 PM Peak Volume: 1,491
 AM Peak Hour Factor: 0.95
 PM Peak Hour Factor: 0.95

N/A

3-Day Average

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

24 Hour Total: 0
 AM Peak Hour begins: 0:00
 PM Peak Hour begins: 12:00

AM Peak Volume: 0
 PM Peak Volume: 0
 AM Peak Hour Factor: #DIV/0!
 PM Peak Hour Factor: #DIV/0!

Total Volume for All Lanes

3-Day Average

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	29	18	16	8	11	29	84	306	516	412	213	195
30	24	16	12	12	16	45	104	385	532	340	205	225
45	18	14	8	6	16	51	171	471	474	258	181	218
00	20	17	10	11	23	70	205	546	496	276	207	252
Hr Total	90	65	46	38	67	194	563	1,709	2,019	1,286	806	890

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	213	237	222	286	368	361	288	224	158	108	101	100
30	250	265	262	349	337	344	286	235	140	114	127	71
45	229	217	266	392	343	338	235	218	122	78	183	61
00	236	246	283	382	305	309	254	211	106	93	191	54
Hr Total	927	966	1,032	1,409	1,354	1,352	1,062	888	526	393	602	286

24 Hour Total: 18,570
 AM Peak Hour begins: 7:45
 PM Peak Hour begins: 15:15

AM Peak Volume: 2,069
 PM Peak Volume: 1,491
 AM Peak Hour Factor: 0.95
 PM Peak Hour Factor: 0.95

Start Time	1	2	Total
0:00	5	3	8
0:15	3	10	13
0:30	3	2	5
0:45	1	2	3
1:00	3	1	4
1:15	1	1	2
1:30	0	1	1
1:45	1	0	1
2:00	1	0	1
2:15	2	1	3
2:30	2	1	3
2:45	1	0	1
3:00	2	0	2
3:15	1	1	2
3:30	0	0	0
3:45	0	0	0
4:00	0	4	4
4:15	0	0	0
4:30	1	1	2
4:45	1	4	5
5:00	9	5	14
5:15	8	7	15
5:30	11	22	33
5:45	9	20	29
6:00	11	27	38
6:15	25	43	68
6:30	16	41	57
6:45	34	30	64
7:00	29	39	68
7:15	49	40	89
7:30	95	56	151
7:45	94	70	164
8:00	98	52	150
8:15	66	47	113
8:30	85	53	138
8:45	61	56	117
9:00	41	26	67
9:15	32	19	51
9:30	38	22	60
9:45	34	32	66
10:00	34	15	49
10:15	31	20	51
10:30	26	30	56
10:45	27	18	45
11:00	23	21	44
11:15	22	32	54
11:30	41	38	79
11:45	35	35	70
12:00	40	36	76
12:15	45	15	60
12:30	41	20	61
12:45	36	22	58
13:00	51	22	73
13:15	40	20	60
13:30	39	20	59
13:45	41	19	60
14:00	30	19	49
14:15	47	15	62
14:30	46	30	76
14:45	56	40	96
15:00	70	44	114
15:15	86	37	123
15:30	100	24	124
15:45	92	20	112
16:00	74	46	120
16:15	72	45	117
16:30	67	43	110
16:45	94	34	128
17:00	108	63	171
17:15	109	50	159
17:30	95	54	149
17:45	47	32	79
18:00	53	28	81
18:15	37	23	60
18:30	22	20	42
18:45	19	16	35
19:00	32	18	50
19:15	34	15	49
19:30	20	9	29
19:45	12	14	26
20:00	22	9	31
20:15	21	11	32
20:30	11	9	20
20:45	11	2	13
21:00	10	11	21
21:15	5	5	10
21:30	10	8	18
21:45	15	5	20
22:00	7	5	12
22:15	7	3	10
22:30	14	5	19
22:45	6	1	7
23:00	15	3	18
23:15	6	4	10
23:30	2	2	4
23:45	8	1	9

Start Date	September 24, 2019	
End Date	September 25, 2019	
Location	Jefferson St north of Whiting St	
City	Tampa	
County	Hillsborough	
Lane 1	NB	
Lane 2	SB	

Start Time	1	2	Total
0:00	4	3	7
0:15	5	2	7
0:30	0	3	3
0:45	7	5	12
1:00	1	1	2
1:15	3	0	3
1:30	0	3	3
1:45	2	1	3
2:00	0	0	0
2:15	3	0	3
2:30	0	0	0
2:45	4	1	5
3:00	4	1	5
3:15	2	0	2
3:30	1	0	1
3:45	0	2	2
4:00	3	0	3
4:15	2	0	2
4:30	4	3	7
4:45	4	4	8
5:00	2	7	9
5:15	10	6	16
5:30	9	12	21
5:45	6	19	25
6:00	4	35	39
6:15	13	41	54
6:30	21	46	67
6:45	40	35	75
7:00	25	45	70
7:15	53	33	86
7:30	99	39	138
7:45	80	43	123
8:00	95	69	164
8:15	64	39	103
8:30	42	45	87
8:45	50	61	111
9:00	46	35	81
9:15	35	26	61
9:30	28	34	62
9:45	36	27	63
10:00	37	21	58
10:15	39	20	59
10:30	34	34	68
10:45	42	24	66
11:00	33	23	56
11:15	27	25	52
11:30	30	25	55
11:45	33	28	61
12:00	37	17	54
12:15	39	24	63
12:30	47	23	70
12:45	46	16	62
13:00	43	19	62
13:15	42	18	60
13:30	42	18	60
13:45	40	28	68
14:00	35	22	57
14:15	39	11	50
14:30	70	12	82
14:45	50	34	84
15:00	88	48	136
15:15	67	27	94
15:30	101	26	127
15:45	71	30	101
16:00	75	52	127
16:15	74	31	105
16:30	71	29	100
16:45	100	45	145
17:00	96	68	164
17:15	110	53	163
17:30	86	34	120
17:45	69	30	99
18:00	55	25	80
18:15	49	22	71
18:30	43	16	59
18:45	30	16	46
19:00	18	17	35
19:15	22	9	31
19:30	24	9	33
19:45	26	4	30
20:00	17	11	28
20:15	6	13	19
20:30	17	11	28
20:45	18	11	29
21:00	13	8	21
21:15	19	9	28
21:30	9	12	21
21:45	16	5	21
22:00	22	7	29
22:15	6	4	10
22:30	4	4	8
22:45	8	5	13
23:00	10	4	14
23:15	3	5	8
23:30	8	4	12
23:45	8	3	11

Start Date	September 25, 2019
End Date	September 26, 2019

Station	
ID	
Location	Jefferson St north of Whiting St

City	Tampa
County	Hillsborough
Lane 1	NB
Lane 2	SB

Start Time	1	2	Total
0:00	6	1	7
0:15	4	2	6
0:30	3	1	4
0:45	1	2	3
1:00	3	2	5
1:15	1	0	1
1:30	0	2	2
1:45	1	1	2
2:00	2	0	2
2:15	1	2	3
2:30	1	4	5
2:45	1	1	2
3:00	2	0	2
3:15	1	0	1
3:30	1	2	3
3:45	0	0	0
4:00	1	0	1
4:15	0	0	0
4:30	7	0	7
4:45	1	2	3
5:00	5	9	14
5:15	7	10	17
5:30	4	13	17
5:45	13	19	32
6:00	3	29	32
6:15	22	35	57
6:30	17	41	58
6:45	19	32	51
7:00	34	38	72
7:15	75	34	109
7:30	108	50	158
7:45	76	39	115
8:00	71	69	140
8:15	68	35	103
8:30	46	45	91
8:45	50	42	92
9:00	42	31	73
9:15	29	31	60
9:30	41	26	67
9:45	25	26	51
10:00	31	23	54
10:15	35	21	56
10:30	33	19	52
10:45	28	28	56
11:00	31	27	58
11:15	23	17	40
11:30	26	23	49
11:45	36	24	60
12:00	36	36	72
12:15	27	35	62
12:30	50	32	82
12:45	38	31	69
13:00	46	30	76
13:15	46	13	59
13:30	40	15	55
13:45	47	21	68
14:00	37	22	59
14:15	44	21	65
14:30	62	43	105
14:45	46	38	84
15:00	83	47	130
15:15	100	24	124
15:30	98	20	118
15:45	85	38	123
16:00	94	48	142
16:15	89	44	133
16:30	96	43	139
16:45	95	36	131
17:00	107	70	177
17:15	101	64	165
17:30	100	65	165
17:45	67	33	100
18:00	48	40	88
18:15	72	48	120
18:30	43	58	101
18:45	58	80	138
19:00	72	51	123
19:15	49	87	136
19:30	64	68	132
19:45	77	46	123
20:00	64	24	88
20:15	38	17	55
20:30	32	17	49
20:45	24	16	40
21:00	18	12	30
21:15	27	11	38
21:30	13	7	20
21:45	18	11	29
22:00	28	30	58
22:15	79	29	108
22:30	324	35	359
22:45	195	43	238
23:00	88	14	102
23:15	29	7	36
23:30	14	9	23
23:45	11	5	16

Start Date	September 26, 2019
End Date	September 27, 2019

Station	
ID	
Location	Jefferson St north of Whiting St

City	Tampa
County	Hillsborough
Lane 1	NB
Lane 2	SB

Volume Count Report

Start Date: September 24, 2019
 Stop Date: September 24, 2019
 City: Tampa
 Location: Jefferson St north of Whiting St

Start Time: 00:00
 Stop Time: 24:00
 County: Hillsborough

Northbound Volume

Tuesday, September 24, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	5	3	1	2	0	9	11	29	98	41	34	23
30	3	1	2	1	0	8	25	49	66	32	31	22
45	3	0	2	0	1	11	16	95	85	38	26	41
00	1	1	1	0	1	9	34	94	61	34	27	35
Hr Total	12	5	6	3	2	37	86	267	310	145	118	121

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	40	51	30	70	74	108	53	32	22	10	7	15
30	45	40	47	86	72	109	37	34	21	5	7	6
45	41	39	46	100	67	95	22	20	11	10	14	2
00	36	41	56	92	94	47	19	12	11	15	6	8
Hr Total	162	171	179	348	307	359	131	98	65	40	34	31

24 Hour Total: 3,037
 AM Peak Hour begins: 7:30 AM Peak Volume: 353 AM Peak Hour Factor: 0.90
 PM Peak Hour begins: 16:45 PM Peak Volume: 406 PM Peak Hour Factor: 0.93

Southbound Volume

Tuesday, September 24, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	3	1	0	0	4	5	27	39	52	26	15	21
30	10	1	1	1	0	7	43	40	47	19	20	32
45	2	1	1	0	1	22	41	56	53	22	30	38
00	2	0	0	0	4	20	30	70	56	32	18	35
Hr Total	17	3	2	1	9	54	141	205	208	99	83	126

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	36	22	19	44	46	63	28	18	9	11	5	3
30	15	20	15	37	45	50	23	15	11	5	3	4
45	20	20	30	24	43	54	20	9	9	8	5	2
00	22	19	40	20	34	32	16	14	2	5	1	1
Hr Total	93	81	104	125	168	199	87	56	31	29	14	10

24 Hour Total: 1,945
 AM Peak Hour begins: 7:30 AM Peak Volume: 225 AM Peak Hour Factor: 0.80
 PM Peak Hour begins: 16:45 PM Peak Volume: 201 PM Peak Hour Factor: 0.80

Total Volume for All Lanes

Tuesday, September 24, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	8	4	1	2	4	14	38	68	150	67	49	44
30	13	2	3	2	0	15	68	89	113	51	51	54
45	5	1	3	0	2	33	57	151	138	60	56	79
00	3	1	1	0	5	29	64	164	117	66	45	70
Hr Total	29	8	8	4	11	91	227	472	518	244	201	247

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	76	73	49	114	120	171	81	50	31	21	12	18
30	60	60	62	123	117	159	60	49	32	10	10	10
45	61	59	76	124	110	149	42	29	20	18	19	4
00	58	60	96	112	128	79	35	26	13	20	7	9
Hr Total	255	252	283	473	475	558	218	154	96	69	48	41

24 Hour Total: 4,982
 AM Peak Hour begins: 7:30 AM Peak Volume: 578 AM Peak Hour Factor: 0.88
 PM Peak Hour begins: 16:45 PM Peak Volume: 607 PM Peak Hour Factor: 0.89

Volume Count Report

Start Date: September 25, 2019
 Stop Date: September 25, 2019
 City: Tampa
 Location: Jefferson St north of Whiting St

Start Time: 00:00
 Stop Time: 24:00
 County: Hillsborough

Northbound Volume

Wednesday, September 25, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	4	1	0	4	3	2	4	25	95	46	37	33
30	5	3	3	2	2	10	13	53	64	35	39	27
45	0	0	0	1	4	9	21	99	42	28	34	30
00	7	2	4	0	4	6	40	80	50	36	42	33
Hr Total	16	6	7	7	13	27	78	257	251	145	152	123

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	37	43	35	88	75	96	55	18	17	13	22	10
30	39	42	39	67	74	110	49	22	6	19	6	3
45	47	42	70	101	71	86	43	24	17	9	4	8
00	46	40	50	71	100	69	30	26	18	16	8	8
Hr Total	169	167	194	327	320	361	177	90	58	57	40	29

24 Hour Total: 3,071
 AM Peak Hour begins: 7:30 AM Peak Volume: 338 AM Peak Hour Factor: 0.85
 PM Peak Hour begins: 16:45 PM Peak Volume: 392 PM Peak Hour Factor: 0.89

Southbound Volume

Wednesday, September 25, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	3	1	0	1	0	7	35	45	69	35	21	23
30	2	0	0	0	0	6	41	33	39	26	20	25
45	3	3	0	0	3	12	46	39	45	34	34	25
00	5	1	1	2	4	19	35	43	61	27	24	28
Hr Total	13	5	1	3	7	44	157	160	214	122	99	101

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	17	19	22	48	52	68	25	17	11	8	7	4
30	24	18	11	27	31	53	22	9	13	9	4	5
45	23	18	12	26	29	34	16	9	11	12	4	4
00	16	28	34	30	45	30	16	4	11	5	5	3
Hr Total	80	83	79	131	157	185	79	39	46	34	20	16

24 Hour Total: 1,875
 AM Peak Hour begins: 8:00 AM Peak Volume: 214 AM Peak Hour Factor: 0.78
 PM Peak Hour begins: 16:45 PM Peak Volume: 200 PM Peak Hour Factor: 0.74

Total Volume for All Lanes

Wednesday, September 25, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	7	2	0	5	3	9	39	70	164	81	58	56
30	7	3	3	2	2	16	54	86	103	61	59	52
45	3	3	0	1	7	21	67	138	87	62	68	55
00	12	3	5	2	8	25	75	123	111	63	66	61
Hr Total	29	11	8	10	20	71	235	417	465	267	251	224

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	54	62	57	136	127	164	80	35	28	21	29	14
30	63	60	50	94	105	163	71	31	19	28	10	8
45	70	60	82	127	100	120	59	33	28	21	8	12
00	62	68	84	101	145	99	46	30	29	21	13	11
Hr Total	249	250	273	458	477	546	256	129	104	91	60	45

24 Hour Total: 4,946
 AM Peak Hour begins: 7:30 AM Peak Volume: 528 AM Peak Hour Factor: 0.80
 PM Peak Hour begins: 16:45 PM Peak Volume: 592 PM Peak Hour Factor: 0.90

Volume Count Report

Start Date: September 26, 2019
 Stop Date: September 26, 2019
 City: Tampa
 Location: Jefferson St north of Whiting St

Start Time: 00:00
 Stop Time: 24:00
 County: Hillsborough

Northbound Volume

Thursday, September 26, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	6	3	2	2	1	5	3	34	71	42	31	31
30	4	1	1	1	0	7	22	75	68	29	35	23
45	3	0	1	1	7	4	17	108	46	41	33	26
00	1	1	1	0	1	13	19	76	50	25	28	36
Hr Total	14	5	5	4	9	29	61	293	235	137	127	116

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	36	46	37	83	94	107	48	72	64	18	28	88
30	27	46	44	100	89	101	72	49	38	27	79	29
45	50	40	62	98	96	100	43	64	32	13	324	14
00	38	47	46	85	95	67	58	77	24	18	195	11
Hr Total	151	179	189	366	374	375	221	262	158	76	626	142

24 Hour Total: 4,154
 AM Peak Hour begins: 7:15 AM Peak Volume: 330 AM Peak Hour Factor: 0.76
 PM Peak Hour begins: 22:15 PM Peak Volume: 686 PM Peak Hour Factor: 0.53

Southbound Volume

Thursday, September 26, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	1	2	0	0	0	9	29	38	69	31	23	27
30	2	0	2	0	0	10	35	34	35	31	21	17
45	1	2	4	2	0	13	41	50	45	26	19	23
00	2	1	1	0	2	19	32	39	42	26	28	24
Hr Total	6	5	7	2	2	51	137	161	191	114	91	91

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	36	30	22	47	48	70	40	51	24	12	30	14
30	35	13	21	24	44	64	48	87	17	11	29	7
45	32	15	43	20	43	65	58	68	17	7	35	9
00	31	21	38	38	36	33	80	46	16	11	43	5
Hr Total	134	79	124	129	171	232	226	252	74	41	137	35

24 Hour Total: 2,492
 AM Peak Hour begins: 7:30 AM Peak Volume: 193 AM Peak Hour Factor: 0.70
 PM Peak Hour begins: 18:45 PM Peak Volume: 286 PM Peak Hour Factor: 0.82

Total Volume for All Lanes

Thursday, September 26, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	7	5	2	2	1	14	32	72	140	73	54	58
30	6	1	3	1	0	17	57	109	103	60	56	40
45	4	2	5	3	7	17	58	158	91	67	52	49
00	3	2	2	0	3	32	51	115	92	51	56	60
Hr Total	20	10	12	6	11	80	198	454	426	251	218	207

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	72	76	59	130	142	177	88	123	88	30	58	102
30	62	59	65	124	133	165	120	136	55	38	108	36
45	82	55	105	118	139	165	101	132	49	20	359	23
00	69	68	84	123	131	100	138	123	40	29	238	16
Hr Total	285	258	313	495	545	607	447	514	232	117	763	177

24 Hour Total: 6,646
 AM Peak Hour begins: 7:15 AM Peak Volume: 522 AM Peak Hour Factor: 0.83
 PM Peak Hour begins: 22:15 PM Peak Volume: 807 PM Peak Hour Factor: 0.56

Volume Count Report 3-Day Average

Start Date: September 24, 2019
 Stop Date: September 26, 2019
 City: Tampa
 Location: Jefferson St north of Whiting St

Start Time: 00:00
 Stop Time: 24:00
 County: Hillsborough

Northbound Volume

3-Day Average

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	5	2	1	3	1	5	6	29	88	43	34	29
30	4	2	2	1	1	8	20	59	66	32	35	24
45	2	0	1	1	4	8	18	101	58	36	31	32
00	3	1	2	0	2	9	31	83	54	32	32	35
Hr Total	14	5	6	5	8	31	75	272	265	142	132	120

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	38	47	34	80	81	104	52	41	34	14	19	38
30	37	43	43	84	78	107	53	35	22	17	31	13
45	46	40	59	100	78	94	36	36	20	11	114	8
00	40	43	51	83	96	61	36	38	18	16	70	9
Hr Total	161	172	187	347	334	365	176	150	94	58	233	67

24 Hour Total: 3,421
 AM Peak Hour begins: 7:30 AM Peak Volume: 338 AM Peak Hour Factor: 0.84
 PM Peak Hour begins: 16:45 PM Peak Volume: 400 PM Peak Hour Factor: 0.94

Southbound Volume

3-Day Average

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	2	1	0	0	1	7	30	41	63	31	20	24
30	5	0	1	0	0	8	40	36	40	25	20	25
45	2	2	2	1	1	16	43	48	48	27	28	29
00	3	1	1	1	3	19	32	51	53	28	23	29
Hr Total	12	4	3	2	6	50	145	175	204	112	91	106

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	30	24	21	46	49	67	31	29	15	10	14	7
30	25	17	16	29	40	56	31	37	14	8	12	5
45	25	18	28	23	38	51	31	29	12	9	15	5
00	23	23	37	29	38	32	37	21	10	7	16	3
Hr Total	102	81	102	128	165	205	131	116	50	35	57	20

24 Hour Total: 2,104
 AM Peak Hour begins: 8:00 AM Peak Volume: 204 AM Peak Hour Factor: 0.81
 PM Peak Hour begins: 16:45 PM Peak Volume: 212 PM Peak Hour Factor: 0.79

Total Volume for All Lanes

3-Day Average

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	7	4	1	3	3	12	36	70	151	74	54	53
30	9	2	3	2	1	16	60	95	106	57	55	49
45	4	2	3	1	5	24	61	149	105	63	59	61
00	6	2	3	1	5	29	63	134	107	60	56	64
Hr Total	26	10	9	7	14	81	220	448	470	254	223	226

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	67	70	55	127	130	171	83	69	49	24	33	45
30	62	60	59	114	118	162	84	72	35	25	43	18
45	71	58	88	123	116	145	67	65	32	20	129	13
00	63	65	88	112	135	93	73	60	27	23	86	12
Hr Total	263	253	290	475	499	570	307	266	144	92	290	88

24 Hour Total: 5,525
 AM Peak Hour begins: 7:30 AM Peak Volume: 541 AM Peak Hour Factor: 0.89
 PM Peak Hour begins: 16:45 PM Peak Volume: 612 PM Peak Hour Factor: 0.90

Start Time	1	2	Total
0:00	4	3	7
0:15	3	5	8
0:30	1	3	4
0:45	3	5	8
1:00	2	0	2
1:15	2	3	5
1:30	0	3	3
1:45	0	0	0
2:00	0	0	0
2:15	2	5	7
2:30	1	1	2
2:45	1	0	1
3:00	2	1	3
3:15	1	1	2
3:30	0	1	1
3:45	0	0	0
4:00	0	5	5
4:15	0	4	4
4:30	1	2	3
4:45	0	3	3
5:00	5	4	9
5:15	7	8	15
5:30	6	12	18
5:45	10	18	28
6:00	5	25	30
6:15	24	35	59
6:30	21	29	50
6:45	33	39	72
7:00	40	34	74
7:15	53	47	100
7:30	80	54	134
7:45	75	62	137
8:00	78	56	134
8:15	78	56	134
8:30	89	42	131
8:45	67	41	108
9:00	46	28	74
9:15	32	33	65
9:30	38	30	68
9:45	37	36	73
10:00	37	26	63
10:15	25	29	54
10:30	30	38	68
10:45	22	28	50
11:00	25	27	52
11:15	19	44	63
11:30	36	47	83
11:45	28	41	69
12:00	37	38	75
12:15	44	34	78
12:30	47	33	80
12:45	31	36	67
13:00	39	36	75
13:15	33	28	61
13:30	31	33	64
13:45	30	27	57
14:00	32	41	73
14:15	40	23	63
14:30	47	37	84
14:45	36	40	76
15:00	54	64	118
15:15	68	60	128
15:30	66	41	107
15:45	75	54	129
16:00	48	104	152
16:15	54	82	136
16:30	46	105	151
16:45	76	98	174
17:00	70	150	220
17:15	78	132	210
17:30	72	119	191
17:45	35	72	107
18:00	39	70	109
18:15	31	56	87
18:30	21	32	53
18:45	19	26	45
19:00	31	39	70
19:15	25	21	46
19:30	27	14	41
19:45	12	16	28
20:00	17	23	40
20:15	18	19	37
20:30	12	12	24
20:45	11	11	22
21:00	7	16	23
21:15	6	11	17
21:30	12	13	25
21:45	15	5	20
22:00	8	3	11
22:15	8	6	14
22:30	12	5	17
22:45	4	4	8
23:00	9	5	14
23:15	4	5	9
23:30	4	5	9
23:45	5	2	7

Start Date	September 24, 2019	
End Date	September 25, 2019	
Location	Jefferson St south of Whiting St	
City	Tampa	
County	Hillsborough	
Lane 1	NB	
Lane 2	SB	

Start Time	1	2	Total
0:00	3	2	5
0:15	4	2	6
0:30	0	4	4
0:45	6	5	11
1:00	1	2	3
1:15	4	0	4
1:30	1	2	3
1:45	2	2	4
2:00	0	0	0
2:15	2	2	4
2:30	0	1	1
2:45	5	1	6
3:00	5	0	5
3:15	1	3	4
3:30	0	1	1
3:45	0	2	2
4:00	1	4	5
4:15	3	2	5
4:30	3	2	5
4:45	1	1	2
5:00	1	7	8
5:15	5	4	9
5:30	10	13	23
5:45	9	16	25
6:00	10	24	34
6:15	13	39	52
6:30	20	36	56
6:45	33	36	69
7:00	36	34	70
7:15	55	28	83
7:30	81	47	128
7:45	92	55	147
8:00	75	65	140
8:15	68	41	109
8:30	60	44	104
8:45	59	53	112
9:00	48	26	74
9:15	30	29	59
9:30	31	53	84
9:45	30	28	58
10:00	29	36	65
10:15	25	23	48
10:30	29	45	74
10:45	28	30	58
11:00	36	42	78
11:15	23	33	56
11:30	28	33	61
11:45	27	38	65
12:00	27	38	65
12:15	29	21	50
12:30	55	34	89
12:45	42	21	63
13:00	29	26	55
13:15	39	25	64
13:30	39	36	75
13:45	33	29	62
14:00	26	32	58
14:15	30	23	53
14:30	58	30	88
14:45	36	42	78
15:00	67	75	142
15:15	62	59	121
15:30	67	53	120
15:45	65	61	126
16:00	53	111	164
16:15	54	77	131
16:30	46	83	129
16:45	87	117	204
17:00	60	146	206
17:15	69	127	196
17:30	78	93	171
17:45	55	83	138
18:00	51	70	121
18:15	40	74	114
18:30	41	49	90
18:45	27	33	60
19:00	23	24	47
19:15	20	16	36
19:30	24	24	48
19:45	20	17	37
20:00	11	16	27
20:15	15	21	36
20:30	17	14	31
20:45	19	14	33
21:00	9	11	20
21:15	19	10	29
21:30	10	13	23
21:45	16	9	25
22:00	15	5	20
22:15	9	8	17
22:30	5	3	8
22:45	8	6	14
23:00	5	3	8
23:15	6	3	9
23:30	6	3	9
23:45	8	3	11

Start Date	September 25, 2019
End Date	September 26, 2019

Station	
ID	
Location	Jefferson St south of Whiting St

City	Tampa
County	Hillsborough
Lane 1	NB
Lane 2	SB

Start Time	1	2	Total
0:00	4	1	5
0:15	3	4	7
0:30	3	2	5
0:45	1	2	3
1:00	3	1	4
1:15	1	2	3
1:30	0	2	2
1:45	1	1	2
2:00	2	0	2
2:15	1	0	1
2:30	2	3	5
2:45	2	1	3
3:00	2	0	2
3:15	1	0	1
3:30	1	0	1
3:45	0	0	0
4:00	2	1	3
4:15	1	8	9
4:30	5	3	8
4:45	0	1	1
5:00	4	9	13
5:15	3	9	12
5:30	4	6	10
5:45	8	18	26
6:00	7	15	22
6:15	23	26	49
6:30	18	44	62
6:45	29	25	54
7:00	39	29	68
7:15	64	35	99
7:30	94	53	147
7:45	75	46	121
8:00	69	48	117
8:15	69	54	123
8:30	52	54	106
8:45	55	50	105
9:00	43	33	76
9:15	35	38	73
9:30	40	33	73
9:45	22	27	49
10:00	30	20	50
10:15	31	27	58
10:30	31	21	52
10:45	14	26	40
11:00	21	31	52
11:15	21	21	42
11:30	24	32	56
11:45	23	33	56
12:00	24	30	54
12:15	28	28	56
12:30	37	33	70
12:45	41	36	77
13:00	47	42	89
13:15	37	34	71
13:30	45	24	69
13:45	36	28	64
14:00	37	43	80
14:15	40	38	78
14:30	53	42	95
14:45	32	42	74
15:00	54	65	119
15:15	78	51	129
15:30	89	50	139
15:45	77	60	137
16:00	69	100	169
16:15	78	99	177
16:30	67	128	195
16:45	86	114	200
17:00	69	148	217
17:15	80	138	218
17:30	63	125	188
17:45	51	89	140
18:00	46	85	131
18:15	52	82	134
18:30	64	99	163
18:45	67	87	154
19:00	87	77	164
19:15	71	74	145
19:30	92	76	168
19:45	116	49	165
20:00	73	41	114
20:15	45	28	73
20:30	26	26	52
20:45	17	21	38
21:00	17	16	33
21:15	17	28	45
21:30	14	15	29
21:45	11	18	29
22:00	21	32	53
22:15	73	64	137
22:30	262	105	367
22:45	77	111	188
23:00	63	87	150
23:15	16	23	39
23:30	10	13	23
23:45	14	7	21

Start Date	September 26, 2019
End Date	September 27, 2019

Station	
ID	
Location	Jefferson St south of Whiting St

City	Tampa
County	Hillsborough
Lane 1	NB
Lane 2	SB

Volume Count Report

Start Date: September 24, 2019
 Stop Date: September 24, 2019
 City: Tampa
 Location: Jefferson St south of Whiting St

Start Time: 00:00
 Stop Time: 24:00
 County: Hillsborough

Northbound Volume

Tuesday, September 24, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	4	2	0	2	0	5	5	40	78	46	37	25
30	3	2	2	1	0	7	24	53	78	32	25	19
45	1	0	1	0	1	6	21	80	89	38	30	36
00	3	0	1	0	0	10	33	75	67	37	22	28
Hr Total	11	4	4	3	1	28	83	248	312	153	114	108

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	37	39	32	54	48	70	39	31	17	7	8	9
30	44	33	40	68	54	78	31	25	18	6	8	4
45	47	31	47	66	46	72	21	27	12	12	12	4
00	31	30	36	75	76	35	19	12	11	15	4	5
Hr Total	159	133	155	263	224	255	110	95	58	40	32	22

24 Hour Total: 2,615
 AM Peak Hour begins: 7:45 AM Peak Volume: 320 AM Peak Hour Factor: 0.90
 PM Peak Hour begins: 16:45 PM Peak Volume: 296 PM Peak Hour Factor: 0.95

Southbound Volume

Tuesday, September 24, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	3	0	0	1	5	4	25	34	56	28	26	27
30	5	3	5	1	4	8	35	47	56	33	29	44
45	3	3	1	1	2	12	29	54	42	30	38	47
00	5	0	0	0	3	18	39	62	41	36	28	41
Hr Total	16	6	6	3	14	42	128	197	195	127	121	159

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	38	36	41	64	104	150	70	39	23	16	3	5
30	34	28	23	60	82	132	56	21	19	11	6	5
45	33	33	37	41	105	119	32	14	12	13	5	5
00	36	27	40	54	98	72	26	16	11	5	4	2
Hr Total	141	124	141	219	389	473	184	90	65	45	18	17

24 Hour Total: 2,920
 AM Peak Hour begins: 7:30 AM Peak Volume: 228 AM Peak Hour Factor: 0.92
 PM Peak Hour begins: 16:45 PM Peak Volume: 499 PM Peak Hour Factor: 0.83

Total Volume for All Lanes

Tuesday, September 24, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	7	2	0	3	5	9	30	74	134	74	63	52
30	8	5	7	2	4	15	59	100	134	65	54	63
45	4	3	2	1	3	18	50	134	131	68	68	83
00	8	0	1	0	3	28	72	137	108	73	50	69
Hr Total	27	10	10	6	15	70	211	445	507	280	235	267

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	75	75	73	118	152	220	109	70	40	23	11	14
30	78	61	63	128	136	210	87	46	37	17	14	9
45	80	64	84	107	151	191	53	41	24	25	17	9
00	67	57	76	129	174	107	45	28	22	20	8	7
Hr Total	300	257	296	482	613	728	294	185	123	85	50	39

24 Hour Total: 5,535
 AM Peak Hour begins: 7:30 AM Peak Volume: 539 AM Peak Hour Factor: 0.98
 PM Peak Hour begins: 16:45 PM Peak Volume: 795 PM Peak Hour Factor: 0.90

Volume Count Report

Start Date: September 25, 2019
 Stop Date: September 25, 2019
 City: Tampa
 Location: Jefferson St south of Whiting St

Start Time: 00:00
 Stop Time: 24:00
 County: Hillsborough

Northbound Volume

Wednesday, September 25, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	3	1	0	5	1	1	10	36	75	48	29	36
30	4	4	2	1	3	5	13	55	68	30	25	23
45	0	1	0	0	3	10	20	81	60	31	29	28
00	6	2	5	0	1	9	33	92	59	30	28	27
Hr Total	13	8	7	6	8	25	76	264	262	139	111	114

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	27	29	26	67	53	60	51	23	11	9	15	5
30	29	39	30	62	54	69	40	20	15	19	9	6
45	55	39	58	67	46	78	41	24	17	10	5	6
00	42	33	36	65	87	55	27	20	19	16	8	8
Hr Total	153	140	150	261	240	262	159	87	62	54	37	25

24 Hour Total: 2,663
 AM Peak Hour begins: 7:30 AM Peak Volume: 316 AM Peak Hour Factor: 0.86
 PM Peak Hour begins: 16:45 PM Peak Volume: 294 PM Peak Hour Factor: 0.84

Southbound Volume

Wednesday, September 25, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	2	2	0	0	4	7	24	34	65	26	36	42
30	2	0	2	3	2	4	39	28	41	29	23	33
45	4	2	1	1	2	13	36	47	44	53	45	33
00	5	2	1	2	1	16	36	55	53	28	30	38
Hr Total	13	6	4	6	9	40	135	164	203	136	134	146

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	38	26	32	75	111	146	70	24	16	11	5	3
30	21	25	23	59	77	127	74	16	21	10	8	3
45	34	36	30	53	83	93	49	24	14	13	3	3
00	21	29	42	61	117	83	33	17	14	9	6	3
Hr Total	114	116	127	248	388	449	226	81	65	43	22	12

24 Hour Total: 2,887
 AM Peak Hour begins: 7:30 AM Peak Volume: 208 AM Peak Hour Factor: 0.80
 PM Peak Hour begins: 16:45 PM Peak Volume: 483 PM Peak Hour Factor: 0.83

Total Volume for All Lanes

Wednesday, September 25, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	5	3	0	5	5	8	34	70	140	74	65	78
30	6	4	4	4	5	9	52	83	109	59	48	56
45	4	3	1	1	5	23	56	128	104	84	74	61
00	11	4	6	2	2	25	69	147	112	58	58	65
Hr Total	26	14	11	12	17	65	211	428	465	275	245	260

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	65	55	58	142	164	206	121	47	27	20	20	8
30	50	64	53	121	131	196	114	36	36	29	17	9
45	89	75	88	120	129	171	90	48	31	23	8	9
00	63	62	78	126	204	138	60	37	33	25	14	11
Hr Total	267	256	277	509	628	711	385	168	127	97	59	37

24 Hour Total: 5,550
 AM Peak Hour begins: 7:30 AM Peak Volume: 524 AM Peak Hour Factor: 0.89
 PM Peak Hour begins: 16:45 PM Peak Volume: 777 PM Peak Hour Factor: 0.94

Volume Count Report

Start Date: September 26, 2019
 Stop Date: September 26, 2019
 City: Tampa
 Location: Jefferson St south of Whiting St

Start Time: 00:00
 Stop Time: 24:00
 County: Hillsborough

Northbound Volume

Thursday, September 26, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	4	3	2	2	2	4	7	39	69	43	30	21
30	3	1	1	1	1	3	23	64	69	35	31	21
45	3	0	2	1	5	4	18	94	52	40	31	24
00	1	1	2	0	0	8	29	75	55	22	14	23
Hr Total	11	5	7	4	8	19	77	272	245	140	106	89

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	24	47	37	54	69	69	46	87	73	17	21	63
30	28	37	40	78	78	80	52	71	45	17	73	16
45	37	45	53	89	67	63	64	92	26	14	262	10
00	41	36	32	77	86	51	67	116	17	11	77	14
Hr Total	130	165	162	298	300	263	229	366	161	59	433	103

24 Hour Total: 3,652
 AM Peak Hour begins: 7:30 AM Peak Volume: 307 AM Peak Hour Factor: 0.82
 PM Peak Hour begins: 22:15 PM Peak Volume: 475 PM Peak Hour Factor: 0.45

Southbound Volume

Thursday, September 26, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	1	1	0	0	1	9	15	29	48	33	20	31
30	4	2	0	0	8	9	26	35	54	38	27	21
45	2	2	3	0	3	6	44	53	54	33	21	32
00	2	1	1	0	1	18	25	46	50	27	26	33
Hr Total	9	6	4	0	13	42	110	163	206	131	94	117

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	30	42	43	65	100	148	85	77	41	16	32	87
30	28	34	38	51	99	138	82	74	28	28	64	23
45	33	24	42	50	128	125	99	76	26	15	105	13
00	36	28	42	60	114	89	87	49	21	18	111	7
Hr Total	127	128	165	226	441	500	353	276	116	77	312	130

24 Hour Total: 3,746
 AM Peak Hour begins: 8:00 AM Peak Volume: 206 AM Peak Hour Factor: 0.95
 PM Peak Hour begins: 16:30 PM Peak Volume: 528 PM Peak Hour Factor: 0.89

Total Volume for All Lanes

Thursday, September 26, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	5	4	2	2	3	13	22	68	117	76	50	52
30	7	3	1	1	9	12	49	99	123	73	58	42
45	5	2	5	1	8	10	62	147	106	73	52	56
00	3	2	3	0	1	26	54	121	105	49	40	56
Hr Total	20	11	11	4	21	61	187	435	451	271	200	206

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	54	89	80	119	169	217	131	164	114	33	53	150
30	56	71	78	129	177	218	134	145	73	45	137	39
45	70	69	95	139	195	188	163	168	52	29	367	23
00	77	64	74	137	200	140	154	165	38	29	188	21
Hr Total	257	293	327	524	741	763	582	642	277	136	745	233

24 Hour Total: 7,398
 AM Peak Hour begins: 7:30 AM Peak Volume: 508 AM Peak Hour Factor: 0.86
 PM Peak Hour begins: 22:15 PM Peak Volume: 842 PM Peak Hour Factor: 0.57

Volume Count Report

3-Day Average

Start Date: September 24, 2019
 Stop Date: September 26, 2019
 City: Tampa
 Location: Jefferson St south of Whiting St

Start Time: 00:00
 Stop Time: 24:00
 County: Hillsborough

Northbound Volume

3-Day Average

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	4	2	1	3	1	3	7	38	74	46	32	27
30	3	2	2	1	1	5	20	57	72	32	27	21
45	1	0	1	0	3	7	20	85	67	36	30	29
00	3	1	3	0	0	9	32	81	60	30	21	26
Hr Total	12	6	6	4	6	24	79	261	273	144	110	104

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	29	38	32	58	57	66	45	47	34	11	15	26
30	34	36	37	69	62	76	41	39	26	14	30	9
45	46	38	53	74	53	71	42	48	18	12	93	7
00	38	33	35	72	83	47	38	49	16	14	30	9
Hr Total	147	146	156	274	255	260	166	183	94	51	167	50

24 Hour Total: 2,977
 AM Peak Hour begins: 7:30 AM Peak Volume: 311 AM Peak Hour Factor: 0.92
 PM Peak Hour begins: 16:45 PM Peak Volume: 296 PM Peak Hour Factor: 0.89

Southbound Volume

3-Day Average

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	2	1	0	0	3	7	21	32	56	29	27	33
30	4	2	2	1	5	7	33	37	50	33	26	33
45	3	2	2	1	2	10	36	51	47	39	35	37
00	4	1	1	1	2	17	33	54	48	30	28	37
Hr Total	13	6	5	3	12	41	124	175	201	131	116	141

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	35	35	39	68	105	148	75	47	27	14	13	32
30	28	29	28	57	86	132	71	37	23	16	26	10
45	33	31	36	48	105	112	60	38	17	14	38	7
00	31	28	41	58	110	81	49	27	15	11	40	4
Hr Total	127	123	144	231	406	474	254	149	82	55	117	53

24 Hour Total: 3,184
 AM Peak Hour begins: 7:30 AM Peak Volume: 212 AM Peak Hour Factor: 0.94
 PM Peak Hour begins: 16:45 PM Peak Volume: 502 PM Peak Hour Factor: 0.85

Total Volume for All Lanes

3-Day Average

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	6	3	1	3	4	10	29	71	130	75	59	61
30	7	4	4	2	6	12	53	94	122	66	53	54
45	4	3	3	1	5	17	56	136	114	75	65	67
00	7	2	3	1	2	26	65	135	108	60	49	63
Hr Total	24	12	11	7	18	65	203	436	474	275	227	244

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	65	73	70	126	162	214	120	94	60	25	28	57
30	61	65	65	126	148	208	112	76	49	30	56	19
45	80	69	89	122	158	183	102	86	36	26	131	14
00	69	61	76	131	193	128	86	77	31	25	70	13
Hr Total	275	269	300	505	661	734	420	332	176	106	285	103

24 Hour Total: 6,161
 AM Peak Hour begins: 7:30 AM Peak Volume: 524 AM Peak Hour Factor: 0.96
 PM Peak Hour begins: 16:45 PM Peak Volume: 798 PM Peak Hour Factor: 0.93

Start Time	1	2	Total
0:00	1	4	5
0:15	5	5	10
0:30	6	10	16
0:45	6	2	8
1:00	8	5	13
1:15	5	4	9
1:30	2	3	5
1:45	8	1	9
2:00	1	6	7
2:15	0	2	2
2:30	2	2	4
2:45	2	3	5
3:00	2	2	4
3:15	4	1	5
3:30	0	1	1
3:45	0	2	2
4:00	1	1	2
4:15	3	1	4
4:30	3	3	6
4:45	13	13	26
5:00	9	12	21
5:15	8	5	13
5:30	11	36	47
5:45	13	64	77
6:00	31	88	119
6:15	26	142	168
6:30	29	171	200
6:45	42	246	288
7:00	54	278	332
7:15	59	313	372
7:30	53	276	329
7:45	57	296	353
8:00	67	325	392
8:15	61	295	356
8:30	63	308	371
8:45	44	264	308
9:00	45	175	220
9:15	54	132	186
9:30	55	102	157
9:45	49	87	136
10:00	37	70	107
10:15	44	60	104
10:30	37	52	89
10:45	52	52	104
11:00	68	63	131
11:15	62	61	123
11:30	53	48	101
11:45	55	55	110
12:00	66	65	131
12:15	71	71	142
12:30	53	68	121
12:45	66	50	116
13:00	59	62	121
13:15	66	61	127
13:30	78	59	137
13:45	54	64	118
14:00	56	43	99
14:15	64	64	128
14:30	77	45	122
14:45	85	54	139
15:00	84	58	142
15:15	105	60	165
15:30	105	52	157
15:45	106	63	169
16:00	119	55	174
16:15	116	56	172
16:30	115	44	159
16:45	118	72	190
17:00	142	79	221
17:15	138	95	233
17:30	130	78	208
17:45	105	102	207
18:00	100	86	186
18:15	109	91	200
18:30	88	96	184
18:45	84	73	157
19:00	69	69	138
19:15	77	69	146
19:30	76	49	125
19:45	49	51	100
20:00	45	44	89
20:15	66	44	110
20:30	51	45	96
20:45	60	44	104
21:00	44	37	81
21:15	45	38	83
21:30	34	25	59
21:45	37	37	74
22:00	28	31	59
22:15	23	22	45
22:30	24	24	48
22:45	21	18	39
23:00	19	16	35
23:15	18	8	26
23:30	10	17	27
23:45	14	10	24

Start Date	September 10, 2019	
End Date	September 11, 2019	
Location	Meridian Ave south of Washington St	
City	Tampa	
County	Hillsborough	
Lane 1	NB	
Lane 2	SB	

Start Time	1	2	Total
0:00	16	13	29
0:15	11	11	22
0:30	9	12	21
0:45	13	4	17
1:00	7	1	8
1:15	4	2	6
1:30	2	1	3
1:45	6	4	10
2:00	5	3	8
2:15	4	1	5
2:30	2	5	7
2:45	2	1	3
3:00	1	3	4
3:15	6	2	8
3:30	3	3	6
3:45	0	0	0
4:00	1	3	4
4:15	5	4	9
4:30	5	6	11
4:45	6	9	15
5:00	9	9	18
5:15	16	15	31
5:30	7	27	34
5:45	22	51	73
6:00	21	86	107
6:15	25	139	164
6:30	29	152	181
6:45	35	213	248
7:00	53	247	300
7:15	66	269	335
7:30	62	270	332
7:45	56	276	332
8:00	55	324	379
8:15	68	309	377
8:30	60	235	295
8:45	68	286	354
9:00	46	133	179
9:15	56	111	167
9:30	60	94	154
9:45	46	89	135
10:00	51	59	110
10:15	59	41	100
10:30	65	52	117
10:45	50	43	93
11:00	58	42	100
11:15	48	62	110
11:30	66	55	121
11:45	64	56	120
12:00	79	62	141
12:15	71	61	132
12:30	66	70	136
12:45	59	70	129
13:00	67	58	125
13:15	65	55	120
13:30	98	43	141
13:45	68	62	130
14:00	66	40	106
14:15	76	46	122
14:30	63	39	102
14:45	54	56	110
15:00	85	68	153
15:15	115	53	168
15:30	110	56	166
15:45	89	58	147
16:00	126	58	184
16:15	88	86	174
16:30	120	65	185
16:45	118	77	195
17:00	147	85	232
17:15	145	96	241
17:30	108	102	210
17:45	112	100	212
18:00	116	104	220
18:15	94	80	174
18:30	98	93	191
18:45	71	73	144
19:00	68	71	139
19:15	75	54	129
19:30	59	51	110
19:45	67	56	123
20:00	76	53	129
20:15	49	55	104
20:30	89	41	130
20:45	56	38	94
21:00	39	35	74
21:15	31	38	69
21:30	44	27	71
21:45	35	21	56
22:00	34	25	59
22:15	30	21	51
22:30	28	16	44
22:45	24	17	41
23:00	32	15	47
23:15	14	12	26
23:30	15	11	26
23:45	12	2	14

Start Date	September 11, 2019
End Date	September 12, 2019

Station	
ID	
Location	Meridian Ave south of Washington St

City	Tampa
County	Hillsborough
Lane 1	NB
Lane 2	SB

Start Time	1	2	Total
0:00	15	7	22
0:15	4	7	11
0:30	6	4	10
0:45	5	4	9
1:00	8	7	15
1:15	3	3	6
1:30	5	6	11
1:45	2	2	4
2:00	7	2	9
2:15	1	0	1
2:30	3	3	6
2:45	4	2	6
3:00	3	3	6
3:15	1	1	2
3:30	1	0	1
3:45	2	3	5
4:00	0	0	0
4:15	3	4	7
4:30	2	6	8
4:45	7	13	20
5:00	5	8	13
5:15	9	12	21
5:30	15	35	50
5:45	13	59	72
6:00	28	92	120
6:15	17	147	164
6:30	21	140	161
6:45	35	220	255
7:00	43	236	279
7:15	56	281	337
7:30	65	288	353
7:45	63	324	387
8:00	58	335	393
8:15	69	246	315
8:30	58	264	322
8:45	57	172	229
9:00	58	117	175
9:15	49	90	139
9:30	66	74	140
9:45	51	76	127
10:00	56	71	127
10:15	56	50	106
10:30	68	50	118
10:45	61	50	111
11:00	56	70	126
11:15	58	55	113
11:30	73	77	150
11:45	45	62	107
12:00	73	61	134
12:15	72	79	151
12:30	64	70	134
12:45	64	50	114
13:00	81	56	137
13:15	60	54	114
13:30	68	56	124
13:45	72	54	126
14:00	65	53	118
14:15	78	52	130
14:30	92	62	154
14:45	84	46	130
15:00	86	56	142
15:15	90	55	145
15:30	105	45	150
15:45	86	62	148
16:00	113	60	173
16:15	120	58	178
16:30	116	78	194
16:45	97	72	169
17:00	149	73	222
17:15	127	87	214
17:30	104	100	204
17:45	89	95	184
18:00	97	114	211
18:15	95	84	179
18:30	82	80	162
18:45	76	89	165
19:00	67	73	140
19:15	66	67	133
19:30	70	61	131
19:45	55	62	117
20:00	59	42	101
20:15	47	50	97
20:30	59	37	96
20:45	49	31	80
21:00	29	36	65
21:15	51	27	78
21:30	30	25	55
21:45	42	33	75
22:00	34	32	66
22:15	23	28	51
22:30	25	22	47
22:45	30	17	47
23:00	23	16	39
23:15	13	14	27
23:30	23	12	35
23:45	17	5	22

Start Date	September 12, 2019
End Date	September 13, 2019

Station	
ID	
Location	Meridian Ave south of Washington St

City	Tampa
County	Hillsborough
Lane 1	NB
Lane 2	SB

Volume Count Report

Start Date: September 10, 2019
 Stop Date: September 10, 2019
 City: Tampa
 Location: Meridian Ave south of Washington St

Start Time: 00:00
 Stop Time: 24:00
 County: Hillsborough

Northbound Volume

Tuesday, September 10, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	1	8	1	2	1	9	31	54	67	45	37	68
30	5	5	0	4	3	8	26	59	61	54	44	62
45	6	2	2	0	3	11	29	53	63	55	37	53
00	6	8	2	0	13	13	42	57	44	49	52	55
Hr Total	18	23	5	6	20	41	128	223	235	203	170	238

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	66	59	56	84	119	142	100	69	45	44	28	19
30	71	66	64	105	116	138	109	77	66	45	23	18
45	53	78	77	105	115	130	88	76	51	34	24	10
00	66	54	85	106	118	105	84	49	60	37	21	14
Hr Total	256	257	282	400	468	515	381	271	222	160	96	61

24 Hour Total: 4,679
 AM Peak Hour begins: 7:45 AM Peak Volume: 248 AM Peak Hour Factor: 0.93
 PM Peak Hour begins: 16:45 PM Peak Volume: 528 PM Peak Hour Factor: 0.93

Southbound Volume

Tuesday, September 10, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	4	5	6	2	1	12	88	278	325	175	70	63
30	5	4	2	1	1	5	142	313	295	132	60	61
45	10	3	2	1	3	36	171	276	308	102	52	48
00	2	1	3	2	13	64	246	296	264	87	52	55
Hr Total	21	13	13	6	18	117	647	1,163	1,192	496	234	227

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	65	62	43	58	55	79	86	69	44	37	31	16
30	71	61	64	60	56	95	91	69	44	38	22	8
45	68	59	45	52	44	78	96	49	45	25	24	17
00	50	64	54	63	72	102	73	51	44	37	18	10
Hr Total	254	246	206	233	227	354	346	238	177	137	95	51

24 Hour Total: 6,711
 AM Peak Hour begins: 7:45 AM Peak Volume: 1,224 AM Peak Hour Factor: 0.94
 PM Peak Hour begins: 17:45 PM Peak Volume: 375 PM Peak Hour Factor: 0.92

Total Volume for All Lanes

Tuesday, September 10, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	5	13	7	4	2	21	119	332	392	220	107	131
30	10	9	2	5	4	13	168	372	356	186	104	123
45	16	5	4	1	6	47	200	329	371	157	89	101
00	8	9	5	2	26	77	288	353	308	136	104	110
Hr Total	39	36	18	12	38	158	775	1,386	1,427	699	404	465

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	131	121	99	142	174	221	186	138	89	81	59	35
30	142	127	128	165	172	233	200	146	110	83	45	26
45	121	137	122	157	159	208	184	125	96	59	48	27
00	116	118	139	169	190	207	157	100	104	74	39	24
Hr Total	510	503	488	633	695	869	727	509	399	297	191	112

24 Hour Total: 11,390
 AM Peak Hour begins: 7:45 AM Peak Volume: 1,472 AM Peak Hour Factor: 0.94
 PM Peak Hour begins: 17:00 PM Peak Volume: 869 PM Peak Hour Factor: 0.93

Volume Count Report

Start Date: September 11, 2019
 Stop Date: September 11, 2019
 City: Tampa
 Location: Meridian Ave south of Washington St

Start Time: 00:00
 Stop Time: 24:00
 County: Hillsborough

Northbound Volume

Wednesday, September 11, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	16	7	5	1	1	9	21	53	55	46	51	58
30	11	4	4	6	5	16	25	66	68	56	59	48
45	9	2	2	3	5	7	29	62	60	60	65	66
00	13	6	2	0	6	22	35	56	68	46	50	64
Hr Total	49	19	13	10	17	54	110	237	251	208	225	236

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	79	67	66	85	126	147	116	68	76	39	34	32
30	71	65	76	115	88	145	94	75	49	31	30	14
45	66	98	63	110	120	108	98	59	89	44	28	15
00	59	68	54	89	118	112	71	67	56	35	24	12
Hr Total	275	298	259	399	452	512	379	269	270	149	116	73

24 Hour Total: 4,880
 AM Peak Hour begins: 11:30 AM Peak Volume: 280 AM Peak Hour Factor: 0.89
 PM Peak Hour begins: 16:30 PM Peak Volume: 530 PM Peak Hour Factor: 0.90

Southbound Volume

Wednesday, September 11, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	13	1	3	3	3	9	86	247	324	133	59	42
30	11	2	1	2	4	15	139	269	309	111	41	62
45	12	1	5	3	6	27	152	270	235	94	52	55
00	4	4	1	0	9	51	213	276	286	89	43	56
Hr Total	40	8	10	8	22	102	590	1,062	1,154	427	195	215

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	62	58	40	68	58	85	104	71	53	35	25	15
30	61	55	46	53	86	96	80	54	55	38	21	12
45	70	43	39	56	65	102	93	51	41	27	16	11
00	70	62	56	58	77	100	73	56	38	21	17	2
Hr Total	263	218	181	235	286	383	350	232	187	121	79	40

24 Hour Total: 6,408
 AM Peak Hour begins: 7:30 AM Peak Volume: 1,179 AM Peak Hour Factor: 0.91
 PM Peak Hour begins: 17:15 PM Peak Volume: 402 PM Peak Hour Factor: 0.97

Total Volume for All Lanes

Wednesday, September 11, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	29	8	8	4	4	18	107	300	379	179	110	100
30	22	6	5	8	9	31	164	335	377	167	100	110
45	21	3	7	6	11	34	181	332	295	154	117	121
00	17	10	3	0	15	73	248	332	354	135	93	120
Hr Total	89	27	23	18	39	156	700	1,299	1,405	635	420	451

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	141	125	106	153	184	232	220	139	129	74	59	47
30	132	120	122	168	174	241	174	129	104	69	51	26
45	136	141	102	166	185	210	191	110	130	71	44	26
00	129	130	110	147	195	212	144	123	94	56	41	14
Hr Total	538	516	440	634	738	895	729	501	457	270	195	113

24 Hour Total: 11,288
 AM Peak Hour begins: 7:30 AM Peak Volume: 1,420 AM Peak Hour Factor: 0.94
 PM Peak Hour begins: 17:00 PM Peak Volume: 895 PM Peak Hour Factor: 0.93

Volume Count Report

Start Date: September 12, 2019
 Stop Date: September 12, 2019
 City: Tampa
 Location: Meridian Ave south of Washington St

Start Time: 00:00
 Stop Time: 24:00
 County: Hillsborough

Northbound Volume

Thursday, September 12, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	15	8	7	3	0	5	28	43	58	58	56	56
30	4	3	1	1	3	9	17	56	69	49	56	58
45	6	5	3	1	2	15	21	65	58	66	68	73
00	5	2	4	2	7	13	35	63	57	51	61	45
Hr Total	30	18	15	7	12	42	101	227	242	224	241	232

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	73	81	65	86	113	149	97	67	59	29	34	23
30	72	60	78	90	120	127	95	66	47	51	23	13
45	64	68	92	105	116	104	82	70	59	30	25	23
00	64	72	84	86	97	89	76	55	49	42	30	17
Hr Total	273	281	319	367	446	469	350	258	214	152	112	76

24 Hour Total: 4,708
 AM Peak Hour begins: 11:30 AM Peak Volume: 263 AM Peak Hour Factor: 0.90
 PM Peak Hour begins: 16:30 PM Peak Volume: 489 PM Peak Hour Factor: 0.82

Southbound Volume

Thursday, September 12, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	7	7	2	3	0	8	92	236	335	117	71	70
30	7	3	0	1	4	12	147	281	246	90	50	55
45	4	6	3	0	6	35	140	288	264	74	50	77
00	4	2	2	3	13	59	220	324	172	76	50	62
Hr Total	22	18	7	7	23	114	599	1,129	1,017	357	221	264

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	61	56	53	56	60	73	114	73	42	36	32	16
30	79	54	52	55	58	87	84	67	50	27	28	14
45	70	56	62	45	78	100	80	61	37	25	22	12
00	50	54	46	62	72	95	89	62	31	33	17	5
Hr Total	260	220	213	218	268	355	367	263	160	121	99	47

24 Hour Total: 6,369
 AM Peak Hour begins: 7:15 AM Peak Volume: 1,228 AM Peak Hour Factor: 0.92
 PM Peak Hour begins: 17:15 PM Peak Volume: 396 PM Peak Hour Factor: 0.87

Total Volume for All Lanes

Thursday, September 12, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	22	15	9	6	0	13	120	279	393	175	127	126
30	11	6	1	2	7	21	164	337	315	139	106	113
45	10	11	6	1	8	50	161	353	322	140	118	150
00	9	4	6	5	20	72	255	387	229	127	111	107
Hr Total	52	36	22	14	35	156	700	1,356	1,259	581	462	496

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	134	137	118	142	173	222	211	140	101	65	66	39
30	151	114	130	145	178	214	179	133	97	78	51	27
45	134	124	154	150	194	204	162	131	96	55	47	35
00	114	126	130	148	169	184	165	117	80	75	47	22
Hr Total	533	501	532	585	714	824	717	521	374	273	211	123

24 Hour Total: 11,077
 AM Peak Hour begins: 7:15 AM Peak Volume: 1,470 AM Peak Hour Factor: 0.94
 PM Peak Hour begins: 17:00 PM Peak Volume: 824 PM Peak Hour Factor: 0.93

Volume Count Report 3-Day Average

Start Date: September 10, 2019
 Stop Date: September 12, 2019
 City: Tampa
 Location: Meridian Ave south of Washington St

Start Time: 00:00
 Stop Time: 24:00
 County: Hillsborough

Northbound Volume

3-Day Average

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	11	8	4	2	1	8	27	50	60	50	48	61
30	7	4	2	4	4	11	23	60	66	53	53	56
45	7	3	2	1	3	11	26	60	60	60	57	64
00	8	5	3	1	9	16	37	59	56	49	54	55
Hr Total	32	20	11	8	16	46	113	229	243	212	212	235

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	73	69	62	85	119	146	104	68	60	37	32	25
30	71	64	73	103	108	137	99	73	54	42	25	15
45	61	81	77	107	117	114	89	68	66	36	26	16
00	63	65	74	94	111	102	77	57	55	38	25	14
Hr Total	268	279	287	389	455	499	370	266	235	154	108	70

24 Hour Total: 4,756
 AM Peak Hour begins: 11:30 AM Peak Volume: 263 AM Peak Hour Factor: 0.90
 PM Peak Hour begins: 16:30 PM Peak Volume: 511 PM Peak Hour Factor: 0.87

Southbound Volume

3-Day Average

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	8	4	4	3	1	10	89	254	328	142	67	58
30	8	3	1	1	3	11	143	288	283	111	50	59
45	9	3	3	1	5	33	154	278	269	90	51	60
00	3	2	2	2	12	58	226	299	241	84	48	58
Hr Total	28	13	10	7	21	111	612	1,118	1,121	427	217	235

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	63	59	45	61	58	79	101	71	46	36	29	16
30	70	57	54	56	67	93	85	63	50	34	24	11
45	69	53	49	51	62	93	90	54	41	26	21	13
00	57	60	52	61	74	99	78	56	38	30	17	6
Hr Total	259	228	200	229	260	364	354	244	175	126	91	46

24 Hour Total: 6,496
 AM Peak Hour begins: 7:15 AM Peak Volume: 1,192 AM Peak Hour Factor: 0.91
 PM Peak Hour begins: 17:15 PM Peak Volume: 386 PM Peak Hour Factor: 0.95

Total Volume for All Lanes

3-Day Average

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	19	12	8	5	2	17	115	304	388	191	115	119
30	14	7	3	5	7	22	165	348	349	164	103	115
45	16	6	6	3	8	44	181	338	329	150	108	124
00	11	8	5	2	20	74	264	357	297	133	103	112
Hr Total	60	33	21	15	37	157	725	1,347	1,364	638	429	471

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	135	128	108	146	177	225	206	139	106	73	61	40
30	142	120	127	159	175	229	184	136	104	77	49	26
45	130	134	126	158	179	207	179	122	107	62	46	29
00	120	125	126	155	185	201	155	113	93	68	42	20
Hr Total	527	507	487	617	716	863	724	510	410	280	199	116

24 Hour Total: 11,252
 AM Peak Hour begins: 7:30 AM Peak Volume: 1,433 AM Peak Hour Factor: 0.92
 PM Peak Hour begins: 17:00 PM Peak Volume: 863 PM Peak Hour Factor: 0.94

Start Time	1	2	Total
0:00	0	3	3
0:15	7	5	12
0:30	7	9	16
0:45	8	2	10
1:00	4	3	7
1:15	5	4	9
1:30	1	3	4
1:45	4	1	5
2:00	3	5	8
2:15	0	3	3
2:30	2	3	5
2:45	1	3	4
3:00	3	2	5
3:15	2	1	3
3:30	1	1	2
3:45	0	1	1
4:00	1	3	4
4:15	3	1	4
4:30	2	3	5
4:45	14	10	24
5:00	5	11	16
5:15	10	6	16
5:30	8	35	43
5:45	14	66	80
6:00	32	93	125
6:15	29	140	169
6:30	34	171	205
6:45	40	267	307
7:00	50	303	353
7:15	58	358	416
7:30	59	345	404
7:45	62	340	402
8:00	70	393	463
8:15	63	343	406
8:30	63	317	380
8:45	48	343	391
9:00	42	170	212
9:15	53	129	182
9:30	57	99	156
9:45	51	79	130
10:00	41	63	104
10:15	40	56	96
10:30	36	54	90
10:45	41	50	91
11:00	78	71	149
11:15	57	61	118
11:30	56	51	107
11:45	66	52	118
12:00	63	62	125
12:15	74	70	144
12:30	58	63	121
12:45	73	49	122
13:00	71	62	133
13:15	64	59	123
13:30	87	57	144
13:45	60	60	120
14:00	61	39	100
14:15	66	54	120
14:30	85	52	137
14:45	86	49	135
15:00	92	60	152
15:15	109	66	175
15:30	104	51	155
15:45	116	62	178
16:00	135	59	194
16:15	124	51	175
16:30	113	45	158
16:45	125	72	197
17:00	130	84	214
17:15	155	92	247
17:30	134	80	214
17:45	127	101	228
18:00	103	85	188
18:15	122	90	212
18:30	95	98	193
18:45	83	66	149
19:00	87	66	153
19:15	79	70	149
19:30	78	44	122
19:45	69	44	113
20:00	48	43	91
20:15	82	44	126
20:30	69	51	120
20:45	64	38	102
21:00	48	37	85
21:15	49	33	82
21:30	50	29	79
21:45	42	35	77
22:00	29	27	56
22:15	27	19	46
22:30	23	16	39
22:45	24	18	42
23:00	19	14	33
23:15	19	7	26
23:30	11	13	24
23:45	13	11	24

Start Date	September 10, 2019	
End Date	September 11, 2019	
Location	Meridian Ave south of Whiting St	
City	Tampa	
County	Hillsborough	
Lane 1	NB	
Lane 2	SB	

Start Time	1	2	Total
0:00	14	9	23
0:15	12	11	23
0:30	9	11	20
0:45	12	5	17
1:00	9	0	9
1:15	2	2	4
1:30	3	1	4
1:45	7	3	10
2:00	5	3	8
2:15	4	1	5
2:30	2	2	4
2:45	2	1	3
3:00	0	2	2
3:15	8	2	10
3:30	3	2	5
3:45	1	0	1
4:00	1	4	5
4:15	4	3	7
4:30	2	6	8
4:45	8	8	16
5:00	9	7	16
5:15	13	18	31
5:30	9	29	38
5:45	13	55	68
6:00	25	85	110
6:15	29	137	166
6:30	28	154	182
6:45	35	217	252
7:00	51	268	319
7:15	65	302	367
7:30	61	291	352
7:45	55	327	382
8:00	51	408	459
8:15	66	439	505
8:30	67	241	308
8:45	75	280	355
9:00	49	127	176
9:15	61	102	163
9:30	63	94	157
9:45	49	94	143
10:00	45	55	100
10:15	63	42	105
10:30	57	51	108
10:45	54	40	94
11:00	52	42	94
11:15	64	62	126
11:30	65	55	120
11:45	62	57	119
12:00	80	62	142
12:15	81	54	135
12:30	83	63	146
12:45	61	75	136
13:00	71	58	129
13:15	68	53	121
13:30	97	41	138
13:45	79	66	145
14:00	68	41	109
14:15	77	42	119
14:30	64	35	99
14:45	66	48	114
15:00	75	68	143
15:15	116	53	169
15:30	117	57	174
15:45	99	55	154
16:00	146	57	203
16:15	106	77	183
16:30	113	70	183
16:45	129	81	210
17:00	146	86	232
17:15	149	90	239
17:30	116	102	218
17:45	128	94	222
18:00	117	99	216
18:15	101	77	178
18:30	110	87	197
18:45	81	69	150
19:00	76	67	143
19:15	76	49	125
19:30	67	51	118
19:45	78	53	131
20:00	76	55	131
20:15	53	57	110
20:30	92	43	135
20:45	65	39	104
21:00	44	34	78
21:15	34	31	65
21:30	46	21	67
21:45	41	23	64
22:00	34	27	61
22:15	33	20	53
22:30	32	16	48
22:45	20	14	34
23:00	30	12	42
23:15	18	13	31
23:30	14	9	23
23:45	15	3	18

Start Date	September 11, 2019
End Date	September 12, 2019

Station	
ID	
Location	Meridian Ave south of Whiting St

City	Tampa
County	Hillsborough
Lane 1	NB
Lane 2	SB

Start Time	1	2	Total
0:00	17	5	22
0:15	7	5	12
0:30	6	2	8
0:45	6	3	9
1:00	5	6	11
1:15	4	4	8
1:30	3	5	8
1:45	1	1	2
2:00	8	3	11
2:15	0	0	0
2:30	5	2	7
2:45	2	3	5
3:00	0	3	3
3:15	3	1	4
3:30	1	0	1
3:45	0	2	2
4:00	2	0	2
4:15	3	3	6
4:30	1	5	6
4:45	8	13	21
5:00	5	9	14
5:15	10	12	22
5:30	14	33	47
5:45	12	64	76
6:00	26	95	121
6:15	22	147	169
6:30	23	135	158
6:45	35	244	279
7:00	45	249	294
7:15	54	315	369
7:30	56	332	388
7:45	72	379	451
8:00	61	446	507
8:15	68	268	336
8:30	62	285	347
8:45	56	168	224
9:00	58	119	177
9:15	60	83	143
9:30	65	76	141
9:45	51	69	120
10:00	59	76	135
10:15	53	51	104
10:30	68	54	122
10:45	69	48	117
11:00	53	69	122
11:15	65	62	127
11:30	74	67	141
11:45	54	68	122
12:00	76	54	130
12:15	69	76	145
12:30	67	65	132
12:45	66	50	116
13:00	87	54	141
13:15	68	55	123
13:30	75	66	141
13:45	79	52	131
14:00	70	50	120
14:15	84	47	131
14:30	97	54	151
14:45	77	55	132
15:00	91	52	143
15:15	95	58	153
15:30	110	45	155
15:45	95	59	154
16:00	127	63	190
16:15	129	58	187
16:30	112	75	187
16:45	111	75	186
17:00	158	75	233
17:15	140	88	228
17:30	118	101	219
17:45	105	88	193
18:00	96	111	207
18:15	105	83	188
18:30	94	67	161
18:45	83	91	174
19:00	79	70	149
19:15	72	61	133
19:30	68	67	135
19:45	74	58	132
20:00	76	43	119
20:15	59	47	106
20:30	63	31	94
20:45	54	34	88
21:00	34	26	60
21:15	51	31	82
21:30	36	25	61
21:45	44	37	81
22:00	43	24	67
22:15	27	28	55
22:30	33	23	56
22:45	28	15	43
23:00	28	16	44
23:15	15	12	27
23:30	27	12	39
23:45	16	7	23

Start Date	September 12, 2019
End Date	September 13, 2019

Station	
ID	
Location	Meridian Ave south of Whiting St

City	Tampa
County	Hillsborough
Lane 1	NB
Lane 2	SB

Volume Count Report

Start Date: September 10, 2019
 Stop Date: September 10, 2019
 City: Tampa
 Location: Meridian Ave south of Whiting St

Start Time: 00:00
 Stop Time: 24:00
 County: Hillsborough

Northbound Volume

Tuesday, September 10, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	0	4	3	3	1	5	32	50	70	42	41	78
30	7	5	0	2	3	10	29	58	63	53	40	57
45	7	1	2	1	2	8	34	59	63	57	36	56
00	8	4	1	0	14	14	40	62	48	51	41	66
Hr Total	22	14	6	6	20	37	135	229	244	203	158	257

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	63	71	61	92	135	130	103	87	48	48	29	19
30	74	64	66	109	124	155	122	79	82	49	27	19
45	58	87	85	104	113	134	95	78	69	50	23	11
00	73	60	86	116	125	127	83	69	64	42	24	13
Hr Total	268	282	298	421	497	546	403	313	263	189	103	62

24 Hour Total: 4,976
 AM Peak Hour begins: 11:30 AM Peak Volume: 259 AM Peak Hour Factor: 0.88
 PM Peak Hour begins: 17:00 PM Peak Volume: 546 PM Peak Hour Factor: 0.88

Southbound Volume

Tuesday, September 10, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	3	3	5	2	3	11	93	303	393	170	63	71
30	5	4	3	1	1	6	140	358	343	129	56	61
45	9	3	3	1	3	35	171	345	317	99	54	51
00	2	1	3	1	10	66	267	340	343	79	50	52
Hr Total	19	11	14	5	17	118	671	1,346	1,396	477	223	235

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	62	62	39	60	59	84	85	66	43	37	27	14
30	70	59	54	66	51	92	90	70	44	33	19	7
45	63	57	52	51	45	80	98	44	51	29	16	13
00	49	60	49	62	72	101	66	44	38	35	18	11
Hr Total	244	238	194	239	227	357	339	224	176	134	80	45

24 Hour Total: 7,029
 AM Peak Hour begins: 7:15 AM Peak Volume: 1,436 AM Peak Hour Factor: 0.91
 PM Peak Hour begins: 17:45 PM Peak Volume: 374 PM Peak Hour Factor: 0.93

Total Volume for All Lanes

Tuesday, September 10, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	3	7	8	5	4	16	125	353	463	212	104	149
30	12	9	3	3	4	16	169	416	406	182	96	118
45	16	4	5	2	5	43	205	404	380	156	90	107
00	10	5	4	1	24	80	307	402	391	130	91	118
Hr Total	41	25	20	11	37	155	806	1,575	1,640	680	381	492

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	125	133	100	152	194	214	188	153	91	85	56	33
30	144	123	120	175	175	247	212	149	126	82	46	26
45	121	144	137	155	158	214	193	122	120	79	39	24
00	122	120	135	178	197	228	149	113	102	77	42	24
Hr Total	512	520	492	660	724	903	742	537	439	323	183	107

24 Hour Total: 12,005
 AM Peak Hour begins: 7:15 AM Peak Volume: 1,685 AM Peak Hour Factor: 0.91
 PM Peak Hour begins: 17:00 PM Peak Volume: 903 PM Peak Hour Factor: 0.91

Volume Count Report

Start Date: September 11, 2019
 Stop Date: September 11, 2019
 City: Tampa
 Location: Meridian Ave south of Whiting St

Start Time: 00:00
 Stop Time: 24:00
 County: Hillsborough

Northbound Volume

Wednesday, September 11, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	14	9	5	0	1	9	25	51	51	49	45	52
30	12	2	4	8	4	13	29	65	66	61	63	64
45	9	3	2	3	2	9	28	61	67	63	57	65
00	12	7	2	1	8	13	35	55	75	49	54	62
Hr Total	47	21	13	12	15	44	117	232	259	222	219	243

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	80	71	68	75	146	146	117	76	76	44	34	30
30	81	68	77	116	106	149	101	76	53	34	33	18
45	83	97	64	117	113	116	110	67	92	46	32	14
00	61	79	66	99	129	128	81	78	65	41	20	15
Hr Total	305	315	275	407	494	539	409	297	286	165	119	77

24 Hour Total: 5,132
 AM Peak Hour begins: 11:30 AM Peak Volume: 288 AM Peak Hour Factor: 0.89
 PM Peak Hour begins: 16:45 PM Peak Volume: 540 PM Peak Hour Factor: 0.91

Southbound Volume

Wednesday, September 11, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	9	0	3	2	4	7	85	268	408	127	55	42
30	11	2	1	2	3	18	137	302	439	102	42	62
45	11	1	2	2	6	29	154	291	241	94	51	55
00	5	3	1	0	8	55	217	327	280	94	40	57
Hr Total	36	6	7	6	21	109	593	1,188	1,368	417	188	216

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	62	58	41	68	57	86	99	67	55	34	27	12
30	54	53	42	53	77	90	77	49	57	31	20	13
45	63	41	35	57	70	102	87	51	43	21	16	9
00	75	66	48	55	81	94	69	53	39	23	14	3
Hr Total	254	218	166	233	285	372	332	220	194	109	77	37

24 Hour Total: 6,652
 AM Peak Hour begins: 7:30 AM Peak Volume: 1,465 AM Peak Hour Factor: 0.83
 PM Peak Hour begins: 17:15 PM Peak Volume: 385 PM Peak Hour Factor: 0.94

Total Volume for All Lanes

Wednesday, September 11, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	23	9	8	2	5	16	110	319	459	176	100	94
30	23	4	5	10	7	31	166	367	505	163	105	126
45	20	4	4	5	8	38	182	352	308	157	108	120
00	17	10	3	1	16	68	252	382	355	143	94	119
Hr Total	83	27	20	18	36	153	710	1,420	1,627	639	407	459

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	142	129	109	143	203	232	216	143	131	78	61	42
30	135	121	119	169	183	239	178	125	110	65	53	31
45	146	138	99	174	183	218	197	118	135	67	48	23
00	136	145	114	154	210	222	150	131	104	64	34	18
Hr Total	559	533	441	640	779	911	741	517	480	274	196	114

24 Hour Total: 11,784
 AM Peak Hour begins: 7:30 AM Peak Volume: 1,698 AM Peak Hour Factor: 0.84
 PM Peak Hour begins: 17:00 PM Peak Volume: 911 PM Peak Hour Factor: 0.95

Volume Count Report

Start Date: September 12, 2019
 Stop Date: September 12, 2019
 City: Tampa
 Location: Meridian Ave south of Whiting St

Start Time: 00:00
 Stop Time: 24:00
 County: Hillsborough

Northbound Volume

Thursday, September 12, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	17	5	8	0	2	5	26	45	61	58	59	53
30	7	4	0	3	3	10	22	54	68	60	53	65
45	6	3	5	1	1	14	23	56	62	65	68	74
00	6	1	2	0	8	12	35	72	56	51	69	54
Hr Total	36	13	15	4	14	41	106	227	247	234	249	246

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	76	87	70	91	127	158	96	79	76	34	43	28
30	69	68	84	95	129	140	105	72	59	51	27	15
45	67	75	97	110	112	118	94	68	63	36	33	27
00	66	79	77	95	111	105	83	74	54	44	28	16
Hr Total	278	309	328	391	479	521	378	293	252	165	131	86

24 Hour Total: 5,043
 AM Peak Hour begins: 11:30 AM Peak Volume: 273 AM Peak Hour Factor: 0.90
 PM Peak Hour begins: 16:45 PM Peak Volume: 527 PM Peak Hour Factor: 0.83

Southbound Volume

Thursday, September 12, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	5	6	3	3	0	9	95	249	446	119	76	69
30	5	4	0	1	3	12	147	315	268	83	51	62
45	2	5	2	0	5	33	135	332	285	76	54	67
00	3	1	3	2	13	64	244	379	168	69	48	68
Hr Total	15	16	8	6	21	118	621	1,275	1,167	347	229	266

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	54	54	50	52	63	75	111	70	43	26	24	16
30	76	55	47	58	58	88	83	61	47	31	28	12
45	65	66	54	45	75	101	67	67	31	25	23	12
00	50	52	55	59	75	88	91	58	34	37	15	7
Hr Total	245	227	206	214	271	352	352	256	155	119	90	47

24 Hour Total: 6,623
 AM Peak Hour begins: 7:15 AM Peak Volume: 1,472 AM Peak Hour Factor: 0.83
 PM Peak Hour begins: 17:15 PM Peak Volume: 388 PM Peak Hour Factor: 0.87

Total Volume for All Lanes

Thursday, September 12, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	22	11	11	3	2	14	121	294	507	177	135	122
30	12	8	0	4	6	22	169	369	336	143	104	127
45	8	8	7	1	6	47	158	388	347	141	122	141
00	9	2	5	2	21	76	279	451	224	120	117	122
Hr Total	51	29	23	10	35	159	727	1,502	1,414	581	478	512

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	130	141	120	143	190	233	207	149	119	60	67	44
30	145	123	131	153	187	228	188	133	106	82	55	27
45	132	141	151	155	187	219	161	135	94	61	56	39
00	116	131	132	154	186	193	174	132	88	81	43	23
Hr Total	523	536	534	605	750	873	730	549	407	284	221	133

24 Hour Total: 11,666
 AM Peak Hour begins: 7:15 AM Peak Volume: 1,715 AM Peak Hour Factor: 0.85
 PM Peak Hour begins: 17:00 PM Peak Volume: 873 PM Peak Hour Factor: 0.94

Volume Count Report

3-Day Average

Start Date: September 10, 2019
 Stop Date: September 12, 2019
 City: Tampa
 Location: Meridian Ave south of Whiting St

Start Time: 00:00
 Stop Time: 24:00
 County: Hillsborough

Northbound Volume

3-Day Average

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	10	6	5	1	1	6	28	49	61	50	48	61
30	9	4	1	4	3	11	27	59	66	58	52	62
45	7	2	3	2	2	10	28	59	64	62	54	65
00	9	4	2	0	10	13	37	63	60	50	55	61
Hr Total	35	16	11	7	16	41	119	229	250	220	209	249

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	73	76	66	86	136	145	105	81	67	42	35	26
30	75	67	76	107	120	148	109	76	65	45	29	17
45	69	86	82	110	113	123	100	71	75	44	29	17
00	67	73	76	103	122	120	82	74	61	42	24	15
Hr Total	284	302	300	406	490	535	397	301	267	173	118	75

24 Hour Total: 5,050
 AM Peak Hour begins: 11:30 AM Peak Volume: 273 AM Peak Hour Factor: 0.92
 PM Peak Hour begins: 16:45 PM Peak Volume: 537 PM Peak Hour Factor: 0.91

Southbound Volume

3-Day Average

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	6	3	4	2	2	9	91	273	416	139	65	61
30	7	3	1	1	2	12	141	325	350	105	50	62
45	7	3	2	1	5	32	153	323	281	90	53	58
00	3	2	2	1	10	62	243	349	264	81	46	59
Hr Total	23	11	10	6	20	115	628	1,270	1,310	414	213	239

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	59	58	43	60	60	82	98	68	47	32	26	14
30	67	56	48	59	62	90	83	60	49	32	22	11
45	64	55	47	51	63	94	84	54	42	25	18	11
00	58	59	51	59	76	94	75	52	37	32	16	7
Hr Total	248	228	189	229	261	360	341	233	175	121	82	43

24 Hour Total: 6,768
 AM Peak Hour begins: 7:30 AM Peak Volume: 1,437 AM Peak Hour Factor: 0.86
 PM Peak Hour begins: 17:15 PM Peak Volume: 377 PM Peak Hour Factor: 0.96

Total Volume for All Lanes

3-Day Average

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	16	9	9	3	4	15	119	322	476	188	113	122
30	16	7	3	6	6	23	168	384	416	163	102	124
45	15	5	5	3	6	43	182	381	345	151	107	123
00	12	6	4	1	20	75	279	412	323	131	101	120
Hr Total	58	27	21	13	36	156	748	1,499	1,560	633	422	488

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	132	134	110	146	196	226	204	148	114	74	61	40
30	141	122	123	166	182	238	193	136	114	76	51	28
45	133	141	129	161	176	217	184	125	116	69	48	29
00	125	132	127	162	198	214	158	125	98	74	40	22
Hr Total	531	530	489	635	751	896	738	534	442	294	200	118

24 Hour Total: 11,818
 AM Peak Hour begins: 7:30 AM Peak Volume: 1,685 AM Peak Hour Factor: 0.88
 PM Peak Hour begins: 17:00 PM Peak Volume: 896 PM Peak Hour Factor: 0.94

Start Time	1	2	Total
0:00	0	1	1
0:15	1	6	7
0:30	2	2	4
0:45	0	1	1
1:00	3	3	6
1:15	0	3	3
1:30	0	2	2
1:45	0	3	3
2:00	0	1	1
2:15	0	4	4
2:30	0	1	1
2:45	1	1	2
3:00	0	0	0
3:15	0	0	0
3:30	1	1	2
3:45	2	1	3
4:00	0	1	1
4:15	0	2	2
4:30	1	2	3
4:45	1	2	3
5:00	5	0	5
5:15	1	3	4
5:30	5	4	9
5:45	10	9	19
6:00	16	11	27
6:15	12	22	34
6:30	14	20	34
6:45	18	15	33
7:00	19	14	33
7:15	32	16	48
7:30	37	20	57
7:45	43	22	65
8:00	51	28	79
8:15	35	16	51
8:30	29	29	58
8:45	38	16	54
9:00	24	10	34
9:15	19	10	29
9:30	15	20	35
9:45	14	17	31
10:00	22	15	37
10:15	13	15	28
10:30	12	23	35
10:45	18	30	48
11:00	8	14	22
11:15	2	14	16
11:30	9	20	29
11:45	7	24	31
12:00	22	20	42
12:15	18	23	41
12:30	14	17	31
12:45	16	21	37
13:00	16	19	35
13:15	20	16	36
13:30	15	14	29
13:45	14	23	37
14:00	7	16	23
14:15	6	33	39
14:30	20	21	41
14:45	16	26	42
15:00	18	22	40
15:15	13	23	36
15:30	19	26	45
15:45	14	32	46
16:00	14	35	49
16:15	6	54	60
16:30	8	28	36
16:45	9	47	56
17:00	7	45	52
17:15	1	72	73
17:30	0	48	48
17:45	0	68	68
18:00	0	78	78
18:15	2	109	111
18:30	0	123	123
18:45	1	146	147
19:00	1	91	92
19:15	14	44	58
19:30	6	50	56
19:45	10	23	33
20:00	6	32	38
20:15	4	16	20
20:30	9	25	34
20:45	5	14	19
21:00	4	2	6
21:15	1	1	2
21:30	3	0	3
21:45	41	20	61
22:00	14	23	37
22:15	7	12	19
22:30	6	17	23
22:45	5	7	12
23:00	5	3	8
23:15	1	4	5
23:30	1	1	2
23:45	2	2	4

Start Date	September 17, 2019	
End Date	September 18, 2019	
Location	Morgan St north of Channelside Dr	
City	Tampa	
County	Hillsborough	
Lane 1	NB	
Lane 2	SB	

Start Time	1	2	Total
0:00	3	1	4
0:15	1	0	1
0:30	2	3	5
0:45	1	1	2
1:00	1	1	2
1:15	1	0	1
1:30	2	4	6
1:45	0	5	5
2:00	0	1	1
2:15	0	2	2
2:30	1	0	1
2:45	1	0	1
3:00	1	4	5
3:15	0	1	1
3:30	1	2	3
3:45	1	2	3
4:00	1	0	1
4:15	1	0	1
4:30	1	0	1
4:45	2	5	7
5:00	2	0	2
5:15	4	9	13
5:30	7	3	10
5:45	9	9	18
6:00	15	10	25
6:15	9	14	23
6:30	14	14	28
6:45	15	22	37
7:00	15	13	28
7:15	36	18	54
7:30	36	29	65
7:45	42	17	59
8:00	54	33	87
8:15	29	19	48
8:30	43	35	78
8:45	24	28	52
9:00	25	19	44
9:15	23	19	42
9:30	11	23	34
9:45	9	25	34
10:00	12	18	30
10:15	11	20	31
10:30	10	20	30
10:45	9	19	28
11:00	4	13	17
11:15	13	17	30
11:30	12	13	25
11:45	14	18	32
12:00	7	12	19
12:15	20	13	33
12:30	20	29	49
12:45	16	28	44
13:00	19	14	33
13:15	18	21	39
13:30	16	19	35
13:45	16	12	28
14:00	12	15	27
14:15	12	14	26
14:30	14	19	33
14:45	10	14	24
15:00	17	15	32
15:15	15	27	42
15:30	26	10	36
15:45	17	7	24
16:00	26	13	39
16:15	16	8	24
16:30	20	9	29
16:45	10	21	31
17:00	37	12	49
17:15	25	14	39
17:30	21	11	32
17:45	22	11	33
18:00	19	8	27
18:15	18	5	23
18:30	13	5	18
18:45	19	11	30
19:00	8	8	16
19:15	11	8	19
19:30	8	1	9
19:45	5	6	11
20:00	5	5	10
20:15	3	4	7
20:30	6	1	7
20:45	4	7	11
21:00	6	4	10
21:15	6	6	12
21:30	3	4	7
21:45	5	4	9
22:00	4	2	6
22:15	4	4	8
22:30	5	0	5
22:45	0	0	0
23:00	4	2	6
23:15	1	1	2
23:30	2	1	3
23:45	0	2	2

Start Date	September 18, 2019
End Date	September 19, 2019

Station	
ID	
Location	Morgan St north of Channelside Dr

City	Tampa
County	Hillsborough
Lane 1	NB
Lane 2	SB

Start Time	1	2	Total
0:00	2	0	2
0:15	3	3	6
0:30	0	0	0
0:45	1	3	4
1:00	2	0	2
1:15	1	0	1
1:30	1	1	2
1:45	0	0	0
2:00	0	1	1
2:15	0	1	1
2:30	0	2	2
2:45	0	1	1
3:00	0	0	0
3:15	0	0	0
3:30	0	0	0
3:45	1	0	1
4:00	2	3	5
4:15	0	0	0
4:30	1	2	3
4:45	5	3	8
5:00	1	2	3
5:15	1	8	9
5:30	7	6	13
5:45	9	5	14
6:00	16	8	24
6:15	14	23	37
6:30	8	12	20
6:45	16	20	36
7:00	9	21	30
7:15	26	24	50
7:30	37	29	66
7:45	48	25	73
8:00	35	34	69
8:15	36	39	75
8:30	37	35	72
8:45	28	42	70
9:00	18	23	41
9:15	16	11	27
9:30	21	18	39
9:45	10	20	30
10:00	19	18	37
10:15	10	9	19
10:30	9	9	18
10:45	6	31	37
11:00	3	27	30
11:15	9	13	22
11:30	10	22	32
11:45	10	19	29
12:00	20	37	57
12:15	16	29	45
12:30	12	25	37
12:45	15	19	34
13:00	19	19	38
13:15	19	14	33
13:30	18	9	27
13:45	14	10	24
14:00	9	10	19
14:15	15	13	28
14:30	15	14	29
14:45	18	17	35
15:00	12	9	21
15:15	17	28	45
15:30	17	11	28
15:45	16	14	30
16:00	16	12	28
16:15	19	12	31
16:30	38	21	59
16:45	24	10	34
17:00	28	18	46
17:15	35	23	58
17:30	14	20	34
17:45	19	16	35
18:00	27	16	43
18:15	18	16	34
18:30	10	8	18
18:45	9	19	28
19:00	10	10	20
19:15	5	11	16
19:30	5	6	11
19:45	6	8	14
20:00	5	5	10
20:15	6	7	13
20:30	9	6	15
20:45	2	5	7
21:00	8	7	15
21:15	4	6	10
21:30	5	3	8
21:45	1	7	8
22:00	8	6	14
22:15	3	2	5
22:30	3	3	6
22:45	6	3	9
23:00	3	4	7
23:15	4	1	5
23:30	2	5	7
23:45	6	0	6

Start Date	September 19, 2019
End Date	September 20, 2019

Station	
ID	
Location	Morgan St north of Channelside Dr

City	Tampa
County	Hillsborough
Lane 1	NB
Lane 2	SB

Volume Count Report

Start Date: September 17, 2019
 Stop Date: September 17, 2019
 City: Tampa
 Location: Morgan St north of Channelside Dr

Start Time: 00:00
 Stop Time: 24:00
 County: Hillsborough

Northbound Volume

Tuesday, September 17, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	0	3	0	0	0	5	16	19	51	24	22	8
30	1	0	0	0	0	1	12	32	35	19	13	2
45	2	0	0	1	1	5	14	37	29	15	12	9
00	0	0	1	2	1	10	18	43	38	14	18	7
Hr Total	3	3	1	3	2	21	60	131	153	72	65	26

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	22	16	7	18	14	7	0	1	6	4	14	5
30	18	20	6	13	6	1	2	14	4	1	7	1
45	14	15	20	19	8	0	0	6	9	3	6	1
00	16	14	16	14	9	0	1	10	5	41	5	2
Hr Total	70	65	49	64	37	8	3	31	24	49	32	9

24 Hour Total: 981
 AM Peak Hour begins: 7:30 AM Peak Volume: 166 AM Peak Hour Factor: 0.81
 PM Peak Hour begins: 12:00 PM Peak Volume: 70 PM Peak Hour Factor: 0.80

Southbound Volume

Tuesday, September 17, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	1	3	1	0	1	0	11	14	28	10	15	14
30	6	3	4	0	2	3	22	16	16	10	15	14
45	2	2	1	1	2	4	20	20	29	20	23	20
00	1	3	1	1	2	9	15	22	16	17	30	24
Hr Total	10	11	7	2	7	16	68	72	89	57	83	72

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	20	19	16	22	35	45	78	91	32	2	23	3
30	23	16	33	23	54	72	109	44	16	1	12	4
45	17	14	21	26	28	48	123	50	25	0	17	1
00	21	23	26	32	47	68	146	23	14	20	7	2
Hr Total	81	72	96	103	164	233	456	208	87	23	59	10

24 Hour Total: 2,086
 AM Peak Hour begins: 7:45 AM Peak Volume: 95 AM Peak Hour Factor: 0.82
 PM Peak Hour begins: 18:15 PM Peak Volume: 469 PM Peak Hour Factor: 0.80

Total Volume for All Lanes

Tuesday, September 17, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	1	6	1	0	1	5	27	33	79	34	37	22
30	7	3	4	0	2	4	34	48	51	29	28	16
45	4	2	1	2	3	9	34	57	58	35	35	29
00	1	3	2	3	3	19	33	65	54	31	48	31
Hr Total	13	14	8	5	9	37	128	203	242	129	148	98

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	42	35	23	40	49	52	78	92	38	6	37	8
30	41	36	39	36	60	73	111	58	20	2	19	5
45	31	29	41	45	36	48	123	56	34	3	23	2
00	37	37	42	46	56	68	147	33	19	61	12	4
Hr Total	151	137	145	167	201	241	459	239	111	72	91	19

24 Hour Total: 3,067
 AM Peak Hour begins: 7:45 AM Peak Volume: 253 AM Peak Hour Factor: 0.80
 PM Peak Hour begins: 18:15 PM Peak Volume: 473 PM Peak Hour Factor: 0.80

Volume Count Report

Start Date: September 18, 2019
 Stop Date: September 18, 2019
 City: Tampa
 Location: Morgan St north of Channelside Dr

Start Time: 00:00
 Stop Time: 24:00
 County: Hillsborough

Northbound Volume

Wednesday, September 18, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	3	1	0	1	1	2	15	15	54	25	12	4
30	1	1	0	0	1	4	9	36	29	23	11	13
45	2	2	1	1	1	7	14	36	43	11	10	12
00	1	0	1	1	2	9	15	42	24	9	9	14
Hr Total	7	4	2	3	5	22	53	129	150	68	42	43

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	7	19	12	17	26	37	19	8	5	6	4	4
30	20	18	12	15	16	25	18	11	3	6	4	1
45	20	16	14	26	20	21	13	8	6	3	5	2
00	16	16	10	17	10	22	19	5	4	5	0	0
Hr Total	63	69	48	75	72	105	69	32	18	20	13	7

24 Hour Total: 1,119
 AM Peak Hour begins: 7:15 AM Peak Volume: 168 AM Peak Hour Factor: 0.78
 PM Peak Hour begins: 17:00 PM Peak Volume: 105 PM Peak Hour Factor: 0.71

Southbound Volume

Wednesday, September 18, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	1	1	1	4	0	0	10	13	33	19	18	13
30	0	0	2	1	0	9	14	18	19	19	20	17
45	3	4	0	2	0	3	14	29	35	23	20	13
00	1	5	0	2	5	9	22	17	28	25	19	18
Hr Total	5	10	3	9	5	21	60	77	115	86	77	61

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	12	14	15	15	13	12	8	8	5	4	2	2
30	13	21	14	27	8	14	5	8	4	6	4	1
45	29	19	19	10	9	11	5	1	1	4	0	1
00	28	12	14	7	21	11	11	6	7	4	0	2
Hr Total	82	66	62	59	51	48	29	23	17	18	6	6

24 Hour Total: 996
 AM Peak Hour begins: 8:00 AM Peak Volume: 115 AM Peak Hour Factor: 0.82
 PM Peak Hour begins: 12:30 PM Peak Volume: 92 PM Peak Hour Factor: 0.79

Total Volume for All Lanes

Wednesday, September 18, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	4	2	1	5	1	2	25	28	87	44	30	17
30	1	1	2	1	1	13	23	54	48	42	31	30
45	5	6	1	3	1	10	28	65	78	34	30	25
00	2	5	1	3	7	18	37	59	52	34	28	32
Hr Total	12	14	5	12	10	43	113	206	265	154	119	104

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	19	33	27	32	39	49	27	16	10	10	6	6
30	33	39	26	42	24	39	23	19	7	12	8	2
45	49	35	33	36	29	32	18	9	7	7	5	3
00	44	28	24	24	31	33	30	11	11	9	0	2
Hr Total	145	135	110	134	123	153	98	55	35	38	19	13

24 Hour Total: 2,115
 AM Peak Hour begins: 7:45 AM Peak Volume: 272 AM Peak Hour Factor: 0.78
 PM Peak Hour begins: 12:30 PM Peak Volume: 165 PM Peak Hour Factor: 0.84

Volume Count Report

Start Date: September 19, 2019
 Stop Date: September 19, 2019
 City: Tampa
 Location: Morgan St north of Channelside Dr

Start Time: 00:00
 Stop Time: 24:00
 County: Hillsborough

Northbound Volume

Thursday, September 19, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	2	2	0	0	2	1	16	9	35	18	19	3
30	3	1	0	0	0	1	14	26	36	16	10	9
45	0	1	0	0	1	7	8	37	37	21	9	10
00	1	0	0	1	5	9	16	48	28	10	6	10
Hr Total	6	4	0	1	8	18	54	120	136	65	44	32

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	20	19	9	12	16	28	27	10	5	8	8	3
30	16	19	15	17	19	35	18	5	6	4	3	4
45	12	18	15	17	38	14	10	5	9	5	3	2
00	15	14	18	16	24	19	9	6	2	1	6	6
Hr Total	63	70	57	62	97	96	64	26	22	18	20	15

24 Hour Total: 1,098
 AM Peak Hour begins: 7:30 AM Peak Volume: 156 AM Peak Hour Factor: 0.81
 PM Peak Hour begins: 16:30 PM Peak Volume: 125 PM Peak Hour Factor: 0.82

Southbound Volume

Thursday, September 19, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	0	0	1	0	3	2	8	21	34	23	18	27
30	3	0	1	0	0	8	23	24	39	11	9	13
45	0	1	2	0	2	6	12	29	35	18	9	22
00	3	0	1	0	3	5	20	25	42	20	31	19
Hr Total	6	1	5	0	8	21	63	99	150	72	67	81

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	37	19	10	9	12	18	16	10	5	7	6	4
30	29	14	13	28	12	23	16	11	7	6	2	1
45	25	9	14	11	21	20	8	6	6	3	3	5
00	19	10	17	14	10	16	19	8	5	7	3	0
Hr Total	110	52	54	62	55	77	59	35	23	23	14	10

24 Hour Total: 1,147
 AM Peak Hour begins: 8:00 AM Peak Volume: 150 AM Peak Hour Factor: 0.89
 PM Peak Hour begins: 12:00 PM Peak Volume: 110 PM Peak Hour Factor: 0.74

Total Volume for All Lanes

Thursday, September 19, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	2	2	1	0	5	3	24	30	69	41	37	30
30	6	1	1	0	0	9	37	50	75	27	19	22
45	0	2	2	0	3	13	20	66	72	39	18	32
00	4	0	1	1	8	14	36	73	70	30	37	29
Hr Total	12	5	5	1	16	39	117	219	286	137	111	113

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	57	38	19	21	28	46	43	20	10	15	14	7
30	45	33	28	45	31	58	34	16	13	10	5	5
45	37	27	29	28	59	34	18	11	15	8	6	7
00	34	24	35	30	34	35	28	14	7	8	9	6
Hr Total	173	122	111	124	152	173	123	61	45	41	34	25

24 Hour Total: 2,245
 AM Peak Hour begins: 7:45 AM Peak Volume: 289 AM Peak Hour Factor: 0.96
 PM Peak Hour begins: 16:30 PM Peak Volume: 197 PM Peak Hour Factor: 0.83

Volume Count Report

3-Day Average

Start Date: September 17, 2019
 Stop Date: September 19, 2019
 City: Tampa
 Location: Morgan St north of Channelside Dr

Start Time: 00:00
 Stop Time: 24:00
 County: Hillsborough

Northbound Volume

3-Day Average

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	2	2	0	0	1	3	16	14	47	22	18	5
30	2	1	0	0	0	2	12	31	33	19	11	8
45	1	1	0	1	1	6	12	37	36	16	10	10
00	1	0	1	1	3	9	16	44	30	11	11	10
Hr Total	5	4	1	2	5	20	56	127	146	68	50	34

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	16	18	9	16	19	24	15	6	5	6	9	4
30	18	19	11	15	14	20	13	10	4	4	5	2
45	15	16	16	21	22	12	8	6	8	4	5	2
00	16	15	15	16	14	14	10	7	4	16	4	3
Hr Total	65	68	51	67	69	70	45	30	21	29	22	10

24 Hour Total: 1,066
 AM Peak Hour begins: 7:30 AM Peak Volume: 161 AM Peak Hour Factor: 0.86
 PM Peak Hour begins: 16:30 PM Peak Volume: 81 PM Peak Hour Factor: 0.84

Southbound Volume

3-Day Average

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	1	1	1	1	1	1	10	16	32	17	17	18
30	3	1	2	0	1	7	20	19	25	13	15	15
45	2	2	1	1	1	4	15	26	33	20	17	18
00	2	3	1	1	3	8	19	21	29	21	27	20
Hr Total	7	7	5	4	7	19	64	83	118	72	76	71

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	23	17	14	15	20	25	34	36	14	4	10	3
30	22	17	20	26	25	36	43	21	9	4	6	2
45	24	14	18	16	19	26	45	19	11	2	7	2
00	23	15	19	18	26	32	59	12	9	10	3	1
Hr Total	91	63	71	75	90	119	181	89	42	21	26	9

24 Hour Total: 1,410
 AM Peak Hour begins: 8:00 AM Peak Volume: 118 AM Peak Hour Factor: 0.89
 PM Peak Hour begins: 18:15 PM Peak Volume: 184 PM Peak Hour Factor: 0.78

Total Volume for All Lanes

3-Day Average

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	2	3	1	2	2	3	25	30	78	40	35	23
30	5	2	2	0	1	9	31	51	58	33	26	23
45	3	3	1	2	2	11	27	63	69	36	28	29
00	2	3	1	2	6	17	35	66	59	32	38	31
Hr Total	12	11	6	6	12	40	119	209	264	140	126	105

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	39	35	23	31	39	49	49	43	19	10	19	7
30	40	36	31	41	38	57	56	31	13	8	11	4
45	39	30	34	36	41	38	53	25	19	6	11	4
00	38	30	34	33	40	45	68	19	12	26	7	4
Hr Total	156	131	122	142	159	189	227	118	64	50	48	19

24 Hour Total: 2,476
 AM Peak Hour begins: 7:45 AM Peak Volume: 271 AM Peak Hour Factor: 0.87
 PM Peak Hour begins: 18:00 PM Peak Volume: 227 PM Peak Hour Factor: 0.83

Start Time	1	2	Total
0:00	0	2	2
0:15	0	19	19
0:30	0	8	8
0:45	0	2	2
1:00	0	2	2
1:15	0	2	2
1:30	0	2	2
1:45	0	7	7
2:00	0	0	0
2:15	0	3	3
2:30	0	7	7
2:45	0	0	0
3:00	0	7	7
3:15	0	0	0
3:30	0	0	0
3:45	0	0	0
4:00	0	4	4
4:15	0	7	7
4:30	0	3	3
4:45	0	0	0
5:00	0	0	0
5:15	3	7	10
5:30	4	12	16
5:45	1	20	21
6:00	5	31	36
6:15	4	24	28
6:30	6	29	35
6:45	7	17	24
7:00	8	13	21
7:15	10	20	30
7:30	19	18	37
7:45	12	16	28
8:00	15	10	25
8:15	13	9	22
8:30	18	24	42
8:45	16	19	35
9:00	6	12	18
9:15	4	18	22
9:30	15	6	21
9:45	14	16	30
10:00	14	13	27
10:15	12	21	33
10:30	23	8	31
10:45	10	16	26
11:00	26	21	47
11:15	10	6	16
11:30	23	28	51
11:45	15	14	29
12:00	13	18	31
12:15	14	17	31
12:30	2	13	15
12:45	12	9	21
13:00	10	1	11
13:15	18	25	43
13:30	18	8	26
13:45	8	7	15
14:00	11	11	22
14:15	16	18	34
14:30	13	10	23
14:45	22	13	35
15:00	14	18	32
15:15	31	9	40
15:30	23	5	28
15:45	20	8	28
16:00	18	22	40
16:15	15	11	26
16:30	14	7	21
16:45	13	8	21
17:00	17	20	37
17:15	19	8	27
17:30	7	3	10
17:45	5	4	9
18:00	4	6	10
18:15	13	3	16
18:30	1	9	10
18:45	9	8	17
19:00	6	1	7
19:15	5	6	11
19:30	5	3	8
19:45	8	5	13
20:00	9	0	9
20:15	7	7	14
20:30	9	0	9
20:45	1	1	2
21:00	6	14	20
21:15	8	9	17
21:30	1	4	5
21:45	10	3	13
22:00	1	3	4
22:15	1	1	2
22:30	3	8	11
22:45	4	0	4
23:00	2	1	3
23:15	1	0	1
23:30	6	2	8
23:45	4	4	8

Start Date	September 24, 2019	
End Date	September 25, 2019	
Location	Nebraska Ave south of Whiting St	
City	Tampa	
County	Hillsborough	
Lane 1	NB	
Lane 2	SB	

Start Time	1	2	Total
0:00	2	3	5
0:15	0	0	0
0:30	4	3	7
0:45	2	4	6
1:00	2	4	6
1:15	6	4	10
1:30	1	2	3
1:45	2	1	3
2:00	0	0	0
2:15	6	5	11
2:30	0	0	0
2:45	0	0	0
3:00	3	0	3
3:15	2	0	2
3:30	0	0	0
3:45	4	3	7
4:00	3	0	3
4:15	5	1	6
4:30	0	0	0
4:45	1	4	5
5:00	1	1	2
5:15	2	5	7
5:30	1	6	7
5:45	4	22	26
6:00	9	29	38
6:15	1	30	31
6:30	7	27	34
6:45	4	17	21
7:00	6	6	12
7:15	15	12	27
7:30	12	6	18
7:45	10	14	24
8:00	14	16	30
8:15	6	9	15
8:30	10	9	19
8:45	10	19	29
9:00	13	12	25
9:15	11	21	32
9:30	26	15	41
9:45	8	14	22
10:00	10	15	25
10:15	20	8	28
10:30	22	21	43
10:45	8	8	16
11:00	18	12	30
11:15	15	16	31
11:30	12	14	26
11:45	13	15	28
12:00	18	20	38
12:15	16	20	36
12:30	17	11	28
12:45	10	15	25
13:00	9	8	17
13:15	13	10	23
13:30	8	10	18
13:45	8	16	24
14:00	6	10	16
14:15	21	20	41
14:30	14	23	37
14:45	14	13	27
15:00	23	22	45
15:15	28	13	41
15:30	30	18	48
15:45	22	13	35
16:00	6	7	13
16:15	16	12	28
16:30	9	9	18
16:45	20	3	23
17:00	25	9	34
17:15	8	13	21
17:30	15	9	24
17:45	4	4	8
18:00	7	5	12
18:15	5	8	13
18:30	4	4	8
18:45	5	6	11
19:00	4	4	8
19:15	8	17	25
19:30	2	3	5
19:45	4	1	5
20:00	11	12	23
20:15	2	4	6
20:30	14	5	19
20:45	2	3	5
21:00	6	13	19
21:15	7	1	8
21:30	3	1	4
21:45	3	5	8
22:00	2	1	3
22:15	3	5	8
22:30	5	7	12
22:45	7	8	15
23:00	4	2	6
23:15	1	6	7
23:30	4	0	4
23:45	2	1	3

Start Date	September 25, 2019
End Date	September 26, 2019

Station	
ID	
Location	Nebraska Ave south of Whiting St

City	Tampa
County	Hillsborough
Lane 1	NB
Lane 2	SB

Start Time	1	2	Total
0:00	3	3	6
0:15	0	0	0
0:30	5	0	5
0:45	1	0	1
1:00	9	11	20
1:15	0	2	2
1:30	0	0	0
1:45	0	1	1
2:00	7	2	9
2:15	5	10	15
2:30	0	0	0
2:45	0	3	3
3:00	2	4	6
3:15	0	0	0
3:30	3	1	4
3:45	3	0	3
4:00	1	7	8
4:15	5	1	6
4:30	0	3	3
4:45	2	1	3
5:00	1	0	1
5:15	2	6	8
5:30	4	7	11
5:45	4	19	23
6:00	3	32	35
6:15	3	21	24
6:30	25	45	70
6:45	9	25	34
7:00	7	11	18
7:15	14	20	34
7:30	17	11	28
7:45	25	16	41
8:00	25	21	46
8:15	2	8	10
8:30	3	19	22
8:45	10	12	22
9:00	12	11	23
9:15	2	27	29
9:30	13	22	35
9:45	12	4	16
10:00	5	26	31
10:15	14	20	34
10:30	15	12	27
10:45	14	14	28
11:00	19	18	37
11:15	19	14	33
11:30	12	17	29
11:45	10	4	14
12:00	19	18	37
12:15	18	27	45
12:30	12	8	20
12:45	20	21	41
13:00	23	25	48
13:15	13	10	23
13:30	9	10	19
13:45	9	13	22
14:00	14	31	45
14:15	20	8	28
14:30	11	12	23
14:45	18	11	29
15:00	19	16	35
15:15	28	11	39
15:30	24	22	46
15:45	16	14	30
16:00	17	11	28
16:15	17	1	18
16:30	21	18	39
16:45	17	16	33
17:00	5	9	14
17:15	17	10	27
17:30	14	7	21
17:45	5	10	15
18:00	9	6	15
18:15	6	4	10
18:30	7	8	15
18:45	7	9	16
19:00	10	7	17
19:15	7	9	16
19:30	11	8	19
19:45	9	3	12
20:00	15	11	26
20:15	7	3	10
20:30	7	1	8
20:45	5	14	19
21:00	5	4	9
21:15	9	10	19
21:30	12	16	28
21:45	8	6	14
22:00	5	8	13
22:15	4	5	9
22:30	14	4	18
22:45	12	6	18
23:00	6	6	12
23:15	9	7	16
23:30	1	2	3
23:45	3	2	5

Start Date	September 26, 2019
End Date	September 27, 2019

Station	
ID	
Location	Nebraska Ave south of Whiting St

City	Tampa
County	Hillsborough
Lane 1	NB
Lane 2	SB

Volume Count Report

Start Date: September 24, 2019
 Stop Date: September 24, 2019
 City: Tampa
 Location: Nebraska Ave south of Whiting St

Start Time: 00:00
 Stop Time: 24:00
 County: Hillsborough

Northbound Volume

Tuesday, September 24, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	0	0	0	0	0	0	5	8	15	6	14	26
30	0	0	0	0	0	3	4	10	13	4	12	10
45	0	0	0	0	0	4	6	19	18	15	23	23
00	0	0	0	0	0	1	7	12	16	14	10	15
Hr Total	0	0	0	0	0	8	22	49	62	39	59	74

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	13	10	11	14	18	17	4	6	9	6	1	2
30	14	18	16	31	15	19	13	5	7	8	1	1
45	2	18	13	23	14	7	1	5	9	1	3	6
00	12	8	22	20	13	5	9	8	1	10	4	4
Hr Total	41	54	62	88	60	48	27	24	26	25	9	13

24 Hour Total: 790
 AM Peak Hour begins: 11:00 AM Peak Volume: 74 AM Peak Hour Factor: 0.71
 PM Peak Hour begins: 15:15 PM Peak Volume: 92 PM Peak Hour Factor: 0.74

Southbound Volume

Tuesday, September 24, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	2	2	0	7	4	0	31	13	10	12	13	21
30	19	2	3	0	7	7	24	20	9	18	21	6
45	8	2	7	0	3	12	29	18	24	6	8	28
00	2	7	0	0	0	20	17	16	19	16	16	14
Hr Total	31	13	10	7	14	39	101	67	62	52	58	69

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	18	1	11	18	22	20	6	1	0	14	3	1
30	17	25	18	9	11	8	3	6	7	9	1	0
45	13	8	10	5	7	3	9	3	0	4	8	2
00	9	7	13	8	8	4	8	5	1	3	0	4
Hr Total	57	41	52	40	48	35	26	15	8	30	12	7

24 Hour Total: 894
 AM Peak Hour begins: 5:45 AM Peak Volume: 104 AM Peak Hour Factor: 0.84
 PM Peak Hour begins: 14:15 PM Peak Volume: 59 PM Peak Hour Factor: 0.82

Total Volume for All Lanes

Tuesday, September 24, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	2	2	0	7	4	0	36	21	25	18	27	47
30	19	2	3	0	7	10	28	30	22	22	33	16
45	8	2	7	0	3	16	35	37	42	21	31	51
00	2	7	0	0	0	21	24	28	35	30	26	29
Hr Total	31	13	10	7	14	47	123	116	124	91	117	143

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	31	11	22	32	40	37	10	7	9	20	4	3
30	31	43	34	40	26	27	16	11	14	17	2	1
45	15	26	23	28	21	10	10	8	9	5	11	8
00	21	15	35	28	21	9	17	13	2	13	4	8
Hr Total	98	95	114	128	108	83	53	39	34	55	21	20

24 Hour Total: 1,684
 AM Peak Hour begins: 11:00 AM Peak Volume: 143 AM Peak Hour Factor: 0.70
 PM Peak Hour begins: 15:15 PM Peak Volume: 136 PM Peak Hour Factor: 0.85

Volume Count Report

Start Date: September 25, 2019
 Stop Date: September 25, 2019
 City: Tampa
 Location: Nebraska Ave south of Whiting St

Start Time: 00:00
 Stop Time: 24:00
 County: Hillsborough

Northbound Volume

Wednesday, September 25, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	2	2	0	3	3	1	9	6	14	13	10	18
30	0	6	6	2	5	2	1	15	6	11	20	15
45	4	1	0	0	0	1	7	12	10	26	22	12
00	2	2	0	4	1	4	4	10	10	8	8	13
Hr Total	8	11	6	9	9	8	21	43	40	58	60	58

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	18	9	6	23	6	25	7	4	11	6	2	4
30	16	13	21	28	16	8	5	8	2	7	3	1
45	17	8	14	30	9	15	4	2	14	3	5	4
00	10	8	14	22	20	4	5	4	2	3	7	2
Hr Total	61	38	55	103	51	52	21	18	29	19	17	11

24 Hour Total: 806
 AM Peak Hour begins: 10:15 AM Peak Volume: 68 AM Peak Hour Factor: 0.77
 PM Peak Hour begins: 15:00 PM Peak Volume: 103 PM Peak Hour Factor: 0.86

Southbound Volume

Wednesday, September 25, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	3	4	0	0	0	1	29	6	16	12	15	12
30	0	4	5	0	1	5	30	12	9	21	8	16
45	3	2	0	0	0	6	27	6	9	15	21	14
00	4	1	0	3	4	22	17	14	19	14	8	15
Hr Total	10	11	5	3	5	34	103	38	53	62	52	57

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	20	8	10	22	7	9	5	4	12	13	1	2
30	20	10	20	13	12	13	8	17	4	1	5	6
45	11	10	23	18	9	9	4	3	5	1	7	0
00	15	16	13	13	3	4	6	1	3	5	8	1
Hr Total	66	44	66	66	31	35	23	25	24	20	21	9

24 Hour Total: 863
 AM Peak Hour begins: 5:45 AM Peak Volume: 108 AM Peak Hour Factor: 0.90
 PM Peak Hour begins: 14:15 PM Peak Volume: 78 PM Peak Hour Factor: 0.85

Total Volume for All Lanes

Wednesday, September 25, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	5	6	0	3	3	2	38	12	30	25	25	30
30	0	10	11	2	6	7	31	27	15	32	28	31
45	7	3	0	0	0	7	34	18	19	41	43	26
00	6	3	0	7	5	26	21	24	29	22	16	28
Hr Total	18	22	11	12	14	42	124	81	93	120	112	115

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	38	17	16	45	13	34	12	8	23	19	3	6
30	36	23	41	41	28	21	13	25	6	8	8	7
45	28	18	37	48	18	24	8	5	19	4	12	4
00	25	24	27	35	23	8	11	5	5	8	15	3
Hr Total	127	82	121	169	82	87	44	43	53	39	38	20

24 Hour Total: 1,669
 AM Peak Hour begins: 11:45 AM Peak Volume: 130 AM Peak Hour Factor: 0.86
 PM Peak Hour begins: 15:00 PM Peak Volume: 169 PM Peak Hour Factor: 0.88

Volume Count Report

Start Date: September 26, 2019
 Stop Date: September 26, 2019
 City: Tampa
 Location: Nebraska Ave south of Whiting St

Start Time: 00:00
 Stop Time: 24:00
 County: Hillsborough

Northbound Volume

Thursday, September 26, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	3	9	7	2	1	1	3	7	25	12	5	19
30	0	0	5	0	5	2	3	14	2	2	14	19
45	5	0	0	3	0	4	25	17	3	13	15	12
00	1	0	0	3	2	4	9	25	10	12	14	10
Hr Total	9	9	12	8	8	11	40	63	40	39	48	60

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	19	23	14	19	17	5	9	10	15	5	5	6
30	18	13	20	28	17	17	6	7	7	9	4	9
45	12	9	11	24	21	14	7	11	7	12	14	1
00	20	9	18	16	17	5	7	9	5	8	12	3
Hr Total	69	54	63	87	72	41	29	37	34	34	35	19

24 Hour Total: 921
 AM Peak Hour begins: 7:15 AM Peak Volume: 81 AM Peak Hour Factor: 0.81
 PM Peak Hour begins: 14:45 PM Peak Volume: 89 PM Peak Hour Factor: 0.79

Southbound Volume

Thursday, September 26, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	3	11	2	4	7	0	32	11	21	11	26	18
30	0	2	10	0	1	6	21	20	8	27	20	14
45	0	0	0	1	3	7	45	11	19	22	12	17
00	0	1	3	0	1	19	25	16	12	4	14	4
Hr Total	3	14	15	5	12	32	123	58	60	64	72	53

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	18	25	31	16	11	9	6	7	11	4	8	6
30	27	10	8	11	1	10	4	9	3	10	5	7
45	8	10	12	22	18	7	8	8	1	16	4	2
00	21	13	11	14	16	10	9	3	14	6	6	2
Hr Total	74	58	62	63	46	36	27	27	29	36	23	17

24 Hour Total: 1,009
 AM Peak Hour begins: 6:00 AM Peak Volume: 123 AM Peak Hour Factor: 0.68
 PM Peak Hour begins: 12:15 PM Peak Volume: 81 PM Peak Hour Factor: 0.75

Total Volume for All Lanes

Thursday, September 26, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	6	20	9	6	8	1	35	18	46	23	31	37
30	0	2	15	0	6	8	24	34	10	29	34	33
45	5	0	0	4	3	11	70	28	22	35	27	29
00	1	1	3	3	3	23	34	41	22	16	28	14
Hr Total	12	23	27	13	20	43	163	121	100	103	120	113

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	37	48	45	35	28	14	15	17	26	9	13	12
30	45	23	28	39	18	27	10	16	10	19	9	16
45	20	19	23	46	39	21	15	19	8	28	18	3
00	41	22	29	30	33	15	16	12	19	14	18	5
Hr Total	143	112	125	150	118	77	56	64	63	70	58	36

24 Hour Total: 1,930
 AM Peak Hour begins: 6:00 AM Peak Volume: 163 AM Peak Hour Factor: 0.58
 PM Peak Hour begins: 12:15 PM Peak Volume: 154 PM Peak Hour Factor: 0.80

Volume Count Report 3-Day Average

Start Date: September 24, 2019
 Stop Date: September 26, 2019
 City: Tampa
 Location: Nebraska Ave south of Whiting St

Start Time: 00:00
 Stop Time: 24:00
 County: Hillsborough

Northbound Volume

3-Day Average

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	2	4	2	2	1	1	6	7	18	10	10	21
30	0	2	4	1	3	2	3	13	7	6	15	15
45	3	0	0	1	0	3	13	16	10	18	20	16
00	1	1	0	2	1	3	7	16	12	11	11	13
Hr Total	6	7	6	6	6	9	28	52	47	45	56	64

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	17	14	10	19	14	16	7	7	12	6	3	4
30	16	15	19	29	16	15	8	7	5	8	3	4
45	10	12	13	26	15	12	4	6	10	5	7	4
00	14	8	18	19	17	5	7	7	3	7	8	3
Hr Total	57	49	60	93	61	47	26	26	30	26	20	14

24 Hour Total: 839
 AM Peak Hour begins: 10:15 AM Peak Volume: 67 AM Peak Hour Factor: 0.80
 PM Peak Hour begins: 15:00 PM Peak Volume: 93 PM Peak Hour Factor: 0.80

Southbound Volume

3-Day Average

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	3	6	1	4	4	0	31	10	16	12	18	17
30	6	3	6	0	3	6	25	17	9	22	16	12
45	4	1	2	0	2	8	34	12	17	14	14	20
00	2	3	1	1	2	20	20	15	17	11	13	11
Hr Total	15	13	10	5	10	35	109	54	58	59	61	60

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	19	11	17	19	13	13	6	4	8	10	4	3
30	21	15	15	11	8	10	5	11	5	7	4	4
45	11	9	15	15	11	6	7	5	2	7	6	1
00	15	12	12	12	9	6	8	3	6	5	5	2
Hr Total	66	48	60	56	42	35	25	22	20	29	19	11

24 Hour Total: 922
 AM Peak Hour begins: 5:45 AM Peak Volume: 110 AM Peak Hour Factor: 0.81
 PM Peak Hour begins: 12:00 PM Peak Volume: 66 PM Peak Hour Factor: 0.77

Total Volume for All Lanes

3-Day Average

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	4	9	3	5	5	1	36	17	34	22	28	38
30	6	5	10	1	6	8	28	30	16	28	32	27
45	7	2	2	1	2	11	46	28	28	32	34	35
00	3	4	1	3	3	23	26	31	29	23	23	24
Hr Total	20	19	16	11	16	44	137	106	106	105	116	124

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	35	25	28	37	27	28	12	11	19	16	7	7
30	37	30	34	40	24	25	13	17	10	15	6	8
45	21	21	28	41	26	18	11	11	12	12	14	5
00	29	20	30	31	26	11	15	10	9	12	12	5
Hr Total	123	96	120	149	103	82	51	49	50	55	39	25

24 Hour Total: 1,761
 AM Peak Hour begins: 6:00 AM Peak Volume: 137 AM Peak Hour Factor: 0.74
 PM Peak Hour begins: 15:00 PM Peak Volume: 149 PM Peak Hour Factor: 0.92

Start Time	1	2	Total
0:00	0	0	0
0:15	16	6	22
0:30	0	1	1
0:45	0	2	2
1:00	0	1	1
1:15	0	2	2
1:30	1	2	3
1:45	2	0	2
2:00	0	1	1
2:15	0	5	5
2:30	3	0	3
2:45	1	0	1
3:00	0	0	0
3:15	1	0	1
3:30	0	0	0
3:45	0	0	0
4:00	3	1	4
4:15	0	3	3
4:30	0	1	1
4:45	1	1	2
5:00	0	0	0
5:15	8	2	10
5:30	8	2	10
5:45	10	2	12
6:00	31	10	41
6:15	31	7	38
6:30	33	7	40
6:45	31	13	44
7:00	31	15	46
7:15	55	25	80
7:30	56	50	106
7:45	72	39	111
8:00	29	40	69
8:15	19	43	62
8:30	30	17	47
8:45	28	25	53
9:00	29	8	37
9:15	14	5	19
9:30	22	10	32
9:45	21	9	30
10:00	11	9	20
10:15	22	7	29
10:30	20	14	34
10:45	7	4	11
11:00	13	14	27
11:15	12	12	24
11:30	12	11	23
11:45	22	18	40
12:00	23	18	41
12:15	15	14	29
12:30	15	7	22
12:45	16	17	33
13:00	9	16	25
13:15	24	12	36
13:30	16	11	27
13:45	13	11	24
14:00	7	10	17
14:15	26	16	42
14:30	13	13	26
14:45	27	32	59
15:00	46	59	105
15:15	17	24	41
15:30	6	31	37
15:45	9	25	34
16:00	24	38	62
16:15	19	25	44
16:30	11	32	43
16:45	16	22	38
17:00	28	26	54
17:15	20	24	44
17:30	16	21	37
17:45	8	8	16
18:00	6	11	17
18:15	4	7	11
18:30	7	3	10
18:45	3	3	6
19:00	2	9	11
19:15	1	8	9
19:30	7	2	9
19:45	1	4	5
20:00	4	7	11
20:15	7	2	9
20:30	1	3	4
20:45	2	1	3
21:00	5	1	6
21:15	3	1	4
21:30	5	5	10
21:45	8	2	10
22:00	0	2	2
22:15	1	2	3
22:30	2	1	3
22:45	2	5	7
23:00	2	2	4
23:15	1	0	1
23:30	0	6	6
23:45	5	0	5

Start Date	September 24, 2019	
End Date	September 25, 2019	
Location	Whiting St east of Jefferson St	
City	Tampa	
County	Hillsborough	
Lane 1	EB	
Lane 2	WB	

Start Time	1	2	Total
0:00	0	1	1
0:15	5	0	5
0:30	0	0	0
0:45	4	1	5
1:00	0	0	0
1:15	0	0	0
1:30	4	0	4
1:45	0	0	0
2:00	0	0	0
2:15	1	0	1
2:30	0	0	0
2:45	1	0	1
3:00	0	0	0
3:15	0	4	4
3:30	0	0	0
3:45	4	0	4
4:00	0	1	1
4:15	5	4	9
4:30	3	0	3
4:45	7	2	9
5:00	2	0	2
5:15	4	2	6
5:30	4	1	5
5:45	21	6	27
6:00	25	6	31
6:15	42	7	49
6:30	23	7	30
6:45	29	14	43
7:00	21	11	32
7:15	54	28	82
7:30	53	46	99
7:45	60	40	100
8:00	40	48	88
8:15	33	51	84
8:30	26	28	54
8:45	38	26	64
9:00	18	8	26
9:15	18	13	31
9:30	21	14	35
9:45	20	19	39
10:00	23	10	33
10:15	7	5	12
10:30	15	14	29
10:45	0	29	29
11:00	1	24	25
11:15	14	21	35
11:30	24	14	38
11:45	19	18	37
12:00	19	17	36
12:15	14	10	24
12:30	20	15	35
12:45	15	6	21
13:00	10	10	20
13:15	12	9	21
13:30	14	6	20
13:45	17	14	31
14:00	11	11	22
14:15	8	12	20
14:30	27	24	51
14:45	34	14	48
15:00	32	48	80
15:15	23	26	49
15:30	21	35	56
15:45	19	37	56
16:00	9	30	39
16:15	17	15	32
16:30	11	30	41
16:45	24	28	52
17:00	19	21	40
17:15	21	23	44
17:30	16	21	37
17:45	10	4	14
18:00	11	8	19
18:15	4	10	14
18:30	2	5	7
18:45	10	0	10
19:00	8	1	9
19:15	4	6	10
19:30	4	0	4
19:45	2	0	2
20:00	0	6	6
20:15	2	0	2
20:30	7	5	12
20:45	1	2	3
21:00	6	2	8
21:15	0	8	8
21:30	1	0	1
21:45	0	1	1
22:00	0	1	1
22:15	4	5	9
22:30	5	0	5
22:45	4	1	5
23:00	1	3	4
23:15	0	1	1
23:30	4	1	5
23:45	0	0	0

Start Date	September 25, 2019
End Date	September 26, 2019

Station	
ID	
Location	Whiting St east of Jefferson St

City	Tampa
County	Hillsborough
Lane 1	EB
Lane 2	WB

Start Time	1	2	Total
0:00	4	6	10
0:15	4	0	4
0:30	1	0	1
0:45	0	1	1
1:00	0	0	0
1:15	3	0	3
1:30	0	0	0
1:45	3	1	4
2:00	4	0	4
2:15	5	1	6
2:30	6	0	6
2:45	1	0	1
3:00	4	0	4
3:15	1	0	1
3:30	1	0	1
3:45	0	2	2
4:00	1	0	1
4:15	1	8	9
4:30	3	0	3
4:45	8	2	10
5:00	1	0	1
5:15	10	1	11
5:30	4	2	6
5:45	18	1	19
6:00	31	4	35
6:15	34	7	41
6:30	30	11	41
6:45	32	9	41
7:00	29	13	42
7:15	63	30	93
7:30	67	49	116
7:45	50	43	93
8:00	40	45	85
8:15	19	42	61
8:30	43	25	68
8:45	23	29	52
9:00	33	17	50
9:15	35	10	45
9:30	30	8	38
9:45	7	14	21
10:00	23	7	30
10:15	20	15	35
10:30	12	9	21
10:45	15	9	24
11:00	9	7	16
11:15	13	9	22
11:30	22	23	45
11:45	8	14	22
12:00	23	12	35
12:15	37	24	61
12:30	16	17	33
12:45	21	23	44
13:00	31	15	46
13:15	12	22	34
13:30	14	7	21
13:45	14	11	25
14:00	33	9	42
14:15	10	13	23
14:30	27	14	41
14:45	35	27	62
15:00	42	42	84
15:15	26	29	55
15:30	29	30	59
15:45	30	26	56
16:00	25	41	66
16:15	22	22	44
16:30	28	33	61
16:45	35	25	60
17:00	36	33	69
17:15	34	38	72
17:30	22	22	44
17:45	10	15	25
18:00	9	15	24
18:15	14	11	25
18:30	9	6	15
18:45	9	7	16
19:00	13	11	24
19:15	11	13	24
19:30	15	5	20
19:45	17	10	27
20:00	13	2	15
20:15	10	1	11
20:30	7	3	10
20:45	7	3	10
21:00	2	6	8
21:15	6	7	13
21:30	9	5	14
21:45	3	2	5
22:00	4	7	11
22:15	4	14	18
22:30	34	46	80
22:45	13	18	31
23:00	4	18	22
23:15	5	29	34
23:30	1	10	11
23:45	3	7	10

Start Date	September 26, 2019
End Date	September 27, 2019

Station	
ID	
Location	Whiting St east of Jefferson St

City	Tampa
County	Hillsborough
Lane 1	EB
Lane 2	WB

Volume Count Report

Start Date: September 24, 2019
 Stop Date: September 24, 2019
 City: Tampa
 Location: Whiting St east of Jefferson St

Start Time: 00:00
 Stop Time: 24:00
 County: Hillsborough

Eastbound Volume

Tuesday, September 24, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	0	0	0	0	3	0	31	31	29	29	11	13
30	16	0	0	1	0	8	31	55	19	14	22	12
45	0	1	3	0	0	8	33	56	30	22	20	12
00	0	2	1	0	1	10	31	72	28	21	7	22
Hr Total	16	3	4	1	4	26	126	214	106	86	60	59

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	23	9	7	46	24	28	6	2	4	5	0	2
30	15	24	26	17	19	20	4	1	7	3	1	1
45	15	16	13	6	11	16	7	7	1	5	2	0
00	16	13	27	9	16	8	3	1	2	8	2	5
Hr Total	69	62	73	78	70	72	20	11	14	21	5	8

24 Hour Total: 1,208
 AM Peak Hour begins: 7:00 AM Peak Volume: 214 AM Peak Hour Factor: 0.74
 PM Peak Hour begins: 14:15 PM Peak Volume: 112 PM Peak Hour Factor: 0.61

Westbound Volume

Tuesday, September 24, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	0	1	1	0	1	0	10	15	40	8	9	14
30	6	2	5	0	3	2	7	25	43	5	7	12
45	1	2	0	0	1	2	7	50	17	10	14	11
00	2	0	0	0	1	2	13	39	25	9	4	18
Hr Total	9	5	6	0	6	6	37	129	125	32	34	55

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	18	16	10	59	38	26	11	9	7	1	2	2
30	14	12	16	24	25	24	7	8	2	1	2	0
45	7	11	13	31	32	21	3	2	3	5	1	6
00	17	11	32	25	22	8	3	4	1	2	5	0
Hr Total	56	50	71	139	117	79	24	23	13	9	10	8

24 Hour Total: 1,043
 AM Peak Hour begins: 7:30 AM Peak Volume: 172 AM Peak Hour Factor: 0.86
 PM Peak Hour begins: 14:45 PM Peak Volume: 146 PM Peak Hour Factor: 0.62

Total Volume for All Lanes

Tuesday, September 24, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	0	1	1	0	4	0	41	46	69	37	20	27
30	22	2	5	1	3	10	38	80	62	19	29	24
45	1	3	3	0	1	10	40	106	47	32	34	23
00	2	2	1	0	2	12	44	111	53	30	11	40
Hr Total	25	8	10	1	10	32	163	343	231	118	94	114

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	41	25	17	105	62	54	17	11	11	6	2	4
30	29	36	42	41	44	44	11	9	9	4	3	1
45	22	27	26	37	43	37	10	9	4	10	3	6
00	33	24	59	34	38	16	6	5	3	10	7	5
Hr Total	125	112	144	217	187	151	44	34	27	30	15	16

24 Hour Total: 2,251
 AM Peak Hour begins: 7:15 AM Peak Volume: 366 AM Peak Hour Factor: 0.82
 PM Peak Hour begins: 14:45 PM Peak Volume: 242 PM Peak Hour Factor: 0.58

Volume Count Report

Start Date: September 25, 2019
 Stop Date: September 25, 2019
 City: Tampa
 Location: Whiting St east of Jefferson St

Start Time: 00:00
 Stop Time: 24:00
 County: Hillsborough

Eastbound Volume

Wednesday, September 25, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	0	0	0	0	0	2	25	21	40	18	23	1
30	5	0	1	0	5	4	42	54	33	18	7	14
45	0	4	0	0	3	4	23	53	26	21	15	24
00	4	0	1	4	7	21	29	60	38	20	0	19
Hr Total	9	4	2	4	15	31	119	188	137	77	45	58

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	19	10	11	32	9	19	11	8	0	6	0	1
30	14	12	8	23	17	21	4	4	2	0	4	0
45	20	14	27	21	11	16	2	4	7	1	5	4
00	15	17	34	19	24	10	10	2	1	0	4	0
Hr Total	68	53	80	95	61	66	27	18	10	7	13	5

24 Hour Total: 1,192
 AM Peak Hour begins: 7:15 AM Peak Volume: 207 AM Peak Hour Factor: 0.86
 PM Peak Hour begins: 14:30 PM Peak Volume: 116 PM Peak Hour Factor: 0.85

Westbound Volume

Wednesday, September 25, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	1	0	0	0	1	0	6	11	48	8	10	24
30	0	0	0	4	4	2	7	28	51	13	5	21
45	0	0	0	0	0	1	7	46	28	14	14	14
00	1	0	0	0	2	6	14	40	26	19	29	18
Hr Total	2	0	0	4	7	9	34	125	153	54	58	77

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	17	10	11	48	30	21	8	1	6	2	1	3
30	10	9	12	26	15	23	10	6	0	8	5	1
45	15	6	24	35	30	21	5	0	5	0	0	1
00	6	14	14	37	28	4	0	0	2	1	1	0
Hr Total	48	39	61	146	103	69	23	7	13	11	7	5

24 Hour Total: 1,055
 AM Peak Hour begins: 7:30 AM Peak Volume: 185 AM Peak Hour Factor: 0.91
 PM Peak Hour begins: 15:00 PM Peak Volume: 146 PM Peak Hour Factor: 0.76

Total Volume for All Lanes

Wednesday, September 25, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	1	0	0	0	1	2	31	32	88	26	33	25
30	5	0	1	4	9	6	49	82	84	31	12	35
45	0	4	0	0	3	5	30	99	54	35	29	38
00	5	0	1	4	9	27	43	100	64	39	29	37
Hr Total	11	4	2	8	22	40	153	313	290	131	103	135

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	36	20	22	80	39	40	19	9	6	8	1	4
30	24	21	20	49	32	44	14	10	2	8	9	1
45	35	20	51	56	41	37	7	4	12	1	5	5
00	21	31	48	56	52	14	10	2	3	1	5	0
Hr Total	116	92	141	241	164	135	50	25	23	18	20	10

24 Hour Total: 2,247
 AM Peak Hour begins: 7:30 AM Peak Volume: 371 AM Peak Hour Factor: 0.93
 PM Peak Hour begins: 15:00 PM Peak Volume: 241 PM Peak Hour Factor: 0.75

Volume Count Report

Start Date: September 26, 2019
 Stop Date: September 26, 2019
 City: Tampa
 Location: Whiting St east of Jefferson St

Start Time: 00:00
 Stop Time: 24:00
 County: Hillsborough

Eastbound Volume

Thursday, September 26, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	4	0	4	4	1	1	31	29	40	33	23	9
30	4	3	5	1	1	10	34	63	19	35	20	13
45	1	0	6	1	3	4	30	67	43	30	12	22
00	0	3	1	0	8	18	32	50	23	7	15	8
Hr Total	9	6	16	6	13	33	127	209	125	105	70	52

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	23	31	33	42	25	36	9	13	13	2	4	4
30	37	12	10	26	22	34	14	11	10	6	4	5
45	16	14	27	29	28	22	9	15	7	9	34	1
00	21	14	35	30	35	10	9	17	7	3	13	3
Hr Total	97	71	105	127	110	102	41	56	37	20	55	13

24 Hour Total: 1,605
 AM Peak Hour begins: 7:15 AM Peak Volume: 220 AM Peak Hour Factor: 0.82
 PM Peak Hour begins: 16:30 PM Peak Volume: 133 PM Peak Hour Factor: 0.92

Westbound Volume

Thursday, September 26, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	6	0	0	0	0	0	4	13	45	17	7	7
30	0	0	1	0	8	1	7	30	42	10	15	9
45	0	0	0	0	0	2	11	49	25	8	9	23
00	1	1	0	2	2	1	9	43	29	14	9	14
Hr Total	7	1	1	2	10	4	31	135	141	49	40	53

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	12	15	9	42	41	33	15	11	2	6	7	18
30	24	22	13	29	22	38	11	13	1	7	14	29
45	17	7	14	30	33	22	6	5	3	5	46	10
00	23	11	27	26	25	15	7	10	3	2	18	7
Hr Total	76	55	63	127	121	108	39	39	9	20	85	64

24 Hour Total: 1,280
 AM Peak Hour begins: 7:30 AM Peak Volume: 179 AM Peak Hour Factor: 0.91
 PM Peak Hour begins: 16:30 PM Peak Volume: 129 PM Peak Hour Factor: 0.85

Total Volume for All Lanes

Thursday, September 26, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	10	0	4	4	1	1	35	42	85	50	30	16
30	4	3	6	1	9	11	41	93	61	45	35	22
45	1	0	6	1	3	6	41	116	68	38	21	45
00	1	4	1	2	10	19	41	93	52	21	24	22
Hr Total	16	7	17	8	23	37	158	344	266	154	110	105

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	35	46	42	84	66	69	24	24	15	8	11	22
30	61	34	23	55	44	72	25	24	11	13	18	34
45	33	21	41	59	61	44	15	20	10	14	80	11
00	44	25	62	56	60	25	16	27	10	5	31	10
Hr Total	173	126	168	254	231	210	80	95	46	40	140	77

24 Hour Total: 2,885
 AM Peak Hour begins: 7:15 AM Peak Volume: 387 AM Peak Hour Factor: 0.83
 PM Peak Hour begins: 16:30 PM Peak Volume: 262 PM Peak Hour Factor: 0.91

Volume Count Report

3-Day Average

Start Date: September 24, 2019
 Stop Date: September 26, 2019
 City: Tampa
 Location: Whiting St east of Jefferson St

Start Time: 00:00
 Stop Time: 24:00
 County: Hillsborough

Eastbound Volume

3-Day Average

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	1	0	1	1	1	1	29	27	36	27	19	8
30	8	1	2	1	2	7	36	57	24	22	16	13
45	0	2	3	0	2	5	29	59	33	24	16	19
00	1	2	1	1	5	16	31	61	30	16	7	16
Hr Total	11	4	7	4	11	30	124	204	123	89	58	56

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	22	17	17	40	19	28	9	8	6	4	1	2
30	22	16	15	22	19	25	7	5	6	3	3	2
45	17	15	22	19	17	18	6	9	5	5	14	2
00	17	15	32	19	25	9	7	7	3	4	6	3
Hr Total	78	62	86	100	80	80	29	28	20	16	24	9

24 Hour Total: 1,335
 AM Peak Hour begins: 7:15 AM Peak Volume: 213 AM Peak Hour Factor: 0.88
 PM Peak Hour begins: 14:30 PM Peak Volume: 116 PM Peak Hour Factor: 0.73

Westbound Volume

3-Day Average

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	2	0	0	0	1	0	7	13	44	11	9	15
30	2	1	2	1	5	2	7	28	45	9	9	14
45	0	1	0	0	0	2	8	48	23	11	12	16
00	1	0	0	1	2	3	12	41	27	14	14	17
Hr Total	6	2	2	2	8	6	34	130	140	45	44	62

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	16	14	10	50	36	27	11	7	5	3	3	8
30	16	14	14	26	21	28	9	9	1	5	7	10
45	13	8	17	32	32	21	5	2	4	3	16	6
00	15	12	24	29	25	9	3	5	2	2	8	2
Hr Total	60	48	65	137	114	85	29	23	12	13	34	26

24 Hour Total: 1,126
 AM Peak Hour begins: 7:30 AM Peak Volume: 179 AM Peak Hour Factor: 0.92
 PM Peak Hour begins: 15:00 PM Peak Volume: 137 PM Peak Hour Factor: 0.69

Total Volume for All Lanes

3-Day Average

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	4	0	2	1	2	1	36	40	81	38	28	23
30	10	2	4	2	7	9	43	85	69	32	25	27
45	1	2	3	0	2	7	37	107	56	35	28	35
00	3	2	1	2	7	19	43	101	56	30	21	33
Hr Total	17	6	10	6	18	36	158	333	262	134	102	118

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	37	30	27	90	56	54	20	15	11	7	5	10
30	38	30	28	48	40	53	17	14	7	8	10	12
45	30	23	39	51	48	39	11	11	9	8	29	7
00	33	27	56	49	50	18	11	11	5	5	14	5
Hr Total	138	110	151	237	194	165	58	51	32	29	58	34

24 Hour Total: 2,461
 AM Peak Hour begins: 7:15 AM Peak Volume: 374 AM Peak Hour Factor: 0.87
 PM Peak Hour begins: 14:45 PM Peak Volume: 245 PM Peak Hour Factor: 0.68

Start Time	1	2	Total
0:00	1	1	2
0:15	0	0	0
0:30	1	0	1
0:45	2	0	2
1:00	1	5	6
1:15	1	0	1
1:30	0	1	1
1:45	1	2	3
2:00	2	1	3
2:15	0	0	0
2:30	0	0	0
2:45	0	0	0
3:00	0	0	0
3:15	0	1	1
3:30	0	0	0
3:45	0	0	0
4:00	0	1	1
4:15	0	0	0
4:30	0	1	1
4:45	2	0	2
5:00	0	2	2
5:15	0	1	1
5:30	0	3	3
5:45	2	3	5
6:00	3	9	12
6:15	5	7	12
6:30	4	6	10
6:45	4	6	10
7:00	2	9	11
7:15	3	16	19
7:30	9	18	27
7:45	8	13	21
8:00	15	19	34
8:15	6	13	19
8:30	13	19	32
8:45	17	11	28
9:00	11	11	22
9:15	12	12	24
9:30	16	8	24
9:45	10	8	18
10:00	12	10	22
10:15	7	11	18
10:30	4	13	17
10:45	10	14	24
11:00	11	14	25
11:15	9	16	25
11:30	10	15	25
11:45	13	13	26
12:00	11	13	24
12:15	9	7	16
12:30	11	7	18
12:45	7	9	16
13:00	16	13	29
13:15	13	14	27
13:30	12	12	24
13:45	15	16	31
14:00	7	11	18
14:15	13	17	30
14:30	8	16	24
14:45	9	14	23
15:00	7	10	17
15:15	5	11	16
15:30	11	12	23
15:45	9	8	17
16:00	17	14	31
16:15	18	9	27
16:30	6	15	21
16:45	15	19	34
17:00	9	19	28
17:15	17	10	27
17:30	14	14	28
17:45	12	21	33
18:00	21	17	38
18:15	22	14	36
18:30	12	14	26
18:45	14	12	26
19:00	24	11	35
19:15	11	16	27
19:30	12	9	21
19:45	27	5	32
20:00	14	12	26
20:15	8	5	13
20:30	16	6	22
20:45	10	4	14
21:00	8	7	15
21:15	8	4	12
21:30	8	3	11
21:45	4	3	7
22:00	8	9	17
22:15	4	1	5
22:30	5	3	8
22:45	3	1	4
23:00	0	5	5
23:15	1	8	9
23:30	2	7	9
23:45	0	5	5

Start Date	September 10, 2019	
End Date	September 11, 2019	
Location	Whiting St east of Meridian Ave	
City	Tampa	
County	Hillsborough	
Lane 1	EB	
Lane 2	WB	

Start Time	1	2	Total
0:00	4	4	8
0:15	0	1	1
0:30	1	3	4
0:45	0	1	1
1:00	1	0	1
1:15	0	2	2
1:30	1	0	1
1:45	2	1	3
2:00	0	0	0
2:15	1	1	2
2:30	3	0	3
2:45	0	0	0
3:00	0	1	1
3:15	0	0	0
3:30	1	1	2
3:45	0	0	0
4:00	0	1	1
4:15	0	1	1
4:30	1	0	1
4:45	0	1	1
5:00	1	0	1
5:15	2	3	5
5:30	0	2	2
5:45	1	9	10
6:00	4	6	10
6:15	3	8	11
6:30	2	3	5
6:45	5	8	13
7:00	3	13	16
7:15	15	19	34
7:30	8	20	28
7:45	15	10	25
8:00	7	17	24
8:15	12	20	32
8:30	16	15	31
8:45	15	13	28
9:00	14	5	19
9:15	11	10	21
9:30	12	10	22
9:45	9	6	15
10:00	11	13	24
10:15	5	12	17
10:30	13	11	24
10:45	5	12	17
11:00	6	10	16
11:15	14	9	23
11:30	15	12	27
11:45	8	15	23
12:00	10	15	25
12:15	20	13	33
12:30	24	13	37
12:45	9	15	24
13:00	10	11	21
13:15	7	14	21
13:30	10	10	20
13:45	12	9	21
14:00	10	14	24
14:15	8	16	24
14:30	17	8	25
14:45	12	10	22
15:00	8	16	24
15:15	11	16	27
15:30	11	10	21
15:45	17	10	27
16:00	19	10	29
16:15	24	12	36
16:30	13	28	41
16:45	18	15	33
17:00	12	15	27
17:15	30	22	52
17:30	21	18	39
17:45	22	10	32
18:00	19	16	35
18:15	22	16	38
18:30	20	12	32
18:45	15	12	27
19:00	15	8	23
19:15	12	11	23
19:30	16	11	27
19:45	13	8	21
20:00	11	8	19
20:15	6	5	11
20:30	9	8	17
20:45	10	10	20
21:00	6	8	14
21:15	10	6	16
21:30	8	5	13
21:45	5	8	13
22:00	0	8	8
22:15	4	3	7
22:30	2	3	5
22:45	4	2	6
23:00	3	5	8
23:15	1	1	2
23:30	3	0	3
23:45	2	2	4

Start Date	September 11, 2019
End Date	September 12, 2019

Station	
ID	
Location	Whiting St east of Meridian Ave

City	Tampa
County	Hillsborough
Lane 1	EB
Lane 2	WB

Start Time	1	2	Total
0:00	3	4	7
0:15	2	1	3
0:30	2	2	4
0:45	0	2	2
1:00	1	5	6
1:15	0	2	2
1:30	0	2	2
1:45	0	1	1
2:00	0	2	2
2:15	0	1	1
2:30	2	0	2
2:45	0	3	3
3:00	0	1	1
3:15	0	0	0
3:30	0	0	0
3:45	1	1	2
4:00	0	1	1
4:15	0	1	1
4:30	0	1	1
4:45	0	1	1
5:00	2	1	3
5:15	0	1	1
5:30	2	3	5
5:45	2	7	9
6:00	2	7	9
6:15	5	3	8
6:30	3	5	8
6:45	4	6	10
7:00	7	8	15
7:15	10	13	23
7:30	8	14	22
7:45	18	19	37
8:00	17	19	36
8:15	13	15	28
8:30	11	12	23
8:45	15	14	29
9:00	5	14	19
9:15	13	9	22
9:30	8	15	23
9:45	10	11	21
10:00	10	11	21
10:15	6	8	14
10:30	6	9	15
10:45	6	9	15
11:00	7	14	21
11:15	11	16	27
11:30	16	18	34
11:45	10	11	21
12:00	14	12	26
12:15	12	14	26
12:30	15	12	27
12:45	8	8	16
13:00	13	13	26
13:15	14	12	26
13:30	8	15	23
13:45	10	14	24
14:00	12	8	20
14:15	14	12	26
14:30	12	14	26
14:45	8	11	19
15:00	13	8	21
15:15	11	18	29
15:30	12	13	25
15:45	20	12	32
16:00	14	14	28
16:15	13	14	27
16:30	18	14	32
16:45	18	15	33
17:00	23	15	38
17:15	17	13	30
17:30	29	16	45
17:45	21	13	34
18:00	15	11	26
18:15	18	20	38
18:30	25	15	40
18:45	15	12	27
19:00	19	12	31
19:15	15	13	28
19:30	16	19	35
19:45	24	12	36
20:00	17	13	30
20:15	15	9	24
20:30	9	10	19
20:45	7	6	13
21:00	12	3	15
21:15	5	11	16
21:30	2	3	5
21:45	8	5	13
22:00	11	4	15
22:15	4	8	12
22:30	10	9	19
22:45	3	4	7
23:00	3	3	6
23:15	1	4	5
23:30	6	7	13
23:45	3	4	7

Start Date	September 12, 2019
End Date	September 13, 2019

Station	
ID	
Location	Whiting St east of Meridian Ave

City	Tampa
County	Hillsborough
Lane 1	EB
Lane 2	WB

Volume Count Report

Start Date: September 10, 2019
 Stop Date: September 10, 2019
 City: Tampa
 Location: Whiting St east of Meridian Ave

Start Time: 00:00
 Stop Time: 24:00
 County: Hillsborough

Eastbound Volume

Tuesday, September 10, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	1	1	2	0	0	0	3	2	15	11	12	11
30	0	1	0	0	0	0	5	3	6	12	7	9
45	1	0	0	0	0	0	4	9	13	16	4	10
00	2	1	0	0	2	2	4	8	17	10	10	13
Hr Total	4	3	2	0	2	2	16	22	51	49	33	43

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	11	16	7	7	17	9	21	24	14	8	8	0
30	9	13	13	5	18	17	22	11	8	8	4	1
45	11	12	8	11	6	14	12	12	16	8	5	2
00	7	15	9	9	15	12	14	27	10	4	3	0
Hr Total	38	56	37	32	56	52	69	74	48	28	20	3

24 Hour Total: 740
 AM Peak Hour begins: 8:45 AM Peak Volume: 56 AM Peak Hour Factor: 0.82
 PM Peak Hour begins: 19:00 PM Peak Volume: 74 PM Peak Hour Factor: 0.69

Westbound Volume

Tuesday, September 10, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	1	5	1	0	1	2	9	9	19	11	10	14
30	0	0	0	1	0	1	7	16	13	12	11	16
45	0	1	0	0	1	3	6	18	19	8	13	15
00	0	2	0	0	0	3	6	13	11	8	14	13
Hr Total	1	8	1	1	2	9	28	56	62	39	48	58

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	13	13	11	10	14	19	17	11	12	7	9	5
30	7	14	17	11	9	10	14	16	5	4	1	8
45	7	12	16	12	15	14	14	9	6	3	3	7
00	9	16	14	8	19	21	12	5	4	3	1	5
Hr Total	36	55	58	41	57	64	57	41	27	17	14	25

24 Hour Total: 805
 AM Peak Hour begins: 7:15 AM Peak Volume: 66 AM Peak Hour Factor: 0.87
 PM Peak Hour begins: 17:30 PM Peak Volume: 66 PM Peak Hour Factor: 0.79

Total Volume for All Lanes

Tuesday, September 10, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	2	6	3	0	1	2	12	11	34	22	22	25
30	0	1	0	1	0	1	12	19	19	24	18	25
45	1	1	0	0	1	3	10	27	32	24	17	25
00	2	3	0	0	2	5	10	21	28	18	24	26
Hr Total	5	11	3	1	4	11	44	78	113	88	81	101

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	24	29	18	17	31	28	38	35	26	15	17	5
30	16	27	30	16	27	27	36	27	13	12	5	9
45	18	24	24	23	21	28	26	21	22	11	8	9
00	16	31	23	17	34	33	26	32	14	7	4	5
Hr Total	74	111	95	73	113	116	126	115	75	45	34	28

24 Hour Total: 1,545
 AM Peak Hour begins: 8:00 AM Peak Volume: 113 AM Peak Hour Factor: 0.83
 PM Peak Hour begins: 17:30 PM Peak Volume: 135 PM Peak Hour Factor: 0.89

Volume Count Report

Start Date: September 11, 2019
 Stop Date: September 11, 2019
 City: Tampa
 Location: Whiting St east of Meridian Ave

Start Time: 00:00
 Stop Time: 24:00
 County: Hillsborough

Eastbound Volume

Wednesday, September 11, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	4	1	0	0	0	1	4	3	7	14	11	6
30	0	0	1	0	0	2	3	15	12	11	5	14
45	1	1	3	1	1	0	2	8	16	12	13	15
00	0	2	0	0	0	1	5	15	15	9	5	8
Hr Total	5	4	4	1	1	4	14	41	50	46	34	43

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	10	10	10	8	19	12	19	15	11	6	0	3
30	20	7	8	11	24	30	22	12	6	10	4	1
45	24	10	17	11	13	21	20	16	9	8	2	3
00	9	12	12	17	18	22	15	13	10	5	4	2
Hr Total	63	39	47	47	74	85	76	56	36	29	10	9

24 Hour Total: 818
 AM Peak Hour begins: 8:15 AM Peak Volume: 57 AM Peak Hour Factor: 0.89
 PM Peak Hour begins: 17:15 PM Peak Volume: 92 PM Peak Hour Factor: 0.77

Westbound Volume

Wednesday, September 11, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	4	0	0	1	1	0	6	13	17	5	13	10
30	1	2	1	0	1	3	8	19	20	10	12	9
45	3	0	0	1	0	2	3	20	15	10	11	12
00	1	1	0	0	1	9	8	10	13	6	12	15
Hr Total	9	3	1	2	3	14	25	62	65	31	48	46

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	15	11	14	16	10	15	16	8	8	8	8	5
30	13	14	16	16	12	22	16	11	5	6	3	1
45	13	10	8	10	28	18	12	11	8	5	3	0
00	15	9	10	10	15	10	12	8	10	8	2	2
Hr Total	56	44	48	52	65	65	56	38	31	27	16	8

24 Hour Total: 815
 AM Peak Hour begins: 7:30 AM Peak Volume: 67 AM Peak Hour Factor: 0.84
 PM Peak Hour begins: 16:30 PM Peak Volume: 80 PM Peak Hour Factor: 0.71

Total Volume for All Lanes

Wednesday, September 11, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	8	1	0	1	1	1	10	16	24	19	24	16
30	1	2	2	0	1	5	11	34	32	21	17	23
45	4	1	3	2	1	2	5	28	31	22	24	27
00	1	3	0	0	1	10	13	25	28	15	17	23
Hr Total	14	7	5	3	4	18	39	103	115	77	82	89

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	25	21	24	24	29	27	35	23	19	14	8	8
30	33	21	24	27	36	52	38	23	11	16	7	2
45	37	20	25	21	41	39	32	27	17	13	5	3
00	24	21	22	27	33	32	27	21	20	13	6	4
Hr Total	119	83	95	99	139	150	132	94	67	56	26	17

24 Hour Total: 1,633
 AM Peak Hour begins: 8:00 AM Peak Volume: 115 AM Peak Hour Factor: 0.90
 PM Peak Hour begins: 17:15 PM Peak Volume: 158 PM Peak Hour Factor: 0.76

Volume Count Report

Start Date: September 12, 2019
 Stop Date: September 12, 2019
 City: Tampa
 Location: Whiting St east of Meridian Ave

Start Time: 00:00
 Stop Time: 24:00
 County: Hillsborough

Eastbound Volume

Thursday, September 12, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	3	1	0	0	0	2	2	7	17	5	10	7
30	2	0	0	0	0	0	5	10	13	13	6	11
45	2	0	2	0	0	2	3	8	11	8	6	16
00	0	0	0	1	0	2	4	18	15	10	6	10
Hr Total	7	1	2	1	0	6	14	43	56	36	28	44

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	14	13	12	13	14	23	15	19	17	12	11	3
30	12	14	14	11	13	17	18	15	15	5	4	1
45	15	8	12	12	18	29	25	16	9	2	10	6
00	8	10	8	20	18	21	15	24	7	8	3	3
Hr Total	49	45	46	56	63	90	73	74	48	27	28	13

24 Hour Total: 850
 AM Peak Hour begins: 7:45 AM Peak Volume: 59 AM Peak Hour Factor: 0.82
 PM Peak Hour begins: 17:00 PM Peak Volume: 90 PM Peak Hour Factor: 0.78

Westbound Volume

Thursday, September 12, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	4	5	2	1	1	1	7	8	19	14	11	14
30	1	2	1	0	1	1	3	13	15	9	8	16
45	2	2	0	0	1	3	5	14	12	15	9	18
00	2	1	3	1	1	7	6	19	14	11	9	11
Hr Total	9	10	6	2	4	12	21	54	60	49	37	59

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	12	13	8	8	14	15	11	12	13	3	4	3
30	14	12	12	18	14	13	20	13	9	11	8	4
45	12	15	14	13	14	16	15	19	10	3	9	7
00	8	14	11	12	15	13	12	12	6	5	4	4
Hr Total	46	54	45	51	57	57	58	56	38	22	25	18

24 Hour Total: 850
 AM Peak Hour begins: 7:30 AM Peak Volume: 67 AM Peak Hour Factor: 0.88
 PM Peak Hour begins: 17:30 PM Peak Volume: 60 PM Peak Hour Factor: 0.75

Total Volume for All Lanes

Thursday, September 12, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	7	6	2	1	1	3	9	15	36	19	21	21
30	3	2	1	0	1	1	8	23	28	22	14	27
45	4	2	2	0	1	5	8	22	23	23	15	34
00	2	1	3	2	1	9	10	37	29	21	15	21
Hr Total	16	11	8	3	4	18	35	97	116	85	65	103

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	26	26	20	21	28	38	26	31	30	15	15	6
30	26	26	26	29	27	30	38	28	24	16	12	5
45	27	23	26	25	32	45	40	35	19	5	19	13
00	16	24	19	32	33	34	27	36	13	13	7	7
Hr Total	95	99	91	107	120	147	131	130	86	49	53	31

24 Hour Total: 1,700
 AM Peak Hour begins: 7:45 AM Peak Volume: 124 AM Peak Hour Factor: 0.84
 PM Peak Hour begins: 17:00 PM Peak Volume: 147 PM Peak Hour Factor: 0.82

Volume Count Report

3-Day Average

Start Date: September 10, 2019
 Stop Date: September 12, 2019
 City: Tampa
 Location: Whiting St east of Meridian Ave

Start Time: 00:00
 Stop Time: 24:00
 County: Hillsborough

Eastbound Volume

3-Day Average

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	3	1	1	0	0	1	3	4	13	10	11	8
30	1	0	0	0	0	1	4	9	10	12	6	11
45	1	0	2	0	0	1	3	8	13	12	8	14
00	1	1	0	0	1	2	4	14	16	10	7	10
Hr Total	5	3	3	1	1	4	15	35	52	44	32	43

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	12	13	10	9	17	15	18	19	14	9	6	2
30	14	11	12	9	18	21	21	13	10	8	4	1
45	17	10	12	11	12	21	19	15	11	6	6	4
00	8	12	10	15	17	18	15	21	9	6	3	2
Hr Total	50	47	43	45	64	76	73	68	44	28	19	8

24 Hour Total: 803
 AM Peak Hour begins: 8:00 AM Peak Volume: 52 AM Peak Hour Factor: 0.84
 PM Peak Hour begins: 17:15 PM Peak Volume: 79 PM Peak Hour Factor: 0.93

Westbound Volume

3-Day Average

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	3	3	1	1	1	1	7	10	18	10	11	13
30	1	1	1	0	1	2	6	16	16	10	10	14
45	2	1	0	0	1	3	5	17	15	11	11	15
00	1	1	1	0	1	6	7	14	13	8	12	13
Hr Total	6	7	3	2	3	12	25	57	62	40	44	54

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	13	12	11	11	13	16	15	10	11	6	7	4
30	11	13	15	15	12	15	17	13	6	7	4	4
45	11	12	13	12	19	16	14	13	8	4	5	5
00	11	13	12	10	16	15	12	8	7	5	2	4
Hr Total	46	51	50	48	60	62	57	45	32	22	18	17

24 Hour Total: 823
 AM Peak Hour begins: 7:15 AM Peak Volume: 66 AM Peak Hour Factor: 0.90
 PM Peak Hour begins: 16:30 PM Peak Volume: 67 PM Peak Hour Factor: 0.88

Total Volume for All Lanes

3-Day Average

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	6	4	2	1	1	2	10	14	31	20	22	21
30	1	2	1	0	1	2	10	25	26	22	16	25
45	3	1	2	1	1	3	8	26	29	23	19	29
00	2	2	1	1	1	8	11	28	28	18	19	23
Hr Total	12	10	5	2	4	16	39	93	115	83	76	98

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	25	25	21	21	29	31	33	30	25	15	13	6
30	25	25	27	24	30	36	37	26	16	15	8	5
45	27	22	25	23	31	37	33	28	19	10	11	8
00	19	25	21	25	33	33	27	30	16	11	6	5
Hr Total	96	98	94	93	124	138	130	113	76	50	38	25

24 Hour Total: 1,626
 AM Peak Hour begins: 8:00 AM Peak Volume: 115 AM Peak Hour Factor: 0.91
 PM Peak Hour begins: 17:30 PM Peak Volume: 141 PM Peak Hour Factor: 0.94

Start Time	1	2	Total
0:00	0	0	0
0:15	1	0	1
0:30	0	2	2
0:45	1	0	1
1:00	1	1	2
1:15	0	0	0
1:30	1	3	4
1:45	0	0	0
2:00	0	0	0
2:15	0	0	0
2:30	0	0	0
2:45	0	0	0
3:00	1	0	1
3:15	2	0	2
3:30	0	0	0
3:45	0	1	1
4:00	0	0	0
4:15	0	1	1
4:30	0	0	0
4:45	1	0	1
5:00	0	1	1
5:15	2	1	3
5:30	0	3	3
5:45	3	15	18
6:00	5	6	11
6:15	7	11	18
6:30	6	31	37
6:45	14	17	31
7:00	25	21	46
7:15	35	28	63
7:30	51	46	97
7:45	62	40	102
8:00	30	54	84
8:15	17	41	58
8:30	19	28	47
8:45	31	24	55
9:00	22	14	36
9:15	11	21	32
9:30	26	9	35
9:45	13	5	18
10:00	8	10	18
10:15	8	11	19
10:30	19	4	23
10:45	5	14	19
11:00	13	6	19
11:15	14	9	23
11:30	18	18	36
11:45	19	8	27
12:00	15	17	32
12:15	13	14	27
12:30	15	13	28
12:45	13	15	28
13:00	18	8	26
13:15	16	9	25
13:30	23	6	29
13:45	11	2	13
14:00	9	5	14
14:15	13	10	23
14:30	24	15	39
14:45	19	20	39
15:00	28	25	53
15:15	28	20	48
15:30	19	18	37
15:45	18	16	34
16:00	22	29	51
16:15	20	19	39
16:30	22	17	39
16:45	26	19	45
17:00	34	31	65
17:15	32	11	43
17:30	20	18	38
17:45	9	11	20
18:00	9	13	22
18:15	10	6	16
18:30	8	6	14
18:45	4	7	11
19:00	9	7	16
19:15	2	12	14
19:30	9	9	18
19:45	6	10	16
20:00	10	4	14
20:15	6	7	13
20:30	4	1	5
20:45	8	1	9
21:00	1	5	6
21:15	3	0	3
21:30	4	4	8
21:45	7	1	8
22:00	1	0	1
22:15	1	0	1
22:30	0	1	1
22:45	2	0	2
23:00	2	0	2
23:15	2	0	2
23:30	1	0	1
23:45	1	0	1

Start Date	September 24, 2019	
End Date	September 25, 2019	
Location	Whiting St east of Nebraska Ave	
City	Tampa	
County	Hillsborough	
Lane 1	EB	
Lane 2	WB	

Start Time	1	2	Total
0:00	0	0	0
0:15	2	0	2
0:30	0	0	0
0:45	0	0	0
1:00	2	1	3
1:15	0	0	0
1:30	2	0	2
1:45	0	0	0
2:00	0	0	0
2:15	0	0	0
2:30	0	1	1
2:45	1	1	2
3:00	0	0	0
3:15	0	0	0
3:30	0	0	0
3:45	0	1	1
4:00	0	0	0
4:15	1	0	1
4:30	1	0	1
4:45	2	0	2
5:00	1	0	1
5:15	0	2	2
5:30	0	4	4
5:45	3	4	7
6:00	4	12	16
6:15	5	13	18
6:30	4	31	35
6:45	13	11	24
7:00	15	19	34
7:15	51	29	80
7:30	56	47	103
7:45	53	38	91
8:00	31	69	100
8:15	24	47	71
8:30	25	37	62
8:45	24	27	51
9:00	10	16	26
9:15	12	9	21
9:30	17	7	24
9:45	11	12	23
10:00	16	10	26
10:15	19	4	23
10:30	10	15	25
10:45	9	15	24
11:00	16	6	22
11:15	11	10	21
11:30	18	16	34
11:45	20	13	33
12:00	12	15	27
12:15	14	14	28
12:30	28	18	46
12:45	14	9	23
13:00	9	14	23
13:15	15	6	21
13:30	10	11	21
13:45	10	16	26
14:00	11	4	15
14:15	6	13	19
14:30	17	15	32
14:45	25	11	36
15:00	32	27	59
15:15	29	36	65
15:30	27	8	35
15:45	25	13	38
16:00	11	24	35
16:15	24	21	45
16:30	17	19	36
16:45	42	20	62
17:00	30	22	52
17:15	23	18	41
17:30	19	20	39
17:45	11	11	22
18:00	14	9	23
18:15	11	12	23
18:30	3	9	12
18:45	8	9	17
19:00	11	0	11
19:15	5	7	12
19:30	5	8	13
19:45	6	0	6
20:00	6	8	14
20:15	2	5	7
20:30	6	3	9
20:45	1	4	5
21:00	6	5	11
21:15	1	1	2
21:30	1	2	3
21:45	0	0	0
22:00	1	1	2
22:15	1	0	1
22:30	1	0	1
22:45	1	2	3
23:00	3	0	3
23:15	0	0	0
23:30	4	0	4
23:45	1	2	3

Start Date	September 25, 2019
End Date	September 26, 2019

Station	
ID	
Location	Whiting St east of Nebraska Ave

City	Tampa
County	Hillsborough
Lane 1	EB
Lane 2	WB

Start Time	1	2	Total
0:00	0	1	1
0:15	0	0	0
0:30	2	0	2
0:45	0	0	0
1:00	0	0	0
1:15	0	0	0
1:30	0	0	0
1:45	2	0	2
2:00	0	0	0
2:15	0	0	0
2:30	2	0	2
2:45	0	1	1
3:00	0	1	1
3:15	0	0	0
3:30	0	1	1
3:45	0	4	4
4:00	1	0	1
4:15	0	0	0
4:30	0	0	0
4:45	2	0	2
5:00	5	0	5
5:15	1	0	1
5:30	0	3	3
5:45	3	6	9
6:00	5	8	13
6:15	9	20	29
6:30	13	24	37
6:45	13	23	36
7:00	21	13	34
7:15	49	30	79
7:30	55	46	101
7:45	48	37	85
8:00	36	44	80
8:15	15	44	59
8:30	23	30	53
8:45	21	24	45
9:00	24	12	36
9:15	8	10	18
9:30	14	17	31
9:45	16	4	20
10:00	8	13	21
10:15	11	21	32
10:30	11	8	19
10:45	7	4	11
11:00	30	18	48
11:15	11	12	23
11:30	21	15	36
11:45	17	12	29
12:00	21	9	30
12:15	22	9	31
12:30	16	14	30
12:45	15	7	22
13:00	12	13	25
13:15	16	12	28
13:30	12	7	19
13:45	12	12	24
14:00	13	8	21
14:15	17	7	24
14:30	17	16	33
14:45	36	20	56
15:00	44	33	77
15:15	28	14	42
15:30	30	15	45
15:45	31	8	39
16:00	28	25	53
16:15	32	19	51
16:30	34	25	59
16:45	44	30	74
17:00	37	24	61
17:15	42	32	74
17:30	24	15	39
17:45	12	16	28
18:00	9	16	25
18:15	13	7	20
18:30	9	12	21
18:45	12	14	26
19:00	12	5	17
19:15	7	10	17
19:30	12	8	20
19:45	10	10	20
20:00	11	4	15
20:15	11	5	16
20:30	8	3	11
20:45	3	15	18
21:00	6	5	11
21:15	4	3	7
21:30	6	5	11
21:45	2	0	2
22:00	5	3	8
22:15	8	8	16
22:30	40	8	48
22:45	19	14	33
23:00	8	20	28
23:15	9	27	36
23:30	3	14	17
23:45	3	4	7

Start Date	September 26, 2019
End Date	September 27, 2019

Station	
ID	
Location	Whiting St east of Nebraska Ave

City	Tampa
County	Hillsborough
Lane 1	EB
Lane 2	WB

Volume Count Report

Start Date: September 24, 2019
 Stop Date: September 24, 2019
 City: Tampa
 Location: Whiting St east of Nebraska Ave

Start Time: 00:00
 Stop Time: 24:00
 County: Hillsborough

Eastbound Volume

Tuesday, September 24, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	0	1	0	1	0	0	5	25	30	22	8	13
30	1	0	0	2	0	2	7	35	17	11	8	14
45	0	1	0	0	0	0	6	51	19	26	19	18
00	1	0	0	0	1	3	14	62	31	13	5	19
Hr Total	2	2	0	3	1	5	32	173	97	72	40	64

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	15	18	9	28	22	34	9	9	10	1	1	2
30	13	16	13	28	20	32	10	2	6	3	1	2
45	15	23	24	19	22	20	8	9	4	4	0	1
00	13	11	19	18	26	9	4	6	8	7	2	1
Hr Total	56	68	65	93	90	95	31	26	28	15	4	6

24 Hour Total: 1,068
 AM Peak Hour begins: 7:15 AM Peak Volume: 178 AM Peak Hour Factor: 0.72
 PM Peak Hour begins: 16:30 PM Peak Volume: 114 PM Peak Hour Factor: 0.84

Westbound Volume

Tuesday, September 24, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	0	1	0	0	0	1	6	21	54	14	10	6
30	0	0	0	0	1	1	11	28	41	21	11	9
45	2	3	0	0	0	3	31	46	28	9	4	18
00	0	0	0	1	0	15	17	40	24	5	14	8
Hr Total	2	4	0	1	1	20	65	135	147	49	39	41

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	17	8	5	25	29	31	13	7	4	5	0	0
30	14	9	10	20	19	11	6	12	7	0	0	0
45	13	6	15	18	17	18	6	9	1	4	1	0
00	15	2	20	16	19	11	7	10	1	1	0	0
Hr Total	59	25	50	79	84	71	32	38	13	10	1	0

24 Hour Total: 966
 AM Peak Hour begins: 7:30 AM Peak Volume: 181 AM Peak Hour Factor: 0.84
 PM Peak Hour begins: 16:15 PM Peak Volume: 86 PM Peak Hour Factor: 0.69

Total Volume for All Lanes

Tuesday, September 24, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	0	2	0	1	0	1	11	46	84	36	18	19
30	1	0	0	2	1	3	18	63	58	32	19	23
45	2	4	0	0	0	3	37	97	47	35	23	36
00	1	0	0	1	1	18	31	102	55	18	19	27
Hr Total	4	6	0	4	2	25	97	308	244	121	79	105

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	32	26	14	53	51	65	22	16	14	6	1	2
30	27	25	23	48	39	43	16	14	13	3	1	2
45	28	29	39	37	39	38	14	18	5	8	1	1
00	28	13	39	34	45	20	11	16	9	8	2	1
Hr Total	115	93	115	172	174	166	63	64	41	25	5	6

24 Hour Total: 2,034
 AM Peak Hour begins: 7:15 AM Peak Volume: 346 AM Peak Hour Factor: 0.85
 PM Peak Hour begins: 16:30 PM Peak Volume: 192 PM Peak Hour Factor: 0.74

Volume Count Report

Start Date: September 25, 2019
 Stop Date: September 25, 2019
 City: Tampa
 Location: Whiting St east of Nebraska Ave

Start Time: 00:00
 Stop Time: 24:00
 County: Hillsborough

Eastbound Volume

Wednesday, September 25, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	0	2	0	0	0	1	4	15	31	10	16	16
30	2	0	0	0	1	0	5	51	24	12	19	11
45	0	2	0	0	1	0	4	56	25	17	10	18
00	0	0	1	0	2	3	13	53	24	11	9	20
Hr Total	2	4	1	0	4	4	26	175	104	50	54	65

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	12	9	11	32	11	30	14	11	6	6	1	3
30	14	15	6	29	24	23	11	5	2	1	1	0
45	28	10	17	27	17	19	3	5	6	1	1	4
00	14	10	25	25	42	11	8	6	1	0	1	1
Hr Total	68	44	59	113	94	83	36	27	15	8	4	8

24 Hour Total: 1,048
 AM Peak Hour begins: 7:15 AM Peak Volume: 191 AM Peak Hour Factor: 0.85
 PM Peak Hour begins: 16:45 PM Peak Volume: 114 PM Peak Hour Factor: 0.68

Westbound Volume

Wednesday, September 25, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	0	1	0	0	0	0	12	19	69	16	10	6
30	0	0	0	0	0	2	13	29	47	9	4	10
45	0	0	1	0	0	4	31	47	37	7	15	16
00	0	0	1	1	0	4	11	38	27	12	15	13
Hr Total	0	1	2	1	0	10	67	133	180	44	44	45

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	15	14	4	27	24	22	9	0	8	5	1	0
30	14	6	13	36	21	18	12	7	5	1	0	0
45	18	11	15	8	19	20	9	8	3	2	0	0
00	9	16	11	13	20	11	9	0	4	0	2	2
Hr Total	56	47	43	84	84	71	39	15	20	8	3	2

24 Hour Total: 999
 AM Peak Hour begins: 7:30 AM Peak Volume: 201 AM Peak Hour Factor: 0.73
 PM Peak Hour begins: 14:30 PM Peak Volume: 89 PM Peak Hour Factor: 0.62

Total Volume for All Lanes

Wednesday, September 25, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	0	3	0	0	0	1	16	34	100	26	26	22
30	2	0	0	0	1	2	18	80	71	21	23	21
45	0	2	1	0	1	4	35	103	62	24	25	34
00	0	0	2	1	2	7	24	91	51	23	24	33
Hr Total	2	5	3	1	4	14	93	308	284	94	98	110

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	27	23	15	59	35	52	23	11	14	11	2	3
30	28	21	19	65	45	41	23	12	7	2	1	0
45	46	21	32	35	36	39	12	13	9	3	1	4
00	23	26	36	38	62	22	17	6	5	0	3	3
Hr Total	124	91	102	197	178	154	75	42	35	16	7	10

24 Hour Total: 2,047
 AM Peak Hour begins: 7:15 AM Peak Volume: 374 AM Peak Hour Factor: 0.91
 PM Peak Hour begins: 15:00 PM Peak Volume: 197 PM Peak Hour Factor: 0.76

Volume Count Report

Start Date: September 26, 2019
 Stop Date: September 26, 2019
 City: Tampa
 Location: Whiting St east of Nebraska Ave

Start Time: 00:00
 Stop Time: 24:00
 County: Hillsborough

Eastbound Volume

Thursday, September 26, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	0	0	0	0	1	5	5	21	36	24	8	30
30	0	0	0	0	0	1	9	49	15	8	11	11
45	2	0	2	0	0	0	13	55	23	14	11	21
00	0	2	0	0	2	3	13	48	21	16	7	17
Hr Total	2	2	2	0	3	9	40	173	95	62	37	79

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	21	12	13	44	28	37	9	12	11	6	5	8
30	22	16	17	28	32	42	13	7	11	4	8	9
45	16	12	17	30	34	24	9	12	8	6	40	3
00	15	12	36	31	44	12	12	10	3	2	19	3
Hr Total	74	52	83	133	138	115	43	41	33	18	72	23

24 Hour Total: 1,329
 AM Peak Hour begins: 7:15 AM Peak Volume: 188 AM Peak Hour Factor: 0.85
 PM Peak Hour begins: 16:30 PM Peak Volume: 157 PM Peak Hour Factor: 0.89

Westbound Volume

Thursday, September 26, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	1	0	0	1	0	0	8	13	44	12	13	18
30	0	0	0	0	0	0	20	30	44	10	21	12
45	0	0	0	1	0	3	24	46	30	17	8	15
00	0	0	1	4	0	6	23	37	24	4	4	12
Hr Total	1	0	1	6	0	9	75	126	142	43	46	57

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	9	13	8	33	25	24	16	5	4	5	3	20
30	9	12	7	14	19	32	7	10	5	3	8	27
45	14	7	16	15	25	15	12	8	3	5	8	14
00	7	12	20	8	30	16	14	10	15	0	14	4
Hr Total	39	44	51	70	99	87	49	33	27	13	33	65

24 Hour Total: 1,116
 AM Peak Hour begins: 7:30 AM Peak Volume: 171 AM Peak Hour Factor: 0.93
 PM Peak Hour begins: 16:30 PM Peak Volume: 111 PM Peak Hour Factor: 0.87

Total Volume for All Lanes

Thursday, September 26, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	1	0	0	1	1	5	13	34	80	36	21	48
30	0	0	0	0	0	1	29	79	59	18	32	23
45	2	0	2	1	0	3	37	101	53	31	19	36
00	0	2	1	4	2	9	36	85	45	20	11	29
Hr Total	3	2	3	6	3	18	115	299	237	105	83	136

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	30	25	21	77	53	61	25	17	15	11	8	28
30	31	28	24	42	51	74	20	17	16	7	16	36
45	30	19	33	45	59	39	21	20	11	11	48	17
00	22	24	56	39	74	28	26	20	18	2	33	7
Hr Total	113	96	134	203	237	202	92	74	60	31	105	88

24 Hour Total: 2,445
 AM Peak Hour begins: 7:15 AM Peak Volume: 345 AM Peak Hour Factor: 0.85
 PM Peak Hour begins: 16:30 PM Peak Volume: 268 PM Peak Hour Factor: 0.91

Volume Count Report

3-Day Average

Start Date: September 24, 2019
 Stop Date: September 26, 2019
 City: Tampa
 Location: Whiting St east of Nebraska Ave

Start Time: 00:00
 Stop Time: 24:00
 County: Hillsborough

Eastbound Volume

3-Day Average

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	0	1	0	0	0	2	5	20	32	19	11	20
30	1	0	0	1	0	1	7	45	19	10	13	12
45	1	1	1	0	0	0	8	54	22	19	13	19
00	0	1	0	0	2	3	13	54	25	13	7	19
Hr Total	2	3	1	1	3	6	33	174	99	61	44	69

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	16	13	11	35	20	34	11	11	9	4	2	4
30	16	16	12	28	25	32	11	5	6	3	3	4
45	20	15	19	25	24	21	7	9	6	4	14	3
00	14	11	27	25	37	11	8	7	4	3	7	2
Hr Total	66	55	69	113	107	98	37	31	25	14	27	12

24 Hour Total: 1,148
 AM Peak Hour begins: 7:15 AM Peak Volume: 186 AM Peak Hour Factor: 0.85
 PM Peak Hour begins: 16:30 PM Peak Volume: 128 PM Peak Hour Factor: 0.85

Westbound Volume

3-Day Average

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	0	1	0	0	0	0	9	18	56	14	11	10
30	0	0	0	0	0	1	15	29	44	13	12	10
45	1	1	0	0	0	3	29	46	32	11	9	16
00	0	0	1	2	0	8	17	38	25	7	11	11
Hr Total	1	2	1	3	0	13	69	131	156	45	43	48

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	14	12	6	28	26	26	13	4	5	5	1	7
30	12	9	10	23	20	20	8	10	6	1	3	9
45	15	8	15	14	20	18	9	8	2	4	3	5
00	10	10	17	12	23	13	10	7	7	0	5	2
Hr Total	51	39	48	78	89	76	40	29	20	10	12	22

24 Hour Total: 1,027
 AM Peak Hour begins: 7:30 AM Peak Volume: 184 AM Peak Hour Factor: 0.83
 PM Peak Hour begins: 16:30 PM Peak Volume: 89 PM Peak Hour Factor: 0.87

Total Volume for All Lanes

3-Day Average

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	0	2	0	1	0	2	13	38	88	33	22	30
30	1	0	0	1	1	2	22	74	63	24	25	22
45	1	2	1	0	0	3	36	100	54	30	22	35
00	0	1	1	2	2	11	30	93	50	20	18	30
Hr Total	3	4	2	4	3	19	102	305	255	107	87	117

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	30	25	17	63	46	59	23	15	14	9	4	11
30	29	25	22	52	45	53	20	14	12	4	6	13
45	35	23	35	39	45	39	16	17	8	7	17	7
00	24	21	44	37	60	23	18	14	11	3	13	4
Hr Total	117	93	117	191	196	174	77	60	45	24	39	35

24 Hour Total: 2,175
 AM Peak Hour begins: 7:15 AM Peak Volume: 355 AM Peak Hour Factor: 0.88
 PM Peak Hour begins: 16:30 PM Peak Volume: 217 PM Peak Hour Factor: 0.90

Start Time	1	2	Total
0:00	1	0	1
0:15	14	0	14
0:30	1	1	2
0:45	3	3	6
1:00	1	0	1
1:15	3	1	4
1:30	3	1	4
1:45	4	0	4
2:00	1	0	1
2:15	0	0	0
2:30	4	1	5
2:45	2	0	2
3:00	1	0	1
3:15	1	0	1
3:30	0	0	0
3:45	0	0	0
4:00	1	0	1
4:15	0	0	0
4:30	0	0	0
4:45	2	1	3
5:00	2	2	4
5:15	11	4	15
5:30	4	4	8
5:45	19	6	25
6:00	29	4	33
6:15	32	9	41
6:30	46	12	58
6:45	43	13	56
7:00	32	24	56
7:15	54	31	85
7:30	63	59	122
7:45	69	64	133
8:00	35	68	103
8:15	37	61	98
8:30	52	47	99
8:45	46	48	94
9:00	33	18	51
9:15	31	10	41
9:30	24	7	31
9:45	21	16	37
10:00	16	11	27
10:15	30	13	43
10:30	23	11	34
10:45	21	8	29
11:00	20	8	28
11:15	27	11	38
11:30	27	7	34
11:45	35	12	47
12:00	35	12	47
12:15	37	8	45
12:30	30	6	36
12:45	40	11	51
13:00	26	14	40
13:15	44	11	55
13:30	39	3	42
13:45	38	8	46
14:00	35	8	43
14:15	43	10	53
14:30	36	18	54
14:45	51	19	70
15:00	57	27	84
15:15	41	20	61
15:30	38	15	53
15:45	57	14	71
16:00	94	22	116
16:15	67	11	78
16:30	88	20	108
16:45	78	9	87
17:00	157	12	169
17:15	107	20	127
17:30	93	21	114
17:45	69	7	76
18:00	60	14	74
18:15	45	4	49
18:30	46	4	50
18:45	23	5	28
19:00	32	6	38
19:15	24	10	34
19:30	22	9	31
19:45	22	4	26
20:00	22	3	25
20:15	19	4	23
20:30	10	4	14
20:45	19	5	24
21:00	11	1	12
21:15	15	1	16
21:30	22	3	25
21:45	19	2	21
22:00	3	2	5
22:15	8	3	11
22:30	11	1	12
22:45	5	0	5
23:00	6	2	8
23:15	4	1	5
23:30	3	1	4
23:45	10	0	10

Start Date	September 24, 2019	
End Date	September 25, 2019	
Location	Whiting St west of Jefferson St	
City	Tampa	
County	Hillsborough	
Lane 1	EB	
Lane 2	WB	

Start Time	1	2	Total
0:00	3	1	4
0:15	3	0	3
0:30	3	1	4
0:45	5	0	5
1:00	0	0	0
1:15	0	0	0
1:30	9	1	10
1:45	0	0	0
2:00	0	0	0
2:15	3	0	3
2:30	2	0	2
2:45	1	1	2
3:00	0	1	1
3:15	2	1	3
3:30	1	0	1
3:45	5	0	5
4:00	1	0	1
4:15	7	4	11
4:30	4	1	5
4:45	5	4	9
5:00	5	2	7
5:15	2	2	4
5:30	7	3	10
5:45	17	5	22
6:00	30	7	37
6:15	41	13	54
6:30	38	10	48
6:45	39	21	60
7:00	29	20	49
7:15	52	31	83
7:30	58	48	106
7:45	70	64	134
8:00	61	81	142
8:15	38	66	104
8:30	30	47	77
8:45	39	42	81
9:00	25	21	46
9:15	30	5	35
9:30	39	12	51
9:45	22	16	38
10:00	38	14	52
10:15	22	10	32
10:30	47	6	53
10:45	26	13	39
11:00	34	8	42
11:15	28	20	48
11:30	43	9	52
11:45	41	14	55
12:00	29	11	40
12:15	27	12	39
12:30	40	9	49
12:45	26	7	33
13:00	36	10	46
13:15	31	5	36
13:30	31	7	38
13:45	32	11	43
14:00	37	5	42
14:15	29	7	36
14:30	47	12	59
14:45	50	19	69
15:00	57	23	80
15:15	50	23	73
15:30	60	16	76
15:45	59	18	77
16:00	80	21	101
16:15	84	13	97
16:30	91	21	112
16:45	114	22	136
17:00	113	15	128
17:15	116	21	137
17:30	89	14	103
17:45	75	12	87
18:00	74	12	86
18:15	57	2	59
18:30	47	4	51
18:45	37	0	37
19:00	18	3	21
19:15	15	4	19
19:30	29	3	32
19:45	26	2	28
20:00	9	1	10
20:15	17	1	18
20:30	18	1	19
20:45	10	4	14
21:00	21	2	23
21:15	10	4	14
21:30	7	2	9
21:45	7	0	7
22:00	13	1	14
22:15	11	4	15
22:30	10	0	10
22:45	7	1	8
23:00	7	1	8
23:15	4	5	9
23:30	7	0	7
23:45	4	1	5

Start Date	September 25, 2019
End Date	September 26, 2019

Station	
ID	
Location	Whiting St west of Jefferson St

City	Tampa
County	Hillsborough
Lane 1	EB
Lane 2	WB

Start Time	1	2	Total
0:00	8	0	8
0:15	11	0	11
0:30	1	1	2
0:45	3	1	4
1:00	2	0	2
1:15	1	0	1
1:30	0	0	0
1:45	3	0	3
2:00	6	0	6
2:15	1	2	3
2:30	5	0	5
2:45	1	1	2
3:00	3	1	4
3:15	1	0	1
3:30	1	1	2
3:45	0	2	2
4:00	2	1	3
4:15	0	0	0
4:30	4	0	4
4:45	6	2	8
5:00	4	0	4
5:15	10	4	14
5:30	8	6	14
5:45	19	5	24
6:00	19	2	21
6:15	49	8	57
6:30	53	17	70
6:45	38	17	55
7:00	33	26	59
7:15	61	27	88
7:30	80	65	145
7:45	46	62	108
8:00	57	70	127
8:15	28	61	89
8:30	74	44	118
8:45	31	39	70
9:00	37	19	56
9:15	43	12	55
9:30	38	13	51
9:45	14	26	40
10:00	32	13	45
10:15	28	9	37
10:30	16	11	27
10:45	26	9	35
11:00	26	10	36
11:15	21	12	33
11:30	38	9	47
11:45	25	10	35
12:00	37	8	45
12:15	41	13	54
12:30	38	12	50
12:45	34	20	54
13:00	45	15	60
13:15	25	12	37
13:30	30	14	44
13:45	45	10	55
14:00	38	6	44
14:15	47	9	56
14:30	50	14	64
14:45	58	29	87
15:00	59	39	98
15:15	60	23	83
15:30	40	16	56
15:45	73	19	92
16:00	100	26	126
16:15	90	20	110
16:30	143	14	157
16:45	113	18	131
17:00	157	26	183
17:15	136	29	165
17:30	113	22	135
17:45	95	19	114
18:00	90	24	114
18:15	111	13	124
18:30	116	18	134
18:45	105	12	117
19:00	92	15	107
19:15	106	17	123
19:30	75	10	85
19:45	73	20	93
20:00	65	15	80
20:15	41	7	48
20:30	27	4	31
20:45	23	3	26
21:00	20	6	26
21:15	26	2	28
21:30	25	3	28
21:45	23	7	30
22:00	27	11	38
22:15	65	16	81
22:30	135	52	187
22:45	134	19	153
23:00	98	10	108
23:15	20	11	31
23:30	7	4	11
23:45	6	3	9

Start Date	September 26, 2019
End Date	September 27, 2019

Station	
ID	
Location	Whiting St west of Jefferson St

City	Tampa
County	Hillsborough
Lane 1	EB
Lane 2	WB

Volume Count Report

Start Date: September 24, 2019
 Stop Date: September 24, 2019
 City: Tampa
 Location: Whiting St west of Jefferson St

Start Time: 00:00
 Stop Time: 24:00
 County: Hillsborough

Eastbound Volume

Tuesday, September 24, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	1	1	1	1	1	2	29	32	35	33	16	20
30	14	3	0	1	0	11	32	54	37	31	30	27
45	1	3	4	0	0	4	46	63	52	24	23	27
00	3	4	2	0	2	19	43	69	46	21	21	35
Hr Total	19	11	7	2	3	36	150	218	170	109	90	109

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	35	26	35	57	94	157	60	32	22	11	3	6
30	37	44	43	41	67	107	45	24	19	15	8	4
45	30	39	36	38	88	93	46	22	10	22	11	3
00	40	38	51	57	78	69	23	22	19	19	5	10
Hr Total	142	147	165	193	327	426	174	100	70	67	27	23

24 Hour Total: 2,785
 AM Peak Hour begins: 7:15 AM Peak Volume: 221 AM Peak Hour Factor: 0.80
 PM Peak Hour begins: 16:45 PM Peak Volume: 435 PM Peak Hour Factor: 0.69

Westbound Volume

Tuesday, September 24, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	0	0	0	0	0	2	4	24	68	18	11	8
30	0	1	0	0	0	4	9	31	61	10	13	11
45	1	1	1	0	0	4	12	59	47	7	11	7
00	3	0	0	0	1	6	13	64	48	16	8	12
Hr Total	4	2	1	0	1	16	38	178	224	51	43	38

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	12	14	8	27	22	12	14	6	3	1	2	2
30	8	11	10	20	11	20	4	10	4	1	3	1
45	6	3	18	15	20	21	4	9	4	3	1	1
00	11	8	19	14	9	7	5	4	5	2	0	0
Hr Total	37	36	55	76	62	60	27	29	16	7	6	4

24 Hour Total: 1,011
 AM Peak Hour begins: 7:30 AM Peak Volume: 252 AM Peak Hour Factor: 0.93
 PM Peak Hour begins: 14:30 PM Peak Volume: 84 PM Peak Hour Factor: 0.78

Total Volume for All Lanes

Tuesday, September 24, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	1	1	1	1	1	4	33	56	103	51	27	28
30	14	4	0	1	0	15	41	85	98	41	43	38
45	2	4	5	0	0	8	58	122	99	31	34	34
00	6	4	2	0	3	25	56	133	94	37	29	47
Hr Total	23	13	8	2	4	52	188	396	394	160	133	147

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	47	40	43	84	116	169	74	38	25	12	5	8
30	45	55	53	61	78	127	49	34	23	16	11	5
45	36	42	54	53	108	114	50	31	14	25	12	4
00	51	46	70	71	87	76	28	26	24	21	5	10
Hr Total	179	183	220	269	389	486	201	129	86	74	33	27

24 Hour Total: 3,796
 AM Peak Hour begins: 7:30 AM Peak Volume: 456 AM Peak Hour Factor: 0.86
 PM Peak Hour begins: 16:45 PM Peak Volume: 497 PM Peak Hour Factor: 0.74

Volume Count Report

Start Date: September 25, 2019
 Stop Date: September 25, 2019
 City: Tampa
 Location: Whiting St west of Jefferson St

Start Time: 00:00
 Stop Time: 24:00
 County: Hillsborough

Eastbound Volume

Wednesday, September 25, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	3	0	0	0	1	5	30	29	61	25	38	34
30	3	0	3	2	7	2	41	52	38	30	22	28
45	3	9	2	1	4	7	38	58	30	39	47	43
00	5	0	1	5	5	17	39	70	39	22	26	41
Hr Total	14	9	6	8	17	31	148	209	168	116	133	146

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	29	36	37	57	80	113	74	18	9	21	13	7
30	27	31	29	50	84	116	57	15	17	10	11	4
45	40	31	47	60	91	89	47	29	18	7	10	7
00	26	32	50	59	114	75	37	26	10	7	7	4
Hr Total	122	130	163	226	369	393	215	88	54	45	41	22

24 Hour Total: 2,873
 AM Peak Hour begins: 7:15 AM Peak Volume: 241 AM Peak Hour Factor: 0.86
 PM Peak Hour begins: 16:30 PM Peak Volume: 434 PM Peak Hour Factor: 0.94

Westbound Volume

Wednesday, September 25, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	1	0	0	1	0	2	7	20	81	21	14	8
30	0	0	0	1	4	2	13	31	66	5	10	20
45	1	1	0	0	1	3	10	48	47	12	6	9
00	0	0	1	0	4	5	21	64	42	16	13	14
Hr Total	2	1	1	2	9	12	51	163	236	54	43	51

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	11	10	5	23	21	15	12	3	1	2	1	1
30	12	5	7	23	13	21	2	4	1	4	4	5
45	9	7	12	16	21	14	4	3	1	2	0	0
00	7	11	19	18	22	12	0	2	4	0	1	1
Hr Total	39	33	43	80	77	62	18	12	7	8	6	7

24 Hour Total: 1,017
 AM Peak Hour begins: 7:30 AM Peak Volume: 259 AM Peak Hour Factor: 0.80
 PM Peak Hour begins: 14:45 PM Peak Volume: 81 PM Peak Hour Factor: 0.88

Total Volume for All Lanes

Wednesday, September 25, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	4	0	0	1	1	7	37	49	142	46	52	42
30	3	0	3	3	11	4	54	83	104	35	32	48
45	4	10	2	1	5	10	48	106	77	51	53	52
00	5	0	2	5	9	22	60	134	81	38	39	55
Hr Total	16	10	7	10	26	43	199	372	404	170	176	197

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	40	46	42	80	101	128	86	21	10	23	14	8
30	39	36	36	73	97	137	59	19	18	14	15	9
45	49	38	59	76	112	103	51	32	19	9	10	7
00	33	43	69	77	136	87	37	28	14	7	8	5
Hr Total	161	163	206	306	446	455	233	100	61	53	47	29

24 Hour Total: 3,890
 AM Peak Hour begins: 7:30 AM Peak Volume: 486 AM Peak Hour Factor: 0.86
 PM Peak Hour begins: 16:30 PM Peak Volume: 513 PM Peak Hour Factor: 0.94

Volume Count Report

Start Date: September 26, 2019
 Stop Date: September 26, 2019
 City: Tampa
 Location: Whiting St west of Jefferson St

Start Time: 00:00
 Stop Time: 24:00
 County: Hillsborough

Eastbound Volume

Thursday, September 26, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	8	2	6	3	2	4	19	33	57	37	32	26
30	11	1	1	1	0	10	49	61	28	43	28	21
45	1	0	5	1	4	8	53	80	74	38	16	38
00	3	3	1	0	6	19	38	46	31	14	26	25
Hr Total	23	6	13	5	12	41	159	220	190	132	102	110

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	37	45	38	59	100	157	90	92	65	20	27	98
30	41	25	47	60	90	136	111	106	41	26	65	20
45	38	30	50	40	143	113	116	75	27	25	135	7
00	34	45	58	73	113	95	105	73	23	23	134	6
Hr Total	150	145	193	232	446	501	422	346	156	94	361	131

24 Hour Total: 4,190
 AM Peak Hour begins: 7:15 AM Peak Volume: 244 AM Peak Hour Factor: 0.76
 PM Peak Hour begins: 16:30 PM Peak Volume: 549 PM Peak Hour Factor: 0.87

Westbound Volume

Thursday, September 26, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	0	0	0	1	1	0	2	26	70	19	13	10
30	0	0	2	0	0	4	8	27	61	12	9	12
45	1	0	0	1	0	6	17	65	44	13	11	9
00	1	0	1	2	2	5	17	62	39	26	9	10
Hr Total	2	0	3	4	3	15	44	180	214	70	42	41

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	8	15	6	39	26	26	24	15	15	6	11	10
30	13	12	9	23	20	29	13	17	7	2	16	11
45	12	14	14	16	14	22	18	10	4	3	52	4
00	20	10	29	19	18	19	12	20	3	7	19	3
Hr Total	53	51	58	97	78	96	67	62	29	18	98	28

24 Hour Total: 1,353
 AM Peak Hour begins: 7:30 AM Peak Volume: 258 AM Peak Hour Factor: 0.92
 PM Peak Hour begins: 14:45 PM Peak Volume: 107 PM Peak Hour Factor: 0.69

Total Volume for All Lanes

Thursday, September 26, 2019

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	8	2	6	4	3	4	21	59	127	56	45	36
30	11	1	3	1	0	14	57	88	89	55	37	33
45	2	0	5	2	4	14	70	145	118	51	27	47
00	4	3	2	2	8	24	55	108	70	40	35	35
Hr Total	25	6	16	9	15	56	203	400	404	202	144	151

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	45	60	44	98	126	183	114	107	80	26	38	108
30	54	37	56	83	110	165	124	123	48	28	81	31
45	50	44	64	56	157	135	134	85	31	28	187	11
00	54	55	87	92	131	114	117	93	26	30	153	9
Hr Total	203	196	251	329	524	597	489	408	185	112	459	159

24 Hour Total: 5,543
 AM Peak Hour begins: 7:30 AM Peak Volume: 469 AM Peak Hour Factor: 0.81
 PM Peak Hour begins: 16:30 PM Peak Volume: 636 PM Peak Hour Factor: 0.87

Volume Count Report 3-Day Average

Start Date: September 24, 2019
 Stop Date: September 26, 2019
 City: Tampa
 Location: Whiting St west of Jefferson St

Start Time: 00:00
 Stop Time: 24:00
 County: Hillsborough

Eastbound Volume

3-Day Average

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	4	1	2	1	1	4	26	31	51	32	29	27
30	9	1	1	1	2	8	41	56	34	35	27	25
45	2	4	4	1	3	6	46	67	52	34	29	36
00	4	2	1	2	4	18	40	62	39	19	24	34
Hr Total	19	9	9	5	11	36	152	216	176	119	108	122

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	34	36	37	58	91	142	75	47	32	17	14	37
30	35	33	40	50	80	120	71	48	26	17	28	9
45	36	33	44	46	107	98	70	42	18	18	52	6
00	33	38	53	63	102	80	55	40	17	16	49	7
Hr Total	138	141	174	217	381	440	270	178	93	69	143	59

24 Hour Total: 3,283
 AM Peak Hour begins: 7:15 AM Peak Volume: 235 AM Peak Hour Factor: 0.88
 PM Peak Hour begins: 16:30 PM Peak Volume: 471 PM Peak Hour Factor: 0.83

Westbound Volume

3-Day Average

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	0	0	0	1	0	1	4	23	73	19	13	9
30	0	0	1	0	1	3	10	30	63	9	11	14
45	1	1	0	0	0	4	13	57	46	11	9	8
00	1	0	1	1	2	5	17	63	43	19	10	12
Hr Total	3	1	2	2	4	14	44	174	225	58	43	43

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	10	13	6	30	23	18	17	8	6	3	5	4
30	11	9	9	22	15	23	6	10	4	2	8	6
45	9	8	15	16	18	19	9	7	3	3	18	2
00	13	10	22	17	16	13	6	9	4	3	7	1
Hr Total	43	40	52	84	72	73	37	34	17	11	37	13

24 Hour Total: 1,127
 AM Peak Hour begins: 7:30 AM Peak Volume: 256 AM Peak Hour Factor: 0.88
 PM Peak Hour begins: 14:45 PM Peak Volume: 90 PM Peak Hour Factor: 0.76

Total Volume for All Lanes

3-Day Average

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	4	1	2	2	2	5	30	55	124	51	41	35
30	9	2	2	2	4	11	51	85	97	44	37	40
45	3	5	4	1	3	11	59	124	98	44	38	44
00	5	2	2	2	7	24	57	125	82	38	34	46
Hr Total	21	10	10	7	15	50	197	389	401	177	151	165

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	44	49	43	87	114	160	91	55	38	20	19	41
30	46	43	48	72	95	143	77	59	30	19	36	15
45	45	41	59	62	126	117	78	49	21	21	70	7
00	46	48	75	80	118	92	61	49	21	19	55	8
Hr Total	181	181	226	301	453	513	308	212	111	80	180	72

24 Hour Total: 4,410
 AM Peak Hour begins: 7:30 AM Peak Volume: 470 AM Peak Hour Factor: 0.94
 PM Peak Hour begins: 16:30 PM Peak Volume: 547 PM Peak Hour Factor: 0.85

Intersection Turning Movement Count

City/County: Tampa/Hillsborough
 Weather: Clear
 Comments:

File Name : Brorein&Florida
 Site Code : 18037
 Start Date : 5/21/2019
 Page No : 1

Groups Printed- Passenger Vehicles - Heavy Vehicles - UTurns

Start Time	BROREIN STREET Westbound					FLORIDA AVENUE Northbound				Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	App. Total	
06:30 AM	0	320	34	10	364	8	137	0	145	509
06:45 AM	0	354	34	10	398	17	163	0	180	578
Total	0	674	68	20	762	25	300	0	325	1087
07:00 AM	0	384	67	8	459	10	208	0	218	677
07:15 AM	0	428	64	5	497	18	290	0	308	805
07:30 AM	0	393	65	2	460	45	381	0	426	886
07:45 AM	0	452	87	10	549	38	284	0	322	871
Total	0	1657	283	25	1965	111	1163	0	1274	3239
08:00 AM	0	384	105	1	490	47	339	0	386	876
08:15 AM	0	363	98	16	477	62	356	0	418	895
08:30 AM	0	279	81	5	365	55	397	0	452	817
08:45 AM	0	329	63	4	396	77	367	0	444	840
Total	0	1355	347	26	1728	241	1459	0	1700	3428
09:00 AM	0	355	86	4	445	72	357	0	429	874
09:15 AM	0	305	81	6	392	70	316	0	386	778
*** BREAK ***										
Total	0	660	167	10	837	142	673	0	815	1652
*** BREAK ***										
04:00 PM	0	207	22	8	237	56	313	0	369	606
04:15 PM	0	215	19	8	242	39	302	0	341	583
04:30 PM	0	262	19	3	284	33	261	0	294	578
04:45 PM	0	232	19	9	260	32	356	0	388	648
Total	0	916	79	28	1023	160	1232	0	1392	2415
05:00 PM	0	309	26	10	345	49	312	0	361	706
05:15 PM	0	325	29	4	358	51	301	0	352	710
05:30 PM	0	325	29	17	371	45	253	0	298	669
05:45 PM	0	327	36	8	371	36	290	0	326	697
Total	0	1286	120	39	1445	181	1156	0	1337	2782
06:00 PM	0	207	17	8	232	31	287	0	318	550
06:15 PM	0	224	17	17	258	37	269	0	306	564
06:30 PM	0	187	35	9	231	30	292	0	322	553
06:45 PM	0	141	32	1	174	27	239	0	266	440
Total	0	759	101	35	895	125	1087	0	1212	2107
Grand Total	0	7307	1165	183	8655	985	7070	0	8055	16710
Apprch %	0	84.4	13.5	2.1		12.2	87.8	0		
Total %	0	43.7	7	1.1	51.8	5.9	42.3	0	48.2	
Passenger Vehicles	0	7247	1151	181	8579	962	6998	0	7960	16539
% Passenger Vehicles	0	99.2	98.8	98.9	99.1	97.7	99	0	98.8	99
Heavy Vehicles	0	60	14	2	76	23	72	0	95	171
% Heavy Vehicles	0	0.8	1.2	1.1	0.9	2.3	1	0	1.2	1
UTurns	0	0	0	0	0	0	0	0	0	0
% UTurns	0	0	0	0	0	0	0	0	0	0

Start Time	BROREIN STREET Westbound					FLORIDA AVENUE Northbound				Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	App. Total	
07:30 AM	0	393	65	2	460	45	381	0	426	886
07:45 AM	0	452	87	10	549	38	284	0	322	871
08:00 AM	0	384	105	1	490	47	339	0	386	876
08:15 AM	0	363	98	16	477	62	356	0	418	895
Total Volume	0	1592	355	29	1976	192	1360	0	1552	3528
% App. Total	0	80.6	18	1.5		12.4	87.6	0		
PHF	.000	.881	.845	.453	.900	.774	.892	.000	.911	.985
Passenger Vehicles	0	1575	352	29	1956	183	1349	0	1532	3488
% Passenger Vehicles	0	98.9	99.2	100	99.0	95.3	99.2	0	98.7	98.9
Heavy Vehicles	0	17	3	0	20	9	11	0	20	40

Peak Hour Analysis From 06:30 AM to 09:15 AM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 07:30 AM

Intersection Turning Movement Count

% Heavy Vehicles	0	1.1	0.8	0	1.0	4.7	0.8	0	1.3	1.1
UTurns	0	0	0	0	0	0	0	0	0	0
% UTurns	0	0	0	0	0	0	0	0	0	0

Peak Hour Analysis From 06:30 AM to 09:15 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:15 AM					08:15 AM				
+0 mins.	0	428	64	5	497	62	356	0	418	
+15 mins.	0	393	65	2	460	55	397	0	452	
+30 mins.	0	452	87	10	549	77	367	0	444	
+45 mins.	0	384	105	1	490	72	357	0	429	
Total Volume	0	1657	321	18	1996	266	1477	0	1743	
% App. Total	0	83	16.1	0.9		15.3	84.7	0		
PHF	.000	.916	.764	.450	.909	.864	.930	.000	.964	
Passenger Vehicles	0	1643	319	18	1980	262	1463	0	1725	
% Passenger Vehicles	0	99.2	99.4	100	99.2	98.5	99.1	0	99	
Heavy Vehicles	0	14	2	0	16	4	14	0	18	
% Heavy Vehicles	0	0.8	0.6	0	0.8	1.5	0.9	0	1	
UTurns	0	0	0	0	0	0	0	0	0	
% UTurns	0	0	0	0	0	0	0	0	0	

Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 05:00 PM

05:00 PM	0	309	26	10	345	49	312	0	361	706
05:15 PM	0	325	29	4	358	51	301	0	352	710
05:30 PM	0	325	29	17	371	45	253	0	298	669
05:45 PM	0	327	36	8	371	36	290	0	326	697
Total Volume	0	1286	120	39	1445	181	1156	0	1337	2782
% App. Total	0	89	8.3	2.7		13.5	86.5	0		
PHF	.000	.983	.833	.574	.974	.887	.926	.000	.926	.980
Passenger Vehicles	0	1284	118	39	1441	179	1144	0	1323	2764
% Passenger Vehicles	0	99.8	98.3	100	99.7	98.9	99.0	0	99.0	99.4
Heavy Vehicles	0	2	2	0	4	2	12	0	14	18
% Heavy Vehicles	0	0.2	1.7	0	0.3	1.1	1.0	0	1.0	0.6
UTurns	0	0	0	0	0	0	0	0	0	0
% UTurns	0	0	0	0	0	0	0	0	0	0

Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	05:00 PM					04:45 PM				
+0 mins.	0	309	26	10	345	32	356	0	388	
+15 mins.	0	325	29	4	358	49	312	0	361	
+30 mins.	0	325	29	17	371	51	301	0	352	
+45 mins.	0	327	36	8	371	45	253	0	298	
Total Volume	0	1286	120	39	1445	177	1222	0	1399	
% App. Total	0	89	8.3	2.7		12.7	87.3	0		
PHF	.000	.983	.833	.574	.974	.868	.858	.000	.901	
Passenger Vehicles	0	1284	118	39	1441	176	1209	0	1385	
% Passenger Vehicles	0	99.8	98.3	100	99.7	99.4	98.9	0	99	
Heavy Vehicles	0	2	2	0	4	1	13	0	14	
% Heavy Vehicles	0	0.2	1.7	0	0.3	0.6	1.1	0	1	
UTurns	0	0	0	0	0	0	0	0	0	
% UTurns	0	0	0	0	0	0	0	0	0	

Intersection Turning Movement Count

City/County: Tampa/Hillsborough
 Weather: Clear
 Comments:

File Name : Brorein&Florida
 Site Code : 18037
 Start Date : 5/21/2019
 Page No : 1

Groups Printed- Passenger Vehicles

Start Time	BROREIN STREET Westbound					FLORIDA AVENUE Northbound				Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	App. Total	
06:30 AM	0	319	34	10	363	8	135	0	143	506
06:45 AM	0	351	33	10	394	15	160	0	175	569
Total	0	670	67	20	757	23	295	0	318	1075
07:00 AM	0	379	67	8	454	9	207	0	216	670
07:15 AM	0	425	64	5	494	16	288	0	304	798
07:30 AM	0	392	65	2	459	42	378	0	420	879
07:45 AM	0	444	86	10	540	35	283	0	318	858
Total	0	1640	282	25	1947	102	1156	0	1258	3205
08:00 AM	0	382	104	1	487	44	333	0	377	864
08:15 AM	0	357	97	16	470	62	355	0	417	887
08:30 AM	0	274	79	5	358	54	392	0	446	804
08:45 AM	0	325	62	3	390	75	364	0	439	829
Total	0	1338	342	25	1705	235	1444	0	1679	3384
09:00 AM	0	349	83	4	436	71	352	0	423	859
09:15 AM	0	300	80	6	386	70	314	0	384	770
*** BREAK ***										
Total	0	649	163	10	822	141	666	0	807	1629
*** BREAK ***										
04:00 PM	0	207	21	8	236	55	311	0	366	602
04:15 PM	0	213	19	7	239	39	296	0	335	574
04:30 PM	0	260	19	3	282	32	258	0	290	572
04:45 PM	0	231	19	9	259	32	352	0	384	643
Total	0	911	78	27	1016	158	1217	0	1375	2391
05:00 PM	0	308	24	10	342	49	307	0	356	698
05:15 PM	0	324	29	4	357	51	299	0	350	707
05:30 PM	0	325	29	17	371	44	251	0	295	666
05:45 PM	0	327	36	8	371	35	287	0	322	693
Total	0	1284	118	39	1441	179	1144	0	1323	2764
06:00 PM	0	206	17	8	231	31	284	0	315	546
06:15 PM	0	224	17	17	258	37	266	0	303	561
06:30 PM	0	186	35	9	230	30	291	0	321	551
06:45 PM	0	139	32	1	172	26	235	0	261	433
Total	0	755	101	35	891	124	1076	0	1200	2091
Grand Total	0	7247	1151	181	8579	962	6998	0	7960	16539
Apprch %	0	84.5	13.4	2.1		12.1	87.9	0		
Total %	0	43.8	7	1.1	51.9	5.8	42.3	0	48.1	

Start Time	BROREIN STREET Westbound					FLORIDA AVENUE Northbound				Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 06:30 AM to 09:15 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	0	392	65	2	459	42	378	0	420	879
07:45 AM	0	444	86	10	540	35	283	0	318	858
08:00 AM	0	382	104	1	487	44	333	0	377	864
08:15 AM	0	357	97	16	470	62	355	0	417	887
Total Volume	0	1575	352	29	1956	183	1349	0	1532	3488
% App. Total	0	80.5	18	1.5		11.9	88.1	0		
PHF	.000	.887	.846	.453	.906	.738	.892	.000	.912	.983

Intersection Turning Movement Count

City/County: Tampa/Hillsborough
 Weather: Clear
 Comments:

File Name : Brorein&Florida
 Site Code : 18037
 Start Date : 5/21/2019
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Start Time	BROREIN STREET Westbound					FLORIDA AVENUE Northbound				Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	App. Total	

Peak Hour Analysis From 06:30 AM to 09:15 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:15 AM					08:15 AM			
+0 mins.	0	425	64	5	494	62	355	0	417
+15 mins.	0	392	65	2	459	54	392	0	446
+30 mins.	0	444	86	10	540	75	364	0	439
+45 mins.	0	382	104	1	487	71	352	0	423
Total Volume	0	1643	319	18	1980	262	1463	0	1725
% App. Total	0	83	16.1	0.9		15.2	84.8	0	
PHF	.000	.925	.767	.450	.917	.873	.933	.000	.967

Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 05:00 PM

05:00 PM	0	308	24	10	342	49	307	0	356	698
05:15 PM	0	324	29	4	357	51	299	0	350	707
05:30 PM	0	325	29	17	371	44	251	0	295	666
05:45 PM	0	327	36	8	371	35	287	0	322	693
Total Volume	0	1284	118	39	1441	179	1144	0	1323	2764
% App. Total	0	89.1	8.2	2.7		13.5	86.5	0		
PHF	.000	.982	.819	.574	.971	.877	.932	.000	.929	.977

Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	05:00 PM					04:45 PM			
+0 mins.	0	308	24	10	342	32	352	0	384
+15 mins.	0	324	29	4	357	49	307	0	356
+30 mins.	0	325	29	17	371	51	299	0	350
+45 mins.	0	327	36	8	371	44	251	0	295
Total Volume	0	1284	118	39	1441	176	1209	0	1385
% App. Total	0	89.1	8.2	2.7		12.7	87.3	0	
PHF	.000	.982	.819	.574	.971	.863	.859	.000	.902

Intersection Turning Movement Count

City/County: Tampa/Hillsborough
 Weather: Clear
 Comments:

File Name : Brorein&Florida
 Site Code : 18037
 Start Date : 5/21/2019
 Page No : 1

Groups Printed- Heavy Vehicles

Start Time	BROREIN STREET Westbound					FLORIDA AVENUE Northbound				Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	App. Total	
06:30 AM	0	1	0	0	1	0	2	0	2	3
06:45 AM	0	3	1	0	4	2	3	0	5	9
Total	0	4	1	0	5	2	5	0	7	12
07:00 AM	0	5	0	0	5	1	1	0	2	7
07:15 AM	0	3	0	0	3	2	2	0	4	7
07:30 AM	0	1	0	0	1	3	3	0	6	7
07:45 AM	0	8	1	0	9	3	1	0	4	13
Total	0	17	1	0	18	9	7	0	16	34
08:00 AM	0	2	1	0	3	3	6	0	9	12
08:15 AM	0	6	1	0	7	0	1	0	1	8
08:30 AM	0	5	2	0	7	1	5	0	6	13
08:45 AM	0	4	1	1	6	2	3	0	5	11
Total	0	17	5	1	23	6	15	0	21	44
09:00 AM	0	6	3	0	9	1	5	0	6	15
09:15 AM	0	5	1	0	6	0	2	0	2	8
*** BREAK ***										
Total	0	11	4	0	15	1	7	0	8	23
*** BREAK ***										
04:00 PM	0	0	1	0	1	1	2	0	3	4
04:15 PM	0	2	0	1	3	0	6	0	6	9
04:30 PM	0	2	0	0	2	1	3	0	4	6
04:45 PM	0	1	0	0	1	0	4	0	4	5
Total	0	5	1	1	7	2	15	0	17	24
05:00 PM	0	1	2	0	3	0	5	0	5	8
05:15 PM	0	1	0	0	1	0	2	0	2	3
05:30 PM	0	0	0	0	0	1	2	0	3	3
05:45 PM	0	0	0	0	0	1	3	0	4	4
Total	0	2	2	0	4	2	12	0	14	18
06:00 PM	0	1	0	0	1	0	3	0	3	4
06:15 PM	0	0	0	0	0	0	3	0	3	3
06:30 PM	0	1	0	0	1	0	1	0	1	2
06:45 PM	0	2	0	0	2	1	4	0	5	7
Total	0	4	0	0	4	1	11	0	12	16
Grand Total	0	60	14	2	76	23	72	0	95	171
Apprch %	0	78.9	18.4	2.6		24.2	75.8	0		
Total %	0	35.1	8.2	1.2	44.4	13.5	42.1	0	55.6	

Start Time	BROREIN STREET Westbound					FLORIDA AVENUE Northbound				Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 06:30 AM to 09:15 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 08:15 AM										
08:15 AM	0	6	1	0	7	0	1	0	1	8
08:30 AM	0	5	2	0	7	1	5	0	6	13
08:45 AM	0	4	1	1	6	2	3	0	5	11
09:00 AM	0	6	3	0	9	1	5	0	6	15
Total Volume	0	21	7	1	29	4	14	0	18	47
% App. Total	0	72.4	24.1	3.4		22.2	77.8	0		
PHF	.000	.875	.583	.250	.806	.500	.700	.000	.750	.783

Intersection Turning Movement Count

City/County: Tampa/Hillsborough
 Weather: Clear
 Comments:

File Name : Brorein&Florida
 Site Code : 18037
 Start Date : 5/21/2019
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Start Time	BROREIN STREET Westbound					FLORIDA AVENUE Northbound				Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	App. Total	

Peak Hour Analysis From 06:30 AM to 09:15 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	08:15 AM					07:15 AM			
+0 mins.	0	6	1	0	7	2	2	0	4
+15 mins.	0	5	2	0	7	3	3	0	6
+30 mins.	0	4	1	1	6	3	1	0	4
+45 mins.	0	6	3	0	9	3	6	0	9
Total Volume	0	21	7	1	29	11	12	0	23
% App. Total	0	72.4	24.1	3.4		47.8	52.2	0	
PHF	.000	.875	.583	.250	.806	.917	.500	.000	.639

Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:15 PM

04:15 PM	0	2	0	1	3	0	6	0	6	9
04:30 PM	0	2	0	0	2	1	3	0	4	6
04:45 PM	0	1	0	0	1	0	4	0	4	5
05:00 PM	0	1	2	0	3	0	5	0	5	8
Total Volume	0	6	2	1	9	1	18	0	19	28
% App. Total	0	66.7	22.2	11.1		5.3	94.7	0		
PHF	.000	.750	.250	.250	.750	.250	.750	.000	.792	.778

Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:15 PM					04:15 PM			
+0 mins.	0	2	0	1	3	0	6	0	6
+15 mins.	0	2	0	0	2	1	3	0	4
+30 mins.	0	1	0	0	1	0	4	0	4
+45 mins.	0	1	2	0	3	0	5	0	5
Total Volume	0	6	2	1	9	1	18	0	19
% App. Total	0	66.7	22.2	11.1		5.3	94.7	0	
PHF	.000	.750	.250	.250	.750	.250	.750	.000	.792

Intersection Pedestrian & Bicycle Count

Date: 5/21/19

Day: Tuesday

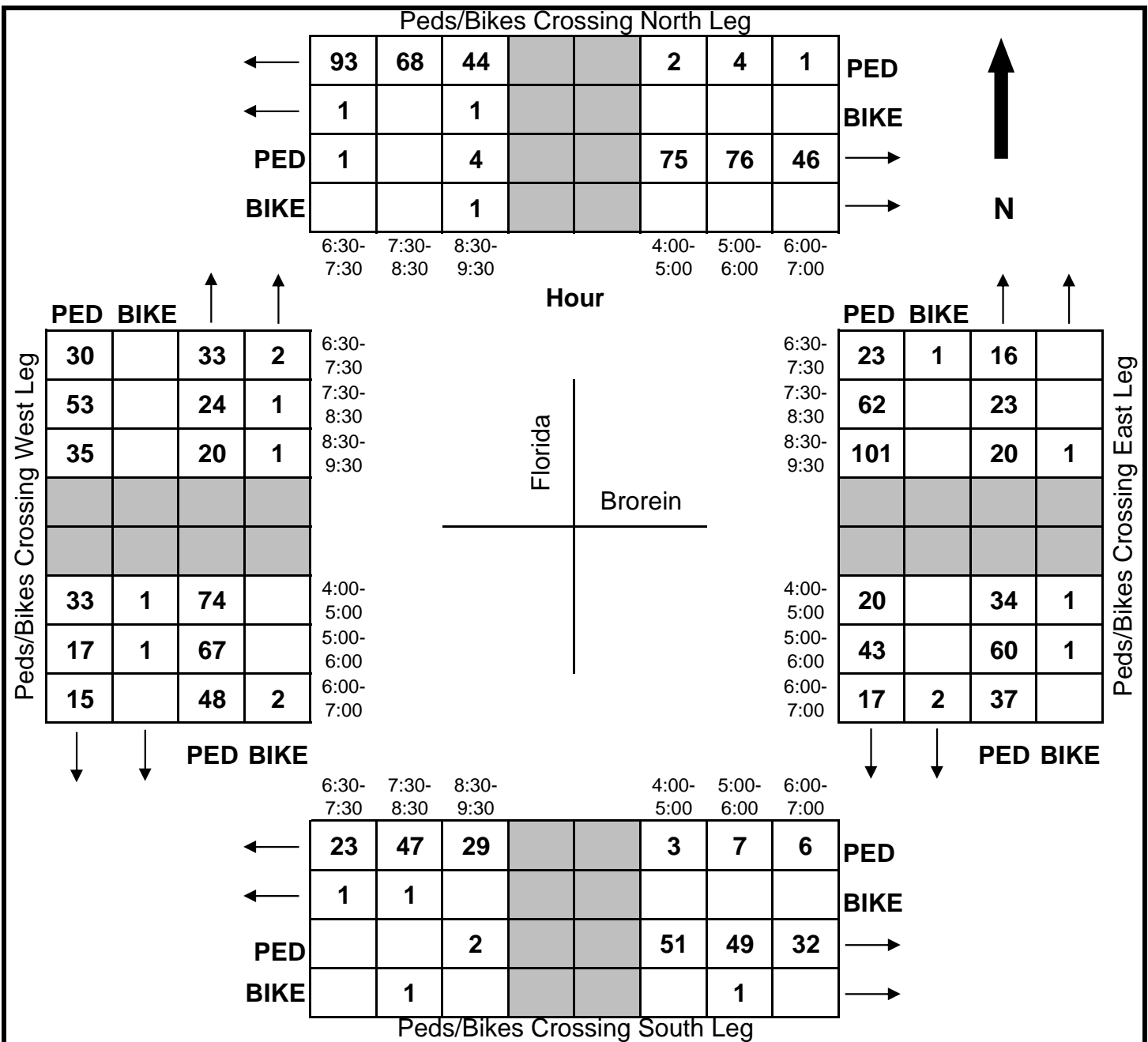
Count Times: 6:30-9:30am; 4-7pm

Weather: Clear

Intersection: Brorein Street at Florida Avenue

Comments: _____

C - Children under 12; S - Seniors 65 or over; D - Physical Disability



Intersection Turning Movement Count

City/County: Tampa/Hillsborough
 Weather: Clear
 Comments:

File Name : Brorein&Jefferson
 Site Code : 18037
 Start Date : 5/21/2019
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Groups Printed- Passenger Vehicles

Start Time	JEFFERSON STREET Southbound				BROREIN STREET Westbound							JEFFERSON STREET Northbound				Int. Total
	Left onto Selmon	Thru	Right	App. Total	Left	Thru	Right to Selmon	RTOR to Selmon	Right to Jefferson	RTOR to Jefferson	App. Total	Left	Thru to Jefferson	Thru to Selmon	App. Total	
06:30 AM	2	0	31	33	0	259	11	0	7	0	277	2	11	9	22	332
06:45 AM	4	0	32	36	0	289	12	0	9	0	310	4	16	5	25	371
Total	6	0	63	69	0	548	23	0	16	0	587	6	27	14	47	703
07:00 AM	2	0	32	34	0	371	12	0	13	0	396	5	17	8	30	460
07:15 AM	3	0	26	29	0	366	27	0	28	0	421	3	31	10	44	494
07:30 AM	4	0	29	33	0	362	24	0	36	0	422	5	37	17	59	514
07:45 AM	6	0	44	50	0	395	23	0	20	0	438	3	40	6	49	537
Total	15	0	131	146	0	1494	86	0	97	0	1677	16	125	41	182	2005
08:00 AM	9	0	35	44	0	375	23	1	34	1	434	4	29	17	50	528
08:15 AM	2	0	41	43	0	341	9	0	30	1	381	5	24	13	42	466
08:30 AM	4	0	49	53	0	215	5	0	38	1	259	4	33	11	48	360
08:45 AM	7	0	32	39	0	284	8	0	24	1	317	5	44	5	54	410
Total	22	0	157	179	0	1215	45	1	126	4	1391	18	130	46	194	1764
09:00 AM	4	0	50	54	0	303	13	0	37	0	353	11	39	4	54	461
09:15 AM	6	0	41	47	0	225	7	0	26	1	259	14	44	17	75	381
*** BREAK ***																
Total	10	0	91	101	0	528	20	0	63	1	612	25	83	21	129	842
*** BREAK ***																
04:00 PM	66	0	33	99	0	138	5	0	17	1	161	12	45	72	129	389
04:15 PM	53	0	42	95	0	164	10	0	14	2	190	6	53	108	167	452
04:30 PM	76	0	50	126	0	156	7	0	16	0	179	9	34	80	123	428
04:45 PM	71	0	48	119	0	148	8	0	13	0	169	7	50	89	146	434
Total	266	0	173	439	0	606	30	0	60	3	699	34	182	349	565	1703
05:00 PM	97	0	65	162	0	198	16	0	16	0	230	4	32	94	130	522
05:15 PM	94	0	58	152	0	231	9	0	10	1	251	8	40	86	134	537
05:30 PM	76	0	44	120	0	221	6	0	10	0	237	8	34	61	103	460
05:45 PM	77	0	34	111	0	224	5	0	3	0	232	5	25	49	79	422
Total	344	0	201	545	0	874	36	0	39	1	950	25	131	290	446	1941
06:00 PM	57	0	26	83	0	142	1	0	9	0	152	9	25	48	82	317
06:15 PM	34	0	30	64	0	200	6	0	10	0	216	7	22	38	67	347
06:30 PM	34	0	16	50	0	140	9	0	7	0	156	7	29	39	75	281
06:45 PM	23	0	12	35	0	117	0	0	11	0	128	2	27	29	58	221
Total	148	0	84	232	0	599	16	0	37	0	652	25	103	154	282	1166
Grand Total	811	0	900	1711	0	5864	256	1	438	9	6568	149	781	915	1845	10124
Apprch %	47.4	0	52.6		0	89.3	3.9	0	6.7	0.1		8.1	42.3	49.6		
Total %	8	0	8.9	16.9	0	57.9	2.5	0	4.3	0.1	64.9	1.5	7.7	9	18.2	

Start Time	JEFFERSON STREET Southbound				BROREIN STREET Westbound							JEFFERSON STREET Northbound				Int. Total
	Left onto Selmon	Thru	Right	App. Total	Left	Thru	Right to Selmon	RTOR to Selmon	Right to Jefferson	RTOR to Jefferson	App. Total	Left	Thru to Jefferson	Thru to Selmon	App. Total	
07:15 AM	3	0	26	29	0	366	27	0	28	0	421	3	31	10	44	494
07:30 AM	4	0	29	33	0	362	24	0	36	0	422	5	37	17	59	514
07:45 AM	6	0	44	50	0	395	23	0	20	0	438	3	40	6	49	537
08:00 AM	9	0	35	44	0	375	23	1	34	1	434	4	29	17	50	528
Total Volume	22	0	134	156	0	1498	97	1	118	1	1715	15	137	50	202	2073
% App. Total	14.1	0	85.9		0	87.3	5.7	0.1	6.9	0.1		7.4	67.8	24.8		
PHF	.611	.000	.761	.780	.000	.948	.898	.250	.819	.250	.979	.750	.856	.735	.856	.965

Peak Hour Analysis From 06:30 AM to 09:15 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:15 AM

Intersection Turning Movement Count

City/County: Tampa/Hillsborough
 Weather: Clear
 Comments:

File Name : Brorein&Jefferson
 Site Code : 18037
 Start Date : 5/21/2019
 Page No : 2

Start Time	JEFFERSON STREET Southbound				BROREIN STREET Westbound							JEFFERSON STREET Northbound				Int. Total
	Left onto Selmon	Thru	Right	App. Total	Left	Thru	Right to Selmon	RTOR to Selmon	Right to Jefferson	RTOR to Jefferson	App. Total	Left	Thru to Jefferson	Thru to Selmon	App. Total	

Peak Hour Analysis From 06:30 AM to 09:15 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	08:30 AM				07:15 AM							08:30 AM			
+0 mins.	4	0	49	53	0	366	27	0	28	0	421	4	33	11	48
+15 mins.	7	0	32	39	0	362	24	0	36	0	422	5	44	5	54
+30 mins.	4	0	50	54	0	395	23	0	20	0	438	11	39	4	54
+45 mins.	6	0	41	47	0	375	23	1	34	1	434	14	44	17	75
Total Volume	21	0	172	193	0	1498	97	1	118	1	1715	34	160	37	231
% App. Total	10.9	0	89.1		0	87.3	5.7	0.1	6.9	0.1		14.7	69.3	16	
PHF	.750	.000	.860	.894	.000	.948	.898	.250	.819	.250	.979	.607	.909	.544	.770

Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:45 PM

04:45 PM	71	0	48	119	0	148	8	0	13	0	169	7	50	89	146	434
05:00 PM	97	0	65	162	0	198	16	0	16	0	230	4	32	94	130	522
05:15 PM	94	0	58	152	0	231	9	0	10	1	251	8	40	86	134	537
05:30 PM	76	0	44	120	0	221	6	0	10	0	237	8	34	61	103	460
Total Volume	338	0	215	553	0	798	39	0	49	1	887	27	156	330	513	1953
% App. Total	61.1	0	38.9		0	90	4.4	0	5.5	0.1		5.3	30.4	64.3		
PHF	.871	.000	.827	.853	.000	.864	.609	.000	.766	.250	.883	.844	.780	.878	.878	.909

Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:30 PM				05:00 PM							04:15 PM			
+0 mins.	76	0	50	126	0	198	16	0	16	0	230	6	53	108	167
+15 mins.	71	0	48	119	0	231	9	0	10	1	251	9	34	80	123
+30 mins.	97	0	65	162	0	221	6	0	10	0	237	7	50	89	146
+45 mins.	94	0	58	152	0	224	5	0	3	0	232	4	32	94	130
Total Volume	338	0	221	559	0	874	36	0	39	1	950	26	169	371	566
% App. Total	60.5	0	39.5		0	92	3.8	0	4.1	0.1		4.6	29.9	65.5	
PHF	.871	.000	.850	.863	.000	.946	.563	.000	.609	.250	.946	.722	.797	.859	.847

Intersection Turning Movement Count

City/County: Tampa/Hillsborough
 Weather: Clear
 Comments:

File Name : Brorein&Jefferson
 Site Code : 18037
 Start Date : 5/21/2019
 Page No : 1

Groups Printed- Heavy Vehicles

Start Time	JEFFERSON STREET Southbound				BROREIN STREET Westbound							JEFFERSON STREET Northbound				Int. Total
	Left onto Selmon	Thru	Right	App. Total	Left	Thru	Right to Selmon	RTOR to Selmon	Right to Jefferson	RTOR to Jefferson	App. Total	Left	Thru to Jefferson	Thru to Selmon	App. Total	
06:30 AM	1	0	0	1	0	3	0	0	0	0	3	1	1	0	2	6
06:45 AM	0	0	1	1	0	1	0	0	0	0	1	1	1	0	2	4
Total	1	0	1	2	0	4	0	0	0	0	4	2	2	0	4	10
07:00 AM	0	0	1	1	0	2	1	0	0	0	3	0	2	1	3	7
07:15 AM	2	0	0	2	0	3	2	0	0	0	5	0	1	0	1	8
07:30 AM	1	0	1	2	0	1	0	0	0	0	1	0	1	1	2	5
07:45 AM	1	0	1	2	0	4	0	0	0	0	4	0	1	1	2	8
Total	4	0	3	7	0	10	3	0	0	0	13	0	5	3	8	28
08:00 AM	1	0	0	1	0	5	1	0	0	0	6	2	2	0	4	11
08:15 AM	0	0	1	1	0	2	1	0	0	0	3	1	0	1	2	6
08:30 AM	0	0	2	2	0	3	0	0	0	0	3	0	1	0	1	6
08:45 AM	0	0	2	2	0	5	0	0	0	0	5	0	0	0	0	7
Total	1	0	5	6	0	15	2	0	0	0	17	3	3	1	7	30
09:00 AM	1	0	2	3	0	7	0	0	2	0	9	0	1	2	3	15
09:15 AM	1	0	0	1	0	6	1	0	0	0	7	0	2	0	2	10
*** BREAK ***																
Total	2	0	2	4	0	13	1	0	2	0	16	0	3	2	5	25
*** BREAK ***																
04:00 PM	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	1
04:15 PM	0	0	0	0	0	5	0	0	0	0	5	1	0	0	1	6
04:30 PM	0	0	0	0	0	1	0	0	0	0	1	0	2	0	2	3
04:45 PM	0	0	1	1	0	2	0	0	0	0	2	0	1	0	1	4
Total	0	0	1	1	0	9	0	0	0	0	9	1	3	0	4	14
05:00 PM	0	0	0	0	0	3	0	0	0	0	3	0	1	0	1	4
05:15 PM	1	0	0	1	0	1	0	0	0	0	1	0	1	0	1	3
05:30 PM	0	0	0	0	0	1	0	0	0	0	1	0	0	1	1	2
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Total	1	0	0	1	0	5	0	0	0	0	5	0	2	2	4	10
06:00 PM	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	1
*** BREAK ***																
06:30 PM	0	0	0	0	0	2	0	0	0	0	2	0	0	1	1	3
06:45 PM	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2
Total	2	0	0	2	0	3	0	0	0	0	3	0	0	1	1	6
Grand Total	11	0	12	23	0	59	6	0	2	0	67	6	18	9	33	123
Apprch %	47.8	0	52.2		0	88.1	9	0	3	0		18.2	54.5	27.3		
Total %	8.9	0	9.8	18.7	0	48	4.9	0	1.6	0	54.5	4.9	14.6	7.3	26.8	

Start Time	JEFFERSON STREET Southbound				BROREIN STREET Westbound							JEFFERSON STREET Northbound				Int. Total
	Left onto Selmon	Thru	Right	App. Total	Left	Thru	Right to Selmon	RTOR to Selmon	Right to Jefferson	RTOR to Jefferson	App. Total	Left	Thru to Jefferson	Thru to Selmon	App. Total	
08:30 AM	0	0	2	2	0	3	0	0	0	0	3	0	1	0	1	6
08:45 AM	0	0	2	2	0	5	0	0	0	0	5	0	0	0	0	7
09:00 AM	1	0	2	3	0	7	0	0	2	0	9	0	1	2	3	15
09:15 AM	1	0	0	1	0	6	1	0	0	0	7	0	2	0	2	10
Total Volume	2	0	6	8	0	21	1	0	2	0	24	0	4	2	6	38
% App. Total	25	0	75		0	87.5	4.2	0	8.3	0		0	66.7	33.3		
PHF	.500	.000	.750	.667	.000	.750	.250	.000	.250	.000	.667	.000	.500	.250	.500	.633

Peak Hour Analysis From 06:30 AM to 09:15 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 08:30 AM

Intersection Turning Movement Count

City/County: Tampa/Hillsborough
 Weather: Clear
 Comments:

File Name : Brorein&Jefferson
 Site Code : 18037
 Start Date : 5/21/2019
 Page No : 2

Start Time	JEFFERSON STREET Southbound				BROREIN STREET Westbound						JEFFERSON STREET Northbound				Int. Total
	Left onto Selmon	Thru	Right	App. Total	Left	Thru	Right to Selmon	RTOR to Selmon	Right to Jefferson	RTOR to Jefferson	App. Total	Left	Thru to Jefferson	Thru to Selmon	

Peak Hour Analysis From 06:30 AM to 09:15 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	08:15 AM				08:30 AM						07:30 AM				
+0 mins.	0	0	1	1	0	3	0	0	0	0	3	0	1	1	2
+15 mins.	0	0	2	2	0	5	0	0	0	0	5	0	1	1	2
+30 mins.	0	0	2	2	0	7	0	0	2	0	9	2	2	0	4
+45 mins.	1	0	2	3	0	6	1	0	0	0	7	1	0	1	2
Total Volume	1	0	7	8	0	21	1	0	2	0	24	3	4	3	10
% App. Total	12.5	0	87.5		0	87.5	4.2	0	8.3	0		30	40	30	
PHF	.250	.000	.875	.667	.000	.750	.250	.000	.250	.000	.667	.375	.500	.750	.625

Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:15 PM

04:15 PM	0	0	0	0	0	5	0	0	0	0	5	1	0	0	1	6
04:30 PM	0	0	0	0	0	1	0	0	0	0	1	0	2	0	2	3
04:45 PM	0	0	1	1	0	2	0	0	0	0	2	0	1	0	1	4
05:00 PM	0	0	0	0	0	3	0	0	0	0	3	0	1	0	1	4
Total Volume	0	0	1	1	0	11	0	0	0	0	11	1	4	0	5	17
% App. Total	0	0	100		0	100	0	0	0	0		20	80	0		
PHF	.000	.000	.250	.250	.000	.550	.000	.000	.000	.000	.550	.250	.500	.000	.625	.708

Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:30 PM				04:15 PM						04:15 PM				
+0 mins.	0	0	0	0	0	5	0	0	0	0	5	1	0	0	1
+15 mins.	0	0	1	1	0	1	0	0	0	0	1	0	2	0	2
+30 mins.	0	0	0	0	0	2	0	0	0	0	2	0	1	0	1
+45 mins.	1	0	0	1	0	3	0	0	0	0	3	0	1	0	1
Total Volume	1	0	1	2	0	11	0	0	0	0	11	1	4	0	5
% App. Total	50	0	50		0	100	0	0	0	0		20	80	0	
PHF	.250	.000	.250	.500	.000	.550	.000	.000	.000	.000	.550	.250	.500	.000	.625

Intersection Pedestrian & Bicycle Count

Date: 5/21/19

Day: Tuesday

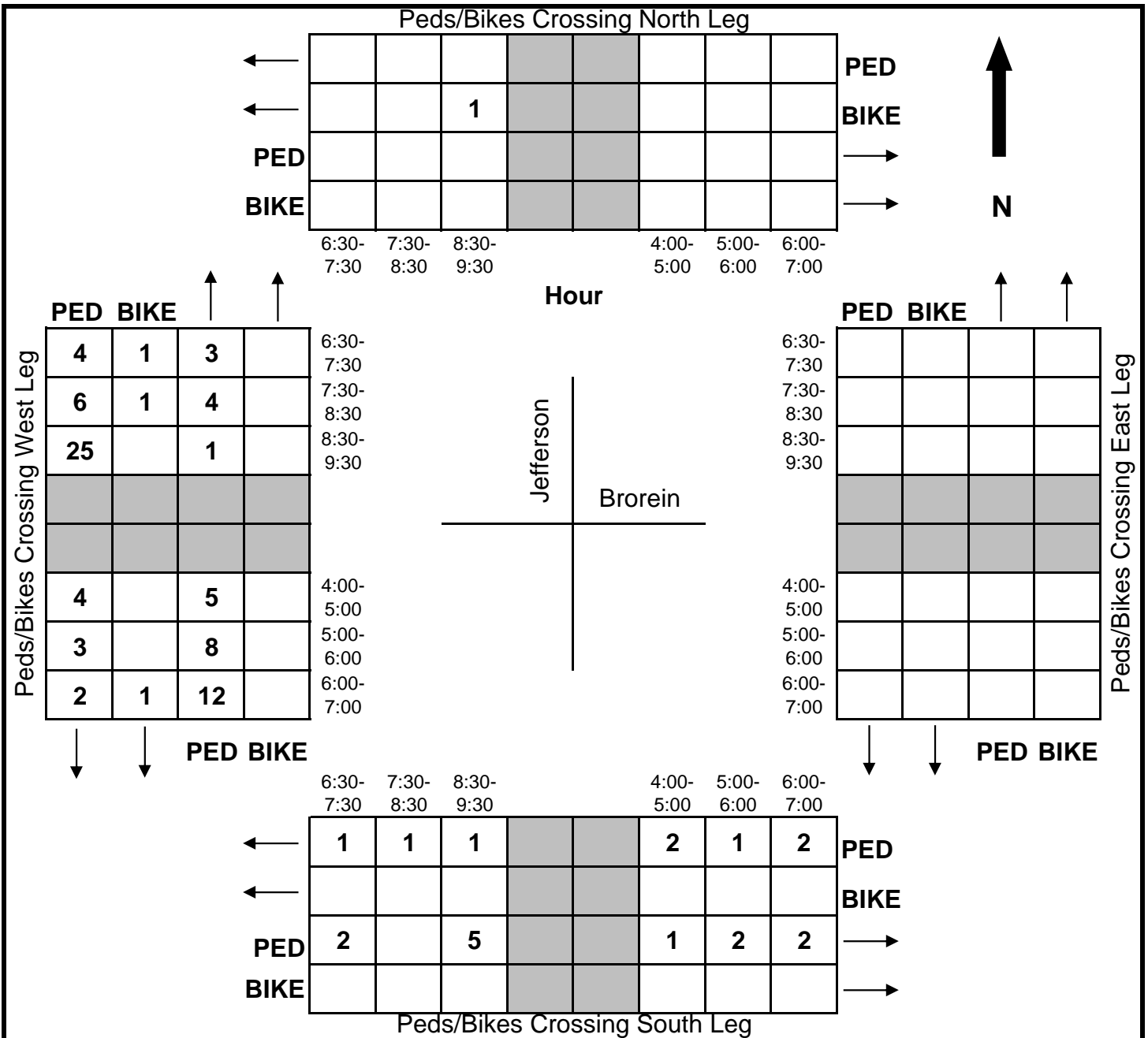
Count Times: 6:30-9:30am; 4-7pm

Weather: Clear

Intersection: Brorein Street at Jefferson Street

Comments: _____

C - Children under 12; S - Seniors 65 or over; D - Physical Disability



Intersection Turning Movement Count

City/County: Tampa/Hillsborough
 Weather: Clear
 Comments:

File Name : Channelside&Florida
 Site Code : 18037
 Start Date : 5/21/2019
 Page No : 1

Groups Printed- Passenger Vehicles - Heavy Vehicles - UTurns

Start Time	FLORIDA AVENUE Northbound					CHANNELSIDE DRIVE Eastbound						Int. Total
	Left	Thru	Right	RTOR	App. Total	Left on Red	Left	Thru	Right	RTOR	App. Total	
06:30 AM	0	6	0	2	8	1	95	88	15	14	213	221
06:45 AM	0	10	0	2	12	9	102	103	24	19	257	269
Total	0	16	0	4	20	10	197	191	39	33	470	490
07:00 AM	0	21	3	0	24	7	120	108	38	12	285	309
07:15 AM	0	18	0	6	24	12	154	127	31	18	342	366
07:30 AM	0	43	3	8	54	17	167	175	51	22	432	486
07:45 AM	0	26	0	3	29	13	106	147	50	35	351	380
Total	0	108	6	17	131	49	547	557	170	87	1410	1541
08:00 AM	0	44	6	9	59	7	117	162	63	10	359	418
08:15 AM	0	43	0	5	48	6	151	125	57	19	358	406
08:30 AM	0	41	3	10	54	9	177	181	72	10	449	503
08:45 AM	0	76	13	7	96	17	131	168	50	25	391	487
Total	0	204	22	31	257	39	576	636	242	64	1557	1814
09:00 AM	0	58	9	9	76	6	170	166	61	20	423	499
09:15 AM	0	76	17	11	104	5	121	156	54	28	364	468
*** BREAK ***												
Total	0	134	26	20	180	11	291	322	115	48	787	967
*** BREAK ***												
04:00 PM	0	91	20	3	114	6	176	308	26	4	520	634
04:15 PM	0	59	21	9	89	8	183	344	15	2	552	641
04:30 PM	0	67	28	6	101	9	147	292	19	1	468	569
04:45 PM	0	80	8	3	91	3	194	361	22	4	584	675
Total	0	297	77	21	395	26	700	1305	82	11	2124	2519
05:00 PM	0	88	19	8	115	2	188	320	23	1	534	649
05:15 PM	0	85	20	5	110	1	158	316	37	2	514	624
05:30 PM	0	84	14	7	105	3	142	273	40	2	460	565
05:45 PM	0	78	13	7	98	10	161	232	31	3	437	535
Total	0	335	66	27	428	16	649	1141	131	8	1945	2373
06:00 PM	0	83	14	6	103	7	147	230	29	5	418	521
06:15 PM	0	101	13	11	125	4	132	217	45	4	402	527
06:30 PM	0	91	15	8	114	2	146	192	29	9	378	492
06:45 PM	0	78	10	11	99	1	143	183	25	3	355	454
Total	0	353	52	36	441	14	568	822	128	21	1553	1994
Grand Total	0	1447	249	156	1852	165	3528	4974	907	272	9846	11698
Apprch %	0	78.1	13.4	8.4		1.7	35.8	50.5	9.2	2.8		
Total %	0	12.4	2.1	1.3	15.8	1.4	30.2	42.5	7.8	2.3	84.2	
Passenger Vehicles	0	1434	244	148	1826	165	3501	4930	894	266	9756	11582
% Passenger Vehicles	0	99.1	98	94.9	98.6	100	99.2	99.1	98.6	97.8	99.1	99
Heavy Vehicles	0	13	5	8	26	0	27	44	13	6	90	116
% Heavy Vehicles	0	0.9	2	5.1	1.4	0	0.8	0.9	1.4	2.2	0.9	1
UTurns	0	0	0	0	0	0	0	0	0	0	0	0
% UTurns	0	0	0	0	0	0	0	0	0	0	0	0

Start Time	FLORIDA AVENUE Northbound					CHANNELSIDE DRIVE Eastbound						Int. Total
	Left	Thru	Right	RTOR	App. Total	Left on Red	Left	Thru	Right	RTOR	App. Total	
Peak Hour Analysis From 06:30 AM to 09:15 AM - Peak 1 of 1												
Peak Hour for Entire Intersection Begins at 08:30 AM												
08:30 AM	0	41	3	10	54	9	177	181	72	10	449	503
08:45 AM	0	76	13	7	96	17	131	168	50	25	391	487
09:00 AM	0	58	9	9	76	6	170	166	61	20	423	499
09:15 AM	0	76	17	11	104	5	121	156	54	28	364	468
Total Volume	0	251	42	37	330	37	599	671	237	83	1627	1957
% App. Total	0	76.1	12.7	11.2		2.3	36.8	41.2	14.6	5.1		
PHF	.000	.826	.618	.841	.793	.544	.846	.927	.823	.741	.906	.973

Intersection Turning Movement Count

City/County: Tampa/Hillsborough
 Weather: Clear
 Comments:

File Name : Channelside&Florida
 Site Code : 18037
 Start Date : 5/21/2019
 Page No : 1

Groups Printed- Passenger Vehicles

Start Time	FLORIDA AVENUE Northbound					CHANNELSIDE DRIVE Eastbound						Int. Total
	Left	Thru	Right	RTOR	App. Total	Left on Red	Left	Thru	Right	RTOR	App. Total	
06:30 AM	0	6	0	2	8	1	94	86	14	14	209	217
06:45 AM	0	9	0	1	10	9	100	103	24	18	254	264
Total	0	15	0	3	18	10	194	189	38	32	463	481
07:00 AM	0	19	2	0	21	7	119	107	36	12	281	302
07:15 AM	0	16	0	5	21	12	153	124	30	18	337	358
07:30 AM	0	43	3	7	53	17	165	173	51	22	428	481
07:45 AM	0	25	0	3	28	13	105	144	49	34	345	373
Total	0	103	5	15	123	49	542	548	166	86	1391	1514
08:00 AM	0	42	5	9	56	7	114	157	63	9	350	406
08:15 AM	0	43	0	2	45	6	151	125	56	18	356	401
08:30 AM	0	40	2	10	52	9	176	178	71	10	444	496
08:45 AM	0	75	13	7	95	17	131	168	50	25	391	486
Total	0	200	20	28	248	39	572	628	240	62	1541	1789
09:00 AM	0	58	8	8	74	6	170	163	60	19	418	492
09:15 AM	0	76	17	10	103	5	121	154	52	28	360	463
*** BREAK ***												
Total	0	134	25	18	177	11	291	317	112	47	778	955
*** BREAK ***												
04:00 PM	0	90	20	3	113	6	175	307	26	4	518	631
04:15 PM	0	58	21	9	88	8	182	341	15	2	548	636
04:30 PM	0	67	28	6	101	9	147	291	19	1	467	568
04:45 PM	0	79	8	3	90	3	192	358	22	4	579	669
Total	0	294	77	21	392	26	696	1297	82	11	2112	2504
05:00 PM	0	88	19	8	115	2	188	318	22	1	531	646
05:15 PM	0	85	19	5	109	1	157	314	37	2	511	620
05:30 PM	0	84	14	7	105	3	141	273	40	2	459	564
05:45 PM	0	78	13	7	98	10	160	229	31	2	432	530
Total	0	335	65	27	427	16	646	1134	130	7	1933	2360
06:00 PM	0	83	14	6	103	7	146	230	28	5	416	519
06:15 PM	0	101	13	11	125	4	130	214	45	4	397	522
06:30 PM	0	91	15	8	114	2	145	191	29	9	376	490
06:45 PM	0	78	10	11	99	1	139	182	24	3	349	448
Total	0	353	52	36	441	14	560	817	126	21	1538	1979
Grand Total	0	1434	244	148	1826	165	3501	4930	894	266	9756	11582
Apprch %	0	78.5	13.4	8.1		1.7	35.9	50.5	9.2	2.7		
Total %	0	12.4	2.1	1.3	15.8	1.4	30.2	42.6	7.7	2.3	84.2	

Start Time	FLORIDA AVENUE Northbound					CHANNELSIDE DRIVE Eastbound						Int. Total
	Left	Thru	Right	RTOR	App. Total	Left on Red	Left	Thru	Right	RTOR	App. Total	
08:30 AM	0	40	2	10	52	9	176	178	71	10	444	496
08:45 AM	0	75	13	7	95	17	131	168	50	25	391	486
09:00 AM	0	58	8	8	74	6	170	163	60	19	418	492
09:15 AM	0	76	17	10	103	5	121	154	52	28	360	463
Total Volume	0	249	40	35	324	37	598	663	233	82	1613	1937
% App. Total	0	76.9	12.3	10.8		2.3	37.1	41.1	14.4	5.1		
PHF	.000	.819	.588	.875	.786	.544	.849	.931	.820	.732	.908	.976

Peak Hour Analysis From 06:30 AM to 09:15 AM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 08:30 AM

Intersection Turning Movement Count

City/County: Tampa/Hillsborough
 Weather: Clear
 Comments:

File Name : Channelside&Florida
 Site Code : 18037
 Start Date : 5/21/2019
 Page No : 2

Start Time	FLORIDA AVENUE Northbound					CHANNELSIDE DRIVE Eastbound						Int. Total
	Left	Thru	Right	RTOR	App. Total	Left on Red	Left	Thru	Right	RTOR	App. Total	

Peak Hour Analysis From 06:30 AM to 09:15 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	08:30 AM					08:30 AM					
+0 mins.	0	40	2	10	52	9	176	178	71	10	444
+15 mins.	0	75	13	7	95	17	131	168	50	25	391
+30 mins.	0	58	8	8	74	6	170	163	60	19	418
+45 mins.	0	76	17	10	103	5	121	154	52	28	360
Total Volume	0	249	40	35	324	37	598	663	233	82	1613
% App. Total	0	76.9	12.3	10.8		2.3	37.1	41.1	14.4	5.1	
PHF	.000	.819	.588	.875	.786	.544	.849	.931	.820	.732	.908

Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:15 PM

04:15 PM	0	58	21	9	88	8	182	341	15	2	548	636
04:30 PM	0	67	28	6	101	9	147	291	19	1	467	568
04:45 PM	0	79	8	3	90	3	192	358	22	4	579	669
05:00 PM	0	88	19	8	115	2	188	318	22	1	531	646
Total Volume	0	292	76	26	394	22	709	1308	78	8	2125	2519
% App. Total	0	74.1	19.3	6.6		1	33.4	61.6	3.7	0.4		
PHF	.000	.830	.679	.722	.857	.611	.923	.913	.886	.500	.918	.941

Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	06:00 PM					04:15 PM					
+0 mins.	0	83	14	6	103	8	182	341	15	2	548
+15 mins.	0	101	13	11	125	9	147	291	19	1	467
+30 mins.	0	91	15	8	114	3	192	358	22	4	579
+45 mins.	0	78	10	11	99	2	188	318	22	1	531
Total Volume	0	353	52	36	441	22	709	1308	78	8	2125
% App. Total	0	80	11.8	8.2		1	33.4	61.6	3.7	0.4	
PHF	.000	.874	.867	.818	.882	.611	.923	.913	.886	.500	.918

Intersection Turning Movement Count

City/County: Tampa/Hillsborough
 Weather: Clear
 Comments:

File Name : Channelside&Florida
 Site Code : 18037
 Start Date : 5/21/2019
 Page No : 1

Groups Printed- Heavy Vehicles

Start Time	FLORIDA AVENUE Northbound					CHANNELSIDE DRIVE Eastbound						Int. Total
	Left	Thru	Right	RTOR	App. Total	Left on Red	Left	Thru	Right	RTOR	App. Total	
06:30 AM	0	0	0	0	0	0	1	2	1	0	4	4
06:45 AM	0	1	0	1	2	0	2	0	0	1	3	5
Total	0	1	0	1	2	0	3	2	1	1	7	9
07:00 AM	0	2	1	0	3	0	1	1	2	0	4	7
07:15 AM	0	2	0	1	3	0	1	3	1	0	5	8
07:30 AM	0	0	0	1	1	0	2	2	0	0	4	5
07:45 AM	0	1	0	0	1	0	1	3	1	1	6	7
Total	0	5	1	2	8	0	5	9	4	1	19	27
08:00 AM	0	2	1	0	3	0	3	5	0	1	9	12
08:15 AM	0	0	0	3	3	0	0	0	1	1	2	5
08:30 AM	0	1	1	0	2	0	1	3	1	0	5	7
08:45 AM	0	1	0	0	1	0	0	0	0	0	0	1
Total	0	4	2	3	9	0	4	8	2	2	16	25
09:00 AM	0	0	1	1	2	0	0	3	1	1	5	7
09:15 AM	0	0	0	1	1	0	0	2	2	0	4	5
*** BREAK ***												
Total	0	0	1	2	3	0	0	5	3	1	9	12
*** BREAK ***												
04:00 PM	0	1	0	0	1	0	1	1	0	0	2	3
04:15 PM	0	1	0	0	1	0	1	3	0	0	4	5
04:30 PM	0	0	0	0	0	0	0	1	0	0	1	1
04:45 PM	0	1	0	0	1	0	2	3	0	0	5	6
Total	0	3	0	0	3	0	4	8	0	0	12	15
05:00 PM	0	0	0	0	0	0	0	2	1	0	3	3
05:15 PM	0	0	1	0	1	0	1	2	0	0	3	4
05:30 PM	0	0	0	0	0	0	1	0	0	0	1	1
05:45 PM	0	0	0	0	0	0	1	3	0	1	5	5
Total	0	0	1	0	1	0	3	7	1	1	12	13
06:00 PM	0	0	0	0	0	0	1	0	1	0	2	2
06:15 PM	0	0	0	0	0	0	2	3	0	0	5	5
06:30 PM	0	0	0	0	0	0	1	1	0	0	2	2
06:45 PM	0	0	0	0	0	0	4	1	1	0	6	6
Total	0	0	0	0	0	0	8	5	2	0	15	15
Grand Total	0	13	5	8	26	0	27	44	13	6	90	116
Apprch %	0	50	19.2	30.8		0	30	48.9	14.4	6.7		
Total %	0	11.2	4.3	6.9	22.4	0	23.3	37.9	11.2	5.2	77.6	

Start Time	FLORIDA AVENUE Northbound					CHANNELSIDE DRIVE Eastbound						Int. Total
	Left	Thru	Right	RTOR	App. Total	Left on Red	Left	Thru	Right	RTOR	App. Total	
07:15 AM	0	2	0	1	3	0	1	3	1	0	5	8
07:30 AM	0	0	0	1	1	0	2	2	0	0	4	5
07:45 AM	0	1	0	0	1	0	1	3	1	1	6	7
08:00 AM	0	2	1	0	3	0	3	5	0	1	9	12
Total Volume	0	5	1	2	8	0	7	13	2	2	24	32
% App. Total	0	62.5	12.5	25		0	29.2	54.2	8.3	8.3		
PHF	.000	.625	.250	.500	.667	.000	.583	.650	.500	.500	.667	.667

Peak Hour Analysis From 06:30 AM to 09:15 AM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 07:15 AM

Intersection Turning Movement Count

City/County: Tampa/Hillsborough
 Weather: Clear
 Comments:

File Name : Channelside&Florida
 Site Code : 18037
 Start Date : 5/21/2019
 Page No : 2

Start Time	FLORIDA AVENUE Northbound					CHANNELSIDE DRIVE Eastbound						Int. Total
	Left	Thru	Right	RTOR	App. Total	Left on Red	Left	Thru	Right	RTOR	App. Total	

Peak Hour Analysis From 06:30 AM to 09:15 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	06:45 AM					07:15 AM					
+0 mins.	0	1	0	1	2	0	1	3	1	0	5
+15 mins.	0	2	1	0	3	0	2	2	0	0	4
+30 mins.	0	2	0	1	3	0	1	3	1	1	6
+45 mins.	0	0	0	1	1	0	3	5	0	1	9
Total Volume	0	5	1	3	9	0	7	13	2	2	24
% App. Total	0	55.6	11.1	33.3		0	29.2	54.2	8.3	8.3	
PHF	.000	.625	.250	.750	.750	.000	.583	.650	.500	.500	.667

Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:00 PM

04:00 PM	0	1	0	0	1	0	1	1	0	0	2	3
04:15 PM	0	1	0	0	1	0	1	3	0	0	4	5
04:30 PM	0	0	0	0	0	0	0	1	0	0	1	1
04:45 PM	0	1	0	0	1	0	2	3	0	0	5	6
Total Volume	0	3	0	0	3	0	4	8	0	0	12	15
% App. Total	0	100	0	0		0	33.3	66.7	0	0		
PHF	.000	.750	.000	.000	.750	.000	.500	.667	.000	.000	.600	.625

Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:00 PM					06:00 PM					
+0 mins.	0	1	0	0	1	0	1	0	1	0	2
+15 mins.	0	1	0	0	1	0	2	3	0	0	5
+30 mins.	0	0	0	0	0	0	1	1	0	0	2
+45 mins.	0	1	0	0	1	0	4	1	1	0	6
Total Volume	0	3	0	0	3	0	8	5	2	0	15
% App. Total	0	100	0	0		0	53.3	33.3	13.3	0	
PHF	.000	.750	.000	.000	.750	.000	.500	.417	.500	.000	.625

Intersection Pedestrian & Bicycle Count

Date: 5/21/19

Day: Tuesday

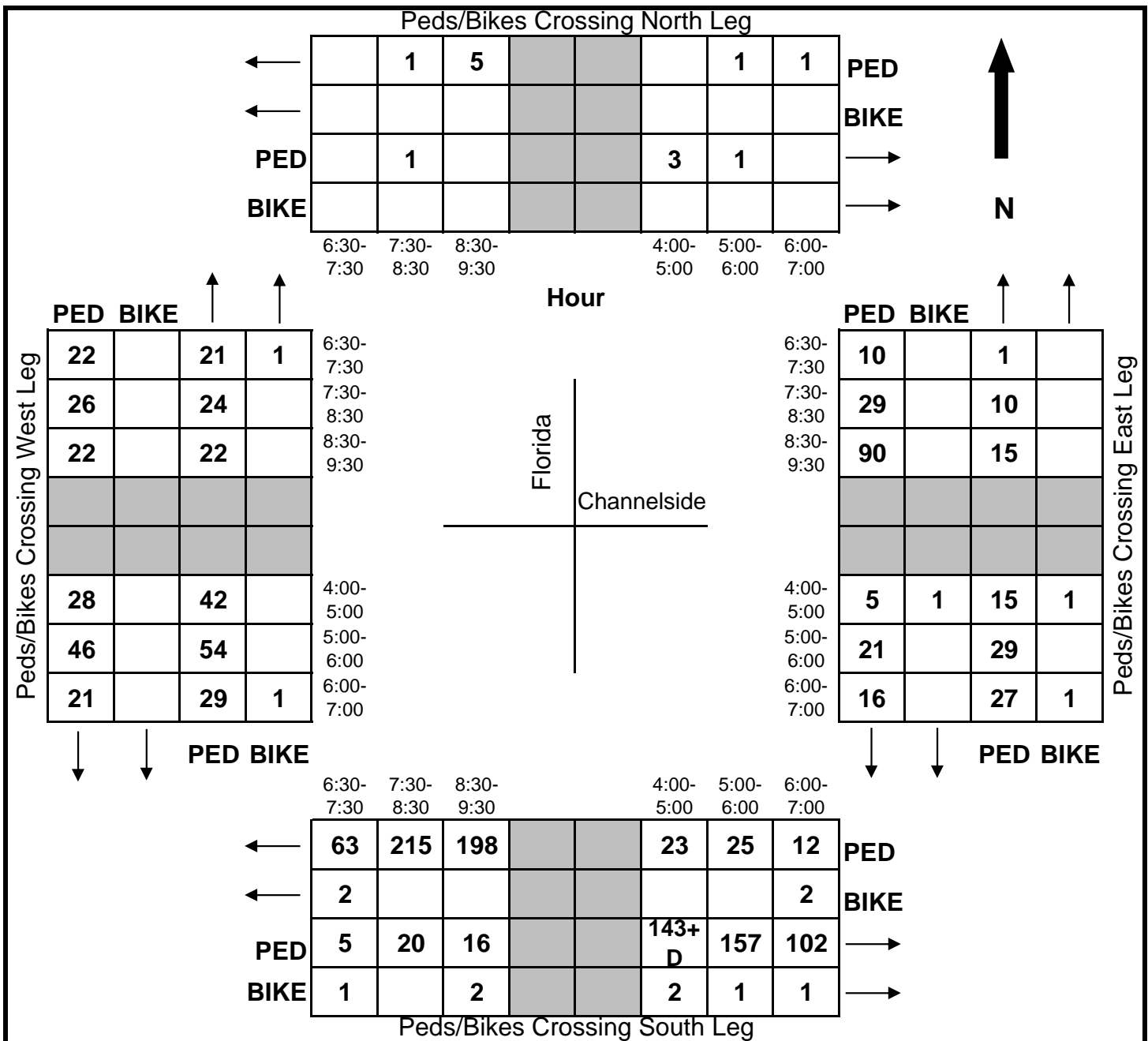
Count Times: 6:30-9:30am; 4-7pm

Weather: Clear

Intersection: Channelside Drive at Florida Avenue

Comments: _____

C - Children under 12; S - Seniors 65 or over; D - Physical Disability



Intersection Turning Movement Count

City/County: Tampa/Hillsborough
 Weather: Clear
 Comments:

File Name : Channelside&Morgan
 Site Code : 18037
 Start Date : 5/21/2019
 Page No : 2

Start Time	MORGAN STREET Southbound			MORGAN STREET Northbound				CHANNELSIDE DRIVE Eastbound					SELMON EXPWY EB OFF RAMP Southeastbound				Int. Total
	Left	Thru	App. Total	Thru	Right	RTO R	App. Total	Left	Thru	Right	RTO R	App. Total	Hard Left to Morgan NB	Left to Channelside	Thru to Morgan SB	App. Total	

Peak Hour Analysis From 06:30 AM to 09:15 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 08:30 AM

08:30 AM	20	37	57	18	6	1	25	21	147	20	2	190	10	59	9	78	350
08:45 AM	17	32	49	22	6	0	28	24	138	29	8	199	21	57	5	83	359
09:00 AM	31	38	69	13	3	1	17	32	124	17	10	183	9	38	6	53	322
09:15 AM	36	58	94	36	3	5	44	18	119	30	15	182	9	36	3	48	368
Total Volume	104	165	269	89	18	7	114	95	528	96	35	754	49	190	23	262	1399
% App. Total	38.7	61.3		78.1	15.8	6.1		12.6	70	12.7	4.6		18.7	72.5	8.8		
PHF	.722	.711	.715	.618	.750	.350	.648	.742	.898	.800	.583	.947	.583	.805	.639	.789	.950

Peak Hour Analysis From 06:30 AM to 09:15 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	08:30 AM			08:30 AM				08:30 AM					08:00 AM			
+0 mins.	20	37	57	18	6	1	25	21	147	20	2	190	18	42	2	62
+15 mins.	17	32	49	22	6	0	28	24	138	29	8	199	7	49	7	63
+30 mins.	31	38	69	13	3	1	17	32	124	17	10	183	10	59	9	78
+45 mins.	36	58	94	36	3	5	44	18	119	30	15	182	21	57	5	83
Total Volume	104	165	269	89	18	7	114	95	528	96	35	754	56	207	23	286
% App. Total	38.7	61.3		78.1	15.8	6.1		12.6	70	12.7	4.6		19.6	72.4	8	
PHF	.722	.711	.715	.618	.750	.350	.648	.742	.898	.800	.583	.947	.667	.877	.639	.861

Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:15 PM

04:15 PM	15	5	20	17	3	1	21	10	366	1	2	379	0	25	1	26	446
04:30 PM	9	2	11	16	2	2	20	3	318	2	1	324	1	35	1	37	392
04:45 PM	15	3	18	10	4	6	20	11	355	2	1	369	1	20	0	21	428
05:00 PM	17	9	26	25	5	6	36	10	341	0	0	351	3	20	1	24	437
Total Volume	56	19	75	68	14	15	97	34	1380	5	4	1423	5	100	3	108	1703
% App. Total	74.7	25.3		70.1	14.4	15.5		2.4	97	0.4	0.3		4.6	92.6	2.8		
PHF	.824	.528	.721	.680	.700	.625	.674	.773	.943	.625	.500	.939	.417	.714	.750	.730	.955

Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	05:00 PM			05:00 PM				04:15 PM					05:30 PM			
+0 mins.	17	9	26	25	5	6	36	10	366	1	2	379	3	35	0	38
+15 mins.	12	3	15	15	4	0	19	3	318	2	1	324	3	38	1	42
+30 mins.	15	7	22	24	6	0	30	11	355	2	1	369	2	32	1	35
+45 mins.	15	7	22	17	2	2	21	10	341	0	0	351	1	34	1	36
Total Volume	59	26	85	81	17	8	106	34	1380	5	4	1423	9	139	3	151
% App. Total	69.4	30.6		76.4	16	7.5		2.4	97	0.4	0.3		6	92.1	2	
PHF	.868	.722	.817	.810	.708	.333	.736	.773	.943	.625	.500	.939	.750	.914	.750	.899

Intersection Turning Movement Count

City/County: Tampa/Hillsborough
 Weather: Clear
 Comments:

File Name : Channelside&Morgan
 Site Code : 18037
 Start Date : 5/21/2019
 Page No : 1

Groups Printed- Passenger Vehicles

Start Time	MORGAN STREET Southbound			MORGAN STREET Northbound				CHANNELSIDE DRIVE Eastbound					SELMON EXPWY EB OFF RAMP Southeastbound				Int. Total
	Left	Thru	App. Total	Thru	Right	RTO R	App. Total	Left	Thru	Right	RTO R	App. Total	Hard Left to Morgan NB	Left to Channelside	Thru to Morgan SB	App. Total	
06:30 AM	9	12	21	7	0	0	7	9	77	9	1	96	0	12	2	14	138
06:45 AM	9	10	19	7	0	1	8	13	90	7	0	110	2	7	3	12	149
Total	18	22	40	14	0	1	15	22	167	16	1	206	2	19	5	26	287
07:00 AM	6	10	16	8	1	1	10	16	84	8	2	110	3	24	2	29	165
07:15 AM	9	7	16	11	0	0	11	14	100	9	0	123	11	24	2	37	187
07:30 AM	7	13	20	13	3	0	16	29	147	6	2	184	7	19	2	28	248
07:45 AM	22	33	55	6	0	2	8	24	113	8	2	147	8	35	4	47	257
Total	44	63	107	38	4	3	45	83	444	31	6	564	29	102	10	141	857
08:00 AM	20	30	50	17	1	0	18	21	138	13	2	174	18	41	2	61	303
08:15 AM	21	41	62	12	1	1	14	20	92	12	0	124	7	47	7	61	261
08:30 AM	19	37	56	18	6	1	25	21	143	20	2	186	10	58	9	77	344
08:45 AM	17	32	49	22	6	0	28	24	138	29	8	199	21	57	5	83	359
Total	77	140	217	69	14	2	85	86	511	74	12	683	56	203	23	282	1267
09:00 AM	28	38	66	13	3	1	17	31	121	17	10	179	9	36	6	51	313
09:15 AM	34	58	92	36	3	5	44	18	115	30	15	178	9	33	3	45	359
*** BREAK ***																	
Total	62	96	158	49	6	6	61	49	236	47	25	357	18	69	9	96	672
*** BREAK ***																	
04:00 PM	14	2	16	16	2	2	20	13	331	2	2	348	0	29	3	32	416
04:15 PM	15	5	20	17	3	1	21	10	362	1	2	375	0	24	1	25	441
04:30 PM	9	2	11	16	2	2	20	3	317	2	1	323	1	33	1	35	389
04:45 PM	14	3	17	10	4	6	20	11	352	2	1	366	1	19	0	20	423
Total	52	12	64	59	11	11	81	37	1362	7	6	1412	2	105	5	112	1669
05:00 PM	17	9	26	25	5	6	36	10	339	0	0	349	3	19	1	23	434
05:15 PM	12	3	15	15	4	0	19	7	331	1	0	339	0	15	0	15	388
05:30 PM	15	7	22	24	6	0	30	5	285	3	1	294	3	34	0	37	383
05:45 PM	14	7	21	17	2	2	21	6	242	1	1	250	3	38	1	42	334
Total	58	26	84	81	17	8	106	28	1197	5	2	1232	9	106	2	117	1539
06:00 PM	7	4	11	18	5	3	26	9	240	1	0	250	2	32	1	35	322
06:15 PM	11	7	18	12	2	3	17	6	223	4	1	234	1	34	1	36	305
06:30 PM	9	3	12	13	3	4	20	5	212	2	0	219	1	22	1	24	275
06:45 PM	19	3	22	12	2	2	16	7	188	2	0	197	1	15	1	17	252
Total	46	17	63	55	12	12	79	27	863	9	1	900	5	103	4	112	1154
Grand Total	357	376	733	365	64	43	472	332	4780	189	53	5354	121	707	58	886	7445
Apprch %	48.7	51.3		77.3	13.6	9.1		6.2	89.3	3.5	1		13.7	79.8	6.5		
Total %	4.8	5.1	9.8	4.9	0.9	0.6	6.3	4.5	64.2	2.5	0.7	71.9	1.6	9.5	0.8	11.9	

Start Time	MORGAN STREET Southbound			MORGAN STREET Northbound				CHANNELSIDE DRIVE Eastbound					SELMON EXPWY EB OFF RAMP Southeastbound				Int. Total
	Left	Thru	App. Total	Thru	Right	RTO R	App. Total	Left	Thru	Right	RTO R	App. Total	Hard Left to Morgan NB	Left to Channelside	Thru to Morgan SB	App. Total	

Peak Hour Analysis From 06:30 AM to 09:15 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 08:30 AM

08:30 AM	19	37	56	18	6	1	25	21	143	20	2	186	10	58	9	77	344
08:45 AM	17	32	49	22	6	0	28	24	138	29	8	199	21	57	5	83	359
09:00 AM	28	38	66	13	3	1	17	31	121	17	10	179	9	36	6	51	313
09:15 AM	34	58	92	36	3	5	44	18	115	30	15	178	9	33	3	45	359

Intersection Turning Movement Count

Total Volume	98	165	263	89	18	7	114	94	517	96	35	742	49	184	23	256	1375
% App. Total	37.3	62.7		78.1	15.8	6.1		12.7	69.7	12.9	4.7		19.1	71.9	9		
PHF	.721	.711	.715	.618	.750	.350	.648	.758	.904	.800	.583	.932	.583	.793	.639	.771	.958

Peak Hour Analysis From 06:30 AM to 09:15 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	08:30 AM			08:30 AM				08:30 AM				08:00 AM				
+0 mins.	19	37	56	18	6	1	25	21	143	20	2	186	18	41	2	61
+15 mins.	17	32	49	22	6	0	28	24	138	29	8	199	7	47	7	61
+30 mins.	28	38	66	13	3	1	17	31	121	17	10	179	10	58	9	77
+45 mins.	34	58	92	36	3	5	44	18	115	30	15	178	21	57	5	83
Total Volume	98	165	263	89	18	7	114	94	517	96	35	742	56	203	23	282
% App. Total	37.3	62.7		78.1	15.8	6.1		12.7	69.7	12.9	4.7		19.9	72	8.2	
PHF	.721	.711	.715	.618	.750	.350	.648	.758	.904	.800	.583	.932	.667	.875	.639	.849

Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:15 PM

04:15 PM	15	5	20	17	3	1	21	10	362	1	2	375	0	24	1	25	441
04:30 PM	9	2	11	16	2	2	20	3	317	2	1	323	1	33	1	35	389
04:45 PM	14	3	17	10	4	6	20	11	352	2	1	366	1	19	0	20	423
05:00 PM	17	9	26	25	5	6	36	10	339	0	0	349	3	19	1	23	434
Total Volume	55	19	74	68	14	15	97	34	1370	5	4	1413	5	95	3	103	1687
% App. Total	74.3	25.7		70.1	14.4	15.5		2.4	97	0.4	0.3		4.9	92.2	2.9		
PHF	.809	.528	.712	.680	.700	.625	.674	.773	.946	.625	.500	.942	.417	.720	.750	.736	.956

Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	05:00 PM			05:00 PM				04:15 PM				05:30 PM				
+0 mins.	17	9	26	25	5	6	36	10	362	1	2	375	3	34	0	37
+15 mins.	12	3	15	15	4	0	19	3	317	2	1	323	3	38	1	42
+30 mins.	15	7	22	24	6	0	30	11	352	2	1	366	2	32	1	35
+45 mins.	14	7	21	17	2	2	21	10	339	0	0	349	1	34	1	36
Total Volume	58	26	84	81	17	8	106	34	1370	5	4	1413	9	138	3	150
% App. Total	69	31		76.4	16	7.5		2.4	97	0.4	0.3		6	92	2	
PHF	.853	.722	.808	.810	.708	.333	.736	.773	.946	.625	.500	.942	.750	.908	.750	.893

Intersection Turning Movement Count

City/County: Tampa/Hillsborough
 Weather: Clear
 Comments:

File Name : Channelside&Morgan
 Site Code : 18037
 Start Date : 5/21/2019
 Page No : 1

Groups Printed- Heavy Vehicles

Start Time	MORGAN STREET Southbound			MORGAN STREET Northbound				CHANNELSIDE DRIVE Eastbound					SELMON EXPWY EB OFF RAMP Southeastbound				Int. Total
	Left	Thru	App. Total	Thru	Right	RTO R	App. Total	Left	Thru	Right	RTO R	App. Total	Hard Left to Morgan NB	Left to Channelside	Thru to Morgan SB	App. Total	
06:30 AM	0	0	0	0	0	0	0	0	2	0	0	2	0	1	0	1	3
06:45 AM	1	0	1	0	0	0	0	1	0	0	0	1	0	1	0	1	3
Total	1	0	1	0	0	0	0	1	2	0	0	3	0	2	0	2	6
07:00 AM	3	1	4	0	0	0	0	0	4	0	0	4	0	2	0	2	10
07:15 AM	0	0	0	0	0	0	0	1	4	0	0	5	0	0	0	0	5
07:30 AM	0	0	0	0	0	0	0	1	2	0	0	3	0	1	0	1	4
07:45 AM	0	0	0	0	0	0	0	0	3	0	0	3	0	2	0	2	5
Total	3	1	4	0	0	0	0	2	13	0	0	15	0	5	0	5	24
08:00 AM	1	0	1	0	0	0	0	0	6	0	0	6	0	1	0	1	8
08:15 AM	3	0	3	0	0	0	0	1	2	0	0	3	0	2	0	2	8
08:30 AM	1	0	1	0	0	0	0	0	4	0	0	4	0	1	0	1	6
*** BREAK ***																	
Total	5	0	5	0	0	0	0	1	12	0	0	13	0	4	0	4	22
09:00 AM	3	0	3	0	0	0	0	1	3	0	0	4	0	2	0	2	9
09:15 AM	2	0	2	0	0	0	0	0	4	0	0	4	0	3	0	3	9
*** BREAK ***																	
Total	5	0	5	0	0	0	0	1	7	0	0	8	0	5	0	5	18
*** BREAK ***																	
04:00 PM	0	0	0	0	0	0	0	0	2	0	0	2	0	1	0	1	3
04:15 PM	0	0	0	0	0	0	0	0	4	0	0	4	0	1	0	1	5
04:30 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	2	0	2	3
04:45 PM	1	0	1	0	0	0	0	0	3	0	0	3	0	1	0	1	5
Total	1	0	1	0	0	0	0	0	10	0	0	10	0	5	0	5	16
05:00 PM	0	0	0	0	0	0	0	0	2	0	0	2	0	1	0	1	3
05:15 PM	0	0	0	0	0	0	0	0	3	0	0	3	0	1	0	1	4
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
05:45 PM	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	3
Total	0	0	0	0	0	0	0	0	8	0	0	8	0	3	0	3	11
*** BREAK ***																	
06:15 PM	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	3
06:30 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
06:45 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	5	0	0	5	0	0	0	0	5
Grand Total	15	1	16	0	0	0	0	5	57	0	0	62	0	24	0	24	102
Apprch %	93.8	6.2		0	0	0		8.1	91.9	0	0		0	100	0		
Total %	14.7	1	15.7	0	0	0	0	4.9	55.9	0	0	60.8	0	23.5	0	23.5	

Start Time	MORGAN STREET Southbound			MORGAN STREET Northbound				CHANNELSIDE DRIVE Eastbound					SELMON EXPWY EB OFF RAMP Southeastbound				Int. Total
	Left	Thru	App. Total	Thru	Right	RTO R	App. Total	Left	Thru	Right	RTO R	App. Total	Hard Left to Morgan NB	Left to Channelside	Thru to Morgan SB	App. Total	
07:45 AM	0	0	0	0	0	0	0	0	3	0	0	3	0	2	0	2	5
08:00 AM	1	0	1	0	0	0	0	0	6	0	0	6	0	1	0	1	8
08:15 AM	3	0	3	0	0	0	0	1	2	0	0	3	0	2	0	2	8
08:30 AM	1	0	1	0	0	0	0	0	4	0	0	4	0	1	0	1	6

Peak Hour Analysis From 06:30 AM to 09:15 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:45 AM

Intersection Turning Movement Count

Total Volume	5	0	5	0	0	0	0	1	15	0	0	16	0	6	0	6	27
% App. Total	100	0		0	0	0		6.2	93.8	0	0		0	100	0		
PHF	.417	.000	.417	.000	.000	.000	.000	.250	.625	.000	.000	.667	.000	.750	.000	.750	.844

Peak Hour Analysis From 06:30 AM to 09:15 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	08:15 AM			06:30 AM				07:15 AM				07:30 AM				
+0 mins.	3	0	3	0	0	0	0	1	4	0	0	5	0	1	0	1
+15 mins.	1	0	1	0	0	0	0	1	2	0	0	3	0	2	0	2
+30 mins.	0	0	0	0	0	0	0	0	3	0	0	3	0	1	0	1
+45 mins.	3	0	3	0	0	0	0	0	6	0	0	6	0	2	0	2
Total Volume	7	0	7	0	0	0	0	2	15	0	0	17	0	6	0	6
% App. Total	100	0		0	0	0		11.8	88.2	0	0		0	100	0	
PHF	.583	.000	.583	.000	.000	.000	.000	.500	.625	.000	.000	.708	.000	.750	.000	.750

Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:00 PM

04:00 PM	0	0	0	0	0	0	0	0	2	0	0	2	0	1	0	1	3
04:15 PM	0	0	0	0	0	0	0	0	4	0	0	4	0	1	0	1	5
04:30 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	2	0	2	3
04:45 PM	1	0	1	0	0	0	0	0	3	0	0	3	0	1	0	1	5
Total Volume	1	0	1	0	0	0	0	0	10	0	0	10	0	5	0	5	16
% App. Total	100	0		0	0	0		0	100	0	0		0	100	0		
PHF	.250	.000	.250	.000	.000	.000	.000	.000	.625	.000	.000	.625	.000	.625	.000	.625	.800

Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:00 PM			04:00 PM				04:00 PM				04:00 PM				
+0 mins.	0	0	0	0	0	0	0	0	2	0	0	2	0	1	0	1
+15 mins.	0	0	0	0	0	0	0	0	4	0	0	4	0	1	0	1
+30 mins.	0	0	0	0	0	0	0	0	1	0	0	1	0	2	0	2
+45 mins.	1	0	1	0	0	0	0	0	3	0	0	3	0	1	0	1
Total Volume	1	0	1	0	0	0	0	0	10	0	0	10	0	5	0	5
% App. Total	100	0		0	0	0		0	100	0	0		0	100	0	
PHF	.250	.000	.250	.000	.000	.000	.000	.000	.625	.000	.000	.625	.000	.625	.000	.625

Intersection Turning Movement Count

City/County: Tampa/Hillsborough
 Weather: Clear
 Comments:

File Name : Channelside&Morgan
 Site Code : 18037
 Start Date : 5/21/2019
 Page No : 2

Start Time	MORGAN STREET Southbound			MORGAN STREET Northbound				CHANNELSIDE DRIVE Eastbound					SELMON EXPWY EB OFF RAMP Southeastbound				Int. Total
	Left	Thru	App. Total	Thru	Right	RTO R	App. Total	Left	Thru	Right	RTO R	App. Total	Hard Left to Morgan NB	Left to Channelside	Thru to Morgan SB	App. Total	

Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	05:00 PM			04:00 PM				04:00 PM					04:00 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	100	0		0	0	0		0	0	0	0		0	0	0	
PHF	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Intersection Pedestrian & Bicycle Count

Date: 5/21/19

Day: Tuesday

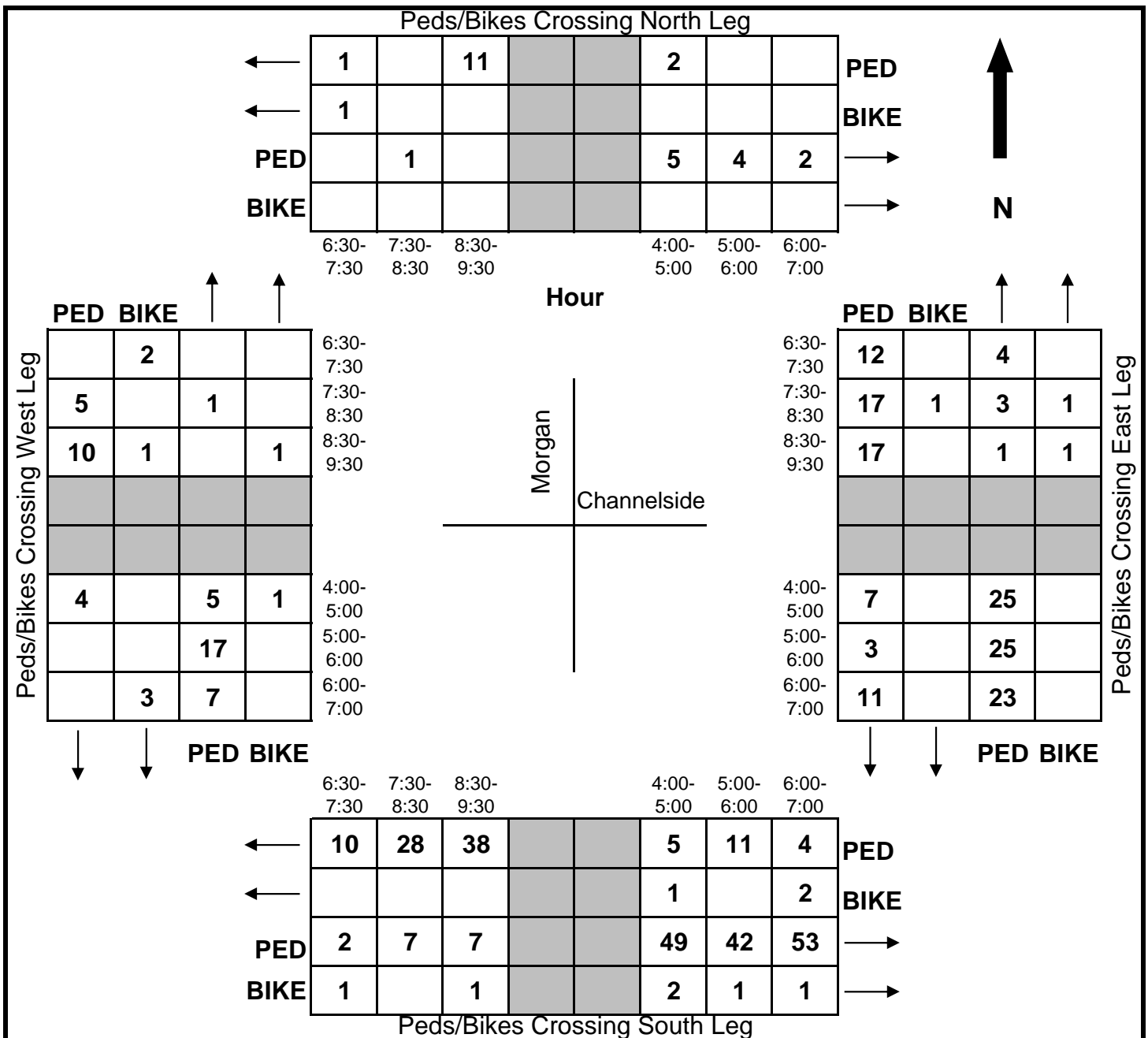
Count Times: 6:30-9:30am; 4-7pm

Weather: Clear

Intersection: Channelside Drive at Morgan Street

Comments: Construction workers in area not counted as pedestrians

C - Children under 12; S - Seniors 65 or over; D - Physical Disability



Intersection Turning Movement Count

City/County: Tampa/Hillsborough
 Weather: Clear
 Comments:

File Name : Meridian&Whiting
 Site Code : 19015
 Start Date : 9/11/2019
 Page No : 1

Groups Printed- Passenger Vehicles - Heavy Vehicles - UTurns

Start Time	MERIDIAN AVENUE Southbound				WHITING STREET Westbound					MERIDIAN AVENUE Northbound					Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	
06:30 AM	2	172	0	174	1	0	0	0	1	0	30	0	0	30	205
06:45 AM	8	198	0	206	2	0	2	3	7	0	31	1	0	32	245
Total	10	370	0	380	3	0	2	3	8	0	61	1	0	62	450
07:00 AM	1	275	0	276	3	0	3	4	10	0	48	4	0	52	338
07:15 AM	8	260	0	268	5	0	6	9	20	0	46	5	1	52	340
07:30 AM	5	283	0	288	12	0	1	5	18	0	59	5	0	64	370
07:45 AM	9	287	0	296	3	0	4	4	11	0	45	8	0	53	360
Total	23	1105	0	1128	23	0	14	22	59	0	198	22	1	221	1408
08:00 AM	6	310	0	316	6	0	5	4	15	0	44	5	0	49	380
08:15 AM	6	316	0	322	14	0	5	3	22	0	59	5	0	64	408
08:30 AM	10	213	0	223	9	0	5	4	18	3	52	5	0	60	301
08:45 AM	9	276	0	285	5	0	1	7	13	2	56	7	2	67	365
Total	31	1115	0	1146	34	0	16	18	68	5	211	22	2	240	1454
09:00 AM	11	115	0	126	3	0	2	1	6	0	43	6	0	49	181
09:15 AM	7	106	0	113	3	0	1	2	6	0	53	7	0	60	179
*** BREAK ***															
Total	18	221	0	239	6	0	3	3	12	0	96	13	0	109	360
*** BREAK ***															
03:45 PM	9	50	0	59	3	0	1	3	7	2	84	11	0	97	163
Total	9	50	0	59	3	0	1	3	7	2	84	11	0	97	163
04:00 PM	7	51	0	58	8	0	1	2	11	0	120	11	1	132	201
04:15 PM	12	75	0	87	0	0	2	6	8	0	84	15	0	99	194
04:30 PM	5	57	0	62	16	0	8	2	26	1	106	5	1	113	201
04:45 PM	13	69	0	82	6	0	0	3	9	2	114	14	1	131	222
Total	37	252	0	289	30	0	11	13	54	3	424	45	3	475	818
05:00 PM	3	71	0	74	8	0	3	2	13	1	138	5	2	146	233
05:15 PM	21	80	0	101	14	0	3	4	21	0	143	15	1	159	281
05:30 PM	11	94	0	105	11	0	4	0	15	2	104	10	1	117	237
05:45 PM	8	93	0	101	5	0	3	3	11	0	102	14	0	116	228
Total	43	338	0	381	38	0	13	9	60	3	487	44	4	538	979
06:00 PM	12	87	0	99	5	0	2	8	15	0	110	9	1	120	234
06:15 PM	12	71	0	83	7	0	1	8	16	0	85	12	0	97	196
06:30 PM	9	82	0	91	2	0	1	7	10	0	90	17	0	107	208
Grand Total	204	3691	0	3895	151	0	64	94	309	13	1846	196	11	2066	6270
Apprch %	5.2	94.8	0		48.9	0	20.7	30.4		0.6	89.4	9.5	0.5		
Total %	3.3	58.9	0	62.1	2.4	0	1	1.5	4.9	0.2	29.4	3.1	0.2	33	
Passenger Vehicles	189	3660	0	3849	148	0	60	92	300	0	1823	193	11	2027	6176
% Passenger Vehicles	92.6	99.2	0	98.8	98	0	93.8	97.9	97.1	0	98.8	98.5	100	98.1	98.5
Heavy Vehicles	0	31	0	31	3	0	4	2	9	0	23	3	0	26	66
% Heavy Vehicles	0	0.8	0	0.8	2	0	6.2	2.1	2.9	0	1.2	1.5	0	1.3	1.1
UTurns	15	0	0	15	0	0	0	0	0	13	0	0	0	13	28
% UTurns	7.4	0	0	0.4	0	0	0	0	0	100	0	0	0	0.6	0.4

Intersection Turning Movement Count

City/County: Tampa/Hillsborough
 Weather: Clear
 Comments:

File Name : Meridian&Whiting
 Site Code : 19015
 Start Date : 9/11/2019
 Page No : 2

Start Time	MERIDIAN AVENUE Southbound				WHITING STREET Westbound					MERIDIAN AVENUE Northbound					Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	
Peak Hour Analysis From 06:30 AM to 09:15 AM - Peak 1 of 1															
Peak Hour for Entire Intersection Begins at 07:30 AM															
07:30 AM	5	283	0	288	12	0	1	5	18	0	59	5	0	64	370
07:45 AM	9	287	0	296	3	0	4	4	11	0	45	8	0	53	360
08:00 AM	6	310	0	316	6	0	5	4	15	0	44	5	0	49	380
08:15 AM	6	316	0	322	14	0	5	3	22	0	59	5	0	64	408
Total Volume	26	1196	0	1222	35	0	15	16	66	0	207	23	0	230	1518
% App. Total	2.1	97.9	0		53	0	22.7	24.2		0	90	10	0		
PHF	.722	.946	.000	.949	.625	.000	.750	.800	.750	.000	.877	.719	.000	.898	.930

Peak Hour Analysis From 06:30 AM to 09:15 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:30 AM				08:00 AM					08:00 AM				
+0 mins.	5	283	0	288	6	0	5	4	15	0	44	5	0	49
+15 mins.	9	287	0	296	14	0	5	3	22	0	59	5	0	64
+30 mins.	6	310	0	316	9	0	5	4	18	3	52	5	0	60
+45 mins.	6	316	0	322	5	0	1	7	13	2	56	7	2	67
Total Volume	26	1196	0	1222	34	0	16	18	68	5	211	22	2	240
% App. Total	2.1	97.9	0		50	0	23.5	26.5		2.1	87.9	9.2	0.8	
PHF	.722	.946	.000	.949	.607	.000	.800	.643	.773	.417	.894	.786	.250	.896

Peak Hour Analysis From 03:45 PM to 06:30 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 05:15 PM

05:15 PM	21	80	0	101	14	0	3	4	21	0	143	15	1	159	281
05:30 PM	11	94	0	105	11	0	4	0	15	2	104	10	1	117	237
05:45 PM	8	93	0	101	5	0	3	3	11	0	102	14	0	116	228
06:00 PM	12	87	0	99	5	0	2	8	15	0	110	9	1	120	234
Total Volume	52	354	0	406	35	0	12	15	62	2	459	48	3	512	980
% App. Total	12.8	87.2	0		56.5	0	19.4	24.2		0.4	89.6	9.4	0.6		
PHF	.619	.941	.000	.967	.625	.000	.750	.469	.738	.250	.802	.800	.750	.805	.872

Peak Hour Analysis From 03:45 PM to 06:30 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	05:15 PM				04:30 PM					04:45 PM				
+0 mins.	21	80	0	101	16	0	8	2	26	2	114	14	1	131
+15 mins.	11	94	0	105	6	0	0	3	9	1	138	5	2	146
+30 mins.	8	93	0	101	8	0	3	2	13	0	143	15	1	159
+45 mins.	12	87	0	99	14	0	3	4	21	2	104	10	1	117
Total Volume	52	354	0	406	44	0	14	11	69	5	499	44	5	553
% App. Total	12.8	87.2	0		63.8	0	20.3	15.9		0.9	90.2	8	0.9	
PHF	.619	.941	.000	.967	.688	.000	.438	.688	.663	.625	.872	.733	.625	.869

Intersection Turning Movement Count

City/County: Tampa/Hillsborough
 Weather: Clear
 Comments:

File Name : Meridian&Whiting
 Site Code : 19015
 Start Date : 9/11/2019
 Page No : 1

Groups Printed- Passenger Vehicles

Start Time	MERIDIAN AVENUE Southbound				WHITING STREET Westbound					MERIDIAN AVENUE Northbound					Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	
06:30 AM	2	172	0	174	1	0	0	0	1	0	30	0	0	30	205
06:45 AM	7	198	0	205	2	0	1	3	6	0	30	1	0	31	242
Total	9	370	0	379	3	0	1	3	7	0	60	1	0	61	447
07:00 AM	1	274	0	275	3	0	2	4	9	0	47	4	0	51	335
07:15 AM	7	260	0	267	5	0	6	8	19	0	45	5	1	51	337
07:30 AM	5	281	0	286	12	0	1	5	18	0	58	4	0	62	366
07:45 AM	7	287	0	294	3	0	4	4	11	0	44	8	0	52	357
Total	20	1102	0	1122	23	0	13	21	57	0	194	21	1	216	1395
08:00 AM	6	307	0	313	6	0	4	4	14	0	44	5	0	49	376
08:15 AM	6	313	0	319	14	0	5	3	22	0	57	5	0	62	403
08:30 AM	10	212	0	222	8	0	5	4	17	0	51	5	0	56	295
08:45 AM	7	270	0	277	5	0	1	7	13	0	55	7	2	64	354
Total	29	1102	0	1131	33	0	15	18	66	0	207	22	2	231	1428
09:00 AM	11	113	0	124	3	0	2	1	6	0	43	6	0	49	179
09:15 AM	6	105	0	111	2	0	1	2	5	0	52	7	0	59	175
*** BREAK ***															
Total	17	218	0	235	5	0	3	3	11	0	95	13	0	108	354
*** BREAK ***															
03:45 PM	9	50	0	59	3	0	1	3	7	0	83	11	0	94	160
Total	9	50	0	59	3	0	1	3	7	0	83	11	0	94	160
04:00 PM	5	49	0	54	8	0	1	2	11	0	119	10	1	130	195
04:15 PM	12	75	0	87	0	0	2	6	8	0	82	14	0	96	191
04:30 PM	5	57	0	62	16	0	7	2	25	0	106	5	1	112	199
04:45 PM	12	68	0	80	6	0	0	3	9	0	112	14	1	127	216
Total	34	249	0	283	30	0	10	13	53	0	419	43	3	465	801
05:00 PM	2	69	0	71	7	0	3	2	12	0	137	5	2	144	227
05:15 PM	20	80	0	100	14	0	3	3	20	0	141	15	1	157	277
05:30 PM	10	91	0	101	11	0	4	0	15	0	104	10	1	115	231
05:45 PM	7	93	0	100	5	0	3	3	11	0	101	14	0	115	226
Total	39	333	0	372	37	0	13	8	58	0	483	44	4	531	961
06:00 PM	12	85	0	97	5	0	2	8	15	0	109	9	1	119	231
06:15 PM	12	71	0	83	7	0	1	8	16	0	83	12	0	95	194
06:30 PM	8	80	0	88	2	0	1	7	10	0	90	17	0	107	205
Grand Total	189	3660	0	3849	148	0	60	92	300	0	1823	193	11	2027	6176
Apprch %	4.9	95.1	0		49.3	0	20	30.7		0	89.9	9.5	0.5		
Total %	3.1	59.3	0	62.3	2.4	0	1	1.5	4.9	0	29.5	3.1	0.2	32.8	

Start Time	MERIDIAN AVENUE Southbound				WHITING STREET Westbound					MERIDIAN AVENUE Northbound					Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	
07:30 AM	5	281	0	286	12	0	1	5	18	0	58	4	0	62	366
07:45 AM	7	287	0	294	3	0	4	4	11	0	44	8	0	52	357
08:00 AM	6	307	0	313	6	0	4	4	14	0	44	5	0	49	376
08:15 AM	6	313	0	319	14	0	5	3	22	0	57	5	0	62	403
Total Volume	24	1188	0	1212	35	0	14	16	65	0	203	22	0	225	1502
% App. Total	2	98	0		53.8	0	21.5	24.6		0	90.2	9.8	0		
PHF	.857	.949	.000	.950	.625	.000	.700	.800	.739	.000	.875	.688	.000	.907	.932

Peak Hour Analysis From 06:30 AM to 09:15 AM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 07:30 AM

Intersection Turning Movement Count

City/County: Tampa/Hillsborough
 Weather: Clear
 Comments:

File Name : Meridian&Whiting
 Site Code : 19015
 Start Date : 9/11/2019
 Page No : 2

Start Time	MERIDIAN AVENUE Southbound				WHITING STREET Westbound					MERIDIAN AVENUE Northbound					Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	

Peak Hour Analysis From 06:30 AM to 09:15 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:30 AM				08:00 AM					08:00 AM					
+0 mins.	5	281	0	286	6	0	4	4	14	0	44	5	0	49	
+15 mins.	7	287	0	294	14	0	5	3	22	0	57	5	0	62	
+30 mins.	6	307	0	313	8	0	5	4	17	0	51	5	0	56	
+45 mins.	6	313	0	319	5	0	1	7	13	0	55	7	2	64	
Total Volume	24	1188	0	1212	33	0	15	18	66	0	207	22	2	231	
% App. Total	2	98	0		50	0	22.7	27.3		0	89.6	9.5	0.9		
PHF	.857	.949	.000	.950	.589	.000	.750	.643	.750	.000	.908	.786	.250	.902	

Peak Hour Analysis From 03:45 PM to 06:30 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 05:15 PM

	05:15 PM				05:30 PM					05:45 PM					06:00 PM	
05:15 PM	20	80	0	100	14	0	3	3	20	0	141	15	1	157	277	
05:30 PM	10	91	0	101	11	0	4	0	15	0	104	10	1	115	231	
05:45 PM	7	93	0	100	5	0	3	3	11	0	101	14	0	115	226	
06:00 PM	12	85	0	97	5	0	2	8	15	0	109	9	1	119	231	
Total Volume	49	349	0	398	35	0	12	14	61	0	455	48	3	506	965	
% App. Total	12.3	87.7	0		57.4	0	19.7	23		0	89.9	9.5	0.6			
PHF	.613	.938	.000	.985	.625	.000	.750	.438	.763	.000	.807	.800	.750	.806	.871	

Peak Hour Analysis From 03:45 PM to 06:30 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	05:15 PM				04:30 PM					04:45 PM					
+0 mins.	20	80	0	100	16	0	7	2	25	0	112	14	1	127	
+15 mins.	10	91	0	101	6	0	0	3	9	0	137	5	2	144	
+30 mins.	7	93	0	100	7	0	3	2	12	0	141	15	1	157	
+45 mins.	12	85	0	97	14	0	3	3	20	0	104	10	1	115	
Total Volume	49	349	0	398	43	0	13	10	66	0	494	44	5	543	
% App. Total	12.3	87.7	0		65.2	0	19.7	15.2		0	91	8.1	0.9		
PHF	.613	.938	.000	.985	.672	.000	.464	.833	.660	.000	.876	.733	.625	.865	

Intersection Turning Movement Count

City/County: Tampa/Hillsborough
 Weather: Clear
 Comments:

File Name : Meridian&Whiting
 Site Code : 19015
 Start Date : 9/11/2019
 Page No : 1

Groups Printed- Heavy Vehicles

Start Time	MERIDIAN AVENUE Southbound				WHITING STREET Westbound					MERIDIAN AVENUE Northbound					Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	
*** BREAK ***															
06:45 AM	0	0	0	0	0	0	1	0	1	0	1	0	0	1	2
Total	0	0	0	0	0	0	1	0	1	0	1	0	0	1	2
07:00 AM	0	1	0	1	0	0	1	0	1	0	1	0	0	1	3
07:15 AM	0	0	0	0	0	0	0	1	1	0	1	0	0	1	2
07:30 AM	0	2	0	2	0	0	0	0	0	0	1	1	0	2	4
07:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Total	0	3	0	3	0	0	1	1	2	0	4	1	0	5	10
08:00 AM	0	3	0	3	0	0	1	0	1	0	0	0	0	0	4
08:15 AM	0	3	0	3	0	0	0	0	0	0	2	0	0	2	5
08:30 AM	0	1	0	1	1	0	0	0	1	0	1	0	0	1	3
08:45 AM	0	6	0	6	0	0	0	0	0	0	1	0	0	1	7
Total	0	13	0	13	1	0	1	0	2	0	4	0	0	4	19
09:00 AM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	2
09:15 AM	0	1	0	1	1	0	0	0	1	0	1	0	0	1	3
*** BREAK ***															
Total	0	3	0	3	1	0	0	0	1	0	1	0	0	1	5
*** BREAK ***															
03:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Total	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
04:00 PM	0	2	0	2	0	0	0	0	0	0	1	1	0	2	4
04:15 PM	0	0	0	0	0	0	0	0	0	0	2	1	0	3	3
04:30 PM	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1
04:45 PM	0	1	0	1	0	0	0	0	0	0	2	0	0	2	3
Total	0	3	0	3	0	0	1	0	1	0	5	2	0	7	11
05:00 PM	0	2	0	2	1	0	0	0	1	0	1	0	0	1	4
05:15 PM	0	0	0	0	0	0	0	1	1	0	2	0	0	2	3
05:30 PM	0	3	0	3	0	0	0	0	0	0	0	0	0	0	3
05:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Total	0	5	0	5	1	0	0	1	2	0	4	0	0	4	11
06:00 PM	0	2	0	2	0	0	0	0	0	0	1	0	0	1	3
06:15 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
06:30 PM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	2
Grand Total	0	31	0	31	3	0	4	2	9	0	23	3	0	26	66
Apprch %	0	100	0		33.3	0	44.4	22.2		0	88.5	11.5	0		
Total %	0	47	0	47	4.5	0	6.1	3	13.6	0	34.8	4.5	0	39.4	

Start Time	MERIDIAN AVENUE Southbound				WHITING STREET Westbound					MERIDIAN AVENUE Northbound					Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	
Peak Hour Analysis From 06:30 AM to 09:15 AM - Peak 1 of 1															
Peak Hour for Entire Intersection Begins at 08:00 AM															
08:00 AM	0	3	0	3	0	0	1	0	1	0	0	0	0	0	4
08:15 AM	0	3	0	3	0	0	0	0	0	0	2	0	0	2	5
08:30 AM	0	1	0	1	1	0	0	0	1	0	1	0	0	1	3
08:45 AM	0	6	0	6	0	0	0	0	0	0	1	0	0	1	7
Total Volume	0	13	0	13	1	0	1	0	2	0	4	0	0	4	19
% App. Total	0	100	0		50	0	50	0		0	100	0	0		
PHF	.000	.542	.000	.542	.250	.000	.250	.000	.500	.000	.500	.000	.000	.500	.679

Intersection Turning Movement Count

City/County: Tampa/Hillsborough
 Weather: Clear
 Comments:

File Name : Meridian&Whiting
 Site Code : 19015
 Start Date : 9/11/2019
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Start Time	MERIDIAN AVENUE Southbound				WHITING STREET Westbound					MERIDIAN AVENUE Northbound					Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	

Peak Hour Analysis From 06:30 AM to 09:15 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	08:00 AM				06:30 AM					06:45 AM				
+0 mins.	0	3	0	3	0	0	0	0	0	0	1	0	0	1
+15 mins.	0	3	0	3	0	0	1	0	1	0	1	0	0	1
+30 mins.	0	1	0	1	0	0	1	0	1	0	1	0	0	1
+45 mins.	0	6	0	6	0	0	0	1	1	0	1	1	0	2
Total Volume	0	13	0	13	0	0	2	1	3	0	4	1	0	5
% App. Total	0	100	0		0	0	66.7	33.3		0	80	20	0	
PHF	.000	.542	.000	.542	.000	.000	.500	.250	.750	.000	1.000	.250	.000	.625

Peak Hour Analysis From 03:45 PM to 06:30 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:45 PM

	04:45 PM				05:00 PM					05:15 PM					05:30 PM				
04:45 PM	0	1	0	1	0	0	0	0	0	0	2	0	0	2	3				
05:00 PM	0	2	0	2	1	0	0	0	1	0	1	0	0	1	4				
05:15 PM	0	0	0	0	0	0	0	1	1	0	2	0	0	2	3				
05:30 PM	0	3	0	3	0	0	0	0	0	0	0	0	0	0	3				
Total Volume	0	6	0	6	1	0	0	1	2	0	5	0	0	5	13				
% App. Total	0	100	0		50	0	0	50		0	100	0	0						
PHF	.000	.500	.000	.500	.250	.000	.000	.250	.500	.000	.625	.000	.000	.625	.813				

Peak Hour Analysis From 03:45 PM to 06:30 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:45 PM				04:30 PM					04:00 PM				
+0 mins.	0	1	0	1	0	0	1	0	1	0	1	1	0	2
+15 mins.	0	2	0	2	0	0	0	0	0	0	2	1	0	3
+30 mins.	0	0	0	0	1	0	0	0	1	0	0	0	0	0
+45 mins.	0	3	0	3	0	0	0	1	1	0	2	0	0	2
Total Volume	0	6	0	6	1	0	1	1	3	0	5	2	0	7
% App. Total	0	100	0		33.3	0	33.3	33.3		0	71.4	28.6	0	
PHF	.000	.500	.000	.500	.250	.000	.250	.250	.750	.000	.625	.500	.000	.583

Intersection Turning Movement Count

City/County: Tampa/Hillsborough
 Weather: Clear
 Comments:

File Name : Meridian&Whiting
 Site Code : 19015
 Start Date : 9/11/2019
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Groups Printed- UTurns

Start Time	MERIDIAN AVENUE Southbound				WHITING STREET Westbound					MERIDIAN AVENUE Northbound					Int. Total	
	Left	Thru	Right	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total		
*** BREAK ***																
06:45 AM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
Total	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
*** BREAK ***																
07:15 AM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
*** BREAK ***																
07:45 AM	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2
Total	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	3
*** BREAK ***																
08:30 AM	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	3
08:45 AM	2	0	0	2	0	0	0	0	0	0	2	0	0	0	2	4
Total	2	0	0	2	0	0	0	0	0	0	5	0	0	0	5	7
*** BREAK ***																
09:15 AM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
*** BREAK ***																
Total	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
*** BREAK ***																
03:45 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	2
Total	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	2
04:00 PM	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2
*** BREAK ***																
04:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
04:45 PM	1	0	0	1	0	0	0	0	0	0	2	0	0	0	2	3
Total	3	0	0	3	0	0	0	0	0	0	3	0	0	0	3	6
05:00 PM	1	0	0	1	0	0	0	0	0	0	1	0	0	0	1	2
05:15 PM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
05:30 PM	1	0	0	1	0	0	0	0	0	0	2	0	0	0	2	3
05:45 PM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
Total	4	0	0	4	0	0	0	0	0	0	3	0	0	0	3	7
*** BREAK ***																
06:30 PM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
Grand Total	15	0	0	15	0	0	0	0	0	0	13	0	0	0	13	28
Apprch %	100	0	0		0	0	0	0	0	0	100	0	0	0		
Total %	53.6	0	0	53.6	0	0	0	0	0	0	46.4	0	0	0	46.4	

Start Time	MERIDIAN AVENUE Southbound				WHITING STREET Westbound					MERIDIAN AVENUE Northbound					Int. Total	
	Left	Thru	Right	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total		
Peak Hour Analysis From 06:30 AM to 09:15 AM - Peak 1 of 1																
Peak Hour for Entire Intersection Begins at 08:30 AM																
08:30 AM	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	3
08:45 AM	2	0	0	2	0	0	0	0	0	0	2	0	0	0	2	4
09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 AM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	3	0	0	3	0	0	0	0	0	0	5	0	0	0	5	8
% App. Total	100	0	0		0	0	0	0	0	0	100	0	0	0		
PHF	.375	.000	.000	.375	.000	.000	.000	.000	.000	.000	.417	.000	.000	.000	.417	.500

Intersection Turning Movement Count

City/County: Tampa/Hillsborough
 Weather: Clear
 Comments:

File Name : Meridian&Whiting
 Site Code : 19015
 Start Date : 9/11/2019
 Page No : 2

Start Time	MERIDIAN AVENUE Southbound				WHITING STREET Westbound					MERIDIAN AVENUE Northbound					Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	

Peak Hour Analysis From 06:30 AM to 09:15 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:00 AM				06:30 AM					08:00 AM				
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	1	0	0	1	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	3	0	0	0	3
+45 mins.	2	0	0	2	0	0	0	0	0	2	0	0	0	2
Total Volume	3	0	0	3	0	0	0	0	0	5	0	0	0	5
% App. Total	100	0	0	0	0	0	0	0	0	100	0	0	0	0
PHF	.375	.000	.000	.375	.000	.000	.000	.000	.000	.417	.000	.000	.000	.417

Peak Hour Analysis From 03:45 PM to 06:30 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:45 PM

	04:45 PM				05:00 PM					05:15 PM					05:30 PM									
04:45 PM	1	0	0	1	0	0	0	0	0	2	0	0	0	2	1	0	0	0	1	1	0	0	0	1
05:00 PM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0
05:15 PM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	1	0	0	1	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	2	0	0	0	2
Total Volume	4	0	0	4	0	0	0	0	0	5	0	0	0	5	0	0	0	0	0	5	0	0	0	5
% App. Total	100	0	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHF	1.00	.000	.000	1.00	.000	.000	.000	.000	.000	.625	.000	.000	.000	.625	.000	.000	.000	.000	.000	.625	.000	.000	.000	.750

Peak Hour Analysis From 03:45 PM to 06:30 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:45 PM				03:45 PM					04:45 PM				
+0 mins.	1	0	0	1	0	0	0	0	0	2	0	0	0	2
+15 mins.	1	0	0	1	0	0	0	0	0	1	0	0	0	1
+30 mins.	1	0	0	1	0	0	0	0	0	0	0	0	0	0
+45 mins.	1	0	0	1	0	0	0	0	0	2	0	0	0	2
Total Volume	4	0	0	4	0	0	0	0	0	5	0	0	0	5
% App. Total	100	0	0	0	0	0	0	0	0	100	0	0	0	0
PHF	1.000	.000	.000	1.000	.000	.000	.000	.000	.000	.625	.000	.000	.000	.625

Intersection Turning Movement Count

City/County: Tampa/Hillsborough
 Weather: Clear
 Comments:

File Name : JeffersonSt&WhitingSt
 Site Code : 19015
 Start Date : 9/24/2019
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Start Time	Groups Printed- Passenger Vehicles - Heavy Vehicles - UTurns																					
	JEFFERSON STREET Southbound				JEFFERSON STREET Northbound				WHITTING STREET Eastbound													
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Int. Total						
06:30 AM	10	20	5	0	35	0	3	0	1	4	3	13	4	0	20	0	21	3	6	30	89	
06:45 AM	6	17	3	0	26	4	3	0	0	7	5	29	4	0	38	2	24	5	6	37	108	
Total	16	37	8	0	61	4	6	0	1	11	8	42	8	0	58	2	45	8	12	67	197	
07:00 AM	5	21	12	0	38	4	7	1	0	12	5	30	8	3	46	5	11	2	2	20	116	
07:15 AM	9	20	7	0	36	8	14	2	2	26	9	39	9	5	62	2	26	4	10	42	166	
07:30 AM	7	18	8	4	37	14	26	11	2	53	22	48	21	1	92	4	28	2	9	43	225	
07:45 AM	8	32	21	6	67	11	20	16	3	50	17	46	16	2	81	2	38	6	6	52	250	
Total	29	91	48	10	178	37	67	30	7	141	53	163	54	11	281	13	103	14	27	157	757	
08:00 AM	6	20	10	5	41	13	32	3	0	48	17	55	10	0	82	3	12	3	13	31	202	
08:15 AM	3	22	16	4	45	13	26	2	0	41	16	55	9	0	80	2	11	9	3	25	191	
08:30 AM	4	25	16	2	47	3	16	0	0	19	14	73	3	1	91	10	16	6	8	40	197	
08:45 AM	3	32	17	3	55	4	18	2	0	24	10	59	8	0	77	6	15	6	7	34	190	
Total	16	99	59	14	188	33	92	7	0	132	57	242	30	1	330	21	54	24	31	130	780	
09:00 AM	4	10	4	2	20	3	5	0	1	9	7	33	8	0	48	2	10	5	6	23	100	
09:15 AM	1	16	3	0	20	0	4	0	0	4	2	28	2	3	35	3	5	4	14	26	85	
BREAK																						
Total	5	26	7	2	40	3	9	0	1	13	9	61	10	3	83	5	15	9	20	49	185	
BREAK																						
03:45 PM	1	18	2	0	21	4	8	7	7	26	4	74	3	0	81	8	5	15	23	51	179	
Total	1	18	2	0	21	4	8	7	7	26	4	74	3	0	81	8	5	15	23	51	179	
04:00 PM	3	42	1	0	46	10	17	7	3	37	3	47	5	1	56	8	8	12	49	77	216	
04:15 PM	2	39	4	0	45	12	7	3	2	24	2	50	6	0	58	15	9	4	38	66	193	
04:30 PM	1	39	1	1	42	9	9	4	6	28	8	45	2	0	55	9	8	17	45	79	204	
04:45 PM	0	29	1	0	30	14	3	3	6	26	5	65	4	2	76	8	12	8	49	77	209	
Total	6	149	7	1	163	45	36	17	17	115	18	207	17	3	245	40	37	41	181	299	822	
05:00 PM	3	65	2	0	70	10	7	2	3	22	2	82	10	0	94	29	15	39	54	137	323	
05:15 PM	0	52	3	1	56	7	13	4	2	26	3	79	4	0	86	14	15	22	55	106	274	
05:30 PM	0	52	3	1	56	9	12	2	1	24	3	75	5	0	83	10	12	19	45	86	249	
05:45 PM	0	28	2	1	31	3	2	1	1	7	3	33	3	0	39	7	5	7	48	67	144	
Total	3	197	10	3	213	29	34	9	7	79	11	269	22	0	302	60	47	87	202	396	990	
06:00 PM	0	28	1	0	29	5	5	1	2	13	6	46	0	1	53	9	6	3	41	59	154	
06:15 PM	0	23	0	0	23	2	3	1	0	6	1	28	1	0	30	3	3	4	33	43	102	
06:30 PM	0	19	1	0	20	0	2	1	0	3	1	14	1	0	16	6	5	3	27	41	80	
Grand Total	76	687	143	30	936	162	262	73	42	539	168	1146	146	19	1479	167	320	208	597	1292	4246	
Approch %	8.1	73.4	15.3	3.2	30.1	48.6	13.5	7.8	4.5	11.4	77.5	9.9	1.3	1.3	12.9	24.8	16.1	46.2	46.2	30.4	4246	
Total %	1.8	16.2	3.4	0.7	22	3.8	6.2	1.7	1	12.7	4	27	3.4	0.4	34.8	3.9	7.5	4.9	14.1	30.4	4246	
Passenger Vehicles	73	677	143	29	922	154	255	71	42	522	156	1133	144	18	1451	165	299	207	597	1268	4163	
% Passenger Vehicles	96.1	98.5	100	96.7	98.5	95.1	97.3	97.3	100	96.8	92.9	98.9	98.6	94.7	98.1	98.8	93.4	99.5	100	98.1	98	
Heavy Vehicles	3	10	0	1	14	8	7	2	0	17	11	13	2	1	27	2	21	1	0	24	82	

Intersection Turning Movement Count

City/County: Tampa/Hillsborough
 Weather: Clear
 Comments:

File Name : JeffersonSt&WhitingSt
 Site Code : 19015
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Start Time	Groups Printed- Passenger Vehicles																				
	JEFFERSON STREET Southbound				JEFFERSON STREET Northbound				WHITTING STREET Eastbound												
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Int. Total					
06:30 AM	10	20	5	0	35	0	3	0	1	4	3	13	4	0	20	0	19	3	6	28	87
06:45 AM	6	17	3	0	26	4	3	0	0	7	5	29	4	0	38	2	24	5	6	37	108
Total	16	37	8	0	61	4	6	0	1	11	8	42	8	0	58	2	43	8	12	65	195
07:00 AM	4	20	12	0	36	4	7	1	0	12	4	29	8	3	44	5	10	2	2	19	111
07:15 AM	9	20	7	0	36	8	13	2	2	25	9	37	9	4	59	2	25	4	10	41	161
07:30 AM	7	17	8	3	35	11	25	11	2	49	21	48	21	1	91	4	26	2	9	41	216
07:45 AM	7	32	21	6	66	11	20	15	3	49	17	46	15	2	80	2	37	6	6	51	246
Total	27	89	48	9	173	34	65	29	7	135	51	160	53	10	274	13	98	14	27	152	734
08:00 AM	6	19	10	5	40	13	31	3	0	47	16	54	10	0	80	3	12	3	13	31	198
08:15 AM	3	22	16	4	45	12	25	2	0	39	16	55	9	0	80	2	11	9	3	25	189
08:30 AM	4	24	16	2	46	3	15	0	0	18	13	73	3	1	90	9	13	6	8	36	190
08:45 AM	3	29	17	3	52	4	18	2	0	24	10	59	8	0	77	6	13	6	7	32	185
Total	16	94	59	14	183	32	89	7	0	128	55	241	30	1	327	20	49	24	31	124	762
09:00 AM	4	10	4	2	20	3	5	0	1	9	6	32	7	0	45	2	8	5	6	21	95
09:15 AM	1	16	3	0	20	0	4	0	0	4	1	28	2	3	34	3	4	4	14	25	83
BREAK																					
Total	5	26	7	2	40	3	9	0	1	13	7	60	9	3	79	5	12	9	20	46	178
03:45 PM	1	18	2	0	21	4	8	7	7	26	4	72	3	0	79	8	5	14	23	50	176
Total	1	18	2	0	21	4	8	7	7	26	4	72	3	0	79	8	5	14	23	50	176
04:00 PM	3	42	1	0	46	10	16	7	3	36	2	45	5	1	53	8	5	12	49	74	209
04:15 PM	1	38	4	0	43	11	7	3	2	23	1	50	6	0	57	15	8	4	38	65	188
04:30 PM	1	39	1	1	42	7	8	4	6	25	8	45	2	0	55	9	8	17	45	79	201
04:45 PM	0	28	1	0	29	13	3	3	6	25	5	64	4	2	75	7	11	8	49	75	204
Total	5	147	7	1	160	41	34	17	17	109	16	204	17	3	240	39	32	41	181	293	802
05:00 PM	3	64	2	0	69	10	7	2	3	22	1	81	10	0	92	29	15	39	54	137	320
05:15 PM	0	52	3	1	56	7	13	3	2	25	3	78	4	0	85	14	15	22	55	106	272
05:30 PM	0	52	3	1	56	9	12	2	1	24	3	75	5	0	83	10	12	19	45	86	249
05:45 PM	0	28	2	1	31	3	2	1	1	7	3	33	3	0	39	7	5	7	48	67	144
Total	3	196	10	3	212	29	34	8	7	78	10	267	22	0	299	60	47	87	202	396	985
06:00 PM	0	28	1	0	29	5	5	1	2	13	4	46	0	1	51	9	6	3	41	59	152
06:15 PM	0	23	0	0	23	2	3	1	0	6	1	28	1	0	30	3	3	4	33	43	102
06:30 PM	0	19	1	0	20	0	2	1	0	3	0	13	1	0	14	6	4	3	27	40	77
Grand Total	73	677	143	29	922	154	255	71	42	522	156	1133	144	18	1451	165	299	207	597	1268	4163
Approch %	7.9	73.4	15.5	3.1	29.5	48.9	13.6	8	8	10.8	78.1	9.9	1.2	1.2	13	23.6	16.3	47.1	47.1	126.8	416.3
Total %	1.8	16.3	3.4	0.7	22.1	3.7	6.1	1.7	1	12.5	3.7	27.2	3.5	0.4	34.9	4	7.2	5	14.3	30.5	116.3

Intersection Turning Movement Count

City/County: Tampa/Hillsborough
 Weather: Clear
 Comments:

File Name : JeffersonSt&WhitingSt
 Site Code : 19015
 Start Date : 9/24/2019
 Page No : 2

Start Time	JEFFERSON STREET Southbound				WHITING STREET Westbound				JEFFERSON STREET Northbound				WHITING STREET Eastbound								
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Int. Total					
Peak Hour Analysis From 06:30 AM to 09:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	7	17	8	3	35	11	25	11	2	49	21	48	21	1	91	4	26	2	9	41	
07:45 AM	7	32	21	6	66	11	20	15	3	49	17	46	15	2	80	2	37	6	6	51	
08:00 AM	6	19	10	5	40	13	31	3	0	47	16	54	10	0	80	3	12	3	13	31	
08:15 AM	3	22	16	4	45	12	25	2	0	39	16	55	9	0	80	2	11	9	3	25	
Total Volume	23	90	55	18	186	47	101	31	5	184	70	203	55	3	331	11	86	20	31	148	
% App. Total	12.4	48.4	29.6	9.7		25.5	54.9	16.8	2.7		21.1	61.3	16.6	0.9		7.4	58.1	13.5	20.9		
PHF	.821	.703	.655	.750	.705	.904	.815	.517	.417	.939	.833	.923	.655	.375	.909	.688	.581	.556	.596	.725	.863

Peak Hour Analysis From 06:30 AM to 09:15 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

Start Time	JEFFERSON STREET Southbound				WHITING STREET Westbound				JEFFERSON STREET Northbound				WHITING STREET Eastbound								
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Int. Total					
Peak Hour Analysis From 03:45 PM to 06:30 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	0	28	1	0	29	13	3	3	6	25	5	64	4	2	75	7	11	8	8	49	75
05:00 PM	3	64	2	0	69	10	7	2	3	22	1	81	10	0	92	29	15	39	54	137	320
05:15 PM	0	52	3	1	56	7	13	3	2	25	3	78	4	0	85	14	15	22	55	106	272
05:30 PM	0	52	3	1	56	9	12	2	1	24	3	75	5	0	83	10	12	19	45	86	249
Total Volume	3	196	9	2	210	39	35	10	12	96	12	298	23	2	335	60	53	88	203	404	1045
% App. Total	1.4	93.3	4.3	1		40.6	36.5	10.4	12.5		3.6	89	6.9	0.6		14.9	13.1	21.8	50.2		
PHF	.250	.766	.750	.500	.761	.750	.673	.833	.500	.960	.600	.920	.575	.250	.910	.517	.883	.564	.923	.737	.816

Peak Hour Analysis From 03:45 PM to 06:30 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

Start Time	JEFFERSON STREET Southbound				WHITING STREET Westbound				JEFFERSON STREET Northbound				WHITING STREET Eastbound								
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Int. Total					
Peak Hour Analysis From 03:45 PM to 06:30 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	0	28	1	0	29	13	3	3	6	25	5	64	4	2	75	7	11	8	8	49	75
05:00 PM	3	64	2	0	69	10	7	2	3	22	1	81	10	0	92	29	15	39	54	137	320
05:15 PM	0	52	3	1	56	7	13	3	2	25	3	78	4	0	85	14	15	22	55	106	272
05:30 PM	0	52	3	1	56	9	12	2	1	24	3	75	5	0	83	10	12	19	45	86	249
Total Volume	3	196	9	2	210	39	35	10	12	96	12	298	23	2	335	60	53	88	203	404	1045
% App. Total	1.4	92.5	4.7	1.4		29.1	35.5	19.1	16.4		3.6	89	6.9	0.6		14.9	13.1	21.8	50.2		
PHF	.250	.766	.833	.750	.768	.727	.609	.750	.643	.764	.600	.920	.575	.250	.910	.517	.883	.564	.923	.737	.816

Intersection Turning Movement Count

City/County: Tampa/Hillsborough
 Weather: Clear
 Comments:

File Name : JeffersonSt&WhitingSt
 Site Code : 19015
 Start Date : 9/24/2019
 Page No : 1

Groups Printed- Heavy Vehicles

Start Time	JEFFERSON STREET Southbound						JEFFERSON STREET Northbound						WHITING STREET Westbound						WHITING STREET Eastbound						
	Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		
06:30 AM	0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	2	0	0	2		
BREAK																									
Total	0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	2	0	0	2		
07:00 AM	1	1	0	0	2		0	0	0	0	0		0	0	0	0	0		0	1	0	0	1		
07:15 AM	0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	1	0	0	1		
07:30 AM	0	1	0	1	2		3	1	0	0	4		1	0	0	0	1		0	2	0	0	2		
07:45 AM	1	0	0	0	1		0	0	1	0	1		0	0	1	0	1		0	1	0	0	1		
Total	2	2	0	1	5		3	2	1	0	6		2	3	1	1	7		0	5	0	0	5		
08:00 AM	0	1	0	0	1		0	1	0	0	1		1	1	0	0	2		0	0	0	0	0		
08:15 AM	0	0	0	0	0		1	1	0	0	2		0	0	0	0	0		0	0	0	0	0		
08:30 AM	0	1	0	0	1		0	1	0	0	1		1	0	0	0	1		1	3	0	0	4		
08:45 AM	0	3	0	0	3		0	0	0	0	0		0	0	0	0	0		0	2	0	0	2		
Total	0	5	0	0	5		1	3	0	0	4		2	1	0	0	3		1	5	0	0	6		
09:00 AM	0	0	0	0	0		0	0	0	0	0		1	1	1	0	3		0	2	0	0	2		
09:15 AM	0	0	0	0	0		0	0	0	0	0		1	0	0	0	1		0	1	0	0	1		
BREAK																									
Total	0	0	0	0	0		0	0	0	0	0		2	1	1	0	4		0	3	0	0	3		
BREAK																									
03:45 PM	0	0	0	0	0		0	0	0	0	0		0	2	0	0	2		0	0	1	0	1		
Total	0	0	0	0	0		0	0	0	0	0		0	2	0	0	2		0	0	1	0	1		
04:00 PM	0	0	0	0	0		0	1	0	0	1		1	2	0	0	3		0	3	0	0	3		
04:15 PM	1	1	0	0	2		1	0	0	0	1		1	0	0	0	1		0	1	0	0	1		
04:30 PM	0	0	0	0	0		2	1	0	0	3		0	0	0	0	0		0	0	0	0	0		
04:45 PM	0	1	0	0	1		1	1	0	0	1		0	1	0	0	1		1	1	0	0	2		
Total	1	2	0	0	3		4	2	0	0	6		2	3	0	0	5		1	5	0	0	6		
05:00 PM	0	1	0	0	1		0	0	0	0	0		1	1	0	0	2		0	0	0	0	0		
05:15 PM	0	0	0	0	0		0	0	1	0	1		0	1	0	0	1		0	0	0	0	0		
BREAK																									
Total	0	1	0	0	1		0	0	1	0	1		1	2	0	0	3		0	0	0	0	0		
06:00 PM	0	0	0	0	0		0	0	0	0	0		1	0	0	0	1		0	0	0	0	0		
BREAK																									
06:30 PM	0	0	0	0	0		0	0	0	0	0		1	1	0	0	2		0	1	0	0	1		
Grand Total	3	10	0	1	14		8	7	2	0	17		11	13	2	1	27		2	21	1	0	24		
Approch %	21.4	71.4	0	7.1		47.1	41.2	11.8	0		40.7	48.1	7.4	3.7		8.3	87.5	4.2	0		2.4	25.6	1.2	0	
Total %	3.7	12.2	0	1.2	17.1		9.8	8.5	2.4	0	20.7		13.4	15.9	2.4	1.2	32.9		2.4	25.6	1.2	0	29.3		

Intersection Turning Movement Count

City/County: Tampa/Hillsborough
 Weather: Clear
 Comments:

File Name : JeffersonSt&WhitingSt
 Site Code : 19015
 Start Date : 9/24/2019
 Page No : 2

Start Time	JEFFERSON STREET Southbound				WHITING STREET Westbound				JEFFERSON STREET Northbound				WHITING STREET Eastbound							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Int. Total				
Peak Hour Analysis From 06:30 AM to 09:15 AM - Peak 1 of 1																				
Peak Hour for Entire Intersection Begins at 07:00 AM																				
07:00 AM	1	1	0	0	2	0	0	0	0	0	1	1	0	0	2	0	1	0	0	1
07:15 AM	0	0	0	0	0	0	1	0	0	1	0	2	0	0	3	0	1	0	0	1
07:30 AM	0	1	0	1	2	3	1	0	0	4	1	0	0	1	1	0	2	0	0	2
07:45 AM	1	0	0	0	1	0	0	1	0	1	0	0	1	0	1	0	1	0	0	1
Total Volume	2	2	0	1	5	3	2	1	0	6	2	3	1	1	7	0	5	0	0	5
% App. Total	40	40	0	20	.625	50	33.3	16.7	0	.375	28.6	42.9	14.3	14.3	.583	100	0	0	0	23
PHF	.500	.500	.000	.250	.625	.250	.500	.250	.000	.375	.500	.375	.250	.250	.583	.000	.625	.000	.000	.625

Peak Hour Analysis From 06:30 AM to 09:15 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:00 AM				07:30 AM				07:00 AM				08:30 AM							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Int. Total				
+0 mins.	1	1	0	0	2	3	1	0	0	4	1	1	0	0	2	1	3	0	0	4
+15 mins.	0	0	0	0	0	0	0	1	0	1	0	2	0	1	3	0	2	0	0	2
+30 mins.	0	1	0	1	2	0	1	0	0	1	1	0	0	0	1	0	2	0	0	2
+45 mins.	1	0	0	0	1	1	1	0	0	2	0	0	1	0	1	0	1	0	0	1
Total Volume	2	2	0	1	5	4	3	1	0	8	2	3	1	1	7	1	8	0	0	9
% App. Total	40	40	0	20	.625	50	37.5	12.5	0	.500	28.6	42.9	14.3	14.3	.583	11.1	88.9	0	0	.563
PHF	.500	.500	.000	.250	.625	.333	.750	.250	.000	.500	.500	.375	.250	.250	.583	.250	.667	.000	.000	.500

Peak Hour Analysis From 03:45 PM to 06:30 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:00 PM				03:45 PM				04:00 PM											
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Int. Total				
+0 mins.	1	1	0	0	2	0	1	0	0	1	0	2	0	0	2	0	3	0	0	3
+15 mins.	0	0	0	0	0	1	0	0	0	1	1	2	0	0	3	0	1	0	0	1
+30 mins.	0	1	0	0	1	2	1	0	0	3	1	0	0	0	1	0	0	0	0	0
+45 mins.	0	1	0	0	1	1	0	0	0	1	0	0	0	0	0	1	1	0	0	2
Total Volume	1	3	0	0	4	4	2	0	0	6	2	4	0	0	6	1	5	0	0	6
% App. Total	25	75	0	0	.500	66.7	33.3	0	0	.500	33.3	66.7	0	0	.500	16.7	83.3	0	0	.500
PHF	.250	.750	.000	.000	.500	.500	.500	.000	.000	.500	.500	.500	.000	.000	.500	.250	.417	.000	.000	.500

Intersection Turning Movement Count

City/County: Tampa/Hillsborough
 Weather: Clear
 Comments:

File Name : JeffersonSt&WhitingSt
 Site Code : 19015
 Start Date : 9/24/2019
 Page No : 1

Groups Printed- UTurns

Start Time	JEFFERSON STREET Southbound			WHITING STREET Westbound			JEFFERSON STREET Northbound			WHITING STREET Eastbound						
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	
	06:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
*** BREAK ***																
Grand Total	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
Approch %	0	0	0	0	0	0	0	0	0	0	100	0	0	0	0	100
Total %	0	0	0	0	0	0	0	0	0	0	100	0	0	0	0	100

Start Time	JEFFERSON STREET Southbound			WHITING STREET Westbound			JEFFERSON STREET Northbound			WHITING STREET Eastbound					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total
	06:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Peak Hour Analysis From 06:30 AM to 09:15 AM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 06:30 AM

Start Time	JEFFERSON STREET Southbound			WHITING STREET Westbound			JEFFERSON STREET Northbound			WHITING STREET Eastbound					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total
06:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Peak Hour Analysis From 03:45 PM to 06:30 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 05:15 PM

Start Time	JEFFERSON STREET Southbound			WHITING STREET Westbound			JEFFERSON STREET Northbound			WHITING STREET Eastbound					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
Total Volume	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
% App. Total	0	0	0	0	0	0	0	0	0	0	100	0	0	0	100
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.000	.000	.250

Intersection Pedestrian & Bicycle Count

Date: 9-24-19

Day: Tuesday

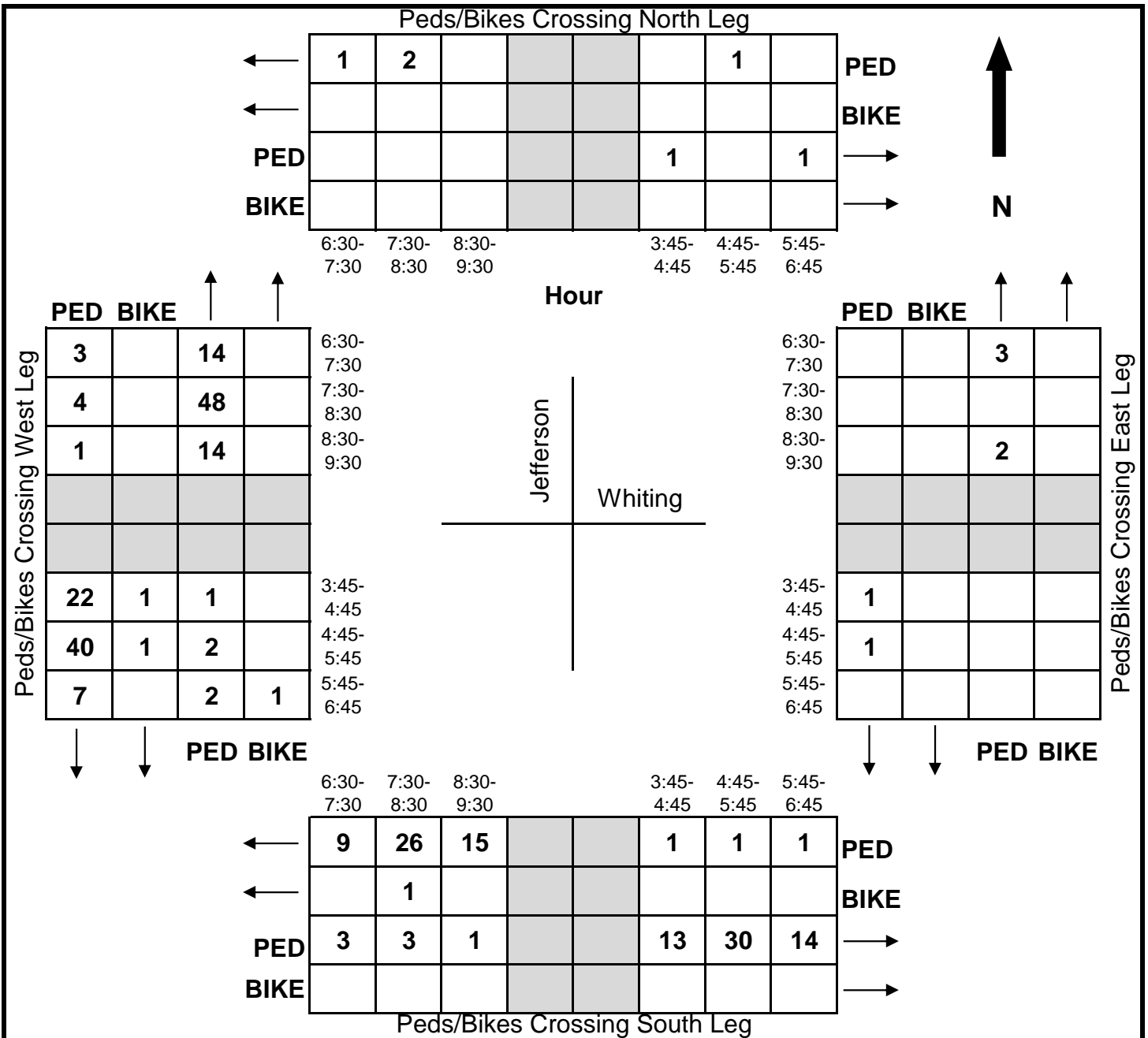
Count Times: 6:30-9:30am & 3:45-6:45pm

Weather: Clear

Intersection: Whiting Street at Jefferson Street

Comments: _____

C - Children under 12; S - Seniors 65 or over; D - Physical Disability



Intersection Turning Movement Count

City/County: Tampa/Hillsborough
 Weather: Clear
 Comments:

File Name : WhitingSt&NebraskaAve
 Site Code : 19015
 Start Date : 9/24/2019
 Page No : 1

Groups Printed- Passenger Vehicles - Heavy Vehicles - UTurns

Start Time	WHITING STREET Westbound				NEBRASKA AVENUE Northbound				WHITING STREET Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
06:30 AM	4	7	0	11	1	0	1	2	1	6	23	30	43
06:45 AM	5	8	0	13	1	0	3	4	0	15	16	31	48
Total	9	15	0	24	2	0	4	6	1	21	39	61	91
07:00 AM	4	12	0	16	2	0	2	4	0	21	7	28	48
07:15 AM	3	20	0	23	1	0	5	6	0	31	14	45	74
07:30 AM	6	34	0	40	2	0	7	9	0	36	7	43	92
07:45 AM	5	33	0	38	2	0	4	6	0	59	6	65	109
Total	18	99	0	117	7	0	18	25	0	147	34	181	323
08:00 AM	2	36	0	38	3	0	3	6	0	27	4	31	75
08:15 AM	2	38	0	40	3	0	2	5	0	14	5	19	64
08:30 AM	3	13	0	16	2	0	3	5	0	10	11	21	42
08:45 AM	1	24	0	25	1	0	8	9	0	15	9	24	58
Total	8	111	0	119	9	0	16	25	0	66	29	95	239
09:00 AM	5	7	0	12	1	0	2	3	0	15	6	21	36
09:15 AM	8	2	0	10	2	0	2	4	0	8	4	12	26
*** BREAK ***													
Total	13	9	0	22	3	0	4	7	0	23	10	33	62
*** BREAK ***													
03:45 PM	4	15	0	19	11	0	8	19	0	7	1	8	46
Total	4	15	0	19	11	0	8	19	0	7	1	8	46
04:00 PM	3	29	0	32	3	0	2	5	1	10	7	18	55
04:15 PM	3	14	0	17	5	0	5	10	0	11	3	14	41
04:30 PM	4	21	0	25	9	0	5	14	0	11	1	12	51
04:45 PM	4	19	0	23	4	0	6	10	0	16	0	16	49
Total	14	83	0	97	21	0	18	39	1	48	11	60	196
05:00 PM	8	13	0	21	6	0	12	18	0	21	6	27	66
05:15 PM	4	10	0	14	9	0	11	20	0	23	1	24	58
05:30 PM	4	14	0	18	5	0	3	8	0	16	0	16	42
05:45 PM	2	7	0	9	0	0	1	1	0	8	0	8	18
Total	18	44	0	62	20	0	27	47	0	68	7	75	184
06:00 PM	3	10	0	13	2	0	2	4	0	6	0	6	23
06:15 PM	4	2	0	6	4	0	5	9	0	4	0	4	19
06:30 PM	3	1	0	4	3	0	2	5	0	4	1	5	14
Grand Total	94	389	0	483	82	0	104	186	2	394	132	528	1197
Apprch %	19.5	80.5	0		44.1	0	55.9		0.4	74.6	25		
Total %	7.9	32.5	0	40.4	6.9	0	8.7	15.5	0.2	32.9	11	44.1	
Passenger Vehicles	68	385	0	453	69	0	73	142	0	390	111	501	1096
% Passenger Vehicles	72.3	99	0	93.8	84.1	0	70.2	76.3	0	99	84.1	94.9	91.6
Heavy Vehicles	25	4	0	29	13	0	31	44	0	4	21	25	98
% Heavy Vehicles	26.6	1	0	6	15.9	0	29.8	23.7	0	1	15.9	4.7	8.2
UTurns	1	0	0	1	0	0	0	0	2	0	0	2	3
% UTurns	1.1	0	0	0.2	0	0	0	0	100	0	0	0.4	0.3

Start Time	WHITING STREET Westbound				NEBRASKA AVENUE Northbound				WHITING STREET Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:15 AM	3	20	0	23	1	0	5	6	0	31	14	45	74
07:30 AM	6	34	0	40	2	0	7	9	0	36	7	43	92
07:45 AM	5	33	0	38	2	0	4	6	0	59	6	65	109
08:00 AM	2	36	0	38	3	0	3	6	0	27	4	31	75
Total Volume	16	123	0	139	8	0	19	27	0	153	31	184	350
% App. Total	11.5	88.5	0		29.6	0	70.4		0	83.2	16.8		
PHF	.667	.854	.000	.869	.667	.000	.679	.750	.000	.648	.554	.708	.803

Peak Hour Analysis From 06:30 AM to 09:15 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:15 AM

Intersection Turning Movement Count

City/County: Tampa/Hillsborough
 Weather: Clear
 Comments:

File Name : WhitingSt&NebraskaAve
 Site Code : 19015
 Start Date : 9/24/2019
 Page No : 1

Groups Printed- Passenger Vehicles

Start Time	WHITING STREET Westbound				NEBRASKA AVENUE Northbound				WHITING STREET Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
06:30 AM	4	7	0	11	1	0	1	2	0	6	22	28	41
06:45 AM	5	8	0	13	1	0	3	4	0	15	16	31	48
Total	9	15	0	24	2	0	4	6	0	21	38	59	89
07:00 AM	4	12	0	16	2	0	1	3	0	21	5	26	45
07:15 AM	2	19	0	21	1	0	4	5	0	31	12	43	69
07:30 AM	6	32	0	38	0	0	5	5	0	36	5	41	84
07:45 AM	5	33	0	38	1	0	3	4	0	59	3	62	104
Total	17	96	0	113	4	0	13	17	0	147	25	172	302
08:00 AM	2	36	0	38	2	0	1	3	0	27	4	31	72
08:15 AM	1	37	0	38	1	0	1	2	0	14	5	19	59
08:30 AM	1	13	0	14	2	0	0	2	0	10	8	18	34
08:45 AM	1	24	0	25	1	0	3	4	0	15	7	22	51
Total	5	110	0	115	6	0	5	11	0	66	24	90	216
09:00 AM	4	7	0	11	0	0	1	1	0	14	4	18	30
09:15 AM	3	2	0	5	2	0	1	3	0	7	4	11	19
*** BREAK ***													
Total	7	9	0	16	2	0	2	4	0	21	8	29	49
*** BREAK ***													
03:45 PM	1	15	0	16	10	0	6	16	0	7	1	8	40
Total	1	15	0	16	10	0	6	16	0	7	1	8	40
04:00 PM	1	29	0	30	2	0	2	4	0	10	4	14	48
04:15 PM	2	14	0	16	4	0	3	7	0	11	2	13	36
04:30 PM	3	21	0	24	7	0	3	10	0	11	1	12	46
04:45 PM	3	19	0	22	4	0	6	10	0	15	0	15	47
Total	9	83	0	92	17	0	14	31	0	47	7	54	177
05:00 PM	6	13	0	19	6	0	11	17	0	21	6	27	63
05:15 PM	4	10	0	14	8	0	8	16	0	23	1	24	54
05:30 PM	3	14	0	17	5	0	3	8	0	16	0	16	41
05:45 PM	0	7	0	7	0	0	1	1	0	8	0	8	16
Total	13	44	0	57	19	0	23	42	0	68	7	75	174
06:00 PM	2	10	0	12	2	0	0	2	0	6	0	6	20
06:15 PM	4	2	0	6	4	0	4	8	0	4	0	4	18
06:30 PM	1	1	0	2	3	0	2	5	0	3	1	4	11
Grand Total	68	385	0	453	69	0	73	142	0	390	111	501	1096
Apprch %	15	85	0		48.6	0	51.4		0	77.8	22.2		
Total %	6.2	35.1	0	41.3	6.3	0	6.7	13	0	35.6	10.1	45.7	

Start Time	WHITING STREET Westbound				NEBRASKA AVENUE Northbound				WHITING STREET Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:15 AM	2	19	0	21	1	0	4	5	0	31	12	43	69
07:30 AM	6	32	0	38	0	0	5	5	0	36	5	41	84
07:45 AM	5	33	0	38	1	0	3	4	0	59	3	62	104
08:00 AM	2	36	0	38	2	0	1	3	0	27	4	31	72
Total Volume	15	120	0	135	4	0	13	17	0	153	24	177	329
% App. Total	11.1	88.9	0		23.5	0	76.5		0	86.4	13.6		
PHF	.625	.833	.000	.888	.500	.000	.650	.850	.000	.648	.500	.714	.791

Peak Hour Analysis From 06:30 AM to 09:15 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:15 AM

Intersection Turning Movement Count

City/County: Tampa/Hillsborough
 Weather: Clear
 Comments:

File Name : WhitingSt&NebraskaAve
 Site Code : 19015
 Start Date : 9/24/2019
 Page No : 2

Start Time	WHITING STREET Westbound				NEBRASKA AVENUE Northbound				WHITING STREET Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	

Peak Hour Analysis From 06:30 AM to 09:15 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:30 AM				06:45 AM				07:15 AM			
+0 mins.	6	32	0	38	1	0	3	4	0	31	12	43
+15 mins.	5	33	0	38	2	0	1	3	0	36	5	41
+30 mins.	2	36	0	38	1	0	4	5	0	59	3	62
+45 mins.	1	37	0	38	0	0	5	5	0	27	4	31
Total Volume	14	138	0	152	4	0	13	17	0	153	24	177
% App. Total	9.2	90.8	0		23.5	0	76.5		0	86.4	13.6	
PHF	.583	.932	.000	1.000	.500	.000	.650	.850	.000	.648	.500	.714

Peak Hour Analysis From 03:45 PM to 06:30 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:30 PM

04:30 PM	3	21	0	24	7	0	3	10	0	11	1	12	46
04:45 PM	3	19	0	22	4	0	6	10	0	15	0	15	47
05:00 PM	6	13	0	19	6	0	11	17	0	21	6	27	63
05:15 PM	4	10	0	14	8	0	8	16	0	23	1	24	54
Total Volume	16	63	0	79	25	0	28	53	0	70	8	78	210
% App. Total	20.3	79.7	0		47.2	0	52.8		0	89.7	10.3		
PHF	.667	.750	.000	.823	.781	.000	.636	.779	.000	.761	.333	.722	.833

Peak Hour Analysis From 03:45 PM to 06:30 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:00 PM				04:30 PM				04:45 PM			
+0 mins.	1	29	0	30	7	0	3	10	0	15	0	15
+15 mins.	2	14	0	16	4	0	6	10	0	21	6	27
+30 mins.	3	21	0	24	6	0	11	17	0	23	1	24
+45 mins.	3	19	0	22	8	0	8	16	0	16	0	16
Total Volume	9	83	0	92	25	0	28	53	0	75	7	82
% App. Total	9.8	90.2	0		47.2	0	52.8		0	91.5	8.5	
PHF	.750	.716	.000	.767	.781	.000	.636	.779	.000	.815	.292	.759

Intersection Turning Movement Count

City/County: Tampa/Hillsborough
 Weather: Clear
 Comments:

File Name : WhitingSt&NebraskaAve
 Site Code : 19015
 Start Date : 9/24/2019
 Page No : 1

Groups Printed- Heavy Vehicles

Start Time	WHITING STREET Westbound				NEBRASKA AVENUE Northbound				WHITING STREET Eastbound				Int. Total	
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total		
06:30 AM	0	0	0	0	0	0	0	0	0	0	0	1	1	1
*** BREAK ***														
Total	0	0	0	0	0	0	0	0	0	0	0	1	1	1
07:00 AM	0	0	0	0	0	0	1	1	0	0	2	2	2	3
07:15 AM	1	1	0	2	0	0	1	1	0	0	2	2	2	5
07:30 AM	0	2	0	2	2	0	2	4	0	0	2	2	2	8
07:45 AM	0	0	0	0	1	0	1	2	0	0	3	3	3	5
Total	1	3	0	4	3	0	5	8	0	0	9	9	9	21
08:00 AM	0	0	0	0	1	0	2	3	0	0	0	0	0	3
08:15 AM	1	1	0	2	2	0	1	3	0	0	0	0	0	5
08:30 AM	2	0	0	2	0	0	3	3	0	0	3	3	3	8
08:45 AM	0	0	0	0	0	0	5	5	0	0	2	2	2	7
Total	3	1	0	4	3	0	11	14	0	0	5	5	5	23
09:00 AM	1	0	0	1	1	0	1	2	0	1	2	3	3	6
09:15 AM	5	0	0	5	0	0	1	1	0	1	0	1	1	7
*** BREAK ***														
Total	6	0	0	6	1	0	2	3	0	2	2	4	4	13
*** BREAK ***														
03:45 PM	3	0	0	3	1	0	2	3	0	0	0	0	0	6
Total	3	0	0	3	1	0	2	3	0	0	0	0	0	6
04:00 PM	2	0	0	2	1	0	0	1	0	0	3	3	3	6
04:15 PM	1	0	0	1	1	0	2	3	0	0	1	1	1	5
04:30 PM	1	0	0	1	2	0	2	4	0	0	0	0	0	5
04:45 PM	1	0	0	1	0	0	0	0	0	1	0	1	1	2
Total	5	0	0	5	4	0	4	8	0	1	4	5	5	18
05:00 PM	2	0	0	2	0	0	1	1	0	0	0	0	0	3
05:15 PM	0	0	0	0	1	0	3	4	0	0	0	0	0	4
*** BREAK ***														
05:45 PM	2	0	0	2	0	0	0	0	0	0	0	0	0	2
Total	4	0	0	4	1	0	4	5	0	0	0	0	0	9
06:00 PM	1	0	0	1	0	0	2	2	0	0	0	0	0	3
06:15 PM	0	0	0	0	0	0	1	1	0	0	0	0	0	1
06:30 PM	2	0	0	2	0	0	0	0	0	1	0	1	1	3
Grand Total	25	4	0	29	13	0	31	44	0	4	21	25	25	98
Apprch %	86.2	13.8	0		29.5	0	70.5		0	16	84			
Total %	25.5	4.1	0	29.6	13.3	0	31.6	44.9	0	4.1	21.4	25.5		

Start Time	WHITING STREET Westbound				NEBRASKA AVENUE Northbound				WHITING STREET Eastbound				Int. Total	
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total		
Peak Hour Analysis From 06:30 AM to 09:15 AM - Peak 1 of 1														
Peak Hour for Entire Intersection Begins at 08:30 AM														
08:30 AM	2	0	0	2	0	0	3	3	0	0	3	3	3	8
08:45 AM	0	0	0	0	0	0	5	5	0	0	2	2	2	7
09:00 AM	1	0	0	1	1	0	1	2	0	1	2	3	3	6
09:15 AM	5	0	0	5	0	0	1	1	0	1	0	1	1	7
Total Volume	8	0	0	8	1	0	10	11	0	2	7	9	9	28
% App. Total	100	0	0		9.1	0	90.9		0	22.2	77.8			
PHF	.400	.000	.000	.400	.250	.000	.500	.550	.000	.500	.583	.750		.875

Intersection Turning Movement Count

City/County: Tampa/Hillsborough
 Weather: Clear
 Comments:

File Name : WhitingSt&NebraskaAve
 Site Code : 19015
 Start Date : 9/24/2019
 Page No : 2

Start Time	WHITING STREET Westbound				NEBRASKA AVENUE Northbound				WHITING STREET Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	

Peak Hour Analysis From 06:30 AM to 09:15 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	08:30 AM				08:00 AM				07:00 AM			
+0 mins.	2	0	0	2	1	0	2	3	0	0	2	2
+15 mins.	0	0	0	0	2	0	1	3	0	0	2	2
+30 mins.	1	0	0	1	0	0	3	3	0	0	2	2
+45 mins.	5	0	0	5	0	0	5	5	0	0	3	3
Total Volume	8	0	0	8	3	0	11	14	0	0	9	9
% App. Total	100	0	0		21.4	0	78.6		0	0	100	
PHF	.400	.000	.000	.400	.375	.000	.550	.700	.000	.000	.750	.750

Peak Hour Analysis From 03:45 PM to 06:30 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 03:45 PM

03:45 PM	3	0	0	3	1	0	2	3	0	0	0	0	6
04:00 PM	2	0	0	2	1	0	0	1	0	0	3	3	6
04:15 PM	1	0	0	1	1	0	2	3	0	0	1	1	5
04:30 PM	1	0	0	1	2	0	2	4	0	0	0	0	5
Total Volume	7	0	0	7	5	0	6	11	0	0	4	4	22
% App. Total	100	0	0		45.5	0	54.5		0	0	100		
PHF	.583	.000	.000	.583	.625	.000	.750	.688	.000	.000	.333	.333	.917

Peak Hour Analysis From 03:45 PM to 06:30 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	03:45 PM				03:45 PM				04:00 PM			
+0 mins.	3	0	0	3	1	0	2	3	0	0	3	3
+15 mins.	2	0	0	2	1	0	0	1	0	0	1	1
+30 mins.	1	0	0	1	1	0	2	3	0	0	0	0
+45 mins.	1	0	0	1	2	0	2	4	0	1	0	1
Total Volume	7	0	0	7	5	0	6	11	0	1	4	5
% App. Total	100	0	0		45.5	0	54.5		0	20	80	
PHF	.583	.000	.000	.583	.625	.000	.750	.688	.000	.250	.333	.417

Intersection Turning Movement Count

City/County: Tampa/Hillsborough
 Weather: Clear
 Comments:

File Name : WhitingSt&NebraskaAve
 Site Code : 19015
 Start Date : 9/24/2019
 Page No : 1

Groups Printed- UTurns

Start Time	WHITING STREET Westbound				NEBRASKA AVENUE Northbound				WHITING STREET Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
06:30 AM	0	0	0	0	0	0	0	0	1	0	0	1	1
*** BREAK ***													
Total	0	0	0	0	0	0	0	0	1	0	0	1	1
*** BREAK ***													
04:00 PM	0	0	0	0	0	0	0	0	1	0	0	1	1
*** BREAK ***													
Total	0	0	0	0	0	0	0	0	1	0	0	1	1
*** BREAK ***													
05:30 PM	1	0	0	1	0	0	0	0	0	0	0	0	1
*** BREAK ***													
Total	1	0	0	1	0	0	0	0	0	0	0	0	1
*** BREAK ***													
Grand Total	1	0	0	1	0	0	0	0	2	0	0	2	3
Apprch %	100	0	0		0	0	0		100	0	0		
Total %	33.3	0	0	33.3	0	0	0	0	66.7	0	0	66.7	

Start Time	WHITING STREET Westbound				NEBRASKA AVENUE Northbound				WHITING STREET Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 06:30 AM to 09:15 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 06:30 AM													
06:30 AM	0	0	0	0	0	0	0	0	1	0	0	1	1
06:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	1	0	0	1	1
% App. Total	0	0	0	0	0	0	0	0	100	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.000	.250	.250

Peak Hour Analysis From 06:30 AM to 09:15 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	06:30 AM				06:30 AM				06:30 AM			
+0 mins.	0	0	0	0	0	0	0	0	1	0	0	1
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	1	0	0	1
% App. Total	0	0	0	0	0	0	0	0	100	0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.000	.250

Peak Hour Analysis From 03:45 PM to 06:30 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 03:45 PM

03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 PM	0	0	0	0	0	0	0	0	1	0	0	1	1
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	1	0	0	1	1
% App. Total	0	0	0	0	0	0	0	0	100	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.000	.250	.250

Peak Hour Analysis From 03:45 PM to 06:30 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:45 PM				03:45 PM				03:45 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	1	0	0	1
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	1	0	0	1	0	0	0	0	0	0	0	0
Total Volume	1	0	0	1	0	0	0	0	1	0	0	1
% App. Total	100	0	0		0	0	0		100	0	0	
PHF	.250	.000	.000	.250	.000	.000	.000	.000	.250	.000	.000	.250

Intersection Pedestrian & Bicycle Count

Date: 9-24-19

Day: Wednesday

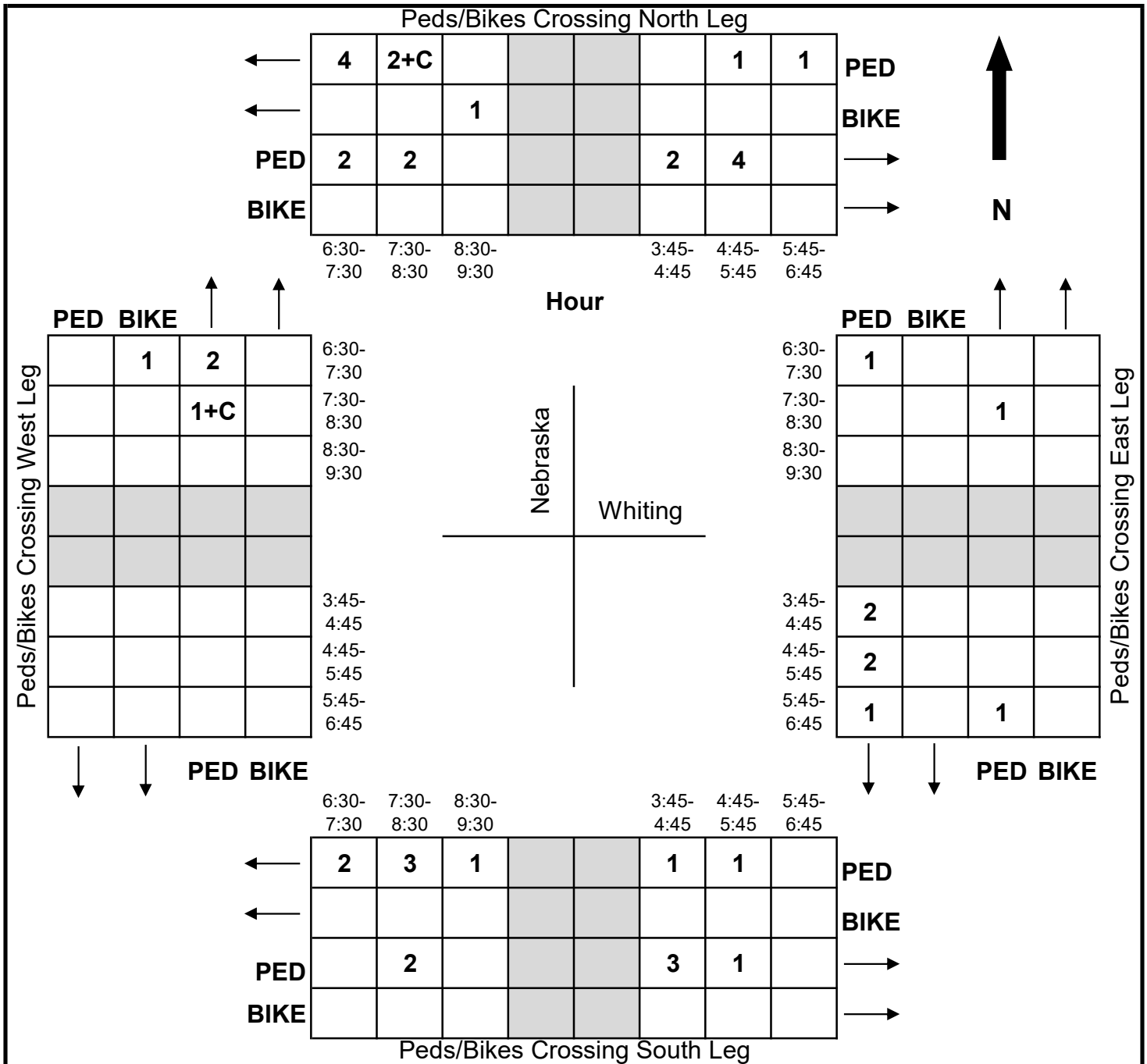
Count Times: 6:30-9:30am & 3:45-6:45pm

Weather: Clear

Intersection: Whiting Street at Nebraska Avenue

Comments: _____

C - Children under 12; S - Seniors 65 or over; D - Physical Disability



Appendix D

Speed Data



Travel Time Runs

EASTBOUND: Whiting Street from Franklin Street to Brush Street

AM Peak	Date:		10/29/2019		10/29/2019		10/29/2019		11/5/2019		11/5/2019		11/5/2019		11/5/2019		11/5/2019	
	Start Time:	Segment	Run #1	Run #2	Run #3	Run #4	Run #5	Run #6	Time (sec)	Speed (mph)	Time (sec)	Speed (mph)	Time (sec)	Speed (mph)	Time (sec)	Speed (mph)	Time (sec)	Speed (mph)
	Distance (miles)	Total	Time (sec)	Speed (mph)	Time (sec)	Speed (mph)	Time (sec)	Speed (mph)	Time (sec)	Speed (mph)	Time (sec)	Speed (mph)	Time (sec)	Speed (mph)	Time (sec)	Speed (mph)	Time (sec)	Speed (mph)
	0.0	83	2	4	57	3	17	12	64	3	83	2	59	4	40			
Florida Avenue	0.1	54	7	7	18	22	53	7	55	7	56	7	49	10	40			
Morgan Street	0.2	18	22	18	22	17	24	23	17	26	18	22	26	19	40			
Jefferson Street	0.3	15	23	15	23	12	16	22	16	22	16	22	19	19	40			
Nebraska Avenue	0.4	13	19	15	16	14	14	17	16	15	14	17	15	17	40			
Brush Street	0.4	183	9	10	181	9	117	14	175	9	187	8	167	10	40			
Totals	0.4	03:03	02:41	02:55	03:01	01:57	02:55	03:07	02:55	03:10	03:07	02:47	02:52	03:06				

PM Peak

PM Peak	Date:		10/30/2019		10/30/2019		11/4/2019		11/4/2019		11/7/2019		11/7/2019		11/7/2019		11/7/2019	
	Start Time:	Segment	Run #1	Run #2	Run #3	Run #4	Run #5	Run #6	Time (sec)	Speed (mph)	Time (sec)	Speed (mph)	Time (sec)	Speed (mph)	Time (sec)	Speed (mph)	Time (sec)	Speed (mph)
	Distance (miles)	Total	Time (sec)	Speed (mph)	Time (sec)	Speed (mph)	Time (sec)	Speed (mph)	Time (sec)	Speed (mph)	Time (sec)	Speed (mph)	Time (sec)	Speed (mph)	Time (sec)	Speed (mph)	Time (sec)	Speed (mph)
	0.0	71	3	3	93	2	66	3	31	6	96	2	71	3	40			
Florida Avenue	0.1	60	7	23	16	25	61	6	63	6	17	23	39	15	40			
Morgan Street	0.2	42	7	10	50	8	17	24	59	7	47	9	46	11	40			
Jefferson Street	0.3	16	22	14	25	17	16	22	19	18	16	22	16	21	40			
Nebraska Avenue	0.4	13	19	13	19	13	14	17	18	14	14	17	14	18	40			
Brush Street	0.4	218	7	10	189	8	174	9	190	8	190	8	186	9	40			
Totals	0.4	03:38	02:33	02:53	03:09	02:54	03:10	02:52	03:10	03:10	03:10	02:47	02:52	03:06				

WESTBOUND: Whiting Street from Brush Street to Franklin Street

AM Peak	Date:		10/29/2019		10/29/2019		11/5/2019		11/5/2019		11/5/2019		11/5/2019		11/5/2019		11/5/2019	
	Start Time:	Segment	Run #1	Run #2	Run #3	Run #4	Run #5	Run #6	Time (sec)	Speed (mph)	Time (sec)	Speed (mph)	Time (sec)	Speed (mph)	Time (sec)	Speed (mph)	Time (sec)	Speed (mph)
	Distance (miles)	Total	Time (sec)	Speed (mph)	Time (sec)	Speed (mph)	Time (sec)	Speed (mph)	Time (sec)	Speed (mph)	Time (sec)	Speed (mph)	Time (sec)	Speed (mph)	Time (sec)	Speed (mph)	Time (sec)	Speed (mph)
	0.0	15	16	20	13	19	14	17	15	16	15	16	14	18	40			
Nebraska Avenue	0.1	50	7	64	5	28	12	50	33	10	27	13	42	9	40			
Jefferson Street	0.2	46	9	39	15	27	39	31	31	13	23	17	32	14	40			
Morgan Street	0.3	92	4	44	9	25	16	37	29	14	42	9	45	10	40			
Florida Avenue	0.4	9	22	49	4	37	5	47	4	4	42	5	39	7	40			
Franklin Street	0.4	212	7	208	118	13	187	8	155	10	149	11	172	10	40			
Totals	0.4	03:32	03:28	01:58	03:07	02:35	02:29	02:52	02:29	02:52	02:52	02:52	02:52	02:52				

PM Peak

PM Peak	Date:		10/30/2019		10/30/2019		11/4/2019		11/4/2019		11/4/2019		11/4/2019		11/4/2019		11/4/2019	
	Start Time:	Segment	Run #1	Run #2	Run #3	Run #4	Run #5	Run #6	Time (sec)	Speed (mph)	Time (sec)	Speed (mph)	Time (sec)	Speed (mph)	Time (sec)	Speed (mph)	Time (sec)	Speed (mph)
	Distance (miles)	Total	Time (sec)	Speed (mph)	Time (sec)	Speed (mph)	Time (sec)	Speed (mph)	Time (sec)	Speed (mph)	Time (sec)	Speed (mph)	Time (sec)	Speed (mph)	Time (sec)	Speed (mph)	Time (sec)	Speed (mph)
	0.0	12	20	20	12	20	15	16	15	16	15	16	14	18	40			
Nebraska Avenue	0.1	38	6	57	5	73	33	32	32	11	41	8	46	8	40			
Jefferson Street	0.2	17	24	16	25	15	27	16	60	7	16	25	23	22	40			
Morgan Street	0.3	16	25	14	28	6	14	28	17	23	60	7	31	20	40			
Florida Avenue	0.4	27	7	26	8	11	18	9	33	6	11	18	20	13	40			
Franklin Street	0.4	110	14	125	173	9	87	18	157	10	143	11	133	13	40			
Totals	0.4	01:50	02:05	02:53	01:27	02:37	02:23	02:13	02:23	02:13	02:13	02:13	02:13	02:13				

Travel Time Runs

NORTHBOUND: Florida Avenue from Channelside Drive to Whiting Street

AM Peak	Date:		10/24/2019		10/24/2019		10/24/2019		10/29/2019		10/29/2019		10/29/2019		10/29/2019		10/29/2019				
	Start Time:		7:22am		7:33am		7:43am		7:42am		7:49am		7:55am		7:55am		7:55am				
	Distance (miles)		Run #1		Run #2		Run #3		Run #4		Run #5		Run #6		Run #6		Run #6				
Cross Street	Total		Time (sec)	Speed (mph)	Time (sec)	Speed (mph)	Time (sec)	Speed (mph)	Time (sec)	Speed (mph)	Time (sec)	Speed (mph)	Time (sec)	Speed (mph)	Time (sec)	Speed (mph)	Time (sec)	Speed (mph)	Travel Run Average	Posted Speed Limit (mph)	
	Channelside Drive	0.0																			
Selmon Ramp	0.1	0.1	11	18	13	15	15	13	11	18	11	18	13	15	11	18	13	15	12	16	35
Borein Street	0.1	0.0	60	3	35	5	57	3	61	3	56	3	61	3	55	3	61	3	55	3	35
Whiting Street	0.2	0.1	19	23	21	20	24	18	20	21	19	23	24	18	21	20	24	18	21	20	35
Totals	0.2	0.2	90	9	69	11	96	8	92	9	86	9	98	8	89	9	98	8	89	9	35
	Travel Time (min)		01:30		01:09		01:36		01:32		01:26		01:38		01:29		01:38		01:29		

PM Peak	Date:		10/24/2019		10/24/2019		10/24/2019		10/30/2019		10/30/2019		10/30/2019		10/30/2019		10/30/2019		10/30/2019		
	Start Time:		4:10pm		5:47pm		5:59pm		4:59pm		5:06pm		5:13pm		5:13pm		5:13pm		5:13pm		
	Distance (miles)		Run #1		Run #2		Run #3		Run #4		Run #5		Run #6		Run #6		Run #6		Run #6		
Cross Street	Total		Time (sec)	Speed (mph)	Time (sec)	Speed (mph)	Time (sec)	Speed (mph)	Time (sec)	Speed (mph)	Time (sec)	Speed (mph)	Time (sec)	Speed (mph)	Time (sec)	Speed (mph)	Time (sec)	Speed (mph)	Travel Run Average	Posted Speed Limit (mph)	
	Channelside Drive	0.0																			
Selmon Ramp	0.1	0.1	14	14	30	7	12	17	13	15	12	17	14	14	12	17	14	14	16	14	35
Borein Street	0.1	0.0	43	4	7	24	59	3	49	3	52	3	51	3	44	3	51	3	44	7	35
Whiting Street	0.2	0.1	27	16	183	2	108	4	56	8	29	15	55	8	76	9	55	8	76	9	35
Totals	0.2	0.2	84	9	220	4	179	4	118	7	93	9	120	7	136	7	120	7	136	7	35
	Travel Time (min)		01:24		05:40		02:59		01:58		01:33		02:00		02:16		02:00		02:16		

Travel Time Runs

NORTHBOUND: Jefferson Street from Channelside Drive to Washington Street

AM Peak	Date:		10/29/2019		10/29/2019		10/29/2019		11/5/2019		11/5/2019		Travel Run Average		
	Start Time:		8:29am		8:34am		8:38am		8:22am		8:27am		Travel Run Average		
	Distance (miles)	Segment	Time (sec)	Speed (mph)	Time (sec)	Speed (mph)	Time (sec)	Speed (mph)	Time (sec)	Speed (mph)	Time (sec)	Speed (mph)	Avg Time (s)	Avg Speed (mph)	Posted Speed Limit (mph)
	Total														
	0.0														
	0.1	0.1	58	6	57	6	63	6	52	7	7	53	7	56	6
	0.1	0.0	10	10	5	19	5	19	5	19	5	19	5	17	17
	0.2	0.1	22	18	23	18	25	18	23	18	27	28	15	25	17
	0.3	0.1	9	22	9	22	9	22	10	20	10	20	17	10	21
	Totals	0.3	99	11	94	11	102	10	90	12	11	98	11	96	11
	Travel Time (min)		01:39		01:34		01:42		01:30		01:34		01:38		01:36

PM Peak	Date:		10/30/2019		10/30/2019		11/4/2019		11/4/2019		11/4/2019		Travel Run Average		
	Start Time:		5:40pm		5:44pm		5:40pm		4:16pm		4:27pm		Travel Run Average		
	Distance (miles)	Segment	Time (sec)	Speed (mph)	Time (sec)	Speed (mph)	Time (sec)	Speed (mph)	Time (sec)	Speed (mph)	Time (sec)	Speed (mph)	Avg Time (s)	Avg Speed (mph)	Posted Speed Limit (mph)
	Total														
	0.0														
	0.1	0.1	89	4	85	4	80	5	84	4	73	5	95	4	84
	0.1	0.0	4	23	4	23	4	23	6	15	7	13	6	15	5
	0.2	0.1	15	27	16	25	16	25	15	27	18	23	19	21	17
	0.3	0.1	7	29	8	25	8	25	8	25	15	13	10	9	23
	Totals	0.3	115	9	113	9	108	10	113	9	113	9	130	8	115
	Travel Time (min)		01:55		01:53		01:48		01:53		01:53		02:10		01:55

SOUTHBOUND: Jefferson Street from Washington Street to Brorein Street

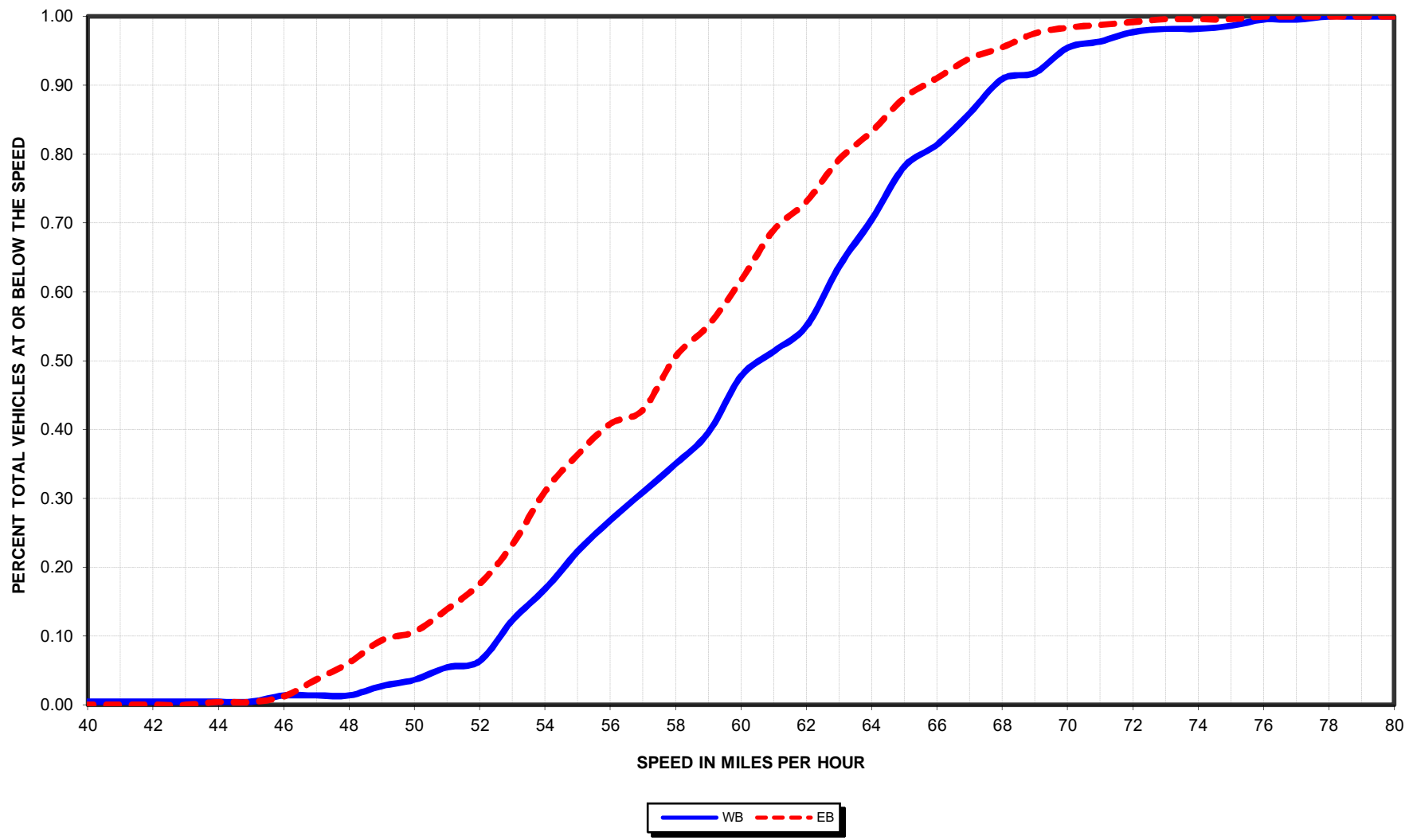
AM Peak	Date:		10/29/2019		10/29/2019		11/5/2019		11/5/2019		11/5/2019		Travel Run Average		
	Start Time:		8:11am		8:21am		8:28am		8:20am		8:29am		Travel Run Average		
	Distance (miles)	Segment	Time (sec)	Speed (mph)	Time (sec)	Speed (mph)	Time (sec)	Speed (mph)	Time (sec)	Speed (mph)	Time (sec)	Speed (mph)	Avg Time (s)	Avg Speed (mph)	Posted Speed Limit (mph)
	Total														
	0.0														
	0.1	0.1	42	5	33	6	7	29	12	17	7	29	7	25	12
	0.2	0.1	13	31	13	31	13	31	12	34	14	29	14	13	31
	0.2	0.0	11	9	15	6	7	14	10	10	10	15	6	11	9
	Totals	0.2	66	11	61	12	27	26	34	21	53	13	58	12	50
	Travel Time (min)		01:06		01:01		00:27		00:34		00:53		00:58		00:50

PM Peak	Date:		10/30/2019		10/30/2019		11/4/2019		11/4/2019		11/4/2019		Travel Run Average		
	Start Time:		5:25pm		5:31pm		5:39pm		4:12pm		4:24pm		Travel Run Average		
	Distance (miles)	Segment	Time (sec)	Speed (mph)	Time (sec)	Speed (mph)	Time (sec)	Speed (mph)	Time (sec)	Speed (mph)	Time (sec)	Speed (mph)	Avg Time (s)	Avg Speed (mph)	Posted Speed Limit (mph)
	Total														
	0.0														
	0.1	0.1	35	6	6	34	6	34	39	5	18	11	42	5	24
	0.2	0.1	12	34	12	34	12	34	14	29	14	29	13	31	32
	0.2	0.0	8	12	8	12	8	12	7	14	10	10	8	12	8
	Totals	0.2	55	13	26	27	26	27	60	12	42	17	63	11	45
	Travel Time (min)		00:55		00:26		00:26		01:00		00:42		01:03		00:45

VEHICLE SPOT SPEED STUDY						
LOCATION: Selmon Expy at Hyde Park Avenue				CITY: Tampa		
POSTED SPEED: 55mph		PVMNT CONDITION: Good/Dry		COUNTY: Hillsborough		
DATE: 5/23/2019		TIME: 10:40-11:40am		OBSERVER: AT		
REMARKS:						
WB VOLUME		SPEED MPH	EB VOLUME		BOTH DIRECTIONS	
Cumulative	Total		Total	Cumulative	Total	Cumulative
220		>80		245	0	465
220		80		245	0	465
220		79		245	0	465
220	1	78		245	1	465
219		77		245	0	464
219	2	76	1	245	3	464
217	1	75		244	1	461
216		74		244	0	460
216	1	73	1	244	2	460
215	3	72	1	243	4	458
212	2	71	1	242	3	454
210	8	70	2	241	10	451
202	2	69	5	239	7	441
200	11	68	4	234	15	434
189	10	67	7	230	17	419
179	7	66	7	223	14	402
172	17	65	12	216	29	388
155	15	64	10	204	25	359
140	19	63	15	194	34	334
121	8	62	10	179	18	300
113	8	61	18	169	26	282
105	18	60	16	151	34	256
87	10	59	11	135	21	222
77	9	58	19	124	28	201
68	9	57	5	105	14	173
59	10	56	11	100	21	159
49	12	55	13	89	25	138
37	10	54	19	76	29	113
27	13	53	14	57	27	84
14	2	52	9	43	11	57
12	4	51	8	34	12	46
8	2	50	3	26	5	34
6	3	49	8	23	11	29
3		48	6	15	6	18
3		47	6	9	6	12
3	2	46	2	3	4	6
1		45		1	0	2
1		44	1	1	1	2
1		43		0	0	1
1		42		0	0	1
1		41		0	0	1
1		40		0	0	1
1	1	<40		0	1	1
TOTALS:	220		245		465	

SPEED DATA SUMMARY	WB VOLUME	EB VOLUME	BOTH DIRECTIONS	
85 PERCENTILE SPEED	67	65	66	
50 PERCENTILE SPEED	61	58	60	
10 MPH PACE	59-68	54-63	56-65	53.76%
MEAN	60.73	58.29	59.45	± 0.17
SAMPLE VARIANCE, s ²	36.41	37.32	38.63	
STANDARD DEVIATION, s	6.03	6.11	6.22	

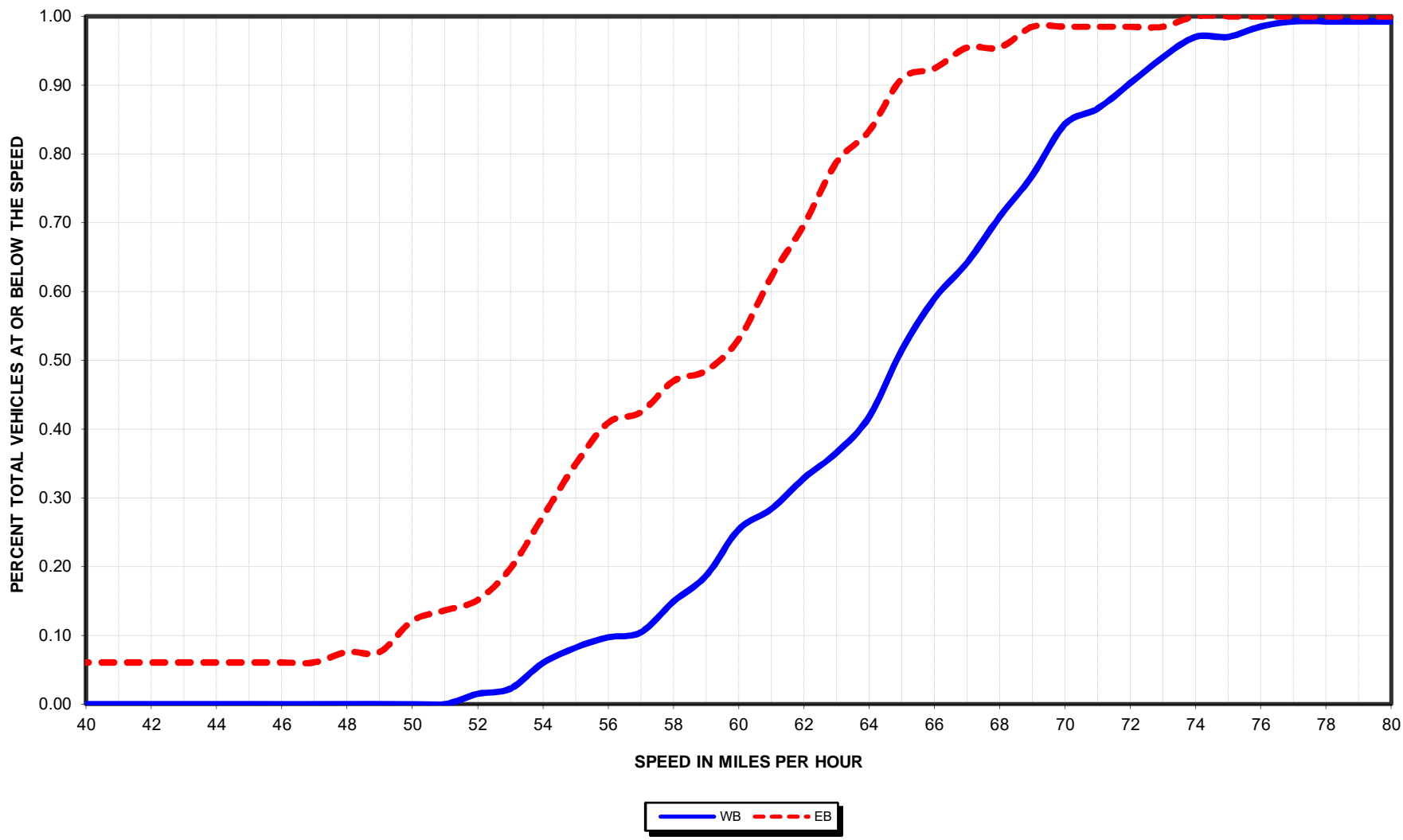
VEHICLE SPOT SPEED STUDY



VEHICLE SPOT SPEED STUDY						
LOCATION: Selmon Expy at Hyde Park Avenue				CITY: Tampa		
POSTED SPEED: 55mph		PVMNT CONDITION: Good/Dry		COUNTY: Hillsborough		
DATE: 5/23/2019		TIME: 3:50-4:50pm		OBSERVER: AT		
REMARKS: EB queued at 4:10pm						
WB VOLUME		SPEED MPH	EB VOLUME		BOTH DIRECTIONS	
Cumulative	Total		Total	Cumulative	Total	Cumulative
134	1	>80		66	1	200
133		80		66	0	199
133		79		66	0	199
133		78		66	0	199
133	1	77		66	1	199
132	2	76		66	2	198
130		75		66	0	196
130	4	74	1	66	5	196
126	5	73		65	5	191
121	5	72		65	5	186
116	3	71		65	3	181
113	10	70		65	10	178
103	8	69	2	65	10	168
95	9	68		63	9	158
86	7	67	2	63	9	149
79	10	66	1	61	11	140
69	13	65	5	60	18	129
56	7	64	3	55	10	111
49	5	63	6	52	11	101
44	6	62	5	46	11	90
38	4	61	6	41	10	79
34	9	60	3	35	12	69
25	5	59	1	32	6	57
20	6	58	3	31	9	51
14	1	57	1	28	2	42
13	2	56	4	27	6	40
11	3	55	5	23	8	34
8	5	54	5	18	10	26
3	1	53	3	13	4	16
2	2	52	1	10	3	12
0		51	1	9	1	9
0		50	3	8	3	8
0		49		5	0	5
0		48	1	5	1	5
0		47		4	0	4
0		46		4	0	4
0		45		4	0	4
0		44		4	0	4
0		43		4	0	4
0		42		4	0	4
0		41		4	0	4
0		40		4	0	4
0		<40	4	4	4	4
TOTALS:	134		66		200	

SPEED DATA SUMMARY	WB VOLUME	EB VOLUME	BOTH DIRECTIONS	
85 PERCENTILE SPEED	71	65	70	
50 PERCENTILE SPEED	65	60	63	
10 MPH PACE	61-70	54-63	60-69	55.50%
MEAN	64.36	55.79	61.53	± 0.40
SAMPLE VARIANCE, s ²	32.82	40.80	39.83	
STANDARD DEVIATION, s	5.73	6.39	6.31	

VEHICLE SPOT SPEED STUDY



Appendix E

Signal Timing Plans



Timingsheet, Controller Operation and Load Switch Page

SECID: 1213 Timing Date: 6/1/2018 Phasing Date: 6/1/2018 Shop Number: 1023 Drop: 4

Major Street: **CHANNELSIDE**
 Minor Street: **FLORIDA**

Orientation: Eastbound Controller Type: Cobalt
 Orientation: Northbound Computer System: CEN Last Date Sent: 3/27/2015

		Controller Timings (seconds)			
Controller Phase Number	Direction	4	NB	6	EB
Minimum Green		10		10	
Vehicle Extension		3.0		3.0	
Yellow Clr/Alt Clr		3.7		4	
Red Clr/Alt Red Clr		2		2	
Max Green I		30		90	
Max Green II		30		90	
Walk		7		7	
Walk - XGuard		---		---	
FDW		9		14	
FDW - XGuard		---		---	
Detector Memory		---		---	
Phase Recall		MAX		MAX	
Ped Recall		ON		ON	
Flash Operation		RED		YEL	

Controller Operation

RXR Preempt: No FDOT SOP: 1 Mod
 Fire Preempt: No Backup Protection: Y
 Bridge Preempt: No LPI Location(Y/N): No
 Transit Preempt: False LPI Date:
 Crossing Guard Times AM:
 Crossing Guard Times PM:
 Free Time Primary:
 Free Time Secondary:
 Flash Source- (C)omputer or (F)ield:
 Flash Times Primary
 Flash Times Secondary
 CNA Ø's Ø4, Ø6

Cabinet Load Switch Assignments

LS1:	LS2:	LS3:	LS4:	LS5:	LS6:	LS7:	LS8:
LS9:	LS10:	P4	P6	LS12:	LS13:	LS14:	LS15:
							LS16:

UPDATED TIMINGS
 ACTUATED PRETIMED OPERATION

Phase Ring Assignments

Sequence 1	Ring 1:	1	2	3	4	5	6	7	8
	Ring 2:	5	8	7	8	PER	6	6	6
Sequence 2	Ring 1:								
	Ring 2:								
Sequence 3	Ring 1:								
	Ring 2:								
Sequence 4	Ring 1:								
	Ring 2:								

Comments

Submitted By: GT Date: 6-6-18 Review By: JS Date: 6/11/18 Approved By: BC Date: 05/12/2018
 Implemented By: DW Date: 6-14-18 Notes:



Coordination Pattern Page

Major Street: CHANNELSIDE

Section Id: 1213

Record Number: 158

Coord Date: 11/2/2017

Minor Street: FLORIDA

Free Time Primary:

Free Time Secondary

Day Plan #1 - Mon-Thr patt 1-7.

Day Plan #2 - Fri - patt 1 - 7 w/5 @ 14:45

Day Plan #3 - Sat - patt 7, then patt 2 all other times

Day Plan #4 - Sun - patt 7, then patt 2 all other times

Min Green:		10				10	
Yellow CLR:		3.7				4	
All Red CLR:		2				2	
Walk:		7				7	
FDW:		9				14	

Direction:						EB	
Ø Number:						4	6

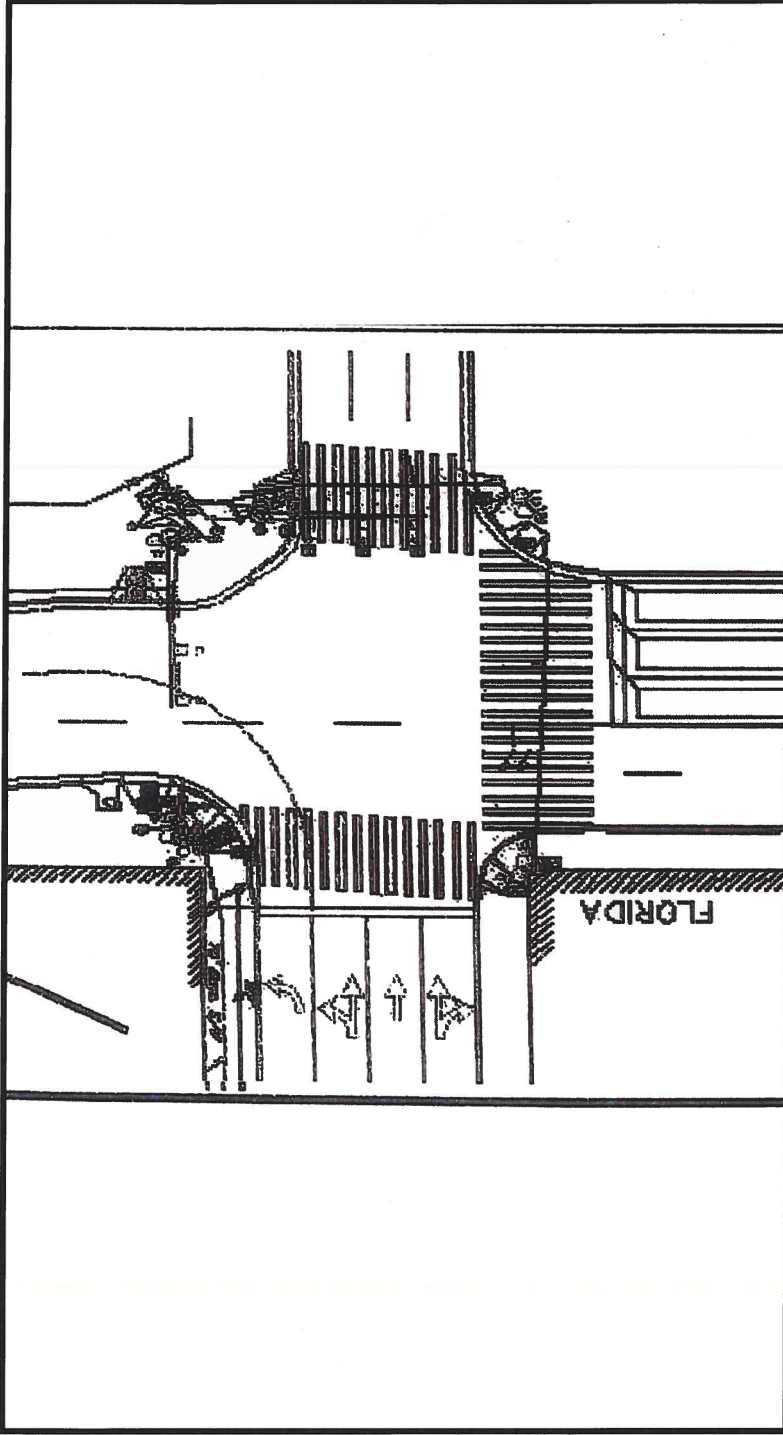
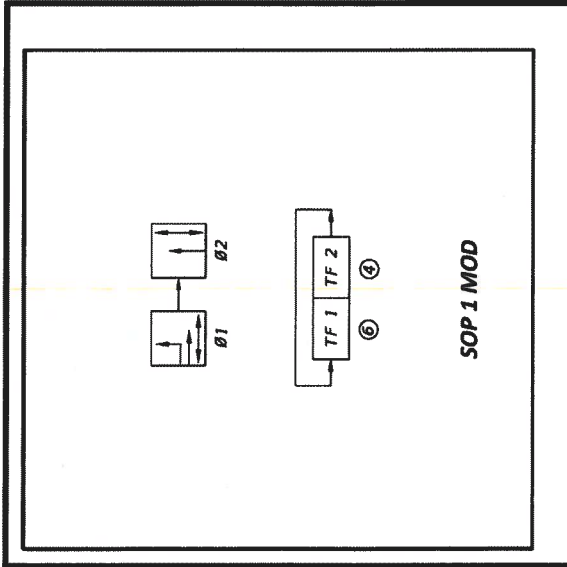
Patterns	Cycle	Offset													
1. 0615 - 0900 AM Peak	140	83									41				99
2. 0900 - 1130 AM Off Peak	120	80									30				90
3. 1130 - 1330 Noon	120	80									30				90
4. 1330 - 1515 PM Off Peak	120	80									30				90
5. 1515 - 1830 PM Peak	140	88									41				99
6. 1830 - 2000 Evening	120	80									50				70
7. 2000 - 0615 Late	120	80									50				70
8.	120	1									50				70
9. Convention Ctr - Outbound	120	115									40				80
10. Arena - Inbound	120	5									30				90
11. Arena - Out Fla Ave Closed	120	97									90				30
12. Marriott - Outbound PM	100	69									40				60
13. Arena - Out Fla Ave Opened	120	91									90				30
14. Arena - Inbound Flush	160	5									30				130
15. Arena Lg/Straz - Outbound	120	14									90				30
16. Hurricane	100	69									25				75



Plan, SOP and Signal Heads Page

Print Date: 6/1/2018

Section Id 1213 Controller Type Cobalt
 Major Street CHANNELSIDE
 Minor Street FLORIDA
 Coord Date 11/2/2017 FDOT SOP: 1 Mod



Ped 1 Selector 1ped-wlk-fdw-count PED Signal 1: P4, P6	Sig 1 Selector 3-section-ball-vertica Signal Head 1: 4, 6	Sig 2 Selector Signal Head 2:	Sig 3 Selector Signal Head 3:	Sig 4 Selector Signal Head 4:	Sig 5 Selector Signal Head 5:	Sig 6 Selector Signal Head 6:	Sig 7 Selector Signal Head 7:	Sig 8 Selector Signal Head 8:
Ped 2 Selector	Sig 9 Selector	Sig 10 Selector	Sig 11 Selector	Sig 12 Selector	Sig 13 Selector	Sig 14 Selector	Sig 15 Selector	Sig 16 Selector
PED Signal 2:	Signal Head 9:	Signal Head 10:	Signal Head 11:	Signal Head 12:	Signal Head 13:	SIGNAL HEAD 14	SIGNAL HEAD 15	SIGNAL L HEAD 16





Timingsheet, Controller Operation and Load Switch Page

SECID: 1214 Timing Date: 11/2/2017 Phasing Date: 10/20/2000

Shop Number: 1438 Drop:

Major Street **CHANNELSIDE**

Orientation: Eastbound

Controller Type **Cobalt**

Minor Street **CROSTOWN RAMP / MORGAN**

Orientation: North-South

Computer System **CEN** Last Date Sent **10/29/2018**

Controller Timings (seconds)

Controller Phase Number	4	5	6	8
Direction	NB	RAMP	EB	SB
Minimum Green	10	5	10	10
Vehicle Extension	3.0	4.5	3.0	3.0
Yellow Clr/Alt Clr	3.7	4	4	3.7
Red Clr/Alt Red Clr	2.2	2.6	2.2	2.2
Max Green I	30	20	40	30
Max Green II	30	25	60	30
Walk	7		7	7
Walk - XGuard	---	---	---	---
FDW	17	11		17
FDW - XGuard	---	---	---	---
Detector Memory	---	ON	---	---
Phase Recall	MAX	---	MAX	MAX
Ped Recall	ON	---	ON	ON
Flash Operation	RED	RED	YEL	RED

Controller Operation

RXR Preempt: No FDOT SOP: 2 MOD
 Fire Preempt: No Backup Protection: N
 Bridge Preempt: No LPI Location(Y/N): No
 Transit Preempt: False LPI Date:
 Crossing Guard Times AM:
 Crossing Guard Times PM:
 Free Time Primary:
 Free Time Secondary:
 Flash Source- (C)omputer or (F)ield:
 Flash Times Primary
 Flash Times Secondary
 CNA Ø's **Ø4, Ø6, Ø8**

Phase Ring Assignments

Sequence 1 Ring 1: 1 2 | 3 4
 Ring 2: 5 6 | 7 8
 Sequence 2 Ring 1: _____
 Ring 2: _____
 Sequence 3 Ring 1: _____
 Ring 2: _____
 Sequence 4 Ring 1: _____
 Ring 2: _____

Cabinet Load Switch Assignments

LS1: LS2: LS3: LS4: Ø4 LS5: Ø5 LS6: Ø6 LS7: LS8: Ø8
 LS9: LS10: P4 LS11: P6 LS12: P8 LS13: LS14: LS15: LS16:

UPDATED TIMINGS.

ACTUATED PRETIMED OPERATION

Comments

Submitted By: *CAB* Date: *10/29/18* Review By: *144* Date: *10-30-18* Approved By: *BC*

Implemented By: *PW* Date: *11/9/18* Notes:

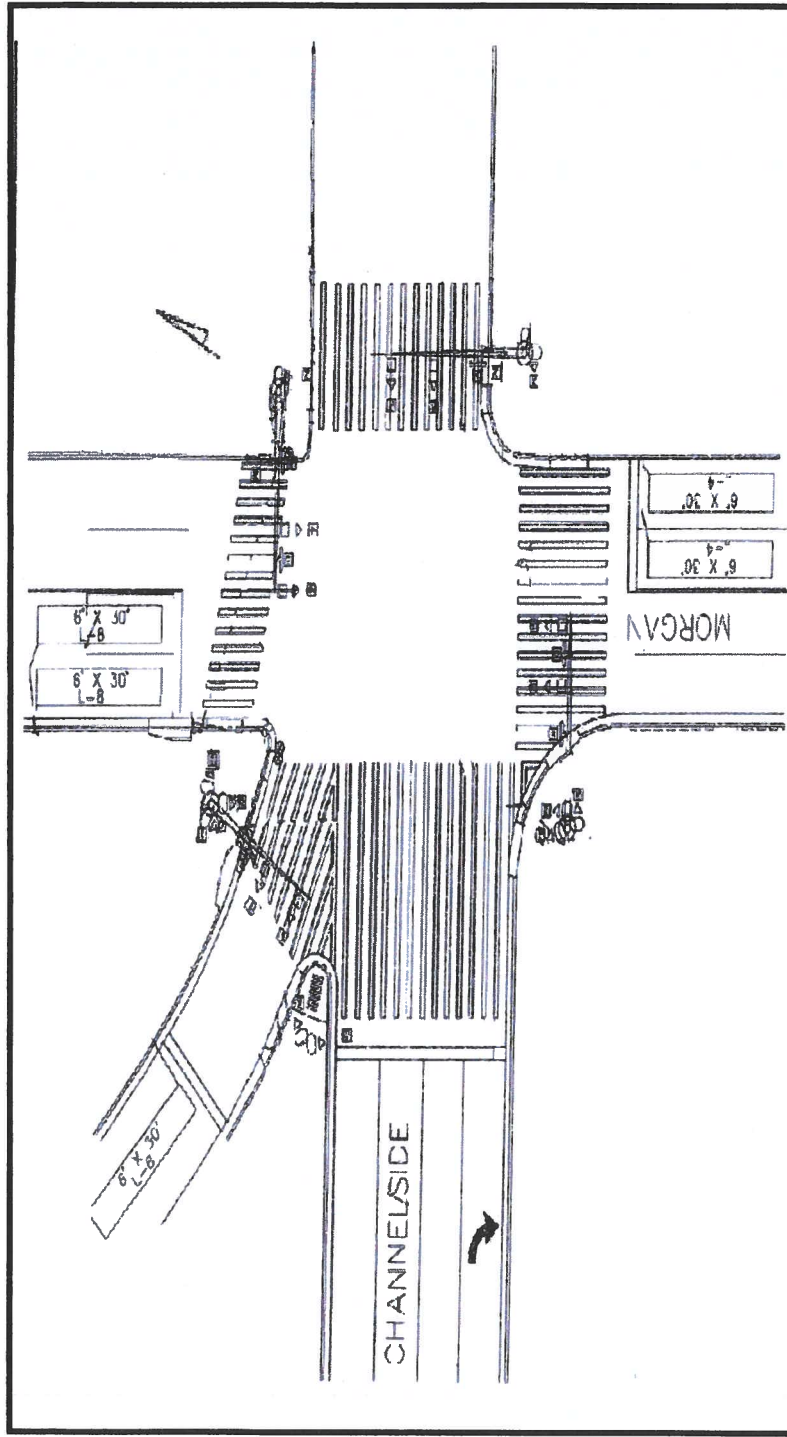
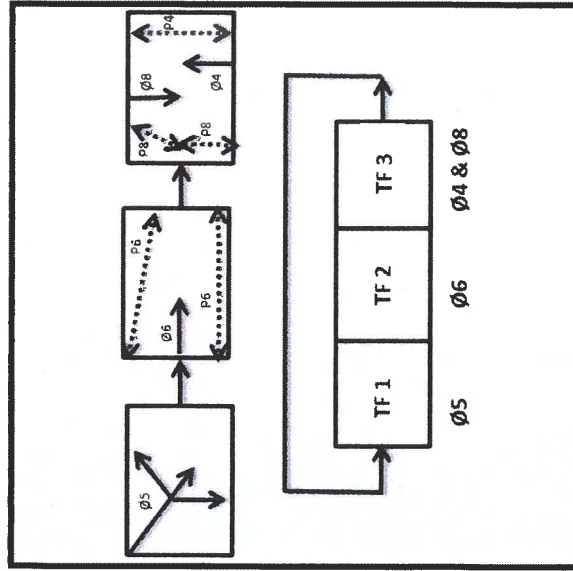
Date: *10/31/2018*



Plan, SOP and Signal Heads Page

Print Date: 10/29/2018

Section Id 1214 Controller Type Cobalt
 Major Street CHANNELSIDE
 Minor Street CROSSTOWN RAMP / MORGAN
 Coord Date 11/3/2017 FDOT SOP: 2 MOD



Ped 1 Selector 1ped-wlk-fdw-count	Sig 1 Selector 3-section-ball-vertical	Sig 2 Selector	Sig 3 Selector	Sig 4 Selector	Sig 5 Selector	Sig 6 Selector	Sig 7 Selector	Sig 8 Selector
PED Signal 1: P4, P6, P8	Signal Head 1: Ø4, Ø5, Ø6, Ø8	Signal Head 2:	Signal Head 3:	Signal Head 4:	Signal Head 5:	Signal Head 6:	Signal Head 7:	Signal Head 8:
		Sig 9 Selector	Sig 10 Selector	Sig 11 Selector	Sig 12 Selector	Sig 13 Selector	Sig 14 Selector	Sig 15 Selector
Ped 2 Selector	Signal Head 9:	Signal Head 10:	Signal Head 11:	Signal Head 12:	Signal Head 13:	SIGNAL HEAD 14	SIGNAL HEAD 15	SIGNAL L HEAD 16



Timingsheet, Controller Operation and Load Switch Page

SECID: 1207 Timing Date: 5/17/2018 Phasing Date: 5/17/2018 Shop Number: 1076 Drop:

Major Street: **BROREIN** Orientation: Westbound Controller Type: COBALT
 Minor Street: **FLORIDA** Orientation: Northbound Computer System: Cen Last Date Sent: 8/26/2014

Controller Timings (seconds)		Controller Operation	
Controller Phase Number		RXR Preempt: No	FDOT SOP: 1 MOD
Direction	2 4	Fire Preempt: No	Backup Protection: N
Minimum Green	WB NB	Bridge Preempt: No	LPI Location(Y/N): Y
Vehicle Extension	10	Transit Preempt: False	LPI Date: 5/17/2018
Yellow Clr/Alt Clr	3.0	Crossing Guard Times AM:	
Red Clr/Alt Red Clr	3.7	Crossing Guard Times PM:	
Max Green I	2.1	Free Time Primary:	
Max Green II	50	Free Time Secondary:	
Walk	70	Flash Source- (C)omputer or (F)ield:	
Walk - XGuard	7	Flash Times Primary	
FDW	17	Flash Times Secondary	
FDW - XGuard	23	CNA Ø's Ø2, Ø4	
Detector Memory	---		
Phase Recall	MAX		
Ped Recall	ON		
Flash Operation	YEL		

Phase Ring Assignments			
Sequence 1	Ring 1:	1	2
	Ring 2:	5	6
Sequence 2	Ring 1:	3	4
	Ring 2:	7	8
Sequence 3	Ring 1:		
	Ring 2:		
Sequence 4	Ring 1:		
	Ring 2:		

Cabinet Load Switch Assignments			
LS1:	Ø2	LS3:	P4
LS2:	Ø4	LS4:	LS8:
LS5:	LS13:	LS7:	P2
LS6:	LS14:	LS9:	LS15:
LS10:	LS11:	LS12:	LS16:

Comments
 UPDATED TIMINGS
 ACTUATED PRETIMED OPERATION
 LPI Location - 5sec green delay for Northbound.

Submitted By: CS Date: 5-31-18 Review By: JS Date: 6/10/18 Approved By: BC Date: 06/12/2018
 Implemented By: DW Date: 6-14-18 Notes:



Coordination Pattern Page

Print Date: 6/1/2018

Major Street: **BROREIN**

Section Id: 1207 Record Number: 153 Coord Date: 7/12/2017

Minor Street: **FLORIDA**

Min Green:	10						
Yellow CLR:	3.7						
All Red CLR:	2.1						
Walk:	7						
FDW:	17						
	10						
	3.7						
	2.4						
	7						
	23						

Free Time Primary:

Free Time Secondary

- Day Plan #1 - Mon-Thr patt 1 -7.
- Day Plan #2 - Fri - patt 1 - 7 w/5 @ 14:45
- Day Plan #3 - Sat - patt 7, then patt 2 all other times
- Day Plan #4 - Sun - patt 7, then patt 2 all other times

Direction:

Ø Number:

Direction:	WB	NB
Ø Number:	2	4

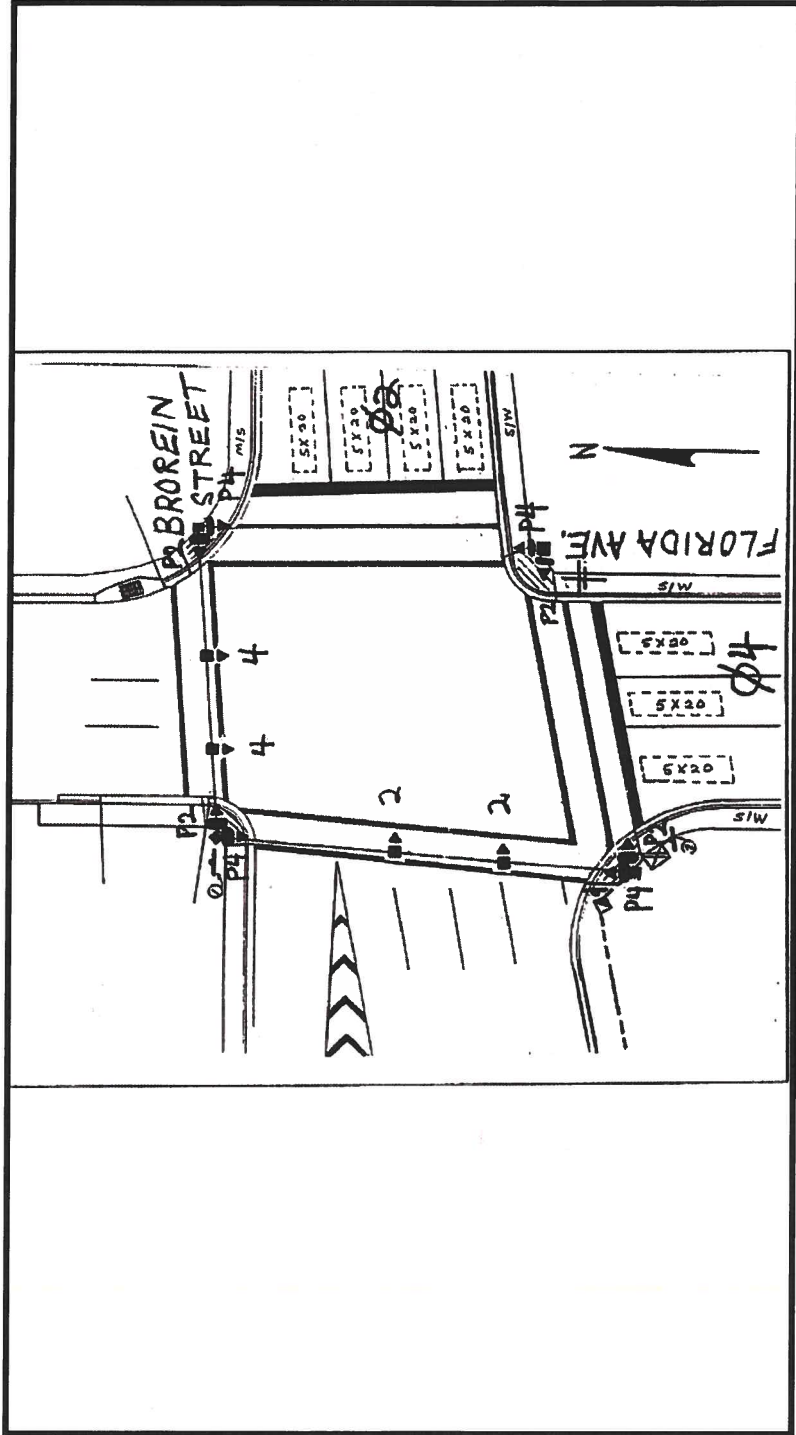
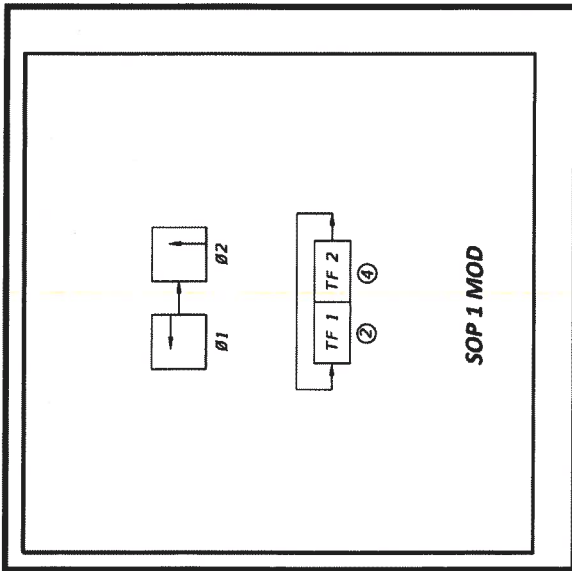
Patterns	Cycle	Offset							
1. 0615 - 0900 AM Peak	140	43							
2. 0900 - 1115 AM Off Peak	120	84							
3. 1115 - 1330 Noon	120	84							
4. 1330 - 1515 PM Off Peak	120	84							
5. 1515 - 1830 PM Peak	140	46							
6. 1830 - 2000 Evening	120	84							
7. 2000 - 0615 Late	120	94							
8.	120	94							
9. Convention Ctr - Outbound	120	94							
10. Arena - Inbound	120	110							
11. Arena - Outbound Fla Ave Closed	120	83							
12. Marriott - Outbound PM	100	39							
13. Arena - Outbound Fla Ave Opened	120	84							
14. Arena - Inbound Flush	120	110							
15. Arena Lg / Straz - Outbound	120	93							
16. Hurricane	100	39							



Plan, SOP and Signal Heads Page

Print Date: 5/25/2018

Section Id 1207 Controller Type COBALT
 Major Street BROREIN
 Minor Street FLORIDA
 Coord Date 7/12/2017 FDOT SOP: 1 MOD



Ped 1 Selector 1ped-wlk-fdw-count	Sig 1 Selector 3-section-ball-vertica	Sig 2 Selector	Sig 3 Selector	Sig 4 Selector	Sig 5 Selector	Sig 6 Selector	Sig 7 Selector	Sig 8 Selector
PED Signal 1: P2, P4	Signal Head 1: 2, 4	Signal Head 2:	Signal Head 3:	Signal Head 4:	Signal Head 5:	Signal Head 6:	Signal Head 7:	Signal Head 8:
		Sig 9 Selector	Sig 10 Selector	Sig 11 Selector	Sig 12 Selector	Sig 13 Selector	Sig 14 Selector	Sig 15 Selector
Ped 2 Selector	Signal Head 2:	Signal Head 10:	Signal Head 11:	Signal Head 12:	Signal Head 13:	SIGNAL HEAD 14	SIGNAL HEAD 15	SIGNAL L HEAD 16
PED Signal 2:								



Timingsheet, Controller Operation and Load Switch Page

SECID: 1203 Timing Date: 4/23/2014 Phasing Date: 10/9/2018 Shop Number: _____ Drop: _____

Major Street: **JEFFERSON** Orientation: North - South Controller Type: Cobalt
 Minor Street: **WHITING** Orientation: East West Computer System: Cent Last Date Sent: 8/26/2014

Controller Timings (seconds)					
Controller Phase Number	2	4	6	8	
Direction	SB	WB	NB	EB	8
Minimum Green	10	10	10	10	
Vehicle Extension	3.0	3.0	3.0	3.0	
Yellow Clr/Alt Clr	3.7	3.7	3.7	3.7	
Red Clr/Alt Red Clr	2	2	2	2	
Max Green I	50	25	50	25	
Max Green II	60	35	60	35	
Walk	7	7	7	7	
Walk - XGuard					
FDW	12	13	12	13	
FDW - XGuard					
Detector Memory	---	---	---	---	
Phase Recall	MAX	---	MAX	---	
Ped Recall	ON	---	ON	---	
Flash Operation	YEL	RED	YEL	RED	

Controller Operation
 RXR Preempt: No FDOT SOP: 1 MOD
 Fire Preempt: No Backup Protection: N
 Bridge Preempt: No LPI Location(Y/N): Yes
 Transit Preempt: False LPI Date: 10/9/2018
 Crossing Guard Times AM:
 Crossing Guard Times PM:
 Free Time Primary:
 Free Time Secondary:
 Flash Source- (C)omputer or (F)ield:
 Flash Times Primary
 Flash Times Secondary
 CNA Ø's **2 & 6**

Cabinet Load Switch Assignments							
LS1:	Ø2	LS3:	Ø4	LS5:	Ø6	LS7:	Ø8
LS9:	P2	LS10:	P4	LS11:	P6	LS12:	P8
		LS13:		LS14:		LS15:	

5 sec LPI implemented 10-9-2018

Comments

Phase Ring Assignments	
Sequence 1	Ring 1: 2 4 Ring 2: 6 8
Sequence 2	Ring 1: _____ Ring 2: _____
Sequence 3	Ring 1: _____ Ring 2: _____
Sequence 4	Ring 1: _____ Ring 2: _____

Submitted By: CYB Date: 10-23-18 Review By: _____ Date: 10-24-2018
 Implemented By: DW Date: 10/31/18 Notes: _____ Approved By: BC Date: _____



Coordination Pattern Page

Ver. E

Print Date: 10/23/2018

Major Street: JEFFERSON

Record Number: 149

Section Id: 1203

Coord Date: 10/9/2018

Minor Street: WHITING

Coord M-F:	Patt 1-7
Coord WkEnd:	S-Su patt 7 and patt 2 all other times
Coord Free:	
Coord Sp Ops:	

Direction:	SB	WB	NB	EB
Ø Number:	2	4	6	8

Patterns	Sequence	Cycle	Offset	SB	WB	NB	EB
1. 0615 - 0900 AM Peak	1	70	18	40		40	30
2. 0900 - 1115 AM Off Peak	1	60	30	30		30	30
3. 1115 - 1330 Noon	1	60	30	30		30	80
4. 1330 - 1515 PM Off Peak	1	60	30	30		30	80
5. 1515 - 1830 PM Peak	1	70	18	40		40	30
6. 1830 - 2000 Evening	1	60	30	30		30	30
7. 2000 - 0615 Late	1	60	30	30		30	30
8.							
9. Convention Ctr - Outbound	1	120	30	40		40	80
10. Arena - Inbound	1	120	30	40		40	80
11. Arena - Outbound Fla Ave Closed	1	120	51	85		85	35
12. Marriott - Outbound PM	1	100	1	40		40	80
13. Arena - Outbound Fla Ave Opened	1	120	40	90		90	30
14. Arena - Inbound Flush	1	120	5	54		54	66
15. Arena Lg / Straz - Outbound	1	120	51	80		80	80
16. Hurricane	1	100	1	40		40	60

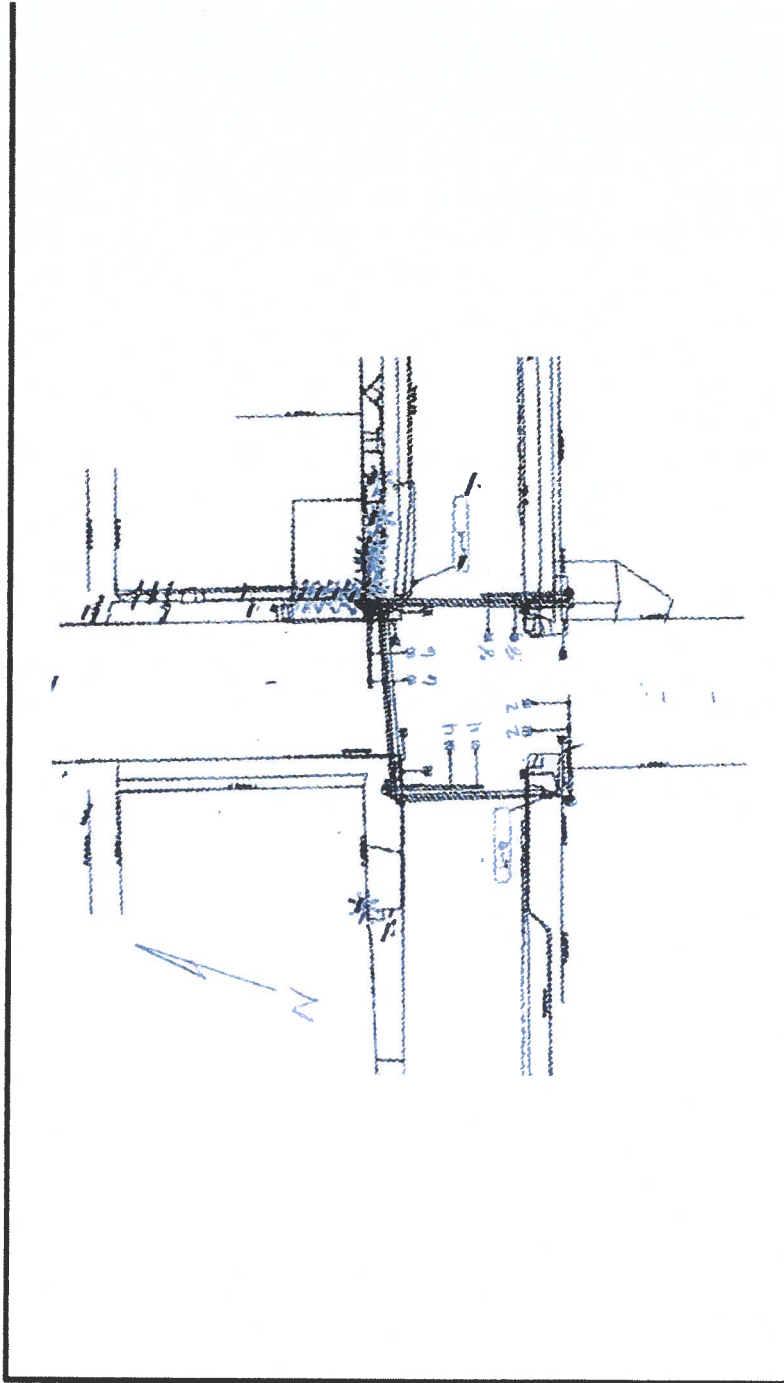
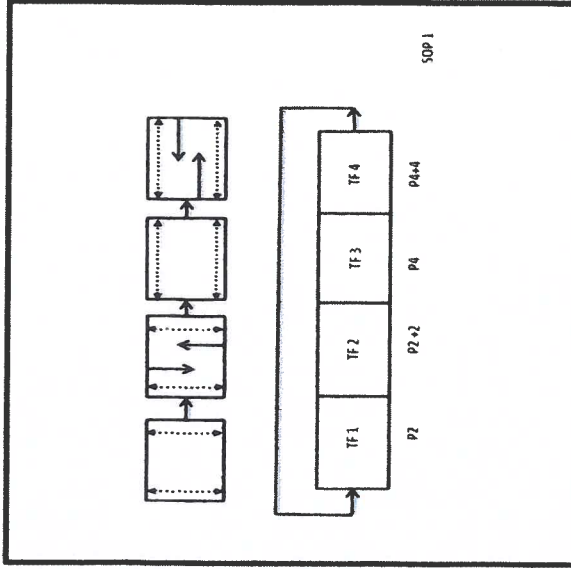




City of Tampa
Florida

Plan, SOP and Signal Heads Page

Print Date: 10/10/2

Section Id 1203 Controller Type Cobalt
 Major Street JEFFERSON
 Minor Street WHITING
 Coord Date 10/9/2018 FDOT SOP: 1



Ped 1 Selector 1ped-wlk-fdw-count	Sig 1 Selector 3-section-ball-vertica	Sig 2 Selector	Sig 3 Selector	Sig 4 Selector	Sig 5 Selector	Sig 6 Selector	Sig 7 Selector	Sig 8 Selector
PED Signal 1: P2, P4, P6, P8	Signal Head 1: 2, 4, 6, 8	Signal Head 2:	Signal Head 3:	Signal Head 4:	Signal Head 5:	Signal Head 6:	Signal Head 7:	Signal Head 8:
		Ped 2 Selector	Sig 9 Selector	Sig 10 Selector	Sig 11 Selector	Sig 12 Selector	Sig 13 Selector	Sig 14 Selector
PED Signal 2:	Signal Head 9:	Signal Head 10:	Signal Head 11:	Signal Head 12:	Signal Head 13:	SIGNAL HEAD 14	SIGNAL HEAD 15	SIGNAL L HEAD 16



Timingsheet, Controller Operation and Load Switch Page

SECID: 1304 Timing Date: 8/7/2017 Phasing Date: 8/7/2017 ARCGIS Node ID: Shop Number: Drop:

Major Street **MERIDIAN**
 Minor Street **WHITING**

Orientation: North-South
 Orientation: West
 Controller Type **COBALT**
 Computer System **CEN** Date Sen

Controller Timings (seconds)							
2	4	5	6	8			
SB	WB	SBLT	NB	EBPED			
10	10	5	10	10			
3.0	3.0	3.0	3.0	3.0			
4.4	3.7	4.4	4.4	3.7			
2.2	3.5	2.0	2.2	3.5			
17	17	12	17	17			
40	45	25	40	45			
---	7	---	7	7			
---	---	---	---	---			
---	30	---	14	30			
---	---	---	---	---			
---	---	---	---	---			
MIN	---	---	MIN	---			
---	---	---	ON	---			
YEL	RED	---	YEL	---			

Controller Operation	
RXR Preempt:	No FDOT SOP: 12
Fire Preempt:	No Backup Protection: Y
Bridge Preempt:	No FDOT Walk Y
Transit Preempt:	False FDOT FDW: Y
Crossing Guard Times AM:	
Crossing Guard Times PM:	
Free Time Primary:	
Free Time Secondary:	
Flash Source- (C)omputer or (F)ield:	
Flash Times Primary:	
Flash Times Secondary:	
CNA Ø's	2 + 6

Phase Ring Assignments	
Sequence 1	Ring 1: 1 2 / 4 Ring 2: 5 6 / 8
Sequence 2	Ring 1: _____ Ring 2: _____
Sequence 3	Ring 1: _____ Ring 2: _____
Sequence 4	Ring 1: _____ Ring 2: _____

Cabinet Load Switch Assignments											
LS1:	LS2:	Ø2	LS3:	LS4:	Ø4	LS5:	Ø5	LS6:	Ø6	LS7:	LS8:
LS9:	LS10:		LS11:	LS12:	P4	LS13:	P5	LS14:	P6	LS15:	P8

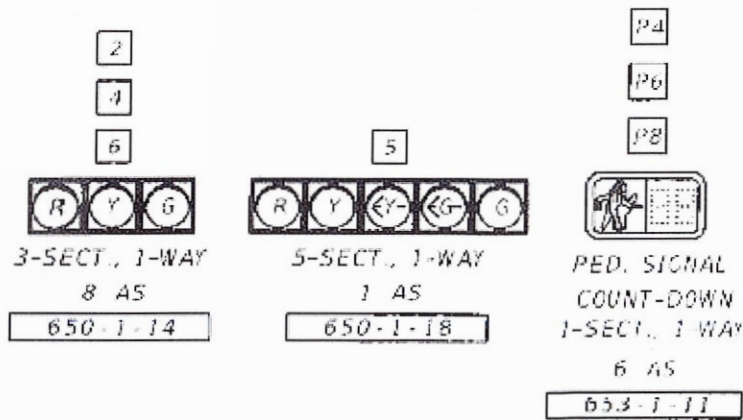
Logic statement control (LP 1-15 EEE)
 Logic stat. 1 IF DET 14 on - Then DET P4 ON
 2 " " " " " " " " P6 ON
 3 " " " " " " " " P8 ON

Comments

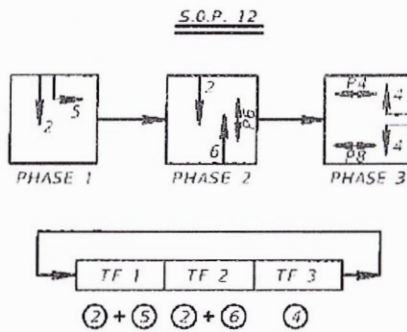
Submitted By: *[Signature]* Date: 10-31-17 Review By: *[Signature]* Date: 10-31-17 Approved By: *[Signature]* Date: 10-31-17
 Implemented By: *[Signature]* Date: 11-1-17 Notes:

DET Assign
 17-1
 18-2
 19-3
 20-4
 21-5
 22-6

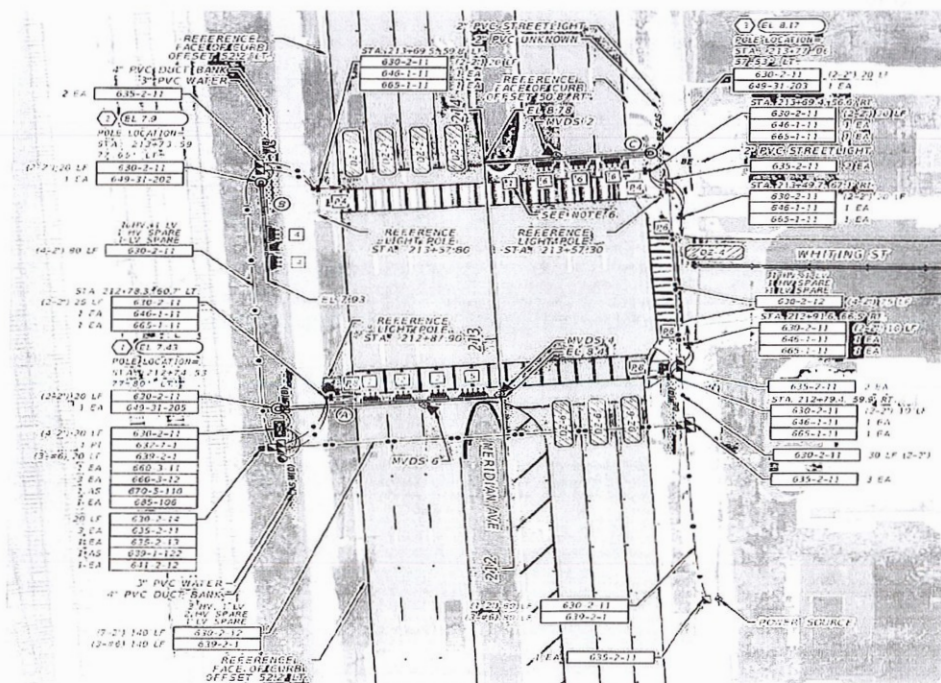
Signal Head Detail



Signal Operating Plan 12



Signal Plan



Meridian-Whiting
 10/31/2017
 Section ID: 1304

Appendix F

Vissim Calibration and Validation Report

Calibration and Validation Report

Interchange Access Request

Eastbound Selmon Expressway (SR 618) at Downtown East/West Interchange

Project No.:HI-0141-P-07

Prepared for:

Tampa Hillsborough Expressway Authority

1104 East Twiggs Street, Suite 300, Tampa, FL 33602

May 2021

LOCHNER

Address
H.W. Lochner, Inc.
4350 West Cypress St, Suite 800
Tampa, FL 33607

Contact
Phone: 800.353.3011
www.hwlochner.com

*CALIBRATION AND VALIDATION REPORT
(DRAFT)*

Tampa Hillsborough Expressway Authority

**INTERCHANGE ACCESS
REQUEST**

Eastbound Selmon Expressway (SR 618) at Downtown East/West Interchange
Hillsborough County, Florida

Prepared for:

**Tampa Hillsborough
Expressway Authority**

1104 East Twiggs Street
Suite 300
Tampa, FL 33602

May 2021

Project No.:

HI-0141-P-07

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1.0 Introduction

1.1 Project Location and Background

This Calibration and Validation Report has been prepared for the Tampa Hillsborough Expressway Authority (THEA) to support the Eastbound Selmon Expressway (SR 618) at Downtown East/West Interchange Access Request (IAR). The aim of this study is to evaluate the need for improvements for access from eastbound Selmon Expressway to Whiting Street within Downtown Tampa. The project would provide a direct connection of the Whiting Street corridor to North Meridian Avenue, reconfigure the on-ramp to eastbound Selmon Expressway at Jefferson Street, and reconfigure the off-ramp at Florida Avenue and Channelside Drive. The study area for the IAR is shown in **Figure 1.1**.

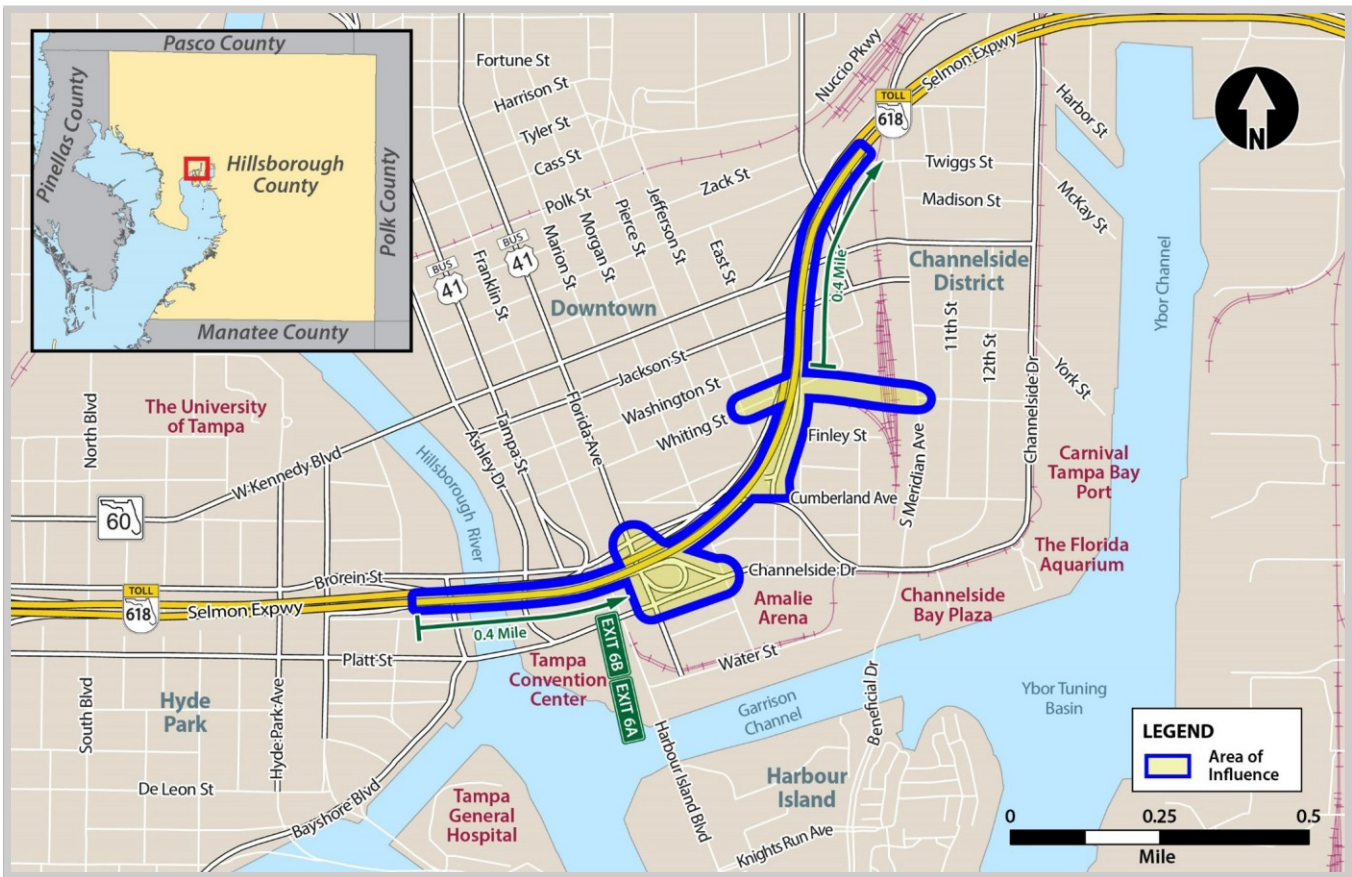


Figure 1.1: Project Location Map

The Selmon Expressway is a tolled, limited access facility that is part of the Strategic Intermodal System (SIS). At the Downtown East/West interchange, the Selmon Expressway transitions from six lanes, to four lanes, and back to six lanes. The posted speed limit is 55 miles per hour (mph) within the study area and the corridor is functionally classified as Urban Principal Arterial Expressway.

1.2 Report Purpose and Methodology

This Calibration and Validation Report documents the development, calibration, and operational analysis results of the existing year (2019) Vissim network for the Eastbound Selmon Expressway at Downtown East/West IAR. PTV Vissim 2020 was used for this microsimulation analysis. All calibration efforts were conducted within the guidelines set forth by the FDOT Traffic Analysis Handbook, 2014 and the Federal Highway Administration (FHWA) Traffic Analysis Toolbox Volume III: Guidelines for Applying Traffic Microsimulation Modeling Software. The area of influence and study intersections are illustrated in **Figure 1.2**. Analysis for the study has been conducted at four on/off-ramps and eight intersections.



Figure 1.2: Project Study Area of Influence

2.0 Data Collection

In order to calibrate and validate the existing year (2019) Vissim network for the IAR, field measured traffic count and speed data was utilized from the concurrent Whiting Street Project Development and Environment (PD&E) Study. The following sections summarize the data collection efforts from the Whiting Street PD&E Study.

2.1 Traffic Count Data

Intersection data collection occurred from May 2019 to February 2020 and included 48-hour tube counts, 72-hour tube counts, and 6-hour peak period turning movement counts (TMCs). **Figure 2.1** shows the locations of the traffic count data collection. Additionally, a list of study date ranges and hours of observation for the traffic count data is summarized in **Table 2.1** and **Table 2.2**. The traffic count data can be found in **Appendix A**.

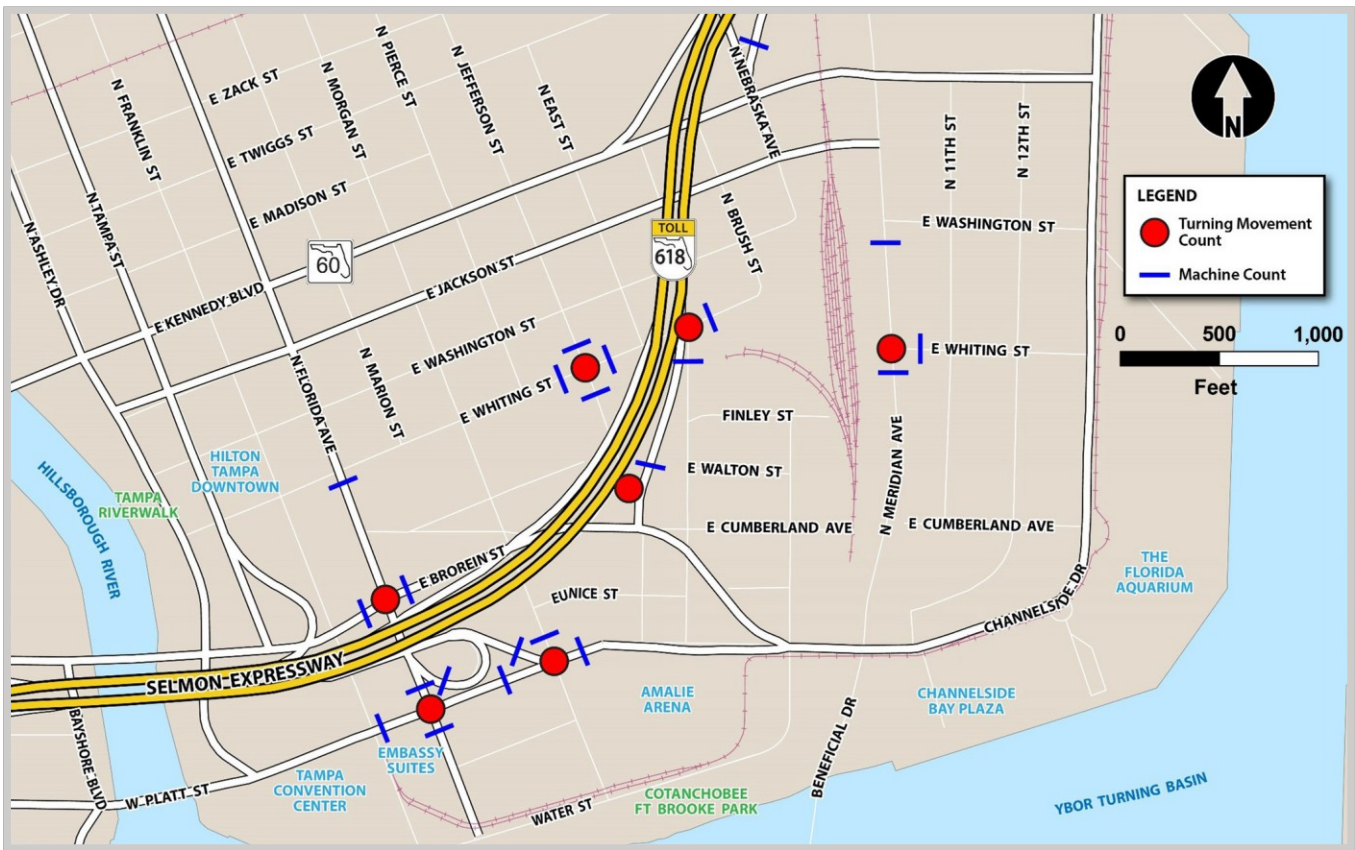


Figure 2.1: Traffic Count Data Locations

Table 2.1: Traffic Count Data Collection Efforts

ID	Data Collection Date	Count Type	Analysis Hours
A	5/21/2019	6-Hour TMC	6:30 AM to 9:30 AM, 4:00 PM to 7:00 PM
B	9/11/2019	6-Hour TMC	6:30 AM to 9:30 AM, 3:45 PM to 6:45 PM
C	9/24/2019	6-Hour TMC	6:30 AM to 9:30 AM, 3:45 PM to 6:45 PM
D	5/14/2019 to 5/15/2019	48-hour	12:00 AM to 12:00 AM (next day)
E	9/10/2019 to 9/12/2019	72-hour	12:00 AM to 12:00 AM (next day)
F	9/17/2019 to 9/19/2019	72-hour	12:00 AM to 12:00 AM (next day)
G	9/24/2019 to 9/26/2019	72-hour	12:00 AM to 12:00 AM (next day)
H	2/25/2020 to 2/27/2020	72-hour	12:00 AM to 12:00 AM (next day)

Table 2.2: Traffic Count Data Locations

ID	Location
A and F	Channelside Drive and Florida Avenue
A and F	Channelside Drive and Morgan Street
D	Selmon Expressway Off-Ramp to Florida Avenue
A and E	Brorein Street and Florida Avenue
A and D	Selmon Expressway On-Ramp from Jefferson Street
G	Whiting Street and Florida Avenue
C and G	Whiting Street and Jefferson Street
C and G	Whiting Street and Nebraska Avenue
B and E	Whiting Street and Meridian Avenue
E	Washington Street and Meridian Avenue
H	Selmon Expressway On-Ramp from Nebraska Avenue

2.2 Speed Data

Three-day speed data was collected over 3-hour AM (6:30 to 9:30) and 3-hour PM (4:00 to 7:00) peak periods in October and November of 2019 for each of the study corridors:

- Florida Avenue from Channelside Drive to Brorein Street;
- Whiting Street from Jefferson Street to Nebraska Avenue; and
- Jefferson Street from the Selmon Expressway on-ramp to Whiting Street.

Regular and reliable speed data could not be obtained along Channelside Drive due to construction within the area during data collection. Additionally, regular and reliable speed data could not be obtained along the Selmon Expressway mainline due to being added to the study area after the start of the COVID-19 pandemic. Raw (2019) speed data can be found in **Appendix B**.

3.0 Base Model Development and Verification

3.1 Network Geometry

Table 3.1 and **Table 3.2** describe the roadway characteristics for each state roadway and non-state roadway being analyzed in the study area, respectively. The Selmon Expressway is part of the SIS, has a posted speed limit of 55 mph, and is functionally classified as Urban Principal Arterial Expressway. Additionally, discontinuity in Whiting Street is currently present west of Meridian Avenue, due to the Chessie-Seaboard Merger (CSX) railway adjacent to the roadway.

Table 3.1: State Roadway Characteristics

From	To	Begin Milepost	End Milepost	Length (mi)	Number of Lanes
<i>Eastbound Selmon Expressway (Roadway ID: 10002000)</i>					
Plant Avenue On-Ramp	Downtown East/West Off-Ramp	4.851	5.242	0.391	2 + 1 aux
Downtown East/West Off-Ramp	Jefferson Street On-Ramp	5.242	5.573	0.331	2
Jefferson Street On-Ramp	Nebraska Avenue On-Ramp	5.573	5.935	0.362	3

Table 3.2: Non-State Roadway Characteristics

Roadway	From	To	Length (mi)	Speed Limit (mph)	Typical Section	Directionality
Channelside Drive	Florida Avenue	Morgan Street	0.1	40	Three-Lane	One-Way Eastbound
Whiting Street	Jefferson Street	Brush Street	0.2	*	Two-Lane	Two-Way East-West
Florida Avenue	Channelside Drive	Brorein Street	0.1	30	Three-Lane	One-Way Northbound

*There is no speed limit posted along this corridor. For analysis purposes, a speed limit of 25 miles per hour (mph) was assumed.

The existing lane geometry, shown in **Figure 3.1**, was coded into the Vissim network for the Eastbound Selmon Expressway at Downtown East/West IAR. The Wiedemann 74 car following model was used for the driving behavior of each surface roadway within the Vissim network and Wiedemann 99 car following was used for the Selmon Expressway, as is recommended for arterials and freeways, respectively.

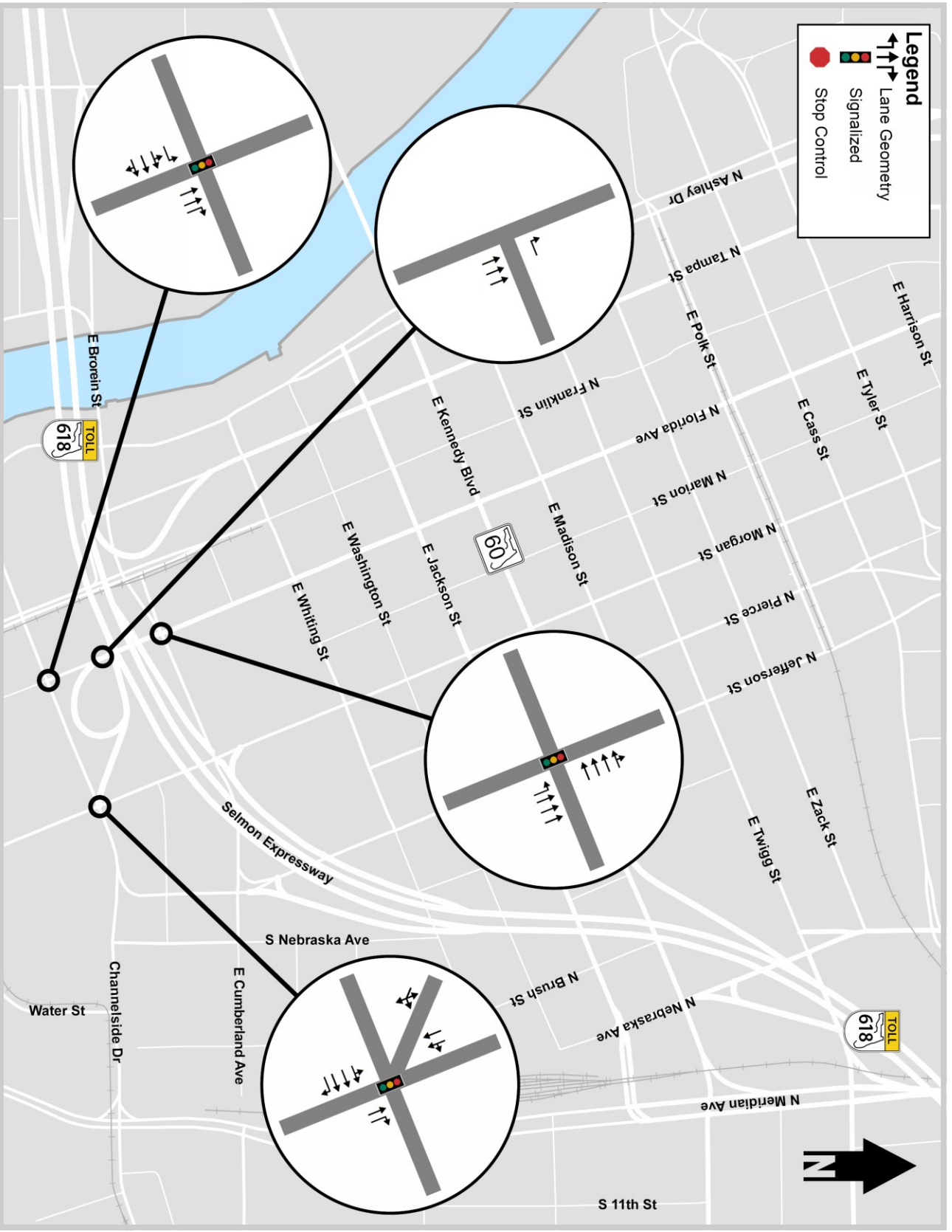


Figure 3.1a: Existing Year (2019) Lane Geometry

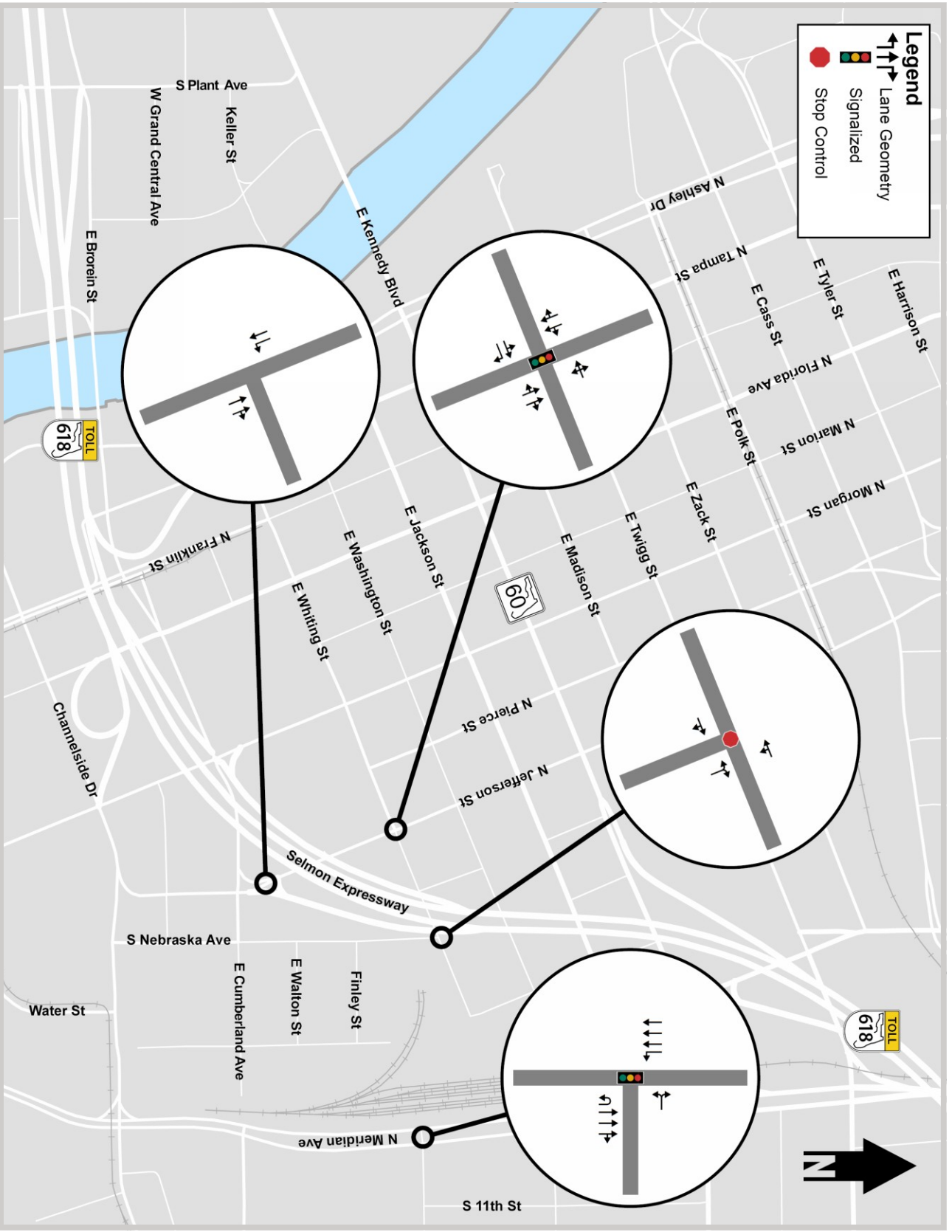


Figure 3.1b: Existing Year (2019) Lane Geometry

3.2 Traffic Control

Table 3.3 summarizes the traffic control features of each of the study intersections within the study area, also shown in **Figure 3.1**. Signal timing plans were obtained from the City of Tampa for each of the signalized intersection and can be found in **Appendix C**.

Table 3.3: Intersection Traffic Control

Intersection	Control Type
Channelside Drive and Florida Avenue	Signalized
Channelside Drive and Morgan Street	Signalized
Florida Avenue and Selmon Expressway Off-Ramp	Uncontrolled
Brorein Street and Florida Avenue	Signalized
Jefferson Street and Selmon Expressway On-Ramp	Uncontrolled
Whiting Street and Jefferson Street	Signalized
Whiting Street and Nebraska Avenue	One-Way Stop
Whiting Street and Meridian Avenue	Signalized

3.3 Existing Year (2019) Volume Development

The following sections summarize the development of the existing year (2019) traffic volumes for the Eastbound Selmon Expressway at Downtown East/West IAR.

3.3.1 Design Traffic Factors

Design traffic factors were determined for the Eastbound Selmon Expressway at Downtown East/West IAR based on the collected traffic data, historically observed factors, and forecasted factors from the THEA approved Tampa Bay Regional Planning Model (TBRPM), with base year 2015, interim year 2030, and forecast year 2040. The factors were developed based on the procedures outlined in the FDOT Project Traffic Forecasting Handbook, 2019. **Table 3.4** summarizes the recommended design traffic factors that were used in the development of the existing year (2019) design hour turning movement volumes.

Table 3.4: Recommended Design Traffic Factors

Factor	Value
Peak Hour Factor	AM: 0.47 to 0.99 (0.92 weighted average)
	PM: 0.78 to 0.96 (0.95 weighted average)
Peak-to-Daily Ratio(K Factor)	9.0%
Directional Factor	Selmon Expressway: 52.3% to 61.2%
	Surface Streets: 50.1% to 67.1%
Design Hour Truck Factor	Roadways: 2.0%
	Parking Lots: 0.0%

3.3.2 Methodology

The following summarizes the steps that were taken to convert the existing year (2019) annual average daily traffic (AADT) for the Eastbound Selmon Expressway at Downtown East/West IAR to existing year (2019) turning movement volumes.

- Seasonal and axle correction factors were obtained from FDOT Florida Traffic Online (2018) and applied to the 48-hour and 72-hour counts to obtain existing year (2019) AADT for the surface streets. AADTs from FDOT Florida Traffic Online (2018) were directly used for the Selmon Expressway.
- The recommended standard K-factor and D-factors, defined in **Table 3.4**, were then applied to the AADTs to determine directional design hour volumes (DDHVs) for each of the external nodes of the study area.
- The external DDHVs were used as inputs to the TFlow Fuzzy methodology of Visum 17 to determine the existing year (2019) turning movement volumes. The existing turning movement percentages from the data collection effort were used as targets within the Visum network.

For the microsimulation of the IAR study area, three hours of traffic simulation were modeled for each AM and PM peak period, as well as a 30-minute network loading interval. The three-hour simulation periods were broken up into one-hour intervals, consisting of one hour for startup, one hour for the peak, and one hour for dissipation of the peak. The network loading, startup, and dissipation volumes were determined as a proportion of the peak hour volumes based on the collected 48-hour and 72-hour approach counts.

3.3.3 Sink/Sources

Traffic volumes were balanced where traffic volume breaks could not be validated based on roadway features, such as side streets and driveways. Where imbalances could be validated, the following sinks/sources, summarized in **Table 3.5** and shown in **Figure 3.2**, were added to the existing year (2019) Vissim network.

Table 3.5: Sink/Sources

ID	Sink/Source
101	Premium Parking/Parway Parking Lot
102	Selmon Expressway CAMLS Lot
103	Selmon Expressway 2 Lot
116	Aurora Apartments
117	Seven One Seven Parking Lot
122	East Street/Raymond O. Shelton School Administration Center Parking

3.3.4 Existing Year (2019) Traffic Volumes

Based on the existing 72 hour traffic counts, the AM and PM peak hours were determined to occur from 7:30 AM to 8:30 AM and from 4:30 PM to 5:30 PM, respectively. **Figure 3.3** and **Figure 3.4** show the existing year (2019) AADT and peak hour turning movement volumes for the Eastbound Selmon Expressway at Downtown East/West IAR.

The existing year (2019) AM and PM peak period turning movement volumes were entered into the Vissim networks using dynamic traffic assignment (DTA) and origin-destination (OD) matrices. The OD matrices for the system were developed by using an iterative proportional fitting (IPF) method, outlined in National Cooperative Highway Research Program (NCHRP) Report 765, Analytical Travel Forecasting Approaches for Project-Level Planning and Design, whereby the existing year (2019) turning movement volumes were used as targets to create the OD matrices.

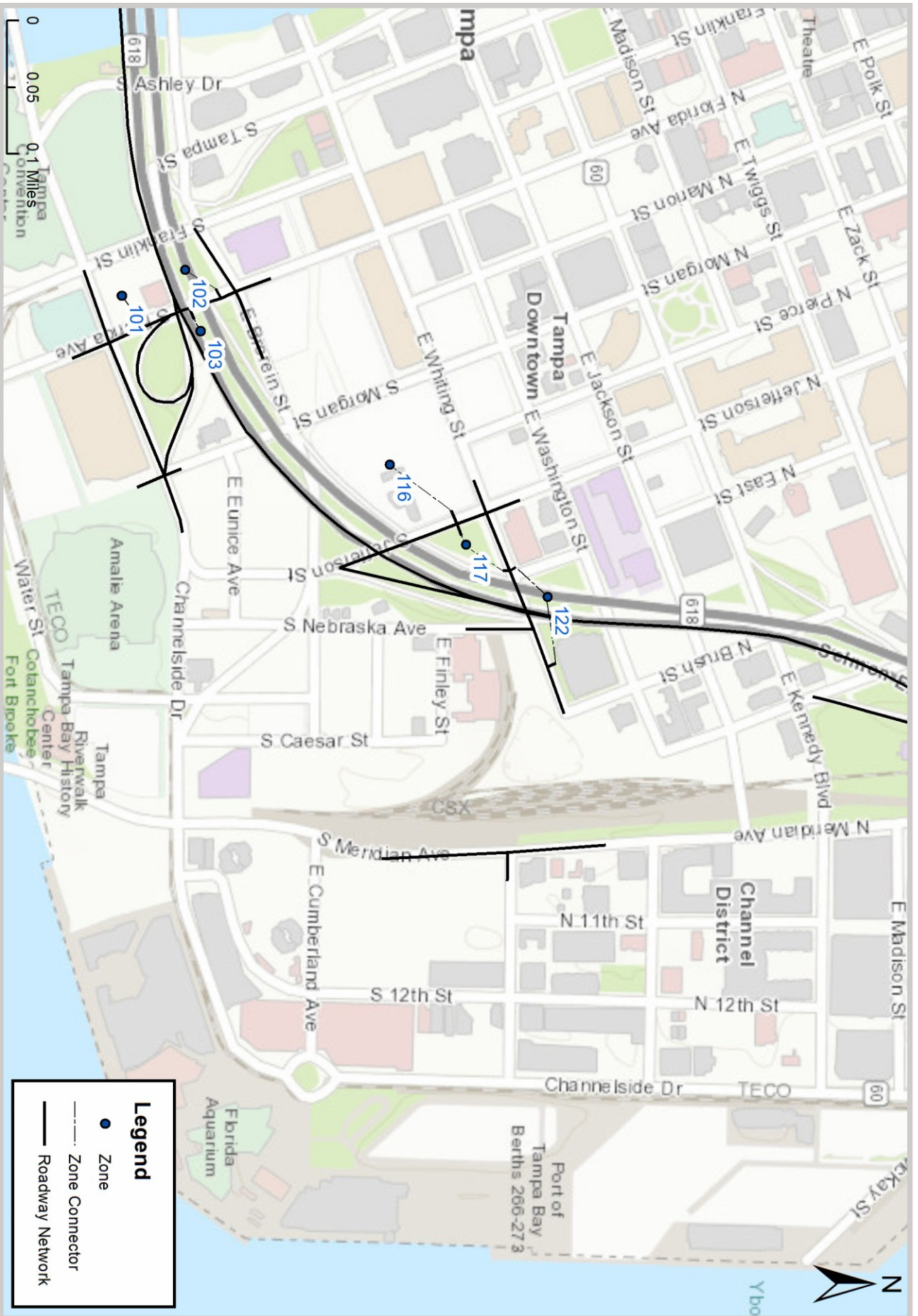


Figure 3.2: Sink/Source Locations

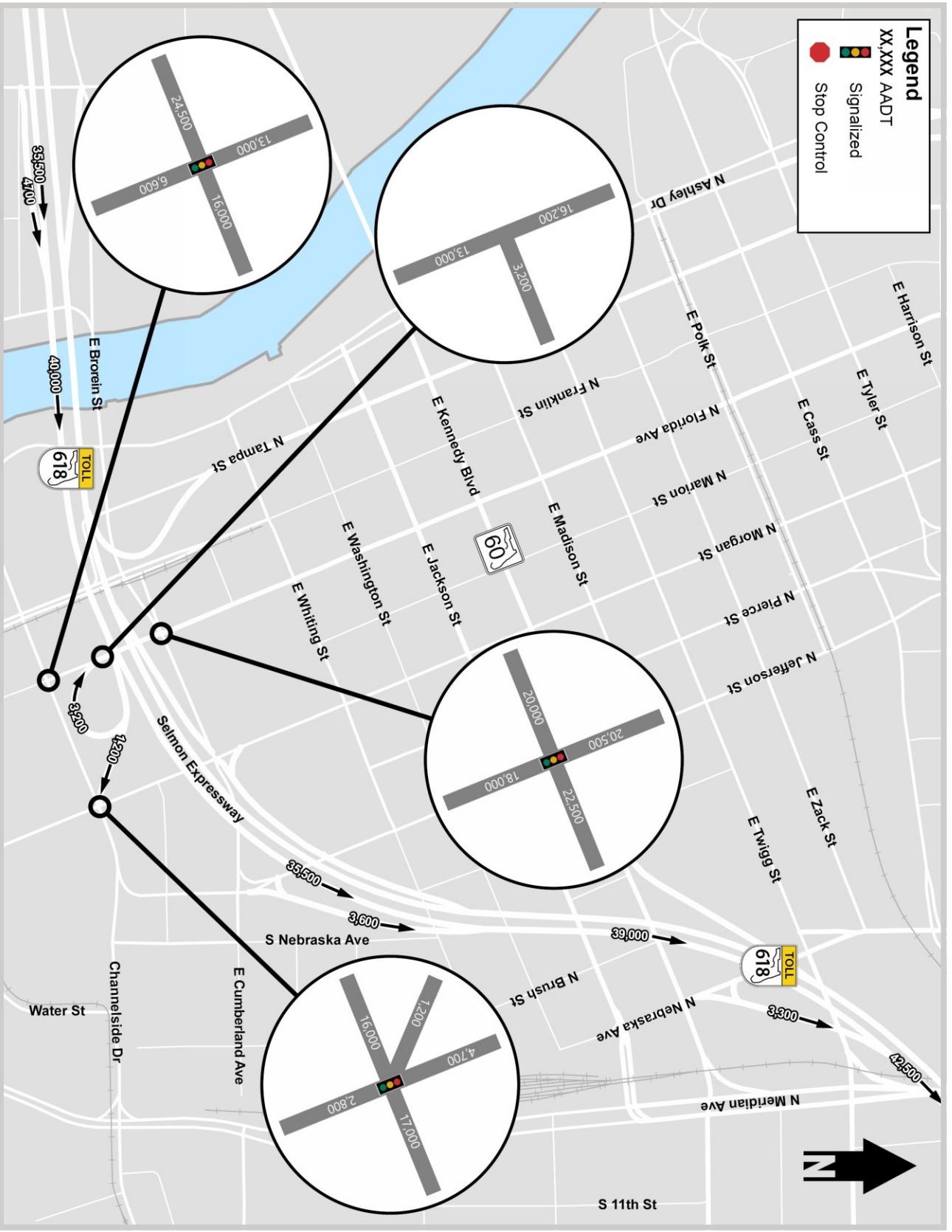


Figure 3.3a: Existing Year (2019) AADT

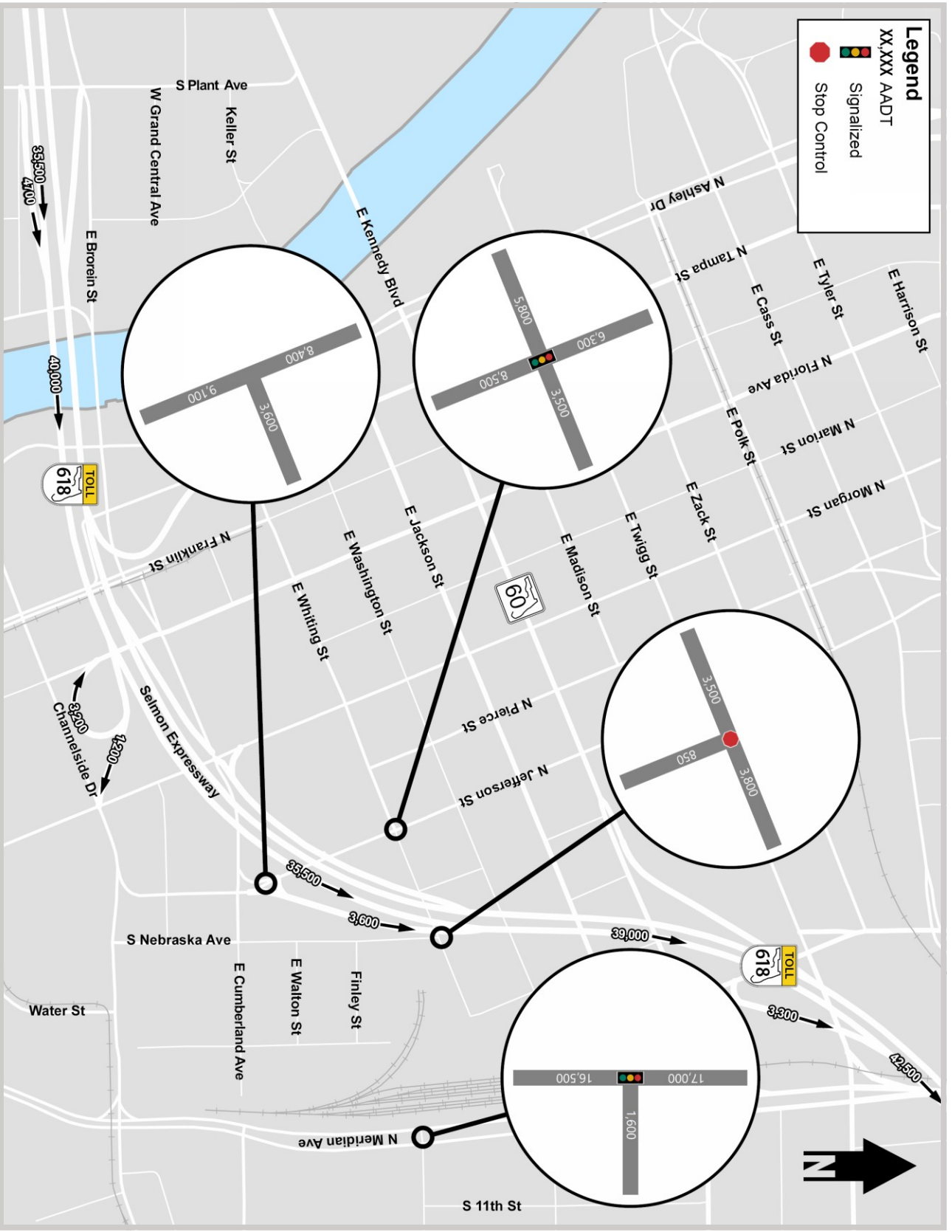


Figure 3.3b: Existing Year (2019) AADT

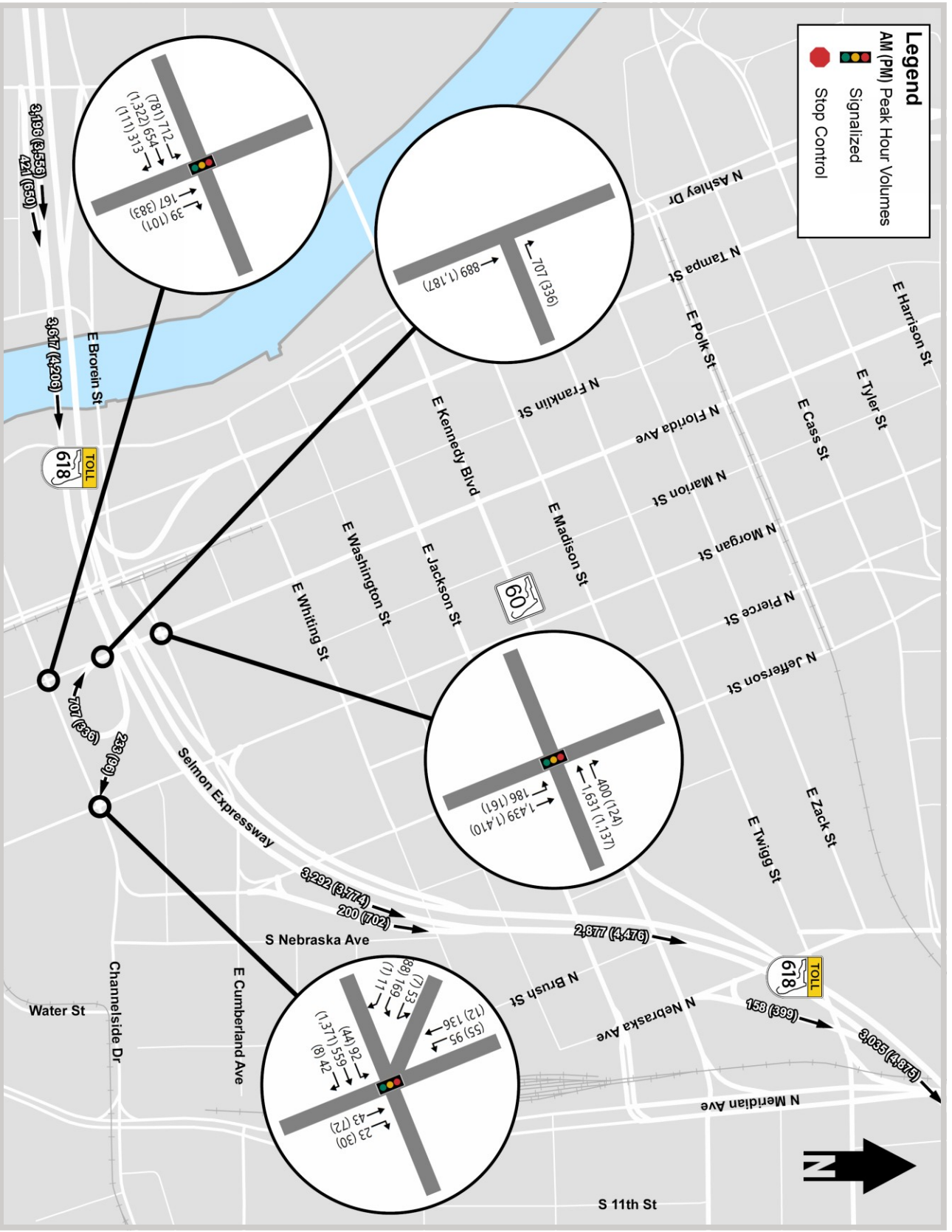


Figure 3.4a: Existing Year (2019) Peak Hour Volumes

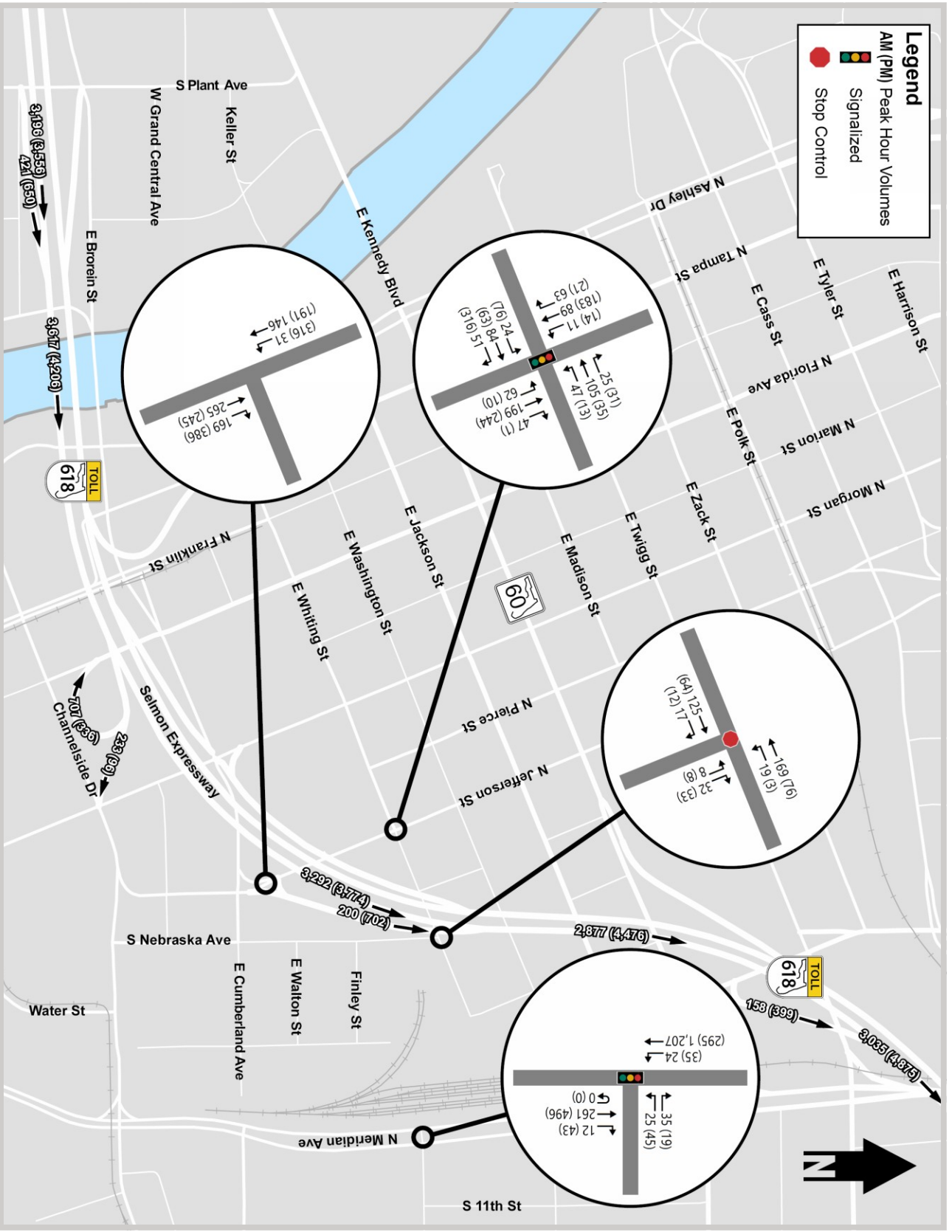


Figure 3.4b: Existing Year (2019) Peak Hour Volumes

3.4 Speed Distributions

Speed distributions were utilized for simulating posted speed limits and reduced speed areas for turning vehicles throughout the network. Rather than using a singular speed for all vehicles traversing through the network, a range of speeds was utilized in keeping with the stochastic nature at which vehicles typically traverse along a corridor. **Table 3.6** summarizes the distribution of speeds utilized for a given posted speed limit. The distribution for each speed was based on standard speed study principles from the Federal Highway Administrations (FHWA's) Manual on Uniform Traffic Control Devices (MUTCD), 2009 Edition, where a posted speed limit should fall within three mph of the 85th percentile observed speed on the roadway and a maximum speed differential of eight mph from the posted. The desired speed distribution for the Selmon Expressway was taken directly from the South Selmon PD&E models which were provided by THEA for consistency. These speed distributions have an 85th percentile speed of 65 mph rather than the posted 55 mph.

Table 3.6: Desired Speed Distributions

Desired Speed (mph)	Minimum	15th Percentile	85th Percentile	Maximum
10	2	7	13	18
15	7	12	18	23
20	12	17	23	28
25	17	22	28	33
30	22	27	33	38
35	27	32	38	43
40	32	37	43	48
45	37	42	48	53
50	42	47	53	58
55	47	52	58	63
60	52	57	63	68
65	57	62	68	73
70	62	67	73	78

The posted speed limits, shown in **Table 3.1**, were utilized throughout the Vissim network. Additionally, speeds of 15 to 25 mph were assumed for turning vehicles at each intersection, depending on the radius of the curve.

3.5 Vehicle Composition

The 2D/3D model distributions both cars and heavy vehicles (HGV) were taken directly from the North American default distributions provided with PTV VISSIM 2020. The vehicle composition and percent shares are provided in Table 3.7 below.

Table 3.7: Vehicle Composition

Vehicle Type	Vehicle	Share
Car	1: Car - Honda Accord	12.9%
Car	2: Car - Nissan Altima	6.0%
Car	3: Car - Nissan Quest	6.4%
Car	4: Car - Plymouth Voyager	5.5%
Car	5: Car - Toyota Avensis	13.5%
Car	6: SUV - Ford Explorer	10.6%
Car	7: SUV - GMC Yukon	5.0%
Car	8: SUV - Jeep Grand Cherokee	5.8%
Car	12: LtTruck - Ford F150	19.2%
Car	11: LtTruck - Chevrolet Silverado	15.1%
HGV	21: HGV - US AASHTO WB-40	10.5%
HGV	22: HGV - US AASHTO WB-50	48.0%
HGV	23: HGV - US AASHTO WB-65	4.5%
HGV	24: HGV - US AASHTO WB-67	4.5%
HGV	25: HGV - Flatbed	5.0%
HGV	26: HGV - EU 04	27.5%

3.6 Parameter Adjustments

In order to calibrate and validate a Vissim network, various factors and parameters are taken into consideration to simulate realistic operations. **Table 3.7** summarizes the parameters which have been modified in order to calibrate the IAR study area Vissim network, as defined by the FDOT Traffic Analysis Handbook, 2014. The parameters that have been adjusted are discussed in further detail in the following sections.

3.6.1 Waiting Time Before Diffusion

Diffusion time is the time a vehicle will wait at the emergency stop distance, without being able to make its desired movement, before disappearing from the network. Within the study area, vehicles were often observed not being able to make their desired movements within the default 60 seconds because of congested conditions. This was mostly due to queue spillback observed between intersections as vehicles were trying to reposition themselves within their desired turn lane. For example, there is a high volume of vehicles traveling westbound on Brorein Street that wish to turn right onto Florida Avenue and it can take some time for all vehicles to reposition themselves into the outside lane. By increasing the diffusion time, vehicles were not able to disappear from the network before receiving the green light or before congestion let up and the downstream queues were dissipated, as is consistent with the existing conditions of the study area.

Table 3.8: Model Calibration Parameters

Parameter	Default Value	Suggested Range	Adjustment
<i>Freeway Car Following (Wiedemann 99)</i>			
CCO standstill distance	4.92 ft	> 4.00 ft (basic segment)	None
		> 4.92 ft (weave/merge/diverge)	
CC1 headway time	0.9 s	0.70 to 3.00 s (basic segment)	None
		0.9 to 3.0 s (weave/merge/diverge)	
CC2 'following' variation	13.12 ft	6.56 to 22.97 ft (basic segment)	None
		13.12 to 39.37 ft (weave/merge/diverge)	
CC3 threshold for entering 'following'	-8	Use default	None
CC4 negative 'following' threshold	-0.35	Use default	None
CC5 positive 'following' threshold	0.35	Use default	None
CC6 speed dependency of oscillation	11.44	Use default	None
CC7 speed oscillation acceleration	0.82 ft/s ²	Use default	None
CC8 standstill acceleration	11.48 ft/s ²	Use default	None
CC9 acceleration at 50 mph	4.92 ft/s ²	Use default	None
<i>Arterial Car Following (Wiedemann 74)</i>			
Average standstill distance	6.56 ft	> 3.28 ft	None
Additive part of safety distance	2	1 to 3.5	None
Multiplicative part of safety distance	3	2.00 to 4.500	None
<i>Lane Change</i>			
Maximum deceleration	-13.12 ft/s ² (Own)	< -12 ft/s ²	None
	-9.84 ft/s ² (Trail)	< -8 ft/s ²	
-1 ft/s ² per distance	200 ft (Freeway)	> 100 ft	None
	100 ft (Arterial)	> 50 ft	
Accepted deceleration	-3.28 ft/s ² (Own)	< -2.5 ft/s ²	None
	-1.64 ft/s ² (Trail)	< -1.5 ft/s ²	
Waiting time before diffusion	60 s	Use default	9,999 s
Minimum headway (front/rear)	1.64 ft	1.5 to 6 ft	None
Safety distance reduction factor	0.6	0.1 to 0.9	None
Maximum deceleration for cooperative braking	-9.84 ft/s ²	-32.2 to -3 ft/s ²	None
Overtake reduced speed areas	Depends of field observations		N/A
Advanced Merging	Checked	Default	None
Emergency stop	16.4 ft	Depends of field observations	16.4 to 1,000 ft
Lane change	656.2 ft	>656.2 ft	600 to 1,500 ft
Reduction factor for changing lanes before signal	0.6	Default	None
Cooperative lane change	Unchecked	Check for freeway merge/diverge areas	Cooperative lane change was checked along Breorein Street

*Source: FDOT Traffic Analysis Handbook, 2014, Table 7-9.

3.6.2 Emergency Stop

The emergency stop distance is defined as the last possible moment a vehicle can decide to change lanes in order to make its desired movement. Within the study area, the emergency stop distance was adjusted along Channelside Drive to simulate realistic driving behaviors, to prevent erratic, last minute maneuvers, and to replicate differences in lane utilization observed in the field as vehicles were turning onto Florida Avenue or Morgan Street.

3.6.3 Lane Change

The lane change distance is the upstream distance from a maneuver at which a vehicle starts to reposition itself to make the given maneuver. Within the study area, all connectors in the network were set to a lane change distance of 1,500 feet. Then, based on the travel patterns of the network, the lane change distance was adjusted as needed to replicate realistic conditions.

Reduced lane change distances were used primarily to reduce over utilization of a given lane while traversing through a signalized intersection. An example of this was at the westbound approach of the Brorein Street and Florida Avenue intersection. Due to the high demand of vehicles wishing to turn right at the Florida Avenue intersection, an overutilization of the right-hand lane in the westbound direction was preventing enough vehicles from being able to be serviced through the given green time. By reducing the lane change distance, more realistic volumes could be observed traveling westbound through the intersection.

3.6.4 Cooperative Lane Change

Cooperative lane change was checked along Brorein Street due to the large number of vehicles trying to get into the righthand lane to make the westbound right turn onto Florida Avenue. Prior to checking cooperative lane change in this scenario, vehicles already in the righthand lane were not allowing additional vehicles to make the lane change, causing unrealistic backups and stopped vehicles along the link.

3.7 Model Verification and Error Checking

Based on the above-mentioned model development and adjustments, the model was run at 50% and 100% demand volumes to verify that no errors were found within the simulation and that operations visually represent that of real world conditions. The below list summarizes the items verified within the simulation, as defined by the FDOT Traffic Analysis Handbook, 2014. Items which are not applicable to this study are stricken through.

Software

- No runtime or syntax errors occurred in the Protocol Window.
- No errors or runtime warnings occurred in the error file (.err).
- No errors or warnings occurred with the ring and barriers (RBCs).

Model Run Parameters

- The temporal boundary limit matches the approved methodology.
- The initialization period is at least equal to twice the time to travel the entire network.

Network

- The spatial boundary limit matches the approved study area.
- The basic network connectivity represents that of the existing conditions.

- The background image has been scaled properly.
- The link geometry matches the existing lane schematics.
- The behavior parameters within the applicable link types are appropriate.
- There are no prohibited turns, lane closures, or lane restrictions within the network.
- ~~Traffic characteristics on special use lanes and general use lanes are appropriate.~~

Demand and Routing

- Coded volumes and vehicle mix/traffic composition are appropriate.
- ~~High-occupancy vehicle (HOV) types and occupancy distributions are appropriate.~~
- Routing decisions and connector look back distances are appropriate.
- Origin-destination (OD) matrices and their placement are appropriate.

Control

- Intersection control type and data are properly coded. Vehicles are reacting properly to the controls.
- ~~Ramp meter control types and data are properly coded.~~
- Conflict area settings are appropriate.

Traffic Operations and Management Data

- ~~Bus operations and dwell times are properly coded.~~
- ~~Parking operations are appropriate.~~
- ~~Pedestrian operations and delays are appropriate.~~

Driver and Vehicle Characteristics

- Driver behavior is appropriate under saturated conditions.
- No lane changes occur in unrealistic locations and vehicles make necessary lane changes upstream in appropriate locations.
- The average travel speed reasonably matches field conditions.

Animation

- No unrealistic operational characteristics, such as congestion and erratic vehicle behaviors were observed at low demand levels.
- The model appears reasonable against data coding, route assignment, and lane utilization.
- The model animation appears true to field characteristics.
- All turn bays are fully utilized and are not blocked by through vehicles.
- There are no vehicles turning at inappropriate times or locations.

4.0 Model Calibration and Validation

Microsimulation of the IAR study area, under the existing conditions, was conducted utilizing Vissim 2020. The existing year (2019) Vissim networks for the AM and PM peak hours were calibrated in accordance with the FDOT Traffic Analysis Handbook, 2014.

4.1 Number of Simulation Runs

The number of simulation runs needed to achieve a confidence level of five percent about the mean total volume processed through the network was determined for the AM and PM peak hours, utilizing the following equation:

$$n = \left(\frac{s^*t \alpha/2}{\mu*\epsilon} \right)^2$$

Where:

n = Required number of simulation runs.

s = Standard deviation of the system performance measure (i.e. total traffic volume) based on previously conducted simulation runs.

tα/2 = Average Annual Average Daily Traffic (AADT) per year on the roadway segment or entering the intersection during the analysis period.

μ = Mean of the system performance measure (i.e. total traffic volume).

ε = Tolerable error, specified as a fraction of μ. A 10% error is desired.

The calculations for the AM and PM peak hours are shown below:

$$n = \left(\frac{25.2*2.26}{11834.9*0.1} \right)^2 = 0.0023$$

AM Peak Hour:

s = 25.2

tα/2 = 2.26

μ = 11,834.9

ε = 0.10

$$n = \left(\frac{27.6*2.26}{12695.9*0.1} \right)^2 = 0.0024$$

PM Peak Hour:

s = 27.6

tα/2 = 2.26

μ = 12,695.9

ε = 0.10

Ten initial simulation runs were used to determine the number of simulation runs needed for the IAR existing

network. Using the sum of the total volume processed through each intersection and the above equation, the number of simulation runs needed was determined to be less than one for both the AM and PM peak hours. Therefore, the results of the initial 10 simulation runs was deemed adequate for the analysis of the IAR study area.

4.2 Model Calibration Targets

Calibration of the existing network was conducted based on guidelines set forth for traffic volumes and speed in the FDOT Traffic Analysis Handbook, 2014.

4.2.1 Traffic Volumes

The following traffic volume targets were utilized to calibrate the existing year (2019) Vissim networks for the AM and PM peak hours:

- Simulated and measured link volumes for more than 85% of links are to be:
 - Within 100 vehicles per hour (vph) for volumes less than 700 vph.
 - Within 15% for volumes between 700 vph and 2,700 vph.
 - Within 400 vph for volumes greater than 2,700 vph.
- Simulated and measured link volumes for more than 85% of links are to have a GEH statistic value of five or lower. GEH is an empirical formula expressed as $\sqrt{2 \times (M-C)^2 / (M+C)}$, where M is the simulation model volumes and C is the field counted volume.
- The sum of the link volumes within the calibration area are to be within 5% of the measured link volumes.
- The sum of the link volumes are to have a GEH statistic value of five or lower.

Based on these traffic volumes targets, the results of the existing year (2019) calibration effort for the AM and PM peak hours are shown in **Table 4.1** and **Table 4.2**, respectively. There is 100.0% of the individual volumes that validate and meet the GEH target during both the AM and PM peak hours. The total volume of the simulated network contains a variance of 0.6% during the AM peak hour and 0.2% during the PM peak hour, as compared to the targets. Additionally, the GEH for the total volume of the simulated network is 0.9 during the AM peak hour and 0.4 during the PM peak hour. Therefore, both of the AM and PM peak hour existing year (2019) Vissim networks yield acceptable simulation results for this calibration effort.

Table 4.1: Traffic Volumes Calibration – AM Peak Hour

Approach	Movement	Target	Vissim Simulation	Volume Validated?	GEH
<i>Eastbound Selmon Expressway at Plant Avenue On-Ramp</i>					
	Mainline	3,196	3,195	Yes	0.0
	On-Ramp	421	421	Yes	0.0
<i>Eastbound Selmon Expressway at Downtown East/West Off-Ramp</i>					
	Mainline	3,617	3,599	Yes	0.3
	Off-Ramp	940	934	Yes	0.2
<i>Eastbound Selmon Expressway at Jefferson Street On-Ramp</i>					
	Mainline	2,677	2,661	Yes	0.3
	On-Ramp	200	200	Yes	0.0
<i>Eastbound Selmon Expressway at Nebraska Avenue On-Ramp</i>					
	Mainline	2,877	2,850	Yes	0.5
	On-Ramp	158	158	Yes	0.0
<i>Channelside Drive and Florida Avenue</i>					
Eastbound	Left Turn	712	714	Yes	0.1
	Through	654	655	Yes	0.0
	Right Turn	313	314	Yes	0.1
Northbound	Through	167	162	Yes	0.4
	Right Turn	39	39	Yes	0.0
<i>Channelside Drive and Morgan Street</i>					
Eastbound	Left Turn	92	91	Yes	0.1
	Through	559	559	Yes	0.0
	Right Turn	42	42	Yes	0.0
Off-Ramp	Left Turn	53	52	Yes	0.1
	Through	169	168	Yes	0.1
	Right Turn	11	11	Yes	0.0
Northbound	Through	43	43	Yes	0.0
	Right Turn	23	23	Yes	0.0
Southbound	Left Turn	95	92	Yes	0.3
	Through	136	135	Yes	0.1
<i>Selmon Expressway Off-Ramp to Florida Avenue</i>					
	Off-Ramp	707	702	Yes	0.2
<i>Brorein Street and Florida Avenue</i>					
Westbound	Through	1,631	1,592	Yes	1.0
	Right Turn	400	393	Yes	0.4
Northbound	Left Turn	186	187	Yes	0.1
	Through	1,439	1,434	Yes	0.1
<i>Selmon Expressway On-Ramp from Jefferson Street</i>					
Northbound	Through	265	265	Yes	0.0
	Right Turn	169	169	Yes	0.0
Southbound	Left Turn	31	32	Yes	0.2
	Through	146	146	Yes	0.0
<i>Whiting Street and Jefferson Street</i>					

Table 4.1 (continued): Traffic Volumes Calibration – AM Peak Hour

Approach	Movement	Target	Vissim Simulation	Volume Validated?	GEH
Eastbound	Left Turn	24	25	Yes	0.2
	Through	84	84	Yes	0.0
	Right Turn	51	51	Yes	0.0
Westbound	Left Turn	47	48	Yes	0.1
	Through	105	106	Yes	0.1
	Right Turn	25	24	Yes	0.2
Northbound	Left Turn	62	61	Yes	0.1
	Through	199	197	Yes	0.1
	Right Turn	47	47	Yes	0.0
Southbound	Left Turn	11	11	Yes	0.0
	Through	89	88	Yes	0.1
	Right Turn	63	63	Yes	0.0
<i>Whiting Street and Nebraska Avenue</i>					
Eastbound	Through	125	124	Yes	0.1
	Right Turn	17	17	Yes	0.0
Westbound	Left Turn	20	20	Yes	0.0
	Through	169	168	Yes	0.1
Northbound	Left Turn	8	8	Yes	0.0
	Right Turn	32	32	Yes	0.0
<i>Whiting Street and Meridian Avenue</i>					
Westbound	Left Turn	25	25	Yes	0.0
	Right Turn	35	36	Yes	0.2
Southbound	Through	261	259	Yes	0.1
	Right Turn	12	12	Yes	0.0
	Left Turn	24	24	Yes	0.0
	Through	1,207	1,204	Yes	0.1

Table 4.2: Traffic Volumes Calibration – PM Peak Hour

Approach	Movement	Target	Vissim Simulation	Volume Validated?	GEH
<i>Eastbound Selmon Expressway at Plant Avenue On-Ramp</i>					
	Mainline	3,556	3,555	Yes	0
	On-Ramp	650	650	Yes	0
<i>Eastbound Selmon Expressway at Downtown East/West Off-Ramp</i>					
	Mainline	4,206	4,193	Yes	0
	Off-Ramp	432	431	Yes	0
<i>Eastbound Selmon Expressway at Jefferson Street On-Ramp</i>					
	Mainline	3,774	3,755	Yes	0
	On-Ramp	702	700	Yes	0
<i>Eastbound Selmon Expressway at Nebraska Avenue On-Ramp</i>					
	Mainline	4,476	4,449	Yes	0
	On-Ramp	399	399	Yes	0

Table 4.2 (continued): Traffic Volumes Calibration – PM Peak Hour

Approach	Movement	Target	Vissim Simulation	Volume Validated?	GEH
<i>Channelside Drive and Florida Avenue</i>					
Eastbound	Left Turn	781	785	Yes	0
	Through	1,322	1,331	Yes	0
	Right Turn	111	111	Yes	0
Northbound	Through	383	373	Yes	1
	Right Turn	101	102	Yes	0
<i>Channelside Drive and Morgan Street</i>					
Eastbound	Left Turn	44	44	Yes	0
	Through	1,371	1,383	Yes	0
	Right Turn	8	8	Yes	0
Off-Ramp	Left Turn	7	8	Yes	0
	Through	88	91	Yes	0
	Right Turn	1	1	Yes	0
Northbound	Through	72	70	Yes	0
	Right Turn	30	29	Yes	0
Southbound	Left Turn	55	54	Yes	0
	Through	12	13	Yes	0
<i>Selmon Expressway Off-Ramp to Florida Avenue</i>					
Off-Ramp		336	337	Yes	0
<i>Brorein Street and Florida Avenue</i>					
Westbound	Through	1,137	1,113	Yes	1
	Right Turn	124	120	Yes	0
Northbound	Left Turn	161	164	Yes	0
	Through	1,410	1,416	Yes	0
<i>Selmon Expressway On-Ramp from Jefferson Street</i>					
Northbound	Through	245	245	Yes	0
	Right Turn	386	385	Yes	0
Southbound	Left Turn	316	315	Yes	0
	Through	191	192	Yes	0
<i>Whiting Street and Jefferson Street</i>					
Eastbound	Left Turn	76	76	Yes	0
	Through	63	65	Yes	0
	Right Turn	316	317	Yes	0
Westbound	Left Turn	13	13	Yes	0
	Through	35	35	Yes	0
	Right Turn	31	31	Yes	0
Northbound	Left Turn	10	11	Yes	0
	Through	244	243	Yes	0
	Right Turn	1	0	Yes	1
Southbound	Left Turn	14	14	Yes	0
	Through	183	182	Yes	0
	Right Turn	21	21	Yes	0

Table 4.2 (continued): Traffic Volumes Calibration – PM Peak Hour

Approach	Movement	Target	Vissim Simulation	Volume Validated?	GEH
<i>Whiting Street and Nebraska Avenue</i>					
Eastbound	Through	64	64	Yes	0
	Right Turn	12	12	Yes	0
Westbound	Left Turn	3	4	Yes	1
	Through	76	77	Yes	0
Northbound	Left Turn	8	9	Yes	0
	Right Turn	33	33	Yes	0
<i>Whiting Street and Meridian Avenue</i>					
Westbound	Left Turn	45	45	Yes	0
	Right Turn	19	19	Yes	0
Northbound	Through	496	494	Yes	0
	Right Turn	43	44	Yes	0
Southbound	Left Turn	35	35	Yes	0
	Through	295	296	Yes	0

4.2.2 Speed

The following speed targets were utilized to calibrate the existing year (2019) Vissim networks for the AM and PM peak hours:

- Modeled average link speeds are within ± 10 mph of field-measured speeds on at least 85% of all network links.

Based on these speed targets, the results of the existing year (2019) calibration effort for the AM and PM peak hours are shown in **Table 4.3**. All of the simulated speeds meet the individual calibration targets within the study area.

Table 4.3: Speed Calibration

Segment	Direction	Posted Speed (mph)	Distance (ft)	Target (mph)	VISSIM Simulation (mph)	Speed Validated?
<i>AM Peak Hour</i>						
Florida Avenue from Channelside Drive to Brore-in Street	Northbound	30	540	5	10	Yes
Jefferson Street from the Selmon Expressway On-Ramp to Whiting Street	Northbound	30	590	16	20	Yes
Jefferson Street from Whiting Street to the Selmon Expressway On-Ramp	Southbound	30	590	31	29	Yes
Whiting Street from Jefferson Street to Nebraska Avenue	Eastbound	*	500	21	28	Yes

*There is no speed limit posted along this corridor. For analysis purposes, a speed limit of 25 miles per hour (mph) was assumed.

Table 4.3 (continued): Speed Calibration

Segment	Direction	Posted Speed (mph)	Distance (ft)	Target (mph)	VISSIM Simulation (mph)	Speed Validated?
Whiting Street from Nebraska Avenue to Jefferson Street	Westbound	*	500	9	9	Yes
Plant Ave On-Ramp to Florida Ave/Channelside Dr Off-Ramp	Eastbound	55	1350	60	49	No
Florida Ave/Channelside Dr Off-Ramp to Jefferson St On-Ramp	Eastbound	55	2175	60	50	Yes
Jefferson St On-Ramp to Nebraska Ave On-Ramp	Eastbound	55	1790	63	50	No
<i>PM Peak Hour</i>						
Florida Avenue from Channelside Drive to Brorein Street	Northbound	30	540	6	10	Yes
Jefferson Street from the Selmon Expressway On-Ramp to Whiting Street	Northbound	30	590	21	22	Yes
Jefferson Street from Whiting Street to the Selmon Expressway On-Ramp	Southbound	30	590	34	39	Yes
Whiting Street from Jefferson Street to Nebraska Avenue	Eastbound	*	500	19	12	Yes
Whiting Street from Nebraska Avenue to Jefferson Street	Westbound	*	500	10	3	Yes
Plant Ave On-Ramp to Florida Ave/Channelside Dr Off-Ramp	Eastbound	55	1350	48	44	Yes
Florida Ave/Channelside Dr Off-Ramp to Jefferson St On-Ramp	Eastbound	55	2175	48	47	Yes
Jefferson St On-Ramp to Nebraska Ave On-Ramp	Eastbound	55	1790	55	47	Yes

*There is no speed limit posted along this corridor. For analysis purposes, a speed limit of 25 miles per hour (mph) was assumed.

Regular and reliable speed data could not be obtained along Channelside Drive due to construction within the area during data collection. Additionally, regular and reliable speed data could not be obtained along the Selmon Expressway mainline due to being added to the study area after the start of the COVID-19 pandemic. Therefore, available speed data from the Whiting Street PD&E Study was utilized for target speeds where applicable.

5.0 Existing Year (2019) Operational Analysis

Based on the calibrated Vissim networks for the Eastbound Selmon Expressway at Downtown East/West IAR, existing year (2019) operational analysis was conducted for the study area, consisting of freeway segment, intersection, and queue analysis, as well as identifying existing congestion patterns within the area. HCM methodologies were utilized to estimate the level of service (LOS) for the intersection analysis. The following sections document the results of the existing year (2019) operational analysis for the Eastbound Selmon Expressway at Downtown East/West IAR.

5.1 Freeway Segment Analysis

Freeway segment analysis was conducted along each segment of eastbound Selmon Expressway for the existing year (2019). The results for the existing year (2019) freeway segment analysis for the AM and PM peak hours are shown in **Table 5.1**. The results of the analysis indicate that the segments from the Plant Avenue On-Ramp to the Downtown East/West Off-Ramp, and from the Downtown East/West off-ramp to the Jefferson Street on-ramp currently do not meet the LOS target D, as defined for urban areas in the FDOT 2020 Quality/Level of Service Handbook.

Table 5.1: Existing Year (2019) Freeway Segment Analysis

Segment	Number of Lanes	AM Peak Hour				PM Peak Hour			
		Simulated Volume (veh/hr)	Simulated Speed (mph)	Density (pc/mi/ln)	LOS	Simulated Volume (veh/hr)	Simulated Speed (mph)	Density (pc/mi/ln)	LOS
Plant Avenue On-Ramp to Downtown East/West Off-Ramp	3	3,599	48	28	D	4,193	40	44	E
Downtown East/West Off-Ramp to Jefferson Street On-Ramp	2	2,661	50	27	D	3,755	46	41	E
Jefferson Street On-Ramp to Nebraska Avenue On-Ramp	3	2,850	50	25	C	4,449	47	36	D

5.2 Intersection Analysis

Intersection operational analysis was conducted at each of the signalized and stop-controlled intersections within the IAR study area for the existing year (2019). The results of the existing year (2019) intersection analysis for the AM and PM peak hours are shown in **Table 5.2**. The results of the analysis indicate that each of the study intersections meet the LOS target D, as defined for urban areas in the FDOT 2020 Quality/Level of Service Handbook, in the AM and PM peak hours. Only the Selmon Expressway off-ramp at the Channelside Drive and Morgan Street intersection does not currently meet the LOS target D, likely due to the reduced amount of green time given to the ramp as compared to the other approaches at the intersection.

Table 5.2: Existing Year (2019) Intersection Analysis

Approach	AM Peak Hour		PM Peak Hour	
	Delay (s/veh)	LOS	Delay (s/veh)	LOS
<i>Channelside Drive and Florida Avenue</i>				
Eastbound	12.9	B	14.7	B
Northbound	33.7	C	35.6	D
Overall	15.1	B	18.4	B
<i>Channelside Drive and Morgan Street</i>				
Eastbound	13.8	B	10.1	B
Off-Ramp	57.3	E	61.9	E
Northbound	28.8	C	32.1	C
Southbound	44.6	D	47.2	D
Overall	28.6	C	15.9	B
<i>Brorein Street and Florida Avenue</i>				
Westbound	35.5	D	30.1	C
Northbound	18.3	B	21.7	C
Overall	27.8	C	25.4	C
<i>Whiting Street and Jefferson Street</i>				
Eastbound	17.9	B	15.0	B
Westbound	25.1	C	20.8	C
Northbound	7.2	A	5.4	A
Southbound	5.2	A	5.8	A
Overall	12.9	B	11.0	B
<i>Whiting Street and Nebraska Avenue*</i>				
Northbound	6.5	A	6.0	A
Overall	N/A			
<i>Whiting Street and Meridian Avenue</i>				
Westbound	34.6	C	49.8	D
Northbound	2.4	A	3.1	A
Southbound	2.4	A	2.4	A
Overall	3.6	A	6.0	A

*Only stop-controlled approaches have been summarized.

5.3 Queue Analysis

Queue analysis was conducted at each of the signalized and stop-controlled intersections within the IAR study area, as well as along the Selmon Expressway off-ramps, for the existing year (2019). The results of the existing year (2019) intersection analysis for the AM and PM peak hours are shown in **Table 5.3**. The results of the analysis indicate that the eastbound approach of the Channelside Drive and Florida Avenue intersection has an observed maximum queue length that spillbacks into the upstream intersection. However, the upstream intersection traffic control, at Channelside Drive and Franklin Street, has not been taken into account during the simulation, as it falls outside of the study area. Therefore, it can be expected that the queue would otherwise be stopped by the upstream traffic signal. Similarly, the westbound approach of

Brorein Street at Florida Avenue has a maximum queue length that spills back into the upstream intersection, but the upstream intersections are not modeled. The maximum queue length of the Selmon Expressway Off-Ramp to Morgan Street also spills back, however the average queue length is within the storage length.

Table 5.3: Existing Year (2019) Queue Analysis

Approach	Movement	Storage Length/ Distance to Upstream Intersection (ft)	AM Peak Hour		PM Peak Hour	
			Average Queue Length (ft)	Maximum Queue Length (ft)	Average Queue Length (ft)	Maximum Queue Length (ft)
<i>Channelside Drive and Florida Avenue</i>						
Eastbound	Left Turn	200	114	661	153	724
	Through		114	661	153	724
	Right Turn		89	605	124	668
Northbound	Through	450	35	146	74	277
	Right Turn		2	82	8	107
<i>Channelside Drive and Morgan Street</i>						
Eastbound	Left Turn	450	30	169	39	258
	Through		30	169	39	258
	Right Turn		1	89	0	35
Off-Ramp	Left Turn	350	101	351	41	182
	Through		101	351	41	182
	Right Turn		101	351	41	182
Northbound	Through	550	13	93	22	135
	Right Turn		1	80	3	103
Southbound	Left Turn	450	49	191	19	109
	Through		49	191	19	109
<i>Selmon Expressway Off-Ramp to Florida Avenue</i>						
	Off-Ramp	500	7	252	1	55
<i>Brorein Street and Florida Avenue</i>						
Westbound	Through	500	210	564	90	321
	Right Turn		231	590	107	347
Northbound	Left Turn	450	98	388	123	391
	Through		98	388	123	391
<i>Whiting Street and Jefferson Street</i>						
Eastbound	Left Turn	500	18	130	37	190
	Through		18	130	37	190
	Right Turn		18	130	37	190
Westbound	Left Turn	450	29	190	10	104
	Through		29	190	10	104
	Right Turn		41	212	17	127

**Only stop-controlled approaches have been summarized.*

Table 5.3 (continued): Existing Year (2019) Queue Analysis

Approach	Movement	Storage Length/ Distance to Upstream Intersection (ft)	AM Peak Hour		PM Peak Hour	
			Average Queue Length (ft)	Maximum Queue Length (ft)	Average Queue Length (ft)	Maximum Queue Length (ft)
Northbound	Left Turn	600	8	118	6	104
	Through		8	118	6	104
	Right Turn		15	150	11	137
Southbound	Left Turn	500	4	88	6	121
	Through		4	88	6	121
	Right Turn		1	38	1	71
<i>Whiting Street and Nebraska Avenue*</i>						
Northbound	Left Turn	850	2	66	1	55
	Right Turn		2	70	1	59
<i>Whiting Street and Meridian Avenue</i>						
Westbound	Left Turn	200	14	123	22	118
	Right Turn		18	130	29	136
Northbound	Through	650	3	65	5	102
	Right Turn		0	5	0	32
Southbound	Left Turn	500	0	18	1	40
	Through		7	137	2	59

**Only stop-controlled approaches have been summarized.*

5.4 Existing Congestion Patterns

Based on the calibrated Vissim networks, **Figure 5.1** and **Figure 5.2** illustrate the existing congestion patterns observed within the IAR study area for the AM and PM peak hours, respectively. As can be expected, operational speeds are reduced at the approach to each signalized and stop-controlled intersection. During the AM peak hour, slightly longer queue lengths can be observed for movements associated with inbound traffic into the Downtown Tampa and Hyde Park areas. Conversely, slightly longer queue lengths can be observed for movements associated with outbound traffic from the Downtown Tampa and Hyde Park areas.

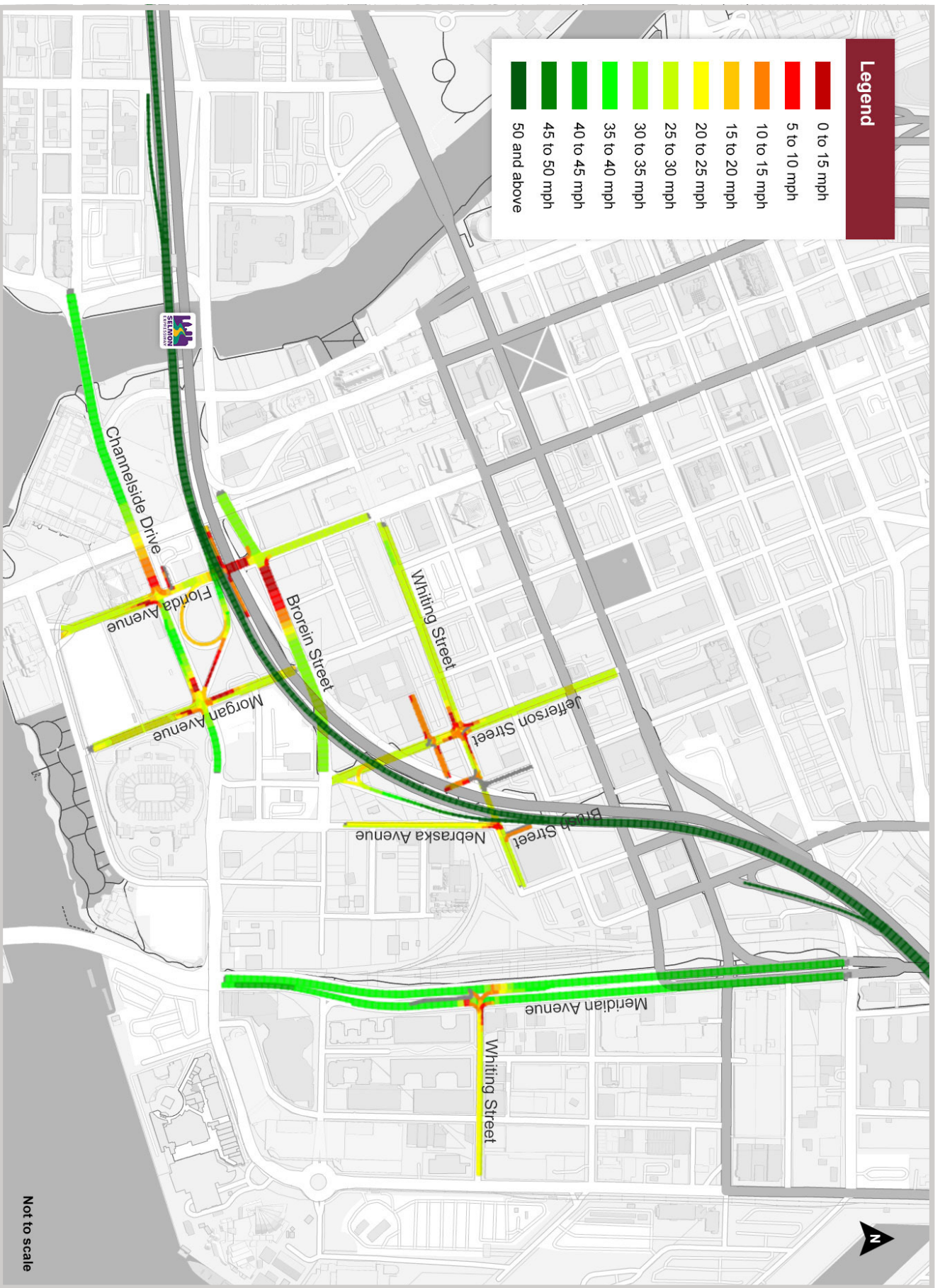


Figure 5.1: Existing Congestion – AM Peak Hour

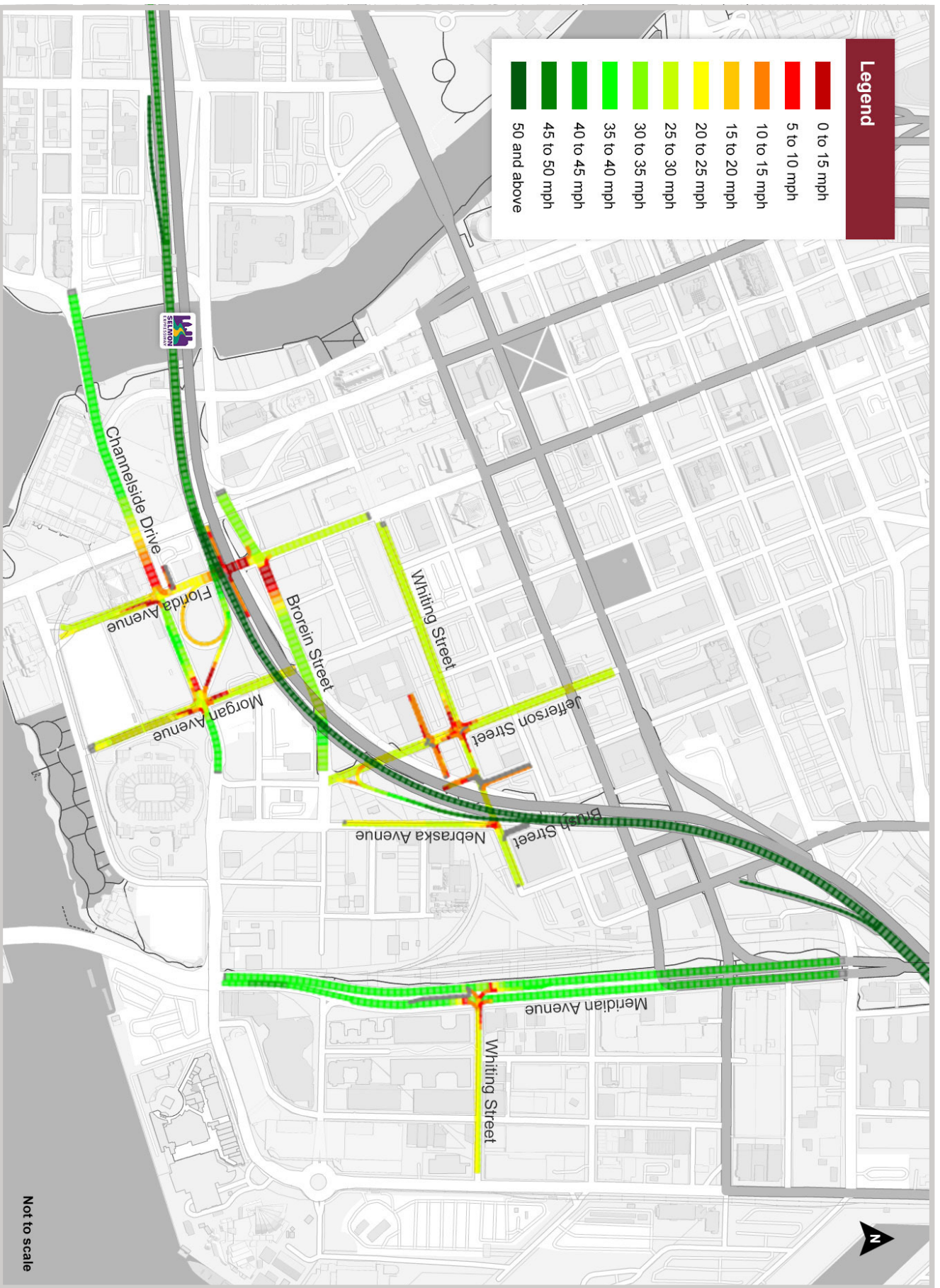


Figure 5.2: Existing Congestion – PM Peak Hour

6.0 Summary and Conclusion

Existing year (2019) operational analysis was conducted for the IAR study area using Vissim 2020. Calibration and validation of the AM and PM peak periods was conducted in accordance with the FDOT Traffic Analysis Handbook, 2014 and the Federal Highway Administration (FHWA) Traffic Analysis Toolbox Volume III: Guidelines for Applying Traffic Microsimulation Modeling Software.

The existing year (2019) Vissim networks were calibrated against traffic volume and speed targets. All of the individual volumes met the link volume targets and the GEH targets. The simulated traffic volumes varied from the total system targets by a maximum of 0.6%. Additionally, all of the segments validated for speed, where speed data was made available for the study.

Operational analysis was conducted for freeway speed and density, intersection delay, intersection approach queue lengths, and overall congestion throughout the IAR study area. The results of the freeway segment analysis indicate that all of the segments meet the LOS target D, except for the segments from the Plant Avenue on-ramp to the Downtown East/West off-ramp, and from the Downtown East/West off-ramp to the Jefferson Street on-ramp. Additionally, each of the study intersections meet the LOS target D in the existing year (2019). During the AM peak hour, slightly longer queue lengths were observed for movements associated with inbound traffic into the Downtown Tampa and Hyde Park areas. Conversely, slightly longer queue lengths were observed for movements associated with outbound traffic from the Downtown Tampa and Hyde Park areas during the PM peak hour.

Appendix G

Historical Crash Data



Contributing Cause Descriptions

Lighting Categorization

Lighting	Lighting Category
Dark - Lighted	Dark With Lights
Dark - Not Lighted	Dark - No Lights
Dark - Unknown	Other / Unknown
Day	Daylight
Other	Other / Unknown
Unknown	Other / Unknown

Road Surface Condition Categorization

Road Surface Condition	Road Surface Condition Category
Dry	Dry
Other	Other / Unknown
Slick (Ice, Frost, Oil)	Wet / Slick / Unpaved
Standing Water	Standing Water
Unknown	Other / Unknown
Unpaved (Mud, Dirt, Gravel, Sand)	Wet / Slick / Unpaved
Wet	Wet / Slick / Unpaved

Cost Per Crash Data

FDOT Design Manual Table 122.6.2 FDOT KABCO Crash Costs

Crash Severity	Comprehensive Crash Cost
Fatal (K)	\$ 10,890,000
Severe Injury (A)	\$ 888,030
Moderate Injury (B)	\$ 180,180
Minor Injury (C)	\$ 103,950
Property Damage Only (O)	\$ 7,700

FDOT Average Crash Costs by Facility Type

Statewide Average Cost Per Crash \$ 159,093

Facility Type	Urban Divided	Suburban Divided	Rural Divided	Urban Undivided	Suburban Undivided	Rural Undivided
2-3 Lanes	\$ 107,732	\$ 201,527	\$ 355,183	\$ 124,618	\$ 267,397	\$ 523,727
4-5 Lanes	\$ 123,406	\$ 225,315	\$ 473,637	\$ 112,896	\$ 190,276	N/A
6+ Lanes	\$ 123,598	\$ 166,258	\$ 451,492	\$ 41,650	N/A	N/A
Interstate	\$ 153,130	N/A	\$ 327,385	N/A	N/A	N/A
Turnpike	\$ 132,199	N/A	\$ 274,012	N/A	N/A	N/A

SOURCE: Florida Department of Transportation State Safety Office's Crash Analysis Reporting (CAR) System, analysis years 2014 through 2018.

Published by FDOT State Safety Office on 11/5/2020.

Crash Data

HSMV

Report

Number	Source	Crash Date	Year	Crash Street Location	Cross Street	Assigned Location	Crash Severity	Crash Type	Weather Condition	Lighting Condition	Road Surface Condition	Vehicle 1 Direction
87527932	CDMS	07/29/2018	2018	CHANNELSIDE DR	FLORIDA AVE S	Channelside Dr at Florida Ave	Minor Injury	Angle	Rain	Day	Wet	EB
86841686	CDMS	06/22/2017	2017	CHANNELSIDE DR	FLORIDA AVE S	Channelside Dr at Florida Ave	Property Damage Only	Angle	Clear	Day	Dry	EB
86840890	CDMS	05/25/2017	2017	FLORIDA AVE S	CHANNELSIDE DR	Channelside Dr at Florida Ave	Property Damage Only	Sideswipe	Clear	Day	Dry	EB
86838911	CDMS	03/18/2017	2017	CHANNELSIDE DR N	FLORIDA AVE S	Channelside Dr at Florida Ave	Property Damage Only	Angle	Clear	Day	Dry	WB
86157126	CDMS	11/10/2016	2016	FLORIDA AVE N	CHANNELSIDE DR	Channelside Dr at Florida Ave	Property Damage Only	Angle	Clear	Dark - Lighted	Dry	EB
86156135	CDMS	10/05/2016	2016	FLORIDA AVE S	CHANNELSIDE DR	Channelside Dr at Florida Ave	Moderate Injury	Sideswipe	Clear	Day	Dry	EB
86152671	CDMS	05/23/2016	2016	FLORIDA AVE S	CHANNELSIDE DR	Channelside Dr at Florida Ave	Minor Injury	Rear End	Clear	Day	Dry	EB
86075610	CDMS	12/04/2015	2015	CHANNELSIDE DR	FLORIDA AVE S	Channelside Dr at Florida Ave	Property Damage Only	Angle	Clear	Day	Dry	EB
85919455	CDMS	05/17/2015	2015	CHANNELSIDE DR	FLORIDA AVE N	Channelside Dr at Florida Ave	Property Damage Only	Sideswipe	Clear	Lighted	Wet	WB
86838676	CDMS	03/10/2017	2017	FLORIDA AVE S	CHANNELSIDE DR	Channelside Dr at Florida Ave	Property Damage Only	Angle	Clear	Lighted	Dry	EB
84737600	CDMS	06/16/2014	2014	CHANNELSIDE DR	FLORIDA AVE S	Channelside Dr at Florida Ave	Property Damage Only	Hit Fixed Object	Clear	Lighted	Dry	EB
86847442	CDMS	10/27/2017	2017	FLORIDA AVE S	CHANNELSIDE DR	Channelside Dr at Florida Ave	Property Damage Only	Sideswipe	Clear	Day	Dry	EB
86154564	CDMS	08/06/2016	2016	CHANNELSIDE DR	FLORIDA AVE S	Channelside Dr at Florida Ave	Property Damage Only	Sideswipe	Clear	Day	Dry	NB
86074353	CDMS	10/17/2015	2015	FLORIDA AVE S	CHANNELSIDE DR	Channelside Dr at Florida Ave	Property Damage Only	Sideswipe	Clear	Lighted	Dry	EB
86073807	CDMS	08/21/2015	2015	CHANNELSIDE DR	FLORIDA AVE S	Channelside Dr at Florida Ave	Property Damage Only	Left Turn	Clear	Day	Dry	EB
84737043	CDMS	05/19/2014	2014	FLORIDA AVE S	CHANNELSIDE DR	Channelside Dr at Florida Ave	Property Damage Only	Sideswipe	Clear	Day	Dry	EB
84736925	CDMS	05/13/2014	2014	CHANNELSIDE DR	FLORIDA AVE N	Channelside Dr at Florida Ave	Property Damage Only	Sideswipe	Clear	Dark - Lighted	Dry	EB
86157251	CDMS	11/14/2016	2016	MORGAN ST N	CHANNELSIDE DR	Channelside Dr at Morgan St	Property Damage Only	Sideswipe	Clear	Day	Dry	EB
86154402	CDMS	07/30/2016	2016	MORGAN ST S	CHANNELSIDE DR	Channelside Dr at Morgan St	Property Damage Only	Rear End	Clear	Day	Dry	EB
86844472	CDMS	08/27/2017	2017	MORGAN ST S	CHANNELSIDE DR	Channelside Dr at Morgan St	Property Damage Only	Rear End	Rain	Day	Wet	EB
86841114	CDMS	06/02/2017	2017	MORGAN ST S	CHANNELSIDE DR	Channelside Dr at Morgan St	Moderate Injury	Angle	Clear	Day	Dry	EB
86157924	CDMS	12/09/2016	2016	MORGAN ST S	CHANNELSIDE DR	Channelside Dr at Morgan St	Moderate Injury	Angle	Clear	Day	Dry	EB
86157788	CDMS	12/04/2016	2016	CHANNELSIDE DR N	MORGAN ST	Channelside Dr at Morgan St	Property Damage Only	Angle	Clear	Day	Dry	EB
86155312	CDMS	09/03/2016	2016	MORGAN ST S	CHANNELSIDE DR	Channelside Dr at Morgan St	Property Damage Only	Sideswipe	Clear	Dark - Lighted	Dry	EB
86074540	CDMS	10/24/2015	2015	MORGAN ST S	CHANNELSIDE DR	Channelside Dr at Morgan St	Fatal	Sideswipe	Clear	Day	Dry	EB
86075870	CDMS	12/13/2015	2015	CHANNELSIDE DR	MORGAN ST N	Channelside Dr at Morgan St	Property Damage Only	Hit Non-Fixed Object	Clear	Day	Dry	EB
85204618	CDMS	12/05/2015	2015	MM 6	SR-618	EB Off Ramp to Florida Ave	Property Damage Only	Hit Fixed Object	Clear	Lighted	Dry	EB
87522765	CARS	4/16/2018	2018	MORGAN ST E	SELMON EXP EXPRESS	EB Off Ramp to Morgan St	Property Damage Only	Hit Fixed Object	Clear	Day	Dry	EB
86842820	CARS	7/25/2017	2017	MORGAN ST N	LEE ROY SELMON EXP SR 618 (SELMON EXPWY) EB RAMP	EB Off Ramp to Morgan St EB On Ramp from Nebraska Ave	Property Damage Only	Hit Fixed Object	Clear	Dark - Lighted	Dry	EB
86562498	CARS	8/31/2016	2016	22ND ST N	EXPWY) EB RAMP	EB On Ramp from Nebraska Ave	Property Damage Only	Rear End	Rain	Day	Wet	EB
87189262	CARS	4/13/2018	2018	NEBRASKA AVE	EB SR-618	EB On Ramp from Nebraska Ave	Property Damage Only	Hit Fixed Object	Clear	Dark - Lighted	Dry	EB
86158679	CDMS	01/07/2017	2017	FRANKLIN ST S	BROREIN ST E	Florida Ave at Brorrein St	Property Damage Only	Sideswipe	Rain	Day	Wet	WB
86152772	CDMS	05/26/2016	2016	FLORIDA AVE S	BROREIN ST E	Florida Ave at Brorrein St	Property Damage Only	Rear End	Clear	Day	Dry	WB
86074467	CDMS	10/22/2015	2015	FRANKLIN ST N	BROREIN ST E	Florida Ave at Brorrein St	Property Damage Only	Sideswipe	Clear	Day	Dry	WB
87530600	CDMS	09/17/2018	2018	BRORIEN ST	FLORIDA AVE S	Florida Ave at Brorrein St	Minor Injury	Angle	Clear	Day	Dry	NB
87517120	CDMS	12/29/2017	2017	BROREIN ST E	FLORIDA AVE N	Florida Ave at Brorrein St	Minor Injury	Rear End	Clear	Dark - Lighted	Dry	NB
87516503	CDMS	12/16/2017	2017	BROREIN ST E	FLORIDA AVE N	Florida Ave at Brorrein St	Property Damage Only	Angle	Clear	Day	Dry	WB
86846140	CDMS	10/01/2017	2017	BROREIN ST E	FLORIDA AVE S	Florida Ave at Brorrein St	Property Damage Only	Angle	Rain	Day	Wet	WB
86839502	CDMS	04/06/2017	2017	BROREIN ST E	FLORIDA AVE S	Florida Ave at Brorrein St	Property Damage Only	Angle	Rain	Dark - Lighted	Wet	NB
86158212	CDMS	12/19/2016	2016	BOREIN ST	FLORIDA AVE N	Florida Ave at Brorrein St	Property Damage Only	Angle	Clear	Day	Dry	WB
86150651	CDMS	03/10/2016	2016	FLORIDA AVE N	BROREIN ST E	Florida Ave at Brorrein St	Moderate Injury	Bicycle	Clear	Day	Dry	WB

Crash Data

Case ID	Agency	Date	Location	Time	Day	Weather	Crash Type	Severity	Damage	Notes		
86076372	CDMS	01/06/2016	FLORIDA AVE N	BROREIN ST E	BROREIN ST E	Florida Ave at Brorein St	Property Damage Only	Angle	Rain	Day	Wet	NB
86075160	CDMS	11/17/2015	BROREIN ST E	FLORIDA AVE N	FLORIDA AVE N	Florida Ave at Brorein St	Minor Injury	Angle	Clear	Day	Dry	WB
86074991	CDMS	11/10/2015	FLORIDA AVE S	BROREIN ST E	BROREIN ST E	Florida Ave at Brorein St	Minor Injury	Left Turn	Clear	Dusk	Dry	WB
86073279	CDMS	09/01/2015	BRORIEN ST E	FLORIDA AVE S	BRORIEN ST E	Florida Ave at Brorein St	Minor Injury	Angle	Clear	Day	Dry	WB
86073160	CDMS	08/25/2015	BOREIN ST	FLORIDA AVE	BOREIN ST	Florida Ave at Brorein St	Moderate Injury	Angle	Clear	Day	Dry	NB
86072982	CDMS	08/18/2015	BROREIN ST E	FLORIDA AVE S	BROREIN ST E	Florida Ave at Brorein St	Property Damage Only	Angle	Clear	Day	Dry	WB
85920665	CDMS	07/07/2015	FLORIDA AVE S	BROREIN ST E	BROREIN ST E	Florida Ave at Brorein St	Property Damage Only	Angle	Cloudy	Day	Dry	WB
85788955	CDMS	03/08/2015	BROREIN ST E	FLORIDA AVE S	BROREIN ST E	Florida Ave at Brorein St	Minor Injury	Angle	Clear	Day	Dry	WB
85788919	CDMS	03/06/2015	FLORIDA AVE S	BRORIEN ST E	BRORIEN ST E	Florida Ave at Brorein St	Minor Injury	Angle	Clear	Dark - Lighted	Dry	NB
85788343	CDMS	02/10/2015	SR 685	BROREIN ST E	BROREIN ST E	Florida Ave at Brorein St	Property Damage Only	Angle	Clear	Day	Dry	WB
85787883	CDMS	01/17/2015	FLORIDA AVE S	BROREIN ST E	BROREIN ST E	Florida Ave at Brorein St	Property Damage Only	Angle	Clear	Day	Dry	WB
85919613	CDMS	05/24/2015	FLORIDA AVE N	BROREIN ST E	BROREIN ST E	Florida Ave at EB Off Ramp from Selmon Expwy	Minor Injury	Sideswipe	Cloudy	Day	Dry	NB
87528116	CARS	8/2/2018	E ON-RAMP	JEFFERSON ST S	JEFFERSON ST S	Jefferson St at EB On Ramp to Selmon Expwy	Moderate Injury	Sideswipe	Clear	Day	Dry	EB
87521879	CDMS	04/01/2018	JEFFERSON ST S	BROREIN ST E	BROREIN ST E	Selmon Expwy	Minor Injury	Left Turn	Clear	Dark - Lighted	Dry	SB
84737812	CDMS	06/27/2014	WHITING ST E	JEFFERSON AVE N	JEFFERSON AVE N	Jefferson St at Whiting St	Property Damage Only	Sideswipe	Clear	Day	Dry	EB
86838789	CDMS	03/14/2017	JEFFERSON ST N	WHITING ST E	WHITING ST E	Jefferson St at Whiting St	Property Damage Only	Angle	Cloudy	Day	Dry	NB
86155983	CDMS	09/30/2016	JEFFERSON ST N	WHITING ST E	WHITING ST E	Jefferson St at Whiting St	Minor Injury	Rear End	Clear	Dark - Lighted	Dry	SB
86075570	CDMS	12/04/2015	JEFFERSON ST N	WHITING ST E	WHITING ST E	Jefferson St at Whiting St	Property Damage Only	Angle	Clear	Day	Dry	EB
85919238	CDMS	05/09/2015	JEFFERSON ST	WHITING ST	WHITING ST	Jefferson St at Whiting St	Minor Injury	Left Turn	Clear	Unknown	Dry	SB
84737713	CDMS	06/21/2014	JEFFERSON ST N	WHITING ST E	WHITING ST E	Jefferson St at Whiting St	Property Damage Only	Angle	Clear	Dusk	Dry	WB
87515654	CARS	12/1/2017	MERIDIAN AVE N	WHITING ST E	WHITING ST E	Meridian Ave at Whiting St	Minor Injury	Rear End	Clear	Dark - Lighted	Dry	NB
86847158	CARS	10/21/2017	MERIDIAN AVE N	WHITING ST E	WHITING ST E	Meridian Ave at Whiting St	Minor Injury	Left Turn	Clear	Dark - Lighted	Dry	WB
84621187	CDMS	04/09/2015	MERIDIAN AVE N	WHITING ST E	WHITING ST E	Meridian Ave at Whiting St	Minor Injury	Rear End	Clear	Lighted	Dry	NB
86840919	CDMS	05/26/2017	MERIDAN AVE S	WHITTING ST E	WHITTING ST E	Meridian Ave at Whiting St	Moderate Injury	Left Turn	Clear	Day	Dry	WB
84521295	CDMS	11/14/2014	SELMON EXPRESSWAY) SR-618 (SELMON EXPRESSWAY) EXIT RAMP	FLORIDA AVENUE	FLORIDA AVENUE	Ramp to Morgan St/Florida Ave	Property Damage Only	Overturn/Rollover	Cloudy	Day	Dry	EB
87251783	CDMS	08/29/2018	MM9 SOUTH FLORIDA AVENUE	MM9 SOUTH FLORIDA AVENUE	MM9 SOUTH FLORIDA AVENUE	Selmon Expressway at Off Ramp	Moderate Injury	Hit Fixed Object	Rain	Day	Wet	EB
83762312	CARS	1/3/2015	STATE ROAD 618	AVENUE	AVENUE	Selmon Expressway at On Ramp from Jefferson St	Property Damage Only	Hit Non-Fixed Object	Clear	Day	Dry	EB
85448753	CARS	1/3/2017	STATE ROAD 618	SOUTH PLANT AVENUE	SOUTH PLANT AVENUE	Selmon Expressway at On Ramp from Jefferson St	Property Damage Only	Hit Non-Fixed Object	Cloudy	Day	Dry	EB
87189263	CARS	4/13/2018	EB SR-619	NEBRASKA AVE	NEBRASKA AVE	Selmon Expressway at On Ramp from Nebraska Ave	Severe Injury	Angle	Clear	Dark - Lighted	Dry	NB
83739002	CARS	2/20/2014	EB ON SR 618 E/B STATE ROAD 618(CROSSTOWN EXPRESSWAY)	WEST IF KENNEDY BLVD	WEST IF KENNEDY BLVD	Selmon Expressway at On Ramp from Nebraska Ave	Property Damage Only	Angle	Clear	Day	Dry	EB
87251037	CARS	6/29/2018	NEBRASKA AVENUE EXPRESSWAY)	NEBRASKA AVENUE	NEBRASKA AVENUE	Selmon Expressway at On Ramp from Nebraska Ave	Minor Injury	Sideswipe	Cloudy	Day	Dry	EB
85240903	CARS	1/30/2016	EB SR 618	22ND ST	22ND ST	Selmon Expressway at On Ramp from Nebraska Ave	Property Damage Only	Rear End	Clear	Dark - Lighted	Dry	EB
86153528	CARS	6/26/2016	SELMON EXP EXPRESS LN	BAYSHORE BLVD	BAYSHORE BLVD	Selmon Expressway at On Ramp from Plant Ave	Property Damage Only	Hit Fixed Object	Rain	Day	Wet	EB
85295851	CARS	5/7/2016	SR-618 EB	MM 4.5	MM 4.5	Selmon Expressway at On Ramp from Plant Ave	Property Damage Only	Hit Non-Fixed Object	Clear	Day	Dry	EB
85302130	CARS	4/14/2016	S.R. 618	HILLSBOROUGH RIVER BRIDGE	HILLSBOROUGH RIVER BRIDGE	Selmon Expressway at On Ramp from Plant Ave	Property Damage Only	Rear End	Clear	Day	Dry	EB

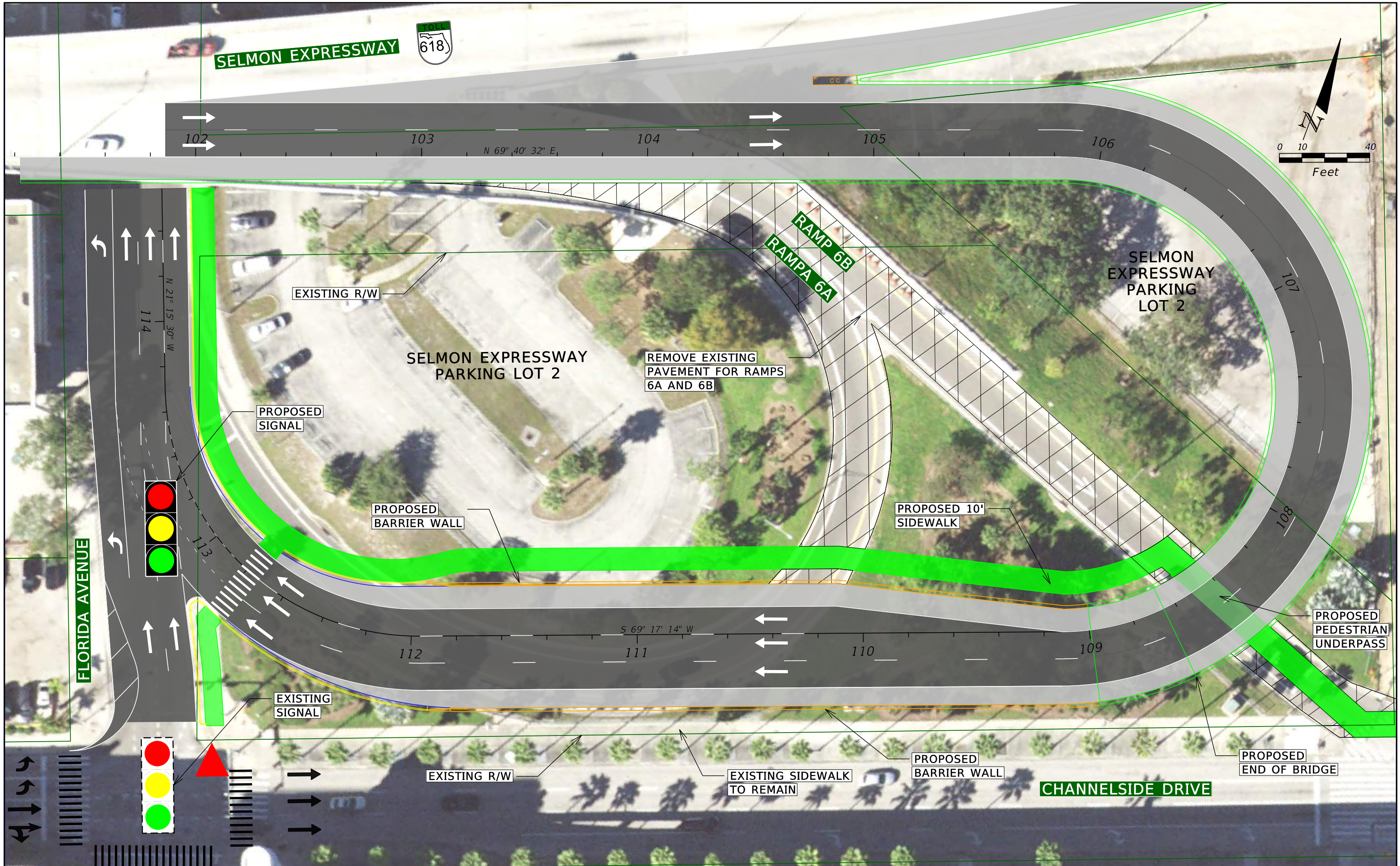
Crash Data

84536228	CARS	11/28/2014	2014	MM5	Selmon Expressway at On Ramp from Plant Ave	SR-618 SELMON EXP EXPRESS	Property Damage Only	Single Vehicle	Clear	Dusk	Dry	EB
87533912	CARS	11/18/2018	2018	WILLOW AVE	Selmon Expressway at On Ramp from Plant Ave	LN	Property Damage Only	Hit Fixed Object	Clear	Dark - Lighted	Dry	EB
85451618	CARS	1/10/2017	2017	PLANT AVENUE	Selmon Expressway at On Ramp from Plant Ave	SR-618 (SELMON EXPY) EB	Minor Injury	Rear End	Clear	Day	Dry	EB
85371900	CARS	8/29/2016	2016	PLANT AVENUE	Selmon Expressway at On Ramp from Plant Ave	STATE ROAD 618	Moderate Injury	Hit Fixed Object	Rain	Day	Wet	EB
86846114	CDMS	09/30/2017	2017	WHITING ST E	Whiting St at Nebraska Ave	NEBRASKA AVE S	Property Damage Only	Rear End	Clear	Day	Dry	SB
86838386	CDMS	03/02/2017	2017	WHITING ST E	Whiting St at Nebraska Ave	NEBRASKA AVE S	Property Damage Only	Rear End	Clear	Day	Dry	SB

Appendix H

Design Concepts





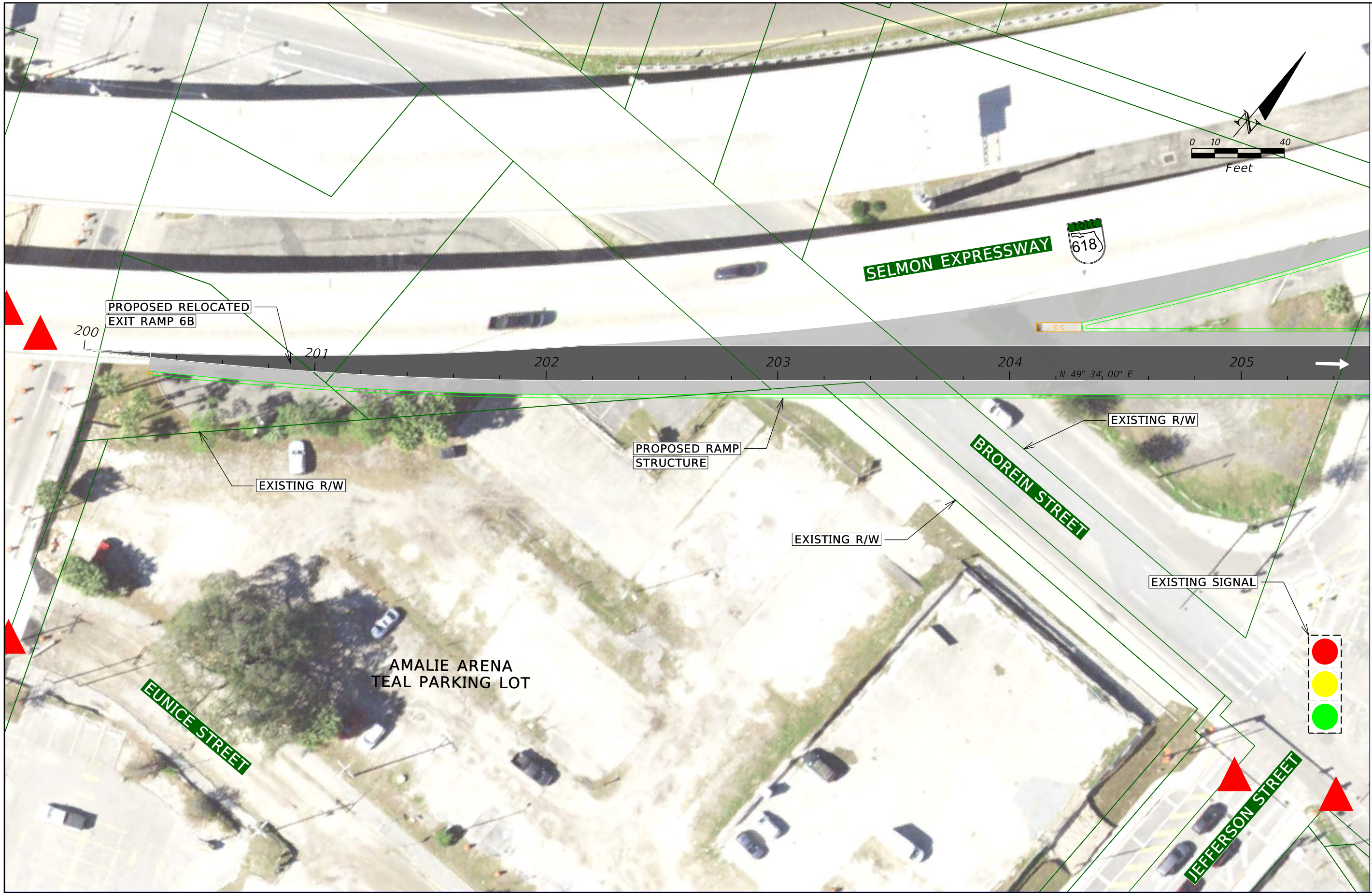
LEGEND	
	Sidewalk
	Roadway Pavement
	Grass
	Traffic Separator/ Raised Median
	Proposed Maintenance Agreement
	Proposed Roadway Limits of Construction
	Existing ROW
	Proposed ROW
	Wall Barrier
	Bridge
	Curb
	Ramp Shoulder
	Pavement Removal
	High Level Contamination
	Medium Level Contamination

H.W. LOCHNER, INC.
 4350 W. CYPRESS STREET - SUITE 800
 TAMPA, FL 33607
 CERTIFICATE OF AUTHORIZATION #894

TAMPA HILLSBOROUGH EXPRESSWAY AUTHORITY		
ROAD NO.	COUNTY	FINANCIAL PROJCT ID
SR 618	HILLSBOROUGH	HI-0141

*PREFERRED ALTERNATIVE
 CONCEPT PLAN SHEET*

SHEET NO.
 1



MATCHLINE (1)

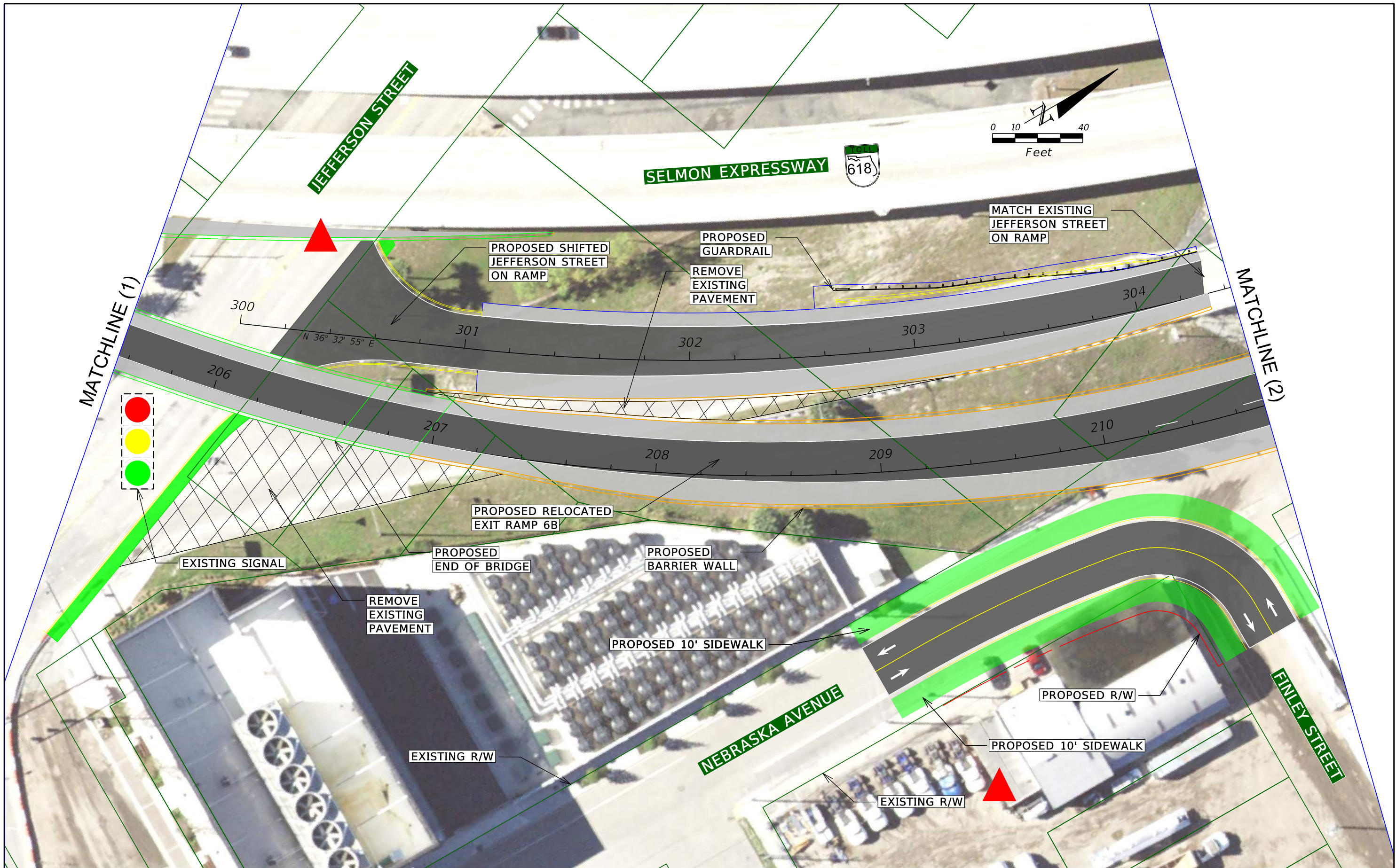
LEGEND	Sidewalk	Proposed Maintenance Agreement	Wall Barrier	Pavement Removal
	Roadway Pavement	Proposed Roadway Limits of Construction	Bridge	High Level Contamination
	Grass	Existing ROW	Curb	Medium Level Contamination
	Traffic Separator/Raised Median	Proposed ROW	Ramp Shoulder	

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SHEET NO.
 2



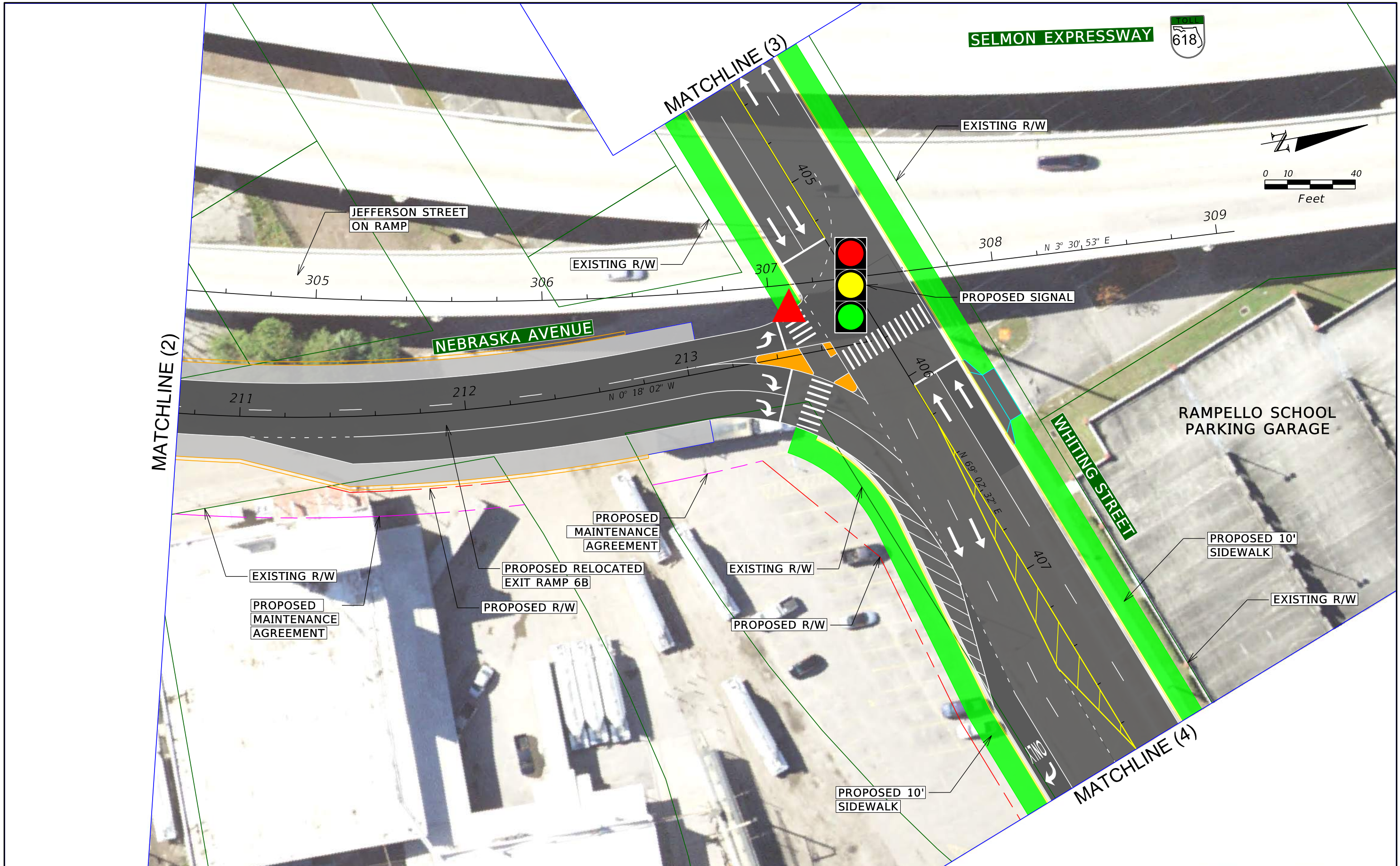
LEGEND	
	Sidewalk
	Roadway Pavement
	Grass
	Traffic Separator/ Raised Median
	Proposed Maintenance Agreement
	Proposed Roadway Limits of Construction
	Existing ROW
	Proposed ROW
	Wall Barrier
	Bridge
	Curb
	Ramp Shoulder
	Pavement Removal
	High Level Contamination
	Medium Level Contamination

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SHEET NO.
3



SELMON EXPRESSWAY

MATCHLINE (3)

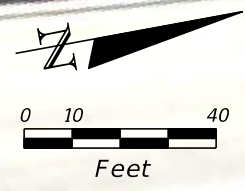
MATCHLINE (2)

WHITING STREET

NEBRASKA AVENUE

RAMPELLO SCHOOL PARKING GARAGE

MATCHLINE (4)



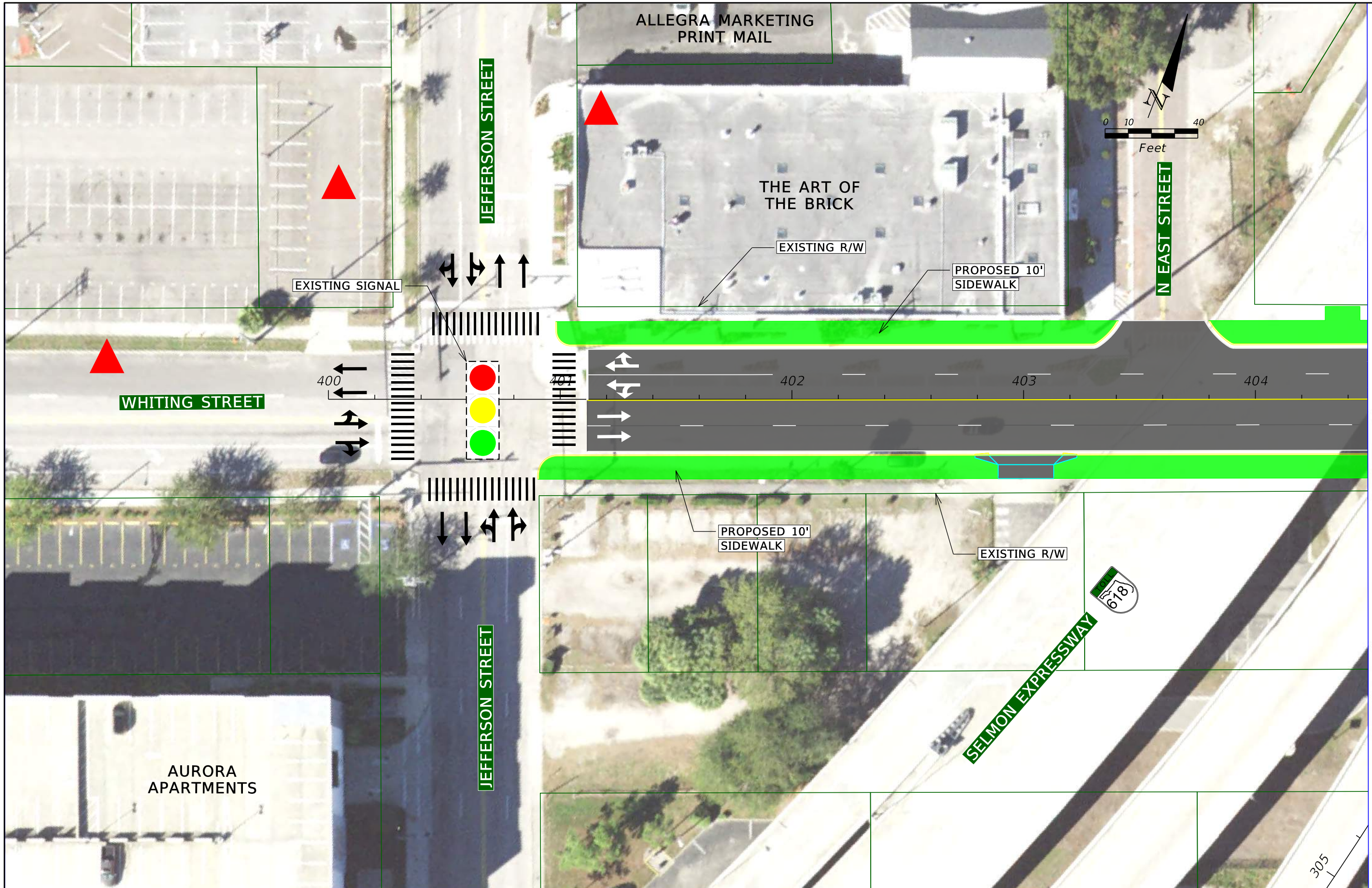
LEGEND	Sidewalk	Proposed Maintenance Agreement	Wall Barrier	Pavement Removal
	Roadway Pavement	Proposed Roadway Limits of Construction	Bridge	High Level Contamination
	Grass	Existing ROW	Curb	Medium Level Contamination
	Traffic Separator/Raised Median	Proposed ROW	Ramp Shoulder	

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4



MATCHLINE (3)

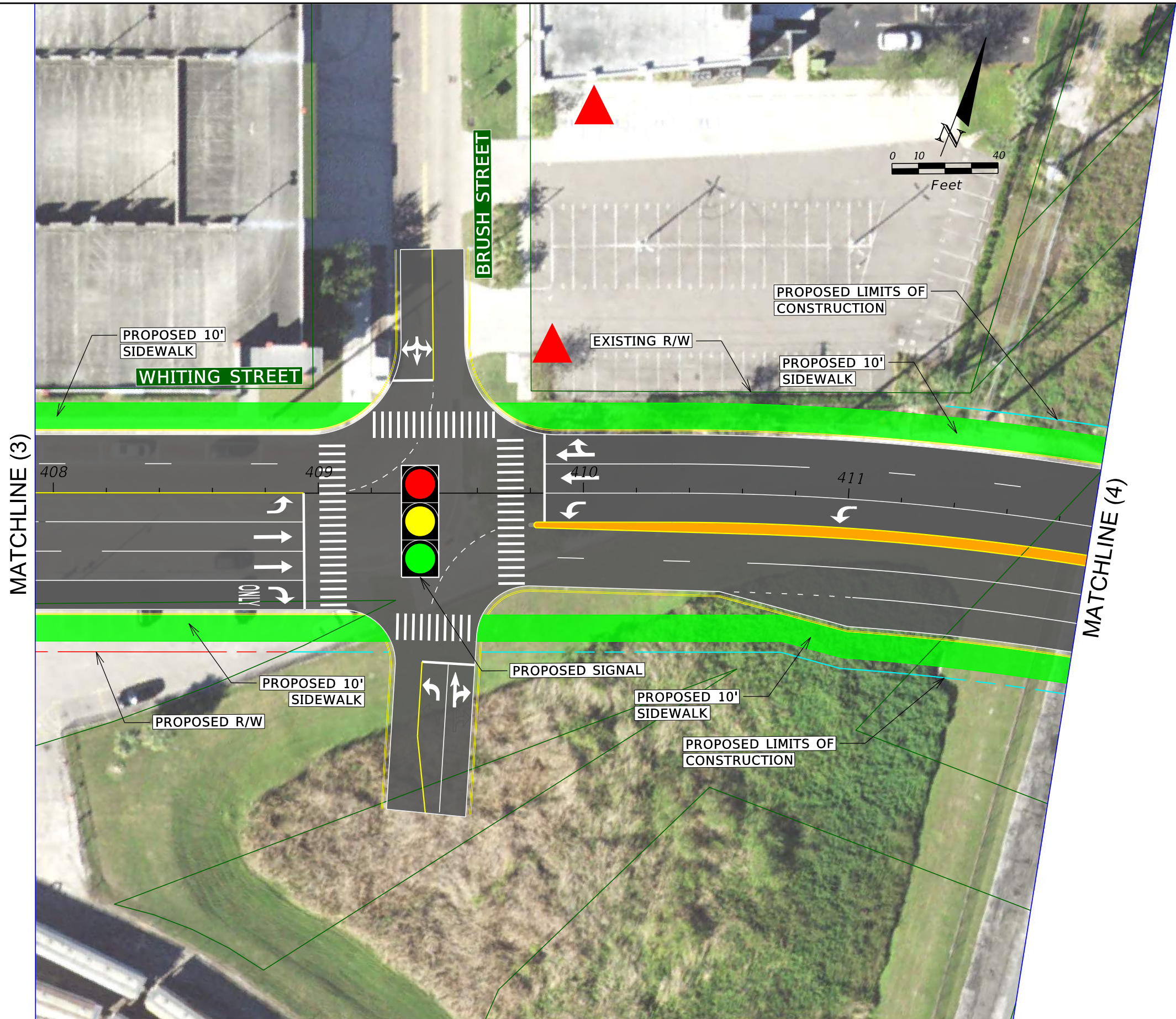
LEGEND	Sidewalk	Proposed Maintenance Agreement	Wall Barrier	Pavement Removal
	Roadway Pavement	Proposed Roadway Limits of Construction	Bridge	High Level Contamination
	Grass	Existing ROW	Curb	Medium Level Contamination
	Traffic Separator/Raised Median	Proposed ROW	Ramp Shoulder	

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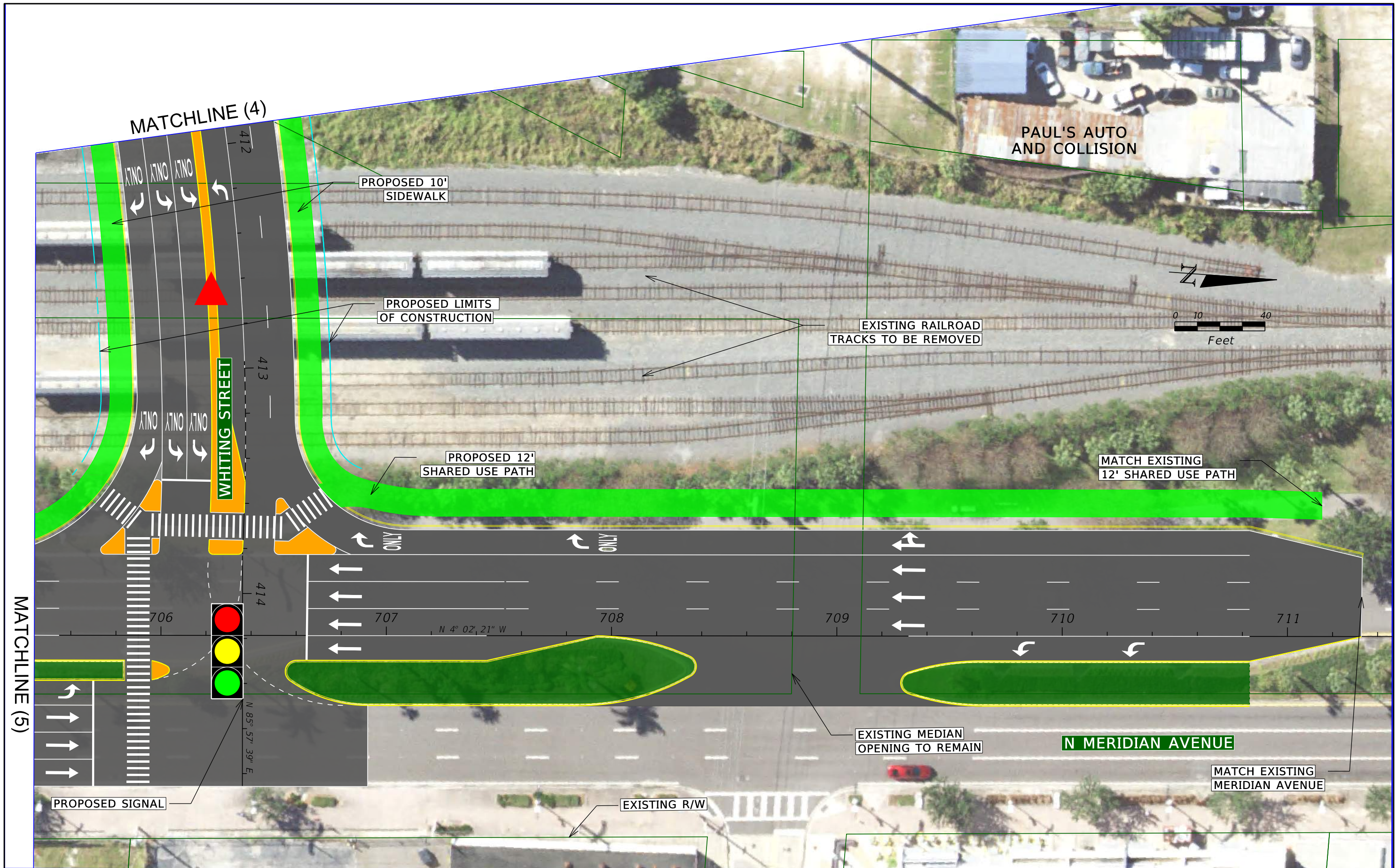
LEGEND	Sidewalk	Proposed Maintenance Agreement	Wall Barrier	Pavement Removal
	Roadway Pavement	Proposed Roadway Limits of Construction	Bridge	High Level Contamination
	Grass	Existing ROW	Curb	Medium Level Contamination
	Traffic Separator/ Raised Median	Proposed ROW	Ramp Shoulder	

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ROAD NO.	COUNTY	FINANCIAL PROJCT ID
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6



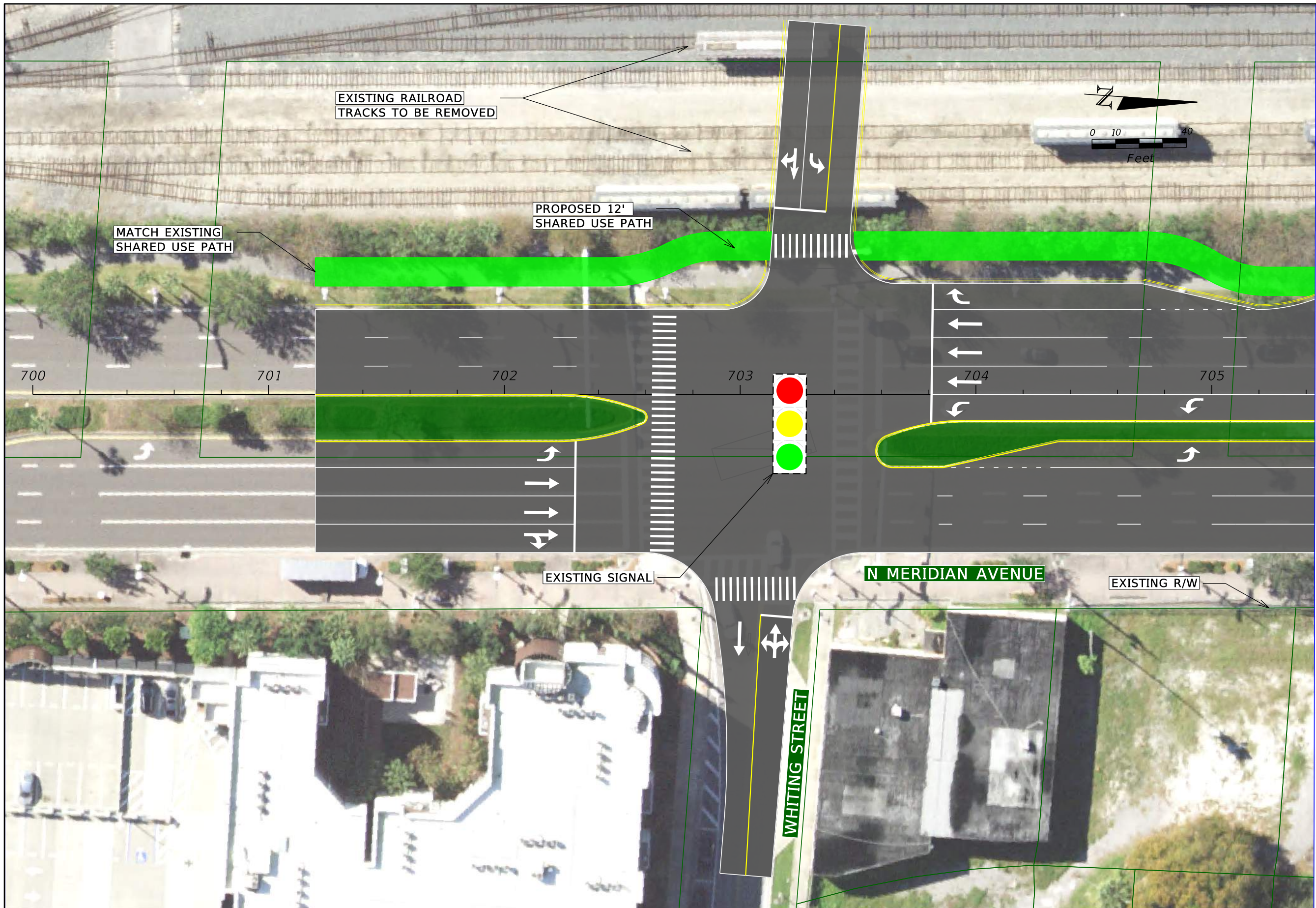
LEGEND	
	Sidewalk
	Roadway Pavement
	Grass
	Traffic Separator/ Raised Median
	Proposed Maintenance Agreement
	Proposed Roadway Limits of Construction
	Existing ROW
	Proposed ROW
	Wall Barrier
	Bridge
	Curb
	Ramp Shoulder
	Pavement Removal
	High Level Contamination
	Medium Level Contamination

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7



MATCHLINE (5)

LEGEND	
	Sidewalk
	Roadway Pavement
	Grass
	Traffic Separator/ Raised Median
	Proposed Maintenance Agreement
	Proposed Roadway Limits of Construction
	Existing ROW
	Proposed ROW
	Wall Barrier
	Bridge
	Curb
	Ramp Shoulder
	Pavement Removal
	High Level Contamination
	Medium Level Contamination

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 CONCEPT PLAN SHEET**

SHEET NO.
8

Appendix I

Future Safety Analysis



No Build ISATe



Ramp Access Data												
Travel in Increasing Milepost Direction												
Entrance Ramp	Ramp entrance in segment? (if yes, indicate type.):	No	Lane Add	No		Lane Add	S-C Lane					
	Distance from begin milepost to upstream entrance ramp gore (X _u), mi:	999	0	999								
	Length of ramp entrance (L _{en,inc}), mi:						0.133					
	Length of ramp entrance in segment (L _{en,seg,inc}), mi:						0.133					
Entrance side?:												
Right												
Exit Ramp	Ramp exit in segment? (if yes, indicate type.):	No	S-C Lane	No		No	No					
	Distance from end milepost to downstream exit ramp gore (X _d), mi:	0.391		999		999	999					
	Length of ramp exit (L _{ex,inc}), mi:		0.028									
	Length of ramp exit in segment (L _{ex,seg,inc}), mi:		0.028									
Exit side?:												
Right												
Weave	Type B weave in segment?:	No	No	No	No	No	No					
	Length of weaving section (L _{wav,inc}), mi:											
	Length of weaving section in segment (L _{wav,seg,inc}), mi:											
Travel in Decreasing Milepost Direction												
Entrance Ramp	Ramp entrance in segment? (if yes, indicate type.):	No	No	No		No	No					
	Distance from end milepost to upstream entrance ramp gore (X _u), mi:	999	999	999		999	999					
	Length of ramp entrance (L _{en,dec}), mi:											
	Length of ramp entrance in segment (L _{en,seg,dec}), mi:											
Entrance side?:												
Exit Ramp	Ramp exit in segment? (if yes, indicate type.):	No	No	No	No	No	No					
	Distance from begin milepost to downstream exit ramp gore (X _d), mi:	999	999	999	999	999	999					
	Length of ramp exit (L _{ex,dec}), mi:											
	Length of ramp exit in segment (L _{ex,seg,dec}), mi:											
Exit side?:												
Weave	Type B weave in segment?:	No	No	No	No	No	No					
	Length of weaving section (L _{wav,dec}), mi:											
	Length of weaving section in segment (L _{wav,seg,dec}), mi:											
Traffic Data												
Proportion of AADT during high-volume hours (P _{hvh}):												Year
Freeway Segment Data												
Average daily traffic (AADT ₈) by year, veh/d:												
(enter data only for those years for which it is available, leave other years blank)												
2026	83500	104000	83500				103000	121000				
2027												
2028												
2029												
2030												
2031												
2032												
2033												
2034												
2035												
2036												
2037												
2038												
2039												
2040												
2041												
2042												
2043												
2044												
2045												
2046	137000	164000	127000				156000	177000				
2047												
2048												
2049												

No	Lane Add	No	Lane Add	S-C Lane								
999.00	0.00	999.00		0.00	0.00							
0.00	0.00	0.00		0.00	0.13							
0.00	0.00	0.00		0.00	0.13							
Right												
No	S-C Lane	No	No	No								
0.39	0.00	999.00		999.00	999.00							
0.00	0.03	0.00		0.00	0.00							
0.00	0.03	0.00		0.00	0.00							
Right												
No	No	No	No	No								
0.00	0.00	0.00		0.00	0.00							
0.00	0.00	0.00		0.00	0.00							
No	No	No	No	No								
999.00	999.00	999.00		999.00	999.00							
0.00	0.00	0.00		0.00	0.00							
0.00	0.00	0.00		0.00	0.00							
No	No	No	No	No								
0.00	0.00	0.00		0.00	0.00							
0.00	0.00	0.00		0.00	0.00							
0.52	0.52	0.59		0.75	0.83							
108000	108000	88500		108000	125000							
0	0	0		0	0							
0	0	0		0	0							
0	0	0		0	0							
0	0	0		0	0							
0	0	0		0	0							
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0	0	0		0	0							
0	0	0		0	0							
0	0	0		0	0							
175000	175000	138000		167000	188000							
0	0	0		0	0							
0	0	0		0	0							
0	0	0		0	0							

Exit Ramp Data for Travel in Decreasing Milepost Direction		Year																	
Average daily traffic (AADT _{0,exit}) by year, veh/d: (enter data only for those years for which it is available, leave other years blank)		2026																	
		2027																	
		2028																	
		2029																	
		2030																	
		2031																	
		2032																	
		2033																	
		2034																	
		2035																	
		2036																	
		2037																	
		2038																	
		2039																	
		2040																	
		2041																	
		2042																	
		2043																	
		2044																	
		2045																	
		2046																	
		2047																	
		2048																	
		2049																	

Crash Data		Segment Crashes -->																	
Count of Fatal-and-Injury (FI) Crashes by Year		2026																	
Multiple-vehicle crashes (not ramp related) (N _{o,fb,n,mv,s})	2026																		
	2027																		
	2028																		
	2029																		
	2030																		
Single-vehicle crashes (not ramp related) (N _{o,fb,n,sv,s})	2026																		
	2027																		
	2028																		
	2029																		
	2030																		
Ramp-entrance-related crashes (N _{o,sc,EN,at,s})	2026																		
	2027																		
	2028																		
	2029																		
	2030																		
Ramp-exit-related crashes (N _{o,sc,EX,at,s})	2026																		
	2027																		
	2028																		
	2029																		
	2030																		

0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Count of Property-Damage-Only (PDO) Crashes by Year

Crash Type	Year																	
Multiple-vehicle crashes (not ramp related) (N _{0,fb,n,mv,pdo})	2026																	
	2027																	
	2028																	
	2029																	
	2030																	
Single-vehicle crashes (not ramp related) (N _{0,fb,n,sv,pdo})	2026																	
	2027																	
	2028																	
	2029																	
	2030																	
Ramp-entrance-related crashes (N _{0,sc,EN,at,pdo})	2026																	
	2027																	
	2028																	
	2029																	
	2030																	
Ramp-exit-related crashes (N _{0,sc,EX,at,pdo})	2026																	
	2027																	
	2028																	
	2029																	
	2030																	

Advisory Messages

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Variable Limits

Number of through lanes (n):	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
Length of curve in segment (Lc1,seg), mi:	0.1472	0.0805	0.0599	0	0.2506	0.252	0	0	0	0	0	0	0	0	0	0	0	0	0
Length of curve in segment (Lc2,seg), mi:	0.34	0.0841	0.1178	0	0.2021	0.252	0	0	0	0	0	0	0	0	0	0	0	0	0
Length of curve in segment (Lc3,seg), mi:	0.34	0.0599	0.2506	0	0.3504	0.252	0	0	0	0	0	0	0	0	0	0	0	0	0
Length of ramp entrance in segment (Len,seg,inc), mi:	0.3	0.3	0.3	0.3	0.3	0.133	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Length of ramp exit in segment (Lex,seg,inc), mi:	0.3	0.028	0.3	0.3	0.3	0.079	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Length of weaving section in segment (Lwev,seg,inc), mi:	0.34	0.302	0.408	0.85	0.351	0.252	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Length of ramp entrance in segment (Len,seg,dec), mi:	0.3	0.3	0.3	0.3	0.3	0.252	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Length of ramp exit in segment (Lex,seg,dec), mi:	0.3	0.3	0.3	0.3	0.3	0.252	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Length of weaving section in segment (Lwev,seg,dec), mi:	0.34	0.302	0.408	0.85	0.351	0.252	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85

Output Summary								
General Information								
Project description:	EB Selmon Expressway IMR - No Build							
Analyst:	SPM	Date:	3/21/2022	Area type:	Urban			
First year of analysis:	2026							
Last year of analysis:	2046							
Crash Data Description								
Freeway segments	Segment crash data available?	No	First year of crash data:					
	Project-level crash data available?	No	Last year of crash data:					
Ramp segments	Segment crash data available?	No	First year of crash data:					
	Project-level crash data available?	No	Last year of crash data:					
Ramp terminals	Segment crash data available?	No	First year of crash data:					
	Project-level crash data available?	No	Last year of crash data:					
Estimated Crash Statistics								
Crashes for Entire Facility		Total	K	A	B	C	PDO	
Estimated number of crashes during Study Period, crashes:		2073.9	9.3	27.1	157.9	459.5	1420.1	
Estimated average crash freq. during Study Period, crashes/yr:		98.8	0.4	1.3	7.5	21.9	67.6	
Crashes by Facility Component		Nbr. Sites	Total	K	A	B	C	PDO
Freeway segments, crashes:		5	1716.7	6.7	18.9	124.4	375.1	1191.6
Ramp segments, crashes:		4	261.2	2.4	7.3	27.7	59.0	164.8
Crossroad ramp terminals, crashes:		1	96.0	0.2	0.9	5.8	25.4	63.7
Crashes for Entire Facility by Year		Year	Total	K	A	B	C	PDO
Estimated number of crashes during the Study Period, crashes:		2026	72.4	0.3	1.0	5.8	16.9	48.3
		2027	74.8	0.4	1.0	6.0	17.4	50.1
		2028	77.3	0.4	1.1	6.1	17.9	51.9
		2029	79.8	0.4	1.1	6.3	18.4	53.7
		2030	82.4	0.4	1.1	6.5	18.8	55.6
		2031	84.9	0.4	1.1	6.6	19.3	57.4
		2032	87.5	0.4	1.2	6.8	19.8	59.3
		2033	90.1	0.4	1.2	7.0	20.3	61.2
		2034	92.8	0.4	1.2	7.2	20.8	63.2
		2035	95.5	0.4	1.3	7.3	21.3	65.2
		2036	98.2	0.4	1.3	7.5	21.8	67.1
		2037	101.0	0.5	1.3	7.7	22.3	69.2
		2038	103.7	0.5	1.3	7.9	22.8	71.2
		2039	106.5	0.5	1.4	8.0	23.4	73.3
		2040	109.4	0.5	1.4	8.2	23.9	75.4
		2041	112.2	0.5	1.4	8.4	24.4	77.5
		2042	115.1	0.5	1.5	8.6	24.9	79.7
		2043	118.1	0.5	1.5	8.7	25.4	81.9
		2044	121.0	0.5	1.5	8.9	26.0	84.1
		2045	124.0	0.5	1.6	9.1	26.5	86.3
2046	127.0	0.5	1.6	9.3	27.0	88.6		
2047								
2048								
2049								
Distribution of Crashes for Entire Facility								
Crash Type	Crash Type Category	Estimated Number of Crashes During the Study Period						
		Total	K	A	B	C	PDO	
Multiple vehicle	Head-on crashes:	5.7	0.0	0.1	0.7	2.3	2.5	
	Right-angle crashes:	63.2	0.2	0.8	5.0	18.7	38.6	
	Rear-end crashes:	840.6	3.2	9.3	59.9	184.7	583.5	
	Sideswipe crashes:	284.7	0.8	2.1	14.0	42.6	225.2	
	Other multiple-vehicle crashes:	33.2	0.2	0.4	2.7	8.1	21.7	
	Total multiple-vehicle crashes:	1227.3	4.4	12.7	82.3	256.4	871.5	
Single vehicle	Crashes with animal:	10.3	0.0	0.0	0.3	0.7	9.3	
	Crashes with fixed object:	625.4	3.6	10.3	54.4	146.4	410.7	
	Crashes with other object:	70.6	0.2	0.5	2.9	8.4	58.6	
	Crashes with parked vehicle:	12.6	0.1	0.2	1.0	2.8	8.5	
	Other single-vehicle crashes:	127.6	1.1	3.3	16.9	44.8	61.5	
	Total single-vehicle crashes:	846.6	4.9	14.4	75.5	203.2	548.6	
Total crashes:		2073.9	9.3	27.1	157.9	459.5	1420.1	

Evaluation Site Summary

General Information

Project description:	EB Selmon Expressway IMR - No Build				
Analyst:	SPM	Date:	3/21/2022	Area type:	Urban
First year of analysis:	2026	Total length of freeway segments for Study Period (mi):			1.653
Last year of analysis:	2046				

Site Description

Freeway Segments

Number	Lanes	Study Period Length (mi)	Study Period Description
1	8	0.340	West of Plant Ave On Ramp
2	8	0.302	Plant Ave to Florida Ave
3	6	0.408	Off Ramp to Florida Ave to On Ramp from Jefferson St
4	0	0.000	0
5	6	0.351	On Ramp from Jefferson St to On Ramp from Nebraska
6	6	0.252	East of Nebraska Ave On Ramp
7	0	0.000	0
8	0	0.000	0
9	0	0.000	0
10	0	0.000	0
11	0	0.000	0
12	0	0.000	0
13	0	0.000	0
14	0	0.000	0
15	0	0.000	0
16	0	0.000	0
17	0	0.000	0
18	0	0.000	0
19	0	0.000	0
20	0	0.000	0

Ramp Segments

Number	Study Period Description	Number	Study Period Description
1	On Ramp from Plant Ave	21	0
2	Off Ramp to Florida Ave + M	22	0
3	0	23	0
4	On Ramp from Jefferson St	24	0
5	On Ramp from Nebraska Av	25	0
6	0	26	0
7	0	27	0
8	0	28	0
9	0	29	0
10	0	30	0
11	0	31	0
12	0	32	0
13	0	33	0
14	0	34	0
15	0	35	0
16	0	36	0
17	0	37	0
18	0	38	0
19	0	39	0
20	0	40	0

Crossroad Ramp Terminals

Number	Config.	Control	Study Period Description
1	0	0	0
2	D3en	One stop	Jefferson St On Ramp
3	0	0	0
4	0	0	0
5	0	0	0
6	0	0	0

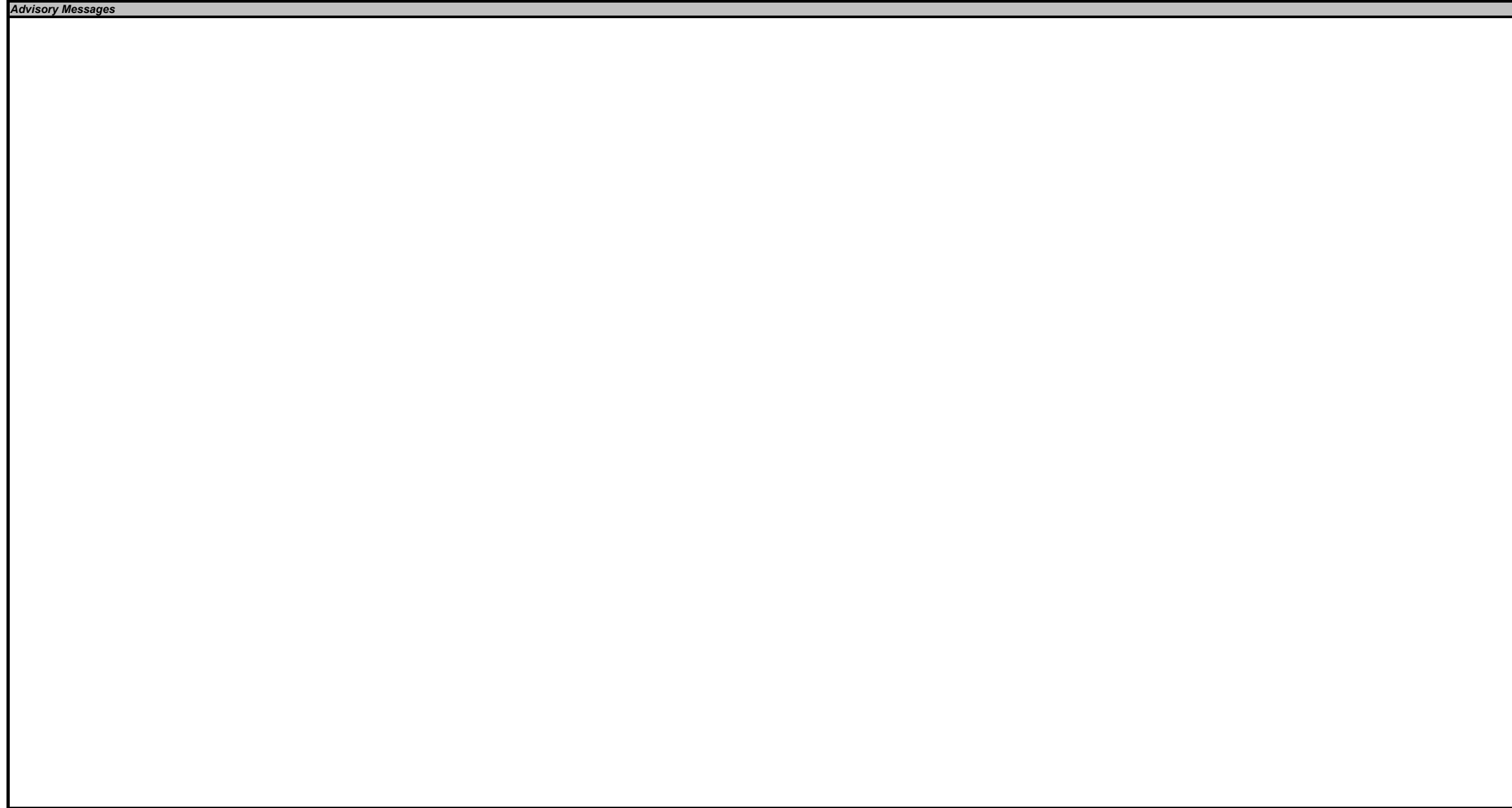
Build ISATe



Ramp Access Data								
Travel in Increasing Milepost Direction								
Entrance Ramp	Ramp entrance in segment? (If yes, indicate type.):	No	Lane Add	No	No	Lane Add	S-C Lane	
	Distance from begin milepost to upstream entrance ramp gore (X _{B,ent}), mi:	999	0	0.391	999			
	Length of ramp entrance (L _{en,inc}), mi:					0.133		
	Length of ramp entrance in segment (L _{en,seg,inc}), mi:					0.133		
Entrance side?:								
Right								
Exit Ramp	Ramp exit in segment? (If yes, indicate type.):	No	S-C Lane	Lane Drop	No	No	No	
	Distance from end milepost to downstream exit ramp gore (X _{B,exit}), mi:	0.391			999	999	999	
	Length of ramp exit (L _{ex,inc}), mi:		0.028	0.09				
	Length of ramp exit in segment (L _{ex,seg,inc}), mi:		0.028	0.05				
Exit side?:								
Right								
Weave	Type B weave in segment?:	No	No	No	No	No	No	
	Length of weaving section (L _{wev,inc}), mi:							
	Length of weaving section in segment (L _{wev,seg,inc}), mi:							
Travel in Decreasing Milepost Direction								
Entrance Ramp	Ramp entrance in segment? (If yes, indicate type.):	No	No	No	No	No	No	
	Distance from end milepost to upstream entrance ramp gore (X _{B,ent}), mi:	999	999	999	999	999	999	
	Length of ramp entrance (L _{en,dec}), mi:							
	Length of ramp entrance in segment (L _{en,seg,dec}), mi:							
Entrance side?:								
Exit Ramp	Ramp exit in segment? (If yes, indicate type.):	No	No	No	No	No	No	
	Distance from begin milepost to downstream exit ramp gore (X _{B,exit}), mi:	999	999	999	999	999	999	
	Length of ramp exit (L _{ex,dec}), mi:							
	Length of ramp exit in segment (L _{ex,seg,dec}), mi:							
Exit side?:								
Weave	Type B weave in segment?:	No	No	No	No	No	No	
	Length of weaving section (L _{wev,dec}), mi:							
	Length of weaving section in segment (L _{wev,seg,dec}), mi:							
Traffic Data								
Proportion of AADT during high-volume hours (P _{hv}):								
Freeway Segment Data		2026	83500	104000	88500	83500	103000	121000
Average daily traffic (AADT _{ts}) by year, veh/d:		2027						
(enter data only for those years for which it is available, leave other years blank)		2028						
		2029						
		2030						
		2031						
		2032						
		2033						
		2034						
		2035						
		2036						
		2037						
		2038						
		2039						
		2040						
		2041						
		2042						
		2043						
		2044						
		2045						
		2046	137000	164000	139000	127000	155000	177000
		2047						
		2048						
		2049						

No	Lane Add	No	No	Lane Add	S-C Lane
999.00	0.00	0.39	999.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.13
0.00	0.00	0.00	0.00	0.00	0.13
Right					
No	S-C Lane	Lane Drop	No	No	No
0.39	0.00	0.00	999.00	999.00	999.00
0.00	0.03	0.00	0.00	0.00	0.00
0.00	0.03	0.00	0.00	0.00	0.00
Right					
No	No	No	No	No	No
0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00
No	No	No	No	No	No
999.00	999.00	999.00	999.00	999.00	999.00
0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00
No	No	No	No	No	No
0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00
0.72	0.72	0.71	0.75	0.86	0.91
175000	175000	151000	138000	167000	188000
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0

Count of Property-Damage-Only (PDO) Crashes by Year		2026																				
Multiple-vehicle crashes (not ramp related) (N _{o,fs,n,mv,pdo})	2026																					
	2027																					
	2028																					
	2029																					
	2030																					
Single-vehicle crashes (not ramp related) (N _{o,fs,n,sv,pdo})	2026																					
	2027																					
	2028																					
	2029																					
	2030																					
Ramp-entrance-related crashes (N _{o,sc,EN,at,pdo})	2026																					
	2027																					
	2028																					
	2029																					
	2030																					
Ramp-exit-related crashes (N _{o,sc,EX,at,pdo})	2026																					
	2027																					
	2028																					
	2029																					
	2030																					



Variable Limits																				
Number of through lanes (n):	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
Length of curve in segment (Lc1,seg), mi:	0.1472	0.0805	0.0599	0.1178	0.2506	0.252	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Length of curve in segment (Lc2,seg), mi:	0.34	0.0841	0.114	0.2506	0.2021	0.252	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Length of curve in segment (Lc3,seg), mi:	0.34	0.0599	0.114	0.295	0.3504	0.252	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Length of ramp entrance in segment (Len,seg,inc), mi:	0.3	0.3	0.114	0.295	0.3	0.133	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Length of ramp exit in segment (Lex,seg,inc), mi:	0.3	0.028	0.09	0.295	0.3	0.079	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Length of weaving section in segment (Lwev,seg,inc), mi:	0.34	0.302	0.114	0.295	0.351	0.252	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Length of ramp entrance in segment (Len,seg,dec), mi:	0.3	0.3	0.114	0.295	0.3	0.252	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Length of ramp exit in segment (Lex,seg,dec), mi:	0.3	0.3	0.114	0.295	0.3	0.252	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Length of weaving section in segment (Lwev,seg,dec), mi:	0.34	0.302	0.114	0.295	0.351	0.252	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85

Output Summary							
General Information							
Project description:	Semlon Expressway IMR - Build						
Analyst:	SPM	Date:	3/21/2022	Area type:	Urban		
First year of analysis:	2026						
Last year of analysis:	2046						
Crash Data Description							
Freeway segments	Segment crash data available?	No	First year of crash data:				
	Project-level crash data available?	No	Last year of crash data:				
Ramp segments	Segment crash data available?	No	First year of crash data:				
	Project-level crash data available?	No	Last year of crash data:				
Ramp terminals	Segment crash data available?	No	First year of crash data:				
	Project-level crash data available?	No	Last year of crash data:				
Estimated Crash Statistics							
Crashes for Entire Facility							
	Total	K	A	B	C	PDO	
Estimated number of crashes during Study Period, crashes:	2276.0	9.4	29.4	174.9	520.7	1541.6	
Estimated average crash freq. during Study Period, crashes/yr:	108.4	0.4	1.4	8.3	24.8	73.4	
Crashes by Facility Component							
	Nbr. Sites	Total	K	A	B	C	PDO
Freeway segments, crashes:	6	1715.4	6.7	18.8	124.7	375.9	1189.1
Ramp segments, crashes:	5	297.5	2.4	7.1	27.9	62.8	197.3
Crossroad ramp terminals, crashes:	2	263.2	0.3	3.4	22.3	82.0	155.2
Crashes for Entire Facility by Year							
	Year	Total	K	A	B	C	PDO
Estimated number of crashes during the Study Period, crashes:	2026	80.1	0.4	1.1	6.5	19.1	53.1
	2027	82.8	0.4	1.1	6.7	19.7	54.9
	2028	85.4	0.4	1.2	6.8	20.2	56.8
	2029	88.1	0.4	1.2	7.0	20.8	58.8
	2030	90.8	0.4	1.2	7.2	21.3	60.7
	2031	93.6	0.4	1.2	7.4	21.9	62.7
	2032	96.3	0.4	1.3	7.6	22.4	64.7
	2033	99.2	0.4	1.3	7.7	23.0	66.7
	2034	102.0	0.4	1.3	7.9	23.6	68.7
	2035	104.9	0.4	1.4	8.1	24.1	70.8
	2036	107.8	0.4	1.4	8.3	24.7	72.9
	2037	110.7	0.5	1.4	8.5	25.3	75.0
	2038	113.7	0.5	1.5	8.7	25.9	77.2
	2039	116.7	0.5	1.5	8.9	26.5	79.4
	2040	119.7	0.5	1.5	9.1	27.1	81.6
	2041	122.8	0.5	1.6	9.3	27.7	83.8
	2042	125.9	0.5	1.6	9.5	28.3	86.1
	2043	129.1	0.5	1.6	9.7	28.9	88.4
	2044	132.2	0.5	1.6	9.9	29.5	90.7
	2045	135.4	0.5	1.7	10.1	30.1	93.1
2046	138.7	0.5	1.7	10.3	30.7	95.4	
2047							
2048							
2049							
Distribution of Crashes for Entire Facility							
Crash Type	Crash Type Category	Estimated Number of Crashes During the Study Period					
		Total	K	A	B	C	PDO
Multiple vehicle	Head-on crashes:	7.2	0.0	0.1	0.9	2.9	3.1
	Right-angle crashes:	105.1	0.2	1.4	9.5	34.4	59.5
	Rear-end crashes:	936.5	3.3	10.7	70.0	219.3	633.2
	Sideswipe crashes:	301.3	0.8	2.2	14.7	45.1	238.6
	Other multiple-vehicle crashes:	35.3	0.1	0.4	2.8	8.5	23.4
	Total multiple-vehicle crashes:	1385.4	4.5	14.9	97.9	310.2	957.9
Single vehicle	Crashes with animal:	10.4	0.0	0.0	0.3	0.7	9.3
	Crashes with fixed object:	661.2	3.5	10.4	55.4	151.4	440.5
	Crashes with other object:	70.9	0.2	0.5	3.0	8.5	58.8
	Crashes with parked vehicle:	13.3	0.1	0.2	1.1	2.9	9.1
	Other single-vehicle crashes:	134.8	1.1	3.3	17.3	47.0	66.0
	Total single-vehicle crashes:	890.6	4.9	14.5	77.0	210.5	583.7
Total crashes:		2276.0	9.4	29.4	174.9	520.7	1541.6

Evaluation Site Summary

General Information

Project description:	Semlon Expressway IMR - Build				
Analyst:	SPM	Date:	3/21/2022	Area type:	Urban
First year of analysis:	2026	Total length of freeway segments for Study Period (mi):		1.654	
Last year of analysis:	2046				

Site Description

Freeway Segments

Number	Lanes	Study Period Length (mi)	Study Period Description
1	8	0.340	West of Plant Ave On Ramp
2	8	0.302	Plant Ave to Florida Ave
3	7	0.114	Florida Ave to Proposed Off Ramp to Whiting St
4	6	0.295	Proposed Off Ramp to Whiting St to On Ramp from Jeffe
5	6	0.351	On Ramp from Jefferson St to On Ramp from Nebraska
6	6	0.252	East of Nebraska Ave On Ramp
7	0	0.000	0
8	0	0.000	0
9	0	0.000	0
10	0	0.000	0
11	0	0.000	0
12	0	0.000	0
13	0	0.000	0
14	0	0.000	0
15	0	0.000	0
16	0	0.000	0
17	0	0.000	0
18	0	0.000	0
19	0	0.000	0
20	0	0.000	0

Ramp Segments

Number	Study Period Description	Number	Study Period Description
1	On Ramp from Plant Ave	21	0
2	Realigned Off Ramp to Flori	22	0
3	Proposed Off Ramp to Whit	23	0
4	On Ramp from Jefferson St	24	0
5	On Ramp from Nebraska Av	25	0
6	0	26	0
7	0	27	0
8	0	28	0
9	0	29	0
10	0	30	0
11	0	31	0
12	0	32	0
13	0	33	0
14	0	34	0
15	0	35	0
16	0	36	0
17	0	37	0
18	0	38	0
19	0	39	0
20	0	40	0

Crossroad Ramp Terminals

Number	Config.	Control	Study Period Description
1	D3ex	Signal	Whiting Ave Off Ramp
2	D3en	One stop	Jefferson St On Ramp
3	0	0	0
4	0	0	0
5	0	0	0
6	0	0	0

No Build HSM Worksheets



Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections						
General Information			Location Information			
Analyst	SL		Roadway	Meridian Ave		
Agency or Company	H.W. Lochner		Intersection	Whiting St (East)		
Date Performed	12/01/21		Jurisdiction			
			Analysis Year	2026		
Input Data			Base Conditions	Site Conditions		
Intersection type (3ST, 3SG, 4ST, 4SG)			--	3SG		
AADT _{major} (veh/day)		AADT _{MAX} = 58,100 (veh/day)	--	31,500		
AADT _{minor} (veh/day)		AADT _{MAX} = 16,400 (veh/day)	--	4,400		
Intersection lighting (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	1		
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]			0	0		
Number of approaches with left-turn signal phasing [for 3SG, use maximum value of 3]			--	2		
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			
Sum of all pedestrian crossing volumes (PedVol) -- Signalized intersections only			3,200			
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	3		
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	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
<i>CMF 1i</i>	<i>CMF 2i</i>	<i>CMF 3i</i>	<i>CMF 4i</i>	<i>CMF 5i</i>	<i>CMF 6i</i>	<i>CMF_{COMB}</i>
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)
0.93	0.93	1.00	1.00	0.91	1.00	0.79

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									
	a	b	c							
Total	-12.13	1.11	0.26	0.33	4.704	1.000	4.704	0.79	1.00	3.707
Fatal and Injury (FI)	-11.58	1.02	0.17	0.30	1.508	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.338	1.588	0.79	1.00	1.252
Property Damage Only (PDO)	-13.24	1.14	0.30	0.36	2.958	$(5)_{TOTAL}-(5)_{FI}$ 0.662	3.115	0.79	1.00	2.455

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	1.252	1.000	2.455	3.707
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.549	0.687	0.546	1.341	2.028
Head-on collision	0.038	0.048	0.020	0.049	0.097
Angle collision	0.280	0.351	0.204	0.501	0.851
Sideswipe	0.076	0.095	0.032	0.079	0.174
Other multiple-vehicle collision	0.057	0.071	0.198	0.486	0.558

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_{bisv}	Combined CMFs	Calibration Factor, C_i	Predicted N_{bisv}
	from Table 12-12									
	a	b	c							
Total	-9.02	0.42	0.40	0.36	0.269	1.000	0.269	0.79	1.00	0.212
Fatal and Injury (FI)	-9.75	0.27	0.51	0.24	0.069	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.264	0.071	0.79	1.00	0.056
Property Damage Only (PDO)	-9.08	0.45	0.33	0.53	0.192	$(5)_{TOTAL}-(5)_{FI}$ 0.736	0.198	0.79	1.00	0.156

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	0.156	0.212
		(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	0.000	0.001
Collision with fixed object	0.653	0.037	0.895	0.139	0.176
Collision with other object	0.091	0.005	0.069	0.011	0.016
Other single-vehicle collision	0.045	0.003	0.018	0.003	0.005
Single-vehicle noncollision	0.209	0.012	0.014	0.002	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)
4.15	1.00	1.12	4.65

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									
	a	b	c	d	e					
Total	-6.60	0.05	0.24	0.41	0.09	0.52	0.074	4.65	1.00	0.342
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	1.00	0.342

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	3.707	0.212	3.919	0.011	1.00	0.043
Fatal and injury (FI)	--	--	--	--	1.00	0.043

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)	0.687	1.341	2.028
Head-on collisions (from Worksheet 2D)	0.048	0.049	0.097
Angle collisions (from Worksheet 2D)	0.351	0.501	0.851
Sideswipe (from Worksheet 2D)	0.095	0.079	0.174
Other multiple-vehicle collision (from Worksheet 2D)	0.071	0.486	0.558
Subtotal	1.252	2.455	3.707
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)	0.037	0.139	0.176
Collision with other object (from Worksheet 2F)	0.005	0.011	0.016
Other single-vehicle collision (from Worksheet 2F)	0.003	0.003	0.005
Single-vehicle noncollision (from Worksheet 2F)	0.012	0.002	0.014
Collision with pedestrian (from Worksheet 2G or 2I)	0.342	0.000	0.342
Collision with bicycle (from Worksheet 2J)	0.043	0.000	0.043
Subtotal	0.441	0.156	0.597
Total	1.693	2.611	4.304

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	4.304
Fatal and injury (FI)	1.693
Property damage only (PDO)	2.611

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections						
General Information			Location Information			
Analyst	SL		Roadway	Meridian Ave		
Agency or Company	H.W. Lochner		Intersection	Whiting St (East)		
Date Performed	12/01/21		Jurisdiction			
			Analysis Year	2027		
Input Data			Base Conditions	Site Conditions		
Intersection type (3ST, 3SG, 4ST, 4SG)			--	3SG		
AADT _{major} (veh/day)		AADT _{MAX} = 58,100 (veh/day)	--	32,150		
AADT _{minor} (veh/day)		AADT _{MAX} = 16,400 (veh/day)	--	4,495		
Intersection lighting (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	1		
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]			0	0		
Number of approaches with left-turn signal phasing [for 3SG, use maximum value of 3]			--	2		
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			
Sum of all pedestrian crossing volumes (PedVol) -- Signalized intersections only			3,200			
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	3		
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	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
<i>CMF 1i</i>	<i>CMF 2i</i>	<i>CMF 3i</i>	<i>CMF 4i</i>	<i>CMF 5i</i>	<i>CMF 6i</i>	<i>CMF_{COMB}</i>
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)
0.93	0.93	1.00	1.00	0.91	1.00	0.79

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									
	a	b	c							
Total	-12.13	1.11	0.26	0.33	4.838	1.000	4.838	0.79	1.00	3.813
Fatal and Injury (FI)	-11.58	1.02	0.17	0.30	1.546	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.337	1.628	0.79	1.00	1.283
Property Damage Only (PDO)	-13.24	1.14	0.30	0.36	3.048	$(5)_{TOTAL}-(5)_{FI}$ 0.663	3.210	0.79	1.00	2.530

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	1.283	1.000	2.530	3.813
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.549	0.705	0.546	1.381	2.086
Head-on collision	0.038	0.049	0.020	0.051	0.099
Angle collision	0.280	0.359	0.204	0.516	0.875
Sideswipe	0.076	0.098	0.032	0.081	0.178
Other multiple-vehicle collision	0.057	0.073	0.198	0.501	0.574

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									
	a	b	c							
Total	-9.02	0.42	0.40	0.36	0.273	1.000	0.273	0.79	1.00	0.215
Fatal and Injury (FI)	-9.75	0.27	0.51	0.24	0.070	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.264	0.072	0.79	1.00	0.057
Property Damage Only (PDO)	-9.08	0.45	0.33	0.53	0.195	$(5)_{TOTAL}-(5)_{FI}$ 0.736	0.201	0.79	1.00	0.159

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	0.159	0.215
		(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	0.000	0.001
Collision with fixed object	0.653	0.037	0.895	0.142	0.179
Collision with other object	0.091	0.005	0.069	0.011	0.016
Other single-vehicle collision	0.045	0.003	0.018	0.003	0.005
Single-vehicle noncollision	0.209	0.012	0.014	0.002	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)
4.15	1.00	1.12	4.65

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} from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C _i	Predicted N _{pedi} (4)*(5)*(6)
	from Table 12-14									
	a	b	c	d	e					
Total	-6.60	0.05	0.24	0.41	0.09	0.52	0.074	4.65	1.00	0.343
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	1.00	0.343

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	3.813	0.215	4.029	0.011	1.00	0.044
Fatal and injury (FI)	--	--	--	--	1.00	0.044

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)	0.705	1.381	2.086
Head-on collisions (from Worksheet 2D)	0.049	0.051	0.099
Angle collisions (from Worksheet 2D)	0.359	0.516	0.875
Sideswipe (from Worksheet 2D)	0.098	0.081	0.178
Other multiple-vehicle collision (from Worksheet 2D)	0.073	0.501	0.574
Subtotal	1.283	2.530	3.813
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)	0.037	0.142	0.179
Collision with other object (from Worksheet 2F)	0.005	0.011	0.016
Other single-vehicle collision (from Worksheet 2F)	0.003	0.003	0.005
Single-vehicle noncollision (from Worksheet 2F)	0.012	0.002	0.014
Collision with pedestrian (from Worksheet 2G or 2I)	0.343	0.000	0.343
Collision with bicycle (from Worksheet 2J)	0.044	0.000	0.044
Subtotal	0.444	0.159	0.602
Total	1.727	2.689	4.416

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	4.416
Fatal and injury (FI)	1.727
Property damage only (PDO)	2.689

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections						
General Information			Location Information			
Analyst	SL		Roadway	Meridian Ave		
Agency or Company	H.W. Lochner		Intersection	Whiting St (East)		
Date Performed	12/01/21		Jurisdiction			
			Analysis Year	2028		
Input Data			Base Conditions	Site Conditions		
Intersection type (3ST, 3SG, 4ST, 4SG)			--	3SG		
AADT _{major} (veh/day)		AADT _{MAX} = 58,100 (veh/day)	--	32,800		
AADT _{minor} (veh/day)		AADT _{MAX} = 16,400 (veh/day)	--	4,590		
Intersection lighting (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	1		
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]			0	0		
Number of approaches with left-turn signal phasing [for 3SG, use maximum value of 3]			--	2		
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			
Sum of all pedestrian crossing volumes (PedVol) -- Signalized intersections only			3,200			
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	3		
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	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
<i>CMF 1i</i>	<i>CMF 2i</i>	<i>CMF 3i</i>	<i>CMF 4i</i>	<i>CMF 5i</i>	<i>CMF 6i</i>	<i>CMF_{COMB}</i>
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)
0.93	0.93	1.00	1.00	0.91	1.00	0.79

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									
	a	b	c							
Total	-12.13	1.11	0.26	0.33	4.974	1.000	4.974	0.79	1.00	3.920
Fatal and Injury (FI)	-11.58	1.02	0.17	0.30	1.583	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.335	1.668	0.79	1.00	1.315
Property Damage Only (PDO)	-13.24	1.14	0.30	0.36	3.137	$(5)_{TOTAL}-(5)_{FI}$ 0.665	3.306	0.79	1.00	2.605

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	2.605	3.920
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.549	0.722	0.546	1.423	2.144
Head-on collision	0.038	0.050	0.020	0.052	0.102
Angle collision	0.280	0.368	0.204	0.532	0.900
Sideswipe	0.076	0.100	0.032	0.083	0.183
Other multiple-vehicle collision	0.057	0.075	0.198	0.516	0.591

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_{bisv}	Combined CMFs	Calibration Factor, C_i	Predicted N_{bisv}
	from Table 12-12									
	a	b	c							
Total	-9.02	0.42	0.40	0.36	0.278	1.000	0.278	0.79	1.00	0.219
Fatal and Injury (FI)	-9.75	0.27	0.51	0.24	0.071	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.264	0.073	0.79	1.00	0.058
Property Damage Only (PDO)	-9.08	0.45	0.33	0.53	0.198	$(5)_{TOTAL}-(5)_{FI}$ 0.736	0.205	0.79	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	0.058	1.000	0.161	0.219
		(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	0.000	0.001
Collision with fixed object	0.653	0.038	0.895	0.144	0.182
Collision with other object	0.091	0.005	0.069	0.011	0.016
Other single-vehicle collision	0.045	0.003	0.018	0.003	0.006
Single-vehicle noncollision	0.209	0.012	0.014	0.002	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)
4.15	1.00	1.12	4.65

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									
	a	b	c	d	e					
Total	-6.60	0.05	0.24	0.41	0.09	0.52	0.074	4.65	1.00	0.343
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	1.00	0.343

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	3.920	0.219	4.139	0.011	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)
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)	0.722	1.423	2.144
Head-on collisions (from Worksheet 2D)	0.050	0.052	0.102
Angle collisions (from Worksheet 2D)	0.368	0.532	0.900
Sideswipe (from Worksheet 2D)	0.100	0.083	0.183
Other multiple-vehicle collision (from Worksheet 2D)	0.075	0.516	0.591
Subtotal	1.315	2.605	3.920
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)	0.038	0.144	0.182
Collision with other object (from Worksheet 2F)	0.005	0.011	0.016
Other single-vehicle collision (from Worksheet 2F)	0.003	0.003	0.006
Single-vehicle noncollision (from Worksheet 2F)	0.012	0.002	0.014
Collision with pedestrian (from Worksheet 2G or 2I)	0.343	0.000	0.343
Collision with bicycle (from Worksheet 2J)	0.046	0.000	0.046
Subtotal	0.446	0.161	0.608
Total	1.761	2.767	4.528

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	4.528
Fatal and injury (FI)	1.761
Property damage only (PDO)	2.767

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections						
General Information			Location Information			
Analyst	SL		Roadway	Meridian Ave		
Agency or Company	H.W. Lochner		Intersection	Whiting St (East)		
Date Performed	12/01/21		Jurisdiction			
			Analysis Year	2029		
Input Data			Base Conditions	Site Conditions		
Intersection type (3ST, 3SG, 4ST, 4SG)			--	3SG		
AADT _{major} (veh/day)		AADT _{MAX} = 58,100 (veh/day)	--	33,450		
AADT _{minor} (veh/day)		AADT _{MAX} = 16,400 (veh/day)	--	4,685		
Intersection lighting (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	1		
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]			0	0		
Number of approaches with left-turn signal phasing [for 3SG, use maximum value of 3]			--	2		
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			
Sum of all pedestrian crossing volumes (PedVol) -- Signalized intersections only			3,200			
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	3		
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	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
<i>CMF 1i</i>	<i>CMF 2i</i>	<i>CMF 3i</i>	<i>CMF 4i</i>	<i>CMF 5i</i>	<i>CMF 6i</i>	<i>CMF_{COMB}</i>
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)
0.93	0.93	1.00	1.00	0.91	1.00	0.79

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									
	a	b	c							
Total	-12.13	1.11	0.26	0.33	5.111	1.000	5.111	0.79	1.00	4.028
Fatal and Injury (FI)	-11.58	1.02	0.17	0.30	1.621	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.334	1.708	0.79	1.00	1.346
Property Damage Only (PDO)	-13.24	1.14	0.30	0.36	3.228	$(5)_{TOTAL}-(5)_{FI}$ 0.666	3.402	0.79	1.00	2.682

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	1.346	1.000	2.682	4.028
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.549	0.739	0.546	1.464	2.203
Head-on collision	0.038	0.051	0.020	0.054	0.105
Angle collision	0.280	0.377	0.204	0.547	0.924
Sideswipe	0.076	0.102	0.032	0.086	0.188
Other multiple-vehicle collision	0.057	0.077	0.198	0.531	0.608

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_{bisv}	Combined CMFs	Calibration Factor, C_i	Predicted N_{bisv}
	from Table 12-12									
	a	b	c							
Total	-9.02	0.42	0.40	0.36	0.283	1.000	0.283	0.79	1.00	0.223
Fatal and Injury (FI)	-9.75	0.27	0.51	0.24	0.072	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.264	0.075	0.79	1.00	0.059
Property Damage Only (PDO)	-9.08	0.45	0.33	0.53	0.201	$(5)_{TOTAL}-(5)_{FI}$ 0.736	0.208	0.79	1.00	0.164

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	0.059	1.000	0.164	0.223
		(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	0.000	0.001
Collision with fixed object	0.653	0.038	0.895	0.147	0.185
Collision with other object	0.091	0.005	0.069	0.011	0.017
Other single-vehicle collision	0.045	0.003	0.018	0.003	0.006
Single-vehicle noncollision	0.209	0.012	0.014	0.002	0.015

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)
4.15	1.00	1.12	4.65

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} from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C _i	Predicted N _{pedi} (4)*(5)*(6)
	from Table 12-14									
	a	b	c	d	e					
Total	-6.60	0.05	0.24	0.41	0.09	0.52	0.074	4.65	1.00	0.343
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	1.00	0.343

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	4.028	0.223	4.251	0.011	1.00	0.047
Fatal and injury (FI)	--	--	--	--	1.00	0.047

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)	0.739	1.464	2.203
Head-on collisions (from Worksheet 2D)	0.051	0.054	0.105
Angle collisions (from Worksheet 2D)	0.377	0.547	0.924
Sideswipe (from Worksheet 2D)	0.102	0.086	0.188
Other multiple-vehicle collision (from Worksheet 2D)	0.077	0.531	0.608
Subtotal	1.346	2.682	4.028
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)	0.038	0.147	0.185
Collision with other object (from Worksheet 2F)	0.005	0.011	0.017
Other single-vehicle collision (from Worksheet 2F)	0.003	0.003	0.006
Single-vehicle noncollision (from Worksheet 2F)	0.012	0.002	0.015
Collision with pedestrian (from Worksheet 2G or 2I)	0.343	0.000	0.343
Collision with bicycle (from Worksheet 2J)	0.047	0.000	0.047
Subtotal	0.449	0.164	0.613
Total	1.796	2.845	4.641

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	4.641
Fatal and injury (FI)	1.796
Property damage only (PDO)	2.845

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections						
General Information			Location Information			
Analyst	SL		Roadway	Meridian Ave		
Agency or Company	H.W. Lochner		Intersection	Whiting St (East)		
Date Performed	12/01/21		Jurisdiction			
			Analysis Year	2030		
Input Data			Base Conditions	Site Conditions		
Intersection type (3ST, 3SG, 4ST, 4SG)			--	3SG		
AADT _{major} (veh/day)		AADT _{MAX} = 58,100 (veh/day)	--	34,100		
AADT _{minor} (veh/day)		AADT _{MAX} = 16,400 (veh/day)	--	4,780		
Intersection lighting (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	1		
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]			0	0		
Number of approaches with left-turn signal phasing [for 3SG, use maximum value of 3]			--	2		
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			
Sum of all pedestrian crossing volumes (PedVol) -- Signalized intersections only			3,200			
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	3		
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	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
<i>CMF 1i</i>	<i>CMF 2i</i>	<i>CMF 3i</i>	<i>CMF 4i</i>	<i>CMF 5i</i>	<i>CMF 6i</i>	<i>CMF_{COMB}</i>
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)
0.93	0.93	1.00	1.00	0.91	1.00	0.79

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									
	a	b	c							
Total	-12.13	1.11	0.26	0.33	5.248	1.000	5.248	0.79	1.00	4.137
Fatal and Injury (FI)	-11.58	1.02	0.17	0.30	1.659	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.333	1.749	0.79	1.00	1.378
Property Damage Only (PDO)	-13.24	1.14	0.30	0.36	3.320	$(5)_{TOTAL}-(5)_{FI}$ 0.667	3.500	0.79	1.00	2.758

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	1.378	1.000	2.758	4.137
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.549	0.757	0.546	1.506	2.263
Head-on collision	0.038	0.052	0.020	0.055	0.108
Angle collision	0.280	0.386	0.204	0.563	0.949
Sideswipe	0.076	0.105	0.032	0.088	0.193
Other multiple-vehicle collision	0.057	0.079	0.198	0.546	0.625

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_{bisv}	Combined CMFs	Calibration Factor, C_i	Predicted N_{bisv}
	from Table 12-12									
	a	b	c							
Total	-9.02	0.42	0.40	0.36	0.287	1.000	0.287	0.79	1.00	0.226
Fatal and Injury (FI)	-9.75	0.27	0.51	0.24	0.073	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.264	0.076	0.79	1.00	0.060
Property Damage Only (PDO)	-9.08	0.45	0.33	0.53	0.204	$(5)_{TOTAL}-(5)_{FI}$ 0.736	0.211	0.79	1.00	0.167

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	0.060	1.000	0.167	0.226
		(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	0.000	0.001
Collision with fixed object	0.653	0.039	0.895	0.149	0.188
Collision with other object	0.091	0.005	0.069	0.011	0.017
Other single-vehicle collision	0.045	0.003	0.018	0.003	0.006
Single-vehicle noncollision	0.209	0.013	0.014	0.002	0.015

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)
4.15	1.00	1.12	4.65

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									
	a	b	c	d	e					
Total	-6.60	0.05	0.24	0.41	0.09	0.52	0.074	4.65	1.00	0.344
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	1.00	0.344

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	4.137	0.226	4.363	0.011	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)	0.757	1.506	2.263
Head-on collisions (from Worksheet 2D)	0.052	0.055	0.108
Angle collisions (from Worksheet 2D)	0.386	0.563	0.949
Sideswipe (from Worksheet 2D)	0.105	0.088	0.193
Other multiple-vehicle collision (from Worksheet 2D)	0.079	0.546	0.625
Subtotal	1.378	2.758	4.137
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)	0.039	0.149	0.188
Collision with other object (from Worksheet 2F)	0.005	0.011	0.017
Other single-vehicle collision (from Worksheet 2F)	0.003	0.003	0.006
Single-vehicle noncollision (from Worksheet 2F)	0.013	0.002	0.015
Collision with pedestrian (from Worksheet 2G or 2I)	0.344	0.000	0.344
Collision with bicycle (from Worksheet 2J)	0.048	0.000	0.048
Subtotal	0.452	0.167	0.618
Total	1.830	2.925	4.755

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	4.755
Fatal and injury (FI)	1.830
Property damage only (PDO)	2.925

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections						
General Information			Location Information			
Analyst	SL		Roadway	Meridian Ave		
Agency or Company	H.W. Lochner		Intersection	Whiting St (East)		
Date Performed	12/01/21		Jurisdiction			
			Analysis Year	2031		
Input Data			Base Conditions	Site Conditions		
Intersection type (3ST, 3SG, 4ST, 4SG)			--	3SG		
AADT _{major} (veh/day)		AADT _{MAX} = 58,100 (veh/day)	--	34,750		
AADT _{minor} (veh/day)		AADT _{MAX} = 16,400 (veh/day)	--	4,875		
Intersection lighting (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	1		
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]			0	0		
Number of approaches with left-turn signal phasing [for 3SG, use maximum value of 3]			--	2		
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			
Sum of all pedestrian crossing volumes (PedVol) -- Signalized intersections only			3,200			
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	3		
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	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
<i>CMF 1i</i>	<i>CMF 2i</i>	<i>CMF 3i</i>	<i>CMF 4i</i>	<i>CMF 5i</i>	<i>CMF 6i</i>	<i>CMF_{COMB}</i>
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)
0.93	0.93	1.00	1.00	0.91	1.00	0.79

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									
	a	b	c							
Total	-12.13	1.11	0.26	0.33	5.387	1.000	5.387	0.79	1.00	4.246
Fatal and Injury (FI)	-11.58	1.02	0.17	0.30	1.697	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.332	1.789	0.79	1.00	1.410
Property Damage Only (PDO)	-13.24	1.14	0.30	0.36	3.412	$(5)_{TOTAL}-(5)_{FI}$ 0.668	3.598	0.79	1.00	2.836

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	1.410	1.000	2.836	4.246
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.549	0.774	0.546	1.548	2.322
Head-on collision	0.038	0.054	0.020	0.057	0.110
Angle collision	0.280	0.395	0.204	0.578	0.973
Sideswipe	0.076	0.107	0.032	0.091	0.198
Other multiple-vehicle collision	0.057	0.080	0.198	0.561	0.642

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_{bisv}	Combined CMFs	Calibration Factor, C_i	Predicted N_{bisv}
	from Table 12-12									
	a	b	c							
Total	-9.02	0.42	0.40	0.36	0.292	1.000	0.292	0.79	1.00	0.230
Fatal and Injury (FI)	-9.75	0.27	0.51	0.24	0.075	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.264	0.077	0.79	1.00	0.061
Property Damage Only (PDO)	-9.08	0.45	0.33	0.53	0.208	$(5)_{TOTAL}-(5)_{FI}$ 0.736	0.215	0.79	1.00	0.169

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	0.061	1.000	0.169	0.230
		(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	0.040	0.895	0.151	0.191
Collision with other object	0.091	0.006	0.069	0.012	0.017
Other single-vehicle collision	0.045	0.003	0.018	0.003	0.006
Single-vehicle noncollision	0.209	0.013	0.014	0.002	0.015

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)
4.15	1.00	1.12	4.65

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									
	a	b	c	d	e					
Total	-6.60	0.05	0.24	0.41	0.09	0.52	0.074	4.65	1.00	0.344
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	1.00	0.344

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	4.246	0.230	4.476	0.011	1.00	0.049
Fatal and injury (FI)	--	--	--	--	1.00	0.049

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)	0.774	1.548	2.322
Head-on collisions (from Worksheet 2D)	0.054	0.057	0.110
Angle collisions (from Worksheet 2D)	0.395	0.578	0.973
Sideswipe (from Worksheet 2D)	0.107	0.091	0.198
Other multiple-vehicle collision (from Worksheet 2D)	0.080	0.561	0.642
Subtotal	1.410	2.836	4.246
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)	0.040	0.151	0.191
Collision with other object (from Worksheet 2F)	0.006	0.012	0.017
Other single-vehicle collision (from Worksheet 2F)	0.003	0.003	0.006
Single-vehicle noncollision (from Worksheet 2F)	0.013	0.002	0.015
Collision with pedestrian (from Worksheet 2G or 2I)	0.344	0.000	0.344
Collision with bicycle (from Worksheet 2J)	0.049	0.000	0.049
Subtotal	0.454	0.169	0.623
Total	1.864	3.005	4.869

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	4.869
Fatal and injury (FI)	1.864
Property damage only (PDO)	3.005

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections						
General Information			Location Information			
Analyst	SL		Roadway	Meridian Ave		
Agency or Company	H.W. Lochner		Intersection	Whiting St (East)		
Date Performed	12/01/21		Jurisdiction			
			Analysis Year	2032		
Input Data			Base Conditions	Site Conditions		
Intersection type (3ST, 3SG, 4ST, 4SG)			--	3SG		
AADT _{major} (veh/day)		AADT _{MAX} = 58,100 (veh/day)	--	35,400		
AADT _{minor} (veh/day)		AADT _{MAX} = 16,400 (veh/day)	--	4,970		
Intersection lighting (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	1		
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]			0	0		
Number of approaches with left-turn signal phasing [for 3SG, use maximum value of 3]			--	2		
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			
Sum of all pedestrian crossing volumes (PedVol) -- Signalized intersections only			3,200			
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	3		
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	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
<i>CMF 1i</i>	<i>CMF 2i</i>	<i>CMF 3i</i>	<i>CMF 4i</i>	<i>CMF 5i</i>	<i>CMF 6i</i>	<i>CMF_{COMB}</i>
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)
0.93	0.93	1.00	1.00	0.91	1.00	0.79

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									
	a	b	c							
Total	-12.13	1.11	0.26	0.33	5.527	1.000	5.527	0.79	1.00	4.356
Fatal and Injury (FI)	-11.58	1.02	0.17	0.30	1.735	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.331	1.830	0.79	1.00	1.442
Property Damage Only (PDO)	-13.24	1.14	0.30	0.36	3.505	$(5)_{TOTAL}-(5)_{FI}$ 0.669	3.697	0.79	1.00	2.914

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	1.442	1.000	2.914	4.356
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.549	0.792	0.546	1.591	2.383
Head-on collision	0.038	0.055	0.020	0.058	0.113
Angle collision	0.280	0.404	0.204	0.594	0.998
Sideswipe	0.076	0.110	0.032	0.093	0.203
Other multiple-vehicle collision	0.057	0.082	0.198	0.577	0.659

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_{bisv}	Combined CMFs	Calibration Factor, C_i	Predicted N_{bisv}
	from Table 12-12									
	a	b	c							
Total	-9.02	0.42	0.40	0.36	0.296	1.000	0.296	0.79	1.00	0.234
Fatal and Injury (FI)	-9.75	0.27	0.51	0.24	0.076	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.264	0.078	0.79	1.00	0.062
Property Damage Only (PDO)	-9.08	0.45	0.33	0.53	0.211	$(5)_{TOTAL}-(5)_{FI}$ 0.736	0.218	0.79	1.00	0.172

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	0.062	1.000	0.172	0.234
		(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	0.040	0.895	0.154	0.194
Collision with other object	0.091	0.006	0.069	0.012	0.017
Other single-vehicle collision	0.045	0.003	0.018	0.003	0.006
Single-vehicle noncollision	0.209	0.013	0.014	0.002	0.015

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)
4.15	1.00	1.12	4.65

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} from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C _i	Predicted N _{pedi} (4)*(5)*(6)
	from Table 12-14									
	a	b	c	d	e					
Total	-6.60	0.05	0.24	0.41	0.09	0.52	0.074	4.65	1.00	0.345
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	1.00	0.345

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	4.356	0.234	4.589	0.011	1.00	0.050
Fatal and injury (FI)	--	--	--	--	1.00	0.050

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)	0.792	1.591	2.383
Head-on collisions (from Worksheet 2D)	0.055	0.058	0.113
Angle collisions (from Worksheet 2D)	0.404	0.594	0.998
Sideswipe (from Worksheet 2D)	0.110	0.093	0.203
Other multiple-vehicle collision (from Worksheet 2D)	0.082	0.577	0.659
Subtotal	1.442	2.914	4.356
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)	0.040	0.154	0.194
Collision with other object (from Worksheet 2F)	0.006	0.012	0.017
Other single-vehicle collision (from Worksheet 2F)	0.003	0.003	0.006
Single-vehicle noncollision (from Worksheet 2F)	0.013	0.002	0.015
Collision with pedestrian (from Worksheet 2G or 2I)	0.345	0.000	0.345
Collision with bicycle (from Worksheet 2J)	0.050	0.000	0.050
Subtotal	0.457	0.172	0.629
Total	1.899	3.086	4.985

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	4.985
Fatal and injury (FI)	1.899
Property damage only (PDO)	3.086

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections						
General Information			Location Information			
Analyst	SL		Roadway	Meridian Ave		
Agency or Company	H.W. Lochner		Intersection	Whiting St (East)		
Date Performed	12/01/21		Jurisdiction			
			Analysis Year	2033		
Input Data			Base Conditions	Site Conditions		
Intersection type (3ST, 3SG, 4ST, 4SG)			--	3SG		
AADT _{major} (veh/day)		AADT _{MAX} = 58,100 (veh/day)	--	36,050		
AADT _{minor} (veh/day)		AADT _{MAX} = 16,400 (veh/day)	--	5,065		
Intersection lighting (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	1		
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]			0	0		
Number of approaches with left-turn signal phasing [for 3SG, use maximum value of 3]			--	2		
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			
Sum of all pedestrian crossing volumes (PedVol) -- Signalized intersections only			3,200			
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	3		
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	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
<i>CMF 1i</i>	<i>CMF 2i</i>	<i>CMF 3i</i>	<i>CMF 4i</i>	<i>CMF 5i</i>	<i>CMF 6i</i>	<i>CMF_{COMB}</i>
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)
0.93	0.93	1.00	1.00	0.91	1.00	0.79

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									
	a	b	c							
Total	-12.13	1.11	0.26	0.33	5.667	1.000	5.667	0.79	1.00	4.467
Fatal and Injury (FI)	-11.58	1.02	0.17	0.30	1.773	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.330	1.870	0.79	1.00	1.474
Property Damage Only (PDO)	-13.24	1.14	0.30	0.36	3.599	$(5)_{TOTAL}-(5)_{FI}$ 0.670	3.797	0.79	1.00	2.993

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	1.474	1.000	2.993	4.467
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.549	0.809	0.546	1.634	2.443
Head-on collision	0.038	0.056	0.020	0.060	0.116
Angle collision	0.280	0.413	0.204	0.610	1.023
Sideswipe	0.076	0.112	0.032	0.096	0.208
Other multiple-vehicle collision	0.057	0.084	0.198	0.593	0.677

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_{bisv}	Combined CMFs	Calibration Factor, C_i	Predicted N_{bisv}
	from Table 12-12									
	a	b	c							
Total	-9.02	0.42	0.40	0.36	0.301	1.000	0.301	0.79	1.00	0.237
Fatal and Injury (FI)	-9.75	0.27	0.51	0.24	0.077	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.264	0.080	0.79	1.00	0.063
Property Damage Only (PDO)	-9.08	0.45	0.33	0.53	0.214	$(5)_{TOTAL}-(5)_{FI}$ 0.736	0.221	0.79	1.00	0.174

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	0.063	1.000	0.174	0.237
		(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	0.041	0.895	0.156	0.197
Collision with other object	0.091	0.006	0.069	0.012	0.018
Other single-vehicle collision	0.045	0.003	0.018	0.003	0.006
Single-vehicle noncollision	0.209	0.013	0.014	0.002	0.016

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)
4.15	1.00	1.12	4.65

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} from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C _i	Predicted N _{pedi} (4)*(5)*(6)
	from Table 12-14									
	a	b	c	d	e					
Total	-6.60	0.05	0.24	0.41	0.09	0.52	0.074	4.65	1.00	0.345
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	1.00	0.345

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	4.467	0.237	4.704	0.011	1.00	0.052
Fatal and injury (FI)	--	--	--	--	1.00	0.052

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)	0.809	1.634	2.443
Head-on collisions (from Worksheet 2D)	0.056	0.060	0.116
Angle collisions (from Worksheet 2D)	0.413	0.610	1.023
Sideswipe (from Worksheet 2D)	0.112	0.096	0.208
Other multiple-vehicle collision (from Worksheet 2D)	0.084	0.593	0.677
Subtotal	1.474	2.993	4.467
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)	0.041	0.156	0.197
Collision with other object (from Worksheet 2F)	0.006	0.012	0.018
Other single-vehicle collision (from Worksheet 2F)	0.003	0.003	0.006
Single-vehicle noncollision (from Worksheet 2F)	0.013	0.002	0.016
Collision with pedestrian (from Worksheet 2G or 2I)	0.345	0.000	0.345
Collision with bicycle (from Worksheet 2J)	0.052	0.000	0.052
Subtotal	0.459	0.174	0.634
Total	1.934	3.167	5.101

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	5.101
Fatal and injury (FI)	1.934
Property damage only (PDO)	3.167

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections						
General Information			Location Information			
Analyst	SL		Roadway	Meridian Ave		
Agency or Company	H.W. Lochner		Intersection	Whiting St (East)		
Date Performed	12/01/21		Jurisdiction			
			Analysis Year	2034		
Input Data			Base Conditions	Site Conditions		
Intersection type (3ST, 3SG, 4ST, 4SG)			--	3SG		
AADT _{major} (veh/day)		AADT _{MAX} = 58,100 (veh/day)	--	36,700		
AADT _{minor} (veh/day)		AADT _{MAX} = 16,400 (veh/day)	--	5,160		
Intersection lighting (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	1		
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]			0	0		
Number of approaches with left-turn signal phasing [for 3SG, use maximum value of 3]			--	2		
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			
Sum of all pedestrian crossing volumes (PedVol) -- Signalized intersections only			3,200			
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	3		
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	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
<i>CMF 1i</i>	<i>CMF 2i</i>	<i>CMF 3i</i>	<i>CMF 4i</i>	<i>CMF 5i</i>	<i>CMF 6i</i>	<i>CMF_{COMB}</i>
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)
0.93	0.93	1.00	1.00	0.91	1.00	0.79

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									
	a	b	c							
Total	-12.13	1.11	0.26	0.33	5.809	1.000	5.809	0.79	1.00	4.578
Fatal and Injury (FI)	-11.58	1.02	0.17	0.30	1.811	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.329	1.911	0.79	1.00	1.506
Property Damage Only (PDO)	-13.24	1.14	0.30	0.36	3.694	$(5)_{TOTAL}-(5)_{FI}$ 0.671	3.897	0.79	1.00	3.072

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	1.506	1.000	3.072	4.578
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.549	0.827	0.546	1.677	2.504
Head-on collision	0.038	0.057	0.020	0.061	0.119
Angle collision	0.280	0.422	0.204	0.627	1.048
Sideswipe	0.076	0.114	0.032	0.098	0.213
Other multiple-vehicle collision	0.057	0.086	0.198	0.608	0.694

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									
	a	b	c							
Total	-9.02	0.42	0.40	0.36	0.305	1.000	0.305	0.79	1.00	0.241
Fatal and Injury (FI)	-9.75	0.27	0.51	0.24	0.078	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.264	0.081	0.79	1.00	0.064
Property Damage Only (PDO)	-9.08	0.45	0.33	0.53	0.217	$(5)_{TOTAL}-(5)_{FI}$ 0.736	0.225	0.79	1.00	0.177

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	0.064	1.000	0.177	0.241
		(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	0.042	0.895	0.158	0.200
Collision with other object	0.091	0.006	0.069	0.012	0.018
Other single-vehicle collision	0.045	0.003	0.018	0.003	0.006
Single-vehicle noncollision	0.209	0.013	0.014	0.002	0.016

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)
4.15	1.00	1.12	4.65

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									
	a	b	c	d	e					
Total	-6.60	0.05	0.24	0.41	0.09	0.52	0.074	4.65	1.00	0.345
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	1.00	0.345

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	4.578	0.241	4.819	0.011	1.00	0.053
Fatal and injury (FI)	--	--	--	--	1.00	0.053

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)	0.827	1.677	2.504
Head-on collisions (from Worksheet 2D)	0.057	0.061	0.119
Angle collisions (from Worksheet 2D)	0.422	0.627	1.048
Sideswipe (from Worksheet 2D)	0.114	0.098	0.213
Other multiple-vehicle collision (from Worksheet 2D)	0.086	0.608	0.694
Subtotal	1.506	3.072	4.578
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)	0.042	0.158	0.200
Collision with other object (from Worksheet 2F)	0.006	0.012	0.018
Other single-vehicle collision (from Worksheet 2F)	0.003	0.003	0.006
Single-vehicle noncollision (from Worksheet 2F)	0.013	0.002	0.016
Collision with pedestrian (from Worksheet 2G or 2I)	0.345	0.000	0.345
Collision with bicycle (from Worksheet 2J)	0.053	0.000	0.053
Subtotal	0.462	0.177	0.639
Total	1.968	3.249	5.217

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	5.217
Fatal and injury (FI)	1.968
Property damage only (PDO)	3.249

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections						
General Information			Location Information			
Analyst	SL		Roadway	Meridian Ave		
Agency or Company	H.W. Lochner		Intersection	Whiting St (East)		
Date Performed	12/01/21		Jurisdiction			
			Analysis Year	2035		
Input Data			Base Conditions	Site Conditions		
Intersection type (3ST, 3SG, 4ST, 4SG)			--	3SG		
AADT _{major} (veh/day)		AADT _{MAX} = 58,100 (veh/day)	--	37,350		
AADT _{minor} (veh/day)		AADT _{MAX} = 16,400 (veh/day)	--	5,255		
Intersection lighting (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	1		
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]			0	0		
Number of approaches with left-turn signal phasing [for 3SG, use maximum value of 3]			--	2		
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			
Sum of all pedestrian crossing volumes (PedVol) -- Signalized intersections only			3,200			
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	3		
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	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
<i>CMF 1i</i>	<i>CMF 2i</i>	<i>CMF 3i</i>	<i>CMF 4i</i>	<i>CMF 5i</i>	<i>CMF 6i</i>	<i>CMF_{COMB}</i>
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)
0.93	0.93	1.00	1.00	0.91	1.00	0.79

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									
	a	b	c							
Total	-12.13	1.11	0.26	0.33	5.951	1.000	5.951	0.79	1.00	4.691
Fatal and Injury (FI)	-11.58	1.02	0.17	0.30	1.850	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.328	1.952	0.79	1.00	1.539
Property Damage Only (PDO)	-13.24	1.14	0.30	0.36	3.789	$(5)_{TOTAL}-(5)_{FI}$ 0.672	3.999	0.79	1.00	3.152

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	1.539	1.000	3.152	4.691
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.549	0.845	0.546	1.721	2.566
Head-on collision	0.038	0.058	0.020	0.063	0.122
Angle collision	0.280	0.431	0.204	0.643	1.074
Sideswipe	0.076	0.117	0.032	0.101	0.218
Other multiple-vehicle collision	0.057	0.088	0.198	0.624	0.712

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_{bisv}	Combined CMFs	Calibration Factor, C_i	Predicted N_{bisv}
	from Table 12-12									
	a	b	c							
Total	-9.02	0.42	0.40	0.36	0.310	1.000	0.310	0.79	1.00	0.244
Fatal and Injury (FI)	-9.75	0.27	0.51	0.24	0.079	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.264	0.082	0.79	1.00	0.065
Property Damage Only (PDO)	-9.08	0.45	0.33	0.53	0.220	$(5)_{TOTAL}-(5)_{FI}$ 0.736	0.228	0.79	1.00	0.180

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	0.065	1.000	0.180	0.244
		(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	0.042	0.895	0.161	0.203
Collision with other object	0.091	0.006	0.069	0.012	0.018
Other single-vehicle collision	0.045	0.003	0.018	0.003	0.006
Single-vehicle noncollision	0.209	0.014	0.014	0.003	0.016

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)
4.15	1.00	1.12	4.65

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									
	a	b	c	d	e					
Total	-6.60	0.05	0.24	0.41	0.09	0.52	0.074	4.65	1.00	0.346
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	1.00	0.346

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	4.691	0.244	4.935	0.011	1.00	0.054
Fatal and injury (FI)	--	--	--	--	1.00	0.054

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)	0.845	1.721	2.566
Head-on collisions (from Worksheet 2D)	0.058	0.063	0.122
Angle collisions (from Worksheet 2D)	0.431	0.643	1.074
Sideswipe (from Worksheet 2D)	0.117	0.101	0.218
Other multiple-vehicle collision (from Worksheet 2D)	0.088	0.624	0.712
Subtotal	1.539	3.152	4.691
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)	0.042	0.161	0.203
Collision with other object (from Worksheet 2F)	0.006	0.012	0.018
Other single-vehicle collision (from Worksheet 2F)	0.003	0.003	0.006
Single-vehicle noncollision (from Worksheet 2F)	0.014	0.003	0.016
Collision with pedestrian (from Worksheet 2G or 2I)	0.346	0.000	0.346
Collision with bicycle (from Worksheet 2J)	0.054	0.000	0.054
Subtotal	0.465	0.180	0.644
Total	2.003	3.332	5.335

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	5.335
Fatal and injury (FI)	2.003
Property damage only (PDO)	3.332

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections						
General Information			Location Information			
Analyst	SL		Roadway	Meridian Ave		
Agency or Company	H.W. Lochner		Intersection	Whiting St (East)		
Date Performed	12/01/21		Jurisdiction			
			Analysis Year	2036		
Input Data			Base Conditions	Site Conditions		
Intersection type (3ST, 3SG, 4ST, 4SG)			--	3SG		
AADT _{major} (veh/day)		AADT _{MAX} = 58,100 (veh/day)	--	38,000		
AADT _{minor} (veh/day)		AADT _{MAX} = 16,400 (veh/day)	--	5,350		
Intersection lighting (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	1		
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]			0	0		
Number of approaches with left-turn signal phasing [for 3SG, use maximum value of 3]			--	2		
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			
Sum of all pedestrian crossing volumes (PedVol) -- Signalized intersections only			3,200			
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	3		
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	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
<i>CMF 1i</i>	<i>CMF 2i</i>	<i>CMF 3i</i>	<i>CMF 4i</i>	<i>CMF 5i</i>	<i>CMF 6i</i>	<i>CMF_{COMB}</i>
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)
0.93	0.93	1.00	1.00	0.91	1.00	0.79

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									
	a	b	c							
Total	-12.13	1.11	0.26	0.33	6.095	1.000	6.095	0.79	1.00	4.804
Fatal and Injury (FI)	-11.58	1.02	0.17	0.30	1.888	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$	1.993	0.79	1.00	1.571
Property Damage Only (PDO)	-13.24	1.14	0.30	0.36	3.885	$(5)_{TOTAL}-(5)_{FI}$	4.101	0.79	1.00	3.232
						0.327				
						0.673				

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	1.571	1.000	3.232	4.804
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.549	0.863	0.546	1.765	2.627
Head-on collision	0.038	0.060	0.020	0.065	0.124
Angle collision	0.280	0.440	0.204	0.659	1.099
Sideswipe	0.076	0.119	0.032	0.103	0.223
Other multiple-vehicle collision	0.057	0.090	0.198	0.640	0.730

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_{bisv}	Combined CMFs	Calibration Factor, C_i	Predicted N_{bisv}
	from Table 12-12									
	a	b	c							
Total	-9.02	0.42	0.40	0.36	0.314	1.000	0.314	0.79	1.00	0.248
Fatal and Injury (FI)	-9.75	0.27	0.51	0.24	0.080	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$	0.083	0.79	1.00	0.066
Property Damage Only (PDO)	-9.08	0.45	0.33	0.53	0.223	$(5)_{TOTAL}-(5)_{FI}$	0.231	0.79	1.00	0.182
						0.264				
						0.736				

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	0.066	1.000	0.182	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	0.001	0.000	0.003	0.001	0.001
Collision with fixed object	0.653	0.043	0.895	0.163	0.206
Collision with other object	0.091	0.006	0.069	0.013	0.019
Other single-vehicle collision	0.045	0.003	0.018	0.003	0.006
Single-vehicle noncollision	0.209	0.014	0.014	0.003	0.016

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)
4.15	1.00	1.12	4.65

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									
	a	b	c	d	e					
Total	-6.60	0.05	0.24	0.41	0.09	0.52	0.074	4.65	1.00	0.346
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	1.00	0.346

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	4.804	0.248	5.051	0.011	1.00	0.056
Fatal and injury (FI)	--	--	--	--	1.00	0.056

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)	0.863	1.765	2.627
Head-on collisions (from Worksheet 2D)	0.060	0.065	0.124
Angle collisions (from Worksheet 2D)	0.440	0.659	1.099
Sideswipe (from Worksheet 2D)	0.119	0.103	0.223
Other multiple-vehicle collision (from Worksheet 2D)	0.090	0.640	0.730
Subtotal	1.571	3.232	4.804
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)	0.043	0.163	0.206
Collision with other object (from Worksheet 2F)	0.006	0.013	0.019
Other single-vehicle collision (from Worksheet 2F)	0.003	0.003	0.006
Single-vehicle noncollision (from Worksheet 2F)	0.014	0.003	0.016
Collision with pedestrian (from Worksheet 2G or 2I)	0.346	0.000	0.346
Collision with bicycle (from Worksheet 2J)	0.056	0.000	0.056
Subtotal	0.467	0.182	0.649
Total	2.038	3.415	5.453

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	5.453
Fatal and injury (FI)	2.038
Property damage only (PDO)	3.415

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections						
General Information			Location Information			
Analyst	SL		Roadway	Meridian Ave		
Agency or Company	H.W. Lochner		Intersection	Whiting St (East)		
Date Performed	12/01/21		Jurisdiction			
			Analysis Year	2037		
Input Data			Base Conditions	Site Conditions		
Intersection type (3ST, 3SG, 4ST, 4SG)			--	3SG		
AADT _{major} (veh/day)		AADT _{MAX} = 58,100 (veh/day)	--	38,650		
AADT _{minor} (veh/day)		AADT _{MAX} = 16,400 (veh/day)	--	5,445		
Intersection lighting (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	1		
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]			0	0		
Number of approaches with left-turn signal phasing [for 3SG, use maximum value of 3]			--	2		
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			
Sum of all pedestrian crossing volumes (PedVol) -- Signalized intersections only			3,200			
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	3		
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	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
<i>CMF 1i</i>	<i>CMF 2i</i>	<i>CMF 3i</i>	<i>CMF 4i</i>	<i>CMF 5i</i>	<i>CMF 6i</i>	<i>CMF_{COMB}</i>
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)
0.93	0.93	1.00	1.00	0.91	1.00	0.79

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									
	a	b	c							
Total	-12.13	1.11	0.26	0.33	6.239	1.000	6.239	0.79	1.00	4.917
Fatal and Injury (FI)	-11.58	1.02	0.17	0.30	1.927	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$	2.035	0.79	1.00	1.604
Property Damage Only (PDO)	-13.24	1.14	0.30	0.36	3.982	$(5)_{TOTAL}-(5)_{FI}$	4.204	0.79	1.00	3.314
						0.326				
						0.674				

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	1.604	1.000	3.314	4.917
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.549	0.880	0.546	1.809	2.690
Head-on collision	0.038	0.061	0.020	0.066	0.127
Angle collision	0.280	0.449	0.204	0.676	1.125
Sideswipe	0.076	0.122	0.032	0.106	0.228
Other multiple-vehicle collision	0.057	0.091	0.198	0.656	0.748

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_{bisv}	Combined CMFs	Calibration Factor, C_i	Predicted N_{bisv}
	from Table 12-12									
	a	b	c							
Total	-9.02	0.42	0.40	0.36	0.319	1.000	0.319	0.79	1.00	0.251
Fatal and Injury (FI)	-9.75	0.27	0.51	0.24	0.081	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$	0.084	0.79	1.00	0.066
Property Damage Only (PDO)	-9.08	0.45	0.33	0.53	0.226	$(5)_{TOTAL}-(5)_{FI}$	0.235	0.79	1.00	0.185
						0.264				
						0.736				

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	0.066	1.000	0.185	0.251
		(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	0.043	0.895	0.165	0.209
Collision with other object	0.091	0.006	0.069	0.013	0.019
Other single-vehicle collision	0.045	0.003	0.018	0.003	0.006
Single-vehicle noncollision	0.209	0.014	0.014	0.003	0.016

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)
4.15	1.00	1.12	4.65

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									
	a	b	c	d	e					
Total	-6.60	0.05	0.24	0.41	0.09	0.52	0.075	4.65	1.00	0.346
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	1.00	0.346

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	4.917	0.251	5.169	0.011	1.00	0.057
Fatal and injury (FI)	--	--	--	--	1.00	0.057

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)	0.880	1.809	2.690
Head-on collisions (from Worksheet 2D)	0.061	0.066	0.127
Angle collisions (from Worksheet 2D)	0.449	0.676	1.125
Sideswipe (from Worksheet 2D)	0.122	0.106	0.228
Other multiple-vehicle collision (from Worksheet 2D)	0.091	0.656	0.748
Subtotal	1.604	3.314	4.917
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)	0.043	0.165	0.209
Collision with other object (from Worksheet 2F)	0.006	0.013	0.019
Other single-vehicle collision (from Worksheet 2F)	0.003	0.003	0.006
Single-vehicle noncollision (from Worksheet 2F)	0.014	0.003	0.016
Collision with pedestrian (from Worksheet 2G or 2I)	0.346	0.000	0.346
Collision with bicycle (from Worksheet 2J)	0.057	0.000	0.057
Subtotal	0.470	0.185	0.655
Total	2.073	3.499	5.572

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	5.572
Fatal and injury (FI)	2.073
Property damage only (PDO)	3.499

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections						
General Information			Location Information			
Analyst	SL		Roadway	Meridian Ave		
Agency or Company	H.W. Lochner		Intersection	Whiting St (East)		
Date Performed	12/01/21		Jurisdiction			
			Analysis Year	2038		
Input Data			Base Conditions	Site Conditions		
Intersection type (3ST, 3SG, 4ST, 4SG)			--	3SG		
AADT _{major} (veh/day)		AADT _{MAX} = 58,100 (veh/day)	--	39,300		
AADT _{minor} (veh/day)		AADT _{MAX} = 16,400 (veh/day)	--	5,540		
Intersection lighting (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	1		
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]			0	0		
Number of approaches with left-turn signal phasing [for 3SG, use maximum value of 3]			--	2		
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			
Sum of all pedestrian crossing volumes (PedVol) -- Signalized intersections only			3,200			
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	3		
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	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
<i>CMF 1i</i>	<i>CMF 2i</i>	<i>CMF 3i</i>	<i>CMF 4i</i>	<i>CMF 5i</i>	<i>CMF 6i</i>	<i>CMF_{COMB}</i>
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)
0.93	0.93	1.00	1.00	0.91	1.00	0.79

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									
	a	b	c							
Total	-12.13	1.11	0.26	0.33	6.384	1.000	6.384	0.79	1.00	5.032
Fatal and Injury (FI)	-11.58	1.02	0.17	0.30	1.966	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.325	2.076	0.79	1.00	1.636
Property Damage Only (PDO)	-13.24	1.14	0.30	0.36	4.079	$(5)_{TOTAL}-(5)_{FI}$ 0.675	4.308	0.79	1.00	3.395

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	1.636	1.000	3.395	5.032
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.549	0.898	0.546	1.854	2.752
Head-on collision	0.038	0.062	0.020	0.068	0.130
Angle collision	0.280	0.458	0.204	0.693	1.151
Sideswipe	0.076	0.124	0.032	0.109	0.233
Other multiple-vehicle collision	0.057	0.093	0.198	0.672	0.766

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_{bisv}	Combined CMFs	Calibration Factor, C_i	Predicted N_{bisv}
	from Table 12-12									
	a	b	c							
Total	-9.02	0.42	0.40	0.36	0.323	1.000	0.323	0.79	1.00	0.255
Fatal and Injury (FI)	-9.75	0.27	0.51	0.24	0.082	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.265	0.086	0.79	1.00	0.067
Property Damage Only (PDO)	-9.08	0.45	0.33	0.53	0.229	$(5)_{TOTAL}-(5)_{FI}$ 0.735	0.238	0.79	1.00	0.187

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	0.187	0.255
		(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	0.044	0.895	0.168	0.212
Collision with other object	0.091	0.006	0.069	0.013	0.019
Other single-vehicle collision	0.045	0.003	0.018	0.003	0.006
Single-vehicle noncollision	0.209	0.014	0.014	0.003	0.017

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)
4.15	1.00	1.12	4.65

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									
	a	b	c	d	e					
Total	-6.60	0.05	0.24	0.41	0.09	0.52	0.075	4.65	1.00	0.347
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	1.00	0.347

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	5.032	0.255	5.287	0.011	1.00	0.058
Fatal and injury (FI)	--	--	--	--	1.00	0.058

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)	0.898	1.854	2.752
Head-on collisions (from Worksheet 2D)	0.062	0.068	0.130
Angle collisions (from Worksheet 2D)	0.458	0.693	1.151
Sideswipe (from Worksheet 2D)	0.124	0.109	0.233
Other multiple-vehicle collision (from Worksheet 2D)	0.093	0.672	0.766
Subtotal	1.636	3.395	5.032
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)	0.044	0.168	0.212
Collision with other object (from Worksheet 2F)	0.006	0.013	0.019
Other single-vehicle collision (from Worksheet 2F)	0.003	0.003	0.006
Single-vehicle noncollision (from Worksheet 2F)	0.014	0.003	0.017
Collision with pedestrian (from Worksheet 2G or 2I)	0.347	0.000	0.347
Collision with bicycle (from Worksheet 2J)	0.058	0.000	0.058
Subtotal	0.472	0.187	0.660
Total	2.109	3.583	5.692

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	5.692
Fatal and injury (FI)	2.109
Property damage only (PDO)	3.583

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections						
General Information			Location Information			
Analyst	SL		Roadway	Meridian Ave		
Agency or Company	H.W. Lochner		Intersection	Whiting St (East)		
Date Performed	12/01/21		Jurisdiction			
			Analysis Year	2039		
Input Data			Base Conditions	Site Conditions		
Intersection type (3ST, 3SG, 4ST, 4SG)			--	3SG		
AADT _{major} (veh/day)		AADT _{MAX} = 58,100 (veh/day)	--	39,950		
AADT _{minor} (veh/day)		AADT _{MAX} = 16,400 (veh/day)	--	5,635		
Intersection lighting (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	1		
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]			0	0		
Number of approaches with left-turn signal phasing [for 3SG, use maximum value of 3]			--	2		
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			
Sum of all pedestrian crossing volumes (PedVol) -- Signalized intersections only			3,200			
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	3		
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	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
<i>CMF 1i</i>	<i>CMF 2i</i>	<i>CMF 3i</i>	<i>CMF 4i</i>	<i>CMF 5i</i>	<i>CMF 6i</i>	<i>CMF_{COMB}</i>
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)
0.93	0.93	1.00	1.00	0.91	1.00	0.79

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									
	a	b	c							
Total	-12.13	1.11	0.26	0.33	6.530	1.000	6.530	0.79	1.00	5.147
Fatal and Injury (FI)	-11.58	1.02	0.17	0.30	2.005	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.324	2.118	0.79	1.00	1.669
Property Damage Only (PDO)	-13.24	1.14	0.30	0.36	4.178	$(5)_{TOTAL}-(5)_{FI}$ 0.676	4.413	0.79	1.00	3.478

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	1.669	1.000	3.478	5.147
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.549	0.916	0.546	1.899	2.815
Head-on collision	0.038	0.063	0.020	0.070	0.133
Angle collision	0.280	0.467	0.204	0.709	1.177
Sideswipe	0.076	0.127	0.032	0.111	0.238
Other multiple-vehicle collision	0.057	0.095	0.198	0.689	0.784

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_{bisv}	Combined CMFs	Calibration Factor, C_i	Predicted N_{bisv}
	from Table 12-12									
	a	b	c							
Total	-9.02	0.42	0.40	0.36	0.328	1.000	0.328	0.79	1.00	0.258
Fatal and Injury (FI)	-9.75	0.27	0.51	0.24	0.083	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.265	0.087	0.79	1.00	0.068
Property Damage Only (PDO)	-9.08	0.45	0.33	0.53	0.232	$(5)_{TOTAL}-(5)_{FI}$ 0.735	0.241	0.79	1.00	0.190

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	0.068	1.000	0.190	0.258
		(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	0.045	0.895	0.170	0.215
Collision with other object	0.091	0.006	0.069	0.013	0.019
Other single-vehicle collision	0.045	0.003	0.018	0.003	0.006
Single-vehicle noncollision	0.209	0.014	0.014	0.003	0.017

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)
4.15	1.00	1.12	4.65

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									
	a	b	c	d	e					
Total	-6.60	0.05	0.24	0.41	0.09	0.52	0.075	4.65	1.00	0.347
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	1.00	0.347

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	5.147	0.258	5.405	0.011	1.00	0.059
Fatal and injury (FI)	--	--	--	--	1.00	0.059

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)	0.916	1.899	2.815
Head-on collisions (from Worksheet 2D)	0.063	0.070	0.133
Angle collisions (from Worksheet 2D)	0.467	0.709	1.177
Sideswipe (from Worksheet 2D)	0.127	0.111	0.238
Other multiple-vehicle collision (from Worksheet 2D)	0.095	0.689	0.784
Subtotal	1.669	3.478	5.147
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)	0.045	0.170	0.215
Collision with other object (from Worksheet 2F)	0.006	0.013	0.019
Other single-vehicle collision (from Worksheet 2F)	0.003	0.003	0.006
Single-vehicle noncollision (from Worksheet 2F)	0.014	0.003	0.017
Collision with pedestrian (from Worksheet 2G or 2I)	0.347	0.000	0.347
Collision with bicycle (from Worksheet 2J)	0.059	0.000	0.059
Subtotal	0.475	0.190	0.665
Total	2.144	3.668	5.812

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	5.812
Fatal and injury (FI)	2.144
Property damage only (PDO)	3.668

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections						
General Information			Location Information			
Analyst	SL		Roadway	Meridian Ave		
Agency or Company	H.W. Lochner		Intersection	Whiting St (East)		
Date Performed	12/01/21		Jurisdiction			
			Analysis Year	2040		
Input Data			Base Conditions	Site Conditions		
Intersection type (3ST, 3SG, 4ST, 4SG)			--	3SG		
AADT _{major} (veh/day)		AADT _{MAX} = 58,100 (veh/day)	--	40,600		
AADT _{minor} (veh/day)		AADT _{MAX} = 16,400 (veh/day)	--	5,730		
Intersection lighting (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	1		
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]			0	0		
Number of approaches with left-turn signal phasing [for 3SG, use maximum value of 3]			--	2		
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			
Sum of all pedestrian crossing volumes (PedVol) -- Signalized intersections only			3,200			
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	3		
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	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
<i>CMF 1i</i>	<i>CMF 2i</i>	<i>CMF 3i</i>	<i>CMF 4i</i>	<i>CMF 5i</i>	<i>CMF 6i</i>	<i>CMF_{COMB}</i>
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)
0.93	0.93	1.00	1.00	0.91	1.00	0.79

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									
	a	b	c							
Total	-12.13	1.11	0.26	0.33	6.677	1.000	6.677	0.79	1.00	5.263
Fatal and Injury (FI)	-11.58	1.02	0.17	0.30	2.044	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.323	2.159	0.79	1.00	1.702
Property Damage Only (PDO)	-13.24	1.14	0.30	0.36	4.277	$(5)_{TOTAL}-(5)_{FI}$ 0.677	4.518	0.79	1.00	3.561

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	1.702	1.000	3.561	5.263
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.549	0.934	0.546	1.944	2.879
Head-on collision	0.038	0.065	0.020	0.071	0.136
Angle collision	0.280	0.477	0.204	0.726	1.203
Sideswipe	0.076	0.129	0.032	0.114	0.243
Other multiple-vehicle collision	0.057	0.097	0.198	0.705	0.802

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_{bisv}	Combined CMFs	Calibration Factor, C_i	Predicted N_{bisv}
	from Table 12-12									
	a	b	c							
Total	-9.02	0.42	0.40	0.36	0.332	1.000	0.332	0.79	1.00	0.262
Fatal and Injury (FI)	-9.75	0.27	0.51	0.24	0.084	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.265	0.088	0.79	1.00	0.069
Property Damage Only (PDO)	-9.08	0.45	0.33	0.53	0.235	$(5)_{TOTAL}-(5)_{FI}$ 0.735	0.244	0.79	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	0.069	1.000	0.193	0.262
		(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	0.045	0.895	0.172	0.218
Collision with other object	0.091	0.006	0.069	0.013	0.020
Other single-vehicle collision	0.045	0.003	0.018	0.003	0.007
Single-vehicle noncollision	0.209	0.014	0.014	0.003	0.017

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)
4.15	1.00	1.12	4.65

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									
	a	b	c	d	e					
Total	-6.60	0.05	0.24	0.41	0.09	0.52	0.075	4.65	1.00	0.347
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	1.00	0.347

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	5.263	0.262	5.525	0.011	1.00	0.061
Fatal and injury (FI)	--	--	--	--	1.00	0.061

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)	0.934	1.944	2.879
Head-on collisions (from Worksheet 2D)	0.065	0.071	0.136
Angle collisions (from Worksheet 2D)	0.477	0.726	1.203
Sideswipe (from Worksheet 2D)	0.129	0.114	0.243
Other multiple-vehicle collision (from Worksheet 2D)	0.097	0.705	0.802
Subtotal	1.702	3.561	5.263
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)	0.045	0.172	0.218
Collision with other object (from Worksheet 2F)	0.006	0.013	0.020
Other single-vehicle collision (from Worksheet 2F)	0.003	0.003	0.007
Single-vehicle noncollision (from Worksheet 2F)	0.014	0.003	0.017
Collision with pedestrian (from Worksheet 2G or 2I)	0.347	0.000	0.347
Collision with bicycle (from Worksheet 2J)	0.061	0.000	0.061
Subtotal	0.477	0.193	0.670
Total	2.179	3.754	5.933

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	5.933
Fatal and injury (FI)	2.179
Property damage only (PDO)	3.754

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections						
General Information			Location Information			
Analyst	SL		Roadway	Meridian Ave		
Agency or Company	H.W. Lochner		Intersection	Whiting St (East)		
Date Performed	12/01/21		Jurisdiction			
			Analysis Year	2041		
Input Data			Base Conditions	Site Conditions		
Intersection type (3ST, 3SG, 4ST, 4SG)			--	3SG		
AADT _{major} (veh/day)		AADT _{MAX} = 58,100 (veh/day)	--	41,250		
AADT _{minor} (veh/day)		AADT _{MAX} = 16,400 (veh/day)	--	5,825		
Intersection lighting (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	1		
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]			0	0		
Number of approaches with left-turn signal phasing [for 3SG, use maximum value of 3]			--	2		
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			
Sum of all pedestrian crossing volumes (PedVol) -- Signalized intersections only			3,200			
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	3		
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	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
<i>CMF 1i</i>	<i>CMF 2i</i>	<i>CMF 3i</i>	<i>CMF 4i</i>	<i>CMF 5i</i>	<i>CMF 6i</i>	<i>CMF_{COMB}</i>
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)
0.93	0.93	1.00	1.00	0.91	1.00	0.79

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									
	a	b	c							
Total	-12.13	1.11	0.26	0.33	6.825	1.000	6.825	0.79	1.00	5.379
Fatal and Injury (FI)	-11.58	1.02	0.17	0.30	2.083	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.322	2.201	0.79	1.00	1.735
Property Damage Only (PDO)	-13.24	1.14	0.30	0.36	4.376	$(5)_{TOTAL}-(5)_{FI}$ 0.678	4.624	0.79	1.00	3.645

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	1.735	1.000	3.645	5.379
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.549	0.952	0.546	1.990	2.942
Head-on collision	0.038	0.066	0.020	0.073	0.139
Angle collision	0.280	0.486	0.204	0.743	1.229
Sideswipe	0.076	0.132	0.032	0.117	0.248
Other multiple-vehicle collision	0.057	0.099	0.198	0.722	0.821

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_{bisv}	Combined CMFs	Calibration Factor, C_i	Predicted N_{bisv}
	from Table 12-12									
	a	b	c							
Total	-9.02	0.42	0.40	0.36	0.337	1.000	0.337	0.79	1.00	0.265
Fatal and Injury (FI)	-9.75	0.27	0.51	0.24	0.086	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.265	0.089	0.79	1.00	0.070
Property Damage Only (PDO)	-9.08	0.45	0.33	0.53	0.238	$(5)_{TOTAL}-(5)_{FI}$ 0.735	0.248	0.79	1.00	0.195

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	0.070	1.000	0.195	0.265
		(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	0.046	0.895	0.175	0.221
Collision with other object	0.091	0.006	0.069	0.013	0.020
Other single-vehicle collision	0.045	0.003	0.018	0.004	0.007
Single-vehicle noncollision	0.209	0.015	0.014	0.003	0.017

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)
4.15	1.00	1.12	4.65

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									
	a	b	c	d	e					
Total	-6.60	0.05	0.24	0.41	0.09	0.52	0.075	4.65	1.00	0.348
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	1.00	0.348

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	5.379	0.265	5.645	0.011	1.00	0.062
Fatal and injury (FI)	--	--	--	--	1.00	0.062

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)	0.952	1.990	2.942
Head-on collisions (from Worksheet 2D)	0.066	0.073	0.139
Angle collisions (from Worksheet 2D)	0.486	0.743	1.229
Sideswipe (from Worksheet 2D)	0.132	0.117	0.248
Other multiple-vehicle collision (from Worksheet 2D)	0.099	0.722	0.821
Subtotal	1.735	3.645	5.379
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)	0.046	0.175	0.221
Collision with other object (from Worksheet 2F)	0.006	0.013	0.020
Other single-vehicle collision (from Worksheet 2F)	0.003	0.004	0.007
Single-vehicle noncollision (from Worksheet 2F)	0.015	0.003	0.017
Collision with pedestrian (from Worksheet 2G or 2I)	0.348	0.000	0.348
Collision with bicycle (from Worksheet 2J)	0.062	0.000	0.062
Subtotal	0.480	0.195	0.675
Total	2.215	3.840	6.055

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	6.055
Fatal and injury (FI)	2.215
Property damage only (PDO)	3.840

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections						
General Information			Location Information			
Analyst	SL		Roadway	Meridian Ave		
Agency or Company	H.W. Lochner		Intersection	Whiting St (East)		
Date Performed	12/01/21		Jurisdiction			
			Analysis Year	2042		
Input Data			Base Conditions	Site Conditions		
Intersection type (3ST, 3SG, 4ST, 4SG)			--	3SG		
AADT _{major} (veh/day)		AADT _{MAX} = 58,100 (veh/day)	--	41,900		
AADT _{minor} (veh/day)		AADT _{MAX} = 16,400 (veh/day)	--	5,920		
Intersection lighting (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	1		
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]			0	0		
Number of approaches with left-turn signal phasing [for 3SG, use maximum value of 3]			--	2		
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			
Sum of all pedestrian crossing volumes (PedVol) -- Signalized intersections only			3,200			
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	3		
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	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
<i>CMF 1i</i>	<i>CMF 2i</i>	<i>CMF 3i</i>	<i>CMF 4i</i>	<i>CMF 5i</i>	<i>CMF 6i</i>	<i>CMF_{COMB}</i>
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)
0.93	0.93	1.00	1.00	0.91	1.00	0.79

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									
	a	b	c							
Total	-12.13	1.11	0.26	0.33	6.974	1.000	6.974	0.79	1.00	5.497
Fatal and Injury (FI)	-11.58	1.02	0.17	0.30	2.122	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.322	2.243	0.79	1.00	1.768
Property Damage Only (PDO)	-13.24	1.14	0.30	0.36	4.477	$(5)_{TOTAL}-(5)_{FI}$ 0.678	4.731	0.79	1.00	3.729

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	1.768	1.000	3.729	5.497
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.549	0.971	0.546	2.036	3.006
Head-on collision	0.038	0.067	0.020	0.075	0.142
Angle collision	0.280	0.495	0.204	0.761	1.256
Sideswipe	0.076	0.134	0.032	0.119	0.254
Other multiple-vehicle collision	0.057	0.101	0.198	0.738	0.839

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_{bisv}	Combined CMFs	Calibration Factor, C_i	Predicted N_{bisv}
	from Table 12-12									
	a	b	c							
Total	-9.02	0.42	0.40	0.36	0.341	1.000	0.341	0.79	1.00	0.269
Fatal and Injury (FI)	-9.75	0.27	0.51	0.24	0.087	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.265	0.090	0.79	1.00	0.071
Property Damage Only (PDO)	-9.08	0.45	0.33	0.53	0.241	$(5)_{TOTAL}-(5)_{FI}$ 0.735	0.251	0.79	1.00	0.198

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	0.071	1.000	0.198	0.269
		(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	0.046	0.895	0.177	0.223
Collision with other object	0.091	0.006	0.069	0.014	0.020
Other single-vehicle collision	0.045	0.003	0.018	0.004	0.007
Single-vehicle noncollision	0.209	0.015	0.014	0.003	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)
4.15	1.00	1.12	4.65

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									
	a	b	c	d	e					
Total	-6.60	0.05	0.24	0.41	0.09	0.52	0.075	4.65	1.00	0.348
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	1.00	0.348

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	5.497	0.269	5.765	0.011	1.00	0.063
Fatal and injury (FI)	--	--	--	--	1.00	0.063

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)	0.971	2.036	3.006
Head-on collisions (from Worksheet 2D)	0.067	0.075	0.142
Angle collisions (from Worksheet 2D)	0.495	0.761	1.256
Sideswipe (from Worksheet 2D)	0.134	0.119	0.254
Other multiple-vehicle collision (from Worksheet 2D)	0.101	0.738	0.839
Subtotal	1.768	3.729	5.497
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)	0.046	0.177	0.223
Collision with other object (from Worksheet 2F)	0.006	0.014	0.020
Other single-vehicle collision (from Worksheet 2F)	0.003	0.004	0.007
Single-vehicle noncollision (from Worksheet 2F)	0.015	0.003	0.018
Collision with pedestrian (from Worksheet 2G or 2I)	0.348	0.000	0.348
Collision with bicycle (from Worksheet 2J)	0.063	0.000	0.063
Subtotal	0.483	0.198	0.680
Total	2.250	3.927	6.177

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	6.177
Fatal and injury (FI)	2.250
Property damage only (PDO)	3.927

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections						
General Information			Location Information			
Analyst	SL		Roadway	Meridian Ave		
Agency or Company	H.W. Lochner		Intersection	Whiting St (East)		
Date Performed	12/01/21		Jurisdiction			
			Analysis Year	2043		
Input Data			Base Conditions	Site Conditions		
Intersection type (3ST, 3SG, 4ST, 4SG)			--	3SG		
AADT _{major} (veh/day)		AADT _{MAX} = 58,100 (veh/day)	--	42,550		
AADT _{minor} (veh/day)		AADT _{MAX} = 16,400 (veh/day)	--	6,015		
Intersection lighting (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	1		
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]			0	0		
Number of approaches with left-turn signal phasing [for 3SG, use maximum value of 3]			--	2		
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			
Sum of all pedestrian crossing volumes (PedVol) -- Signalized intersections only			3,200			
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	3		
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	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
<i>CMF 1i</i>	<i>CMF 2i</i>	<i>CMF 3i</i>	<i>CMF 4i</i>	<i>CMF 5i</i>	<i>CMF 6i</i>	<i>CMF_{COMB}</i>
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)
0.93	0.93	1.00	1.00	0.91	1.00	0.79

Worksheet 2C -- Multiple-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections										
(1) Crash Severity Level	(2) SPF Coefficients			(3) Overdispersion Parameter, k	(4) Initial N_{bimv}	(5) Proportion of Total Crashes	(6) Adjusted N_{bimv}	(7) Combined CMFs	(8) Calibration Factor, C_i	(9) 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	7.123	1.000	7.123	0.79	1.00	5.614
Fatal and Injury (FI)	-11.58	1.02	0.17	0.30	2.162	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.321	2.285	0.79	1.00	1.801
Property Damage Only (PDO)	-13.24	1.14	0.30	0.36	4.578	$(5)_{TOTAL}-(5)_{FI}$ 0.679	4.838	0.79	1.00	3.814

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections					
(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted $N_{bimv (FI)}$ (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted $N_{bimv (PDO)}$ (crashes/year)	(6) 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	1.801	1.000	3.814	5.614
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.549	0.989	0.546	2.082	3.071
Head-on collision	0.038	0.068	0.020	0.076	0.145
Angle collision	0.280	0.504	0.204	0.778	1.282
Sideswipe	0.076	0.137	0.032	0.122	0.259
Other multiple-vehicle collision	0.057	0.103	0.198	0.755	0.858

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections										
(1) Crash Severity Level	(2) SPF Coefficients			(3) Overdispersion Parameter, k	(4) Initial N_{bisv}	(5) Proportion of Total Crashes	(6) Adjusted N_{bisv}	(7) Combined CMFs	(8) Calibration Factor, C_i	(9) 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	0.346	1.000	0.346	0.79	1.00	0.272
Fatal and Injury (FI)	-9.75	0.27	0.51	0.24	0.088	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.265	0.091	0.79	1.00	0.072
Property Damage Only (PDO)	-9.08	0.45	0.33	0.53	0.244	$(5)_{TOTAL}-(5)_{FI}$ 0.735	0.254	0.79	1.00	0.200

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	0.072	1.000	0.200	0.272
		(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	0.047	0.895	0.179	0.226
Collision with other object	0.091	0.007	0.069	0.014	0.020
Other single-vehicle collision	0.045	0.003	0.018	0.004	0.007
Single-vehicle noncollision	0.209	0.015	0.014	0.003	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)
4.15	1.00	1.12	4.65

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} from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C _i	Predicted N _{pedi} (4)*(5)*(6)
	from Table 12-14									
	a	b	c	d	e					
Total	-6.60	0.05	0.24	0.41	0.09	0.52	0.075	4.65	1.00	0.348
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	1.00	0.348

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	5.614	0.272	5.887	0.011	1.00	0.065
Fatal and injury (FI)	--	--	--	--	1.00	0.065

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)	0.989	2.082	3.071
Head-on collisions (from Worksheet 2D)	0.068	0.076	0.145
Angle collisions (from Worksheet 2D)	0.504	0.778	1.282
Sideswipe (from Worksheet 2D)	0.137	0.122	0.259
Other multiple-vehicle collision (from Worksheet 2D)	0.103	0.755	0.858
Subtotal	1.801	3.814	5.614
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)	0.047	0.179	0.226
Collision with other object (from Worksheet 2F)	0.007	0.014	0.020
Other single-vehicle collision (from Worksheet 2F)	0.003	0.004	0.007
Single-vehicle noncollision (from Worksheet 2F)	0.015	0.003	0.018
Collision with pedestrian (from Worksheet 2G or 2I)	0.348	0.000	0.348
Collision with bicycle (from Worksheet 2J)	0.065	0.000	0.065
Subtotal	0.485	0.200	0.685
Total	2.286	4.014	6.300

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	6.300
Fatal and injury (FI)	2.286
Property damage only (PDO)	4.014

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections						
General Information			Location Information			
Analyst	SL		Roadway	Meridian Ave		
Agency or Company	H.W. Lochner		Intersection	Whiting St (East)		
Date Performed	12/01/21		Jurisdiction			
			Analysis Year	2044		
Input Data			Base Conditions	Site Conditions		
Intersection type (3ST, 3SG, 4ST, 4SG)			--	3SG		
AADT _{major} (veh/day)		AADT _{MAX} = 58,100 (veh/day)	--	43,200		
AADT _{minor} (veh/day)		AADT _{MAX} = 16,400 (veh/day)	--	6,110		
Intersection lighting (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	1		
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]			0	0		
Number of approaches with left-turn signal phasing [for 3SG, use maximum value of 3]			--	2		
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			
Sum of all pedestrian crossing volumes (PedVol) -- Signalized intersections only			3,200			
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	3		
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	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
<i>CMF 1i</i>	<i>CMF 2i</i>	<i>CMF 3i</i>	<i>CMF 4i</i>	<i>CMF 5i</i>	<i>CMF 6i</i>	<i>CMF_{COMB}</i>
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)
0.93	0.93	1.00	1.00	0.91	1.00	0.79

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									
	a	b	c							
Total	-12.13	1.11	0.26	0.33	7.274	1.000	7.274	0.79	1.00	5.733
Fatal and Injury (FI)	-11.58	1.02	0.17	0.30	2.201	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.320	2.327	0.79	1.00	1.834
Property Damage Only (PDO)	-13.24	1.14	0.30	0.36	4.680	$(5)_{TOTAL}-(5)_{FI}$ 0.680	4.947	0.79	1.00	3.899

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	1.834	1.000	3.899	5.733
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.549	1.007	0.546	2.129	3.136
Head-on collision	0.038	0.070	0.020	0.078	0.148
Angle collision	0.280	0.514	0.204	0.795	1.309
Sideswipe	0.076	0.139	0.032	0.125	0.264
Other multiple-vehicle collision	0.057	0.105	0.198	0.772	0.877

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_{bisv}	Combined CMFs	Calibration Factor, C_i	Predicted N_{bisv}
	from Table 12-12									
	a	b	c							
Total	-9.02	0.42	0.40	0.36	0.350	1.000	0.350	0.79	1.00	0.276
Fatal and Injury (FI)	-9.75	0.27	0.51	0.24	0.089	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.265	0.093	0.79	1.00	0.073
Property Damage Only (PDO)	-9.08	0.45	0.33	0.53	0.247	$(5)_{TOTAL}-(5)_{FI}$ 0.735	0.257	0.79	1.00	0.203

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	0.073	1.000	0.203	0.276
		(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	0.048	0.895	0.182	0.229
Collision with other object	0.091	0.007	0.069	0.014	0.021
Other single-vehicle collision	0.045	0.003	0.018	0.004	0.007
Single-vehicle noncollision	0.209	0.015	0.014	0.003	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)
4.15	1.00	1.12	4.65

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									
	a	b	c	d	e					
Total	-6.60	0.05	0.24	0.41	0.09	0.52	0.075	4.65	1.00	0.349
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	1.00	0.349

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	5.733	0.276	6.009	0.011	1.00	0.066
Fatal and injury (FI)	--	--	--	--	1.00	0.066

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)	1.007	2.129	3.136
Head-on collisions (from Worksheet 2D)	0.070	0.078	0.148
Angle collisions (from Worksheet 2D)	0.514	0.795	1.309
Sideswipe (from Worksheet 2D)	0.139	0.125	0.264
Other multiple-vehicle collision (from Worksheet 2D)	0.105	0.772	0.877
Subtotal	1.834	3.899	5.733
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)	0.048	0.182	0.229
Collision with other object (from Worksheet 2F)	0.007	0.014	0.021
Other single-vehicle collision (from Worksheet 2F)	0.003	0.004	0.007
Single-vehicle noncollision (from Worksheet 2F)	0.015	0.003	0.018
Collision with pedestrian (from Worksheet 2G or 2I)	0.349	0.000	0.349
Collision with bicycle (from Worksheet 2J)	0.066	0.000	0.066
Subtotal	0.488	0.203	0.691
Total	2.322	4.102	6.424

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	6.424
Fatal and injury (FI)	2.322
Property damage only (PDO)	4.102

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections			
General Information		Location Information	
Analyst	SL	Roadway	Meridian Ave
Agency or Company	H.W. Lochner	Intersection	Whiting St (East)
Date Performed	12/01/21	Jurisdiction	
		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)	--	43,850
AADT _{minor} (veh/day)	AADT _{MAX} = 16,400 (veh/day)	--	6,205
Intersection lighting (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	1
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	0
Number of approaches with left-turn signal phasing [for 3SG, use maximum value of 3]		--	2
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			3,200
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	3
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
<i>CMF 1i</i>	<i>CMF 2i</i>	<i>CMF 3i</i>	<i>CMF 4i</i>	<i>CMF 5i</i>	<i>CMF 6i</i>	<i>CMF_{COMB}</i>
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)
0.93	0.93	1.00	1.00	0.91	1.00	0.79

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									
	a	b	c							
Total	-12.13	1.11	0.26	0.33	7.425	1.000	7.425	0.79	1.00	5.852
Fatal and Injury (FI)	-11.58	1.02	0.17	0.30	2.241	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.319	2.369	0.79	1.00	1.867
Property Damage Only (PDO)	-13.24	1.14	0.30	0.36	4.782	$(5)_{TOTAL}-(5)_{FI}$ 0.681	5.056	0.79	1.00	3.985

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	1.867	1.000	3.985	5.852
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.549	1.025	0.546	2.176	3.201
Head-on collision	0.038	0.071	0.020	0.080	0.151
Angle collision	0.280	0.523	0.204	0.813	1.336
Sideswipe	0.076	0.142	0.032	0.128	0.269
Other multiple-vehicle collision	0.057	0.106	0.198	0.789	0.895

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_{bisv}	Combined CMFs	Calibration Factor, C_i	Predicted N_{bisv}
	from Table 12-12									
	a	b	c							
Total	-9.02	0.42	0.40	0.36	0.354	1.000	0.354	0.79	1.00	0.279
Fatal and Injury (FI)	-9.75	0.27	0.51	0.24	0.090	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.265	0.094	0.79	1.00	0.074
Property Damage Only (PDO)	-9.08	0.45	0.33	0.53	0.250	$(5)_{TOTAL}-(5)_{FI}$ 0.735	0.261	0.79	1.00	0.205

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	0.205	0.279
		(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	0.048	0.895	0.184	0.232
Collision with other object	0.091	0.007	0.069	0.014	0.021
Other single-vehicle collision	0.045	0.003	0.018	0.004	0.007
Single-vehicle noncollision	0.209	0.015	0.014	0.003	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)
4.15	1.00	1.12	4.65

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									
	a	b	c	d	e					
Total	-6.60	0.05	0.24	0.41	0.09	0.52	0.075	4.65	1.00	0.349
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	1.00	0.349

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	5.852	0.279	6.132	0.011	1.00	0.067
Fatal and injury (FI)	--	--	--	--	1.00	0.067

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)	1.025	2.176	3.201
Head-on collisions (from Worksheet 2D)	0.071	0.080	0.151
Angle collisions (from Worksheet 2D)	0.523	0.813	1.336
Sideswipe (from Worksheet 2D)	0.142	0.128	0.269
Other multiple-vehicle collision (from Worksheet 2D)	0.106	0.789	0.895
Subtotal	1.867	3.985	5.852
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)	0.048	0.184	0.232
Collision with other object (from Worksheet 2F)	0.007	0.014	0.021
Other single-vehicle collision (from Worksheet 2F)	0.003	0.004	0.007
Single-vehicle noncollision (from Worksheet 2F)	0.015	0.003	0.018
Collision with pedestrian (from Worksheet 2G or 2I)	0.349	0.000	0.349
Collision with bicycle (from Worksheet 2J)	0.067	0.000	0.067
Subtotal	0.490	0.205	0.696
Total	2.358	4.190	6.548

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	6.548
Fatal and injury (FI)	2.358
Property damage only (PDO)	4.190

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections						
General Information			Location Information			
Analyst	SL		Roadway	Meridian Ave		
Agency or Company	H.W. Lochner		Intersection	Whiting St (East)		
Date Performed	12/01/21		Jurisdiction			
			Analysis Year	2046		
Input Data			Base Conditions	Site Conditions		
Intersection type (3ST, 3SG, 4ST, 4SG)			--	3SG		
AADT _{major} (veh/day)		AADT _{MAX} = 58,100 (veh/day)	--	44,500		
AADT _{minor} (veh/day)		AADT _{MAX} = 16,400 (veh/day)	--	6,300		
Intersection lighting (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	1		
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]			0	0		
Number of approaches with left-turn signal phasing [for 3SG, use maximum value of 3]			--	2		
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			
Sum of all pedestrian crossing volumes (PedVol) -- Signalized intersections only			3,200			
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	3		
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	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
<i>CMF 1i</i>	<i>CMF 2i</i>	<i>CMF 3i</i>	<i>CMF 4i</i>	<i>CMF 5i</i>	<i>CMF 6i</i>	<i>CMF_{COMB}</i>
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)
0.93	0.93	1.00	1.00	0.91	1.00	0.79

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									
	a	b	c							
Total	-12.13	1.11	0.26	0.33	7.577	1.000	7.577	0.79	1.00	5.972
Fatal and Injury (FI)	-11.58	1.02	0.17	0.30	2.281	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.318	2.412	0.79	1.00	1.901
Property Damage Only (PDO)	-13.24	1.14	0.30	0.36	4.885	$(5)_{TOTAL}-(5)_{FI}$ 0.682	5.166	0.79	1.00	4.071

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	1.901	1.000	4.071	5.972
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.549	1.044	0.546	2.223	3.267
Head-on collision	0.038	0.072	0.020	0.081	0.154
Angle collision	0.280	0.532	0.204	0.831	1.363
Sideswipe	0.076	0.144	0.032	0.130	0.275
Other multiple-vehicle collision	0.057	0.108	0.198	0.806	0.914

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_{bisv}	Combined CMFs	Calibration Factor, C_i	Predicted N_{bisv}
	from Table 12-12									
	a	b	c							
Total	-9.02	0.42	0.40	0.36	0.359	1.000	0.359	0.79	1.00	0.283
Fatal and Injury (FI)	-9.75	0.27	0.51	0.24	0.091	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.265	0.095	0.79	1.00	0.075
Property Damage Only (PDO)	-9.08	0.45	0.33	0.53	0.252	$(5)_{TOTAL}-(5)_{FI}$ 0.735	0.264	0.79	1.00	0.208

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	0.075	1.000	0.208	0.283
		(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	0.049	0.895	0.186	0.235
Collision with other object	0.091	0.007	0.069	0.014	0.021
Other single-vehicle collision	0.045	0.003	0.018	0.004	0.007
Single-vehicle noncollision	0.209	0.016	0.014	0.003	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)
4.15	1.00	1.12	4.65

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} from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C _i	Predicted N _{pedi} (4)*(5)*(6)
	from Table 12-14									
	a	b	c	d	e					
Total	-6.60	0.05	0.24	0.41	0.09	0.52	0.075	4.65	1.00	0.349
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	1.00	0.349

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	5.972	0.283	6.255	0.011	1.00	0.069
Fatal and injury (FI)	--	--	--	--	1.00	0.069

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)	1.044	2.223	3.267
Head-on collisions (from Worksheet 2D)	0.072	0.081	0.154
Angle collisions (from Worksheet 2D)	0.532	0.831	1.363
Sideswipe (from Worksheet 2D)	0.144	0.130	0.275
Other multiple-vehicle collision (from Worksheet 2D)	0.108	0.806	0.914
Subtotal	1.901	4.071	5.972
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)	0.049	0.186	0.235
Collision with other object (from Worksheet 2F)	0.007	0.014	0.021
Other single-vehicle collision (from Worksheet 2F)	0.003	0.004	0.007
Single-vehicle noncollision (from Worksheet 2F)	0.016	0.003	0.019
Collision with pedestrian (from Worksheet 2G or 2I)	0.349	0.000	0.349
Collision with bicycle (from Worksheet 2J)	0.069	0.000	0.069
Subtotal	0.493	0.208	0.701
Total	2.394	4.279	6.673

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	6.673
Fatal and injury (FI)	2.394
Property damage only (PDO)	4.279

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections						
General Information			Location Information			
Analyst	SL		Roadway	Jefferson St		
Agency or Company	H.W. Lochner		Intersection	Whiting St		
Date Performed	12/01/21		Jurisdiction			
			Analysis Year	2026		
Input Data			Base Conditions	Site Conditions		
Intersection type (3ST, 3SG, 4ST, 4SG)			--	4SG		
AADT _{major} (veh/day)			AADT _{MAX} = 67,700 (veh/day)	15,500		
AADT _{minor} (veh/day)			AADT _{MAX} = 33,400 (veh/day)	14,500		
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	1		
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]			0	0		
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	Permissive		
Type of left-turn signal phasing for Leg #2			--	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				3,200		
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	5		
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	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
<i>CMF_{1i}</i>	<i>CMF_{2i}</i>	<i>CMF_{3i}</i>	<i>CMF_{4i}</i>	<i>CMF_{5i}</i>	<i>CMF_{6i}</i>	<i>CMF_{COMB}</i>
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)
0.90	1.00	1.00	1.00	0.91	1.00	0.82

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 from Table 12-10	Initial N_{bimv} from Equation 12-21	Proportion of Total Crashes	Adjusted N_{bimv} (4) _{TOTAL} *(5)	Combined CMFs (7) from Worksheet 2B	Calibration Factor, C_i	Predicted N_{bimv} (6)*(7)*(8)
	a	b	c							
Total	-10.99	1.07	0.23	0.39	4.655	1.000	4.655	0.82	1.00	3.815
Fatal and Injury (FI)	-13.14	1.18	0.22	0.33	1.424	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.317	1.475	0.82	1.00	1.209
Property Damage Only (PDO)	-11.02	1.02	0.24	0.44	3.069	$(5)_{TOTAL}-(5)_{FI}$ 0.683	3.179	0.82	1.00	2.606

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	1.209	1.000	2.606	3.815
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.450	0.544	0.483	1.259	1.803
Head-on collision	0.049	0.059	0.030	0.078	0.137
Angle collision	0.347	0.420	0.244	0.636	1.055
Sideswipe	0.099	0.120	0.032	0.083	0.203
Other multiple-vehicle collision	0.055	0.067	0.211	0.550	0.616

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 from Table 12-12	Initial N_{bisv} from Eqn. 12-24; (FI) from Eqn. 12-24 or 12-27	Proportion of Total Crashes	Adjusted N_{bisv} (4) _{TOTAL} *(5)	Combined CMFs (7) from Worksheet 2B	Calibration Factor, C_i	Predicted N_{bisv} (6)*(7)*(8)
	a	b	c							
Total	-10.21	0.68	0.27	0.36	0.346	1.000	0.346	0.82	1.00	0.283
Fatal and Injury (FI)	-9.25	0.43	0.29	0.09	0.098	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.288	0.100	0.82	1.00	0.082
Property Damage Only (PDO)	-11.34	0.78	0.25	0.44	0.242	$(5)_{TOTAL}-(5)_{FI}$ 0.712	0.246	0.82	1.00	0.202

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	0.082	1.000	0.202	0.283
		(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	0.061	0.870	0.176	0.236
Collision with other object	0.072	0.006	0.070	0.014	0.020
Other single-vehicle collision	0.040	0.003	0.023	0.005	0.008
Single-vehicle noncollision	0.141	0.012	0.034	0.007	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)
4.15	1.35	1.12	6.27

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} from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C _i	Predicted N _{pedi} (4)*(5)*(6)
	from Table 12-14									
	a	b	c	d	e					
Total	-9.53	0.40	0.26	0.45	0.04	0.24	0.196	6.27	1.00	1.227
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	1.00	1.227

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	3.815	0.283	4.098	0.015	1.00	0.061
Fatal and injury (FI)	--	--	--	--	1.00	0.061

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)	0.544	1.259	1.803
Head-on collisions (from Worksheet 2D)	0.059	0.078	0.137
Angle collisions (from Worksheet 2D)	0.420	0.636	1.055
Sideswipe (from Worksheet 2D)	0.120	0.083	0.203
Other multiple-vehicle collision (from Worksheet 2D)	0.067	0.550	0.616
Subtotal	1.209	2.606	3.815
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)	0.061	0.176	0.236
Collision with other object (from Worksheet 2F)	0.006	0.014	0.020
Other single-vehicle collision (from Worksheet 2F)	0.003	0.005	0.008
Single-vehicle noncollision (from Worksheet 2F)	0.012	0.007	0.018
Collision with pedestrian (from Worksheet 2G or 2I)	1.227	0.000	1.227
Collision with bicycle (from Worksheet 2J)	0.061	0.000	0.061
Subtotal	1.370	0.202	1.572
Total	2.579	2.808	5.387

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	5.387
Fatal and injury (FI)	2.579
Property damage only (PDO)	2.808

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections						
General Information			Location Information			
Analyst	SL		Roadway	Jefferson St		
Agency or Company	H.W. Lochner		Intersection	Whiting St		
Date Performed	12/01/21		Jurisdiction			
			Analysis Year	2027		
Input Data			Base Conditions	Site Conditions		
Intersection type (3ST, 3SG, 4ST, 4SG)			--	4SG		
AADT _{major} (veh/day)			AADT _{MAX} = 67,700 (veh/day)	15,700		
AADT _{minor} (veh/day)			AADT _{MAX} = 33,400 (veh/day)	14,800		
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	1		
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]			0	0		
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	Permissive		
Type of left-turn signal phasing for Leg #2			--	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				3,200		
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	5		
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	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
<i>CMF 1i</i>	<i>CMF 2i</i>	<i>CMF 3i</i>	<i>CMF 4i</i>	<i>CMF 5i</i>	<i>CMF 6i</i>	<i>CMF_{COMB}</i>
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)
0.90	1.00	1.00	1.00	0.91	1.00	0.82

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 (7) from Worksheet 2B	Calibration Factor, C_i	Predicted N_{bimv}
	from Table 12-10			from Table 12-10	from Equation 12-21		(4) _{TOTAL} *(5)			(6)*(7)*(8)
	a	b	c							
Total	-10.99	1.07	0.23	0.39	4.741	1.000	4.741	0.82	1.00	3.886
Fatal and Injury (FI)	-13.14	1.18	0.22	0.33	1.452	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.317	1.504	0.82	1.00	1.233
Property Damage Only (PDO)	-11.02	1.02	0.24	0.44	3.124	$(5)_{TOTAL}-(5)_{FI}$ 0.683	3.237	0.82	1.00	2.653

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	1.233	1.000	2.653	3.886
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.450	0.555	0.483	1.281	1.836
Head-on collision	0.049	0.060	0.030	0.080	0.140
Angle collision	0.347	0.428	0.244	0.647	1.075
Sideswipe	0.099	0.122	0.032	0.085	0.207
Other multiple-vehicle collision	0.055	0.068	0.211	0.560	0.628

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_{bisv}	Combined CMFs (7) from Worksheet 2B	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)			(6)*(7)*(8)
	a	b	c							
Total	-10.21	0.68	0.27	0.36	0.351	1.000	0.351	0.82	1.00	0.288
Fatal and Injury (FI)	-9.25	0.43	0.29	0.09	0.099	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.288	0.101	0.82	1.00	0.083
Property Damage Only (PDO)	-11.34	0.78	0.25	0.44	0.246	$(5)_{TOTAL}-(5)_{FI}$ 0.712	0.250	0.82	1.00	0.205

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	0.083	1.000	0.205	0.288
		(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	0.062	0.870	0.178	0.240
Collision with other object	0.072	0.006	0.070	0.014	0.020
Other single-vehicle collision	0.040	0.003	0.023	0.005	0.008
Single-vehicle noncollision	0.141	0.012	0.034	0.007	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)
4.15	1.35	1.12	6.27

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} from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C _i	Predicted N _{pedi} (4)*(5)*(6)
	from Table 12-14									
	a	b	c	d	e					
Total	-9.53	0.40	0.26	0.45	0.04	0.24	0.197	6.27	1.00	1.238
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	1.00	1.238

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	3.886	0.288	4.173	0.015	1.00	0.063
Fatal and injury (FI)	--	--	--	--	1.00	0.063

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)	0.555	1.281	1.836
Head-on collisions (from Worksheet 2D)	0.060	0.080	0.140
Angle collisions (from Worksheet 2D)	0.428	0.647	1.075
Sideswipe (from Worksheet 2D)	0.122	0.085	0.207
Other multiple-vehicle collision (from Worksheet 2D)	0.068	0.560	0.628
Subtotal	1.233	2.653	3.886
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)	0.062	0.178	0.240
Collision with other object (from Worksheet 2F)	0.006	0.014	0.020
Other single-vehicle collision (from Worksheet 2F)	0.003	0.005	0.008
Single-vehicle noncollision (from Worksheet 2F)	0.012	0.007	0.019
Collision with pedestrian (from Worksheet 2G or 2I)	1.238	0.000	1.238
Collision with bicycle (from Worksheet 2J)	0.063	0.000	0.063
Subtotal	1.383	0.205	1.588
Total	2.616	2.858	5.474

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	5.474
Fatal and injury (FI)	2.616
Property damage only (PDO)	2.858

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections						
General Information			Location Information			
Analyst	SL		Roadway	Jefferson St		
Agency or Company	H.W. Lochner		Intersection	Whiting St		
Date Performed	12/01/21		Jurisdiction			
			Analysis Year	2028		
Input Data		Base Conditions		Site Conditions		
Intersection type (3ST, 3SG, 4ST, 4SG)		--		4SG		
AADT _{major} (veh/day)	AADT _{MAX} = 67,700 (veh/day)		--		15,900	
AADT _{minor} (veh/day)	AADT _{MAX} = 33,400 (veh/day)		--		15,100	
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				
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		1		
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0		0		
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		Permissive		
Type of left-turn signal phasing for Leg #2		--		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				3,200		
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		5		
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		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
<i>CMF_{1i}</i>	<i>CMF_{2i}</i>	<i>CMF_{3i}</i>	<i>CMF_{4i}</i>	<i>CMF_{5i}</i>	<i>CMF_{6i}</i>	<i>CMF_{COMB}</i>
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)
0.90	1.00	1.00	1.00	0.91	1.00	0.82

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 (7) from Worksheet 2B	Calibration Factor, C_i	Predicted N_{bimv}
	from Table 12-10			from Table 12-10	from Equation 12-21		(4) _{TOTAL} *(5)			(6)*(7)*(8)
	a	b	c							
Total	-10.99	1.07	0.23	0.39	4.828	1.000	4.828	0.82	1.00	3.957
Fatal and Injury (FI)	-13.14	1.18	0.22	0.33	1.480	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.318	1.534	0.82	1.00	1.257
Property Damage Only (PDO)	-11.02	1.02	0.24	0.44	3.180	$(5)_{TOTAL}-(5)_{FI}$ 0.682	3.294	0.82	1.00	2.700

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	1.257	1.000	2.700	3.957
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.450	0.566	0.483	1.304	1.870
Head-on collision	0.049	0.062	0.030	0.081	0.143
Angle collision	0.347	0.436	0.244	0.659	1.095
Sideswipe	0.099	0.124	0.032	0.086	0.211
Other multiple-vehicle collision	0.055	0.069	0.211	0.570	0.639

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_{bisv}	Combined CMFs (7) from Worksheet 2B	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)			(6)*(7)*(8)
	a	b	c							
Total	-10.21	0.68	0.27	0.36	0.356	1.000	0.356	0.82	1.00	0.292
Fatal and Injury (FI)	-9.25	0.43	0.29	0.09	0.100	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.287	0.102	0.82	1.00	0.084
Property Damage Only (PDO)	-11.34	0.78	0.25	0.44	0.249	$(5)_{TOTAL}-(5)_{FI}$ 0.713	0.254	0.82	1.00	0.208

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	0.084	1.000	0.208	0.292
		(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	0.062	0.870	0.181	0.243
Collision with other object	0.072	0.006	0.070	0.015	0.021
Other single-vehicle collision	0.040	0.003	0.023	0.005	0.008
Single-vehicle noncollision	0.141	0.012	0.034	0.007	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)
4.15	1.35	1.12	6.27

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} from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C _i	Predicted N _{pedi} (4)*(5)*(6)
	from Table 12-14									
	a	b	c	d	e					
Total	-9.53	0.40	0.26	0.45	0.04	0.24	0.199	6.27	1.00	1.248
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	1.00	1.248

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	3.957	0.292	4.249	0.015	1.00	0.064
Fatal and injury (FI)	--	--	--	--	1.00	0.064

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)	0.566	1.304	1.870
Head-on collisions (from Worksheet 2D)	0.062	0.081	0.143
Angle collisions (from Worksheet 2D)	0.436	0.659	1.095
Sideswipe (from Worksheet 2D)	0.124	0.086	0.211
Other multiple-vehicle collision (from Worksheet 2D)	0.069	0.570	0.639
Subtotal	1.257	2.700	3.957
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)	0.062	0.181	0.243
Collision with other object (from Worksheet 2F)	0.006	0.015	0.021
Other single-vehicle collision (from Worksheet 2F)	0.003	0.005	0.008
Single-vehicle noncollision (from Worksheet 2F)	0.012	0.007	0.019
Collision with pedestrian (from Worksheet 2G or 2I)	1.248	0.000	1.248
Collision with bicycle (from Worksheet 2J)	0.064	0.000	0.064
Subtotal	1.396	0.208	1.604
Total	2.653	2.908	5.561

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	5.561
Fatal and injury (FI)	2.653
Property damage only (PDO)	2.908

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections						
General Information			Location Information			
Analyst	SL		Roadway	Jefferson St		
Agency or Company	H.W. Lochner		Intersection	Whiting St		
Date Performed	12/01/21		Jurisdiction			
			Analysis Year	2029		
Input Data			Base Conditions	Site Conditions		
Intersection type (3ST, 3SG, 4ST, 4SG)			--	4SG		
AADT _{major} (veh/day)		AADT _{MAX} = 67,700 (veh/day)	--	16,100		
AADT _{minor} (veh/day)		AADT _{MAX} = 33,400 (veh/day)	--	15,400		
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	1		
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]			0	0		
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	Permissive		
Type of left-turn signal phasing for Leg #2			--	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				3,200		
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	5		
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	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
<i>CMF_{1i}</i>	<i>CMF_{2i}</i>	<i>CMF_{3i}</i>	<i>CMF_{4i}</i>	<i>CMF_{5i}</i>	<i>CMF_{6i}</i>	<i>CMF_{COMB}</i>
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)
0.90	1.00	1.00	1.00	0.91	1.00	0.82

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 from Table 12-10	Initial N_{bimv} from Equation 12-21	Proportion of Total Crashes	Adjusted N_{bimv} (4) _{TOTAL} *(5)	Combined CMFs (7) from Worksheet 2B	Calibration Factor, C_i	Predicted N_{bimv} (6)*(7)*(8)
	a	b	c							
Total	-10.99	1.07	0.23	0.39	4.915	1.000	4.915	0.82	1.00	4.029
Fatal and Injury (FI)	-13.14	1.18	0.22	0.33	1.509	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.318	1.563	0.82	1.00	1.281
Property Damage Only (PDO)	-11.02	1.02	0.24	0.44	3.236	$(5)_{TOTAL}-(5)_{FI}$ 0.682	3.352	0.82	1.00	2.748

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	1.281	1.000	2.748	4.029
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.450	0.576	0.483	1.327	1.904
Head-on collision	0.049	0.063	0.030	0.082	0.145
Angle collision	0.347	0.445	0.244	0.670	1.115
Sideswipe	0.099	0.127	0.032	0.088	0.215
Other multiple-vehicle collision	0.055	0.070	0.211	0.580	0.650

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 from Table 12-12	Initial N_{bisv} from Eqn. 12-24; (FI) from Eqn. 12-24 or 12-27	Proportion of Total Crashes	Adjusted N_{bisv} (4) _{TOTAL} *(5)	Combined CMFs (7) from Worksheet 2B	Calibration Factor, C_i	Predicted N_{bisv} (6)*(7)*(8)
	a	b	c							
Total	-10.21	0.68	0.27	0.36	0.361	1.000	0.361	0.82	1.00	0.296
Fatal and Injury (FI)	-9.25	0.43	0.29	0.09	0.101	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.286	0.103	0.82	1.00	0.085
Property Damage Only (PDO)	-11.34	0.78	0.25	0.44	0.253	$(5)_{TOTAL}-(5)_{FI}$ 0.714	0.258	0.82	1.00	0.211

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	0.085	1.000	0.211	0.296
		(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	0.063	0.870	0.184	0.247
Collision with other object	0.072	0.006	0.070	0.015	0.021
Other single-vehicle collision	0.040	0.003	0.023	0.005	0.008
Single-vehicle noncollision	0.141	0.012	0.034	0.007	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)
4.15	1.35	1.12	6.27

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} from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C _i	Predicted N _{pedi} (4)*(5)*(6)
	from Table 12-14									
	a	b	c	d	e					
Total	-9.53	0.40	0.26	0.45	0.04	0.24	0.201	6.27	1.00	1.259
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	1.00	1.259

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	4.029	0.296	4.324	0.015	1.00	0.065
Fatal and injury (FI)	--	--	--	--	1.00	0.065

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)	0.576	1.327	1.904
Head-on collisions (from Worksheet 2D)	0.063	0.082	0.145
Angle collisions (from Worksheet 2D)	0.445	0.670	1.115
Sideswipe (from Worksheet 2D)	0.127	0.088	0.215
Other multiple-vehicle collision (from Worksheet 2D)	0.070	0.580	0.650
Subtotal	1.281	2.748	4.029
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)	0.063	0.184	0.247
Collision with other object (from Worksheet 2F)	0.006	0.015	0.021
Other single-vehicle collision (from Worksheet 2F)	0.003	0.005	0.008
Single-vehicle noncollision (from Worksheet 2F)	0.012	0.007	0.019
Collision with pedestrian (from Worksheet 2G or 2I)	1.259	0.000	1.259
Collision with bicycle (from Worksheet 2J)	0.065	0.000	0.065
Subtotal	1.408	0.211	1.619
Total	2.689	2.959	5.648

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	5.648
Fatal and injury (FI)	2.689
Property damage only (PDO)	2.959

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections						
General Information			Location Information			
Analyst	SL		Roadway	Jefferson St		
Agency or Company	H.W. Lochner		Intersection	Whiting St		
Date Performed	12/01/21		Jurisdiction			
			Analysis Year	2030		
Input Data			Base Conditions	Site Conditions		
Intersection type (3ST, 3SG, 4ST, 4SG)			--	4SG		
AADT _{major} (veh/day)			AADT _{MAX} = 67,700 (veh/day)	16,300		
AADT _{minor} (veh/day)			AADT _{MAX} = 33,400 (veh/day)	15,700		
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	1		
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]			0	0		
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	Permissive		
Type of left-turn signal phasing for Leg #2			--	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				3,200		
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	5		
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	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
<i>CMF_{1i}</i>	<i>CMF_{2i}</i>	<i>CMF_{3i}</i>	<i>CMF_{4i}</i>	<i>CMF_{5i}</i>	<i>CMF_{6i}</i>	<i>CMF_{COMB}</i>
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)
0.90	1.00	1.00	1.00	0.91	1.00	0.82

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 (7) from Worksheet 2B	Calibration Factor, C_i	Predicted N_{bimv}
	from Table 12-10			from Table 12-10	from Equation 12-21		(4) _{TOTAL} *(5)			(6)*(7)*(8)
	a	b	c							
Total	-10.99	1.07	0.23	0.39	5.003	1.000	5.003	0.82	1.00	4.100
Fatal and Injury (FI)	-13.14	1.18	0.22	0.33	1.538	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.318	1.593	0.82	1.00	1.305
Property Damage Only (PDO)	-11.02	1.02	0.24	0.44	3.292	$(5)_{TOTAL}-(5)_{FI}$ 0.682	3.410	0.82	1.00	2.795

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	1.305	1.000	2.795	4.100
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.450	0.587	0.483	1.350	1.937
Head-on collision	0.049	0.064	0.030	0.084	0.148
Angle collision	0.347	0.453	0.244	0.682	1.135
Sideswipe	0.099	0.129	0.032	0.089	0.219
Other multiple-vehicle collision	0.055	0.072	0.211	0.590	0.662

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_{bisv}	Combined CMFs (7) from Worksheet 2B	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)			(6)*(7)*(8)
	a	b	c							
Total	-10.21	0.68	0.27	0.36	0.366	1.000	0.366	0.82	1.00	0.300
Fatal and Injury (FI)	-9.25	0.43	0.29	0.09	0.103	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.285	0.104	0.82	1.00	0.086
Property Damage Only (PDO)	-11.34	0.78	0.25	0.44	0.257	$(5)_{TOTAL}-(5)_{FI}$ 0.715	0.261	0.82	1.00	0.214

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	0.086	1.000	0.214	0.300
		(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	0.064	0.870	0.186	0.250
Collision with other object	0.072	0.006	0.070	0.015	0.021
Other single-vehicle collision	0.040	0.003	0.023	0.005	0.008
Single-vehicle noncollision	0.141	0.012	0.034	0.007	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)
4.15	1.35	1.12	6.27

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} from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C _i	Predicted N _{pedi} (4)*(5)*(6)
	from Table 12-14									
	a	b	c	d	e					
Total	-9.53	0.40	0.26	0.45	0.04	0.24	0.202	6.27	1.00	1.269
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	1.00	1.269

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	4.100	0.300	4.400	0.015	1.00	0.066
Fatal and injury (FI)	--	--	--	--	1.00	0.066

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)	0.587	1.350	1.937
Head-on collisions (from Worksheet 2D)	0.064	0.084	0.148
Angle collisions (from Worksheet 2D)	0.453	0.682	1.135
Sideswipe (from Worksheet 2D)	0.129	0.089	0.219
Other multiple-vehicle collision (from Worksheet 2D)	0.072	0.590	0.662
Subtotal	1.305	2.795	4.100
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)	0.064	0.186	0.250
Collision with other object (from Worksheet 2F)	0.006	0.015	0.021
Other single-vehicle collision (from Worksheet 2F)	0.003	0.005	0.008
Single-vehicle noncollision (from Worksheet 2F)	0.012	0.007	0.019
Collision with pedestrian (from Worksheet 2G or 2I)	1.269	0.000	1.269
Collision with bicycle (from Worksheet 2J)	0.066	0.000	0.066
Subtotal	1.420	0.214	1.635
Total	2.726	3.009	5.735

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	5.735
Fatal and injury (FI)	2.726
Property damage only (PDO)	3.009

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections						
General Information			Location Information			
Analyst	SL		Roadway	Jefferson St		
Agency or Company	H.W. Lochner		Intersection	Whiting St		
Date Performed	12/01/21		Jurisdiction			
			Analysis Year	2031		
Input Data			Base Conditions	Site Conditions		
Intersection type (3ST, 3SG, 4ST, 4SG)			--	4SG		
AADT _{major} (veh/day)			AADT _{MAX} = 67,700 (veh/day)	--	16,500	
AADT _{minor} (veh/day)			AADT _{MAX} = 33,400 (veh/day)	--	16,000	
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			
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	1		
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]			0	0		
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	Permissive		
Type of left-turn signal phasing for Leg #2			--	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				3,200		
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	5		
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	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
<i>CMF_{1i}</i>	<i>CMF_{2i}</i>	<i>CMF_{3i}</i>	<i>CMF_{4i}</i>	<i>CMF_{5i}</i>	<i>CMF_{6i}</i>	<i>CMF_{COMB}</i>
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)
0.90	1.00	1.00	1.00	0.91	1.00	0.82

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 from Table 12-10	Initial N_{bimv} from Equation 12-21	Proportion of Total Crashes	Adjusted N_{bimv} (4) _{TOTAL} *(5)	Combined CMFs (7) from Worksheet 2B	Calibration Factor, C_i	Predicted N_{bimv} (6)*(7)*(8)
	a	b	c							
Total	-10.99	1.07	0.23	0.39	5.090	1.000	5.090	0.82	1.00	4.172
Fatal and Injury (FI)	-13.14	1.18	0.22	0.33	1.566	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.319	1.622	0.82	1.00	1.330
Property Damage Only (PDO)	-11.02	1.02	0.24	0.44	3.349	$(5)_{TOTAL}-(5)_{FI}$ 0.681	3.468	0.82	1.00	2.843

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	1.330	1.000	2.843	4.172
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.450	0.598	0.483	1.373	1.971
Head-on collision	0.049	0.065	0.030	0.085	0.150
Angle collision	0.347	0.461	0.244	0.694	1.155
Sideswipe	0.099	0.132	0.032	0.091	0.223
Other multiple-vehicle collision	0.055	0.073	0.211	0.600	0.673

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 from Table 12-12	Initial N_{bisv} from Eqn. 12-24; (FI) from Eqn. 12-24 or 12-27	Proportion of Total Crashes	Adjusted N_{bisv} (4) _{TOTAL} *(5)	Combined CMFs (7) from Worksheet 2B	Calibration Factor, C_i	Predicted N_{bisv} (6)*(7)*(8)
	a	b	c							
Total	-10.21	0.68	0.27	0.36	0.371	1.000	0.371	0.82	1.00	0.304
Fatal and Injury (FI)	-9.25	0.43	0.29	0.09	0.104	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.285	0.105	0.82	1.00	0.086
Property Damage Only (PDO)	-11.34	0.78	0.25	0.44	0.260	$(5)_{TOTAL}-(5)_{FI}$ 0.715	0.265	0.82	1.00	0.217

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	0.086	1.000	0.217	0.304
		(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	0.064	0.870	0.189	0.253
Collision with other object	0.072	0.006	0.070	0.015	0.021
Other single-vehicle collision	0.040	0.003	0.023	0.005	0.008
Single-vehicle noncollision	0.141	0.012	0.034	0.007	0.020

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)
4.15	1.35	1.12	6.27

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} from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C _i	Predicted N _{pedi} (4)*(5)*(6)
	from Table 12-14									
	a	b	c	d	e					
Total	-9.53	0.40	0.26	0.45	0.04	0.24	0.204	6.27	1.00	1.279
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	1.00	1.279

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	4.172	0.304	4.476	0.015	1.00	0.067
Fatal and injury (FI)	--	--	--	--	1.00	0.067

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)	0.598	1.373	1.971
Head-on collisions (from Worksheet 2D)	0.065	0.085	0.150
Angle collisions (from Worksheet 2D)	0.461	0.694	1.155
Sideswipe (from Worksheet 2D)	0.132	0.091	0.223
Other multiple-vehicle collision (from Worksheet 2D)	0.073	0.600	0.673
Subtotal	1.330	2.843	4.172
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)	0.064	0.189	0.253
Collision with other object (from Worksheet 2F)	0.006	0.015	0.021
Other single-vehicle collision (from Worksheet 2F)	0.003	0.005	0.008
Single-vehicle noncollision (from Worksheet 2F)	0.012	0.007	0.020
Collision with pedestrian (from Worksheet 2G or 2I)	1.279	0.000	1.279
Collision with bicycle (from Worksheet 2J)	0.067	0.000	0.067
Subtotal	1.433	0.217	1.650
Total	2.762	3.060	5.822

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	5.822
Fatal and injury (FI)	2.762
Property damage only (PDO)	3.060

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections						
General Information			Location Information			
Analyst	SL		Roadway	Jefferson St		
Agency or Company	H.W. Lochner		Intersection	Whiting St		
Date Performed	12/01/21		Jurisdiction			
			Analysis Year	2032		
Input Data		Base Conditions		Site Conditions		
Intersection type (3ST, 3SG, 4ST, 4SG)		--		4SG		
AADT _{major} (veh/day)	AADT _{MAX} = 67,700 (veh/day)		--		16,700	
AADT _{minor} (veh/day)	AADT _{MAX} = 33,400 (veh/day)		--		16,300	
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				
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		1		
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0		0		
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		Permissive		
Type of left-turn signal phasing for Leg #2		--		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				3,200		
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		5		
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		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
<i>CMF_{1i}</i>	<i>CMF_{2i}</i>	<i>CMF_{3i}</i>	<i>CMF_{4i}</i>	<i>CMF_{5i}</i>	<i>CMF_{6i}</i>	<i>CMF_{COMB}</i>
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)
0.90	1.00	1.00	1.00	0.91	1.00	0.82

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 (7) from Worksheet 2B	Calibration Factor, C_i	Predicted N_{bimv}
	from Table 12-10			from Table 12-10	from Equation 12-21		(4) _{TOTAL} *(5)			(6)*(7)*(8)
	a	b	c							
Total	-10.99	1.07	0.23	0.39	5.179	1.000	5.179	0.82	1.00	4.245
Fatal and Injury (FI)	-13.14	1.18	0.22	0.33	1.595	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.319	1.652	0.82	1.00	1.354
Property Damage Only (PDO)	-11.02	1.02	0.24	0.44	3.405	$(5)_{TOTAL}-(5)_{FI}$ 0.681	3.527	0.82	1.00	2.890

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	1.354	1.000	2.890	4.245
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.450	0.609	0.483	1.396	2.005
Head-on collision	0.049	0.066	0.030	0.087	0.153
Angle collision	0.347	0.470	0.244	0.705	1.175
Sideswipe	0.099	0.134	0.032	0.092	0.227
Other multiple-vehicle collision	0.055	0.074	0.211	0.610	0.684

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_{bisv}	Combined CMFs (7) from Worksheet 2B	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)			(6)*(7)*(8)
	a	b	c							
Total	-10.21	0.68	0.27	0.36	0.375	1.000	0.375	0.82	1.00	0.308
Fatal and Injury (FI)	-9.25	0.43	0.29	0.09	0.105	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.284	0.107	0.82	1.00	0.087
Property Damage Only (PDO)	-11.34	0.78	0.25	0.44	0.264	$(5)_{TOTAL}-(5)_{FI}$ 0.716	0.269	0.82	1.00	0.220

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	0.087	1.000	0.220	0.308
		(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	0.065	0.870	0.192	0.257
Collision with other object	0.072	0.006	0.070	0.015	0.022
Other single-vehicle collision	0.040	0.003	0.023	0.005	0.009
Single-vehicle noncollision	0.141	0.012	0.034	0.007	0.020

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)
4.15	1.35	1.12	6.27

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} from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C _i	Predicted N _{pedi} (4)*(5)*(6)
	from Table 12-14									
	a	b	c	d	e					
Total	-9.53	0.40	0.26	0.45	0.04	0.24	0.205	6.27	1.00	1.289
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	1.00	1.289

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	4.245	0.308	4.552	0.015	1.00	0.068
Fatal and injury (FI)	--	--	--	--	1.00	0.068

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)	0.609	1.396	2.005
Head-on collisions (from Worksheet 2D)	0.066	0.087	0.153
Angle collisions (from Worksheet 2D)	0.470	0.705	1.175
Sideswipe (from Worksheet 2D)	0.134	0.092	0.227
Other multiple-vehicle collision (from Worksheet 2D)	0.074	0.610	0.684
Subtotal	1.354	2.890	4.245
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)	0.065	0.192	0.257
Collision with other object (from Worksheet 2F)	0.006	0.015	0.022
Other single-vehicle collision (from Worksheet 2F)	0.003	0.005	0.009
Single-vehicle noncollision (from Worksheet 2F)	0.012	0.007	0.020
Collision with pedestrian (from Worksheet 2G or 2I)	1.289	0.000	1.289
Collision with bicycle (from Worksheet 2J)	0.068	0.000	0.068
Subtotal	1.445	0.220	1.665
Total	2.799	3.111	5.910

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	5.910
Fatal and injury (FI)	2.799
Property damage only (PDO)	3.111

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections						
General Information			Location Information			
Analyst	SL		Roadway	Jefferson St		
Agency or Company	H.W. Lochner		Intersection	Whiting St		
Date Performed	12/01/21		Jurisdiction			
			Analysis Year	2033		
Input Data		Base Conditions		Site Conditions		
Intersection type (3ST, 3SG, 4ST, 4SG)		--		4SG		
AADT _{major} (veh/day)	AADT _{MAX} = 67,700 (veh/day)		--		16,900	
AADT _{minor} (veh/day)	AADT _{MAX} = 33,400 (veh/day)		--		16,600	
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		1		
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0		0		
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		Permissive		
Type of left-turn signal phasing for Leg #2		--		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				3,200		
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		5		
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		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
<i>CMF_{1i}</i>	<i>CMF_{2i}</i>	<i>CMF_{3i}</i>	<i>CMF_{4i}</i>	<i>CMF_{5i}</i>	<i>CMF_{6i}</i>	<i>CMF_{COMB}</i>
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)
0.90	1.00	1.00	1.00	0.91	1.00	0.82

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 (7) from Worksheet 2B	Calibration Factor, C_i	Predicted N_{bimv}
	from Table 12-10			from Table 12-10	from Equation 12-21		(4) _{TOTAL} *(5)			(6)*(7)*(8)
	a	b	c							
Total	-10.99	1.07	0.23	0.39	5.267	1.000	5.267	0.82	1.00	4.317
Fatal and Injury (FI)	-13.14	1.18	0.22	0.33	1.624	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.319	1.682	0.82	1.00	1.379
Property Damage Only (PDO)	-11.02	1.02	0.24	0.44	3.462	$(5)_{TOTAL}-(5)_{FI}$ 0.681	3.585	0.82	1.00	2.938

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	1.379	1.000	2.938	4.317
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.450	0.620	0.483	1.419	2.040
Head-on collision	0.049	0.068	0.030	0.088	0.156
Angle collision	0.347	0.478	0.244	0.717	1.195
Sideswipe	0.099	0.136	0.032	0.094	0.231
Other multiple-vehicle collision	0.055	0.076	0.211	0.620	0.696

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_{bisv}	Combined CMFs (7) from Worksheet 2B	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)			(6)*(7)*(8)
	a	b	c							
Total	-10.21	0.68	0.27	0.36	0.380	1.000	0.380	0.82	1.00	0.312
Fatal and Injury (FI)	-9.25	0.43	0.29	0.09	0.106	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.283	0.108	0.82	1.00	0.088
Property Damage Only (PDO)	-11.34	0.78	0.25	0.44	0.268	$(5)_{TOTAL}-(5)_{FI}$ 0.717	0.273	0.82	1.00	0.223

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	0.088	1.000	0.223	0.312
		(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	0.066	0.870	0.194	0.260
Collision with other object	0.072	0.006	0.070	0.016	0.022
Other single-vehicle collision	0.040	0.004	0.023	0.005	0.009
Single-vehicle noncollision	0.141	0.012	0.034	0.008	0.020

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)
4.15	1.35	1.12	6.27

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} from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C _i	Predicted N _{pedi} (4)*(5)*(6)
	from Table 12-14									
	a	b	c	d	e					
Total	-9.53	0.40	0.26	0.45	0.04	0.24	0.207	6.27	1.00	1.299
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	1.00	1.299

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	4.317	0.312	4.629	0.015	1.00	0.069
Fatal and injury (FI)	--	--	--	--	1.00	0.069

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)	0.620	1.419	2.040
Head-on collisions (from Worksheet 2D)	0.068	0.088	0.156
Angle collisions (from Worksheet 2D)	0.478	0.717	1.195
Sideswipe (from Worksheet 2D)	0.136	0.094	0.231
Other multiple-vehicle collision (from Worksheet 2D)	0.076	0.620	0.696
Subtotal	1.379	2.938	4.317
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)	0.066	0.194	0.260
Collision with other object (from Worksheet 2F)	0.006	0.016	0.022
Other single-vehicle collision (from Worksheet 2F)	0.004	0.005	0.009
Single-vehicle noncollision (from Worksheet 2F)	0.012	0.008	0.020
Collision with pedestrian (from Worksheet 2G or 2I)	1.299	0.000	1.299
Collision with bicycle (from Worksheet 2J)	0.069	0.000	0.069
Subtotal	1.457	0.223	1.680
Total	2.835	3.162	5.997

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	5.997
Fatal and injury (FI)	2.835
Property damage only (PDO)	3.162

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections						
General Information			Location Information			
Analyst	SL		Roadway	Jefferson St		
Agency or Company	H.W. Lochner		Intersection	Whiting St		
Date Performed	12/01/21		Jurisdiction			
			Analysis Year	2034		
Input Data		Base Conditions		Site Conditions		
Intersection type (3ST, 3SG, 4ST, 4SG)		--		4SG		
AADT _{major} (veh/day)		AADT _{MAX} = 67,700 (veh/day)		17,100		
AADT _{minor} (veh/day)		AADT _{MAX} = 33,400 (veh/day)		16,900		
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				
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		1		
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0		0		
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		Permissive		
Type of left-turn signal phasing for Leg #2		--		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				3,200		
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		5		
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		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
<i>CMF</i> _{1i}	<i>CMF</i> _{2i}	<i>CMF</i> _{3i}	<i>CMF</i> _{4i}	<i>CMF</i> _{5i}	<i>CMF</i> _{6i}	<i>CMF</i> _{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)
0.90	1.00	1.00	1.00	0.91	1.00	0.82

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 (7) from Worksheet 2B	Calibration Factor, C_i	Predicted N_{bimv}
	from Table 12-10			from Table 12-10	from Equation 12-21		(4) _{TOTAL} *(5)			(6)*(7)*(8)
	a	b	c							
Total	-10.99	1.07	0.23	0.39	5.356	1.000	5.356	0.82	1.00	4.390
Fatal and Injury (FI)	-13.14	1.18	0.22	0.33	1.654	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.320	1.712	0.82	1.00	1.403
Property Damage Only (PDO)	-11.02	1.02	0.24	0.44	3.519	$(5)_{TOTAL}-(5)_{FI}$ 0.680	3.644	0.82	1.00	2.986

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	1.403	1.000	2.986	4.390
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.450	0.632	0.483	1.442	2.074
Head-on collision	0.049	0.069	0.030	0.090	0.158
Angle collision	0.347	0.487	0.244	0.729	1.216
Sideswipe	0.099	0.139	0.032	0.096	0.234
Other multiple-vehicle collision	0.055	0.077	0.211	0.630	0.707

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_{bisv}	Combined CMFs (7) from Worksheet 2B	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)			(6)*(7)*(8)
	a	b	c							
Total	-10.21	0.68	0.27	0.36	0.385	1.000	0.385	0.82	1.00	0.316
Fatal and Injury (FI)	-9.25	0.43	0.29	0.09	0.107	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.283	0.109	0.82	1.00	0.089
Property Damage Only (PDO)	-11.34	0.78	0.25	0.44	0.272	$(5)_{TOTAL}-(5)_{FI}$ 0.717	0.276	0.82	1.00	0.227

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	0.089	1.000	0.227	0.316
		(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	0.066	0.870	0.197	0.264
Collision with other object	0.072	0.006	0.070	0.016	0.022
Other single-vehicle collision	0.040	0.004	0.023	0.005	0.009
Single-vehicle noncollision	0.141	0.013	0.034	0.008	0.020

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)
4.15	1.35	1.12	6.27

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} from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C _i	Predicted N _{pedi} (4)*(5)*(6)
	from Table 12-14									
	a	b	c	d	e					
Total	-9.53	0.40	0.26	0.45	0.04	0.24	0.209	6.27	1.00	1.309
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	1.00	1.309

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	4.390	0.316	4.706	0.015	1.00	0.071
Fatal and injury (FI)	--	--	--	--	1.00	0.071

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)	0.632	1.442	2.074
Head-on collisions (from Worksheet 2D)	0.069	0.090	0.158
Angle collisions (from Worksheet 2D)	0.487	0.729	1.216
Sideswipe (from Worksheet 2D)	0.139	0.096	0.234
Other multiple-vehicle collision (from Worksheet 2D)	0.077	0.630	0.707
Subtotal	1.403	2.986	4.390
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)	0.066	0.197	0.264
Collision with other object (from Worksheet 2F)	0.006	0.016	0.022
Other single-vehicle collision (from Worksheet 2F)	0.004	0.005	0.009
Single-vehicle noncollision (from Worksheet 2F)	0.013	0.008	0.020
Collision with pedestrian (from Worksheet 2G or 2I)	1.309	0.000	1.309
Collision with bicycle (from Worksheet 2J)	0.071	0.000	0.071
Subtotal	1.469	0.227	1.695
Total	2.872	3.213	6.085

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	6.085
Fatal and injury (FI)	2.872
Property damage only (PDO)	3.213

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections						
General Information			Location Information			
Analyst	SL		Roadway	Jefferson St		
Agency or Company	H.W. Lochner		Intersection	Whiting St		
Date Performed	12/01/21		Jurisdiction			
			Analysis Year	2035		
Input Data		Base Conditions		Site Conditions		
Intersection type (3ST, 3SG, 4ST, 4SG)		--		4SG		
AADT _{major} (veh/day)	AADT _{MAX} = 67,700 (veh/day)	--		17,300		
AADT _{minor} (veh/day)	AADT _{MAX} = 33,400 (veh/day)	--		17,200		
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		1		
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0		0		
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		Permissive		
Type of left-turn signal phasing for Leg #2		--		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				3,200		
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		5		
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		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
<i>CMF 1i</i>	<i>CMF 2i</i>	<i>CMF 3i</i>	<i>CMF 4i</i>	<i>CMF 5i</i>	<i>CMF 6i</i>	<i>CMF_{COMB}</i>
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)
0.90	1.00	1.00	1.00	0.91	1.00	0.82

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 (7) from Worksheet 2B	Calibration Factor, C_i	Predicted N_{bimv}
	from Table 12-10			from Table 12-10	from Equation 12-21		(4) _{TOTAL} *(5)			(6)*(7)*(8)
	a	b	c							
Total	-10.99	1.07	0.23	0.39	5.445	1.000	5.445	0.82	1.00	4.463
Fatal and Injury (FI)	-13.14	1.18	0.22	0.33	1.683	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.320	1.742	0.82	1.00	1.428
Property Damage Only (PDO)	-11.02	1.02	0.24	0.44	3.576	$(5)_{TOTAL}-(5)_{FI}$ 0.680	3.702	0.82	1.00	3.035

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	1.428	1.000	3.035	4.463
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.450	0.643	0.483	1.466	2.108
Head-on collision	0.049	0.070	0.030	0.091	0.161
Angle collision	0.347	0.496	0.244	0.740	1.236
Sideswipe	0.099	0.141	0.032	0.097	0.238
Other multiple-vehicle collision	0.055	0.079	0.211	0.640	0.719

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_{bisv}	Combined CMFs (7) from Worksheet 2B	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)			(6)*(7)*(8)
	a	b	c							
Total	-10.21	0.68	0.27	0.36	0.390	1.000	0.390	0.82	1.00	0.320
Fatal and Injury (FI)	-9.25	0.43	0.29	0.09	0.108	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.282	0.110	0.82	1.00	0.090
Property Damage Only (PDO)	-11.34	0.78	0.25	0.44	0.275	$(5)_{TOTAL}-(5)_{FI}$ 0.718	0.280	0.82	1.00	0.230

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	0.090	1.000	0.230	0.320
		(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	0.067	0.870	0.200	0.267
Collision with other object	0.072	0.006	0.070	0.016	0.023
Other single-vehicle collision	0.040	0.004	0.023	0.005	0.009
Single-vehicle noncollision	0.141	0.013	0.034	0.008	0.021

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)
4.15	1.35	1.12	6.27

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} from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C _i	Predicted N _{pedi} (4)*(5)*(6)
	from Table 12-14									
	a	b	c	d	e					
Total	-9.53	0.40	0.26	0.45	0.04	0.24	0.210	6.27	1.00	1.318
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	1.00	1.318

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	4.463	0.320	4.783	0.015	1.00	0.072
Fatal and injury (FI)	--	--	--	--	1.00	0.072

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)	0.643	1.466	2.108
Head-on collisions (from Worksheet 2D)	0.070	0.091	0.161
Angle collisions (from Worksheet 2D)	0.496	0.740	1.236
Sideswipe (from Worksheet 2D)	0.141	0.097	0.238
Other multiple-vehicle collision (from Worksheet 2D)	0.079	0.640	0.719
Subtotal	1.428	3.035	4.463
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)	0.067	0.200	0.267
Collision with other object (from Worksheet 2F)	0.006	0.016	0.023
Other single-vehicle collision (from Worksheet 2F)	0.004	0.005	0.009
Single-vehicle noncollision (from Worksheet 2F)	0.013	0.008	0.021
Collision with pedestrian (from Worksheet 2G or 2I)	1.318	0.000	1.318
Collision with bicycle (from Worksheet 2J)	0.072	0.000	0.072
Subtotal	1.480	0.230	1.710
Total	2.908	3.264	6.173

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	6.173
Fatal and injury (FI)	2.908
Property damage only (PDO)	3.264

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections						
General Information			Location Information			
Analyst	SL		Roadway	Jefferson St		
Agency or Company	H.W. Lochner		Intersection	Whiting St		
Date Performed	12/01/21		Jurisdiction			
			Analysis Year	2036		
Input Data			Base Conditions	Site Conditions		
Intersection type (3ST, 3SG, 4ST, 4SG)			--	4SG		
AADT _{major} (veh/day)			AADT _{MAX} = 67,700 (veh/day)	--	17,500	
AADT _{minor} (veh/day)			AADT _{MAX} = 33,400 (veh/day)	--	17,500	
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	1		
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]			0	0		
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	Permissive		
Type of left-turn signal phasing for Leg #2			--	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				3,200		
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	5		
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	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
<i>CMF_{1i}</i>	<i>CMF_{2i}</i>	<i>CMF_{3i}</i>	<i>CMF_{4i}</i>	<i>CMF_{5i}</i>	<i>CMF_{6i}</i>	<i>CMF_{COMB}</i>
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)
0.90	1.00	1.00	1.00	0.91	1.00	0.82

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 (7) from Worksheet 2B	Calibration Factor, C_i	Predicted N_{bimv}
	from Table 12-10			from Table 12-10	from Equation 12-21		(4) _{TOTAL} *(5)			(6)*(7)*(8)
	a	b	c							
Total	-10.99	1.07	0.23	0.39	5.534	1.000	5.534	0.82	1.00	4.536
Fatal and Injury (FI)	-13.14	1.18	0.22	0.33	1.712	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.320	1.773	0.82	1.00	1.453
Property Damage Only (PDO)	-11.02	1.02	0.24	0.44	3.633	$(5)_{TOTAL}-(5)_{FI}$ 0.680	3.761	0.82	1.00	3.083

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	1.453	1.000	3.083	4.536
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.450	0.654	0.483	1.489	2.143
Head-on collision	0.049	0.071	0.030	0.092	0.164
Angle collision	0.347	0.504	0.244	0.752	1.256
Sideswipe	0.099	0.144	0.032	0.099	0.243
Other multiple-vehicle collision	0.055	0.080	0.211	0.650	0.730

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_{bisv}	Combined CMFs (7) from Worksheet 2B	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)			(6)*(7)*(8)
	a	b	c							
Total	-10.21	0.68	0.27	0.36	0.395	1.000	0.395	0.82	1.00	0.324
Fatal and Injury (FI)	-9.25	0.43	0.29	0.09	0.109	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.281	0.111	0.82	1.00	0.091
Property Damage Only (PDO)	-11.34	0.78	0.25	0.44	0.279	$(5)_{TOTAL}-(5)_{FI}$ 0.719	0.284	0.82	1.00	0.233

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	0.091	1.000	0.233	0.324
		(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	0.068	0.870	0.203	0.270
Collision with other object	0.072	0.007	0.070	0.016	0.023
Other single-vehicle collision	0.040	0.004	0.023	0.005	0.009
Single-vehicle noncollision	0.141	0.013	0.034	0.008	0.021

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)
4.15	1.35	1.12	6.27

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} from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C _i	Predicted N _{pedi} (4)*(5)*(6)
	from Table 12-14									
	a	b	c	d	e					
Total	-9.53	0.40	0.26	0.45	0.04	0.24	0.212	6.27	1.00	1.328
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	1.00	1.328

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	4.536	0.324	4.860	0.015	1.00	0.073
Fatal and injury (FI)	--	--	--	--	1.00	0.073

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)	0.654	1.489	2.143
Head-on collisions (from Worksheet 2D)	0.071	0.092	0.164
Angle collisions (from Worksheet 2D)	0.504	0.752	1.256
Sideswipe (from Worksheet 2D)	0.144	0.099	0.243
Other multiple-vehicle collision (from Worksheet 2D)	0.080	0.650	0.730
Subtotal	1.453	3.083	4.536
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)	0.068	0.203	0.270
Collision with other object (from Worksheet 2F)	0.007	0.016	0.023
Other single-vehicle collision (from Worksheet 2F)	0.004	0.005	0.009
Single-vehicle noncollision (from Worksheet 2F)	0.013	0.008	0.021
Collision with pedestrian (from Worksheet 2G or 2I)	1.328	0.000	1.328
Collision with bicycle (from Worksheet 2J)	0.073	0.000	0.073
Subtotal	1.492	0.233	1.725
Total	2.945	3.316	6.261

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	6.261
Fatal and injury (FI)	2.945
Property damage only (PDO)	3.316

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections						
General Information			Location Information			
Analyst	SL		Roadway	Jefferson St		
Agency or Company	H.W. Lochner		Intersection	Whiting St		
Date Performed	12/01/21		Jurisdiction			
			Analysis Year	2037		
Input Data			Base Conditions	Site Conditions		
Intersection type (3ST, 3SG, 4ST, 4SG)			--	4SG		
AADT _{major} (veh/day)			AADT _{MAX} = 67,700 (veh/day)	--	17,750	
AADT _{minor} (veh/day)			AADT _{MAX} = 33,400 (veh/day)	--	17,800	
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	1		
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]			0	0		
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	Permissive		
Type of left-turn signal phasing for Leg #2			--	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				3,200		
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	5		
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	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
<i>CMF_{1i}</i>	<i>CMF_{2i}</i>	<i>CMF_{3i}</i>	<i>CMF_{4i}</i>	<i>CMF_{5i}</i>	<i>CMF_{6i}</i>	<i>CMF_{COMB}</i>
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)
0.90	1.00	1.00	1.00	0.91	1.00	0.82

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 (7) from Worksheet 2B	Calibration Factor, C_i	Predicted N_{bimv}
	from Table 12-10			from Table 12-10	from Equation 12-21		(4) _{TOTAL} *(5)			(6)*(7)*(8)
	a	b	c							
Total	-10.99	1.07	0.23	0.39	5.641	1.000	5.641	0.82	1.00	4.623
Fatal and Injury (FI)	-13.14	1.18	0.22	0.33	1.748	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.321	1.809	0.82	1.00	1.483
Property Damage Only (PDO)	-11.02	1.02	0.24	0.44	3.701	$(5)_{TOTAL}-(5)_{FI}$ 0.679	3.831	0.82	1.00	3.140

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	1.483	1.000	3.140	4.623
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.450	0.667	0.483	1.517	2.184
Head-on collision	0.049	0.073	0.030	0.094	0.167
Angle collision	0.347	0.515	0.244	0.766	1.281
Sideswipe	0.099	0.147	0.032	0.100	0.247
Other multiple-vehicle collision	0.055	0.082	0.211	0.663	0.744

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_{bisv}	Combined CMFs (7) from Worksheet 2B	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)			(6)*(7)*(8)
	a	b	c							
Total	-10.21	0.68	0.27	0.36	0.401	1.000	0.401	0.82	1.00	0.329
Fatal and Injury (FI)	-9.25	0.43	0.29	0.09	0.110	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.280	0.112	0.82	1.00	0.092
Property Damage Only (PDO)	-11.34	0.78	0.25	0.44	0.283	$(5)_{TOTAL}-(5)_{FI}$ 0.720	0.288	0.82	1.00	0.236

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	0.092	1.000	0.236	0.329
		(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	0.069	0.870	0.206	0.274
Collision with other object	0.072	0.007	0.070	0.017	0.023
Other single-vehicle collision	0.040	0.004	0.023	0.005	0.009
Single-vehicle noncollision	0.141	0.013	0.034	0.008	0.021

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)
4.15	1.35	1.12	6.27

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} from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C _i	Predicted N _{pedi} (4)*(5)*(6)
	from Table 12-14									
	a	b	c	d	e					
Total	-9.53	0.40	0.26	0.45	0.04	0.24	0.213	6.27	1.00	1.337
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	1.00	1.337

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	4.623	0.329	4.952	0.015	1.00	0.074
Fatal and injury (FI)	--	--	--	--	1.00	0.074

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)	0.667	1.517	2.184
Head-on collisions (from Worksheet 2D)	0.073	0.094	0.167
Angle collisions (from Worksheet 2D)	0.515	0.766	1.281
Sideswipe (from Worksheet 2D)	0.147	0.100	0.247
Other multiple-vehicle collision (from Worksheet 2D)	0.082	0.663	0.744
Subtotal	1.483	3.140	4.623
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)	0.069	0.206	0.274
Collision with other object (from Worksheet 2F)	0.007	0.017	0.023
Other single-vehicle collision (from Worksheet 2F)	0.004	0.005	0.009
Single-vehicle noncollision (from Worksheet 2F)	0.013	0.008	0.021
Collision with pedestrian (from Worksheet 2G or 2I)	1.337	0.000	1.337
Collision with bicycle (from Worksheet 2J)	0.074	0.000	0.074
Subtotal	1.504	0.236	1.740
Total	2.987	3.377	6.363

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	6.363
Fatal and injury (FI)	2.987
Property damage only (PDO)	3.377

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections						
General Information			Location Information			
Analyst	SL		Roadway	Jefferson St		
Agency or Company	H.W. Lochner		Intersection	Whiting St		
Date Performed	12/01/21		Jurisdiction			
			Analysis Year	2038		
Input Data		Base Conditions		Site Conditions		
Intersection type (3ST, 3SG, 4ST, 4SG)		--		4SG		
AADT _{major} (veh/day)	AADT _{MAX} = 67,700 (veh/day)		--		18,000	
AADT _{minor} (veh/day)	AADT _{MAX} = 33,400 (veh/day)		--		18,100	
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				
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		1		
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0		0		
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		Permissive		
Type of left-turn signal phasing for Leg #2		--		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				3,200		
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		5		
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		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
<i>CMF_{1i}</i>	<i>CMF_{2i}</i>	<i>CMF_{3i}</i>	<i>CMF_{4i}</i>	<i>CMF_{5i}</i>	<i>CMF_{6i}</i>	<i>CMF_{COMB}</i>
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)
0.90	1.00	1.00	1.00	0.91	1.00	0.82

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 (7) from Worksheet 2B	Calibration Factor, C_i	Predicted N_{bimv}
	from Table 12-10			from Table 12-10	from Equation 12-21		(4) _{TOTAL} *(5)			(6)*(7)*(8)
	a	b	c							
Total	-10.99	1.07	0.23	0.39	5.748	1.000	5.748	0.82	1.00	4.711
Fatal and Injury (FI)	-13.14	1.18	0.22	0.33	1.784	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.321	1.846	0.82	1.00	1.513
Property Damage Only (PDO)	-11.02	1.02	0.24	0.44	3.770	$(5)_{TOTAL}-(5)_{FI}$ 0.679	3.902	0.82	1.00	3.198

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	1.513	1.000	3.198	4.711
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.450	0.681	0.483	1.545	2.226
Head-on collision	0.049	0.074	0.030	0.096	0.170
Angle collision	0.347	0.525	0.244	0.780	1.305
Sideswipe	0.099	0.150	0.032	0.102	0.252
Other multiple-vehicle collision	0.055	0.083	0.211	0.675	0.758

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_{bisv}	Combined CMFs (7) from Worksheet 2B	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)			(6)*(7)*(8)
	a	b	c							
Total	-10.21	0.68	0.27	0.36	0.406	1.000	0.406	0.82	1.00	0.333
Fatal and Injury (FI)	-9.25	0.43	0.29	0.09	0.111	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.279	0.114	0.82	1.00	0.093
Property Damage Only (PDO)	-11.34	0.78	0.25	0.44	0.287	$(5)_{TOTAL}-(5)_{FI}$ 0.721	0.293	0.82	1.00	0.240

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	0.093	1.000	0.240	0.333
		(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	0.069	0.870	0.209	0.278
Collision with other object	0.072	0.007	0.070	0.017	0.024
Other single-vehicle collision	0.040	0.004	0.023	0.006	0.009
Single-vehicle noncollision	0.141	0.013	0.034	0.008	0.021

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)
4.15	1.35	1.12	6.27

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} from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C _i	Predicted N _{pedi} (4)*(5)*(6)
	from Table 12-14									
	a	b	c	d	e					
Total	-9.53	0.40	0.26	0.45	0.04	0.24	0.215	6.27	1.00	1.347
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	1.00	1.347

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	4.711	0.333	5.044	0.015	1.00	0.076
Fatal and injury (FI)	--	--	--	--	1.00	0.076

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)	0.681	1.545	2.226
Head-on collisions (from Worksheet 2D)	0.074	0.096	0.170
Angle collisions (from Worksheet 2D)	0.525	0.780	1.305
Sideswipe (from Worksheet 2D)	0.150	0.102	0.252
Other multiple-vehicle collision (from Worksheet 2D)	0.083	0.675	0.758
Subtotal	1.513	3.198	4.711
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)	0.069	0.209	0.278
Collision with other object (from Worksheet 2F)	0.007	0.017	0.024
Other single-vehicle collision (from Worksheet 2F)	0.004	0.006	0.009
Single-vehicle noncollision (from Worksheet 2F)	0.013	0.008	0.021
Collision with pedestrian (from Worksheet 2G or 2I)	1.347	0.000	1.347
Collision with bicycle (from Worksheet 2J)	0.076	0.000	0.076
Subtotal	1.515	0.240	1.755
Total	3.028	3.438	6.466

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	6.466
Fatal and injury (FI)	3.028
Property damage only (PDO)	3.438

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections						
General Information			Location Information			
Analyst	SL		Roadway	Jefferson St		
Agency or Company	H.W. Lochner		Intersection	Whiting St		
Date Performed	12/01/21		Jurisdiction			
			Analysis Year	2039		
Input Data		Base Conditions		Site Conditions		
Intersection type (3ST, 3SG, 4ST, 4SG)		--		4SG		
AADT _{major} (veh/day)		AADT _{MAX} = 67,700 (veh/day)		18,250		
AADT _{minor} (veh/day)		AADT _{MAX} = 33,400 (veh/day)		18,400		
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		1		
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0		0		
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		Permissive		
Type of left-turn signal phasing for Leg #2		--		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				3,200		
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		5		
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		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
<i>CMF 1i</i>	<i>CMF 2i</i>	<i>CMF 3i</i>	<i>CMF 4i</i>	<i>CMF 5i</i>	<i>CMF 6i</i>	<i>CMF_{COMB}</i>
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)
0.90	1.00	1.00	1.00	0.91	1.00	0.82

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 (7) from Worksheet 2B	Calibration Factor, C_i	Predicted N_{bimv}
	from Table 12-10			from Table 12-10	from Equation 12-21		(4) _{TOTAL} *(5)			(6)*(7)*(8)
	a	b	c							
Total	-10.99	1.07	0.23	0.39	5.855	1.000	5.855	0.82	1.00	4.799
Fatal and Injury (FI)	-13.14	1.18	0.22	0.33	1.819	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.322	1.883	0.82	1.00	1.543
Property Damage Only (PDO)	-11.02	1.02	0.24	0.44	3.838	$(5)_{TOTAL}-(5)_{FI}$ 0.678	3.972	0.82	1.00	3.256

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	1.543	1.000	3.256	4.799
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.450	0.695	0.483	1.573	2.267
Head-on collision	0.049	0.076	0.030	0.098	0.173
Angle collision	0.347	0.536	0.244	0.794	1.330
Sideswipe	0.099	0.153	0.032	0.104	0.257
Other multiple-vehicle collision	0.055	0.085	0.211	0.687	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_{bisv}	Combined CMFs (7) from Worksheet 2B	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)			(6)*(7)*(8)
	a	b	c							
Total	-10.21	0.68	0.27	0.36	0.412	1.000	0.412	0.82	1.00	0.338
Fatal and Injury (FI)	-9.25	0.43	0.29	0.09	0.113	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.279	0.115	0.82	1.00	0.094
Property Damage Only (PDO)	-11.34	0.78	0.25	0.44	0.292	$(5)_{TOTAL}-(5)_{FI}$ 0.721	0.297	0.82	1.00	0.244

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	0.094	1.000	0.244	0.338
		(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	0.070	0.870	0.212	0.282
Collision with other object	0.072	0.007	0.070	0.017	0.024
Other single-vehicle collision	0.040	0.004	0.023	0.006	0.009
Single-vehicle noncollision	0.141	0.013	0.034	0.008	0.022

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)
4.15	1.35	1.12	6.27

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} from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C _i	Predicted N _{pedi} (4)*(5)*(6)
	from Table 12-14									
	a	b	c	d	e					
Total	-9.53	0.40	0.26	0.45	0.04	0.24	0.216	6.27	1.00	1.356
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	1.00	1.356

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	4.799	0.338	5.137	0.015	1.00	0.077
Fatal and injury (FI)	--	--	--	--	1.00	0.077

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)	0.695	1.573	2.267
Head-on collisions (from Worksheet 2D)	0.076	0.098	0.173
Angle collisions (from Worksheet 2D)	0.536	0.794	1.330
Sideswipe (from Worksheet 2D)	0.153	0.104	0.257
Other multiple-vehicle collision (from Worksheet 2D)	0.085	0.687	0.772
Subtotal	1.543	3.256	4.799
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)	0.070	0.212	0.282
Collision with other object (from Worksheet 2F)	0.007	0.017	0.024
Other single-vehicle collision (from Worksheet 2F)	0.004	0.006	0.009
Single-vehicle noncollision (from Worksheet 2F)	0.013	0.008	0.022
Collision with pedestrian (from Worksheet 2G or 2I)	1.356	0.000	1.356
Collision with bicycle (from Worksheet 2J)	0.077	0.000	0.077
Subtotal	1.527	0.244	1.770
Total	3.070	3.500	6.570

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	6.570
Fatal and injury (FI)	3.070
Property damage only (PDO)	3.500

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections						
General Information			Location Information			
Analyst	SL		Roadway	Jefferson St		
Agency or Company	H.W. Lochner		Intersection	Whiting St		
Date Performed	12/01/21		Jurisdiction			
			Analysis Year	2040		
Input Data		Base Conditions		Site Conditions		
Intersection type (3ST, 3SG, 4ST, 4SG)		--		4SG		
AADT _{major} (veh/day)	AADT _{MAX} = 67,700 (veh/day)		--		18,500	
AADT _{minor} (veh/day)	AADT _{MAX} = 33,400 (veh/day)		--		18,700	
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		1		
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0		0		
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		Permissive		
Type of left-turn signal phasing for Leg #2		--		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				3,200		
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		5		
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		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
<i>CMF</i> _{1i}	<i>CMF</i> _{2i}	<i>CMF</i> _{3i}	<i>CMF</i> _{4i}	<i>CMF</i> _{5i}	<i>CMF</i> _{6i}	<i>CMF</i> _{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)
0.90	1.00	1.00	1.00	0.91	1.00	0.82

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 from Table 12-10	Initial N_{bimv} from Equation 12-21	Proportion of Total Crashes	Adjusted N_{bimv} (4) _{TOTAL} *(5)	Combined CMFs (7) from Worksheet 2B	Calibration Factor, C_i	Predicted N_{bimv} (6)*(7)*(8)
	a	b	c							
Total	-10.99	1.07	0.23	0.39	5.963	1.000	5.963	0.82	1.00	4.888
Fatal and Injury (FI)	-13.14	1.18	0.22	0.33	1.855	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.322	1.920	0.82	1.00	1.574
Property Damage Only (PDO)	-11.02	1.02	0.24	0.44	3.907	$(5)_{TOTAL}-(5)_{FI}$ 0.678	4.043	0.82	1.00	3.314

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	1.574	1.000	3.314	4.888
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.450	0.708	0.483	1.601	2.309
Head-on collision	0.049	0.077	0.030	0.099	0.177
Angle collision	0.347	0.546	0.244	0.809	1.355
Sideswipe	0.099	0.156	0.032	0.106	0.262
Other multiple-vehicle collision	0.055	0.087	0.211	0.699	0.786

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 from Table 12-12	Initial N_{bisv} from Eqn. 12-24; (FI) from Eqn. 12-24 or 12-27	Proportion of Total Crashes	Adjusted N_{bisv} (4) _{TOTAL} *(5)	Combined CMFs (7) from Worksheet 2B	Calibration Factor, C_i	Predicted N_{bisv} (6)*(7)*(8)
	a	b	c							
Total	-10.21	0.68	0.27	0.36	0.418	1.000	0.418	0.82	1.00	0.342
Fatal and Injury (FI)	-9.25	0.43	0.29	0.09	0.114	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.278	0.116	0.82	1.00	0.095
Property Damage Only (PDO)	-11.34	0.78	0.25	0.44	0.296	$(5)_{TOTAL}-(5)_{FI}$ 0.722	0.302	0.82	1.00	0.247

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	0.095	1.000	0.247	0.342
		(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	0.071	0.870	0.215	0.286
Collision with other object	0.072	0.007	0.070	0.017	0.024
Other single-vehicle collision	0.040	0.004	0.023	0.006	0.009
Single-vehicle noncollision	0.141	0.013	0.034	0.008	0.022

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)
4.15	1.35	1.12	6.27

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} from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C _i	Predicted N _{pedi} (4)*(5)*(6)
	from Table 12-14									
	a	b	c	d	e					
Total	-9.53	0.40	0.26	0.45	0.04	0.24	0.217	6.27	1.00	1.365
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	1.00	1.365

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	4.888	0.342	5.230	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)
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)	0.708	1.601	2.309
Head-on collisions (from Worksheet 2D)	0.077	0.099	0.177
Angle collisions (from Worksheet 2D)	0.546	0.809	1.355
Sideswipe (from Worksheet 2D)	0.156	0.106	0.262
Other multiple-vehicle collision (from Worksheet 2D)	0.087	0.699	0.786
Subtotal	1.574	3.314	4.888
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)	0.071	0.215	0.286
Collision with other object (from Worksheet 2F)	0.007	0.017	0.024
Other single-vehicle collision (from Worksheet 2F)	0.004	0.006	0.009
Single-vehicle noncollision (from Worksheet 2F)	0.013	0.008	0.022
Collision with pedestrian (from Worksheet 2G or 2I)	1.365	0.000	1.365
Collision with bicycle (from Worksheet 2J)	0.078	0.000	0.078
Subtotal	1.538	0.247	1.785
Total	3.112	3.561	6.673

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	6.673
Fatal and injury (FI)	3.112
Property damage only (PDO)	3.561

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections						
General Information			Location Information			
Analyst	SL		Roadway	Jefferson St		
Agency or Company	H.W. Lochner		Intersection	Whiting St		
Date Performed	12/01/21		Jurisdiction	2041		
Analysis Year						
Input Data		Base Conditions		Site Conditions		
Intersection type (3ST, 3SG, 4ST, 4SG)		--		4SG		
AADT _{major} (veh/day)		AADT _{MAX} = 67,700 (veh/day)		18,750		
AADT _{minor} (veh/day)		AADT _{MAX} = 33,400 (veh/day)		19,000		
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				
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		1		
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0		0		
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		Permissive		
Type of left-turn signal phasing for Leg #2		--		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				3,200		
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		5		
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		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
<i>CMF_{1i}</i>	<i>CMF_{2i}</i>	<i>CMF_{3i}</i>	<i>CMF_{4i}</i>	<i>CMF_{5i}</i>	<i>CMF_{6i}</i>	<i>CMF_{COMB}</i>
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)
0.90	1.00	1.00	1.00	0.91	1.00	0.82

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 (7) from Worksheet 2B	Calibration Factor, C_i	Predicted N_{bimv}
	from Table 12-10			from Table 12-10	from Equation 12-21		(4) _{TOTAL} *(5)			(6)*(7)*(8)
	a	b	c							
Total	-10.99	1.07	0.23	0.39	6.072	1.000	6.072	0.82	1.00	4.977
Fatal and Injury (FI)	-13.14	1.18	0.22	0.33	1.892	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.322	1.958	0.82	1.00	1.604
Property Damage Only (PDO)	-11.02	1.02	0.24	0.44	3.976	$(5)_{TOTAL}-(5)_{FI}$ 0.678	4.114	0.82	1.00	3.372

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
		(2)*(3) _{FI}		(4)*(5) _{PDO}	(3)+(5)
Total	1.000	1.604	1.000	3.372	4.977
Rear-end collision	0.450	0.722	0.483	1.629	2.351
Head-on collision	0.049	0.079	0.030	0.101	0.180
Angle collision	0.347	0.557	0.244	0.823	1.380
Sideswipe	0.099	0.159	0.032	0.108	0.267
Other multiple-vehicle collision	0.055	0.088	0.211	0.712	0.800

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_{bisv}	Combined CMFs (7) from Worksheet 2B	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)			(6)*(7)*(8)
	a	b	c							
Total	-10.21	0.68	0.27	0.36	0.423	1.000	0.423	0.82	1.00	0.347
Fatal and Injury (FI)	-9.25	0.43	0.29	0.09	0.115	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.277	0.117	0.82	1.00	0.096
Property Damage Only (PDO)	-11.34	0.78	0.25	0.44	0.300	$(5)_{TOTAL}-(5)_{FI}$ 0.723	0.306	0.82	1.00	0.251

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	0.096	1.000	0.251	0.347
		(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	0.072	0.870	0.218	0.290
Collision with other object	0.072	0.007	0.070	0.018	0.024
Other single-vehicle collision	0.040	0.004	0.023	0.006	0.010
Single-vehicle noncollision	0.141	0.014	0.034	0.009	0.022

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)
4.15	1.35	1.12	6.27

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} from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C _i	Predicted N _{pedi} (4)*(5)*(6)
	from Table 12-14									
	a	b	c	d	e					
Total	-9.53	0.40	0.26	0.45	0.04	0.24	0.219	6.27	1.00	1.374
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	1.00	1.374

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	4.977	0.347	5.324	0.015	1.00	0.080
Fatal and injury (FI)	--	--	--	--	1.00	0.080

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)	0.722	1.629	2.351
Head-on collisions (from Worksheet 2D)	0.079	0.101	0.180
Angle collisions (from Worksheet 2D)	0.557	0.823	1.380
Sideswipe (from Worksheet 2D)	0.159	0.108	0.267
Other multiple-vehicle collision (from Worksheet 2D)	0.088	0.712	0.800
Subtotal	1.604	3.372	4.977
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)	0.072	0.218	0.290
Collision with other object (from Worksheet 2F)	0.007	0.018	0.024
Other single-vehicle collision (from Worksheet 2F)	0.004	0.006	0.010
Single-vehicle noncollision (from Worksheet 2F)	0.014	0.009	0.022
Collision with pedestrian (from Worksheet 2G or 2I)	1.374	0.000	1.374
Collision with bicycle (from Worksheet 2J)	0.080	0.000	0.080
Subtotal	1.550	0.251	1.800
Total	3.154	3.623	6.777

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	6.777
Fatal and injury (FI)	3.154
Property damage only (PDO)	3.623

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections						
General Information			Location Information			
Analyst	SL		Roadway	Jefferson St		
Agency or Company	H.W. Lochner		Intersection	Whiting St		
Date Performed	12/01/21		Jurisdiction			
			Analysis Year	2042		
Input Data			Base Conditions	Site Conditions		
Intersection type (3ST, 3SG, 4ST, 4SG)			--	4SG		
AADT _{major} (veh/day)			AADT _{MAX} = 67,700 (veh/day)	--	19,000	
AADT _{minor} (veh/day)			AADT _{MAX} = 33,400 (veh/day)	--	19,300	
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			
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	1		
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]			0	0		
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	Permissive		
Type of left-turn signal phasing for Leg #2			--	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				3,200		
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	5		
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	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
<i>CMF 1i</i>	<i>CMF 2i</i>	<i>CMF 3i</i>	<i>CMF 4i</i>	<i>CMF 5i</i>	<i>CMF 6i</i>	<i>CMF_{COMB}</i>
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)
0.90	1.00	1.00	1.00	0.91	1.00	0.82

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 (7) from Worksheet 2B	Calibration Factor, C_i	Predicted N_{bimv}
	from Table 12-10			from Table 12-10	from Equation 12-21		(4) _{TOTAL} *(5)			(6)*(7)*(8)
	a	b	c							
Total	-10.99	1.07	0.23	0.39	6.181	1.000	6.181	0.82	1.00	5.066
Fatal and Injury (FI)	-13.14	1.18	0.22	0.33	1.928	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.323	1.995	0.82	1.00	1.635
Property Damage Only (PDO)	-11.02	1.02	0.24	0.44	4.045	$(5)_{TOTAL}-(5)_{FI}$ 0.677	4.186	0.82	1.00	3.431

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	1.635	1.000	3.431	5.066
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.450	0.736	0.483	1.657	2.393
Head-on collision	0.049	0.080	0.030	0.103	0.183
Angle collision	0.347	0.567	0.244	0.837	1.405
Sideswipe	0.099	0.162	0.032	0.110	0.272
Other multiple-vehicle collision	0.055	0.090	0.211	0.724	0.814

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_{bisv}	Combined CMFs (7) from Worksheet 2B	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)			(6)*(7)*(8)
	a	b	c							
Total	-10.21	0.68	0.27	0.36	0.429	1.000	0.429	0.82	1.00	0.352
Fatal and Injury (FI)	-9.25	0.43	0.29	0.09	0.116	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.276	0.118	0.82	1.00	0.097
Property Damage Only (PDO)	-11.34	0.78	0.25	0.44	0.305	$(5)_{TOTAL}-(5)_{FI}$ 0.724	0.311	0.82	1.00	0.255

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	0.097	1.000	0.255	0.352
		(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	0.072	0.870	0.221	0.294
Collision with other object	0.072	0.007	0.070	0.018	0.025
Other single-vehicle collision	0.040	0.004	0.023	0.006	0.010
Single-vehicle noncollision	0.141	0.014	0.034	0.009	0.022

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)
4.15	1.35	1.12	6.27

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} from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C _i	Predicted N _{pedi} (4)*(5)*(6)
	from Table 12-14									
	a	b	c	d	e					
Total	-9.53	0.40	0.26	0.45	0.04	0.24	0.220	6.27	1.00	1.382
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	1.00	1.382

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	5.066	0.352	5.418	0.015	1.00	0.081
Fatal and injury (FI)	--	--	--	--	1.00	0.081

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)	0.736	1.657	2.393
Head-on collisions (from Worksheet 2D)	0.080	0.103	0.183
Angle collisions (from Worksheet 2D)	0.567	0.837	1.405
Sideswipe (from Worksheet 2D)	0.162	0.110	0.272
Other multiple-vehicle collision (from Worksheet 2D)	0.090	0.724	0.814
Subtotal	1.635	3.431	5.066
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)	0.072	0.221	0.294
Collision with other object (from Worksheet 2F)	0.007	0.018	0.025
Other single-vehicle collision (from Worksheet 2F)	0.004	0.006	0.010
Single-vehicle noncollision (from Worksheet 2F)	0.014	0.009	0.022
Collision with pedestrian (from Worksheet 2G or 2I)	1.382	0.000	1.382
Collision with bicycle (from Worksheet 2J)	0.081	0.000	0.081
Subtotal	1.561	0.255	1.815
Total	3.196	3.685	6.881

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	6.881
Fatal and injury (FI)	3.196
Property damage only (PDO)	3.685

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections						
General Information			Location Information			
Analyst	SL		Roadway	Jefferson St		
Agency or Company	H.W. Lochner		Intersection	Whiting St		
Date Performed	12/01/21		Jurisdiction			
			Analysis Year	2043		
Input Data		Base Conditions		Site Conditions		
Intersection type (3ST, 3SG, 4ST, 4SG)		--		4SG		
AADT _{major} (veh/day)		AADT _{MAX} = 67,700 (veh/day)		19,250		
AADT _{minor} (veh/day)		AADT _{MAX} = 33,400 (veh/day)		19,600		
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		1		
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0		0		
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		Permissive		
Type of left-turn signal phasing for Leg #2		--		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				3,200		
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		5		
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		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
<i>CMF_{1i}</i>	<i>CMF_{2i}</i>	<i>CMF_{3i}</i>	<i>CMF_{4i}</i>	<i>CMF_{5i}</i>	<i>CMF_{6i}</i>	<i>CMF_{COMB}</i>
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)
0.90	1.00	1.00	1.00	0.91	1.00	0.82

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 (7) from Worksheet 2B	Calibration Factor, C_i	Predicted N_{bimv}
	from Table 12-10			from Table 12-10	from Equation 12-21		(4) _{TOTAL} *(5)			(6)*(7)*(8)
	a	b	c							
Total	-10.99	1.07	0.23	0.39	6.290	1.000	6.290	0.82	1.00	5.156
Fatal and Injury (FI)	-13.14	1.18	0.22	0.33	1.965	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.323	2.033	0.82	1.00	1.666
Property Damage Only (PDO)	-11.02	1.02	0.24	0.44	4.115	$(5)_{TOTAL}-(5)_{FI}$ 0.677	4.257	0.82	1.00	3.489

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	1.666	1.000	3.489	5.156
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.450	0.750	0.483	1.685	2.435
Head-on collision	0.049	0.082	0.030	0.105	0.186
Angle collision	0.347	0.578	0.244	0.851	1.430
Sideswipe	0.099	0.165	0.032	0.112	0.277
Other multiple-vehicle collision	0.055	0.092	0.211	0.736	0.828

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_{bisv}	Combined CMFs (7) from Worksheet 2B	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)			(6)*(7)*(8)
	a	b	c							
Total	-10.21	0.68	0.27	0.36	0.435	1.000	0.435	0.82	1.00	0.356
Fatal and Injury (FI)	-9.25	0.43	0.29	0.09	0.117	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.275	0.120	0.82	1.00	0.098
Property Damage Only (PDO)	-11.34	0.78	0.25	0.44	0.309	$(5)_{TOTAL}-(5)_{FI}$ 0.725	0.315	0.82	1.00	0.258

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	0.098	1.000	0.258	0.356
		(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	0.073	0.870	0.225	0.298
Collision with other object	0.072	0.007	0.070	0.018	0.025
Other single-vehicle collision	0.040	0.004	0.023	0.006	0.010
Single-vehicle noncollision	0.141	0.014	0.034	0.009	0.023

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)
4.15	1.35	1.12	6.27

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} from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C _i	Predicted N _{pedi} (4)*(5)*(6)
	from Table 12-14									
	a	b	c	d	e					
Total	-9.53	0.40	0.26	0.45	0.04	0.24	0.222	6.27	1.00	1.391
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	1.00	1.391

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	5.156	0.356	5.512	0.015	1.00	0.083
Fatal and injury (FI)	--	--	--	--	1.00	0.083

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)	0.750	1.685	2.435
Head-on collisions (from Worksheet 2D)	0.082	0.105	0.186
Angle collisions (from Worksheet 2D)	0.578	0.851	1.430
Sideswipe (from Worksheet 2D)	0.165	0.112	0.277
Other multiple-vehicle collision (from Worksheet 2D)	0.092	0.736	0.828
Subtotal	1.666	3.489	5.156
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)	0.073	0.225	0.298
Collision with other object (from Worksheet 2F)	0.007	0.018	0.025
Other single-vehicle collision (from Worksheet 2F)	0.004	0.006	0.010
Single-vehicle noncollision (from Worksheet 2F)	0.014	0.009	0.023
Collision with pedestrian (from Worksheet 2G or 2I)	1.391	0.000	1.391
Collision with bicycle (from Worksheet 2J)	0.083	0.000	0.083
Subtotal	1.572	0.258	1.830
Total	3.238	3.748	6.986

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	6.986
Fatal and injury (FI)	3.238
Property damage only (PDO)	3.748

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections						
General Information			Location Information			
Analyst	SL		Roadway	Jefferson St		
Agency or Company	H.W. Lochner		Intersection	Whiting St		
Date Performed	12/01/21		Jurisdiction			
			Analysis Year	2044		
Input Data			Base Conditions	Site Conditions		
Intersection type (3ST, 3SG, 4ST, 4SG)			--	4SG		
AADT _{major} (veh/day)			AADT _{MAX} = 67,700 (veh/day)	--	19,500	
AADT _{minor} (veh/day)			AADT _{MAX} = 33,400 (veh/day)	--	19,900	
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			
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	1		
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]			0	0		
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	Permissive		
Type of left-turn signal phasing for Leg #2			--	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				3,200		
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	5		
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	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
<i>CMF_{1i}</i>	<i>CMF_{2i}</i>	<i>CMF_{3i}</i>	<i>CMF_{4i}</i>	<i>CMF_{5i}</i>	<i>CMF_{6i}</i>	<i>CMF_{COMB}</i>
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)
0.90	1.00	1.00	1.00	0.91	1.00	0.82

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 (7) from Worksheet 2B	Calibration Factor, C_i	Predicted N_{bimv}
	from Table 12-10			from Table 12-10	from Equation 12-21		(4) _{TOTAL} *(5)			(6)*(7)*(8)
	a	b	c							
Total	-10.99	1.07	0.23	0.39	6.400	1.000	6.400	0.82	1.00	5.246
Fatal and Injury (FI)	-13.14	1.18	0.22	0.33	2.002	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.324	2.071	0.82	1.00	1.697
Property Damage Only (PDO)	-11.02	1.02	0.24	0.44	4.184	$(5)_{TOTAL}-(5)_{FI}$ 0.676	4.329	0.82	1.00	3.548

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	1.697	1.000	3.548	5.246
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.450	0.764	0.483	1.714	2.478
Head-on collision	0.049	0.083	0.030	0.106	0.190
Angle collision	0.347	0.589	0.244	0.866	1.455
Sideswipe	0.099	0.168	0.032	0.114	0.282
Other multiple-vehicle collision	0.055	0.093	0.211	0.749	0.842

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_{bisv}	Combined CMFs (7) from Worksheet 2B	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)			(6)*(7)*(8)
	a	b	c							
Total	-10.21	0.68	0.27	0.36	0.440	1.000	0.440	0.82	1.00	0.361
Fatal and Injury (FI)	-9.25	0.43	0.29	0.09	0.119	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.275	0.121	0.82	1.00	0.099
Property Damage Only (PDO)	-11.34	0.78	0.25	0.44	0.313	$(5)_{TOTAL}-(5)_{FI}$ 0.725	0.319	0.82	1.00	0.262

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	0.099	1.000	0.262	0.361
		(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	0.074	0.870	0.228	0.301
Collision with other object	0.072	0.007	0.070	0.018	0.025
Other single-vehicle collision	0.040	0.004	0.023	0.006	0.010
Single-vehicle noncollision	0.141	0.014	0.034	0.009	0.023

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)
4.15	1.35	1.12	6.27

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} from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C _i	Predicted N _{pedi} (4)*(5)*(6)
	from Table 12-14									
	a	b	c	d	e					
Total	-9.53	0.40	0.26	0.45	0.04	0.24	0.223	6.27	1.00	1.400
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	1.00	1.400

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	5.246	0.361	5.606	0.015	1.00	0.084
Fatal and injury (FI)	--	--	--	--	1.00	0.084

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)	0.764	1.714	2.478
Head-on collisions (from Worksheet 2D)	0.083	0.106	0.190
Angle collisions (from Worksheet 2D)	0.589	0.866	1.455
Sideswipe (from Worksheet 2D)	0.168	0.114	0.282
Other multiple-vehicle collision (from Worksheet 2D)	0.093	0.749	0.842
Subtotal	1.697	3.548	5.246
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)	0.074	0.228	0.301
Collision with other object (from Worksheet 2F)	0.007	0.018	0.025
Other single-vehicle collision (from Worksheet 2F)	0.004	0.006	0.010
Single-vehicle noncollision (from Worksheet 2F)	0.014	0.009	0.023
Collision with pedestrian (from Worksheet 2G or 2I)	1.400	0.000	1.400
Collision with bicycle (from Worksheet 2J)	0.084	0.000	0.084
Subtotal	1.583	0.262	1.845
Total	3.280	3.810	7.090

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	7.090
Fatal and injury (FI)	3.280
Property damage only (PDO)	3.810

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections						
General Information			Location Information			
Analyst	SL		Roadway	Jefferson St		
Agency or Company	H.W. Lochner		Intersection	Whiting St		
Date Performed	12/01/21		Jurisdiction			
			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)		--		19,750	
AADT _{minor} (veh/day)	AADT _{MAX} = 33,400 (veh/day)		--		20,200	
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		1		
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0		0		
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		Permissive		
Type of left-turn signal phasing for Leg #2		--		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				3,200		
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		5		
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		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
<i>CMF_{1i}</i>	<i>CMF_{2i}</i>	<i>CMF_{3i}</i>	<i>CMF_{4i}</i>	<i>CMF_{5i}</i>	<i>CMF_{6i}</i>	<i>CMF_{COMB}</i>
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)
0.90	1.00	1.00	1.00	0.91	1.00	0.82

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 (7) from Worksheet 2B	Calibration Factor, C_i	Predicted N_{bimv}
	from Table 12-10			from Table 12-10	from Equation 12-21		(4) _{TOTAL} *(5)			(6)*(7)*(8)
	a	b	c							
Total	-10.99	1.07	0.23	0.39	6.510	1.000	6.510	0.82	1.00	5.336
Fatal and Injury (FI)	-13.14	1.18	0.22	0.33	2.039	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.324	2.109	0.82	1.00	1.729
Property Damage Only (PDO)	-11.02	1.02	0.24	0.44	4.254	$(5)_{TOTAL}-(5)_{FI}$ 0.676	4.401	0.82	1.00	3.607

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	1.729	1.000	3.607	5.336
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.450	0.778	0.483	1.742	2.520
Head-on collision	0.049	0.085	0.030	0.108	0.193
Angle collision	0.347	0.600	0.244	0.880	1.480
Sideswipe	0.099	0.171	0.032	0.115	0.287
Other multiple-vehicle collision	0.055	0.095	0.211	0.761	0.856

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_{bisv}	Combined CMFs (7) from Worksheet 2B	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)			(6)*(7)*(8)
	a	b	c							
Total	-10.21	0.68	0.27	0.36	0.446	1.000	0.446	0.82	1.00	0.366
Fatal and Injury (FI)	-9.25	0.43	0.29	0.09	0.120	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.274	0.122	0.82	1.00	0.100
Property Damage Only (PDO)	-11.34	0.78	0.25	0.44	0.318	$(5)_{TOTAL}-(5)_{FI}$ 0.726	0.324	0.82	1.00	0.265

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	0.100	1.000	0.265	0.366
		(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	0.074	0.870	0.231	0.305
Collision with other object	0.072	0.007	0.070	0.019	0.026
Other single-vehicle collision	0.040	0.004	0.023	0.006	0.010
Single-vehicle noncollision	0.141	0.014	0.034	0.009	0.023

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)
4.15	1.35	1.12	6.27

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} from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C _i	Predicted N _{pedi} (4)*(5)*(6)
	from Table 12-14									
	a	b	c	d	e					
Total	-9.53	0.40	0.26	0.45	0.04	0.24	0.224	6.27	1.00	1.408
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	1.00	1.408

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	5.336	0.366	5.701	0.015	1.00	0.086
Fatal and injury (FI)	--	--	--	--	1.00	0.086

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)	0.778	1.742	2.520
Head-on collisions (from Worksheet 2D)	0.085	0.108	0.193
Angle collisions (from Worksheet 2D)	0.600	0.880	1.480
Sideswipe (from Worksheet 2D)	0.171	0.115	0.287
Other multiple-vehicle collision (from Worksheet 2D)	0.095	0.761	0.856
Subtotal	1.729	3.607	5.336
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)	0.074	0.231	0.305
Collision with other object (from Worksheet 2F)	0.007	0.019	0.026
Other single-vehicle collision (from Worksheet 2F)	0.004	0.006	0.010
Single-vehicle noncollision (from Worksheet 2F)	0.014	0.009	0.023
Collision with pedestrian (from Worksheet 2G or 2I)	1.408	0.000	1.408
Collision with bicycle (from Worksheet 2J)	0.086	0.000	0.086
Subtotal	1.594	0.265	1.859
Total	3.323	3.873	7.195

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	7.195
Fatal and injury (FI)	3.323
Property damage only (PDO)	3.873

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections						
General Information			Location Information			
Analyst	SL		Roadway	Jefferson St		
Agency or Company	H.W. Lochner		Intersection	Whiting St		
Date Performed	12/01/21		Jurisdiction			
			Analysis Year	2046		
Input Data			Base Conditions	Site Conditions		
Intersection type (3ST, 3SG, 4ST, 4SG)			--	4SG		
AADT _{major} (veh/day)			AADT _{MAX} = 67,700 (veh/day)	20,000		
AADT _{minor} (veh/day)			AADT _{MAX} = 33,400 (veh/day)	20,500		
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	1		
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]			0	0		
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	Permissive		
Type of left-turn signal phasing for Leg #2			--	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				3,200		
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	5		
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	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
<i>CMF_{1i}</i>	<i>CMF_{2i}</i>	<i>CMF_{3i}</i>	<i>CMF_{4i}</i>	<i>CMF_{5i}</i>	<i>CMF_{6i}</i>	<i>CMF_{COMB}</i>
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)
0.90	1.00	1.00	1.00	0.91	1.00	0.82

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)			(6)*(7)*(8)
	a	b	c							
Total	-10.99	1.07	0.23	0.39	6.621	1.000	6.621	0.82	1.00	5.427
Fatal and Injury (FI)	-13.14	1.18	0.22	0.33	2.076	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.324	2.147	0.82	1.00	1.760
Property Damage Only (PDO)	-11.02	1.02	0.24	0.44	4.325	$(5)_{TOTAL}-(5)_{FI}$ 0.676	4.474	0.82	1.00	3.667

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	1.760	1.000	3.667	5.427
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.450	0.792	0.483	1.771	2.563
Head-on collision	0.049	0.086	0.030	0.110	0.196
Angle collision	0.347	0.611	0.244	0.895	1.505
Sideswipe	0.099	0.174	0.032	0.117	0.292
Other multiple-vehicle collision	0.055	0.097	0.211	0.774	0.870

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_{bisv}	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)			(6)*(7)*(8)
	a	b	c							
Total	-10.21	0.68	0.27	0.36	0.452	1.000	0.452	0.82	1.00	0.370
Fatal and Injury (FI)	-9.25	0.43	0.29	0.09	0.121	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.273	0.123	0.82	1.00	0.101
Property Damage Only (PDO)	-11.34	0.78	0.25	0.44	0.322	$(5)_{TOTAL}-(5)_{FI}$ 0.727	0.328	0.82	1.00	0.269

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	0.101	1.000	0.269	0.370
		(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	0.075	0.870	0.234	0.309
Collision with other object	0.072	0.007	0.070	0.019	0.026
Other single-vehicle collision	0.040	0.004	0.023	0.006	0.010
Single-vehicle noncollision	0.141	0.014	0.034	0.009	0.023

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)
4.15	1.35	1.12	6.27

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} from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C _i	Predicted N _{pedi} (4)*(5)*(6)
	from Table 12-14									
	a	b	c	d	e					
Total	-9.53	0.40	0.26	0.45	0.04	0.24	0.226	6.27	1.00	1.417
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	1.00	1.417

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	5.427	0.370	5.797	0.015	1.00	0.087
Fatal and injury (FI)	--	--	--	--	1.00	0.087

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)	0.792	1.771	2.563
Head-on collisions (from Worksheet 2D)	0.086	0.110	0.196
Angle collisions (from Worksheet 2D)	0.611	0.895	1.505
Sideswipe (from Worksheet 2D)	0.174	0.117	0.292
Other multiple-vehicle collision (from Worksheet 2D)	0.097	0.774	0.870
Subtotal	1.760	3.667	5.427
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)	0.075	0.234	0.309
Collision with other object (from Worksheet 2F)	0.007	0.019	0.026
Other single-vehicle collision (from Worksheet 2F)	0.004	0.006	0.010
Single-vehicle noncollision (from Worksheet 2F)	0.014	0.009	0.023
Collision with pedestrian (from Worksheet 2G or 2I)	1.417	0.000	1.417
Collision with bicycle (from Worksheet 2J)	0.087	0.000	0.087
Subtotal	1.605	0.269	1.874
Total	3.365	3.936	7.301

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	7.301
Fatal and injury (FI)	3.365
Property damage only (PDO)	3.936

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections						
General Information			Location Information			
Analyst	SL		Roadway	Whiting St		
Agency or Company	H.W. Lochner		Intersection	Nebraska Ave		
Date Performed	12/01/21		Jurisdiction			
			Analysis Year	2026		
Input Data			Base Conditions	Site Conditions		
Intersection type (3ST, 3SG, 4ST, 4SG)			--	3ST		
AADT _{major} (veh/day)		AADT _{MAX} = 45,700 (veh/day)	--	9,700		
AADT _{minor} (veh/day)		AADT _{MAX} = 9,300 (veh/day)	--	9,300		
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	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			
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
<i>CMF_{1i}</i>	<i>CMF_{2i}</i>	<i>CMF_{3i}</i>	<i>CMF_{4i}</i>	<i>CMF_{5i}</i>	<i>CMF_{6i}</i>	<i>CMF_{COMB}</i>
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)
1.00	1.00	1.00	1.00	0.91	1.00	0.91

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 (7) from Worksheet 2B	Calibration Factor, C_i	Predicted N_{bimv}
	from Table 12-10			from Table 12-10	from Equation 12-21		(4) _{TOTAL} *(5)			(6)*(7)*(8)
	a	b	c							
Total	-13.36	1.11	0.41	0.80	1.779	1.000	1.779	0.91	1.00	1.623
Fatal and Injury (FI)	-14.01	1.16	0.30	0.69	0.538	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.286	0.508	0.91	1.00	0.464
Property Damage Only (PDO)	-15.38	1.20	0.51	0.77	1.345	$(5)_{TOTAL}-(5)_{FI}$ 0.714	1.271	0.91	1.00	1.160

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	0.464	1.000	1.160	1.623
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.421	0.195	0.440	0.510	0.705
Head-on collision	0.045	0.021	0.023	0.027	0.048
Angle collision	0.343	0.159	0.262	0.304	0.463
Sideswipe	0.126	0.058	0.040	0.046	0.105
Other multiple-vehicle collision	0.065	0.030	0.235	0.272	0.303

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_{bisv}	Combined CMFs (7) from Worksheet 2B	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)			(6)*(7)*(8)
	a	b	c							
Total	-6.81	0.16	0.51	1.14	0.506	1.000	0.506	0.91	1.00	0.462
Fatal and Injury (FI)	--	--	--	--	0.157	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.307	0.156	0.91	1.00	0.142
Property Damage Only (PDO)	-8.36	0.25	0.55	1.29	0.354	$(5)_{TOTAL}-(5)_{FI}$ 0.693	0.351	0.91	1.00	0.320

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	0.142	1.000	0.320	0.462
		(2)*(3) _{FI}		(4)*(5) _{PDO}	(3)+(5)
Collision with parked vehicle	0.001	0.000	0.003	0.001	0.001
Collision with animal	0.003	0.000	0.018	0.006	0.006
Collision with fixed object	0.762	0.108	0.834	0.267	0.375
Collision with other object	0.090	0.013	0.092	0.029	0.042
Other single-vehicle collision	0.039	0.006	0.023	0.007	0.013
Single-vehicle noncollision	0.105	0.015	0.030	0.010	0.024

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	1.623	0.462	2.085	0.021	1.00	0.044
Fatal and injury (FI)	--	--	--	--	1.00	0.044

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} from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C _i	Predicted N _{pedi} (4)*(5)*(6)
	from Table 12-14									
	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	1.623	0.462	2.085	0.016	1.00	0.033
Fatal and injury (FI)	--	--	--	--	1.00	0.033

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)	0.195	0.510	0.705
Head-on collisions (from Worksheet 2D)	0.021	0.027	0.048
Angle collisions (from Worksheet 2D)	0.159	0.304	0.463
Sideswipe (from Worksheet 2D)	0.058	0.046	0.105
Other multiple-vehicle collision (from Worksheet 2D)	0.030	0.272	0.303
Subtotal	0.464	1.160	1.623
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.001	0.001
Collision with animal (from Worksheet 2F)	0.000	0.006	0.006
Collision with fixed object (from Worksheet 2F)	0.108	0.267	0.375
Collision with other object (from Worksheet 2F)	0.013	0.029	0.042
Other single-vehicle collision (from Worksheet 2F)	0.006	0.007	0.013
Single-vehicle noncollision (from Worksheet 2F)	0.015	0.010	0.024
Collision with pedestrian (from Worksheet 2G or 2I)	0.044	0.000	0.044
Collision with bicycle (from Worksheet 2J)	0.033	0.000	0.033
Subtotal	0.219	0.320	0.539
Total	0.683	1.479	2.162

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	2.162
Fatal and injury (FI)	0.683
Property damage only (PDO)	1.479

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections						
General Information			Location Information			
Analyst	SL		Roadway	Whiting St		
Agency or Company	H.W. Lochner		Intersection	Nebraska Ave		
Date Performed	12/01/21		Jurisdiction			
			Analysis Year	2027		
Input Data			Base Conditions	Site Conditions		
Intersection type (3ST, 3SG, 4ST, 4SG)			--	3ST		
AADT _{major} (veh/day)		AADT _{MAX} = 45,700 (veh/day)	--	9,890		
AADT _{minor} (veh/day)		AADT _{MAX} = 9,300 (veh/day)	--	9,410		
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			
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
<i>CMF_{1i}</i>	<i>CMF_{2i}</i>	<i>CMF_{3i}</i>	<i>CMF_{4i}</i>	<i>CMF_{5i}</i>	<i>CMF_{6i}</i>	<i>CMF_{COMB}</i>
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)
1.00	1.00	1.00	1.00	0.91	1.00	0.91

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 (7) from Worksheet 2B	Calibration Factor, C_i	Predicted N_{bimv}
	from Table 12-10			from Table 12-10	from Equation 12-21		(4) _{TOTAL} *(5)			(6)*(7)*(8)
	a	b	c							
Total	-13.36	1.11	0.41	0.80	1.827	1.000	1.827	0.91	1.00	1.667
Fatal and Injury (FI)	-14.01	1.16	0.30	0.69	0.552	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.285	0.521	0.91	1.00	0.475
Property Damage Only (PDO)	-15.38	1.20	0.51	0.77	1.385	$(5)_{TOTAL}-(5)_{FI}$ 0.715	1.306	0.91	1.00	1.192

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	0.475	1.000	1.192	1.667
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.421	0.200	0.440	0.524	0.724
Head-on collision	0.045	0.021	0.023	0.027	0.049
Angle collision	0.343	0.163	0.262	0.312	0.475
Sideswipe	0.126	0.060	0.040	0.048	0.108
Other multiple-vehicle collision	0.065	0.031	0.235	0.280	0.311

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_{bisv}	Combined CMFs (7) from Worksheet 2B	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)			(6)*(7)*(8)
	a	b	c							
Total	-6.81	0.16	0.51	1.14	0.511	1.000	0.511	0.91	1.00	0.466
Fatal and Injury (FI)	--	--	--	--	0.158	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.307	0.157	0.91	1.00	0.143
Property Damage Only (PDO)	-8.36	0.25	0.55	1.29	0.358	$(5)_{TOTAL}-(5)_{FI}$ 0.693	0.354	0.91	1.00	0.323

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	0.143	1.000	0.323	0.466
		(2)*(3) _{FI}		(4)*(5) _{PDO}	(3)+(5)
Collision with parked vehicle	0.001	0.000	0.003	0.001	0.001
Collision with animal	0.003	0.000	0.018	0.006	0.006
Collision with fixed object	0.762	0.109	0.834	0.269	0.378
Collision with other object	0.090	0.013	0.092	0.030	0.043
Other single-vehicle collision	0.039	0.006	0.023	0.007	0.013
Single-vehicle noncollision	0.105	0.015	0.030	0.010	0.025

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	1.667	0.466	2.133	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} from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C _i	Predicted N _{pedi} (4)*(5)*(6)
	from Table 12-14									
	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	1.667	0.466	2.133	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)	0.200	0.524	0.724
Head-on collisions (from Worksheet 2D)	0.021	0.027	0.049
Angle collisions (from Worksheet 2D)	0.163	0.312	0.475
Sideswipe (from Worksheet 2D)	0.060	0.048	0.108
Other multiple-vehicle collision (from Worksheet 2D)	0.031	0.280	0.311
Subtotal	0.475	1.192	1.667
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.001	0.001
Collision with animal (from Worksheet 2F)	0.000	0.006	0.006
Collision with fixed object (from Worksheet 2F)	0.109	0.269	0.378
Collision with other object (from Worksheet 2F)	0.013	0.030	0.043
Other single-vehicle collision (from Worksheet 2F)	0.006	0.007	0.013
Single-vehicle noncollision (from Worksheet 2F)	0.015	0.010	0.025
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	0.222	0.323	0.545
Total	0.697	1.515	2.212

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	2.212
Fatal and injury (FI)	0.697
Property damage only (PDO)	1.515

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections						
General Information			Location Information			
Analyst	SL		Roadway	Whiting St		
Agency or Company	H.W. Lochner		Intersection	Nebraska Ave		
Date Performed	12/01/21		Jurisdiction			
			Analysis Year	2028		
Input Data		Base Conditions		Site Conditions		
Intersection type (3ST, 3SG, 4ST, 4SG)		--		3ST		
AADT _{major} (veh/day)		AADT _{MAX} = 45,700 (veh/day)		10,080		
AADT _{minor} (veh/day)		AADT _{MAX} = 9,300 (veh/day)		9,520		
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				
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
<i>CMF_{1i}</i>	<i>CMF_{2i}</i>	<i>CMF_{3i}</i>	<i>CMF_{4i}</i>	<i>CMF_{5i}</i>	<i>CMF_{6i}</i>	<i>CMF_{COMB}</i>
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)
1.00	1.00	1.00	1.00	0.91	1.00	0.91

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 (7) from Worksheet 2B	Calibration Factor, C_i	Predicted N_{bimv}
	from Table 12-10			from Table 12-10	from Equation 12-21		(4) _{TOTAL} *(5)			(6)*(7)*(8)
	a	b	c							
Total	-13.36	1.11	0.41	0.80	1.875	1.000	1.875	0.91	1.00	1.711
Fatal and Injury (FI)	-14.01	1.16	0.30	0.69	0.566	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.284	0.533	0.91	1.00	0.487
Property Damage Only (PDO)	-15.38	1.20	0.51	0.77	1.425	$(5)_{TOTAL}-(5)_{FI}$ 0.716	1.341	0.91	1.00	1.224

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	0.487	1.000	1.224	1.711
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.421	0.205	0.440	0.539	0.743
Head-on collision	0.045	0.022	0.023	0.028	0.050
Angle collision	0.343	0.167	0.262	0.321	0.488
Sideswipe	0.126	0.061	0.040	0.049	0.110
Other multiple-vehicle collision	0.065	0.032	0.235	0.288	0.319

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_{bisv}	Combined CMFs (7) from Worksheet 2B	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)			(6)*(7)*(8)
	a	b	c							
Total	-6.81	0.16	0.51	1.14	0.515	1.000	0.515	0.91	1.00	0.470
Fatal and Injury (FI)	--	--	--	--	0.160	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.306	0.158	0.91	1.00	0.144
Property Damage Only (PDO)	-8.36	0.25	0.55	1.29	0.362	$(5)_{TOTAL}-(5)_{FI}$ 0.694	0.357	0.91	1.00	0.326

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	0.144	1.000	0.326	0.470
		(2)*(3) _{FI}		(4)*(5) _{PDO}	(3)+(5)
Collision with parked vehicle	0.001	0.000	0.003	0.001	0.001
Collision with animal	0.003	0.000	0.018	0.006	0.006
Collision with fixed object	0.762	0.110	0.834	0.272	0.382
Collision with other object	0.090	0.013	0.092	0.030	0.043
Other single-vehicle collision	0.039	0.006	0.023	0.008	0.013
Single-vehicle noncollision	0.105	0.015	0.030	0.010	0.025

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	1.711	0.470	2.181	0.021	1.00	0.046
Fatal and injury (FI)	--	--	--	--	1.00	0.046

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} from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C _i	Predicted N _{pedi} (4)*(5)*(6)
	from Table 12-14									
	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	1.711	0.470	2.181	0.016	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)	0.205	0.539	0.743
Head-on collisions (from Worksheet 2D)	0.022	0.028	0.050
Angle collisions (from Worksheet 2D)	0.167	0.321	0.488
Sideswipe (from Worksheet 2D)	0.061	0.049	0.110
Other multiple-vehicle collision (from Worksheet 2D)	0.032	0.288	0.319
Subtotal	0.487	1.224	1.711
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.001	0.001
Collision with animal (from Worksheet 2F)	0.000	0.006	0.006
Collision with fixed object (from Worksheet 2F)	0.110	0.272	0.382
Collision with other object (from Worksheet 2F)	0.013	0.030	0.043
Other single-vehicle collision (from Worksheet 2F)	0.006	0.008	0.013
Single-vehicle noncollision (from Worksheet 2F)	0.015	0.010	0.025
Collision with pedestrian (from Worksheet 2G or 2I)	0.046	0.000	0.046
Collision with bicycle (from Worksheet 2J)	0.035	0.000	0.035
Subtotal	0.225	0.326	0.551
Total	0.711	1.550	2.262

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	2.262
Fatal and injury (FI)	0.711
Property damage only (PDO)	1.550

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections						
General Information			Location Information			
Analyst	SL		Roadway	Whiting St		
Agency or Company	H.W. Lochner		Intersection	Nebraska Ave		
Date Performed	12/01/21		Jurisdiction			
			Analysis Year	2029		
Input Data			Base Conditions	Site Conditions		
Intersection type (3ST, 3SG, 4ST, 4SG)			--	3ST		
AADT _{major} (veh/day)			AADT _{MAX} = 45,700 (veh/day)	10,270		
AADT _{minor} (veh/day)			AADT _{MAX} = 9,300 (veh/day)	9,630		
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			
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
<i>CMF_{1i}</i>	<i>CMF_{2i}</i>	<i>CMF_{3i}</i>	<i>CMF_{4i}</i>	<i>CMF_{5i}</i>	<i>CMF_{6i}</i>	<i>CMF_{COMB}</i>
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)
1.00	1.00	1.00	1.00	0.91	1.00	0.91

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									
	a	b	c							
Total	-13.36	1.11	0.41	0.80	1.923	1.000	1.923	0.91	1.00	1.755
Fatal and Injury (FI)	-14.01	1.16	0.30	0.69	0.581	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.284	0.546	0.91	1.00	0.498
Property Damage Only (PDO)	-15.38	1.20	0.51	0.77	1.466	$(5)_{TOTAL}-(5)_{FI}$ 0.716	1.377	0.91	1.00	1.257

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	0.498	1.000	1.257	1.755
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.421	0.210	0.440	0.553	0.763
Head-on collision	0.045	0.022	0.023	0.029	0.051
Angle collision	0.343	0.171	0.262	0.329	0.500
Sideswipe	0.126	0.063	0.040	0.050	0.113
Other multiple-vehicle collision	0.065	0.032	0.235	0.295	0.328

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_{bisv}	Combined CMFs	Calibration Factor, C_i	Predicted N_{bisv}
	from Table 12-12									
	a	b	c							
Total	-6.81	0.16	0.51	1.14	0.520	1.000	0.520	0.91	1.00	0.474
Fatal and Injury (FI)	--	--	--	--	0.161	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.306	0.159	0.91	1.00	0.145
Property Damage Only (PDO)	-8.36	0.25	0.55	1.29	0.366	$(5)_{TOTAL}-(5)_{FI}$ 0.694	0.361	0.91	1.00	0.329

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	0.329	0.474
		(2)*(3) _{FI}		(4)*(5) _{PDO}	(3)+(5)
Collision with parked vehicle	0.001	0.000	0.003	0.001	0.001
Collision with animal	0.003	0.000	0.018	0.006	0.006
Collision with fixed object	0.762	0.111	0.834	0.275	0.385
Collision with other object	0.090	0.013	0.092	0.030	0.043
Other single-vehicle collision	0.039	0.006	0.023	0.008	0.013
Single-vehicle noncollision	0.105	0.015	0.030	0.010	0.025

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	1.755	0.474	2.229	0.021	1.00	0.047
Fatal and injury (FI)	--	--	--	--	1.00	0.047

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} from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C _i	Predicted N _{pedi} (4)*(5)*(6)
	from Table 12-14									
	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	1.755	0.474	2.229	0.016	1.00	0.036
Fatal and injury (FI)	--	--	--	--	1.00	0.036

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)	0.210	0.553	0.763
Head-on collisions (from Worksheet 2D)	0.022	0.029	0.051
Angle collisions (from Worksheet 2D)	0.171	0.329	0.500
Sideswipe (from Worksheet 2D)	0.063	0.050	0.113
Other multiple-vehicle collision (from Worksheet 2D)	0.032	0.295	0.328
Subtotal	0.498	1.257	1.755
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.001	0.001
Collision with animal (from Worksheet 2F)	0.000	0.006	0.006
Collision with fixed object (from Worksheet 2F)	0.111	0.275	0.385
Collision with other object (from Worksheet 2F)	0.013	0.030	0.043
Other single-vehicle collision (from Worksheet 2F)	0.006	0.008	0.013
Single-vehicle noncollision (from Worksheet 2F)	0.015	0.010	0.025
Collision with pedestrian (from Worksheet 2G or 2I)	0.047	0.000	0.047
Collision with bicycle (from Worksheet 2J)	0.036	0.000	0.036
Subtotal	0.228	0.329	0.557
Total	0.726	1.586	2.312

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	2.312
Fatal and injury (FI)	0.726
Property damage only (PDO)	1.586

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections						
General Information			Location Information			
Analyst	SL		Roadway	Whiting St		
Agency or Company	H.W. Lochner		Intersection	Nebraska Ave		
Date Performed	12/01/21		Jurisdiction	2030		
Analysis Year						
Input Data		Base Conditions		Site Conditions		
Intersection type (3ST, 3SG, 4ST, 4SG)		--		3ST		
AADT _{major} (veh/day)		AADT _{MAX} = 45,700 (veh/day)		10,460		
AADT _{minor} (veh/day)		AADT _{MAX} = 9,300 (veh/day)		9,740		
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				
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
<i>CMF_{1i}</i>	<i>CMF_{2i}</i>	<i>CMF_{3i}</i>	<i>CMF_{4i}</i>	<i>CMF_{5i}</i>	<i>CMF_{6i}</i>	<i>CMF_{COMB}</i>
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)
1.00	1.00	1.00	1.00	0.91	1.00	0.91

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 (7) from Worksheet 2B	Calibration Factor, C_i	Predicted N_{bimv}
	from Table 12-10			from Table 12-10	from Equation 12-21		(4) _{TOTAL} *(5)			(6)*(7)*(8)
	a	b	c							
Total	-13.36	1.11	0.41	0.80	1.972	1.000	1.972	0.91	1.00	1.799
Fatal and Injury (FI)	-14.01	1.16	0.30	0.69	0.595	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.283	0.558	0.91	1.00	0.509
Property Damage Only (PDO)	-15.38	1.20	0.51	0.77	1.507	$(5)_{TOTAL}-(5)_{FI}$ 0.717	1.413	0.91	1.00	1.290

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	0.509	1.000	1.290	1.799
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.421	0.214	0.440	0.567	0.782
Head-on collision	0.045	0.023	0.023	0.030	0.053
Angle collision	0.343	0.175	0.262	0.338	0.513
Sideswipe	0.126	0.064	0.040	0.052	0.116
Other multiple-vehicle collision	0.065	0.033	0.235	0.303	0.336

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_{bisv}	Combined CMFs (7) from Worksheet 2B	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)			(6)*(7)*(8)
	a	b	c							
Total	-6.81	0.16	0.51	1.14	0.524	1.000	0.524	0.91	1.00	0.479
Fatal and Injury (FI)	--	--	--	--	0.163	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.305	0.160	0.91	1.00	0.146
Property Damage Only (PDO)	-8.36	0.25	0.55	1.29	0.370	$(5)_{TOTAL}-(5)_{FI}$ 0.695	0.364	0.91	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	0.146	1.000	0.332	0.479
		(2)*(3) _{FI}		(4)*(5) _{PDO}	(3)+(5)
Collision with parked vehicle	0.001	0.000	0.003	0.001	0.001
Collision with animal	0.003	0.000	0.018	0.006	0.006
Collision with fixed object	0.762	0.111	0.834	0.277	0.389
Collision with other object	0.090	0.013	0.092	0.031	0.044
Other single-vehicle collision	0.039	0.006	0.023	0.008	0.013
Single-vehicle noncollision	0.105	0.015	0.030	0.010	0.025

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	1.799	0.479	2.278	0.021	1.00	0.048
Fatal and injury (FI)	--	--	--	--	1.00	0.048

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} from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C _i	Predicted N _{pedi} (4)*(5)*(6)
	from Table 12-14									
	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	1.799	0.479	2.278	0.016	1.00	0.036
Fatal and injury (FI)	--	--	--	--	1.00	0.036

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)	0.214	0.567	0.782
Head-on collisions (from Worksheet 2D)	0.023	0.030	0.053
Angle collisions (from Worksheet 2D)	0.175	0.338	0.513
Sideswipe (from Worksheet 2D)	0.064	0.052	0.116
Other multiple-vehicle collision (from Worksheet 2D)	0.033	0.303	0.336
Subtotal	0.509	1.290	1.799
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.001	0.001
Collision with animal (from Worksheet 2F)	0.000	0.006	0.006
Collision with fixed object (from Worksheet 2F)	0.111	0.277	0.389
Collision with other object (from Worksheet 2F)	0.013	0.031	0.044
Other single-vehicle collision (from Worksheet 2F)	0.006	0.008	0.013
Single-vehicle noncollision (from Worksheet 2F)	0.015	0.010	0.025
Collision with pedestrian (from Worksheet 2G or 2I)	0.048	0.000	0.048
Collision with bicycle (from Worksheet 2J)	0.036	0.000	0.036
Subtotal	0.230	0.332	0.563
Total	0.740	1.622	2.362

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	2.362
Fatal and injury (FI)	0.740
Property damage only (PDO)	1.622

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections						
General Information			Location Information			
Analyst	SL		Roadway	Whiting St		
Agency or Company	H.W. Lochner		Intersection	Nebraska Ave		
Date Performed	12/01/21		Jurisdiction	2031		
Analysis Year						
Input Data		Base Conditions		Site Conditions		
Intersection type (3ST, 3SG, 4ST, 4SG)		--		3ST		
AADT _{major} (veh/day)	AADT _{MAX} = 45,700 (veh/day)	--		10,650		
AADT _{minor} (veh/day)	AADT _{MAX} = 9,300 (veh/day)	--		9,850		
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				
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
<i>CMF_{1i}</i>	<i>CMF_{2i}</i>	<i>CMF_{3i}</i>	<i>CMF_{4i}</i>	<i>CMF_{5i}</i>	<i>CMF_{6i}</i>	<i>CMF_{COMB}</i>
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)
1.00	1.00	1.00	1.00	0.91	1.00	0.91

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 (7) from Worksheet 2B	Calibration Factor, C_i	Predicted N_{bimv}
	from Table 12-10			from Table 12-10	from Equation 12-21		(4) _{TOTAL} *(5)			(6)*(7)*(8)
	a	b	c							
Total	-13.36	1.11	0.41	0.80	2.021	1.000	2.021	0.91	1.00	1.844
Fatal and Injury (FI)	-14.01	1.16	0.30	0.69	0.610	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.283	0.571	0.91	1.00	0.521
Property Damage Only (PDO)	-15.38	1.20	0.51	0.77	1.549	$(5)_{TOTAL}-(5)_{FI}$ 0.717	1.450	0.91	1.00	1.323

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	0.521	1.000	1.323	1.844
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.421	0.219	0.440	0.582	0.801
Head-on collision	0.045	0.023	0.023	0.030	0.054
Angle collision	0.343	0.179	0.262	0.347	0.525
Sideswipe	0.126	0.066	0.040	0.053	0.119
Other multiple-vehicle collision	0.065	0.034	0.235	0.311	0.345

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_{bisv}	Combined CMFs (7) from Worksheet 2B	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)			(6)*(7)*(8)
	a	b	c							
Total	-6.81	0.16	0.51	1.14	0.529	1.000	0.529	0.91	1.00	0.483
Fatal and Injury (FI)	--	--	--	--	0.164	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.305	0.161	0.91	1.00	0.147
Property Damage Only (PDO)	-8.36	0.25	0.55	1.29	0.374	$(5)_{TOTAL}-(5)_{FI}$ 0.695	0.368	0.91	1.00	0.336

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	0.147	1.000	0.336	0.483
		(2)*(3) _{FI}		(4)*(5) _{PDO}	(3)+(5)
Collision with parked vehicle	0.001	0.000	0.003	0.001	0.001
Collision with animal	0.003	0.000	0.018	0.006	0.006
Collision with fixed object	0.762	0.112	0.834	0.280	0.392
Collision with other object	0.090	0.013	0.092	0.031	0.044
Other single-vehicle collision	0.039	0.006	0.023	0.008	0.013
Single-vehicle noncollision	0.105	0.015	0.030	0.010	0.026

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	1.844	0.483	2.327	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} from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C _i	Predicted N _{pedi} (4)*(5)*(6)
	from Table 12-14									
	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	1.844	0.483	2.327	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)
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)	0.219	0.582	0.801
Head-on collisions (from Worksheet 2D)	0.023	0.030	0.054
Angle collisions (from Worksheet 2D)	0.179	0.347	0.525
Sideswipe (from Worksheet 2D)	0.066	0.053	0.119
Other multiple-vehicle collision (from Worksheet 2D)	0.034	0.311	0.345
Subtotal	0.521	1.323	1.844
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.001	0.001
Collision with animal (from Worksheet 2F)	0.000	0.006	0.006
Collision with fixed object (from Worksheet 2F)	0.112	0.280	0.392
Collision with other object (from Worksheet 2F)	0.013	0.031	0.044
Other single-vehicle collision (from Worksheet 2F)	0.006	0.008	0.013
Single-vehicle noncollision (from Worksheet 2F)	0.015	0.010	0.026
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	0.233	0.336	0.569
Total	0.754	1.659	2.413

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	2.413
Fatal and injury (FI)	0.754
Property damage only (PDO)	1.659

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections						
General Information			Location Information			
Analyst	SL		Roadway	Whiting St		
Agency or Company	H.W. Lochner		Intersection	Nebraska Ave		
Date Performed	12/01/21		Jurisdiction	2032		
Analysis Year						
Input Data		Base Conditions		Site Conditions		
Intersection type (3ST, 3SG, 4ST, 4SG)		--		3ST		
AADT _{major} (veh/day)	AADT _{MAX} = 45,700 (veh/day)	--		10,840		
AADT _{minor} (veh/day)	AADT _{MAX} = 9,300 (veh/day)	--		9,960		
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				
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
<i>CMF_{1i}</i>	<i>CMF_{2i}</i>	<i>CMF_{3i}</i>	<i>CMF_{4i}</i>	<i>CMF_{5i}</i>	<i>CMF_{6i}</i>	<i>CMF_{COMB}</i>
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)
1.00	1.00	1.00	1.00	0.91	1.00	0.91

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 (7) from Worksheet 2B	Calibration Factor, C_i	Predicted N_{bimv}
	from Table 12-10			from Table 12-10	from Equation 12-21		(4) _{TOTAL} *(5)			(6)*(7)*(8)
	a	b	c							
Total	-13.36	1.11	0.41	0.80	2.070	1.000	2.070	0.91	1.00	1.889
Fatal and Injury (FI)	-14.01	1.16	0.30	0.69	0.625	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.282	0.584	0.91	1.00	0.533
Property Damage Only (PDO)	-15.38	1.20	0.51	0.77	1.591	$(5)_{TOTAL}-(5)_{FI}$ 0.718	1.487	0.91	1.00	1.357

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	0.533	1.000	1.357	1.889
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.421	0.224	0.440	0.597	0.821
Head-on collision	0.045	0.024	0.023	0.031	0.055
Angle collision	0.343	0.183	0.262	0.355	0.538
Sideswipe	0.126	0.067	0.040	0.054	0.121
Other multiple-vehicle collision	0.065	0.035	0.235	0.319	0.353

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_{bisv}	Combined CMFs (7) from Worksheet 2B	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)			(6)*(7)*(8)
	a	b	c							
Total	-6.81	0.16	0.51	1.14	0.534	1.000	0.534	0.91	1.00	0.487
Fatal and Injury (FI)	--	--	--	--	0.165	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.305	0.163	0.91	1.00	0.148
Property Damage Only (PDO)	-8.36	0.25	0.55	1.29	0.378	$(5)_{TOTAL}-(5)_{FI}$ 0.695	0.371	0.91	1.00	0.339

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	0.148	1.000	0.339	0.487
		(2)*(3) _{FI}		(4)*(5) _{PDO}	(3)+(5)
Collision with parked vehicle	0.001	0.000	0.003	0.001	0.001
Collision with animal	0.003	0.000	0.018	0.006	0.007
Collision with fixed object	0.762	0.113	0.834	0.282	0.395
Collision with other object	0.090	0.013	0.092	0.031	0.044
Other single-vehicle collision	0.039	0.006	0.023	0.008	0.014
Single-vehicle noncollision	0.105	0.016	0.030	0.010	0.026

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	1.889	0.487	2.376	0.021	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} from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C _i	Predicted N _{pedi} (4)*(5)*(6)
	from Table 12-14									
	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	1.889	0.487	2.376	0.016	1.00	0.038
Fatal and injury (FI)	--	--	--	--	1.00	0.038

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)	0.224	0.597	0.821
Head-on collisions (from Worksheet 2D)	0.024	0.031	0.055
Angle collisions (from Worksheet 2D)	0.183	0.355	0.538
Sideswipe (from Worksheet 2D)	0.067	0.054	0.121
Other multiple-vehicle collision (from Worksheet 2D)	0.035	0.319	0.353
Subtotal	0.533	1.357	1.889
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.001	0.001
Collision with animal (from Worksheet 2F)	0.000	0.006	0.007
Collision with fixed object (from Worksheet 2F)	0.113	0.282	0.395
Collision with other object (from Worksheet 2F)	0.013	0.031	0.044
Other single-vehicle collision (from Worksheet 2F)	0.006	0.008	0.014
Single-vehicle noncollision (from Worksheet 2F)	0.016	0.010	0.026
Collision with pedestrian (from Worksheet 2G or 2I)	0.050	0.000	0.050
Collision with bicycle (from Worksheet 2J)	0.038	0.000	0.038
Subtotal	0.236	0.339	0.575
Total	0.769	1.695	2.464

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	2.464
Fatal and injury (FI)	0.769
Property damage only (PDO)	1.695

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections						
General Information			Location Information			
Analyst	SL		Roadway	Whiting St		
Agency or Company	H.W. Lochner		Intersection	Nebraska Ave		
Date Performed	12/01/21		Jurisdiction	2033		
Analysis Year						
Input Data		Base Conditions		Site Conditions		
Intersection type (3ST, 3SG, 4ST, 4SG)		--		3ST		
AADT _{major} (veh/day)	AADT _{MAX} = 45,700 (veh/day)	--		11,030		
AADT _{minor} (veh/day)	AADT _{MAX} = 9,300 (veh/day)	--		10,070		
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				
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
<i>CMF_{1i}</i>	<i>CMF_{2i}</i>	<i>CMF_{3i}</i>	<i>CMF_{4i}</i>	<i>CMF_{5i}</i>	<i>CMF_{6i}</i>	<i>CMF_{COMB}</i>
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)
1.00	1.00	1.00	1.00	0.91	1.00	0.91

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 (7) from Worksheet 2B	Calibration Factor, C_i	Predicted N_{bimv}
	from Table 12-10			from Table 12-10	from Equation 12-21		(4) _{TOTAL} *(5)			(6)*(7)*(8)
	a	b	c							
Total	-13.36	1.11	0.41	0.80	2.120	1.000	2.120	0.91	1.00	1.935
Fatal and Injury (FI)	-14.01	1.16	0.30	0.69	0.639	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.281	0.596	0.91	1.00	0.544
Property Damage Only (PDO)	-15.38	1.20	0.51	0.77	1.634	$(5)_{TOTAL}-(5)_{FI}$ 0.719	1.524	0.91	1.00	1.390

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
		(2)*(3) _{FI}		(4)*(5) _{PDO}	(3)+(5)
Total	1.000	0.544	1.000	1.390	1.935
Rear-end collision	0.421	0.229	0.440	0.612	0.841
Head-on collision	0.045	0.024	0.023	0.032	0.056
Angle collision	0.343	0.187	0.262	0.364	0.551
Sideswipe	0.126	0.069	0.040	0.056	0.124
Other multiple-vehicle collision	0.065	0.035	0.235	0.327	0.362

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_{bisv}	Combined CMFs (7) from Worksheet 2B	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)			(6)*(7)*(8)
	a	b	c							
Total	-6.81	0.16	0.51	1.14	0.538	1.000	0.538	0.91	1.00	0.491
Fatal and Injury (FI)	--	--	--	--	0.167	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.304	0.164	0.91	1.00	0.149
Property Damage Only (PDO)	-8.36	0.25	0.55	1.29	0.382	$(5)_{TOTAL}-(5)_{FI}$ 0.696	0.374	0.91	1.00	0.342

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	0.149	1.000	0.342	0.491
		(2)*(3) _{FI}		(4)*(5) _{PDO}	(3)+(5)
Collision with parked vehicle	0.001	0.000	0.003	0.001	0.001
Collision with animal	0.003	0.000	0.018	0.006	0.007
Collision with fixed object	0.762	0.114	0.834	0.285	0.399
Collision with other object	0.090	0.013	0.092	0.031	0.045
Other single-vehicle collision	0.039	0.006	0.023	0.008	0.014
Single-vehicle noncollision	0.105	0.016	0.030	0.010	0.026

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	1.935	0.491	2.426	0.021	1.00	0.051
Fatal and injury (FI)	--	--	--	--	1.00	0.051

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} from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C _i	Predicted N _{pedi} (4)*(5)*(6)
	from Table 12-14									
	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	1.935	0.491	2.426	0.016	1.00	0.039
Fatal and injury (FI)	--	--	--	--	1.00	0.039

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)	0.229	0.612	0.841
Head-on collisions (from Worksheet 2D)	0.024	0.032	0.056
Angle collisions (from Worksheet 2D)	0.187	0.364	0.551
Sideswipe (from Worksheet 2D)	0.069	0.056	0.124
Other multiple-vehicle collision (from Worksheet 2D)	0.035	0.327	0.362
Subtotal	0.544	1.390	1.935
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.001	0.001
Collision with animal (from Worksheet 2F)	0.000	0.006	0.007
Collision with fixed object (from Worksheet 2F)	0.114	0.285	0.399
Collision with other object (from Worksheet 2F)	0.013	0.031	0.045
Other single-vehicle collision (from Worksheet 2F)	0.006	0.008	0.014
Single-vehicle noncollision (from Worksheet 2F)	0.016	0.010	0.026
Collision with pedestrian (from Worksheet 2G or 2I)	0.051	0.000	0.051
Collision with bicycle (from Worksheet 2J)	0.039	0.000	0.039
Subtotal	0.239	0.342	0.581
Total	0.783	1.732	2.515

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	2.515
Fatal and injury (FI)	0.783
Property damage only (PDO)	1.732

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections						
General Information			Location Information			
Analyst	SL		Roadway	Whiting St		
Agency or Company	H.W. Lochner		Intersection	Nebraska Ave		
Date Performed	12/01/21		Jurisdiction	2034		
Analysis Year						
Input Data		Base Conditions		Site Conditions		
Intersection type (3ST, 3SG, 4ST, 4SG)		--		3ST		
AADT _{major} (veh/day)	AADT _{MAX} = 45,700 (veh/day)	--		11,220		
AADT _{minor} (veh/day)	AADT _{MAX} = 9,300 (veh/day)	--		10,180		
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				
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
<i>CMF_{1i}</i>	<i>CMF_{2i}</i>	<i>CMF_{3i}</i>	<i>CMF_{4i}</i>	<i>CMF_{5i}</i>	<i>CMF_{6i}</i>	<i>CMF_{COMB}</i>
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)
1.00	1.00	1.00	1.00	0.91	1.00	0.91

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
	a	b	c							
Total	-13.36	1.11	0.41	0.80	2.170	1.000	2.170	0.91	1.00	1.981
Fatal and Injury (FI)	-14.01	1.16	0.30	0.69	0.654	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.281	0.609	0.91	1.00	0.556
Property Damage Only (PDO)	-15.38	1.20	0.51	0.77	1.677	$(5)_{TOTAL}-(5)_{FI}$ 0.719	1.561	0.91	1.00	1.425

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	0.556	1.000	1.425	1.981
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.421	0.234	0.440	0.627	0.861
Head-on collision	0.045	0.025	0.023	0.033	0.058
Angle collision	0.343	0.191	0.262	0.373	0.564
Sideswipe	0.126	0.070	0.040	0.057	0.127
Other multiple-vehicle collision	0.065	0.036	0.235	0.335	0.371

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_{bisv}	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
	a	b	c							
Total	-6.81	0.16	0.51	1.14	0.543	1.000	0.543	0.91	1.00	0.495
Fatal and Injury (FI)	--	--	--	--	0.168	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.304	0.165	0.91	1.00	0.150
Property Damage Only (PDO)	-8.36	0.25	0.55	1.29	0.386	$(5)_{TOTAL}-(5)_{FI}$ 0.696	0.378	0.91	1.00	0.345

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	0.150	1.000	0.345	0.495
		(2)*(3) _{FI}		(4)*(5) _{PDO}	(3)+(5)
Collision with parked vehicle	0.001	0.000	0.003	0.001	0.001
Collision with animal	0.003	0.000	0.018	0.006	0.007
Collision with fixed object	0.762	0.115	0.834	0.288	0.402
Collision with other object	0.090	0.014	0.092	0.032	0.045
Other single-vehicle collision	0.039	0.006	0.023	0.008	0.014
Single-vehicle noncollision	0.105	0.016	0.030	0.010	0.026

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	1.981	0.495	2.476	0.021	1.00	0.052
Fatal and injury (FI)	--	--	--	--	1.00	0.052

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} from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C _i	Predicted N _{pedi} (4)*(5)*(6)
	from Table 12-14									
	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	1.981	0.495	2.476	0.016	1.00	0.040
Fatal and injury (FI)	--	--	--	--	1.00	0.040

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)	0.234	0.627	0.861
Head-on collisions (from Worksheet 2D)	0.025	0.033	0.058
Angle collisions (from Worksheet 2D)	0.191	0.373	0.564
Sideswipe (from Worksheet 2D)	0.070	0.057	0.127
Other multiple-vehicle collision (from Worksheet 2D)	0.036	0.335	0.371
Subtotal	0.556	1.425	1.981
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.001	0.001
Collision with animal (from Worksheet 2F)	0.000	0.006	0.007
Collision with fixed object (from Worksheet 2F)	0.115	0.288	0.402
Collision with other object (from Worksheet 2F)	0.014	0.032	0.045
Other single-vehicle collision (from Worksheet 2F)	0.006	0.008	0.014
Single-vehicle noncollision (from Worksheet 2F)	0.016	0.010	0.026
Collision with pedestrian (from Worksheet 2G or 2I)	0.052	0.000	0.052
Collision with bicycle (from Worksheet 2J)	0.040	0.000	0.040
Subtotal	0.242	0.345	0.587
Total	0.798	1.769	2.567

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	2.567
Fatal and injury (FI)	0.798
Property damage only (PDO)	1.769

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections						
General Information			Location Information			
Analyst	SL		Roadway	Whiting St		
Agency or Company	H.W. Lochner		Intersection	Nebraska Ave		
Date Performed	12/01/21		Jurisdiction	2035		
Analysis Year						
Input Data		Base Conditions		Site Conditions		
Intersection type (3ST, 3SG, 4ST, 4SG)		--		3ST		
AADT _{major} (veh/day)		AADT _{MAX} = 45,700 (veh/day)		11,410		
AADT _{minor} (veh/day)		AADT _{MAX} = 9,300 (veh/day)		10,290		
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				
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
<i>CMF_{1i}</i>	<i>CMF_{2i}</i>	<i>CMF_{3i}</i>	<i>CMF_{4i}</i>	<i>CMF_{5i}</i>	<i>CMF_{6i}</i>	<i>CMF_{COMB}</i>
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)
1.00	1.00	1.00	1.00	0.91	1.00	0.91

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 (7) from Worksheet 2B	Calibration Factor, C_i	Predicted N_{bimv}
	from Table 12-10			from Table 12-10	from Equation 12-21		(4) _{TOTAL} *(5)			(6)*(7)*(8)
	a	b	c							
Total	-13.36	1.11	0.41	0.80	2.221	1.000	2.221	0.91	1.00	2.027
Fatal and Injury (FI)	-14.01	1.16	0.30	0.69	0.669	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.280	0.622	0.91	1.00	0.568
Property Damage Only (PDO)	-15.38	1.20	0.51	0.77	1.720	$(5)_{TOTAL}-(5)_{FI}$ 0.720	1.599	0.91	1.00	1.459

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	0.568	1.000	1.459	2.027
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.421	0.239	0.440	0.642	0.881
Head-on collision	0.045	0.026	0.023	0.034	0.059
Angle collision	0.343	0.195	0.262	0.382	0.577
Sideswipe	0.126	0.072	0.040	0.058	0.130
Other multiple-vehicle collision	0.065	0.037	0.235	0.343	0.380

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_{bisv}	Combined CMFs (7) from Worksheet 2B	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)			(6)*(7)*(8)
	a	b	c							
Total	-6.81	0.16	0.51	1.14	0.547	1.000	0.547	0.91	1.00	0.499
Fatal and Injury (FI)	--	--	--	--	0.170	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.303	0.166	0.91	1.00	0.151
Property Damage Only (PDO)	-8.36	0.25	0.55	1.29	0.389	$(5)_{TOTAL}-(5)_{FI}$ 0.697	0.381	0.91	1.00	0.348

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	0.151	1.000	0.348	0.499
		(2)*(3) _{FI}		(4)*(5) _{PDO}	(3)+(5)
Collision with parked vehicle	0.001	0.000	0.003	0.001	0.001
Collision with animal	0.003	0.000	0.018	0.006	0.007
Collision with fixed object	0.762	0.115	0.834	0.290	0.405
Collision with other object	0.090	0.014	0.092	0.032	0.046
Other single-vehicle collision	0.039	0.006	0.023	0.008	0.014
Single-vehicle noncollision	0.105	0.016	0.030	0.010	0.026

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	2.027	0.499	2.526	0.021	1.00	0.053
Fatal and injury (FI)	--	--	--	--	1.00	0.053

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} from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C _i	Predicted N _{pedi} (4)*(5)*(6)
	from Table 12-14									
	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	2.027	0.499	2.526	0.016	1.00	0.040
Fatal and injury (FI)	--	--	--	--	1.00	0.040

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)	0.239	0.642	0.881
Head-on collisions (from Worksheet 2D)	0.026	0.034	0.059
Angle collisions (from Worksheet 2D)	0.195	0.382	0.577
Sideswipe (from Worksheet 2D)	0.072	0.058	0.130
Other multiple-vehicle collision (from Worksheet 2D)	0.037	0.343	0.380
Subtotal	0.568	1.459	2.027
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.001	0.001
Collision with animal (from Worksheet 2F)	0.000	0.006	0.007
Collision with fixed object (from Worksheet 2F)	0.115	0.290	0.405
Collision with other object (from Worksheet 2F)	0.014	0.032	0.046
Other single-vehicle collision (from Worksheet 2F)	0.006	0.008	0.014
Single-vehicle noncollision (from Worksheet 2F)	0.016	0.010	0.026
Collision with pedestrian (from Worksheet 2G or 2I)	0.053	0.000	0.053
Collision with bicycle (from Worksheet 2J)	0.040	0.000	0.040
Subtotal	0.245	0.348	0.593
Total	0.813	1.807	2.619

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	2.619
Fatal and injury (FI)	0.813
Property damage only (PDO)	1.807

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections						
General Information			Location Information			
Analyst	SL		Roadway	Whiting St		
Agency or Company	H.W. Lochner		Intersection	Nebraska Ave		
Date Performed	12/01/21		Jurisdiction	2036		
Analysis Year						
Input Data			Base Conditions	Site Conditions		
Intersection type (3ST, 3SG, 4ST, 4SG)			--	3ST		
AADT _{major} (veh/day)			AADT _{MAX} = 45,700 (veh/day)	11,600		
AADT _{minor} (veh/day)			AADT _{MAX} = 9,300 (veh/day)	10,400		
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	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			
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
<i>CMF_{1i}</i>	<i>CMF_{2i}</i>	<i>CMF_{3i}</i>	<i>CMF_{4i}</i>	<i>CMF_{5i}</i>	<i>CMF_{6i}</i>	<i>CMF_{COMB}</i>
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)
1.00	1.00	1.00	1.00	0.91	1.00	0.91

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 (7) from Worksheet 2B	Calibration Factor, C_i	Predicted N_{bimv}
	from Table 12-10			from Table 12-10	from Equation 12-21		(4) _{TOTAL} *(5)			(6)*(7)*(8)
	a	b	c							
Total	-13.36	1.11	0.41	0.80	2.272	1.000	2.272	0.91	1.00	2.073
Fatal and Injury (FI)	-14.01	1.16	0.30	0.69	0.685	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.280	0.635	0.91	1.00	0.580
Property Damage Only (PDO)	-15.38	1.20	0.51	0.77	1.764	$(5)_{TOTAL}-(5)_{FI}$ 0.720	1.637	0.91	1.00	1.494

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	0.580	1.000	1.494	2.073
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.421	0.244	0.440	0.657	0.901
Head-on collision	0.045	0.026	0.023	0.034	0.060
Angle collision	0.343	0.199	0.262	0.391	0.590
Sideswipe	0.126	0.073	0.040	0.060	0.133
Other multiple-vehicle collision	0.065	0.038	0.235	0.351	0.389

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_{bisv}	Combined CMFs (7) from Worksheet 2B	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)			(6)*(7)*(8)
	a	b	c							
Total	-6.81	0.16	0.51	1.14	0.551	1.000	0.551	0.91	1.00	0.503
Fatal and Injury (FI)	--	--	--	--	0.171	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.303	0.167	0.91	1.00	0.152
Property Damage Only (PDO)	-8.36	0.25	0.55	1.29	0.393	$(5)_{TOTAL}-(5)_{FI}$ 0.697	0.384	0.91	1.00	0.351

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	0.152	1.000	0.351	0.503
		(2)*(3) _{FI}		(4)*(5) _{PDO}	(3)+(5)
Collision with parked vehicle	0.001	0.000	0.003	0.001	0.001
Collision with animal	0.003	0.000	0.018	0.006	0.007
Collision with fixed object	0.762	0.116	0.834	0.293	0.409
Collision with other object	0.090	0.014	0.092	0.032	0.046
Other single-vehicle collision	0.039	0.006	0.023	0.008	0.014
Single-vehicle noncollision	0.105	0.016	0.030	0.011	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	2.073	0.503	2.577	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} from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C _i	Predicted N _{pedi} (4)*(5)*(6)
	from Table 12-14									
	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	2.073	0.503	2.577	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)
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)	0.244	0.657	0.901
Head-on collisions (from Worksheet 2D)	0.026	0.034	0.060
Angle collisions (from Worksheet 2D)	0.199	0.391	0.590
Sideswipe (from Worksheet 2D)	0.073	0.060	0.133
Other multiple-vehicle collision (from Worksheet 2D)	0.038	0.351	0.389
Subtotal	0.580	1.494	2.073
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.001	0.001
Collision with animal (from Worksheet 2F)	0.000	0.006	0.007
Collision with fixed object (from Worksheet 2F)	0.116	0.293	0.409
Collision with other object (from Worksheet 2F)	0.014	0.032	0.046
Other single-vehicle collision (from Worksheet 2F)	0.006	0.008	0.014
Single-vehicle noncollision (from Worksheet 2F)	0.016	0.011	0.027
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	0.248	0.351	0.599
Total	0.827	1.845	2.672

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	2.672
Fatal and injury (FI)	0.827
Property damage only (PDO)	1.845

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections						
General Information			Location Information			
Analyst	SL		Roadway	Whiting St		
Agency or Company	H.W. Lochner		Intersection	Nebraska Ave		
Date Performed	12/01/21		Jurisdiction	2037		
Analysis Year						
Input Data		Base Conditions		Site Conditions		
Intersection type (3ST, 3SG, 4ST, 4SG)		--		3ST		
AADT _{major} (veh/day)		AADT _{MAX} = 45,700 (veh/day)		11,790		
AADT _{minor} (veh/day)		AADT _{MAX} = 9,300 (veh/day)		10,510		
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				
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
<i>CMF_{1i}</i>	<i>CMF_{2i}</i>	<i>CMF_{3i}</i>	<i>CMF_{4i}</i>	<i>CMF_{5i}</i>	<i>CMF_{6i}</i>	<i>CMF_{COMB}</i>
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)
1.00	1.00	1.00	1.00	0.91	1.00	0.91

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	2.323	1.000	2.323	0.91	1.00	2.120
Fatal and Injury (FI)	-14.01	1.16	0.30	0.69	0.700	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.279	0.648	0.91	1.00	0.591
Property Damage Only (PDO)	-15.38	1.20	0.51	0.77	1.809	$(5)_{TOTAL}-(5)_{FI}$ 0.721	1.675	0.91	1.00	1.529

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	0.591	1.000	1.529	2.120
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.421	0.249	0.440	0.673	0.922
Head-on collision	0.045	0.027	0.023	0.035	0.062
Angle collision	0.343	0.203	0.262	0.401	0.603
Sideswipe	0.126	0.075	0.040	0.061	0.136
Other multiple-vehicle collision	0.065	0.038	0.235	0.359	0.398

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_{bisv}	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	0.556	1.000	0.556	0.91	1.00	0.507
Fatal and Injury (FI)	--	--	--	--	0.172	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.303	0.168	0.91	1.00	0.153
Property Damage Only (PDO)	-8.36	0.25	0.55	1.29	0.397	$(5)_{TOTAL}-(5)_{FI}$ 0.697	0.388	0.91	1.00	0.354

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	0.153	1.000	0.354	0.507
		(2)*(3) _{FI}		(4)*(5) _{PDO}	(3)+(5)
Collision with parked vehicle	0.001	0.000	0.003	0.001	0.001
Collision with animal	0.003	0.000	0.018	0.006	0.007
Collision with fixed object	0.762	0.117	0.834	0.295	0.412
Collision with other object	0.090	0.014	0.092	0.033	0.046
Other single-vehicle collision	0.039	0.006	0.023	0.008	0.014
Single-vehicle noncollision	0.105	0.016	0.030	0.011	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	2.120	0.507	2.627	0.021	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} from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C _i	Predicted N _{pedi} (4)*(5)*(6)
	from Table 12-14									
	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	2.120	0.507	2.627	0.016	1.00	0.042
Fatal and injury (FI)	--	--	--	--	1.00	0.042

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)	0.249	0.673	0.922
Head-on collisions (from Worksheet 2D)	0.027	0.035	0.062
Angle collisions (from Worksheet 2D)	0.203	0.401	0.603
Sideswipe (from Worksheet 2D)	0.075	0.061	0.136
Other multiple-vehicle collision (from Worksheet 2D)	0.038	0.359	0.398
Subtotal	0.591	1.529	2.120
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.001	0.001
Collision with animal (from Worksheet 2F)	0.000	0.006	0.007
Collision with fixed object (from Worksheet 2F)	0.117	0.295	0.412
Collision with other object (from Worksheet 2F)	0.014	0.033	0.046
Other single-vehicle collision (from Worksheet 2F)	0.006	0.008	0.014
Single-vehicle noncollision (from Worksheet 2F)	0.016	0.011	0.027
Collision with pedestrian (from Worksheet 2G or 2I)	0.055	0.000	0.055
Collision with bicycle (from Worksheet 2J)	0.042	0.000	0.042
Subtotal	0.251	0.354	0.605
Total	0.842	1.883	2.725

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	2.725
Fatal and injury (FI)	0.842
Property damage only (PDO)	1.883

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections						
General Information			Location Information			
Analyst	SL		Roadway	Whiting St		
Agency or Company	H.W. Lochner		Intersection	Nebraska Ave		
Date Performed	12/01/21		Jurisdiction	2038		
Analysis Year						
Input Data		Base Conditions		Site Conditions		
Intersection type (3ST, 3SG, 4ST, 4SG)		--		3ST		
AADT _{major} (veh/day)		AADT _{MAX} = 45,700 (veh/day)		11,980		
AADT _{minor} (veh/day)		AADT _{MAX} = 9,300 (veh/day)		10,620		
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				
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
<i>CMF_{1i}</i>	<i>CMF_{2i}</i>	<i>CMF_{3i}</i>	<i>CMF_{4i}</i>	<i>CMF_{5i}</i>	<i>CMF_{6i}</i>	<i>CMF_{COMB}</i>
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)
1.00	1.00	1.00	1.00	0.91	1.00	0.91

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 (7) from Worksheet 2B	Calibration Factor, C_i	Predicted N_{bimv}
	from Table 12-10			from Table 12-10	from Equation 12-21		(4) _{TOTAL} *(5)			(6)*(7)*(8)
	a	b	c							
Total	-13.36	1.11	0.41	0.80	2.375	1.000	2.375	0.91	1.00	2.167
Fatal and Injury (FI)	-14.01	1.16	0.30	0.69	0.715	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.278	0.661	0.91	1.00	0.603
Property Damage Only (PDO)	-15.38	1.20	0.51	0.77	1.854	$(5)_{TOTAL}-(5)_{FI}$ 0.722	1.714	0.91	1.00	1.564

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	0.603	1.000	1.564	2.167
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.421	0.254	0.440	0.688	0.942
Head-on collision	0.045	0.027	0.023	0.036	0.063
Angle collision	0.343	0.207	0.262	0.410	0.617
Sideswipe	0.126	0.076	0.040	0.063	0.139
Other multiple-vehicle collision	0.065	0.039	0.235	0.368	0.407

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_{bisv}	Combined CMFs (7) from Worksheet 2B	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)			(6)*(7)*(8)
	a	b	c							
Total	-6.81	0.16	0.51	1.14	0.560	1.000	0.560	0.91	1.00	0.511
Fatal and Injury (FI)	--	--	--	--	0.174	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.302	0.169	0.91	1.00	0.154
Property Damage Only (PDO)	-8.36	0.25	0.55	1.29	0.401	$(5)_{TOTAL}-(5)_{FI}$ 0.698	0.391	0.91	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	0.154	1.000	0.357	0.511
		(2)*(3) _{FI}		(4)*(5) _{PDO}	(3)+(5)
Collision with parked vehicle	0.001	0.000	0.003	0.001	0.001
Collision with animal	0.003	0.000	0.018	0.006	0.007
Collision with fixed object	0.762	0.118	0.834	0.298	0.415
Collision with other object	0.090	0.014	0.092	0.033	0.047
Other single-vehicle collision	0.039	0.006	0.023	0.008	0.014
Single-vehicle noncollision	0.105	0.016	0.030	0.011	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	2.167	0.511	2.679	0.021	1.00	0.056
Fatal and injury (FI)	--	--	--	--	1.00	0.056

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} from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C _i	Predicted N _{pedi} (4)*(5)*(6)
	from Table 12-14									
	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	2.167	0.511	2.679	0.016	1.00	0.043
Fatal and injury (FI)	--	--	--	--	1.00	0.043

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)	0.254	0.688	0.942
Head-on collisions (from Worksheet 2D)	0.027	0.036	0.063
Angle collisions (from Worksheet 2D)	0.207	0.410	0.617
Sideswipe (from Worksheet 2D)	0.076	0.063	0.139
Other multiple-vehicle collision (from Worksheet 2D)	0.039	0.368	0.407
Subtotal	0.603	1.564	2.167
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.001	0.001
Collision with animal (from Worksheet 2F)	0.000	0.006	0.007
Collision with fixed object (from Worksheet 2F)	0.118	0.298	0.415
Collision with other object (from Worksheet 2F)	0.014	0.033	0.047
Other single-vehicle collision (from Worksheet 2F)	0.006	0.008	0.014
Single-vehicle noncollision (from Worksheet 2F)	0.016	0.011	0.027
Collision with pedestrian (from Worksheet 2G or 2I)	0.056	0.000	0.056
Collision with bicycle (from Worksheet 2J)	0.043	0.000	0.043
Subtotal	0.254	0.357	0.610
Total	0.857	1.921	2.778

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	2.778
Fatal and injury (FI)	0.857
Property damage only (PDO)	1.921

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections						
General Information			Location Information			
Analyst	SL		Roadway	Whiting St		
Agency or Company	H.W. Lochner		Intersection	Nebraska Ave		
Date Performed	12/01/21		Jurisdiction	2039		
			Analysis Year			
Input Data			Base Conditions	Site Conditions		
Intersection type (3ST, 3SG, 4ST, 4SG)			--	3ST		
AADT _{major} (veh/day)			AADT _{MAX} = 45,700 (veh/day)	12,170		
AADT _{minor} (veh/day)			AADT _{MAX} = 9,300 (veh/day)	10,730		
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			
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
<i>CMF_{1i}</i>	<i>CMF_{2i}</i>	<i>CMF_{3i}</i>	<i>CMF_{4i}</i>	<i>CMF_{5i}</i>	<i>CMF_{6i}</i>	<i>CMF_{COMB}</i>
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)
1.00	1.00	1.00	1.00	0.91	1.00	0.91

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 (7) from Worksheet 2B	Calibration Factor, C_i	Predicted N_{bimv}
	from Table 12-10			from Table 12-10	from Equation 12-21		(4) _{TOTAL} *(5)			(6)*(7)*(8)
	a	b	c							
Total	-13.36	1.11	0.41	0.80	2.427	1.000	2.427	0.91	1.00	2.215
Fatal and Injury (FI)	-14.01	1.16	0.30	0.69	0.731	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.278	0.674	0.91	1.00	0.615
Property Damage Only (PDO)	-15.38	1.20	0.51	0.77	1.899	$(5)_{TOTAL}-(5)_{FI}$ 0.722	1.753	0.91	1.00	1.600

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	0.615	1.000	1.600	2.215
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.421	0.259	0.440	0.704	0.963
Head-on collision	0.045	0.028	0.023	0.037	0.064
Angle collision	0.343	0.211	0.262	0.419	0.630
Sideswipe	0.126	0.078	0.040	0.064	0.142
Other multiple-vehicle collision	0.065	0.040	0.235	0.376	0.416

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_{bisv}	Combined CMFs (7) from Worksheet 2B	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)			(6)*(7)*(8)
	a	b	c							
Total	-6.81	0.16	0.51	1.14	0.565	1.000	0.565	0.91	1.00	0.515
Fatal and Injury (FI)	--	--	--	--	0.175	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.302	0.170	0.91	1.00	0.155
Property Damage Only (PDO)	-8.36	0.25	0.55	1.29	0.405	$(5)_{TOTAL}-(5)_{FI}$ 0.698	0.394	0.91	1.00	0.360

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	0.155	1.000	0.360	0.515
		(2)*(3) _{FI}		(4)*(5) _{PDO}	(3)+(5)
Collision with parked vehicle	0.001	0.000	0.003	0.001	0.001
Collision with animal	0.003	0.000	0.018	0.006	0.007
Collision with fixed object	0.762	0.118	0.834	0.300	0.419
Collision with other object	0.090	0.014	0.092	0.033	0.047
Other single-vehicle collision	0.039	0.006	0.023	0.008	0.014
Single-vehicle noncollision	0.105	0.016	0.030	0.011	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	2.215	0.515	2.730	0.021	1.00	0.057
Fatal and injury (FI)	--	--	--	--	1.00	0.057

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} from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C _i	Predicted N _{pedi} (4)*(5)*(6)
	from Table 12-14									
	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	2.215	0.515	2.730	0.016	1.00	0.044
Fatal and injury (FI)	--	--	--	--	1.00	0.044

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)	0.259	0.704	0.963
Head-on collisions (from Worksheet 2D)	0.028	0.037	0.064
Angle collisions (from Worksheet 2D)	0.211	0.419	0.630
Sideswipe (from Worksheet 2D)	0.078	0.064	0.142
Other multiple-vehicle collision (from Worksheet 2D)	0.040	0.376	0.416
Subtotal	0.615	1.600	2.215
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.001	0.001
Collision with animal (from Worksheet 2F)	0.000	0.006	0.007
Collision with fixed object (from Worksheet 2F)	0.118	0.300	0.419
Collision with other object (from Worksheet 2F)	0.014	0.033	0.047
Other single-vehicle collision (from Worksheet 2F)	0.006	0.008	0.014
Single-vehicle noncollision (from Worksheet 2F)	0.016	0.011	0.027
Collision with pedestrian (from Worksheet 2G or 2I)	0.057	0.000	0.057
Collision with bicycle (from Worksheet 2J)	0.044	0.000	0.044
Subtotal	0.257	0.360	0.616
Total	0.872	1.959	2.831

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	2.831
Fatal and injury (FI)	0.872
Property damage only (PDO)	1.959

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections						
General Information			Location Information			
Analyst	SL		Roadway	Whiting St		
Agency or Company	H.W. Lochner		Intersection	Nebraska Ave		
Date Performed	12/01/21		Jurisdiction	2040		
Analysis Year						
Input Data		Base Conditions		Site Conditions		
Intersection type (3ST, 3SG, 4ST, 4SG)		--		3ST		
AADT _{major} (veh/day)	AADT _{MAX} = 45,700 (veh/day)		--		12,360	
AADT _{minor} (veh/day)	AADT _{MAX} = 9,300 (veh/day)		--		10,840	
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				
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)
1.00	1.00	1.00	1.00	0.91	1.00	0.91

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									
	a	b	c							
Total	-13.36	1.11	0.41	0.80	2.479	1.000	2.479	0.91	1.00	2.263
Fatal and Injury (FI)	-14.01	1.16	0.30	0.69	0.746	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.277	0.687	0.91	1.00	0.627
Property Damage Only (PDO)	-15.38	1.20	0.51	0.77	1.945	$(5)_{TOTAL}-(5)_{FI}$ 0.723	1.792	0.91	1.00	1.635

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	0.627	1.000	1.635	2.263
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.421	0.264	0.440	0.720	0.984
Head-on collision	0.045	0.028	0.023	0.038	0.066
Angle collision	0.343	0.215	0.262	0.428	0.644
Sideswipe	0.126	0.079	0.040	0.065	0.144
Other multiple-vehicle collision	0.065	0.041	0.235	0.384	0.425

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_{bisv}	Combined CMFs	Calibration Factor, C_i	Predicted N_{bisv}
	from Table 12-12									
	a	b	c							
Total	-6.81	0.16	0.51	1.14	0.569	1.000	0.569	0.91	1.00	0.519
Fatal and Injury (FI)	--	--	--	--	0.176	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.301	0.171	0.91	1.00	0.156
Property Damage Only (PDO)	-8.36	0.25	0.55	1.29	0.409	$(5)_{TOTAL}-(5)_{FI}$ 0.699	0.397	0.91	1.00	0.363

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	0.156	1.000	0.363	0.519
		(2)*(3) _{FI}		(4)*(5) _{PDO}	(3)+(5)
Collision with parked vehicle	0.001	0.000	0.003	0.001	0.001
Collision with animal	0.003	0.000	0.018	0.007	0.007
Collision with fixed object	0.762	0.119	0.834	0.303	0.422
Collision with other object	0.090	0.014	0.092	0.033	0.047
Other single-vehicle collision	0.039	0.006	0.023	0.008	0.014
Single-vehicle noncollision	0.105	0.016	0.030	0.011	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	2.263	0.519	2.782	0.021	1.00	0.058
Fatal and injury (FI)	--	--	--	--	1.00	0.058

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} from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C _i	Predicted N _{pedi} (4)*(5)*(6)
	from Table 12-14									
	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	2.263	0.519	2.782	0.016	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)
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)	0.264	0.720	0.984
Head-on collisions (from Worksheet 2D)	0.028	0.038	0.066
Angle collisions (from Worksheet 2D)	0.215	0.428	0.644
Sideswipe (from Worksheet 2D)	0.079	0.065	0.144
Other multiple-vehicle collision (from Worksheet 2D)	0.041	0.384	0.425
Subtotal	0.627	1.635	2.263
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.001	0.001
Collision with animal (from Worksheet 2F)	0.000	0.007	0.007
Collision with fixed object (from Worksheet 2F)	0.119	0.303	0.422
Collision with other object (from Worksheet 2F)	0.014	0.033	0.047
Other single-vehicle collision (from Worksheet 2F)	0.006	0.008	0.014
Single-vehicle noncollision (from Worksheet 2F)	0.016	0.011	0.027
Collision with pedestrian (from Worksheet 2G or 2I)	0.058	0.000	0.058
Collision with bicycle (from Worksheet 2J)	0.045	0.000	0.045
Subtotal	0.259	0.363	0.622
Total	0.887	1.998	2.885

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	2.885
Fatal and injury (FI)	0.887
Property damage only (PDO)	1.998

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections						
General Information			Location Information			
Analyst	SL		Roadway	Whiting St		
Agency or Company	H.W. Lochner		Intersection	Nebraska Ave		
Date Performed	12/01/21		Jurisdiction	2041		
Analysis Year						
Input Data			Base Conditions	Site Conditions		
Intersection type (3ST, 3SG, 4ST, 4SG)			--	3ST		
AADT _{major} (veh/day)			AADT _{MAX} = 45,700 (veh/day)	12,550		
AADT _{minor} (veh/day)			AADT _{MAX} = 9,300 (veh/day)	10,950		
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			
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
<i>CMF_{1i}</i>	<i>CMF_{2i}</i>	<i>CMF_{3i}</i>	<i>CMF_{4i}</i>	<i>CMF_{5i}</i>	<i>CMF_{6i}</i>	<i>CMF_{COMB}</i>
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)
1.00	1.00	1.00	1.00	0.91	1.00	0.91

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 (7) from Worksheet 2B	Calibration Factor, C_i	Predicted N_{bimv}
	from Table 12-10			from Table 12-10	from Equation 12-21		(4) _{TOTAL} *(5)			(6)*(7)*(8)
	a	b	c							
Total	-13.36	1.11	0.41	0.80	2.532	1.000	2.532	0.91	1.00	2.311
Fatal and Injury (FI)	-14.01	1.16	0.30	0.69	0.762	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.277	0.701	0.91	1.00	0.640
Property Damage Only (PDO)	-15.38	1.20	0.51	0.77	1.991	$(5)_{TOTAL}-(5)_{FI}$ 0.723	1.831	0.91	1.00	1.672

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	0.640	1.000	1.672	2.311
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.421	0.269	0.440	0.736	1.005
Head-on collision	0.045	0.029	0.023	0.038	0.067
Angle collision	0.343	0.219	0.262	0.438	0.657
Sideswipe	0.126	0.081	0.040	0.067	0.147
Other multiple-vehicle collision	0.065	0.042	0.235	0.393	0.434

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_{bisv}	Combined CMFs (7) from Worksheet 2B	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)			(6)*(7)*(8)
	a	b	c							
Total	-6.81	0.16	0.51	1.14	0.573	1.000	0.573	0.91	1.00	0.523
Fatal and Injury (FI)	--	--	--	--	0.178	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.301	0.173	0.91	1.00	0.157
Property Damage Only (PDO)	-8.36	0.25	0.55	1.29	0.413	$(5)_{TOTAL}-(5)_{FI}$ 0.699	0.401	0.91	1.00	0.366

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	0.157	1.000	0.366	0.523
		(2)*(3) _{FI}		(4)*(5) _{PDO}	(3)+(5)
Collision with parked vehicle	0.001	0.000	0.003	0.001	0.001
Collision with animal	0.003	0.000	0.018	0.007	0.007
Collision with fixed object	0.762	0.120	0.834	0.305	0.425
Collision with other object	0.090	0.014	0.092	0.034	0.048
Other single-vehicle collision	0.039	0.006	0.023	0.008	0.015
Single-vehicle noncollision	0.105	0.017	0.030	0.011	0.028

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	2.311	0.523	2.834	0.021	1.00	0.060
Fatal and injury (FI)	--	--	--	--	1.00	0.060

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} from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C _i	Predicted N _{pedi} (4)*(5)*(6)
	from Table 12-14									
	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	2.311	0.523	2.834	0.016	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)
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)	0.269	0.736	1.005
Head-on collisions (from Worksheet 2D)	0.029	0.038	0.067
Angle collisions (from Worksheet 2D)	0.219	0.438	0.657
Sideswipe (from Worksheet 2D)	0.081	0.067	0.147
Other multiple-vehicle collision (from Worksheet 2D)	0.042	0.393	0.434
Subtotal	0.640	1.672	2.311
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.001	0.001
Collision with animal (from Worksheet 2F)	0.000	0.007	0.007
Collision with fixed object (from Worksheet 2F)	0.120	0.305	0.425
Collision with other object (from Worksheet 2F)	0.014	0.034	0.048
Other single-vehicle collision (from Worksheet 2F)	0.006	0.008	0.015
Single-vehicle noncollision (from Worksheet 2F)	0.017	0.011	0.028
Collision with pedestrian (from Worksheet 2G or 2I)	0.060	0.000	0.060
Collision with bicycle (from Worksheet 2J)	0.045	0.000	0.045
Subtotal	0.262	0.366	0.628
Total	0.902	2.037	2.939

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	2.939
Fatal and injury (FI)	0.902
Property damage only (PDO)	2.037

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections						
General Information			Location Information			
Analyst	SL		Roadway	Whiting St		
Agency or Company	H.W. Lochner		Intersection	Nebraska Ave		
Date Performed	12/01/21		Jurisdiction	2042		
Analysis Year						
Input Data			Base Conditions	Site Conditions		
Intersection type (3ST, 3SG, 4ST, 4SG)			--	3ST		
AADT _{major} (veh/day)			AADT _{MAX} = 45,700 (veh/day)	12,740		
AADT _{minor} (veh/day)			AADT _{MAX} = 9,300 (veh/day)	11,060		
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			
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
<i>CMF_{1i}</i>	<i>CMF_{2i}</i>	<i>CMF_{3i}</i>	<i>CMF_{4i}</i>	<i>CMF_{5i}</i>	<i>CMF_{6i}</i>	<i>CMF_{COMB}</i>
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)
1.00	1.00	1.00	1.00	0.91	1.00	0.91

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 (7) from Worksheet 2B	Calibration Factor, C_i	Predicted N_{bimv}
	from Table 12-10			from Table 12-10	from Equation 12-21		(4) _{TOTAL} *(5)			(6)*(7)*(8)
	a	b	c							
Total	-13.36	1.11	0.41	0.80	2.585	1.000	2.585	0.91	1.00	2.360
Fatal and Injury (FI)	-14.01	1.16	0.30	0.69	0.777	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.276	0.714	0.91	1.00	0.652
Property Damage Only (PDO)	-15.38	1.20	0.51	0.77	2.037	$(5)_{TOTAL}-(5)_{FI}$ 0.724	1.871	0.91	1.00	1.708

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	0.652	1.000	1.708	2.360
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.421	0.274	0.440	0.752	1.026
Head-on collision	0.045	0.029	0.023	0.039	0.069
Angle collision	0.343	0.224	0.262	0.447	0.671
Sideswipe	0.126	0.082	0.040	0.068	0.150
Other multiple-vehicle collision	0.065	0.042	0.235	0.401	0.444

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_{bisv}	Combined CMFs (7) from Worksheet 2B	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)			(6)*(7)*(8)
	a	b	c							
Total	-6.81	0.16	0.51	1.14	0.578	1.000	0.578	0.91	1.00	0.527
Fatal and Injury (FI)	--	--	--	--	0.179	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.301	0.174	0.91	1.00	0.158
Property Damage Only (PDO)	-8.36	0.25	0.55	1.29	0.417	$(5)_{TOTAL}-(5)_{FI}$ 0.699	0.404	0.91	1.00	0.369

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	0.158	1.000	0.369	0.527
		(2)*(3) _{FI}		(4)*(5) _{PDO}	(3)+(5)
Collision with parked vehicle	0.001	0.000	0.003	0.001	0.001
Collision with animal	0.003	0.000	0.018	0.007	0.007
Collision with fixed object	0.762	0.121	0.834	0.308	0.428
Collision with other object	0.090	0.014	0.092	0.034	0.048
Other single-vehicle collision	0.039	0.006	0.023	0.008	0.015
Single-vehicle noncollision	0.105	0.017	0.030	0.011	0.028

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	2.360	0.527	2.887	0.021	1.00	0.061
Fatal and injury (FI)	--	--	--	--	1.00	0.061

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} from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C _i	Predicted N _{pedi} (4)*(5)*(6)
	from Table 12-14									
	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	2.360	0.527	2.887	0.016	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)
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)	0.274	0.752	1.026
Head-on collisions (from Worksheet 2D)	0.029	0.039	0.069
Angle collisions (from Worksheet 2D)	0.224	0.447	0.671
Sideswipe (from Worksheet 2D)	0.082	0.068	0.150
Other multiple-vehicle collision (from Worksheet 2D)	0.042	0.401	0.444
Subtotal	0.652	1.708	2.360
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.001	0.001
Collision with animal (from Worksheet 2F)	0.000	0.007	0.007
Collision with fixed object (from Worksheet 2F)	0.121	0.308	0.428
Collision with other object (from Worksheet 2F)	0.014	0.034	0.048
Other single-vehicle collision (from Worksheet 2F)	0.006	0.008	0.015
Single-vehicle noncollision (from Worksheet 2F)	0.017	0.011	0.028
Collision with pedestrian (from Worksheet 2G or 2I)	0.061	0.000	0.061
Collision with bicycle (from Worksheet 2J)	0.046	0.000	0.046
Subtotal	0.265	0.369	0.634
Total	0.917	2.077	2.994

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	2.994
Fatal and injury (FI)	0.917
Property damage only (PDO)	2.077

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections						
General Information			Location Information			
Analyst	SL		Roadway	Whiting St		
Agency or Company	H.W. Lochner		Intersection	Nebraska Ave		
Date Performed	12/01/21		Jurisdiction	2043		
Analysis Year						
Input Data		Base Conditions		Site Conditions		
Intersection type (3ST, 3SG, 4ST, 4SG)		--		3ST		
AADT _{major} (veh/day)		AADT _{MAX} = 45,700 (veh/day)		12,930		
AADT _{minor} (veh/day)		AADT _{MAX} = 9,300 (veh/day)		11,170		
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				
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
<i>CMF_{1i}</i>	<i>CMF_{2i}</i>	<i>CMF_{3i}</i>	<i>CMF_{4i}</i>	<i>CMF_{5i}</i>	<i>CMF_{6i}</i>	<i>CMF_{COMB}</i>
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)
1.00	1.00	1.00	1.00	0.91	1.00	0.91

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 (7) from Worksheet 2B	Calibration Factor, C_i	Predicted N_{bimv}
	from Table 12-10			from Table 12-10	from Equation 12-21		(4) _{TOTAL} *(5)			(6)*(7)*(8)
	a	b	c							
Total	-13.36	1.11	0.41	0.80	2.639	1.000	2.639	0.91	1.00	2.409
Fatal and Injury (FI)	-14.01	1.16	0.30	0.69	0.793	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.276	0.727	0.91	1.00	0.664
Property Damage Only (PDO)	-15.38	1.20	0.51	0.77	2.084	$(5)_{TOTAL}-(5)_{FI}$ 0.724	1.911	0.91	1.00	1.745

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	1.745	2.409
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.421	0.280	0.440	0.768	1.047
Head-on collision	0.045	0.030	0.023	0.040	0.070
Angle collision	0.343	0.228	0.262	0.457	0.685
Sideswipe	0.126	0.084	0.040	0.070	0.153
Other multiple-vehicle collision	0.065	0.043	0.235	0.410	0.453

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_{bisv}	Combined CMFs (7) from Worksheet 2B	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)			(6)*(7)*(8)
	a	b	c							
Total	-6.81	0.16	0.51	1.14	0.582	1.000	0.582	0.91	1.00	0.531
Fatal and Injury (FI)	--	--	--	--	0.180	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.300	0.175	0.91	1.00	0.159
Property Damage Only (PDO)	-8.36	0.25	0.55	1.29	0.420	$(5)_{TOTAL}-(5)_{FI}$ 0.700	0.407	0.91	1.00	0.372

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	0.159	1.000	0.372	0.531
		(2)*(3) _{FI}		(4)*(5) _{PDO}	(3)+(5)
Collision with parked vehicle	0.001	0.000	0.003	0.001	0.001
Collision with animal	0.003	0.000	0.018	0.007	0.007
Collision with fixed object	0.762	0.122	0.834	0.310	0.432
Collision with other object	0.090	0.014	0.092	0.034	0.049
Other single-vehicle collision	0.039	0.006	0.023	0.009	0.015
Single-vehicle noncollision	0.105	0.017	0.030	0.011	0.028

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	2.409	0.531	2.940	0.021	1.00	0.062
Fatal and injury (FI)	--	--	--	--	1.00	0.062

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} from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C _i	Predicted N _{pedi} (4)*(5)*(6)
	from Table 12-14									
	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	2.409	0.531	2.940	0.016	1.00	0.047
Fatal and injury (FI)	--	--	--	--	1.00	0.047

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)	0.280	0.768	1.047
Head-on collisions (from Worksheet 2D)	0.030	0.040	0.070
Angle collisions (from Worksheet 2D)	0.228	0.457	0.685
Sideswipe (from Worksheet 2D)	0.084	0.070	0.153
Other multiple-vehicle collision (from Worksheet 2D)	0.043	0.410	0.453
Subtotal	0.664	1.745	2.409
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.001	0.001
Collision with animal (from Worksheet 2F)	0.000	0.007	0.007
Collision with fixed object (from Worksheet 2F)	0.122	0.310	0.432
Collision with other object (from Worksheet 2F)	0.014	0.034	0.049
Other single-vehicle collision (from Worksheet 2F)	0.006	0.009	0.015
Single-vehicle noncollision (from Worksheet 2F)	0.017	0.011	0.028
Collision with pedestrian (from Worksheet 2G or 2I)	0.062	0.000	0.062
Collision with bicycle (from Worksheet 2J)	0.047	0.000	0.047
Subtotal	0.268	0.372	0.640
Total	0.932	2.116	3.049

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	3.049
Fatal and injury (FI)	0.932
Property damage only (PDO)	2.116

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections						
General Information			Location Information			
Analyst	SL		Roadway	Whiting St		
Agency or Company	H.W. Lochner		Intersection	Nebraska Ave		
Date Performed	12/01/21		Jurisdiction	2044		
Analysis Year						
Input Data			Base Conditions	Site Conditions		
Intersection type (3ST, 3SG, 4ST, 4SG)			--	3ST		
AADT _{major} (veh/day)			AADT _{MAX} = 45,700 (veh/day)	13,120		
AADT _{minor} (veh/day)			AADT _{MAX} = 9,300 (veh/day)	11,280		
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			
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
<i>CMF_{1i}</i>	<i>CMF_{2i}</i>	<i>CMF_{3i}</i>	<i>CMF_{4i}</i>	<i>CMF_{5i}</i>	<i>CMF_{6i}</i>	<i>CMF_{COMB}</i>
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)
1.00	1.00	1.00	1.00	0.91	1.00	0.91

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 (7) from Worksheet 2B	Calibration Factor, C_i	Predicted N_{bimv}
	from Table 12-10			from Table 12-10	from Equation 12-21		(4) _{TOTAL} *(5)			(6)*(7)*(8)
	a	b	c							
Total	-13.36	1.11	0.41	0.80	2.693	1.000	2.693	0.91	1.00	2.458
Fatal and Injury (FI)	-14.01	1.16	0.30	0.69	0.809	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.275	0.741	0.91	1.00	0.676
Property Damage Only (PDO)	-15.38	1.20	0.51	0.77	2.132	$(5)_{TOTAL}-(5)_{FI}$ 0.725	1.952	0.91	1.00	1.782

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	0.676	1.000	1.782	2.458
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.421	0.285	0.440	0.784	1.069
Head-on collision	0.045	0.030	0.023	0.041	0.071
Angle collision	0.343	0.232	0.262	0.467	0.699
Sideswipe	0.126	0.085	0.040	0.071	0.156
Other multiple-vehicle collision	0.065	0.044	0.235	0.419	0.463

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_{bisv}	Combined CMFs (7) from Worksheet 2B	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)			(6)*(7)*(8)
	a	b	c							
Total	-6.81	0.16	0.51	1.14	0.586	1.000	0.586	0.91	1.00	0.535
Fatal and Injury (FI)	--	--	--	--	0.182	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.300	0.176	0.91	1.00	0.160
Property Damage Only (PDO)	-8.36	0.25	0.55	1.29	0.424	$(5)_{TOTAL}-(5)_{FI}$ 0.700	0.410	0.91	1.00	0.375

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	0.160	1.000	0.375	0.535
		(2)*(3) _{FI}		(4)*(5) _{PDO}	(3)+(5)
Collision with parked vehicle	0.001	0.000	0.003	0.001	0.001
Collision with animal	0.003	0.000	0.018	0.007	0.007
Collision with fixed object	0.762	0.122	0.834	0.312	0.435
Collision with other object	0.090	0.014	0.092	0.034	0.049
Other single-vehicle collision	0.039	0.006	0.023	0.009	0.015
Single-vehicle noncollision	0.105	0.017	0.030	0.011	0.028

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	2.458	0.535	2.993	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} from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C _i	Predicted N _{pedi} (4)*(5)*(6)
	from Table 12-14									
	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	2.458	0.535	2.993	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)	0.285	0.784	1.069
Head-on collisions (from Worksheet 2D)	0.030	0.041	0.071
Angle collisions (from Worksheet 2D)	0.232	0.467	0.699
Sideswipe (from Worksheet 2D)	0.085	0.071	0.156
Other multiple-vehicle collision (from Worksheet 2D)	0.044	0.419	0.463
Subtotal	0.676	1.782	2.458
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.001	0.001
Collision with animal (from Worksheet 2F)	0.000	0.007	0.007
Collision with fixed object (from Worksheet 2F)	0.122	0.312	0.435
Collision with other object (from Worksheet 2F)	0.014	0.034	0.049
Other single-vehicle collision (from Worksheet 2F)	0.006	0.009	0.015
Single-vehicle noncollision (from Worksheet 2F)	0.017	0.011	0.028
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	0.271	0.375	0.646
Total	0.947	2.156	3.104

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	3.104
Fatal and injury (FI)	0.947
Property damage only (PDO)	2.156

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections						
General Information			Location Information			
Analyst	SL		Roadway	Whiting St		
Agency or Company	H.W. Lochner		Intersection	Nebraska Ave		
Date Performed	12/01/21		Jurisdiction	2045		
Analysis Year						
Input Data		Base Conditions		Site Conditions		
Intersection type (3ST, 3SG, 4ST, 4SG)		--		3ST		
AADT _{major} (veh/day)	AADT _{MAX} = 45,700 (veh/day)	--		13,310		
AADT _{minor} (veh/day)	AADT _{MAX} = 9,300 (veh/day)	--		11,390		
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				
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
<i>CMF_{1i}</i>	<i>CMF_{2i}</i>	<i>CMF_{3i}</i>	<i>CMF_{4i}</i>	<i>CMF_{5i}</i>	<i>CMF_{6i}</i>	<i>CMF_{COMB}</i>
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)
1.00	1.00	1.00	1.00	0.91	1.00	0.91

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									
	a	b	c							
Total	-13.36	1.11	0.41	0.80	2.747	1.000	2.747	0.91	1.00	2.507
Fatal and Injury (FI)	-14.01	1.16	0.30	0.69	0.825	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.275	0.754	0.91	1.00	0.689
Property Damage Only (PDO)	-15.38	1.20	0.51	0.77	2.180	$(5)_{TOTAL}-(5)_{FI}$ 0.725	1.993	0.91	1.00	1.819

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	0.689	1.000	1.819	2.507
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.421	0.290	0.440	0.800	1.090
Head-on collision	0.045	0.031	0.023	0.042	0.073
Angle collision	0.343	0.236	0.262	0.477	0.713
Sideswipe	0.126	0.087	0.040	0.073	0.160
Other multiple-vehicle collision	0.065	0.045	0.235	0.427	0.472

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_{bisv}	Combined CMFs	Calibration Factor, C_i	Predicted N_{bisv}
	from Table 12-12									
	a	b	c							
Total	-6.81	0.16	0.51	1.14	0.590	1.000	0.590	0.91	1.00	0.539
Fatal and Injury (FI)	--	--	--	--	0.183	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.300	0.177	0.91	1.00	0.161
Property Damage Only (PDO)	-8.36	0.25	0.55	1.29	0.428	$(5)_{TOTAL}-(5)_{FI}$ 0.700	0.414	0.91	1.00	0.377

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	0.161	1.000	0.377	0.539
		(2)*(3) _{FI}		(4)*(5) _{PDO}	(3)+(5)
Collision with parked vehicle	0.001	0.000	0.003	0.001	0.001
Collision with animal	0.003	0.000	0.018	0.007	0.007
Collision with fixed object	0.762	0.123	0.834	0.315	0.438
Collision with other object	0.090	0.015	0.092	0.035	0.049
Other single-vehicle collision	0.039	0.006	0.023	0.009	0.015
Single-vehicle noncollision	0.105	0.017	0.030	0.011	0.028

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	2.507	0.539	3.046	0.021	1.00	0.064
Fatal and injury (FI)	--	--	--	--	1.00	0.064

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} from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C _i	Predicted N _{pedi} (4)*(5)*(6)
	from Table 12-14									
	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	2.507	0.539	3.046	0.016	1.00	0.049
Fatal and injury (FI)	--	--	--	--	1.00	0.049

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)	0.290	0.800	1.090
Head-on collisions (from Worksheet 2D)	0.031	0.042	0.073
Angle collisions (from Worksheet 2D)	0.236	0.477	0.713
Sideswipe (from Worksheet 2D)	0.087	0.073	0.160
Other multiple-vehicle collision (from Worksheet 2D)	0.045	0.427	0.472
Subtotal	0.689	1.819	2.507
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.001	0.001
Collision with animal (from Worksheet 2F)	0.000	0.007	0.007
Collision with fixed object (from Worksheet 2F)	0.123	0.315	0.438
Collision with other object (from Worksheet 2F)	0.015	0.035	0.049
Other single-vehicle collision (from Worksheet 2F)	0.006	0.009	0.015
Single-vehicle noncollision (from Worksheet 2F)	0.017	0.011	0.028
Collision with pedestrian (from Worksheet 2G or 2I)	0.064	0.000	0.064
Collision with bicycle (from Worksheet 2J)	0.049	0.000	0.049
Subtotal	0.274	0.378	0.652
Total	0.963	2.196	3.159

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	3.159
Fatal and injury (FI)	0.963
Property damage only (PDO)	2.196

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections						
General Information			Location Information			
Analyst	SL		Roadway	Whiting St		
Agency or Company	H.W. Lochner		Intersection	Nebraska Ave		
Date Performed	12/01/21		Jurisdiction	2046		
Analysis Year						
Input Data		Base Conditions		Site Conditions		
Intersection type (3ST, 3SG, 4ST, 4SG)		--		3ST		
AADT _{major} (veh/day)		AADT _{MAX} = 45,700 (veh/day)		13,500		
AADT _{minor} (veh/day)		AADT _{MAX} = 9,300 (veh/day)		11,500		
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				
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
<i>CMF 1i</i>	<i>CMF 2i</i>	<i>CMF 3i</i>	<i>CMF 4i</i>	<i>CMF 5i</i>	<i>CMF 6i</i>	<i>CMF_{COMB}</i>
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)
1.00	1.00	1.00	1.00	0.91	1.00	0.91

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 (7) from Worksheet 2B	Calibration Factor, C_i	Predicted N_{bimv}
	from Table 12-10			from Table 12-10	from Equation 12-21		(4) _{TOTAL} *(5)			(6)*(7)*(8)
	a	b	c							
Total	-13.36	1.11	0.41	0.80	2.801	1.000	2.801	0.91	1.00	2.557
Fatal and Injury (FI)	-14.01	1.16	0.30	0.69	0.841	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.274	0.768	0.91	1.00	0.701
Property Damage Only (PDO)	-15.38	1.20	0.51	0.77	2.228	$(5)_{TOTAL}-(5)_{FI}$ 0.726	2.034	0.91	1.00	1.856

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	0.701	1.000	1.856	2.557
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.421	0.295	0.440	0.817	1.112
Head-on collision	0.045	0.032	0.023	0.043	0.074
Angle collision	0.343	0.240	0.262	0.486	0.727
Sideswipe	0.126	0.088	0.040	0.074	0.163
Other multiple-vehicle collision	0.065	0.046	0.235	0.436	0.482

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_{bisv}	Combined CMFs (7) from Worksheet 2B	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)			(6)*(7)*(8)
	a	b	c							
Total	-6.81	0.16	0.51	1.14	0.595	1.000	0.595	0.91	1.00	0.543
Fatal and Injury (FI)	--	--	--	--	0.184	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.299	0.178	0.91	1.00	0.162
Property Damage Only (PDO)	-8.36	0.25	0.55	1.29	0.432	$(5)_{TOTAL}-(5)_{FI}$ 0.701	0.417	0.91	1.00	0.380

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	0.162	1.000	0.380	0.543
		(2)*(3) _{FI}		(4)*(5) _{PDO}	(3)+(5)
Collision with parked vehicle	0.001	0.000	0.003	0.001	0.001
Collision with animal	0.003	0.000	0.018	0.007	0.007
Collision with fixed object	0.762	0.124	0.834	0.317	0.441
Collision with other object	0.090	0.015	0.092	0.035	0.050
Other single-vehicle collision	0.039	0.006	0.023	0.009	0.015
Single-vehicle noncollision	0.105	0.017	0.030	0.011	0.028

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	2.557	0.543	3.100	0.021	1.00	0.065
Fatal and injury (FI)	--	--	--	--	1.00	0.065

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} from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C _i	Predicted N _{pedi} (4)*(5)*(6)
	from Table 12-14									
	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	2.557	0.543	3.100	0.016	1.00	0.050
Fatal and injury (FI)	--	--	--	--	1.00	0.050

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)	0.295	0.817	1.112
Head-on collisions (from Worksheet 2D)	0.032	0.043	0.074
Angle collisions (from Worksheet 2D)	0.240	0.486	0.727
Sideswipe (from Worksheet 2D)	0.088	0.074	0.163
Other multiple-vehicle collision (from Worksheet 2D)	0.046	0.436	0.482
Subtotal	0.701	1.856	2.557
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.001	0.001
Collision with animal (from Worksheet 2F)	0.000	0.007	0.007
Collision with fixed object (from Worksheet 2F)	0.124	0.317	0.441
Collision with other object (from Worksheet 2F)	0.015	0.035	0.050
Other single-vehicle collision (from Worksheet 2F)	0.006	0.009	0.015
Single-vehicle noncollision (from Worksheet 2F)	0.017	0.011	0.028
Collision with pedestrian (from Worksheet 2G or 2I)	0.065	0.000	0.065
Collision with bicycle (from Worksheet 2J)	0.050	0.000	0.050
Subtotal	0.277	0.380	0.658
Total	0.978	2.237	3.215

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	3.215
Fatal and injury (FI)	0.978
Property damage only (PDO)	2.237

Build HSM Worksheets



Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections

General Information		Location Information	
Analyst	SL	Roadway	Meridian Ave
Agency or Company	H.W. Lochner	Intersection	Whiting St (East)
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2026
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	3SG
AADT _{major} (veh/day)	AADT _{MAX} = 58,100 (veh/day)	--	31,000
AADT _{minor} (veh/day)	AADT _{MAX} = 16,400 (veh/day)	--	4,400
Intersection lighting (present/not present)		Not Present	
Calibration factor, C _i		1.00	2.50
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	1
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	0
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	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)		--	
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			3,200
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	3
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
<i>CMF 1i</i>	<i>CMF 2i</i>	<i>CMF 3i</i>	<i>CMF 4i</i>	<i>CMF 5i</i>	<i>CMF 6i</i>	<i>CMF_{COMB}</i>
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)
0.93	0.87	1.00	1.00	0.91	1.00	0.74

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									
	a	b	c							

Urban and Suburban Predictive Methods

Total	-12.13	1.11	0.26	0.33	4.621	1.000	4.621	0.74	2.50	8.559
Fatal and Injury (FI)	-11.58	1.02	0.17	0.30	1.484	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.338	1.562	0.74	2.50	2.894
Property Damage Only (PDO)	-13.24	1.14	0.30	0.36	2.905	$(5)_{TOTAL}-(5)_{FI}$ 0.662	3.058	0.74	2.50	5.665

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)			(3) Predicted N _{bimv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)		(5) Predicted N _{bimv (PDO)} (crashes/year)	(6) 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			2.894	1.000		5.665	8.559		
				$(2)*(3)_{FI}$			$(4)*(5)_{PDO}$	$(3)+(5)$		
Rear-end collision	0.549			1.589	0.546		3.093	4.682		
Head-on collision	0.038			0.110	0.020		0.113	0.223		
Angle collision	0.280			0.810	0.204		1.156	1.966		
Sideswipe	0.076			0.220	0.032		0.181	0.401		
Other multiple-vehicle collision	0.057			0.165	0.198		1.122	1.287		

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1) Crash Severity Level	(2) SPF Coefficients			(3) Overdispersion Parameter, k	(4) Initial N _{bisv}	(5) Proportion of Total Crashes	(6) Adjusted N _{bimv}	(7) Combined CMFs	(8) Calibration Factor, C _i	(9) 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	0.267	1.000	0.267	0.74	2.50	0.494
Fatal and Injury (FI)	-9.75	0.27	0.51	0.24	0.069	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.265	0.071	0.74	2.50	0.131
Property Damage Only (PDO)	-9.08	0.45	0.33	0.53	0.191	$(5)_{TOTAL}-(5)_{FI}$ 0.735	0.196	0.74	2.50	0.364

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)			(3) Predicted N _{bisv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)		(5) Predicted N _{bisv (PDO)} (crashes/year)	(6) 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			0.131	1.000		0.364	0.494		
				$(2)*(3)_{FI}$			$(4)*(5)_{PDO}$	$(3)+(5)$		
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			0.085	0.895		0.325	0.411		

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Collision with other object	0.091	0.012	0.069	0.025	0.037
Other single-vehicle collision	0.045	0.006	0.018	0.007	0.012
Single-vehicle noncollision	0.209	0.027	0.014	0.005	0.032

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	--	--	--	--	2.50	--
Fatal and injury (FI)	--	--	--	--	2.50	--

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)
4.15	1.00	1.12	4.65

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	0.074	4.65	2.50	0.858			
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.50	0.858			

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	8.559	0.494	9.053	0.011	2.50	0.249
Fatal and injury (FI)	--	--	--	--	2.50	0.249

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;	(5) from Worksheet 2D and 2F	(6) from Worksheet 2D and 2F;

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	(7) from 2G or 2I and 2J		(7) from 2G or 2I and 2J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 2D)	1.589	3.093	4.682
Head-on collisions (from Worksheet 2D)	0.110	0.113	0.223
Angle collisions (from Worksheet 2D)	0.810	1.156	1.966
Sideswipe (from Worksheet 2D)	0.220	0.181	0.401
Other multiple-vehicle collision (from Worksheet 2D)	0.165	1.122	1.287
Subtotal	2.894	5.665	8.559
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)	0.085	0.325	0.411
Collision with other object (from Worksheet 2F)	0.012	0.025	0.037
Other single-vehicle collision (from Worksheet 2F)	0.006	0.007	0.012
Single-vehicle noncollision (from Worksheet 2F)	0.027	0.005	0.032
Collision with pedestrian (from Worksheet 2G or 2I)	0.858	0.000	0.858
Collision with bicycle (from Worksheet 2J)	0.249	0.000	0.249
Subtotal	1.238	0.364	1.601
Total	4.132	6.028	10.160

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	10.160
Fatal and injury (FI)	4.132
Property damage only (PDO)	6.028

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections

General Information		Location Information	
Analyst	SL	Roadway	Meridian Ave
Agency or Company	H.W. Lochner	Intersection	Whiting St (East)
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2027
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	3SG
AADT _{major} (veh/day)	AADT _{MAX} = 58,100 (veh/day)	--	31,475
AADT _{minor} (veh/day)	AADT _{MAX} = 16,400 (veh/day)	--	4,485
Intersection lighting (present/not present)		Not Present	
Calibration factor, C _i		1.00	2.50
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	1
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	0
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	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)		--	
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			3,200
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	3
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
<i>CMF 1i</i>	<i>CMF 2i</i>	<i>CMF 3i</i>	<i>CMF 4i</i>	<i>CMF 5i</i>	<i>CMF 6i</i>	<i>CMF_{COMB}</i>
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)
0.93	0.87	1.00	1.00	0.91	1.00	0.74

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									
	a	b	c	from Table 12-10	from Equation 12-21	(4) _{TOTAL} *(5)	(7) from Worksheet 2B	(6)*(7)*(8)		

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Total	-12.13	1.11	0.26	0.33	4.723	1.000	4.723	0.74	2.50	8.748
Fatal and Injury (FI)	-11.58	1.02	0.17	0.30	1.512	$\frac{(4)_{FI}}{((4)_{FI}+(4)_{PDO}}$ 0.337	1.592	0.74	2.50	2.949
Property Damage Only (PDO)	-13.24	1.14	0.30	0.36	2.973	$\frac{(5)_{TOTAL}-(5)_{FI}}{0.663}$	3.130	0.74	2.50	5.798

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)		(3) Predicted N _{bimv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bimv (PDO)} (crashes/year)	(6) 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		2.949	1.000	5.798	8.748
			$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.549		1.619	0.546	3.166	4.785
Head-on collision	0.038		0.112	0.020	0.116	0.228
Angle collision	0.280		0.826	0.204	1.183	2.009
Sideswipe	0.076		0.224	0.032	0.186	0.410
Other multiple-vehicle collision	0.057		0.168	0.198	1.148	1.316

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1) Crash Severity Level	(2) SPF Coefficients			(3) Overdispersion Parameter, k	(4) Initial N _{bisv}	(5) Proportion of Total Crashes	(6) Adjusted N _{bimv}	(7) Combined CMFs (7) from Worksheet 2B	(8) Calibration Factor, C _i	(9) Predicted N _{bisv}
	from Table 12-12			from Table 12-12	from Eqn. 12-24; (FI) from Eqn. 12-24 or 12-27		$(4)_{TOTAL}*(5)$			$(6)*(7)*(8)$
	a	b	c							
Total	-9.02	0.42	0.40	0.36	0.271	1.000	0.271	0.74	2.50	0.501
Fatal and Injury (FI)	-9.75	0.27	0.51	0.24	0.070	$\frac{(4)_{FI}}{((4)_{FI}+(4)_{PDO}}$ 0.265	0.072	0.74	2.50	0.133
Property Damage Only (PDO)	-9.08	0.45	0.33	0.53	0.193	$\frac{(5)_{TOTAL}-(5)_{FI}}{0.735}$	0.199	0.74	2.50	0.369

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bisv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bisv (PDO)} (crashes/year)	(6) 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	0.133	1.000	0.369	0.501
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
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	0.087	0.895	0.330	0.417

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Collision with other object	0.091	0.012	0.069	0.025	0.038
Other single-vehicle collision	0.045	0.006	0.018	0.007	0.013
Single-vehicle noncollision	0.209	0.028	0.014	0.005	0.033

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	--	--	--	--	2.50	--
Fatal and injury (FI)	--	--	--	--	2.50	--

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)
4.15	1.00	1.12	4.65

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	0.074	4.65	2.50	0.860			
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.50	0.860			

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	8.748	0.501	9.249	0.011	2.50	0.254
Fatal and injury (FI)	--	--	--	--	2.50	0.254

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;	(5) from Worksheet 2D and 2F	(6) from Worksheet 2D and 2F;

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	(7) from 2G or 2I and 2J		(7) from 2G or 2I and 2J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 2D)	1.619	3.166	4.785
Head-on collisions (from Worksheet 2D)	0.112	0.116	0.228
Angle collisions (from Worksheet 2D)	0.826	1.183	2.009
Sideswipe (from Worksheet 2D)	0.224	0.186	0.410
Other multiple-vehicle collision (from Worksheet 2D)	0.168	1.148	1.316
Subtotal	2.949	5.798	8.748
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)	0.087	0.330	0.417
Collision with other object (from Worksheet 2F)	0.012	0.025	0.038
Other single-vehicle collision (from Worksheet 2F)	0.006	0.007	0.013
Single-vehicle noncollision (from Worksheet 2F)	0.028	0.005	0.033
Collision with pedestrian (from Worksheet 2G or 2I)	0.860	0.000	0.860
Collision with bicycle (from Worksheet 2J)	0.254	0.000	0.254
Subtotal	1.247	0.369	1.615
Total	4.196	6.167	10.363

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	10.363
Fatal and injury (FI)	4.196
Property damage only (PDO)	6.167

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections			
General Information		Location Information	
Analyst	SL	Roadway	Meridian Ave
Agency or Company	H.W. Lochner	Intersection	Whiting St (East)
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2028
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	3SG
AADT _{major} (veh/day)	AADT _{MAX} = 58,100 (veh/day)	--	31,950
AADT _{minor} (veh/day)	AADT _{MAX} = 16,400 (veh/day)	--	4,570
Intersection lighting (present/not present)		Not Present	
Calibration factor, C _i		1.00	2.50
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	1
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	0
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	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)		--	
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			3,200
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	3
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
<i>CMF 1i</i>	<i>CMF 2i</i>	<i>CMF 3i</i>	<i>CMF 4i</i>	<i>CMF 5i</i>	<i>CMF 6i</i>	<i>CMF_{COMB}</i>
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)
0.93	0.87	1.00	1.00	0.91	1.00	0.74

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									
	a	b	c							

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Total	-12.13	1.11	0.26	0.33	4.826	1.000	4.826	0.74	2.50	8.938
Fatal and Injury (FI)	-11.58	1.02	0.17	0.30	1.540	$\frac{(4)_{FI}}{(4)_{FI}+(4)_{PDO}}$ 0.336	1.622	0.74	2.50	3.005
Property Damage Only (PDO)	-13.24	1.14	0.30	0.36	3.041	$\frac{(5)_{TOTAL}-(5)_{FI}}{0.664}$	3.203	0.74	2.50	5.933

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)			(3) Predicted N _{bimv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)		(5) Predicted N _{bimv (PDO)} (crashes/year)	(6) 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			3.005	1.000		5.933	8.938		
				$(2)*(3)_{FI}$			$(4)*(5)_{PDO}$	$(3)+(5)$		
Rear-end collision	0.549			1.650	0.546		3.239	4.889		
Head-on collision	0.038			0.114	0.020		0.119	0.233		
Angle collision	0.280			0.841	0.204		1.210	2.052		
Sideswipe	0.076			0.228	0.032		0.190	0.418		
Other multiple-vehicle collision	0.057			0.171	0.198		1.175	1.346		

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1) Crash Severity Level	(2) SPF Coefficients			(3) Overdispersion Parameter, k	(4) Initial N _{bisv}	(5) Proportion of Total Crashes	(6) Adjusted N _{bimv}	(7) Combined CMFs	(8) Calibration Factor, C _i	(9) 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	0.274	1.000	0.274	0.74	2.50	0.508
Fatal and Injury (FI)	-9.75	0.27	0.51	0.24	0.071	$\frac{(4)_{FI}}{(4)_{FI}+(4)_{PDO}}$ 0.265	0.073	0.74	2.50	0.135
Property Damage Only (PDO)	-9.08	0.45	0.33	0.53	0.196	$\frac{(5)_{TOTAL}-(5)_{FI}}{0.735}$	0.202	0.74	2.50	0.374

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)			(3) Predicted N _{bisv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)		(5) Predicted N _{bisv (PDO)} (crashes/year)	(6) 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			0.135	1.000		0.374	0.508		
				$(2)*(3)_{FI}$			$(4)*(5)_{PDO}$	$(3)+(5)$		
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			0.088	0.895		0.334	0.422		

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Collision with other object	0.091	0.012	0.069	0.026	0.038
Other single-vehicle collision	0.045	0.006	0.018	0.007	0.013
Single-vehicle noncollision	0.209	0.028	0.014	0.005	0.033

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	--	--	--	--	2.50	--
Fatal and injury (FI)	--	--	--	--	2.50	--

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)
4.15	1.00	1.12	4.65

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	0.074	4.65	2.50	0.861			
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.50	0.861			

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	8.938	0.508	9.446	0.011	2.50	0.260
Fatal and injury (FI)	--	--	--	--	2.50	0.260

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;	(5) from Worksheet 2D and 2F	(6) from Worksheet 2D and 2F;

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	(7) from 2G or 2I and 2J		(7) from 2G or 2I and 2J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 2D)	1.650	3.239	4.889
Head-on collisions (from Worksheet 2D)	0.114	0.119	0.233
Angle collisions (from Worksheet 2D)	0.841	1.210	2.052
Sideswipe (from Worksheet 2D)	0.228	0.190	0.418
Other multiple-vehicle collision (from Worksheet 2D)	0.171	1.175	1.346
Subtotal	3.005	5.933	8.938
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)	0.088	0.334	0.422
Collision with other object (from Worksheet 2F)	0.012	0.026	0.038
Other single-vehicle collision (from Worksheet 2F)	0.006	0.007	0.013
Single-vehicle noncollision (from Worksheet 2F)	0.028	0.005	0.033
Collision with pedestrian (from Worksheet 2G or 2I)	0.861	0.000	0.861
Collision with bicycle (from Worksheet 2J)	0.260	0.000	0.260
Subtotal	1.256	0.374	1.629
Total	4.261	6.306	10.567

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	10.567
Fatal and injury (FI)	4.261
Property damage only (PDO)	6.306

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections			
General Information		Location Information	
Analyst	SL	Roadway	Meridian Ave
Agency or Company	H.W. Lochner	Intersection	Whiting St (East)
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2029
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	3SG
AADT _{major} (veh/day)	AADT _{MAX} = 58,100 (veh/day)	--	32,425
AADT _{minor} (veh/day)	AADT _{MAX} = 16,400 (veh/day)	--	4,655
Intersection lighting (present/not present)		Not Present	
Calibration factor, C _i		1.00	2.50
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	1
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	0
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	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)		--	
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			3,200
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	3
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)
0.93	0.87	1.00	1.00	0.91	1.00	0.74

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							

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Total	-12.13	1.11	0.26	0.33	4.929	1.000	4.929	0.74	2.50	9.129
Fatal and Injury (FI)	-11.58	1.02	0.17	0.30	1.569	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.335	1.653	0.74	2.50	3.061
Property Damage Only (PDO)	-13.24	1.14	0.30	0.36	3.110	$(5)_{TOTAL}-(5)_{FI}$ 0.665	3.276	0.74	2.50	6.068

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)		(3) Predicted N _{bimv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bimv (PDO)} (crashes/year)	(6) 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		3.061	1.000	6.068	9.129
			$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.549		1.680	0.546	3.313	4.994
Head-on collision	0.038		0.116	0.020	0.121	0.238
Angle collision	0.280		0.857	0.204	1.238	2.095
Sideswipe	0.076		0.233	0.032	0.194	0.427
Other multiple-vehicle collision	0.057		0.174	0.198	1.202	1.376

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1) Crash Severity Level	(2) SPF Coefficients			(3) Overdispersion Parameter, k	(4) Initial N _{bisv}	(5) Proportion of Total Crashes	(6) Adjusted N _{bimv}	(7) Combined CMFs	(8) Calibration Factor, C _i	(9) 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	0.278	1.000	0.278	0.74	2.50	0.515
Fatal and Injury (FI)	-9.75	0.27	0.51	0.24	0.071	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.265	0.074	0.74	2.50	0.137
Property Damage Only (PDO)	-9.08	0.45	0.33	0.53	0.198	$(5)_{TOTAL}-(5)_{FI}$ 0.735	0.204	0.74	2.50	0.379

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bisv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bisv (PDO)} (crashes/year)	(6) 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	0.137	1.000	0.379	0.515
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
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	0.089	0.895	0.339	0.428

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Collision with other object	0.091	0.012	0.069	0.026	0.039
Other single-vehicle collision	0.045	0.006	0.018	0.007	0.013
Single-vehicle noncollision	0.209	0.029	0.014	0.005	0.034

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	--	--	--	--	2.50	--
Fatal and injury (FI)	--	--	--	--	2.50	--

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)
4.15	1.00	1.12	4.65

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	0.074	4.65	2.50	0.862			
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.50	0.862			

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	9.129	0.515	9.645	0.011	2.50	0.265
Fatal and injury (FI)	--	--	--	--	2.50	0.265

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;	(5) from Worksheet 2D and 2F	(6) from Worksheet 2D and 2F;

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	(7) from 2G or 2I and 2J		(7) from 2G or 2I and 2J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 2D)	1.680	3.313	4.994
Head-on collisions (from Worksheet 2D)	0.116	0.121	0.238
Angle collisions (from Worksheet 2D)	0.857	1.238	2.095
Sideswipe (from Worksheet 2D)	0.233	0.194	0.427
Other multiple-vehicle collision (from Worksheet 2D)	0.174	1.202	1.376
Subtotal	3.061	6.068	9.129
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)	0.089	0.339	0.428
Collision with other object (from Worksheet 2F)	0.012	0.026	0.039
Other single-vehicle collision (from Worksheet 2F)	0.006	0.007	0.013
Single-vehicle noncollision (from Worksheet 2F)	0.029	0.005	0.034
Collision with pedestrian (from Worksheet 2G or 2I)	0.862	0.000	0.862
Collision with bicycle (from Worksheet 2J)	0.265	0.000	0.265
Subtotal	1.264	0.379	1.643
Total	4.325	6.447	10.772

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	10.772
Fatal and injury (FI)	4.325
Property damage only (PDO)	6.447

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections			
General Information		Location Information	
Analyst	SL	Roadway	Meridian Ave
Agency or Company	H.W. Lochner	Intersection	Whiting St (East)
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2030
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	3SG
AADT _{major} (veh/day)	AADT _{MAX} = 58,100 (veh/day)	--	32,900
AADT _{minor} (veh/day)	AADT _{MAX} = 16,400 (veh/day)	--	4,740
Intersection lighting (present/not present)		Not Present	
Calibration factor, C _i		1.00	2.50
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	1
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	0
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	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)		--	
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			3,200
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	3
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
<i>CMF 1i</i>	<i>CMF 2i</i>	<i>CMF 3i</i>	<i>CMF 4i</i>	<i>CMF 5i</i>	<i>CMF 6i</i>	<i>CMF_{COMB}</i>
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)
0.93	0.87	1.00	1.00	0.91	1.00	0.74

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									
	a	b	c							

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Total	-12.13	1.11	0.26	0.33	5.033	1.000	5.033	0.74	2.50	9.322
Fatal and Injury (FI)	-11.58	1.02	0.17	0.30	1.597	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.334	1.683	0.74	2.50	3.117
Property Damage Only (PDO)	-13.24	1.14	0.30	0.36	3.179	$(5)_{TOTAL}-(5)_{FI}$ 0.666	3.350	0.74	2.50	6.205

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)			(3) Predicted N _{bimv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)		(5) Predicted N _{bimv (PDO)} (crashes/year)	(6) 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			3.117	1.000		6.205	9.322		
				$(2)*(3)_{FI}$			$(4)*(5)_{PDO}$	$(3)+(5)$		
Rear-end collision	0.549			1.711	0.546		3.388	5.099		
Head-on collision	0.038			0.118	0.020		0.124	0.243		
Angle collision	0.280			0.873	0.204		1.266	2.138		
Sideswipe	0.076			0.237	0.032		0.199	0.435		
Other multiple-vehicle collision	0.057			0.178	0.198		1.229	1.406		

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1) Crash Severity Level	(2) SPF Coefficients			(3) Overdispersion Parameter, k	(4) Initial N _{bisv}	(5) Proportion of Total Crashes	(6) Adjusted N _{bimv}	(7) Combined CMFs	(8) Calibration Factor, C _i	(9) 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	0.282	1.000	0.282	0.74	2.50	0.522
Fatal and Injury (FI)	-9.75	0.27	0.51	0.24	0.072	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.265	0.075	0.74	2.50	0.139
Property Damage Only (PDO)	-9.08	0.45	0.33	0.53	0.201	$(5)_{TOTAL}-(5)_{FI}$ 0.735	0.207	0.74	2.50	0.384

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)			(3) Predicted N _{bisv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)		(5) Predicted N _{bisv (PDO)} (crashes/year)	(6) 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			0.139	1.000		0.384	0.522		
				$(2)*(3)_{FI}$			$(4)*(5)_{PDO}$	$(3)+(5)$		
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			0.090	0.895		0.343	0.434		

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Collision with other object	0.091	0.013	0.069	0.026	0.039
Other single-vehicle collision	0.045	0.006	0.018	0.007	0.013
Single-vehicle noncollision	0.209	0.029	0.014	0.005	0.034

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	--	--	--	--	2.50	--
Fatal and injury (FI)	--	--	--	--	2.50	--

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)
4.15	1.00	1.12	4.65

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	0.074	4.65	2.50	0.864			
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.50	0.864			

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	9.322	0.522	9.844	0.011	2.50	0.271
Fatal and injury (FI)	--	--	--	--	2.50	0.271

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;	(5) from Worksheet 2D and 2F	(6) from Worksheet 2D and 2F;

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	(7) from 2G or 2I and 2J	(7) from 2G or 2I and 2J
MULTIPLE-VEHICLE		
Rear-end collisions (from Worksheet 2D)	1.711	5.099
Head-on collisions (from Worksheet 2D)	0.118	0.243
Angle collisions (from Worksheet 2D)	0.873	2.138
Sideswipe (from Worksheet 2D)	0.237	0.435
Other multiple-vehicle collision (from Worksheet 2D)	0.178	1.406
Subtotal	3.117	9.322
SINGLE-VEHICLE		
Collision with parked vehicle (from Worksheet 2F)	0.000	0.001
Collision with animal (from Worksheet 2F)	0.000	0.001
Collision with fixed object (from Worksheet 2F)	0.090	0.434
Collision with other object (from Worksheet 2F)	0.013	0.039
Other single-vehicle collision (from Worksheet 2F)	0.006	0.013
Single-vehicle noncollision (from Worksheet 2F)	0.029	0.034
Collision with pedestrian (from Worksheet 2G or 2I)	0.864	0.864
Collision with bicycle (from Worksheet 2J)	0.271	0.271
Subtotal	1.273	1.657
Total	4.390	10.978

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	10.978
Fatal and injury (FI)	4.390
Property damage only (PDO)	6.588

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections			
General Information		Location Information	
Analyst	SL	Roadway	Meridian Ave
Agency or Company	H.W. Lochner	Intersection	Whiting St (East)
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2031
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	3SG
AADT _{major} (veh/day)	AADT _{MAX} = 58,100 (veh/day)	--	33,375
AADT _{minor} (veh/day)	AADT _{MAX} = 16,400 (veh/day)	--	4,825
Intersection lighting (present/not present)		Not Present	
Calibration factor, C _i		1.00	2.50
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	1
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	0
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	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)		--	
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			3,200
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	3
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
<i>CMF 1i</i>	<i>CMF 2i</i>	<i>CMF 3i</i>	<i>CMF 4i</i>	<i>CMF 5i</i>	<i>CMF 6i</i>	<i>CMF_{COMB}</i>
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)
0.93	0.87	1.00	1.00	0.91	1.00	0.74

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							

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Total	-12.13	1.11	0.26	0.33	5.137	1.000	5.137	0.74	2.50	9.515
Fatal and Injury (FI)	-11.58	1.02	0.17	0.30	1.625	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.333	1.713	0.74	2.50	3.173
Property Damage Only (PDO)	-13.24	1.14	0.30	0.36	3.249	$(5)_{TOTAL}-(5)_{FI}$ 0.667	3.424	0.74	2.50	6.342

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)		(3) Predicted N _{bimv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bimv (PDO)} (crashes/year)	(6) 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		3.173	1.000	6.342	9.515
			$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.549		1.742	0.546	3.463	5.205
Head-on collision	0.038		0.121	0.020	0.127	0.247
Angle collision	0.280		0.888	0.204	1.294	2.182
Sideswipe	0.076		0.241	0.032	0.203	0.444
Other multiple-vehicle collision	0.057		0.181	0.198	1.256	1.437

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1) Crash Severity Level	(2) SPF Coefficients			(3) Overdispersion Parameter, k	(4) Initial N _{bisv}	(5) Proportion of Total Crashes	(6) Adjusted N _{bimv}	(7) Combined CMFs	(8) Calibration Factor, C _i	(9) 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	0.286	1.000	0.286	0.74	2.50	0.529
Fatal and Injury (FI)	-9.75	0.27	0.51	0.24	0.073	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.265	0.076	0.74	2.50	0.140
Property Damage Only (PDO)	-9.08	0.45	0.33	0.53	0.203	$(5)_{TOTAL}-(5)_{FI}$ 0.735	0.210	0.74	2.50	0.389

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bisv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bisv (PDO)} (crashes/year)	(6) 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	0.140	1.000	0.389	0.529
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
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	0.092	0.895	0.348	0.440

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Collision with other object	0.091	0.013	0.069	0.027	0.040
Other single-vehicle collision	0.045	0.006	0.018	0.007	0.013
Single-vehicle noncollision	0.209	0.029	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	--	--	--	--	2.50	--
Fatal and injury (FI)	--	--	--	--	2.50	--

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)
4.15	1.00	1.12	4.65

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	0.074	4.65	2.50	0.865			
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.50	0.865			

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	9.515	0.529	10.044	0.011	2.50	0.276
Fatal and injury (FI)	--	--	--	--	2.50	0.276

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;	(5) from Worksheet 2D and 2F	(6) from Worksheet 2D and 2F;

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	(7) from 2G or 2I and 2J		(7) from 2G or 2I and 2J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 2D)	1.742	3.463	5.205
Head-on collisions (from Worksheet 2D)	0.121	0.127	0.247
Angle collisions (from Worksheet 2D)	0.888	1.294	2.182
Sideswipe (from Worksheet 2D)	0.241	0.203	0.444
Other multiple-vehicle collision (from Worksheet 2D)	0.181	1.256	1.437
Subtotal	3.173	6.342	9.515
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)	0.092	0.348	0.440
Collision with other object (from Worksheet 2F)	0.013	0.027	0.040
Other single-vehicle collision (from Worksheet 2F)	0.006	0.007	0.013
Single-vehicle noncollision (from Worksheet 2F)	0.029	0.005	0.035
Collision with pedestrian (from Worksheet 2G or 2I)	0.865	0.000	0.865
Collision with bicycle (from Worksheet 2J)	0.276	0.000	0.276
Subtotal	1.282	0.389	1.671
Total	4.455	6.731	11.185

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	11.185
Fatal and injury (FI)	4.455
Property damage only (PDO)	6.731

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections			
General Information		Location Information	
Analyst	SL	Roadway	Meridian Ave
Agency or Company	H.W. Lochner	Intersection	Whiting St (East)
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2032
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	3SG
AADT _{major} (veh/day)	AADT _{MAX} = 58,100 (veh/day)	--	33,850
AADT _{minor} (veh/day)	AADT _{MAX} = 16,400 (veh/day)	--	4,910
Intersection lighting (present/not present)		Not Present	
Calibration factor, C _i		1.00	2.50
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	1
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	0
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	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)		--	
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			3,200
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	3
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
<i>CMF 1i</i>	<i>CMF 2i</i>	<i>CMF 3i</i>	<i>CMF 4i</i>	<i>CMF 5i</i>	<i>CMF 6i</i>	<i>CMF_{COMB}</i>
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)
0.93	0.87	1.00	1.00	0.91	1.00	0.74

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									
	a	b	c							

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Total	-12.13	1.11	0.26	0.33	5.242	1.000	5.242	0.74	2.50	9.709
Fatal and Injury (FI)	-11.58	1.02	0.17	0.30	1.654	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.333	1.744	0.74	2.50	3.229
Property Damage Only (PDO)	-13.24	1.14	0.30	0.36	3.319	$(5)_{TOTAL}-(5)_{FI}$ 0.667	3.499	0.74	2.50	6.480

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)			(3) Predicted N _{bimv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)		(5) Predicted N _{bimv (PDO)} (crashes/year)	(6) 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			3.229	1.000		6.480	9.709		
				$(2)*(3)_{FI}$			$(4)*(5)_{PDO}$	$(3)+(5)$		
Rear-end collision	0.549			1.773	0.546		3.538	5.311		
Head-on collision	0.038			0.123	0.020		0.130	0.252		
Angle collision	0.280			0.904	0.204		1.322	2.226		
Sideswipe	0.076			0.245	0.032		0.207	0.453		
Other multiple-vehicle collision	0.057			0.184	0.198		1.283	1.467		

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1) Crash Severity Level	(2) SPF Coefficients			(3) Overdispersion Parameter, k	(4) Initial N _{bisv}	(5) Proportion of Total Crashes	(6) Adjusted N _{bimv}	(7) Combined CMFs	(8) Calibration Factor, C _i	(9) 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	0.289	1.000	0.289	0.74	2.50	0.536
Fatal and Injury (FI)	-9.75	0.27	0.51	0.24	0.074	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.266	0.077	0.74	2.50	0.142
Property Damage Only (PDO)	-9.08	0.45	0.33	0.53	0.206	$(5)_{TOTAL}-(5)_{FI}$ 0.734	0.213	0.74	2.50	0.394

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)			(3) Predicted N _{bisv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)		(5) Predicted N _{bisv (PDO)} (crashes/year)	(6) 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			0.142	1.000		0.394	0.536		
				$(2)*(3)_{FI}$			$(4)*(5)_{PDO}$	$(3)+(5)$		
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			0.093	0.895		0.352	0.445		

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Collision with other object	0.091	0.013	0.069	0.027	0.040
Other single-vehicle collision	0.045	0.006	0.018	0.007	0.013
Single-vehicle noncollision	0.209	0.030	0.014	0.006	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	--	--	--	--	2.50	--
Fatal and injury (FI)	--	--	--	--	2.50	--

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)
4.15	1.00	1.12	4.65

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	0.075	4.65	2.50	0.866			
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.50	0.866			

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	9.709	0.536	10.245	0.011	2.50	0.282
Fatal and injury (FI)	--	--	--	--	2.50	0.282

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;	(5) from Worksheet 2D and 2F	(6) from Worksheet 2D and 2F;

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	(7) from 2G or 2I and 2J		(7) from 2G or 2I and 2J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 2D)	1.773	3.538	5.311
Head-on collisions (from Worksheet 2D)	0.123	0.130	0.252
Angle collisions (from Worksheet 2D)	0.904	1.322	2.226
Sideswipe (from Worksheet 2D)	0.245	0.207	0.453
Other multiple-vehicle collision (from Worksheet 2D)	0.184	1.283	1.467
Subtotal	3.229	6.480	9.709
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)	0.093	0.352	0.445
Collision with other object (from Worksheet 2F)	0.013	0.027	0.040
Other single-vehicle collision (from Worksheet 2F)	0.006	0.007	0.013
Single-vehicle noncollision (from Worksheet 2F)	0.030	0.006	0.035
Collision with pedestrian (from Worksheet 2G or 2I)	0.866	0.000	0.866
Collision with bicycle (from Worksheet 2J)	0.282	0.000	0.282
Subtotal	1.291	0.394	1.684
Total	4.520	6.874	11.394

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	11.394
Fatal and injury (FI)	4.520
Property damage only (PDO)	6.874

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections			
General Information		Location Information	
Analyst	SL	Roadway	Meridian Ave
Agency or Company	H.W. Lochner	Intersection	Whiting St (East)
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2033
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	3SG
AADT _{major} (veh/day)	AADT _{MAX} = 58,100 (veh/day)	--	34,325
AADT _{minor} (veh/day)	AADT _{MAX} = 16,400 (veh/day)	--	4,995
Intersection lighting (present/not present)		Not Present	
Calibration factor, C _i		1.00	2.50
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	1
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	0
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	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)		--	
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			3,200
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	3
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
<i>CMF 1i</i>	<i>CMF 2i</i>	<i>CMF 3i</i>	<i>CMF 4i</i>	<i>CMF 5i</i>	<i>CMF 6i</i>	<i>CMF_{COMB}</i>
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)
0.93	0.87	1.00	1.00	0.91	1.00	0.74

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									
	a	b	c							

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Total	-12.13	1.11	0.26	0.33	5.348	1.000	5.348	0.74	2.50	9.905
Fatal and Injury (FI)	-11.58	1.02	0.17	0.30	1.682	$\frac{(4)_{FI}}{(4)_{FI}+(4)_{PDO}}$ 0.332	1.774	0.74	2.50	3.286
Property Damage Only (PDO)	-13.24	1.14	0.30	0.36	3.389	$\frac{(5)_{TOTAL}-(5)_{FI}}{0.668}$	3.574	0.74	2.50	6.619

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)		(3) Predicted N _{bimv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bimv (PDO)} (crashes/year)	(6) 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		3.286	1.000	6.619	9.905
			$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.549		1.804	0.546	3.614	5.418
Head-on collision	0.038		0.125	0.020	0.132	0.257
Angle collision	0.280		0.920	0.204	1.350	2.270
Sideswipe	0.076		0.250	0.032	0.212	0.462
Other multiple-vehicle collision	0.057		0.187	0.198	1.311	1.498

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1) Crash Severity Level	(2) SPF Coefficients			(3) Overdispersion Parameter, k	(4) Initial N _{bisv}	(5) Proportion of Total Crashes	(6) Adjusted N _{bimv}	(7) Combined CMFs	(8) Calibration Factor, C _i	(9) 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	0.293	1.000	0.293	0.74	2.50	0.543
Fatal and Injury (FI)	-9.75	0.27	0.51	0.24	0.075	$\frac{(4)_{FI}}{(4)_{FI}+(4)_{PDO}}$ 0.266	0.078	0.74	2.50	0.144
Property Damage Only (PDO)	-9.08	0.45	0.33	0.53	0.208	$\frac{(5)_{TOTAL}-(5)_{FI}}{0.734}$	0.215	0.74	2.50	0.399

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bisv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bisv (PDO)} (crashes/year)	(6) 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	0.144	1.000	0.399	0.543
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
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	0.094	0.895	0.357	0.451

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Collision with other object	0.091	0.013	0.069	0.028	0.041
Other single-vehicle collision	0.045	0.006	0.018	0.007	0.014
Single-vehicle noncollision	0.209	0.030	0.014	0.006	0.036

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	--	--	--	--	2.50	--
Fatal and injury (FI)	--	--	--	--	2.50	--

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)
4.15	1.00	1.12	4.65

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	0.075	4.65	2.50	0.868			
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.50	0.868			

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	9.905	0.543	10.448	0.011	2.50	0.287
Fatal and injury (FI)	--	--	--	--	2.50	0.287

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;	(5) from Worksheet 2D and 2F	(6) from Worksheet 2D and 2F;

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	(7) from 2G or 2I and 2J		(7) from 2G or 2I and 2J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 2D)	1.804	3.614	5.418
Head-on collisions (from Worksheet 2D)	0.125	0.132	0.257
Angle collisions (from Worksheet 2D)	0.920	1.350	2.270
Sideswipe (from Worksheet 2D)	0.250	0.212	0.462
Other multiple-vehicle collision (from Worksheet 2D)	0.187	1.311	1.498
Subtotal	3.286	6.619	9.905
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)	0.094	0.357	0.451
Collision with other object (from Worksheet 2F)	0.013	0.028	0.041
Other single-vehicle collision (from Worksheet 2F)	0.006	0.007	0.014
Single-vehicle noncollision (from Worksheet 2F)	0.030	0.006	0.036
Collision with pedestrian (from Worksheet 2G or 2I)	0.868	0.000	0.868
Collision with bicycle (from Worksheet 2J)	0.287	0.000	0.287
Subtotal	1.299	0.399	1.698
Total	4.585	7.018	11.603

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	11.603
Fatal and injury (FI)	4.585
Property damage only (PDO)	7.018

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections			
General Information		Location Information	
Analyst	SL	Roadway	Meridian Ave
Agency or Company	H.W. Lochner	Intersection	Whiting St (East)
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2034
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	3SG
AADT _{major} (veh/day)	AADT _{MAX} = 58,100 (veh/day)	--	34,800
AADT _{minor} (veh/day)	AADT _{MAX} = 16,400 (veh/day)	--	5,080
Intersection lighting (present/not present)		Not Present	
Calibration factor, C _i		1.00	2.50
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	1
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	0
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	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)		--	
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			3,200
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	3
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
<i>CMF 1i</i>	<i>CMF 2i</i>	<i>CMF 3i</i>	<i>CMF 4i</i>	<i>CMF 5i</i>	<i>CMF 6i</i>	<i>CMF_{COMB}</i>
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)
0.93	0.87	1.00	1.00	0.91	1.00	0.74

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							

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Total	-12.13	1.11	0.26	0.33	5.454	1.000	5.454	0.74	2.50	10.101
Fatal and Injury (FI)	-11.58	1.02	0.17	0.30	1.711	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.331	1.805	0.74	2.50	3.342
Property Damage Only (PDO)	-13.24	1.14	0.30	0.36	3.460	$(5)_{TOTAL}-(5)_{FI}$ 0.669	3.649	0.74	2.50	6.759

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)			(3) Predicted N _{bimv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)		(5) Predicted N _{bimv (PDO)} (crashes/year)	(6) 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			3.342	1.000		6.759	10.101		
				$(2)*(3)_{FI}$			$(4)*(5)_{PDO}$	$(3)+(5)$		
Rear-end collision	0.549			1.835	0.546		3.690	5.525		
Head-on collision	0.038			0.127	0.020		0.135	0.262		
Angle collision	0.280			0.936	0.204		1.379	2.315		
Sideswipe	0.076			0.254	0.032		0.216	0.470		
Other multiple-vehicle collision	0.057			0.191	0.198		1.338	1.529		

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1) Crash Severity Level	(2) SPF Coefficients			(3) Overdispersion Parameter, k	(4) Initial N _{bisv}	(5) Proportion of Total Crashes	(6) Adjusted N _{bimv}	(7) Combined CMFs	(8) Calibration Factor, C _i	(9) 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	0.297	1.000	0.297	0.74	2.50	0.550
Fatal and Injury (FI)	-9.75	0.27	0.51	0.24	0.076	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.266	0.079	0.74	2.50	0.146
Property Damage Only (PDO)	-9.08	0.45	0.33	0.53	0.210	$(5)_{TOTAL}-(5)_{FI}$ 0.734	0.218	0.74	2.50	0.404

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)			(3) Predicted N _{bisv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)		(5) Predicted N _{bisv (PDO)} (crashes/year)	(6) 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			0.146	1.000		0.404	0.550		
				$(2)*(3)_{FI}$			$(4)*(5)_{PDO}$	$(3)+(5)$		
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			0.095	0.895		0.361	0.457		

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Collision with other object	0.091	0.013	0.069	0.028	0.041
Other single-vehicle collision	0.045	0.007	0.018	0.007	0.014
Single-vehicle noncollision	0.209	0.031	0.014	0.006	0.036

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	--	--	--	--	2.50	--
Fatal and injury (FI)	--	--	--	--	2.50	--

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)
4.15	1.00	1.12	4.65

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	0.075	4.65	2.50	0.869			
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.50	0.869			

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	10.101	0.550	10.651	0.011	2.50	0.293
Fatal and injury (FI)	--	--	--	--	2.50	0.293

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;	(5) from Worksheet 2D and 2F	(6) from Worksheet 2D and 2F;

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	(7) from 2G or 2I and 2J		(7) from 2G or 2I and 2J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 2D)	1.835	3.690	5.525
Head-on collisions (from Worksheet 2D)	0.127	0.135	0.262
Angle collisions (from Worksheet 2D)	0.936	1.379	2.315
Sideswipe (from Worksheet 2D)	0.254	0.216	0.470
Other multiple-vehicle collision (from Worksheet 2D)	0.191	1.338	1.529
Subtotal	3.342	6.759	10.101
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)	0.095	0.361	0.457
Collision with other object (from Worksheet 2F)	0.013	0.028	0.041
Other single-vehicle collision (from Worksheet 2F)	0.007	0.007	0.014
Single-vehicle noncollision (from Worksheet 2F)	0.031	0.006	0.036
Collision with pedestrian (from Worksheet 2G or 2I)	0.869	0.000	0.869
Collision with bicycle (from Worksheet 2J)	0.293	0.000	0.293
Subtotal	1.308	0.404	1.712
Total	4.650	7.163	11.813

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	11.813
Fatal and injury (FI)	4.650
Property damage only (PDO)	7.163

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections			
General Information		Location Information	
Analyst	SL	Roadway	Meridian Ave
Agency or Company	H.W. Lochner	Intersection	Whiting St (East)
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2035
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	3SG
AADT _{major} (veh/day)	AADT _{MAX} = 58,100 (veh/day)	--	35,275
AADT _{minor} (veh/day)	AADT _{MAX} = 16,400 (veh/day)	--	5,165
Intersection lighting (present/not present)		Not Present	
Calibration factor, C _i		1.00	2.50
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	1
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	0
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	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)		--	
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			3,200
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	3
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
<i>CMF 1i</i>	<i>CMF 2i</i>	<i>CMF 3i</i>	<i>CMF 4i</i>	<i>CMF 5i</i>	<i>CMF 6i</i>	<i>CMF_{COMB}</i>
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)
0.93	0.87	1.00	1.00	0.91	1.00	0.74

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									
	a	b	c							

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Total	-12.13	1.11	0.26	0.33	5.560	1.000	5.560	0.74	2.50	10.299
Fatal and Injury (FI)	-11.58	1.02	0.17	0.30	1.740	$\frac{(4)_{FI}}{(4)_{FI}+(4)_{PDO}}$ 0.330	1.835	0.74	2.50	3.399
Property Damage Only (PDO)	-13.24	1.14	0.30	0.36	3.532	$\frac{(5)_{TOTAL}-(5)_{FI}}{0.670}$	3.725	0.74	2.50	6.900

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)		(3) Predicted N _{bimv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bimv (PDO)} (crashes/year)	(6) 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		3.399	1.000	6.900	10.299
			$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.549		1.866	0.546	3.767	5.633
Head-on collision	0.038		0.129	0.020	0.138	0.267
Angle collision	0.280		0.952	0.204	1.408	2.359
Sideswipe	0.076		0.258	0.032	0.221	0.479
Other multiple-vehicle collision	0.057		0.194	0.198	1.366	1.560

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1) Crash Severity Level	(2) SPF Coefficients			(3) Overdispersion Parameter, k	(4) Initial N _{bisv}	(5) Proportion of Total Crashes	(6) Adjusted N _{bimv}	(7) Combined CMFs	(8) Calibration Factor, C _i	(9) 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	0.300	1.000	0.300	0.74	2.50	0.557
Fatal and Injury (FI)	-9.75	0.27	0.51	0.24	0.077	$\frac{(4)_{FI}}{(4)_{FI}+(4)_{PDO}}$ 0.266	0.080	0.74	2.50	0.148
Property Damage Only (PDO)	-9.08	0.45	0.33	0.53	0.213	$\frac{(5)_{TOTAL}-(5)_{FI}}{0.734}$	0.221	0.74	2.50	0.409

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bisv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bisv (PDO)} (crashes/year)	(6) 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	0.148	1.000	0.409	0.557
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
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	0.097	0.895	0.366	0.462

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Collision with other object	0.091	0.013	0.069	0.028	0.042
Other single-vehicle collision	0.045	0.007	0.018	0.007	0.014
Single-vehicle noncollision	0.209	0.031	0.014	0.006	0.037

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	--	--	--	--	2.50	--
Fatal and injury (FI)	--	--	--	--	2.50	--

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)
4.15	1.00	1.12	4.65

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	0.075	4.65	2.50	0.870			
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.50	0.870			

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	10.299	0.557	10.855	0.011	2.50	0.299
Fatal and injury (FI)	--	--	--	--	2.50	0.299

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;	(5) from Worksheet 2D and 2F	(6) from Worksheet 2D and 2F;

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	(7) from 2G or 2I and 2J		(7) from 2G or 2I and 2J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 2D)	1.866	3.767	5.633
Head-on collisions (from Worksheet 2D)	0.129	0.138	0.267
Angle collisions (from Worksheet 2D)	0.952	1.408	2.359
Sideswipe (from Worksheet 2D)	0.258	0.221	0.479
Other multiple-vehicle collision (from Worksheet 2D)	0.194	1.366	1.560
Subtotal	3.399	6.900	10.299
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)	0.097	0.366	0.462
Collision with other object (from Worksheet 2F)	0.013	0.028	0.042
Other single-vehicle collision (from Worksheet 2F)	0.007	0.007	0.014
Single-vehicle noncollision (from Worksheet 2F)	0.031	0.006	0.037
Collision with pedestrian (from Worksheet 2G or 2I)	0.870	0.000	0.870
Collision with bicycle (from Worksheet 2J)	0.299	0.000	0.299
Subtotal	1.317	0.409	1.725
Total	4.716	7.308	12.024

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	12.024
Fatal and injury (FI)	4.716
Property damage only (PDO)	7.308

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections			
General Information		Location Information	
Analyst	SL	Roadway	Meridian Ave
Agency or Company	H.W. Lochner	Intersection	Whiting St (East)
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2036
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	3SG
AADT _{major} (veh/day)	AADT _{MAX} = 58,100 (veh/day)	--	35,750
AADT _{minor} (veh/day)	AADT _{MAX} = 16,400 (veh/day)	--	5,250
Intersection lighting (present/not present)		Not Present	
Calibration factor, C _i		1.00	2.50
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	1
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	0
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	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)		--	
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			3,200
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	3
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
<i>CMF 1i</i>	<i>CMF 2i</i>	<i>CMF 3i</i>	<i>CMF 4i</i>	<i>CMF 5i</i>	<i>CMF 6i</i>	<i>CMF_{COMB}</i>
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)
0.93	0.87	1.00	1.00	0.91	1.00	0.74

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									
	a	b	c							

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Total	-12.13	1.11	0.26	0.33	5.667	1.000	5.667	0.74	2.50	10.497
Fatal and Injury (FI)	-11.58	1.02	0.17	0.30	1.769	$\frac{(4)_{FI}}{(4)_{FI}+(4)_{PDO}}$ 0.329	1.866	0.74	2.50	3.456
Property Damage Only (PDO)	-13.24	1.14	0.30	0.36	3.603	$\frac{(5)_{TOTAL}-(5)_{FI}}{0.671}$	3.802	0.74	2.50	7.041

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)		(3) Predicted N _{bimv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bimv (PDO)} (crashes/year)	(6) 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		3.456	1.000	7.041	10.497
			$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.549		1.897	0.546	3.845	5.742
Head-on collision	0.038		0.131	0.020	0.141	0.272
Angle collision	0.280		0.968	0.204	1.436	2.404
Sideswipe	0.076		0.263	0.032	0.225	0.488
Other multiple-vehicle collision	0.057		0.197	0.198	1.394	1.591

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1) Crash Severity Level	(2) SPF Coefficients			(3) Overdispersion Parameter, k	(4) Initial N _{bisv}	(5) Proportion of Total Crashes	(6) Adjusted N _{bimv}	(7) Combined CMFs	(8) Calibration Factor, C _i	(9) 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	0.304	1.000	0.304	0.74	2.50	0.563
Fatal and Injury (FI)	-9.75	0.27	0.51	0.24	0.078	$\frac{(4)_{FI}}{(4)_{FI}+(4)_{PDO}}$ 0.266	0.081	0.74	2.50	0.150
Property Damage Only (PDO)	-9.08	0.45	0.33	0.53	0.215	$\frac{(5)_{TOTAL}-(5)_{FI}}{0.734}$	0.223	0.74	2.50	0.414

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bisv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bisv (PDO)} (crashes/year)	(6) 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	0.150	1.000	0.414	0.563
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
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	0.098	0.895	0.370	0.468

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Collision with other object	0.091	0.014	0.069	0.029	0.042
Other single-vehicle collision	0.045	0.007	0.018	0.007	0.014
Single-vehicle noncollision	0.209	0.031	0.014	0.006	0.037

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	--	--	--	--	2.50	--
Fatal and injury (FI)	--	--	--	--	2.50	--

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)
4.15	1.00	1.12	4.65

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	0.075	4.65	2.50	0.872			
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.50	0.872			

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	10.497	0.563	11.061	0.011	2.50	0.304
Fatal and injury (FI)	--	--	--	--	2.50	0.304

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;	(5) from Worksheet 2D and 2F	(6) from Worksheet 2D and 2F;

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	(7) from 2G or 2I and 2J		(7) from 2G or 2I and 2J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 2D)	1.897	3.845	5.742
Head-on collisions (from Worksheet 2D)	0.131	0.141	0.272
Angle collisions (from Worksheet 2D)	0.968	1.436	2.404
Sideswipe (from Worksheet 2D)	0.263	0.225	0.488
Other multiple-vehicle collision (from Worksheet 2D)	0.197	1.394	1.591
Subtotal	3.456	7.041	10.497
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)	0.098	0.370	0.468
Collision with other object (from Worksheet 2F)	0.014	0.029	0.042
Other single-vehicle collision (from Worksheet 2F)	0.007	0.007	0.014
Single-vehicle noncollision (from Worksheet 2F)	0.031	0.006	0.037
Collision with pedestrian (from Worksheet 2G or 2I)	0.872	0.000	0.872
Collision with bicycle (from Worksheet 2J)	0.304	0.000	0.304
Subtotal	1.325	0.414	1.739
Total	4.781	7.455	12.236

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	12.236
Fatal and injury (FI)	4.781
Property damage only (PDO)	7.455

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections			
General Information		Location Information	
Analyst	SL	Roadway	Meridian Ave
Agency or Company	H.W. Lochner	Intersection	Whiting St (East)
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2037
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	3SG
AADT _{major} (veh/day)	AADT _{MAX} = 58,100 (veh/day)	--	36,225
AADT _{minor} (veh/day)	AADT _{MAX} = 16,400 (veh/day)	--	5,335
Intersection lighting (present/not present)		Not Present	
Calibration factor, C _i		1.00	2.50
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	1
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	0
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	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)		--	
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			3,200
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	3
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)
0.93	0.87	1.00	1.00	0.91	1.00	0.74

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							

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Total	-12.13	1.11	0.26	0.33	5.775	1.000	5.775	0.74	2.50	10.697
Fatal and Injury (FI)	-11.58	1.02	0.17	0.30	1.798	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.328	1.897	0.74	2.50	3.513
Property Damage Only (PDO)	-13.24	1.14	0.30	0.36	3.676	$(5)_{TOTAL}-(5)_{FI}$ 0.672	3.878	0.74	2.50	7.184

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)			(3) Predicted N _{bimv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)		(5) Predicted N _{bimv (PDO)} (crashes/year)	(6) 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			3.513	1.000		7.184	10.697		
				$(2)*(3)_{FI}$			$(4)*(5)_{PDO}$	$(3)+(5)$		
Rear-end collision	0.549			1.929	0.546		3.922	5.851		
Head-on collision	0.038			0.133	0.020		0.144	0.277		
Angle collision	0.280			0.984	0.204		1.465	2.449		
Sideswipe	0.076			0.267	0.032		0.230	0.497		
Other multiple-vehicle collision	0.057			0.200	0.198		1.422	1.623		

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1) Crash Severity Level	(2) SPF Coefficients			(3) Overdispersion Parameter, k	(4) Initial N _{bisv}	(5) Proportion of Total Crashes	(6) Adjusted N _{bimv}	(7) Combined CMFs	(8) Calibration Factor, C _i	(9) 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	0.308	1.000	0.308	0.74	2.50	0.570
Fatal and Injury (FI)	-9.75	0.27	0.51	0.24	0.079	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.266	0.082	0.74	2.50	0.152
Property Damage Only (PDO)	-9.08	0.45	0.33	0.53	0.218	$(5)_{TOTAL}-(5)_{FI}$ 0.734	0.226	0.74	2.50	0.418

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)			(3) Predicted N _{bisv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)		(5) Predicted N _{bisv (PDO)} (crashes/year)	(6) 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			0.152	1.000		0.418	0.570		
				$(2)*(3)_{FI}$			$(4)*(5)_{PDO}$	$(3)+(5)$		
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			0.099	0.895		0.375	0.474		

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Collision with other object	0.091	0.014	0.069	0.029	0.043
Other single-vehicle collision	0.045	0.007	0.018	0.008	0.014
Single-vehicle noncollision	0.209	0.032	0.014	0.006	0.038

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	--	--	--	--	2.50	--
Fatal and injury (FI)	--	--	--	--	2.50	--

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)
4.15	1.00	1.12	4.65

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	0.075	4.65	2.50	0.873			
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.50	0.873			

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	10.697	0.570	11.267	0.011	2.50	0.310
Fatal and injury (FI)	--	--	--	--	2.50	0.310

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;	(5) from Worksheet 2D and 2F	(6) from Worksheet 2D and 2F;

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	(7) from 2G or 2I and 2J		(7) from 2G or 2I and 2J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 2D)	1.929	3.922	5.851
Head-on collisions (from Worksheet 2D)	0.133	0.144	0.277
Angle collisions (from Worksheet 2D)	0.984	1.465	2.449
Sideswipe (from Worksheet 2D)	0.267	0.230	0.497
Other multiple-vehicle collision (from Worksheet 2D)	0.200	1.422	1.623
Subtotal	3.513	7.184	10.697
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)	0.099	0.375	0.474
Collision with other object (from Worksheet 2F)	0.014	0.029	0.043
Other single-vehicle collision (from Worksheet 2F)	0.007	0.008	0.014
Single-vehicle noncollision (from Worksheet 2F)	0.032	0.006	0.038
Collision with pedestrian (from Worksheet 2G or 2I)	0.873	0.000	0.873
Collision with bicycle (from Worksheet 2J)	0.310	0.000	0.310
Subtotal	1.334	0.418	1.753
Total	4.847	7.602	12.449

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	12.449
Fatal and injury (FI)	4.847
Property damage only (PDO)	7.602

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections			
General Information		Location Information	
Analyst	SL	Roadway	Meridian Ave
Agency or Company	H.W. Lochner	Intersection	Whiting St (East)
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2038
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	3SG
AADT _{major} (veh/day)	AADT _{MAX} = 58,100 (veh/day)	--	36,700
AADT _{minor} (veh/day)	AADT _{MAX} = 16,400 (veh/day)	--	5,420
Intersection lighting (present/not present)		Not Present	
Calibration factor, C _i		1.00	2.50
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	1
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	0
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	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)		--	
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			3,200
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	3
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
<i>CMF 1i</i>	<i>CMF 2i</i>	<i>CMF 3i</i>	<i>CMF 4i</i>	<i>CMF 5i</i>	<i>CMF 6i</i>	<i>CMF_{COMB}</i>
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)
0.93	0.87	1.00	1.00	0.91	1.00	0.74

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									
	a	b	c							

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Total	-12.13	1.11	0.26	0.33	5.883	1.000	5.883	0.74	2.50	10.897
Fatal and Injury (FI)	-11.58	1.02	0.17	0.30	1.826	$\frac{(4)_{FI}}{(4)_{FI}+(4)_{PDO}}$ 0.328	1.927	0.74	2.50	3.570
Property Damage Only (PDO)	-13.24	1.14	0.30	0.36	3.749	$\frac{(5)_{TOTAL}-(5)_{FI}}{0.672}$	3.956	0.74	2.50	7.327

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)		(3) Predicted N _{bimv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bimv (PDO)} (crashes/year)	(6) 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		3.570	1.000	7.327	10.897
			$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.549		1.960	0.546	4.001	5.961
Head-on collision	0.038		0.136	0.020	0.147	0.282
Angle collision	0.280		1.000	0.204	1.495	2.494
Sideswipe	0.076		0.271	0.032	0.234	0.506
Other multiple-vehicle collision	0.057		0.203	0.198	1.451	1.654

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1) Crash Severity Level	(2) SPF Coefficients			(3) Overdispersion Parameter, k	(4) Initial N _{bisv}	(5) Proportion of Total Crashes	(6) Adjusted N _{bimv}	(7) Combined CMFs	(8) Calibration Factor, C _i	(9) 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	0.311	1.000	0.311	0.74	2.50	0.577
Fatal and Injury (FI)	-9.75	0.27	0.51	0.24	0.080	$\frac{(4)_{FI}}{(4)_{FI}+(4)_{PDO}}$ 0.266	0.083	0.74	2.50	0.154
Property Damage Only (PDO)	-9.08	0.45	0.33	0.53	0.220	$\frac{(5)_{TOTAL}-(5)_{FI}}{0.734}$	0.229	0.74	2.50	0.423

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bisv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bisv (PDO)} (crashes/year)	(6) 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	0.154	1.000	0.423	0.577
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
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	0.100	0.895	0.379	0.479

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Collision with other object	0.091	0.014	0.069	0.029	0.043
Other single-vehicle collision	0.045	0.007	0.018	0.008	0.015
Single-vehicle noncollision	0.209	0.032	0.014	0.006	0.038

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	--	--	--	--	2.50	--
Fatal and injury (FI)	--	--	--	--	2.50	--

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)
4.15	1.00	1.12	4.65

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	0.075	4.65	2.50	0.874			
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.50	0.874			

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	10.897	0.577	11.474	0.011	2.50	0.316
Fatal and injury (FI)	--	--	--	--	2.50	0.316

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;	(5) from Worksheet 2D and 2F	(6) from Worksheet 2D and 2F;

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	(7) from 2G or 2I and 2J		(7) from 2G or 2I and 2J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 2D)	1.960	4.001	5.961
Head-on collisions (from Worksheet 2D)	0.136	0.147	0.282
Angle collisions (from Worksheet 2D)	1.000	1.495	2.494
Sideswipe (from Worksheet 2D)	0.271	0.234	0.506
Other multiple-vehicle collision (from Worksheet 2D)	0.203	1.451	1.654
Subtotal	3.570	7.327	10.897
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)	0.100	0.379	0.479
Collision with other object (from Worksheet 2F)	0.014	0.029	0.043
Other single-vehicle collision (from Worksheet 2F)	0.007	0.008	0.015
Single-vehicle noncollision (from Worksheet 2F)	0.032	0.006	0.038
Collision with pedestrian (from Worksheet 2G or 2I)	0.874	0.000	0.874
Collision with bicycle (from Worksheet 2J)	0.316	0.000	0.316
Subtotal	1.343	0.423	1.766
Total	4.913	7.750	12.664

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	12.664
Fatal and injury (FI)	4.913
Property damage only (PDO)	7.750

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections			
General Information		Location Information	
Analyst	SL	Roadway	Meridian Ave
Agency or Company	H.W. Lochner	Intersection	Whiting St (East)
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2039
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	3SG
AADT _{major} (veh/day)	AADT _{MAX} = 58,100 (veh/day)	--	37,175
AADT _{minor} (veh/day)	AADT _{MAX} = 16,400 (veh/day)	--	5,505
Intersection lighting (present/not present)		Not Present	
Calibration factor, C _i		1.00	2.50
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	1
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	0
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	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)		--	
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			3,200
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	3
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
<i>CMF 1i</i>	<i>CMF 2i</i>	<i>CMF 3i</i>	<i>CMF 4i</i>	<i>CMF 5i</i>	<i>CMF 6i</i>	<i>CMF_{COMB}</i>
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)
0.93	0.87	1.00	1.00	0.91	1.00	0.74

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									
	a	b	c							

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Total	-12.13	1.11	0.26	0.33	5.992	1.000	5.992	0.74	2.50	11.099
Fatal and Injury (FI)	-11.58	1.02	0.17	0.30	1.855	$\frac{(4)_{FI}}{((4)_{FI}+(4)_{PDO}}$ 0.327	1.958	0.74	2.50	3.627
Property Damage Only (PDO)	-13.24	1.14	0.30	0.36	3.822	$\frac{(5)_{TOTAL}-(5)_{FI}}{0.673}$	4.034	0.74	2.50	7.471

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)		(3) Predicted N _{bimv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bimv (PDO)} (crashes/year)	(6) 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		3.627	1.000	7.471	11.099
			$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.549		1.991	0.546	4.079	6.071
Head-on collision	0.038		0.138	0.020	0.149	0.287
Angle collision	0.280		1.016	0.204	1.524	2.540
Sideswipe	0.076		0.276	0.032	0.239	0.515
Other multiple-vehicle collision	0.057		0.207	0.198	1.479	1.686

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1) Crash Severity Level	(2) SPF Coefficients			(3) Overdispersion Parameter, k	(4) Initial N _{bisv}	(5) Proportion of Total Crashes	(6) Adjusted N _{bimv}	(7) Combined CMFs	(8) Calibration Factor, C _i	(9) 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	0.315	1.000	0.315	0.74	2.50	0.584
Fatal and Injury (FI)	-9.75	0.27	0.51	0.24	0.081	$\frac{(4)_{FI}}{((4)_{FI}+(4)_{PDO}}$ 0.266	0.084	0.74	2.50	0.155
Property Damage Only (PDO)	-9.08	0.45	0.33	0.53	0.223	$\frac{(5)_{TOTAL}-(5)_{FI}}{0.734}$	0.231	0.74	2.50	0.428

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bisv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bisv (PDO)} (crashes/year)	(6) 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	0.155	1.000	0.428	0.584
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
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	0.101	0.895	0.383	0.485

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Collision with other object	0.091	0.014	0.069	0.030	0.044
Other single-vehicle collision	0.045	0.007	0.018	0.008	0.015
Single-vehicle noncollision	0.209	0.032	0.014	0.006	0.038

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	--	--	--	--	2.50	--
Fatal and injury (FI)	--	--	--	--	2.50	--

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)
4.15	1.00	1.12	4.65

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	0.075	4.65	2.50	0.875			
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.50	0.875			

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	11.099	0.584	11.682	0.011	2.50	0.321
Fatal and injury (FI)	--	--	--	--	2.50	0.321

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;	(5) from Worksheet 2D and 2F	(6) from Worksheet 2D and 2F;

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	(7) from 2G or 2I and 2J		(7) from 2G or 2I and 2J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 2D)	1.991	4.079	6.071
Head-on collisions (from Worksheet 2D)	0.138	0.149	0.287
Angle collisions (from Worksheet 2D)	1.016	1.524	2.540
Sideswipe (from Worksheet 2D)	0.276	0.239	0.515
Other multiple-vehicle collision (from Worksheet 2D)	0.207	1.479	1.686
Subtotal	3.627	7.471	11.099
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)	0.101	0.383	0.485
Collision with other object (from Worksheet 2F)	0.014	0.030	0.044
Other single-vehicle collision (from Worksheet 2F)	0.007	0.008	0.015
Single-vehicle noncollision (from Worksheet 2F)	0.032	0.006	0.038
Collision with pedestrian (from Worksheet 2G or 2I)	0.875	0.000	0.875
Collision with bicycle (from Worksheet 2J)	0.321	0.000	0.321
Subtotal	1.352	0.428	1.780
Total	4.979	7.900	12.879

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	12.879
Fatal and injury (FI)	4.979
Property damage only (PDO)	7.900

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections			
General Information		Location Information	
Analyst	SL	Roadway	Meridian Ave
Agency or Company	H.W. Lochner	Intersection	Whiting St (East)
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2040
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	3SG
AADT _{major} (veh/day)	AADT _{MAX} = 58,100 (veh/day)	--	37,650
AADT _{minor} (veh/day)	AADT _{MAX} = 16,400 (veh/day)	--	5,590
Intersection lighting (present/not present)		Not Present	
Calibration factor, C _i		1.00	2.50
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	1
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	0
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	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)		--	
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			3,200
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	3
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
<i>CMF 1i</i>	<i>CMF 2i</i>	<i>CMF 3i</i>	<i>CMF 4i</i>	<i>CMF 5i</i>	<i>CMF 6i</i>	<i>CMF_{COMB}</i>
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)
0.93	0.87	1.00	1.00	0.91	1.00	0.74

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									
	a	b	c							

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Total	-12.13	1.11	0.26	0.33	6.101	1.000	6.101	0.74	2.50	11.301
Fatal and Injury (FI)	-11.58	1.02	0.17	0.30	1.885	$\frac{(4)_{FI}}{(4)_{FI}+(4)_{PDO}}$ 0.326	1.989	0.74	2.50	3.685
Property Damage Only (PDO)	-13.24	1.14	0.30	0.36	3.895	$\frac{(5)_{TOTAL}-(5)_{FI}}{0.674}$	4.112	0.74	2.50	7.616

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)			(3) Predicted N _{bimv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)		(5) Predicted N _{bimv (PDO)} (crashes/year)	(6) 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			3.685	1.000		7.616	11.301		
				$(2)*(3)_{FI}$			$(4)*(5)_{PDO}$	$(3)+(5)$		
Rear-end collision	0.549			2.023	0.546		4.159	6.181		
Head-on collision	0.038			0.140	0.020		0.152	0.292		
Angle collision	0.280			1.032	0.204		1.554	2.585		
Sideswipe	0.076			0.280	0.032		0.244	0.524		
Other multiple-vehicle collision	0.057			0.210	0.198		1.508	1.718		

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1) Crash Severity Level	(2) SPF Coefficients			(3) Overdispersion Parameter, k	(4) Initial N _{bisv}	(5) Proportion of Total Crashes	(6) Adjusted N _{bimv}	(7) Combined CMFs	(8) Calibration Factor, C _i	(9) 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	0.319	1.000	0.319	0.74	2.50	0.590
Fatal and Injury (FI)	-9.75	0.27	0.51	0.24	0.082	$\frac{(4)_{FI}}{(4)_{FI}+(4)_{PDO}}$ 0.266	0.085	0.74	2.50	0.157
Property Damage Only (PDO)	-9.08	0.45	0.33	0.53	0.225	$\frac{(5)_{TOTAL}-(5)_{FI}}{0.734}$	0.234	0.74	2.50	0.433

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)			(3) Predicted N _{bisv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)		(5) Predicted N _{bisv (PDO)} (crashes/year)	(6) 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			0.157	1.000		0.433	0.590		
				$(2)*(3)_{FI}$			$(4)*(5)_{PDO}$	$(3)+(5)$		
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			0.103	0.895		0.388	0.490		

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Collision with other object	0.091	0.014	0.069	0.030	0.044
Other single-vehicle collision	0.045	0.007	0.018	0.008	0.015
Single-vehicle noncollision	0.209	0.033	0.014	0.006	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	--	--	--	--	2.50	--
Fatal and injury (FI)	--	--	--	--	2.50	--

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)
4.15	1.00	1.12	4.65

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	0.075	4.65	2.50	0.876			
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.50	0.876			

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	11.301	0.590	11.892	0.011	2.50	0.327
Fatal and injury (FI)	--	--	--	--	2.50	0.327

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;	(5) from Worksheet 2D and 2F	(6) from Worksheet 2D and 2F;

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	(7) from 2G or 2I and 2J		(7) from 2G or 2I and 2J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 2D)	2.023	4.159	6.181
Head-on collisions (from Worksheet 2D)	0.140	0.152	0.292
Angle collisions (from Worksheet 2D)	1.032	1.554	2.585
Sideswipe (from Worksheet 2D)	0.280	0.244	0.524
Other multiple-vehicle collision (from Worksheet 2D)	0.210	1.508	1.718
Subtotal	3.685	7.616	11.301
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)	0.103	0.388	0.490
Collision with other object (from Worksheet 2F)	0.014	0.030	0.044
Other single-vehicle collision (from Worksheet 2F)	0.007	0.008	0.015
Single-vehicle noncollision (from Worksheet 2F)	0.033	0.006	0.039
Collision with pedestrian (from Worksheet 2G or 2I)	0.876	0.000	0.876
Collision with bicycle (from Worksheet 2J)	0.327	0.000	0.327
Subtotal	1.360	0.433	1.794
Total	5.045	8.049	13.095

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	13.095
Fatal and injury (FI)	5.045
Property damage only (PDO)	8.049

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections			
General Information		Location Information	
Analyst	SL	Roadway	Meridian Ave
Agency or Company	H.W. Lochner	Intersection	Whiting St (East)
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2041
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	3SG
AADT _{major} (veh/day)	AADT _{MAX} = 58,100 (veh/day)	--	38,125
AADT _{minor} (veh/day)	AADT _{MAX} = 16,400 (veh/day)	--	5,675
Intersection lighting (present/not present)		Not Present	
Calibration factor, C _i		1.00	2.50
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	1
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	0
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	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)		--	
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			3,200
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	3
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
<i>CMF 1i</i>	<i>CMF 2i</i>	<i>CMF 3i</i>	<i>CMF 4i</i>	<i>CMF 5i</i>	<i>CMF 6i</i>	<i>CMF_{COMB}</i>
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)
0.93	0.87	1.00	1.00	0.91	1.00	0.74

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									
	a	b	c							

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Total	-12.13	1.11	0.26	0.33	6.211	1.000	6.211	0.74	2.50	11.505
Fatal and Injury (FI)	-11.58	1.02	0.17	0.30	1.914	$\frac{(4)_{FI}}{((4)_{FI}+(4)_{PDO}}$ 0.325	2.021	0.74	2.50	3.742
Property Damage Only (PDO)	-13.24	1.14	0.30	0.36	3.969	$\frac{(5)_{TOTAL}-(5)_{FI}}{0.675}$	4.191	0.74	2.50	7.762

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bimv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bimv (PDO)} (crashes/year)	(6) 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	3.742	1.000	7.762	11.505
		(2)*(3) _{FI}		(4)*(5) _{PDO}	(3)+(5)
Rear-end collision	0.549	2.055	0.546	4.238	6.293
Head-on collision	0.038	0.142	0.020	0.155	0.297
Angle collision	0.280	1.048	0.204	1.583	2.631
Sideswipe	0.076	0.284	0.032	0.248	0.533
Other multiple-vehicle collision	0.057	0.213	0.198	1.537	1.750

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1) Crash Severity Level	(2) SPF Coefficients			(3) Overdispersion Parameter, k	(4) Initial N _{bisv}	(5) Proportion of Total Crashes	(6) Adjusted N _{bimv}	(7) Combined CMFs	(8) Calibration Factor, C _i	(9) 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	0.322	1.000	0.322	0.74	2.50	0.597
Fatal and Injury (FI)	-9.75	0.27	0.51	0.24	0.083	$\frac{(4)_{FI}}{((4)_{FI}+(4)_{PDO}}$ 0.266	0.086	0.74	2.50	0.159
Property Damage Only (PDO)	-9.08	0.45	0.33	0.53	0.227	$\frac{(5)_{TOTAL}-(5)_{FI}}{0.734}$	0.236	0.74	2.50	0.438

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bisv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bisv (PDO)} (crashes/year)	(6) 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	0.159	1.000	0.438	0.597
		(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	0.104	0.895	0.392	0.496

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Collision with other object	0.091	0.014	0.069	0.030	0.045
Other single-vehicle collision	0.045	0.007	0.018	0.008	0.015
Single-vehicle noncollision	0.209	0.033	0.014	0.006	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	--	--	--	--	2.50	--
Fatal and injury (FI)	--	--	--	--	2.50	--

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)
4.15	1.00	1.12	4.65

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	0.075	4.65	2.50	0.877			
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.50	0.877			

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	11.505	0.597	12.102	0.011	2.50	0.333
Fatal and injury (FI)	--	--	--	--	2.50	0.333

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;	(5) from Worksheet 2D and 2F	(6) from Worksheet 2D and 2F;

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	(7) from 2G or 2I and 2J		(7) from 2G or 2I and 2J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 2D)	2.055	4.238	6.293
Head-on collisions (from Worksheet 2D)	0.142	0.155	0.297
Angle collisions (from Worksheet 2D)	1.048	1.583	2.631
Sideswipe (from Worksheet 2D)	0.284	0.248	0.533
Other multiple-vehicle collision (from Worksheet 2D)	0.213	1.537	1.750
Subtotal	3.742	7.762	11.505
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)	0.104	0.392	0.496
Collision with other object (from Worksheet 2F)	0.014	0.030	0.045
Other single-vehicle collision (from Worksheet 2F)	0.007	0.008	0.015
Single-vehicle noncollision (from Worksheet 2F)	0.033	0.006	0.039
Collision with pedestrian (from Worksheet 2G or 2I)	0.877	0.000	0.877
Collision with bicycle (from Worksheet 2J)	0.333	0.000	0.333
Subtotal	1.369	0.438	1.807
Total	5.112	8.200	13.312

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	13.312
Fatal and injury (FI)	5.112
Property damage only (PDO)	8.200

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections

General Information		Location Information	
Analyst	SL	Roadway	Meridian Ave
Agency or Company	H.W. Lochner	Intersection	Whiting St (East)
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2042
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	3SG
AADT _{major} (veh/day)	AADT _{MAX} = 58,100 (veh/day)	--	38,700
AADT _{minor} (veh/day)	AADT _{MAX} = 16,400 (veh/day)	--	5,760
Intersection lighting (present/not present)		Not Present	
Calibration factor, C _i		1.00	2.50
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	1
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	0
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	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)		--	
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			3,200
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	3
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
<i>CMF 1i</i>	<i>CMF 2i</i>	<i>CMF 3i</i>	<i>CMF 4i</i>	<i>CMF 5i</i>	<i>CMF 6i</i>	<i>CMF_{COMB}</i>
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)
0.93	0.87	1.00	1.00	0.91	1.00	0.74

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									
	a	b	c							

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Total	-12.13	1.11	0.26	0.33	6.340	1.000	6.340	0.74	2.50	11.743
Fatal and Injury (FI)	-11.58	1.02	0.17	0.30	1.948	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.324	2.057	0.74	2.50	3.810
Property Damage Only (PDO)	-13.24	1.14	0.30	0.36	4.056	$(5)_{TOTAL}-(5)_{FI}$ 0.676	4.283	0.74	2.50	7.932

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)			(3) Predicted N _{bimv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)		(5) Predicted N _{bimv (PDO)} (crashes/year)	(6) 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			3.810	1.000		7.932	11.743		
				$(2)*(3)_{FI}$			$(4)*(5)_{PDO}$	$(3)+(5)$		
Rear-end collision	0.549			2.092	0.546		4.331	6.423		
Head-on collision	0.038			0.145	0.020		0.159	0.303		
Angle collision	0.280			1.067	0.204		1.618	2.685		
Sideswipe	0.076			0.290	0.032		0.254	0.543		
Other multiple-vehicle collision	0.057			0.217	0.198		1.571	1.788		

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1) Crash Severity Level	(2) SPF Coefficients			(3) Overdispersion Parameter, k	(4) Initial N _{bisv}	(5) Proportion of Total Crashes	(6) Adjusted N _{bimv}	(7) Combined CMFs	(8) Calibration Factor, C _i	(9) 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	0.326	1.000	0.326	0.74	2.50	0.604
Fatal and Injury (FI)	-9.75	0.27	0.51	0.24	0.084	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.266	0.087	0.74	2.50	0.161
Property Damage Only (PDO)	-9.08	0.45	0.33	0.53	0.230	$(5)_{TOTAL}-(5)_{FI}$ 0.734	0.239	0.74	2.50	0.443

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)			(3) Predicted N _{bisv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)		(5) Predicted N _{bisv (PDO)} (crashes/year)	(6) 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			0.161	1.000		0.443	0.604		
				$(2)*(3)_{FI}$			$(4)*(5)_{PDO}$	$(3)+(5)$		
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			0.105	0.895		0.397	0.502		

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Collision with other object	0.091	0.015	0.069	0.031	0.045
Other single-vehicle collision	0.045	0.007	0.018	0.008	0.015
Single-vehicle noncollision	0.209	0.034	0.014	0.006	0.040

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	--	--	--	--	2.50	--
Fatal and injury (FI)	--	--	--	--	2.50	--

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)
4.15	1.00	1.12	4.65

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	0.076	4.65	2.50	0.878			
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.50	0.878			

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	11.743	0.604	12.347	0.011	2.50	0.340
Fatal and injury (FI)	--	--	--	--	2.50	0.340

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;	(5) from Worksheet 2D and 2F	(6) from Worksheet 2D and 2F;

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	(7) from 2G or 2I and 2J		(7) from 2G or 2I and 2J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 2D)	2.092	4.331	6.423
Head-on collisions (from Worksheet 2D)	0.145	0.159	0.303
Angle collisions (from Worksheet 2D)	1.067	1.618	2.685
Sideswipe (from Worksheet 2D)	0.290	0.254	0.543
Other multiple-vehicle collision (from Worksheet 2D)	0.217	1.571	1.788
Subtotal	3.810	7.932	11.743
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)	0.105	0.397	0.502
Collision with other object (from Worksheet 2F)	0.015	0.031	0.045
Other single-vehicle collision (from Worksheet 2F)	0.007	0.008	0.015
Single-vehicle noncollision (from Worksheet 2F)	0.034	0.006	0.040
Collision with pedestrian (from Worksheet 2G or 2I)	0.878	0.000	0.878
Collision with bicycle (from Worksheet 2J)	0.340	0.000	0.340
Subtotal	1.378	0.443	1.822
Total	5.189	8.376	13.565

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	13.565
Fatal and injury (FI)	5.189
Property damage only (PDO)	8.376

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections			
General Information		Location Information	
Analyst	SL	Roadway	Meridian Ave
Agency or Company	H.W. Lochner	Intersection	Whiting St (East)
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2043
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	3SG
AADT _{major} (veh/day)	AADT _{MAX} = 58,100 (veh/day)	--	39,275
AADT _{minor} (veh/day)	AADT _{MAX} = 16,400 (veh/day)	--	5,845
Intersection lighting (present/not present)		Not Present	
Calibration factor, C _i		1.00	2.50
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	1
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	0
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	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)		--	
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			3,200
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	3
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
<i>CMF 1i</i>	<i>CMF 2i</i>	<i>CMF 3i</i>	<i>CMF 4i</i>	<i>CMF 5i</i>	<i>CMF 6i</i>	<i>CMF_{COMB}</i>
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)
0.93	0.87	1.00	1.00	0.91	1.00	0.74

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									
	a	b	c							

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Total	-12.13	1.11	0.26	0.33	6.469	1.000	6.469	0.74	2.50	11.982
Fatal and Injury (FI)	-11.58	1.02	0.17	0.30	1.983	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.324	2.094	0.74	2.50	3.878
Property Damage Only (PDO)	-13.24	1.14	0.30	0.36	4.143	$(5)_{TOTAL}-(5)_{FI}$ 0.676	4.375	0.74	2.50	8.104

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)		(3) Predicted N _{bimv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bimv (PDO)} (crashes/year)	(6) 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		3.878	1.000	8.104	11.982
			$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.549		2.129	0.546	4.425	6.554
Head-on collision	0.038		0.147	0.020	0.162	0.309
Angle collision	0.280		1.086	0.204	1.653	2.739
Sideswipe	0.076		0.295	0.032	0.259	0.554
Other multiple-vehicle collision	0.057		0.221	0.198	1.605	1.826

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1) Crash Severity Level	(2) SPF Coefficients			(3) Overdispersion Parameter, k	(4) Initial N _{bisv}	(5) Proportion of Total Crashes	(6) Adjusted N _{bimv}	(7) Combined CMFs	(8) Calibration Factor, C _i	(9) 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	0.330	1.000	0.330	0.74	2.50	0.612
Fatal and Injury (FI)	-9.75	0.27	0.51	0.24	0.085	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.266	0.088	0.74	2.50	0.163
Property Damage Only (PDO)	-9.08	0.45	0.33	0.53	0.233	$(5)_{TOTAL}-(5)_{FI}$ 0.734	0.242	0.74	2.50	0.449

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bisv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bisv (PDO)} (crashes/year)	(6) 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	0.163	1.000	0.449	0.612
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
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	0.002
Collision with fixed object	0.653	0.106	0.895	0.402	0.508

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Collision with other object	0.091	0.015	0.069	0.031	0.046
Other single-vehicle collision	0.045	0.007	0.018	0.008	0.015
Single-vehicle noncollision	0.209	0.034	0.014	0.006	0.040

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	--	--	--	--	2.50	--
Fatal and injury (FI)	--	--	--	--	2.50	--

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)
4.15	1.00	1.12	4.65

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	0.076	4.65	2.50	0.878			
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.50	0.878			

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	11.982	0.612	12.594	0.011	2.50	0.346
Fatal and injury (FI)	--	--	--	--	2.50	0.346

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;	(5) from Worksheet 2D and 2F	(6) from Worksheet 2D and 2F;

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	(7) from 2G or 2I and 2J		(7) from 2G or 2I and 2J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 2D)	2.129	4.425	6.554
Head-on collisions (from Worksheet 2D)	0.147	0.162	0.309
Angle collisions (from Worksheet 2D)	1.086	1.653	2.739
Sideswipe (from Worksheet 2D)	0.295	0.259	0.554
Other multiple-vehicle collision (from Worksheet 2D)	0.221	1.605	1.826
Subtotal	3.878	8.104	11.982
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	0.002
Collision with fixed object (from Worksheet 2F)	0.106	0.402	0.508
Collision with other object (from Worksheet 2F)	0.015	0.031	0.046
Other single-vehicle collision (from Worksheet 2F)	0.007	0.008	0.015
Single-vehicle noncollision (from Worksheet 2F)	0.034	0.006	0.040
Collision with pedestrian (from Worksheet 2G or 2I)	0.878	0.000	0.878
Collision with bicycle (from Worksheet 2J)	0.346	0.000	0.346
Subtotal	1.388	0.449	1.837
Total	5.266	8.553	13.819

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	13.819
Fatal and injury (FI)	5.266
Property damage only (PDO)	8.553

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections			
General Information		Location Information	
Analyst	SL	Roadway	Meridian Ave
Agency or Company	H.W. Lochner	Intersection	Whiting St (East)
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2044
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	3SG
AADT _{major} (veh/day)	AADT _{MAX} = 58,100 (veh/day)	--	39,850
AADT _{minor} (veh/day)	AADT _{MAX} = 16,400 (veh/day)	--	5,930
Intersection lighting (present/not present)		Not Present	
Calibration factor, C _i		1.00	2.50
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	1
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	0
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	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)		--	
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			3,200
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	3
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
<i>CMF 1i</i>	<i>CMF 2i</i>	<i>CMF 3i</i>	<i>CMF 4i</i>	<i>CMF 5i</i>	<i>CMF 6i</i>	<i>CMF_{COMB}</i>
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)
0.93	0.87	1.00	1.00	0.91	1.00	0.74

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									
	a	b	c							

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Total	-12.13	1.11	0.26	0.33	6.599	1.000	6.599	0.74	2.50	12.223
Fatal and Injury (FI)	-11.58	1.02	0.17	0.30	2.017	$\frac{(4)_{FI}}{((4)_{FI}+(4)_{PDO}}$ 0.323	2.131	0.74	2.50	3.946
Property Damage Only (PDO)	-13.24	1.14	0.30	0.36	4.230	$\frac{(5)_{TOTAL}-(5)_{FI}}{0.677}$	4.468	0.74	2.50	8.276

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bimv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bimv (PDO)} (crashes/year)	(6) 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	3.946	1.000	8.276	12.223
		(2)*(3) _{FI}		(4)*(5) _{PDO}	(3)+(5)
Rear-end collision	0.549	2.167	0.546	4.519	6.685
Head-on collision	0.038	0.150	0.020	0.166	0.315
Angle collision	0.280	1.105	0.204	1.688	2.793
Sideswipe	0.076	0.300	0.032	0.265	0.565
Other multiple-vehicle collision	0.057	0.225	0.198	1.639	1.864

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1) Crash Severity Level	(2) SPF Coefficients			(3) Overdispersion Parameter, k	(4) Initial N _{bisv}	(5) Proportion of Total Crashes	(6) Adjusted N _{bimv}	(7) Combined CMFs	(8) Calibration Factor, C _i	(9) 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	0.334	1.000	0.334	0.74	2.50	0.619
Fatal and Injury (FI)	-9.75	0.27	0.51	0.24	0.086	$\frac{(4)_{FI}}{((4)_{FI}+(4)_{PDO}}$ 0.266	0.089	0.74	2.50	0.165
Property Damage Only (PDO)	-9.08	0.45	0.33	0.53	0.235	$\frac{(5)_{TOTAL}-(5)_{FI}}{0.734}$	0.245	0.74	2.50	0.454

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bisv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bisv (PDO)} (crashes/year)	(6) 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	0.454	0.619
		(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	0.002
Collision with fixed object	0.653	0.108	0.895	0.406	0.514

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Collision with other object	0.091	0.015	0.069	0.031	0.046
Other single-vehicle collision	0.045	0.007	0.018	0.008	0.016
Single-vehicle noncollision	0.209	0.034	0.014	0.006	0.041

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	--	--	--	--	2.50	--
Fatal and injury (FI)	--	--	--	--	2.50	--

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)
4.15	1.00	1.12	4.65

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									
	a	b	c	d	e					
Total	-6.60	0.05	0.24	0.41	0.09	0.52	0.076	4.65	2.50	0.879
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.50	0.879

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	12.223	0.619	12.842	0.011	2.50	0.353
Fatal and injury (FI)	--	--	--	--	2.50	0.353

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;	(5) from Worksheet 2D and 2F	(6) from Worksheet 2D and 2F;

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	(7) from 2G or 2I and 2J		(7) from 2G or 2I and 2J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 2D)	2.167	4.519	6.685
Head-on collisions (from Worksheet 2D)	0.150	0.166	0.315
Angle collisions (from Worksheet 2D)	1.105	1.688	2.793
Sideswipe (from Worksheet 2D)	0.300	0.265	0.565
Other multiple-vehicle collision (from Worksheet 2D)	0.225	1.639	1.864
Subtotal	3.946	8.276	12.223
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	0.002
Collision with fixed object (from Worksheet 2F)	0.108	0.406	0.514
Collision with other object (from Worksheet 2F)	0.015	0.031	0.046
Other single-vehicle collision (from Worksheet 2F)	0.007	0.008	0.016
Single-vehicle noncollision (from Worksheet 2F)	0.034	0.006	0.041
Collision with pedestrian (from Worksheet 2G or 2I)	0.879	0.000	0.879
Collision with bicycle (from Worksheet 2J)	0.353	0.000	0.353
Subtotal	1.397	0.454	1.851
Total	5.344	8.730	14.074

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	14.074
Fatal and injury (FI)	5.344
Property damage only (PDO)	8.730

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections

General Information		Location Information	
Analyst	SL	Roadway	Meridian Ave
Agency or Company	H.W. Lochner	Intersection	Whiting St (East)
Date Performed	12/01/21	Jurisdiction	
		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)	--	40,425
AADT _{minor} (veh/day)	AADT _{MAX} = 16,400 (veh/day)	--	6,015
Intersection lighting (present/not present)		Not Present	
Calibration factor, C _i		1.00	2.50
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	1
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	0
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	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)		--	
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			3,200
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	3
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
<i>CMF 1i</i>	<i>CMF 2i</i>	<i>CMF 3i</i>	<i>CMF 4i</i>	<i>CMF 5i</i>	<i>CMF 6i</i>	<i>CMF_{COMB}</i>
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)
0.93	0.87	1.00	1.00	0.91	1.00	0.74

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									
	a	b	c							

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Total	-12.13	1.11	0.26	0.33	6.730	1.000	6.730	0.74	2.50	12.465
Fatal and Injury (FI)	-11.58	1.02	0.17	0.30	2.052	$\frac{(4)_{FI}}{(4)_{FI}+(4)_{PDO}}$ 0.322	2.168	0.74	2.50	4.015
Property Damage Only (PDO)	-13.24	1.14	0.30	0.36	4.318	$\frac{(5)_{TOTAL}-(5)_{FI}}{0.678}$	4.562	0.74	2.50	8.450

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)		(3) Predicted N _{bimv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bimv (PDO)} (crashes/year)	(6) 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		4.015	1.000	8.450	12.465
			$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.549		2.204	0.546	4.614	6.818
Head-on collision	0.038		0.153	0.020	0.169	0.322
Angle collision	0.280		1.124	0.204	1.724	2.848
Sideswipe	0.076		0.305	0.032	0.270	0.576
Other multiple-vehicle collision	0.057		0.229	0.198	1.673	1.902

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1) Crash Severity Level	(2) SPF Coefficients			(3) Overdispersion Parameter, k	(4) Initial N _{bisv}	(5) Proportion of Total Crashes	(6) Adjusted N _{bimv}	(7) Combined CMFs	(8) Calibration Factor, C _i	(9) 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	0.338	1.000	0.338	0.74	2.50	0.626
Fatal and Injury (FI)	-9.75	0.27	0.51	0.24	0.086	$\frac{(4)_{FI}}{(4)_{FI}+(4)_{PDO}}$ 0.266	0.090	0.74	2.50	0.167
Property Damage Only (PDO)	-9.08	0.45	0.33	0.53	0.238	$\frac{(5)_{TOTAL}-(5)_{FI}}{0.734}$	0.248	0.74	2.50	0.460

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bisv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bisv (PDO)} (crashes/year)	(6) 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	0.167	1.000	0.460	0.626
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
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	0.002
Collision with fixed object	0.653	0.109	0.895	0.411	0.520

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Collision with other object	0.091	0.015	0.069	0.032	0.047
Other single-vehicle collision	0.045	0.008	0.018	0.008	0.016
Single-vehicle noncollision	0.209	0.035	0.014	0.006	0.041

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	--	--	--	--	2.50	--
Fatal and injury (FI)	--	--	--	--	2.50	--

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)
4.15	1.00	1.12	4.65

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	0.076	4.65	2.50	0.880			
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.50	0.880			

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	12.465	0.626	13.091	0.011	2.50	0.360
Fatal and injury (FI)	--	--	--	--	2.50	0.360

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;	(5) from Worksheet 2D and 2F	(6) from Worksheet 2D and 2F;

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	(7) from 2G or 2I and 2J		(7) from 2G or 2I and 2J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 2D)	2.204	4.614	6.818
Head-on collisions (from Worksheet 2D)	0.153	0.169	0.322
Angle collisions (from Worksheet 2D)	1.124	1.724	2.848
Sideswipe (from Worksheet 2D)	0.305	0.270	0.576
Other multiple-vehicle collision (from Worksheet 2D)	0.229	1.673	1.902
Subtotal	4.015	8.450	12.465
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	0.002
Collision with fixed object (from Worksheet 2F)	0.109	0.411	0.520
Collision with other object (from Worksheet 2F)	0.015	0.032	0.047
Other single-vehicle collision (from Worksheet 2F)	0.008	0.008	0.016
Single-vehicle noncollision (from Worksheet 2F)	0.035	0.006	0.041
Collision with pedestrian (from Worksheet 2G or 2I)	0.880	0.000	0.880
Collision with bicycle (from Worksheet 2J)	0.360	0.000	0.360
Subtotal	1.407	0.460	1.866
Total	5.421	8.909	14.331

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	14.331
Fatal and injury (FI)	5.421
Property damage only (PDO)	8.909

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections

General Information		Location Information	
Analyst	SL	Roadway	Meridian Ave
Agency or Company	H.W. Lochner	Intersection	Whiting St (East)
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2046
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	3SG
AADT _{major} (veh/day)	AADT _{MAX} = 58,100 (veh/day)	--	41,000
AADT _{minor} (veh/day)	AADT _{MAX} = 16,400 (veh/day)	--	6,100
Intersection lighting (present/not present)		Not Present	
Calibration factor, C _i		1.00	2.50
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	1
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	0
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	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)		--	
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			3,200
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	3
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
<i>CMF 1i</i>	<i>CMF 2i</i>	<i>CMF 3i</i>	<i>CMF 4i</i>	<i>CMF 5i</i>	<i>CMF 6i</i>	<i>CMF_{COMB}</i>
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)
0.93	0.87	1.00	1.00	0.91	1.00	0.74

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									
	a	b	c							

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Total	-12.13	1.11	0.26	0.33	6.861	1.000	6.861	0.74	2.50	12.708
Fatal and Injury (FI)	-11.58	1.02	0.17	0.30	2.086	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$	2.205	0.74	2.50	4.083
						0.321				
Property Damage Only (PDO)	-13.24	1.14	0.30	0.36	4.407	$(5)_{TOTAL}-(5)_{FI}$	4.656	0.74	2.50	8.624
						0.679				

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bimv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bimv (PDO)} (crashes/year)	(6) 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	4.083	1.000	8.624	12.708
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.549	2.242	0.546	4.709	6.951
Head-on collision	0.038	0.155	0.020	0.172	0.328
Angle collision	0.280	1.143	0.204	1.759	2.903
Sideswipe	0.076	0.310	0.032	0.276	0.586
Other multiple-vehicle collision	0.057	0.233	0.198	1.708	1.940

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1) Crash Severity Level	(2) SPF Coefficients			(3) Overdispersion Parameter, k	(4) Initial N _{bisv}	(5) Proportion of Total Crashes	(6) Adjusted N _{bimv}	(7) Combined CMFs	(8) Calibration Factor, C _i	(9) 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	0.342	1.000	0.342	0.74	2.50	0.634
Fatal and Injury (FI)	-9.75	0.27	0.51	0.24	0.087	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$	0.091	0.74	2.50	0.169
						0.266				
Property Damage Only (PDO)	-9.08	0.45	0.33	0.53	0.241	$(5)_{TOTAL}-(5)_{FI}$	0.251	0.74	2.50	0.465
						0.734				

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bisv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bisv (PDO)} (crashes/year)	(6) 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	0.169	1.000	0.465	0.634
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
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	0.002
Collision with fixed object	0.653	0.110	0.895	0.416	0.526

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Collision with other object	0.091	0.015	0.069	0.032	0.047
Other single-vehicle collision	0.045	0.008	0.018	0.008	0.016
Single-vehicle noncollision	0.209	0.035	0.014	0.007	0.042

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	--	--	--	--	2.50	--
Fatal and injury (FI)	--	--	--	--	2.50	--

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)
4.15	1.00	1.12	4.65

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	0.076	4.65	2.50	0.880			
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.50	0.880			

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	12.708	0.634	13.342	0.011	2.50	0.367
Fatal and injury (FI)	--	--	--	--	2.50	0.367

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;	(5) from Worksheet 2D and 2F	(6) from Worksheet 2D and 2F;

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	(7) from 2G or 2I and 2J		(7) from 2G or 2I and 2J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 2D)	2.242	4.709	6.951
Head-on collisions (from Worksheet 2D)	0.155	0.172	0.328
Angle collisions (from Worksheet 2D)	1.143	1.759	2.903
Sideswipe (from Worksheet 2D)	0.310	0.276	0.586
Other multiple-vehicle collision (from Worksheet 2D)	0.233	1.708	1.940
Subtotal	4.083	8.624	12.708
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	0.002
Collision with fixed object (from Worksheet 2F)	0.110	0.416	0.526
Collision with other object (from Worksheet 2F)	0.015	0.032	0.047
Other single-vehicle collision (from Worksheet 2F)	0.008	0.008	0.016
Single-vehicle noncollision (from Worksheet 2F)	0.035	0.007	0.042
Collision with pedestrian (from Worksheet 2G or 2I)	0.880	0.000	0.880
Collision with bicycle (from Worksheet 2J)	0.367	0.000	0.367
Subtotal	1.416	0.465	1.881
Total	5.500	9.089	14.589

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	14.589
Fatal and injury (FI)	5.500
Property damage only (PDO)	9.089

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections			
General Information		Location Information	
Analyst	SL	Roadway	Jefferson St
Agency or Company	H.W. Lochner	Intersection	Whiting St
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2026
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	4SG
AADT _{major} (veh/day)	AADT _{MAX} = 67,700 (veh/day)	--	15,000
AADT _{minor} (veh/day)	AADT _{MAX} = 33,400 (veh/day)	--	13,500
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C _i		1.00	2.27
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	0
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	0
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 / Permissive
Type of left-turn signal phasing for Leg #3		--	Permissive
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			3,200
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	5
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	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)
1.00	0.97	1.00	1.00	0.91	1.00	0.88

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}

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	from Table 12-10			from Table 12-10	from Equation 12-21	(4) _{TOTAL} *(5)	(7) from Worksheet 2B	2.27	(6)*(7)*(8)
	a	b	c						
Total	-10.99	1.07	0.23	0.39	4.421	1.000	4.421	0.88	8.868
Fatal and Injury (FI)	-13.14	1.18	0.22	0.33	1.348	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.316	1.397	0.88	2.803
Property Damage Only (PDO)	-11.02	1.02	0.24	0.44	2.917	$(5)_{TOTAL}-(5)_{FI}$ 0.684	3.023	0.88	6.064

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bimv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bimv (PDO)} (crashes/year)	(6) 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	2.803	1.000	6.064	8.868
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.450	1.261	0.483	2.929	4.191
Head-on collision	0.049	0.137	0.030	0.182	0.319
Angle collision	0.347	0.973	0.244	1.480	2.452
Sideswipe	0.099	0.278	0.032	0.194	0.472
Other multiple-vehicle collision	0.055	0.154	0.211	1.280	1.434

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1) Crash Severity Level	(2) SPF Coefficients			(3) Overdispersion Parameter, k	(4) Initial N _{bisv}	(5) Proportion of Total Crashes	(6) Adjusted N _{bimv}	(7) Combined CMFs	(8) Calibration Factor, C _i	(9) Predicted N _{bisv}			
	from Table 12-12										(4) _{TOTAL} *(5)	(7) from Worksheet 2B	(6)*(7)*(8)
	a	b	c										
Total	-10.21	0.68	0.27	0.36	0.332	1.000	0.332	0.88	2.27	0.665			
Fatal and Injury (FI)	-9.25	0.43	0.29	0.09	0.095	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.290	0.096	0.88	2.27	0.193			
Property Damage Only (PDO)	-11.34	0.78	0.25	0.44	0.232	$(5)_{TOTAL}-(5)_{FI}$ 0.710	0.236	0.88	2.27	0.472			

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bisv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bisv (PDO)} (crashes/year)	(6) 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	0.193	1.000	0.472	0.665

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		$(2) \times (3)_{FI}$		$(4) \times (5)_{PDO}$	$(3) + (5)$
Collision with parked vehicle	0.001	0.000	0.001	0.000	0.001
Collision with animal	0.002	0.000	0.002	0.001	0.001
Collision with fixed object	0.744	0.144	0.870	0.411	0.555
Collision with other object	0.072	0.014	0.070	0.033	0.047
Other single-vehicle collision	0.040	0.008	0.023	0.011	0.019
Single-vehicle noncollision	0.141	0.027	0.034	0.016	0.043

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		$(4) \times (5) \times (6)$
Total	--	--	--	--	2.27	--
Fatal and injury (FI)	--	--	--	--	2.27	--

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	$(1) \times (2) \times (3)$
4.15	1.35	1.12	6.27

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	$N_{pedbase}$ from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C_i	Predicted N_{pedi} $(4) \times (5) \times (6)$
	from Table 12-14									
	a	b	c	d	e					
Total	-9.53	0.40	0.26	0.45	0.04	0.24	0.190	6.27	2.27	1.190
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.27	1.190

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		$(4) \times (5) \times (6)$
Total	8.868	0.665	9.533	0.015	2.27	0.143
Fatal and injury (FI)	--	--	--	--	2.27	0.143

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)	1.261	2.929	4.191
Head-on collisions (from Worksheet 2D)	0.137	0.182	0.319
Angle collisions (from Worksheet 2D)	0.973	1.480	2.452
Sideswipe (from Worksheet 2D)	0.278	0.194	0.472
Other multiple-vehicle collision (from Worksheet 2D)	0.154	1.280	1.434
Subtotal	2.803	6.064	8.868
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)	0.144	0.411	0.555
Collision with other object (from Worksheet 2F)	0.014	0.033	0.047
Other single-vehicle collision (from Worksheet 2F)	0.008	0.011	0.019
Single-vehicle noncollision (from Worksheet 2F)	0.027	0.016	0.043
Collision with pedestrian (from Worksheet 2G or 2I)	1.190	0.000	1.190
Collision with bicycle (from Worksheet 2J)	0.143	0.000	0.143
Subtotal	1.526	0.472	1.999
Total	4.329	6.537	10.866

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	10.866
Fatal and injury (FI)	4.329
Property damage only (PDO)	6.537

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections			
General Information		Location Information	
Analyst	SL	Roadway	Jefferson St
Agency or Company	H.W. Lochner	Intersection	Whiting St
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2027
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	4SG
AADT _{major} (veh/day)	AADT _{MAX} = 67,700 (veh/day)	--	15,200
AADT _{minor} (veh/day)	AADT _{MAX} = 33,400 (veh/day)	--	13,725
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C _i		1.00	2.27
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	0
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	0
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 / Permissive
Type of left-turn signal phasing for Leg #3		--	Permissive
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			3,200
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	5
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	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)
1.00	0.97	1.00	1.00	0.91	1.00	0.88

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}

Urban and Suburban Arterial Predictive Method

	from Table 12-10			from Table 12-10	from Equation 12-21		(4) _{TOTAL} *(5)	(7) from Worksheet 2B	2.27	(6)*(7)*(8)
	a	b	c							
Total	-10.99	1.07	0.23	0.39	4.501	1.000	4.501	0.88	2.27	9.028
Fatal and Injury (FI)	-13.14	1.18	0.22	0.33	1.375	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.317	1.425	0.88	2.27	2.858
Property Damage Only (PDO)	-11.02	1.02	0.24	0.44	2.969	$(5)_{TOTAL}-(5)_{FI}$ 0.683	3.076	0.88	2.27	6.171

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bimv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bimv (PDO)} (crashes/year)	(6) 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	2.858	1.000	6.171	9.028
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.450	1.286	0.483	2.981	4.266
Head-on collision	0.049	0.140	0.030	0.185	0.325
Angle collision	0.347	0.992	0.244	1.506	2.497
Sideswipe	0.099	0.283	0.032	0.197	0.480
Other multiple-vehicle collision	0.055	0.157	0.211	1.302	1.459

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1) Crash Severity Level	(2) SPF Coefficients			(3) Overdispersion Parameter, k	(4) Initial N _{bisv}	(5) Proportion of Total Crashes	(6) Adjusted N _{bimv}	(7) Combined CMFs	(8) Calibration Factor, C _i	(9) Predicted N _{bisv}			
	from Table 12-12										(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	0.88	2.27	0.674			
Fatal and Injury (FI)	-9.25	0.43	0.29	0.09	0.096	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.289	0.097	0.88	2.27	0.195			
Property Damage Only (PDO)	-11.34	0.78	0.25	0.44	0.235	$(5)_{TOTAL}-(5)_{FI}$ 0.711	0.239	0.88	2.27	0.479			

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bisv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bisv (PDO)} (crashes/year)	(6) 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	0.195	1.000	0.479	0.674

Urban and Suburban Arterial Predictive Method

		$(2) \times (3)_{FI}$		$(4) \times (5)_{PDO}$	$(3) + (5)$
Collision with parked vehicle	0.001	0.000	0.001	0.000	0.001
Collision with animal	0.002	0.000	0.002	0.001	0.001
Collision with fixed object	0.744	0.145	0.870	0.417	0.562
Collision with other object	0.072	0.014	0.070	0.034	0.048
Other single-vehicle collision	0.040	0.008	0.023	0.011	0.019
Single-vehicle noncollision	0.141	0.028	0.034	0.016	0.044

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		$(4) \times (5) \times (6)$
Total	--	--	--	--	2.27	--
Fatal and injury (FI)	--	--	--	--	2.27	--

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	$(1) \times (2) \times (3)$
4.15	1.35	1.12	6.27

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	$N_{pedbase}$ from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C_i	Predicted N_{pedi}
	from Table 12-14									$(4) \times (5) \times (6)$
	a	b	c	d	e					
Total	-9.53	0.40	0.26	0.45	0.04	0.24	0.191	6.27	2.27	1.198
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.27	1.198

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		$(4) \times (5) \times (6)$
Total	9.028	0.674	9.703	0.015	2.27	0.146
Fatal and injury (FI)	--	--	--	--	2.27	0.146

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)	1.286	2.981	4.266
Head-on collisions (from Worksheet 2D)	0.140	0.185	0.325
Angle collisions (from Worksheet 2D)	0.992	1.506	2.497
Sideswipe (from Worksheet 2D)	0.283	0.197	0.480
Other multiple-vehicle collision (from Worksheet 2D)	0.157	1.302	1.459
Subtotal	2.858	6.171	9.028
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)	0.145	0.417	0.562
Collision with other object (from Worksheet 2F)	0.014	0.034	0.048
Other single-vehicle collision (from Worksheet 2F)	0.008	0.011	0.019
Single-vehicle noncollision (from Worksheet 2F)	0.028	0.016	0.044
Collision with pedestrian (from Worksheet 2G or 2I)	1.198	0.000	1.198
Collision with bicycle (from Worksheet 2J)	0.146	0.000	0.146
Subtotal	1.539	0.479	2.018
Total	4.396	6.650	11.047

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	11.047
Fatal and injury (FI)	4.396
Property damage only (PDO)	6.650

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections			
General Information		Location Information	
Analyst	SL	Roadway	Jefferson St
Agency or Company	H.W. Lochner	Intersection	Whiting St
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2028
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	4SG
AADT _{major} (veh/day)	AADT _{MAX} = 67,700 (veh/day)	--	15,400
AADT _{minor} (veh/day)	AADT _{MAX} = 33,400 (veh/day)	--	13,950
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C _i		1.00	2.27
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	0
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	0
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 / Permissive
Type of left-turn signal phasing for Leg #3		--	Permissive
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			3,200
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	5
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	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)
1.00	0.97	1.00	1.00	0.91	1.00	0.88

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}

Urban and Suburban Arterial Predictive Method

	from Table 12-10			from Table 12-10	from Equation 12-21		(4) _{TOTAL} *(5)	(7) from Worksheet 2B	2.27	(6)*(7)*(8)
	a	b	c							
Total	-10.99	1.07	0.23	0.39	4.581	1.000	4.581	0.88	2.27	9.190
Fatal and Injury (FI)	-13.14	1.18	0.22	0.33	1.401	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.317	1.452	0.88	2.27	2.912
Property Damage Only (PDO)	-11.02	1.02	0.24	0.44	3.020	$(5)_{TOTAL}-(5)_{FI}$ 0.683	3.130	0.88	2.27	6.278

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	2.912	1.000	6.278	9.190
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.450	1.310	0.483	3.032	4.343
Head-on collision	0.049	0.143	0.030	0.188	0.331
Angle collision	0.347	1.011	0.244	1.532	2.542
Sideswipe	0.099	0.288	0.032	0.201	0.489
Other multiple-vehicle collision	0.055	0.160	0.211	1.325	1.485

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									
	a	b	c							
Total	-10.21	0.68	0.27	0.36	0.341	1.000	0.341	0.88	2.27	0.683
Fatal and Injury (FI)	-9.25	0.43	0.29	0.09	0.097	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.288	0.098	0.88	2.27	0.197
Property Damage Only (PDO)	-11.34	0.78	0.25	0.44	0.239	$(5)_{TOTAL}-(5)_{FI}$ 0.712	0.242	0.88	2.27	0.486

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	0.197	1.000	0.486	0.683

Urban and Suburban Arterial Predictive Method

		$(2) \times (3)_{FI}$		$(4) \times (5)_{PDO}$	$(3) + (5)$
Collision with parked vehicle	0.001	0.000	0.001	0.000	0.001
Collision with animal	0.002	0.000	0.002	0.001	0.001
Collision with fixed object	0.744	0.147	0.870	0.423	0.570
Collision with other object	0.072	0.014	0.070	0.034	0.048
Other single-vehicle collision	0.040	0.008	0.023	0.011	0.019
Single-vehicle noncollision	0.141	0.028	0.034	0.017	0.044

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		$(4) \times (5) \times (6)$
Total	--	--	--	--	2.27	--
Fatal and injury (FI)	--	--	--	--	2.27	--

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	$(1) \times (2) \times (3)$
4.15	1.35	1.12	6.27

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	$N_{pedbase}$ from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C_i	Predicted N_{pedi}
	from Table 12-14									$(4) \times (5) \times (6)$
	a	b	c	d	e					
Total	-9.53	0.40	0.26	0.45	0.04	0.24	0.192	6.27	2.27	1.206
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.27	1.206

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		$(4) \times (5) \times (6)$
Total	9.190	0.683	9.873	0.015	2.27	0.148
Fatal and injury (FI)	--	--	--	--	2.27	0.148

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)	1.310	3.032	4.343
Head-on collisions (from Worksheet 2D)	0.143	0.188	0.331
Angle collisions (from Worksheet 2D)	1.011	1.532	2.542
Sideswipe (from Worksheet 2D)	0.288	0.201	0.489
Other multiple-vehicle collision (from Worksheet 2D)	0.160	1.325	1.485
Subtotal	2.912	6.278	9.190
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)	0.147	0.423	0.570
Collision with other object (from Worksheet 2F)	0.014	0.034	0.048
Other single-vehicle collision (from Worksheet 2F)	0.008	0.011	0.019
Single-vehicle noncollision (from Worksheet 2F)	0.028	0.017	0.044
Collision with pedestrian (from Worksheet 2G or 2I)	1.206	0.000	1.206
Collision with bicycle (from Worksheet 2J)	0.148	0.000	0.148
Subtotal	1.552	0.486	2.038
Total	4.464	6.764	11.228

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	11.228
Fatal and injury (FI)	4.464
Property damage only (PDO)	6.764

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections			
General Information		Location Information	
Analyst	SL	Roadway	Jefferson St
Agency or Company	H.W. Lochner	Intersection	Whiting St
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2029
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	4SG
AADT _{major} (veh/day)	AADT _{MAX} = 67,700 (veh/day)	--	15,600
AADT _{minor} (veh/day)	AADT _{MAX} = 33,400 (veh/day)	--	14,175
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C _i		1.00	2.27
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	0
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	0
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 / Permissive
Type of left-turn signal phasing for Leg #3		--	Permissive
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			3,200
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	5
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	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)
1.00	0.97	1.00	1.00	0.91	1.00	0.88

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}

Urban and Suburban Arterial Predictive Method

	from Table 12-10			from Table 12-10	from Equation 12-21	(4) _{TOTAL} *(5)	(7) from Worksheet 2B	2.27	(6)*(7)*(8)
	a	b	c						
Total	-10.99	1.07	0.23	0.39	4.662	1.000	4.662	0.88	9.352
Fatal and Injury (FI)	-13.14	1.18	0.22	0.33	1.428	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.317	1.479	0.88	2.967
Property Damage Only (PDO)	-11.02	1.02	0.24	0.44	3.072	$(5)_{TOTAL}-(5)_{FI}$ 0.683	3.183	0.88	6.385

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bimv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bimv (PDO)} (crashes/year)	(6) 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	2.967	1.000	6.385	9.352
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.450	1.335	0.483	3.084	4.419
Head-on collision	0.049	0.145	0.030	0.192	0.337
Angle collision	0.347	1.030	0.244	1.558	2.587
Sideswipe	0.099	0.294	0.032	0.204	0.498
Other multiple-vehicle collision	0.055	0.163	0.211	1.347	1.510

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1) Crash Severity Level	(2) SPF Coefficients			(3) Overdispersion Parameter, k	(4) Initial N _{bisv}	(5) Proportion of Total Crashes	(6) Adjusted N _{bimv}	(7) Combined CMFs	(8) Calibration Factor, C _i	(9) Predicted N _{bisv}			
	from Table 12-12										(4) _{TOTAL} *(5)	(7) from Worksheet 2B	(6)*(7)*(8)
	a	b	c										
Total	-10.21	0.68	0.27	0.36	0.345	1.000	0.345	0.88	2.27	0.692			
Fatal and Injury (FI)	-9.25	0.43	0.29	0.09	0.098	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.288	0.099	0.88	2.27	0.199			
Property Damage Only (PDO)	-11.34	0.78	0.25	0.44	0.242	$(5)_{TOTAL}-(5)_{FI}$ 0.712	0.246	0.88	2.27	0.493			

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bisv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bisv (PDO)} (crashes/year)	(6) 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	0.199	1.000	0.493	0.692

Urban and Suburban Arterial Predictive Method

		$(2) \times (3)_{FI}$		$(4) \times (5)_{PDO}$	$(3) + (5)$
Collision with parked vehicle	0.001	0.000	0.001	0.000	0.001
Collision with animal	0.002	0.000	0.002	0.001	0.001
Collision with fixed object	0.744	0.148	0.870	0.429	0.577
Collision with other object	0.072	0.014	0.070	0.035	0.049
Other single-vehicle collision	0.040	0.008	0.023	0.011	0.019
Single-vehicle noncollision	0.141	0.028	0.034	0.017	0.045

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		$(4) \times (5) \times (6)$
Total	--	--	--	--	2.27	--
Fatal and injury (FI)	--	--	--	--	2.27	--

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	$(1) \times (2) \times (3)$
4.15	1.35	1.12	6.27

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	$N_{pedbase}$ from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C_i	Predicted N_{pedi} $(4) \times (5) \times (6)$
	from Table 12-14									
	a	b	c	d	e					
Total	-9.53	0.40	0.26	0.45	0.04	0.24	0.194	6.27	2.27	1.214
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.27	1.214

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		$(4) \times (5) \times (6)$
Total	9.352	0.692	10.044	0.015	2.27	0.151
Fatal and injury (FI)	--	--	--	--	2.27	0.151

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)	1.335	3.084	4.419
Head-on collisions (from Worksheet 2D)	0.145	0.192	0.337
Angle collisions (from Worksheet 2D)	1.030	1.558	2.587
Sideswipe (from Worksheet 2D)	0.294	0.204	0.498
Other multiple-vehicle collision (from Worksheet 2D)	0.163	1.347	1.510
Subtotal	2.967	6.385	9.352
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)	0.148	0.429	0.577
Collision with other object (from Worksheet 2F)	0.014	0.035	0.049
Other single-vehicle collision (from Worksheet 2F)	0.008	0.011	0.019
Single-vehicle noncollision (from Worksheet 2F)	0.028	0.017	0.045
Collision with pedestrian (from Worksheet 2G or 2I)	1.214	0.000	1.214
Collision with bicycle (from Worksheet 2J)	0.151	0.000	0.151
Subtotal	1.564	0.493	2.057
Total	4.531	6.878	11.409

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	11.409
Fatal and injury (FI)	4.531
Property damage only (PDO)	6.878

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections			
General Information		Location Information	
Analyst	SL	Roadway	Jefferson St
Agency or Company	H.W. Lochner	Intersection	Whiting St
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2030
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	4SG
AADT _{major} (veh/day)	AADT _{MAX} = 67,700 (veh/day)	--	15,800
AADT _{minor} (veh/day)	AADT _{MAX} = 33,400 (veh/day)	--	14,400
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C _i		1.00	2.27
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	0
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	0
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 / Permissive
Type of left-turn signal phasing for Leg #3		--	Permissive
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			3,200
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	5
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	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)
1.00	0.97	1.00	1.00	0.91	1.00	0.88

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}

Urban and Suburban Arterial Predictive Method

	from Table 12-10			from Table 12-10	from Equation 12-21	(4) _{TOTAL} *(5)	(7) from Worksheet 2B	2.27	(6)*(7)*(8)
	a	b	c						
Total	-10.99	1.07	0.23	0.39	4.743	1.000	4.743	0.88	9.515
Fatal and Injury (FI)	-13.14	1.18	0.22	0.33	1.454	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.318	1.507	0.88	3.022
Property Damage Only (PDO)	-11.02	1.02	0.24	0.44	3.124	$(5)_{TOTAL}-(5)_{FI}$ 0.682	3.237	0.88	6.493

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bimv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bimv (PDO)} (crashes/year)	(6) 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	3.022	1.000	6.493	9.515
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.450	1.360	0.483	3.136	4.496
Head-on collision	0.049	0.148	0.030	0.195	0.343
Angle collision	0.347	1.049	0.244	1.584	2.633
Sideswipe	0.099	0.299	0.032	0.208	0.507
Other multiple-vehicle collision	0.055	0.166	0.211	1.370	1.536

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1) Crash Severity Level	(2) SPF Coefficients			(3) Overdispersion Parameter, k	(4) Initial N _{bisv}	(5) Proportion of Total Crashes	(6) Adjusted N _{bimv}	(7) Combined CMFs	(8) Calibration Factor, C _i	(9) Predicted N _{bisv}			
	from Table 12-12										(4) _{TOTAL} *(5)	(7) from Worksheet 2B	(6)*(7)*(8)
	a	b	c										
Total	-10.21	0.68	0.27	0.36	0.350	1.000	0.350	0.88	2.27	0.701			
Fatal and Injury (FI)	-9.25	0.43	0.29	0.09	0.099	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.287	0.100	0.88	2.27	0.201			
Property Damage Only (PDO)	-11.34	0.78	0.25	0.44	0.245	$(5)_{TOTAL}-(5)_{FI}$ 0.713	0.249	0.88	2.27	0.500			

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bisv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bisv (PDO)} (crashes/year)	(6) 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	0.201	1.000	0.500	0.701

Urban and Suburban Arterial Predictive Method

		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Collision with parked vehicle	0.001	0.000	0.001	0.001	0.001
Collision with animal	0.002	0.000	0.002	0.001	0.001
Collision with fixed object	0.744	0.150	0.870	0.435	0.585
Collision with other object	0.072	0.014	0.070	0.035	0.050
Other single-vehicle collision	0.040	0.008	0.023	0.012	0.020
Single-vehicle noncollision	0.141	0.028	0.034	0.017	0.045

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	--	--	--	--	2.27	--
Fatal and injury (FI)	--	--	--	--	2.27	--

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	$(1)*(2)*(3)$
4.15	1.35	1.12	6.27

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	0.195	6.27	2.27	1.222			
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.27	1.222			

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	9.515	0.701	10.216	0.015	2.27	0.153
Fatal and injury (FI)	--	--	--	--	2.27	0.153

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)	1.360	3.136	4.496
Head-on collisions (from Worksheet 2D)	0.148	0.195	0.343
Angle collisions (from Worksheet 2D)	1.049	1.584	2.633
Sideswipe (from Worksheet 2D)	0.299	0.208	0.507
Other multiple-vehicle collision (from Worksheet 2D)	0.166	1.370	1.536
Subtotal	3.022	6.493	9.515
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.001	0.001
Collision with animal (from Worksheet 2F)	0.000	0.001	0.001
Collision with fixed object (from Worksheet 2F)	0.150	0.435	0.585
Collision with other object (from Worksheet 2F)	0.014	0.035	0.050
Other single-vehicle collision (from Worksheet 2F)	0.008	0.012	0.020
Single-vehicle noncollision (from Worksheet 2F)	0.028	0.017	0.045
Collision with pedestrian (from Worksheet 2G or 2I)	1.222	0.000	1.222
Collision with bicycle (from Worksheet 2J)	0.153	0.000	0.153
Subtotal	1.577	0.500	2.077
Total	4.599	6.993	11.592

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	11.592
Fatal and injury (FI)	4.599
Property damage only (PDO)	6.993

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections			
General Information		Location Information	
Analyst	SL	Roadway	Jefferson St
Agency or Company	H.W. Lochner	Intersection	Whiting St
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2031
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	4SG
AADT _{major} (veh/day)	AADT _{MAX} = 67,700 (veh/day)	--	16,000
AADT _{minor} (veh/day)	AADT _{MAX} = 33,400 (veh/day)	--	14,625
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C _i		1.00	2.27
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	0
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	0
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 / Permissive
Type of left-turn signal phasing for Leg #3		--	Permissive
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			3,200
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	5
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	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)
1.00	0.97	1.00	1.00	0.91	1.00	0.88

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}

Urban and Suburban Arterial Predictive Method

	from Table 12-10			from Table 12-10	from Equation 12-21	(4) _{TOTAL} *(5)	(7) from Worksheet 2B	2.27	(6)*(7)*(8)
	a	b	c						
Total	-10.99	1.07	0.23	0.39	4.825	1.000	4.825	0.88	9.678
Fatal and Injury (FI)	-13.14	1.18	0.22	0.33	1.481	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.318	1.534	0.88	3.078
Property Damage Only (PDO)	-11.02	1.02	0.24	0.44	3.176	$(5)_{TOTAL}-(5)_{FI}$ 0.682	3.291	0.88	6.600

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bimv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bimv (PDO)} (crashes/year)	(6) 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	3.078	1.000	6.600	9.678
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.450	1.385	0.483	3.188	4.573
Head-on collision	0.049	0.151	0.030	0.198	0.349
Angle collision	0.347	1.068	0.244	1.611	2.678
Sideswipe	0.099	0.305	0.032	0.211	0.516
Other multiple-vehicle collision	0.055	0.169	0.211	1.393	1.562

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1) Crash Severity Level	(2) SPF Coefficients			(3) Overdispersion Parameter, k	(4) Initial N _{bisv}	(5) Proportion of Total Crashes	(6) Adjusted N _{bimv}	(7) Combined CMFs	(8) Calibration Factor, C _i	(9) Predicted N _{bisv}			
	from Table 12-12										(4) _{TOTAL} *(5)	(7) from Worksheet 2B	(6)*(7)*(8)
	a	b	c										
Total	-10.21	0.68	0.27	0.36	0.354	1.000	0.354	0.88	2.27	0.710			
Fatal and Injury (FI)	-9.25	0.43	0.29	0.09	0.100	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.286	0.101	0.88	2.27	0.203			
Property Damage Only (PDO)	-11.34	0.78	0.25	0.44	0.249	$(5)_{TOTAL}-(5)_{FI}$ 0.714	0.253	0.88	2.27	0.507			

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bisv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bisv (PDO)} (crashes/year)	(6) 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	0.203	1.000	0.507	0.710

Urban and Suburban Arterial Predictive Method

		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Collision with parked vehicle	0.001	0.000	0.001	0.001	0.001
Collision with animal	0.002	0.000	0.002	0.001	0.001
Collision with fixed object	0.744	0.151	0.870	0.441	0.592
Collision with other object	0.072	0.015	0.070	0.036	0.050
Other single-vehicle collision	0.040	0.008	0.023	0.012	0.020
Single-vehicle noncollision	0.141	0.029	0.034	0.017	0.046

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	--	--	--	--	2.27	--
Fatal and injury (FI)	--	--	--	--	2.27	--

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	$(1)*(2)*(3)$
4.15	1.35	1.12	6.27

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	$N_{pedbase}$ from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C_i	Predicted N_{pedi}
	from Table 12-14									$(4)*(5)*(6)$
	a	b	c	d	e					
Total	-9.53	0.40	0.26	0.45	0.04	0.24	0.196	6.27	2.27	1.230
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.27	1.230

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	9.678	0.710	10.389	0.015	2.27	0.156
Fatal and injury (FI)	--	--	--	--	2.27	0.156

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)	1.385	3.188	4.573
Head-on collisions (from Worksheet 2D)	0.151	0.198	0.349
Angle collisions (from Worksheet 2D)	1.068	1.611	2.678
Sideswipe (from Worksheet 2D)	0.305	0.211	0.516
Other multiple-vehicle collision (from Worksheet 2D)	0.169	1.393	1.562
Subtotal	3.078	6.600	9.678
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.001	0.001
Collision with animal (from Worksheet 2F)	0.000	0.001	0.001
Collision with fixed object (from Worksheet 2F)	0.151	0.441	0.592
Collision with other object (from Worksheet 2F)	0.015	0.036	0.050
Other single-vehicle collision (from Worksheet 2F)	0.008	0.012	0.020
Single-vehicle noncollision (from Worksheet 2F)	0.029	0.017	0.046
Collision with pedestrian (from Worksheet 2G or 2I)	1.230	0.000	1.230
Collision with bicycle (from Worksheet 2J)	0.156	0.000	0.156
Subtotal	1.589	0.507	2.096
Total	4.667	7.108	11.774

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	11.774
Fatal and injury (FI)	4.667
Property damage only (PDO)	7.108

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections			
General Information		Location Information	
Analyst	SL	Roadway	Jefferson St
Agency or Company	H.W. Lochner	Intersection	Whiting St
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2032
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	4SG
AADT _{major} (veh/day)	AADT _{MAX} = 67,700 (veh/day)	--	16,200
AADT _{minor} (veh/day)	AADT _{MAX} = 33,400 (veh/day)	--	14,850
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C _i		1.00	2.27
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	0
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	0
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 / Permissive
Type of left-turn signal phasing for Leg #3		--	Permissive
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			3,200
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	5
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	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)
1.00	0.97	1.00	1.00	0.91	1.00	0.88

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}

Urban and Suburban Arterial Predictive Method

	from Table 12-10			from Table 12-10	from Equation 12-21		(4) _{TOTAL} *(5)	(7) from Worksheet 2B	2.27	(6)*(7)*(8)
	a	b	c							
Total	-10.99	1.07	0.23	0.39	4.907	1.000	4.907	0.88	2.27	9.842
Fatal and Injury (FI)	-13.14	1.18	0.22	0.33	1.508	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.318	1.562	0.88	2.27	3.133
Property Damage Only (PDO)	-11.02	1.02	0.24	0.44	3.228	$(5)_{TOTAL}-(5)_{FI}$ 0.682	3.344	0.88	2.27	6.709

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	3.133	1.000	6.709	9.842
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.450	1.410	0.483	3.240	4.650
Head-on collision	0.049	0.154	0.030	0.201	0.355
Angle collision	0.347	1.087	0.244	1.637	2.724
Sideswipe	0.099	0.310	0.032	0.215	0.525
Other multiple-vehicle collision	0.055	0.172	0.211	1.416	1.588

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									
	a	b	c							
Total	-10.21	0.68	0.27	0.36	0.359	1.000	0.359	0.88	2.27	0.719
Fatal and Injury (FI)	-9.25	0.43	0.29	0.09	0.101	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.285	0.102	0.88	2.27	0.205
Property Damage Only (PDO)	-11.34	0.78	0.25	0.44	0.252	$(5)_{TOTAL}-(5)_{FI}$ 0.715	0.256	0.88	2.27	0.514

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	0.205	1.000	0.514	0.719

Urban and Suburban Arterial Predictive Method

		$(2) \times (3)_{FI}$		$(4) \times (5)_{PDO}$	$(3) + (5)$
Collision with parked vehicle	0.001	0.000	0.001	0.001	0.001
Collision with animal	0.002	0.000	0.002	0.001	0.001
Collision with fixed object	0.744	0.153	0.870	0.447	0.600
Collision with other object	0.072	0.015	0.070	0.036	0.051
Other single-vehicle collision	0.040	0.008	0.023	0.012	0.020
Single-vehicle noncollision	0.141	0.029	0.034	0.017	0.046

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		$(4) \times (5) \times (6)$
Total	--	--	--	--	2.27	--
Fatal and injury (FI)	--	--	--	--	2.27	--

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	$(1) \times (2) \times (3)$
4.15	1.35	1.12	6.27

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	$N_{pedbase}$ from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C_i	Predicted N_{pedi}
	from Table 12-14									$(4) \times (5) \times (6)$
	a	b	c	d	e					
Total	-9.53	0.40	0.26	0.45	0.04	0.24	0.197	6.27	2.27	1.238
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.27	1.238

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		$(4) \times (5) \times (6)$
Total	9.842	0.719	10.562	0.015	2.27	0.158
Fatal and injury (FI)	--	--	--	--	2.27	0.158

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)	1.410	3.240	4.650
Head-on collisions (from Worksheet 2D)	0.154	0.201	0.355
Angle collisions (from Worksheet 2D)	1.087	1.637	2.724
Sideswipe (from Worksheet 2D)	0.310	0.215	0.525
Other multiple-vehicle collision (from Worksheet 2D)	0.172	1.416	1.588
Subtotal	3.133	6.709	9.842
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.001	0.001
Collision with animal (from Worksheet 2F)	0.000	0.001	0.001
Collision with fixed object (from Worksheet 2F)	0.153	0.447	0.600
Collision with other object (from Worksheet 2F)	0.015	0.036	0.051
Other single-vehicle collision (from Worksheet 2F)	0.008	0.012	0.020
Single-vehicle noncollision (from Worksheet 2F)	0.029	0.017	0.046
Collision with pedestrian (from Worksheet 2G or 2I)	1.238	0.000	1.238
Collision with bicycle (from Worksheet 2J)	0.158	0.000	0.158
Subtotal	1.601	0.514	2.115
Total	4.735	7.223	11.958

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	11.958
Fatal and injury (FI)	4.735
Property damage only (PDO)	7.223

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections			
General Information		Location Information	
Analyst	SL	Roadway	Jefferson St
Agency or Company	H.W. Lochner	Intersection	Whiting St
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2033
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	4SG
AADT _{major} (veh/day)	AADT _{MAX} = 67,700 (veh/day)	--	16,400
AADT _{minor} (veh/day)	AADT _{MAX} = 33,400 (veh/day)	--	15,075
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C _i		1.00	2.27
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	0
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	0
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 / Permissive
Type of left-turn signal phasing for Leg #3		--	Permissive
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			3,200
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	5
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	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)
1.00	0.97	1.00	1.00	0.91	1.00	0.88

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}

Urban and Suburban Arterial Predictive Method

	from Table 12-10			from Table 12-10	from Equation 12-21	(4) _{TOTAL} *(5)	(7) from Worksheet 2B	2.27	(6)*(7)*(8)
	a	b	c						
Total	-10.99	1.07	0.23	0.39	4.989	1.000	4.989	0.88	10.007
Fatal and Injury (FI)	-13.14	1.18	0.22	0.33	1.535	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.319	1.590	0.88	3.189
Property Damage Only (PDO)	-11.02	1.02	0.24	0.44	3.281	$(5)_{TOTAL}-(5)_{FI}$ 0.681	3.399	0.88	6.817

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bimv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bimv (PDO)} (crashes/year)	(6) 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	3.189	1.000	6.817	10.007
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.450	1.435	0.483	3.293	4.728
Head-on collision	0.049	0.156	0.030	0.205	0.361
Angle collision	0.347	1.107	0.244	1.663	2.770
Sideswipe	0.099	0.316	0.032	0.218	0.534
Other multiple-vehicle collision	0.055	0.175	0.211	1.438	1.614

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1) Crash Severity Level	(2) SPF Coefficients			(3) Overdispersion Parameter, k	(4) Initial N _{bisv}	(5) Proportion of Total Crashes	(6) Adjusted N _{bimv}	(7) Combined CMFs	(8) Calibration Factor, C _i	(9) Predicted N _{bisv}			
	from Table 12-12										(4) _{TOTAL} *(5)	(7) from Worksheet 2B	(6)*(7)*(8)
	a	b	c										
Total	-10.21	0.68	0.27	0.36	0.363	1.000	0.363	0.88	2.27	0.728			
Fatal and Injury (FI)	-9.25	0.43	0.29	0.09	0.102	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.285	0.103	0.88	2.27	0.207			
Property Damage Only (PDO)	-11.34	0.78	0.25	0.44	0.255	$(5)_{TOTAL}-(5)_{FI}$ 0.715	0.260	0.88	2.27	0.521			

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bisv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bisv (PDO)} (crashes/year)	(6) 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	0.207	1.000	0.521	0.728

Urban and Suburban Arterial Predictive Method

		$(2) \times (3)_{FI}$		$(4) \times (5)_{PDO}$	$(3) + (5)$
Collision with parked vehicle	0.001	0.000	0.001	0.001	0.001
Collision with animal	0.002	0.000	0.002	0.001	0.001
Collision with fixed object	0.744	0.154	0.870	0.453	0.608
Collision with other object	0.072	0.015	0.070	0.036	0.051
Other single-vehicle collision	0.040	0.008	0.023	0.012	0.020
Single-vehicle noncollision	0.141	0.029	0.034	0.018	0.047

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		$(4) \times (5) \times (6)$
Total	--	--	--	--	2.27	--
Fatal and injury (FI)	--	--	--	--	2.27	--

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	$(1) \times (2) \times (3)$
4.15	1.35	1.12	6.27

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	$(4) \times (5) \times (6)$
	a	b	c	d	e								
Total	-9.53	0.40	0.26	0.45	0.04	0.24	0.198	6.27	2.27	1.245			
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.27	1.245			

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		$(4) \times (5) \times (6)$
Total	10.007	0.728	10.735	0.015	2.27	0.161
Fatal and injury (FI)	--	--	--	--	2.27	0.161

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)	1.435	3.293	4.728
Head-on collisions (from Worksheet 2D)	0.156	0.205	0.361
Angle collisions (from Worksheet 2D)	1.107	1.663	2.770
Sideswipe (from Worksheet 2D)	0.316	0.218	0.534
Other multiple-vehicle collision (from Worksheet 2D)	0.175	1.438	1.614
Subtotal	3.189	6.817	10.007
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.001	0.001
Collision with animal (from Worksheet 2F)	0.000	0.001	0.001
Collision with fixed object (from Worksheet 2F)	0.154	0.453	0.608
Collision with other object (from Worksheet 2F)	0.015	0.036	0.051
Other single-vehicle collision (from Worksheet 2F)	0.008	0.012	0.020
Single-vehicle noncollision (from Worksheet 2F)	0.029	0.018	0.047
Collision with pedestrian (from Worksheet 2G or 2I)	1.245	0.000	1.245
Collision with bicycle (from Worksheet 2J)	0.161	0.000	0.161
Subtotal	1.614	0.521	2.135
Total	4.803	7.338	12.141

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	12.141
Fatal and injury (FI)	4.803
Property damage only (PDO)	7.338

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections			
General Information		Location Information	
Analyst	SL	Roadway	Jefferson St
Agency or Company	H.W. Lochner	Intersection	Whiting St
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2034
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	4SG
AADT _{major} (veh/day)	AADT _{MAX} = 67,700 (veh/day)	--	16,600
AADT _{minor} (veh/day)	AADT _{MAX} = 33,400 (veh/day)	--	15,300
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C _i		1.00	2.27
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	0
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	0
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 / Permissive
Type of left-turn signal phasing for Leg #3		--	Permissive
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			3,200
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	5
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	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)
1.00	0.97	1.00	1.00	0.91	1.00	0.88

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}

Urban and Suburban Arterial Predictive Method

	from Table 12-10			from Table 12-10	from Equation 12-21	(4) _{TOTAL} *(5)	(7) from Worksheet 2B	2.27	(6)*(7)*(8)
	a	b	c						
Total	-10.99	1.07	0.23	0.39	5.071	1.000	5.071	0.88	10.172
Fatal and Injury (FI)	-13.14	1.18	0.22	0.33	1.562	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.319	1.618	0.88	3.246
Property Damage Only (PDO)	-11.02	1.02	0.24	0.44	3.334	$(5)_{TOTAL}-(5)_{FI}$ 0.681	3.453	0.88	6.926

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bimv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bimv (PDO)} (crashes/year)	(6) 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	3.246	1.000	6.926	10.172
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.450	1.461	0.483	3.345	4.806
Head-on collision	0.049	0.159	0.030	0.208	0.367
Angle collision	0.347	1.126	0.244	1.690	2.816
Sideswipe	0.099	0.321	0.032	0.222	0.543
Other multiple-vehicle collision	0.055	0.179	0.211	1.461	1.640

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1) Crash Severity Level	(2) SPF Coefficients			(3) Overdispersion Parameter, k	(4) Initial N _{bisv}	(5) Proportion of Total Crashes	(6) Adjusted N _{bimv}	(7) Combined CMFs	(8) Calibration Factor, C _i	(9) Predicted N _{bisv}			
	from Table 12-12										(4) _{TOTAL} *(5)	(7) from Worksheet 2B	(6)*(7)*(8)
	a	b	c										
Total	-10.21	0.68	0.27	0.36	0.368	1.000	0.368	0.88	2.27	0.737			
Fatal and Injury (FI)	-9.25	0.43	0.29	0.09	0.103	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.284	0.104	0.88	2.27	0.209			
Property Damage Only (PDO)	-11.34	0.78	0.25	0.44	0.259	$(5)_{TOTAL}-(5)_{FI}$ 0.716	0.263	0.88	2.27	0.528			

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bisv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bisv (PDO)} (crashes/year)	(6) 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	0.209	1.000	0.528	0.737

Urban and Suburban Arterial Predictive Method

		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Collision with parked vehicle	0.001	0.000	0.001	0.001	0.001
Collision with animal	0.002	0.000	0.002	0.001	0.001
Collision with fixed object	0.744	0.156	0.870	0.459	0.615
Collision with other object	0.072	0.015	0.070	0.037	0.052
Other single-vehicle collision	0.040	0.008	0.023	0.012	0.021
Single-vehicle noncollision	0.141	0.030	0.034	0.018	0.047

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	--	--	--	--	2.27	--
Fatal and injury (FI)	--	--	--	--	2.27	--

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	$(1)*(2)*(3)$
4.15	1.35	1.12	6.27

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	$N_{pedbase}$ from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C_i	Predicted N_{pedi} $(4)*(5)*(6)$
	from Table 12-14									
	a	b	c	d	e					
Total	-9.53	0.40	0.26	0.45	0.04	0.24	0.200	6.27	2.27	1.253
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.27	1.253

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	10.172	0.737	10.909	0.015	2.27	0.164
Fatal and injury (FI)	--	--	--	--	2.27	0.164

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)	1.461	3.345	4.806
Head-on collisions (from Worksheet 2D)	0.159	0.208	0.367
Angle collisions (from Worksheet 2D)	1.126	1.690	2.816
Sideswipe (from Worksheet 2D)	0.321	0.222	0.543
Other multiple-vehicle collision (from Worksheet 2D)	0.179	1.461	1.640
Subtotal	3.246	6.926	10.172
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.001	0.001
Collision with animal (from Worksheet 2F)	0.000	0.001	0.001
Collision with fixed object (from Worksheet 2F)	0.156	0.459	0.615
Collision with other object (from Worksheet 2F)	0.015	0.037	0.052
Other single-vehicle collision (from Worksheet 2F)	0.008	0.012	0.021
Single-vehicle noncollision (from Worksheet 2F)	0.030	0.018	0.047
Collision with pedestrian (from Worksheet 2G or 2I)	1.253	0.000	1.253
Collision with bicycle (from Worksheet 2J)	0.164	0.000	0.164
Subtotal	1.626	0.528	2.154
Total	4.871	7.454	12.326

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	12.326
Fatal and injury (FI)	4.871
Property damage only (PDO)	7.454

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections			
General Information		Location Information	
Analyst	SL	Roadway	Jefferson St
Agency or Company	H.W. Lochner	Intersection	Whiting St
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2035
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	4SG
AADT _{major} (veh/day)	AADT _{MAX} = 67,700 (veh/day)	--	16,800
AADT _{minor} (veh/day)	AADT _{MAX} = 33,400 (veh/day)	--	15,525
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C _i		1.00	2.27
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	0
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	0
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 / Permissive
Type of left-turn signal phasing for Leg #3		--	Permissive
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			3,200
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	5
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	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
<i>CMF_{1i}</i>	<i>CMF_{2i}</i>	<i>CMF_{3i}</i>	<i>CMF_{4i}</i>	<i>CMF_{5i}</i>	<i>CMF_{6i}</i>	<i>CMF_{COMB}</i>
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)
1.00	0.97	1.00	1.00	0.91	1.00	0.88

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}

Urban and Suburban Arterial Predictive Method

	from Table 12-10			from Table 12-10	from Equation 12-21	(4) _{TOTAL} *(5)	(7) from Worksheet 2B	2.27	(6)*(7)*(8)
	a	b	c						
Total	-10.99	1.07	0.23	0.39	5.154	1.000	5.154	0.88	10.338
Fatal and Injury (FI)	-13.14	1.18	0.22	0.33	1.590	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.319	1.646	0.88	3.302
Property Damage Only (PDO)	-11.02	1.02	0.24	0.44	3.386	$(5)_{TOTAL}-(5)_{FI}$ 0.681	3.507	0.88	7.035

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bimv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bimv (PDO)} (crashes/year)	(6) 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	3.302	1.000	7.035	10.338
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.450	1.486	0.483	3.398	4.884
Head-on collision	0.049	0.162	0.030	0.211	0.373
Angle collision	0.347	1.146	0.244	1.717	2.863
Sideswipe	0.099	0.327	0.032	0.225	0.552
Other multiple-vehicle collision	0.055	0.182	0.211	1.484	1.666

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1) Crash Severity Level	(2) SPF Coefficients			(3) Overdispersion Parameter, k	(4) Initial N _{bisv}	(5) Proportion of Total Crashes	(6) Adjusted N _{bimv}	(7) Combined CMFs	(8) Calibration Factor, C _i	(9) Predicted N _{bisv}			
	from Table 12-12										(4) _{TOTAL} *(5)	(7) from Worksheet 2B	(6)*(7)*(8)
	a	b	c										
Total	-10.21	0.68	0.27	0.36	0.372	1.000	0.372	0.88	2.27	0.746			
Fatal and Injury (FI)	-9.25	0.43	0.29	0.09	0.104	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.283	0.105	0.88	2.27	0.211			
Property Damage Only (PDO)	-11.34	0.78	0.25	0.44	0.262	$(5)_{TOTAL}-(5)_{FI}$ 0.717	0.267	0.88	2.27	0.535			

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bisv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bisv (PDO)} (crashes/year)	(6) 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	0.211	1.000	0.535	0.746

Urban and Suburban Arterial Predictive Method

		$(2) \times (3)_{FI}$		$(4) \times (5)_{PDO}$	$(3) + (5)$
Collision with parked vehicle	0.001	0.000	0.001	0.001	0.001
Collision with animal	0.002	0.000	0.002	0.001	0.001
Collision with fixed object	0.744	0.157	0.870	0.466	0.623
Collision with other object	0.072	0.015	0.070	0.037	0.053
Other single-vehicle collision	0.040	0.008	0.023	0.012	0.021
Single-vehicle noncollision	0.141	0.030	0.034	0.018	0.048

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		$(4) \times (5) \times (6)$
Total	--	--	--	--	2.27	--
Fatal and injury (FI)	--	--	--	--	2.27	--

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	$(1) \times (2) \times (3)$
4.15	1.35	1.12	6.27

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	$N_{pedbase}$ from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C_i	Predicted N_{pedi}
	from Table 12-14									$(4) \times (5) \times (6)$
	a	b	c	d	e					
Total	-9.53	0.40	0.26	0.45	0.04	0.24	0.201	6.27	2.27	1.260
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.27	1.260

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		$(4) \times (5) \times (6)$
Total	10.338	0.746	11.084	0.015	2.27	0.166
Fatal and injury (FI)	--	--	--	--	2.27	0.166

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)	1.486	3.398	4.884
Head-on collisions (from Worksheet 2D)	0.162	0.211	0.373
Angle collisions (from Worksheet 2D)	1.146	1.717	2.863
Sideswipe (from Worksheet 2D)	0.327	0.225	0.552
Other multiple-vehicle collision (from Worksheet 2D)	0.182	1.484	1.666
Subtotal	3.302	7.035	10.338
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.001	0.001
Collision with animal (from Worksheet 2F)	0.000	0.001	0.001
Collision with fixed object (from Worksheet 2F)	0.157	0.466	0.623
Collision with other object (from Worksheet 2F)	0.015	0.037	0.053
Other single-vehicle collision (from Worksheet 2F)	0.008	0.012	0.021
Single-vehicle noncollision (from Worksheet 2F)	0.030	0.018	0.048
Collision with pedestrian (from Worksheet 2G or 2I)	1.260	0.000	1.260
Collision with bicycle (from Worksheet 2J)	0.166	0.000	0.166
Subtotal	1.638	0.535	2.173
Total	4.940	7.571	12.511

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	12.511
Fatal and injury (FI)	4.940
Property damage only (PDO)	7.571

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections			
General Information		Location Information	
Analyst	SL	Roadway	Jefferson St
Agency or Company	H.W. Lochner	Intersection	Whiting St
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2036
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	4SG
AADT _{major} (veh/day)	AADT _{MAX} = 67,700 (veh/day)	--	17,000
AADT _{minor} (veh/day)	AADT _{MAX} = 33,400 (veh/day)	--	15,750
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C _i		1.00	2.27
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	0
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	0
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 / Permissive
Type of left-turn signal phasing for Leg #3		--	Permissive
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			3,200
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	5
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	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)
1.00	0.97	1.00	1.00	0.91	1.00	0.88

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}

Urban and Suburban Arterial Predictive Method

	from Table 12-10			from Table 12-10	from Equation 12-21	(4) _{TOTAL} *(5)	(7) from Worksheet 2B	2.27	(6)*(7)*(8)
	a	b	c						
Total	-10.99	1.07	0.23	0.39	5.237	1.000	5.237	0.88	10.504
Fatal and Injury (FI)	-13.14	1.18	0.22	0.33	1.617	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.320	1.675	0.88	3.359
Property Damage Only (PDO)	-11.02	1.02	0.24	0.44	3.439	$(5)_{TOTAL}-(5)_{FI}$ 0.680	3.562	0.88	7.145

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	3.359	1.000	7.145	10.504
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.450	1.512	0.483	3.451	4.963
Head-on collision	0.049	0.165	0.030	0.214	0.379
Angle collision	0.347	1.166	0.244	1.743	2.909
Sideswipe	0.099	0.333	0.032	0.229	0.561
Other multiple-vehicle collision	0.055	0.185	0.211	1.508	1.692

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									
	a	b	c							
Total	-10.21	0.68	0.27	0.36	0.377	1.000	0.377	0.88	2.27	0.755
Fatal and Injury (FI)	-9.25	0.43	0.29	0.09	0.104	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.282	0.106	0.88	2.27	0.213
Property Damage Only (PDO)	-11.34	0.78	0.25	0.44	0.266	$(5)_{TOTAL}-(5)_{FI}$ 0.718	0.270	0.88	2.27	0.542

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	0.213	1.000	0.542	0.755

Urban and Suburban Arterial Predictive Method

		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Collision with parked vehicle	0.001	0.000	0.001	0.001	0.001
Collision with animal	0.002	0.000	0.002	0.001	0.002
Collision with fixed object	0.744	0.159	0.870	0.472	0.630
Collision with other object	0.072	0.015	0.070	0.038	0.053
Other single-vehicle collision	0.040	0.009	0.023	0.012	0.021
Single-vehicle noncollision	0.141	0.030	0.034	0.018	0.049

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	--	--	--	--	2.27	--
Fatal and injury (FI)	--	--	--	--	2.27	--

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	$(1)*(2)*(3)$
4.15	1.35	1.12	6.27

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	$N_{pedbase}$ from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C_i	Predicted N_{pedi}
	from Table 12-14									$(4)*(5)*(6)$
	a	b	c	d	e					
Total	-9.53	0.40	0.26	0.45	0.04	0.24	0.202	6.27	2.27	1.268
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.27	1.268

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	10.504	0.755	11.260	0.015	2.27	0.169
Fatal and injury (FI)	--	--	--	--	2.27	0.169

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)	1.512	3.451	4.963
Head-on collisions (from Worksheet 2D)	0.165	0.214	0.379
Angle collisions (from Worksheet 2D)	1.166	1.743	2.909
Sideswipe (from Worksheet 2D)	0.333	0.229	0.561
Other multiple-vehicle collision (from Worksheet 2D)	0.185	1.508	1.692
Subtotal	3.359	7.145	10.504
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.001	0.001
Collision with animal (from Worksheet 2F)	0.000	0.001	0.002
Collision with fixed object (from Worksheet 2F)	0.159	0.472	0.630
Collision with other object (from Worksheet 2F)	0.015	0.038	0.053
Other single-vehicle collision (from Worksheet 2F)	0.009	0.012	0.021
Single-vehicle noncollision (from Worksheet 2F)	0.030	0.018	0.049
Collision with pedestrian (from Worksheet 2G or 2I)	1.268	0.000	1.268
Collision with bicycle (from Worksheet 2J)	0.169	0.000	0.169
Subtotal	1.650	0.542	2.192
Total	5.009	7.687	12.696

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	12.696
Fatal and injury (FI)	5.009
Property damage only (PDO)	7.687

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections			
General Information		Location Information	
Analyst	SL	Roadway	Jefferson St
Agency or Company	H.W. Lochner	Intersection	Whiting St
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2037
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	4SG
AADT _{major} (veh/day)	AADT _{MAX} = 67,700 (veh/day)	--	17,200
AADT _{minor} (veh/day)	AADT _{MAX} = 33,400 (veh/day)	--	15,975
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C _i		1.00	2.27
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	0
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	0
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 / Permissive
Type of left-turn signal phasing for Leg #3		--	Permissive
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			3,200
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	5
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	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)
1.00	0.97	1.00	1.00	0.91	1.00	0.88

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}

Urban and Suburban Arterial Predictive Method

	from Table 12-10			from Table 12-10	from Equation 12-21	(4) _{TOTAL} *(5)	(7) from Worksheet 2B	2.27	(6)*(7)*(8)
	a	b	c						
Total	-10.99	1.07	0.23	0.39	5.320	1.000	5.320	0.88	10.671
Fatal and Injury (FI)	-13.14	1.18	0.22	0.33	1.645	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.320	1.703	0.88	3.416
Property Damage Only (PDO)	-11.02	1.02	0.24	0.44	3.493	$(5)_{TOTAL}-(5)_{FI}$ 0.680	3.617	0.88	7.255

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bimv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bimv (PDO)} (crashes/year)	(6) 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	3.416	1.000	7.255	10.671
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.450	1.537	0.483	3.504	5.042
Head-on collision	0.049	0.167	0.030	0.218	0.385
Angle collision	0.347	1.185	0.244	1.770	2.956
Sideswipe	0.099	0.338	0.032	0.232	0.570
Other multiple-vehicle collision	0.055	0.188	0.211	1.531	1.719

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1) Crash Severity Level	(2) SPF Coefficients			(3) Overdispersion Parameter, k	(4) Initial N _{bisv}	(5) Proportion of Total Crashes	(6) Adjusted N _{bimv}	(7) Combined CMFs	(8) Calibration Factor, C _i	(9) Predicted N _{bisv}			
	from Table 12-12										(4) _{TOTAL} *(5)	(7) from Worksheet 2B	(6)*(7)*(8)
	a	b	c										
Total	-10.21	0.68	0.27	0.36	0.381	1.000	0.381	0.88	2.27	0.764			
Fatal and Injury (FI)	-9.25	0.43	0.29	0.09	0.105	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.282	0.107	0.88	2.27	0.215			
Property Damage Only (PDO)	-11.34	0.78	0.25	0.44	0.269	$(5)_{TOTAL}-(5)_{FI}$ 0.718	0.274	0.88	2.27	0.549			

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bisv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bisv (PDO)} (crashes/year)	(6) 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	0.215	1.000	0.549	0.764

Urban and Suburban Arterial Predictive Method

		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Collision with parked vehicle	0.001	0.000	0.001	0.001	0.001
Collision with animal	0.002	0.000	0.002	0.001	0.002
Collision with fixed object	0.744	0.160	0.870	0.478	0.638
Collision with other object	0.072	0.015	0.070	0.038	0.054
Other single-vehicle collision	0.040	0.009	0.023	0.013	0.021
Single-vehicle noncollision	0.141	0.030	0.034	0.019	0.049

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	--	--	--	--	2.27	--
Fatal and injury (FI)	--	--	--	--	2.27	--

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	$(1)*(2)*(3)$
4.15	1.35	1.12	6.27

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	$N_{pedbase}$ from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C_i	Predicted N_{pedi} $(4)*(5)*(6)$
	from Table 12-14									
	a	b	c	d	e					
Total	-9.53	0.40	0.26	0.45	0.04	0.24	0.203	6.27	2.27	1.275
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.27	1.275

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	10.671	0.764	11.436	0.015	2.27	0.172
Fatal and injury (FI)	--	--	--	--	2.27	0.172

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)	1.537	3.504	5.042
Head-on collisions (from Worksheet 2D)	0.167	0.218	0.385
Angle collisions (from Worksheet 2D)	1.185	1.770	2.956
Sideswipe (from Worksheet 2D)	0.338	0.232	0.570
Other multiple-vehicle collision (from Worksheet 2D)	0.188	1.531	1.719
Subtotal	3.416	7.255	10.671
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.001	0.001
Collision with animal (from Worksheet 2F)	0.000	0.001	0.002
Collision with fixed object (from Worksheet 2F)	0.160	0.478	0.638
Collision with other object (from Worksheet 2F)	0.015	0.038	0.054
Other single-vehicle collision (from Worksheet 2F)	0.009	0.013	0.021
Single-vehicle noncollision (from Worksheet 2F)	0.030	0.019	0.049
Collision with pedestrian (from Worksheet 2G or 2I)	1.275	0.000	1.275
Collision with bicycle (from Worksheet 2J)	0.172	0.000	0.172
Subtotal	1.662	0.549	2.211
Total	5.078	7.804	12.882

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	12.882
Fatal and injury (FI)	5.078
Property damage only (PDO)	7.804

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections			
General Information		Location Information	
Analyst	SL	Roadway	Jefferson St
Agency or Company	H.W. Lochner	Intersection	Whiting St
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2038
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	4SG
AADT _{major} (veh/day)	AADT _{MAX} = 67,700 (veh/day)	--	17,400
AADT _{minor} (veh/day)	AADT _{MAX} = 33,400 (veh/day)	--	16,200
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C _i		1.00	2.27
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	0
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	0
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 / Permissive
Type of left-turn signal phasing for Leg #3		--	Permissive
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			3,200
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	5
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	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)
1.00	0.97	1.00	1.00	0.91	1.00	0.88

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}

Urban and Suburban Arterial Predictive Method

	from Table 12-10			from Table 12-10	from Equation 12-21	(4) _{TOTAL} *(5)	(7) from Worksheet 2B	2.27	(6)*(7)*(8)
	a	b	c						
Total	-10.99	1.07	0.23	0.39	5.404	1.000	5.404	0.88	10.839
Fatal and Injury (FI)	-13.14	1.18	0.22	0.33	1.672	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.320	1.732	0.88	3.474
Property Damage Only (PDO)	-11.02	1.02	0.24	0.44	3.546	$(5)_{TOTAL}-(5)_{FI}$ 0.680	3.672	0.88	7.365

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bimv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bimv (PDO)} (crashes/year)	(6) 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	3.474	1.000	7.365	10.839
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.450	1.563	0.483	3.557	5.121
Head-on collision	0.049	0.170	0.030	0.221	0.391
Angle collision	0.347	1.205	0.244	1.797	3.002
Sideswipe	0.099	0.344	0.032	0.236	0.580
Other multiple-vehicle collision	0.055	0.191	0.211	1.554	1.745

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1) Crash Severity Level	(2) SPF Coefficients			(3) Overdispersion Parameter, k	(4) Initial N _{bisv}	(5) Proportion of Total Crashes	(6) Adjusted N _{bimv}	(7) Combined CMFs	(8) Calibration Factor, C _i	(9) Predicted N _{bisv}			
	from Table 12-12										(4) _{TOTAL} *(5)	(7) from Worksheet 2B	(6)*(7)*(8)
	a	b	c										
Total	-10.21	0.68	0.27	0.36	0.385	1.000	0.385	0.88	2.27	0.773			
Fatal and Injury (FI)	-9.25	0.43	0.29	0.09	0.106	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.281	0.108	0.88	2.27	0.217			
Property Damage Only (PDO)	-11.34	0.78	0.25	0.44	0.272	$(5)_{TOTAL}-(5)_{FI}$ 0.719	0.277	0.88	2.27	0.556			

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bisv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bisv (PDO)} (crashes/year)	(6) 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	0.217	1.000	0.556	0.773

Urban and Suburban Arterial Predictive Method

		$(2) \times (3)_{FI}$		$(4) \times (5)_{PDO}$	$(3) + (5)$
Collision with parked vehicle	0.001	0.000	0.001	0.001	0.001
Collision with animal	0.002	0.000	0.002	0.001	0.002
Collision with fixed object	0.744	0.162	0.870	0.484	0.645
Collision with other object	0.072	0.016	0.070	0.039	0.055
Other single-vehicle collision	0.040	0.009	0.023	0.013	0.021
Single-vehicle noncollision	0.141	0.031	0.034	0.019	0.050

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		$(4) \times (5) \times (6)$
Total	--	--	--	--	2.27	--
Fatal and injury (FI)	--	--	--	--	2.27	--

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	$(1) \times (2) \times (3)$
4.15	1.35	1.12	6.27

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	$N_{pedbase}$ from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C_i	Predicted N_{pedi} $(4) \times (5) \times (6)$
	from Table 12-14									
	a	b	c	d	e					
Total	-9.53	0.40	0.26	0.45	0.04	0.24	0.204	6.27	2.27	1.282
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.27	1.282

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		$(4) \times (5) \times (6)$
Total	10.839	0.773	11.612	0.015	2.27	0.174
Fatal and injury (FI)	--	--	--	--	2.27	0.174

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)	1.563	3.557	5.121
Head-on collisions (from Worksheet 2D)	0.170	0.221	0.391
Angle collisions (from Worksheet 2D)	1.205	1.797	3.002
Sideswipe (from Worksheet 2D)	0.344	0.236	0.580
Other multiple-vehicle collision (from Worksheet 2D)	0.191	1.554	1.745
Subtotal	3.474	7.365	10.839
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.001	0.001
Collision with animal (from Worksheet 2F)	0.000	0.001	0.002
Collision with fixed object (from Worksheet 2F)	0.162	0.484	0.645
Collision with other object (from Worksheet 2F)	0.016	0.039	0.055
Other single-vehicle collision (from Worksheet 2F)	0.009	0.013	0.021
Single-vehicle noncollision (from Worksheet 2F)	0.031	0.019	0.050
Collision with pedestrian (from Worksheet 2G or 2I)	1.282	0.000	1.282
Collision with bicycle (from Worksheet 2J)	0.174	0.000	0.174
Subtotal	1.674	0.556	2.230
Total	5.148	7.921	13.069

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	13.069
Fatal and injury (FI)	5.148
Property damage only (PDO)	7.921

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections			
General Information		Location Information	
Analyst	SL	Roadway	Jefferson St
Agency or Company	H.W. Lochner	Intersection	Whiting St
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2039
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	4SG
AA _{major} (veh/day)	AA _{MAX} = 67,700 (veh/day)	--	17,600
AA _{minor} (veh/day)	AA _{MAX} = 33,400 (veh/day)	--	16,425
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C _i		1.00	2.27
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	0
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	0
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 / Permissive
Type of left-turn signal phasing for Leg #3		--	Permissive
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			3,200
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	5
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	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)
1.00	0.97	1.00	1.00	0.91	1.00	0.88

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}

Urban and Suburban Arterial Predictive Method

	from Table 12-10			from Table 12-10	from Equation 12-21	(4) _{TOTAL} *(5)	(7) from Worksheet 2B	2.27	(6)*(7)*(8)
	a	b	c						
Total	-10.99	1.07	0.23	0.39	5.487	1.000	5.487	0.88	11.007
Fatal and Injury (FI)	-13.14	1.18	0.22	0.33	1.700	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.321	1.760	0.88	3.531
Property Damage Only (PDO)	-11.02	1.02	0.24	0.44	3.599	$(5)_{TOTAL}-(5)_{FI}$ 0.679	3.727	0.88	7.476

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bimv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bimv (PDO)} (crashes/year)	(6) 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	3.531	1.000	7.476	11.007
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.450	1.589	0.483	3.611	5.200
Head-on collision	0.049	0.173	0.030	0.224	0.397
Angle collision	0.347	1.225	0.244	1.824	3.049
Sideswipe	0.099	0.350	0.032	0.239	0.589
Other multiple-vehicle collision	0.055	0.194	0.211	1.577	1.772

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1) Crash Severity Level	(2) SPF Coefficients			(3) Overdispersion Parameter, k	(4) Initial N _{bisv}	(5) Proportion of Total Crashes	(6) Adjusted N _{bimv}	(7) Combined CMFs	(8) Calibration Factor, C _i	(9) Predicted N _{bisv}			
	from Table 12-12										(4) _{TOTAL} *(5)	(7) from Worksheet 2B	(6)*(7)*(8)
	a	b	c										
Total	-10.21	0.68	0.27	0.36	0.390	1.000	0.390	0.88	2.27	0.782			
Fatal and Injury (FI)	-9.25	0.43	0.29	0.09	0.107	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.280	0.109	0.88	2.27	0.219			
Property Damage Only (PDO)	-11.34	0.78	0.25	0.44	0.276	$(5)_{TOTAL}-(5)_{FI}$ 0.720	0.281	0.88	2.27	0.563			

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bisv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bisv (PDO)} (crashes/year)	(6) 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	0.219	1.000	0.563	0.782

Urban and Suburban Arterial Predictive Method

		$(2) \times (3)_{FI}$		$(4) \times (5)_{PDO}$	$(3) + (5)$
Collision with parked vehicle	0.001	0.000	0.001	0.001	0.001
Collision with animal	0.002	0.000	0.002	0.001	0.002
Collision with fixed object	0.744	0.163	0.870	0.490	0.653
Collision with other object	0.072	0.016	0.070	0.039	0.055
Other single-vehicle collision	0.040	0.009	0.023	0.013	0.022
Single-vehicle noncollision	0.141	0.031	0.034	0.019	0.050

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		$(4) \times (5) \times (6)$
Total	--	--	--	--	2.27	--
Fatal and injury (FI)	--	--	--	--	2.27	--

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	$(1) \times (2) \times (3)$
4.15	1.35	1.12	6.27

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	$(4) \times (5) \times (6)$
	a	b	c	d	e								
Total	-9.53	0.40	0.26	0.45	0.04	0.24	0.206	6.27	2.27	1.290			
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.27	1.290			

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		$(4) \times (5) \times (6)$
Total	11.007	0.782	11.789	0.015	2.27	0.177
Fatal and injury (FI)	--	--	--	--	2.27	0.177

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)	1.589	3.611	5.200
Head-on collisions (from Worksheet 2D)	0.173	0.224	0.397
Angle collisions (from Worksheet 2D)	1.225	1.824	3.049
Sideswipe (from Worksheet 2D)	0.350	0.239	0.589
Other multiple-vehicle collision (from Worksheet 2D)	0.194	1.577	1.772
Subtotal	3.531	7.476	11.007
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.001	0.001
Collision with animal (from Worksheet 2F)	0.000	0.001	0.002
Collision with fixed object (from Worksheet 2F)	0.163	0.490	0.653
Collision with other object (from Worksheet 2F)	0.016	0.039	0.055
Other single-vehicle collision (from Worksheet 2F)	0.009	0.013	0.022
Single-vehicle noncollision (from Worksheet 2F)	0.031	0.019	0.050
Collision with pedestrian (from Worksheet 2G or 2I)	1.290	0.000	1.290
Collision with bicycle (from Worksheet 2J)	0.177	0.000	0.177
Subtotal	1.686	0.563	2.249
Total	5.217	8.039	13.256

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	13.256
Fatal and injury (FI)	5.217
Property damage only (PDO)	8.039

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections			
General Information		Location Information	
Analyst	SL	Roadway	Jefferson St
Agency or Company	H.W. Lochner	Intersection	Whiting St
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2040
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	4SG
AADT _{major} (veh/day)	AADT _{MAX} = 67,700 (veh/day)	--	17,800
AADT _{minor} (veh/day)	AADT _{MAX} = 33,400 (veh/day)	--	16,650
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C _i		1.00	2.27
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	0
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	0
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 / Permissive
Type of left-turn signal phasing for Leg #3		--	Permissive
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			3,200
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	5
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	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)
1.00	0.97	1.00	1.00	0.91	1.00	0.88

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}

Urban and Suburban Arterial Predictive Method

	from Table 12-10			from Table 12-10	from Equation 12-21	(4) _{TOTAL} *(5)	(7) from Worksheet 2B	2.27	(6)*(7)*(8)
	a	b	c						
Total	-10.99	1.07	0.23	0.39	5.572	1.000	5.572	0.88	11.176
Fatal and Injury (FI)	-13.14	1.18	0.22	0.33	1.728	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.321	1.789	0.88	3.589
Property Damage Only (PDO)	-11.02	1.02	0.24	0.44	3.653	$(5)_{TOTAL}-(5)_{FI}$ 0.679	3.782	0.88	7.587

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bimv (FI)} (crashes/year)	(4) Proportion of Collision Type (PDO)	(5) Predicted N _{bimv (PDO)} (crashes/year)	(6) 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	3.589	1.000	7.587	11.176
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.450	1.615	0.483	3.664	5.280
Head-on collision	0.049	0.176	0.030	0.228	0.403
Angle collision	0.347	1.245	0.244	1.851	3.097
Sideswipe	0.099	0.355	0.032	0.243	0.598
Other multiple-vehicle collision	0.055	0.197	0.211	1.601	1.798

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1) Crash Severity Level	(2) SPF Coefficients			(3) Overdispersion Parameter, k	(4) Initial N _{bisv}	(5) Proportion of Total Crashes	(6) Adjusted N _{bimv}	(7) Combined CMFs	(8) Calibration Factor, C _i	(9) Predicted N _{bisv}			
	from Table 12-12										(4) _{TOTAL} *(5)	(7) from Worksheet 2B	(6)*(7)*(8)
	a	b	c										
Total	-10.21	0.68	0.27	0.36	0.394	1.000	0.394	0.88	2.27	0.791			
Fatal and Injury (FI)	-9.25	0.43	0.29	0.09	0.108	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.280	0.110	0.88	2.27	0.221			
Property Damage Only (PDO)	-11.34	0.78	0.25	0.44	0.279	$(5)_{TOTAL}-(5)_{FI}$ 0.720	0.284	0.88	2.27	0.570			

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bisv (FI)} (crashes/year)	(4) Proportion of Collision Type (PDO)	(5) Predicted N _{bisv (PDO)} (crashes/year)	(6) 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	0.221	1.000	0.570	0.791

Urban and Suburban Arterial Predictive Method

		$(2) \times (3)_{FI}$		$(4) \times (5)_{PDO}$	$(3) + (5)$
Collision with parked vehicle	0.001	0.000	0.001	0.001	0.001
Collision with animal	0.002	0.000	0.002	0.001	0.002
Collision with fixed object	0.744	0.165	0.870	0.496	0.660
Collision with other object	0.072	0.016	0.070	0.040	0.056
Other single-vehicle collision	0.040	0.009	0.023	0.013	0.022
Single-vehicle noncollision	0.141	0.031	0.034	0.019	0.051

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		$(4) \times (5) \times (6)$
Total	--	--	--	--	2.27	--
Fatal and injury (FI)	--	--	--	--	2.27	--

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	$(1) \times (2) \times (3)$
4.15	1.35	1.12	6.27

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	$(4) \times (5) \times (6)$
	a	b	c	d	e								
Total	-9.53	0.40	0.26	0.45	0.04	0.24	0.207	6.27	2.27	1.297			
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.27	1.297			

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		$(4) \times (5) \times (6)$
Total	11.176	0.791	11.967	0.015	2.27	0.180
Fatal and injury (FI)	--	--	--	--	2.27	0.180

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)	1.615	3.664	5.280
Head-on collisions (from Worksheet 2D)	0.176	0.228	0.403
Angle collisions (from Worksheet 2D)	1.245	1.851	3.097
Sideswipe (from Worksheet 2D)	0.355	0.243	0.598
Other multiple-vehicle collision (from Worksheet 2D)	0.197	1.601	1.798
Subtotal	3.589	7.587	11.176
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.001	0.001
Collision with animal (from Worksheet 2F)	0.000	0.001	0.002
Collision with fixed object (from Worksheet 2F)	0.165	0.496	0.660
Collision with other object (from Worksheet 2F)	0.016	0.040	0.056
Other single-vehicle collision (from Worksheet 2F)	0.009	0.013	0.022
Single-vehicle noncollision (from Worksheet 2F)	0.031	0.019	0.051
Collision with pedestrian (from Worksheet 2G or 2I)	1.297	0.000	1.297
Collision with bicycle (from Worksheet 2J)	0.180	0.000	0.180
Subtotal	1.698	0.570	2.268
Total	5.287	8.157	13.443

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	13.443
Fatal and injury (FI)	5.287
Property damage only (PDO)	8.157

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections			
General Information		Location Information	
Analyst	SL	Roadway	Jefferson St
Agency or Company	H.W. Lochner	Intersection	Whiting St
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2041
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	4SG
AADT _{major} (veh/day)	AADT _{MAX} = 67,700 (veh/day)	--	18,000
AADT _{minor} (veh/day)	AADT _{MAX} = 33,400 (veh/day)	--	16,875
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C _i		1.00	2.27
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	0
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	0
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 / Permissive
Type of left-turn signal phasing for Leg #3		--	Permissive
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			3,200
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	5
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	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)
1.00	0.97	1.00	1.00	0.91	1.00	0.88

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}

Urban and Suburban Arterial Predictive Method

	from Table 12-10			from Table 12-10	from Equation 12-21	(4) _{TOTAL} *(5)	(7) from Worksheet 2B	2.27	(6)*(7)*(8)
	a	b	c						
Total	-10.99	1.07	0.23	0.39	5.656	1.000	5.656	0.88	11.345
Fatal and Injury (FI)	-13.14	1.18	0.22	0.33	1.756	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.321	1.818	0.88	3.647
Property Damage Only (PDO)	-11.02	1.02	0.24	0.44	3.707	$(5)_{TOTAL}-(5)_{FI}$ 0.679	3.838	0.88	7.698

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bimv (FI)} (crashes/year)	(4) Proportion of Collision Type (PDO)	(5) Predicted N _{bimv (PDO)} (crashes/year)	(6) 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	3.647	1.000	7.698	11.345
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.450	1.641	0.483	3.718	5.359
Head-on collision	0.049	0.179	0.030	0.231	0.410
Angle collision	0.347	1.266	0.244	1.878	3.144
Sideswipe	0.099	0.361	0.032	0.246	0.607
Other multiple-vehicle collision	0.055	0.201	0.211	1.624	1.825

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1) Crash Severity Level	(2) SPF Coefficients			(3) Overdispersion Parameter, k	(4) Initial N _{bisv}	(5) Proportion of Total Crashes	(6) Adjusted N _{bimv}	(7) Combined CMFs	(8) Calibration Factor, C _i	(9) Predicted N _{bisv}			
	from Table 12-12										(4) _{TOTAL} *(5)	(7) from Worksheet 2B	(6)*(7)*(8)
	a	b	c										
Total	-10.21	0.68	0.27	0.36	0.399	1.000	0.399	0.88	2.27	0.800			
Fatal and Injury (FI)	-9.25	0.43	0.29	0.09	0.109	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.279	0.111	0.88	2.27	0.223			
Property Damage Only (PDO)	-11.34	0.78	0.25	0.44	0.283	$(5)_{TOTAL}-(5)_{FI}$ 0.721	0.288	0.88	2.27	0.577			

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bisv (FI)} (crashes/year)	(4) Proportion of Collision Type (PDO)	(5) Predicted N _{bisv (PDO)} (crashes/year)	(6) 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	0.223	1.000	0.577	0.800

Urban and Suburban Arterial Predictive Method

		$(2) \times (3)_{FI}$		$(4) \times (5)_{PDO}$	$(3) + (5)$
Collision with parked vehicle	0.001	0.000	0.001	0.001	0.001
Collision with animal	0.002	0.000	0.002	0.001	0.002
Collision with fixed object	0.744	0.166	0.870	0.502	0.668
Collision with other object	0.072	0.016	0.070	0.040	0.056
Other single-vehicle collision	0.040	0.009	0.023	0.013	0.022
Single-vehicle noncollision	0.141	0.031	0.034	0.020	0.051

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		$(4) \times (5) \times (6)$
Total	--	--	--	--	2.27	--
Fatal and injury (FI)	--	--	--	--	2.27	--

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	$(1) \times (2) \times (3)$
4.15	1.35	1.12	6.27

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	$N_{pedbase}$ from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C_i	Predicted N_{pedi}
	from Table 12-14									$(4) \times (5) \times (6)$
	a	b	c	d	e					
Total	-9.53	0.40	0.26	0.45	0.04	0.24	0.208	6.27	2.27	1.304
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.27	1.304

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		$(4) \times (5) \times (6)$
Total	11.345	0.800	12.145	0.015	2.27	0.182
Fatal and injury (FI)	--	--	--	--	2.27	0.182

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)	1.641	3.718	5.359
Head-on collisions (from Worksheet 2D)	0.179	0.231	0.410
Angle collisions (from Worksheet 2D)	1.266	1.878	3.144
Sideswipe (from Worksheet 2D)	0.361	0.246	0.607
Other multiple-vehicle collision (from Worksheet 2D)	0.201	1.624	1.825
Subtotal	3.647	7.698	11.345
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.001	0.001
Collision with animal (from Worksheet 2F)	0.000	0.001	0.002
Collision with fixed object (from Worksheet 2F)	0.166	0.502	0.668
Collision with other object (from Worksheet 2F)	0.016	0.040	0.056
Other single-vehicle collision (from Worksheet 2F)	0.009	0.013	0.022
Single-vehicle noncollision (from Worksheet 2F)	0.031	0.020	0.051
Collision with pedestrian (from Worksheet 2G or 2I)	1.304	0.000	1.304
Collision with bicycle (from Worksheet 2J)	0.182	0.000	0.182
Subtotal	1.709	0.577	2.286
Total	5.357	8.275	13.632

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	13.632
Fatal and injury (FI)	5.357
Property damage only (PDO)	8.275

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections			
General Information		Location Information	
Analyst	SL	Roadway	Jefferson St
Agency or Company	H.W. Lochner	Intersection	Whiting St
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2042
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	4SG
AADT _{major} (veh/day)	AADT _{MAX} = 67,700 (veh/day)	--	18,200
AADT _{minor} (veh/day)	AADT _{MAX} = 33,400 (veh/day)	--	17,100
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C _i		1.00	2.27
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	0
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	0
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 / Permissive
Type of left-turn signal phasing for Leg #3		--	Permissive
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			3,200
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	5
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	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)
1.00	0.97	1.00	1.00	0.91	1.00	0.88

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}

Urban and Suburban Arterial Predictive Method

	from Table 12-10			from Table 12-10	from Equation 12-21	(4) _{TOTAL} *(5)	(7) from Worksheet 2B	2.27	(6)*(7)*(8)
	a	b	c						
Total	-10.99	1.07	0.23	0.39	5.741	1.000	5.741	0.88	11.515
Fatal and Injury (FI)	-13.14	1.18	0.22	0.33	1.784	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.322	1.847	0.88	3.706
Property Damage Only (PDO)	-11.02	1.02	0.24	0.44	3.761	$(5)_{TOTAL}-(5)_{FI}$ 0.678	3.893	0.88	7.810

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bimv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bimv (PDO)} (crashes/year)	(6) 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	3.706	1.000	7.810	11.515
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.450	1.668	0.483	3.772	5.440
Head-on collision	0.049	0.182	0.030	0.234	0.416
Angle collision	0.347	1.286	0.244	1.906	3.191
Sideswipe	0.099	0.367	0.032	0.250	0.617
Other multiple-vehicle collision	0.055	0.204	0.211	1.648	1.852

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1) Crash Severity Level	(2) SPF Coefficients			(3) Overdispersion Parameter, k	(4) Initial N _{bisv}	(5) Proportion of Total Crashes	(6) Adjusted N _{bimv}	(7) Combined CMFs	(8) Calibration Factor, C _i	(9) Predicted N _{bisv}			
	from Table 12-12										(4) _{TOTAL} *(5)	(7) from Worksheet 2B	(6)*(7)*(8)
	a	b	c										
Total	-10.21	0.68	0.27	0.36	0.403	1.000	0.403	0.88	2.27	0.809			
Fatal and Injury (FI)	-9.25	0.43	0.29	0.09	0.110	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.278	0.112	0.88	2.27	0.225			
Property Damage Only (PDO)	-11.34	0.78	0.25	0.44	0.286	$(5)_{TOTAL}-(5)_{FI}$ 0.722	0.291	0.88	2.27	0.584			

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bisv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bisv (PDO)} (crashes/year)	(6) 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	0.225	1.000	0.584	0.809

Urban and Suburban Arterial Predictive Method

		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Collision with parked vehicle	0.001	0.000	0.001	0.001	0.001
Collision with animal	0.002	0.000	0.002	0.001	0.002
Collision with fixed object	0.744	0.167	0.870	0.508	0.675
Collision with other object	0.072	0.016	0.070	0.041	0.057
Other single-vehicle collision	0.040	0.009	0.023	0.013	0.022
Single-vehicle noncollision	0.141	0.032	0.034	0.020	0.052

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	--	--	--	--	2.27	--
Fatal and injury (FI)	--	--	--	--	2.27	--

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	$(1)*(2)*(3)$
4.15	1.35	1.12	6.27

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	0.209	6.27	2.27	1.311			
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.27	1.311			

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	11.515	0.809	12.324	0.015	2.27	0.185
Fatal and injury (FI)	--	--	--	--	2.27	0.185

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)	1.668	3.772	5.440
Head-on collisions (from Worksheet 2D)	0.182	0.234	0.416
Angle collisions (from Worksheet 2D)	1.286	1.906	3.191
Sideswipe (from Worksheet 2D)	0.367	0.250	0.617
Other multiple-vehicle collision (from Worksheet 2D)	0.204	1.648	1.852
Subtotal	3.706	7.810	11.515
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.001	0.001
Collision with animal (from Worksheet 2F)	0.000	0.001	0.002
Collision with fixed object (from Worksheet 2F)	0.167	0.508	0.675
Collision with other object (from Worksheet 2F)	0.016	0.041	0.057
Other single-vehicle collision (from Worksheet 2F)	0.009	0.013	0.022
Single-vehicle noncollision (from Worksheet 2F)	0.032	0.020	0.052
Collision with pedestrian (from Worksheet 2G or 2I)	1.311	0.000	1.311
Collision with bicycle (from Worksheet 2J)	0.185	0.000	0.185
Subtotal	1.721	0.584	2.305
Total	5.427	8.393	13.820

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	13.820
Fatal and injury (FI)	5.427
Property damage only (PDO)	8.393

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections			
General Information		Location Information	
Analyst	SL	Roadway	Jefferson St
Agency or Company	H.W. Lochner	Intersection	Whiting St
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2043
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	4SG
AADT _{major} (veh/day)	AADT _{MAX} = 67,700 (veh/day)	--	18,400
AADT _{minor} (veh/day)	AADT _{MAX} = 33,400 (veh/day)	--	17,325
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C _i		1.00	2.27
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	0
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	0
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 / Permissive
Type of left-turn signal phasing for Leg #3		--	Permissive
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			3,200
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	5
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	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)
1.00	0.97	1.00	1.00	0.91	1.00	0.88

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}

Urban and Suburban Arterial Predictive Method

	from Table 12-10			from Table 12-10	from Equation 12-21		(4) _{TOTAL} *(5)	(7) from Worksheet 2B	2.27	(6)*(7)*(8)
	a	b	c							
Total	-10.99	1.07	0.23	0.39	5.826	1.000	5.826	0.88	2.27	11.686
Fatal and Injury (FI)	-13.14	1.18	0.22	0.33	1.813	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.322	1.877	0.88	2.27	3.764
Property Damage Only (PDO)	-11.02	1.02	0.24	0.44	3.815	$(5)_{TOTAL}-(5)_{FI}$ 0.678	3.949	0.88	2.27	7.921

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	3.764	1.000	7.921	11.686
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.450	1.694	0.483	3.826	5.520
Head-on collision	0.049	0.184	0.030	0.238	0.422
Angle collision	0.347	1.306	0.244	1.933	3.239
Sideswipe	0.099	0.373	0.032	0.253	0.626
Other multiple-vehicle collision	0.055	0.207	0.211	1.671	1.878

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									
	a	b	c							
Total	-10.21	0.68	0.27	0.36	0.408	1.000	0.408	0.88	2.27	0.818
Fatal and Injury (FI)	-9.25	0.43	0.29	0.09	0.111	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.278	0.113	0.88	2.27	0.227
Property Damage Only (PDO)	-11.34	0.78	0.25	0.44	0.289	$(5)_{TOTAL}-(5)_{FI}$ 0.722	0.295	0.88	2.27	0.591

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	0.227	1.000	0.591	0.818

Urban and Suburban Arterial Predictive Method

		$(2) \times (3)_{FI}$		$(4) \times (5)_{PDO}$	$(3) + (5)$
Collision with parked vehicle	0.001	0.000	0.001	0.001	0.001
Collision with animal	0.002	0.000	0.002	0.001	0.002
Collision with fixed object	0.744	0.169	0.870	0.514	0.683
Collision with other object	0.072	0.016	0.070	0.041	0.058
Other single-vehicle collision	0.040	0.009	0.023	0.014	0.023
Single-vehicle noncollision	0.141	0.032	0.034	0.020	0.052

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		$(4) \times (5) \times (6)$
Total	--	--	--	--	2.27	--
Fatal and injury (FI)	--	--	--	--	2.27	--

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	$(1) \times (2) \times (3)$
4.15	1.35	1.12	6.27

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	$N_{pedbase}$ from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C_i	Predicted N_{pedi}
	from Table 12-14									$(4) \times (5) \times (6)$
	a	b	c	d	e					
Total	-9.53	0.40	0.26	0.45	0.04	0.24	0.210	6.27	2.27	1.318
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.27	1.318

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		$(4) \times (5) \times (6)$
Total	11.686	0.818	12.504	0.015	2.27	0.188
Fatal and injury (FI)	--	--	--	--	2.27	0.188

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)	1.694	3.826	5.520
Head-on collisions (from Worksheet 2D)	0.184	0.238	0.422
Angle collisions (from Worksheet 2D)	1.306	1.933	3.239
Sideswipe (from Worksheet 2D)	0.373	0.253	0.626
Other multiple-vehicle collision (from Worksheet 2D)	0.207	1.671	1.878
Subtotal	3.764	7.921	11.686
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.001	0.001
Collision with animal (from Worksheet 2F)	0.000	0.001	0.002
Collision with fixed object (from Worksheet 2F)	0.169	0.514	0.683
Collision with other object (from Worksheet 2F)	0.016	0.041	0.058
Other single-vehicle collision (from Worksheet 2F)	0.009	0.014	0.023
Single-vehicle noncollision (from Worksheet 2F)	0.032	0.020	0.052
Collision with pedestrian (from Worksheet 2G or 2I)	1.318	0.000	1.318
Collision with bicycle (from Worksheet 2J)	0.188	0.000	0.188
Subtotal	1.733	0.591	2.324
Total	5.497	8.512	14.009

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	14.009
Fatal and injury (FI)	5.497
Property damage only (PDO)	8.512

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections			
General Information		Location Information	
Analyst	SL	Roadway	Jefferson St
Agency or Company	H.W. Lochner	Intersection	Whiting St
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2044
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	4SG
AADT _{major} (veh/day)	AADT _{MAX} = 67,700 (veh/day)	--	18,600
AADT _{minor} (veh/day)	AADT _{MAX} = 33,400 (veh/day)	--	17,550
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C _i		1.00	2.27
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	0
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	0
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 / Permissive
Type of left-turn signal phasing for Leg #3		--	Permissive
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			3,200
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	5
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	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)
1.00	0.97	1.00	1.00	0.91	1.00	0.88

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}

Urban and Suburban Arterial Predictive Method

	from Table 12-10			from Table 12-10	from Equation 12-21	(4) _{TOTAL} *(5)	(7) from Worksheet 2B	2.27	(6)*(7)*(8)
	a	b	c						
Total	-10.99	1.07	0.23	0.39	5.911	1.000	5.911	0.88	11.857
Fatal and Injury (FI)	-13.14	1.18	0.22	0.33	1.841	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.322	1.906	0.88	3.823
Property Damage Only (PDO)	-11.02	1.02	0.24	0.44	3.869	$(5)_{TOTAL}-(5)_{FI}$ 0.678	4.005	0.88	8.034

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bimv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bimv (PDO)} (crashes/year)	(6) 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	3.823	1.000	8.034	11.857
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.450	1.721	0.483	3.880	5.601
Head-on collision	0.049	0.187	0.030	0.241	0.428
Angle collision	0.347	1.327	0.244	1.960	3.287
Sideswipe	0.099	0.379	0.032	0.257	0.636
Other multiple-vehicle collision	0.055	0.210	0.211	1.695	1.905

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1) Crash Severity Level	(2) SPF Coefficients			(3) Overdispersion Parameter, k	(4) Initial N _{bisv}	(5) Proportion of Total Crashes	(6) Adjusted N _{bimv}	(7) Combined CMFs	(8) Calibration Factor, C _i	(9) Predicted N _{bisv}			
	from Table 12-12										(4) _{TOTAL} *(5)	(7) from Worksheet 2B	(6)*(7)*(8)
	a	b	c										
Total	-10.21	0.68	0.27	0.36	0.412	1.000	0.412	0.88	2.27	0.827			
Fatal and Injury (FI)	-9.25	0.43	0.29	0.09	0.112	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.277	0.114	0.88	2.27	0.229			
Property Damage Only (PDO)	-11.34	0.78	0.25	0.44	0.293	$(5)_{TOTAL}-(5)_{FI}$ 0.723	0.298	0.88	2.27	0.598			

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bisv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bisv (PDO)} (crashes/year)	(6) 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	0.229	1.000	0.598	0.827

Urban and Suburban Arterial Predictive Method

		$(2) \times (3)_{FI}$		$(4) \times (5)_{PDO}$	$(3) + (5)$
Collision with parked vehicle	0.001	0.000	0.001	0.001	0.001
Collision with animal	0.002	0.000	0.002	0.001	0.002
Collision with fixed object	0.744	0.170	0.870	0.520	0.690
Collision with other object	0.072	0.016	0.070	0.042	0.058
Other single-vehicle collision	0.040	0.009	0.023	0.014	0.023
Single-vehicle noncollision	0.141	0.032	0.034	0.020	0.053

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		$(4) \times (5) \times (6)$
Total	--	--	--	--	2.27	--
Fatal and injury (FI)	--	--	--	--	2.27	--

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	$(1) \times (2) \times (3)$
4.15	1.35	1.12	6.27

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	$(4) \times (5) \times (6)$
	a	b	c	d	e								
Total	-9.53	0.40	0.26	0.45	0.04	0.24	0.211	6.27	2.27	1.325			
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.27	1.325			

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		$(4) \times (5) \times (6)$
Total	11.857	0.827	12.684	0.015	2.27	0.190
Fatal and injury (FI)	--	--	--	--	2.27	0.190

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)	1.721	3.880	5.601
Head-on collisions (from Worksheet 2D)	0.187	0.241	0.428
Angle collisions (from Worksheet 2D)	1.327	1.960	3.287
Sideswipe (from Worksheet 2D)	0.379	0.257	0.636
Other multiple-vehicle collision (from Worksheet 2D)	0.210	1.695	1.905
Subtotal	3.823	8.034	11.857
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.001	0.001
Collision with animal (from Worksheet 2F)	0.000	0.001	0.002
Collision with fixed object (from Worksheet 2F)	0.170	0.520	0.690
Collision with other object (from Worksheet 2F)	0.016	0.042	0.058
Other single-vehicle collision (from Worksheet 2F)	0.009	0.014	0.023
Single-vehicle noncollision (from Worksheet 2F)	0.032	0.020	0.053
Collision with pedestrian (from Worksheet 2G or 2I)	1.325	0.000	1.325
Collision with bicycle (from Worksheet 2J)	0.190	0.000	0.190
Subtotal	1.744	0.598	2.342
Total	5.568	8.631	14.199

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	14.199
Fatal and injury (FI)	5.568
Property damage only (PDO)	8.631

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections			
General Information		Location Information	
Analyst	SL	Roadway	Jefferson St
Agency or Company	H.W. Lochner	Intersection	Whiting St
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2045
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	4SG
AAADT _{major} (veh/day)	AAADT _{MAX} = 67,700 (veh/day)	--	18,800
AAADT _{minor} (veh/day)	AAADT _{MAX} = 33,400 (veh/day)	--	17,775
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C _i		1.00	2.27
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	0
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	0
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 / Permissive
Type of left-turn signal phasing for Leg #3		--	Permissive
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			3,200
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	5
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	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)
1.00	0.97	1.00	1.00	0.91	1.00	0.88

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}

Urban and Suburban Arterial Predictive Method

	from Table 12-10			from Table 12-10	from Equation 12-21	(4) _{TOTAL} *(5)	(7) from Worksheet 2B	2.27	(6)*(7)*(8)
	a	b	c						
Total	-10.99	1.07	0.23	0.39	5.997	1.000	5.997	0.88	12.029
Fatal and Injury (FI)	-13.14	1.18	0.22	0.33	1.870	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.323	1.936	0.88	3.883
Property Damage Only (PDO)	-11.02	1.02	0.24	0.44	3.923	$(5)_{TOTAL}-(5)_{FI}$ 0.677	4.061	0.88	8.146

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bimv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bimv (PDO)} (crashes/year)	(6) 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	3.883	1.000	8.146	12.029
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.450	1.747	0.483	3.935	5.682
Head-on collision	0.049	0.190	0.030	0.244	0.435
Angle collision	0.347	1.347	0.244	1.988	3.335
Sideswipe	0.099	0.384	0.032	0.261	0.645
Other multiple-vehicle collision	0.055	0.214	0.211	1.719	1.932

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1) Crash Severity Level	(2) SPF Coefficients			(3) Overdispersion Parameter, k	(4) Initial N _{bisv}	(5) Proportion of Total Crashes	(6) Adjusted N _{bimv}	(7) Combined CMFs	(8) Calibration Factor, C _i	(9) Predicted N _{bisv}			
	from Table 12-12										(4) _{TOTAL} *(5)	(7) from Worksheet 2B	(6)*(7)*(8)
	a	b	c										
Total	-10.21	0.68	0.27	0.36	0.417	1.000	0.417	0.88	2.27	0.836			
Fatal and Injury (FI)	-9.25	0.43	0.29	0.09	0.113	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.276	0.115	0.88	2.27	0.231			
Property Damage Only (PDO)	-11.34	0.78	0.25	0.44	0.296	$(5)_{TOTAL}-(5)_{FI}$ 0.724	0.302	0.88	2.27	0.605			

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bisv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bisv (PDO)} (crashes/year)	(6) 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	0.231	1.000	0.605	0.836

Urban and Suburban Arterial Predictive Method

		$(2) \times (3)_{FI}$		$(4) \times (5)_{PDO}$	$(3) + (5)$
Collision with parked vehicle	0.001	0.000	0.001	0.001	0.001
Collision with animal	0.002	0.000	0.002	0.001	0.002
Collision with fixed object	0.744	0.172	0.870	0.526	0.698
Collision with other object	0.072	0.017	0.070	0.042	0.059
Other single-vehicle collision	0.040	0.009	0.023	0.014	0.023
Single-vehicle noncollision	0.141	0.033	0.034	0.021	0.053

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		$(4) \times (5) \times (6)$
Total	--	--	--	--	2.27	--
Fatal and injury (FI)	--	--	--	--	2.27	--

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	$(1) \times (2) \times (3)$
4.15	1.35	1.12	6.27

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	$N_{pedbase}$ from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C_i	Predicted N_{pedi}
	from Table 12-14									$(4) \times (5) \times (6)$
	a	b	c	d	e					
Total	-9.53	0.40	0.26	0.45	0.04	0.24	0.212	6.27	2.27	1.332
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.27	1.332

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		$(4) \times (5) \times (6)$
Total	12.029	0.836	12.864	0.015	2.27	0.193
Fatal and injury (FI)	--	--	--	--	2.27	0.193

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)	1.747	3.935	5.682
Head-on collisions (from Worksheet 2D)	0.190	0.244	0.435
Angle collisions (from Worksheet 2D)	1.347	1.988	3.335
Sideswipe (from Worksheet 2D)	0.384	0.261	0.645
Other multiple-vehicle collision (from Worksheet 2D)	0.214	1.719	1.932
Subtotal	3.883	8.146	12.029
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.001	0.001
Collision with animal (from Worksheet 2F)	0.000	0.001	0.002
Collision with fixed object (from Worksheet 2F)	0.172	0.526	0.698
Collision with other object (from Worksheet 2F)	0.017	0.042	0.059
Other single-vehicle collision (from Worksheet 2F)	0.009	0.014	0.023
Single-vehicle noncollision (from Worksheet 2F)	0.033	0.021	0.053
Collision with pedestrian (from Worksheet 2G or 2I)	1.332	0.000	1.332
Collision with bicycle (from Worksheet 2J)	0.193	0.000	0.193
Subtotal	1.756	0.605	2.361
Total	5.638	8.751	14.389

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	14.389
Fatal and injury (FI)	5.638
Property damage only (PDO)	8.751

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections			
General Information		Location Information	
Analyst	SL	Roadway	Jefferson St
Agency or Company	H.W. Lochner	Intersection	Whiting St
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2046
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	4SG
AADT _{major} (veh/day)	AADT _{MAX} = 67,700 (veh/day)	--	19,000
AADT _{minor} (veh/day)	AADT _{MAX} = 33,400 (veh/day)	--	18,000
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C _i		1.00	2.27
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	0
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	0
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 / Permissive
Type of left-turn signal phasing for Leg #3		--	Permissive
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			3,200
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	5
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	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)
1.00	0.97	1.00	1.00	0.91	1.00	0.88

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}

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	from Table 12-10			from Table 12-10	from Equation 12-21		(4) _{TOTAL} *(5)	(7) from Worksheet 2B	2.27	(6)*(7)*(8)
	a	b	c							
Total	-10.99	1.07	0.23	0.39	6.083	1.000	6.083	0.88	2.27	12.201
Fatal and Injury (FI)	-13.14	1.18	0.22	0.33	1.899	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.323	1.965	0.88	2.27	3.942
Property Damage Only (PDO)	-11.02	1.02	0.24	0.44	3.978	$(5)_{TOTAL}-(5)_{FI}$ 0.677	4.117	0.88	2.27	8.259

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		3.942	1.000	8.259	12.201
			$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.450		1.774	0.483	3.989	5.763
Head-on collision	0.049		0.193	0.030	0.248	0.441
Angle collision	0.347		1.368	0.244	2.015	3.383
Sideswipe	0.099		0.390	0.032	0.264	0.655
Other multiple-vehicle collision	0.055		0.217	0.211	1.743	1.959

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									
	a	b	c							
Total	-10.21	0.68	0.27	0.36	0.421	1.000	0.421	0.88	2.27	0.845
Fatal and Injury (FI)	-9.25	0.43	0.29	0.09	0.114	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.276	0.116	0.88	2.27	0.233
Property Damage Only (PDO)	-11.34	0.78	0.25	0.44	0.299	$(5)_{TOTAL}-(5)_{FI}$ 0.724	0.305	0.88	2.27	0.612

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	0.233	1.000	0.612	0.845

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		$(2) \times (3)_{FI}$		$(4) \times (5)_{PDO}$	$(3) + (5)$
Collision with parked vehicle	0.001	0.000	0.001	0.001	0.001
Collision with animal	0.002	0.000	0.002	0.001	0.002
Collision with fixed object	0.744	0.173	0.870	0.532	0.705
Collision with other object	0.072	0.017	0.070	0.043	0.060
Other single-vehicle collision	0.040	0.009	0.023	0.014	0.023
Single-vehicle noncollision	0.141	0.033	0.034	0.021	0.054

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		$(4) \times (5) \times (6)$
Total	--	--	--	--	2.27	--
Fatal and injury (FI)	--	--	--	--	2.27	--

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	$(1) \times (2) \times (3)$
4.15	1.35	1.12	6.27

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	$(4) \times (5) \times (6)$
	a	b	c	d	e								
Total	-9.53	0.40	0.26	0.45	0.04	0.24	0.213	6.27	2.27	1.339			
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.27	1.339			

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		$(4) \times (5) \times (6)$
Total	12.201	0.845	13.045	0.015	2.27	0.196
Fatal and injury (FI)	--	--	--	--	2.27	0.196

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)	1.774	3.989	5.763
Head-on collisions (from Worksheet 2D)	0.193	0.248	0.441
Angle collisions (from Worksheet 2D)	1.368	2.015	3.383
Sideswipe (from Worksheet 2D)	0.390	0.264	0.655
Other multiple-vehicle collision (from Worksheet 2D)	0.217	1.743	1.959
Subtotal	3.942	8.259	12.201
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.001	0.001
Collision with animal (from Worksheet 2F)	0.000	0.001	0.002
Collision with fixed object (from Worksheet 2F)	0.173	0.532	0.705
Collision with other object (from Worksheet 2F)	0.017	0.043	0.060
Other single-vehicle collision (from Worksheet 2F)	0.009	0.014	0.023
Single-vehicle noncollision (from Worksheet 2F)	0.033	0.021	0.054
Collision with pedestrian (from Worksheet 2G or 2I)	1.339	0.000	1.339
Collision with bicycle (from Worksheet 2J)	0.196	0.000	0.196
Subtotal	1.767	0.612	2.379
Total	5.709	8.871	14.580

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	14.580
Fatal and injury (FI)	5.709
Property damage only (PDO)	8.871

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections			
General Information		Location Information	
Analyst	SL	Roadway	Meridian Ave
Agency or Company	H.W. Lochner	Intersection	Whiting St (West)
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2026
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	3SG
AADT _{major} (veh/day)	AADT _{MAX} = 58,100 (veh/day)	--	33,500
AADT _{minor} (veh/day)	AADT _{MAX} = 16,400 (veh/day)	--	14,000
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C _i		1.00	2.50
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	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		--	Permissive / 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			3,200
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	3
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	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
<i>CMF 1i</i>	<i>CMF 2i</i>	<i>CMF 3i</i>	<i>CMF 4i</i>	<i>CMF 5i</i>	<i>CMF 6i</i>	<i>CMF_{COMB}</i>
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							

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Total	-12.13	1.11	0.26	0.33	6.805	1.000	6.805	0.63	2.50	10.741
Fatal and Injury (FI)	-11.58	1.02	0.17	0.30	1.955	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.303	2.064	0.63	2.50	3.258
Property Damage Only (PDO)	-13.24	1.14	0.30	0.36	4.491	$(5)_{TOTAL}-(5)_{FI}$ 0.697	4.740	0.63	2.50	7.483

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)		(3) Predicted N _{bimv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bimv (PDO)} (crashes/year)	(6) 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		3.258	1.000	7.483	10.741
			$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.549		1.789	0.546	4.086	5.874
Head-on collision	0.038		0.124	0.020	0.150	0.273
Angle collision	0.280		0.912	0.204	1.526	2.439
Sideswipe	0.076		0.248	0.032	0.239	0.487
Other multiple-vehicle collision	0.057		0.186	0.198	1.482	1.667

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1) Crash Severity Level	(2) SPF Coefficients			(3) Overdispersion Parameter, k	(4) Initial N _{bisv}	(5) Proportion of Total Crashes	(6) Adjusted N _{bimv}	(7) Combined CMFs	(8) Calibration Factor, C _i	(9) 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	0.438	1.000	0.438	0.63	2.50	0.692
Fatal and Injury (FI)	-9.75	0.27	0.51	0.24	0.126	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.304	0.133	0.63	2.50	0.210
Property Damage Only (PDO)	-9.08	0.45	0.33	0.53	0.289	$(5)_{TOTAL}-(5)_{FI}$ 0.696	0.305	0.63	2.50	0.481

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bisv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bisv (PDO)} (crashes/year)	(6) 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	0.210	1.000	0.481	0.692
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
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	0.002
Collision with fixed object	0.653	0.137	0.895	0.431	0.568

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Collision with other object	0.091	0.019	0.069	0.033	0.052
Other single-vehicle collision	0.045	0.009	0.018	0.009	0.018
Single-vehicle noncollision	0.209	0.044	0.014	0.007	0.051

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	--	--	--	--	2.50	--
Fatal and injury (FI)	--	--	--	--	2.50	--

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)
4.15	1.35	1.12	6.27

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	0.074	6.27	2.50	1.163			
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.50	1.163			

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	10.741	0.692	11.433	0.011	2.50	0.314
Fatal and injury (FI)	--	--	--	--	2.50	0.314

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;	(5) from Worksheet 2D and 2F	(6) from Worksheet 2D and 2F;

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	(7) from 2G or 2I and 2J		(7) from 2G or 2I and 2J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 2D)	1.789	4.086	5.874
Head-on collisions (from Worksheet 2D)	0.124	0.150	0.273
Angle collisions (from Worksheet 2D)	0.912	1.526	2.439
Sideswipe (from Worksheet 2D)	0.248	0.239	0.487
Other multiple-vehicle collision (from Worksheet 2D)	0.186	1.482	1.667
Subtotal	3.258	7.483	10.741
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	0.002
Collision with fixed object (from Worksheet 2F)	0.137	0.431	0.568
Collision with other object (from Worksheet 2F)	0.019	0.033	0.052
Other single-vehicle collision (from Worksheet 2F)	0.009	0.009	0.018
Single-vehicle noncollision (from Worksheet 2F)	0.044	0.007	0.051
Collision with pedestrian (from Worksheet 2G or 2I)	1.163	0.000	1.163
Collision with bicycle (from Worksheet 2J)	0.314	0.000	0.314
Subtotal	1.688	0.481	2.169
Total	4.946	7.964	12.910

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	12.910
Fatal and injury (FI)	4.946
Property damage only (PDO)	7.964

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections			
General Information		Location Information	
Analyst	SL	Roadway	Meridian Ave
Agency or Company	H.W. Lochner	Intersection	Whiting St (West)
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2027
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	3SG
AADT _{major} (veh/day)	AADT _{MAX} = 58,100 (veh/day)	--	34,075
AADT _{minor} (veh/day)	AADT _{MAX} = 16,400 (veh/day)	--	14,450
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C _i		1.00	2.50
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	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		--	Permissive / 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			3,200
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	3
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	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)
0.86	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							

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Total	-12.13	1.11	0.26	0.33	6.992	1.000	6.992	0.63	2.50	11.036
Fatal and Injury (FI)	-11.58	1.02	0.17	0.30	2.000	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.302	2.112	0.63	2.50	3.334
Property Damage Only (PDO)	-13.24	1.14	0.30	0.36	4.623	$(5)_{TOTAL}-(5)_{FI}$ 0.698	4.880	0.63	2.50	7.703

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)		(3) Predicted N _{bimv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bimv (PDO)} (crashes/year)	(6) 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		3.334	1.000	7.703	11.036
			$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.549		1.830	0.546	4.206	6.036
Head-on collision	0.038		0.127	0.020	0.154	0.281
Angle collision	0.280		0.933	0.204	1.571	2.505
Sideswipe	0.076		0.253	0.032	0.246	0.500
Other multiple-vehicle collision	0.057		0.190	0.198	1.525	1.715

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1) Crash Severity Level	(2) SPF Coefficients			(3) Overdispersion Parameter, k	(4) Initial N _{bisv}	(5) Proportion of Total Crashes	(6) Adjusted N _{bimv}	(7) Combined CMFs	(8) Calibration Factor, C _i	(9) 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	0.447	1.000	0.447	0.63	2.50	0.705
Fatal and Injury (FI)	-9.75	0.27	0.51	0.24	0.129	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.305	0.136	0.63	2.50	0.215
Property Damage Only (PDO)	-9.08	0.45	0.33	0.53	0.294	$(5)_{TOTAL}-(5)_{FI}$ 0.695	0.311	0.63	2.50	0.490

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bisv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bisv (PDO)} (crashes/year)	(6) 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	0.215	1.000	0.490	0.705
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
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	0.002
Collision with fixed object	0.653	0.140	0.895	0.439	0.579

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Collision with other object	0.091	0.020	0.069	0.034	0.053
Other single-vehicle collision	0.045	0.010	0.018	0.009	0.019
Single-vehicle noncollision	0.209	0.045	0.014	0.007	0.052

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	--	--	--	--	2.50	--
Fatal and injury (FI)	--	--	--	--	2.50	--

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)
4.15	1.35	1.12	6.27

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	0.074	6.27	2.50	1.168			
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.50	1.168			

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	11.036	0.705	11.742	0.011	2.50	0.323
Fatal and injury (FI)	--	--	--	--	2.50	0.323

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;	(5) from Worksheet 2D and 2F	(6) from Worksheet 2D and 2F;

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	(7) from 2G or 2I and 2J		(7) from 2G or 2I and 2J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 2D)	1.830	4.206	6.036
Head-on collisions (from Worksheet 2D)	0.127	0.154	0.281
Angle collisions (from Worksheet 2D)	0.933	1.571	2.505
Sideswipe (from Worksheet 2D)	0.253	0.246	0.500
Other multiple-vehicle collision (from Worksheet 2D)	0.190	1.525	1.715
Subtotal	3.334	7.703	11.036
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	0.002
Collision with fixed object (from Worksheet 2F)	0.140	0.439	0.579
Collision with other object (from Worksheet 2F)	0.020	0.034	0.053
Other single-vehicle collision (from Worksheet 2F)	0.010	0.009	0.019
Single-vehicle noncollision (from Worksheet 2F)	0.045	0.007	0.052
Collision with pedestrian (from Worksheet 2G or 2I)	1.168	0.000	1.168
Collision with bicycle (from Worksheet 2J)	0.323	0.000	0.323
Subtotal	1.706	0.490	2.197
Total	5.040	8.193	13.233

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	13.233
Fatal and injury (FI)	5.040
Property damage only (PDO)	8.193

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections			
General Information		Location Information	
Analyst	SL	Roadway	Meridian Ave
Agency or Company	H.W. Lochner	Intersection	Whiting St (West)
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2028
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	3SG
AADT _{major} (veh/day)	AADT _{MAX} = 58,100 (veh/day)	--	34,650
AADT _{minor} (veh/day)	AADT _{MAX} = 16,400 (veh/day)	--	14,900
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C _i		1.00	2.50
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	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		--	Permissive / 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			3,200
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	3
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	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
<i>CMF 1i</i>	<i>CMF 2i</i>	<i>CMF 3i</i>	<i>CMF 4i</i>	<i>CMF 5i</i>	<i>CMF 6i</i>	<i>CMF_{COMB}</i>
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									
	a	b	c							

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Total	-12.13	1.11	0.26	0.33	7.180	1.000	7.180	0.63	2.50	11.333
Fatal and Injury (FI)	-11.58	1.02	0.17	0.30	2.046	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.301	2.160	0.63	2.50	3.409
Property Damage Only (PDO)	-13.24	1.14	0.30	0.36	4.755	$(5)_{TOTAL}-(5)_{FI}$ 0.699	5.020	0.63	2.50	7.924

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)		(3) Predicted N _{bimv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bimv (PDO)} (crashes/year)	(6) 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		3.409	1.000	7.924	11.333
			$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.549		1.871	0.546	4.327	6.198
Head-on collision	0.038		0.130	0.020	0.158	0.288
Angle collision	0.280		0.954	0.204	1.617	2.571
Sideswipe	0.076		0.259	0.032	0.254	0.513
Other multiple-vehicle collision	0.057		0.194	0.198	1.569	1.763

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1) Crash Severity Level	(2) SPF Coefficients			(3) Overdispersion Parameter, k	(4) Initial N _{bisv}	(5) Proportion of Total Crashes	(6) Adjusted N _{bimv}	(7) Combined CMFs	(8) Calibration Factor, C _i	(9) 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	0.456	1.000	0.456	0.63	2.50	0.719
Fatal and Injury (FI)	-9.75	0.27	0.51	0.24	0.132	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.305	0.139	0.63	2.50	0.220
Property Damage Only (PDO)	-9.08	0.45	0.33	0.53	0.300	$(5)_{TOTAL}-(5)_{FI}$ 0.695	0.317	0.63	2.50	0.500

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bisv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bisv (PDO)} (crashes/year)	(6) 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	0.220	1.000	0.500	0.719
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
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	0.002
Collision with fixed object	0.653	0.143	0.895	0.447	0.591

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Collision with other object	0.091	0.020	0.069	0.034	0.054
Other single-vehicle collision	0.045	0.010	0.018	0.009	0.019
Single-vehicle noncollision	0.209	0.046	0.014	0.007	0.053

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	--	--	--	--	2.50	--
Fatal and injury (FI)	--	--	--	--	2.50	--

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)
4.15	1.35	1.12	6.27

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	0.075	6.27	2.50	1.173			
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.50	1.173			

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	11.333	0.719	12.052	0.011	2.50	0.331
Fatal and injury (FI)	--	--	--	--	2.50	0.331

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;	(5) from Worksheet 2D and 2F	(6) from Worksheet 2D and 2F;

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	(7) from 2G or 2I and 2J		(7) from 2G or 2I and 2J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 2D)	1.871	4.327	6.198
Head-on collisions (from Worksheet 2D)	0.130	0.158	0.288
Angle collisions (from Worksheet 2D)	0.954	1.617	2.571
Sideswipe (from Worksheet 2D)	0.259	0.254	0.513
Other multiple-vehicle collision (from Worksheet 2D)	0.194	1.569	1.763
Subtotal	3.409	7.924	11.333
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	0.002
Collision with fixed object (from Worksheet 2F)	0.143	0.447	0.591
Collision with other object (from Worksheet 2F)	0.020	0.034	0.054
Other single-vehicle collision (from Worksheet 2F)	0.010	0.009	0.019
Single-vehicle noncollision (from Worksheet 2F)	0.046	0.007	0.053
Collision with pedestrian (from Worksheet 2G or 2I)	1.173	0.000	1.173
Collision with bicycle (from Worksheet 2J)	0.331	0.000	0.331
Subtotal	1.724	0.500	2.224
Total	5.133	8.424	13.557

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	13.557
Fatal and injury (FI)	5.133
Property damage only (PDO)	8.424

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections			
General Information		Location Information	
Analyst	SL	Roadway	Meridian Ave
Agency or Company	H.W. Lochner	Intersection	Whiting St (West)
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2029
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	3SG
AADT _{major} (veh/day)	AADT _{MAX} = 58,100 (veh/day)	--	35,225
AADT _{minor} (veh/day)	AADT _{MAX} = 16,400 (veh/day)	--	15,350
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C _i		1.00	2.50
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	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		--	Permissive / 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			3,200
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	3
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	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
<i>CMF 1i</i>	<i>CMF 2i</i>	<i>CMF 3i</i>	<i>CMF 4i</i>	<i>CMF 5i</i>	<i>CMF 6i</i>	<i>CMF_{COMB}</i>
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							

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Total	-12.13	1.11	0.26	0.33	7.369	1.000	7.369	0.63	2.50	11.632
Fatal and Injury (FI)	-11.58	1.02	0.17	0.30	2.091	$\frac{(4)_{FI}}{(4)_{FI}+(4)_{PDO}}$ 0.300	2.207	0.63	2.50	3.484
Property Damage Only (PDO)	-13.24	1.14	0.30	0.36	4.889	$\frac{(5)_{TOTAL}-(5)_{FI}}{0.700}$	5.161	0.63	2.50	8.147

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bimv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bimv (PDO)} (crashes/year)	(6) 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	3.484	1.000	8.147	11.632
		(2)*(3) _{FI}		(4)*(5) _{PDO}	(3)+(5)
Rear-end collision	0.549	1.913	0.546	4.448	6.361
Head-on collision	0.038	0.132	0.020	0.163	0.295
Angle collision	0.280	0.976	0.204	1.662	2.638
Sideswipe	0.076	0.265	0.032	0.261	0.526
Other multiple-vehicle collision	0.057	0.199	0.198	1.613	1.812

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1) Crash Severity Level	(2) SPF Coefficients			(3) Overdispersion Parameter, k	(4) Initial N _{bisv}	(5) Proportion of Total Crashes	(6) Adjusted N _{bimv}	(7) Combined CMFs	(8) Calibration Factor, C _i	(9) 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	0.464	1.000	0.464	0.63	2.50	0.733
Fatal and Injury (FI)	-9.75	0.27	0.51	0.24	0.134	$\frac{(4)_{FI}}{(4)_{FI}+(4)_{PDO}}$ 0.306	0.142	0.63	2.50	0.224
Property Damage Only (PDO)	-9.08	0.45	0.33	0.53	0.305	$\frac{(5)_{TOTAL}-(5)_{FI}}{0.694}$	0.322	0.63	2.50	0.509

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bisv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bisv (PDO)} (crashes/year)	(6) 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	0.224	1.000	0.509	0.733
		(2)*(3) _{FI}		(4)*(5) _{PDO}	(3)+(5)
Collision with parked vehicle	0.001	0.000	0.001	0.001	0.001
Collision with animal	0.001	0.000	0.003	0.002	0.002
Collision with fixed object	0.653	0.146	0.895	0.455	0.602

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Collision with other object	0.091	0.020	0.069	0.035	0.056
Other single-vehicle collision	0.045	0.010	0.018	0.009	0.019
Single-vehicle noncollision	0.209	0.047	0.014	0.007	0.054

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	--	--	--	--	2.50	--
Fatal and injury (FI)	--	--	--	--	2.50	--

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)
4.15	1.35	1.12	6.27

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	0.075	6.27	2.50	1.178			
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.50	1.178			

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	11.632	0.733	12.365	0.011	2.50	0.340
Fatal and injury (FI)	--	--	--	--	2.50	0.340

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;	(5) from Worksheet 2D and 2F	(6) from Worksheet 2D and 2F;

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	(7) from 2G or 2I and 2J		(7) from 2G or 2I and 2J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 2D)	1.913	4.448	6.361
Head-on collisions (from Worksheet 2D)	0.132	0.163	0.295
Angle collisions (from Worksheet 2D)	0.976	1.662	2.638
Sideswipe (from Worksheet 2D)	0.265	0.261	0.526
Other multiple-vehicle collision (from Worksheet 2D)	0.199	1.613	1.812
Subtotal	3.484	8.147	11.632
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.001	0.001
Collision with animal (from Worksheet 2F)	0.000	0.002	0.002
Collision with fixed object (from Worksheet 2F)	0.146	0.455	0.602
Collision with other object (from Worksheet 2F)	0.020	0.035	0.056
Other single-vehicle collision (from Worksheet 2F)	0.010	0.009	0.019
Single-vehicle noncollision (from Worksheet 2F)	0.047	0.007	0.054
Collision with pedestrian (from Worksheet 2G or 2I)	1.178	0.000	1.178
Collision with bicycle (from Worksheet 2J)	0.340	0.000	0.340
Subtotal	1.743	0.509	2.251
Total	5.227	8.656	13.883

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	13.883
Fatal and injury (FI)	5.227
Property damage only (PDO)	8.656

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections			
General Information		Location Information	
Analyst	SL	Roadway	Meridian Ave
Agency or Company	H.W. Lochner	Intersection	Whiting St (West)
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2030
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	3SG
AADT _{major} (veh/day)	AADT _{MAX} = 58,100 (veh/day)	--	35,800
AADT _{minor} (veh/day)	AADT _{MAX} = 16,400 (veh/day)	--	15,800
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C _i		1.00	2.50
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	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		--	Permissive / 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			3,200
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	3
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	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
<i>CMF 1i</i>	<i>CMF 2i</i>	<i>CMF 3i</i>	<i>CMF 4i</i>	<i>CMF 5i</i>	<i>CMF 6i</i>	<i>CMF_{COMB}</i>
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									
	a	b	c							

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Total	-12.13	1.11	0.26	0.33	7.559	1.000	7.559	0.63	2.50	11.932
Fatal and Injury (FI)	-11.58	1.02	0.17	0.30	2.136	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.298	2.255	0.63	2.50	3.560
Property Damage Only (PDO)	-13.24	1.14	0.30	0.36	5.023	$(5)_{TOTAL}-(5)_{FI}$ 0.702	5.304	0.63	2.50	8.372

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bimv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bimv (PDO)} (crashes/year)	(6) 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	3.560	1.000	8.372	11.932
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.549	1.955	0.546	4.571	6.526
Head-on collision	0.038	0.135	0.020	0.167	0.303
Angle collision	0.280	0.997	0.204	1.708	2.705
Sideswipe	0.076	0.271	0.032	0.268	0.538
Other multiple-vehicle collision	0.057	0.203	0.198	1.658	1.861

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1) Crash Severity Level	(2) SPF Coefficients			(3) Overdispersion Parameter, k	(4) Initial N _{bisv}	(5) Proportion of Total Crashes	(6) Adjusted N _{bimv}	(7) Combined CMFs	(8) Calibration Factor, C _i	(9) 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	0.473	1.000	0.473	0.63	2.50	0.746
Fatal and Injury (FI)	-9.75	0.27	0.51	0.24	0.137	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.306	0.145	0.63	2.50	0.229
Property Damage Only (PDO)	-9.08	0.45	0.33	0.53	0.310	$(5)_{TOTAL}-(5)_{FI}$ 0.694	0.328	0.63	2.50	0.518

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bisv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bisv (PDO)} (crashes/year)	(6) 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	0.229	1.000	0.518	0.746
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Collision with parked vehicle	0.001	0.000	0.001	0.001	0.001
Collision with animal	0.001	0.000	0.003	0.002	0.002
Collision with fixed object	0.653	0.149	0.895	0.463	0.613

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Collision with other object	0.091	0.021	0.069	0.036	0.057
Other single-vehicle collision	0.045	0.010	0.018	0.009	0.020
Single-vehicle noncollision	0.209	0.048	0.014	0.007	0.055

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	--	--	--	--	2.50	--
Fatal and injury (FI)	--	--	--	--	2.50	--

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)
4.15	1.35	1.12	6.27

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	0.075	6.27	2.50	1.183			
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.50	1.183			

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	11.932	0.746	12.679	0.011	2.50	0.349
Fatal and injury (FI)	--	--	--	--	2.50	0.349

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;	(5) from Worksheet 2D and 2F	(6) from Worksheet 2D and 2F;

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	(7) from 2G or 2I and 2J		(7) from 2G or 2I and 2J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 2D)	1.955	4.571	6.526
Head-on collisions (from Worksheet 2D)	0.135	0.167	0.303
Angle collisions (from Worksheet 2D)	0.997	1.708	2.705
Sideswipe (from Worksheet 2D)	0.271	0.268	0.538
Other multiple-vehicle collision (from Worksheet 2D)	0.203	1.658	1.861
Subtotal	3.560	8.372	11.932
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.001	0.001
Collision with animal (from Worksheet 2F)	0.000	0.002	0.002
Collision with fixed object (from Worksheet 2F)	0.149	0.463	0.613
Collision with other object (from Worksheet 2F)	0.021	0.036	0.057
Other single-vehicle collision (from Worksheet 2F)	0.010	0.009	0.020
Single-vehicle noncollision (from Worksheet 2F)	0.048	0.007	0.055
Collision with pedestrian (from Worksheet 2G or 2I)	1.183	0.000	1.183
Collision with bicycle (from Worksheet 2J)	0.349	0.000	0.349
Subtotal	1.760	0.518	2.278
Total	5.321	8.890	14.210

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	14.210
Fatal and injury (FI)	5.321
Property damage only (PDO)	8.890

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections			
General Information		Location Information	
Analyst	SL	Roadway	Meridian Ave
Agency or Company	H.W. Lochner	Intersection	Whiting St (West)
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2031
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	3SG
AADT _{major} (veh/day)	AADT _{MAX} = 58,100 (veh/day)	--	36,375
AADT _{minor} (veh/day)	AADT _{MAX} = 16,400 (veh/day)	--	16,250
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C _i		1.00	2.50
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	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		--	Permissive / 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			3,200
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	3
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	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
<i>CMF 1i</i>	<i>CMF 2i</i>	<i>CMF 3i</i>	<i>CMF 4i</i>	<i>CMF 5i</i>	<i>CMF 6i</i>	<i>CMF_{COMB}</i>
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							

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Total	-12.13	1.11	0.26	0.33	7.750	1.000	7.750	0.63	2.50	12.234
Fatal and Injury (FI)	-11.58	1.02	0.17	0.30	2.181	$\frac{(4)_{FI}}{((4)_{FI}+(4)_{PDO}}$ 0.297	2.303	0.63	2.50	3.636
Property Damage Only (PDO)	-13.24	1.14	0.30	0.36	5.158	$\frac{(5)_{TOTAL}-(5)_{FI}}{0.703}$	5.447	0.63	2.50	8.598

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bimv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bimv (PDO)} (crashes/year)	(6) 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	3.636	1.000	8.598	12.234
		(2)*(3) _{FI}		(4)*(5) _{PDO}	(3)+(5)
Rear-end collision	0.549	1.996	0.546	4.695	6.691
Head-on collision	0.038	0.138	0.020	0.172	0.310
Angle collision	0.280	1.018	0.204	1.754	2.772
Sideswipe	0.076	0.276	0.032	0.275	0.551
Other multiple-vehicle collision	0.057	0.207	0.198	1.702	1.910

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1) Crash Severity Level	(2) SPF Coefficients			(3) Overdispersion Parameter, k	(4) Initial N _{bisv}	(5) Proportion of Total Crashes	(6) Adjusted N _{bimv}	(7) Combined CMFs	(8) Calibration Factor, C _i	(9) 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	0.481	1.000	0.481	0.63	2.50	0.760
Fatal and Injury (FI)	-9.75	0.27	0.51	0.24	0.140	$\frac{(4)_{FI}}{((4)_{FI}+(4)_{PDO}}$ 0.307	0.148	0.63	2.50	0.233
Property Damage Only (PDO)	-9.08	0.45	0.33	0.53	0.315	$\frac{(5)_{TOTAL}-(5)_{FI}}{0.693}$	0.334	0.63	2.50	0.527

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bisv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bisv (PDO)} (crashes/year)	(6) 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	0.233	1.000	0.527	0.760
		(2)*(3) _{FI}		(4)*(5) _{PDO}	(3)+(5)
Collision with parked vehicle	0.001	0.000	0.001	0.001	0.001
Collision with animal	0.001	0.000	0.003	0.002	0.002
Collision with fixed object	0.653	0.152	0.895	0.471	0.624

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Collision with other object	0.091	0.021	0.069	0.036	0.058
Other single-vehicle collision	0.045	0.010	0.018	0.009	0.020
Single-vehicle noncollision	0.209	0.049	0.014	0.007	0.056

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	--	--	--	--	2.50	--
Fatal and injury (FI)	--	--	--	--	2.50	--

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)
4.15	1.35	1.12	6.27

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	0.076	6.27	2.50	1.188			
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.50	1.188			

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	12.234	0.760	12.994	0.011	2.50	0.357
Fatal and injury (FI)	--	--	--	--	2.50	0.357

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;	(5) from Worksheet 2D and 2F	(6) from Worksheet 2D and 2F;

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	(7) from 2G or 2I and 2J		(7) from 2G or 2I and 2J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 2D)	1.996	4.695	6.691
Head-on collisions (from Worksheet 2D)	0.138	0.172	0.310
Angle collisions (from Worksheet 2D)	1.018	1.754	2.772
Sideswipe (from Worksheet 2D)	0.276	0.275	0.551
Other multiple-vehicle collision (from Worksheet 2D)	0.207	1.702	1.910
Subtotal	3.636	8.598	12.234
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.001	0.001
Collision with animal (from Worksheet 2F)	0.000	0.002	0.002
Collision with fixed object (from Worksheet 2F)	0.152	0.471	0.624
Collision with other object (from Worksheet 2F)	0.021	0.036	0.058
Other single-vehicle collision (from Worksheet 2F)	0.010	0.009	0.020
Single-vehicle noncollision (from Worksheet 2F)	0.049	0.007	0.056
Collision with pedestrian (from Worksheet 2G or 2I)	1.188	0.000	1.188
Collision with bicycle (from Worksheet 2J)	0.357	0.000	0.357
Subtotal	1.778	0.527	2.305
Total	5.414	9.125	14.539

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	14.539
Fatal and injury (FI)	5.414
Property damage only (PDO)	9.125

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections			
General Information		Location Information	
Analyst	SL	Roadway	Meridian Ave
Agency or Company	H.W. Lochner	Intersection	Whiting St (West)
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2032
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	3SG
AADT _{major} (veh/day)	AADT _{MAX} = 58,100 (veh/day)	--	36,950
AADT _{minor} (veh/day)	AADT _{MAX} = 16,400 (veh/day)	--	16,700
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C _i		1.00	2.50
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	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		--	Permissive / 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			3,200
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	3
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	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
<i>CMF 1i</i>	<i>CMF 2i</i>	<i>CMF 3i</i>	<i>CMF 4i</i>	<i>CMF 5i</i>	<i>CMF 6i</i>	<i>CMF_{COMB}</i>
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									
	a	b	c							

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Total	-12.13	1.11	0.26	0.33	7.943	1.000	7.943	0.63	2.50	12.538
Fatal and Injury (FI)	-11.58	1.02	0.17	0.30	2.227	$\frac{(4)_{FI}}{((4)_{FI}+(4)_{PDO})}$ 0.296	2.352	0.63	2.50	3.712
Property Damage Only (PDO)	-13.24	1.14	0.30	0.36	5.295	$\frac{(5)_{TOTAL}-(5)_{FI}}{0.704}$	5.591	0.63	2.50	8.826

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)		(3) Predicted N _{bimv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bimv (PDO)} (crashes/year)	(6) 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		3.712	1.000	8.826	12.538
			$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.549		2.038	0.546	4.819	6.857
Head-on collision	0.038		0.141	0.020	0.177	0.318
Angle collision	0.280		1.039	0.204	1.800	2.840
Sideswipe	0.076		0.282	0.032	0.282	0.565
Other multiple-vehicle collision	0.057		0.212	0.198	1.747	1.959

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1) Crash Severity Level	(2) SPF Coefficients			(3) Overdispersion Parameter, k	(4) Initial N _{bisv}	(5) Proportion of Total Crashes	(6) Adjusted N _{bimv}	(7) Combined CMFs	(8) Calibration Factor, C _i	(9) 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	0.490	1.000	0.490	0.63	2.50	0.773
Fatal and Injury (FI)	-9.75	0.27	0.51	0.24	0.142	$\frac{(4)_{FI}}{((4)_{FI}+(4)_{PDO})}$ 0.307	0.151	0.63	2.50	0.238
Property Damage Only (PDO)	-9.08	0.45	0.33	0.53	0.320	$\frac{(5)_{TOTAL}-(5)_{FI}}{0.693}$	0.339	0.63	2.50	0.536

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bisv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bisv (PDO)} (crashes/year)	(6) 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	0.238	1.000	0.536	0.773
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Collision with parked vehicle	0.001	0.000	0.001	0.001	0.001
Collision with animal	0.001	0.000	0.003	0.002	0.002
Collision with fixed object	0.653	0.155	0.895	0.479	0.635

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Collision with other object	0.091	0.022	0.069	0.037	0.059
Other single-vehicle collision	0.045	0.011	0.018	0.010	0.020
Single-vehicle noncollision	0.209	0.050	0.014	0.008	0.057

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	--	--	--	--	2.50	--
Fatal and injury (FI)	--	--	--	--	2.50	--

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)
4.15	1.35	1.12	6.27

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	0.076	6.27	2.50	1.192			
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.50	1.192			

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	12.538	0.773	13.311	0.011	2.50	0.366
Fatal and injury (FI)	--	--	--	--	2.50	0.366

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;	(5) from Worksheet 2D and 2F	(6) from Worksheet 2D and 2F;

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	(7) from 2G or 2I and 2J		(7) from 2G or 2I and 2J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 2D)	2.038	4.819	6.857
Head-on collisions (from Worksheet 2D)	0.141	0.177	0.318
Angle collisions (from Worksheet 2D)	1.039	1.800	2.840
Sideswipe (from Worksheet 2D)	0.282	0.282	0.565
Other multiple-vehicle collision (from Worksheet 2D)	0.212	1.747	1.959
Subtotal	3.712	8.826	12.538
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.001	0.001
Collision with animal (from Worksheet 2F)	0.000	0.002	0.002
Collision with fixed object (from Worksheet 2F)	0.155	0.479	0.635
Collision with other object (from Worksheet 2F)	0.022	0.037	0.059
Other single-vehicle collision (from Worksheet 2F)	0.011	0.010	0.020
Single-vehicle noncollision (from Worksheet 2F)	0.050	0.008	0.057
Collision with pedestrian (from Worksheet 2G or 2I)	1.192	0.000	1.192
Collision with bicycle (from Worksheet 2J)	0.366	0.000	0.366
Subtotal	1.796	0.536	2.332
Total	5.508	9.361	14.869

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	14.869
Fatal and injury (FI)	5.508
Property damage only (PDO)	9.361

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections			
General Information		Location Information	
Analyst	SL	Roadway	Meridian Ave
Agency or Company	H.W. Lochner	Intersection	Whiting St (West)
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2033
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	3SG
AADT _{major} (veh/day)	AADT _{MAX} = 58,100 (veh/day)	--	37,525
AADT _{minor} (veh/day)	AADT _{MAX} = 16,400 (veh/day)	--	17,150
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C _i		1.00	2.50
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	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		--	Permissive / 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			3,200
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	3
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	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
<i>CMF 1i</i>	<i>CMF 2i</i>	<i>CMF 3i</i>	<i>CMF 4i</i>	<i>CMF 5i</i>	<i>CMF 6i</i>	<i>CMF_{COMB}</i>
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									
	a	b	c							

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Total	-12.13	1.11	0.26	0.33	8.136	1.000	8.136	0.63	2.50	12.843
Fatal and Injury (FI)	-11.58	1.02	0.17	0.30	2.272	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.295	2.400	0.63	2.50	3.788
Property Damage Only (PDO)	-13.24	1.14	0.30	0.36	5.432	$(5)_{TOTAL}-(5)_{FI}$ 0.705	5.736	0.63	2.50	9.055

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bimv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bimv (PDO)} (crashes/year)	(6) 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	3.788	1.000	9.055	12.843
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.549	2.080	0.546	4.944	7.024
Head-on collision	0.038	0.144	0.020	0.181	0.325
Angle collision	0.280	1.061	0.204	1.847	2.908
Sideswipe	0.076	0.288	0.032	0.290	0.578
Other multiple-vehicle collision	0.057	0.216	0.198	1.793	2.009

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1) Crash Severity Level	(2) SPF Coefficients			(3) Overdispersion Parameter, k	(4) Initial N _{bisv}	(5) Proportion of Total Crashes	(6) Adjusted N _{bimv}	(7) Combined CMFs	(8) Calibration Factor, C _i	(9) 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	0.498	1.000	0.498	0.63	2.50	0.787
Fatal and Injury (FI)	-9.75	0.27	0.51	0.24	0.145	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.308	0.153	0.63	2.50	0.242
Property Damage Only (PDO)	-9.08	0.45	0.33	0.53	0.325	$(5)_{TOTAL}-(5)_{FI}$ 0.692	0.345	0.63	2.50	0.545

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bisv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bisv (PDO)} (crashes/year)	(6) 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	0.242	1.000	0.545	0.787
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Collision with parked vehicle	0.001	0.000	0.001	0.001	0.001
Collision with animal	0.001	0.000	0.003	0.002	0.002
Collision with fixed object	0.653	0.158	0.895	0.487	0.646

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Collision with other object	0.091	0.022	0.069	0.038	0.060
Other single-vehicle collision	0.045	0.011	0.018	0.010	0.021
Single-vehicle noncollision	0.209	0.051	0.014	0.008	0.058

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	--	--	--	--	2.50	--
Fatal and injury (FI)	--	--	--	--	2.50	--

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)
4.15	1.35	1.12	6.27

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	0.076	6.27	2.50	1.197			
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.50	1.197			

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	12.843	0.787	13.630	0.011	2.50	0.375
Fatal and injury (FI)	--	--	--	--	2.50	0.375

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;	(5) from Worksheet 2D and 2F	(6) from Worksheet 2D and 2F;

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	(7) from 2G or 2I and 2J		(7) from 2G or 2I and 2J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 2D)	2.080	4.944	7.024
Head-on collisions (from Worksheet 2D)	0.144	0.181	0.325
Angle collisions (from Worksheet 2D)	1.061	1.847	2.908
Sideswipe (from Worksheet 2D)	0.288	0.290	0.578
Other multiple-vehicle collision (from Worksheet 2D)	0.216	1.793	2.009
Subtotal	3.788	9.055	12.843
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.001	0.001
Collision with animal (from Worksheet 2F)	0.000	0.002	0.002
Collision with fixed object (from Worksheet 2F)	0.158	0.487	0.646
Collision with other object (from Worksheet 2F)	0.022	0.038	0.060
Other single-vehicle collision (from Worksheet 2F)	0.011	0.010	0.021
Single-vehicle noncollision (from Worksheet 2F)	0.051	0.008	0.058
Collision with pedestrian (from Worksheet 2G or 2I)	1.197	0.000	1.197
Collision with bicycle (from Worksheet 2J)	0.375	0.000	0.375
Subtotal	1.813	0.545	2.358
Total	5.602	9.599	15.201

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	15.201
Fatal and injury (FI)	5.602
Property damage only (PDO)	9.599

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections			
General Information		Location Information	
Analyst	SL	Roadway	Meridian Ave
Agency or Company	H.W. Lochner	Intersection	Whiting St (West)
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2034
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	3SG
AADT _{major} (veh/day)	AADT _{MAX} = 58,100 (veh/day)	--	38,100
AADT _{minor} (veh/day)	AADT _{MAX} = 16,400 (veh/day)	--	17,600
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C _i		1.00	2.50
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	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		--	Permissive / 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			3,200
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	3
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	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
<i>CMF 1i</i>	<i>CMF 2i</i>	<i>CMF 3i</i>	<i>CMF 4i</i>	<i>CMF 5i</i>	<i>CMF 6i</i>	<i>CMF_{COMB}</i>
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									
	a	b	c							

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Total	-12.13	1.11	0.26	0.33	8.330	1.000	8.330	0.63	2.50	13.150
Fatal and Injury (FI)	-11.58	1.02	0.17	0.30	2.318	$\frac{(4)_{FI}}{(4)_{FI}+(4)_{PDO}}$ 0.294	2.448	0.63	2.50	3.864
Property Damage Only (PDO)	-13.24	1.14	0.30	0.36	5.570	$\frac{(5)_{TOTAL}-(5)_{FI}}{0.706}$	5.882	0.63	2.50	9.285

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)		(3) Predicted N _{bimv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bimv (PDO)} (crashes/year)	(6) 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		3.864	1.000	9.285	13.150
			$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.549		2.122	0.546	5.070	7.191
Head-on collision	0.038		0.147	0.020	0.186	0.333
Angle collision	0.280		1.082	0.204	1.894	2.976
Sideswipe	0.076		0.294	0.032	0.297	0.591
Other multiple-vehicle collision	0.057		0.220	0.198	1.838	2.059

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1) Crash Severity Level	(2) SPF Coefficients			(3) Overdispersion Parameter, k	(4) Initial N _{bisv}	(5) Proportion of Total Crashes	(6) Adjusted N _{bimv}	(7) Combined CMFs	(8) Calibration Factor, C _i	(9) 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	0.507	1.000	0.507	0.63	2.50	0.800
Fatal and Injury (FI)	-9.75	0.27	0.51	0.24	0.147	$\frac{(4)_{FI}}{(4)_{FI}+(4)_{PDO}}$ 0.308	0.156	0.63	2.50	0.246
Property Damage Only (PDO)	-9.08	0.45	0.33	0.53	0.330	$\frac{(5)_{TOTAL}-(5)_{FI}}{0.692}$	0.351	0.63	2.50	0.554

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bisv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bisv (PDO)} (crashes/year)	(6) 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	0.246	1.000	0.554	0.800
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Collision with parked vehicle	0.001	0.000	0.001	0.001	0.001
Collision with animal	0.001	0.000	0.003	0.002	0.002
Collision with fixed object	0.653	0.161	0.895	0.495	0.656

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Collision with other object	0.091	0.022	0.069	0.038	0.061
Other single-vehicle collision	0.045	0.011	0.018	0.010	0.021
Single-vehicle noncollision	0.209	0.052	0.014	0.008	0.059

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	--	--	--	--	2.50	--
Fatal and injury (FI)	--	--	--	--	2.50	--

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)
4.15	1.35	1.12	6.27

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	0.077	6.27	2.50	1.201			
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.50	1.201			

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	13.150	0.800	13.950	0.011	2.50	0.384
Fatal and injury (FI)	--	--	--	--	2.50	0.384

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;	(5) from Worksheet 2D and 2F	(6) from Worksheet 2D and 2F;

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	(7) from 2G or 2I and 2J	(7) from 2G or 2I and 2J
MULTIPLE-VEHICLE		
Rear-end collisions (from Worksheet 2D)	2.122	7.191
Head-on collisions (from Worksheet 2D)	0.147	0.333
Angle collisions (from Worksheet 2D)	1.082	2.976
Sideswipe (from Worksheet 2D)	0.294	0.591
Other multiple-vehicle collision (from Worksheet 2D)	0.220	2.059
Subtotal	3.864	13.150
SINGLE-VEHICLE		
Collision with parked vehicle (from Worksheet 2F)	0.000	0.001
Collision with animal (from Worksheet 2F)	0.000	0.002
Collision with fixed object (from Worksheet 2F)	0.161	0.656
Collision with other object (from Worksheet 2F)	0.022	0.061
Other single-vehicle collision (from Worksheet 2F)	0.011	0.021
Single-vehicle noncollision (from Worksheet 2F)	0.052	0.059
Collision with pedestrian (from Worksheet 2G or 2I)	1.201	1.201
Collision with bicycle (from Worksheet 2J)	0.384	0.384
Subtotal	1.831	2.384
Total	5.695	15.534

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	15.534
Fatal and injury (FI)	5.695
Property damage only (PDO)	9.839

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections			
General Information		Location Information	
Analyst	SL	Roadway	Meridian Ave
Agency or Company	H.W. Lochner	Intersection	Whiting St (West)
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2035
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	3SG
AADT _{major} (veh/day)	AADT _{MAX} = 58,100 (veh/day)	--	38,675
AADT _{minor} (veh/day)	AADT _{MAX} = 16,400 (veh/day)	--	18,050
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C _i		1.00	2.50
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	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		--	Permissive / 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			3,200
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	3
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	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
<i>CMF 1i</i>	<i>CMF 2i</i>	<i>CMF 3i</i>	<i>CMF 4i</i>	<i>CMF 5i</i>	<i>CMF 6i</i>	<i>CMF_{COMB}</i>
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							

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Total	-12.13	1.11	0.26	0.33	8.526	1.000	8.526	0.63	2.50	13.458
Fatal and Injury (FI)	-11.58	1.02	0.17	0.30	2.364	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.293	2.497	0.63	2.50	3.941
Property Damage Only (PDO)	-13.24	1.14	0.30	0.36	5.709	$(5)_{TOTAL}-(5)_{FI}$ 0.707	6.029	0.63	2.50	9.517

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)			(3) Predicted N _{bimv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)		(5) Predicted N _{bimv (PDO)} (crashes/year)	(6) 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			3.941	1.000		9.517	13.458		
				$(2)*(3)_{FI}$			$(4)*(5)_{PDO}$	$(3)+(5)$		
Rear-end collision	0.549			2.164	0.546		5.196	7.360		
Head-on collision	0.038			0.150	0.020		0.190	0.340		
Angle collision	0.280			1.103	0.204		1.942	3.045		
Sideswipe	0.076			0.300	0.032		0.305	0.604		
Other multiple-vehicle collision	0.057			0.225	0.198		1.884	2.109		

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1) Crash Severity Level	(2) SPF Coefficients			(3) Overdispersion Parameter, k	(4) Initial N _{bisv}	(5) Proportion of Total Crashes	(6) Adjusted N _{bimv}	(7) Combined CMFs (7) from Worksheet 2B	(8) Calibration Factor, C _i	(9) Predicted N _{bisv}
	from Table 12-12			from Table 12-12	from Eqn. 12-24; (FI) from Eqn. 12-24 or 12-27		$(4)_{TOTAL}*(5)$			$(6)*(7)*(8)$
	a	b	c							
Total	-9.02	0.42	0.40	0.36	0.515	1.000	0.515	0.63	2.50	0.813
Fatal and Injury (FI)	-9.75	0.27	0.51	0.24	0.150	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.308	0.159	0.63	2.50	0.251
Property Damage Only (PDO)	-9.08	0.45	0.33	0.53	0.335	$(5)_{TOTAL}-(5)_{FI}$ 0.692	0.356	0.63	2.50	0.562

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)			(3) Predicted N _{bisv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)		(5) Predicted N _{bisv (PDO)} (crashes/year)	(6) 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			0.251	1.000		0.562	0.813		
				$(2)*(3)_{FI}$			$(4)*(5)_{PDO}$	$(3)+(5)$		
Collision with parked vehicle	0.001			0.000	0.001		0.001	0.001		
Collision with animal	0.001			0.000	0.003		0.002	0.002		
Collision with fixed object	0.653			0.164	0.895		0.503	0.667		

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Collision with other object	0.091	0.023	0.069	0.039	0.062
Other single-vehicle collision	0.045	0.011	0.018	0.010	0.021
Single-vehicle noncollision	0.209	0.052	0.014	0.008	0.060

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	--	--	--	--	2.50	--
Fatal and injury (FI)	--	--	--	--	2.50	--

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)
4.15	1.35	1.12	6.27

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	0.077	6.27	2.50	1.205			
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.50	1.205			

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	13.458	0.813	14.271	0.011	2.50	0.392
Fatal and injury (FI)	--	--	--	--	2.50	0.392

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;	(5) from Worksheet 2D and 2F	(6) from Worksheet 2D and 2F;

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	(7) from 2G or 2I and 2J		(7) from 2G or 2I and 2J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 2D)	2.164	5.196	7.360
Head-on collisions (from Worksheet 2D)	0.150	0.190	0.340
Angle collisions (from Worksheet 2D)	1.103	1.942	3.045
Sideswipe (from Worksheet 2D)	0.300	0.305	0.604
Other multiple-vehicle collision (from Worksheet 2D)	0.225	1.884	2.109
Subtotal	3.941	9.517	13.458
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.001	0.001
Collision with animal (from Worksheet 2F)	0.000	0.002	0.002
Collision with fixed object (from Worksheet 2F)	0.164	0.503	0.667
Collision with other object (from Worksheet 2F)	0.023	0.039	0.062
Other single-vehicle collision (from Worksheet 2F)	0.011	0.010	0.021
Single-vehicle noncollision (from Worksheet 2F)	0.052	0.008	0.060
Collision with pedestrian (from Worksheet 2G or 2I)	1.205	0.000	1.205
Collision with bicycle (from Worksheet 2J)	0.392	0.000	0.392
Subtotal	1.848	0.562	2.411
Total	5.789	10.080	15.869

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	15.869
Fatal and injury (FI)	5.789
Property damage only (PDO)	10.080

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections			
General Information		Location Information	
Analyst	SL	Roadway	Meridian Ave
Agency or Company	H.W. Lochner	Intersection	Whiting St (West)
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2036
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	3SG
AADT _{major} (veh/day)	AADT _{MAX} = 58,100 (veh/day)	--	39,250
AADT _{minor} (veh/day)	AADT _{MAX} = 16,400 (veh/day)	--	18,500
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C _i		1.00	2.50
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	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		--	Permissive / 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			3,200
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	3
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	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
<i>CMF 1i</i>	<i>CMF 2i</i>	<i>CMF 3i</i>	<i>CMF 4i</i>	<i>CMF 5i</i>	<i>CMF 6i</i>	<i>CMF_{COMB}</i>
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							

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Total	-12.13	1.11	0.26	0.33	8.722	1.000	8.722	0.63	2.50	13.768
Fatal and Injury (FI)	-11.58	1.02	0.17	0.30	2.410	$\frac{(4)_{FI}}{(4)_{FI}+(4)_{PDO}}$ 0.292	2.545	0.63	2.50	4.018
Property Damage Only (PDO)	-13.24	1.14	0.30	0.36	5.849	$\frac{(5)_{TOTAL}-(5)_{FI}}{0.708}$	6.177	0.63	2.50	9.751

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)			(3) Predicted N _{bimv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)		(5) Predicted N _{bimv (PDO)} (crashes/year)	(6) 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			4.018	1.000		9.751	13.768		
				$(2)*(3)_{FI}$			$(4)*(5)_{PDO}$	$(3)+(5)$		
Rear-end collision	0.549			2.206	0.546		5.324	7.530		
Head-on collision	0.038			0.153	0.020		0.195	0.348		
Angle collision	0.280			1.125	0.204		1.989	3.114		
Sideswipe	0.076			0.305	0.032		0.312	0.617		
Other multiple-vehicle collision	0.057			0.229	0.198		1.931	2.160		

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1) Crash Severity Level	(2) SPF Coefficients			(3) Overdispersion Parameter, k	(4) Initial N _{bisv}	(5) Proportion of Total Crashes	(6) Adjusted N _{bimv}	(7) Combined CMFs	(8) Calibration Factor, C _i	(9) 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	0.524	1.000	0.524	0.63	2.50	0.826
Fatal and Injury (FI)	-9.75	0.27	0.51	0.24	0.152	$\frac{(4)_{FI}}{(4)_{FI}+(4)_{PDO}}$ 0.309	0.162	0.63	2.50	0.255
Property Damage Only (PDO)	-9.08	0.45	0.33	0.53	0.340	$\frac{(5)_{TOTAL}-(5)_{FI}}{0.691}$	0.362	0.63	2.50	0.571

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bisv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bisv (PDO)} (crashes/year)	(6) 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	0.255	1.000	0.571	0.826
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Collision with parked vehicle	0.001	0.000	0.001	0.001	0.001
Collision with animal	0.001	0.000	0.003	0.002	0.002
Collision with fixed object	0.653	0.167	0.895	0.511	0.678

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Collision with other object	0.091	0.023	0.069	0.039	0.063
Other single-vehicle collision	0.045	0.011	0.018	0.010	0.022
Single-vehicle noncollision	0.209	0.053	0.014	0.008	0.061

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	--	--	--	--	2.50	--
Fatal and injury (FI)	--	--	--	--	2.50	--

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)
4.15	1.35	1.12	6.27

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	0.077	6.27	2.50	1.209			
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.50	1.209			

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	13.768	0.826	14.595	0.011	2.50	0.401
Fatal and injury (FI)	--	--	--	--	2.50	0.401

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;	(5) from Worksheet 2D and 2F	(6) from Worksheet 2D and 2F;

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	(7) from 2G or 2I and 2J		(7) from 2G or 2I and 2J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 2D)	2.206	5.324	7.530
Head-on collisions (from Worksheet 2D)	0.153	0.195	0.348
Angle collisions (from Worksheet 2D)	1.125	1.989	3.114
Sideswipe (from Worksheet 2D)	0.305	0.312	0.617
Other multiple-vehicle collision (from Worksheet 2D)	0.229	1.931	2.160
Subtotal	4.018	9.751	13.768
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.001	0.001
Collision with animal (from Worksheet 2F)	0.000	0.002	0.002
Collision with fixed object (from Worksheet 2F)	0.167	0.511	0.678
Collision with other object (from Worksheet 2F)	0.023	0.039	0.063
Other single-vehicle collision (from Worksheet 2F)	0.011	0.010	0.022
Single-vehicle noncollision (from Worksheet 2F)	0.053	0.008	0.061
Collision with pedestrian (from Worksheet 2G or 2I)	1.209	0.000	1.209
Collision with bicycle (from Worksheet 2J)	0.401	0.000	0.401
Subtotal	1.865	0.571	2.436
Total	5.883	10.322	16.205

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	16.205
Fatal and injury (FI)	5.883
Property damage only (PDO)	10.322

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections			
General Information		Location Information	
Analyst	SL	Roadway	Meridian Ave
Agency or Company	H.W. Lochner	Intersection	Whiting St (West)
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2037
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	3SG
AADT _{major} (veh/day)	AADT _{MAX} = 58,100 (veh/day)	--	39,825
AADT _{minor} (veh/day)	AADT _{MAX} = 16,400 (veh/day)	--	18,950
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C _i		1.00	2.50
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	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		--	Permissive / 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			3,200
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	3
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	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)
0.86	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							

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Total	-12.13	1.11	0.26	0.33	8.920	1.000	8.920	0.63	2.50	14.080
Fatal and Injury (FI)	-11.58	1.02	0.17	0.30	2.456	$\frac{(4)_{FI}}{((4)_{FI}+(4)_{PDO}}$ 0.291	2.594	0.63	2.50	4.094
Property Damage Only (PDO)	-13.24	1.14	0.30	0.36	5.990	$\frac{(5)_{TOTAL}-(5)_{FI}}$ 0.709	6.326	0.63	2.50	9.986

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)			(3) Predicted N _{bimv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)		(5) Predicted N _{bimv (PDO)} (crashes/year)	(6) 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			4.094	1.000		9.986	14.080		
				$(2)*(3)_{FI}$			$(4)*(5)_{PDO}$	$(3)+(5)$		
Rear-end collision	0.549			2.248	0.546		5.452	7.700		
Head-on collision	0.038			0.156	0.020		0.200	0.355		
Angle collision	0.280			1.146	0.204		2.037	3.184		
Sideswipe	0.076			0.311	0.032		0.320	0.631		
Other multiple-vehicle collision	0.057			0.233	0.198		1.977	2.211		

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1) Crash Severity Level	(2) SPF Coefficients			(3) Overdispersion Parameter, k	(4) Initial N _{bisv}	(5) Proportion of Total Crashes	(6) Adjusted N _{bimv}	(7) Combined CMFs (7) from Worksheet 2B	(8) Calibration Factor, C _i	(9) Predicted N _{bisv}
	from Table 12-12			from Table 12-12	from Eqn. 12-24; (FI) from Eqn. 12-24 or 12-27		$(4)_{TOTAL}*(5)$			$(6)*(7)*(8)$
	a	b	c							
Total	-9.02	0.42	0.40	0.36	0.532	1.000	0.532	0.63	2.50	0.839
Fatal and Injury (FI)	-9.75	0.27	0.51	0.24	0.155	$\frac{(4)_{FI}}{((4)_{FI}+(4)_{PDO}}$ 0.309	0.164	0.63	2.50	0.260
Property Damage Only (PDO)	-9.08	0.45	0.33	0.53	0.345	$\frac{(5)_{TOTAL}-(5)_{FI}}$ 0.691	0.367	0.63	2.50	0.580

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)			(3) Predicted N _{bisv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)		(5) Predicted N _{bisv (PDO)} (crashes/year)	(6) 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			0.260	1.000		0.580	0.839		
				$(2)*(3)_{FI}$			$(4)*(5)_{PDO}$	$(3)+(5)$		
Collision with parked vehicle	0.001			0.000	0.001		0.001	0.001		
Collision with animal	0.001			0.000	0.003		0.002	0.002		
Collision with fixed object	0.653			0.170	0.895		0.519	0.689		

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Collision with other object	0.091	0.024	0.069	0.040	0.064
Other single-vehicle collision	0.045	0.012	0.018	0.010	0.022
Single-vehicle noncollision	0.209	0.054	0.014	0.008	0.062

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	--	--	--	--	2.50	--
Fatal and injury (FI)	--	--	--	--	2.50	--

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)
4.15	1.35	1.12	6.27

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	0.077	6.27	2.50	1.213			
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.50	1.213			

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	14.080	0.839	14.920	0.011	2.50	0.410
Fatal and injury (FI)	--	--	--	--	2.50	0.410

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;	(5) from Worksheet 2D and 2F	(6) from Worksheet 2D and 2F;

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	(7) from 2G or 2I and 2J		(7) from 2G or 2I and 2J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 2D)	2.248	5.452	7.700
Head-on collisions (from Worksheet 2D)	0.156	0.200	0.355
Angle collisions (from Worksheet 2D)	1.146	2.037	3.184
Sideswipe (from Worksheet 2D)	0.311	0.320	0.631
Other multiple-vehicle collision (from Worksheet 2D)	0.233	1.977	2.211
Subtotal	4.094	9.986	14.080
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.001	0.001
Collision with animal (from Worksheet 2F)	0.000	0.002	0.002
Collision with fixed object (from Worksheet 2F)	0.170	0.519	0.689
Collision with other object (from Worksheet 2F)	0.024	0.040	0.064
Other single-vehicle collision (from Worksheet 2F)	0.012	0.010	0.022
Single-vehicle noncollision (from Worksheet 2F)	0.054	0.008	0.062
Collision with pedestrian (from Worksheet 2G or 2I)	1.213	0.000	1.213
Collision with bicycle (from Worksheet 2J)	0.410	0.000	0.410
Subtotal	1.882	0.580	2.462
Total	5.977	10.566	16.542

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	16.542
Fatal and injury (FI)	5.977
Property damage only (PDO)	10.566

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections			
General Information		Location Information	
Analyst	SL	Roadway	Meridian Ave
Agency or Company	H.W. Lochner	Intersection	Whiting St (West)
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2038
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	3SG
AADT _{major} (veh/day)	AADT _{MAX} = 58,100 (veh/day)	--	40,400
AADT _{minor} (veh/day)	AADT _{MAX} = 16,400 (veh/day)	--	19,400
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C _i		1.00	2.50
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	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		--	Permissive / 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			3,200
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	3
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	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
<i>CMF 1i</i>	<i>CMF 2i</i>	<i>CMF 3i</i>	<i>CMF 4i</i>	<i>CMF 5i</i>	<i>CMF 6i</i>	<i>CMF_{COMB}</i>
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							

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Total	-12.13	1.11	0.26	0.33	9.118	1.000	9.118	0.63	2.50	14.394
Fatal and Injury (FI)	-11.58	1.02	0.17	0.30	2.502	$\frac{(4)_{FI}}{(4)_{FI}+(4)_{PDO}}$ 0.290	2.643	0.63	2.50	4.171
Property Damage Only (PDO)	-13.24	1.14	0.30	0.36	6.131	$\frac{(5)_{TOTAL}-(5)_{FI}}{0.710}$	6.476	0.63	2.50	10.222

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)		(3) Predicted N _{bimv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bimv (PDO)} (crashes/year)	(6) 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		4.171	1.000	10.222	14.394
			$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.549		2.290	0.546	5.581	7.871
Head-on collision	0.038		0.159	0.020	0.204	0.363
Angle collision	0.280		1.168	0.204	2.085	3.253
Sideswipe	0.076		0.317	0.032	0.327	0.644
Other multiple-vehicle collision	0.057		0.238	0.198	2.024	2.262

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1) Crash Severity Level	(2) SPF Coefficients			(3) Overdispersion Parameter, k	(4) Initial N _{bisv}	(5) Proportion of Total Crashes	(6) Adjusted N _{bimv}	(7) Combined CMFs	(8) Calibration Factor, C _i	(9) 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	0.540	1.000	0.540	0.63	2.50	0.853
Fatal and Injury (FI)	-9.75	0.27	0.51	0.24	0.157	$\frac{(4)_{FI}}{(4)_{FI}+(4)_{PDO}}$ 0.310	0.167	0.63	2.50	0.264
Property Damage Only (PDO)	-9.08	0.45	0.33	0.53	0.350	$\frac{(5)_{TOTAL}-(5)_{FI}}{0.690}$	0.373	0.63	2.50	0.589

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bisv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bisv (PDO)} (crashes/year)	(6) 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	0.264	1.000	0.589	0.853
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Collision with parked vehicle	0.001	0.000	0.001	0.001	0.001
Collision with animal	0.001	0.000	0.003	0.002	0.002
Collision with fixed object	0.653	0.172	0.895	0.527	0.699

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Collision with other object	0.091	0.024	0.069	0.041	0.065
Other single-vehicle collision	0.045	0.012	0.018	0.011	0.022
Single-vehicle noncollision	0.209	0.055	0.014	0.008	0.063

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	--	--	--	--	2.50	--
Fatal and injury (FI)	--	--	--	--	2.50	--

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)
4.15	1.35	1.12	6.27

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	0.078	6.27	2.50	1.216			
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.50	1.216			

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	14.394	0.853	15.246	0.011	2.50	0.419
Fatal and injury (FI)	--	--	--	--	2.50	0.419

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;	(5) from Worksheet 2D and 2F	(6) from Worksheet 2D and 2F;

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	(7) from 2G or 2I and 2J		(7) from 2G or 2I and 2J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 2D)	2.290	5.581	7.871
Head-on collisions (from Worksheet 2D)	0.159	0.204	0.363
Angle collisions (from Worksheet 2D)	1.168	2.085	3.253
Sideswipe (from Worksheet 2D)	0.317	0.327	0.644
Other multiple-vehicle collision (from Worksheet 2D)	0.238	2.024	2.262
Subtotal	4.171	10.222	14.394
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.001	0.001
Collision with animal (from Worksheet 2F)	0.000	0.002	0.002
Collision with fixed object (from Worksheet 2F)	0.172	0.527	0.699
Collision with other object (from Worksheet 2F)	0.024	0.041	0.065
Other single-vehicle collision (from Worksheet 2F)	0.012	0.011	0.022
Single-vehicle noncollision (from Worksheet 2F)	0.055	0.008	0.063
Collision with pedestrian (from Worksheet 2G or 2I)	1.216	0.000	1.216
Collision with bicycle (from Worksheet 2J)	0.419	0.000	0.419
Subtotal	1.899	0.589	2.488
Total	6.071	10.811	16.882

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	16.882
Fatal and injury (FI)	6.071
Property damage only (PDO)	10.811

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections			
General Information		Location Information	
Analyst	SL	Roadway	Meridian Ave
Agency or Company	H.W. Lochner	Intersection	Whiting St (West)
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2039
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	3SG
AADT _{major} (veh/day)	AADT _{MAX} = 58,100 (veh/day)	--	40,975
AADT _{minor} (veh/day)	AADT _{MAX} = 16,400 (veh/day)	--	19,850
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C _i		1.00	2.50
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	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		--	Permissive / 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			3,200
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	3
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	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
<i>CMF 1i</i>	<i>CMF 2i</i>	<i>CMF 3i</i>	<i>CMF 4i</i>	<i>CMF 5i</i>	<i>CMF 6i</i>	<i>CMF_{COMB}</i>
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									
	a	b	c							

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Total	-12.13	1.11	0.26	0.33	9.318	1.000	9.318	0.63	2.50	14.709
Fatal and Injury (FI)	-11.58	1.02	0.17	0.30	2.548	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.289	2.692	0.63	2.50	4.249
Property Damage Only (PDO)	-13.24	1.14	0.30	0.36	6.274	$(5)_{TOTAL}-(5)_{FI}$ 0.711	6.626	0.63	2.50	10.460

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)			(3) Predicted N _{bimv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)		(5) Predicted N _{bimv (PDO)} (crashes/year)	(6) 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			4.249	1.000		10.460	14.709		
				$(2)*(3)_{FI}$			$(4)*(5)_{PDO}$	$(3)+(5)$		
Rear-end collision	0.549			2.332	0.546		5.711	8.044		
Head-on collision	0.038			0.161	0.020		0.209	0.371		
Angle collision	0.280			1.190	0.204		2.134	3.323		
Sideswipe	0.076			0.323	0.032		0.335	0.658		
Other multiple-vehicle collision	0.057			0.242	0.198		2.071	2.313		

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1) Crash Severity Level	(2) SPF Coefficients			(3) Overdispersion Parameter, k	(4) Initial N _{bisv}	(5) Proportion of Total Crashes	(6) Adjusted N _{bimv}	(7) Combined CMFs (7) from Worksheet 2B	(8) Calibration Factor, C _i	(9) Predicted N _{bisv}
	from Table 12-12			from Table 12-12	from Eqn. 12-24; (FI) from Eqn. 12-24 or 12-27		$(4)_{TOTAL}*(5)$			$(6)*(7)*(8)$
	a	b	c							
Total	-9.02	0.42	0.40	0.36	0.548	1.000	0.548	0.63	2.50	0.866
Fatal and Injury (FI)	-9.75	0.27	0.51	0.24	0.160	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.310	0.170	0.63	2.50	0.268
Property Damage Only (PDO)	-9.08	0.45	0.33	0.53	0.355	$(5)_{TOTAL}-(5)_{FI}$ 0.690	0.378	0.63	2.50	0.597

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bisv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bisv (PDO)} (crashes/year)	(6) 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	0.268	1.000	0.597	0.866
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Collision with parked vehicle	0.001	0.000	0.001	0.001	0.001
Collision with animal	0.001	0.000	0.003	0.002	0.002
Collision with fixed object	0.653	0.175	0.895	0.535	0.710

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Collision with other object	0.091	0.024	0.069	0.041	0.066
Other single-vehicle collision	0.045	0.012	0.018	0.011	0.023
Single-vehicle noncollision	0.209	0.056	0.014	0.008	0.064

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	--	--	--	--	2.50	--
Fatal and injury (FI)	--	--	--	--	2.50	--

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)
4.15	1.35	1.12	6.27

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	0.078	6.27	2.50	1.220			
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.50	1.220			

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	14.709	0.866	15.574	0.011	2.50	0.428
Fatal and injury (FI)	--	--	--	--	2.50	0.428

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;	(5) from Worksheet 2D and 2F	(6) from Worksheet 2D and 2F;

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	(7) from 2G or 2I and 2J		(7) from 2G or 2I and 2J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 2D)	2.332	5.711	8.044
Head-on collisions (from Worksheet 2D)	0.161	0.209	0.371
Angle collisions (from Worksheet 2D)	1.190	2.134	3.323
Sideswipe (from Worksheet 2D)	0.323	0.335	0.658
Other multiple-vehicle collision (from Worksheet 2D)	0.242	2.071	2.313
Subtotal	4.249	10.460	14.709
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.001	0.001
Collision with animal (from Worksheet 2F)	0.000	0.002	0.002
Collision with fixed object (from Worksheet 2F)	0.175	0.535	0.710
Collision with other object (from Worksheet 2F)	0.024	0.041	0.066
Other single-vehicle collision (from Worksheet 2F)	0.012	0.011	0.023
Single-vehicle noncollision (from Worksheet 2F)	0.056	0.008	0.064
Collision with pedestrian (from Worksheet 2G or 2I)	1.220	0.000	1.220
Collision with bicycle (from Worksheet 2J)	0.428	0.000	0.428
Subtotal	1.916	0.597	2.514
Total	6.165	11.057	17.222

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	17.222
Fatal and injury (FI)	6.165
Property damage only (PDO)	11.057

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections			
General Information		Location Information	
Analyst	SL	Roadway	Meridian Ave
Agency or Company	H.W. Lochner	Intersection	Whiting St (West)
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2040
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	3SG
AADT _{major} (veh/day)	AADT _{MAX} = 58,100 (veh/day)	--	41,550
AADT _{minor} (veh/day)	AADT _{MAX} = 16,400 (veh/day)	--	20,300
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C _i		1.00	2.50
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	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		--	Permissive / 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			3,200
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	3
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	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
<i>CMF 1i</i>	<i>CMF 2i</i>	<i>CMF 3i</i>	<i>CMF 4i</i>	<i>CMF 5i</i>	<i>CMF 6i</i>	<i>CMF_{COMB}</i>
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							

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Total	-12.13	1.11	0.26	0.33	9.519	1.000	9.519	0.63	2.50	15.025
Fatal and Injury (FI)	-11.58	1.02	0.17	0.30	2.595	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.288	2.741	0.63	2.50	4.326
Property Damage Only (PDO)	-13.24	1.14	0.30	0.36	6.417	$(5)_{TOTAL}-(5)_{FI}$ 0.712	6.778	0.63	2.50	10.699

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bimv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bimv (PDO)} (crashes/year)	(6) 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	4.326	1.000	10.699	15.025
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.549	2.375	0.546	5.842	8.217
Head-on collision	0.038	0.164	0.020	0.214	0.378
Angle collision	0.280	1.211	0.204	2.183	3.394
Sideswipe	0.076	0.329	0.032	0.342	0.671
Other multiple-vehicle collision	0.057	0.247	0.198	2.118	2.365

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1) Crash Severity Level	(2) SPF Coefficients			(3) Overdispersion Parameter, k	(4) Initial N _{bisv}	(5) Proportion of Total Crashes	(6) Adjusted N _{bimv}	(7) Combined CMFs	(8) Calibration Factor, C _i	(9) 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	0.556	1.000	0.556	0.63	2.50	0.878
Fatal and Injury (FI)	-9.75	0.27	0.51	0.24	0.162	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.310	0.173	0.63	2.50	0.273
Property Damage Only (PDO)	-9.08	0.45	0.33	0.53	0.360	$(5)_{TOTAL}-(5)_{FI}$ 0.690	0.384	0.63	2.50	0.606

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bisv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bisv (PDO)} (crashes/year)	(6) 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	0.273	1.000	0.606	0.878
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Collision with parked vehicle	0.001	0.000	0.001	0.001	0.001
Collision with animal	0.001	0.000	0.003	0.002	0.002
Collision with fixed object	0.653	0.178	0.895	0.542	0.720

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Collision with other object	0.091	0.025	0.069	0.042	0.067
Other single-vehicle collision	0.045	0.012	0.018	0.011	0.023
Single-vehicle noncollision	0.209	0.057	0.014	0.008	0.065

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	--	--	--	--	2.50	--
Fatal and injury (FI)	--	--	--	--	2.50	--

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)
4.15	1.35	1.12	6.27

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	0.078	6.27	2.50	1.223			
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.50	1.223			

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	15.025	0.878	15.904	0.011	2.50	0.437
Fatal and injury (FI)	--	--	--	--	2.50	0.437

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;	(5) from Worksheet 2D and 2F	(6) from Worksheet 2D and 2F;

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	(7) from 2G or 2I and 2J		(7) from 2G or 2I and 2J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 2D)	2.375	5.842	8.217
Head-on collisions (from Worksheet 2D)	0.164	0.214	0.378
Angle collisions (from Worksheet 2D)	1.211	2.183	3.394
Sideswipe (from Worksheet 2D)	0.329	0.342	0.671
Other multiple-vehicle collision (from Worksheet 2D)	0.247	2.118	2.365
Subtotal	4.326	10.699	15.025
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.001	0.001
Collision with animal (from Worksheet 2F)	0.000	0.002	0.002
Collision with fixed object (from Worksheet 2F)	0.178	0.542	0.720
Collision with other object (from Worksheet 2F)	0.025	0.042	0.067
Other single-vehicle collision (from Worksheet 2F)	0.012	0.011	0.023
Single-vehicle noncollision (from Worksheet 2F)	0.057	0.008	0.065
Collision with pedestrian (from Worksheet 2G or 2I)	1.223	0.000	1.223
Collision with bicycle (from Worksheet 2J)	0.437	0.000	0.437
Subtotal	1.933	0.606	2.539
Total	6.259	11.305	17.564

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	17.564
Fatal and injury (FI)	6.259
Property damage only (PDO)	11.305

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections			
General Information		Location Information	
Analyst	SL	Roadway	Meridian Ave
Agency or Company	H.W. Lochner	Intersection	Whiting St (West)
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2041
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	3SG
AADT _{major} (veh/day)	AADT _{MAX} = 58,100 (veh/day)	--	42,125
AADT _{minor} (veh/day)	AADT _{MAX} = 16,400 (veh/day)	--	20,750
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C _i		1.00	2.50
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	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		--	Permissive / 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			3,200
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	3
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	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
<i>CMF 1i</i>	<i>CMF 2i</i>	<i>CMF 3i</i>	<i>CMF 4i</i>	<i>CMF 5i</i>	<i>CMF 6i</i>	<i>CMF_{COMB}</i>
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									
	a	b	c							

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Total	-12.13	1.11	0.26	0.33	9.720	1.000	9.720	0.63	2.50	15.343
Fatal and Injury (FI)	-11.58	1.02	0.17	0.30	2.641	$\frac{(4)_{FI}}{((4)_{FI}+(4)_{PDO}}$ 0.287	2.790	0.63	2.50	4.403
Property Damage Only (PDO)	-13.24	1.14	0.30	0.36	6.562	$\frac{(5)_{TOTAL}-(5)_{FI}}{0.713}$	6.931	0.63	2.50	10.940

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)		(3) Predicted N _{bimv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bimv (PDO)} (crashes/year)	(6) 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		4.403	1.000	10.940	15.343
			$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.549		2.417	0.546	5.973	8.391
Head-on collision	0.038		0.167	0.020	0.219	0.386
Angle collision	0.280		1.233	0.204	2.232	3.465
Sideswipe	0.076		0.335	0.032	0.350	0.685
Other multiple-vehicle collision	0.057		0.251	0.198	2.166	2.417

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1) Crash Severity Level	(2) SPF Coefficients			(3) Overdispersion Parameter, k	(4) Initial N _{bisv}	(5) Proportion of Total Crashes	(6) Adjusted N _{bimv}	(7) Combined CMFs	(8) Calibration Factor, C _i	(9) 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	0.565	1.000	0.565	0.63	2.50	0.891
Fatal and Injury (FI)	-9.75	0.27	0.51	0.24	0.164	$\frac{(4)_{FI}}{((4)_{FI}+(4)_{PDO}}$ 0.311	0.175	0.63	2.50	0.277
Property Damage Only (PDO)	-9.08	0.45	0.33	0.53	0.365	$\frac{(5)_{TOTAL}-(5)_{FI}}{0.689}$	0.389	0.63	2.50	0.614

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bisv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bisv (PDO)} (crashes/year)	(6) 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	0.277	1.000	0.614	0.891
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Collision with parked vehicle	0.001	0.000	0.001	0.001	0.001
Collision with animal	0.001	0.000	0.003	0.002	0.002
Collision with fixed object	0.653	0.181	0.895	0.550	0.731

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Collision with other object	0.091	0.025	0.069	0.042	0.068
Other single-vehicle collision	0.045	0.012	0.018	0.011	0.024
Single-vehicle noncollision	0.209	0.058	0.014	0.009	0.066

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	--	--	--	--	2.50	--
Fatal and injury (FI)	--	--	--	--	2.50	--

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)
4.15	1.35	1.12	6.27

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	0.078	6.27	2.50	1.227			
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.50	1.227			

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	15.343	0.891	16.235	0.011	2.50	0.446
Fatal and injury (FI)	--	--	--	--	2.50	0.446

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;	(5) from Worksheet 2D and 2F	(6) from Worksheet 2D and 2F;

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	(7) from 2G or 2I and 2J		(7) from 2G or 2I and 2J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 2D)	2.417	5.973	8.391
Head-on collisions (from Worksheet 2D)	0.167	0.219	0.386
Angle collisions (from Worksheet 2D)	1.233	2.232	3.465
Sideswipe (from Worksheet 2D)	0.335	0.350	0.685
Other multiple-vehicle collision (from Worksheet 2D)	0.251	2.166	2.417
Subtotal	4.403	10.940	15.343
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.001	0.001
Collision with animal (from Worksheet 2F)	0.000	0.002	0.002
Collision with fixed object (from Worksheet 2F)	0.181	0.550	0.731
Collision with other object (from Worksheet 2F)	0.025	0.042	0.068
Other single-vehicle collision (from Worksheet 2F)	0.012	0.011	0.024
Single-vehicle noncollision (from Worksheet 2F)	0.058	0.009	0.066
Collision with pedestrian (from Worksheet 2G or 2I)	1.227	0.000	1.227
Collision with bicycle (from Worksheet 2J)	0.446	0.000	0.446
Subtotal	1.950	0.614	2.565
Total	6.353	11.554	17.908

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	17.908
Fatal and injury (FI)	6.353
Property damage only (PDO)	11.554

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections			
General Information		Location Information	
Analyst	SL	Roadway	Meridian Ave
Agency or Company	H.W. Lochner	Intersection	Whiting St (West)
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2042
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	3SG
AADT _{major} (veh/day)	AADT _{MAX} = 58,100 (veh/day)	--	42,700
AADT _{minor} (veh/day)	AADT _{MAX} = 16,400 (veh/day)	--	21,200
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C _i		1.00	2.50
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	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		--	Permissive / 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			3,200
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	3
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	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
<i>CMF 1i</i>	<i>CMF 2i</i>	<i>CMF 3i</i>	<i>CMF 4i</i>	<i>CMF 5i</i>	<i>CMF 6i</i>	<i>CMF_{COMB}</i>
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									
	a	b	c							

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Total	-12.13	1.11	0.26	0.33	9.923	1.000	9.923	0.63	2.50	15.663
Fatal and Injury (FI)	-11.58	1.02	0.17	0.30	2.688	$\frac{(4)_{FI}}{((4)_{FI}+(4)_{PDO}}$ 0.286	2.839	0.63	2.50	4.481
Property Damage Only (PDO)	-13.24	1.14	0.30	0.36	6.707	$\frac{(5)_{TOTAL}-(5)_{FI}}{0.714}$	7.084	0.63	2.50	11.182

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bimv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bimv (PDO)} (crashes/year)	(6) 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	4.481	1.000	11.182	15.663
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.549	2.460	0.546	6.105	8.565
Head-on collision	0.038	0.170	0.020	0.224	0.394
Angle collision	0.280	1.255	0.204	2.281	3.536
Sideswipe	0.076	0.341	0.032	0.358	0.698
Other multiple-vehicle collision	0.057	0.255	0.198	2.214	2.469

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1) Crash Severity Level	(2) SPF Coefficients			(3) Overdispersion Parameter, k	(4) Initial N _{bisv}	(5) Proportion of Total Crashes	(6) Adjusted N _{bimv}	(7) Combined CMFs	(8) Calibration Factor, C _i	(9) 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	0.573	1.000	0.573	0.63	2.50	0.904
Fatal and Injury (FI)	-9.75	0.27	0.51	0.24	0.167	$\frac{(4)_{FI}}{((4)_{FI}+(4)_{PDO}}$ 0.311	0.178	0.63	2.50	0.281
Property Damage Only (PDO)	-9.08	0.45	0.33	0.53	0.370	$\frac{(5)_{TOTAL}-(5)_{FI}}{0.689}$	0.395	0.63	2.50	0.623

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bisv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bisv (PDO)} (crashes/year)	(6) 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	0.281	1.000	0.623	0.904
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Collision with parked vehicle	0.001	0.000	0.001	0.001	0.001
Collision with animal	0.001	0.000	0.003	0.002	0.002
Collision with fixed object	0.653	0.184	0.895	0.558	0.741

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Collision with other object	0.091	0.026	0.069	0.043	0.069
Other single-vehicle collision	0.045	0.013	0.018	0.011	0.024
Single-vehicle noncollision	0.209	0.059	0.014	0.009	0.067

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	--	--	--	--	2.50	--
Fatal and injury (FI)	--	--	--	--	2.50	--

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)
4.15	1.35	1.12	6.27

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	0.078	6.27	2.50	1.230			
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.50	1.230			

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	15.663	0.904	16.567	0.011	2.50	0.456
Fatal and injury (FI)	--	--	--	--	2.50	0.456

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;	(5) from Worksheet 2D and 2F	(6) from Worksheet 2D and 2F;

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	(7) from 2G or 2I and 2J		(7) from 2G or 2I and 2J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 2D)	2.460	6.105	8.565
Head-on collisions (from Worksheet 2D)	0.170	0.224	0.394
Angle collisions (from Worksheet 2D)	1.255	2.281	3.536
Sideswipe (from Worksheet 2D)	0.341	0.358	0.698
Other multiple-vehicle collision (from Worksheet 2D)	0.255	2.214	2.469
Subtotal	4.481	11.182	15.663
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.001	0.001
Collision with animal (from Worksheet 2F)	0.000	0.002	0.002
Collision with fixed object (from Worksheet 2F)	0.184	0.558	0.741
Collision with other object (from Worksheet 2F)	0.026	0.043	0.069
Other single-vehicle collision (from Worksheet 2F)	0.013	0.011	0.024
Single-vehicle noncollision (from Worksheet 2F)	0.059	0.009	0.067
Collision with pedestrian (from Worksheet 2G or 2I)	1.230	0.000	1.230
Collision with bicycle (from Worksheet 2J)	0.456	0.000	0.456
Subtotal	1.967	0.623	2.590
Total	6.448	11.805	18.253

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	18.253
Fatal and injury (FI)	6.448
Property damage only (PDO)	11.805

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections			
General Information		Location Information	
Analyst	SL	Roadway	Meridian Ave
Agency or Company	H.W. Lochner	Intersection	Whiting St (West)
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2043
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	3SG
AADT _{major} (veh/day)	AADT _{MAX} = 58,100 (veh/day)	--	43,275
AADT _{minor} (veh/day)	AADT _{MAX} = 16,400 (veh/day)	--	21,650
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C _i		1.00	2.50
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	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		--	Permissive / 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			3,200
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	3
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	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
<i>CMF 1i</i>	<i>CMF 2i</i>	<i>CMF 3i</i>	<i>CMF 4i</i>	<i>CMF 5i</i>	<i>CMF 6i</i>	<i>CMF_{COMB}</i>
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							

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Total	-12.13	1.11	0.26	0.33	10.126	1.000	10.126	0.63	2.50	15.984
Fatal and Injury (FI)	-11.58	1.02	0.17	0.30	2.734	$\frac{(4)_{FI}}{((4)_{FI}+(4)_{PDO}}$ 0.285	2.888	0.63	2.50	4.559
Property Damage Only (PDO)	-13.24	1.14	0.30	0.36	6.853	$\frac{(5)_{TOTAL}-(5)_{FI}}{0.715}$	7.238	0.63	2.50	11.426

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bimv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bimv (PDO)} (crashes/year)	(6) 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	4.559	1.000	11.426	15.984
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.549	2.503	0.546	6.238	8.741
Head-on collision	0.038	0.173	0.020	0.229	0.402
Angle collision	0.280	1.276	0.204	2.331	3.607
Sideswipe	0.076	0.346	0.032	0.366	0.712
Other multiple-vehicle collision	0.057	0.260	0.198	2.262	2.522

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1) Crash Severity Level	(2) SPF Coefficients			(3) Overdispersion Parameter, k	(4) Initial N _{bisv}	(5) Proportion of Total Crashes	(6) Adjusted N _{bimv}	(7) Combined CMFs	(8) Calibration Factor, C _i	(9) 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	0.581	1.000	0.581	0.63	2.50	0.917
Fatal and Injury (FI)	-9.75	0.27	0.51	0.24	0.169	$\frac{(4)_{FI}}{((4)_{FI}+(4)_{PDO}}$ 0.311	0.181	0.63	2.50	0.285
Property Damage Only (PDO)	-9.08	0.45	0.33	0.53	0.375	$\frac{(5)_{TOTAL}-(5)_{FI}}{0.689}$	0.400	0.63	2.50	0.632

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bisv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bisv (PDO)} (crashes/year)	(6) 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	0.285	1.000	0.632	0.917
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Collision with parked vehicle	0.001	0.000	0.001	0.001	0.001
Collision with animal	0.001	0.000	0.003	0.002	0.002
Collision with fixed object	0.653	0.186	0.895	0.565	0.752

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Collision with other object	0.091	0.026	0.069	0.044	0.070
Other single-vehicle collision	0.045	0.013	0.018	0.011	0.024
Single-vehicle noncollision	0.209	0.060	0.014	0.009	0.068

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	--	--	--	--	2.50	--
Fatal and injury (FI)	--	--	--	--	2.50	--

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)
4.15	1.35	1.12	6.27

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	0.079	6.27	2.50	1.233			
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.50	1.233			

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	15.984	0.917	16.901	0.011	2.50	0.465
Fatal and injury (FI)	--	--	--	--	2.50	0.465

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;	(5) from Worksheet 2D and 2F	(6) from Worksheet 2D and 2F;

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	(7) from 2G or 2I and 2J		(7) from 2G or 2I and 2J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 2D)	2.503	6.238	8.741
Head-on collisions (from Worksheet 2D)	0.173	0.229	0.402
Angle collisions (from Worksheet 2D)	1.276	2.331	3.607
Sideswipe (from Worksheet 2D)	0.346	0.366	0.712
Other multiple-vehicle collision (from Worksheet 2D)	0.260	2.262	2.522
Subtotal	4.559	11.426	15.984
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.001	0.001
Collision with animal (from Worksheet 2F)	0.000	0.002	0.002
Collision with fixed object (from Worksheet 2F)	0.186	0.565	0.752
Collision with other object (from Worksheet 2F)	0.026	0.044	0.070
Other single-vehicle collision (from Worksheet 2F)	0.013	0.011	0.024
Single-vehicle noncollision (from Worksheet 2F)	0.060	0.009	0.068
Collision with pedestrian (from Worksheet 2G or 2I)	1.233	0.000	1.233
Collision with bicycle (from Worksheet 2J)	0.465	0.000	0.465
Subtotal	1.983	0.632	2.615
Total	6.542	12.057	18.599

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	18.599
Fatal and injury (FI)	6.542
Property damage only (PDO)	12.057

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections			
General Information		Location Information	
Analyst	SL	Roadway	Meridian Ave
Agency or Company	H.W. Lochner	Intersection	Whiting St (West)
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2044
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	3SG
AADT _{major} (veh/day)	AADT _{MAX} = 58,100 (veh/day)	--	43,850
AADT _{minor} (veh/day)	AADT _{MAX} = 16,400 (veh/day)	--	22,100
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C _i		1.00	2.50
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	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		--	Permissive / 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			3,200
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	3
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	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
<i>CMF 1i</i>	<i>CMF 2i</i>	<i>CMF 3i</i>	<i>CMF 4i</i>	<i>CMF 5i</i>	<i>CMF 6i</i>	<i>CMF_{COMB}</i>
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									
	a	b	c							

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Total	-12.13	1.11	0.26	0.33	10.331	1.000	10.331	0.63	2.50	16.307
Fatal and Injury (FI)	-11.58	1.02	0.17	0.30	2.781	$\frac{(4)_{FI}}{((4)_{FI}+(4)_{PDO}}$ 0.284	2.937	0.63	2.50	4.637
Property Damage Only (PDO)	-13.24	1.14	0.30	0.36	7.000	$\frac{(5)_{TOTAL}-(5)_{FI}}$ 0.716	7.393	0.63	2.50	11.671

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)		(3) Predicted N _{bimv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bimv (PDO)} (crashes/year)	(6) 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		4.637	1.000	11.671	16.307
			$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.549		2.546	0.546	6.372	8.918
Head-on collision	0.038		0.176	0.020	0.233	0.410
Angle collision	0.280		1.298	0.204	2.381	3.679
Sideswipe	0.076		0.352	0.032	0.373	0.726
Other multiple-vehicle collision	0.057		0.264	0.198	2.311	2.575

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1) Crash Severity Level	(2) SPF Coefficients			(3) Overdispersion Parameter, k	(4) Initial N _{bisv}	(5) Proportion of Total Crashes	(6) Adjusted N _{bimv}	(7) Combined CMFs	(8) Calibration Factor, C _i	(9) 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	0.589	1.000	0.589	0.63	2.50	0.930
Fatal and Injury (FI)	-9.75	0.27	0.51	0.24	0.172	$\frac{(4)_{FI}}{((4)_{FI}+(4)_{PDO}}$ 0.311	0.183	0.63	2.50	0.290
Property Damage Only (PDO)	-9.08	0.45	0.33	0.53	0.379	$\frac{(5)_{TOTAL}-(5)_{FI}}$ 0.689	0.405	0.63	2.50	0.640

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bisv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bisv (PDO)} (crashes/year)	(6) 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	0.290	1.000	0.640	0.930
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Collision with parked vehicle	0.001	0.000	0.001	0.001	0.001
Collision with animal	0.001	0.000	0.003	0.002	0.002
Collision with fixed object	0.653	0.189	0.895	0.573	0.762

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Collision with other object	0.091	0.026	0.069	0.044	0.071
Other single-vehicle collision	0.045	0.013	0.018	0.012	0.025
Single-vehicle noncollision	0.209	0.061	0.014	0.009	0.069

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	--	--	--	--	2.50	--
Fatal and injury (FI)	--	--	--	--	2.50	--

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)
4.15	1.35	1.12	6.27

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	0.079	6.27	2.50	1.237			
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.50	1.237			

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	16.307	0.930	17.237	0.011	2.50	0.474
Fatal and injury (FI)	--	--	--	--	2.50	0.474

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;	(5) from Worksheet 2D and 2F	(6) from Worksheet 2D and 2F;

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	(7) from 2G or 2I and 2J		(7) from 2G or 2I and 2J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 2D)	2.546	6.372	8.918
Head-on collisions (from Worksheet 2D)	0.176	0.233	0.410
Angle collisions (from Worksheet 2D)	1.298	2.381	3.679
Sideswipe (from Worksheet 2D)	0.352	0.373	0.726
Other multiple-vehicle collision (from Worksheet 2D)	0.264	2.311	2.575
Subtotal	4.637	11.671	16.307
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.001	0.001
Collision with animal (from Worksheet 2F)	0.000	0.002	0.002
Collision with fixed object (from Worksheet 2F)	0.189	0.573	0.762
Collision with other object (from Worksheet 2F)	0.026	0.044	0.071
Other single-vehicle collision (from Worksheet 2F)	0.013	0.012	0.025
Single-vehicle noncollision (from Worksheet 2F)	0.061	0.009	0.069
Collision with pedestrian (from Worksheet 2G or 2I)	1.237	0.000	1.237
Collision with bicycle (from Worksheet 2J)	0.474	0.000	0.474
Subtotal	2.000	0.640	2.640
Total	6.637	12.311	18.947

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	18.947
Fatal and injury (FI)	6.637
Property damage only (PDO)	12.311

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections			
General Information		Location Information	
Analyst	SL	Roadway	Meridian Ave
Agency or Company	H.W. Lochner	Intersection	Whiting St (West)
Date Performed	12/01/21	Jurisdiction	
		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)	--	44,425
AADT _{minor} (veh/day)	AADT _{MAX} = 16,400 (veh/day)	--	22,550
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C _i		1.00	2.50
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	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		--	Permissive / 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			3,200
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	3
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	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
<i>CMF 1i</i>	<i>CMF 2i</i>	<i>CMF 3i</i>	<i>CMF 4i</i>	<i>CMF 5i</i>	<i>CMF 6i</i>	<i>CMF_{COMB}</i>
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									
	a	b	c							

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Total	-12.13	1.11	0.26	0.33	10.536	1.000	10.536	0.63	2.50	16.632
Fatal and Injury (FI)	-11.58	1.02	0.17	0.30	2.828	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.283	2.987	0.63	2.50	4.715
Property Damage Only (PDO)	-13.24	1.14	0.30	0.36	7.148	$(5)_{TOTAL}-(5)_{FI}$ 0.717	7.549	0.63	2.50	11.917

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)			(3) Predicted N _{bimv (FI)} (crashes/year)	(4) Proportion of Collision Type (PDO)		(5) Predicted N _{bimv (PDO)} (crashes/year)	(6) 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			4.715	1.000		11.917	16.632		
				$(2)*(3)_{FI}$			$(4)*(5)_{PDO}$	$(3)+(5)$		
Rear-end collision	0.549			2.588	0.546		6.507	9.095		
Head-on collision	0.038			0.179	0.020		0.238	0.418		
Angle collision	0.280			1.320	0.204		2.431	3.751		
Sideswipe	0.076			0.358	0.032		0.381	0.740		
Other multiple-vehicle collision	0.057			0.269	0.198		2.360	2.628		

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1) Crash Severity Level	(2) SPF Coefficients			(3) Overdispersion Parameter, k	(4) Initial N _{bisv}	(5) Proportion of Total Crashes	(6) Adjusted N _{bimv}	(7) Combined CMFs (7) from Worksheet 2B	(8) Calibration Factor, C _i	(9) Predicted N _{bisv}
	from Table 12-12			from Table 12-12	from Eqn. 12-24; (FI) from Eqn. 12-24 or 12-27		$(4)_{TOTAL}*(5)$			$(6)*(7)*(8)$
	a	b	c							
Total	-9.02	0.42	0.40	0.36	0.597	1.000	0.597	0.63	2.50	0.942
Fatal and Injury (FI)	-9.75	0.27	0.51	0.24	0.174	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.312	0.186	0.63	2.50	0.294
Property Damage Only (PDO)	-9.08	0.45	0.33	0.53	0.384	$(5)_{TOTAL}-(5)_{FI}$ 0.688	0.411	0.63	2.50	0.649

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)			(3) Predicted N _{bisv (FI)} (crashes/year)	(4) Proportion of Collision Type (PDO)		(5) Predicted N _{bisv (PDO)} (crashes/year)	(6) 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			0.294	1.000		0.649	0.942		
				$(2)*(3)_{FI}$			$(4)*(5)_{PDO}$	$(3)+(5)$		
Collision with parked vehicle	0.001			0.000	0.001		0.001	0.001		
Collision with animal	0.001			0.000	0.003		0.002	0.002		
Collision with fixed object	0.653			0.192	0.895		0.580	0.772		

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Collision with other object	0.091	0.027	0.069	0.045	0.071
Other single-vehicle collision	0.045	0.013	0.018	0.012	0.025
Single-vehicle noncollision	0.209	0.061	0.014	0.009	0.070

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	--	--	--	--	2.50	--
Fatal and injury (FI)	--	--	--	--	2.50	--

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)
4.15	1.35	1.12	6.27

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	0.079	6.27	2.50	1.240			
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.50	1.240			

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	16.632	0.942	17.574	0.011	2.50	0.483
Fatal and injury (FI)	--	--	--	--	2.50	0.483

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;	(5) from Worksheet 2D and 2F	(6) from Worksheet 2D and 2F;

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	(7) from 2G or 2I and 2J	(7) from 2G or 2I and 2J
MULTIPLE-VEHICLE		
Rear-end collisions (from Worksheet 2D)	2.588	9.095
Head-on collisions (from Worksheet 2D)	0.179	0.418
Angle collisions (from Worksheet 2D)	1.320	3.751
Sideswipe (from Worksheet 2D)	0.358	0.740
Other multiple-vehicle collision (from Worksheet 2D)	0.269	2.628
Subtotal	4.715	16.632
SINGLE-VEHICLE		
Collision with parked vehicle (from Worksheet 2F)	0.000	0.001
Collision with animal (from Worksheet 2F)	0.000	0.002
Collision with fixed object (from Worksheet 2F)	0.192	0.580
Collision with other object (from Worksheet 2F)	0.027	0.045
Other single-vehicle collision (from Worksheet 2F)	0.013	0.012
Single-vehicle noncollision (from Worksheet 2F)	0.061	0.009
Collision with pedestrian (from Worksheet 2G or 2I)	1.240	1.240
Collision with bicycle (from Worksheet 2J)	0.483	0.483
Subtotal	2.017	2.665
Total	6.731	19.297

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	19.297
Fatal and injury (FI)	6.731
Property damage only (PDO)	12.565

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections			
General Information		Location Information	
Analyst	SL	Roadway	Meridian Ave
Agency or Company	H.W. Lochner	Intersection	Whiting St (West)
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2046
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	3SG
AADT _{major} (veh/day)	AADT _{MAX} = 58,100 (veh/day)	--	45,000
AADT _{minor} (veh/day)	AADT _{MAX} = 16,400 (veh/day)	--	23,000
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C _i		1.00	2.50
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	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		--	Permissive / 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			3,200
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	3
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	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
<i>CMF 1i</i>	<i>CMF 2i</i>	<i>CMF 3i</i>	<i>CMF 4i</i>	<i>CMF 5i</i>	<i>CMF 6i</i>	<i>CMF_{COMB}</i>
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									
	a	b	c							

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Total	-12.13	1.11	0.26	0.33	10.743	1.000	10.743	0.63	2.50	16.958
Fatal and Injury (FI)	-11.58	1.02	0.17	0.30	2.875	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.283	3.036	0.63	2.50	4.793
Property Damage Only (PDO)	-13.24	1.14	0.30	0.36	7.297	$(5)_{TOTAL}-(5)_{FI}$ 0.717	7.706	0.63	2.50	12.165

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bimv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bimv (PDO)} (crashes/year)	(6) 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	4.793	1.000	12.165	16.958
		(2)*(3) _{FI}		(4)*(5) _{PDO}	(3)+(5)
Rear-end collision	0.549	2.631	0.546	6.642	9.273
Head-on collision	0.038	0.182	0.020	0.243	0.425
Angle collision	0.280	1.342	0.204	2.482	3.824
Sideswipe	0.076	0.364	0.032	0.389	0.754
Other multiple-vehicle collision	0.057	0.273	0.198	2.409	2.682

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1) Crash Severity Level	(2) SPF Coefficients			(3) Overdispersion Parameter, k	(4) Initial N _{bisv}	(5) Proportion of Total Crashes	(6) Adjusted N _{bimv}	(7) Combined CMFs	(8) Calibration Factor, C _i	(9) 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	0.605	1.000	0.605	0.63	2.50	0.955
Fatal and Injury (FI)	-9.75	0.27	0.51	0.24	0.176	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.312	0.189	0.63	2.50	0.298
Property Damage Only (PDO)	-9.08	0.45	0.33	0.53	0.389	$(5)_{TOTAL}-(5)_{FI}$ 0.688	0.416	0.63	2.50	0.657

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bisv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bisv (PDO)} (crashes/year)	(6) 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	0.298	1.000	0.657	0.955
		(2)*(3) _{FI}		(4)*(5) _{PDO}	(3)+(5)
Collision with parked vehicle	0.001	0.000	0.001	0.001	0.001
Collision with animal	0.001	0.000	0.003	0.002	0.002
Collision with fixed object	0.653	0.195	0.895	0.588	0.783

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Collision with other object	0.091	0.027	0.069	0.045	0.072
Other single-vehicle collision	0.045	0.013	0.018	0.012	0.025
Single-vehicle noncollision	0.209	0.062	0.014	0.009	0.071

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	--	--	--	--	2.50	--
Fatal and injury (FI)	--	--	--	--	2.50	--

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)
4.15	1.35	1.12	6.27

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	0.079	6.27	2.50	1.243			
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.50	1.243			

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	16.958	0.955	17.913	0.011	2.50	0.493
Fatal and injury (FI)	--	--	--	--	2.50	0.493

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;	(5) from Worksheet 2D and 2F	(6) from Worksheet 2D and 2F;

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	(7) from 2G or 2I and 2J		(7) from 2G or 2I and 2J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 2D)	2.631	6.642	9.273
Head-on collisions (from Worksheet 2D)	0.182	0.243	0.425
Angle collisions (from Worksheet 2D)	1.342	2.482	3.824
Sideswipe (from Worksheet 2D)	0.364	0.389	0.754
Other multiple-vehicle collision (from Worksheet 2D)	0.273	2.409	2.682
Subtotal	4.793	12.165	16.958
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.001	0.001
Collision with animal (from Worksheet 2F)	0.000	0.002	0.002
Collision with fixed object (from Worksheet 2F)	0.195	0.588	0.783
Collision with other object (from Worksheet 2F)	0.027	0.045	0.072
Other single-vehicle collision (from Worksheet 2F)	0.013	0.012	0.025
Single-vehicle noncollision (from Worksheet 2F)	0.062	0.009	0.071
Collision with pedestrian (from Worksheet 2G or 2I)	1.243	0.000	1.243
Collision with bicycle (from Worksheet 2J)	0.493	0.000	0.493
Subtotal	2.033	0.657	2.690
Total	6.826	12.822	19.648

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	19.648
Fatal and injury (FI)	6.826
Property damage only (PDO)	12.822

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections			
General Information		Location Information	
Analyst	SL	Roadway	Whiting St
Agency or Company	H.W. Lochner	Intersection	Brush St
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2026
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	4SG
AADT _{major} (veh/day)	AADT _{MAX} = 67,700 (veh/day)	--	15,500
AADT _{minor} (veh/day)	AADT _{MAX} = 33,400 (veh/day)	--	10,200
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C _i		1.00	2.50
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	1
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)		--	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			3,200
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	2
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	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)
0.73	0.97	0.96	1.00	0.91	1.00	0.62

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}

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	from Table 12-10			from Table 12-10	from Equation 12-21	(4) _{TOTAL} *(5)	(7) from Worksheet 2B	2.50	(6)*(7)*(8)
	a	b	c						
Total	-10.99	1.07	0.23	0.39	4.293	1.000	4.293	0.62	6.646
Fatal and Injury (FI)	-13.14	1.18	0.22	0.33	1.318	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.318	1.367	0.62	2.116
Property Damage Only (PDO)	-11.02	1.02	0.24	0.44	2.820	$(5)_{TOTAL}-(5)_{FI}$ 0.682	2.926	0.62	4.529

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bimv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bimv (PDO)} (crashes/year)	(6) 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	2.116	1.000	4.529	6.646
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.450	0.952	0.483	2.188	3.140
Head-on collision	0.049	0.104	0.030	0.136	0.240
Angle collision	0.347	0.734	0.244	1.105	1.840
Sideswipe	0.099	0.210	0.032	0.145	0.354
Other multiple-vehicle collision	0.055	0.116	0.211	0.956	1.072

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1) Crash Severity Level	(2) SPF Coefficients			(3) Overdispersion Parameter, k	(4) Initial N _{bisv}	(5) Proportion of Total Crashes	(6) Adjusted N _{bimv}	(7) Combined CMFs	(8) Calibration Factor, C _i	(9) Predicted N _{bisv}			
	from Table 12-12										(4) _{TOTAL} *(5)	(7) from Worksheet 2B	(6)*(7)*(8)
	a	b	c										
Total	-10.21	0.68	0.27	0.36	0.314	1.000	0.314	0.62	2.50	0.487			
Fatal and Injury (FI)	-9.25	0.43	0.29	0.09	0.089	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.285	0.090	0.62	2.50	0.139			
Property Damage Only (PDO)	-11.34	0.78	0.25	0.44	0.222	$(5)_{TOTAL}-(5)_{FI}$ 0.715	0.225	0.62	2.50	0.348			

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bisv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bisv (PDO)} (crashes/year)	(6) 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	0.139	1.000	0.348	0.487

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		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
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	0.103	0.870	0.303	0.406
Collision with other object	0.072	0.010	0.070	0.024	0.034
Other single-vehicle collision	0.040	0.006	0.023	0.008	0.014
Single-vehicle noncollision	0.141	0.020	0.034	0.012	0.031

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	--	--	--	--	2.50	--
Fatal and injury (FI)	--	--	--	--	2.50	--

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	$(1)*(2)*(3)$
2.78	1.35	1.12	4.20

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	0.182	4.20	2.50	0.764			
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.50	0.764			

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	6.646	0.487	7.133	0.015	2.50	0.107
Fatal and injury (FI)	--	--	--	--	2.50	0.107

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)	0.952	2.188	3.140
Head-on collisions (from Worksheet 2D)	0.104	0.136	0.240
Angle collisions (from Worksheet 2D)	0.734	1.105	1.840
Sideswipe (from Worksheet 2D)	0.210	0.145	0.354
Other multiple-vehicle collision (from Worksheet 2D)	0.116	0.956	1.072
Subtotal	2.116	4.529	6.646
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)	0.103	0.303	0.406
Collision with other object (from Worksheet 2F)	0.010	0.024	0.034
Other single-vehicle collision (from Worksheet 2F)	0.006	0.008	0.014
Single-vehicle noncollision (from Worksheet 2F)	0.020	0.012	0.031
Collision with pedestrian (from Worksheet 2G or 2I)	0.764	0.000	0.764
Collision with bicycle (from Worksheet 2J)	0.107	0.000	0.107
Subtotal	1.010	0.348	1.358
Total	3.126	4.877	8.004

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	8.004
Fatal and injury (FI)	3.126
Property damage only (PDO)	4.877

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections			
General Information		Location Information	
Analyst	SL	Roadway	Whiting St
Agency or Company	H.W. Lochner	Intersection	Brush St
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2027
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	4SG
AADT _{major} (veh/day)	AADT _{MAX} = 67,700 (veh/day)	--	15,975
AADT _{minor} (veh/day)	AADT _{MAX} = 33,400 (veh/day)	--	10,250
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C _i		1.00	2.50
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	1
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)		--	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			3,200
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	2
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	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)
0.73	0.97	0.96	1.00	0.91	1.00	0.62

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}

Urban and Suburban Arterial Predictive Method

	from Table 12-10			from Table 12-10	from Equation 12-21	(4) _{TOTAL} *(5)	(7) from Worksheet 2B	2.50	(6)*(7)*(8)
	a	b	c						
Total	-10.99	1.07	0.23	0.39	4.439	1.000	4.439	0.62	6.872
Fatal and Injury (FI)	-13.14	1.18	0.22	0.33	1.367	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.319	1.418	0.62	2.195
Property Damage Only (PDO)	-11.02	1.02	0.24	0.44	2.912	$(5)_{TOTAL}-(5)_{FI}$ 0.681	3.021	0.62	4.676

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bimv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bimv (PDO)} (crashes/year)	(6) 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	2.195	1.000	4.676	6.872
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.450	0.988	0.483	2.259	3.247
Head-on collision	0.049	0.108	0.030	0.140	0.248
Angle collision	0.347	0.762	0.244	1.141	1.903
Sideswipe	0.099	0.217	0.032	0.150	0.367
Other multiple-vehicle collision	0.055	0.121	0.211	0.987	1.107

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1) Crash Severity Level	(2) SPF Coefficients			(3) Overdispersion Parameter, k	(4) Initial N _{bisv}	(5) Proportion of Total Crashes	(6) Adjusted N _{bimv}	(7) Combined CMFs	(8) Calibration Factor, C _i	(9) Predicted N _{bisv}			
	from Table 12-12										(4) _{TOTAL} *(5)	(7) from Worksheet 2B	(6)*(7)*(8)
	a	b	c										
Total	-10.21	0.68	0.27	0.36	0.321	1.000	0.321	0.62	2.50	0.498			
Fatal and Injury (FI)	-9.25	0.43	0.29	0.09	0.090	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.283	0.091	0.62	2.50	0.141			
Property Damage Only (PDO)	-11.34	0.78	0.25	0.44	0.227	$(5)_{TOTAL}-(5)_{FI}$ 0.717	0.230	0.62	2.50	0.357			

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bisv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bisv (PDO)} (crashes/year)	(6) 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	0.141	1.000	0.357	0.498

Urban and Suburban Arterial Predictive Method

		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
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	0.105	0.870	0.310	0.415
Collision with other object	0.072	0.010	0.070	0.025	0.035
Other single-vehicle collision	0.040	0.006	0.023	0.008	0.014
Single-vehicle noncollision	0.141	0.020	0.034	0.012	0.032

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	--	--	--	--	2.50	--
Fatal and injury (FI)	--	--	--	--	2.50	--

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	$(1)*(2)*(3)$
2.78	1.35	1.12	4.20

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	0.182	4.20	2.50	0.765			
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.50	0.765			

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	6.872	0.498	7.369	0.015	2.50	0.111
Fatal and injury (FI)	--	--	--	--	2.50	0.111

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)	0.988	2.259	3.247
Head-on collisions (from Worksheet 2D)	0.108	0.140	0.248
Angle collisions (from Worksheet 2D)	0.762	1.141	1.903
Sideswipe (from Worksheet 2D)	0.217	0.150	0.367
Other multiple-vehicle collision (from Worksheet 2D)	0.121	0.987	1.107
Subtotal	2.195	4.676	6.872
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)	0.105	0.310	0.415
Collision with other object (from Worksheet 2F)	0.010	0.025	0.035
Other single-vehicle collision (from Worksheet 2F)	0.006	0.008	0.014
Single-vehicle noncollision (from Worksheet 2F)	0.020	0.012	0.032
Collision with pedestrian (from Worksheet 2G or 2I)	0.765	0.000	0.765
Collision with bicycle (from Worksheet 2J)	0.111	0.000	0.111
Subtotal	1.017	0.357	1.373
Total	3.212	5.033	8.245

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	8.245
Fatal and injury (FI)	3.212
Property damage only (PDO)	5.033

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections			
General Information		Location Information	
Analyst	SL	Roadway	Whiting St
Agency or Company	H.W. Lochner	Intersection	Brush St
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2028
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	4SG
AADT _{major} (veh/day)	AADT _{MAX} = 67,700 (veh/day)	--	16,450
AADT _{minor} (veh/day)	AADT _{MAX} = 33,400 (veh/day)	--	10,300
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C _i		1.00	2.50
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	1
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)		--	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			3,200
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	2
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	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
<i>CMF_{1i}</i>	<i>CMF_{2i}</i>	<i>CMF_{3i}</i>	<i>CMF_{4i}</i>	<i>CMF_{5i}</i>	<i>CMF_{6i}</i>	<i>CMF_{COMB}</i>
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	0.97	0.96	1.00	0.91	1.00	0.62

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}

Urban and Suburban Arterial Predictive Method

	from Table 12-10			from Table 12-10	from Equation 12-21	(4) _{TOTAL} *(5)	(7) from Worksheet 2B	2.50	(6)*(7)*(8)
	a	b	c						
Total	-10.99	1.07	0.23	0.39	4.585	1.000	4.585	0.62	7.099
Fatal and Injury (FI)	-13.14	1.18	0.22	0.33	1.417	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.320	1.470	0.62	2.275
Property Damage Only (PDO)	-11.02	1.02	0.24	0.44	3.004	$(5)_{TOTAL}-(5)_{FI}$ 0.680	3.116	0.62	4.824

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bimv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bimv (PDO)} (crashes/year)	(6) 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	2.275	1.000	4.824	7.099
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.450	1.024	0.483	2.330	3.354
Head-on collision	0.049	0.111	0.030	0.145	0.256
Angle collision	0.347	0.789	0.244	1.177	1.966
Sideswipe	0.099	0.225	0.032	0.154	0.380
Other multiple-vehicle collision	0.055	0.125	0.211	1.018	1.143

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1) Crash Severity Level	(2) SPF Coefficients			(3) Overdispersion Parameter, k	(4) Initial N _{bisv}	(5) Proportion of Total Crashes	(6) Adjusted N _{bimv}	(7) Combined CMFs	(8) Calibration Factor, C _i	(9) Predicted N _{bisv}			
	from Table 12-12										(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	0.62	2.50	0.508			
Fatal and Injury (FI)	-9.25	0.43	0.29	0.09	0.091	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.281	0.092	0.62	2.50	0.143			
Property Damage Only (PDO)	-11.34	0.78	0.25	0.44	0.233	$(5)_{TOTAL}-(5)_{FI}$ 0.719	0.236	0.62	2.50	0.365			

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bisv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bisv (PDO)} (crashes/year)	(6) 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	0.143	1.000	0.365	0.508

Urban and Suburban Arterial Predictive Method

		$(2) \times (3)_{FI}$		$(4) \times (5)_{PDO}$	$(3) + (5)$
Collision with parked vehicle	0.001	0.000	0.001	0.000	0.001
Collision with animal	0.002	0.000	0.002	0.001	0.001
Collision with fixed object	0.744	0.106	0.870	0.318	0.424
Collision with other object	0.072	0.010	0.070	0.026	0.036
Other single-vehicle collision	0.040	0.006	0.023	0.008	0.014
Single-vehicle noncollision	0.141	0.020	0.034	0.012	0.033

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		$(4) \times (5) \times (6)$
Total	--	--	--	--	2.50	--
Fatal and injury (FI)	--	--	--	--	2.50	--

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	$(1) \times (2) \times (3)$
2.78	1.35	1.12	4.20

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	$N_{pedbase}$ from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C_i	Predicted N_{pedi}
	from Table 12-14									$(4) \times (5) \times (6)$
	a	b	c	d	e					
Total	-9.53	0.40	0.26	0.45	0.04	0.24	0.182	4.20	2.50	0.766
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.50	0.766

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		$(4) \times (5) \times (6)$
Total	7.099	0.508	7.607	0.015	2.50	0.114
Fatal and injury (FI)	--	--	--	--	2.50	0.114

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)	1.024	2.330	3.354
Head-on collisions (from Worksheet 2D)	0.111	0.145	0.256
Angle collisions (from Worksheet 2D)	0.789	1.177	1.966
Sideswipe (from Worksheet 2D)	0.225	0.154	0.380
Other multiple-vehicle collision (from Worksheet 2D)	0.125	1.018	1.143
Subtotal	2.275	4.824	7.099
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)	0.106	0.318	0.424
Collision with other object (from Worksheet 2F)	0.010	0.026	0.036
Other single-vehicle collision (from Worksheet 2F)	0.006	0.008	0.014
Single-vehicle noncollision (from Worksheet 2F)	0.020	0.012	0.033
Collision with pedestrian (from Worksheet 2G or 2I)	0.766	0.000	0.766
Collision with bicycle (from Worksheet 2J)	0.114	0.000	0.114
Subtotal	1.023	0.365	1.389
Total	3.298	5.189	8.487

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	8.487
Fatal and injury (FI)	3.298
Property damage only (PDO)	5.189

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections			
General Information		Location Information	
Analyst	SL	Roadway	Whiting St
Agency or Company	H.W. Lochner	Intersection	Brush St
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2029
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	4SG
AADT _{major} (veh/day)	AADT _{MAX} = 67,700 (veh/day)	--	16,925
AADT _{minor} (veh/day)	AADT _{MAX} = 33,400 (veh/day)	--	10,350
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C _i		1.00	2.50
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	1
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)		--	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			3,200
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	2
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	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
<i>CMF_{1i}</i>	<i>CMF_{2i}</i>	<i>CMF_{3i}</i>	<i>CMF_{4i}</i>	<i>CMF_{5i}</i>	<i>CMF_{6i}</i>	<i>CMF_{COMB}</i>
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	0.97	0.96	1.00	0.91	1.00	0.62

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}

Urban and Suburban Arterial Predictive Method

	from Table 12-10			from Table 12-10	from Equation 12-21	(4) _{TOTAL} *(5)	(7) from Worksheet 2B	2.50	(6)*(7)*(8)
	a	b	c						
Total	-10.99	1.07	0.23	0.39	4.732	1.000	4.732	0.62	7.326
Fatal and Injury (FI)	-13.14	1.18	0.22	0.33	1.467	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.321	1.521	0.62	2.355
Property Damage Only (PDO)	-11.02	1.02	0.24	0.44	3.096	$(5)_{TOTAL}-(5)_{FI}$ 0.679	3.211	0.62	4.971

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bimv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bimv (PDO)} (crashes/year)	(6) 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	2.355	1.000	4.971	7.326
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.450	1.060	0.483	2.401	3.461
Head-on collision	0.049	0.115	0.030	0.149	0.265
Angle collision	0.347	0.817	0.244	1.213	2.030
Sideswipe	0.099	0.233	0.032	0.159	0.392
Other multiple-vehicle collision	0.055	0.130	0.211	1.049	1.178

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1) Crash Severity Level	(2) SPF Coefficients			(3) Overdispersion Parameter, k	(4) Initial N _{bisv}	(5) Proportion of Total Crashes	(6) Adjusted N _{bimv}	(7) Combined CMFs	(8) Calibration Factor, C _i	(9) Predicted N _{bisv}			
	from Table 12-12										(4) _{TOTAL} *(5)	(7) from Worksheet 2B	(6)*(7)*(8)
	a	b	c										
Total	-10.21	0.68	0.27	0.36	0.335	1.000	0.335	0.62	2.50	0.519			
Fatal and Injury (FI)	-9.25	0.43	0.29	0.09	0.092	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.279	0.094	0.62	2.50	0.145			
Property Damage Only (PDO)	-11.34	0.78	0.25	0.44	0.238	$(5)_{TOTAL}-(5)_{FI}$ 0.721	0.242	0.62	2.50	0.374			

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bisv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bisv (PDO)} (crashes/year)	(6) 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	0.374	0.519

Urban and Suburban Arterial Predictive Method

		$(2) \times (3)_{FI}$		$(4) \times (5)_{PDO}$	$(3) + (5)$
Collision with parked vehicle	0.001	0.000	0.001	0.000	0.001
Collision with animal	0.002	0.000	0.002	0.001	0.001
Collision with fixed object	0.744	0.108	0.870	0.325	0.433
Collision with other object	0.072	0.010	0.070	0.026	0.037
Other single-vehicle collision	0.040	0.006	0.023	0.009	0.014
Single-vehicle noncollision	0.141	0.020	0.034	0.013	0.033

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		$(4) \times (5) \times (6)$
Total	--	--	--	--	2.50	--
Fatal and injury (FI)	--	--	--	--	2.50	--

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	$(1) \times (2) \times (3)$
2.78	1.35	1.12	4.20

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	$N_{pedbase}$ from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C_i	Predicted N_{pedi} $(4) \times (5) \times (6)$
	from Table 12-14									
	a	b	c	d	e					
Total	-9.53	0.40	0.26	0.45	0.04	0.24	0.183	4.20	2.50	0.768
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.50	0.768

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		$(4) \times (5) \times (6)$
Total	7.326	0.519	7.845	0.015	2.50	0.118
Fatal and injury (FI)	--	--	--	--	2.50	0.118

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)	1.060	2.401	3.461
Head-on collisions (from Worksheet 2D)	0.115	0.149	0.265
Angle collisions (from Worksheet 2D)	0.817	1.213	2.030
Sideswipe (from Worksheet 2D)	0.233	0.159	0.392
Other multiple-vehicle collision (from Worksheet 2D)	0.130	1.049	1.178
Subtotal	2.355	4.971	7.326
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	0.325	0.433
Collision with other object (from Worksheet 2F)	0.010	0.026	0.037
Other single-vehicle collision (from Worksheet 2F)	0.006	0.009	0.014
Single-vehicle noncollision (from Worksheet 2F)	0.020	0.013	0.033
Collision with pedestrian (from Worksheet 2G or 2I)	0.768	0.000	0.768
Collision with bicycle (from Worksheet 2J)	0.118	0.000	0.118
Subtotal	1.030	0.374	1.404
Total	3.385	5.345	8.730

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	8.730
Fatal and injury (FI)	3.385
Property damage only (PDO)	5.345

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections			
General Information		Location Information	
Analyst	SL	Roadway	Whiting St
Agency or Company	H.W. Lochner	Intersection	Brush St
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2030
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	4SG
AADT _{major} (veh/day)	AADT _{MAX} = 67,700 (veh/day)	--	17,400
AADT _{minor} (veh/day)	AADT _{MAX} = 33,400 (veh/day)	--	10,400
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C _i		1.00	2.50
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	1
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)		--	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			3,200
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	2
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	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)
0.73	0.97	0.96	1.00	0.91	1.00	0.62

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}

Urban and Suburban Arterial Predictive Method

	from Table 12-10			from Table 12-10	from Equation 12-21	(4) _{TOTAL} *(5)	(7) from Worksheet 2B	2.50	(6)*(7)*(8)
	a	b	c						
Total	-10.99	1.07	0.23	0.39	4.880	1.000	4.880	0.62	7.555
Fatal and Injury (FI)	-13.14	1.18	0.22	0.33	1.517	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.322	1.573	0.62	2.436
Property Damage Only (PDO)	-11.02	1.02	0.24	0.44	3.188	$(5)_{TOTAL}-(5)_{FI}$ 0.678	3.307	0.62	5.119

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bimv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bimv (PDO)} (crashes/year)	(6) 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	2.436	1.000	5.119	7.555
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.450	1.096	0.483	2.473	3.569
Head-on collision	0.049	0.119	0.030	0.154	0.273
Angle collision	0.347	0.845	0.244	1.249	2.094
Sideswipe	0.099	0.241	0.032	0.164	0.405
Other multiple-vehicle collision	0.055	0.134	0.211	1.080	1.214

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1) Crash Severity Level	(2) SPF Coefficients			(3) Overdispersion Parameter, k	(4) Initial N _{bisv}	(5) Proportion of Total Crashes	(6) Adjusted N _{bimv}	(7) Combined CMFs	(8) Calibration Factor, C _i	(9) Predicted N _{bisv}			
	from Table 12-12										(4) _{TOTAL} *(5)	(7) from Worksheet 2B	(6)*(7)*(8)
	a	b	c										
Total	-10.21	0.68	0.27	0.36	0.342	1.000	0.342	0.62	2.50	0.529			
Fatal and Injury (FI)	-9.25	0.43	0.29	0.09	0.094	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.277	0.095	0.62	2.50	0.147			
Property Damage Only (PDO)	-11.34	0.78	0.25	0.44	0.244	$(5)_{TOTAL}-(5)_{FI}$ 0.723	0.247	0.62	2.50	0.383			

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bisv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bisv (PDO)} (crashes/year)	(6) 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	0.147	1.000	0.383	0.529

Urban and Suburban Arterial Predictive Method

		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Collision with parked vehicle	0.001	0.000	0.001	0.000	0.001
Collision with animal	0.002	0.000	0.002	0.001	0.001
Collision with fixed object	0.744	0.109	0.870	0.333	0.442
Collision with other object	0.072	0.011	0.070	0.027	0.037
Other single-vehicle collision	0.040	0.006	0.023	0.009	0.015
Single-vehicle noncollision	0.141	0.021	0.034	0.013	0.034

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	--	--	--	--	2.50	--
Fatal and injury (FI)	--	--	--	--	2.50	--

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	$(1)*(2)*(3)$
2.78	1.35	1.12	4.20

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	0.183	4.20	2.50	0.769			
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.50	0.769			

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	7.555	0.529	8.084	0.015	2.50	0.121
Fatal and injury (FI)	--	--	--	--	2.50	0.121

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)	1.096	2.473	3.569
Head-on collisions (from Worksheet 2D)	0.119	0.154	0.273
Angle collisions (from Worksheet 2D)	0.845	1.249	2.094
Sideswipe (from Worksheet 2D)	0.241	0.164	0.405
Other multiple-vehicle collision (from Worksheet 2D)	0.134	1.080	1.214
Subtotal	2.436	5.119	7.555
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)	0.109	0.333	0.442
Collision with other object (from Worksheet 2F)	0.011	0.027	0.037
Other single-vehicle collision (from Worksheet 2F)	0.006	0.009	0.015
Single-vehicle noncollision (from Worksheet 2F)	0.021	0.013	0.034
Collision with pedestrian (from Worksheet 2G or 2I)	0.769	0.000	0.769
Collision with bicycle (from Worksheet 2J)	0.121	0.000	0.121
Subtotal	1.037	0.383	1.420
Total	3.473	5.502	8.974

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	8.974
Fatal and injury (FI)	3.473
Property damage only (PDO)	5.502

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections			
General Information		Location Information	
Analyst	SL	Roadway	Whiting St
Agency or Company	H.W. Lochner	Intersection	Brush St
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2031
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	4SG
AADT _{major} (veh/day)	AADT _{MAX} = 67,700 (veh/day)	--	17,875
AADT _{minor} (veh/day)	AADT _{MAX} = 33,400 (veh/day)	--	10,450
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C _i		1.00	2.50
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	1
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)		--	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			3,200
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	2
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	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
<i>CMF_{1i}</i>	<i>CMF_{2i}</i>	<i>CMF_{3i}</i>	<i>CMF_{4i}</i>	<i>CMF_{5i}</i>	<i>CMF_{6i}</i>	<i>CMF_{COMB}</i>
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	0.97	0.96	1.00	0.91	1.00	0.62

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}

Urban and Suburban Arterial Predictive Method

	from Table 12-10			from Table 12-10	from Equation 12-21	(4) _{TOTAL} *(5)	(7) from Worksheet 2B	2.50	(6)*(7)*(8)
	a	b	c						
Total	-10.99	1.07	0.23	0.39	5.028	1.000	5.028	0.62	7.784
Fatal and Injury (FI)	-13.14	1.18	0.22	0.33	1.568	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.323	1.626	0.62	2.517
Property Damage Only (PDO)	-11.02	1.02	0.24	0.44	3.281	$(5)_{TOTAL}-(5)_{FI}$ 0.677	3.402	0.62	5.267

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bimv (FI)} (crashes/year)	(4) Proportion of Collision Type (PDO)	(5) Predicted N _{bimv (PDO)} (crashes/year)	(6) 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	2.517	1.000	5.267	7.784
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.450	1.133	0.483	2.544	3.677
Head-on collision	0.049	0.123	0.030	0.158	0.281
Angle collision	0.347	0.873	0.244	1.285	2.159
Sideswipe	0.099	0.249	0.032	0.169	0.418
Other multiple-vehicle collision	0.055	0.138	0.211	1.111	1.250

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1) Crash Severity Level	(2) SPF Coefficients			(3) Overdispersion Parameter, k	(4) Initial N _{bisv}	(5) Proportion of Total Crashes	(6) Adjusted N _{bimv}	(7) Combined CMFs	(8) Calibration Factor, C _i	(9) Predicted N _{bisv}			
	from Table 12-12										(4) _{TOTAL} *(5)	(7) from Worksheet 2B	(6)*(7)*(8)
	a	b	c										
Total	-10.21	0.68	0.27	0.36	0.349	1.000	0.349	0.62	2.50	0.540			
Fatal and Injury (FI)	-9.25	0.43	0.29	0.09	0.095	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.276	0.096	0.62	2.50	0.149			
Property Damage Only (PDO)	-11.34	0.78	0.25	0.44	0.249	$(5)_{TOTAL}-(5)_{FI}$ 0.724	0.253	0.62	2.50	0.391			

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bisv (FI)} (crashes/year)	(4) Proportion of Collision Type (PDO)	(5) Predicted N _{bisv (PDO)} (crashes/year)	(6) 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	0.149	1.000	0.391	0.540

Urban and Suburban Arterial Predictive Method

		$(2) \times (3)_{FI}$		$(4) \times (5)_{PDO}$	$(3) + (5)$
Collision with parked vehicle	0.001	0.000	0.001	0.000	0.001
Collision with animal	0.002	0.000	0.002	0.001	0.001
Collision with fixed object	0.744	0.111	0.870	0.340	0.451
Collision with other object	0.072	0.011	0.070	0.027	0.038
Other single-vehicle collision	0.040	0.006	0.023	0.009	0.015
Single-vehicle noncollision	0.141	0.021	0.034	0.013	0.034

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		$(4) \times (5) \times (6)$
Total	--	--	--	--	2.50	--
Fatal and injury (FI)	--	--	--	--	2.50	--

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	$(1) \times (2) \times (3)$
2.78	1.35	1.12	4.20

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	$(4) \times (5) \times (6)$
	a	b	c	d	e								
Total	-9.53	0.40	0.26	0.45	0.04	0.24	0.183	4.20	2.50	0.770			
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.50	0.770			

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		$(4) \times (5) \times (6)$
Total	7.784	0.540	8.324	0.015	2.50	0.125
Fatal and injury (FI)	--	--	--	--	2.50	0.125

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)	1.133	2.544	3.677
Head-on collisions (from Worksheet 2D)	0.123	0.158	0.281
Angle collisions (from Worksheet 2D)	0.873	1.285	2.159
Sideswipe (from Worksheet 2D)	0.249	0.169	0.418
Other multiple-vehicle collision (from Worksheet 2D)	0.138	1.111	1.250
Subtotal	2.517	5.267	7.784
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)	0.111	0.340	0.451
Collision with other object (from Worksheet 2F)	0.011	0.027	0.038
Other single-vehicle collision (from Worksheet 2F)	0.006	0.009	0.015
Single-vehicle noncollision (from Worksheet 2F)	0.021	0.013	0.034
Collision with pedestrian (from Worksheet 2G or 2I)	0.770	0.000	0.770
Collision with bicycle (from Worksheet 2J)	0.125	0.000	0.125
Subtotal	1.044	0.391	1.435
Total	3.561	5.659	9.219

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	9.219
Fatal and injury (FI)	3.561
Property damage only (PDO)	5.659

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections			
General Information		Location Information	
Analyst	SL	Roadway	Whiting St
Agency or Company	H.W. Lochner	Intersection	Brush St
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2032
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	4SG
AADT _{major} (veh/day)	AADT _{MAX} = 67,700 (veh/day)	--	18,350
AADT _{minor} (veh/day)	AADT _{MAX} = 33,400 (veh/day)	--	10,500
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C _i		1.00	2.50
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	1
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)		--	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			3,200
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	2
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	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)
0.73	0.97	0.96	1.00	0.91	1.00	0.62

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}

Urban and Suburban Arterial Predictive Method

	from Table 12-10			from Table 12-10	from Equation 12-21	(4) _{TOTAL} *(5)	(7) from Worksheet 2B	2.50	(6)*(7)*(8)
	a	b	c						
Total	-10.99	1.07	0.23	0.39	5.177	1.000	5.177	0.62	8.015
Fatal and Injury (FI)	-13.14	1.18	0.22	0.33	1.619	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.324	1.678	0.62	2.599
Property Damage Only (PDO)	-11.02	1.02	0.24	0.44	3.373	$(5)_{TOTAL}-(5)_{FI}$ 0.676	3.498	0.62	5.416

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bimv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bimv (PDO)} (crashes/year)	(6) 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	2.599	1.000	5.416	8.015
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.450	1.169	0.483	2.616	3.785
Head-on collision	0.049	0.127	0.030	0.162	0.290
Angle collision	0.347	0.902	0.244	1.322	2.223
Sideswipe	0.099	0.257	0.032	0.173	0.431
Other multiple-vehicle collision	0.055	0.143	0.211	1.143	1.286

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1) Crash Severity Level	(2) SPF Coefficients			(3) Overdispersion Parameter, k	(4) Initial N _{bisv}	(5) Proportion of Total Crashes	(6) Adjusted N _{bimv}	(7) Combined CMFs	(8) Calibration Factor, C _i	(9) Predicted N _{bisv}			
	from Table 12-12										(4) _{TOTAL} *(5)	(7) from Worksheet 2B	(6)*(7)*(8)
	a	b	c										
Total	-10.21	0.68	0.27	0.36	0.356	1.000	0.356	0.62	2.50	0.550			
Fatal and Injury (FI)	-9.25	0.43	0.29	0.09	0.096	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.274	0.097	0.62	2.50	0.151			
Property Damage Only (PDO)	-11.34	0.78	0.25	0.44	0.255	$(5)_{TOTAL}-(5)_{FI}$ 0.726	0.258	0.62	2.50	0.400			

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bisv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bisv (PDO)} (crashes/year)	(6) 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	0.151	1.000	0.400	0.550

Urban and Suburban Arterial Predictive Method

		$(2) \times (3)_{FI}$		$(4) \times (5)_{PDO}$	$(3) + (5)$
Collision with parked vehicle	0.001	0.000	0.001	0.000	0.001
Collision with animal	0.002	0.000	0.002	0.001	0.001
Collision with fixed object	0.744	0.112	0.870	0.348	0.460
Collision with other object	0.072	0.011	0.070	0.028	0.039
Other single-vehicle collision	0.040	0.006	0.023	0.009	0.015
Single-vehicle noncollision	0.141	0.021	0.034	0.014	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		$(4) \times (5) \times (6)$
Total	--	--	--	--	2.50	--
Fatal and injury (FI)	--	--	--	--	2.50	--

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	$(1) \times (2) \times (3)$
2.78	1.35	1.12	4.20

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	$N_{pedbase}$ from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C_i	Predicted N_{pedi} $(4) \times (5) \times (6)$
	from Table 12-14									
	a	b	c	d	e					
Total	-9.53	0.40	0.26	0.45	0.04	0.24	0.184	4.20	2.50	0.772
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.50	0.772

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		$(4) \times (5) \times (6)$
Total	8.015	0.550	8.565	0.015	2.50	0.128
Fatal and injury (FI)	--	--	--	--	2.50	0.128

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)	1.169	2.616	3.785
Head-on collisions (from Worksheet 2D)	0.127	0.162	0.290
Angle collisions (from Worksheet 2D)	0.902	1.322	2.223
Sideswipe (from Worksheet 2D)	0.257	0.173	0.431
Other multiple-vehicle collision (from Worksheet 2D)	0.143	1.143	1.286
Subtotal	2.599	5.416	8.015
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)	0.112	0.348	0.460
Collision with other object (from Worksheet 2F)	0.011	0.028	0.039
Other single-vehicle collision (from Worksheet 2F)	0.006	0.009	0.015
Single-vehicle noncollision (from Worksheet 2F)	0.021	0.014	0.035
Collision with pedestrian (from Worksheet 2G or 2I)	0.772	0.000	0.772
Collision with bicycle (from Worksheet 2J)	0.128	0.000	0.128
Subtotal	1.051	0.400	1.450
Total	3.649	5.816	9.465

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	9.465
Fatal and injury (FI)	3.649
Property damage only (PDO)	5.816

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections			
General Information		Location Information	
Analyst	SL	Roadway	Whiting St
Agency or Company	H.W. Lochner	Intersection	Brush St
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2033
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	4SG
AADT _{major} (veh/day)	AADT _{MAX} = 67,700 (veh/day)	--	18,825
AADT _{minor} (veh/day)	AADT _{MAX} = 33,400 (veh/day)	--	10,550
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C _i		1.00	2.50
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	1
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)		--	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			3,200
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	2
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	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
<i>CMF_{1i}</i>	<i>CMF_{2i}</i>	<i>CMF_{3i}</i>	<i>CMF_{4i}</i>	<i>CMF_{5i}</i>	<i>CMF_{6i}</i>	<i>CMF_{COMB}</i>
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	0.97	0.96	1.00	0.91	1.00	0.62

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}

Urban and Suburban Arterial Predictive Method

	from Table 12-10			from Table 12-10	from Equation 12-21		(4) _{TOTAL} *(5)	(7) from Worksheet 2B	2.50	(6)*(7)*(8)
	a	b	c							
Total	-10.99	1.07	0.23	0.39	5.326	1.000	5.326	0.62	2.50	8.246
Fatal and Injury (FI)	-13.14	1.18	0.22	0.33	1.670	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.325	1.732	0.62	2.50	2.681
Property Damage Only (PDO)	-11.02	1.02	0.24	0.44	3.466	$(5)_{TOTAL}-(5)_{FI}$ 0.675	3.595	0.62	2.50	5.565

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	5.565	8.246
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.450	1.206	0.483	2.688	3.894
Head-on collision	0.049	0.131	0.030	0.167	0.298
Angle collision	0.347	0.930	0.244	1.358	2.288
Sideswipe	0.099	0.265	0.032	0.178	0.443
Other multiple-vehicle collision	0.055	0.147	0.211	1.174	1.322

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									
	a	b	c							
Total	-10.21	0.68	0.27	0.36	0.362	1.000	0.362	0.62	2.50	0.561
Fatal and Injury (FI)	-9.25	0.43	0.29	0.09	0.097	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.272	0.099	0.62	2.50	0.153
Property Damage Only (PDO)	-11.34	0.78	0.25	0.44	0.260	$(5)_{TOTAL}-(5)_{FI}$ 0.728	0.264	0.62	2.50	0.408

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	0.153	1.000	0.408	0.561

Urban and Suburban Arterial Predictive Method

		$(2) \times (3)_{FI}$		$(4) \times (5)_{PDO}$	$(3) + (5)$
Collision with parked vehicle	0.001	0.000	0.001	0.000	0.001
Collision with animal	0.002	0.000	0.002	0.001	0.001
Collision with fixed object	0.744	0.113	0.870	0.355	0.469
Collision with other object	0.072	0.011	0.070	0.029	0.040
Other single-vehicle collision	0.040	0.006	0.023	0.009	0.015
Single-vehicle noncollision	0.141	0.022	0.034	0.014	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		$(4) \times (5) \times (6)$
Total	--	--	--	--	2.50	--
Fatal and injury (FI)	--	--	--	--	2.50	--

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	$(1) \times (2) \times (3)$
2.78	1.35	1.12	4.20

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	$(4) \times (5) \times (6)$
	a	b	c	d	e								
Total	-9.53	0.40	0.26	0.45	0.04	0.24	0.184	4.20	2.50	0.773			
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.50	0.773			

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		$(4) \times (5) \times (6)$
Total	8.246	0.561	8.807	0.015	2.50	0.132
Fatal and injury (FI)	--	--	--	--	2.50	0.132

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)	1.206	2.688	3.894
Head-on collisions (from Worksheet 2D)	0.131	0.167	0.298
Angle collisions (from Worksheet 2D)	0.930	1.358	2.288
Sideswipe (from Worksheet 2D)	0.265	0.178	0.443
Other multiple-vehicle collision (from Worksheet 2D)	0.147	1.174	1.322
Subtotal	2.681	5.565	8.246
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)	0.113	0.355	0.469
Collision with other object (from Worksheet 2F)	0.011	0.029	0.040
Other single-vehicle collision (from Worksheet 2F)	0.006	0.009	0.015
Single-vehicle noncollision (from Worksheet 2F)	0.022	0.014	0.035
Collision with pedestrian (from Worksheet 2G or 2I)	0.773	0.000	0.773
Collision with bicycle (from Worksheet 2J)	0.132	0.000	0.132
Subtotal	1.058	0.408	1.466
Total	3.738	5.973	9.712

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	9.712
Fatal and injury (FI)	3.738
Property damage only (PDO)	5.973

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections			
General Information		Location Information	
Analyst	SL	Roadway	Whiting St
Agency or Company	H.W. Lochner	Intersection	Brush St
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2034
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	4SG
AADT _{major} (veh/day)	AADT _{MAX} = 67,700 (veh/day)	--	19,300
AADT _{minor} (veh/day)	AADT _{MAX} = 33,400 (veh/day)	--	10,600
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C _i		1.00	2.50
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	1
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)		--	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			3,200
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	2
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	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)
0.73	0.97	0.96	1.00	0.91	1.00	0.62

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}

Urban and Suburban Arterial Predictive Method

	from Table 12-10			from Table 12-10	from Equation 12-21		(4) _{TOTAL} *(5)	(7) from Worksheet 2B	2.50	(6)*(7)*(8)
	a	b	c							
Total	-10.99	1.07	0.23	0.39	5.476	1.000	5.476	0.62	2.50	8.478
Fatal and Injury (FI)	-13.14	1.18	0.22	0.33	1.721	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.326	1.785	0.62	2.50	2.763
Property Damage Only (PDO)	-11.02	1.02	0.24	0.44	3.560	$(5)_{TOTAL}-(5)_{FI}$ 0.674	3.691	0.62	2.50	5.714

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bimv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bimv (PDO)} (crashes/year)	(6) 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	2.763	1.000	5.714	8.478
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.450	1.244	0.483	2.760	4.004
Head-on collision	0.049	0.135	0.030	0.171	0.307
Angle collision	0.347	0.959	0.244	1.394	2.353
Sideswipe	0.099	0.274	0.032	0.183	0.456
Other multiple-vehicle collision	0.055	0.152	0.211	1.206	1.358

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1) Crash Severity Level	(2) SPF Coefficients			(3) Overdispersion Parameter, k	(4) Initial N _{bisv}	(5) Proportion of Total Crashes	(6) Adjusted N _{bimv}	(7) Combined CMFs	(8) Calibration Factor, C _i	(9) 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	0.369	1.000	0.369	0.62	2.50	0.571					
Fatal and Injury (FI)	-9.25	0.43	0.29	0.09	0.098	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.270	0.100	0.62	2.50	0.154					
Property Damage Only (PDO)	-11.34	0.78	0.25	0.44	0.266	$(5)_{TOTAL}-(5)_{FI}$ 0.730	0.269	0.62	2.50	0.417					

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bisv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bisv (PDO)} (crashes/year)	(6) 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	0.154	1.000	0.417	0.571

Urban and Suburban Arterial Predictive Method

		$(2) \times (3)_{FI}$		$(4) \times (5)_{PDO}$	$(3) + (5)$
Collision with parked vehicle	0.001	0.000	0.001	0.000	0.001
Collision with animal	0.002	0.000	0.002	0.001	0.001
Collision with fixed object	0.744	0.115	0.870	0.363	0.477
Collision with other object	0.072	0.011	0.070	0.029	0.040
Other single-vehicle collision	0.040	0.006	0.023	0.010	0.016
Single-vehicle noncollision	0.141	0.022	0.034	0.014	0.036

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		$(4) \times (5) \times (6)$
Total	--	--	--	--	2.50	--
Fatal and injury (FI)	--	--	--	--	2.50	--

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	$(1) \times (2) \times (3)$
2.78	1.35	1.12	4.20

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	$N_{pedbase}$ from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C_i	Predicted N_{pedi}
	from Table 12-14									$(4) \times (5) \times (6)$
	a	b	c	d	e					
Total	-9.53	0.40	0.26	0.45	0.04	0.24	0.184	4.20	2.50	0.774
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.50	0.774

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		$(4) \times (5) \times (6)$
Total	8.478	0.571	9.049	0.015	2.50	0.136
Fatal and injury (FI)	--	--	--	--	2.50	0.136

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)	1.244	2.760	4.004
Head-on collisions (from Worksheet 2D)	0.135	0.171	0.307
Angle collisions (from Worksheet 2D)	0.959	1.394	2.353
Sideswipe (from Worksheet 2D)	0.274	0.183	0.456
Other multiple-vehicle collision (from Worksheet 2D)	0.152	1.206	1.358
Subtotal	2.763	5.714	8.478
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)	0.115	0.363	0.477
Collision with other object (from Worksheet 2F)	0.011	0.029	0.040
Other single-vehicle collision (from Worksheet 2F)	0.006	0.010	0.016
Single-vehicle noncollision (from Worksheet 2F)	0.022	0.014	0.036
Collision with pedestrian (from Worksheet 2G or 2I)	0.774	0.000	0.774
Collision with bicycle (from Worksheet 2J)	0.136	0.000	0.136
Subtotal	1.064	0.417	1.481
Total	3.828	6.131	9.959

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	9.959
Fatal and injury (FI)	3.828
Property damage only (PDO)	6.131

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections			
General Information		Location Information	
Analyst	SL	Roadway	Whiting St
Agency or Company	H.W. Lochner	Intersection	Brush St
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2035
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	4SG
AADT _{major} (veh/day)	AADT _{MAX} = 67,700 (veh/day)	--	19,775
AADT _{minor} (veh/day)	AADT _{MAX} = 33,400 (veh/day)	--	10,650
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C _i		1.00	2.50
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	1
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)		--	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			3,200
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	2
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	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
<i>CMF_{1i}</i>	<i>CMF_{2i}</i>	<i>CMF_{3i}</i>	<i>CMF_{4i}</i>	<i>CMF_{5i}</i>	<i>CMF_{6i}</i>	<i>CMF_{COMB}</i>
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	0.97	0.96	1.00	0.91	1.00	0.62

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}

Urban and Suburban Arterial Predictive Method

	from Table 12-10			from Table 12-10	from Equation 12-21	(4) _{TOTAL} *(5)	(7) from Worksheet 2B	2.50	(6)*(7)*(8)
	a	b	c						
Total	-10.99	1.07	0.23	0.39	5.627	1.000	5.627	0.62	8.711
Fatal and Injury (FI)	-13.14	1.18	0.22	0.33	1.773	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.327	1.839	0.62	2.847
Property Damage Only (PDO)	-11.02	1.02	0.24	0.44	3.653	$(5)_{TOTAL}-(5)_{FI}$ 0.673	3.788	0.62	5.864

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bimv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bimv (PDO)} (crashes/year)	(6) 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	2.847	1.000	5.864	8.711
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.450	1.281	0.483	2.832	4.113
Head-on collision	0.049	0.139	0.030	0.176	0.315
Angle collision	0.347	0.988	0.244	1.431	2.419
Sideswipe	0.099	0.282	0.032	0.188	0.469
Other multiple-vehicle collision	0.055	0.157	0.211	1.237	1.394

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1) Crash Severity Level	(2) SPF Coefficients			(3) Overdispersion Parameter, k	(4) Initial N _{bisv}	(5) Proportion of Total Crashes	(6) Adjusted N _{bimv}	(7) Combined CMFs	(8) Calibration Factor, C _i	(9) Predicted N _{bisv}			
	from Table 12-12										(4) _{TOTAL} *(5)	(7) from Worksheet 2B	(6)*(7)*(8)
	a	b	c										
Total	-10.21	0.68	0.27	0.36	0.375	1.000	0.375	0.62	2.50	0.581			
Fatal and Injury (FI)	-9.25	0.43	0.29	0.09	0.100	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.269	0.101	0.62	2.50	0.156			
Property Damage Only (PDO)	-11.34	0.78	0.25	0.44	0.271	$(5)_{TOTAL}-(5)_{FI}$ 0.731	0.275	0.62	2.50	0.425			

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bisv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bisv (PDO)} (crashes/year)	(6) 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	0.156	1.000	0.425	0.581

Urban and Suburban Arterial Predictive Method

		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Collision with parked vehicle	0.001	0.000	0.001	0.000	0.001
Collision with animal	0.002	0.000	0.002	0.001	0.001
Collision with fixed object	0.744	0.116	0.870	0.370	0.486
Collision with other object	0.072	0.011	0.070	0.030	0.041
Other single-vehicle collision	0.040	0.006	0.023	0.010	0.016
Single-vehicle noncollision	0.141	0.022	0.034	0.014	0.036

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	--	--	--	--	2.50	--
Fatal and injury (FI)	--	--	--	--	2.50	--

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	$(1)*(2)*(3)$
2.78	1.35	1.12	4.20

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	$N_{pedbase}$ from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C_i	Predicted N_{pedi} $(4)*(5)*(6)$
	from Table 12-14									
	a	b	c	d	e					
Total	-9.53	0.40	0.26	0.45	0.04	0.24	0.185	4.20	2.50	0.776
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.50	0.776

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	8.711	0.581	9.292	0.015	2.50	0.139
Fatal and injury (FI)	--	--	--	--	2.50	0.139

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)	1.281	2.832	4.113
Head-on collisions (from Worksheet 2D)	0.139	0.176	0.315
Angle collisions (from Worksheet 2D)	0.988	1.431	2.419
Sideswipe (from Worksheet 2D)	0.282	0.188	0.469
Other multiple-vehicle collision (from Worksheet 2D)	0.157	1.237	1.394
Subtotal	2.847	5.864	8.711
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)	0.116	0.370	0.486
Collision with other object (from Worksheet 2F)	0.011	0.030	0.041
Other single-vehicle collision (from Worksheet 2F)	0.006	0.010	0.016
Single-vehicle noncollision (from Worksheet 2F)	0.022	0.014	0.036
Collision with pedestrian (from Worksheet 2G or 2I)	0.776	0.000	0.776
Collision with bicycle (from Worksheet 2J)	0.139	0.000	0.139
Subtotal	1.071	0.425	1.496
Total	3.918	6.289	10.207

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	10.207
Fatal and injury (FI)	3.918
Property damage only (PDO)	6.289

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections			
General Information		Location Information	
Analyst	SL	Roadway	Whiting St
Agency or Company	H.W. Lochner	Intersection	Brush St
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2036
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	4SG
AADT _{major} (veh/day)	AADT _{MAX} = 67,700 (veh/day)	--	20,250
AADT _{minor} (veh/day)	AADT _{MAX} = 33,400 (veh/day)	--	10,700
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C _i		1.00	2.50
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	1
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)		--	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			3,200
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	2
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	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
<i>CMF_{1i}</i>	<i>CMF_{2i}</i>	<i>CMF_{3i}</i>	<i>CMF_{4i}</i>	<i>CMF_{5i}</i>	<i>CMF_{6i}</i>	<i>CMF_{COMB}</i>
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	0.97	0.96	1.00	0.91	1.00	0.62

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}

Urban and Suburban Arterial Predictive Method

	from Table 12-10			from Table 12-10	from Equation 12-21	(4) _{TOTAL} *(5)	(7) from Worksheet 2B	2.50	(6)*(7)*(8)
	a	b	c						
Total	-10.99	1.07	0.23	0.39	5.777	1.000	5.777	0.62	8.944
Fatal and Injury (FI)	-13.14	1.18	0.22	0.33	1.826	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.328	1.893	0.62	2.930
Property Damage Only (PDO)	-11.02	1.02	0.24	0.44	3.747	$(5)_{TOTAL}-(5)_{FI}$ 0.672	3.885	0.62	6.014

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bimv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bimv (PDO)} (crashes/year)	(6) 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	2.930	1.000	6.014	8.944
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.450	1.319	0.483	2.905	4.223
Head-on collision	0.049	0.144	0.030	0.180	0.324
Angle collision	0.347	1.017	0.244	1.467	2.484
Sideswipe	0.099	0.290	0.032	0.192	0.483
Other multiple-vehicle collision	0.055	0.161	0.211	1.269	1.430

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1) Crash Severity Level	(2) SPF Coefficients			(3) Overdispersion Parameter, k	(4) Initial N _{bisv}	(5) Proportion of Total Crashes	(6) Adjusted N _{bimv}	(7) Combined CMFs	(8) Calibration Factor, C _i	(9) 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	0.382	1.000	0.382	0.62	2.50	0.592					
Fatal and Injury (FI)	-9.25	0.43	0.29	0.09	0.101	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.267	0.102	0.62	2.50	0.158					
Property Damage Only (PDO)	-11.34	0.78	0.25	0.44	0.276	$(5)_{TOTAL}-(5)_{FI}$ 0.733	0.280	0.62	2.50	0.434					

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bisv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bisv (PDO)} (crashes/year)	(6) 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	0.158	1.000	0.434	0.592

Urban and Suburban Arterial Predictive Method

		$(2) \times (3)_{FI}$		$(4) \times (5)_{PDO}$	$(3) + (5)$
Collision with parked vehicle	0.001	0.000	0.001	0.000	0.001
Collision with animal	0.002	0.000	0.002	0.001	0.001
Collision with fixed object	0.744	0.118	0.870	0.377	0.495
Collision with other object	0.072	0.011	0.070	0.030	0.042
Other single-vehicle collision	0.040	0.006	0.023	0.010	0.016
Single-vehicle noncollision	0.141	0.022	0.034	0.015	0.037

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		$(4) \times (5) \times (6)$
Total	--	--	--	--	2.50	--
Fatal and injury (FI)	--	--	--	--	2.50	--

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	$(1) \times (2) \times (3)$
2.78	1.35	1.12	4.20

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	$N_{pedbase}$ from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C_i	Predicted N_{pedi}
	from Table 12-14									$(4) \times (5) \times (6)$
	a	b	c	d	e					
Total	-9.53	0.40	0.26	0.45	0.04	0.24	0.185	4.20	2.50	0.777
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.50	0.777

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		$(4) \times (5) \times (6)$
Total	8.944	0.592	9.536	0.015	2.50	0.143
Fatal and injury (FI)	--	--	--	--	2.50	0.143

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)	1.319	2.905	4.223
Head-on collisions (from Worksheet 2D)	0.144	0.180	0.324
Angle collisions (from Worksheet 2D)	1.017	1.467	2.484
Sideswipe (from Worksheet 2D)	0.290	0.192	0.483
Other multiple-vehicle collision (from Worksheet 2D)	0.161	1.269	1.430
Subtotal	2.930	6.014	8.944
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)	0.118	0.377	0.495
Collision with other object (from Worksheet 2F)	0.011	0.030	0.042
Other single-vehicle collision (from Worksheet 2F)	0.006	0.010	0.016
Single-vehicle noncollision (from Worksheet 2F)	0.022	0.015	0.037
Collision with pedestrian (from Worksheet 2G or 2I)	0.777	0.000	0.777
Collision with bicycle (from Worksheet 2J)	0.143	0.000	0.143
Subtotal	1.078	0.434	1.512
Total	4.009	6.448	10.456

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	10.456
Fatal and injury (FI)	4.009
Property damage only (PDO)	6.448

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections			
General Information		Location Information	
Analyst	SL	Roadway	Whiting St
Agency or Company	H.W. Lochner	Intersection	Brush St
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2037
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	4SG
AADT _{major} (veh/day)	AADT _{MAX} = 67,700 (veh/day)	--	20,725
AADT _{minor} (veh/day)	AADT _{MAX} = 33,400 (veh/day)	--	10,750
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C _i		1.00	2.50
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	1
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)		--	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			3,200
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	2
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	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)
0.73	0.97	0.96	1.00	0.91	1.00	0.62

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}

Urban and Suburban Arterial Predictive Method

	from Table 12-10			from Table 12-10	from Equation 12-21		(4) _{TOTAL} *(5)	(7) from Worksheet 2B	2.50	(6)*(7)*(8)
	a	b	c							
Total	-10.99	1.07	0.23	0.39	5.929	1.000	5.929	0.62	2.50	9.179
Fatal and Injury (FI)	-13.14	1.18	0.22	0.33	1.878	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.328	1.947	0.62	2.50	3.014
Property Damage Only (PDO)	-11.02	1.02	0.24	0.44	3.841	$(5)_{TOTAL}-(5)_{FI}$ 0.672	3.982	0.62	2.50	6.164

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bimv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bimv (PDO)} (crashes/year)	(6) 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	3.014	1.000	6.164	9.179
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.450	1.356	0.483	2.977	4.334
Head-on collision	0.049	0.148	0.030	0.185	0.333
Angle collision	0.347	1.046	0.244	1.504	2.550
Sideswipe	0.099	0.298	0.032	0.197	0.496
Other multiple-vehicle collision	0.055	0.166	0.211	1.301	1.467

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1) Crash Severity Level	(2) SPF Coefficients			(3) Overdispersion Parameter, k	(4) Initial N _{bisv}	(5) Proportion of Total Crashes	(6) Adjusted N _{bimv}	(7) Combined CMFs	(8) Calibration Factor, C _i	(9) Predicted N _{bisv}			
	from Table 12-12										(4) _{TOTAL} *(5)	(7) from Worksheet 2B	(6)*(7)*(8)
	a	b	c										
Total	-10.21	0.68	0.27	0.36	0.389	1.000	0.389	0.62	2.50	0.602			
Fatal and Injury (FI)	-9.25	0.43	0.29	0.09	0.102	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.266	0.103	0.62	2.50	0.160			
Property Damage Only (PDO)	-11.34	0.78	0.25	0.44	0.282	$(5)_{TOTAL}-(5)_{FI}$ 0.734	0.285	0.62	2.50	0.442			

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bisv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bisv (PDO)} (crashes/year)	(6) 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	0.160	1.000	0.442	0.602

Urban and Suburban Arterial Predictive Method

		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Collision with parked vehicle	0.001	0.000	0.001	0.000	0.001
Collision with animal	0.002	0.000	0.002	0.001	0.001
Collision with fixed object	0.744	0.119	0.870	0.384	0.503
Collision with other object	0.072	0.012	0.070	0.031	0.042
Other single-vehicle collision	0.040	0.006	0.023	0.010	0.017
Single-vehicle noncollision	0.141	0.023	0.034	0.015	0.038

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	--	--	--	--	2.50	--
Fatal and injury (FI)	--	--	--	--	2.50	--

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	$(1)*(2)*(3)$
2.78	1.35	1.12	4.20

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	$N_{pedbase}$ from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C_i	Predicted N_{pedi} $(4)*(5)*(6)$
	from Table 12-14									
	a	b	c	d	e					
Total	-9.53	0.40	0.26	0.45	0.04	0.24	0.185	4.20	2.50	0.779
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.50	0.779

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	9.179	0.602	9.781	0.015	2.50	0.147
Fatal and injury (FI)	--	--	--	--	2.50	0.147

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)	1.356	2.977	4.334
Head-on collisions (from Worksheet 2D)	0.148	0.185	0.333
Angle collisions (from Worksheet 2D)	1.046	1.504	2.550
Sideswipe (from Worksheet 2D)	0.298	0.197	0.496
Other multiple-vehicle collision (from Worksheet 2D)	0.166	1.301	1.467
Subtotal	3.014	6.164	9.179
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)	0.119	0.384	0.503
Collision with other object (from Worksheet 2F)	0.012	0.031	0.042
Other single-vehicle collision (from Worksheet 2F)	0.006	0.010	0.017
Single-vehicle noncollision (from Worksheet 2F)	0.023	0.015	0.038
Collision with pedestrian (from Worksheet 2G or 2I)	0.779	0.000	0.779
Collision with bicycle (from Worksheet 2J)	0.147	0.000	0.147
Subtotal	1.085	0.442	1.527
Total	4.100	6.606	10.706

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	10.706
Fatal and injury (FI)	4.100
Property damage only (PDO)	6.606

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections			
General Information		Location Information	
Analyst	SL	Roadway	Whiting St
Agency or Company	H.W. Lochner	Intersection	Brush St
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2038
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	4SG
AADT _{major} (veh/day)	AADT _{MAX} = 67,700 (veh/day)	--	21,200
AADT _{minor} (veh/day)	AADT _{MAX} = 33,400 (veh/day)	--	10,800
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C _i		1.00	2.50
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	1
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)		--	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			3,200
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	2
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	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
<i>CMF_{1i}</i>	<i>CMF_{2i}</i>	<i>CMF_{3i}</i>	<i>CMF_{4i}</i>	<i>CMF_{5i}</i>	<i>CMF_{6i}</i>	<i>CMF_{COMB}</i>
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	0.97	0.96	1.00	0.91	1.00	0.62

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}

Urban and Suburban Arterial Predictive Method

	from Table 12-10			from Table 12-10	from Equation 12-21	(4) _{TOTAL} *(5)	(7) from Worksheet 2B	2.50	(6)*(7)*(8)
	a	b	c						
Total	-10.99	1.07	0.23	0.39	6.081	1.000	6.081	0.62	9.414
Fatal and Injury (FI)	-13.14	1.18	0.22	0.33	1.931	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.329	2.002	0.62	3.099
Property Damage Only (PDO)	-11.02	1.02	0.24	0.44	3.935	$(5)_{TOTAL}-(5)_{FI}$ 0.671	4.079	0.62	6.315

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bimv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bimv (PDO)} (crashes/year)	(6) 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	3.099	1.000	6.315	9.414
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.450	1.395	0.483	3.050	4.445
Head-on collision	0.049	0.152	0.030	0.189	0.341
Angle collision	0.347	1.075	0.244	1.541	2.616
Sideswipe	0.099	0.307	0.032	0.202	0.509
Other multiple-vehicle collision	0.055	0.170	0.211	1.333	1.503

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1) Crash Severity Level	(2) SPF Coefficients			(3) Overdispersion Parameter, k	(4) Initial N _{bisv}	(5) Proportion of Total Crashes	(6) Adjusted N _{bimv}	(7) Combined CMFs	(8) Calibration Factor, C _i	(9) Predicted N _{bisv}			
	from Table 12-12										(4) _{TOTAL} *(5)	(7) from Worksheet 2B	(6)*(7)*(8)
	a	b	c										
Total	-10.21	0.68	0.27	0.36	0.395	1.000	0.395	0.62	2.50	0.612			
Fatal and Injury (FI)	-9.25	0.43	0.29	0.09	0.103	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.264	0.104	0.62	2.50	0.162			
Property Damage Only (PDO)	-11.34	0.78	0.25	0.44	0.287	$(5)_{TOTAL}-(5)_{FI}$ 0.736	0.291	0.62	2.50	0.450			

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bisv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bisv (PDO)} (crashes/year)	(6) 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	0.162	1.000	0.450	0.612

Urban and Suburban Arterial Predictive Method

		$(2) \times (3)_{FI}$		$(4) \times (5)_{PDO}$	$(3) + (5)$
Collision with parked vehicle	0.001	0.000	0.001	0.000	0.001
Collision with animal	0.002	0.000	0.002	0.001	0.001
Collision with fixed object	0.744	0.120	0.870	0.392	0.512
Collision with other object	0.072	0.012	0.070	0.032	0.043
Other single-vehicle collision	0.040	0.006	0.023	0.010	0.017
Single-vehicle noncollision	0.141	0.023	0.034	0.015	0.038

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		$(4) \times (5) \times (6)$
Total	--	--	--	--	2.50	--
Fatal and injury (FI)	--	--	--	--	2.50	--

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	$(1) \times (2) \times (3)$
2.78	1.35	1.12	4.20

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	$N_{pedbase}$ from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C_i	Predicted N_{pedi}
	from Table 12-14									$(4) \times (5) \times (6)$
	a	b	c	d	e					
Total	-9.53	0.40	0.26	0.45	0.04	0.24	0.186	4.20	2.50	0.780
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.50	0.780

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		$(4) \times (5) \times (6)$
Total	9.414	0.612	10.026	0.015	2.50	0.150
Fatal and injury (FI)	--	--	--	--	2.50	0.150

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)	1.395	3.050	4.445
Head-on collisions (from Worksheet 2D)	0.152	0.189	0.341
Angle collisions (from Worksheet 2D)	1.075	1.541	2.616
Sideswipe (from Worksheet 2D)	0.307	0.202	0.509
Other multiple-vehicle collision (from Worksheet 2D)	0.170	1.333	1.503
Subtotal	3.099	6.315	9.414
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)	0.120	0.392	0.512
Collision with other object (from Worksheet 2F)	0.012	0.032	0.043
Other single-vehicle collision (from Worksheet 2F)	0.006	0.010	0.017
Single-vehicle noncollision (from Worksheet 2F)	0.023	0.015	0.038
Collision with pedestrian (from Worksheet 2G or 2I)	0.780	0.000	0.780
Collision with bicycle (from Worksheet 2J)	0.150	0.000	0.150
Subtotal	1.092	0.450	1.542
Total	4.191	6.765	10.957

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	10.957
Fatal and injury (FI)	4.191
Property damage only (PDO)	6.765

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections			
General Information		Location Information	
Analyst	SL	Roadway	Whiting St
Agency or Company	H.W. Lochner	Intersection	Brush St
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2039
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	4SG
AADT _{major} (veh/day)	AADT _{MAX} = 67,700 (veh/day)	--	21,675
AADT _{minor} (veh/day)	AADT _{MAX} = 33,400 (veh/day)	--	10,960
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C _i		1.00	2.50
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	1
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)		--	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			3,200
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	2
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	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
<i>CMF_{1i}</i>	<i>CMF_{2i}</i>	<i>CMF_{3i}</i>	<i>CMF_{4i}</i>	<i>CMF_{5i}</i>	<i>CMF_{6i}</i>	<i>CMF_{COMB}</i>
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	0.97	0.96	1.00	0.91	1.00	0.62

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}

Urban and Suburban Arterial Predictive Method

	from Table 12-10			from Table 12-10	from Equation 12-21	(4) _{TOTAL} *(5)	(7) from Worksheet 2B	2.50	(6)*(7)*(8)
	a	b	c						
Total	-10.99	1.07	0.23	0.39	6.248	1.000	6.248	0.62	9.673
Fatal and Injury (FI)	-13.14	1.18	0.22	0.33	1.989	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.330	2.061	0.62	3.191
Property Damage Only (PDO)	-11.02	1.02	0.24	0.44	4.039	$(5)_{TOTAL}-(5)_{FI}$ 0.670	4.187	0.62	6.482

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bimv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bimv (PDO)} (crashes/year)	(6) 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	3.191	1.000	6.482	9.673
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.450	1.436	0.483	3.131	4.567
Head-on collision	0.049	0.156	0.030	0.194	0.351
Angle collision	0.347	1.107	0.244	1.582	2.689
Sideswipe	0.099	0.316	0.032	0.207	0.523
Other multiple-vehicle collision	0.055	0.176	0.211	1.368	1.543

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1) Crash Severity Level	(2) SPF Coefficients			(3) Overdispersion Parameter, k	(4) Initial N _{bisv}	(5) Proportion of Total Crashes	(6) Adjusted N _{bimv}	(7) Combined CMFs	(8) Calibration Factor, C _i	(9) Predicted N _{bisv}			
	from Table 12-12										(4) _{TOTAL} *(5)	(7) from Worksheet 2B	(6)*(7)*(8)
	a	b	c										
Total	-10.21	0.68	0.27	0.36	0.403	1.000	0.403	0.62	2.50	0.624			
Fatal and Injury (FI)	-9.25	0.43	0.29	0.09	0.104	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.263	0.106	0.62	2.50	0.164			
Property Damage Only (PDO)	-11.34	0.78	0.25	0.44	0.293	$(5)_{TOTAL}-(5)_{FI}$ 0.737	0.297	0.62	2.50	0.460			

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bisv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bisv (PDO)} (crashes/year)	(6) 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	0.164	1.000	0.460	0.624

Urban and Suburban Arterial Predictive Method

		$(2) \times (3)_{FI}$		$(4) \times (5)_{PDO}$	$(3) + (5)$
Collision with parked vehicle	0.001	0.000	0.001	0.000	0.001
Collision with animal	0.002	0.000	0.002	0.001	0.001
Collision with fixed object	0.744	0.122	0.870	0.400	0.522
Collision with other object	0.072	0.012	0.070	0.032	0.044
Other single-vehicle collision	0.040	0.007	0.023	0.011	0.017
Single-vehicle noncollision	0.141	0.023	0.034	0.016	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		$(4) \times (5) \times (6)$
Total	--	--	--	--	2.50	--
Fatal and injury (FI)	--	--	--	--	2.50	--

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	$(1) \times (2) \times (3)$
2.78	1.35	1.12	4.20

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	$(4) \times (5) \times (6)$
	a	b	c	d	e								
Total	-9.53	0.40	0.26	0.45	0.04	0.24	0.187	4.20	2.50	0.785			
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.50	0.785			

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		$(4) \times (5) \times (6)$
Total	9.673	0.624	10.296	0.015	2.50	0.154
Fatal and injury (FI)	--	--	--	--	2.50	0.154

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)	1.436	3.131	4.567
Head-on collisions (from Worksheet 2D)	0.156	0.194	0.351
Angle collisions (from Worksheet 2D)	1.107	1.582	2.689
Sideswipe (from Worksheet 2D)	0.316	0.207	0.523
Other multiple-vehicle collision (from Worksheet 2D)	0.176	1.368	1.543
Subtotal	3.191	6.482	9.673
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)	0.122	0.400	0.522
Collision with other object (from Worksheet 2F)	0.012	0.032	0.044
Other single-vehicle collision (from Worksheet 2F)	0.007	0.011	0.017
Single-vehicle noncollision (from Worksheet 2F)	0.023	0.016	0.039
Collision with pedestrian (from Worksheet 2G or 2I)	0.785	0.000	0.785
Collision with bicycle (from Worksheet 2J)	0.154	0.000	0.154
Subtotal	1.103	0.460	1.563
Total	4.294	6.941	11.236

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	11.236
Fatal and injury (FI)	4.294
Property damage only (PDO)	6.941

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections			
General Information		Location Information	
Analyst	SL	Roadway	Whiting St
Agency or Company	H.W. Lochner	Intersection	Brush St
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2040
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	4SG
AADT _{major} (veh/day)	AADT _{MAX} = 67,700 (veh/day)	--	22,150
AADT _{minor} (veh/day)	AADT _{MAX} = 33,400 (veh/day)	--	11,180
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C _i		1.00	2.50
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	1
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)		--	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			3,200
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	2
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	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)
0.73	0.97	0.96	1.00	0.91	1.00	0.62

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}

Urban and Suburban Arterial Predictive Method

	from Table 12-10			from Table 12-10	from Equation 12-21	(4) _{TOTAL} *(5)	(7) from Worksheet 2B	2.50	(6)*(7)*(8)
	a	b	c						
Total	-10.99	1.07	0.23	0.39	6.424	1.000	6.424	0.62	9.945
Fatal and Injury (FI)	-13.14	1.18	0.22	0.33	2.049	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.331	2.124	0.62	3.288
Property Damage Only (PDO)	-11.02	1.02	0.24	0.44	4.149	$(5)_{TOTAL}-(5)_{FI}$ 0.669	4.300	0.62	6.657

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bimv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bimv (PDO)} (crashes/year)	(6) 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	3.288	1.000	6.657	9.945
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.450	1.479	0.483	3.216	4.695
Head-on collision	0.049	0.161	0.030	0.200	0.361
Angle collision	0.347	1.141	0.244	1.624	2.765
Sideswipe	0.099	0.325	0.032	0.213	0.539
Other multiple-vehicle collision	0.055	0.181	0.211	1.405	1.586

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1) Crash Severity Level	(2) SPF Coefficients			(3) Overdispersion Parameter, k	(4) Initial N _{bisv}	(5) Proportion of Total Crashes	(6) Adjusted N _{bimv}	(7) Combined CMFs	(8) Calibration Factor, C _i	(9) Predicted N _{bisv}			
	from Table 12-12										(4) _{TOTAL} *(5)	(7) from Worksheet 2B	(6)*(7)*(8)
	a	b	c										
Total	-10.21	0.68	0.27	0.36	0.411	1.000	0.411	0.62	2.50	0.636			
Fatal and Injury (FI)	-9.25	0.43	0.29	0.09	0.106	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.261	0.107	0.62	2.50	0.166			
Property Damage Only (PDO)	-11.34	0.78	0.25	0.44	0.300	$(5)_{TOTAL}-(5)_{FI}$ 0.739	0.304	0.62	2.50	0.470			

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bisv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bisv (PDO)} (crashes/year)	(6) 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	0.166	1.000	0.470	0.636

Urban and Suburban Arterial Predictive Method

		$(2) \times (3)_{FI}$		$(4) \times (5)_{PDO}$	$(3) + (5)$
Collision with parked vehicle	0.001	0.000	0.001	0.000	0.001
Collision with animal	0.002	0.000	0.002	0.001	0.001
Collision with fixed object	0.744	0.124	0.870	0.409	0.533
Collision with other object	0.072	0.012	0.070	0.033	0.045
Other single-vehicle collision	0.040	0.007	0.023	0.011	0.017
Single-vehicle noncollision	0.141	0.023	0.034	0.016	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		$(4) \times (5) \times (6)$
Total	--	--	--	--	2.50	--
Fatal and injury (FI)	--	--	--	--	2.50	--

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	$(1) \times (2) \times (3)$
2.78	1.35	1.12	4.20

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	$N_{pedbase}$ from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C_i	Predicted N_{pedi}
	from Table 12-14									$(4) \times (5) \times (6)$
	a	b	c	d	e					
Total	-9.53	0.40	0.26	0.45	0.04	0.24	0.188	4.20	2.50	0.791
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.50	0.791

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		$(4) \times (5) \times (6)$
Total	9.945	0.636	10.581	0.015	2.50	0.159
Fatal and injury (FI)	--	--	--	--	2.50	0.159

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)	1.479	3.216	4.695
Head-on collisions (from Worksheet 2D)	0.161	0.200	0.361
Angle collisions (from Worksheet 2D)	1.141	1.624	2.765
Sideswipe (from Worksheet 2D)	0.325	0.213	0.539
Other multiple-vehicle collision (from Worksheet 2D)	0.181	1.405	1.586
Subtotal	3.288	6.657	9.945
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)	0.124	0.409	0.533
Collision with other object (from Worksheet 2F)	0.012	0.033	0.045
Other single-vehicle collision (from Worksheet 2F)	0.007	0.011	0.017
Single-vehicle noncollision (from Worksheet 2F)	0.023	0.016	0.039
Collision with pedestrian (from Worksheet 2G or 2I)	0.791	0.000	0.791
Collision with bicycle (from Worksheet 2J)	0.159	0.000	0.159
Subtotal	1.116	0.470	1.586
Total	4.404	7.127	11.531

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	11.531
Fatal and injury (FI)	4.404
Property damage only (PDO)	7.127

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections			
General Information		Location Information	
Analyst	SL	Roadway	Whiting St
Agency or Company	H.W. Lochner	Intersection	Brush St
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2041
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	4SG
AADT _{major} (veh/day)	AADT _{MAX} = 67,700 (veh/day)	--	22,625
AADT _{minor} (veh/day)	AADT _{MAX} = 33,400 (veh/day)	--	11,400
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C _i		1.00	2.50
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	1
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)		--	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			3,200
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	2
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	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)
0.73	0.97	0.96	1.00	0.91	1.00	0.62

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}

Urban and Suburban Arterial Predictive Method

	from Table 12-10			from Table 12-10	from Equation 12-21	(4) _{TOTAL} *(5)	(7) from Worksheet 2B	2.50	(6)*(7)*(8)
	a	b	c						
Total	-10.99	1.07	0.23	0.39	6.601	1.000	6.601	0.62	10.219
Fatal and Injury (FI)	-13.14	1.18	0.22	0.33	2.110	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.331	2.187	0.62	3.385
Property Damage Only (PDO)	-11.02	1.02	0.24	0.44	4.260	$(5)_{TOTAL}-(5)_{FI}$ 0.669	4.414	0.62	6.834

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bimv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bimv (PDO)} (crashes/year)	(6) 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	3.385	1.000	6.834	10.219
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.450	1.523	0.483	3.301	4.824
Head-on collision	0.049	0.166	0.030	0.205	0.371
Angle collision	0.347	1.175	0.244	1.668	2.842
Sideswipe	0.099	0.335	0.032	0.219	0.554
Other multiple-vehicle collision	0.055	0.186	0.211	1.442	1.628

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1) Crash Severity Level	(2) SPF Coefficients			(3) Overdispersion Parameter, k	(4) Initial N _{bisv}	(5) Proportion of Total Crashes	(6) Adjusted N _{bimv}	(7) Combined CMFs	(8) Calibration Factor, C _i	(9) Predicted N _{bisv}			
	from Table 12-12										(4) _{TOTAL} *(5)	(7) from Worksheet 2B	(6)*(7)*(8)
	a	b	c										
Total	-10.21	0.68	0.27	0.36	0.419	1.000	0.419	0.62	2.50	0.649			
Fatal and Injury (FI)	-9.25	0.43	0.29	0.09	0.108	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.260	0.109	0.62	2.50	0.169			
Property Damage Only (PDO)	-11.34	0.78	0.25	0.44	0.306	$(5)_{TOTAL}-(5)_{FI}$ 0.740	0.310	0.62	2.50	0.480			

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bisv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bisv (PDO)} (crashes/year)	(6) 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	0.169	1.000	0.480	0.649

Urban and Suburban Arterial Predictive Method

		$(2) \times (3)_{FI}$		$(4) \times (5)_{PDO}$	$(3) + (5)$
Collision with parked vehicle	0.001	0.000	0.001	0.000	0.001
Collision with animal	0.002	0.000	0.002	0.001	0.001
Collision with fixed object	0.744	0.126	0.870	0.418	0.543
Collision with other object	0.072	0.012	0.070	0.034	0.046
Other single-vehicle collision	0.040	0.007	0.023	0.011	0.018
Single-vehicle noncollision	0.141	0.024	0.034	0.016	0.040

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		$(4) \times (5) \times (6)$
Total	--	--	--	--	2.50	--
Fatal and injury (FI)	--	--	--	--	2.50	--

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	$(1) \times (2) \times (3)$
2.78	1.35	1.12	4.20

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	$N_{pedbase}$ from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C_i	Predicted N_{pedi} $(4) \times (5) \times (6)$
	from Table 12-14									
	a	b	c	d	e					
Total	-9.53	0.40	0.26	0.45	0.04	0.24	0.190	4.20	2.50	0.797
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.50	0.797

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		$(4) \times (5) \times (6)$
Total	10.219	0.649	10.868	0.015	2.50	0.163
Fatal and injury (FI)	--	--	--	--	2.50	0.163

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)	1.523	3.301	4.824
Head-on collisions (from Worksheet 2D)	0.166	0.205	0.371
Angle collisions (from Worksheet 2D)	1.175	1.668	2.842
Sideswipe (from Worksheet 2D)	0.335	0.219	0.554
Other multiple-vehicle collision (from Worksheet 2D)	0.186	1.442	1.628
Subtotal	3.385	6.834	10.219
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)	0.126	0.418	0.543
Collision with other object (from Worksheet 2F)	0.012	0.034	0.046
Other single-vehicle collision (from Worksheet 2F)	0.007	0.011	0.018
Single-vehicle noncollision (from Worksheet 2F)	0.024	0.016	0.040
Collision with pedestrian (from Worksheet 2G or 2I)	0.797	0.000	0.797
Collision with bicycle (from Worksheet 2J)	0.163	0.000	0.163
Subtotal	1.129	0.480	1.609
Total	4.514	7.314	11.828

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	11.828
Fatal and injury (FI)	4.514
Property damage only (PDO)	7.314

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections			
General Information		Location Information	
Analyst	SL	Roadway	Whiting St
Agency or Company	H.W. Lochner	Intersection	Brush St
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2042
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	4SG
AADT _{major} (veh/day)	AADT _{MAX} = 67,700 (veh/day)	--	23,100
AADT _{minor} (veh/day)	AADT _{MAX} = 33,400 (veh/day)	--	11,620
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C _i		1.00	2.50
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	1
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)		--	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			3,200
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	2
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	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
<i>CMF_{1i}</i>	<i>CMF_{2i}</i>	<i>CMF_{3i}</i>	<i>CMF_{4i}</i>	<i>CMF_{5i}</i>	<i>CMF_{6i}</i>	<i>CMF_{COMB}</i>
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	0.97	0.96	1.00	0.91	1.00	0.62

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}

Urban and Suburban Arterial Predictive Method

	from Table 12-10			from Table 12-10	from Equation 12-21	(4) _{TOTAL} *(5)	(7) from Worksheet 2B	2.50	(6)*(7)*(8)
	a	b	c						
Total	-10.99	1.07	0.23	0.39	6.779	1.000	6.779	0.62	10.495
Fatal and Injury (FI)	-13.14	1.18	0.22	0.33	2.172	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.332	2.250	0.62	3.483
Property Damage Only (PDO)	-11.02	1.02	0.24	0.44	4.371	$(5)_{TOTAL}-(5)_{FI}$ 0.668	4.529	0.62	7.012

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bimv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bimv (PDO)} (crashes/year)	(6) 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	3.483	1.000	7.012	10.495
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.450	1.567	0.483	3.387	4.954
Head-on collision	0.049	0.171	0.030	0.210	0.381
Angle collision	0.347	1.209	0.244	1.711	2.920
Sideswipe	0.099	0.345	0.032	0.224	0.569
Other multiple-vehicle collision	0.055	0.192	0.211	1.479	1.671

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1) Crash Severity Level	(2) SPF Coefficients			(3) Overdispersion Parameter, k	(4) Initial N _{bisv}	(5) Proportion of Total Crashes	(6) Adjusted N _{bimv}	(7) Combined CMFs	(8) Calibration Factor, C _i	(9) Predicted N _{bisv}			
	from Table 12-12										(4) _{TOTAL} *(5)	(7) from Worksheet 2B	(6)*(7)*(8)
	a	b	c										
Total	-10.21	0.68	0.27	0.36	0.427	1.000	0.427	0.62	2.50	0.662			
Fatal and Injury (FI)	-9.25	0.43	0.29	0.09	0.109	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.259	0.111	0.62	2.50	0.171			
Property Damage Only (PDO)	-11.34	0.78	0.25	0.44	0.313	$(5)_{TOTAL}-(5)_{FI}$ 0.741	0.317	0.62	2.50	0.490			

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bisv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bisv (PDO)} (crashes/year)	(6) 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	0.171	1.000	0.490	0.662

Urban and Suburban Arterial Predictive Method

		$(2) \times (3)_{FI}$		$(4) \times (5)_{PDO}$	$(3) + (5)$
Collision with parked vehicle	0.001	0.000	0.001	0.000	0.001
Collision with animal	0.002	0.000	0.002	0.001	0.001
Collision with fixed object	0.744	0.127	0.870	0.427	0.554
Collision with other object	0.072	0.012	0.070	0.034	0.047
Other single-vehicle collision	0.040	0.007	0.023	0.011	0.018
Single-vehicle noncollision	0.141	0.024	0.034	0.017	0.041

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		$(4) \times (5) \times (6)$
Total	--	--	--	--	2.50	--
Fatal and injury (FI)	--	--	--	--	2.50	--

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	$(1) \times (2) \times (3)$
2.78	1.35	1.12	4.20

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	$N_{pedbase}$ from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C_i	Predicted N_{pedi} $(4) \times (5) \times (6)$
	from Table 12-14									
	a	b	c	d	e					
Total	-9.53	0.40	0.26	0.45	0.04	0.24	0.191	4.20	2.50	0.803
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.50	0.803

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		$(4) \times (5) \times (6)$
Total	10.495	0.662	11.156	0.015	2.50	0.167
Fatal and injury (FI)	--	--	--	--	2.50	0.167

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)	1.567	3.387	4.954
Head-on collisions (from Worksheet 2D)	0.171	0.210	0.381
Angle collisions (from Worksheet 2D)	1.209	1.711	2.920
Sideswipe (from Worksheet 2D)	0.345	0.224	0.569
Other multiple-vehicle collision (from Worksheet 2D)	0.192	1.479	1.671
Subtotal	3.483	7.012	10.495
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)	0.127	0.427	0.554
Collision with other object (from Worksheet 2F)	0.012	0.034	0.047
Other single-vehicle collision (from Worksheet 2F)	0.007	0.011	0.018
Single-vehicle noncollision (from Worksheet 2F)	0.024	0.017	0.041
Collision with pedestrian (from Worksheet 2G or 2I)	0.803	0.000	0.803
Collision with bicycle (from Worksheet 2J)	0.167	0.000	0.167
Subtotal	1.142	0.490	1.632
Total	4.625	7.502	12.127

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	12.127
Fatal and injury (FI)	4.625
Property damage only (PDO)	7.502

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections			
General Information		Location Information	
Analyst	SL	Roadway	Whiting St
Agency or Company	H.W. Lochner	Intersection	Brush St
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2043
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	4SG
AADT _{major} (veh/day)	AADT _{MAX} = 67,700 (veh/day)	--	23,575
AADT _{minor} (veh/day)	AADT _{MAX} = 33,400 (veh/day)	--	11,840
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C _i		1.00	2.50
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	1
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)		--	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			3,200
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	2
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	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)
0.73	0.97	0.96	1.00	0.91	1.00	0.62

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}

Urban and Suburban Arterial Predictive Method

	from Table 12-10			from Table 12-10	from Equation 12-21	(4) _{TOTAL} *(5)	(7) from Worksheet 2B	2.50	(6)*(7)*(8)
	a	b	c						
Total	-10.99	1.07	0.23	0.39	6.958	1.000	6.958	0.62	10.772
Fatal and Injury (FI)	-13.14	1.18	0.22	0.33	2.234	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.333	2.314	0.62	3.582
Property Damage Only (PDO)	-11.02	1.02	0.24	0.44	4.483	$(5)_{TOTAL}-(5)_{FI}$ 0.667	4.644	0.62	7.190

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bimv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bimv (PDO)} (crashes/year)	(6) 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	3.582	1.000	7.190	10.772
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.450	1.612	0.483	3.473	5.085
Head-on collision	0.049	0.176	0.030	0.216	0.391
Angle collision	0.347	1.243	0.244	1.754	2.997
Sideswipe	0.099	0.355	0.032	0.230	0.585
Other multiple-vehicle collision	0.055	0.197	0.211	1.517	1.714

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1) Crash Severity Level	(2) SPF Coefficients			(3) Overdispersion Parameter, k	(4) Initial N _{bisv}	(5) Proportion of Total Crashes	(6) Adjusted N _{bimv}	(7) Combined CMFs	(8) Calibration Factor, C _i	(9) Predicted N _{bisv}			
	from Table 12-12										(4) _{TOTAL} *(5)	(7) from Worksheet 2B	(6)*(7)*(8)
	a	b	c										
Total	-10.21	0.68	0.27	0.36	0.435	1.000	0.435	0.62	2.50	0.674			
Fatal and Injury (FI)	-9.25	0.43	0.29	0.09	0.111	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.258	0.112	0.62	2.50	0.174			
Property Damage Only (PDO)	-11.34	0.78	0.25	0.44	0.319	$(5)_{TOTAL}-(5)_{FI}$ 0.742	0.323	0.62	2.50	0.500			

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bisv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bisv (PDO)} (crashes/year)	(6) 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	0.174	1.000	0.500	0.674

Urban and Suburban Arterial Predictive Method

		$(2) \times (3)_{FI}$		$(4) \times (5)_{PDO}$	$(3) + (5)$
Collision with parked vehicle	0.001	0.000	0.001	0.001	0.001
Collision with animal	0.002	0.000	0.002	0.001	0.001
Collision with fixed object	0.744	0.129	0.870	0.435	0.565
Collision with other object	0.072	0.013	0.070	0.035	0.048
Other single-vehicle collision	0.040	0.007	0.023	0.012	0.018
Single-vehicle noncollision	0.141	0.024	0.034	0.017	0.041

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		$(4) \times (5) \times (6)$
Total	--	--	--	--	2.50	--
Fatal and injury (FI)	--	--	--	--	2.50	--

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	$(1) \times (2) \times (3)$
2.78	1.35	1.12	4.20

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	$N_{pedbase}$ from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C_i	Predicted N_{pedi}
	from Table 12-14									$(4) \times (5) \times (6)$
	a	b	c	d	e					
Total	-9.53	0.40	0.26	0.45	0.04	0.24	0.193	4.20	2.50	0.810
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.50	0.810

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		$(4) \times (5) \times (6)$
Total	10.772	0.674	11.447	0.015	2.50	0.172
Fatal and injury (FI)	--	--	--	--	2.50	0.172

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)	1.612	3.473	5.085
Head-on collisions (from Worksheet 2D)	0.176	0.216	0.391
Angle collisions (from Worksheet 2D)	1.243	1.754	2.997
Sideswipe (from Worksheet 2D)	0.355	0.230	0.585
Other multiple-vehicle collision (from Worksheet 2D)	0.197	1.517	1.714
Subtotal	3.582	7.190	10.772
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.001	0.001
Collision with animal (from Worksheet 2F)	0.000	0.001	0.001
Collision with fixed object (from Worksheet 2F)	0.129	0.435	0.565
Collision with other object (from Worksheet 2F)	0.013	0.035	0.048
Other single-vehicle collision (from Worksheet 2F)	0.007	0.012	0.018
Single-vehicle noncollision (from Worksheet 2F)	0.024	0.017	0.041
Collision with pedestrian (from Worksheet 2G or 2I)	0.810	0.000	0.810
Collision with bicycle (from Worksheet 2J)	0.172	0.000	0.172
Subtotal	1.155	0.500	1.655
Total	4.737	7.691	12.428

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	12.428
Fatal and injury (FI)	4.737
Property damage only (PDO)	7.691

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections			
General Information		Location Information	
Analyst	SL	Roadway	Whiting St
Agency or Company	H.W. Lochner	Intersection	Brush St
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2044
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	4SG
AADT _{major} (veh/day)	AADT _{MAX} = 67,700 (veh/day)	--	24,050
AADT _{minor} (veh/day)	AADT _{MAX} = 33,400 (veh/day)	--	12,060
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C _i		1.00	2.50
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	1
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)		--	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			3,200
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	2
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	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
<i>CMF_{1i}</i>	<i>CMF_{2i}</i>	<i>CMF_{3i}</i>	<i>CMF_{4i}</i>	<i>CMF_{5i}</i>	<i>CMF_{6i}</i>	<i>CMF_{COMB}</i>
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	0.97	0.96	1.00	0.91	1.00	0.62

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}

Urban and Suburban Arterial Predictive Method

	from Table 12-10			from Table 12-10	from Equation 12-21		(4) _{TOTAL} *(5)	(7) from Worksheet 2B	2.50	(6)*(7)*(8)
	a	b	c							
Total	-10.99	1.07	0.23	0.39	7.138	1.000	7.138	0.62	2.50	11.052
Fatal and Injury (FI)	-13.14	1.18	0.22	0.33	2.296	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.333	2.378	0.62	2.50	3.682
Property Damage Only (PDO)	-11.02	1.02	0.24	0.44	4.596	$(5)_{TOTAL}-(5)_{FI}$ 0.667	4.760	0.62	2.50	7.369

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bimv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bimv (PDO)} (crashes/year)	(6) 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	3.682	1.000	7.369	11.052
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.450	1.657	0.483	3.559	5.216
Head-on collision	0.049	0.180	0.030	0.221	0.402
Angle collision	0.347	1.278	0.244	1.798	3.076
Sideswipe	0.099	0.365	0.032	0.236	0.600
Other multiple-vehicle collision	0.055	0.203	0.211	1.555	1.757

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1) Crash Severity Level	(2) SPF Coefficients			(3) Overdispersion Parameter, k	(4) Initial N _{bisv}	(5) Proportion of Total Crashes	(6) Adjusted N _{bimv}	(7) Combined CMFs	(8) Calibration Factor, C _i	(9) Predicted N _{bisv}			
	from Table 12-12										(4) _{TOTAL} *(5)	(7) from Worksheet 2B	(6)*(7)*(8)
	a	b	c										
Total	-10.21	0.68	0.27	0.36	0.444	1.000	0.444	0.62	2.50	0.687			
Fatal and Injury (FI)	-9.25	0.43	0.29	0.09	0.112	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.256	0.114	0.62	2.50	0.176			
Property Damage Only (PDO)	-11.34	0.78	0.25	0.44	0.326	$(5)_{TOTAL}-(5)_{FI}$ 0.744	0.330	0.62	2.50	0.511			

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bisv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bisv (PDO)} (crashes/year)	(6) 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	0.176	1.000	0.511	0.687

Urban and Suburban Arterial Predictive Method

		$(2) \times (3)_{FI}$		$(4) \times (5)_{PDO}$	$(3) + (5)$
Collision with parked vehicle	0.001	0.000	0.001	0.001	0.001
Collision with animal	0.002	0.000	0.002	0.001	0.001
Collision with fixed object	0.744	0.131	0.870	0.444	0.575
Collision with other object	0.072	0.013	0.070	0.036	0.048
Other single-vehicle collision	0.040	0.007	0.023	0.012	0.019
Single-vehicle noncollision	0.141	0.025	0.034	0.017	0.042

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		$(4) \times (5) \times (6)$
Total	--	--	--	--	2.50	--
Fatal and injury (FI)	--	--	--	--	2.50	--

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	$(1) \times (2) \times (3)$
2.78	1.35	1.12	4.20

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	$N_{pedbase}$ from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C_i	Predicted N_{pedi}
	from Table 12-14									$(4) \times (5) \times (6)$
	a	b	c	d	e					
Total	-9.53	0.40	0.26	0.45	0.04	0.24	0.194	4.20	2.50	0.816
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.50	0.816

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		$(4) \times (5) \times (6)$
Total	11.052	0.687	11.738	0.015	2.50	0.176
Fatal and injury (FI)	--	--	--	--	2.50	0.176

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)	1.657	3.559	5.216
Head-on collisions (from Worksheet 2D)	0.180	0.221	0.402
Angle collisions (from Worksheet 2D)	1.278	1.798	3.076
Sideswipe (from Worksheet 2D)	0.365	0.236	0.600
Other multiple-vehicle collision (from Worksheet 2D)	0.203	1.555	1.757
Subtotal	3.682	7.369	11.052
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.001	0.001
Collision with animal (from Worksheet 2F)	0.000	0.001	0.001
Collision with fixed object (from Worksheet 2F)	0.131	0.444	0.575
Collision with other object (from Worksheet 2F)	0.013	0.036	0.048
Other single-vehicle collision (from Worksheet 2F)	0.007	0.012	0.019
Single-vehicle noncollision (from Worksheet 2F)	0.025	0.017	0.042
Collision with pedestrian (from Worksheet 2G or 2I)	0.816	0.000	0.816
Collision with bicycle (from Worksheet 2J)	0.176	0.000	0.176
Subtotal	1.168	0.511	1.678
Total	4.850	7.880	12.730

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	12.730
Fatal and injury (FI)	4.850
Property damage only (PDO)	7.880

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections			
General Information		Location Information	
Analyst	SL	Roadway	Whiting St
Agency or Company	H.W. Lochner	Intersection	Brush St
Date Performed	12/01/21	Jurisdiction	
		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)	--	24,525
AADT _{minor} (veh/day)	AADT _{MAX} = 33,400 (veh/day)	--	12,280
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C _i		1.00	2.50
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	1
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)		--	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			3,200
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	2
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	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)
0.73	0.97	0.96	1.00	0.91	1.00	0.62

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}

Urban and Suburban Arterial Predictive Method

	from Table 12-10			from Table 12-10	from Equation 12-21	(4) _{TOTAL} *(5)	(7) from Worksheet 2B	2.50	(6)*(7)*(8)
	a	b	c						
Total	-10.99	1.07	0.23	0.39	7.320	1.000	7.320	0.62	11.332
Fatal and Injury (FI)	-13.14	1.18	0.22	0.33	2.359	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.334	2.443	0.62	3.783
Property Damage Only (PDO)	-11.02	1.02	0.24	0.44	4.709	$(5)_{TOTAL}-(5)_{FI}$ 0.666	4.877	0.62	7.550

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bimv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bimv (PDO)} (crashes/year)	(6) 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	3.783	1.000	7.550	11.332
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.450	1.702	0.483	3.647	5.349
Head-on collision	0.049	0.185	0.030	0.226	0.412
Angle collision	0.347	1.313	0.244	1.842	3.155
Sideswipe	0.099	0.374	0.032	0.242	0.616
Other multiple-vehicle collision	0.055	0.208	0.211	1.593	1.801

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1) Crash Severity Level	(2) SPF Coefficients			(3) Overdispersion Parameter, k	(4) Initial N _{bisv}	(5) Proportion of Total Crashes	(6) Adjusted N _{bimv}	(7) Combined CMFs	(8) Calibration Factor, C _i	(9) Predicted N _{bisv}			
	from Table 12-12										(4) _{TOTAL} *(5)	(7) from Worksheet 2B	(6)*(7)*(8)
	a	b	c										
Total	-10.21	0.68	0.27	0.36	0.452	1.000	0.452	0.62	2.50	0.699			
Fatal and Injury (FI)	-9.25	0.43	0.29	0.09	0.114	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.255	0.115	0.62	2.50	0.178			
Property Damage Only (PDO)	-11.34	0.78	0.25	0.44	0.332	$(5)_{TOTAL}-(5)_{FI}$ 0.745	0.336	0.62	2.50	0.521			

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bisv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bisv (PDO)} (crashes/year)	(6) 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	0.178	1.000	0.521	0.699

Urban and Suburban Arterial Predictive Method

		$(2) \times (3)_{FI}$		$(4) \times (5)_{PDO}$	$(3) + (5)$
Collision with parked vehicle	0.001	0.000	0.001	0.001	0.001
Collision with animal	0.002	0.000	0.002	0.001	0.001
Collision with fixed object	0.744	0.133	0.870	0.453	0.586
Collision with other object	0.072	0.013	0.070	0.036	0.049
Other single-vehicle collision	0.040	0.007	0.023	0.012	0.019
Single-vehicle noncollision	0.141	0.025	0.034	0.018	0.043

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		$(4) \times (5) \times (6)$
Total	--	--	--	--	2.50	--
Fatal and injury (FI)	--	--	--	--	2.50	--

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	$(1) \times (2) \times (3)$
2.78	1.35	1.12	4.20

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	$N_{pedbase}$ from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C_i	Predicted N_{pedi} $(4) \times (5) \times (6)$
	from Table 12-14									
	a	b	c	d	e					
Total	-9.53	0.40	0.26	0.45	0.04	0.24	0.195	4.20	2.50	0.821
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.50	0.821

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		$(4) \times (5) \times (6)$
Total	11.332	0.699	12.032	0.015	2.50	0.180
Fatal and injury (FI)	--	--	--	--	2.50	0.180

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)	1.702	3.647	5.349
Head-on collisions (from Worksheet 2D)	0.185	0.226	0.412
Angle collisions (from Worksheet 2D)	1.313	1.842	3.155
Sideswipe (from Worksheet 2D)	0.374	0.242	0.616
Other multiple-vehicle collision (from Worksheet 2D)	0.208	1.593	1.801
Subtotal	3.783	7.550	11.332
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.001	0.001
Collision with animal (from Worksheet 2F)	0.000	0.001	0.001
Collision with fixed object (from Worksheet 2F)	0.133	0.453	0.586
Collision with other object (from Worksheet 2F)	0.013	0.036	0.049
Other single-vehicle collision (from Worksheet 2F)	0.007	0.012	0.019
Single-vehicle noncollision (from Worksheet 2F)	0.025	0.018	0.043
Collision with pedestrian (from Worksheet 2G or 2I)	0.821	0.000	0.821
Collision with bicycle (from Worksheet 2J)	0.180	0.000	0.180
Subtotal	1.180	0.521	1.701
Total	4.963	8.071	13.033

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	13.033
Fatal and injury (FI)	4.963
Property damage only (PDO)	8.071

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections			
General Information		Location Information	
Analyst	SL	Roadway	Whiting St
Agency or Company	H.W. Lochner	Intersection	Brush St
Date Performed	12/01/21	Jurisdiction	
		Analysis Year	2046
Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	4SG
AADT _{major} (veh/day)	AADT _{MAX} = 67,700 (veh/day)	--	25,000
AADT _{minor} (veh/day)	AADT _{MAX} = 33,400 (veh/day)	--	12,500
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C _i		1.00	2.50
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	1
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)		--	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			3,200
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	2
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	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)
0.73	0.97	0.96	1.00	0.91	1.00	0.62

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}

Urban and Suburban Arterial Predictive Method

	from Table 12-10			from Table 12-10	from Equation 12-21		(4) _{TOTAL} *(5)	(7) from Worksheet 2B	2.50	(6)*(7)*(8)
	a	b	c							
Total	-10.99	1.07	0.23	0.39	7.502	1.000	7.502	0.62	2.50	11.615
Fatal and Injury (FI)	-13.14	1.18	0.22	0.33	2.422	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.334	2.509	0.62	2.50	3.884
Property Damage Only (PDO)	-11.02	1.02	0.24	0.44	4.822	$(5)_{TOTAL}-(5)_{FI}$ 0.666	4.994	0.62	2.50	7.731

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bimv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bimv (PDO)} (crashes/year)	(6) 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	3.884	1.000	7.731	11.615
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	$(3)+(5)$
Rear-end collision	0.450	1.748	0.483	3.734	5.482
Head-on collision	0.049	0.190	0.030	0.232	0.422
Angle collision	0.347	1.348	0.244	1.886	3.234
Sideswipe	0.099	0.384	0.032	0.247	0.632
Other multiple-vehicle collision	0.055	0.214	0.211	1.631	1.845

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1) Crash Severity Level	(2) SPF Coefficients			(3) Overdispersion Parameter, k	(4) Initial N _{bisv}	(5) Proportion of Total Crashes	(6) Adjusted N _{bimv}	(7) Combined CMFs	(8) Calibration Factor, C _i	(9) Predicted N _{bisv}			
	from Table 12-12										(4) _{TOTAL} *(5)	(7) from Worksheet 2B	(6)*(7)*(8)
	a	b	c										
Total	-10.21	0.68	0.27	0.36	0.460	1.000	0.460	0.62	2.50	0.712			
Fatal and Injury (FI)	-9.25	0.43	0.29	0.09	0.115	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.254	0.117	0.62	2.50	0.181			
Property Damage Only (PDO)	-11.34	0.78	0.25	0.44	0.339	$(5)_{TOTAL}-(5)_{FI}$ 0.746	0.343	0.62	2.50	0.531			

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1) Collision Type	(2) Proportion of Collision Type _(FI)	(3) Predicted N _{bisv (FI)} (crashes/year)	(4) Proportion of Collision Type _(PDO)	(5) Predicted N _{bisv (PDO)} (crashes/year)	(6) 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	0.181	1.000	0.531	0.712

Urban and Suburban Arterial Predictive Method

		$(2) \times (3)_{FI}$		$(4) \times (5)_{PDO}$	$(3) + (5)$
Collision with parked vehicle	0.001	0.000	0.001	0.001	0.001
Collision with animal	0.002	0.000	0.002	0.001	0.001
Collision with fixed object	0.744	0.135	0.870	0.462	0.597
Collision with other object	0.072	0.013	0.070	0.037	0.050
Other single-vehicle collision	0.040	0.007	0.023	0.012	0.019
Single-vehicle noncollision	0.141	0.026	0.034	0.018	0.044

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		$(4) \times (5) \times (6)$
Total	--	--	--	--	2.50	--
Fatal and injury (FI)	--	--	--	--	2.50	--

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	$(1) \times (2) \times (3)$
2.78	1.35	1.12	4.20

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	$N_{pedbase}$ from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C_i	Predicted N_{pedi} $(4) \times (5) \times (6)$
	from Table 12-14									
	a	b	c	d	e					
Total	-9.53	0.40	0.26	0.45	0.04	0.24	0.197	4.20	2.50	0.827
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	2.50	0.827

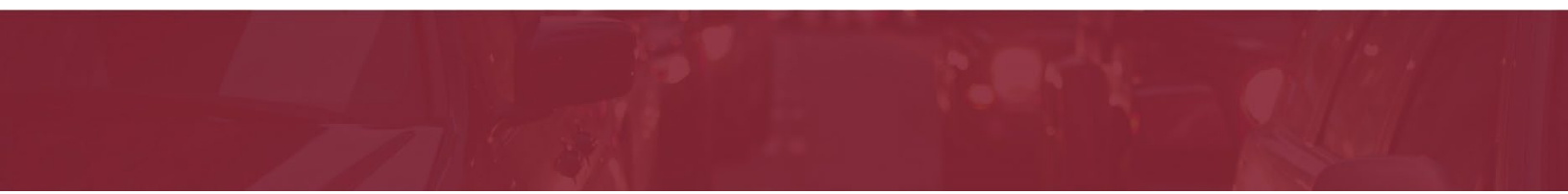
Worksheet 2J -- Vehicle-Bicycle Collisions for Urban and Suburban Arterial Intersections

(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		$(4) \times (5) \times (6)$
Total	11.615	0.712	12.327	0.015	2.50	0.185
Fatal and injury (FI)	--	--	--	--	2.50	0.185

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)	1.748	3.734	5.482
Head-on collisions (from Worksheet 2D)	0.190	0.232	0.422
Angle collisions (from Worksheet 2D)	1.348	1.886	3.234
Sideswipe (from Worksheet 2D)	0.384	0.247	0.632
Other multiple-vehicle collision (from Worksheet 2D)	0.214	1.631	1.845
Subtotal	3.884	7.731	11.615
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.001	0.001
Collision with animal (from Worksheet 2F)	0.000	0.001	0.001
Collision with fixed object (from Worksheet 2F)	0.135	0.462	0.597
Collision with other object (from Worksheet 2F)	0.013	0.037	0.050
Other single-vehicle collision (from Worksheet 2F)	0.007	0.012	0.019
Single-vehicle noncollision (from Worksheet 2F)	0.026	0.018	0.044
Collision with pedestrian (from Worksheet 2G or 2I)	0.827	0.000	0.827
Collision with bicycle (from Worksheet 2J)	0.185	0.000	0.185
Subtotal	1.193	0.531	1.724
Total	5.077	8.262	13.339

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	13.339
Fatal and injury (FI)	5.077
Property damage only (PDO)	8.262

CMF/CRF Details





CMF / CRF Details

CMF ID: 7924

Increase from 4 lanes to 6 lanes


Description:

Prior Condition: 4 lane roadway

Category: Roadway

Study: [Assessment of safety effects for widening urban roadways in developing crash modification functions using nonlinearizing link functions, Park et al., 2015](#)



Star Quality Rating:	 [View score details]
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Value:	0.85
---------------	------

Adjusted Standard Error:	
---------------------------------	--

Unadjusted Standard Error:	0.073
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Value:	15 (This value indicates a decrease in crashes)
---------------	--

Adjusted Standard Error:	
---------------------------------	--

Unadjusted Standard Error:	7.3
-----------------------------------	-----

Applicability

Crash Type:	All
--------------------	-----

Crash Severity:	All
------------------------	-----

Roadway Types:	Not specified
-----------------------	---------------

Number of Lanes:	
-------------------------	--

Road Division Type:	
----------------------------	--

Speed Limit:	40-60
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Area Type:	Urban
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Traffic Volume:	20500 to 60683 <i>Annual Average Daily Traffic (AADT)</i>
------------------------	---

Time of Day:	
---------------------	--

If countermeasure is intersection-based

Intersection Type:	
---------------------------	--

Intersection Geometry:	
-------------------------------	--

Traffic Control:	
-------------------------	--

Major Road Traffic Volume:	
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Minor Road Traffic Volume:	
-----------------------------------	--

Development Details

Date Range of Data Used:	2003 to 2012
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Municipality:	
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State:	FL
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Country:	
Type of Methodology Used:	2
Sample Size Used:	

Other Details	
Included in Highway Safety Manual?	No
Date Added to Clearinghouse:	Mar-08-2016
Comments:	

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CMF / CRF Details

CMF ID: 9398

Widen managed lane envelope

Description: The managed lane envelope is defined as the managed lane, the left shoulder, and the buffer between the lane and regular traffic. The width of the envelope is the combined width of these elements. This treatment is for widening this envelope.

Prior Condition: Managed lane with left shoulder and flush buffer with paint or pylons between managed lane and regular traffic.

Category: Roadway

Study: [*Safety Evaluation of Cross-Sectional Elements of Freeway Managed Lanes, Avelar and Fitzpatrick, 2018*](#)

Star Quality Rating:



[\[View score details\]](#)

Crash Modification Factor (CMF)

Value: 0.98

Adjusted Standard Error:

Unadjusted Standard Error: 0.005

Crash Reduction Factor (CRF)

Value:	2 (This value indicates a decrease in crashes)
Adjusted Standard Error:	
Unadjusted Standard Error:	0.5

Applicability

Crash Type:	All
Crash Severity:	All
Roadway Types:	Not specified
Number of Lanes:	6-10
Road Division Type:	Divided by Median
Speed Limit:	
Area Type:	Urban and suburban
Traffic Volume:	
Time of Day:	All

If countermeasure is intersection-based

Intersection Type:	
Intersection Geometry:	
Traffic Control:	
Major Road Traffic Volume:	
Minor Road Traffic Volume:	

Development Details

Date Range of Data Used:	2007 to 2011
---------------------------------	--------------

Municipality:	Los Angeles
State:	CA
Country:	United States
Type of Methodology Used:	7
Sample Size Used:	

Other Details	
Included in Highway Safety Manual?	No
Date Added to Clearinghouse:	Oct-27-2018
Comments:	This CMF indicates the reduction in all crashes on a freeway segment with a managed lane due to widening the managed lane envelope by one foot.

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CMF / CRF Details

CMF ID: 9857

Coordinate arterial signals

Description: Coordination of traffic signals along an arterial corridor

Prior Condition: No coordination between arterial signals

Category: Intersection traffic control

Study: [Identifying the Safety Impact of Signal Coordination Projects along Urban Arterials Using a Meta-analysis Method, Williamson et al., 2018](#)

Star Quality Rating:



[\[View score details\]](#)

Crash Modification Factor (CMF)

Value: 0.42

Adjusted Standard Error:

Unadjusted Standard Error: 0.21

Crash Reduction Factor (CRF)

Value: 58 (This value indicates a **decrease** in crashes)

Adjusted Standard Error:

Unadjusted Standard Error:	21
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Applicability

Crash Type:	All
Crash Severity:	A (serious injury),B (minor injury),C (possible injury)
Roadway Types:	Not specified
Number of Lanes:	
Road Division Type:	
Speed Limit:	
Area Type:	Urban
Traffic Volume:	
Time of Day:	All

If countermeasure is intersection-based

Intersection Type:	
Intersection Geometry:	
Traffic Control:	
Major Road Traffic Volume:	
Minor Road Traffic Volume:	

Development Details

Date Range of Data Used:	
Municipality:	
State:	IL

Country:	USA
Type of Methodology Used:	1
Sample Size Used:	

Other Details	
Included in Highway Safety Manual?	No
Date Added to Clearinghouse:	Nov-19-2018
Comments:	The CMF applies to all crashes along the corridor. Applies for both suburban principal arterial-other and minor arterial.

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CMF / CRF Details

CMF ID: 3081

Change number of 5-leg intersections from X to Y

Description:

Prior Condition: *No Prior Condition(s)*

Category: Intersection geometry

Study: [*A Random-parameter Model to Explain the Effects of Built Environment Characteristics on Pedestrian crash frequency, Ukkusuri et al., 2011*](#)

Star Quality Rating:



[\[View score details\]](#)

Crash Modification Factor (CMF)

Value:

$$100 * (1 - e^{0.033(Y-X)})$$

Adjusted Standard Error:

Unadjusted Standard Error:

Crash Reduction Factor (CRF)

Value:

$$e^{0.033(Y-X)}$$

Adjusted Standard Error:

Unadjusted Standard Error:

Applicability

Crash Type:

Vehicle/pedestrian

Crash Severity:

K (fatal),A (serious injury)

Roadway Types:

All

Number of Lanes:

Road Division Type:

Speed Limit:

Area Type:

Urban

Traffic Volume:

Time of Day:

All

If countermeasure is intersection-based

Intersection Type:

Intersection Geometry:

Traffic Control:

Major Road Traffic Volume:

Minor Road Traffic Volume:

Development Details

Date Range of Data Used:

2002 to 2006

Municipality:

New York City

State:	NY
Country:	USA
Type of Methodology Used:	7
Sample Size Used:	10965

Other Details	
Included in Highway Safety Manual?	No
Date Added to Clearinghouse:	Jul-15-2011
Comments:	

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Appendix J

Cost Estimates



ENGINEER'S ESTIMATE
TAMPA-HILLSBOROUGH EXPRESSWAY AUTHORITY
PREFERRED ALTERNATIVE

PROJECT NUMBER:	HI-0141
SUBMITTAL TYPE:	PD&E Estimate
COUNTY:	Hillsborough
DATE:	January 17, 2022
ENGINEERING CONSULTANT FIRM:	H.W. Lochner, Inc.
CONTACT NAME:	William Howell, P.E.
PHONE NUMBER:	(813) 357 - 3750

COMPONENT GROUP TOTALS		Florida Ave. Ramp	Whiting Street	Totals
100 - STRUCTURES		\$6,817,810.26	\$3,169,904.96	\$9,987,715.23
200 - ROADWAY		\$1,075,044.62	\$5,829,307.68	\$6,904,352.30
300 - SIGNING & PAVEMENT MARKINGS		\$79,316.61	\$456,990.16	\$536,306.77
400 - LIGHTING		\$202,609.75	\$200,702.00	\$403,311.75
500 - SIGNALIZATION		\$215,995.85	\$928,870.24	\$1,144,866.09
550 - ITS		\$50,000.00	\$50,000.00	\$100,000.00
600 - LANDSCAPE / PERIPHERALS (4% OF COMPONENTS 100 - 550)		\$338,000.00	\$426,000.00	\$764,000.00
COMPONENT SUB-TOTAL		\$8,778,777.09	\$11,061,775.04	\$19,840,552.14
(102-1) MOT (Maintenance of Traffic)	15%	\$1,316,816.56	\$1,659,266.26	\$2,976,082.82
	SUB-TOTAL	\$10,095,593.66	\$12,721,041.30	\$22,816,634.96
(101-1) MOB (Mobilization)	12%	\$1,211,471.24	\$1,526,524.96	\$2,737,996.19
	SUB-TOTAL	\$11,307,064.90	\$14,247,566.25	\$25,554,631.15
Market Conditions Factor	20%	\$2,261,412.98	\$2,849,513.25	\$5,110,926.23
	SUB-TOTAL	\$13,568,477.88	\$17,097,079.51	\$30,665,557.38
PU (Project Unknowns)	30%	\$4,070,543.36	\$5,129,123.85	\$9,199,667.21
	SUB-TOTAL	\$17,639,021.24	\$22,226,203.36	\$39,865,224.60
ALTERNATIVE TWO GRAND TOTAL				\$39,865,224.60

NOTES:

ENGINEER'S ESTIMATE
TAMPA-HILLSBOROUGH EXPRESSWAY AUTHORITY
PREFERRED ALTERNATIVE - FLORIDA AVENUE RAMP IMPROVEMENTS

PROJECT NUMBER:	HI-0141
DESCRIPTION:	Florida Avenue Ramp Improvements.
PAGE NUMBER:	1 of 7

COMPONENT GROUPS

100 - STRUCTURES		\$6,817,810.26
200 - ROADWAY		\$1,075,044.62
300 - SIGNING & PAVEMENT MARKINGS		\$79,316.61
400 - LIGHTING		\$202,609.75
500 - SIGNALIZATION		\$215,995.85
550 - ITS		\$50,000.00
600 - LANDSCAPE / PERIPHERALS (4% OF COMPONENTS 100 - 550)		\$338,000.00
COMPONENT SUB-TOTAL		\$8,778,777.09
(102-1) MOT (Maintenance of Traffic)	15%	\$1,316,816.56
SUB-TOTAL		\$10,095,593.66
(101-1) MOB (Mobilization)	12%	\$1,211,471.24
SUB-TOTAL		\$11,307,064.90
Market Conditions Factor	20%	\$2,261,412.98
SUB-TOTAL		\$13,568,477.88
PU (Project Unknowns)	30%	\$4,070,543.36
SUB-TOTAL		\$17,639,021.24

NOTES:

ENGINEER'S ESTIMATE
TAMPA-HILLSBOROUGH EXPRESSWAY AUTHORITY
PREFERRED ALTERNATIVE - WHITING STREET IMPROVEMENTS

PROJECT NUMBER:	HI-0141
DESCRIPTION:	Whiting Street Improvements. Includes Whiting Street Off-Ramp, Whiting Street realignment and Meridian Ave. improvements.
PAGE NUMBER:	1 of 9

COMPONENT GROUPS

100 - STRUCTURES		\$3,169,904.96
200 - ROADWAY		\$5,829,307.68
300 - SIGNING & PAVEMENT MARKINGS		\$456,990.16
400 - LIGHTING		\$200,702.00
500 - SIGNALIZATION		\$928,870.24
550 - ITS		\$50,000.00
600 - LANDSCAPE / PERIPHERALS (4% OF COMPONENTS 100 - 550)		\$426,000.00
COMPONENT SUB-TOTAL		\$11,061,775.04
(102-1) MOT (Maintenance of Traffic)	15%	\$1,659,266.26
SUB-TOTAL		\$12,721,041.30
(101-1) MOB (Mobilization)	12%	\$1,526,524.96
SUB-TOTAL		\$14,247,566.25
Market Conditions Factor	20%	\$2,849,513.25
SUB-TOTAL		\$17,097,079.51
PU (Project Unknowns)	30%	\$5,129,123.85
SUB-TOTAL		\$22,226,203.36

NOTES:

Appendix K

Conceptual Signing Plan

