Appendix I
Transportation Impact Analysis

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KITTELSON & ASSOCIATES

Transportation Impact Analysis

FIRESTONE BOULEVARD WIDENING PROJECT

Norwalk, CA

July 2019

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Project No. 23420

July 2019

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1.0 INTRODUCTION

This report presents the findings of the traffic operations and safety analysis conducted for the Firestone Boulevard Widening Project (herein referred to as the "project") that proposes to widen Firestone Boulevard from Hoxie Avenue/I-605 Ramps to Imperial Highway in the City of Norwalk, California (City).

This study evaluated current and future traffic conditions on Firestone Boulevard to determine if the proposed intersection and roadway capacity improvements address operational and safety deficiencies, and prepared the traffic index required for pavement design. In addition, this study included a review of the proposed conceptual design to verify safe and efficient operation of the roadway system.

The project location and vicinity are shown in Figure 1.

1.1 PROJECT DESCRIPTION AND LOCATION

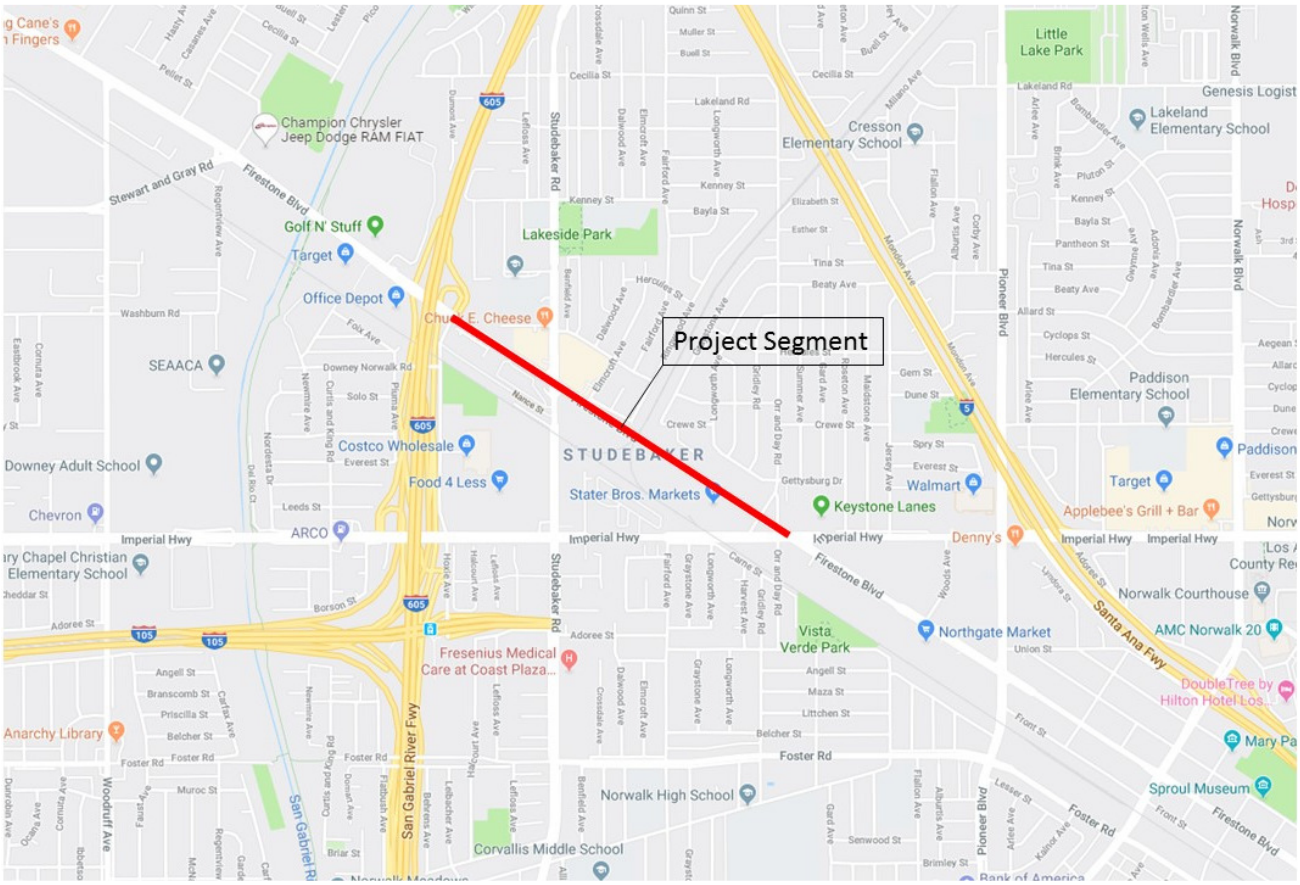
Firestone Boulevard extends approximately 12 miles from the City of South Gate to Interstate 5 (I-5) in the City of Norwalk and travels through the City of Downey. The roadway serves as an important truck route between I-5 and Interstate 605 (I-605) and into the City of Los Angeles to the west. The City of Norwalk (City) would increase capacity along an approximately one-mile long segment of Firestone Boulevard located in the City. The Los Angeles County Metropolitan Transportation Authority (Metro) has previously identified major highway improvements along the State Route 91 (SR-91), I-605, and I-5 corridors in the study area through the I-605 "Hot Spots" Program and subsequent PSR-PDS and PA&ED documents[1]. Additionally, Firestone Boulevard would be widened to six lanes under I-605 and was recently widened to six lanes west of I-605 into the City of Downey.

To maintain consistency with the rest of the roadway, this project would widen the segment of Firestone Boulevard from Hoxie Avenue/I-605 Ramps to Imperial Highway (including the Union Pacific Railroad bridge) from four lanes (two lanes in each direction) to six lanes (three lanes in each direction). Additionally, the project would include multimodal improvements for bicycles and pedestrians while maintaining existing on-street parking.

The geometric approval design for the project is presented in Appendix A.

[1] www.metro.net/projects/i-605

Figure 1: Proposed Project Site Location and Study Intersections



1.2 STUDY SCOPE AND METHODOLOGY

The scope and analysis methodologies utilized for this study are presented in this section.

Analysis Scenarios

An intersection level of service (LOS) analysis was performed to assess traffic operations during the peak hour of the weekday AM (7:00 – 9:00 AM) and PM (4:00 – 6:00 PM) peak periods for the following four scenarios:

- Existing 2019 – existing roadway conditions and traffic demand (2019);
- 2040 Baseline – existing roadway conditions and future (2040) traffic demand;
- 2019 Plus Project – widened roadway and existing (2019) traffic demand, and,
- 2040 Plus Project – widened roadway and future (2040) traffic demand.

Study Intersections

The following signalized intersections were analyzed:

1. Hoxie Avenue/I-605 Ramps/Firestone Boulevard
2. Studebaker Road/Firestone Boulevard
3. Stater Bros. Markets Driveway/Firestone Boulevard
4. Orr and Day Road/Firestone Boulevard
5. Firestone Boulevard/Imperial Highway

The locations of the study intersections are shown on the map in Figure 1.

Intersection Analysis Methodology

The operating conditions at the study intersections were evaluated using Synchro 10, applying the Highway Capacity Manual (HCM) methodologies. Due to the unique phasing and lane configurations at the intersections, the HCM 2000 Edition was utilized as the Synchro software is not able to calculate operational results for these conditions utilizing the methodologies presented in more recent HCMs (HCM 2010 and HCM 6th Edition).

Level of Service

"Level of service" (LOS) describes the operating conditions experienced by users of a facility. LOS is a qualitative measure of the effect of a number of factors, including speed and travel time, traffic interruptions, freedom to maneuver, driving comfort and convenience. LOS is designated A through F from best to worst, and cover the entire range of traffic operations that might occur. LOS A through LOS E generally represent traffic volumes at less than roadway capacity, while LOS F represents over capacity and/or forced flow conditions. The LOS for the HCM methodology is based on average control delay per vehicle. Table 1 presents the ranges of delay associated with each LOS grade designation.

Table 1: Signalized Intersection LOS Definitions

Level of Service	Average Delay per Vehicle	Average Control Delay per Vehicle (Seconds)
A	Very low average control delay, less than 10 seconds per vehicle. This occurs when progression is extremely favorable, and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.	<10.0
B	Average control delay is greater than 10 seconds per vehicle and less than or equal to 20 seconds per vehicle. This generally occurs with good progression and/or short cycle lengths. More vehicles stop than for a level of service A, causing higher levels of average delay.	>10 and ≤20
C	Average control delay is greater than 20 seconds per vehicle and less than or equal to 35 seconds per vehicle. These higher delays may result from fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping.	>20 and ≤35
D	Average control delay is greater than 35 seconds per vehicle and less than or equal to 55 seconds per vehicle. The influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle length, or high volume/capacity ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.	>35 and ≤55
E	Average control delay is greater than 55 seconds per vehicle and less than or equal to 80 seconds per vehicle. This is usually considered to be the limit of acceptable delay. These high delay values generally (but not always) indicate poor progression, long cycle lengths, and high volume/capacity ratios. Individual cycle failures are frequent occurrences.	>55 and ≤80
F	Average control delay is in excess of 80 seconds per vehicle. This is considered to be unacceptable to most drivers. This condition often occurs with oversaturation. It may also occur at high volume/capacity ratios below 1.0 with many individual cycle failures. Poor progression and long cycle lengths may also contribute to such high delay values.	>80

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

Significance Threshold

According the City's Circulation Element of the General Plan[2], LOS C is identified as a target LOS standard and LOS D is identified as a threshold standard for signalized intersections. A significant impact would occur at a signalized intersection if the addition of the project traffic causes the intersection to worsen from a LOS C or better to LOS D or worse. If the intersection is already operating at LOS D or worse, a significant impact would occur if the addition of the project traffic causes the volume to capacity (V/C) ratio at the intersection to increase by 0.01 or more.

[2] The City of Norwalk General Plan, City of Norwalk, February 1996.

Safety

Crash data provided by the City of Norwalk for the last five years (March 1, 2014 to March 1, 2019) was assessed to identify potential safety issues on Firestone Boulevard. Using the Highway Safety Manual crash predictive methodologies, the safety performance of the roadway was evaluated to determine the potential impact of the roadway improvements.

2.0 EXISTING 2019 CONDITIONS

A comprehensive data collection effort was undertaken to develop a detailed description of existing operations and safety conditions on Firestone Boulevard. The Existing 2019 conditions analysis includes an assessment of the existing street system and an analysis of traffic volumes and current operating conditions.

2.1 ROADWAY NETWORK

The existing roadway network in the study area is comprised of the following street system:

Interstate 605 (I-605) is a freeway providing a connection between Interstate 210 and State Route 22. I-605 generally travels in the north-south direction and is located on the west end of the study segment. In the vicinity of the project, there are five general purpose lanes and one high-occupancy lane in the northbound direction and four general purpose lanes and one high-occupancy lane in the southbound direction. Access to northbound I-605 is provided via the ramp at the Firestone Boulevard/Hoxie Avenue intersection. The posted speed limit on I-605 is 65 miles per hour (mph).

Firestone Boulevard travels in the northwest-southeast direction and is designated as a Secondary Highway per the City's Circulation Element of the General Plan. For ease of discussion, the directions on Firestone Boulevard are designated as eastbound and westbound. The roadway consists of two travel lanes in each direction between Hoxie Avenue/I-605 Ramps and Studebaker Road with two travel lanes in the westbound direction and three travel lanes in the eastbound direction between Studebaker Road and Imperial Highway. Unmetered on-street parking is provided on both sides of the roadway between Hoxie Avenue/I-605 Ramps and Studebaker Road; no on-street parking is provided between Studebaker Road and Imperial Highway. The roadway contains a center median with left-turn lanes at intersections and certain driveways. Firestone Boulevard has a posted speed limit of 40 miles per hour west of Studebaker Road and 45 miles per hour east of Studebaker Road.

Hoxie Avenue travels in the north-south direction and is designated as a Collector Road per the City's Circulation Element of the General Plan. The roadway consists of two travel lanes in each direction at Firestone Boulevard. On-street parking is generally not provided on either side of Hoxie Avenue. The posted speed limit is 35 mph.

Studebaker Road travels in the north-south direction and is designated as a Collector Road per the City's Circulation Element of the General Plan. The roadway consists of two travel lanes in each direction at Firestone Boulevard with a center median. Unmetered on-street parking is generally provided along on both sides of Studebaker Road. The posted speed limit is 40 mph.

Orr and Day Road travels in the north-south direction and is designated as a Collector Road per the City's Circulation Element of the General Plan. The roadway consists of one travel lane in each direction at Firestone Boulevard. Unmetered on-street parking is generally provided on both sides of Orr and Day Road. The posted speed limit is 35 mph.

Imperial Highway travels in the east-west direction and is designated as a Major Highway per the City's Circulation Element of the General Plan. The roadway consists of three travel lanes in each direction with a center median to the west of Firestone Boulevard and a center two-way left-turn lane to the east of Firestone Boulevard. On-street parking is generally not provided on either side of the roadway. The posted speed limit is 40 miles per hour.

2.2 TRANSIT FACILITIES

Metro operates the following transit service along the study segment:

Metro Line 115 extends from the Norwalk Green Line Station to Playa del Rey and travels in the westbound direction on Firestone Boulevard west of Studebaker Road. The bus stop for Line 115 is located at the north side of Firestone Boulevard immediately west of Studebaker Road. During the weekday AM peak period, Line 115 provides headways of approximately 10-15 minutes in both directions and during the weekday PM peak period, Line 115 provides headways of approximately 10 minutes in the eastbound direction and 13-20 minutes in the westbound direction. Metro Line 115 has limited service on weekends and holidays.

2.3 BICYCLE AND PEDESTRIAN FACILITIES

No bicycle facilities are currently provided along the study segment. Most of the roadways in the study area provide sidewalks (generally 8 feet wide) on both sides of the street. No sidewalk is provided on the south side and a sidewalk slightly narrower than 8 feet wide is provided on the northside of Firestone Boulevard at the Union Pacific Railroad bridge. All signalized intersections provide marked pedestrian crosswalks with pedestrian signals on most legs of the intersection. The Hoxie Avenue/I-605 Ramps/Firestone Boulevard intersection provides marked crosswalks at the north, east, and south legs of the intersection and the Stater Bros. Markets Driveway/Firestone Boulevard provides a marked crosswalk at the east leg of the intersection. All other signalized intersections provide marked crosswalks on all legs of the intersection.

2.4 EXISTING 2019 TRAFFIC VOLUMES AND LEVEL OF SERVICE

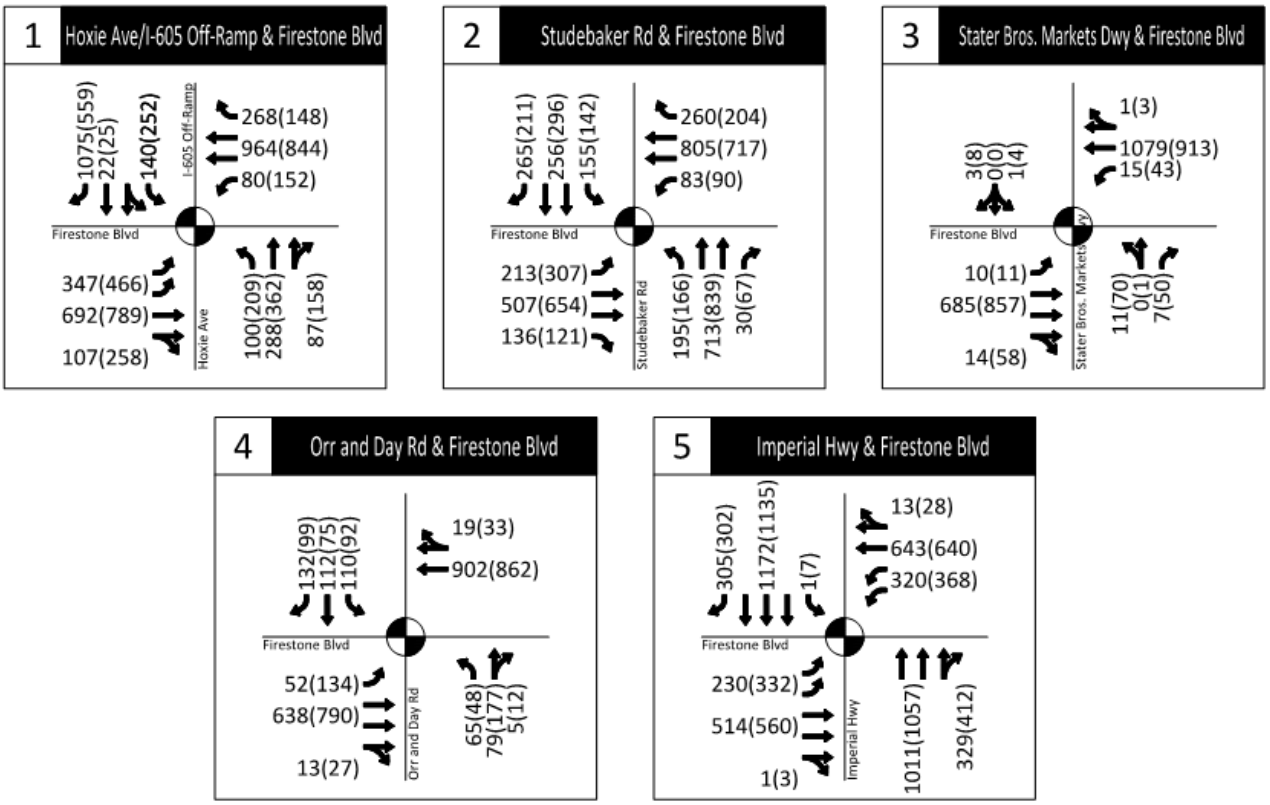
This section presents the existing peak hour turning movement traffic volumes and the resulting operating conditions at each study intersection.

Existing 2019 Traffic Volumes

The existing operations of the study intersections were assessed for the weekday AM and PM peak hours. Existing traffic volume data at the study intersections were collected on Tuesday, February 26, 2019, which represents a typical weekday with local schools and colleges in session. Data was collected between 7:00 AM and 9:00 AM and between 4:00 PM and 6:00 PM. The peak hour volumes utilized in

this analysis and shown in Figure 2 represent the highest hour during the weekday AM and PM data collection periods. Appendix B provides the detailed count sheets for each intersection.

Figure 2: Existing 2019 Traffic Volumes and Lane Geometries



Legend:
– Denotes signalized intersection
(AM) PM – Traffic volumes

Existing 2019 Intersection Levels of Service

Intersection turning movement volumes, lane configurations, and traffic control were used to calculate the LOS at the study intersections for the weekday AM and PM peak hours. Table 2 shows the LOS results based on the delay for the study intersections for Existing 2019 conditions. As shown, all intersections currently operate at or better than the City's LOS D threshold during both peak hours except for the following intersections:

- Hoxie Avenue/I-605 Ramps/Firestone Boulevard: Operates at LOS F during the AM peak hour and LOS E during the PM peak hour
- Studebaker Road/Firestone Boulevard: Operates at LOS E during the PM peak hour

Detailed LOS worksheets for Existing 2019 conditions are presented in Appendix C.

Table 2: Intersection LOS – Existing 2019 Conditions

#	Intersection	Control	Peak Hour	Existing 2019	
				Delay	LOS
1	Hoxie Avenue/I-605 Ramps/Firestone Boulevard	Signalized	AM	189.9	F
			PM	56.8	E
2	Studebaker Road/Firestone Boulevard	Signalized	AM	51.8	D
			PM	64.4	E
3	Stater Bros. Markets Driveway/Firestone Boulevard	Signalized	AM	5.6	A
			PM	9.0	A
4	Orr and Day Road/Firestone Boulevard	Signalized	AM	26.4	C
			PM	30.3	C
5	Firestone Boulevard/Imperial Highway	Signalized	AM	41.6	D
			PM	47.4	D

Notes:
LOS – Level of Service

Source: Kittelson & Associates, Inc., 2019

3.0 2040 BASELINE CONDITONS

The 2040 Baseline conditions analysis evaluates traffic operations with the existing roadway conditions under future 2040 traffic demand projections.

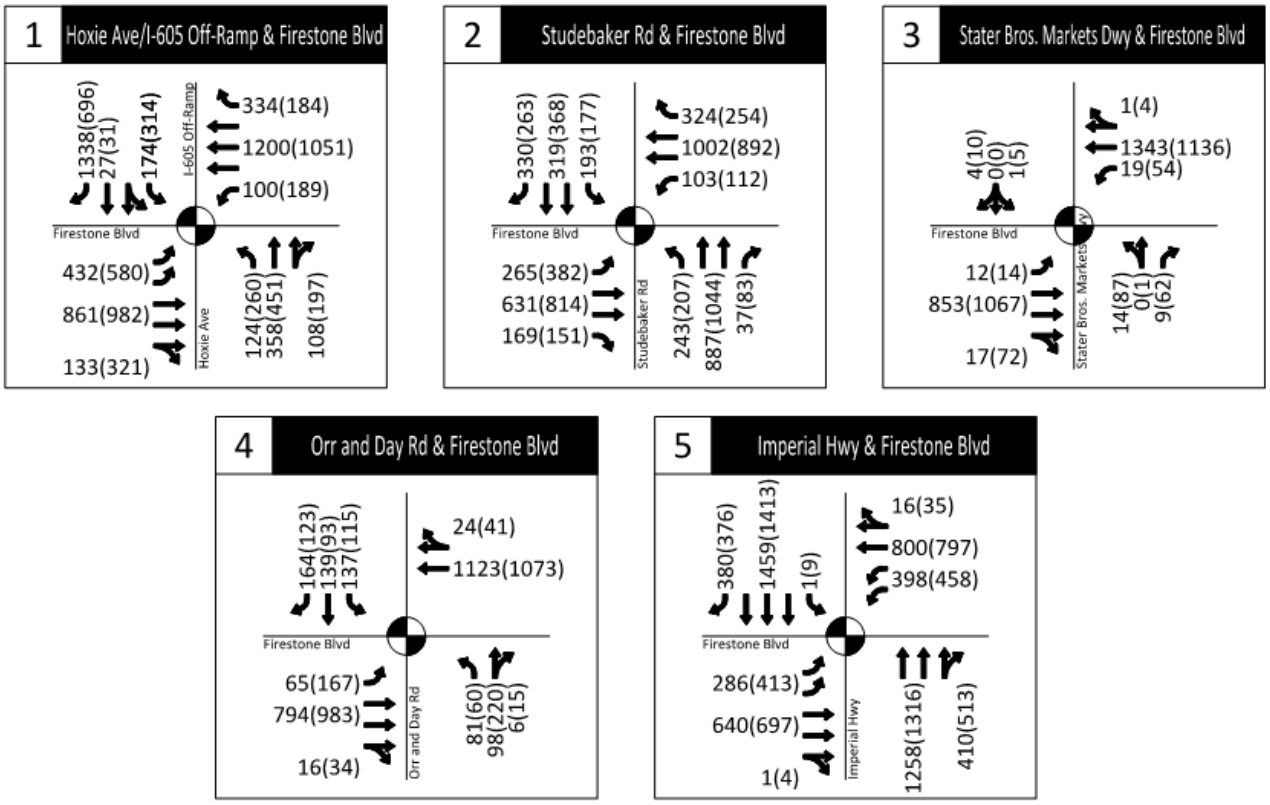
3.1 EXPECTED TRANSPORTATION IMPROVEMENTS

As part of the I-605 Corridor "Hot Spots" Program, Metro has previously identified major highway improvements along the State Route 91 (SR-91), I-605, and I-5 corridors in the study area. Additionally, Firestone Boulevard would be widened to six lanes under I-605 and was recently widened to six lanes west of I-605 into the City of Downey.

3.2 TRAFFIC VOLUME FORECASTING

Per direction from the City staff, the Southern California Association of Governments (SCAG) Travel Demand Model was used to derive 2040 traffic forecast volumes. According to the SCAG Travel Demand Model, the study segment would experience less than 1% growth per year. To maintain a conservative approach for the purposes of this analysis, the growth rate was rounded up to 1% per year and was applied to the existing traffic volumes. The resulting 2040 traffic volumes are presented in Figure 3.

Figure 3: 2040 Baseline Traffic Volumes and Lane Geometries



Legend:

– Denotes signalized intersection

(AM) PM – Traffic volumes

3.3 2040 BASELINE INTERSECTION LEVEL OF SERVICE

Table 3 shows the LOS results for the 2040 Baseline conditions. As shown in the table, Stater Bros. Markets Driveway/Firestone Boulevard and Orr and Day Road/Firestone Boulevard intersections would continue to operate at or better than the City's threshold of LOS D during both peak hours. The following intersections would operate at LOS E or F during one of the peak hours:

- Hoxie Avenue/I-605 Ramps/Firestone Boulevard: Operates at LOS F during the both peak hours
- Studebaker Road/Firestone Boulevard: Operates at LOS F during the both peak hours
- Firestone Boulevard/Imperial Highway: Operates at LOS E during the AM peak hour and LOS F during the PM peak hour

Detailed LOS worksheets for the 2040 Baseline conditions are presented in Appendix D.

Table 3: Intersection LOS – 2040 Baseline Conditions

#	Intersection	Control	Peak Hour	2040 Baseline	
				Delay	LOS
1	Hoxie Avenue/I-605 Ramps/Firestone Boulevard	Signalized	AM	264.8	F
			PM	95.7	F
2	Studebaker Road/Firestone Boulevard	Signalized	AM	92.6	F
			PM	95.6	F
3	Stater Bros. Markets Driveway/Firestone Boulevard	Signalized	AM	6.2	A
			PM	10.0	B
4	Orr and Day Road/Firestone Boulevard	Signalized	AM	28.4	C
			PM	34.6	C
5	Firestone Boulevard/Imperial Highway	Signalized	AM	60.5	E
			PM	87.8	F

Notes:
LOS – Level of Service
Source: Kittelson & Associates, Inc., 2019

4.0 PROPOSED PROJECT DESCRIPTION

The project would widen the segment of Firestone Boulevard from Hoxie Avenue/I-605 Ramps to Imperial Highway (including the Union Pacific Railroad bridge) from four lanes (two lanes in each direction) to six lanes (three lanes in each direction). Additionally, the project would construct multimodal improvements for bicycles and pedestrians while maintaining existing on-street parking. As part of the project, a sidewalk would be provided along the south side of Firestone Boulevard at the Union Pacific Railroad bridge and sidewalk widths would be 8 feet along the corridor.

4.1 INTERSECTION LANE CONFIGURATIONS

The existing lane configurations at the study intersections and the lane configurations at the study intersections as proposed by the project are summarized in Table 4 and illustrated in Figure 4.

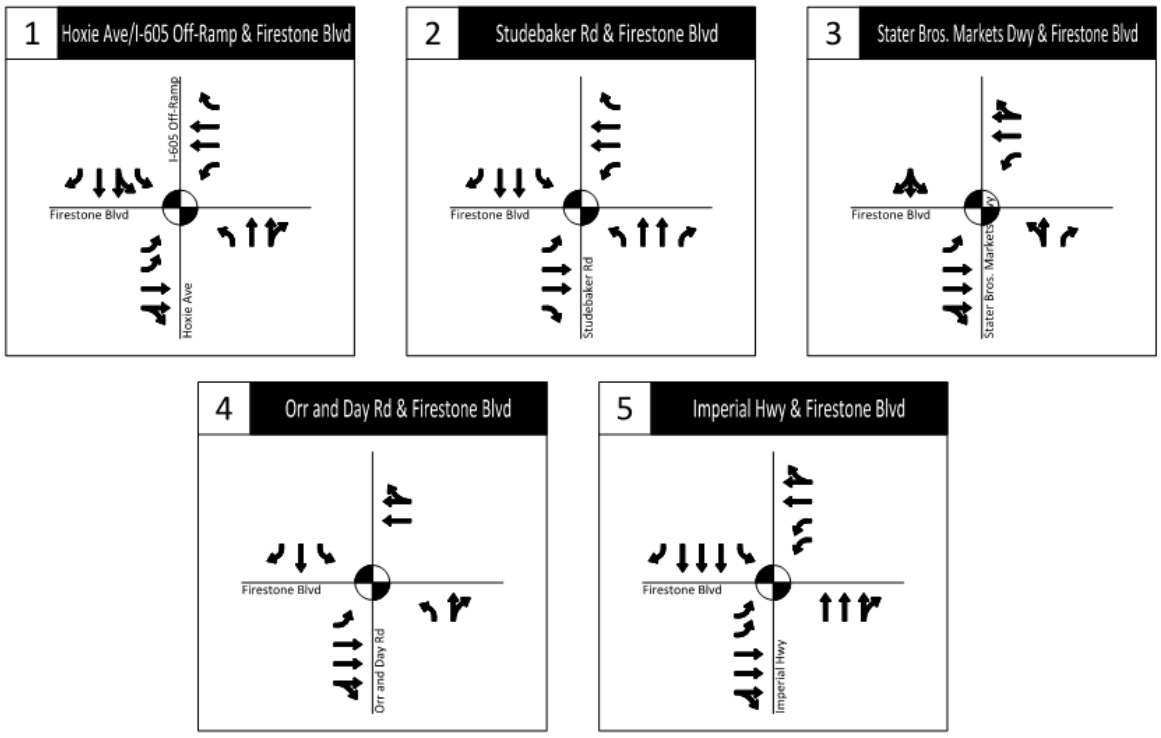
Table 4: Proposed Lane Configurations

#	Intersection	Proposed Lane Configuration Changes
1	Hoxie Avenue/I-605 Ramps/Firestone Boulevard	SB – Two right-turn, one shared through/left-turn, and one left-turn WB: One right-turn, three through, and two left-turn EB – One right-turn, three through, and two left-turn
2	Studebaker Road/Firestone Boulevard	WB – One shared through/right-turn, two through, and two left-turn EB – One right-turn, three through, and two left-turn
3	Stater Bros. Markets Driveway/Firestone Boulevard	WB – One shared through/right-turn, two through, and one left-turn
4	Orr and Day Road/Firestone Boulevard	WB – One shared through/right-turn, and two through
5	Firestone Boulevard/Imperial Highway	No changes proposed

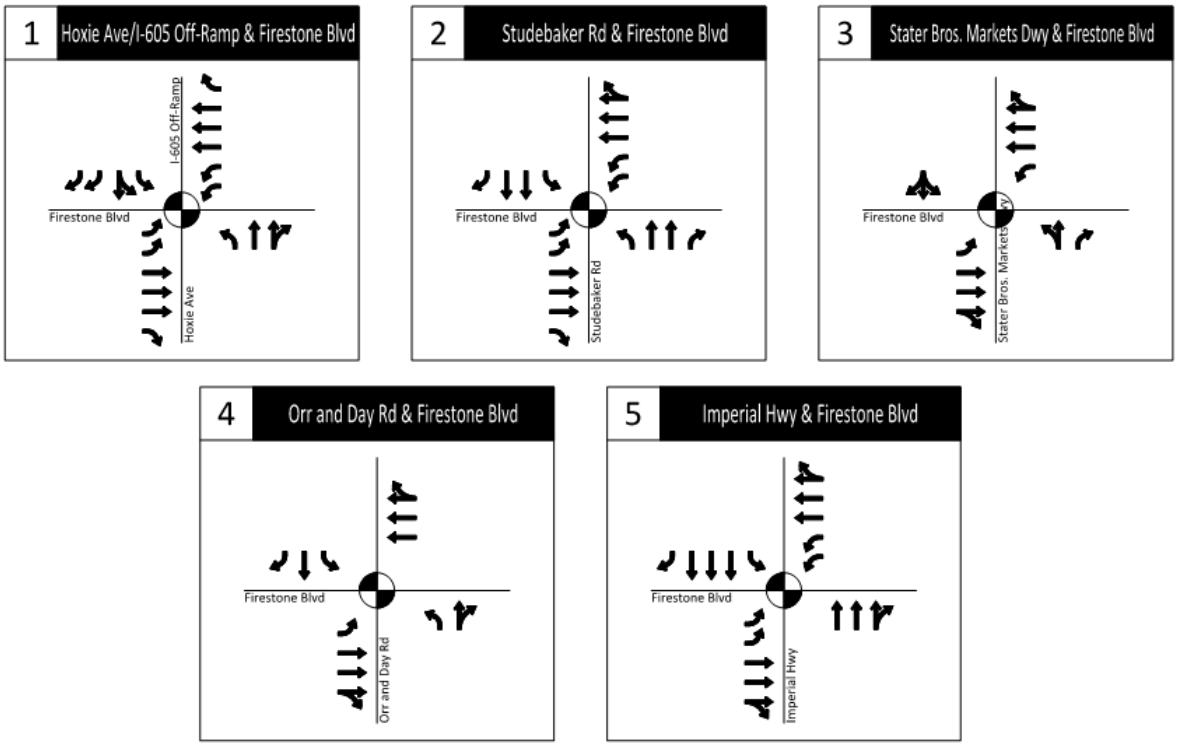
Notes:
SB – Southbound
WB – Westbound
EB - Eastbound
Source: Mark Thomas, 2019

Figure 4: Existing and Project Lane Configurations

Existing:



Project:



Legend:

– Denotes signalized intersection

4.2 TRANSIT FACILITIES

The bus stop for Line 115 will continue to be located at the north side of Firestone Boulevard immediately west of Studebaker Road. As part of the project, the curb lane in front of the bus stop would be 17 feet wide and would contain shared lane markings for a Class 3 bicycle route.

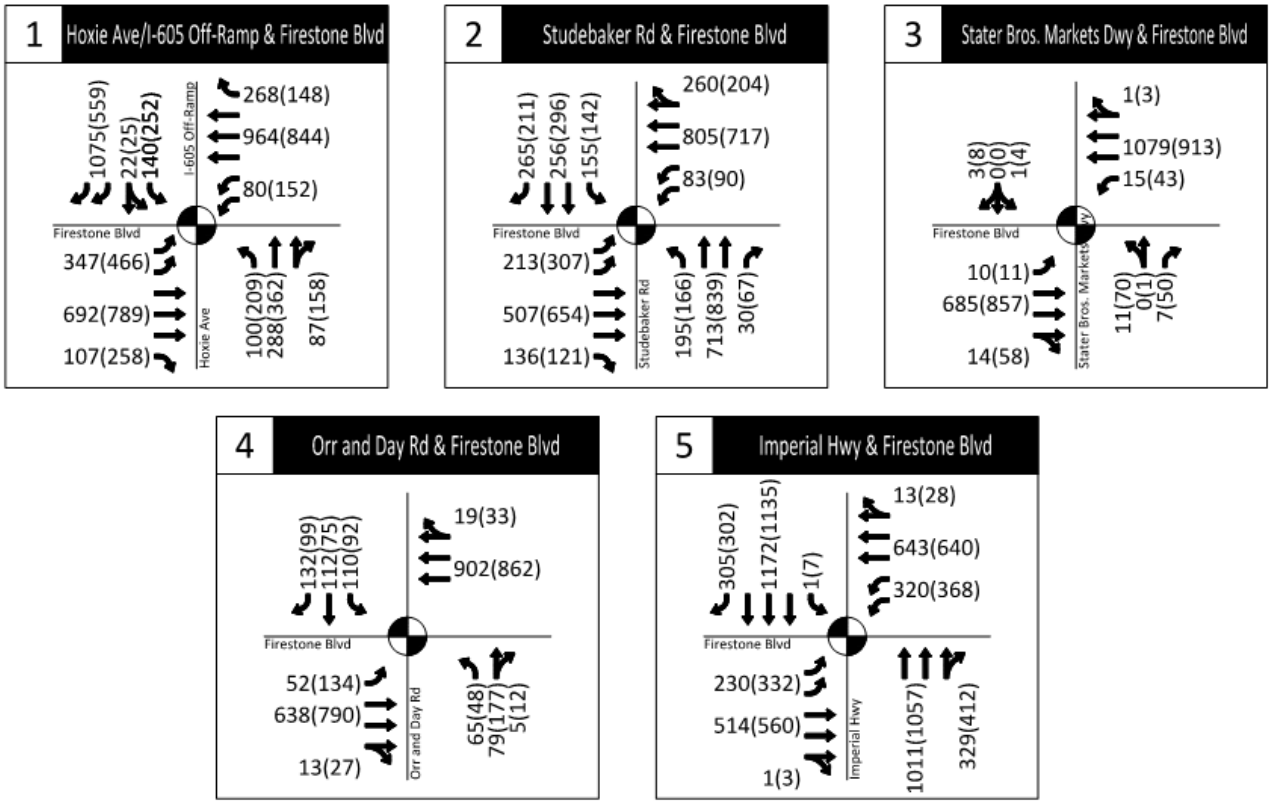
4.3 BICYCLE AND PEDESTRIAN FACILITIES

As part of the proposed project, a 6 feet wide marked bicycle lane is provided between Orr and Day Road and Studebaker Road in both directions. Shared lane markings for Class 3 bike routes would designate the outside lane as "sharrow" bicycle lanes in each direction of travel between Hoxie Avenue/I-605 Ramps and Studebaker Road. Bicycle travel would be shared with motor vehicles in these lanes. Continuous 8-foot sidewalks (same as existing) would be provided on both sides of the roadway between Hoxie Avenue/I-605 Ramps and Imperial Highway.

5.0 2019 PLUS PROJECT CONDITIONS

The 2019 Plus Project conditions represent the existing traffic volumes with the proposed project lane configurations. The volumes and lane configurations utilized for the 2019 Plus Project conditions are presented in Figure 5. In order to determine whether the additional lane in each direction would attract more volume to the Firestone Boulevard corridor, the capacity conditions were evaluated in the SCAG Travel Demand Model. Based on this evaluation, it was determined that increasing the capacity of Firestone Boulevard by one lane in each direction is not expected to attract traffic from other roadways in the network. According to the SCAG model, the proposed additional lane in each direction would not generate any new demand for the study corridor. As such, no additional volume was added to the baseline traffic volumes to account for the project.

Figure 5: 2019 Plus Project Traffic Volumes and Lane Geometries



Legend:

– Denotes signalized intersection

(AM) PM – Traffic volumes

5.1 2019 PLUS PROJECT INTERSECTION LEVEL OF SERVICE

Table 5 shows the LOS results based on the delays for the study intersections for the 2019 Plus Project conditions. As shown, the implementation of the project results in an improvement of the delay at all study intersections during both peak hours. All study intersections are projected to operate at or better than the City's threshold of LOS D during both peak hours except for the Hoxie Avenue/I-605 Ramps/Firestone Boulevard intersection, which improves to LOS E during the AM peak hour. As such, the project would not cause any significant impacts at the study intersections during the 2019 Plus Project conditions.

Detailed LOS worksheets for 2019 Plus Project are presented in Appendix E.

Table 5: Intersection LOS – 2019 Plus Project Conditions

#	Intersection	Control	Peak Hour	Existing 2019		2019 Plus Project	
				Delay	LOS	Delay	LOS
1	Hoxie Avenue/I-605 Ramps/Firestone Boulevard	Signalized	AM	189.9	F	65.0	E
			PM	56.8	E	44.4	D
2	Studebaker Road/Firestone Boulevard	Signalized	AM	51.8	D	43.6	D
			PM	64.4	E	43.3	D
3	Stater Bros. Markets Driveway/Firestone Boulevard	Signalized	AM	5.6	A	5.0	A
			PM	9.0	A	8.7	A
4	Orr and Day Road/Firestone Boulevard	Signalized	AM	26.4	C	25.6	C
			PM	30.3	C	29.4	C
5	Firestone Boulevard/Imperial Highway	Signalized	AM	41.6	D	41.0	D
			PM	47.4	D	46.8	D

Notes:
LOS – Level of Service
Source: Kittelson & Associates, Inc., 2019

5.2 TRANSIT, BICYCLE, AND PEDESTRIAN OPERATIONS

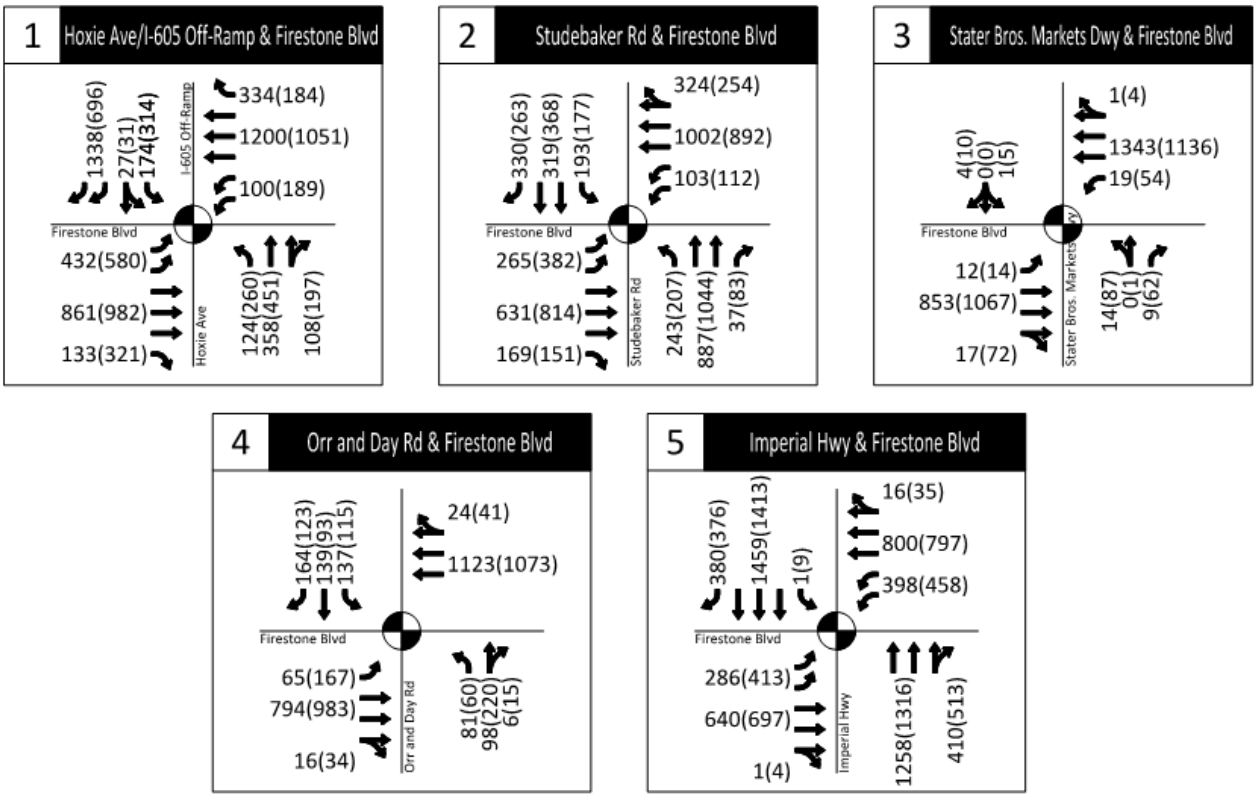
The proposed 6-foot bicycle lanes in each direction between Studebaker Road and Orr and Day Road would improve the safety of cyclists. An appropriate transition from the bicycle lane to the "sharrow" lane would be required to increase cyclist visibility and delineate the path for cyclists.

There is a bus stop located at the north side of Firestone Boulevard immediately west of Studebaker Road. Buses utilizing this bus stop located would have to stop in the outside lane, which would be shared between bicycles and motor vehicles. This may pose safety hazards to bicyclists traveling west on Firestone Boulevard. Due to the relatively low number of buses that utilize this bus stop (approximately 3-6 buses per hour), the potential safety hazards to bicyclists are not expected to be substantial. However, with the presence of a "sharrow" lane, the speed limit on Firestone Boulevard should be reduced to 35 mph as bicyclists would be sharing the outside lane with motorists.

6.0 2040 PLUS PROJECT CONDITIONS

The 2040 Plus Project conditions represent the 2040 traffic projections with the proposed project lane configurations. The volumes and lane configurations utilized for the 2040 Plus Project conditions are presented in Figure 6. As with the 2019 Plus Project conditions, no additional volume was added to the baseline traffic volumes to account for the project.

Figure 6: 2040 Plus Project Traffic Volumes and Lane Geometries



Legend:

– Denotes signalized intersection

(AM) PM – Traffic volumes

6.1 2040 PLUS PROJECT INTERSECTION LEVEL OF SERVICE

Table 6 shows the LOS results based on the delay for the study intersections for 2040 Plus Project Conditions. As shown, the implementation of the project results in an improvement of the delay at all study intersections during both peak hours. As such, the project would not cause any significant impacts at the study intersections during the 2040 Plus Project Conditions. As shown, all intersections are projected to operate at or better than the City's LOS D threshold during both peak hours except for the following intersections:

- Hoxie Avenue/I-605 Ramps/Firestone Boulevard: Continues to operate at LOS F (lower delay) during the AM peak hour and improves to LOS E during the PM peak hour
- Studebaker Road/Firestone Boulevard: Improves to LOS E during both peak hours

Detailed LOS worksheets for 2040 Plus Project conditions are presented in Appendix F.

Table 6: Intersection Level of Service – 2040 Plus Project Conditions

#	Intersection	Control	Peak Hour	2040 Baseline		2040 Plus Project	
				Delay	LOS	Delay	LOS
1	Hoxie Avenue/I-605 Ramps/Firestone Boulevard	Signalized	AM	264.8	F	114.8	F
			PM	95.7	F	66.1	E
2	Studebaker Road/Firestone Boulevard	Signalized	AM	92.6	F	69.7	E
			PM	95.6	F	58.2	E
3	Stater Bros. Markets Driveway/Firestone Boulevard	Signalized	AM	6.2	A	5.2	A
			PM	10.0	B	9.4	A
4	Orr and Day Road/Firestone Boulevard	Signalized	AM	28.4	C	27.1	C
			PM	34.6	C	32.2	C
5	Firestone Boulevard/Imperial Highway	Signalized	AM	60.5	E	59.7	E
			PM	87.8	F	87.0	F

Notes:
LOS – Level of Service
Source: Kittelson & Associates, Inc., 2019

6.2 TRANSIT, BICYCLE, AND PEDESTRIAN OPERATIONS

The transit, bicycle, and pedestrian operations for the 2040 Plus Project conditions are consistent with the assessment presented in Section 5.2.

7.0 SAFETY

An assessment of the safety performance of the roadway was conducted to determine the potential safety impacts associated with the roadway improvements. The section presents a summary of historical crash data and the expected annual crash frequencies for Firestone Boulevard.

7.1 CRASH HISTORY

Crash data over the last five years (March 1, 2014 to March 1, 2019) provided by the City of Norwalk is presented in Appendix G and summarized in Table 7. A total of 208 crashes occurred on the section of Firestone Boulevard between Hoxie Avenue/I-605 Ramps and Imperial Highway over the most-recent 5-year period, a crash frequency of approximately 42 crashes per year. The majority of crashes (98%) occurred at or in close proximity to the four signalized intersections, with the highest number (65) occurring at the Hoxie Avenue/I-605 Ramps intersection. The crashes occurring at the Studebaker Road, Orr and Day Road, and Imperial Highway intersections were similar, ranging from 41 to 49 crashes over the 5 years.

Rear-end crashes (80) were the most predominant, which is typical at urban signalized intersections. Broadside crashes, which typically involve a left-turning vehicle, were the second highest number of crashes (51), followed by sideswipe crashes (43) which typically are associated with lane changing. Four pedestrian crashes occurred, one of which was a fatality. In addition, eight bicycle crashes occurred, one of which was a fatality. Of the 208 crashes, 2 resulted in fatalities and 66 resulted in injuries.

7.2 SAFETY PERFORMANCE

The safety performance for the section of Firestone Boulevard between Hoxie Avenue/I-605 Ramps and Imperial Highway was assessed using the crash prediction methodologies provided in the Highway Capacity Manual. Expected crashes were estimated for the four analysis scenarios and are summarized in Table 8. Observed crashes were used to adjust the number of predicted crashes to account for the regression-to-the mean of crashes over time. No local calibration factors were used in the estimation.

The expected annual crash frequencies for this section of Firestone Boulevard are provided in Table 8. The crash prediction worksheets are included in Appendix G. The analysis results indicate that the expected crash frequency for existing conditions is very close to the observed crash frequency. The increase in traffic demand, estimated at 1% annually, would potentially result in a slight increase in crashes between Existing and 2040 conditions. While crashes may increase slightly with a 6-lane cross section (2019 Plus Project), over the longer term, there isn't expected to be any difference between the safety performance of the existing 4-lane roadway and the proposed 6-lane roadway.

Table 7: Crash Data Summary (March 1, 2014 to March 1, 2019)

Category		Intersection						Total
		Hoxie Ave/ I-605 Ramps	Stude-baker Road	Elmcroft Avenue	Fairford Avenue	Orr and Day Road	Imperial Highway	
Type	Broad-side	18	9	1	0	15	8	24
	Head-on	2	1	0	0	1	2	3
	Hit Object	4	4	0	0	6	2	8
	Not stated	0	1	0	0	0	1	1
	Other	0	3	0	0	1	2	3
	Rear-end	28	25	0	1	8	18	27
	Side-swipe	13	6	1	1	8	14	24
	Veh-Ped	0	0	0	0	2	2	4
	Total	65	49	2	2	41	49	94
Severity	Injured	23	15	0	0	19	9	28
	Fatal	0	1	0	0	0	1	1
	PDO	41	33	2	2	22	39	65
Multi or Single Vehicle	Multi Vehicle	58	44	2	2	33	43	80
	Single Vehicle	7	5	0	0	8	6	14
Ped/Bike Involve-ment	Ped	0	0	0	0	2	2	4
	Bike	4	3	0	0	0	1	1

Notes:
PDO – Property Damage Only
Source: City of Norwalk, 2019

Table 8: Expected Annual Crash Frequency on Firestone Boulevard

Scenario	Fatal and Injury Crashes Per Year	PDO Crashes Per Year	Total Crashes Per Year
Observed	14	28	42
Existing 2019	14	26	40
2040 Baseline	17	31	48
2019 Plus Project	17	27	44
2040 Plus Project	18	30	48

Notes:
PDO – Property Damage Only
Source: Kittelson & Associates, Inc., 2019

8.0 TRAFFIC INDEX

The Traffic Index (TI) is a measure of the deteriorating effects that truck traffic has on asphalt concrete pavement of a roadway and is used to determine the minimum pavement thickness.

The TI was calculated based on the methodologies presented in the 6th Edition of the California Highway Design Manual (California Department of Transportation, 2017). Traffic counts over a 24-hour period were collected on Tuesday, February 26, 2019 and full vehicle classifications were documented between Elmcroft Avenue and Orr and Day Road. These volumes and vehicles classifications are presented in Appendix B. Based on this data, the Average Annual Daily Traffic (AADT) and the Equivalent Single Axle Load (ESAL) numbers were calculated. These detailed calculations are presented in Appendix H. As shown in Table 9, the resulting TI numbers for a 10-year design life was 8.5 and a 20-year design life was 9.0.

Table 9: Traffic Index Calculations

Location	Traffic Index	EB			WB			Max
		Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3	
Firestone Boulevard between Elmcroft Ave and Orr and Day Road								
10 Year Design Life (2029)	TI_{10}	7.00	8.50	8.50	7.00	8.00	8.00	8.50
20 Year Design Life (2039)	TI_{20}	7.50	9.00	9.00	7.50	9.00	9.00	9.00

Source: Kittelson & Associates, Inc., 2019

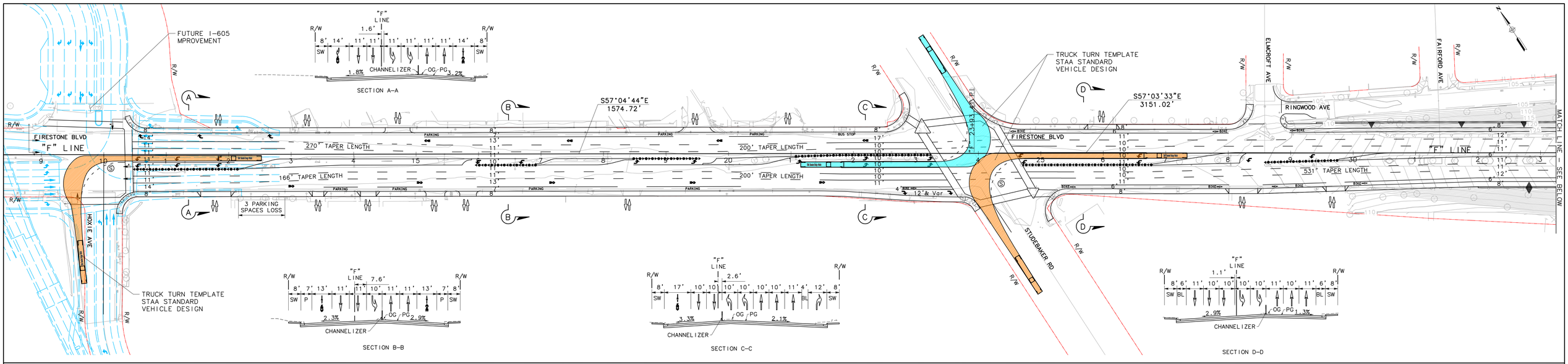
9.0 CONCLUSIONS AND FINDINGS

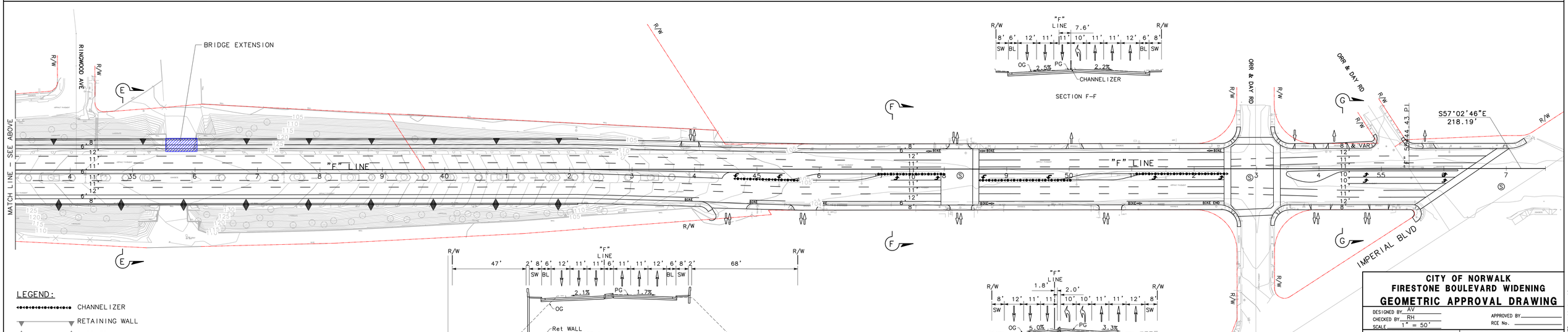
The project proposes to widen the segment of Firestone Boulevard from Hoxie Avenue/I-605 Ramps to Imperial Highway (including the Union Pacific Railroad bridge) from four lanes (two lanes in each direction) to six lanes (three lanes in each direction). Additionally, the project would construct multimodal improvements for bicycles and pedestrians while maintaining existing on-street parking.

The findings of the technical analysis are summarized as below:

- Based on the evaluation of the SCAG Travel Demand Model, it was determined that increasing the capacity of Firestone Boulevard by one lane in each direction is not expected to attract traffic from other roadways in the network.
- The project would not result in significant impacts during both weekday AM and PM peak hours for either the Existing or 2040 conditions.
- The proposed 6-foot bicycle lanes in each direction between Studebaker Road and Orr and Day Road would improve the safety of cyclists. At Studebaker Road, an appropriate transition from the bicycle lane to the "sharrow" lane would be required to increase cyclist visibility and delineate the path for cyclists.
- Buses utilizing the bus stop located at the north side of Firestone Boulevard immediately west of Studebaker Road will have to stop in the outside lane, which would be shared between bicycles and motor vehicles. This may pose safety hazards to bicyclists traveling west on Firestone Boulevard.
- With the presence of a "sharrow" lane on Firestone Boulevard between Studebaker Road and Hoxie Avenue/I-605 Ramps, the speed limit on Firestone Boulevard should be reduced to 35 mph.
- A safety performance evaluation for the roadway indicates that crash potential is not expected to increase with the planned roadway improvements. To reduce crash severity, the City of Norwalk should consider reducing the speed limit on Firestone Boulevard.

Appendix A
Geometric Approval Design





LEGEND:

- CHANNELIZER
- RETAINING WALL
- BARRIER
- Ⓢ SIGNALIZED INTERSECTION

CITY OF NORWALK
FIRESTONE BOULEVARD WIDENING
GEOMETRIC APPROVAL DRAWING

DESIGNED BY AV
CHECKED BY RH
SCALE 1" = 50'
APPROVED BY
RCE No.

MARK THOMAS
16795 VON KARMAN AVE
SUITE 240
IRVINE, CA 92606

CITY OF NORWALK
12700 NORWALK BOULEVARD
NORWALK, CA 90650

DATE PLOTTED => 11-Jun-19
TIME PLOTTED => 11:36

USERNAME => acortez
DGN FILE => IR-19101_GAD.dwg

Appendix B
Traffic Count Data

Prepared by National Data & Surveying Services

Firestone Blvd & I-605/Hoxie Ave

Peak Hour Turning Movement Count

ID: 19-05099-001
City: Norwalk

Day: Tuesday
Date: 02/26/2019

PEAK HOURS		COUNT PERIODS
AM	07:30 AM - 08:30 AM	07:00 AM - 09:00 AM
NOON	NONE	NONE
PM	04:30 PM - 05:30 PM	04:00 PM - 06:00 PM

Firestone Blvd — SOUTHBOUND

AM	107	692	347	0	2139	AM
NOON	0	0	0	0	0	NOON
PM	258	789	465	1	1613	PM
	0	2	2	0		

I-605/Hoxie Ave — EASTBOUND

AM	NOON	PM		
202	0	415		
0	0	0	0	
100	0	209	1	
288	0	362	2	
87	0	158	0	
AM	NOON	PM		

CONTROL

Signalized

TEV	4172 AM	0 NOON	4230 PM
PHF	0.97		0.97

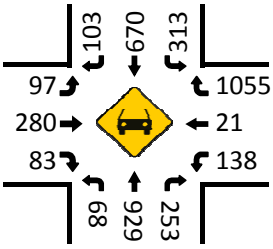
I-605/Hoxie Ave — WESTBOUND

PM	NOON	AM		
559	0	1075	1	
25	0	22	1.5	
252	0	140	1.5	
8	0	2	0	
983	0	905		
PM	NOON	AM		

Firestone Blvd — NORTHBOUND

PM	1219	20	132	844	148	PM
NOON	0	0	0	0	0	NOON
AM	926	7	73	964	268	AM
		0	1	2	1	

Cars (AM)



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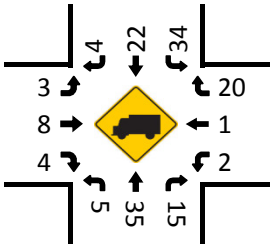

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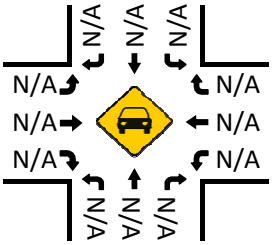

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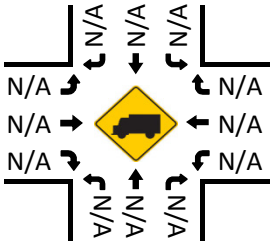
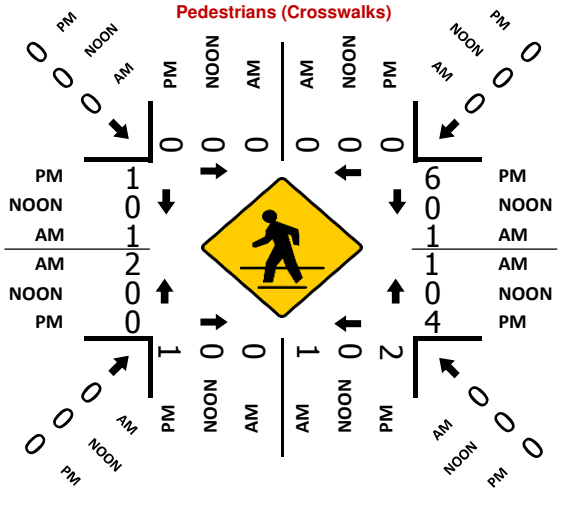


Pedestrians (Crosswalks)



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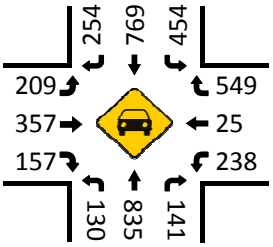

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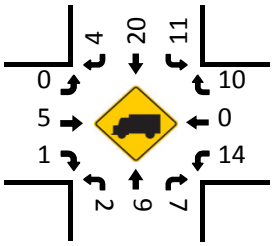


Prepared by National Data & Surveying Services

Firestone Blvd & Studebaker Rd

Peak Hour Turning Movement Count

ID: 19-05099-002
City: Norwalk

Day: Tuesday
Date: 02/26/2019

PEAK HOURS	COUNT PERIODS
07:30 AM - 08:30 AM	07:00 AM - 09:00 AM
NONE	NONE
04:30 PM - 05:30 PM	04:00 PM - 06:00 PM

Firestone Blvd

SOUTHBOUND

AM	136	507	207	6	1271	AM
NOON	0	0	0	0	0	NOON
PM	121	654	299	8	1102	PM
	1	2	1	0		

EASTBOUND (Studebaker Rd)

AM	NOON	PM	
452	0	481	
0	0	0	0
195	0	166	1
713	0	839	2
30	0	67	1
AM	NOON	PM	

WESTBOUND (Studebaker Rd)

PM	NOON	AM	
211	0	265	1
296	0	256	2
142	0	155	1
0	0	0	0
1342	0	1180	
PM	NOON	AM	

CONTROL: Signalized

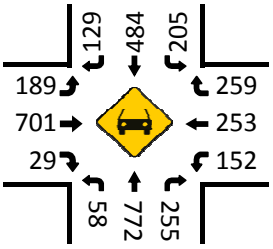
TEV	3618 AM	0 NOON	3814 PM
PHF	0.92		0.98

	0	1	2	1		
PM	889	26	64	717	204	PM
NOON	0	0	0	0	0	NOON
AM	715	23	60	805	260	AM

NORTHBOUND

Firestone Blvd

Cars (AM)



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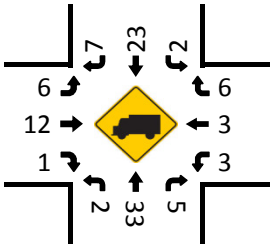

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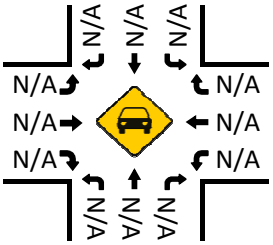

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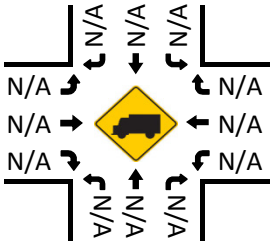

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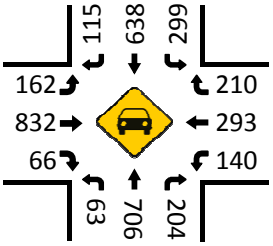
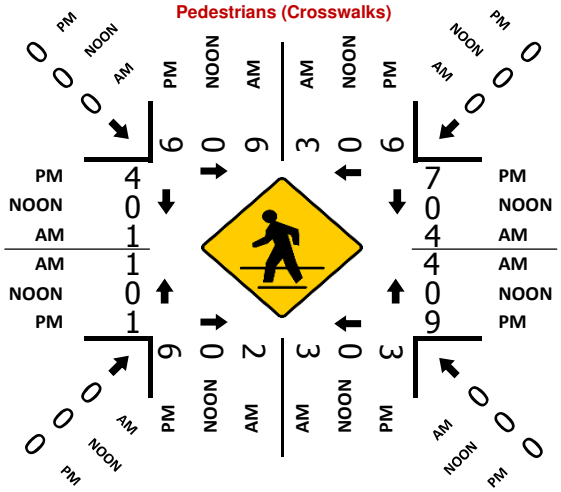


Pedestrians (Crosswalks)



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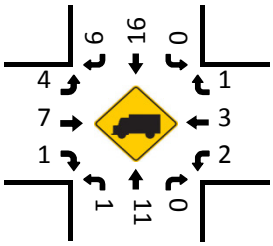


Prepared by National Data & Surveying Services

Firestone Blvd & Stater Bros Drwy

Peak Hour Turning Movement Count

ID: 19-05099-003
City: Norwalk

Day: Tuesday
Date: 02/26/2019

	PEAK HOURS	COUNT PERIODS
AM	07:30 AM - 08:30 AM	07:00 AM - 09:00 AM
NOON	NONE	NONE
PM	04:30 PM - 05:30 PM	04:00 PM - 06:00 PM

Firestone Blvd — SOUTHBOUND

	Right	Through	Left	U-Turn	Exit
AM	14	685	10	2	1095
NOON	0	0	0	0	0
PM	58	857	11	3	994
(red)	0	3	1	0	

Stater Bros Drwy — EASTBOUND

	AM	NOON	PM	(red)
Exit	29	0	101	
U-Turn	0	0	0	0
Left	11	0	70	0.5
Through	0	0	1	0.5
Right	7	0	50	1

Stater Bros Drwy — WESTBOUND

	(red)	PM	NOON	AM
Right	0	8	0	3
Through	1	0	0	0
Left	0	4	0	1
U-Turn	0	0	0	0
Exit		15	0	11

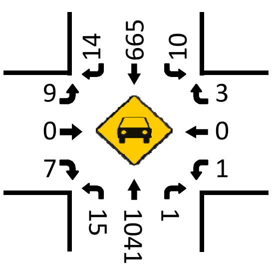
Firestone Blvd — NORTHBOUND

	Exit	U-Turn	Left	Through	Right
(red)		0	1	2	0
PM	916	5	43	913	3
NOON	0	0	0	0	0
AM	697	4	15	1079	1

CONTROL: Signalized

	AM	NOON	PM
TEV	1832	0	2026
PHF	0.94		0.96

Cars (AM)



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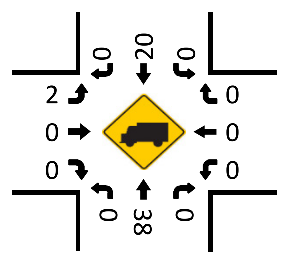

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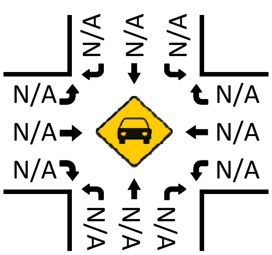

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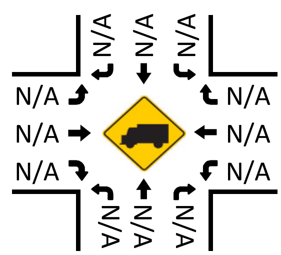
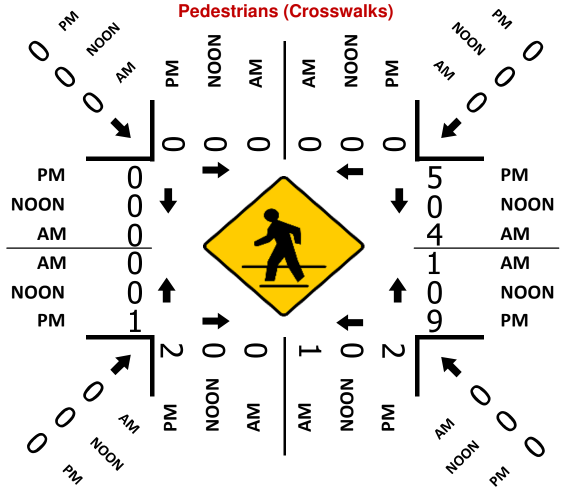


Pedestrians (Crosswalks)



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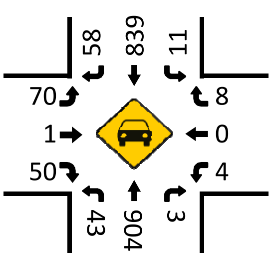

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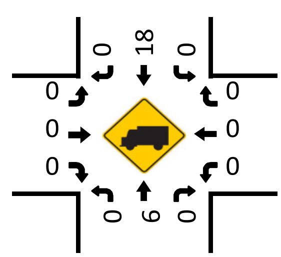


Prepared by National Data & Surveying Services

Firestone Blvd & Orr and Day Rd

Peak Hour Turning Movement Count

ID: 19-05099-004
City: Norwalk

Day: Tuesday
Date: 02/26/2019

PEAK HOURS	COUNT PERIODS
07:15 AM - 08:15 AM	07:00 AM - 09:00 AM
NONE	NONE
04:30 PM - 05:30 PM	04:00 PM - 06:00 PM

SOUTHBOUND (Firestone Blvd)

AM	13	638	52	0	1099	AM
NOON	0	0	0	0	0	NOON
PM	27	790	134	0	1009	PM

EASTBOUND (Orr and Day Rd)

AM	NOON	PM	
125	0	103	⇦
0	0	0	0
65	0	48	1
79	0	177	1
5	0	12	0
AM	NOON	PM	

WESTBOUND (Orr and Day Rd)

PM	NOON	AM	
99	0	132	1
75	0	112	1
92	0	110	1
0	0	0	0
344	0	150	⇨
PM	NOON	AM	

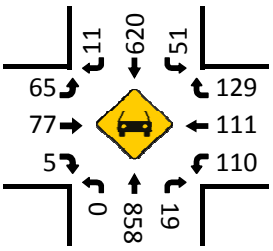
NORTHBOUND (Firestone Blvd)

PM	894	0	1	862	33	PM
NOON	0	0	0	0	0	NOON
AM	753	0	0	902	19	AM

0	3	1	0
0	0	2	0

CONTROL			
Signalized			
TEV	2127 AM	0 NOON	2350 PM
PHF	0.96		0.97

Cars (AM)



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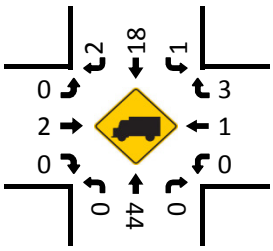

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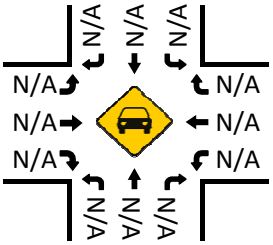

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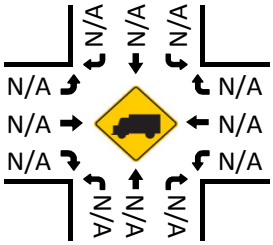
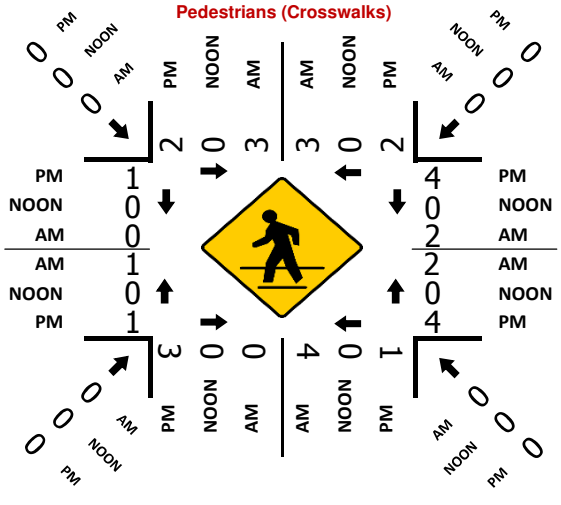


Pedestrians (Crosswalks)



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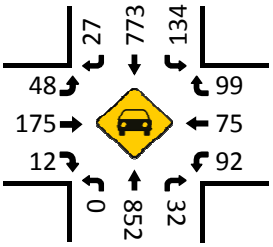

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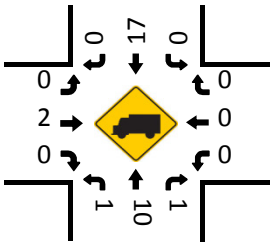


Prepared by National Data & Surveying Services

Firestone Blvd & Orr and Day Rd

Peak Hour Turning Movement Count

ID: 19-05099-006
City: Norwalk

Day: Tuesday
Date: 02/26/2019

PEAK HOURS	COUNT PERIODS
07:45 AM - 08:45 AM	07:00 AM - 09:00 AM
NONE	NONE
04:30 PM - 05:30 PM	04:00 PM - 06:00 PM

Firestone Blvd — SOUTHBOUND

AM	3	719	0	0	935	AM
NOON	0	0	0	0	0	NOON
PM	1	883	0	0	866	PM

Orr and Day Rd — EASTBOUND

AM	NOON	PM	
3	0	1	
0	0	0	0
0	0	0	0
0	0	0	0
8	0	7	0
AM	NOON	PM	

Orr and Day Rd — WESTBOUND

PM	NOON	AM	
7	0	4	0
0	0	0	1
0	0	0	0
0	0	0	0
85	0	57	
PM	NOON	AM	

CONTROL: 1-Way Stop (WB)

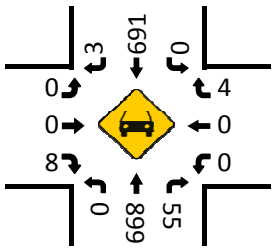
TEV	1722 AM	0 NOON	1842 PM
PHF	0.93		0.97

PM	890	0	0	859	85	PM
NOON	0	0	0	0	0	NOON
AM	727	0	0	931	57	AM

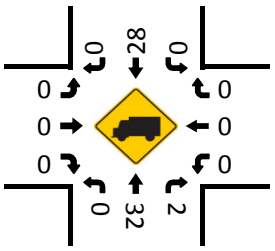
Firestone Blvd — NORTHBOUND

0	5	0	0	
0	0	2	0	

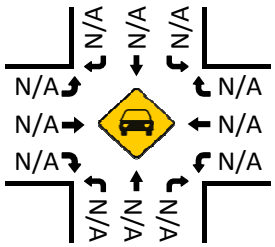
Cars (AM)



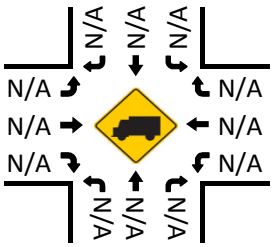
HT (AM)



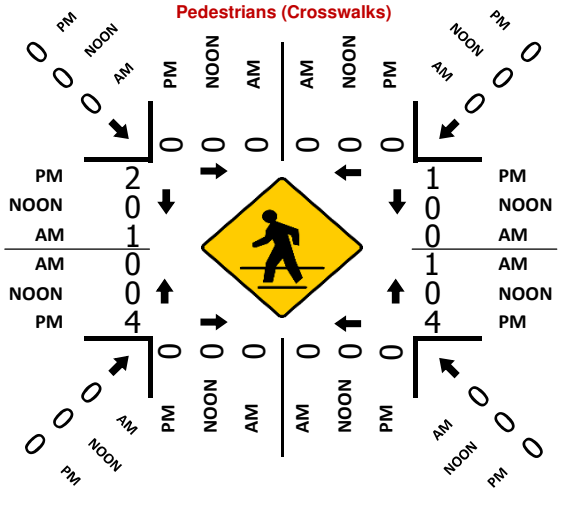
Cars (NOON)



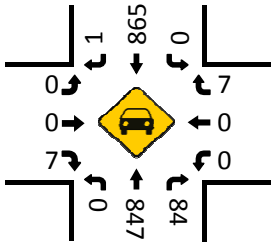
HT (NOON)



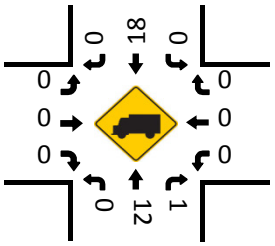
Pedestrians (Crosswalks)



Cars (PM)



HT (PM)



Prepared by National Data & Surveying Services

Firestone Blvd & Imperial Hwy

Peak Hour Turning Movement Count

ID: 19-05099-005
City: Norwalk

Day: Tuesday
Date: 02/26/2019

PEAK HOURS

AM	07:30 AM - 08:30 AM
NOON	NONE
PM	04:30 PM - 05:30 PM

COUNT PERIODS

AM	07:00 AM - 09:00 AM
NOON	NONE
PM	04:00 PM - 06:00 PM

Firestone Blvd — SOUTHBOUND

AM	1	514	230	0	948	AM
NOON	0	0	0	0	0	NOON
PM	3	560	332	0	942	PM

Imperial Hwy — EASTBOUND

AM	NOON	PM	
1493	0	1506	⇦
0	0	0	0 ↶
0	0	0	0 ↱
1011	0	1057	3 →
329	0	412	0 ↴
AM	NOON	PM	

CONTROL

Signalized

TEV	4539 AM	0 NOON	4844 PM
PHF	0.99		0.96

Imperial Hwy — WESTBOUND

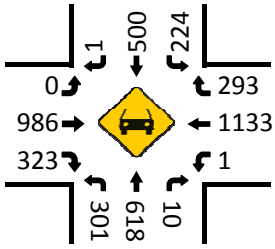
PM	NOON	AM	
302	0	305	1 ↰
1135	0	1172	3 ←
7	0	1	1 ↰
0	0	0	0 ↶
1417	0	1254	⇨
PM	NOON	AM	

Firestone Blvd — NORTHBOUND

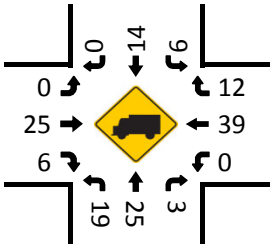
PM	979	0	368	640	28	PM
NOON	0	0	0	0	0	NOON
AM	844	0	320	643	13	AM

0 2 2 0 ↰ ↰ ↑ ↱

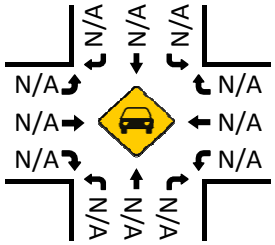
Cars (AM)



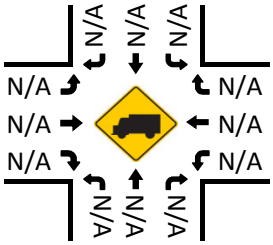
HT (AM)



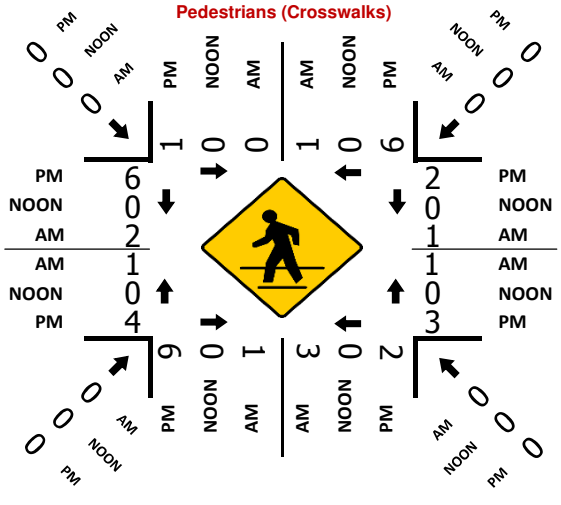
Cars (NOON)



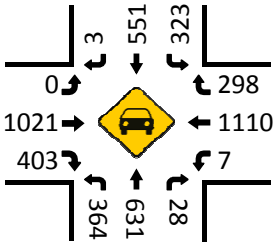
HT (NOON)



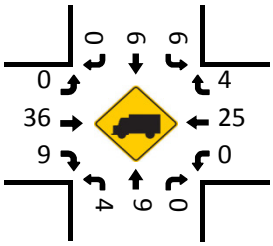
Pedestrians (Crosswalks)



Cars (PM)



HT (PM)



Prepared by National Data & Surveying Services

Orr and Day Rd & Imperial Hwy

Peak Hour Turning Movement Count

ID: 19-05099-007
City: Norwalk

Day: Tuesday
Date: 02/26/2019

PEAK HOURS	
AM	07:00 AM - 08:00 AM
NOON	NONE
PM	04:30 PM - 05:30 PM

COUNT PERIODS	
AM	07:00 AM - 09:00 AM
NOON	NONE
PM	04:00 PM - 06:00 PM

Orr and Day Rd — SOUTHBOUND

AM	9	0	0	0	22	AM
NOON	0	0	0	0	0	NOON
PM	13	0	0	0	25	PM

EASTBOUND — Imperial Hwy

AM	NOON	PM	
1608	0	1549	⇦
0	0	0	↶ 0
0	0	0	↱ 0
1373	0	1414	→ 3
2	0	7	↴ 0
AM	NOON	PM	

WESTBOUND — Imperial Hwy

PM	NOON	AM	
23	0	19	0 ↰
1482	0	1503	3 ←
0	0	0	0 ↰
0	0	0	0 ↶
1469	0	1428	⇨
PM	NOON	AM	

CONTROL: Signalized

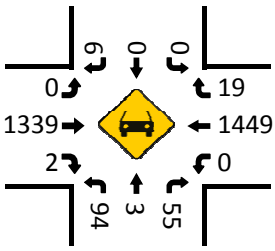
TEV	3060	0	3050
	AM	NOON	PM
PHF	0.97		0.93

0 0 0 0 — 0 1 0 1

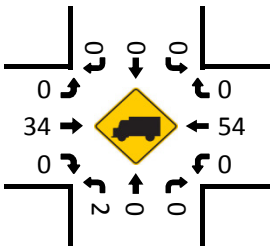
Orr and Day Rd — NORTHBOUND

PM	7	0	54	2	55	PM
NOON	0	0	0	0	0	NOON
AM	2	0	96	3	55	AM

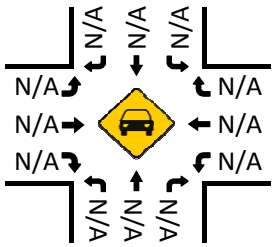
Cars (AM)



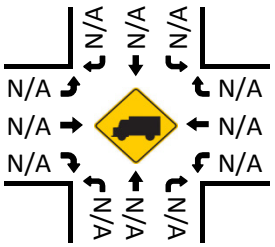
HT (AM)



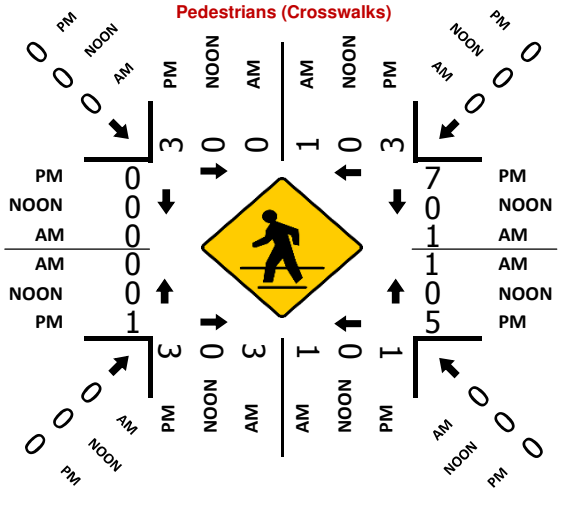
Cars (NOON)



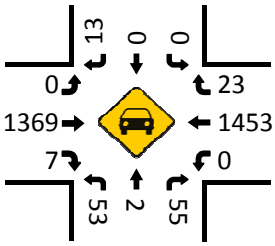
HT (NOON)



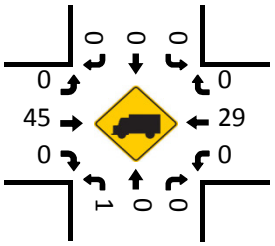
Pedestrians (Crosswalks)



Cars (PM)



HT (PM)



Prepared by NDS/ATD

DAILY TOTALS	NB	SB	EB	WB	To
	12,327	11,311	0	0	23,(

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TO
00:00	30		14		0	0	44		12:00	166		183		0	0	349
00:15	14		18		0	0	32		12:15	157		182		0	0	339
00:30	15		19		0	0	34		12:30	196		189		0	0	385
00:45	13	72	11	62	0	0	24	134	12:45	148	667	177	731	0	0	325
01:00	10		6		0	0	16		13:00	165		192		0	0	357
01:15	13		17		0	0	30		13:15	148		163		0	0	311
01:30	11		12		0	0	23		13:30	175		185		0	0	360
01:45	16	50	11	46	0	0	27	96	13:45	157	645	198	738	0	0	355
02:00	13		9		0	0	22		14:00	167		160		0	0	327
02:15	10		9		0	0	19		14:15	180		202		0	0	382
02:30	8		8		0	0	16		14:30	175		208		0	0	383
02:45	15	46	9	35	0	0	24	81	14:45	231	753	228	798	0	0	459
03:00	8		5		0	0	13		15:00	202		199		0	0	401
03:15	7		11		0	0	18		15:15	221		230		0	0	451
03:30	11		16		0	0	27		15:30	232		184		0	0	416
03:45	27	53	13	45	0	0	40	98	15:45	189	844	180	793	0	0	369
04:00	15		19		0	0	34		16:00	194		200		0	0	394
04:15	26		31		0	0	57		16:15	212		200		0	0	412
04:30	36		52		0	0	88		16:30	230		240		0	0	470
04:45	57	134	39	141	0	0	96	275	16:45	232	868	244	884	0	0	476
05:00	65		53		0	0	118		17:00	271		226		0	0	497
05:15	59		57		0	0	116		17:15	237		218		0	0	455
05:30	82		87		0	0	169		17:30	229		176		0	0	405
05:45	108	314	95	292	0	0	203	606	17:45	228	965	193	813	0	0	421
06:00	139		96		0	0	235		18:00	225		231		0	0	456
06:15	144		104		0	0	248		18:15	183		194		0	0	377
06:30	188		117		0	0	305		18:30	168		146		0	0	314
06:45	216	687	114	431	0	0	330	1118	18:45	158	734	174	745	0	0	332
07:00	191		136		0	0	327		19:00	166		162		0	0	328
07:15	251		153		0	0	404		19:15	142		166		0	0	308
07:30	275		185		0	0	460		19:30	139		135		0	0	274
07:45	286	1003	178	652	0	0	464	1655	19:45	110	557	133	596	0	0	243
08:00	250		180		0	0	430		20:00	118		122		0	0	240
08:15	262		181		0	0	443		20:15	105		134		0	0	239
08:30	273		147		0	0	420		20:30	104		107		0	0	211
08:45	249	1034	148	656	0	0	397	1690	20:45	107	434	103	466	0	0	210
09:00	164		132		0	0	296		21:00	85		92		0	0	177
09:15	156		128		0	0	284		21:15	76		69		0	0	145
09:30	174		148		0	0	322		21:30	78		95		0	0	173
09:45	176	670	129	537	0	0	305	1207	21:45	63	302	68	324	0	0	131
10:00	134		135		0	0	269		22:00	47		66		0	0	113
10:15	166		126		0	0	292		22:15	44		61		0	0	105
10:30	143		141		0	0	284		22:30	56		45		0	0	101
10:45	152	595	151	553	0	0	303	1148	22:45	42	189	36	208	0	0	78
11:00	166		148		0	0	314		23:00	43		24		0	0	67
11:15	141		148		0	0	289		23:15	26		31		0	0	57
11:30	135		188		0	0	323		23:30	27		21		0	0	48
11:45	153	595	174	658	0	0	327	1253	23:45	20	116	31	107	0	0	51
TOTALS		5253		4108				9361	TOTALS		7074		7203			
SPLIT %		56.1%		43.9%				39.6%	SPLIT %		49.5%		50.5%			

DAILY TOTALS	NB	SB	EB	WB	To
	12,327	11,311	0	0	23,(

AM Peak Hour	07:30	11:45			07:30	PM Peak Hour	16:30	16:30		
AM Pk Volume	1073	728			1797	PM Pk Volume	970	928		
Pk Hr Factor	0.938	0.963			0.968	Pk Hr Factor	0.895	0.951		
7 - 9 Volume	2037	1308	0	0	3345	4 - 6 Volume	1833	1697	0	0
7 - 9 Peak Hour	07:30	07:30			07:30	4 - 6 Peak Hour	16:30	16:30		
7 - 9 Pk Volume	1073	724	0	0	1797	4 - 6 Pk Volume	970	928	0	0
Pk Hr Factor	0.938	0.978	0.000	0.000	0.968	Pk Hr Factor	0.895	0.951	0.000	0.000

Prepared by National Data & Surveying Services

CLASSIFICATION

Firestone Blvd Bet. Elmcroft Ave & Orr and Day Rd

Day: Tuesday
Date: 2/26/2019

City: Norwalk
Project #: CA19_5100_001n

North Bound

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	1	63	6	0	1	1	0	0	0	0	0	0	0	72
01:00	0	43	7	0	0	0	0	0	0	0	0	0	0	50
02:00	0	40	5	0	1	0	0	0	0	0	0	0	0	46
03:00	0	45	7	0	0	0	0	1	0	0	0	0	0	53
04:00	0	114	18	0	2	0	0	0	0	0	0	0	0	134
05:00	0	247	57	0	7	1	0	1	1	0	0	0	0	314
06:00	0	562	99	0	23	0	0	2	1	0	0	0	0	687
07:00	0	835	119	6	29	2	5	0	7	0	0	0	0	1003
08:00	1	864	133	3	22	8	1	0	2	0	0	0	0	1034
09:00	0	559	85	0	20	3	1	0	2	0	0	0	0	670
10:00	0	496	81	0	18	0	0	0	0	0	0	0	0	595
11:00	0	507	67	1	18	0	2	0	0	0	0	0	0	595
12:00 PM	0	567	82	1	13	2	0	0	2	0	0	0	0	667
13:00	1	543	86	0	13	1	0	0	1	0	0	0	0	645
14:00	0	650	85	1	15	2	0	0	0	0	0	0	0	753
15:00	1	711	111	0	19	0	0	0	2	0	0	0	0	844
16:00	0	748	107	0	11	1	0	1	0	0	0	0	0	868
17:00	2	834	117	1	11	0	0	0	0	0	0	0	0	965
18:00	0	635	90	0	8	0	0	1	0	0	0	0	0	734
19:00	0	491	58	0	7	0	0	1	0	0	0	0	0	557
20:00	0	371	53	0	10	0	0	0	0	0	0	0	0	434
21:00	0	260	33	0	9	0	0	0	0	0	0	0	0	302
22:00	0	157	25	1	6	0	0	0	0	0	0	0	0	189
23:00	0	103	10	0	2	0	0	0	1	0	0	0	0	116
Totals	**6**	**10445**	**1541**	**14**	**265**	**21**	**9**	**7**	**19**					**12327**
% of Totals	0%	85%	13%	0%	2%	0%	0%	0%	0%					100%

AM Volumes	2	4375	684	10	141	15	9	4	13	0	0	0	0	5253
% AM	0%	35%	6%	0%	1%	0%	0%	0%	0%					43%
AM Peak Hour		08:00	08:00	07:00	07:00	08:00	07:00	06:00	07:00					08:00
Volume	1	864	133	6	29	8	5	2	7					1034
PM Volumes	4	6070	857	4	124	6	0	3	6	0	0	0	0	7074
% PM	0%	49%	7%	0%	1%	0%		0%	0%					57%
PM Peak Hour	17:00	17:00	17:00	12:00	15:00	12:00		16:00	12:00					17:00
Volume	2	834	117	1	19	2		1	2					965

Directional Peak Periods	**AM 7-9**			**NOON 12-2**			**PM 4-6**			**Off Peak Volumes**		
All Classes	Volume	⟷	%	Volume	⟷	%	Volume	⟷	%	Volume	⟷	%
	2037		17%	1312		11%	1833		15%	7145		58%

Classification Definitions

1 Motorcycles	**4** Buses	**7** > =4-Axle Single Units	**10** >=6-Axle Single Trailers	**13** >=7-Axle Multi-Trailers
2 Passenger Cars	**5** 2-Axle, 6-Tire Single Units	**8** <=4-Axle Single Trailers	**11** <=5-Axle Multi-Trailers	
3 2-Axle, 4-Tire Single Units	**6** 3-Axle Single Units	**9** 5-Axle Single Trailers	**12** 6-Axle Multi-Trailers	

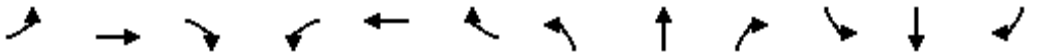
Appendix C

LOS Worksheets – Existing 2019 Conditions

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	347	692	107	80	964	268	100	288	87	140	22	1075
Future Volume (vph)	347	692	107	80	964	268	100	288	87	140	22	1075
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	11	12	12	11	12	12
Total Lost time (s)	4.7	5.4		4.7	5.4	5.4	5.6	5.6		5.4	5.4	4.7
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00	1.00	0.95		0.91	0.91	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.99	1.00	1.00		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	0.96	1.00
Satd. Flow (prot)	3183	3423		1703	3471	1503	1694	3357		1572	3267	1574
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	0.96	1.00
Satd. Flow (perm)	3183	3423		1703	3471	1503	1694	3357		1572	3267	1574
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	358	713	110	82	994	276	103	297	90	144	23	1108
RTOR Reduction (vph)	0	10	0	0	0	0	0	26	0	0	0	68
Lane Group Flow (vph)	358	813	0	82	994	276	103	361	0	72	95	1040
Confl. Peds. (#/hr)	2		3	3		2			1	1		
Confl. Bikes (#/hr)												7
Heavy Vehicles (%)	10%	3%	4%	6%	4%	6%	3%	3%	5%	1%	5%	2%
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA		Split	NA	pm+ov
Protected Phases	5	2		1	6		3	3		4	4	5
Permitted Phases						6						4
Actuated Green, G (s)	21.0	57.5		8.7	45.2	45.2	12.0	12.0		10.7	10.7	31.7
Effective Green, g (s)	21.0	57.5		8.7	45.2	45.2	12.0	12.0		10.7	10.7	31.7
Actuated g/C Ratio	0.19	0.52		0.08	0.41	0.41	0.11	0.11		0.10	0.10	0.29
Clearance Time (s)	4.7	5.4		4.7	5.4	5.4	5.6	5.6		5.4	5.4	4.7
Vehicle Extension (s)	5.0	5.0		3.0	5.0	5.0	2.5	2.5		2.5	2.5	5.0
Lane Grp Cap (vph)	607	1789		134	1426	617	184	366		152	317	453
v/s Ratio Prot	0.11	0.24		0.05	c0.29		0.06	c0.11		0.05	0.03	c0.44
v/s Ratio Perm						0.18						0.22
v/c Ratio	0.59	0.45		0.61	0.70	0.45	0.56	0.99		0.47	0.30	2.30
Uniform Delay, d1	40.6	16.4		49.0	26.7	23.4	46.5	48.9		47.0	46.2	39.1
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	2.3	0.8		8.0	2.8	2.3	2.9	43.1		1.7	0.4	589.7
Delay (s)	42.8	17.3		57.0	29.6	25.7	49.4	92.0		48.7	46.6	628.9
Level of Service	D	B		E	C	C	D	F		D	D	F
Approach Delay (s)		25.0			30.5			83.1			552.7	
Approach LOS		C			C			F			F	

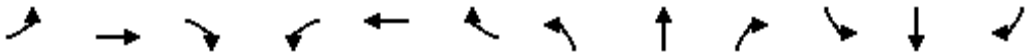
Intersection Summary			
HCM 2000 Control Delay	189.9	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.30		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	21.1
Intersection Capacity Utilization	122.6%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	213	507	136	83	805	260	195	713	30	155	256	265
Future Volume (vph)	213	507	136	83	805	260	195	713	30	155	256	265
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	10	12	12
Total Lost time (s)	5.0	6.5	5.0	5.0	6.5	5.0	5.0	6.5	6.5	5.0	6.5	6.5
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1805	3266	1522	1770	3298	1559	1752	3362	1540	1652	3396	1538
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1805	3266	1522	1770	3298	1559	1752	3362	1540	1652	3396	1538
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	232	551	148	90	875	283	212	775	33	168	278	288
RTOR Reduction (vph)	0	0	68	0	0	46	0	0	24	0	0	212
Lane Group Flow (vph)	232	551	80	90	875	237	212	775	9	168	278	76
Confl. Peds. (#/hr)	8		2	2		8	12		5	5		12
Confl. Bikes (#/hr)			2									5
Heavy Vehicles (%)	0%	5%	5%	2%	4%	2%	3%	2%	3%	2%	1%	2%
Parking (#/hr)		0			0			0			0	
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6	3	5	2	7	3	8		7	4	
Permitted Phases			6			2			8			4
Actuated Green, G (s)	14.0	38.8	55.4	9.9	34.7	48.8	16.6	34.2	34.2	14.1	31.7	31.7
Effective Green, g (s)	14.0	38.8	55.4	9.9	34.7	48.8	16.6	34.2	34.2	14.1	31.7	31.7
Actuated g/C Ratio	0.12	0.32	0.46	0.08	0.29	0.41	0.14	0.29	0.29	0.12	0.26	0.26
Clearance Time (s)	5.0	6.5	5.0	5.0	6.5	5.0	5.0	6.5	6.5	5.0	6.5	6.5
Vehicle Extension (s)	1.5	4.0	1.5	1.5	4.0	1.5	1.5	4.0	4.0	1.5	4.0	4.0
Lane Grp Cap (vph)	210	1056	702	146	953	633	242	958	438	194	897	406
v/s Ratio Prot	c0.13	c0.17	0.02	0.05	c0.27	0.04	c0.12	c0.23		0.10	0.08	
v/s Ratio Perm			0.04			0.11			0.01			0.05
v/c Ratio	1.10	0.52	0.11	0.62	0.92	0.37	0.88	0.81	0.02	0.87	0.31	0.19
Uniform Delay, d1	53.0	33.0	18.4	53.2	41.3	24.9	50.7	39.9	30.9	52.0	35.4	34.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	93.0	1.8	0.0	5.3	15.0	0.1	27.1	5.4	0.0	30.0	0.3	0.3
Delay (s)	146.0	34.9	18.4	58.6	56.3	25.1	77.8	45.3	30.9	82.0	35.7	34.5
Level of Service	F	C	B	E	E	C	E	D	C	F	D	C
Approach Delay (s)		59.9			49.4			51.6			45.8	
Approach LOS		E			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	51.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	23.0
Intersection Capacity Utilization	85.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	685	14	15	1079	1	11	0	7	1	0	3
Future Volume (vph)	10	685	14	15	1079	1	11	0	7	1	0	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	12	12	12	11	11	12	13	12
Total Lost time (s)	5.0	6.0		5.0	6.0			5.0	5.0		5.0	
Lane Util. Factor	1.00	0.91		1.00	0.95			1.00	1.00		1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	0.99		0.96	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Frt	1.00	1.00		1.00	1.00			1.00	0.85		0.90	
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00		0.99	
Satd. Flow (prot)	1742	4856		1745	3471			1479	1541		1672	
Flt Permitted	0.95	1.00		0.95	1.00			1.00	1.00		1.00	
Satd. Flow (perm)	1742	4856		1745	3471			1556	1541		1693	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	11	729	15	16	1148	1	12	0	7	1	0	3
RTOR Reduction (vph)	0	2	0	0	0	0	0	0	7	0	4	0
Lane Group Flow (vph)	11	742	0	16	1149	0	0	12	0	0	0	0
Confl. Peds. (#/hr)	5					5			1			1
Confl. Bikes (#/hr)												6
Heavy Vehicles (%)	0%	3%	0%	0%	4%	0%	18%	0%	0%	0%	0%	0%
Turn Type	Prot	NA		Prot	NA		Perm	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8		8	4		
Actuated Green, G (s)	0.8	30.5		0.9	30.6			1.9	1.9		1.9	
Effective Green, g (s)	0.8	30.5		0.9	30.6			1.9	1.9		1.9	
Actuated g/C Ratio	0.02	0.62		0.02	0.62			0.04	0.04		0.04	
Clearance Time (s)	5.0	6.0		5.0	6.0			5.0	5.0		5.0	
Vehicle Extension (s)	2.0	2.5		2.0	2.5			2.0	2.0		2.0	
Lane Grp Cap (vph)	28	3004		31	2154			59	59		65	
v/s Ratio Prot	0.01	0.15		c0.01	c0.33							
v/s Ratio Perm								c0.01	0.00		0.00	
v/c Ratio	0.39	0.25		0.52	0.53			0.20	0.00		0.00	
Uniform Delay, d1	24.0	4.2		24.0	5.3			23.0	22.8		22.8	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	3.3	0.0		5.9	0.2			0.6	0.0		0.0	
Delay (s)	27.3	4.3		29.9	5.5			23.6	22.8		22.8	
Level of Service	C	A		C	A			C	C		C	
Approach Delay (s)		4.6			5.8			23.3			22.8	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	5.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	49.3	Sum of lost time (s)	16.0
Intersection Capacity Utilization	44.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	52	638	13	0	902	19	65	79	5	110	112	132
Future Volume (veh/h)	52	638	13	0	902	19	65	79	5	110	112	132
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	0.99		0.99	0.99		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1840	1900	0	1811	1900	1900	1848	1900	1900	1900	1863
Adj Flow Rate, veh/h	54	665	14	0	940	20	68	82	5	115	117	138
Adj No. of Lanes	1	3	0	0	2	0	1	1	0	1	1	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	3	3	0	5	5	0	3	3	0	0	2
Cap, veh/h	74	3885	82	0	2406	51	163	281	17	200	310	250
Arrive On Green	0.04	0.77	0.77	0.00	0.70	0.70	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	1774	5061	106	0	3536	73	1135	1723	105	1320	1900	1534
Grp Volume(v), veh/h	54	440	239	0	469	491	68	0	87	115	117	138
Grp Sat Flow(s),veh/h/ln	1774	1675	1819	0	1721	1798	1135	0	1828	1320	1900	1534
Q Serve(g_s), s	5.4	6.3	6.3	0.0	20.4	20.4	10.2	0.0	7.5	15.1	9.9	14.9
Cycle Q Clear(g_c), s	5.4	6.3	6.3	0.0	20.4	20.4	20.1	0.0	7.5	22.6	9.9	14.9
Prop In Lane	1.00		0.06	0.00		0.04	1.00		0.06	1.00		1.00
Lane Grp Cap(c), veh/h	74	2571	1396	0	1202	1256	163	0	298	200	310	250
V/C Ratio(X)	0.73	0.17	0.17	0.00	0.39	0.39	0.42	0.00	0.29	0.58	0.38	0.55
Avail Cap(c_a), veh/h	197	2571	1396	0	1202	1256	230	0	406	278	422	341
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.99	0.99	0.99	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	85.3	5.6	5.6	0.0	11.3	11.3	76.2	0.0	66.2	76.2	67.2	69.3
Incr Delay (d2), s/veh	5.1	0.1	0.3	0.0	1.0	0.9	1.7	0.0	0.5	2.6	0.8	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	3.0	3.3	0.0	10.0	10.4	3.3	0.0	3.9	5.7	5.3	6.4
LnGrp Delay(d),s/veh	90.4	5.7	5.9	0.0	12.2	12.2	77.9	0.0	66.7	78.8	68.0	71.2
LnGrp LOS	F	A	A		B	B	E		E	E	E	E
Approach Vol, veh/h		733			960			155			370	
Approach Delay, s/veh		12.0			12.2			71.6			72.5	
Approach LOS		B			B			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		8
Phs Duration (G+Y+Rc), s	12.5	132.2		35.3		144.7		35.3
Change Period (Y+Rc), s	5.0	6.5		6.0		6.5		6.0
Max Green Setting (Gmax), s	20.0	102.5		40.0		127.5		40.0
Max Q Clear Time (g_c+I1), s	7.4	22.4		22.1		8.3		24.6
Green Ext Time (p_c), s	0.0	30.4		2.1		33.1		2.0

Intersection Summary	
HCM 2010 Ctrl Delay	26.4
HCM 2010 LOS	C

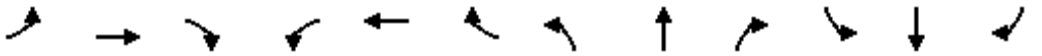
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	0	1011	329	1	1172	305	230	514	1	320	643	13
Future Volume (vph)	0	1011	329	1	1172	305	230	514	1	320	643	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.5		6.5	6.5	6.5	6.5	6.5		6.5	6.5	
Lane Util. Factor		0.91		1.00	0.91	1.00	0.97	0.91		0.97	0.95	
Frpb, ped/bikes		0.99		1.00	1.00	0.98	1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt		0.96		1.00	1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected		1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		4866		1805	5036	1525	3400	5035		3303	3447	
Flt Permitted		1.00		0.07	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		4866		135	5036	1525	3400	5035		3303	3447	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	0	1021	332	1	1184	308	232	519	1	323	649	13
RTOR Reduction (vph)	0	32	0	0	0	85	0	0	0	0	1	0
Lane Group Flow (vph)	0	1321	0	1	1184	223	232	520	0	323	661	0
Confl. Peds. (#/hr)	1		4	4		1	2		3	3		2
Confl. Bikes (#/hr)						3			4			8
Heavy Vehicles (%)	0%	2%	2%	0%	3%	4%	3%	3%	0%	6%	4%	23%
Turn Type		NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			4		1	6		5	2	
Permitted Phases				4		4						
Actuated Green, G (s)		56.5		56.5	56.5	56.5	18.6	68.1		19.9	69.4	
Effective Green, g (s)		56.5		56.5	56.5	56.5	18.6	68.1		19.9	69.4	
Actuated g/C Ratio		0.31		0.31	0.31	0.31	0.10	0.38		0.11	0.39	
Clearance Time (s)		6.5		6.5	6.5	6.5	6.5	6.5		6.5	6.5	
Vehicle Extension (s)		4.5		4.5	4.5	4.5	1.5	4.5		1.5	4.5	
Lane Grp Cap (vph)		1527		42	1580	478	351	1904		365	1329	
v/s Ratio Prot		c0.27			0.24		c0.07	0.10		c0.10	c0.19	
v/s Ratio Perm				0.01		0.15						
v/c Ratio		0.86		0.02	0.75	0.47	0.66	0.27		0.88	0.50	
Uniform Delay, d1		58.2		42.7	55.4	49.6	77.7	38.8		78.9	42.0	
Progression Factor		0.05		1.00	1.00	1.00	0.99	0.95		1.00	1.00	
Incremental Delay, d2		2.8		0.4	2.3	1.2	3.6	0.4		21.1	1.3	
Delay (s)		5.6		43.1	57.7	50.9	80.4	37.2		100.0	43.4	
Level of Service		A		D	E	D	F	D		F	D	
Approach Delay (s)		5.6			56.2			50.5			62.0	
Approach LOS		A			E			D			E	

Intersection Summary			
HCM 2000 Control Delay	41.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	180.0	Sum of lost time (s)	23.5
Intersection Capacity Utilization	102.4%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	466	789	258	152	844	148	209	362	158	252	25	559
Future Volume (vph)	466	789	258	152	844	148	209	362	158	252	25	559
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	11	12	12	11	12	12
Total Lost time (s)	4.7	5.4		4.7	5.4	5.4	5.6	5.6		5.4	5.4	4.7
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00	1.00	0.95		0.91	0.91	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.99	1.00	0.99		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.96		1.00	1.00	0.85	1.00	0.95		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	0.96	1.00
Satd. Flow (prot)	3273	3370		1752	3471	1448	1728	3351		1588	3298	1545
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	0.96	1.00
Satd. Flow (perm)	3273	3370		1752	3471	1448	1728	3351		1588	3298	1545
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	480	813	266	157	870	153	215	373	163	260	26	576
RTOR Reduction (vph)	0	28	0	0	0	0	0	45	0	0	0	54
Lane Group Flow (vph)	480	1051	0	157	870	153	215	491	0	130	156	522
Confl. Peds. (#/hr)	2		3	3		2			1	1		
Confl. Bikes (#/hr)									8			4
Heavy Vehicles (%)	7%	3%	2%	3%	4%	10%	1%	2%	2%	0%	4%	4%
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA		Split	NA	pm+ov
Protected Phases	5	2		1	6		3	3		4	4	5
Permitted Phases						6						4
Actuated Green, G (s)	22.0	49.7		11.7	39.4	39.4	15.0	15.0		12.5	12.5	34.5
Effective Green, g (s)	22.0	49.7		11.7	39.4	39.4	15.0	15.0		12.5	12.5	34.5
Actuated g/C Ratio	0.20	0.45		0.11	0.36	0.36	0.14	0.14		0.11	0.11	0.31
Clearance Time (s)	4.7	5.4		4.7	5.4	5.4	5.6	5.6		5.4	5.4	4.7
Vehicle Extension (s)	5.0	5.0		3.0	5.0	5.0	2.5	2.5		2.5	2.5	5.0
Lane Grp Cap (vph)	654	1522		186	1243	518	235	456		180	374	484
v/s Ratio Prot	0.15	c0.31		0.09	0.25		0.12	c0.15		0.08	0.05	c0.22
v/s Ratio Perm						0.11						0.12
v/c Ratio	0.73	0.69		0.84	0.70	0.30	0.91	1.08		0.72	0.42	1.08
Uniform Delay, d1	41.3	24.0		48.3	30.2	25.3	46.9	47.5		47.1	45.4	37.8
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	5.2	2.6		27.9	3.3	1.4	36.2	64.4		12.6	0.5	63.5
Delay (s)	46.4	26.6		76.1	33.5	26.8	83.1	111.9		59.6	45.9	101.3
Level of Service	D	C		E	C	C	F	F		E	D	F
Approach Delay (s)		32.7			38.3			103.6			85.0	
Approach LOS		C			D			F			F	

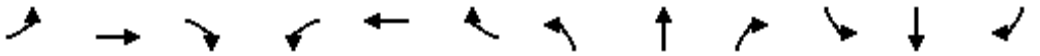
Intersection Summary			
HCM 2000 Control Delay	56.8	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	21.1
Intersection Capacity Utilization	94.8%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	307	654	121	90	717	204	166	839	67	142	296	211
Future Volume (vph)	307	654	121	90	717	204	166	839	67	142	296	211
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	10	12	12
Total Lost time (s)	5.0	6.5	5.0	5.0	6.5	5.0	5.0	6.5	6.5	5.0	6.5	6.5
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3362	1562	1770	3362	1546	1770	3362	1546	1652	3396	1527
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	3362	1562	1770	3362	1546	1770	3362	1546	1652	3396	1527
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	313	667	123	92	732	208	169	856	68	145	302	215
RTOR Reduction (vph)	0	0	47	0	0	46	0	0	48	0	0	153
Lane Group Flow (vph)	313	667	76	92	732	162	169	856	20	145	302	62
Confl. Peds. (#/hr)	16		5	5		16	12		9	9		12
Confl. Bikes (#/hr)			2			4			2			2
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	1%	3%
Parking (#/hr)		0			0			0			0	
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6	3	5	2	7	3	8		7	4	
Permitted Phases			6			2			8			4
Actuated Green, G (s)	14.0	38.3	52.4	10.0	34.3	47.7	14.1	35.3	35.3	13.4	34.6	34.6
Effective Green, g (s)	14.0	38.3	52.4	10.0	34.3	47.7	14.1	35.3	35.3	13.4	34.6	34.6
Actuated g/C Ratio	0.12	0.32	0.44	0.08	0.29	0.40	0.12	0.29	0.29	0.11	0.29	0.29
Clearance Time (s)	5.0	6.5	5.0	5.0	6.5	5.0	5.0	6.5	6.5	5.0	6.5	6.5
Vehicle Extension (s)	1.5	4.0	1.5	1.5	4.0	1.5	1.5	4.0	4.0	1.5	4.0	4.0
Lane Grp Cap (vph)	206	1073	682	147	960	614	207	988	454	184	979	440
v/s Ratio Prot	c0.18	c0.20	0.01	0.05	c0.22	0.03	c0.10	c0.25		0.09	0.09	
v/s Ratio Perm			0.04			0.08			0.01			0.04
v/c Ratio	1.52	0.62	0.11	0.63	0.76	0.26	0.82	0.87	0.04	0.79	0.31	0.14
Uniform Delay, d1	53.0	34.7	20.0	53.2	39.1	24.3	51.7	40.1	30.3	51.9	33.4	31.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	257.0	2.7	0.0	5.9	5.7	0.1	20.4	8.3	0.1	18.3	0.2	0.2
Delay (s)	310.0	37.4	20.0	59.0	44.8	24.4	72.1	48.5	30.3	70.2	33.6	31.9
Level of Service	F	D	C	E	D	C	E	D	C	E	C	C
Approach Delay (s)		112.8			42.0			51.0			41.1	
Approach LOS		F			D			D			D	

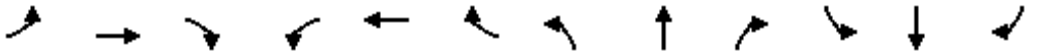
Intersection Summary			
HCM 2000 Control Delay	64.4	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	23.0
Intersection Capacity Utilization	92.9%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	857	58	43	913	3	70	1	50	4	0	8
Future Volume (vph)	11	857	58	43	913	3	70	1	50	4	0	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	12	12	12	11	11	12	13	12
Total Lost time (s)	5.0	6.0		5.0	6.0			5.0	5.0		5.0	
Lane Util. Factor	1.00	0.91		1.00	0.95			1.00	1.00		1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	0.98		0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Frt	1.00	0.99		1.00	1.00			1.00	0.85		0.91	
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00		0.98	
Satd. Flow (prot)	1736	4868		1745	3608			1750	1528		1733	
Flt Permitted	0.95	1.00		0.95	1.00			0.72	1.00		0.88	
Satd. Flow (perm)	1736	4868		1745	3608			1322	1528		1547	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	12	912	62	46	971	3	74	1	53	4	0	9
RTOR Reduction (vph)	0	8	0	0	0	0	0	0	46	0	11	0
Lane Group Flow (vph)	12	966	0	46	974	0	0	75	7	0	2	0
Confl. Peds. (#/hr)	14		1	1		14			4	4		
Confl. Bikes (#/hr)									4			2
Heavy Vehicles (%)	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Prot	NA		Prot	NA		Perm	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8		8	4		
Actuated Green, G (s)	0.8	24.4		2.4	26.0			6.3	6.3		6.3	
Effective Green, g (s)	0.8	24.4		2.4	26.0			6.3	6.3		6.3	
Actuated g/C Ratio	0.02	0.50		0.05	0.53			0.13	0.13		0.13	
Clearance Time (s)	5.0	6.0		5.0	6.0			5.0	5.0		5.0	
Vehicle Extension (s)	2.0	2.5		2.0	2.5			2.0	2.0		2.0	
Lane Grp Cap (vph)	28	2419		85	1910			169	196		198	
v/s Ratio Prot	0.01	0.20		c0.03	c0.27							
v/s Ratio Perm								c0.06	0.00		0.00	
v/c Ratio	0.43	0.40		0.54	0.51			0.44	0.03		0.01	
Uniform Delay, d1	23.9	7.8		22.8	7.4			19.8	18.7		18.7	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	3.8	0.1		3.7	0.2			0.7	0.0		0.0	
Delay (s)	27.7	7.8		26.5	7.6			20.5	18.8		18.7	
Level of Service	C	A		C	A			C	B		B	
Approach Delay (s)		8.1			8.5			19.8			18.7	
Approach LOS		A			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	9.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	49.1	Sum of lost time (s)	16.0
Intersection Capacity Utilization	53.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	134	790	27	0	862	33	48	177	12	92	75	99
Future Volume (veh/h)	134	790	27	0	862	33	48	177	12	92	75	99
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1860	1900	0	1813	1900	1900	1882	1900	1900	1881	1845
Adj Flow Rate, veh/h	138	814	28	0	889	34	49	182	12	95	77	102
Adj No. of Lanes	1	3	0	0	2	0	1	1	0	1	1	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	2	2	0	5	5	0	1	1	0	1	3
Cap, veh/h	157	3717	128	0	2107	81	233	337	22	159	363	297
Arrive On Green	0.09	0.74	0.74	0.00	0.62	0.62	0.19	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	1810	5040	173	0	3472	129	1219	1744	115	1203	1881	1536
Grp Volume(v), veh/h	138	546	296	0	453	470	49	0	194	95	77	102
Grp Sat Flow(s),veh/h/ln	1810	1692	1828	0	1722	1789	1219	0	1859	1203	1881	1536
Q Serve(g_s), s	13.6	9.1	9.1	0.0	24.2	24.2	6.3	0.0	16.9	13.9	6.2	10.3
Cycle Q Clear(g_c), s	13.6	9.1	9.1	0.0	24.2	24.2	12.5	0.0	16.9	30.8	6.2	10.3
Prop In Lane	1.00		0.09	0.00		0.07	1.00		0.06	1.00		1.00
Lane Grp Cap(c), veh/h	157	2496	1348	0	1073	1115	233	0	359	159	363	297
V/C Ratio(X)	0.88	0.22	0.22	0.00	0.42	0.42	0.21	0.00	0.54	0.60	0.21	0.34
Avail Cap(c_a), veh/h	201	2496	1348	0	1073	1115	269	0	413	194	418	341
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.95	0.95	0.95	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	81.3	7.4	7.4	0.0	17.3	17.3	66.4	0.0	65.4	79.3	61.1	62.8
Incr Delay (d2), s/veh	23.6	0.2	0.4	0.0	1.2	1.2	0.4	0.0	1.3	3.5	0.3	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.8	4.3	4.7	0.0	11.8	12.3	2.2	0.0	8.9	4.8	3.3	4.5
LnGrp Delay(d),s/veh	104.9	7.6	7.8	0.0	18.6	18.5	66.8	0.0	66.7	82.9	61.4	63.5
LnGrp LOS	F	A	A		B	B	E		E	F	E	E
Approach Vol, veh/h		980			923			243			274	
Approach Delay, s/veh		21.3			18.5			66.7			69.6	
Approach LOS		C			B			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		8
Phs Duration (G+Y+Rc), s	20.6	118.7		40.7		139.3		40.7
Change Period (Y+Rc), s	5.0	6.5		6.0		6.5		6.0
Max Green Setting (Gmax), s	20.0	102.5		40.0		127.5		40.0
Max Q Clear Time (g_c+I1), s	15.6	26.2		18.9		11.1		32.8
Green Ext Time (p_c), s	0.0	33.9		2.3		38.3		1.4

Intersection Summary	
HCM 2010 Ctrl Delay	30.3
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	0	1057	412	7	1135	302	332	560	3	368	640	28
Future Volume (vph)	0	1057	412	7	1135	302	332	560	3	368	640	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.5		6.5	6.5	6.5	6.5	6.5		6.5	6.5	
Lane Util. Factor		0.91		1.00	0.91	1.00	0.97	0.91		0.97	0.95	
Frpb, ped/bikes		0.99		1.00	1.00	0.96	1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt		0.96		1.00	1.00	0.85	1.00	1.00		1.00	0.99	
Flt Protected		1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		4778		1805	5085	1538	3400	5081		3467	3550	
Flt Permitted		1.00		0.07	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		4778		135	5085	1538	3400	5081		3467	3550	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	1101	429	7	1182	315	346	583	3	383	667	29
RTOR Reduction (vph)	0	39	0	0	0	85	0	0	0	0	2	0
Lane Group Flow (vph)	0	1491	0	7	1182	230	346	586	0	383	694	0
Confl. Peds. (#/hr)	7		8	8		7	5		10	10		5
Confl. Bikes (#/hr)			2						5			10
Heavy Vehicles (%)	0%	3%	2%	0%	2%	1%	3%	2%	0%	1%	1%	0%
Turn Type		NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			4		1	6		5	2	
Permitted Phases				4		4						
Actuated Green, G (s)		56.5		56.5	56.5	56.5	22.0	68.8		20.5	67.3	
Effective Green, g (s)		56.5		56.5	56.5	56.5	22.0	68.8		20.5	67.3	
Actuated g/C Ratio		0.31		0.31	0.31	0.31	0.12	0.38		0.11	0.37	
Clearance Time (s)		6.5		6.5	6.5	6.5	6.5	6.5		6.5	6.5	
Vehicle Extension (s)		4.5		4.5	4.5	4.5	1.5	4.5		1.5	4.5	
Lane Grp Cap (vph)		1499		42	1596	482	415	1942		394	1327	
v/s Ratio Prot		c0.31			0.23		c0.10	0.12		c0.11	c0.20	
v/s Ratio Perm				0.05		0.15						
v/c Ratio		0.99		0.17	0.74	0.48	0.83	0.30		0.97	0.52	
Uniform Delay, d1		61.6		44.7	55.2	49.8	77.2	38.8		79.5	43.9	
Progression Factor		0.08		1.00	1.00	1.00	0.97	0.92		1.00	1.00	
Incremental Delay, d2		12.5		3.2	2.1	1.3	12.6	0.4		37.6	1.5	
Delay (s)		17.6		47.9	57.3	51.1	87.5	36.0		117.1	45.3	
Level of Service		B		D	E	D	F	D		F	D	
Approach Delay (s)		17.6			56.0			55.1			70.8	
Approach LOS		B			E			E			E	

Intersection Summary			
HCM 2000 Control Delay	47.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	180.0	Sum of lost time (s)	23.5
Intersection Capacity Utilization	105.3%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

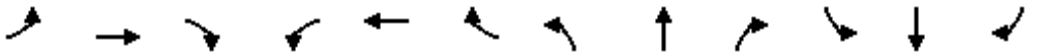
Appendix D

LOS Worksheets – 2040 Baseline Conditions

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	432	861	133	100	1200	334	124	358	108	174	27	1338
Future Volume (vph)	432	861	133	100	1200	334	124	358	108	174	27	1338
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	11	12	12	11	12	12
Total Lost time (s)	4.7	5.4		4.7	5.4	5.4	5.6	5.6		5.4	5.4	4.7
Lane Util. Factor	0.97	0.91		1.00	0.91	1.00	1.00	0.95		0.91	0.91	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.99	1.00	1.00		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	0.96	1.00
Satd. Flow (prot)	3183	4918		1703	4988	1503	1694	3358		1572	3267	1574
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	0.96	1.00
Satd. Flow (perm)	3183	4918		1703	4988	1503	1694	3358		1572	3267	1574
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	445	888	137	103	1237	344	128	369	111	179	28	1379
RTOR Reduction (vph)	0	17	0	0	0	138	0	26	0	0	0	56
Lane Group Flow (vph)	445	1008	0	103	1237	206	128	454	0	89	118	1323
Confl. Peds. (#/hr)	2		3	3		2			1	1		
Confl. Bikes (#/hr)												7
Heavy Vehicles (%)	10%	3%	4%	6%	4%	6%	3%	3%	5%	1%	5%	2%
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA		Split	NA	pm+ov
Protected Phases	5	2		1	6		3	3		4	4	5
Permitted Phases						6						4
Actuated Green, G (s)	21.0	55.1		10.6	44.7	44.7	12.0	12.0		11.2	11.2	32.2
Effective Green, g (s)	21.0	55.1		10.6	44.7	44.7	12.0	12.0		11.2	11.2	32.2
Actuated g/C Ratio	0.19	0.50		0.10	0.41	0.41	0.11	0.11		0.10	0.10	0.29
Clearance Time (s)	4.7	5.4		4.7	5.4	5.4	5.6	5.6		5.4	5.4	4.7
Vehicle Extension (s)	5.0	5.0		3.0	5.0	5.0	2.5	2.5		2.5	2.5	5.0
Lane Grp Cap (vph)	607	2463		164	2026	610	184	366		160	332	460
v/s Ratio Prot	0.14	0.20		0.06	c0.25		0.08	c0.14		0.06	0.04	c0.55
v/s Ratio Perm						0.14						0.29
v/c Ratio	0.73	0.41		0.63	0.61	0.34	0.70	1.24		0.56	0.36	2.88
Uniform Delay, d1	41.9	17.2		47.8	25.8	22.5	47.2	49.0		47.0	46.0	38.9
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	5.5	0.5		7.3	1.4	1.5	10.0	129.6		3.3	0.5	850.3
Delay (s)	47.4	17.7		55.1	27.2	24.0	57.3	178.6		50.4	46.5	889.2
Level of Service	D	B		E	C	C	E	F		D	D	F
Approach Delay (s)		26.7			28.2			153.1			779.4	
Approach LOS		C			C			F			F	

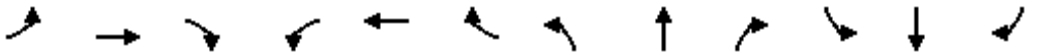
Intersection Summary			
HCM 2000 Control Delay	264.8	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.51		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	21.1
Intersection Capacity Utilization	141.4%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	265	631	169	103	1002	324	243	887	37	193	319	330
Future Volume (vph)	265	631	169	103	1002	324	243	887	37	193	319	330
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	10	12	12
Total Lost time (s)	5.0	6.5	5.0	5.0	6.5	5.0	5.0	6.5	6.5	5.0	6.5	6.5
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	0.99	1.00	1.00	0.98	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1805	3266	1523	1770	3298	1561	1752	3362	1540	1652	3396	1538
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1805	3266	1523	1770	3298	1561	1752	3362	1540	1652	3396	1538
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	288	686	184	112	1089	352	264	964	40	210	347	359
RTOR Reduction (vph)	0	0	72	0	0	48	0	0	28	0	0	204
Lane Group Flow (vph)	288	686	112	112	1089	304	264	964	12	210	347	155
Confl. Peds. (#/hr)	8		2	2		8	12		5	5		12
Confl. Bikes (#/hr)			2									5
Heavy Vehicles (%)	0%	5%	5%	2%	4%	2%	3%	2%	3%	2%	1%	2%
Parking (#/hr)		0			0			0			0	
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6	3	5	2	7	3	8		7	4	
Permitted Phases			6			2			8			4
Actuated Green, G (s)	14.0	33.8	51.8	11.0	30.8	45.8	18.0	37.2	37.2	15.0	34.2	34.2
Effective Green, g (s)	14.0	33.8	51.8	11.0	30.8	45.8	18.0	37.2	37.2	15.0	34.2	34.2
Actuated g/C Ratio	0.12	0.28	0.43	0.09	0.26	0.38	0.15	0.31	0.31	0.12	0.29	0.29
Clearance Time (s)	5.0	6.5	5.0	5.0	6.5	5.0	5.0	6.5	6.5	5.0	6.5	6.5
Vehicle Extension (s)	1.5	4.0	1.5	1.5	4.0	1.5	1.5	4.0	4.0	1.5	4.0	4.0
Lane Grp Cap (vph)	210	919	657	162	846	595	262	1042	477	206	967	438
v/s Ratio Prot	c0.16	c0.21	0.03	0.06	c0.33	0.06	c0.15	c0.29		0.13	0.10	
v/s Ratio Perm			0.05			0.13			0.01			0.10
v/c Ratio	1.37	0.75	0.17	0.69	1.29	0.51	1.01	0.93	0.03	1.02	0.36	0.35
Uniform Delay, d1	53.0	39.2	20.9	52.9	44.6	28.5	51.0	40.1	28.8	52.5	34.2	34.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	194.4	5.5	0.0	9.8	138.2	0.3	57.6	13.5	0.0	67.8	0.3	0.7
Delay (s)	247.4	44.7	21.0	62.7	182.8	28.8	108.6	53.6	28.8	120.3	34.5	34.8
Level of Service	F	D	C	E	F	C	F	D	C	F	C	C
Approach Delay (s)		91.3			139.2			64.2			54.3	
Approach LOS		F			F			E			D	

Intersection Summary			
HCM 2000 Control Delay	92.6	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.14		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	23.0
Intersection Capacity Utilization	97.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	853	17	19	1343	1	14	0	9	1	0	4
Future Volume (vph)	12	853	17	19	1343	1	14	0	9	1	0	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	12	12	12	11	11	12	13	12
Total Lost time (s)	5.0	6.0		5.0	6.0			5.0	5.0		5.0	
Lane Util. Factor	1.00	0.91		1.00	0.95			1.00	1.00		1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	0.99		0.95	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Frt	1.00	1.00		1.00	1.00			1.00	0.85		0.89	
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00		0.99	
Satd. Flow (prot)	1743	4857		1745	3471			1479	1541		1655	
Flt Permitted	0.95	1.00		0.95	1.00			1.00	1.00		1.00	
Satd. Flow (perm)	1743	4857		1745	3471			1556	1541		1672	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	13	907	18	20	1429	1	15	0	10	1	0	4
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	10	0	5	0
Lane Group Flow (vph)	13	924	0	20	1430	0	0	15	0	0	0	0
Confl. Peds. (#/hr)	5					5			1			1
Confl. Bikes (#/hr)												6
Heavy Vehicles (%)	0%	3%	0%	0%	4%	0%	18%	0%	0%	0%	0%	0%
Turn Type	Prot	NA		Prot	NA		Perm	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8		8	4		
Actuated Green, G (s)	0.8	36.6		0.9	36.7			2.0	2.0		2.0	
Effective Green, g (s)	0.8	36.6		0.9	36.7			2.0	2.0		2.0	
Actuated g/C Ratio	0.01	0.66		0.02	0.66			0.04	0.04		0.04	
Clearance Time (s)	5.0	6.0		5.0	6.0			5.0	5.0		5.0	
Vehicle Extension (s)	2.0	2.5		2.0	2.5			2.0	2.0		2.0	
Lane Grp Cap (vph)	25	3202		28	2295			56	55		60	
v/s Ratio Prot	0.01	0.19		c0.01	c0.41							
v/s Ratio Perm								c0.01	0.00		0.00	
v/c Ratio	0.52	0.29		0.71	0.62			0.27	0.01		0.00	
Uniform Delay, d1	27.2	4.0		27.2	5.4			26.0	25.8		25.8	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	8.7	0.0		52.5	0.5			0.9	0.0		0.0	
Delay (s)	35.9	4.0		79.7	5.9			27.0	25.8		25.8	
Level of Service	D	A		E	A			C	C		C	
Approach Delay (s)		4.5			6.9			26.5			25.8	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	6.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	55.5	Sum of lost time (s)	16.0
Intersection Capacity Utilization	51.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	794	16	0	1123	24	81	98	6	137	139	164
Future Volume (veh/h)	65	794	16	0	1123	24	81	98	6	137	139	164
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	0.99		0.99	0.99		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1840	1900	0	1811	1900	1900	1848	1900	1900	1900	1863
Adj Flow Rate, veh/h	68	827	17	0	1170	25	84	102	6	143	145	171
Adj No. of Lanes	1	3	0	0	2	0	1	1	0	1	1	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	3	3	0	5	5	0	3	3	0	0	2
Cap, veh/h	84	3765	77	0	2302	49	169	323	19	217	356	288
Arrive On Green	0.05	0.74	0.74	0.00	0.67	0.67	0.19	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	1774	5065	104	0	3536	74	1075	1727	102	1297	1900	1538
Grp Volume(v), veh/h	68	547	297	0	584	611	84	0	108	143	145	171
Grp Sat Flow(s),veh/h/ln	1774	1675	1819	0	1721	1798	1075	0	1829	1297	1900	1538
Q Serve(g_s), s	6.8	9.0	9.0	0.0	30.7	30.7	13.4	0.0	9.2	19.3	12.1	18.3
Cycle Q Clear(g_c), s	6.8	9.0	9.0	0.0	30.7	30.7	25.5	0.0	9.2	28.5	12.1	18.3
Prop In Lane	1.00		0.06	0.00		0.04	1.00		0.06	1.00		1.00
Lane Grp Cap(c), veh/h	84	2490	1352	0	1150	1201	169	0	342	217	356	288
V/C Ratio(X)	0.81	0.22	0.22	0.00	0.51	0.51	0.50	0.00	0.32	0.66	0.41	0.59
Avail Cap(c_a), veh/h	197	2490	1352	0	1150	1201	207	0	406	262	422	342
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.98	0.98	0.98	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	84.9	7.1	7.1	0.0	15.0	15.0	75.6	0.0	63.2	75.5	64.4	66.9
Incr Delay (d2), s/veh	6.5	0.2	0.4	0.0	1.6	1.5	2.3	0.0	0.5	4.5	0.8	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	4.2	4.7	0.0	15.1	15.8	4.1	0.0	4.7	7.2	6.4	8.0
LnGrp Delay(d),s/veh	91.4	7.3	7.5	0.0	16.6	16.6	77.9	0.0	63.7	80.0	65.1	68.9
LnGrp LOS	F	A	A		B	B	E		E	F	E	E
Approach Vol, veh/h		912			1195			192			459	
Approach Delay, s/veh		13.6			16.6			69.9			71.2	
Approach LOS		B			B			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		8
Phs Duration (G+Y+Rc), s	13.6	126.7		39.7		140.3		39.7
Change Period (Y+Rc), s	5.0	6.5		6.0		6.5		6.0
Max Green Setting (Gmax), s	20.0	102.5		40.0		127.5		40.0
Max Q Clear Time (g_c+I1), s	8.8	32.7		27.5		11.0		30.5
Green Ext Time (p_c), s	0.0	41.7		2.3		53.1		2.0

Intersection Summary	
HCM 2010 Ctrl Delay	28.4
HCM 2010 LOS	C

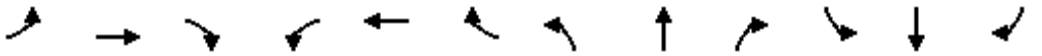
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	0	1258	410	1	1459	380	286	640	1	398	800	16
Future Volume (vph)	0	1258	410	1	1459	380	286	640	1	398	800	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.5		6.5	6.5	6.5	6.5	6.5		6.5	6.5	
Lane Util. Factor		0.91		1.00	0.91	1.00	0.97	0.91		0.97	0.95	
Frpb, ped/bikes		0.99		1.00	1.00	0.98	1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt		0.96		1.00	1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected		1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		4865		1805	5036	1525	3400	5035		3303	3448	
Flt Permitted		1.00		0.07	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		4865		135	5036	1525	3400	5035		3303	3448	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	0	1271	414	1	1474	384	289	646	1	402	808	16
RTOR Reduction (vph)	0	33	0	0	0	85	0	0	0	0	1	0
Lane Group Flow (vph)	0	1652	0	1	1474	299	289	647	0	402	823	0
Confl. Peds. (#/hr)	1		4	4		1	2		3	3		2
Confl. Bikes (#/hr)						3			4			8
Heavy Vehicles (%)	0%	2%	2%	0%	3%	4%	3%	3%	0%	6%	4%	23%
Turn Type		NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			4		1	6		5	2	
Permitted Phases				4		4						
Actuated Green, G (s)		56.5		56.5	56.5	56.5	20.1	67.5		20.5	67.9	
Effective Green, g (s)		56.5		56.5	56.5	56.5	20.1	67.5		20.5	67.9	
Actuated g/C Ratio		0.31		0.31	0.31	0.31	0.11	0.38		0.11	0.38	
Clearance Time (s)		6.5		6.5	6.5	6.5	6.5	6.5		6.5	6.5	
Vehicle Extension (s)		4.5		4.5	4.5	4.5	1.5	4.5		1.5	4.5	
Lane Grp Cap (vph)		1527		42	1580	478	379	1888		376	1300	
v/s Ratio Prot		c0.34			0.29		c0.09	0.13		c0.12	c0.24	
v/s Ratio Perm				0.01		0.20						
v/c Ratio		1.08		0.02	0.93	0.63	0.76	0.34		1.07	0.63	
Uniform Delay, d1		61.8		42.7	59.9	52.7	77.6	40.3		79.8	45.9	
Progression Factor		0.09		1.00	1.00	1.00	0.96	0.89		1.00	1.00	
Incremental Delay, d2		38.2		0.4	10.7	3.2	7.8	0.5		66.0	2.4	
Delay (s)		43.9		43.1	70.6	55.9	81.9	36.5		145.8	48.2	
Level of Service		D		D	E	E	F	D		F	D	
Approach Delay (s)		43.9			67.6			50.5			80.2	
Approach LOS		D			E			D			F	

Intersection Summary			
HCM 2000 Control Delay	60.5	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	180.0	Sum of lost time (s)	23.5
Intersection Capacity Utilization	109.0%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	580	982	321	189	1051	184	260	451	197	314	31	696
Future Volume (vph)	580	982	321	189	1051	184	260	451	197	314	31	696
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	11	12	12	11	12	12
Total Lost time (s)	4.7	5.4		4.7	5.4	5.4	5.6	5.6		5.4	5.4	4.7
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00	1.00	0.95		0.91	0.91	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.99	1.00	0.99		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.96		1.00	1.00	0.85	1.00	0.95		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	0.96	1.00
Satd. Flow (prot)	3273	3370		1752	3471	1448	1728	3351		1588	3298	1544
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	0.96	1.00
Satd. Flow (perm)	3273	3370		1752	3471	1448	1728	3351		1588	3298	1544
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	598	1012	331	195	1084	190	268	465	203	324	32	718
RTOR Reduction (vph)	0	29	0	0	0	112	0	45	0	0	0	54
Lane Group Flow (vph)	598	1314	0	195	1084	78	268	623	0	162	194	664
Confl. Peds. (#/hr)	2		3	3		2			1	1		
Confl. Bikes (#/hr)									8			4
Heavy Vehicles (%)	7%	3%	2%	3%	4%	10%	1%	2%	2%	0%	4%	4%
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA		Split	NA	pm+ov
Protected Phases	5	2		1	6		3	3		4	4	5
Permitted Phases						6						4
Actuated Green, G (s)	22.0	48.5		12.0	38.5	38.5	15.0	15.0		13.4	13.4	35.4
Effective Green, g (s)	22.0	48.5		12.0	38.5	38.5	15.0	15.0		13.4	13.4	35.4
Actuated g/C Ratio	0.20	0.44		0.11	0.35	0.35	0.14	0.14		0.12	0.12	0.32
Clearance Time (s)	4.7	5.4		4.7	5.4	5.4	5.6	5.6		5.4	5.4	4.7
Vehicle Extension (s)	5.0	5.0		3.0	5.0	5.0	2.5	2.5		2.5	2.5	5.0
Lane Grp Cap (vph)	654	1485		191	1214	506	235	456		193	401	496
v/s Ratio Prot	0.18	c0.39		0.11	0.31		0.16	c0.19		0.10	0.06	c0.27
v/s Ratio Perm						0.05						0.16
v/c Ratio	0.91	0.89		1.02	0.89	0.15	1.14	1.37		0.84	0.48	1.34
Uniform Delay, d1	43.1	28.2		49.0	33.8	24.6	47.5	47.5		47.2	45.1	37.3
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	18.2	8.1		70.7	10.2	0.6	101.8	178.5		25.7	0.7	166.0
Delay (s)	61.3	36.3		119.7	44.0	25.2	149.3	226.0		72.9	45.7	203.3
Level of Service	E	D		F	D	C	F	F		E	D	F
Approach Delay (s)		44.0			51.6			204.0			155.2	
Approach LOS		D			D			F			F	

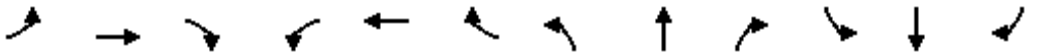
Intersection Summary			
HCM 2000 Control Delay	95.7	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.17		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	21.1
Intersection Capacity Utilization	106.9%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	382	814	151	112	892	254	207	1044	83	177	368	263
Future Volume (vph)	382	814	151	112	892	254	207	1044	83	177	368	263
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	10	12	12
Total Lost time (s)	5.0	6.5	5.0	5.0	6.5	5.0	5.0	6.5	6.5	5.0	6.5	6.5
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3362	1563	1770	3362	1548	1770	3362	1546	1652	3396	1527
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	3362	1563	1770	3362	1548	1770	3362	1546	1652	3396	1527
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	390	831	154	114	910	259	211	1065	85	181	376	268
RTOR Reduction (vph)	0	0	50	0	0	47	0	0	59	0	0	188
Lane Group Flow (vph)	390	831	104	114	910	212	211	1065	26	181	376	80
Confl. Peds. (#/hr)	16		5	5		16	12		9	9		12
Confl. Bikes (#/hr)			2			4			2			2
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	1%	3%
Parking (#/hr)		0			0			0			0	
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6	3	5	2	7	3	8		7	4	
Permitted Phases			6			2			8			4
Actuated Green, G (s)	14.0	34.4	49.9	11.1	31.5	46.5	15.5	36.5	36.5	15.0	36.0	36.0
Effective Green, g (s)	14.0	34.4	49.9	11.1	31.5	46.5	15.5	36.5	36.5	15.0	36.0	36.0
Actuated g/C Ratio	0.12	0.29	0.42	0.09	0.26	0.39	0.13	0.30	0.30	0.12	0.30	0.30
Clearance Time (s)	5.0	6.5	5.0	5.0	6.5	5.0	5.0	6.5	6.5	5.0	6.5	6.5
Vehicle Extension (s)	1.5	4.0	1.5	1.5	4.0	1.5	1.5	4.0	4.0	1.5	4.0	4.0
Lane Grp Cap (vph)	206	963	649	163	882	599	228	1022	470	206	1018	458
v/s Ratio Prot	c0.22	c0.25	0.02	0.06	c0.27	0.04	c0.12	c0.32		0.11	0.11	
v/s Ratio Perm			0.05			0.09			0.02			0.05
v/c Ratio	1.89	0.86	0.16	0.70	1.03	0.35	0.93	1.04	0.06	0.88	0.37	0.18
Uniform Delay, d1	53.0	40.6	21.9	52.8	44.2	26.1	51.7	41.8	29.5	51.6	33.1	31.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	419.7	10.1	0.0	10.1	38.7	0.1	38.9	39.7	0.1	30.9	0.3	0.3
Delay (s)	472.7	50.7	22.0	62.9	83.0	26.2	90.5	81.5	29.6	82.5	33.4	31.3
Level of Service	F	D	C	E	F	C	F	F	C	F	C	C
Approach Delay (s)		167.2			69.7			79.6			43.5	
Approach LOS		F			E			E			D	

Intersection Summary			
HCM 2000 Control Delay	95.7	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.14		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	23.0
Intersection Capacity Utilization	104.0%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	1067	72	54	1136	4	87	1	62	5	0	10
Future Volume (vph)	14	1067	72	54	1136	4	87	1	62	5	0	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	12	12	12	11	11	12	13	12
Total Lost time (s)	5.0	6.0		5.0	6.0			5.0	5.0		5.0	
Lane Util. Factor	1.00	0.91		1.00	0.95			1.00	1.00		1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	0.98		0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Frt	1.00	0.99		1.00	1.00			1.00	0.85		0.91	
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00		0.98	
Satd. Flow (prot)	1738	4868		1745	3608			1750	1527		1734	
Flt Permitted	0.95	1.00		0.95	1.00			0.72	1.00		0.88	
Satd. Flow (perm)	1738	4868		1745	3608			1317	1527		1553	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	15	1135	77	57	1209	4	93	1	66	5	0	11
RTOR Reduction (vph)	0	7	0	0	0	0	0	0	57	0	14	0
Lane Group Flow (vph)	15	1205	0	57	1213	0	0	94	9	0	2	0
Confl. Peds. (#/hr)	14		1	1		14			4	4		
Confl. Bikes (#/hr)									4			2
Heavy Vehicles (%)	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Prot	NA		Prot	NA		Perm	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8		8	4		
Actuated Green, G (s)	0.9	29.4		3.9	32.4			7.3	7.3		7.3	
Effective Green, g (s)	0.9	29.4		3.9	32.4			7.3	7.3		7.3	
Actuated g/C Ratio	0.02	0.52		0.07	0.57			0.13	0.13		0.13	
Clearance Time (s)	5.0	6.0		5.0	6.0			5.0	5.0		5.0	
Vehicle Extension (s)	2.0	2.5		2.0	2.5			2.0	2.0		2.0	
Lane Grp Cap (vph)	27	2528		120	2065			169	196		200	
v/s Ratio Prot	0.01	0.25		c0.03	c0.34							
v/s Ratio Perm								c0.07	0.01		0.00	
v/c Ratio	0.56	0.48		0.47	0.59			0.56	0.04		0.01	
Uniform Delay, d1	27.7	8.7		25.4	7.8			23.1	21.6		21.5	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	13.3	0.1		1.1	0.4			2.2	0.0		0.0	
Delay (s)	40.9	8.8		26.4	8.2			25.4	21.6		21.5	
Level of Service	D	A		C	A			C	C		C	
Approach Delay (s)		9.2			9.0			23.8			21.5	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	10.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	56.6	Sum of lost time (s)	16.0
Intersection Capacity Utilization	60.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	167	983	34	0	1073	41	60	220	15	115	93	123
Future Volume (veh/h)	167	983	34	0	1073	41	60	220	15	115	93	123
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1860	1900	0	1813	1900	1900	1882	1900	1900	1881	1845
Adj Flow Rate, veh/h	172	1013	35	0	1106	42	62	227	15	119	96	127
Adj No. of Lanes	1	3	0	0	2	0	1	1	0	1	1	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	2	2	0	5	5	0	1	1	0	1	3
Cap, veh/h	190	3569	123	0	1946	74	251	388	26	162	418	342
Arrive On Green	0.11	0.71	0.71	0.00	0.58	0.58	0.22	0.22	0.22	0.22	0.22	0.22
Sat Flow, veh/h	1810	5039	174	0	3473	128	1172	1744	115	1153	1881	1538
Grp Volume(v), veh/h	172	680	368	0	563	585	62	0	242	119	96	127
Grp Sat Flow(s),veh/h/ln	1810	1692	1828	0	1722	1789	1172	0	1859	1153	1881	1538
Q Serve(g_s), s	16.9	13.2	13.2	0.0	37.1	37.1	8.2	0.0	20.9	18.5	7.5	12.6
Cycle Q Clear(g_c), s	16.9	13.2	13.2	0.0	37.1	37.1	15.8	0.0	20.9	39.5	7.5	12.6
Prop In Lane	1.00		0.10	0.00		0.07	1.00		0.06	1.00		1.00
Lane Grp Cap(c), veh/h	190	2397	1295	0	991	1029	251	0	413	162	418	342
V/C Ratio(X)	0.90	0.28	0.28	0.00	0.57	0.57	0.25	0.00	0.59	0.73	0.23	0.37
Avail Cap(c_a), veh/h	201	2397	1295	0	991	1029	251	0	413	162	418	342
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.91	0.91	0.91	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	79.6	9.6	9.6	0.0	24.1	24.1	63.8	0.0	62.6	80.2	57.4	59.3
Incr Delay (d2), s/veh	33.4	0.3	0.5	0.0	2.4	2.3	0.5	0.0	2.1	15.8	0.3	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.2	6.2	6.8	0.0	18.3	19.0	2.7	0.0	11.0	6.6	4.0	5.4
LnGrp Delay(d),s/veh	113.0	9.9	10.1	0.0	26.5	26.4	64.3	0.0	64.7	96.0	57.6	60.0
LnGrp LOS	F	A	B		C	C	E		E	F	E	E
Approach Vol, veh/h		1220			1148			304			342	
Approach Delay, s/veh		24.5			26.4			64.6			71.9	
Approach LOS		C			C			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		8
Phs Duration (G+Y+Rc), s	23.9	110.1		46.0		134.0		46.0
Change Period (Y+Rc), s	5.0	6.5		6.0		6.5		6.0
Max Green Setting (Gmax), s	20.0	102.5		40.0		127.5		40.0
Max Q Clear Time (g_c+I1), s	18.9	39.1		22.9		15.2		41.5
Green Ext Time (p_c), s	0.0	43.0		2.8		59.7		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	34.6
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	0	1316	513	9	1413	376	413	697	4	458	797	35
Future Volume (vph)	0	1316	513	9	1413	376	413	697	4	458	797	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.5		6.5	6.5	6.5	6.5	6.5		6.5	6.5	
Lane Util. Factor		0.91		1.00	0.91	1.00	0.97	0.91		0.97	0.95	
Frpb, ped/bikes		0.99		1.00	1.00	0.96	1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt		0.96		1.00	1.00	0.85	1.00	1.00		1.00	0.99	
Flt Protected		1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		4778		1805	5085	1538	3400	5081		3467	3550	
Flt Permitted		1.00		0.07	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		4778		135	5085	1538	3400	5081		3467	3550	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	1371	534	9	1472	392	430	726	4	477	830	36
RTOR Reduction (vph)	0	39	0	0	0	85	0	0	0	0	2	0
Lane Group Flow (vph)	0	1866	0	9	1472	307	430	730	0	477	864	0
Confl. Peds. (#/hr)	7		8	8		7	5		10	10		5
Confl. Bikes (#/hr)			2						5			10
Heavy Vehicles (%)	0%	3%	2%	0%	2%	1%	3%	2%	0%	1%	1%	0%
Turn Type		NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			4		1	6		5	2	
Permitted Phases				4		4						
Actuated Green, G (s)		56.5		56.5	56.5	56.5	24.6	68.4		20.5	64.3	
Effective Green, g (s)		56.5		56.5	56.5	56.5	24.6	68.4		20.5	64.3	
Actuated g/C Ratio		0.31		0.31	0.31	0.31	0.14	0.38		0.11	0.36	
Clearance Time (s)		6.5		6.5	6.5	6.5	6.5	6.5		6.5	6.5	
Vehicle Extension (s)		4.5		4.5	4.5	4.5	1.5	4.5		1.5	4.5	
Lane Grp Cap (vph)		1499		42	1596	482	464	1930		394	1268	
v/s Ratio Prot		c0.39			0.29		c0.13	0.14		c0.14	c0.24	
v/s Ratio Perm				0.07		0.20						
v/c Ratio		1.24		0.21	0.92	0.64	0.93	0.38		1.21	0.68	
Uniform Delay, d1		61.8		45.4	59.6	53.0	76.8	40.4		79.8	49.1	
Progression Factor		0.10		1.00	1.00	1.00	0.92	0.84		1.00	1.00	
Incremental Delay, d2		110.7		4.4	9.5	3.4	23.4	0.5		116.2	3.0	
Delay (s)		117.1		49.8	69.1	56.4	94.3	34.4		196.0	52.1	
Level of Service		F		D	E	E	F	C		F	D	
Approach Delay (s)		117.1			66.4			56.6			103.2	
Approach LOS		F			E			E			F	

Intersection Summary			
HCM 2000 Control Delay	87.8	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	180.0	Sum of lost time (s)	23.5
Intersection Capacity Utilization	112.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

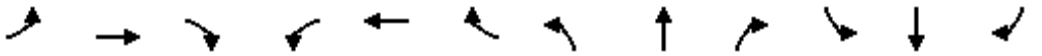
Appendix E

LOS Worksheets – 2019 Plus Project Conditions

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	347	692	107	80	964	268	100	288	87	140	22	1075
Future Volume (vph)	347	692	107	80	964	268	100	288	87	140	22	1075
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	11	12	12	11	12	12
Total Lost time (s)	4.7	5.4	5.4	4.7	5.4	5.4	5.6	5.6		5.4	5.4	4.7
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	0.95		0.95	0.95	0.88
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.99	1.00	1.00		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	0.97	1.00
Satd. Flow (prot)	3183	5036	1528	3303	4988	1503	1694	3357		1641	1706	2770
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	0.97	1.00
Satd. Flow (perm)	3183	5036	1528	3303	4988	1503	1694	3357		1641	1706	2770
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	358	713	110	82	994	276	103	297	90	144	23	1108
RTOR Reduction (vph)	0	0	51	0	0	163	0	26	0	0	0	119
Lane Group Flow (vph)	358	713	59	82	994	113	103	361	0	84	83	989
Confl. Peds. (#/hr)	2		3	3		2			1	1		
Confl. Bikes (#/hr)												7
Heavy Vehicles (%)	10%	3%	4%	6%	4%	6%	3%	3%	5%	1%	5%	2%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA		Split	NA	pm+ov
Protected Phases	5	2		1	6		3	3		4	4	5
Permitted Phases			2			6						4
Actuated Green, G (s)	21.0	59.0	59.0	6.9	44.9	44.9	12.0	12.0		11.0	11.0	32.0
Effective Green, g (s)	21.0	59.0	59.0	6.9	44.9	44.9	12.0	12.0		11.0	11.0	32.0
Actuated g/C Ratio	0.19	0.54	0.54	0.06	0.41	0.41	0.11	0.11		0.10	0.10	0.29
Clearance Time (s)	4.7	5.4	5.4	4.7	5.4	5.4	5.6	5.6		5.4	5.4	4.7
Vehicle Extension (s)	5.0	5.0	5.0	3.0	5.0	5.0	2.5	2.5		2.5	2.5	5.0
Lane Grp Cap (vph)	607	2701	819	207	2036	613	184	366		164	170	805
v/s Ratio Prot	0.11	0.14		0.02	c0.20		0.06	c0.11		0.05	0.05	c0.23
v/s Ratio Perm			0.04			0.07						0.12
v/c Ratio	0.59	0.26	0.07	0.40	0.49	0.18	0.56	0.99		0.51	0.49	1.23
Uniform Delay, d1	40.6	13.8	12.3	49.5	24.1	20.8	46.5	48.9		47.0	46.8	39.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	2.3	0.2	0.2	1.2	0.8	0.7	2.9	43.1		2.0	1.6	113.7
Delay (s)	42.8	14.0	12.5	50.8	24.9	21.5	49.4	92.0		49.0	48.4	152.7
Level of Service	D	B	B	D	C	C	D	F		D	D	F
Approach Delay (s)		22.6			25.8			83.1			139.0	
Approach LOS		C			C			F			F	

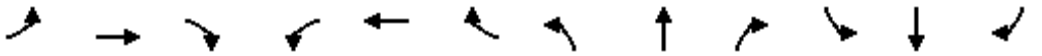
Intersection Summary			
HCM 2000 Control Delay	65.0	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	21.1
Intersection Capacity Utilization	93.6%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	213	507	136	83	805	260	195	713	30	155	256	265
Future Volume (vph)	213	507	136	83	805	260	195	713	30	155	256	265
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	10	12	12
Total Lost time (s)	5.0	6.5	5.0	5.0	6.5		5.0	6.5	6.5	5.0	6.5	6.5
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.99	1.00	0.99		1.00	1.00	0.98	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3502	4775	1521	3433	4642		1752	3362	1540	1652	3396	1538
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3502	4775	1521	3433	4642		1752	3362	1540	1652	3396	1538
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	232	551	148	90	875	283	212	775	33	168	278	288
RTOR Reduction (vph)	0	0	76	0	45	0	0	0	24	0	0	212
Lane Group Flow (vph)	232	551	72	90	1113	0	212	775	9	168	278	76
Confl. Peds. (#/hr)	8		2	2		8	12		5	5		12
Confl. Bikes (#/hr)			2									5
Heavy Vehicles (%)	0%	5%	5%	2%	4%	2%	3%	2%	3%	2%	1%	2%
Parking (#/hr)		0			0			0			0	
Turn Type	Prot	NA	pm+ov	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6	3	5	2		3	8		7	4	
Permitted Phases			6						8			4
Actuated Green, G (s)	11.5	41.6	58.2	7.1	37.2		16.6	34.2	34.2	14.1	31.7	31.7
Effective Green, g (s)	11.5	41.6	58.2	7.1	37.2		16.6	34.2	34.2	14.1	31.7	31.7
Actuated g/C Ratio	0.10	0.35	0.49	0.06	0.31		0.14	0.29	0.29	0.12	0.26	0.26
Clearance Time (s)	5.0	6.5	5.0	5.0	6.5		5.0	6.5	6.5	5.0	6.5	6.5
Vehicle Extension (s)	1.5	4.0	1.5	1.5	4.0		1.5	4.0	4.0	1.5	4.0	4.0
Lane Grp Cap (vph)	335	1655	737	203	1439		242	958	438	194	897	406
v/s Ratio Prot	c0.07	c0.12	0.01	0.03	c0.24		c0.12	c0.23		0.10	0.08	
v/s Ratio Perm			0.03						0.01			0.05
v/c Ratio	0.69	0.33	0.10	0.44	0.77		0.88	0.81	0.02	0.87	0.31	0.19
Uniform Delay, d1	52.5	29.0	16.7	54.5	37.6		50.7	39.9	30.9	52.0	35.4	34.2
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	4.9	0.5	0.0	0.6	4.1		27.1	5.4	0.0	30.0	0.3	0.3
Delay (s)	57.5	29.5	16.7	55.1	41.7		77.8	45.3	30.9	82.0	35.7	34.5
Level of Service	E	C	B	E	D		E	D	C	F	D	C
Approach Delay (s)		34.4			42.7			51.6			45.8	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	43.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	23.0
Intersection Capacity Utilization	79.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	685	14	15	1079	1	11	0	7	1	0	3
Future Volume (vph)	10	685	14	15	1079	1	11	0	7	1	0	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	12	12	12	11	11	12	13	12
Total Lost time (s)	5.0	6.0		5.0	6.0			5.0	5.0		5.0	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00	1.00		1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	0.99		0.94	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Frt	1.00	1.00		1.00	1.00			1.00	0.85		0.90	
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00		0.99	
Satd. Flow (prot)	1743	4856		1745	4987			1479	1542		1635	
Flt Permitted	0.95	1.00		0.95	1.00			1.00	1.00		1.00	
Satd. Flow (perm)	1743	4856		1745	4987			1556	1542		1655	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	11	729	15	16	1148	1	12	0	7	1	0	3
RTOR Reduction (vph)	0	2	0	0	0	0	0	0	7	0	4	0
Lane Group Flow (vph)	11	742	0	16	1149	0	0	12	0	0	0	0
Confl. Peds. (#/hr)	5					5			1			1
Confl. Bikes (#/hr)												6
Heavy Vehicles (%)	0%	3%	0%	0%	4%	0%	18%	0%	0%	0%	0%	0%
Turn Type	Prot	NA		Prot	NA		Perm	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8		8	4		
Actuated Green, G (s)	0.8	26.5		0.8	26.5			0.9	0.9		0.9	
Effective Green, g (s)	0.8	26.5		0.8	26.5			0.9	0.9		0.9	
Actuated g/C Ratio	0.02	0.60		0.02	0.60			0.02	0.02		0.02	
Clearance Time (s)	5.0	6.0		5.0	6.0			5.0	5.0		5.0	
Vehicle Extension (s)	2.0	2.5		2.0	2.5			2.0	2.0		2.0	
Lane Grp Cap (vph)	31	2911		31	2989			31	31		33	
v/s Ratio Prot	0.01	0.15		c0.01	c0.23							
v/s Ratio Perm								c0.01	0.00		0.00	
v/c Ratio	0.35	0.26		0.52	0.38			0.39	0.00		0.00	
Uniform Delay, d1	21.4	4.2		21.5	4.6			21.4	21.2		21.2	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	2.5	0.0		5.9	0.1			2.9	0.0		0.0	
Delay (s)	24.0	4.2		27.4	4.7			24.3	21.2		21.2	
Level of Service	C	A		C	A			C	C		C	
Approach Delay (s)		4.5			5.0			23.2			21.2	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	5.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	44.2	Sum of lost time (s)	16.0
Intersection Capacity Utilization	37.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	52	638	13	0	902	19	65	79	5	110	112	132
Future Volume (veh/h)	52	638	13	0	902	19	65	79	5	110	112	132
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	0.99		0.99	0.99		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1840	1900	0	1811	1900	1900	1848	1900	1900	1900	1863
Adj Flow Rate, veh/h	54	665	14	0	940	20	68	82	5	115	117	138
Adj No. of Lanes	1	3	0	0	3	0	1	1	0	1	1	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	3	3	0	5	5	0	3	3	0	0	2
Cap, veh/h	74	3885	82	0	3480	74	163	281	17	200	310	250
Arrive On Green	0.04	0.77	0.77	0.00	0.70	0.70	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	1774	5061	106	0	5146	106	1135	1723	105	1320	1900	1534
Grp Volume(v), veh/h	54	440	239	0	622	338	68	0	87	115	117	138
Grp Sat Flow(s),veh/h/ln	1774	1675	1819	0	1648	1792	1135	0	1828	1320	1900	1534
Q Serve(g_s), s	5.4	6.3	6.3	0.0	12.6	12.6	10.2	0.0	7.5	15.1	9.9	14.9
Cycle Q Clear(g_c), s	5.4	6.3	6.3	0.0	12.6	12.6	20.1	0.0	7.5	22.6	9.9	14.9
Prop In Lane	1.00		0.06	0.00		0.06	1.00		0.06	1.00		1.00
Lane Grp Cap(c), veh/h	74	2571	1396	0	2302	1252	163	0	298	200	310	250
V/C Ratio(X)	0.73	0.17	0.17	0.00	0.27	0.27	0.42	0.00	0.29	0.58	0.38	0.55
Avail Cap(c_a), veh/h	197	2571	1396	0	2302	1252	230	0	406	278	422	341
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.99	0.99	0.99	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	85.3	5.6	5.6	0.0	10.1	10.1	76.2	0.0	66.2	76.2	67.2	69.3
Incr Delay (d2), s/veh	5.1	0.1	0.3	0.0	0.3	0.5	1.7	0.0	0.5	2.6	0.8	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	3.0	3.3	0.0	5.8	6.4	3.3	0.0	3.9	5.7	5.3	6.5
LnGrp Delay(d),s/veh	90.4	5.7	5.9	0.0	10.4	10.6	77.9	0.0	66.7	78.8	68.0	71.2
LnGrp LOS	F	A	A		B	B	E		E	E	E	E
Approach Vol, veh/h		733			960			155			370	
Approach Delay, s/veh		12.0			10.5			71.6			72.5	
Approach LOS		B			B			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		8
Phs Duration (G+Y+Rc), s	12.5	132.2		35.3		144.7		35.3
Change Period (Y+Rc), s	5.0	6.5		6.0		6.5		6.0
Max Green Setting (Gmax), s	20.0	102.5		40.0		127.5		40.0
Max Q Clear Time (g_c+I1), s	7.4	14.6		22.1		8.3		24.6
Green Ext Time (p_c), s	0.0	31.2		2.1		33.1		2.0

Intersection Summary	
HCM 2010 Ctrl Delay	25.6
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	0	1011	329	1	1172	305	230	514	1	320	643	13
Future Volume (vph)	0	1011	329	1	1172	305	230	514	1	320	643	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.5		6.5	6.5	6.5	6.5	6.5		6.5	6.5	
Lane Util. Factor		0.91		1.00	0.91	1.00	0.97	0.91		0.97	0.91	
Frpb, ped/bikes		0.99		1.00	1.00	0.98	1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt		0.96		1.00	1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected		1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		4866		1805	5036	1525	3400	5035		3303	4953	
Flt Permitted		1.00		0.07	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		4866		135	5036	1525	3400	5035		3303	4953	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	0	1021	332	1	1184	308	232	519	1	323	649	13
RTOR Reduction (vph)	0	32	0	0	0	85	0	0	0	0	1	0
Lane Group Flow (vph)	0	1321	0	1	1184	223	232	520	0	323	661	0
Confl. Peds. (#/hr)	1		4	4		1	2		3	3		2
Confl. Bikes (#/hr)						3			4			8
Heavy Vehicles (%)	0%	2%	2%	0%	3%	4%	3%	3%	0%	6%	4%	23%
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			4		1	6		5	2	
Permitted Phases	4			4		4						
Actuated Green, G (s)		56.5		56.5	56.5	56.5	18.6	68.1		19.9	69.4	
Effective Green, g (s)		56.5		56.5	56.5	56.5	18.6	68.1		19.9	69.4	
Actuated g/C Ratio		0.31		0.31	0.31	0.31	0.10	0.38		0.11	0.39	
Clearance Time (s)		6.5		6.5	6.5	6.5	6.5	6.5		6.5	6.5	
Vehicle Extension (s)		4.5		4.5	4.5	4.5	1.5	4.5		1.5	4.5	
Lane Grp Cap (vph)		1527		42	1580	478	351	1904		365	1909	
v/s Ratio Prot		c0.27			0.24		c0.07	0.10		c0.10	c0.13	
v/s Ratio Perm				0.01		0.15						
v/c Ratio		0.86		0.02	0.75	0.47	0.66	0.27		0.88	0.35	
Uniform Delay, d1		58.2		42.7	55.4	49.6	77.7	38.8		78.9	39.2	
Progression Factor		0.05		1.00	1.00	1.00	0.99	0.94		1.00	1.00	
Incremental Delay, d2		2.8		0.4	2.3	1.2	3.6	0.4		21.1	0.5	
Delay (s)		5.7		43.1	57.7	50.9	80.2	37.0		100.0	39.7	
Level of Service		A		D	E	D	F	D		F	D	
Approach Delay (s)		5.7			56.2			50.3			59.5	
Approach LOS		A			E			D			E	

Intersection Summary			
HCM 2000 Control Delay	41.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	180.0	Sum of lost time (s)	23.5
Intersection Capacity Utilization	102.4%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

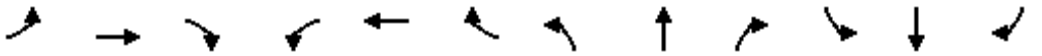
HCM Signalized Intersection Capacity Analysis
1: Hoxie Ave/I-605 Off-Ramp & Firestone Blvd

06/22/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	466	789	258	152	844	148	209	362	158	252	25	559
Future Volume (vph)	466	789	258	152	844	148	209	362	158	252	25	559
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	11	12	12	11	12	12
Total Lost time (s)	4.7	5.4	5.4	4.7	5.4	5.4	5.6	5.6		5.4	5.4	4.7
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	0.95		0.95	0.95	0.88
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.99	1.00	0.99		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.95		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	0.96	1.00
Satd. Flow (prot)	3273	5036	1558	3400	4988	1448	1728	3351		1658	1722	2718
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	0.96	1.00
Satd. Flow (perm)	3273	5036	1558	3400	4988	1448	1728	3351		1658	1722	2718
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	480	813	266	157	870	153	215	373	163	260	26	576
RTOR Reduction (vph)	0	0	142	0	0	98	0	45	0	0	0	78
Lane Group Flow (vph)	480	813	124	157	870	55	215	491	0	143	143	498
Confl. Peds. (#/hr)	2		3	3		2			1	1		
Confl. Bikes (#/hr)									8			4
Heavy Vehicles (%)	7%	3%	2%	3%	4%	10%	1%	2%	2%	0%	4%	4%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA		Split	NA	pm+ov
Protected Phases	5	2		1	6		3	3		4	4	5
Permitted Phases			2			6						4
Actuated Green, G (s)	21.7	51.2	51.2	10.1	39.6	39.6	15.0	15.0		12.6	12.6	34.3
Effective Green, g (s)	21.7	51.2	51.2	10.1	39.6	39.6	15.0	15.0		12.6	12.6	34.3
Actuated g/C Ratio	0.20	0.47	0.47	0.09	0.36	0.36	0.14	0.14		0.11	0.11	0.31
Clearance Time (s)	4.7	5.4	5.4	4.7	5.4	5.4	5.6	5.6		5.4	5.4	4.7
Vehicle Extension (s)	5.0	5.0	5.0	3.0	5.0	5.0	2.5	2.5		2.5	2.5	5.0
Lane Grp Cap (vph)	645	2344	725	312	1795	521	235	456		189	197	847
v/s Ratio Prot	c0.15	0.16		0.05	c0.17		0.12	c0.15		c0.09	0.08	0.12
v/s Ratio Perm			0.08			0.04						0.07
v/c Ratio	0.74	0.35	0.17	0.50	0.48	0.11	0.91	1.08		0.76	0.73	0.59
Uniform Delay, d1	41.5	18.7	17.1	47.6	27.3	23.4	46.9	47.5		47.2	47.0	31.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	5.6	0.4	0.5	1.3	0.9	0.4	36.2	64.4		15.1	11.8	1.6
Delay (s)	47.1	19.1	17.6	48.8	28.2	23.8	83.1	111.9		62.3	58.8	33.5
Level of Service	D	B	B	D	C	C	F	F		E	E	C
Approach Delay (s)		27.5			30.4			103.6			42.5	
Approach LOS		C			C			F			D	

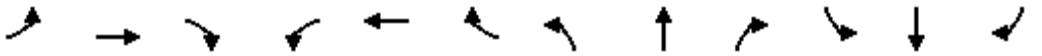
Intersection Summary			
HCM 2000 Control Delay	44.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	21.1
Intersection Capacity Utilization	85.6%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	307	654	121	90	717	204	166	839	67	142	296	211
Future Volume (vph)	307	654	121	90	717	204	166	839	67	142	296	211
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	10	12	12
Total Lost time (s)	5.0	6.5	5.0	5.0	6.5		5.0	6.5	6.5	5.0	6.5	6.5
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.99	1.00	0.99		1.00	1.00	0.98	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	4916	1561	3433	4717		1770	3362	1546	1652	3396	1527
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	4916	1561	3433	4717		1770	3362	1546	1652	3396	1527
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	313	667	123	92	732	208	169	856	68	145	302	215
RTOR Reduction (vph)	0	0	57	0	40	0	0	0	48	0	0	153
Lane Group Flow (vph)	313	667	66	92	900	0	169	856	20	145	302	62
Confl. Peds. (#/hr)	16		5	5		16	12		9	9		12
Confl. Bikes (#/hr)			2			4			2			2
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	1%	3%
Parking (#/hr)		0			0			0			0	
Turn Type	Prot	NA	pm+ov	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6	3	5	2		3	8		7	4	
Permitted Phases			6						8			4
Actuated Green, G (s)	13.2	41.2	55.3	7.1	35.1		14.1	35.3	35.3	13.4	34.6	34.6
Effective Green, g (s)	13.2	41.2	55.3	7.1	35.1		14.1	35.3	35.3	13.4	34.6	34.6
Actuated g/C Ratio	0.11	0.34	0.46	0.06	0.29		0.12	0.29	0.29	0.11	0.29	0.29
Clearance Time (s)	5.0	6.5	5.0	5.0	6.5		5.0	6.5	6.5	5.0	6.5	6.5
Vehicle Extension (s)	1.5	4.0	1.5	1.5	4.0		1.5	4.0	4.0	1.5	4.0	4.0
Lane Grp Cap (vph)	377	1687	719	203	1379		207	988	454	184	979	440
v/s Ratio Prot	c0.09	0.14	0.01	0.03	c0.19		c0.10	c0.25		0.09	0.09	
v/s Ratio Perm			0.03						0.01			0.04
v/c Ratio	0.83	0.40	0.09	0.45	0.65		0.82	0.87	0.04	0.79	0.31	0.14
Uniform Delay, d1	52.3	29.9	18.2	54.6	37.1		51.7	40.1	30.3	51.9	33.4	31.7
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	13.7	0.7	0.0	0.6	2.4		20.4	8.3	0.1	18.3	0.2	0.2
Delay (s)	66.0	30.6	18.2	55.2	39.5		72.1	48.5	30.3	70.2	33.6	31.9
Level of Service	E	C	B	E	D		E	D	C	E	C	C
Approach Delay (s)		39.3			40.9			51.0			41.1	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	43.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	23.0
Intersection Capacity Utilization	84.7%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	857	58	43	913	3	70	1	50	4	0	8
Future Volume (vph)	11	857	58	43	913	3	70	1	50	4	0	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	12	12	12	11	11	12	13	12
Total Lost time (s)	5.0	6.0		5.0	6.0			5.0	5.0		5.0	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00	1.00		1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	0.98		0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Frt	1.00	0.99		1.00	1.00			1.00	0.85		0.91	
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00		0.98	
Satd. Flow (prot)	1736	4868		1745	5184			1750	1528		1733	
Flt Permitted	0.95	1.00		0.95	1.00			0.72	1.00		0.88	
Satd. Flow (perm)	1736	4868		1745	5184			1322	1528		1542	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	12	912	62	46	971	3	74	1	53	4	0	9
RTOR Reduction (vph)	0	8	0	0	0	0	0	0	46	0	11	0
Lane Group Flow (vph)	12	966	0	46	974	0	0	75	7	0	2	0
Confl. Peds. (#/hr)	14		1	1		14			4	4		
Confl. Bikes (#/hr)									4			2
Heavy Vehicles (%)	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Prot	NA		Prot	NA		Perm	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8		8	4		
Actuated Green, G (s)	0.9	23.2		2.3	24.6			6.1	6.1		6.1	
Effective Green, g (s)	0.9	23.2		2.3	24.6			6.1	6.1		6.1	
Actuated g/C Ratio	0.02	0.49		0.05	0.52			0.13	0.13		0.13	
Clearance Time (s)	5.0	6.0		5.0	6.0			5.0	5.0		5.0	
Vehicle Extension (s)	2.0	2.5		2.0	2.5			2.0	2.0		2.0	
Lane Grp Cap (vph)	32	2372		84	2679			169	195		197	
v/s Ratio Prot	0.01	c0.20		c0.03	0.19							
v/s Ratio Perm								c0.06	0.00		0.00	
v/c Ratio	0.38	0.41		0.55	0.36			0.44	0.03		0.01	
Uniform Delay, d1	23.1	7.8		22.1	6.8			19.2	18.2		18.1	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	2.7	0.1		3.9	0.1			0.7	0.0		0.0	
Delay (s)	25.7	7.9		26.0	6.9			19.9	18.2		18.1	
Level of Service	C	A		C	A			B	B		B	
Approach Delay (s)		8.1			7.8			19.2			18.1	
Approach LOS		A			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	8.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	47.6	Sum of lost time (s)	16.0
Intersection Capacity Utilization	45.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	134	790	27	0	862	33	48	177	12	92	75	99
Future Volume (veh/h)	134	790	27	0	862	33	48	177	12	92	75	99
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1860	1900	0	1813	1900	1900	1882	1900	1900	1881	1845
Adj Flow Rate, veh/h	138	814	28	0	889	34	49	182	12	95	77	102
Adj No. of Lanes	1	3	0	0	3	0	1	1	0	1	1	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	2	2	0	5	5	0	1	1	0	1	3
Cap, veh/h	157	3717	128	0	3047	116	233	337	22	159	363	297
Arrive On Green	0.09	0.74	0.74	0.00	0.62	0.62	0.19	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	1810	5040	173	0	5054	187	1219	1744	115	1203	1881	1536
Grp Volume(v), veh/h	138	546	296	0	599	324	49	0	194	95	77	102
Grp Sat Flow(s),veh/h/ln	1810	1692	1828	0	1650	1778	1219	0	1859	1203	1881	1536
Q Serve(g_s), s	13.6	9.1	9.1	0.0	15.1	15.1	6.3	0.0	16.9	13.9	6.2	10.3
Cycle Q Clear(g_c), s	13.6	9.1	9.1	0.0	15.1	15.1	12.5	0.0	16.9	30.8	6.2	10.3
Prop In Lane	1.00		0.09	0.00		0.10	1.00		0.06	1.00		1.00
Lane Grp Cap(c), veh/h	157	2496	1348	0	2056	1108	233	0	359	159	363	297
V/C Ratio(X)	0.88	0.22	0.22	0.00	0.29	0.29	0.21	0.00	0.54	0.60	0.21	0.34
Avail Cap(c_a), veh/h	201	2496	1348	0	2056	1108	269	0	413	194	418	341
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.95	0.95	0.95	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	81.3	7.4	7.4	0.0	15.6	15.6	66.4	0.0	65.4	79.3	61.1	62.8
Incr Delay (d2), s/veh	23.6	0.2	0.4	0.0	0.4	0.7	0.4	0.0	1.3	3.5	0.3	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.8	4.3	4.7	0.0	6.9	7.6	2.2	0.0	8.9	4.8	3.3	4.5
LnGrp Delay(d),s/veh	104.8	7.6	7.8	0.0	16.0	16.3	66.8	0.0	66.7	82.9	61.4	63.5
LnGrp LOS	F	A	A		B	B	E		E	F	E	E
Approach Vol, veh/h		980			923			243			274	
Approach Delay, s/veh		21.3			16.1			66.7			69.6	
Approach LOS		C			B			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		8
Phs Duration (G+Y+Rc), s	20.6	118.7		40.7		139.3		40.7
Change Period (Y+Rc), s	5.0	6.5		6.0		6.5		6.0
Max Green Setting (Gmax), s	20.0	102.5		40.0		127.5		40.0
Max Q Clear Time (g_c+I1), s	15.6	17.1		18.9		11.1		32.8
Green Ext Time (p_c), s	0.0	35.3		2.3		38.4		1.4

Intersection Summary	
HCM 2010 Ctrl Delay	29.4
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	0	1057	412	7	1135	302	332	560	3	368	640	28
Future Volume (vph)	0	1057	412	7	1135	302	332	560	3	368	640	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.5		6.5	6.5	6.5	6.5	6.5		6.5	6.5	
Lane Util. Factor		0.91		1.00	0.91	1.00	0.97	0.91		0.97	0.91	
Frpb, ped/bikes		0.99		1.00	1.00	0.96	1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt		0.96		1.00	1.00	0.85	1.00	1.00		1.00	0.99	
Flt Protected		1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		4778		1805	5085	1538	3400	5081		3467	5101	
Flt Permitted		1.00		0.07	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		4778		135	5085	1538	3400	5081		3467	5101	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	1101	429	7	1182	315	346	583	3	383	667	29
RTOR Reduction (vph)	0	39	0	0	0	85	0	0	0	0	3	0
Lane Group Flow (vph)	0	1491	0	7	1182	230	346	586	0	383	693	0
Confl. Peds. (#/hr)	7		8	8		7	5		10	10		5
Confl. Bikes (#/hr)			2						5			10
Heavy Vehicles (%)	0%	3%	2%	0%	2%	1%	3%	2%	0%	1%	1%	0%
Turn Type		NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			4		1	6		5	2	
Permitted Phases				4		4						
Actuated Green, G (s)		56.5		56.5	56.5	56.5	22.1	68.8		20.5	67.2	
Effective Green, g (s)		56.5		56.5	56.5	56.5	22.1	68.8		20.5	67.2	
Actuated g/C Ratio		0.31		0.31	0.31	0.31	0.12	0.38		0.11	0.37	
Clearance Time (s)		6.5		6.5	6.5	6.5	6.5	6.5		6.5	6.5	
Vehicle Extension (s)		4.5		4.5	4.5	4.5	1.5	4.5		1.5	4.5	
Lane Grp Cap (vph)		1499		42	1596	482	417	1942		394	1904	
v/s Ratio Prot		c0.31			0.23		c0.10	0.12		c0.11	c0.14	
v/s Ratio Perm				0.05		0.15						
v/c Ratio		0.99		0.17	0.74	0.48	0.83	0.30		0.97	0.36	
Uniform Delay, d1		61.6		44.7	55.2	49.8	77.1	38.8		79.5	40.9	
Progression Factor		0.08		1.00	1.00	1.00	0.97	0.92		1.00	1.00	
Incremental Delay, d2		12.5		3.2	2.1	1.3	12.0	0.4		37.6	0.5	
Delay (s)		17.6		47.9	57.3	51.1	86.7	35.9		117.1	41.4	
Level of Service		B		D	E	D	F	D		F	D	
Approach Delay (s)		17.6			56.0			54.8			68.3	
Approach LOS		B			E			D			E	

Intersection Summary			
HCM 2000 Control Delay	46.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	180.0	Sum of lost time (s)	23.5
Intersection Capacity Utilization	105.3%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

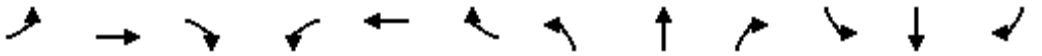
Appendix F

LOS Worksheets – 2040 Plus Project Conditions

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	432	861	133	100	1200	334	124	358	108	174	27	1338
Future Volume (vph)	432	861	133	100	1200	334	124	358	108	174	27	1338
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	11	12	12	11	12	12
Total Lost time (s)	4.7	5.4	5.4	4.7	5.4	5.4	5.6	5.6		5.4	5.4	4.7
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	0.95		0.95	0.95	0.88
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.99	1.00	1.00		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	0.96	1.00
Satd. Flow (prot)	3183	5036	1528	3303	4988	1503	1694	3358		1641	1706	2770
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	0.96	1.00
Satd. Flow (perm)	3183	5036	1528	3303	4988	1503	1694	3358		1641	1706	2770
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	445	888	137	103	1237	344	128	369	111	179	28	1379
RTOR Reduction (vph)	0	0	67	0	0	205	0	26	0	0	0	77
Lane Group Flow (vph)	445	888	70	103	1237	139	128	454	0	102	105	1302
Confl. Peds. (#/hr)	2		3	3		2			1	1		
Confl. Bikes (#/hr)												7
Heavy Vehicles (%)	10%	3%	4%	6%	4%	6%	3%	3%	5%	1%	5%	2%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA		Split	NA	pm+ov
Protected Phases	5	2		1	6		3	3		4	4	5
Permitted Phases			2			6						4
Actuated Green, G (s)	21.0	56.4	56.4	8.9	44.3	44.3	12.0	12.0		11.6	11.6	32.6
Effective Green, g (s)	21.0	56.4	56.4	8.9	44.3	44.3	12.0	12.0		11.6	11.6	32.6
Actuated g/C Ratio	0.19	0.51	0.51	0.08	0.40	0.40	0.11	0.11		0.11	0.11	0.30
Clearance Time (s)	4.7	5.4	5.4	4.7	5.4	5.4	5.6	5.6		5.4	5.4	4.7
Vehicle Extension (s)	5.0	5.0	5.0	3.0	5.0	5.0	2.5	2.5		2.5	2.5	5.0
Lane Grp Cap (vph)	607	2582	783	267	2008	605	184	366		173	179	820
v/s Ratio Prot	0.14	0.18		0.03	c0.25		0.08	c0.14		0.06	0.06	c0.30
v/s Ratio Perm			0.05			0.09						0.17
v/c Ratio	0.73	0.34	0.09	0.39	0.62	0.23	0.70	1.24		0.59	0.59	1.59
Uniform Delay, d1	41.9	15.9	13.7	48.0	26.1	21.6	47.2	49.0		46.9	46.9	38.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	5.5	0.4	0.2	0.9	1.4	0.9	10.0	129.6		4.2	4.0	270.5
Delay (s)	47.4	16.2	13.9	48.9	27.5	22.5	57.3	178.6		51.1	50.9	309.2
Level of Service	D	B	B	D	C	C	E	F		D	D	F
Approach Delay (s)		25.4			27.8			153.1			275.5	
Approach LOS		C			C			F			F	

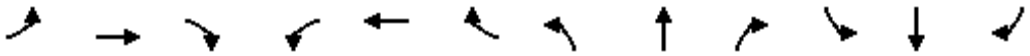
Intersection Summary			
HCM 2000 Control Delay	114.8	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	21.1
Intersection Capacity Utilization	105.3%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	265	631	169	103	1002	324	243	887	37	193	319	330
Future Volume (vph)	265	631	169	103	1002	324	243	887	37	193	319	330
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	10	12	12
Total Lost time (s)	5.0	6.5	5.0	5.0	6.5		5.0	6.5	6.5	5.0	6.5	6.5
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.99	1.00	0.99		1.00	1.00	0.98	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3502	4775	1522	3433	4642		1752	3362	1540	1652	3396	1538
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3502	4775	1522	3433	4642		1752	3362	1540	1652	3396	1538
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	288	686	184	112	1089	352	264	964	40	210	347	359
RTOR Reduction (vph)	0	0	86	0	48	0	0	0	28	0	0	204
Lane Group Flow (vph)	288	686	98	112	1393	0	264	964	12	210	347	155
Confl. Peds. (#/hr)	8		2	2		8	12		5	5		12
Confl. Bikes (#/hr)			2									5
Heavy Vehicles (%)	0%	5%	5%	2%	4%	2%	3%	2%	3%	2%	1%	2%
Parking (#/hr)		0			0			0			0	
Turn Type	Prot	NA	pm+ov	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6	3	5	2		3	8		7	4	
Permitted Phases			6						8			4
Actuated Green, G (s)	12.7	37.0	55.0	7.8	32.1		18.0	37.2	37.2	15.0	34.2	34.2
Effective Green, g (s)	12.7	37.0	55.0	7.8	32.1		18.0	37.2	37.2	15.0	34.2	34.2
Actuated g/C Ratio	0.11	0.31	0.46	0.06	0.27		0.15	0.31	0.31	0.12	0.29	0.29
Clearance Time (s)	5.0	6.5	5.0	5.0	6.5		5.0	6.5	6.5	5.0	6.5	6.5
Vehicle Extension (s)	1.5	4.0	1.5	1.5	4.0		1.5	4.0	4.0	1.5	4.0	4.0
Lane Grp Cap (vph)	370	1472	697	223	1241		262	1042	477	206	967	438
v/s Ratio Prot	c0.08	c0.14	0.02	0.03	c0.30		c0.15	c0.29		0.13	0.10	
v/s Ratio Perm			0.04						0.01			0.10
v/c Ratio	0.78	0.47	0.14	0.50	1.12		1.01	0.93	0.03	1.02	0.36	0.35
Uniform Delay, d1	52.3	33.5	18.8	54.2	44.0		51.0	40.1	28.8	52.5	34.2	34.1
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	9.1	1.1	0.0	0.6	66.3		57.6	13.5	0.0	67.8	0.3	0.7
Delay (s)	61.4	34.6	18.9	54.9	110.3		108.6	53.6	28.8	120.3	34.5	34.8
Level of Service	E	C	B	D	F		F	D	C	F	C	C
Approach Delay (s)		38.7			106.3			64.2			54.3	
Approach LOS		D			F			E			D	

Intersection Summary			
HCM 2000 Control Delay	69.7	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	23.0
Intersection Capacity Utilization	88.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	853	17	19	1343	1	14	0	9	1	0	4
Future Volume (vph)	12	853	17	19	1343	1	14	0	9	1	0	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	12	12	12	11	11	12	13	12
Total Lost time (s)	5.0	6.0		5.0	6.0			5.0	5.0		5.0	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00	1.00		1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	0.99		0.93	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Frt	1.00	1.00		1.00	1.00			1.00	0.85		0.89	
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00		0.99	
Satd. Flow (prot)	1743	4857		1745	4987			1479	1542		1611	
Flt Permitted	0.95	1.00		0.95	1.00			1.00	1.00		1.00	
Satd. Flow (perm)	1743	4857		1745	4987			1556	1542		1627	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	13	907	18	20	1429	1	15	0	10	1	0	4
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	10	0	5	0
Lane Group Flow (vph)	13	924	0	20	1430	0	0	15	0	0	0	0
Confl. Peds. (#/hr)	5					5			1			1
Confl. Bikes (#/hr)												6
Heavy Vehicles (%)	0%	3%	0%	0%	4%	0%	18%	0%	0%	0%	0%	0%
Turn Type	Prot	NA		Prot	NA		Perm	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8		8	4		
Actuated Green, G (s)	0.8	30.3		0.9	30.4			1.0	1.0		1.0	
Effective Green, g (s)	0.8	30.3		0.9	30.4			1.0	1.0		1.0	
Actuated g/C Ratio	0.02	0.63		0.02	0.63			0.02	0.02		0.02	
Clearance Time (s)	5.0	6.0		5.0	6.0			5.0	5.0		5.0	
Vehicle Extension (s)	2.0	2.5		2.0	2.5			2.0	2.0		2.0	
Lane Grp Cap (vph)	28	3053		32	3145			32	31		33	
v/s Ratio Prot	0.01	0.19		c0.01	c0.29							
v/s Ratio Perm								c0.01	0.00		0.00	
v/c Ratio	0.46	0.30		0.62	0.45			0.47	0.01		0.00	
Uniform Delay, d1	23.5	4.1		23.5	4.6			23.3	23.1		23.1	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	4.4	0.0		24.3	0.1			3.9	0.0		0.0	
Delay (s)	27.9	4.1		47.7	4.7			27.2	23.1		23.1	
Level of Service	C	A		D	A			C	C		C	
Approach Delay (s)		4.5			5.3			25.6			23.1	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	5.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	48.2	Sum of lost time (s)	16.0
Intersection Capacity Utilization	40.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	794	16	0	1123	24	81	98	6	137	139	164
Future Volume (veh/h)	65	794	16	0	1123	24	81	98	6	137	139	164
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	0.99		0.99	0.99		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1840	1900	0	1811	1900	1900	1848	1900	1900	1900	1863
Adj Flow Rate, veh/h	68	827	17	0	1170	25	84	102	6	143	145	171
Adj No. of Lanes	1	3	0	0	3	0	1	1	0	1	1	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	3	3	0	5	5	0	3	3	0	0	2
Cap, veh/h	84	3765	77	0	3328	71	169	323	19	217	356	288
Arrive On Green	0.05	0.74	0.74	0.00	0.67	0.67	0.19	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	1774	5065	104	0	5145	106	1075	1727	102	1297	1900	1538
Grp Volume(v), veh/h	68	547	297	0	774	421	84	0	108	143	145	171
Grp Sat Flow(s),veh/h/ln	1774	1675	1819	0	1648	1792	1075	0	1829	1297	1900	1538
Q Serve(g_s), s	6.8	9.0	9.0	0.0	18.3	18.3	13.4	0.0	9.2	19.3	12.1	18.3
Cycle Q Clear(g_c), s	6.8	9.0	9.0	0.0	18.3	18.3	25.5	0.0	9.2	28.5	12.1	18.3
Prop In Lane	1.00		0.06	0.00		0.06	1.00		0.06	1.00		1.00
Lane Grp Cap(c), veh/h	84	2490	1352	0	2202	1197	169	0	342	217	356	288
V/C Ratio(X)	0.81	0.22	0.22	0.00	0.35	0.35	0.50	0.00	0.32	0.66	0.41	0.59
Avail Cap(c_a), veh/h	197	2490	1352	0	2202	1197	207	0	406	262	422	342
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.99	0.99	0.99	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	84.9	7.1	7.1	0.0	13.0	13.0	75.6	0.0	63.2	75.5	64.4	66.9
Incr Delay (d2), s/veh	6.5	0.2	0.4	0.0	0.4	0.8	2.3	0.0	0.5	4.5	0.8	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	4.2	4.7	0.0	8.4	9.3	4.1	0.0	4.7	7.2	6.4	8.0
LnGrp Delay(d),s/veh	91.4	7.3	7.5	0.0	13.4	13.8	77.9	0.0	63.7	80.0	65.1	68.9
LnGrp LOS	F	A	A		B	B	E		E	F	E	E
Approach Vol, veh/h		912			1195			192			459	
Approach Delay, s/veh		13.6			13.5			69.9			71.2	
Approach LOS		B			B			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		8
Phs Duration (G+Y+Rc), s	13.6	126.7		39.7		140.3		39.7
Change Period (Y+Rc), s	5.0	6.5		6.0		6.5		6.0
Max Green Setting (Gmax), s	20.0	102.5		40.0		127.5		40.0
Max Q Clear Time (g_c+I1), s	8.8	20.3		27.5		11.0		30.5
Green Ext Time (p_c), s	0.0	44.7		2.3		51.9		2.0

Intersection Summary	
HCM 2010 Ctrl Delay	27.1
HCM 2010 LOS	C

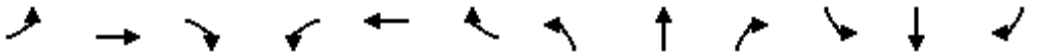
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	0	1258	410	1	1459	380	286	640	1	398	800	16
Future Volume (vph)	0	1258	410	1	1459	380	286	640	1	398	800	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.5		6.5	6.5	6.5	6.5	6.5		6.5	6.5	
Lane Util. Factor		0.91		1.00	0.91	1.00	0.97	0.91		0.97	0.91	
Frpb, ped/bikes		0.99		1.00	1.00	0.98	1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt		0.96		1.00	1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected		1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		4865		1805	5036	1525	3400	5035		3303	4954	
Flt Permitted		1.00		0.07	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		4865		135	5036	1525	3400	5035		3303	4954	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	0	1271	414	1	1474	384	289	646	1	402	808	16
RTOR Reduction (vph)	0	33	0	0	0	85	0	0	0	0	1	0
Lane Group Flow (vph)	0	1652	0	1	1474	299	289	647	0	402	823	0
Confl. Peds. (#/hr)	1		4	4		1	2		3	3		2
Confl. Bikes (#/hr)						3			4			8
Heavy Vehicles (%)	0%	2%	2%	0%	3%	4%	3%	3%	0%	6%	4%	23%
Turn Type		NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			4		1	6		5	2	
Permitted Phases				4		4						
Actuated Green, G (s)		56.5		56.5	56.5	56.5	20.1	67.5		20.5	67.9	
Effective Green, g (s)		56.5		56.5	56.5	56.5	20.1	67.5		20.5	67.9	
Actuated g/C Ratio		0.31		0.31	0.31	0.31	0.11	0.38		0.11	0.38	
Clearance Time (s)		6.5		6.5	6.5	6.5	6.5	6.5		6.5	6.5	
Vehicle Extension (s)		4.5		4.5	4.5	4.5	1.5	4.5		1.5	4.5	
Lane Grp Cap (vph)		1527		42	1580	478	379	1888		376	1868	
v/s Ratio Prot		c0.34			0.29		c0.09	0.13		c0.12	c0.17	
v/s Ratio Perm				0.01		0.20						
v/c Ratio		1.08		0.02	0.93	0.63	0.76	0.34		1.07	0.44	
Uniform Delay, d1		61.8		42.7	59.9	52.7	77.6	40.3		79.8	41.9	
Progression Factor		0.09		1.00	1.00	1.00	0.96	0.90		1.00	1.00	
Incremental Delay, d2		38.2		0.4	10.7	3.2	7.8	0.5		66.0	0.8	
Delay (s)		43.9		43.1	70.6	55.9	82.0	36.6		145.8	42.6	
Level of Service		D		D	E	E	F	D		F	D	
Approach Delay (s)		43.9			67.6			50.7			76.4	
Approach LOS		D			E			D			E	

Intersection Summary			
HCM 2000 Control Delay	59.7	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	180.0	Sum of lost time (s)	23.5
Intersection Capacity Utilization	109.0%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	580	982	321	189	1051	184	260	451	197	314	31	696
Future Volume (vph)	580	982	321	189	1051	184	260	451	197	314	31	696
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	11	12	12	11	12	12
Total Lost time (s)	4.7	5.4	5.4	4.7	5.4	5.4	5.6	5.6		5.4	5.4	4.7
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	0.95		0.95	0.95	0.88
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.99	1.00	0.99		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.95		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	0.96	1.00
Satd. Flow (prot)	3273	5036	1558	3400	4988	1448	1728	3351		1658	1722	2718
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	0.96	1.00
Satd. Flow (perm)	3273	5036	1558	3400	4988	1448	1728	3351		1658	1722	2718
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	598	1012	331	195	1084	190	268	465	203	324	32	718
RTOR Reduction (vph)	0	0	182	0	0	124	0	45	0	0	0	54
Lane Group Flow (vph)	598	1012	149	195	1084	66	268	623	0	178	178	664
Confl. Peds. (#/hr)	2		3	3		2			1	1		
Confl. Bikes (#/hr)									8			4
Heavy Vehicles (%)	7%	3%	2%	3%	4%	10%	1%	2%	2%	0%	4%	4%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA		Split	NA	pm+ov
Protected Phases	5	2		1	6		3	3		4	4	5
Permitted Phases			2			6						4
Actuated Green, G (s)	22.0	49.5	49.5	10.9	38.4	38.4	15.0	15.0		13.5	13.5	35.5
Effective Green, g (s)	22.0	49.5	49.5	10.9	38.4	38.4	15.0	15.0		13.5	13.5	35.5
Actuated g/C Ratio	0.20	0.45	0.45	0.10	0.35	0.35	0.14	0.14		0.12	0.12	0.32
Clearance Time (s)	4.7	5.4	5.4	4.7	5.4	5.4	5.6	5.6		5.4	5.4	4.7
Vehicle Extension (s)	5.0	5.0	5.0	3.0	5.0	5.0	2.5	2.5		2.5	2.5	5.0
Lane Grp Cap (vph)	654	2266	701	336	1741	505	235	456		203	211	877
v/s Ratio Prot	c0.18	0.20		0.06	c0.22		0.16	c0.19		c0.11	0.10	0.15
v/s Ratio Perm			0.10			0.05						0.09
v/c Ratio	0.91	0.45	0.21	0.58	0.62	0.13	1.14	1.37		0.88	0.84	0.76
Uniform Delay, d1	43.1	20.8	18.4	47.4	29.8	24.4	47.5	47.5		47.4	47.2	33.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	18.2	0.6	0.7	2.5	1.7	0.5	101.8	178.5		31.6	24.9	4.5
Delay (s)	61.3	21.5	19.1	49.9	31.5	25.0	149.3	226.0		79.0	72.1	37.9
Level of Service	E	C	B	D	C	C	F	F		E	E	D
Approach Delay (s)		33.3			33.1			204.0			50.4	
Approach LOS		C			C			F			D	

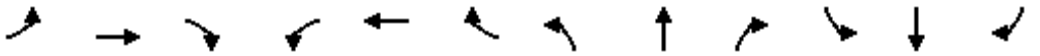
Intersection Summary			
HCM 2000 Control Delay	66.1	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	21.1
Intersection Capacity Utilization	94.3%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	382	814	151	112	892	254	207	1044	83	177	368	263
Future Volume (vph)	382	814	151	112	892	254	207	1044	83	177	368	263
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	10	12	12
Total Lost time (s)	5.0	6.5	5.0	5.0	6.5		5.0	6.5	6.5	5.0	6.5	6.5
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.99	1.00	0.99		1.00	1.00	0.98	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	4916	1562	3433	4717		1770	3362	1546	1652	3396	1527
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	4916	1562	3433	4717		1770	3362	1546	1652	3396	1527
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	390	831	154	114	910	259	211	1065	85	181	376	268
RTOR Reduction (vph)	0	0	59	0	42	0	0	0	59	0	0	188
Lane Group Flow (vph)	390	831	95	114	1127	0	211	1065	26	181	376	80
Confl. Peds. (#/hr)	16		5	5		16	12		9	9		12
Confl. Bikes (#/hr)			2			4			2			2
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	1%	3%
Parking (#/hr)		0			0			0			0	
Turn Type	Prot	NA	pm+ov	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6	3	5	2		3	8		7	4	
Permitted Phases			6						8			4
Actuated Green, G (s)	14.0	37.6	53.1	7.9	31.5		15.5	36.5	36.5	15.0	36.0	36.0
Effective Green, g (s)	14.0	37.6	53.1	7.9	31.5		15.5	36.5	36.5	15.0	36.0	36.0
Actuated g/C Ratio	0.12	0.31	0.44	0.07	0.26		0.13	0.30	0.30	0.12	0.30	0.30
Clearance Time (s)	5.0	6.5	5.0	5.0	6.5		5.0	6.5	6.5	5.0	6.5	6.5
Vehicle Extension (s)	1.5	4.0	1.5	1.5	4.0		1.5	4.0	4.0	1.5	4.0	4.0
Lane Grp Cap (vph)	400	1540	691	226	1238		228	1022	470	206	1018	458
v/s Ratio Prot	c0.11	0.17	0.02	0.03	c0.24		c0.12	c0.32		0.11	0.11	
v/s Ratio Perm			0.04						0.02			0.05
v/c Ratio	0.97	0.54	0.14	0.50	0.91		0.93	1.04	0.06	0.88	0.37	0.18
Uniform Delay, d1	52.8	34.0	19.9	54.2	42.9		51.7	41.8	29.5	51.6	33.1	31.0
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	38.0	1.4	0.0	0.6	11.5		38.9	39.7	0.1	30.9	0.3	0.3
Delay (s)	90.8	35.4	19.9	54.8	54.4		90.5	81.5	29.6	82.5	33.4	31.3
Level of Service	F	D	B	D	D		F	F	C	F	C	C
Approach Delay (s)		49.4			54.4			79.6			43.5	
Approach LOS		D			D			E			D	

Intersection Summary			
HCM 2000 Control Delay	58.2	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	23.0
Intersection Capacity Utilization	93.7%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	1067	72	54	1136	4	87	1	62	5	0	10
Future Volume (vph)	14	1067	72	54	1136	4	87	1	62	5	0	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	12	12	12	11	11	12	13	12
Total Lost time (s)	5.0	6.0		5.0	6.0			5.0	5.0		5.0	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00	1.00		1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	0.98		0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Frt	1.00	0.99		1.00	1.00			1.00	0.85		0.91	
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00		0.98	
Satd. Flow (prot)	1738	4868		1745	5184			1750	1528		1734	
Flt Permitted	0.95	1.00		0.95	1.00			0.72	1.00		0.88	
Satd. Flow (perm)	1738	4868		1745	5184			1317	1528		1549	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	15	1135	77	57	1209	4	93	1	66	5	0	11
RTOR Reduction (vph)	0	7	0	0	0	0	0	0	57	0	14	0
Lane Group Flow (vph)	15	1205	0	57	1213	0	0	94	9	0	2	0
Confl. Peds. (#/hr)	14		1	1		14			4	4		
Confl. Bikes (#/hr)									4			2
Heavy Vehicles (%)	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Prot	NA		Prot	NA		Perm	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8		8	4		
Actuated Green, G (s)	0.9	27.9		3.9	30.9			7.1	7.1		7.1	
Effective Green, g (s)	0.9	27.9		3.9	30.9			7.1	7.1		7.1	
Actuated g/C Ratio	0.02	0.51		0.07	0.56			0.13	0.13		0.13	
Clearance Time (s)	5.0	6.0		5.0	6.0			5.0	5.0		5.0	
Vehicle Extension (s)	2.0	2.5		2.0	2.5			2.0	2.0		2.0	
Lane Grp Cap (vph)	28	2473		123	2917			170	197		200	
v/s Ratio Prot	0.01	c0.25		c0.03	c0.23							
v/s Ratio Perm								c0.07	0.01		0.00	
v/c Ratio	0.54	0.49		0.46	0.42			0.55	0.04		0.01	
Uniform Delay, d1	26.8	8.8		24.5	6.8			22.4	20.9		20.8	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	9.5	0.1		1.0	0.1			2.2	0.0		0.0	
Delay (s)	36.3	8.9		25.5	6.9			24.6	21.0		20.8	
Level of Service	D	A		C	A			C	C		C	
Approach Delay (s)		9.3			7.8			23.1			20.8	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	9.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	54.9	Sum of lost time (s)	16.0
Intersection Capacity Utilization	51.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	167	983	34	0	1073	41	60	220	15	115	93	123
Future Volume (veh/h)	167	983	34	0	1073	41	60	220	15	115	93	123
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1860	1900	0	1813	1900	1900	1882	1900	1900	1881	1845
Adj Flow Rate, veh/h	172	1013	35	0	1106	42	62	227	15	119	96	127
Adj No. of Lanes	1	3	0	0	3	0	1	1	0	1	1	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	2	2	0	5	5	0	1	1	0	1	3
Cap, veh/h	191	3569	123	0	2813	107	251	388	26	162	418	342
Arrive On Green	0.11	0.71	0.71	0.00	0.58	0.58	0.22	0.22	0.22	0.22	0.22	0.22
Sat Flow, veh/h	1810	5039	174	0	5055	186	1172	1744	115	1153	1881	1538
Grp Volume(v), veh/h	172	680	368	0	746	402	62	0	242	119	96	127
Grp Sat Flow(s),veh/h/ln	1810	1692	1828	0	1650	1778	1172	0	1859	1153	1881	1538
Q Serve(g_s), s	16.9	13.2	13.2	0.0	22.3	22.4	8.2	0.0	20.9	18.5	7.5	12.6
Cycle Q Clear(g_c), s	16.9	13.2	13.2	0.0	22.3	22.4	15.8	0.0	20.9	39.5	7.5	12.6
Prop In Lane	1.00		0.10	0.00		0.10	1.00		0.06	1.00		1.00
Lane Grp Cap(c), veh/h	191	2397	1295	0	1897	1023	251	0	413	162	418	342
V/C Ratio(X)	0.90	0.28	0.28	0.00	0.39	0.39	0.25	0.00	0.59	0.73	0.23	0.37
Avail Cap(c_a), veh/h	251	2397	1295	0	1897	1023	251	0	413	162	418	342
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.91	0.91	0.91	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	79.6	9.6	9.6	0.0	21.0	21.0	63.8	0.0	62.6	80.2	57.4	59.3
Incr Delay (d2), s/veh	22.0	0.3	0.5	0.0	0.6	1.1	0.5	0.0	2.1	15.8	0.3	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.6	6.2	6.8	0.0	10.3	11.3	2.7	0.0	11.0	6.6	4.0	5.4
LnGrp Delay(d),s/veh	101.5	9.9	10.1	0.0	21.6	22.1	64.3	0.0	64.7	96.0	57.6	60.0
LnGrp LOS	F	A	B		C	C	E		E	F	E	E
Approach Vol, veh/h		1220			1148			304			342	
Approach Delay, s/veh		22.8			21.8			64.6			71.9	
Approach LOS		C			C			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		8
Phs Duration (G+Y+Rc), s	24.0	110.0		46.0		134.0		46.0
Change Period (Y+Rc), s	5.0	6.5		6.0		6.5		6.0
Max Green Setting (Gmax), s	25.0	97.5		40.0		127.5		40.0
Max Q Clear Time (g_c+I1), s	18.9	24.4		22.9		15.2		41.5
Green Ext Time (p_c), s	0.1	46.7		2.8		58.8		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	32.2
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	0	1316	513	9	1413	376	413	697	4	458	797	35
Future Volume (vph)	0	1316	513	9	1413	376	413	697	4	458	797	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.5		6.5	6.5	6.5	6.5	6.5		6.5	6.5	
Lane Util. Factor		0.91		1.00	0.91	1.00	0.97	0.91		0.97	0.91	
Frpb, ped/bikes		0.99		1.00	1.00	0.96	1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt		0.96		1.00	1.00	0.85	1.00	1.00		1.00	0.99	
Flt Protected		1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		4778		1805	5085	1538	3400	5081		3467	5101	
Flt Permitted		1.00		0.07	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		4778		135	5085	1538	3400	5081		3467	5101	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	1371	534	9	1472	392	430	726	4	477	830	36
RTOR Reduction (vph)	0	39	0	0	0	85	0	0	0	0	3	0
Lane Group Flow (vph)	0	1866	0	9	1472	307	430	730	0	477	863	0
Confl. Peds. (#/hr)	7		8	8		7	5		10	10		5
Confl. Bikes (#/hr)			2						5			10
Heavy Vehicles (%)	0%	3%	2%	0%	2%	1%	3%	2%	0%	1%	1%	0%
Turn Type		NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			4		1	6		5	2	
Permitted Phases				4		4						
Actuated Green, G (s)		56.5		56.5	56.5	56.5	24.6	68.4		20.5	64.3	
Effective Green, g (s)		56.5		56.5	56.5	56.5	24.6	68.4		20.5	64.3	
Actuated g/C Ratio		0.31		0.31	0.31	0.31	0.14	0.38		0.11	0.36	
Clearance Time (s)		6.5		6.5	6.5	6.5	6.5	6.5		6.5	6.5	
Vehicle Extension (s)		4.5		4.5	4.5	4.5	1.5	4.5		1.5	4.5	
Lane Grp Cap (vph)		1499		42	1596	482	464	1930		394	1822	
v/s Ratio Prot		c0.39			0.29		c0.13	0.14		c0.14	c0.17	
v/s Ratio Perm				0.07		0.20						
v/c Ratio		1.24		0.21	0.92	0.64	0.93	0.38		1.21	0.47	
Uniform Delay, d1		61.8		45.4	59.6	53.0	76.8	40.4		79.8	44.8	
Progression Factor		0.10		1.00	1.00	1.00	0.93	0.84		1.00	1.00	
Incremental Delay, d2		110.7		4.4	9.5	3.4	23.4	0.5		116.2	0.9	
Delay (s)		117.1		49.8	69.1	56.4	94.5	34.6		196.0	45.6	
Level of Service		F		D	E	E	F	C		F	D	
Approach Delay (s)		117.1			66.4			56.8			99.0	
Approach LOS		F			E			E			F	

Intersection Summary			
HCM 2000 Control Delay	87.0	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	180.0	Sum of lost time (s)	23.5
Intersection Capacity Utilization	112.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Appendix G
Crash Data

General Information

Analyst	Lindsey Willman	Analysis Name	Existing 2019	Date of Analysis	3/20/2019
Agency/Company	Kittelson & Associates, Inc.	Project Number/PIN #	23420	Comments	
State	California	Site(s)			
Region/Area/City/County	Norwalk	Jurisdiction	City of Norwalk		

Input Data

Segment Name	Hoxie Ave to Studebaker Rd
Road Type	Four-lane divided arterials (4D)
Length of segment, L (mi)	0.250
Analysis Year	2019
AADT (veh/day)	29,677
Type of on-street parking	Parallel
Land use	Commercial/Industrial/ Institutional
Curb length with parking	
Median width (ft)	20-ft (15-ft to 24-ft)
Lighting	Yes
Automated speed enforcement	No
Major commercial driveways	2
Minor commercial driveways	4
Major industrial driveways	0
Minor industrial driveways	0
Major residential driveways	1
Minor residential driveways	1
Other driveways	0
Speed category	>30mph
Roadside fixed object density (fixed objects/ mi)	12
Offset to roadside fixed objects (ft)	10
Calibration Factor, Cr	1.000

Summary Results

	Fatal and Injury (FI)	Property Damage Only (PDO)	Total
Predicted Annual Avg Crash Frequency	0.47	1.20	1.67
Crash rate (crashes/mi/year)	1.9	4.8	6.7

Crash Severity Distribution

Multiple-Vehicle	Fatal and Injury (FI)	Property Damage Only (PDO)	Total
Rear-end collisions	0.272	0.577	0.849
Head-on collisions	0.007	0.006	0.013
Angle collisions	0.013	0.031	0.044
Sideswipe, same direction	0.016	0.194	0.211
Sideswipe, opposite direction	0.003	0.001	0.004
Driveway-related collisions	0.072	0.181	0.252
Other multiple-vehicle collision	0.016	0.062	0.078
Subtotal	0.399	1.052	1.450
Single-Vehicle			
Collision with animal	0.000	0.009	0.010
Collision with fixed object	0.017	0.122	0.139
Collision with other object	0.001	0.002	0.003
Other single-vehicle collision	0.016	0.016	0.032
Collision with pedestrian	0.031		0.031
Collision with bicycle	0.008		0.008
Subtotal	0.073	0.150	0.223
Total	0.471	1.202	1.673

General Information

Analyst	Lindsey Willman	Analysis Name	Existing 2019	Date of Analysis	3/20/2019
Agency/Company	Kittelson & Associates, Inc.	Project Number/PIN #	23420	Comments	
State	California	Site(s)			
Region/Area/City/County	Norwalk	Jurisdiction	City of Norwalk		

Input Data

Segment Name	Studebaker Rd to Stater Bros Markets Dwy
Road Type	Five-lane arterials (5T)
Length of segment, L (mi)	0.440
Analysis Year	2019
AADT (veh/day)	25,807
Type of on-street parking	None
Land use	Commercial/Industrial/ Institutional
Curb length with parking	
Median width (ft)	20-ft (15-ft to 24-ft)
Lighting	Yes
Automated speed enforcement	No
Major commercial driveways	3
Minor commercial driveways	1
Major industrial driveways	1
Minor industrial driveways	0
Major residential driveways	0
Minor residential driveways	0
Other driveways	0
Speed category	>30mph
Roadside fixed object density (fixed objects/ mi)	19
Offset to roadside fixed objects (ft)	6
Calibration Factor, Cr	1.000

Summary Results

	Fatal and Injury (FI)	Property Damage Only (PDO)	Total
Predicted Annual Avg Crash Frequency	1.75	4.36	6.11
Crash rate (crashes/mi/year)	4.0	9.9	13.9

Crash Severity Distribution

Multiple-Vehicle	Fatal and Injury (FI)	Property Damage Only (PDO)	Total
Rear-end collisions	0.850	1.793	2.644
Head-on collisions	0.021	0.011	0.032
Angle collisions	0.050	0.163	0.213
Sideswipe, same direction	0.061	0.683	0.744
Sideswipe, opposite direction	0.004	0.025	0.029
Driveway-related collisions	0.356	0.967	1.323
Other multiple-vehicle collision	0.018	0.080	0.098
Subtotal	1.361	3.721	5.082
Single-Vehicle			
Collision with animal	0.003	0.031	0.034
Collision with fixed object	0.073	0.490	0.563
Collision with other object	0.001	0.039	0.040
Other single-vehicle collision	0.107	0.078	0.185
Collision with pedestrian	0.136		0.136
Collision with bicycle	0.071		0.071
Subtotal	0.391	0.638	1.029
Total	1.752	4.359	6.112

General Information

Analyst	Lindsey Willman	Analysis Name	Existing 2019	Date of Analysis	3/20/2019
Agency/Company	Kittelson & Associates, Inc.	Project Number/PIN #	23420	Comments	
State	California	Site(s)			
Region/Area/City/County	Norwalk	Jurisdiction	City of Norwalk		

Input Data

Segment Name	Stater Bros Markets Dwy to Orr and Day Rd
Road Type	Five-lane arterials (5T)
Length of segment, L (mi)	0.077
Analysis Year	2019
AADT (veh/day)	25,533
Type of on-street parking	None
Land use	Commercial/Industrial/ Institutional
Curb length with parking	
Median width (ft)	10-ft (1-ft to 14-ft)
Lighting	Yes
Automated speed enforcement	No
Major commercial driveways	1
Minor commercial driveways	1
Major industrial driveways	0
Minor industrial driveways	0
Major residential driveways	0
Minor residential driveways	0
Other driveways	0
Speed category	>30mph
Roadside fixed object density (fixed objects/ mi)	12
Offset to roadside fixed objects (ft)	10
Calibration Factor, Cr	1.000

Summary Results

	Fatal and Injury (FI)	Property Damage Only (PDO)	Total
Predicted Annual Avg Crash Frequency	0.35	0.85	1.20
Crash rate (crashes/mi/year)	4.5	11.1	15.6

Crash Severity Distribution

Multiple-Vehicle	Fatal and Injury (FI)	Property Damage Only (PDO)	Total
Rear-end collisions	0.144	0.303	0.448
Head-on collisions	0.004	0.002	0.005
Angle collisions	0.009	0.028	0.036
Sideswipe, same direction	0.010	0.116	0.126
Sideswipe, opposite direction	0.001	0.004	0.005
Driveway-related collisions	0.103	0.280	0.383
Other multiple-vehicle collision	0.003	0.014	0.017
Subtotal	0.273	0.746	1.019
Single-Vehicle			
Collision with animal	0.001	0.005	0.006
Collision with fixed object	0.013	0.083	0.096
Collision with other object	0.000	0.007	0.007
Other single-vehicle collision	0.018	0.013	0.032
Collision with pedestrian	0.027		0.027
Collision with bicycle	0.014		0.014
Subtotal	0.072	0.109	0.181
Total	0.345	0.855	1.200

General Information

Analyst	Lindsey Willman	Analysis Name	Existing 2019	Date of Analysis	3/20/2019
Agency/Company	Kittelson & Associates, Inc.	Project Number/PIN #	23420	Comments	
State	California	Site(s)			
Region/Area/City/County	Norwalk	Jurisdiction	City of Norwalk		

Input Data

Segment Name	Orr and Day Rd to Imperial Hwy
Road Type	Five-lane arterials (5T)
Length of segment, L (mi)	0.056
Analysis Year	2019
AADT (veh/day)	23,880
Type of on-street parking	None
Land use	Commercial/Industrial/ Institutional
Curb length with parking	
Median width (ft)	10-ft (1-ft to 14-ft)
Lighting	Yes
Automated speed enforcement	No
Major commercial driveways	0
Minor commercial driveways	2
Major industrial driveways	0
Minor industrial driveways	0
Major residential driveways	0
Minor residential driveways	0
Other driveways	0
Speed category	>30mph
Roadside fixed object density (fixed objects/ mi)	7
Offset to roadside fixed objects (ft)	10
Calibration Factor, Cr	1.000

Summary Results

	Fatal and Injury (FI)	Property Damage Only (PDO)	Total
Predicted Annual Avg Crash Frequency	0.21	0.51	0.72
Crash rate (crashes/mi/year)	3.7	9.2	12.9

Crash Severity Distribution

Multiple-Vehicle	Fatal and Injury (FI)	Property Damage Only (PDO)	Total
Rear-end collisions	0.097	0.204	0.301
Head-on collisions	0.002	0.001	0.004
Angle collisions	0.006	0.018	0.024
Sideswipe, same direction	0.007	0.078	0.085
Sideswipe, opposite direction	0.000	0.003	0.003
Driveway-related collisions	0.046	0.126	0.172
Other multiple-vehicle collision	0.002	0.009	0.011
Subtotal	0.161	0.439	0.600
Single-Vehicle			
Collision with animal	0.000	0.004	0.004
Collision with fixed object	0.009	0.058	0.067
Collision with other object	0.000	0.005	0.005
Other single-vehicle collision	0.013	0.009	0.022
Collision with pedestrian	0.016		0.016
Collision with bicycle	0.008		0.008
Subtotal	0.047	0.076	0.123
Total	0.208	0.515	0.722

General Information

Analyst	Lindsey Willman	Analysis Name	Existing 2019	Date of Analysis	3/20/2019
Agency/Company	Kittelson & Associates, Inc.	Project Number/PIN #	23420	Comments	
State	California	Site(s)			
Region/Area/City/County	Norwalk	Jurisdiction	City of Norwalk		

Input Data

Major Street	Firestone Blvd
Minor Street	I-605 Off-Ramp/Hoxie Ave
Intersection Type	Signalized four-leg intersection (4SG)
Analysis Year	2019
AADTmajor (veh/day)	35,410
AADTminor (veh/day)	20,933
Intersection Lighting	Yes
Calibration Factor, Ci	1.00

Data for Signalized Intersections only

Approaches with left-turn lanes	4
Approaches with right-turn lanes	2
Approaches with left-turn signal phasing	4
Type of left-turn signal phasing	Protected
Intersection red-light cameras	No
Sum of all pedestrian crossing volumes	140
Max number of lanes crossed by a pedestrian	6
Number of bus stops within 1,000 ft	1-2
Schools within 1,000 ft	No
Num of alcohol sales establishments within 1,000 ft	0
Approaches with RTOR prohibited	1

Summary Results

	Fatal and Injury (FI)	Property Damage Only (PDO)	Total
Predicted Annual Avg Crash Frequency	2.10	3.62	5.72

Crash Severity Distribution

Multiple-Vehicle Collisions	Fatal and Injury (FI)	Property Damage Only (PDO)	Total
Rear-end collisions	0.804	1.642	2.446
Head-on collisions	0.088	0.102	0.190
Angle collisions	0.620	0.830	1.450
Sideswipe	0.177	0.109	0.286
Other multiple-vehicle collision	0.098	0.717	0.816
Subtotal	1.787	3.400	5.187
Single-Vehicle Collisions			
Collision with parked vehicle	0.000	0.000	0.000
Collision with animal	0.000	0.000	0.001
Collision with parked fixed object	0.050	0.188	0.238
Collision with other object	0.005	0.015	0.020
Other single-vehicle collision	0.003	0.005	0.008
Single-vehicle noncollision	0.009	0.007	0.017
Collision with pedestrian	0.165		0.165
Collision with bicycle	0.082		0.082
Subtotal	0.313	0.217	0.530
Total	2.100	3.616	5.717

General Information

Analyst	Lindsey Willman	Analysis Name	Existing 2019	Date of Analysis	3/20/2019
Agency/Company	Kittelson & Associates, Inc.	Project Number/PIN #	23420	Comments	
State	California	Site(s)			
Region/Area/City/County	Norwalk	Jurisdiction	City of Norwalk		

Input Data

Major Street	Firestone Blvd
Minor Street	Studebaker Rd
Intersection Type	Signalized four-leg intersection (4SG)
Analysis Year	2019
AADTmajor (veh/day)	27,907
AADTminor (veh/day)	22,946
Intersection Lighting	Yes
Calibration Factor, Ci	1.00

Data for Signalized Intersections only

Approaches with left-turn lanes	4
Approaches with right-turn lanes	4
Approaches with left-turn signal phasing	4
Type of left-turn signal phasing	Protected
Intersection red-light cameras	No
Sum of all pedestrian crossing volumes	740
Max number of lanes crossed by a pedestrian	6
Number of bus stops within 1,000 ft	3+
Schools within 1,000 ft	No
Num of alcohol sales establishments within 1,000 ft	0
Approaches with RTOR prohibited	0

Summary Results

	Fatal and Injury (FI)	Property Damage Only (PDO)	Total
Predicted Annual Avg Crash Frequency	1.96	2.75	4.71

Crash Severity Distribution

Multiple-Vehicle Collisions	Fatal and Injury (FI)	Property Damage Only (PDO)	Total
Rear-end collisions	0.585	1.242	1.827
Head-on collisions	0.064	0.077	0.141
Angle collisions	0.451	0.628	1.078
Sideswipe	0.129	0.082	0.211
Other multiple-vehicle collision	0.071	0.543	0.614
Subtotal	1.299	2.572	3.871
Single-Vehicle Collisions			
Collision with parked vehicle	0.000	0.000	0.000
Collision with animal	0.000	0.000	0.000
Collision with parked fixed object	0.044	0.152	0.195
Collision with other object	0.004	0.012	0.016
Other single-vehicle collision	0.002	0.004	0.006
Single-vehicle noncollision	0.008	0.006	0.014
Collision with pedestrian	0.543		0.543
Collision with bicycle	0.062		0.062
Subtotal	0.663	0.174	0.838
Total	1.963	2.746	4.709

General Information

Analyst	Lindsey Willman	Analysis Name	Existing 2019	Date of Analysis	3/20/2019
Agency/Company	Kittelson & Associates, Inc.	Project Number/PIN #	23420	Comments	
State	California	Site(s)			
Region/Area/City/County	Norwalk	Jurisdiction	City of Norwalk		

Input Data

Major Street	Firestone Blvd
Minor Street	Stater Bros Markets Dwy
Intersection Type	Signalized four-leg intersection (4SG)
Analysis Year	2019
AADTmajor (veh/day)	25,240
AADTminor (veh/day)	1,760
Intersection Lighting	Yes
Calibration Factor, Ci	1.00

Data for Signalized Intersections only

Approaches with left-turn lanes	2
Approaches with right-turn lanes	1
Approaches with left-turn signal phasing	2
Type of left-turn signal phasing	Protected
Intersection red-light cameras	No
Sum of all pedestrian crossing volumes	190
Max number of lanes crossed by a pedestrian	6
Number of bus stops within 1,000 ft	0
Schools within 1,000 ft	No
Num of alcohol sales establishments within 1,000 ft	0
Approaches with RTOR prohibited	0

Summary Results

	Fatal and Injury (FI)	Property Damage Only (PDO)	Total
Predicted Annual Avg Crash Frequency	1.16	2.11	3.27

Crash Severity Distribution

Multiple-Vehicle Collisions	Fatal and Injury (FI)	Property Damage Only (PDO)	Total
Rear-end collisions	0.467	0.958	1.425
Head-on collisions	0.051	0.060	0.110
Angle collisions	0.360	0.484	0.844
Sideswipe	0.103	0.063	0.166
Other multiple-vehicle collision	0.057	0.419	0.476
Subtotal	1.038	1.983	3.021
Single-Vehicle Collisions			
Collision with parked vehicle	0.000	0.000	0.000
Collision with animal	0.000	0.000	0.000
Collision with parked fixed object	0.030	0.113	0.143
Collision with other object	0.003	0.009	0.012
Other single-vehicle collision	0.002	0.003	0.005
Single-vehicle noncollision	0.006	0.004	0.010
Collision with pedestrian	0.029		0.029
Collision with bicycle	0.048		0.048
Subtotal	0.118	0.130	0.247
Total	1.156	2.113	3.269

General Information

Analyst	Lindsey Willman	Analysis Name	Existing 2019	Date of Analysis	3/20/2019
Agency/Company	Kittelson & Associates, Inc.	Project Number/PIN #	23420	Comments	
State	California	Site(s)			
Region/Area/City/County	Norwalk	Jurisdiction	City of Norwalk		

Input Data

Major Street	Firestone Blvd
Minor Street	Orr and Day Rd
Intersection Type	Signalized four-leg intersection (4SG)
Analysis Year	2019
AADTmajor (veh/day)	24,627
AADTminor (veh/day)	6,706
Intersection Lighting	Yes
Calibration Factor, Ci	1.05

Data for Signalized Intersections only

Approaches with left-turn lanes	3
Approaches with right-turn lanes	1
Approaches with left-turn signal phasing	1
Type of left-turn signal phasing	Protected
Intersection red-light cameras	No
Sum of all pedestrian crossing volumes	180
Max number of lanes crossed by a pedestrian	6
Number of bus stops within 1,000 ft	0
Schools within 1,000 ft	No
Num of alcohol sales establishments within 1,000 ft	0
Approaches with RTOR prohibited	0

Summary Results

	Fatal and Injury (FI)	Property Damage Only (PDO)	Total
Predicted Annual Avg Crash Frequency	1.53	2.85	4.38

Crash Severity Distribution

Multiple-Vehicle Collisions	Fatal and Injury (FI)	Property Damage Only (PDO)	Total
Rear-end collisions	0.610	1.291	1.902
Head-on collisions	0.066	0.080	0.147
Angle collisions	0.471	0.652	1.123
Sideswipe	0.134	0.086	0.220
Other multiple-vehicle collision	0.075	0.564	0.639
Subtotal	1.357	2.673	4.030
Single-Vehicle Collisions			
Collision with parked vehicle	0.000	0.000	0.000
Collision with animal	0.000	0.000	0.000
Collision with parked fixed object	0.045	0.158	0.203
Collision with other object	0.004	0.013	0.017
Other single-vehicle collision	0.002	0.004	0.007
Single-vehicle noncollision	0.009	0.006	0.015
Collision with pedestrian	0.045		0.045
Collision with bicycle	0.067		0.067
Subtotal	0.173	0.182	0.355
Total	1.529	2.855	4.384

General Information

Analyst	Lindsey Willman	Analysis Name	Existing 2019	Date of Analysis	3/20/2019
Agency/Company	Kittelson & Associates, Inc.	Project Number/PIN #	23420	Comments	
State	California	Site(s)			
Region/Area/City/County	Norwalk	Jurisdiction	City of Norwalk		

Input Data

Major Street	Firestone Blvd
Minor Street	Imperial Hwy
Intersection Type	Signalized four-leg intersection (4SG)
Analysis Year	2019
AADTmajor (veh/day)	58,840
AADTminor (veh/day)	25,746
Intersection Lighting	Yes
Calibration Factor, Ci	1.00

Data for Signalized Intersections only

Approaches with left-turn lanes	3
Approaches with right-turn lanes	2
Approaches with left-turn signal phasing	2
Type of left-turn signal phasing	Protected
Intersection red-light cameras	No
Sum of all pedestrian crossing volumes	300
Max number of lanes crossed by a pedestrian	8
Number of bus stops within 1,000 ft	1-2
Schools within 1,000 ft	No
Num of alcohol sales establishments within 1,000 ft	0
Approaches with RTOR prohibited	0

Summary Results

	Fatal and Injury (FI)	Property Damage Only (PDO)	Total
Predicted Annual Avg Crash Frequency	4.91	8.06	12.96

Crash Severity Distribution

Multiple-Vehicle Collisions	Fatal and Injury (FI)	Property Damage Only (PDO)	Total
Rear-end collisions	1.950	3.686	5.635
Head-on collisions	0.212	0.229	0.441
Angle collisions	1.504	1.862	3.365
Sideswipe	0.429	0.244	0.673
Other multiple-vehicle collision	0.238	1.610	1.848
Subtotal	4.333	7.631	11.964
Single-Vehicle Collisions			
Collision with parked vehicle	0.000	0.000	0.001
Collision with animal	0.000	0.001	0.001
Collision with parked fixed object	0.083	0.373	0.456
Collision with other object	0.008	0.030	0.038
Other single-vehicle collision	0.004	0.010	0.014
Single-vehicle noncollision	0.016	0.015	0.030
Collision with pedestrian	0.273		0.273
Collision with bicycle	0.188		0.188
Subtotal	0.572	0.429	1.001
Total	4.905	8.060	12.965

General Information

Analyst	Lindsey Willman	Analysis Name	Existing 2019	Date of Analysis	3/20/2019
Agency/Company	Kittelson & Associates, Inc.	Project Number/PIN #	23420	Comments	
State	California	Site(s)			
Region/Area/City/County	Norwalk	Jurisdiction	City of Norwalk		

Analysis Summary Results

Crash Severity Distribution	Crash Frequency		
	Fatal and Injury (FI)	Property Damage Only (PDO)	Total
Total Predicted Crashes (entire study period)	14.43	26.32	40.75
Total Predicted Crashes (crashes/year)	14.43	26.32	40.75
Hoxie Ave to Studebaker Rd	0.47	1.20	1.67
Studebaker Rd to Stater Bros Markets Dwy	1.75	4.36	6.11
Stater Bros Markets Dwy to Orr and Day Rd	0.35	0.85	1.20
Orr and Day Rd to Imperial Hwy	0.21	0.51	0.72
Firestone Blvd/I-605 Off-Ramp/Hoxie Ave	2.10	3.62	5.72
Firestone Blvd/Studebaker Rd	1.96	2.75	4.71
Firestone Blvd/Stater Bros Markets Dwy	1.16	2.11	3.27
Firestone Blvd/Orr and Day Rd	1.53	2.85	4.38
Firestone Blvd/Imperial Hwy	4.91	8.06	12.96

General Information

Analyst	Lindsey Willman	Analysis Name	Existing 2040	Date of Analysis	3/20/2019
Agency/Company	Kittelson & Associates, Inc.	Project Number/PIN #	23420	Comments	
State	California	Site(s)			
Region/Area/City/County	Norwalk	Jurisdiction	City of Norwalk		

Input Data

Segment Name	Hoxie Ave to Studebaker Rd
Road Type	Four-lane divided arterials (4D)
Length of segment, L (mi)	0.250
Analysis Year	2019
AADT (veh/day)	35,600
Type of on-street parking	Parallel
Land use	Commercial/Industrial/ Institutional
Curb length with parking	
Median width (ft)	20-ft (15-ft to 24-ft)
Lighting	Yes
Automated speed enforcement	No
Major commercial driveways	2
Minor commercial driveways	4
Major industrial driveways	0
Minor industrial driveways	0
Major residential driveways	1
Minor residential driveways	1
Other driveways	0
Speed category	>30mph
Roadside fixed object density (fixed objects/ mi)	12
Offset to roadside fixed objects (ft)	10
Calibration Factor, Cr	1.000

Summary Results

	Fatal and Injury (FI)	Property Damage Only (PDO)	Total
Predicted Annual Avg Crash Frequency	0.59	1.50	2.09
Crash rate (crashes/mi/year)	2.3	6.0	8.4

Crash Severity Distribution

Multiple-Vehicle	Fatal and Injury (FI)	Property Damage Only (PDO)	Total
Rear-end collisions	0.344	0.742	1.086
Head-on collisions	0.008	0.008	0.016
Angle collisions	0.017	0.040	0.057
Sideswipe, same direction	0.021	0.250	0.271
Sideswipe, opposite direction	0.004	0.001	0.005
Driveway-related collisions	0.088	0.221	0.309
Other multiple-vehicle collision	0.020	0.080	0.099
Subtotal	0.501	1.342	1.843
Single-Vehicle			
Collision with animal	0.000	0.010	0.010
Collision with fixed object	0.019	0.132	0.151
Collision with other object	0.001	0.003	0.004
Other single-vehicle collision	0.018	0.018	0.035
Collision with pedestrian	0.039		0.039
Collision with bicycle	0.010		0.010
Subtotal	0.086	0.163	0.249
Total	0.587	1.505	2.092

General Information

Analyst	Lindsey Willman	Analysis Name	Existing 2040	Date of Analysis	3/20/2019
Agency/Company	Kittelson & Associates, Inc.	Project Number/PIN #	23420	Comments	
State	California	Site(s)			
Region/Area/City/County	Norwalk	Jurisdiction	City of Norwalk		

Input Data

Segment Name	Studebaker Rd to Stater Bros Markets Dwy
Road Type	Five-lane arterials (5T)
Length of segment, L (mi)	0.440
Analysis Year	2019
AADT (veh/day)	30,968
Type of on-street parking	None
Land use	Commercial/Industrial/ Institutional
Curb length with parking	
Median width (ft)	20-ft (15-ft to 24-ft)
Lighting	Yes
Automated speed enforcement	No
Major commercial driveways	3
Minor commercial driveways	1
Major industrial driveways	1
Minor industrial driveways	0
Major residential driveways	0
Minor residential driveways	0
Other driveways	0
Speed category	>30mph
Roadside fixed object density (fixed objects/ mi)	19
Offset to roadside fixed objects (ft)	6
Calibration Factor, Cr	1.000

Summary Results

	Fatal and Injury (FI)	Property Damage Only (PDO)	Total
Predicted Annual Avg Crash Frequency	2.12	5.33	7.45
Crash rate (crashes/mi/year)	4.8	12.1	16.9

Crash Severity Distribution

Multiple-Vehicle	Fatal and Injury (FI)	Property Damage Only (PDO)	Total
Rear-end collisions	1.046	2.225	3.270
Head-on collisions	0.026	0.014	0.040
Angle collisions	0.062	0.202	0.263
Sideswipe, same direction	0.075	0.848	0.923
Sideswipe, opposite direction	0.005	0.031	0.036
Driveway-related collisions	0.441	1.197	1.638
Other multiple-vehicle collision	0.022	0.099	0.121
Subtotal	1.677	4.615	6.291
Single-Vehicle			
Collision with animal	0.003	0.035	0.038
Collision with fixed object	0.078	0.546	0.624
Collision with other object	0.001	0.043	0.044
Other single-vehicle collision	0.114	0.087	0.201
Collision with pedestrian	0.166		0.166
Collision with bicycle	0.086		0.086
Subtotal	0.448	0.711	1.159
Total	2.125	5.326	7.451

General Information

Analyst	Lindsey Willman	Analysis Name	Existing 2040	Date of Analysis	3/20/2019
Agency/Company	Kittelson & Associates, Inc.	Project Number/PIN #	23420	Comments	
State	California	Site(s)			
Region/Area/City/County	Norwalk	Jurisdiction	City of Norwalk		

Input Data

Segment Name	Stater Bros Markets Dwy to Orr and Day Rd
Road Type	Five-lane arterials (5T)
Length of segment, L (mi)	0.077
Analysis Year	2019
AADT (veh/day)	30,640
Type of on-street parking	None
Land use	Commercial/Industrial/ Institutional
Curb length with parking	
Median width (ft)	10-ft (1-ft to 14-ft)
Lighting	Yes
Automated speed enforcement	No
Major commercial driveways	1
Minor commercial driveways	1
Major industrial driveways	0
Minor industrial driveways	0
Major residential driveways	0
Minor residential driveways	0
Other driveways	0
Speed category	>30mph
Roadside fixed object density (fixed objects/ mi)	12
Offset to roadside fixed objects (ft)	10
Calibration Factor, Cr	1.000

Summary Results

	Fatal and Injury (FI)	Property Damage Only (PDO)	Total
Predicted Annual Avg Crash Frequency	0.42	1.05	1.47
Crash rate (crashes/mi/year)	5.5	13.6	19.0

Crash Severity Distribution

Multiple-Vehicle	Fatal and Injury (FI)	Property Damage Only (PDO)	Total
Rear-end collisions	0.177	0.377	0.554
Head-on collisions	0.004	0.002	0.007
Angle collisions	0.010	0.034	0.045
Sideswipe, same direction	0.013	0.143	0.156
Sideswipe, opposite direction	0.001	0.005	0.006
Driveway-related collisions	0.127	0.346	0.474
Other multiple-vehicle collision	0.004	0.017	0.021
Subtotal	0.337	0.925	1.262
Single-Vehicle			
Collision with animal	0.001	0.006	0.006
Collision with fixed object	0.013	0.093	0.106
Collision with other object	0.000	0.007	0.008
Other single-vehicle collision	0.019	0.015	0.034
Collision with pedestrian	0.033		0.033
Collision with bicycle	0.017		0.017
Subtotal	0.083	0.121	0.204
Total	0.420	1.046	1.466

General Information

Analyst	Lindsey Willman	Analysis Name	Existing 2040	Date of Analysis	3/20/2019
Agency/Company	Kittelson & Associates, Inc.	Project Number/PIN #	23420	Comments	
State	California	Site(s)			
Region/Area/City/County	Norwalk	Jurisdiction	City of Norwalk		

Input Data

Segment Name	Orr and Day Rd to Imperial Hwy
Road Type	Five-lane arterials (5T)
Length of segment, L (mi)	0.056
Analysis Year	2019
AADT (veh/day)	28,656
Type of on-street parking	None
Land use	Commercial/Industrial/ Institutional
Curb length with parking	
Median width (ft)	20-ft (15-ft to 24-ft)
Lighting	Yes
Automated speed enforcement	No
Major commercial driveways	0
Minor commercial driveways	2
Major industrial driveways	0
Minor industrial driveways	0
Major residential driveways	0
Minor residential driveways	0
Other driveways	0
Speed category	>30mph
Roadside fixed object density (fixed objects/ mi)	7
Offset to roadside fixed objects (ft)	10
Calibration Factor, Cr	1.000

Summary Results

	Fatal and Injury (FI)	Property Damage Only (PDO)	Total
Predicted Annual Avg Crash Frequency	0.25	0.63	0.88
Crash rate (crashes/mi/year)	4.5	11.2	15.7

Crash Severity Distribution

Multiple-Vehicle	Fatal and Injury (FI)	Property Damage Only (PDO)	Total
Rear-end collisions	0.119	0.253	0.372
Head-on collisions	0.003	0.002	0.005
Angle collisions	0.007	0.023	0.030
Sideswipe, same direction	0.009	0.096	0.105
Sideswipe, opposite direction	0.001	0.003	0.004
Driveway-related collisions	0.057	0.156	0.213
Other multiple-vehicle collision	0.003	0.011	0.014
Subtotal	0.198	0.544	0.742
Single-Vehicle			
Collision with animal	0.000	0.004	0.005
Collision with fixed object	0.009	0.065	0.074
Collision with other object	0.000	0.005	0.005
Other single-vehicle collision	0.014	0.010	0.024
Collision with pedestrian	0.020		0.020
Collision with bicycle	0.010		0.010
Subtotal	0.054	0.085	0.138
Total	0.252	0.629	0.880

General Information

Analyst	Lindsey Willman	Analysis Name	Existing 2040	Date of Analysis	3/20/2019
Agency/Company	Kittelson & Associates, Inc.	Project Number/PIN #	23420	Comments	
State	California	Site(s)			
Region/Area/City/County	Norwalk	Jurisdiction	City of Norwalk		

Input Data

Major Street	Firestone Blvd
Minor Street	I-605 Off-Ramp/Hoxie Ave
Intersection Type	Signalized four-leg intersection (4SG)
Analysis Year	2019
AADTmajor (veh/day)	42,492
AADTminor (veh/day)	25,120
Intersection Lighting	Yes
Calibration Factor, Ci	1.00

Data for Signalized Intersections only

Approaches with left-turn lanes	4
Approaches with right-turn lanes	2
Approaches with left-turn signal phasing	4
Type of left-turn signal phasing	Protected
Intersection red-light cameras	No
Sum of all pedestrian crossing volumes	140
Max number of lanes crossed by a pedestrian	6
Number of bus stops within 1,000 ft	1-2
Schools within 1,000 ft	Yes
Num of alcohol sales establishments within 1,000 ft	0
Approaches with RTOR prohibited	1

Summary Results

	Fatal and Injury (FI)	Property Damage Only (PDO)	Total
Predicted Annual Avg Crash Frequency	2.72	4.53	7.25

Crash Severity Distribution

Multiple-Vehicle Collisions	Fatal and Injury (FI)	Property Damage Only (PDO)	Total
Rear-end collisions	1.036	2.063	3.099
Head-on collisions	0.113	0.128	0.241
Angle collisions	0.799	1.042	1.841
Sideswipe	0.228	0.137	0.365
Other multiple-vehicle collision	0.127	0.901	1.028
Subtotal	2.303	4.271	6.574
Single-Vehicle Collisions			
Collision with parked vehicle	0.000	0.000	0.000
Collision with animal	0.000	0.001	0.001
Collision with parked fixed object	0.056	0.227	0.284
Collision with other object	0.005	0.018	0.024
Other single-vehicle collision	0.003	0.006	0.009
Single-vehicle noncollision	0.011	0.009	0.020
Collision with pedestrian	0.239		0.239
Collision with bicycle	0.104		0.104
Subtotal	0.418	0.261	0.679
Total	2.722	4.532	7.254

General Information

Analyst	Lindsey Willman	Analysis Name	Existing 2040	Date of Analysis	3/20/2019
Agency/Company	Kittelson & Associates, Inc.	Project Number/PIN #	23420	Comments	
State	California	Site(s)			
Region/Area/City/County	Norwalk	Jurisdiction	City of Norwalk		

Input Data

Major Street	Firestone Blvd
Minor Street	Studebaker Rd
Intersection Type	Signalized four-leg intersection (4SG)
Analysis Year	2019
AADTmajor (veh/day)	33,488
AADTminor (veh/day)	27,535
Intersection Lighting	Yes
Calibration Factor, Ci	1.00

Data for Signalized Intersections only

Approaches with left-turn lanes	4
Approaches with right-turn lanes	4
Approaches with left-turn signal phasing	4
Type of left-turn signal phasing	Protected
Intersection red-light cameras	No
Sum of all pedestrian crossing volumes	740
Max number of lanes crossed by a pedestrian	6
Number of bus stops within 1,000 ft	3+
Schools within 1,000 ft	No
Num of alcohol sales establishments within 1,000 ft	0
Approaches with RTOR prohibited	0

Summary Results

	Fatal and Injury (FI)	Property Damage Only (PDO)	Total
Predicted Annual Avg Crash Frequency	2.40	3.44	5.85

Crash Severity Distribution

Multiple-Vehicle Collisions	Fatal and Injury (FI)	Property Damage Only (PDO)	Total
Rear-end collisions	0.754	1.561	2.315
Head-on collisions	0.082	0.097	0.179
Angle collisions	0.581	0.789	1.370
Sideswipe	0.166	0.103	0.269
Other multiple-vehicle collision	0.092	0.682	0.774
Subtotal	1.675	3.232	4.906
Single-Vehicle Collisions			
Collision with parked vehicle	0.000	0.000	0.000
Collision with animal	0.000	0.000	0.001
Collision with parked fixed object	0.050	0.183	0.233
Collision with other object	0.005	0.015	0.020
Other single-vehicle collision	0.003	0.005	0.008
Single-vehicle noncollision	0.009	0.007	0.017
Collision with pedestrian	0.584		0.584
Collision with bicycle	0.078		0.078
Subtotal	0.729	0.210	0.939
Total	2.403	3.442	5.845

General Information

Analyst	Lindsey Willman	Analysis Name	Existing 2040	Date of Analysis	3/20/2019
Agency/Company	Kittelson & Associates, Inc.	Project Number/PIN #	23420	Comments	
State	California	Site(s)			
Region/Area/City/County	Norwalk	Jurisdiction	City of Norwalk		

Input Data

Major Street	Firestone Blvd
Minor Street	Stater Bros Markets Dwy
Intersection Type	Signalized four-leg intersection (4SG)
Analysis Year	2019
AADTmajor (veh/day)	30,288
AADTminor (veh/day)	2,112
Intersection Lighting	Yes
Calibration Factor, Ci	1.00

Data for Signalized Intersections only

Approaches with left-turn lanes	2
Approaches with right-turn lanes	1
Approaches with left-turn signal phasing	2
Type of left-turn signal phasing	Protected
Intersection red-light cameras	No
Sum of all pedestrian crossing volumes	190
Max number of lanes crossed by a pedestrian	6
Number of bus stops within 1,000 ft	0
Schools within 1,000 ft	No
Num of alcohol sales establishments within 1,000 ft	0
Approaches with RTOR prohibited	0

Summary Results

	Fatal and Injury (FI)	Property Damage Only (PDO)	Total
Predicted Annual Avg Crash Frequency	1.48	2.65	4.12

Crash Severity Distribution

Multiple-Vehicle Collisions	Fatal and Injury (FI)	Property Damage Only (PDO)	Total
Rear-end collisions	0.602	1.204	1.805
Head-on collisions	0.066	0.075	0.140
Angle collisions	0.464	0.608	1.072
Sideswipe	0.132	0.080	0.212
Other multiple-vehicle collision	0.074	0.526	0.599
Subtotal	1.338	2.492	3.829
Single-Vehicle Collisions			
Collision with parked vehicle	0.000	0.000	0.000
Collision with animal	0.000	0.000	0.000
Collision with parked fixed object	0.035	0.136	0.171
Collision with other object	0.003	0.011	0.014
Other single-vehicle collision	0.002	0.004	0.005
Single-vehicle noncollision	0.007	0.005	0.012
Collision with pedestrian	0.031		0.031
Collision with bicycle	0.060		0.060
Subtotal	0.138	0.156	0.295
Total	1.476	2.648	4.124

General Information

Analyst	Lindsey Willman	Analysis Name	Existing 2040	Date of Analysis	3/20/2019
Agency/Company	Kittelson & Associates, Inc.	Project Number/PIN #	23420	Comments	
State	California	Site(s)			
Region/Area/City/County	Norwalk	Jurisdiction	City of Norwalk		

Input Data

Major Street	Firestone Blvd
Minor Street	Orr and Day Rd
Intersection Type	Signalized four-leg intersection (4SG)
Analysis Year	2019
AADTmajor (veh/day)	29,552
AADTminor (veh/day)	8,047
Intersection Lighting	Yes
Calibration Factor, Ci	1.00

Data for Signalized Intersections only

Approaches with left-turn lanes	3
Approaches with right-turn lanes	1
Approaches with left-turn signal phasing	1
Type of left-turn signal phasing	Protected
Intersection red-light cameras	No
Sum of all pedestrian crossing volumes	180
Max number of lanes crossed by a pedestrian	6
Number of bus stops within 1,000 ft	0
Schools within 1,000 ft	No
Num of alcohol sales establishments within 1,000 ft	0
Approaches with RTOR prohibited	0

Summary Results

	Fatal and Injury (FI)	Property Damage Only (PDO)	Total
Predicted Annual Avg Crash Frequency	1.85	3.41	5.26

Crash Severity Distribution

Multiple-Vehicle Collisions	Fatal and Injury (FI)	Property Damage Only (PDO)	Total
Rear-end collisions	0.749	1.545	2.295
Head-on collisions	0.082	0.096	0.178
Angle collisions	0.578	0.781	1.358
Sideswipe	0.165	0.102	0.267
Other multiple-vehicle collision	0.092	0.675	0.767
Subtotal	1.665	3.199	4.864
Single-Vehicle Collisions			
Collision with parked vehicle	0.000	0.000	0.000
Collision with animal	0.000	0.000	0.001
Collision with parked fixed object	0.049	0.181	0.230
Collision with other object	0.005	0.015	0.019
Other single-vehicle collision	0.003	0.005	0.007
Single-vehicle noncollision	0.009	0.007	0.016
Collision with pedestrian	0.046		0.046
Collision with bicycle	0.077		0.077
Subtotal	0.189	0.209	0.398
Total	1.854	3.408	5.262

General Information

Analyst	Lindsey Willman	Analysis Name	Existing 2040	Date of Analysis	3/20/2019
Agency/Company	Kittelson & Associates, Inc.	Project Number/PIN #	23420	Comments	
State	California	Site(s)			
Region/Area/City/County	Norwalk	Jurisdiction	City of Norwalk		

Input Data

Major Street	Firestone Blvd
Minor Street	Imperial Hwy
Intersection Type	Signalized four-leg intersection (4SG)
Analysis Year	2019
AADTmajor (veh/day)	64,724
AADTminor (veh/day)	30,895
Intersection Lighting	Yes
Calibration Factor, Ci	1.00

Data for Signalized Intersections only

Approaches with left-turn lanes	3
Approaches with right-turn lanes	2
Approaches with left-turn signal phasing	3
Type of left-turn signal phasing	Protected
Intersection red-light cameras	No
Sum of all pedestrian crossing volumes	300
Max number of lanes crossed by a pedestrian	8
Number of bus stops within 1,000 ft	1-2
Schools within 1,000 ft	No
Num of alcohol sales establishments within 1,000 ft	0
Approaches with RTOR prohibited	0

Summary Results

	Fatal and Injury (FI)	Property Damage Only (PDO)	Total
Predicted Annual Avg Crash Frequency	5.35	8.70	14.05

Crash Severity Distribution

Multiple-Vehicle Collisions	Fatal and Injury (FI)	Property Damage Only (PDO)	Total
Rear-end collisions	2.132	3.984	6.116
Head-on collisions	0.232	0.247	0.480
Angle collisions	1.644	2.013	3.657
Sideswipe	0.469	0.264	0.733
Other multiple-vehicle collision	0.261	1.740	2.001
Subtotal	4.738	8.248	12.986
Single-Vehicle Collisions			
Collision with parked vehicle	0.000	0.000	0.001
Collision with animal	0.000	0.001	0.001
Collision with parked fixed object	0.086	0.395	0.481
Collision with other object	0.008	0.032	0.040
Other single-vehicle collision	0.005	0.010	0.015
Single-vehicle noncollision	0.016	0.015	0.032
Collision with pedestrian	0.294		0.294
Collision with bicycle	0.203		0.203
Subtotal	0.612	0.454	1.066
Total	5.350	8.703	14.053

General Information

Analyst	Lindsey Willman	Analysis Name	Existing 2040	Date of Analysis	3/20/2019
Agency/Company	Kittelson & Associates, Inc.	Project Number/PIN #	23420	Comments	
State	California	Site(s)			
Region/Area/City/County	Norwalk	Jurisdiction	City of Norwalk		

Analysis Summary Results

Crash Severity Distribution	Crash Frequency		
	Fatal and Injury (FI)	Property Damage Only (PDO)	Total
Total Predicted Crashes (entire study period)	17.19	31.24	48.43
Total Predicted Crashes (crashes/year)	17.19	31.24	48.43
Hoxie Ave to Studebaker Rd	0.59	1.50	2.09
Studebaker Rd to Stater Bros Markets Dwy	2.12	5.33	7.45
Stater Bros Markets Dwy to Orr and Day Rd	0.42	1.05	1.47
Orr and Day Rd to Imperial Hwy	0.25	0.63	0.88
Firestone Blvd/I-605 Off-Ramp/Hoxie Ave	2.72	4.53	7.25
Firestone Blvd/Studebaker Rd	2.40	3.44	5.85
Firestone Blvd/Stater Bros Markets Dwy	1.48	2.65	4.12
Firestone Blvd/Orr and Day Rd	1.85	3.41	5.26
Firestone Blvd/Imperial Hwy	5.35	8.70	14.05

Safety Prediction Worksheet for Two-Way Urban and Suburban Arterial Segments

General Information

Analyst	L. Willman
Agency	Kittelson
Date	6/23/2019
Location	City of Norwalk

Site Information

Street number	
Street name	Hoxie to Studebaker
Segment number	1
Analysis year	2019

Add to Totals worksheet | Restore equations | Reset input cells

Output Summary

Predicted crash frequency, crashes / year

	F+I	PDO	Total
Total crashes	1.404	2.116	3.520
Multiple-vehicle crashes	1.160	1.905	
Single-vehicle crashes	0.165	0.210	
Vehicle-pedestrian crashes	0.052		
Vehicle-bicycle crashes	0.028		

Combined CMF

	F+I	PDO
Multiple-vehicle crashes	1.384	1.384
Single-vehicle crashes	1.116	1.116

Severity distribution for F+I crashes

K	A	B	C
0.015	0.095	0.369	0.926

Input Data		*Value*	*Advisory Messages*
Basic Roadway Data			
Area type		Urban	.
Segment type		6D	.
Segment length, mi		0.25	.
Annual average daily traffic (AADT), veh/day		29677	.
Number of highway-rail grade crossings present		0	.
Posted speed limit, mi/h		40	.
Automated speed enforcement present?		No	.
Access Data			
Driveway count	Major commercial	2	**8 major comm. driveways per mile.**
	Major industrial	0	.
	Minor	4	**16 minor driveways per mile.**
Cross Section Data			
Lane width, ft		11	.
Outside shoulder width, ft		0	.
Median width, ft		10	.
Median barrier present?		No	.
Roadside Data			
Roadside fixed object count		3	**12 objects per mile.**
Average roadside fixed object offset, ft		15	.

Calibration Factors	*Value*	*Default Values*
Local calibration factor (C)	1.000	1.000
Adjustment factor for pedestrians (f_{ped})	0.015	0.015
Adjustment factor for bicyclists (f_{bike})	0.008	0.008
Severity distribution calibration factor ($C_{sdf,tws}$)	1.000	1.000

Crash Modification Factors	*F+I*		*PDO*	
	Multiple	*Single*	*Multiple*	*Single*
Lane width	1.022	1.022	1.022	1.022
Outside shoulder width	1.044	1.044	1.044	1.044
Median width	1.029	1.029	1.029	1.029
Median barrier	1.000	1.000	1.000	1.000
Highway-rail grade crossing	1.000	1.000	1.000	1.000
Major commercial driveways	1.234		1.234	
Major industrial driveways	0.989		0.989	
Minor driveways	1.033		1.033	
Automated speed enforcement	1.000	1.000	1.000	1.000
Roadside fixed objects		1.017		1.017

Safety Prediction Worksheet for Two-Way Urban and Suburban Arterial Segments

General Information

Analyst	L. Willman
Agency	Kittelson
Date	6/23/2019
Location	City of Norwalk

Site Information

Street number	
Street name	Studebaker-Stater
Segment number	2
Analysis year	2019

Add to Totals worksheet | Restore equations | Reset input cells

Output Summary

Predicted crash frequency, crashes / year

	F+I	PDO	Total
Total crashes	1.648	2.523	4.171
Multiple-vehicle crashes	1.321	2.225	
Single-vehicle crashes	0.234	0.299	
Vehicle-pedestrian crashes	0.061		
Vehicle-bicycle crashes	0.033		

Combined CMF

	F+I	PDO
Multiple-vehicle crashes	1.065	1.065
Single-vehicle crashes	0.955	0.955

Severity distribution for F+I crashes

K	A	B	C
0.021	0.111	0.432	1.084

Input Data		*Value*	*Advisory Messages*
Basic Roadway Data			
Area type		Urban	.
Segment type		6D	.
Segment length, mi		0.44	.
Annual average daily traffic (AADT), veh/day		25807	.
Number of highway-rail grade crossings present		0	.
Posted speed limit, mi/h		45	.
Automated speed enforcement present?		No	.
Access Data			
Driveway count	Major commercial	3	**7 major comm. driveways per mile.**
	Major industrial	1	**2 major industrial driveways per mile.**
	Minor	1	**2 minor driveways per mile.**
Cross Section Data			
Lane width, ft		11	.
Outside shoulder width, ft		6	.
Median width, ft		10	.
Median barrier present?		No	.
Roadside Data			
Roadside fixed object count		9	**20 objects per mile.**
Average roadside fixed object offset, ft		14	.

Calibration Factors	*Value*	*Default Values*
Local calibration factor (C)	1.000	1.000
Adjustment factor for pedestrians (f_{ped})	0.015	0.015
Adjustment factor for bicyclists (f_{bike})	0.008	0.008
Severity distribution calibration factor ($C_{sdf,tws}$)	1.000	1.000

Crash Modification Factors	*F+I*		*PDO*	
	Multiple	*Single*	*Multiple*	*Single*
Lane width	1.022	1.022	1.022	1.022
Outside shoulder width	0.880	0.880	0.880	0.880
Median width	1.029	1.029	1.029	1.029
Median barrier	1.000	1.000	1.000	1.000
Highway-rail grade crossing	1.000	1.000	1.000	1.000
Major commercial driveways	1.184		1.184	
Major industrial driveways	1.014		1.014	
Minor driveways	0.959		0.959	
Automated speed enforcement	1.000	1.000	1.000	1.000
Roadside fixed objects		1.033		1.033

Safety Prediction Worksheet for Two-Way Urban and Suburban Arterial Segments

General Information

Analyst	L. Willman
Agency	Kittelson
Date	6/23/2019
Location	City of Norwalk

Site Information

Street number	
Street name	Stater - Orr & Day
Segment number	3
Analysis year	2019

Add to Totals worksheet | Restore equations | Reset input cells

Output Summary

Predicted crash frequency, crashes / year

	F+I	PDO	Total
Total crashes	0.353	0.545	0.899
Multiple-vehicle crashes	0.293	0.494	
Single-vehicle crashes	0.040	0.051	
Vehicle-pedestrian crashes	0.013		
Vehicle-bicycle crashes	0.007		

Combined CMF

	F+I	PDO
Multiple-vehicle crashes	1.366	1.366
Single-vehicle crashes	0.944	0.944

Severity distribution for F+I crashes

K	A	B	C
0.005	0.024	0.093	0.232

Input Data

		Value	*Advisory Messages*
Basic Roadway Data			
Area type		Urban	.
Segment type		6D	.
Segment length, mi		0.077	.
Annual average daily traffic (AADT), veh/day		25533	.
Number of highway-rail grade crossings present		0	.
Posted speed limit, mi/h		45	.
Automated speed enforcement present?		No	.
Access Data			
Driveway count	Major commercial	1	**13 major comm. driveways per mile.**
	Major industrial	0	.
	Minor	1	**13 minor driveways per mile.**
Cross Section Data			
Lane width, ft		11	.
Outside shoulder width, ft		6	.
Median width, ft		10	.
Median barrier present?		No	.
Roadside Data			
Roadside fixed object count		1	**13 objects per mile.**
Average roadside fixed object offset, ft		14	.

Calibration Factors

	Value	*Default Values*
Local calibration factor (C)	1.000	1.000
Adjustment factor for pedestrians (f_{ped})	0.015	0.015
Adjustment factor for bicyclists (f_{bike})	0.008	0.008
Severity distribution calibration factor ($C_{sdf,tws}$)	1.000	1.000

Crash Modification Factors

	F+I		*PDO*	
	Multiple	*Single*	*Multiple*	*Single*
Lane width	1.022	1.022	1.022	1.022
Outside shoulder width	0.880	0.880	0.880	0.880
Median width	1.029	1.029	1.029	1.029
Median barrier	1.000	1.000	1.000	1.000
Highway-rail grade crossing	1.000	1.000	1.000	1.000
Major commercial driveways	1.469		1.469	
Major industrial driveways	0.989		0.989	
Minor driveways	1.016		1.016	
Automated speed enforcement	1.000	1.000	1.000	1.000
Roadside fixed objects		1.021		1.021

Safety Prediction Worksheet for Two-Way Urban and Suburban Arterial Segments

General Information

Analyst	L. Willman
Agency	Kittelson
Date	6/23/2019
Location	City of Norwalk

Site Information

Street number	
Street name	Orr & Day - Imperial Hwy
Segment number	4
Analysis year	2019

Add to Totals worksheet | Restore equations | Reset input cells

Output Summary

Predicted crash frequency, crashes / year

	F+I	PDO	Total
Total crashes	0.179	0.277	0.456
Multiple-vehicle crashes	0.141	0.240	
Single-vehicle crashes	0.029	0.037	
Vehicle-pedestrian crashes	0.007		
Vehicle-bicycle crashes	0.004		

Combined CMF

	F+I	PDO
Multiple-vehicle crashes	0.980	0.980
Single-vehicle crashes	0.951	0.951

Severity distribution for F+I crashes

K	A	B	C
0.002	0.012	0.047	0.118

Input Data		*Value*	*Advisory Messages*
Basic Roadway Data			
Area type		Urban	.
Segment type		6D	.
Segment length, mi		0.056	.
Annual average daily traffic (AADT), veh/day		23880	.
Number of highway-rail grade crossings present		0	.
Posted speed limit, mi/h		45	.
Automated speed enforcement present?		No	.
Access Data			
Driveway count	Major commercial	0	.
	Major industrial	0	.
	Minor	2	**36 minor driveways per mile.**
Cross Section Data			
Lane width, ft		11	.
Outside shoulder width, ft		6	.
Median width, ft		10	.
Median barrier present?		No	.
Roadside Data			
Roadside fixed object count		1	**18 objects per mile.**
Average roadside fixed object offset, ft		14	.

Calibration Factors	*Value*	*Default Values*
Local calibration factor (C)	1.000	1.000
Adjustment factor for pedestrians (f_{ped})	0.015	0.015
Adjustment factor for bicyclists (f_{bike})	0.008	0.008
Severity distribution calibration factor ($C_{sdf,tws}$)	1.000	1.000

Crash Modification Factors	*F+I*		*PDO*	
	Multiple	*Single*	*Multiple*	*Single*
Lane width	1.022	1.022	1.022	1.022
Outside shoulder width	0.880	0.880	0.880	0.880
Median width	1.029	1.029	1.029	1.029
Median barrier	1.000	1.000	1.000	1.000
Highway-rail grade crossing	1.000	1.000	1.000	1.000
Major commercial driveways	0.932		0.932	
Major industrial driveways	0.989		0.989	
Minor driveways	1.149		1.149	
Automated speed enforcement	1.000	1.000	1.000	1.000
Roadside fixed objects		1.029		1.029

Safety Prediction Worksheet for Urban and Suburban Arterial Intersections

General Information

Analyst	L. Willman
Agency	Kittelson
Date	6/23/2019
Location	City of Norwalk

Site Information

Major street name	I-605 ramsp/Hoxie Ave
Minor street name	Firestone
Intersection number	1
Analysis year	2019

Add to Totals worksheet | Restore equations | Reset input cells

Output Summary

Predicted crash frequency, crashes / year

	F+I	PDO	Total
Total crashes	3.373	2.832	6.205
Total-vehicle crashes	3.076	2.832	
Vehicle-pedestrian crashes	0.185		
Vehicle-bicycle crashes	0.112		

Combined CMF

	F+I	PDO
Total-vehicle crashes	0.495	0.495
Vehicle-pedestrian crashes	2.780	

Severity distribution for F+I crashes

K	A	B	C
0.013	0.129	0.751	2.480

Input Data

Input Data	Value	Advisory Messages
Intersection Data		
Area type	Urban	.
Number of legs	4	4SG intersection type
Traffic control type	Signalized	.
Lighting present?	Yes	.
Red-light cameras present?	No	.
Daily pedestrian volume crossing all legs (peds/day)	140	.
Maximum number of lanes crossed by a pedestrian	9	.
Number of bus stops within 1,000 ft of intersection	1	.
School(s) present within 1,000 ft of intersection?	No	.
Alcohol sales establishments within 1,000 ft	0	.

Street Data	*Major*	*Minor*	.
Street configuration	Two-way	Two-way	2x2 intersection configuration
Annual average daily traffic (AADT), veh/day	35410	20933	.
Number of through lanes	4	6	.
Number of approaches with left-turn lanes	2	2	.
Number of left-turn movements with protected phasing	2	2	.
Number of right-turn movements prohibited on red	0	1	.
Number of U-turn movements prohibited	2	1	.
Number of approaches with right-turn channelization	0	0	.

Calibration Factors

Calibration Factors	Value	Default Values
Local calibration factor (C)	1.000	1.000
Adjustment factor for pedestrians for stop control (f_{ped})	0.049	0.049
Adjustment factor for bicyclists (f_{bike})	0.019	0.019
Severity distribution calibration factor, 2-way ($C_{sdf,twi}$)	1.000	1.000
Severity distribution calibration factor, 1-way ($C_{sdf,owi}$)	1.000	1.000
Probability of fatality given K+A severity ($P_{K\|K+A}$)	0.094	0.094

Manner of Collision Proportions

2x2 intersections	*3ST, F+I*	*3ST, PDO*	*3SG, F+I*	*3SG, PDO*	*4ST, F+I*	*4ST, PDO*	*4SG, F+I*	*4SG, PDO*
Rear-end collision proportion	0.094	0.154	0.120	0.189	0.079	0.098	0.083	0.148
Angle colllision proportion	0.764	0.629	0.676	0.554	0.806	0.707	0.746	0.552
1x2 or 1x1 intersections	*3ST, F+I*	*3ST, PDO*	*3SG, F+I*	*3SG, PDO*	*4ST, F+I*	*4ST, PDO*	*4SG, F+I*	*4SG, PDO*
Rear-end collision proportion	0.100	0.100	0.111	0.143	0.047	0.065	0.030	0.059
Angle colllision proportion	0.300	0.250	0.889	0.571	0.822	0.706	0.837	0.733

Crash Modification Factors

Crash Modification Factors	F+I	PDO
Total-vehicle crash CMFs		
Lighting	0.911	0.911
Red-light cameras	1.000	1.000
Left-turn signal phasing	0.547	0.547
Right-turn-on-red	0.980	0.980
U-turn prohibition	0.885	0.885
Right-turn channelization	1.000	1.000
Number of lanes	1.146	1.146
Vehicle-pedestrian crash CMFs		
Bus stops	2.780	
Schools	1.000	
Alcohol sales establishments	1.000	

Safety Prediction Worksheet for Urban and Suburban Arterial Intersections

General Information

Analyst	L. Willman
Agency	Kittelson
Date	6/23/2019
Location	City of Norwalk

Site Information

Major street name	Firestone
Minor street name	Studebaker
Intersection number	2
Analysis year	2019

Add to Totals worksheet | Restore equations | Reset input cells

Output Summary

Predicted crash frequency, crashes / year

	F+I	PDO	Total
Total crashes	2.148	1.755	3.903
Total-vehicle crashes	1.761	1.755	
Vehicle-pedestrian crashes	0.286		
Vehicle-bicycle crashes	0.102		

Combined CMF

	F+I	PDO
Total-vehicle crashes	0.557	0.557
Vehicle-pedestrian crashes	4.150	

Severity distribution for F+I crashes

K	A	B	C
0.011	0.105	0.524	1.509

Input Data

Input Data	Value	Advisory Messages
Intersection Data		
Area type	Urban	.
Number of legs	3	3SG intersection type
Traffic control type	Signalized	.
Lighting present?	Yes	.
Red-light cameras present?	No	.
Daily pedestrian volume crossing all legs (peds/day)	740	.
Maximum number of lanes crossed by a pedestrian	8	.
Number of bus stops within 1,000 ft of intersection	3	.
School(s) present within 1,000 ft of intersection?	No	.
Alcohol sales establishments within 1,000 ft	0	.

Street Data	*Major*	*Minor*	.
Street configuration	Two-way	Two-way	2x2 intersection configuration
Annual average daily traffic (AADT), veh/day	27907	22946	.
Number of through lanes	6	4	.
Number of approaches with left-turn lanes	2	2	.
Number of left-turn movements with protected phasing	2	2	.
Number of right-turn movements prohibited on red	0	0	.
Number of U-turn movements prohibited	0	2	.
Number of approaches with right-turn channelization	0	2	.

Calibration Factors

Calibration Factors	Value	Default Values
Local calibration factor (C)	1.000	1.000
Adjustment factor for pedestrians for stop control (f_{ped})	0.051	0.051
Adjustment factor for bicyclists (f_{bike})	0.029	0.029
Severity distribution calibration factor, 2-way ($C_{sdf,twi}$)	1.000	1.000
Severity distribution calibration factor, 1-way ($C_{sdf,owi}$)	1.000	1.000
Probability of fatality given K+A severity ($P_{K|K+A}$)	0.094	0.094

Manner of Collision Proportions

2x2 intersections	*3ST, F+I*	*3ST, PDO*	*3SG, F+I*	*3SG, PDO*	*4ST, F+I*	*4ST, PDO*	*4SG, F+I*	*4SG, PDO*
Rear-end collision proportion	0.094	0.154	0.120	0.189	0.079	0.098	0.083	0.148
Angle colllision proportion	0.764	0.629	0.676	0.554	0.806	0.707	0.746	0.552
1x2 or 1x1 intersections	*3ST, F+I*	*3ST, PDO*	*3SG, F+I*	*3SG, PDO*	*4ST, F+I*	*4ST, PDO*	*4SG, F+I*	*4SG, PDO*
Rear-end collision proportion	0.100	0.100	0.111	0.143	0.047	0.065	0.030	0.059
Angle colllision proportion	0.300	0.250	0.889	0.571	0.822	0.706	0.837	0.733

Crash Modification Factors

Crash Modification Factors	F+I	PDO
Total-vehicle crash CMFs		
Lighting	0.911	0.911
Red-light cameras	1.000	1.000
Left-turn signal phasing	0.547	0.547
Right-turn-on-red	1.000	1.000
U-turn prohibition	0.922	0.922
Right-turn channelization	1.000	1.000
Number of lanes	1.214	1.214
Vehicle-pedestrian crash CMFs		
Bus stops	4.150	
Schools	1.000	
Alcohol sales establishments	1.000	

Safety Prediction Worksheet for Urban and Suburban Arterial Intersections

General Information

Analyst	L. Willman
Agency	Kittelson
Date	6/23/2019
Location	City of Norwalk

Site Information

Major street name	Firestone
Minor street name	Stater
Intersection number	3
Analysis year	2019

Add to Totals worksheet | Restore equations | Reset input cells

Output Summary

Predicted crash frequency, crashes / year

	F+I	PDO	Total
Total crashes	1.846	1.661	3.507
Total-vehicle crashes	1.751	1.661	
Vehicle-pedestrian crashes	0.030		
Vehicle-bicycle crashes	0.065		

Combined CMF

	F+I	PDO
Total-vehicle crashes	0.621	0.621
Vehicle-pedestrian crashes	1.000	

Severity distribution for F+I crashes

K	A	B	C
0.009	0.090	0.450	1.296

Input Data	*Value*		*Advisory Messages*
Intersection Data			
Area type	Urban		.
Number of legs	4		**4SG intersection type**
Traffic control type	Signalized		.
Lighting present?	Yes		.
Red-light cameras present?	No		.
Daily pedestrian volume crossing all legs (peds/day)	190		.
Maximum number of lanes crossed by a pedestrian	7		.
Number of bus stops within 1,000 ft of intersection	0		.
School(s) present within 1,000 ft of intersection?	No		.
Alcohol sales establishments within 1,000 ft	0		.
Street Data	*Major*	*Minor*	.
Street configuration	Two-way	Two-way	**2x2 intersection configuration**
Annual average daily traffic (AADT), veh/day	25240	1760	.
Number of through lanes	6	2	.
Number of approaches with left-turn lanes	2	1	.
Number of left-turn movements with protected phasing	2	0	.
Number of right-turn movements prohibited on red	0	0	.
Number of U-turn movements prohibited	0	2	.
Number of approaches with right-turn channelization	0	0	.

Calibration Factors	*Value*	*Default Values*
Local calibration factor (C)	1.000	1.000
Adjustment factor for pedestrians for stop control (f_{ped})	0.049	0.049
Adjustment factor for bicyclists (f_{bike})	0.019	0.019
Severity distribution calibration factor, 2-way ($C_{sdf,twi}$)	1.000	1.000
Severity distribution calibration factor, 1-way ($C_{sdf,owi}$)	1.000	1.000
Probability of fatality given K+A severity ($P_{K\|K+A}$)	0.094	0.094

Manner of Collision Proportions

2x2 intersections	3ST, F+I	3ST, PDO	3SG, F+I	3SG, PDO	4ST, F+I	4ST, PDO	4SG, F+I	4SG, PDO
Rear-end collision proportion	0.094	0.154	0.120	0.189	0.079	0.098	0.083	0.148
Angle colllision proportion	0.764	0.629	0.676	0.554	0.806	0.707	0.746	0.552
1x2 or 1x1 intersections	3ST, F+I	3ST, PDO	3SG, F+I	3SG, PDO	4ST, F+I	4ST, PDO	4SG, F+I	4SG, PDO
Rear-end collision proportion	0.100	0.100	0.111	0.143	0.047	0.065	0.030	0.059
Angle colllision proportion	0.300	0.250	0.889	0.571	0.822	0.706	0.837	0.733

Crash Modification Factors	*F+I*	*PDO*
Total-vehicle crash CMFs		
Lighting	0.911	0.911
Red-light cameras	1.000	1.000
Left-turn signal phasing	0.740	0.740
Right-turn-on-red	1.000	1.000
U-turn prohibition	0.922	0.922
Right-turn channelization	1.000	1.000
Number of lanes	1.000	1.000
Vehicle-pedestrian crash CMFs		
Bus stops	1.000	
Schools	1.000	
Alcohol sales establishments	1.000	

Safety Prediction Worksheet for Urban and Suburban Arterial Intersections

General Information

Analyst	L. Willman
Agency	Kittelson
Date	6/23/2019
Location	City of Norwalk

Site Information

Major street name	Firestone
Minor street name	Orr & Day
Intersection number	4
Analysis year	2019

Add to Totals worksheet | Restore equations | Reset input cells

Output Summary

Predicted crash frequency, crashes / year

	F+I	PDO	Total
Total crashes	2.927	2.644	5.571
Total-vehicle crashes	2.779	2.644	
Vehicle-pedestrian crashes	0.045		
Vehicle-bicycle crashes	0.103		

Combined CMF

	F+I	PDO
Total-vehicle crashes	0.693	0.693
Vehicle-pedestrian crashes	1.000	

Severity distribution for F+I crashes

K	A	B	C
0.015	0.146	0.734	2.032

Input Data	*Value*	*Advisory Messages*
Intersection Data		
Area type	Urban	.
Number of legs	4	**4SG intersection type**
Traffic control type	Signalized	.
Lighting present?	Yes	.
Red-light cameras present?	No	.
Daily pedestrian volume crossing all legs (peds/day)	180	.
Maximum number of lanes crossed by a pedestrian	7	.
Number of bus stops within 1,000 ft of intersection	0	.
School(s) present within 1,000 ft of intersection?	No	.
Alcohol sales establishments within 1,000 ft	0	.

Street Data	*Major*	*Minor*	.
Street configuration	Two-way	Two-way	**2x2 intersection configuration**
Annual average daily traffic (AADT), veh/day	24627	6706	.
Number of through lanes	6	2	.
Number of approaches with left-turn lanes	1	2	.
Number of left-turn movements with protected phasing	1	0	.
Number of right-turn movements prohibited on red	0	0	.
Number of U-turn movements prohibited	1	2	.
Number of approaches with right-turn channelization	0	0	.

Calibration Factors	*Value*	*Default Values*
Local calibration factor (C)	1.000	1.000
Adjustment factor for pedestrians for stop control (f_{ped})	0.049	0.049
Adjustment factor for bicyclists (f_{bike})	0.019	0.019
Severity distribution calibration factor, 2-way ($C_{sdf,twi}$)	1.000	1.000
Severity distribution calibration factor, 1-way ($C_{sdf,owi}$)	1.000	1.000
Probability of fatality given K+A severity ($P_{K\|K+A}$)	0.094	0.094

Manner of Collision Proportions

2x2 intersections	*3ST, F+I*	*3ST, PDO*	*3SG, F+I*	*3SG, PDO*	*4ST, F+I*	*4ST, PDO*	*4SG, F+I*	*4SG, PDO*
Rear-end collision proportion	0.094	0.154	0.120	0.189	0.079	0.098	0.083	0.148
Angle colllision proportion	0.764	0.629	0.676	0.554	0.806	0.707	0.746	0.552
1x2 or 1x1 intersections	*3ST, F+I*	*3ST, PDO*	*3SG, F+I*	*3SG, PDO*	*4ST, F+I*	*4ST, PDO*	*4SG, F+I*	*4SG, PDO*
Rear-end collision proportion	0.100	0.100	0.111	0.143	0.047	0.065	0.030	0.059
Angle colllision proportion	0.300	0.250	0.889	0.571	0.822	0.706	0.837	0.733

Crash Modification Factors	*F+I*	*PDO*
Total-vehicle crash CMFs		
Lighting	0.911	0.911
Red-light cameras	1.000	1.000
Left-turn signal phasing	0.860	0.860
Right-turn-on-red	1.000	1.000
U-turn prohibition	0.885	0.885
Right-turn channelization	1.000	1.000
Number of lanes	1.000	1.000
Vehicle-pedestrian crash CMFs		
Bus stops	1.000	
Schools	1.000	
Alcohol sales establishments	1.000	

Safety Prediction Worksheet for Urban and Suburban Arterial Intersections

General Information

Analyst	L. Willman
Agency	Kittelson
Date	6/23/2019
Location	City of Norwalk

Site Information

Major street name	Imperial
Minor street name	Firestone
Intersection number	5
Analysis year	2019

Add to Totals worksheet | Restore equations | Reset input cells

Output Summary

Predicted crash frequency, crashes / year

	F+I	PDO	Total
Total crashes	9.556	7.768	17.324
Total-vehicle crashes	8.833	7.768	
Vehicle-pedestrian crashes	0.408		
Vehicle-bicycle crashes	0.315		

Combined CMF

	F+I	PDO
Total-vehicle crashes	1.119	1.119
Vehicle-pedestrian crashes	4.150	

Severity distribution for F+I crashes

K	A	B	C
0.044	0.424	2.292	6.796

Input Data

Input Data	Value	Advisory Messages
Intersection Data		
Area type	Urban	.
Number of legs	4	**4SG intersection type**
Traffic control type	Signalized	.
Lighting present?	Yes	.
Red-light cameras present?	No	.
Daily pedestrian volume crossing all legs (peds/day)	300	.
Maximum number of lanes crossed by a pedestrian	8	.
Number of bus stops within 1,000 ft of intersection	2	.
School(s) present within 1,000 ft of intersection?	No	.
Alcohol sales establishments within 1,000 ft	0	.

Street Data	*Major*	*Minor*	.
Street configuration	Two-way	Two-way	**2x2 intersection configuration**
Annual average daily traffic (AADT), veh/day	58840	25746	.
Number of through lanes	6	6	.
Number of approaches with left-turn lanes	1	2	.
Number of left-turn movements with protected phasing	1	2	.
Number of right-turn movements prohibited on red	0	0	.
Number of U-turn movements prohibited	2	0	.
Number of approaches with right-turn channelization	2	2	.

Calibration Factors

Calibration Factors	Value	Default Values
Local calibration factor (C)	1.000	1.000
Adjustment factor for pedestrians for stop control (f_{ped})	0.049	0.049
Adjustment factor for bicyclists (f_{bike})	0.019	0.019
Severity distribution calibration factor, 2-way ($C_{sdf,twi}$)	1.000	1.000
Severity distribution calibration factor, 1-way ($C_{sdf,owi}$)	1.000	1.000
Probability of fatality given K+A severity ($P_{K\|K+A}$)	0.094	0.094

Manner of Collision Proportions

2x2 intersections	*3ST, F+I*	*3ST, PDO*	*3SG, F+I*	*3SG, PDO*	*4ST, F+I*	*4ST, PDO*	*4SG, F+I*	*4SG, PDO*
Rear-end collision proportion	0.094	0.154	0.120	0.189	0.079	0.098	0.083	0.148
Angle colllision proportion	0.764	0.629	0.676	0.554	0.806	0.707	0.746	0.552

1x2 or 1x1 intersections	*3ST, F+I*	*3ST, PDO*	*3SG, F+I*	*3SG, PDO*	*4ST, F+I*	*4ST, PDO*	*4SG, F+I*	*4SG, PDO*
Rear-end collision proportion	0.100	0.100	0.111	0.143	0.047	0.065	0.030	0.059
Angle colllision proportion	0.300	0.250	0.889	0.571	0.822	0.706	0.837	0.733

Crash Modification Factors

Crash Modification Factors	F+I	PDO
Total-vehicle crash CMFs		
Lighting	0.911	0.911
Red-light cameras	1.000	1.000
Left-turn signal phasing	0.636	0.636
Right-turn-on-red	1.000	1.000
U-turn prohibition	0.922	0.922
Right-turn channelization	1.545	1.545
Number of lanes	1.357	1.357
Vehicle-pedestrian crash CMFs		
Bus stops	4.150	
Schools	1.000	
Alcohol sales establishments	1.000	

Crash Totals Tabulation

Empirical Bayes adjustment type: Site-specific

Clear tables

Sort rows

Calculate

Facility Totals	
MV+SV:	43.747
VP+VB:	1.556
F+I:	18.224
PDO:	27.079
Total:	45.303

Project-Level Observed Crash Totals		
Crash type	F+I	PDO
Multiple-vehicle crashes on segments:		
Single-vehicle crashes on segments:		
Total-vehicle crashes at **all** intersections:		
Vehicle-pedestrian crashes at **signalized** intersections:		

Total Expected Crash Frequency, crashes / year								
	Multiple-vehicle		Single-vehicle		Total-vehicle		Veh-ped	Veh-bike
Site type	F+I	PDO	F+I	PDO	F+I	PDO	F+I	F+I
Segments:	1.981	2.567	0.415	0.543	2.396	3.111	0.083	0.044
Intersections:					14.271	23.969	0.630	0.799
Total:	1.981	2.567	0.415	0.543	16.668	27.079	0.713	0.843

Segment Site Information				Predicted crash frequency, crashes / year						Site-specific observed crash totals				Expected crash frequency, crashes / year						Combined CMF				Location information	
				Multiple-vehicle		Single-vehicle		Vehicle-pedestrian	Vehicle-bicycle	Multiple-vehicle		Single-vehicle		Multiple-vehicle		Single-vehicle		Vehicle-pedestrian	Vehicle-bicycle	Multiple-vehicle		Single-vehicle			
Number	Year	Type	Street number	F+I	PDO	F+I	PDO	F+I	F+I	F+I	PDO	F+I	PDO	F+I	PDO	F+I	PDO	F+I	F+I	F+I	PDO	F+I	PDO	Location	Street name
1	2019	6D		1.160	1.905	0.165	0.210	0.052	0.028					0.726	0.895	0.144	0.189	0.029	0.016	1.384	1.384	1.116	1.116	City of Norwalk	Hoxie to Studebaker
2	2019	6D		1.321	2.225	0.234	0.299	0.061	0.033					0.953	1.272	0.209	0.274	0.041	0.022	1.065	1.065	0.955	0.955	City of Norwalk	Studebaker-Stater
3	2019	6D		0.293	0.494	0.040	0.051	0.013	0.007					0.197	0.253	0.036	0.047	0.008	0.004	1.366	1.366	0.944	0.944	City of Norwalk	Stater - Orr & Day
4	2019	6D		0.141	0.240	0.029	0.037	0.007	0.004					0.106	0.147	0.026	0.034	0.005	0.002	0.980	0.980	0.951	0.951	City of Norwalk	Orr & Day - Imperial Hwy

Intersection Site Information				Predicted crash frequency, crashes / year				Site-specific observed crash totals			Expected crash frequency, crashes / year				Combined CMF			Location information	
				Total-vehicle		Vehicle-pedestrian	Vehicle-bicycle	Total-vehicle		Vehicle-pedestrian	Total-vehicle		Vehicle-pedestrian	Vehicle-bicycle	Total-vehicle		Vehicle-pedestrian		
Number	Year	Type	Configuration	F+I	PDO	F+I	F+I	F+I	PDO	F+I	F+I	PDO	F+I	F+I	F+I	PDO	F+I	Major street name	Minor street name
1	2019	4SG	Two-way	3.076	2.832	0.185	0.112	4.2	8.2	0	3.789	6.789	0.105	0.201	0.495	0.495	2.780	I-605 ramsp/Hoxie Ave	Firestone
2	2019	3SG	Two-way	1.761	1.755	0.286	0.102	3.2	6.6	0	2.447	4.841	0.184	0.211	0.557	0.557	4.150	Firestone	Studebaker
3	2019	4SG	Two-way	1.751	1.661	0.030	0.065	0	0	0	0.880	0.628	0.027	0.029	0.621	0.621	1.000	Firestone	Stater
4	2019	4SG	Two-way	2.779	2.644	0.045	0.103	4.8	4.4	0	4.014	3.915	0.038	0.151	0.693	0.693	1.000	Firestone	Orr & Day
5	2019	4SG	Two-way	8.833	7.768	0.408	0.315	2	7.8	0.2	3.141	7.796	0.277	0.208	1.119	1.119	4.150	Imperial	Firestone

Safety Prediction Worksheet for Two-Way Urban and Suburban Arterial Segments

General Information

Analyst	L. Willman
Agency	Kittelson
Date	6/23/2019
Location	City of Norwalk

Site Information

Street number	
Street name	Hoxie to Studebaker
Segment number	1
Analysis year	2019

Add to Totals worksheet | Restore equations | Reset input cells

Output Summary

Predicted crash frequency, crashes / year

	F+I	PDO	Total
Total crashes	1.729	2.538	4.267
Multiple-vehicle crashes	1.453	2.310	
Single-vehicle crashes	0.180	0.228	
Vehicle-pedestrian crashes	0.063		
Vehicle-bicycle crashes	0.033		

Combined CMF

	F+I	PDO
Multiple-vehicle crashes	1.384	1.384
Single-vehicle crashes	1.116	1.116

Severity distribution for F+I crashes

K	A	B	C
0.018	0.117	0.455	1.140

Input Data		*Value*	*Advisory Messages*
Basic Roadway Data			
Area type		Urban	.
Segment type		6D	.
Segment length, mi		0.25	.
Annual average daily traffic (AADT), veh/day		35600	.
Number of highway-rail grade crossings present		0	.
Posted speed limit, mi/h		40	.
Automated speed enforcement present?		No	.
Access Data			
Driveway count	Major commercial	2	**8 major comm. driveways per mile.**
	Major industrial	0	.
	Minor	4	**16 minor driveways per mile.**
Cross Section Data			
Lane width, ft		11	.
Outside shoulder width, ft		0	.
Median width, ft		10	.
Median barrier present?		No	.
Roadside Data			
Roadside fixed object count		3	**12 objects per mile.**
Average roadside fixed object offset, ft		15	.

Calibration Factors	*Value*	*Default Values*
Local calibration factor (C)	1.000	1.000
Adjustment factor for pedestrians (f_{ped})	0.015	0.015
Adjustment factor for bicyclists (f_{bike})	0.008	0.008
Severity distribution calibration factor ($C_{sdf,tws}$)	1.000	1.000

Crash Modification Factors	*F+I*		*PDO*	
	Multiple	*Single*	*Multiple*	*Single*
Lane width	1.022	1.022	1.022	1.022
Outside shoulder width	1.044	1.044	1.044	1.044
Median width	1.029	1.029	1.029	1.029
Median barrier	1.000	1.000	1.000	1.000
Highway-rail grade crossing	1.000	1.000	1.000	1.000
Major commercial driveways	1.234		1.234	
Major industrial driveways	0.989		0.989	
Minor driveways	1.033		1.033	
Automated speed enforcement	1.000	1.000	1.000	1.000
Roadside fixed objects		1.017		1.017

Safety Prediction Worksheet for Two-Way Urban and Suburban Arterial Segments

General Information

Analyst	L. Willman
Agency	Kittelson
Date	6/23/2019
Location	City of Norwalk

Site Information

Street number	
Street name	Studebaker-Stater
Segment number	2
Analysis year	2019

Add to Totals worksheet | Restore equations | Reset input cells

Output Summary

Predicted crash frequency, crashes / year

	F+I	PDO	Total
Total crashes	2.023	3.022	5.045
Multiple-vehicle crashes	1.656	2.699	
Single-vehicle crashes	0.254	0.323	
Vehicle-pedestrian crashes	0.074		
Vehicle-bicycle crashes	0.039		

Combined CMF

	F+I	PDO
Multiple-vehicle crashes	1.065	1.065
Single-vehicle crashes	0.955	0.955

Severity distribution for F+I crashes

K	A	B	C
0.026	0.136	0.530	1.330

Input Data		*Value*	*Advisory Messages*
Basic Roadway Data			
Area type		Urban	.
Segment type		6D	.
Segment length, mi		0.44	.
Annual average daily traffic (AADT), veh/day		30968	.
Number of highway-rail grade crossings present		0	.
Posted speed limit, mi/h		45	.
Automated speed enforcement present?		No	.
Access Data			
Driveway count	Major commercial	3	**7 major comm. driveways per mile.**
	Major industrial	1	**2 major industrial driveways per mile.**
	Minor	1	**2 minor driveways per mile.**
Cross Section Data			
Lane width, ft		11	.
Outside shoulder width, ft		6	.
Median width, ft		10	.
Median barrier present?		No	.
Roadside Data			
Roadside fixed object count		9	**20 objects per mile.**
Average roadside fixed object offset, ft		14	.

Calibration Factors	*Value*	*Default Values*
Local calibration factor (C)	1.000	1.000
Adjustment factor for pedestrians (f_{ped})	0.015	0.015
Adjustment factor for bicyclists (f_{bike})	0.008	0.008
Severity distribution calibration factor ($C_{sdf,tws}$)	1.000	1.000

Crash Modification Factors	*F+I*		*PDO*	
	Multiple	*Single*	*Multiple*	*Single*
Lane width	1.022	1.022	1.022	1.022
Outside shoulder width	0.880	0.880	0.880	0.880
Median width	1.029	1.029	1.029	1.029
Median barrier	1.000	1.000	1.000	1.000
Highway-rail grade crossing	1.000	1.000	1.000	1.000
Major commercial driveways	1.184		1.184	
Major industrial driveways	1.014		1.014	
Minor driveways	0.959		0.959	
Automated speed enforcement	1.000	1.000	1.000	1.000
Roadside fixed objects		1.033		1.033

Safety Prediction Worksheet for Two-Way Urban and Suburban Arterial Segments

General Information

Analyst	L. Willman
Agency	Kittelson
Date	6/23/2019
Location	City of Norwalk

Site Information

Street number	
Street name	Stater - Orr & Day
Segment number	3
Analysis year	2019

Add to Totals worksheet | Restore equations | Reset input cells

Output Summary

Predicted crash frequency, crashes / year

	F+I	PDO	Total
Total crashes	0.435	0.655	1.090
Multiple-vehicle crashes	0.367	0.599	
Single-vehicle crashes	0.044	0.056	
Vehicle-pedestrian crashes	0.016		
Vehicle-bicycle crashes	0.009		

Combined CMF

	F+I	PDO
Multiple-vehicle crashes	1.366	1.366
Single-vehicle crashes	0.944	0.944

Severity distribution for F+I crashes

K	A	B	C
0.006	0.029	0.114	0.286

Input Data		*Value*	*Advisory Messages*
Basic Roadway Data			
Area type		Urban	.
Segment type		6D	.
Segment length, mi		0.077	.
Annual average daily traffic (AADT), veh/day		30640	.
Number of highway-rail grade crossings present		0	.
Posted speed limit, mi/h		45	.
Automated speed enforcement present?		No	.
Access Data			
Driveway count	Major commercial	1	**13 major comm. driveways per mile.**
	Major industrial	0	.
	Minor	1	**13 minor driveways per mile.**
Cross Section Data			
Lane width, ft		11	.
Outside shoulder width, ft		6	.
Median width, ft		10	.
Median barrier present?		No	.
Roadside Data			
Roadside fixed object count		1	**13 objects per mile.**
Average roadside fixed object offset, ft		14	.

Calibration Factors	*Value*	*Default Values*
Local calibration factor (C)	1.000	1.000
Adjustment factor for pedestrians (f_{ped})	0.015	0.015
Adjustment factor for bicyclists (f_{bike})	0.008	0.008
Severity distribution calibration factor ($C_{sdf,tws}$)	1.000	1.000

Crash Modification Factors	*F+I*		*PDO*	
	Multiple	*Single*	*Multiple*	*Single*
Lane width	1.022	1.022	1.022	1.022
Outside shoulder width	0.880	0.880	0.880	0.880
Median width	1.029	1.029	1.029	1.029
Median barrier	1.000	1.000	1.000	1.000
Highway-rail grade crossing	1.000	1.000	1.000	1.000
Major commercial driveways	1.469		1.469	
Major industrial driveways	0.989		0.989	
Minor driveways	1.016		1.016	
Automated speed enforcement	1.000	1.000	1.000	1.000
Roadside fixed objects		1.021		1.021

Safety Prediction Worksheet for Two-Way Urban and Suburban Arterial Segments

General Information

Analyst	L. Willman
Agency	Kittelson
Date	6/23/2019
Location	City of Norwalk

Site Information

Street number	
Street name	Orr & Day - Imperial Hwy
Segment number	4
Analysis year	2019

Add to Totals worksheet | Restore equations | Reset input cells

Output Summary

Predicted crash frequency, crashes / year

	F+I	PDO	Total
Total crashes	0.220	0.331	0.551
Multiple-vehicle crashes	0.176	0.291	
Single-vehicle crashes	0.031	0.040	
Vehicle-pedestrian crashes	0.008		
Vehicle-bicycle crashes	0.004		

Combined CMF

	F+I	PDO
Multiple-vehicle crashes	0.980	0.980
Single-vehicle crashes	0.951	0.951

Severity distribution for F+I crashes

K	A	B	C
0.003	0.015	0.058	0.144

Input Data

		Value	*Advisory Messages*
Basic Roadway Data			
Area type		Urban	.
Segment type		6D	.
Segment length, mi		0.056	.
Annual average daily traffic (AADT), veh/day		28656	.
Number of highway-rail grade crossings present		0	.
Posted speed limit, mi/h		45	.
Automated speed enforcement present?		No	.
Access Data			
Driveway count	Major commercial	0	.
	Major industrial	0	.
	Minor	2	**36 minor driveways per mile.**
Cross Section Data			
Lane width, ft		11	.
Outside shoulder width, ft		6	.
Median width, ft		10	.
Median barrier present?		No	.
Roadside Data			
Roadside fixed object count		1	**18 objects per mile.**
Average roadside fixed object offset, ft		14	.

Calibration Factors

	Value	*Default Values*
Local calibration factor (C)	1.000	1.000
Adjustment factor for pedestrians (f_{ped})	0.015	0.015
Adjustment factor for bicyclists (f_{bike})	0.008	0.008
Severity distribution calibration factor ($C_{sdf,tws}$)	1.000	1.000

Crash Modification Factors

	F+I		*PDO*	
	Multiple	*Single*	*Multiple*	*Single*
Lane width	1.022	1.022	1.022	1.022
Outside shoulder width	0.880	0.880	0.880	0.880
Median width	1.029	1.029	1.029	1.029
Median barrier	1.000	1.000	1.000	1.000
Highway-rail grade crossing	1.000	1.000	1.000	1.000
Major commercial driveways	0.932		0.932	
Major industrial driveways	0.989		0.989	
Minor driveways	1.149		1.149	
Automated speed enforcement	1.000	1.000	1.000	1.000
Roadside fixed objects		1.029		1.029

Safety Prediction Worksheet for Urban and Suburban Arterial Intersections

General Information

Analyst	L. Willman
Agency	Kittelson
Date	6/23/2019
Location	City of Norwalk

Site Information

Major street name	I-605 ramsp/Hoxie Ave
Minor street name	Firestone
Intersection number	1
Analysis year	2019

Add to Totals worksheet | Restore equations | Reset input cells

Output Summary

Predicted crash frequency, crashes / year

	F+I	PDO	Total
Total crashes	3.775	3.125	6.899
Total-vehicle crashes	3.450	3.125	
Vehicle-pedestrian crashes	0.200		
Vehicle-bicycle crashes	0.125		

Combined CMF

	F+I	PDO
Total-vehicle crashes	0.495	0.495
Vehicle-pedestrian crashes	2.780	

Severity distribution for F+I crashes

K	A	B	C
0.015	0.145	0.840	2.775

Input Data

Input Data	Value	Advisory Messages
Intersection Data		
Area type	Urban	.
Number of legs	4	4SG intersection type
Traffic control type	Signalized	.
Lighting present?	Yes	.
Red-light cameras present?	No	.
Daily pedestrian volume crossing all legs (peds/day)	140	.
Maximum number of lanes crossed by a pedestrian	9	.
Number of bus stops within 1,000 ft of intersection	1	.
School(s) present within 1,000 ft of intersection?	No	.
Alcohol sales establishments within 1,000 ft	0	.

Street Data	*Major*	*Minor*	.
Street configuration	Two-way	Two-way	2x2 intersection configuration
Annual average daily traffic (AADT), veh/day	42492	25120	.
Number of through lanes	4	6	.
Number of approaches with left-turn lanes	2	2	.
Number of left-turn movements with protected phasing	2	2	.
Number of right-turn movements prohibited on red	0	1	.
Number of U-turn movements prohibited	2	1	.
Number of approaches with right-turn channelization	0	0	.

Calibration Factors

Calibration Factors	Value	Default Values
Local calibration factor (C)	1.000	1.000
Adjustment factor for pedestrians for stop control (f_{ped})	0.049	0.049
Adjustment factor for bicyclists (f_{bike})	0.019	0.019
Severity distribution calibration factor, 2-way ($C_{sdf,twi}$)	1.000	1.000
Severity distribution calibration factor, 1-way ($C_{sdf,owi}$)	1.000	1.000
Probability of fatality given K+A severity ($P_{K\|K+A}$)	0.094	0.094

Manner of Collision Proportions

2x2 intersections	3ST, F+I	3ST, PDO	3SG, F+I	3SG, PDO	4ST, F+I	4ST, PDO	4SG, F+I	4SG, PDO
Rear-end collision proportion	0.094	0.154	0.120	0.189	0.079	0.098	0.083	0.148
Angle colllision proportion	0.764	0.629	0.676	0.554	0.806	0.707	0.746	0.552
1x2 or 1x1 intersections	3ST, F+I	3ST, PDO	3SG, F+I	3SG, PDO	4ST, F+I	4ST, PDO	4SG, F+I	4SG, PDO
Rear-end collision proportion	0.100	0.100	0.111	0.143	0.047	0.065	0.030	0.059
Angle colllision proportion	0.300	0.250	0.889	0.571	0.822	0.706	0.837	0.733

Crash Modification Factors

Crash Modification Factors	F+I	PDO
Total-vehicle crash CMFs		
Lighting	0.911	0.911
Red-light cameras	1.000	1.000
Left-turn signal phasing	0.547	0.547
Right-turn-on-red	0.980	0.980
U-turn prohibition	0.885	0.885
Right-turn channelization	1.000	1.000
Number of lanes	1.146	1.146
Vehicle-pedestrian crash CMFs		
Bus stops	2.780	
Schools	1.000	
Alcohol sales establishments	1.000	

Safety Prediction Worksheet for Urban and Suburban Arterial Intersections

General Information

Analyst	L. Willman
Agency	Kittelson
Date	6/23/2019
Location	City of Norwalk

Site Information

Major street name	Firestone
Minor street name	Studebaker
Intersection number	2
Analysis year	2019

Add to Totals worksheet | Restore equations | Reset input cells

Output Summary

Predicted crash frequency, crashes / year

	F+I	PDO	Total
Total crashes	2.445	1.961	4.406
Total-vehicle crashes	2.041	1.961	
Vehicle-pedestrian crashes	0.288		
Vehicle-bicycle crashes	0.116		

Combined CMF

	F+I	PDO
Total-vehicle crashes	0.557	0.557
Vehicle-pedestrian crashes	4.150	

Severity distribution for F+I crashes

K	A	B	C
0.012	0.119	0.597	1.717

Input Data

Input Data	Value	Advisory Messages
Intersection Data		
Area type	Urban	.
Number of legs	3	3SG intersection type
Traffic control type	Signalized	.
Lighting present?	Yes	.
Red-light cameras present?	No	.
Daily pedestrian volume crossing all legs (peds/day)	740	.
Maximum number of lanes crossed by a pedestrian	8	.
Number of bus stops within 1,000 ft of intersection	3	.
School(s) present within 1,000 ft of intersection?	No	.
Alcohol sales establishments within 1,000 ft	0	.

Street Data	*Major*	*Minor*	.
Street configuration	Two-way	Two-way	2x2 intersection configuration
Annual average daily traffic (AADT), veh/day	33488	27535	.
Number of through lanes	6	4	.
Number of approaches with left-turn lanes	2	2	.
Number of left-turn movements with protected phasing	2	2	.
Number of right-turn movements prohibited on red	0	0	.
Number of U-turn movements prohibited	0	2	.
Number of approaches with right-turn channelization	0	2	.

Calibration Factors

Calibration Factors	Value	Default Values
Local calibration factor (C)	1.000	1.000
Adjustment factor for pedestrians for stop control (f_{ped})	0.051	0.051
Adjustment factor for bicyclists (f_{bike})	0.029	0.029
Severity distribution calibration factor, 2-way ($C_{sdf,twi}$)	1.000	1.000
Severity distribution calibration factor, 1-way ($C_{sdf,owi}$)	1.000	1.000
Probability of fatality given K+A severity ($P_{K\|K+A}$)	0.094	0.094

Manner of Collision Proportions

2x2 intersections	*3ST, F+I*	*3ST, PDO*	*3SG, F+I*	*3SG, PDO*	*4ST, F+I*	*4ST, PDO*	*4SG, F+I*	*4SG, PDO*
Rear-end collision proportion	0.094	0.154	0.120	0.189	0.079	0.098	0.083	0.148
Angle colllision proportion	0.764	0.629	0.676	0.554	0.806	0.707	0.746	0.552
1x2 or 1x1 intersections	*3ST, F+I*	*3ST, PDO*	*3SG, F+I*	*3SG, PDO*	*4ST, F+I*	*4ST, PDO*	*4SG, F+I*	*4SG, PDO*
Rear-end collision proportion	0.100	0.100	0.111	0.143	0.047	0.065	0.030	0.059
Angle colllision proportion	0.300	0.250	0.889	0.571	0.822	0.706	0.837	0.733

Crash Modification Factors

Crash Modification Factors	F+I	PDO
Total-vehicle crash CMFs		
Lighting	0.911	0.911
Red-light cameras	1.000	1.000
Left-turn signal phasing	0.547	0.547
Right-turn-on-red	1.000	1.000
U-turn prohibition	0.922	0.922
Right-turn channelization	1.000	1.000
Number of lanes	1.214	1.214
Vehicle-pedestrian crash CMFs		
Bus stops	4.150	
Schools	1.000	
Alcohol sales establishments	1.000	

Safety Prediction Worksheet for Urban and Suburban Arterial Intersections

General Information

Analyst	L. Willman
Agency	Kittelson
Date	6/23/2019
Location	City of Norwalk

Site Information

Major street name	Firestone
Minor street name	Stater
Intersection number	3
Analysis year	2019

Add to Totals worksheet | Restore equations | Reset input cells

Output Summary

Predicted crash frequency, crashes / year

	F+I	PDO	Total
Total crashes	2.068	1.833	3.902
Total-vehicle crashes	1.964	1.833	
Vehicle-pedestrian crashes	0.032		
Vehicle-bicycle crashes	0.072		

Combined CMF

	F+I	PDO
Total-vehicle crashes	0.621	0.621
Vehicle-pedestrian crashes	1.000	

Severity distribution for F+I crashes

K	A	B	C
0.010	0.101	0.505	1.452

Input Data	*Value*		*Advisory Messages*
Intersection Data			
Area type	Urban		.
Number of legs	4		**4SG intersection type**
Traffic control type	Signalized		.
Lighting present?	Yes		.
Red-light cameras present?	No		.
Daily pedestrian volume crossing all legs (peds/day)	190		.
Maximum number of lanes crossed by a pedestrian	7		.
Number of bus stops within 1,000 ft of intersection	0		.
School(s) present within 1,000 ft of intersection?	No		.
Alcohol sales establishments within 1,000 ft	0		.
Street Data	*Major*	*Minor*	.
Street configuration	Two-way	Two-way	**2x2 intersection configuration**
Annual average daily traffic (AADT), veh/day	30288	2112	.
Number of through lanes	6	2	.
Number of approaches with left-turn lanes	2	1	.
Number of left-turn movements with protected phasing	2	0	.
Number of right-turn movements prohibited on red	0	0	.
Number of U-turn movements prohibited	0	2	.
Number of approaches with right-turn channelization	0	0	.

Calibration Factors	*Value*	*Default Values*
Local calibration factor (C)	1.000	1.000
Adjustment factor for pedestrians for stop control (f_{ped})	0.049	0.049
Adjustment factor for bicyclists (f_{bike})	0.019	0.019
Severity distribution calibration factor, 2-way ($C_{sdf,twi}$)	1.000	1.000
Severity distribution calibration factor, 1-way ($C_{sdf,owi}$)	1.000	1.000
Probability of fatality given K+A severity ($P_{K\|K+A}$)	0.094	0.094

Manner of Collision Proportions

2x2 intersections	3ST, F+I	3ST, PDO	3SG, F+I	3SG, PDO	4ST, F+I	4ST, PDO	4SG, F+I	4SG, PDO
Rear-end collision proportion	0.094	0.154	0.120	0.189	0.079	0.098	0.083	0.148
Angle colllision proportion	0.764	0.629	0.676	0.554	0.806	0.707	0.746	0.552
1x2 or 1x1 intersections	3ST, F+I	3ST, PDO	3SG, F+I	3SG, PDO	4ST, F+I	4ST, PDO	4SG, F+I	4SG, PDO
Rear-end collision proportion	0.100	0.100	0.111	0.143	0.047	0.065	0.030	0.059
Angle colllision proportion	0.300	0.250	0.889	0.571	0.822	0.706	0.837	0.733

Crash Modification Factors	*F+I*	*PDO*
Total-vehicle crash CMFs		
Lighting	0.911	0.911
Red-light cameras	1.000	1.000
Left-turn signal phasing	0.740	0.740
Right-turn-on-red	1.000	1.000
U-turn prohibition	0.922	0.922
Right-turn channelization	1.000	1.000
Number of lanes	1.000	1.000
Vehicle-pedestrian crash CMFs		
Bus stops	1.000	
Schools	1.000	
Alcohol sales establishments	1.000	

Safety Prediction Worksheet for Urban and Suburban Arterial Intersections

General Information

Analyst	L. Willman
Agency	Kittelson
Date	6/23/2019
Location	City of Norwalk

Site Information

Major street name	Firestone
Minor street name	Orr & Day
Intersection number	4
Analysis year	2019

Add to Totals worksheet | Restore equations | Reset input cells

Output Summary

Predicted crash frequency, crashes / year

	F+I	PDO	Total
Total crashes	3.280	2.917	6.198
Total-vehicle crashes	3.118	2.917	
Vehicle-pedestrian crashes	0.048		
Vehicle-bicycle crashes	0.115		

Combined CMF

	F+I	PDO
Total-vehicle crashes	0.693	0.693
Vehicle-pedestrian crashes	1.000	

Severity distribution for F+I crashes

K	A	B	C
0.017	0.164	0.823	2.277

Input Data	*Value*		*Advisory Messages*
Intersection Data			
Area type	Urban		.
Number of legs	4		**4SG intersection type**
Traffic control type	Signalized		.
Lighting present?	Yes		.
Red-light cameras present?	No		.
Daily pedestrian volume crossing all legs (peds/day)	180		.
Maximum number of lanes crossed by a pedestrian	7		.
Number of bus stops within 1,000 ft of intersection	0		.
School(s) present within 1,000 ft of intersection?	No		.
Alcohol sales establishments within 1,000 ft	0		.
Street Data	*Major*	*Minor*	.
Street configuration	Two-way	Two-way	**2x2 intersection configuration**
Annual average daily traffic (AADT), veh/day	29552	8047	.
Number of through lanes	6	2	.
Number of approaches with left-turn lanes	1	2	.
Number of left-turn movements with protected phasing	1	0	.
Number of right-turn movements prohibited on red	0	0	.
Number of U-turn movements prohibited	1	2	.
Number of approaches with right-turn channelization	0	0	.

Calibration Factors	*Value*	*Default Values*
Local calibration factor (C)	1.000	1.000
Adjustment factor for pedestrians for stop control (f_{ped})	0.049	0.049
Adjustment factor for bicyclists (f_{bike})	0.019	0.019
Severity distribution calibration factor, 2-way ($C_{sdf,twi}$)	1.000	1.000
Severity distribution calibration factor, 1-way ($C_{sdf,owi}$)	1.000	1.000
Probability of fatality given K+A severity ($P_{K\|K+A}$)	0.094	0.094

Manner of Collision Proportions

2x2 intersections	3ST, F+I	3ST, PDO	3SG, F+I	3SG, PDO	4ST, F+I	4ST, PDO	4SG, F+I	4SG, PDO
Rear-end collision proportion	0.094	0.154	0.120	0.189	0.079	0.098	0.083	0.148
Angle colllision proportion	0.764	0.629	0.676	0.554	0.806	0.707	0.746	0.552
1x2 or 1x1 intersections	3ST, F+I	3ST, PDO	3SG, F+I	3SG, PDO	4ST, F+I	4ST, PDO	4SG, F+I	4SG, PDO
Rear-end collision proportion	0.100	0.100	0.111	0.143	0.047	0.065	0.030	0.059
Angle colllision proportion	0.300	0.250	0.889	0.571	0.822	0.706	0.837	0.733

Crash Modification Factors	*F+I*	*PDO*
Total-vehicle crash CMFs		
Lighting	0.911	0.911
Red-light cameras	1.000	1.000
Left-turn signal phasing	0.860	0.860
Right-turn-on-red	1.000	1.000
U-turn prohibition	0.885	0.885
Right-turn channelization	1.000	1.000
Number of lanes	1.000	1.000
Vehicle-pedestrian crash CMFs		
Bus stops	1.000	
Schools	1.000	
Alcohol sales establishments	1.000	

Safety Prediction Worksheet for Urban and Suburban Arterial Intersections

General Information

Analyst	L. Willman
Agency	Kittelson
Date	6/23/2019
Location	City of Norwalk

Site Information

Major street name	Imperial
Minor street name	Firestone
Intersection number	5
Analysis year	2019

Add to Totals worksheet | Restore equations | Reset input cells

Output Summary

Predicted crash frequency, crashes / year

	F+I	PDO	Total
Total crashes	10.543	8.508	19.051
Total-vehicle crashes	9.758	8.508	
Vehicle-pedestrian crashes	0.438		
Vehicle-bicycle crashes	0.347		

Combined CMF

	F+I	PDO
Total-vehicle crashes	1.137	1.137
Vehicle-pedestrian crashes	4.150	

Severity distribution for F+I crashes

K	A	B	C
0.049	0.468	2.529	7.498

Input Data

Input Data	Value	Advisory Messages
Intersection Data		
Area type	Urban	.
Number of legs	4	4SG intersection type
Traffic control type	Signalized	.
Lighting present?	Yes	.
Red-light cameras present?	No	.
Daily pedestrian volume crossing all legs (peds/day)	300	.
Maximum number of lanes crossed by a pedestrian	8	.
Number of bus stops within 1,000 ft of intersection	2	.
School(s) present within 1,000 ft of intersection?	No	.
Alcohol sales establishments within 1,000 ft	0	.

Street Data	*Major*	*Minor*	.
Street configuration	Two-way	Two-way	2x2 intersection configuration
Annual average daily traffic (AADT), veh/day	64724	30895	.
Number of through lanes	6	6	.
Number of approaches with left-turn lanes	1	2	.
Number of left-turn movements with protected phasing	1	2	.
Number of right-turn movements prohibited on red	0	0	.
Number of U-turn movements prohibited	2	0	.
Number of approaches with right-turn channelization	2	2	.

Calibration Factors

Calibration Factors	Value	Default Values
Local calibration factor (C)	1.000	1.000
Adjustment factor for pedestrians for stop control (f_{ped})	0.049	0.049
Adjustment factor for bicyclists (f_{bike})	0.019	0.019
Severity distribution calibration factor, 2-way ($C_{sdf,twi}$)	1.000	1.000
Severity distribution calibration factor, 1-way ($C_{sdf,owi}$)	1.000	1.000
Probability of fatality given K+A severity ($P_{K\|K+A}$)	0.094	0.094

Manner of Collision Proportions

2x2 intersections	3ST, F+I	3ST, PDO	3SG, F+I	3SG, PDO	4ST, F+I	4ST, PDO	4SG, F+I	4SG, PDO
Rear-end collision proportion	0.094	0.154	0.120	0.189	0.079	0.098	0.083	0.148
Angle colllision proportion	0.764	0.629	0.676	0.554	0.806	0.707	0.746	0.552
1x2 or 1x1 intersections	3ST, F+I	3ST, PDO	3SG, F+I	3SG, PDO	4ST, F+I	4ST, PDO	4SG, F+I	4SG, PDO
Rear-end collision proportion	0.100	0.100	0.111	0.143	0.047	0.065	0.030	0.059
Angle colllision proportion	0.300	0.250	0.889	0.571	0.822	0.706	0.837	0.733

Crash Modification Factors

Crash Modification Factors	F+I	PDO
Total-vehicle crash CMFs		
Lighting	0.911	0.911
Red-light cameras	1.000	1.000
Left-turn signal phasing	0.636	0.636
Right-turn-on-red	1.000	1.000
U-turn prohibition	0.922	0.922
Right-turn channelization	1.545	1.545
Number of lanes	1.379	1.379
Vehicle-pedestrian crash CMFs		
Bus stops	4.150	
Schools	1.000	
Alcohol sales establishments	1.000	

Crash Totals Tabulation

Empirical Bayes adjustment type:
Site-specific

Clear tables

Sort rows

Calculate

Facility Totals	
MV+SV:	45.596
VP+VB:	1.615
F+I:	19.256
PDO:	27.955
Total:	47.211

Project-Level Observed Crash Totals		
Crash type	F+I	PDO
Multiple-vehicle crashes on segments:		
Single-vehicle crashes on segments:		
Total-vehicle crashes at **all** intersections:		
Vehicle-pedestrian crashes at **signalized** intersections:		

Total Expected Crash Frequency, crashes / year								
	Multiple-vehicle		Single-vehicle		Total-vehicle		Veh-ped	Veh-bike
Site type	F+I	PDO	F+I	PDO	F+I	PDO	F+I	F+I
Segments:	2.299	2.833	0.447	0.583	2.746	3.416	0.092	0.049
Intersections:					14.895	24.539	0.647	0.826
Total:	2.299	2.833	0.447	0.583	17.641	27.955	0.740	0.875

Segment Site Information

				Predicted crash frequency, crashes / year						Site-specific observed crash totals				Expected crash frequency, crashes / year						Combined CMF				Location information	
				Multiple-vehicle		Single-vehicle		Vehicle-pedestrian	Vehicle-bicycle	Multiple-vehicle		Single-vehicle		Multiple-vehicle		Single-vehicle		Vehicle-pedestrian	Vehicle-bicycle	Multiple-vehicle		Single-vehicle			
Number	Year	Type	Street number	F+I	PDO	F+I	PDO	F+I	F+I	F+I	PDO	F+I	PDO	F+I	PDO	F+I	PDO	F+I	F+I	F+I	PDO	F+I	PDO	Location	Street name
1	2019	6D		1.453	2.310	0.180	0.228	0.063	0.033					0.831	0.975	0.155	0.203	0.032	0.017	1.384	1.384	1.116	1.116	City of Norwalk	Hoxie to Studebaker
2	2019	6D		1.656	2.699	0.254	0.323	0.074	0.039					1.115	1.414	0.225	0.294	0.046	0.024	1.065	1.065	0.955	0.955	City of Norwalk	Studebaker-Stater
3	2019	6D		0.367	0.599	0.044	0.056	0.016	0.009					0.227	0.278	0.039	0.051	0.009	0.005	1.366	1.366	0.944	0.944	City of Norwalk	Stater - Orr & Day
4	2019	6D		0.176	0.291	0.031	0.040	0.008	0.004					0.125	0.165	0.028	0.036	0.005	0.003	0.980	0.980	0.951	0.951	City of Norwalk	Orr & Day - Imperial Hwy

Intersection Site Information

				Predicted crash frequency, crashes / year				Site-specific observed crash totals			Expected crash frequency, crashes / year				Combined CMF			Location information	
				Total-vehicle		Vehicle-pedestrian	Vehicle-bicycle	Total-vehicle		Vehicle-pedestrian	Total-vehicle		Vehicle-pedestrian	Vehicle-bicycle	Total-vehicle		Vehicle-pedestrian		
Number	Year	Type	Configuration	F+I	PDO	F+I	F+I	F+I	PDO	F+I	F+I	PDO	F+I	F+I	F+I	PDO	F+I	Major street name	Minor street name
1	2019	4SG	Two-way	3.450	3.125	0.200	0.125	4.2	8.2	0	3.946	6.960	0.109	0.207	0.495	0.495	2.780	I-605 ramsp/Hoxie Ave	Firestone
2	2019	3SG	Two-way	2.041	1.961	0.288	0.116	3.2	6.6	0	2.637	5.033	0.185	0.222	0.557	0.557	4.150	Firestone	Studebaker
3	2019	4SG	Two-way	1.964	1.833	0.032	0.072	0	0	0	0.931	0.651	0.029	0.030	0.621	0.621	1.000	Firestone	Stater
4	2019	4SG	Two-way	3.118	2.917	0.048	0.115	4.8	4.4	0	4.191	4.019	0.040	0.156	0.693	0.693	1.000	Firestone	Orr & Day
5	2019	4SG	Two-way	9.758	8.508	0.438	0.347	2	7.8	0.2	3.191	7.875	0.284	0.210	1.137	1.137	4.150	Imperial	Firestone

Los Angeles County Sheriff's Department
Norwalk Station

From 3/1/2014 to 3/1/2019

Total Collisions: 211
Injury Collisions: 66
Fatal Collisions: 2

Collision Summary Report

3/26/19

FIRESTONE BLVD from IMPERIAL HWY to HOXIE AV

914-03349-0451-472 **3/10/2014** **07:45** Monday FIRESTONE BLVD - ORR AND DAY RD (E) 800' Direction: West Daylight Clear Pty at Fault:1
Sideswipe Other Motor Vehicle Unsafe Lane Change 21658(a) Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver West Changing Lanes Male Age: 57 2005 HONDA CIVIC Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver West Proceeding Straight Female Age: 24 1998 ACURA INTEGRA Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

914-03571-0451-472 **3/14/2014** **18:05** Friday FIRESTONE BLVD - ORR AND DAY RD (E) 230' Direction: West Daylight Clear Pty at Fault:1
Broadside Other Motor Vehicle Traffic Signals and Signs 21453(a) Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver East Proceeding Straight Male Age: 41 2010 TOYOTA COROLLA Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Stated Lap/Shoulder Harness Used Not Stated
Party 2 Driver West Making Left Turn Male Age: 40 2006 CHEVROLET SILVERADO Pickups & Panels No Injury
Veh Type: Pickup Truck Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Not Stated

914-04888-0451-250 **4/11/2014** **05:20** Friday FIRESTONE BLVD - STUDEBAKER RD 0' Direction: Not Stated Dark - Street Lig Clear Pty at Fault:1
Rear-End Other Motor Vehicle Unsafe Speed 22350 Hit & Run: Misde Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver East Proceeding Straight Male Age: 2012 CHEVROLET SILVERADO Pickups & Panels No Injury
Veh Type: Pickup Truck Sobriety: Impairment Not Kno Assoc Factor: None Apparent Not Stated
Party 2 Driver East Proceeding Straight Male Age: 58 1998 CHEVROLET SILVERADO Pickups & Panels No Injury
Veh Type: Pickup Truck Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Not Us Cell Phone Not In Use

914-05315-0451-471 **4/19/2014** **15:45** Saturday FIRESTONE BLVD - HOXIE AV 12' Direction: North Daylight Clear Pty at Fault:1
Rear-End Other Motor Vehicle Unsafe Starting or Backing 22106 Hit & Run: No Complaint of Pain # Inj: 2 # Killed: 0

Party 1 Driver East Stopped In Road Male Age: 28 2002 TOYOTA TERCEL Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HBD Not Under Influ Assoc Factor: Violation Lap/Shoulder Harness Used Cell Phone Handheld In Use
Party 2 Driver East Stopped In Road Male Age: 32 2006 YAMA RI Motorcycle No Injury
Veh Type: Motorcycle Sobriety: HNBD Assoc Factor: None Apparent M/C Helmet Driver - Yes Cell Phone Not In Use
Party 3 Driver East Stopped In Road Male Age: 31 2013 YAMA R6 600 Motorcycle No Injury
Veh Type: Motorcycle Sobriety: HNBD Assoc Factor: None Apparent M/C Helmet Driver - Yes Cell Phone Not In Use

914-05671-0453-250 **4/27/2014** **20:15** Sunday IMPERIAL HWY - FIRESTONE BLVD 0' Direction: Not Stated Dark - Street Lig Clear Pty at Fault:1
Broadside Other Motor Vehicle Auto R/W Violation 21801(a) Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver West Making Left Turn Female Age: 2007 FORD EXP Unknown Hit and Run Vehicle Involvem No Injury
Veh Type: Other Sobriety: Impairment Not Kno Assoc Factor: None Apparent Unknown Not Stated
Party 2 Driver East Proceeding Straight Female Age: 23 2005 CHEVROLET CAVALIER Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Not Stated

914-05889-0451-242 5/2/2014 03:40 Friday FIRESTONE BLVD - ORR AND DAY RD (E) 15' Direction: West Dark - Street Lig Clear Pty at Fault:1
Rear-End Other Motor Vehicle Driving Under Influence 23152(a) Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver East Proceeding Straight Female Age: 22 2006 TOYOTA COROLLA Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HBD Under Influenc Assoc Factor: None Stated Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver East Stopped In Road Female Age: 47 2013 FORD ESCAPE Pickups & Panels No Injury
Veh Type: Pickup Truck Sobriety: HNBD Assoc Factor: None Stated Lap/Shoulder Harness Used Cell Phone Not In Use

914-06634-0451-255 5/17/2014 17:35 Saturday FIRESTONE BLVD - STUDEBAKER RD 40' Direction: West Daylight Clear Pty at Fault:1
Rear-End Other Motor Vehicle Unsafe Starting or Backing 22106 Hit & Run: Misde Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver East Proceeding Straight Male Age: 21 2005 HONDA ACCORD Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Not Stated
Party 2 Driver East Stopped In Road Female Age: 51 2006 TOYOTA MATRIX Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Not Stated

914-08350-0451-472 6/23/2014 11:46 Monday FIRESTONE BLVD - HOXIE AV 14' Direction: East Daylight Clear Pty at Fault:1
Rear-End Other Motor Vehicle Unsafe Starting or Backing 22106 Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver West Proceeding Straight Male Age: 86 2001 DODGE INTREPID Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver West Stopped In Road Male Age: 29 2010 HONDA CIVIC Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

914-08603-0453-472 6/28/2014 23:15 Saturday IMPERIAL HWY - FIRESTONE BLVD 0' Direction: Not Stated Dark - Street Lig Clear Pty at Fault:
Sideswipe Other Motor Vehicle Improper Turning 22107 Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver East Making Right Turn Female Age: 28 2012 DODGE CARAVAN Mini Van No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver East Proceeding Straight Male Age: 21 2014 HONDA ACCORD Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

914-09516-0451-250 7/18/2014 06:45 Friday FIRESTONE BLVD - STUDEBAKER RD 302' Direction: West Daylight Clear Pty at Fault:2
Broadside Other Motor Vehicle Auto R/W Violation 21801(a) Hit & Run: Misde Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver West Proceeding Straight Male Age: 1995 ACURA INTEGRA Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: Impairment Not Kno Assoc Factor: None Apparent Not Stated
Party 2 Driver East Making Left Turn Male Age: 36 2001 FORD F-450 Pickups & Panels No Injury
Veh Type: Pickup Truck Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

914-09732-0453-255 7/22/2014 19:30 Tuesday FIRESTONE BLVD - IMPERIAL HWY 0' Direction: Not Stated Daylight Clear Pty at Fault:1
Not Stated Other Motor Vehicle Traffic Signals and Signs 21453(a) Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver South Proceeding Straight Female Age: 22 2007 TOYOTA PRIUS Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver North Proceeding Straight Female Age: 60 2003 NISSAN ALTIMA Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

914-09854-0451-471 7/25/2014 15:30 Friday FIRESTONE BLVD - ORR AND DAY RD (E) 0' Direction: Not Stated Daylight Clear Pty at Fault:
Vehicle - Pedestrian Pedestrian Unknown Hit & Run: No Complaint of Pain # Inj: 1 # Killed: 0

Party 1 Driver East Proceeding Straight Female Age: 40 2014 MAZDA CX-9 Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

Party 2 Pedestrian North Proceeding Straight Female Age: 13 Pedestrian No Injury
Veh Type: Pedestrian Sobriety: HNBD Assoc Factor: None Apparent Cell Phone Not In Use
914-11183-0453-250 **8/25/2014** **14:10** Monday FIRESTONE BLVD - STUDEBAKER RD 182' Direction: West Daylight Clear Pty at Fault:1
Rear-End Other Motor Vehicle Unsafe Speed 22350 Hit & Run: Misde Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver East Proceeding Straight Age: HONDA ACCORD Unknown Hit and Run Vehicle Involvem No Injury
Veh Type: Other Sobriety: Impairment Not Kno Assoc Factor: None Apparent Cell Phone Not In Use
Party 2 Driver East Stopped In Road Female Age: 31 2009 DODGE GRAND CARAV Mini Van No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 3 Driver East Stopped In Road Male Age: 33 2014 CHEVROLET TRAVERSE Sport Utility Vehicle No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
914-11389-0453-472 **8/29/2014** **09:25** Friday IMPERIAL HWY - FIRESTONE BLVD 0' Direction: Not Stated Daylight Clear Pty at Fault:1
Sideswipe Other Motor Vehicle Improper Turning 22100(a) Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver East Making Right Turn Female Age: 54 2001 HONDA CIVIC Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver East Making Right Turn Female Age: 34 2002 KIA OPTIMA Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
914-12280-0451-471 **9/19/2014** **08:53** Friday FIRESTONE BLVD - HOXIE AV 0' Direction: Not Stated Daylight Cloudy Pty at Fault:1
Broadside Other Motor Vehicle Auto R/W Violation 21453(c) Hit & Run: No Complaint of Pain # Inj: 3 # Killed: 0

Party 1 Driver East Making Left Turn Male Age: 31 2010 LEXUS IS250 Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: Inattention Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver West Proceeding Straight Male Age: 56 1989 FORD F-250 Pickups & Panels No Injury
Veh Type: Pickup Truck Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 3 Bicyclist West Proceeding Straight Male Age: 40 Bicycle No Injury
Veh Type: Bicycle Sobriety: HNBD Assoc Factor: None Apparent Cell Phone Not In Use
914-12354-0451-242 **9/20/2014** **20:55** Saturday FIRESTONE BLVD - HOXIE AV 40' Direction: West Dark - Street Lig Clear Pty at Fault:1
Rear-End Other Motor Vehicle Driving Under Influence 23152(a) Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver East Changing Lanes Male Age: 44 2002 DODGE NEON Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HBD Under Influenc Assoc Factor: Violation Lap/Shoulder Harness Used Not Stated
Party 2 Driver East Stopped In Road Female Age: 39 2007 TOYOTA CAMRY Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Not Stated
914-12730-0451-472 **9/29/2014** **10:15** Monday FIRESTONE BLVD - HOXIE AV 0' Direction: Not Stated Daylight Clear Pty at Fault:1
Broadside Other Motor Vehicle Traffic Signals and Signs 21453(a) Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver East Proceeding Straight Female Age: 33 2012 HONDA ODYSSEY Mini Van No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver South Proceeding Straight Female Age: 32 2003 LINCOLN NAVIGATOR Sport Utility Vehicle No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
914-13033-0451-250 **10/5/2014** **09:00** Sunday FIRESTONE BLVD - HOXIE AV 900' Direction: East Daylight Clear Pty at Fault:1
Sideswipe Parked Motor Vehicle Improper Turning 22107 Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver West Proceeding Straight Age: Unknown Hit and Run Vehicle Involvem No Injury
Veh Type: Other Sobriety: Impairment Not Kno Assoc Factor: None Apparent Cell Phone Not In Use
Party 2 Parked Vehicle West Parked Age: 1998 CHEVROLET IMPALA Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: Not Applicable Assoc Factor: None Apparent Cell Phone Not In Use

914-13024-0451-471 **10/5/2014** **09:55** Sunday FIRESTONE BLVD - STUDEBAKER RD 537' Direction: West Daylight Clear Pty at Fault:1
Broadside Other Motor Vehicle Auto R/W Violation 21804(a) Hit & Run: No Other Visible Injury # Inj: 3 # Killed: 0

Party 1 Driver North Entering Traffic Female Age: 40 2011 HONDA CIVIC Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver East Proceeding Straight Female Age: 37 2005 TOYOTA COROLLA Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

914-13630-0451-255 **10/19/2014** **04:35** Sunday FIRESTONE BLVD - ORR AND DAY RD (E) 300' Direction: West Dark - Street Lig Clear Pty at Fault:1
Hit Object Fixed Object Driving Under Influence 23152(a) Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver East Proceeding Straight Male Age: 33 2000 TOYOTA TUNDRA Pickups & Panels No Injury
Veh Type: Pickup Truck Sobriety: HBD Under Influenc Assoc Factor: Violation Lap/Shoulder Harness Used Cell Phone Not In Use

914-14353-0451-472 **11/4/2014** **11:58** Tuesday FIRESTONE BLVD - STUDEBAKER RD 276' Direction: West Daylight Clear Pty at Fault:1
Not Stated Other Motor Vehicle Unsafe Starting or Backing 22106 Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver East Entering Traffic Female Age: 22 2014 BMW 320I Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Not Stated
Party 2 Driver East Proceeding Straight Female Age: 29 2005 HYUNDAI ELANTRA Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Not Stated

914-14526-0451-250 **11/8/2014** **04:02** Saturday FIRESTONE BLVD - STUDEBAKER RD 282' Direction: West Dark - Street Lig Clear Pty at Fault:1
Rear-End Parked Motor Vehicle Improper Turning 22107 Hit & Run: Misde Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver East Other Unsafe Turning Age: 2011 DODGE RAM Unknown Hit and Run Vehicle Involvem No Injury
Veh Type: Other Sobriety: Impairment Not Kno Assoc Factor: None Apparent Not Stated
Party 2 Parked Vehicle East Parked Age: 2003 FORD EXPEDITION Sport Utility Vehicle No Injury
Veh Type: Passenger Car Sobriety: Not Applicable Assoc Factor: None Apparent Cell Phone Not In Use
Party 3 Parked Vehicle East Parked Age: 1998 TOYOTA SIENNA Mini Van No Injury
Veh Type: Passenger Car Sobriety: Not Applicable Assoc Factor: None Apparent Not Stated

914-15120-0451-255 **11/22/2014** **07:50** Saturday FIRESTONE BLVD - ORR AND DAY RD (E) 101' Direction: West Daylight Clear Pty at Fault:1
Rear-End Other Motor Vehicle Following Too Closely 21703 Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver East Proceeding Straight Male Age: 52 1994 HONDA ACCORD Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver East Slowing/Stopping Female Age: 18 2005 FORD FOCUS Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 3 Driver East Slowing/Stopping Male Age: 22 1990 TOYOTA CAMRY Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

914-15730-0451-250 **12/6/2014** **11:20** Saturday FIRESTONE BLVD - ELMCROFT AV 147' Direction: East Daylight Clear Pty at Fault:1
Sideswipe Other Motor Vehicle Unsafe Lane Change 21658(a) Hit & Run: Misde Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver West Changing Lanes Male Age: 63 2005 DODGE TRUCK Pickups & Panels No Injury
Veh Type: Pickup Truck Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Not Stated
Party 2 Driver West Proceeding Straight Male Age: 29 2005 TOYOTA TUNDRA Pickups & Panels No Injury
Veh Type: Pickup Truck Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Not Stated

914-15754-0451-250 **12/6/2014** **20:30** Saturday FIRESTONE BLVD - HOXIE AV 80' Direction: East Dark - Street Lig Clear Pty at Fault:1
Broadside Other Motor Vehicle Unsafe Lane Change 21658(a) Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver East Changing Lanes Female Age: 2014 CHEVROLET Unknown Hit and Run Vehicle Involvem No Injury
Veh Type: Other Sobriety: Impairment Not Kno Assoc Factor: None Apparent Not Stated
Party 2 Driver East Proceeding Straight Male Age: 26 2009 BMW 328IC Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
914-15875-0451-250 **12/10/2014** **03:40** Wednesday FIRESTONE BLVD - STUDEBAKER RD 210' Direction: East Dark - Street Lig Clear Pty at Fault:1
Hit Object Fixed Object Improper Turning 22107 Hit & Run: Misde Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver West Other Unsafe Turning Age: 2002 HONDA ACCORD Unknown Hit and Run Vehicle Involvem No Injury
Veh Type: Other Sobriety: Impairment Not Kno Assoc Factor: None Apparent Lap/Shoulder Harness Used Not Stated
914-16608-0453-472 **12/26/2014** **12:30** Friday FIRESTONE BLVD - IMPERIAL HWY 53' Direction: East Daylight Clear Pty at Fault:1
Rear-End Other Motor Vehicle Unsafe Starting or Backing 22106 Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver West Proceeding Straight Female Age: 45 2003 CHEVROLET TAHOE Sport Utility Vehicle No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver West Stopped In Road Male Age: 34 2006 DODGE CARAVAN Mini Van No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
915-02188-0451-255 **2/15/2015** **16:05** Sunday FIRESTONE BLVD - ORR AND DAY RD (E) 195' Direction: West Daylight Clear Pty at Fault:
Hit Object Fixed Object Unsafe Speed 22350 Hit & Run: No Other Visible Injury # Inj: 1 # Killed: 0

Party 1 Driver West Proceeding Straight Male Age: 26 2012 KAWASAKI BTM Motorcycle No Injury
Veh Type: Motorcycle Sobriety: HNBD Assoc Factor: None Apparent M/C Helmet Driver - Yes Cell Phone Not In Use
915-02192-0451-471 **2/15/2015** **17:45** Sunday FIRESTONE BLVD - HOXIE AV 25' Direction: West Dark - Street Lig Clear Pty at Fault:1
Rear-End Other Motor Vehicle Unsafe Speed 22350 Hit & Run: Felony Complaint of Pain # Inj: 1 # Killed: 0

Party 1 Driver East Proceeding Straight Male Age: 38 2011 CHEVROLET SILVERADO Pickups & Panels No Injury
Veh Type: Pickup Truck Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver East Stopped In Road Male Age: 20 2015 HONDA CIVIC Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
915-80039-0451-472 **3/29/2015** **09:30** Sunday FIRESTONE BLVD - IMPERIAL HWY 300' Direction: West Daylight Clear Pty at Fault:1
Rear-End Other Motor Vehicle Unsafe Lane Change 21658(a) Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver South Changing Lanes Male Age: 30 2007 TOYOTA TACOMA Pickups & Panels No Injury
Veh Type: Pickup Truck Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver South Proceeding Straight Male Age: 31 2014 FORD FLEX Sport Utility Vehicle No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
915-04137-0451-470 **3/29/2015** **23:50** Sunday IMPERIAL HWY - FIRESTONE BLVD 0' Direction: Not Stated Dark - Street Lig Clear Pty at Fault:
Vehicle - Pedestrian Pedestrian Unknown Hit & Run: No Fatal # Inj: 0 # Killed: 1

Party 1 Pedestrian North Not Stated Male Age: 39 Pedestrian No Injury
Veh Type: Pedestrian Sobriety: Not Stated Assoc Factor: None Stated Cell Phone Not In Use
Party 2 Driver West Stopped In Road Male Age: 27 2010 INTL PROSTAR Truck Tractor No Injury
Veh Type: Truck Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
915-04265-0451-472 **4/1/2015** **13:00** Wednesday FIRESTONE BLVD - FAIRFORD AV 0' Direction: Not Stated Daylight Clear Pty at Fault:
Sideswipe Other Motor Vehicle Unsafe Lane Change 21658(a) Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver West Proceeding Straight Female Age: 27 2014 GMC ARCADIA Sport Utility Vehicle No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

Party 2 Driver West Proceeding Straight Male Age: 40 2005 FORD EXPLORER Sport Utility Vehicle No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
915-04586-0451-250 **4/8/2015** **12:59** Wednesday FIRESTONE BLVD - IMPERIAL HWY 0' Direction: Not Stated Daylight Clear Pty at Fault:
Rear-End Other Motor Vehicle Unknown Hit & Run: Misde Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver East Proceeding Straight Age: Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: Impairment Not Kno Assoc Factor: None Apparent Cell Phone Not In Use
Party 2 Driver East Stopped In Road Age: 1990 Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: Impairment Not Kno Assoc Factor: None Apparent Cell Phone Not In Use
Party 3 Driver East Stopped In Road Age: 2000 HONDA ACCORD Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: Impairment Not Kno Assoc Factor: None Apparent Cell Phone Not In Use
Party 4 Driver East Stopped In Road Male Age: 75 2012 TOYOTA SCION Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
915-05347-0453-472 **4/23/2015** **17:55** Thursday IMPERIAL HWY - FIRESTONE BLVD 0' Direction: Not Stated Daylight Cloudy Pty at Fault:
Sideswipe Other Motor Vehicle Improper Turning 22107 Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver East Stopped In Road Male Age: 50 2015 TOYOTA COROLLA Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver East Stopped In Road Male Age: 31 2008 FORD E350 Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
915-05588-0451-471 **4/28/2015** **23:00** Tuesday FIRESTONE BLVD - ORR AND DAY RD (W) 450' Direction: West Dark - Street Lig Clear Pty at Fault:
Hit Object Fixed Object Other Than Driver Hit & Run: No Other Visible Injury # Inj: 1 # Killed: 0

Party 1 Driver East Proceeding Straight Male Age: 54 2005 HARLEY DAVIDS No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent M/C Helmet Driver - Yes Not Stated
915-05619-0451-250 **4/29/2015** **20:30** Wednesday FIRESTONE BLVD - HOXIE AV 30' Direction: West Dark - Street Lig Clear Pty at Fault:
Rear-End Other Motor Vehicle Unsafe Speed 22350 Hit & Run: Misde Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver East Proceeding Straight Age: 2013 KIA Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: Impairment Not Kno Assoc Factor: None Apparent Not Stated
Party 2 Driver East Stopped In Road Female Age: 19 1997 MAZDA MPV Mini Van No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
915-05826-0451-250 **5/3/2015** **22:16** Sunday FIRESTONE BLVD - STUDEBAKER RD 100' Direction: West Dark - Street Lig Clear Pty at Fault:1
Rear-End Parked Motor Vehicle Improper Turning 22107 Hit & Run: Misde Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver East Proceeding Straight Age: 2001 TOYOTA COROLLA Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: Impairment Not Kno Assoc Factor: None Apparent Not Stated
Party 2 Parked Vehicle East Parked Age: 2005 FORD PICK UP Pickups & Panels No Injury
Veh Type: Pickup Truck Sobriety: HNBD Assoc Factor: None Apparent Not Stated
915-06010-0453-471 **5/7/2015** **09:06** Thursday IMPERIAL HWY - FIRESTONE BLVD 0' Direction: Not Stated Daylight Cloudy Pty at Fault:1
Sideswipe Other Motor Vehicle Improper Turning 22100(a) Hit & Run: No Complaint of Pain # Inj: 4 # Killed: 0

Party 1 Driver East Making Right Turn Male Age: 62 1999 MITSUBISHI MONTERO SPO Sport Utility Vehicle No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver East Proceeding Straight Female Age: 47 1997 NISSAN MAXIMA Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 3 Driver West Stopped In Road Female Age: 62 2013 HONDA CR-V Sport Utility Vehicle No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

915-07114-0451-471 5/31/2015 18:45 Sunday FIRESTONE BLVD - HOXIE AV 51' Direction: West Daylight Clear Pty at Fault:1
Rear-End Other Motor Vehicle Unsafe Speed 22350 Hit & Run: No Complaint of Pain # Inj: 4 # Killed: 0

Party 1 Driver East Proceeding Straight Female Age: 22 2009 TOYOTA MATRIX Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver East Stopped In Road Female Age: 37 2013 HONDA CIVIC Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

915-07261-0451-472 6/4/2015 06:11 Thursday FIRESTONE BLVD - ORR AND DAY RD (W) 8' Direction: South Daylight Clear Pty at Fault:1
Rear-End Other Motor Vehicle Following Too Closely 21703 Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver West Stopped In Road Female Age: 29 2005 NISSAN ALTIMA Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: Not Applicable Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver South Proceeding Straight Female Age: 36 2000 NISSAN MAXIMA Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: Not Applicable Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

915-07663-0451-251 6/12/2015 22:50 Friday FIRESTONE BLVD - IMPERIAL HWY 5' Direction: West Dark - Street Lig Clear Pty at Fault:
Other Bicycle Traffic Signals and Signs 21453(a) Hit & Run: No Other Visible Injury # Inj: 1 # Killed: 0

Party 1 Driver West Proceeding Straight Age: 2000 FORD MUSTANG Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: Impairment Not Kno Assoc Factor: None Apparent Not Stated
Party 2 Bicyclist East Proceeding Straight Age: Bicycle No Injury
Veh Type: Bicycle Sobriety: HNBD Assoc Factor: None Apparent Not Stated

915-07738-0451-250 6/14/2015 21:00 Sunday FIRESTONE BLVD - IMPERIAL HWY 0' Direction: Not Stated Dark - Street Lig Clear Pty at Fault:1
Sideswipe Other Motor Vehicle Improper Turning 22107 Hit & Run: Misde Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver East Changing Lanes Age: CHEVROLET CAMARO Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: Impairment Not Kno Assoc Factor: None Apparent Not Stated
Party 2 Driver East Stopped In Road Male Age: 27 2013 NISSAN SENTRA Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

915-07935-0451-472 6/17/2015 19:59 Wednesday FIRESTONE BLVD - RT 605 NBON/R 0' Direction: Not Stated Dusk - Dawn Clear Pty at Fault:
Broadside Other Motor Vehicle Traffic Signals and Signs 21453(a) Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver South Making Left Turn Male Age: 71 2013 LEXUS GS300 Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: Entering - Leaving Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver West Proceeding Straight Female Age: 44 2005 SATURN VUE Sport Utility Vehicle No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: Cell Phone Not In Use

915-08125-0453-472 6/22/2015 13:30 Monday FIRESTONE BLVD - IMPERIAL HWY 0' Direction: Not Stated Daylight Clear Pty at Fault:1
Rear-End Other Motor Vehicle Unsafe Starting or Backing 22106 Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver West Proceeding Straight Male Age: 42 2000 FORD CROWN VICTO Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver West Stopped In Road Female Age: 42 1996 NISSAN QUEST Mini Van No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 3 Driver West Stopped In Road Male Age: 49 2014 DODGE RAM 2500 Pickups & Panels No Injury
Veh Type: Pickup Truck Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

915-08781-0453-472 7/7/2015 14:30 Tuesday FIRESTONE BLVD - IMPERIAL HWY 0' Direction: Not Stated Daylight Clear Pty at Fault:1
Rear-End Other Motor Vehicle Unknown Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver North Slowing/Stopping Female Age: 32 2002 JEEP Sport Utility Vehicle No Injury
Veh Type: Passenger Car Sobriety: Impairment Not Kno Assoc Factor: None Apparent Cell Phone Not In Use
Party 2 Driver North Stopped In Road Female Age: 36 2015 GMC YUKON Sport Utility Vehicle No Injury
Veh Type: Passenger Car Sobriety: Impairment Not Kno Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
915-08995-0451-250 **7/12/2015** **03:41** Sunday FIRESTONE BLVD - HOXIE AV 300' Direction: East Dark - Street Lig Clear Pty at Fault:1
Broadside Parked Motor Vehicle Improper Turning 22107 Hit & Run: Misde Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver South Other Unsafe Turning Age: 1999 TOYOTA COROLLA Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HBD Impairment Un Assoc Factor: None Stated Not Stated
Party 2 Parked Vehicle West Parked Age: 2013 NISSAN FRONTIER Pickups & Panels No Injury
Veh Type: Pickup Truck Sobriety: Not Applicable Assoc Factor: None Stated Cell Phone Not In Use
Party 3 Parked Vehicle West Parked Age: 2010 JEEP PATRIOT Sport Utility Vehicle No Injury
Veh Type: Passenger Car Sobriety: Not Applicable Assoc Factor: None Stated Cell Phone Not In Use
Party 4 Parked Vehicle West Parked Age: 2009 INFINITI G37 Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: Not Applicable Assoc Factor: None Apparent Cell Phone Not In Use
Party 5 Parked Vehicle West Parked Age: 2000 CHEVROLET SILVERADO Pickups & Panels No Injury
Veh Type: Pickup Truck Sobriety: Not Applicable Assoc Factor: None Apparent Cell Phone Not In Use
915-09360-0451-471 **7/19/2015** **07:06** Sunday FIRESTONE BLVD - ORR AND DAY RD (W) 1308' Direction: West Daylight Cloudy Pty at Fault:1
Hit Object Fixed Object Improper Turning 22107 Hit & Run: No Complaint of Pain # Inj: 1 # Killed: 0

Party 1 Driver West Other Unsafe Turning Male Age: 19 2005 TOYOTA TACOMA Pickups & Panels No Injury
Veh Type: Pickup Truck Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
915-09400-0451-472 **7/20/2015** **10:25** Monday FIRESTONE BLVD - ORR AND DAY RD (E) 32' Direction: East Daylight Cloudy Pty at Fault:1
Sideswipe Other Motor Vehicle Unsafe Lane Change 21658(a) Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver West Changing Lanes Female Age: 26 1994 TOYOTA CAMRY Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver West Proceeding Straight Female Age: 36 2004 LEXUS RX330 Sport Utility Vehicle No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
915-09476-0451-471 **7/21/2015** **17:04** Tuesday FIRESTONE BLVD - STUDEBAKER RD 406' Direction: West Daylight Clear Pty at Fault:1
Rear-End Other Motor Vehicle Unsafe Speed 22350 Hit & Run: No Complaint of Pain # Inj: 1 # Killed: 0

Party 1 Driver East Proceeding Straight Male Age: 21 1995 HONDA ACCORD Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: Uninvolved Vehicl Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver East Stopped In Road Male Age: 25 1997 HONDA CIVIC Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 3 Driver East Stopped In Road Male Age: 65 2004 CHEVROLET SILVERADO Pickups & Panels No Injury
Veh Type: Pickup Truck Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
915-10211-0451-250 **8/6/2015** **12:15** Thursday FIRESTONE BLVD - HOXIE AV 39' Direction: East Daylight Clear Pty at Fault:1
Sideswipe Other Motor Vehicle Improper Turning 22107 Hit & Run: Misde Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver North Proceeding Straight Age: 2015 GMC SIERRA Pickups & Panels No Injury
Veh Type: Pickup Truck Sobriety: Impairment Not Kno Assoc Factor: None Apparent Not Stated
Party 2 Driver North Proceeding Straight Male Age: 42 2015 TOYOTA COROLLA Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
915-10717-0451-471 **8/16/2015** **10:35** Sunday FIRESTONE BLVD - RT 605 NBON/R 12' Direction: West Daylight Clear Pty at Fault:1
Rear-End Other Motor Vehicle Traffic Signals and Signs 21453(a) Hit & Run: No Complaint of Pain # Inj: 1 # Killed: 0

Party 1 Driver West Making Right Turn Male Age: 45 2002 SUZUKI HAYABUSA Motorcycle No Injury
Veh Type: Motorcycle Sobriety: HNBD Assoc Factor: None Apparent M/C Helmet Driver - Yes Cell Phone Not In Use
Party 2 Driver West Proceeding Straight Male Age: 49 1999 VOLVO S-70 Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
915-11796-0453-471 **9/6/2015** **20:50** Sunday IMPERIAL HWY - FIRESTONE BLVD 0' Direction: Not Stated Dark - Street Lig Clear Pty at Fault:1
Broadside Other Motor Vehicle Auto R/W Violation 21801(a) Hit & Run: No Complaint of Pain # Inj: 2 # Killed: 0

Party 1 Driver West Making Left Turn Male Age: 21 2007 TOYOTA FJ CRUISER Sport Utility Vehicle No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver East Proceeding Straight Female Age: 24 2004 MAZDA 3 Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
915-12362-0451-472 **9/18/2015** **09:36** Friday FIRESTONE BLVD - STUDEBAKER RD 265' Direction: West Daylight Clear Pty at Fault:1
Sideswipe Other Motor Vehicle Auto R/W Violation 21804(a) Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver South Entering Traffic Female Age: 50 2015 TOYOTA CAMRY Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: Vision Obscureme Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver West Proceeding Straight Female Age: 31 2006 TOYOTA COROLLA Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
915-12566-0451-250 **9/23/2015** Wednesday FIRESTONE BLVD - RT 605 NBON/R 34' Direction: East Daylight Clear Pty at Fault:1
Hit Object Fixed Object Improper Turning 22107 Hit & Run: Misde Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver West Making Right Turn Age: Unknown Hit and Run Vehicle Involvem No Injury
Veh Type: Other Sobriety: Impairment Not Kno Assoc Factor: None Apparent Not Stated
915-13063-0453-471 **10/2/2015** **19:38** Friday FIRESTONE BLVD - IMPERIAL HWY 0' Direction: Not Stated Dark - Street Lig Clear Pty at Fault:1
Sideswipe Bicycle Wrong Side of Road 21650.1 Hit & Run: No Complaint of Pain # Inj: 1 # Killed: 0

Party 1 Bicyclist East Proceeding Straight Female Age: 46 Bicycle No Injury
Veh Type: Bicycle Sobriety: HNBD Assoc Factor: Violation Cell Phone Not In Use
Party 2 Driver South Slowing/Stopping Male Age: 45 2001 FORD F-150 Pickups & Panels No Injury
Veh Type: Pickup Truck Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
915-13165-0451-471 **10/5/2015** **08:05** Monday FIRESTONE BLVD - HOXIE AV 185' Direction: East Daylight Clear Pty at Fault:1
Broadside Other Motor Vehicle Auto R/W Violation 21801(a) Hit & Run: No Complaint of Pain # Inj: 1 # Killed: 0

Party 1 Driver East Making U Turn Female Age: 26 2012 TOYOTA SCION Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver West Proceeding Straight Male Age: 33 2011 TRIUMPH MOTORCYCLE Motorcycle No Injury
Veh Type: Motorcycle Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 3 Parked Vehicle West Parked Age: 2000 CHEVROLET SILVERADO Pickups & Panels No Injury
Veh Type: Pickup Truck Sobriety: Not Applicable Assoc Factor: None Apparent Not Stated
915-14917-0451-149 **11/8/2015** **15:25** Sunday FIRESTONE BLVD - ORR AND DAY RD (E) 445' Direction: West Daylight Clear Pty at Fault:1
Broadside Other Motor Vehicle Driving Under Influence 23152(a) Hit & Run: No Complaint of Pain # Inj: 2 # Killed: 0

Party 1 Driver East Proceeding Straight Male Age: 24 2007 FORD F15 Pickups & Panels No Injury
Veh Type: Pickup Truck Sobriety: HBD Under Influenc Assoc Factor: Violation Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver North Entering Traffic Male Age: 55 2013 MACK TRUCK TRACTO Truck Tractor No Injury
Veh Type: Truck Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

915-15013-0451-250 **11/10/2015** **16:15** Tuesday FIRESTONE BLVD - ORR AND DAY RD (E) 265' Direction: West Daylight Clear Pty at Fault:1
Rear-End Other Motor Vehicle Unsafe Speed 22350 Hit & Run: Misde Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver East Proceeding Straight Age: 1995 HONDA Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: Impairment Not Kno Assoc Factor: None Apparent Not Stated
Party 2 Driver East Stopped In Road Female Age: 40 2012 NISSAN Sport Utility Vehicle No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

915-15373-0451-471 **11/14/2015** **16:30** Saturday FIRESTONE BLVD - ORR AND DAY RD (E) 40' Direction: West Daylight Clear Pty at Fault:1
Rear-End Other Motor Vehicle Unsafe Speed 22350 Hit & Run: No Complaint of Pain # Inj: 2 # Killed: 0

Party 1 Driver East Proceeding Straight Male Age: 19 1990 NISSAN 240SX Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: Impairment Not Kno Assoc Factor: None Apparent Lap/Shoulder Harness Used Not Stated
Party 2 Driver East Stopped In Road Female Age: 30 2010 HYUNDAI ELANTRA Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: Impairment Not Kno Assoc Factor: None Apparent Lap/Shoulder Harness Used Not Stated

915-15374-0451-472 **11/17/2015** **19:50** Tuesday FIRESTONE BLVD - HOXIE AV 401' Direction: East Dark - Street Lig Clear Pty at Fault:1
Rear-End Parked Motor Vehicle Unsafe Speed 22350 Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver West Proceeding Straight Male Age: 64 2000 HONDA CRV Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Not Stated
Party 2 Parked Vehicle West Parked Age: 2014 BMW 320I Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: Not Applicable Assoc Factor: None Apparent Cell Phone Not In Use
Party 3 Parked Vehicle West Parked Age: 1999 MERCEDES-BENZ C230 Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: Not Applicable Assoc Factor: None Apparent Cell Phone Not In Use
Party 4 Parked Vehicle West Parked Age: 2016 AUDI A-4 Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: Not Applicable Assoc Factor: None Apparent Cell Phone Not In Use

915-16227-0451-472 **12/5/2015** **01:29** Saturday FIRESTONE BLVD - STUDEBAKER RD 0' Direction: Not Stated Dark - Street Lig Clear Pty at Fault:1
Rear-End Parked Motor Vehicle Improper Turning 22107 Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver West Other Unsafe Turning Male Age: 50 2010 TOYOTA CAMRY Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: Inattention Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Parked Vehicle West Parked Age: TRAILER Truck Tractor No Injury
Veh Type: Truck Sobriety: Not Applicable Assoc Factor: None Apparent Cell Phone Not In Use

915-16501-0456-472 **12/9/2015** **16:46** Wednesday FIRESTONE BLVD - HOXIE AV 210' Direction: East Dusk - Dawn Clear Pty at Fault:1
Rear-End Other Motor Vehicle Following Too Closely 21703 Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver North Proceeding Straight Female Age: 31 2006 TOYOTA CAMRY Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver North Stopped In Road Male Age: 25 2013 NISSAN SENTRA Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

915-16554-0451-472 **12/10/2015** **15:40** Thursday FIRESTONE BLVD - STUDEBAKER RD 310' Direction: East Daylight Clear Pty at Fault:1
Rear-End Other Motor Vehicle Following Too Closely 21703 Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver West Proceeding Straight Female Age: 29 1998 HONDA CIVIC Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver West Slowing/Stopping Female Age: 58 2008 HONDA ACCORD Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 3 Driver West Stopped In Road Male Age: 42 2009 CHEVROLET COBALT Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

915-16556-0451-471 **12/10/2015** **17:40** Thursday FIRESTONE BLVD - RT 605 NBON/R 0' Direction: Not Stated Dusk - Dawn Clear Pty at Fault:1
Broadside Bicycle Wrong Side of Road 21650.1 Hit & Run: No Other Visible Injury # Inj: 1 # Killed: 0

Party 1 Bicyclist East Entering Traffic Female Age: 60 Bicycle No Injury
Veh Type: Bicycle Sobriety: HNBD Assoc Factor: Violation Cell Phone Not In Use
Party 2 Driver East Making Right Turn Female Age: 88 2004 BUICK PANI Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

915-17112-0451-255 **12/20/2015** **16:00** Sunday FIRESTONE BLVD - STUDEBAKER RD 405' Direction: West Daylight Clear Pty at Fault:1
Broadside Other Motor Vehicle Auto R/W Violation 21801(a) Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver East Making Left Turn Female Age: 36 2012 HONDA CIVIC Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver West Proceeding Straight Female Age: 45 2004 TOYOTA SIENNA Mini Van No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

915-17185-0451-472 **12/22/2015** **09:55** Tuesday FIRESTONE BLVD - IMPERIAL HWY 49' Direction: West Daylight Cloudy Pty at Fault:1
Sideswipe Other Motor Vehicle Unsafe Lane Change 21658(a) Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver East Changing Lanes Male Age: 49 2007 CHEVROLET COBALT Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver East Proceeding Straight Female Age: 50 2007 LAND ROVER Sport Utility Vehicle No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

916-00359-0451-250 **1/9/2016** **01:15** Saturday IMPERIAL HWY - FIRESTONE BLVD 0' Direction: Not Stated Dark - Street Lig Clear Pty at Fault:1
Sideswipe Other Motor Vehicle Unsafe Lane Change 21658(a) Hit & Run: Misde Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver West Changing Lanes Age: Unknown Hit and Run Vehicle Involvem No Injury
Veh Type: Other Sobriety: Impairment Not Kno Assoc Factor: None Apparent Cell Phone Not In Use
Party 2 Driver West Proceeding Straight Male Age: 25 2013 KIA RIO Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

916-02135-0452-472 **2/14/2016** **10:30** Sunday IMPERIAL HWY - FIRESTONE BLVD 0' Direction: Not Stated Daylight Clear Pty at Fault:1
Sideswipe Other Motor Vehicle Improper Turning 22107 Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver West Making Right Turn Female Age: 56 2015 TOYOTA RAV4 Sport Utility Vehicle No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver West Proceeding Straight Male Age: 28 2004 TOYOTA CAMRY Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

916-02177-0451-255 **2/15/2016** **12:30** Monday FIRESTONE BLVD - ORR AND DAY RD (E) 476' Direction: West Daylight Clear Pty at Fault:1
Sideswipe Other Motor Vehicle Unsafe Lane Change 21658(a) Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver East Changing Lanes Male Age: 25 2011 TOYOTA COROLLA Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver East Proceeding Straight Female Age: 41 2015 HONDA CIVIC Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

916-02517-0451-250 **2/22/2016** **15:45** Monday FIRESTONE BLVD - HOXIE AV 20' Direction: West Daylight Clear Pty at Fault:1
Rear-End Other Motor Vehicle Unsafe Speed 22350 Hit & Run: Misde Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver East Proceeding Straight Age: 1980 FORD F-150 Pickups & Panels No Injury
Veh Type: Pickup Truck Sobriety: Impairment Not Kno Assoc Factor: None Apparent Cell Phone Not In Use

Party 2 Driver East Stopped In Road Female Age: 30 2011 TOYOTA CAMRY Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
916-02723-0451-472 **2/26/2016** **11:20** Friday FIRESTONE BLVD - HOXIE AV 93' Direction: West Daylight Clear Pty at Fault:1
Rear-End Other Motor Vehicle Unsafe Speed 22350 Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver East Proceeding Straight Female Age: 47 2001 TOYOTA 4RUNNER Sport Utility Vehicle No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver East Proceeding Straight Male Age: 54 2009 NISSAN ALTIMA Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
916-02821-0451-471 **2/28/2016** **21:00** Sunday FIRESTONE BLVD - STUDEBAKER RD 0' Direction: Not Stated Dark - Street Lig Clear Pty at Fault:1
Rear-End Other Motor Vehicle Unsafe Starting or Backing 22106 Hit & Run: No Complaint of Pain # Inj: 1 # Killed: 0

Party 1 Driver East Proceeding Straight Male Age: 32 2013 TOYOTA COROLLA Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: Stop and Go Traffi Lap/Shoulder Harness Used Not Stated
Party 2 Driver East Proceeding Straight Male Age: 23 2014 HONDA ACCORD Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: Stop and Go Traffi Lap/Shoulder Harness Used Not Stated
915-02956-0453-471 **3/2/2016** **14:00** Wednesday FIRESTONE BLVD - ORR AND DAY RD (E) 8' Direction: West Daylight Clear Pty at Fault:1
Vehicle - Pedestrian Pedestrian Ped R/W Violation 21950(a) Hit & Run: No Other Visible Injury # Inj: 1 # Killed: 0

Party 1 Driver North Making Left Turn Female Age: 61 2010 HONDA INSIGHT Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Pedestrian South Other Female Age: 20 Pedestrian No Injury
Veh Type: Pedestrian Sobriety: HNBD Assoc Factor: None Apparent Unknown Cell Phone Not In Use
916-02965-0451-472 **3/2/2016** **16:00** Wednesday FIRESTONE BLVD - STUDEBAKER RD 900' Direction: West Daylight Clear Pty at Fault:
Sideswipe Other Motor Vehicle Unknown Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver South Making Left Turn Male Age: 58 2015 CHEVROLET SILVERADO Pickups & Panels No Injury
Veh Type: Pickup Truck Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver South Making Left Turn Female Age: 20 1994 TOYOTA COROLLA Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
916-03163-0451-471 **3/6/2016** **14:20** Sunday FIRESTONE BLVD - STUDEBAKER RD 240' Direction: West Daylight Clear Pty at Fault:1
Rear-End Other Motor Vehicle Unsafe Starting or Backing 22106 Hit & Run: No Complaint of Pain # Inj: 2 # Killed: 0

Party 1 Driver West Proceeding Straight Male Age: 53 2012 NABI TRANIST BUS Public Transit Authority No Injury
Veh Type: Other Bus Sobriety: HNBD Assoc Factor: Inattention Lap/Shoulder Harness Used Not Stated
Party 2 Driver West Stopped In Road Female Age: 34 2006 AUDI A4 Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Not Stated
916-03563-0451-472 **3/14/2016** **15:55** Monday FIRESTONE BLVD - ELMCROFT AV 60' Direction: West Daylight Clear Pty at Fault:1
Broadside Other Motor Vehicle Auto R/W Violation 21802(a) Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver West Making Right Turn Male Age: 74 2001 NISSAN PATHFINDER Pickups & Panels No Injury
Veh Type: Pickup Truck Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver West Proceeding Straight Male Age: 21 2004 TOYOTA TUNDRA Pickups & Panels No Injury
Veh Type: Pickup Truck Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
916-03834-0451-242 **3/21/2016** **06:05** Monday FIRESTONE BLVD - HOXIE AV 70' Direction: East Dark - Street Lig Cloudy Pty at Fault:1
Hit Object Fixed Object Driving Under Influence 23152(a) Hit & Run: No Complaint of Pain # Inj: 1 # Killed: 0

Party 1 Driver East Other Unsafe Turning Male Age: 44 2006 TOYOTA 4RUNNER Sport Utility Vehicle No Injury
Veh Type: Passenger Car Sobriety: HBD Under Influenc Assoc Factor: Violation Lap/Shoulder Harness Used Not Stated
916-04079-0451-242 **3/25/2016** **17:18** Friday FIRESTONE BLVD - IMPERIAL HWY 0' Direction: Not Stated Daylight Clear Pty at Fault:1
Broadside Other Motor Vehicle Driving Under Influence 23152(a) Hit & Run: Misde Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver West Proceeding Straight Male Age: 46 2001 TOYOTA TUNDRA Two Axle Tank Truck No Injury
Veh Type: Truck Sobriety: HBD Under Influenc Assoc Factor: Violation Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver East Making Left Turn Female Age: 57 2013 MITSUBISHI MIRAGE Sport Utility Vehicle No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
916-04314-0451-471 **3/31/2016** **05:30** Thursday FIRESTONE BLVD - ORR AND DAY RD (E) 200' Direction: West Dark - Street Lig Clear Pty at Fault:1
Broadside Other Motor Vehicle Auto R/W Violation 21804(b) Hit & Run: No Other Visible Injury # Inj: 1 # Killed: 0

Party 1 Driver East Proceeding Straight Female Age: 44 2005 NISSAN SENTRA Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: Violation Lap/Shoulder Harness Used Not Stated
Party 2 Driver West Stopped In Road Male Age: 33 2009 FORD 32F Truck Tractor No Injury
Veh Type: Truck Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used 32 Ft Trailer Combo
916-04330-0451-472 **3/31/2016** **13:45** Thursday FIRESTONE BLVD - HOXIE AV 150' Direction: East Daylight Clear Pty at Fault:1
Sideswipe Other Motor Vehicle Unsafe Lane Change 21658(a) Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver East Changing Lanes Female Age: 46 2005 HYUNDAI ELANTRA Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver East Proceeding Straight Male Age: 48 2007 DODGE RAM Pickups & Panels No Injury
Veh Type: Pickup Truck Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
916-04789-0451-250 **4/8/2016** **15:35** Friday FIRESTONE BLVD - STUDEBAKER RD 27' Direction: East Daylight Cloudy Pty at Fault:1
Broadside Other Motor Vehicle Auto R/W Violation 21804(a) Hit & Run: No Complaint of Pain # Inj: 3 # Killed: 0

Party 1 Driver South Entering Traffic Male Age: 69 2004 SUZUKI FLOREN Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver West Proceeding Straight Age: CHEVROLET SILVERADO Pickups & Panels No Injury
Veh Type: Pickup Truck Sobriety: Impairment Not Kno Assoc Factor: None Apparent Cell Phone Not In Use
916-04820-0451-471 **4/9/2016** **00:10** Saturday FIRESTONE BLVD - STUDEBAKER RD 45' Direction: East Dark - Street Lig Cloudy Pty at Fault:1
Sideswipe Other Motor Vehicle Traffic Signals and Signs 21453(a) Hit & Run: No Complaint of Pain # Inj: 3 # Killed: 0

Party 1 Driver West Proceeding Straight Male Age: 60 1993 GMC SIERRA Pickups & Panels No Injury
Veh Type: Pickup Truck Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver East Making Left Turn Male Age: 34 1999 HONDA ACCORD Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
916-06126-0451-250 **4/11/2016** **11:15** Monday RT 605 NBON/R - FIRESTONE BLVD 0' Direction: Not Stated Daylight Clear Pty at Fault:2
Sideswipe Other Motor Vehicle Improper Turning 22107 Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver South Proceeding Straight Male Age: 50 1999 CHEVROLET VAN Pickups & Panels No Injury
Veh Type: Pickup Truck Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver West Other Unsafe Turning Female Age: 2010 TOYOTA Unknown Hit and Run Vehicle Involvem No Injury
Veh Type: Other Sobriety: Impairment Not Kno Assoc Factor: None Apparent Unknown Cell Phone Not In Use
916-05295-0451-471 **4/18/2016** **15:15** Monday FIRESTONE BLVD - STUDEBAKER RD 0' Direction: Not Stated Daylight Clear Pty at Fault:1
Broadside Other Motor Vehicle Traffic Signals and Signs 21453(a) Hit & Run: No Complaint of Pain # Inj: 1 # Killed: 0

Party 1 Driver South Proceeding Straight Male Age: 17 2014 HONDA CIVIC Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver East Making Left Turn Female Age: 34 2006 NISSAN ARMADA Sport Utility Vehicle No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
916-06938-0453-471 5/18/2016 20:15 Wednesday IMPERIAL HWY - FIRESTONE BLVD 0' Direction: Not Stated Dark - Street Lig Clear Pty at Fault:1
Vehicle - Pedestrian Pedestrian Ped R/W Violation 21950(a) Hit & Run: No Complaint of Pain # Inj: 1 # Killed: 0

Party 1 Driver West Making Right Turn Female Age: 77 2008 TOYOTA PRIUS Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Pedestrian South Other Female Age: 58 Pedestrian No Injury
Veh Type: Pedestrian Sobriety: Impairment Not Kno Assoc Factor: None Apparent Cell Phone Not In Use
916-07674-0451-251 6/1/2016 17:50 Wednesday FIRESTONE BLVD - STUDEBAKER RD 0' Direction: Not Stated Daylight Clear Pty at Fault:1
Rear-End Other Motor Vehicle Unsafe Speed 22350 Hit & Run: No Complaint of Pain # Inj: 1 # Killed: 0

Party 1 Driver West Proceeding Straight Male Age: 2013 KIA Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: Impairment Not Kno Assoc Factor: None Apparent Not Stated
Party 2 Driver South Stopped In Road Male Age: 55 2012 FORD F-550 Pickups & Panels No Injury
Veh Type: Pickup Truck Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
916-08434-0451-472 6/17/2016 16:15 Friday FIRESTONE BLVD - STUDEBAKER RD 141' Direction: East Daylight Clear Pty at Fault:1
Broadside Other Motor Vehicle Auto R/W Violation 21804(a) Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver West Entering Traffic Female Age: 38 1998 LEXUS GS300 Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver West Stopped In Road Male Age: 25 2003 FORD F-150 Pickups & Panels No Injury
Veh Type: Pickup Truck Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
916-08508-0451-472 6/18/2016 12:55 Saturday IMPERIAL HWY - FIRESTONE BLVD 0' Direction: Not Stated Daylight Clear Pty at Fault:1
Head-On Other Motor Vehicle Traffic Signals and Signs 21453(a) Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver West Proceeding Straight Female Age: 24 2007 TOYOTA YARIS Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver South Making Left Turn Male Age: 73 2003 LINCOLN TWNCAR Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
916-09616-0451-472 7/11/2016 17:25 Monday FIRESTONE BLVD - STUDEBAKER RD 200' Direction: West Daylight Clear Pty at Fault:
Broadside Other Motor Vehicle Unknown Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver West Proceeding Straight Male Age: 27 2000 TOYOTA SIENNA Mini Van No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver North Stopped In Road Male Age: 29 2009 FRTH CONV CAB TRK Truck Tractor No Injury
Veh Type: Truck Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
916-09797-0451-471 7/14/2016 18:50 Thursday HOXIE AV - FIRESTONE BLVD 0' Direction: Not Stated Daylight Clear Pty at Fault:1
Rear-End Other Motor Vehicle Following Too Closely 21703 Hit & Run: No Complaint of Pain # Inj: 3 # Killed: 0

Party 1 Driver North Proceeding Straight Female Age: 41 2011 DODGE RAM 1500 Pickups & Panels No Injury
Veh Type: Pickup Truck Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver North Proceeding Straight Male Age: 50 2015 FORD TRANSIT Mini Van No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

916-10236-0451-471 **7/24/2016** **20:14** Sunday FIRESTONE BLVD - HOXIE AV 0' Direction: Not Stated Dusk - Dawn Clear Pty at Fault:
Head-On Other Motor Vehicle Unknown Hit & Run: No Complaint of Pain # Inj: 2 # Killed: 0

Party 1 Driver West Making Left Turn Female Age: 41 2016 HONDA CIVIC Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver East Proceeding Straight Male Age: 34 2013 VOLKSWAGEN CC2 Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

916-10268-0451-250 **7/25/2016** **12:00** Monday FIRESTONE BLVD - HOXIE AV 48' Direction: West Daylight Clear Pty at Fault:1
Rear-End Other Motor Vehicle Unsafe Speed 22350 Hit & Run: Misde Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver East Proceeding Straight Male Age: 1999 TOYOTA 4RUNNER Sport Utility Vehicle No Injury
Veh Type: Passenger Car Sobriety: Impairment Not Kno Assoc Factor: None Apparent Cell Phone Not In Use
Party 2 Driver East Stopped In Road Male Age: 38 2015 HYUNDAI SONATA Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

916-11309-0453-250 **8/13/2016** **20:55** Saturday IMPERIAL HWY - FIRESTONE BLVD 0' Direction: Not Stated Dark - Street Lig Clear Pty at Fault:1
Sideswipe Other Motor Vehicle Improper Turning 22107 Hit & Run: Misde Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver East Making Right Turn Age: Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HBD Impairment Un Assoc Factor: None Apparent Not Stated
Party 2 Driver East Proceeding Straight Male Age: 44 2013 FORD EXPLORER Sport Utility Vehicle No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

916-11979-0451-472 **8/26/2016** **17:15** Friday FIRESTONE BLVD - HOXIE AV 0' Direction: Not Stated Daylight Clear Pty at Fault:
Sideswipe Other Motor Vehicle Unsafe Lane Change 21658(a) Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver East Making Left Turn Male Age: 50 2007 VOLVO TRUCK Pickups & Panels No Injury
Veh Type: Pickup Truck Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver East Making Left Turn Male Age: 26 2004 FORD F150 Pickups & Panels No Injury
Veh Type: Pickup Truck Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

916-12091-0451-250 **8/29/2016** **05:59** Monday FIRESTONE BLVD - STUDEBAKER RD 0' Direction: Not Stated Dusk - Dawn Clear Pty at Fault:1
Rear-End Other Motor Vehicle Unsafe Speed 22350 Hit & Run: Misde Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver West Proceeding Straight Male Age: FORD MUSTANG Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: Impairment Not Kno Assoc Factor: None Apparent Not Stated
Party 2 Driver West Stopped In Road Male Age: 51 2015 CHEVROLET CAMARO Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

916-12344-0451-472 **9/2/2016** **10:15** Friday FIRESTONE BLVD - STUDEBAKER RD 78' Direction: East Daylight Clear Pty at Fault:1
Sideswipe Other Motor Vehicle Unsafe Starting or Backing 22106 Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver West Entering Traffic Female Age: 31 2003 CADILLAC ESCALADE Sport Utility Vehicle No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver West Proceeding Straight Female Age: 59 2013 TOYOTA CAMRY Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

916-12554-0451-471 **9/7/2016** **15:30** Wednesday FIRESTONE BLVD - ORR AND DAY RD (E) 0' Direction: Not Stated Daylight Clear Pty at Fault:1
Broadside Other Motor Vehicle Other Improper Driving 21453(a) Hit & Run: No Other Visible Injury # Inj: 1 # Killed: 0

Party 1 Driver East Proceeding Straight Female Age: 40 2006 HONDA ACCORD Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

Party 2 Driver South Proceeding Straight Male Age: 26 2013 MAZADA 3 Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
916-14101-0451-471 **10/6/2016** **23:32** Thursday FIRESTONE BLVD - ORR AND DAY RD (E) 10' Direction: North Dark - Street Lig Clear Pty at Fault:1
Broadside Other Motor Vehicle Other Hazardous Movement 21461(a) Hit & Run: No Complaint of Pain # Inj: 1 # Killed: 0

Party 1 Driver West Making Left Turn Female Age: 32 1997 TOYOTA CAMRY Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Not Stated
Party 2 Driver East Proceeding Straight Female Age: 31 2011 TOYOTA CAMRY Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
916-14133-0451-471 **10/7/2016** **21:49** Friday FIRESTONE BLVD - HOXIE AV 0' Direction: Not Stated Dark - Street Lig Clear Pty at Fault:
Head-On Other Motor Vehicle Other Improper Driving 21453(a) Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver East Proceeding Straight Female Age: 44 1997 SATURN 4D Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Not Us Cell Phone Not In Use
Party 2 Driver South Proceeding Straight Female Age: 24 2004 JEEP SUV Sport Utility Vehicle No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Not Us Cell Phone Not In Use
916-14754-0451-472 **10/20/2016** **07:55** Thursday FIRESTONE BLVD - IMPERIAL HWY 0' Direction: Not Stated Daylight Clear Pty at Fault:1
Head-On Other Motor Vehicle Other Improper Driving 21453(a) Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver East Proceeding Straight Male Age: 51 2002 NISSAN FRONTIER Pickups & Panels No Injury
Veh Type: Pickup Truck Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver South Making Left Turn Male Age: 26 1999 HONDA ACCORD Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
916-14931-0451-471 **10/23/2016** **10:34** Sunday FIRESTONE BLVD - RT 605 NBON/R 159' Direction: East Daylight Raining Pty at Fault:1
Rear-End Other Motor Vehicle Following Too Closely 21703 Hit & Run: No Complaint of Pain # Inj: 2 # Killed: 0

Party 1 Driver East Proceeding Straight Male Age: 50 2009 TOYOTA MATRIX Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver East Slowing/Stopping Female Age: 58 2008 MERCEDES-BENZ R350 Sport Utility Vehicle No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 3 Driver East Slowing/Stopping Male Age: 48 2005 KIA SOR Sport Utility Vehicle No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 4 Driver East Slowing/Stopping Female Age: 53 2014 NISSAN ROGU Sport Utility Vehicle No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
916-15550-0453-250 **11/3/2016** **13:00** Thursday FIRESTONE BLVD - IMPERIAL HWY 23' Direction: South Daylight Clear Pty at Fault:1
Sideswipe Other Motor Vehicle Improper Turning 22100(a) Hit & Run: Misde Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver East Making Right Turn Female Age: MITSUBISHI Pickups & Panels No Injury
Veh Type: Pickup Truck Sobriety: Impairment Not Kno Assoc Factor: None Apparent Not Stated
Party 2 Driver East Making Right Turn Female Age: 49 2013 INFINITI G37 Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
916-16277-0451-471 **11/17/2016** **13:44** Thursday FIRESTONE BLVD - HOXIE AV 274' Direction: South Daylight Clear Pty at Fault:1
Rear-End Other Motor Vehicle Following Too Closely 21703 Hit & Run: No Complaint of Pain # Inj: 1 # Killed: 0

Party 1 Driver West Proceeding Straight Male Age: 20 2014 CHEVROLET CRUZ Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver West Stopped In Road Female Age: 48 2010 MERCEDES-BENZ ME350 Sport Utility Vehicle No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

916-16442-0451-255 **11/20/2016** **05:10** Sunday FIRESTONE BLVD - RT 605 NBON/R 0' Direction: Not Stated Dark - Street Lig Clear Pty at Fault:1
Hit Object Fixed Object Improper Turning 22107 Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver West Making Right Turn Male Age: 23 1995 INFINITI G45 Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Not Stated

916-16623-0451-255 **11/24/2016** **09:35** Thursday FIRESTONE BLVD - HOXIE AV 0' Direction: Not Stated Daylight Clear Pty at Fault:1
Broadside Other Motor Vehicle Other Improper Driving 21453(a) Hit & Run: No Complaint of Pain # Inj: 2 # Killed: 0

Party 1 Driver East Proceeding Straight Male Age: 23 1999 TOYOTA CAMRY Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

Party 2 Driver East Making Left Turn Female Age: 32 2004 ING G35 Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

916-17261-0451-471 **12/7/2016** **19:06** Wednesday FIRESTONE BLVD - ORR AND DAY RD (E) 0' Direction: Not Stated Dark - Street Lig Clear Pty at Fault:1
Broadside Other Motor Vehicle Other Improper Driving 21453(a) Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver East Proceeding Straight Female Age: 31 2016 TOYOTA CAMRY Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

Party 2 Driver South Proceeding Straight Female Age: 27 2010 HONDA CIVIC Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

916-17348-0451-250 **12/9/2016** **14:15** Friday FIRESTONE BLVD - RT 605 NBON/R 112' Direction: East Daylight Cloudy Pty at Fault:1
Sideswipe Other Motor Vehicle Unsafe Lane Change 21658(a) Hit & Run: Misde Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver East Changing Lanes Male Age: Unknown Hit and Run Vehicle Involvem No Injury
Veh Type: Sobriety: Impairment Not Kno Assoc Factor: None Apparent Not Stated

Party 2 Driver East Proceeding Straight Female Age: 45 2011 HONDA PILOT Sport Utility Vehicle No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

916-17484-0451-250 **12/11/2016** **18:00** Sunday FIRESTONE BLVD - FAIRFORD AV 6' Direction: West Daylight Clear Pty at Fault:1
Rear-End Other Motor Vehicle Unsafe Speed 22350 Hit & Run: No Property Damage Only # Inj: 1 # Killed: 0

Party 1 Driver East Proceeding Straight Age: 2014 DODGE GHALL Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: Impairment Not Kno Assoc Factor: None Apparent Not Stated

Party 2 Driver East Stopped In Road Male Age: 53 2007 KIA SPECTRA Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Handheld In Use

916-17525-0451-242 **12/13/2016** **12:50** Tuesday FIRESTONE BLVD - IMPERIAL HWY 32' Direction: West Daylight Clear Pty at Fault:
Rear-End Other Motor Vehicle Driving Under Influence 23152(a) Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver East Proceeding Straight Male Age: 42 2006 HONDA CR-V Sport Utility Vehicle No Injury
Veh Type: Sobriety: HBD Impairment Un Assoc Factor: Violation Lap/Shoulder Harness Used Cell Phone Not In Use

Party 2 Driver East Stopped In Road Male Age: 47 2000 FRGHT PAYSTAR Truck Tractor No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

916-17633-0452-472 **12/15/2016** **17:55** Thursday FIRESTONE BLVD - IMPERIAL HWY 16' Direction: North Dusk - Dawn Clear Pty at Fault:1
Rear-End Other Motor Vehicle Unsafe Speed 22350 Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver South Proceeding Straight Female Age: 56 2013 HONDA ACCORD Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: Inattention Lap/Shoulder Harness Used Cell Phone Not In Use

Party 2 Driver South Stopped In Road Female Age: 27 2015 TOYOTA CAMRY Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

Party 3 Driver South Stopped In Road Male Age: 23 2009 TOYOTA SCION Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
916-17817-0453-471 **12/19/2016** **16:45** Monday IMPERIAL HWY - FIRESTONE BLVD 0' Direction: Not Stated Dusk - Dawn Clear Pty at Fault:1
Broadside Other Motor Vehicle Auto R/W Violation 21804(a) Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver West Making Left Turn Male Age: 27 2016 HONDA CIVIC Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver East Proceeding Straight Male Age: 27 2011 MAZDA MAZDA 3 Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
916-80102-0451-471 **12/20/2016** **07:00** Tuesday FIRESTONE BLVD - ORR AND DAY RD (E) 0' Direction: Not Stated Daylight Cloudy Pty at Fault:1
Head-On Other Motor Vehicle Auto R/W Violation 21801(a) Hit & Run: No Complaint of Pain # Inj: 1 # Killed: 0

Party 1 Driver South Making Left Turn Female Age: 37 2013 NISSAN SENTRA Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver North Proceeding Straight Male Age: 37 2016 FORD F-150 Pickups & Panels No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
916-17988-0451-470 **12/22/2016** **21:50** Thursday FIRESTONE BLVD - STUDEBAKER RD 0' Direction: Not Stated Dark - Street Lig Clear Pty at Fault:1
Head-On Bicycle Other Improper Driving 21453(a) Hit & Run: No Fatal # Inj: 0 # Killed: 1

Party 1 Bicyclist South Proceeding Straight Male Age: 17 Bicycle No Injury
Veh Type: Sobriety: Impairment Not Kno Assoc Factor: None Apparent Cell Phone Not In Use
Party 2 Driver East Proceeding Straight Male Age: 28 2014 TOYOTA CAMRY Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
917-00273-0451-472 **1/6/2017** **12:00** Friday FIRESTONE BLVD - IMPERIAL HWY 0' Direction: Not Stated Daylight Clear Pty at Fault:1
Broadside Other Motor Vehicle Auto R/W Violation 21804(a) Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver South Making Right Turn Female Age: 86 2003 MERCEDES-BENZ C240 Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver West Proceeding Straight Female Age: 38 2005 NISSAN ALTIMA Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
917-00765-0451-250 **1/16/2017** **17:25** Monday FIRESTONE BLVD - IMPERIAL HWY 1029' Direction: West Dusk - Dawn Clear Pty at Fault:1
Rear-End Other Motor Vehicle Unsafe Speed 22350 Hit & Run: Misde Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver East Proceeding Straight Age: HONE Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: Impairment Not Kno Assoc Factor: None Apparent Not Stated
Party 2 Driver East Stopped In Road Male Age: 21 2008 PONTIAC GRAND PRIX Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 3 Driver East Stopped In Road Female Age: 20 1998 HONDA ACCORD Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
917-01265-0451-472 **1/27/2017** **00:40** Friday FIRESTONE BLVD - HOXIE AV 240' Direction: East Dark - No Street Clear Pty at Fault:1
Rear-End Other Motor Vehicle Unsafe Lane Change 21658(a) Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver East Changing Lanes Male Age: 23 1997 ACURA INTEGRA Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: Violation Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver East Stopped In Road Male Age: 19 2014 FORD MUSTANG Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

917-02458-0451-250 2/16/2017 09:45 Thursday FIRESTONE BLVD - HOXIE AV 10' Direction: West Daylight Cloudy Pty at Fault:1
Sideswipe Other Motor Vehicle Unsafe Lane Change 21658(a) Hit & Run: Misde Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver East Changing Lanes Male Age: 2012 HYUNDAI GENESIS Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: Impairment Not Kno Assoc Factor: None Apparent Not Stated
Party 2 Driver East Proceeding Straight Male Age: 77 2006 HONDA ACCORD Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

917-02481-0451-472 2/16/2017 15:20 Thursday FIRESTONE BLVD - RT 605 NBON/R 49' Direction: West Dusk - Dawn Cloudy Pty at Fault:1
Sideswipe Other Motor Vehicle Unsafe Lane Change 21658(a) Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver East Proceeding Straight Female Age: 28 2010 NISSAN SENTRA Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver East Changing Lanes Female Age: 22 2016 HONDA ACCORD Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

917-02822-0451-255 2/23/2017 21:30 Thursday FIRESTONE BLVD - IMPERIAL HWY 49' Direction: North Dark - Street Lig Clear Pty at Fault:1
Rear-End Other Motor Vehicle Unsafe Starting or Backing 22106 Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver South Proceeding Straight Male Age: 22 2008 FORD EXPLORER Sport Utility Vehicle No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver South Stopped In Road Male Age: 32 2017 CHEVROLET EXPRESS Mini Van No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

917-03104-0454-472 2/28/2017 16:25 Tuesday IMPERIAL HWY - FIRESTONE BLVD 0' Direction: Not Stated Daylight Clear Pty at Fault:1
Broadside Other Motor Vehicle Auto R/W Violation 21801(a) Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver West Making Left Turn Male Age: 45 2011 FORD TAURUS Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: Stop and Go Traffi Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver East Proceeding Straight Male Age: 43 2015 NISSAN LEAF Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

917-03188-0454-250 3/2/2017 12:05 Thursday FIRESTONE BLVD - IMPERIAL HWY 0' Direction: Not Stated Daylight Clear Pty at Fault:1
Rear-End Other Motor Vehicle Following Too Closely 21703 Hit & Run: Felony Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver North Proceeding Straight Age: FORD BRONCO Sport Utility Vehicle No Injury
Veh Type: Sobriety: Impairment Not Kno Assoc Factor: None Apparent Not Stated
Party 2 Driver North Slowing/Stopping Male Age: 21 2016 HONDA ACCORD Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

917-03231-0453-472 3/3/2017 11:45 Friday FIRESTONE BLVD - STUDEBAKER RD 42' Direction: South Daylight Clear Pty at Fault:1
Rear-End Other Motor Vehicle Following Too Closely 21703 Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver West Stopped In Road Male Age: 44 2005 BUICK CENTURY Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver West Stopped In Road Male Age: 22 2008 FORD EXPEDITION Sport Utility Vehicle No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

917-03342-0451-250 3/5/2017 15:55 Sunday FIRESTONE BLVD - IMPERIAL HWY 47' Direction: North Daylight Clear Pty at Fault:
Sideswipe Other Motor Vehicle Unsafe Lane Change 21658(a) Hit & Run: Misde Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver North Proceeding Straight Age: Sport Utility Vehicle No Injury
Veh Type: Sobriety: Impairment Not Kno Assoc Factor: None Apparent Not Stated

Party 2 Driver North Changing Lanes Female Age: 60 2012 KIA SOUL Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
917-04894-0451-471 **4/3/2017** **17:14** Monday FIRESTONE BLVD - IMPERIAL HWY 0' Direction: Not Stated Daylight Clear Pty at Fault:1
Hit Object Fixed Object Improper Turning 22107 Hit & Run: No Other Visible Injury # Inj: 1 # Killed: 0

Party 1 Driver North Proceeding Straight Male Age: 25 2012 AUT A4 Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
917-05186-0451-250 **4/8/2017** **02:20** Saturday FIRESTONE BLVD - IMPERIAL HWY 0' Direction: Not Stated Dark - Street Lig Raining Pty at Fault:1
Rear-End Other Motor Vehicle Unsafe Speed 22350 Hit & Run: Misde Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver South Proceeding Straight Age: Unknown Hit and Run Vehicle Involvem No Injury
Veh Type: Sobriety: Impairment Not Kno Assoc Factor: None Apparent Not Stated
Party 2 Driver South Stopped In Road Male Age: 52 2006 BMW 750IL Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: Not Applicable Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
917-05366-0453-472 **4/11/2017** **16:30** Tuesday IMPERIAL HWY - FIRESTONE BLVD 0' Direction: Not Stated Daylight Clear Pty at Fault:1
Rear-End Other Motor Vehicle Following Too Closely 21703 Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver East Proceeding Straight Female Age: 49 2011 FORD FLEX Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver South Slowing/Stopping Male Age: 51 2008 GMC Pickups & Panels No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 3 Driver East Slowing/Stopping Male Age: 44 2016 TOYOTA SIENNA Mini Van No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
917-05804-0451-472 **4/20/2017** **09:00** Thursday FIRESTONE BLVD - RT 605 NBON/R 0' Direction: Not Stated Daylight Clear Pty at Fault:1
Broadside Other Motor Vehicle Traffic Signals and Signs 21453(a) Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver West Proceeding Straight Female Age: 30 2014 TOYOTA CAMRY Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver South Making Left Turn Female Age: 29 2016 TOYOTA RAV4 Sport Utility Vehicle No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
917-06386-0451-472 **5/2/2017** **23:20** Tuesday STUDEBAKER RD - FIRESTONE BLVD 0' Direction: Not Stated Dark - Street Lig Clear Pty at Fault:1
Hit Object Fixed Object Improper Turning 22107 Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver South Making Right Turn Age: 2016 NISSAN ALTIMA Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: Impairment Not Kno Assoc Factor: None Apparent Cell Phone Not In Use
Party 2 Driver South Making Right Turn Age: 2016 NISSAN VERSA Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: Impairment Not Kno Assoc Factor: None Apparent Cell Phone Not In Use
917-06609-0451-251 **5/7/2017** **02:54** Sunday FIRESTONE BLVD - ORR AND DAY RD (E) 10' Direction: West Dark - Street Lig Cloudy Pty at Fault:1
Rear-End Other Motor Vehicle Unsafe Speed 22350 Hit & Run: Felony Complaint of Pain # Inj: 1 # Killed: 0

Party 1 Driver East Proceeding Straight Male Age: 2007 DODGE RAM Pickups & Panels No Injury
Veh Type: Sobriety: Impairment Not Kno Assoc Factor: None Apparent Not Stated
Party 2 Driver East Stopped In Road Male Age: 24 2014 CHEVROLET CRUZE Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Not Stated
Party 3 Driver East Stopped In Road Male Age: 28 2010 HONDA FIT Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Not Stated

917-07264-0451-250 **5/19/2017** **22:00** Friday FIRESTONE BLVD - STUDEBAKER RD 53' Direction: East Dark - Street Lig Clear Pty at Fault:1
Other Other Motor Vehicle Unsafe Starting or Backing 22106 Hit & Run: Misde Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver West Backing Age: 2006 SCION TC Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: Impairment Not Kno Assoc Factor: None Apparent Not Stated
Party 2 Driver West Stopped In Road Female Age: 51 1997 TOYOTA 4RUNNER Sport Utility Vehicle No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

917-07403-0451-472 **5/22/2017** **16:10** Monday FIRESTONE BLVD - HOXIE AV 0' Direction: Not Stated Daylight Clear Pty at Fault:1
Broadside Other Motor Vehicle Traffic Signals and Signs 21453(a) Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver West Proceeding Straight Male Age: 50 2012 DODGE RAM 1500 Pickups & Panels No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver North Making Left Turn Male Age: 63 2003 DODGE RAM 1500 Pickups & Panels No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

917-07473-0451-250 **5/24/2017** **07:47** Wednesday FIRESTONE BLVD - STUDEBAKER RD 800' Direction: West Daylight Cloudy Pty at Fault:1
Other Parked Motor Vehicle Unsafe Starting or Backing 22106 Hit & Run: Misde Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver West Backing Age: Unknown Hit and Run Vehicle Involvem No Injury
Veh Type: Sobriety: Impairment Not Kno Assoc Factor: None Apparent Not Stated
Party 2 Parked Vehicle East Parked Age: 2016 BMW 528I Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: Not Applicable Assoc Factor: None Apparent Cell Phone Not In Use

917-08472-0451-471 **6/13/2017** **08:34** Tuesday FIRESTONE BLVD - STUDEBAKER RD 0' Direction: Not Stated Daylight Clear Pty at Fault:1
Rear-End Other Motor Vehicle Following Too Closely 21703 Hit & Run: No Other Visible Injury # Inj: 1 # Killed: 0

Party 1 Driver West Proceeding Straight Male Age: 26 2016 FORD FUSION Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Not Stated
Party 2 Driver West Stopped In Road Female Age: 26 2017 TOYOTA PRIUS Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Not Stated
Party 3 Bicyclist East Proceeding Straight Male Age: 27 Bicycle No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent M/C Helmet Driver - No Not Stated

917-08895-0451-250 **6/21/2017** **08:50** Wednesday FIRESTONE BLVD - STUDEBAKER RD 15' Direction: West Daylight Clear Pty at Fault:1
Rear-End Other Motor Vehicle Unsafe Starting or Backing 22106 Hit & Run: Misde Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver East Stopped In Road Male Age: Truck Tractor No Injury
Veh Type: Sobriety: Impairment Not Kno Assoc Factor: None Apparent Cell Phone Not In Use
Party 2 Driver East Proceeding Straight Male Age: 49 2016 MAZDA M3 Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

917-09045-0451-472 **6/24/2017** **22:52** Saturday FIRESTONE BLVD - ORR AND DAY RD (E) 0' Direction: Not Stated Dark - Street Lig Clear Pty at Fault:1
Sideswipe Other Motor Vehicle Auto R/W Violation 21801(a) Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver West Making Left Turn Female Age: 37 2006 MERCEDES-BENZ S430 Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap Belt Used Not Stated
Party 2 Driver East Proceeding Straight Male Age: 40 2013 DODGE CARAVAN Mini Van No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap Belt Used Not Stated

917-09664-0451-250 **7/8/2017** **16:02** Saturday FIRESTONE BLVD - STUDEBAKER RD 460' Direction: West Daylight Clear Pty at Fault:1
Rear-End Other Motor Vehicle Unsafe Speed 22350 Hit & Run: No Complaint of Pain # Inj: 1 # Killed: 0

Party 1 Driver East Proceeding Straight Age: 1997 BMW 528I Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: Impairment Not Kno Assoc Factor: None Apparent Not Stated
Party 2 Driver East Stopped In Road Female Age: 33 2000 HONDA ACCORD Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
917-10755-0451-472 **7/28/2017** **17:00** Friday FIRESTONE BLVD - STUDEBAKER RD 281' Direction: East Daylight Clear Pty at Fault:1
Rear-End Other Motor Vehicle Unsafe Speed 22350 Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver West Proceeding Straight Male Age: 33 2015 HONDA CIVIC Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Not Stated
Party 2 Driver West Stopped In Road Female Age: 49 2008 HONDA CU Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Not Stated
917-11290-0451-251 **8/7/2017** **00:01** Monday FIRESTONE BLVD - HOXIE AV 0' Direction: Not Stated Dark - Street Lig Clear Pty at Fault:1
Broadside Other Motor Vehicle Traffic Signals and Signs 21453(a) Hit & Run: No Complaint of Pain # Inj: 1 # Killed: 0

Party 1 Driver West Proceeding Straight Age: 2017 HONDA HRV Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: Impairment Not Kno Assoc Factor: None Apparent Not Stated
Party 2 Driver East Making Left Turn Male Age: 22 2014 CHEVROLET MUSTANG Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Not Stated
917-12086-0451-472 **8/22/2017** **17:28** Tuesday FIRESTONE BLVD - ORR AND DAY RD (E) 36' Direction: East Daylight Clear Pty at Fault:1
Sideswipe Other Motor Vehicle Unsafe Lane Change 21658(a) Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver West Changing Lanes Male Age: 42 2012 NISSAN PATHFINDER Sport Utility Vehicle No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Not Stated
Party 2 Driver West Proceeding Straight Male Age: 56 2016 TOYOTA CAMRY Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Not Stated
917-12575-0451-250 **8/30/2017** **10:50** Wednesday FIRESTONE BLVD - RT 605 NBON/R 39' Direction: West Daylight Clear Pty at Fault:1
Rear-End Other Motor Vehicle Following Too Closely 21703 Hit & Run: Misde Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver East Slowing/Stopping Male Age: 2004 CHEVROLET 4DOOR Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: Impairment Not Kno Assoc Factor: Violation Not Stated
Party 2 Driver East Slowing/Stopping Female Age: 62 2011 LEXUS RX350 Sport Utility Vehicle No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
917-12864-0451-472 **9/7/2017** **08:55** Thursday FIRESTONE BLVD - ORR AND DAY RD (E) 0' Direction: Not Stated Daylight Clear Pty at Fault:1
Broadside Other Motor Vehicle Traffic Signals and Signs 22101(d) Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver South Making Left Turn Male Age: 33 2014 TOYOTA COROLLA Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver East Proceeding Straight Female Age: 22 2014 TOYOTA SCION Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
917-13034-0452-242 **9/10/2017** **20:52** Sunday FIRESTONE BLVD - IMPERIAL HWY 26' Direction: South Dark - Street Lig Clear Pty at Fault:1
Hit Object Fixed Object Driving Under Influence 23152(a) Hit & Run: Misde Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver North Making Right Turn Male Age: 33 1998 DODGE CARAVAN Mini Van No Injury
Veh Type: Sobriety: HBD Under Influenc Assoc Factor: Violation Lap/Shoulder Harness Used Not Stated
917-13461-0451-250 **9/18/2017** **16:15** Monday FIRESTONE BLVD - RT 605 NBON/R 0' Direction: Not Stated Daylight Clear Pty at Fault:1
Broadside Other Motor Vehicle Impeding Traffic 22400(a) Hit & Run: Misde Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver South Making Left Turn Male Age: 36 2012 DODGE RAM 1500 Pickups & Panels No Injury
Veh Type: Sobriety: Impairment Not Kno Assoc Factor: Violation Unknown Cell Phone Not In Use
Party 2 Driver South Making Left Turn Male Age: 46 2012 INTL DURASTAR Two Axle Truck No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
917-13537-0451-472 **9/19/2017** **02:20** Tuesday FIRESTONE BLVD - RT 605 NBON/R 30' Direction: West Dark - Street Lig Clear Pty at Fault:1
Sideswipe Other Motor Vehicle Traffic Signals and Signs 22101(d) Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver West Making Right Turn Female Age: 47 2016 FORD FUSION Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Not Stated
Party 2 Driver West Making Right Turn Male Age: 38 2014 DODGE RAM 1500 Pickups & Panels No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Not Stated
917-13502-0453-472 **9/19/2017** **11:45** Tuesday FIRESTONE BLVD - IMPERIAL HWY 0' Direction: Not Stated Daylight Cloudy Pty at Fault:1
Other Other Motor Vehicle Improper Turning 22107 Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver West Making Left Turn Male Age: 20 2006 HONDA CIVIC Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver West Making Left Turn Male Age: 51 2012 TOYOTA TACOMA Pickups & Panels No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
917-13532-0451-471 **9/19/2017** **19:15** Tuesday FIRESTONE BLVD - RT 605 NBON/R 26' Direction: West Dusk - Dawn Clear Pty at Fault:1
Rear-End Other Motor Vehicle Unsafe Speed 22350 Hit & Run: No Complaint of Pain # Inj: 1 # Killed: 0

Party 1 Driver East Proceeding Straight Male Age: 47 2001 HYUNDAI TUCSON Sport Utility Vehicle No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver East Stopped In Road Male Age: 19 2005 TOYOTA SEQUOIA Sport Utility Vehicle No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 3 Driver East Stopped In Road Male Age: 59 2000 CHEVROLET ASTRO VAN Pickups & Panels No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
917-13731-0451-470 **9/23/2017** **16:14** Saturday FIRESTONE BLVD - RT 605 NBON/R 72' Direction: East Daylight Clear Pty at Fault:1
Sideswipe Other Motor Vehicle Unsafe Lane Change 21658(a) Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver West Proceeding Straight Female Age: 36 2017 TOYOTA CAMRY Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver West Proceeding Straight Female Age: 38 2005 NISSAN ARMANDA Sport Utility Vehicle No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
917-14050-0451-472 **9/29/2017** **17:52** Friday FIRESTONE BLVD - HOXIE AV 263' Direction: East Daylight Clear Pty at Fault:1
Rear-End Other Motor Vehicle Traffic Signals and Signs 21453(a) Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver West Proceeding Straight Male Age: 29 2016 NISSAN SENTRA Bicycle No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver West Stopped In Road Female Age: 38 2008 INFINITI G37 Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
917-14634-0451-250 **10/10/2017** **14:15** Tuesday FIRESTONE BLVD - STUDEBAKER RD 30' Direction: East Daylight Clear Pty at Fault:1
Rear-End Parked Motor Vehicle Unsafe Starting or Backing 22106 Hit & Run: Misde Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver West Backing Female Age: Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: Impairment Not Kno Assoc Factor: None Apparent Cell Phone Not In Use
Party 2 Parked Vehicle West Stopped In Road Age: 2007 SATURN SKY Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Cell Phone Not In Use

917-14910-0451-472 **10/15/2017** **12:20** Sunday FIRESTONE BLVD - HOXIE AV 0' Direction: Not Stated Daylight Clear Pty at Fault:1
Sideswipe Other Motor Vehicle Improper Turning 22107 Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver East Making Left Turn Male Age: 32 2007 FORD F-150 Pickups & Panels No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver East Making Left Turn Male Age: 24 2016 TOYOTA COROLLA Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

917-15645-0451-471 **10/28/2017** **20:03** Saturday FIRESTONE BLVD - STUDEBAKER RD 2' Direction: East Dark - Street Lig Clear Pty at Fault:2
Broadside Bicycle Ped R/W Violation 21950(a) Hit & Run: No Complaint of Pain # Inj: 1 # Killed: 0

Party 1 Bicyclist West Proceeding Straight Male Age: 43 Bicycle No Injury
Veh Type: Sobriety: HNBD Assoc Factor: Violation M/C Helmet Driver - No Cell Phone Not In Use
Party 2 Driver North Making Right Turn Female Age: 42 2004 CHEVROLET TAHOE Sport Utility Vehicle No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

917-15803-0451-472 **10/31/2017** **18:50** Tuesday FIRESTONE BLVD - IMPERIAL HWY 59' Direction: North Daylight Clear Pty at Fault:1
Rear-End Other Motor Vehicle Unsafe Starting or Backing 22106 Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver South Proceeding Straight Female Age: 20 2018 TOYOTA YARIS Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver South Stopped In Road Male Age: 63 2016 KIA FOR Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

917-17205-0451-472 **11/5/2017** **01:00** Sunday FIRESTONE BLVD - ORR AND DAY RD (E) 0' Direction: Not Stated Dark - Street Lig Clear Pty at Fault:1
Broadside Other Motor Vehicle Following Too Closely 21703 Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver East Proceeding Straight Female Age: 23 2010 VOLKSWAGEN BEETLE Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: Other Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver East Proceeding Straight Female Age: 23 2015 HONDA CIVIC Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: Other Lap/Shoulder Harness Used Cell Phone Not In Use
Party 3 Driver East Proceeding Straight Male Age: 23 2006 BMW 328IC Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: Other Lap/Shoulder Harness Used Cell Phone Not In Use

917-16402-0451-471 **11/7/2017** **20:30** Tuesday FIRESTONE BLVD - ORR AND DAY RD (E) 0' Direction: Not Stated Dark - Street Lig Clear Pty at Fault:
Broadside Other Motor Vehicle Traffic Signals and Signs 21453(a) Hit & Run: No Complaint of Pain # Inj: 1 # Killed: 0

Party 1 Driver South Proceeding Straight Male Age: 34 2007 TOYOTA SOLARA Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver West Proceeding Straight Male Age: 39 2001 GMC YUKON Sport Utility Vehicle No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

917-16441-0451-244 **11/12/2017** **19:45** Sunday FIRESTONE BLVD - ORR AND DAY RD (E) 455' Direction: West Dark - Street Lig Clear Pty at Fault:1
Broadside Other Motor Vehicle Traffic Signals and Signs 21453(a) Hit & Run: No Complaint of Pain # Inj: 1 # Killed: 0

Party 1 Driver East Proceeding Straight Male Age: 22 2010 LAND ROVER LRC Sport Utility Vehicle No Injury
Veh Type: Sobriety: Under Drug Influenc Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver West Making Left Turn Female Age: 58 2012 MITSUBISHI GALANT Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

917-16655-0453-472 **11/16/2017** **15:20** Thursday IMPERIAL HWY - FIRESTONE BLVD 0' Direction: Not Stated Daylight Clear Pty at Fault:1
Sideswipe Other Motor Vehicle Improper Turning 22107 Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver East Making Right Turn Female Age: 53 2015 FORD MUSTANG Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: Unfamiliar With R Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver East Proceeding Straight Female Age: 45 2013 GILLI BUS Public Transit Authority No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
917-17001-0451-472 **11/22/2017** **15:02** Wednesday FIRESTONE BLVD - ORR AND DAY RD (E) 50' Direction: West Daylight Clear Pty at Fault:1
Sideswipe Other Motor Vehicle Unsafe Lane Change 21658(a) Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver East Changing Lanes Male Age: 2007 INTER Truck Tractor No Injury
Veh Type: Sobriety: Not Stated Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver East Proceeding Straight Female Age: 61 2007 TOYOTA COROLLA Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
917-16995-0466-471 **11/22/2017** **15:50** Wednesday FIRESTONE BLVD - HOXIE AV 15' Direction: West Daylight Clear Pty at Fault:1
Rear-End Other Motor Vehicle Unsafe Starting or Backing 22106 Hit & Run: No Complaint of Pain # Inj: 1 # Killed: 0

Party 1 Driver East Proceeding Straight Male Age: 51 2004 CADILLAC CTS Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver East Stopped In Road Male Age: 19 2001 TOYOTA COROLLA Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
917-17695-0451-250 **12/7/2017** **02:51** Thursday FIRESTONE BLVD - STUDEBAKER RD 66' Direction: West Dark - Street Lig Clear Pty at Fault:1
Sideswipe Other Motor Vehicle Improper Turning 22107 Hit & Run: Misde Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver South Other Unsafe Turning Age: TOYOTA Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: Impairment Not Kno Assoc Factor: None Apparent Cell Phone Not In Use
Party 2 Driver West Making Right Turn Male Age: 49 2006 CHEVROLET 3500 Pickups & Panels No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Cell Phone Not In Use
917-17989-0451-472 **12/12/2017** **11:52** Tuesday FIRESTONE BLVD - ORR AND DAY RD (E) 433' Direction: West Daylight Clear Pty at Fault:
Broadside Other Motor Vehicle Traffic Signals and Signs 21453(a) Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver East Parked Male Age: 47 2013 FORD TRANC CONNE Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver North Parked Male Age: 54 2017 FORD FUSION Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: Lap/Shoulder Harness Used Cell Phone Not In Use
917-18163-0451-472 **12/15/2017** **18:06** Friday FIRESTONE BLVD - STUDEBAKER RD 20' Direction: East Dark - Street Lig Clear Pty at Fault:1
Rear-End Other Motor Vehicle Unsafe Starting or Backing 22106 Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver West Proceeding Straight Male Age: 26 2015 KIA OPTIMA Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver West Stopped In Road Female Age: 46 2014 FORD F-150 Pickups & Panels No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
917-18532-0453-255 **12/22/2017** **17:09** Friday IMPERIAL HWY - FIRESTONE BLVD 0' Direction: Not Stated Dark - Street Lig Clear Pty at Fault:1
Sideswipe Other Motor Vehicle Traffic Signals and Signs 21453(a) Hit & Run: No Complaint of Pain # Inj: 4 # Killed: 0

Party 1 Driver South Making Left Turn Female Age: 33 2015 MITSUBISHI OUTLANDER Sport Utility Vehicle No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver East Proceeding Straight Female Age: 47 2003 FORD FOCUS Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

918-00744-0451-250 **1/14/2018** **20:18** Sunday FIRESTONE BLVD - STUDEBAKER RD 89' Direction: West Daylight Clear Pty at Fault:1
Sideswipe Other Motor Vehicle Improper Passing 21750 Hit & Run: Misde Property Damage Only # Inj: # Killed: 0

Party 1 Driver West Passing Other Vehicle Age: TOYOTA Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: Impairment Not Kno Assoc Factor: None Apparent Cell Phone Not In Use
Party 2 Driver West Stopped In Road Female Age: 42 2017 FORD FUSION Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

918-01470-0451-471 **1/28/2018** **02:07** Sunday IMPERIAL HWY - FIRESTONE BLVD 0' Direction: Not Stated Dark - Street Lig Clear Pty at Fault:1
Rear-End Other Motor Vehicle Unsafe Speed 22350 Hit & Run: No Complaint of Pain # Inj: 1 # Killed: 0

Party 1 Driver West Proceeding Straight Male Age: 32 1992 TOYOTA Pickups & Panels No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver West Stopped In Road Male Age: 38 2017 KIA OPTIMA Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

918-02627-0451-471 **2/16/2018** **17:30** Friday FIRESTONE BLVD - STUDEBAKER RD 278' Direction: East Dusk - Dawn Clear Pty at Fault:1
Rear-End Other Motor Vehicle Unsafe Speed 22350 Hit & Run: No Complaint of Pain # Inj: 1 # Killed: 0

Party 1 Driver East Proceeding Straight Male Age: 50 2011 CHEVROLET SILVERADO Pickups & Panels No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver East Proceeding Straight Female Age: 70 2018 KIA SPORTAGE Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

918-02698-0451-250 **2/17/2018** **20:45** Saturday FIRESTONE BLVD - RT 605 NBON/R 17' Direction: West Dark - Street Lig Clear Pty at Fault:1
Sideswipe Other Motor Vehicle Unsafe Lane Change 21658(a) Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver South Making Right Turn Age: CAR CARRIER Truck Tractor No Injury
Veh Type: Sobriety: Impairment Not Kno Assoc Factor: None Apparent Not Stated
Party 2 Driver South Making Right Turn Male Age: 47 2013 KENW TAMCER Three-Axle Tank Truck No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Hazardous Material

918-03272-0451-255 **2/28/2018** **17:08** Wednesday FIRESTONE BLVD - HOXIE AV 694' Direction: East Daylight Clear Pty at Fault:1
Rear-End Other Motor Vehicle Following Too Closely 21703 Hit & Run: No Complaint of Pain # Inj: 1 # Killed: 0

Party 1 Driver East Slowing/Stopping Male Age: 23 2008 TOYOTA CAMRY Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver East Slowing/Stopping Female Age: 61 2005 TOYOTA CAMRY Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

918-04797-0451-250 **3/27/2018** **15:20** Tuesday FIRESTONE BLVD - HOXIE AV 0' Direction: Not Stated Daylight Clear Pty at Fault:2
Broadside Other Motor Vehicle Improper Turning 22107 Hit & Run: Misde Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver East Making Left Turn Male Age: 17 2014 NISSAN ROGUE Sport Utility Vehicle No Injury
Veh Type: Sobriety: HNBD Assoc Factor: Entering - Leaving Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver East Making Left Turn Age: SUV Sport Utility Vehicle No Injury
Veh Type: Sobriety: Impairment Not Kno Assoc Factor: Entering - Leaving Lap/Shoulder Harness Used Cell Phone Not In Use

918-05013-0451-471 **3/30/2018** **14:00** Friday FIRESTONE BLVD - ORR AND DAY RD (E) 0' Direction: Not Stated Daylight Clear Pty at Fault:1
Broadside Other Motor Vehicle Auto R/W Violation 21801(a) Hit & Run: No Complaint of Pain # Inj: 2 # Killed: 0

Party 1 Driver East Making Left Turn Male Age: 26 2004 TOYOTA COROLLA Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: Other Lap/Shoulder Harness Used Cell Phone Not In Use

Party 2 Driver South Proceeding Straight Female Age: 23 2014 FORD ESCAPE Sport Utility Vehicle No Injury
Veh Type: Sobriety: HNBD Assoc Factor: Other Lap/Shoulder Harness Used Cell Phone Not In Use
918-05604-0451-250 **4/7/2018** **05:21** Saturday FIRESTONE BLVD - RT 605 NBON/R 0' Direction: Not Stated Daylight Clear Pty at Fault:1
Rear-End Other Motor Vehicle Unsafe Speed 22350 Hit & Run: Misde Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver West Proceeding Straight Age: 1998 TOYOTA Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: Impairment Not Kno Assoc Factor: None Apparent Not Stated
Party 2 Driver West Proceeding Straight Female Age: 48 2013 MERCEDES-BENZ C250 Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Unknown Cell Phone Not In Use
918-06160-0451-471 **4/19/2018** **20:30** Thursday FIRESTONE BLVD - RT 605 NBON/R 0' Direction: Not Stated Dark - Street Lig Clear Pty at Fault:1
Broadside Bicycle Wrong Side of Road 21650 Hit & Run: No Complaint of Pain # Inj: 1 # Killed: 0

Party 1 Bicyclist East Proceeding Straight Female Age: 42 Bicycle No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent M/C Helmet Driver - No Cell Phone Not In Use
Party 2 Driver South Making Right Turn Male Age: 35 2015 CHEVROLET VOLT Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
918-06482-0451-255 **4/25/2018** **07:30** Wednesday FIRESTONE BLVD - RT 605 NBON/R 60' Direction: East Daylight Clear Pty at Fault:1
Rear-End Other Motor Vehicle Unsafe Speed 22350 Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver West Proceeding Straight Male Age: 36 2012 DODGE CHALLENGER Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver West Stopped In Road Male Age: 38 2000 HONDA ACCORD Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 3 Driver West Stopped In Road Male Age: 26 2015 TOYOTA COROLLA Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 4 Driver West Stopped In Road Male Age: 57 2006 NISSAN TITAN Pickups & Panels No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
918-06760-0451-471 **4/30/2018** **08:53** Monday FIRESTONE BLVD - STUDEBAKER RD 200' Direction: East Daylight Clear Pty at Fault:1
Rear-End Other Motor Vehicle Following Too Closely 21703 Hit & Run: No Other Visible Injury # Inj: 1 # Killed: 0

Party 1 Driver East Proceeding Straight Male Age: 29 2008 INFINITI FX35 Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: Inattention Lap Belt Used Cell Phone Not In Use
Party 2 Driver East Stopped In Road Male Age: 45 2014 FLATBED ST Two Axle Truck No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap Belt Used Cell Phone Not In Use
918-06834-0451-250 **5/1/2018** **12:30** Tuesday FIRESTONE BLVD - STUDEBAKER RD 28' Direction: South Daylight Clear Pty at Fault:1
Rear-End Other Motor Vehicle Unsafe Starting or Backing 22106 Hit & Run: Misde Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver West Proceeding Straight Male Age: 20 2013 HYUNDAI SONATA Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver West Stopped In Road Male Age: 51 2008 HYUNDAI SANTA FE Sport Utility Vehicle No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
918-07184-0451-250 **5/8/2018** **06:20** Tuesday FIRESTONE BLVD - ORR AND DAY RD (E) 1500' Direction: West Daylight Cloudy Pty at Fault:
Hit Object Fixed Object Improper Turning 22107 Hit & Run: Misde Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver East Other Unsafe Turning Age: 2010 NISSAN GTR Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: Impairment Not Kno Assoc Factor: None Apparent Not Stated

918-07663-0451-472 **5/17/2018** **07:43** Thursday IMPERIAL HWY - FIRESTONE BLVD 0' Direction: Not Stated Daylight Clear Pty at Fault:1
Rear-End Other Motor Vehicle Following Too Closely 21703 Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver East Proceeding Straight Male Age: 35 2005 TOYOTA TACOMA Pickups & Panels No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver East Stopped In Road Male Age: 63 2005 TOYOTA Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

918-07822-0451-250 **5/20/2018** **12:00** Sunday FIRESTONE BLVD - RT 605 NBON/R 0' Direction: Not Stated Daylight Cloudy Pty at Fault:1
Sideswipe Other Motor Vehicle Traffic Signals and Signs 21453(a) Hit & Run: Misde Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver South Making Right Turn Age: Motorcycle No Injury
Veh Type: Sobriety: Impairment Not Kno Assoc Factor: None Apparent Not Stated
Party 2 Driver West Stopped In Road Female Age: 26 2015 CHEVROLET CAMARO Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

918-07962-0451-472 **5/23/2018** **08:02** Wednesday FIRESTONE BLVD - ORR AND DAY RD (E) 713' Direction: West Daylight Clear Pty at Fault:1
Rear-End Other Motor Vehicle Unsafe Lane Change 21658(a) Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver West Changing Lanes Male Age: 56 2015 CHEVROLET CAMARO Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver West Proceeding Straight Female Age: 41 2018 HONDA CIVIC Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

918-09125-0451-250 **6/14/2018** **21:05** Thursday FIRESTONE BLVD - HOXIE AV 42' Direction: West Dark - Street Lig Clear Pty at Fault:1
Rear-End Other Motor Vehicle Unsafe Speed 22350 Hit & Run: Misde Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver East Proceeding Straight Age: Unknown Hit and Run Vehicle Involvem No Injury
Veh Type: Sobriety: Impairment Not Kno Assoc Factor: None Apparent Not Stated
Party 2 Driver East Stopped In Road Male Age: 58 2017 TOYOTA PRIUS Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 3 Driver East Stopped In Road Male Age: 46 2012 TOYOTA CAMRY Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

918-09657-0451-472 **6/25/2018** **17:30** Monday FIRESTONE BLVD - HOXIE AV 15' Direction: East Daylight Clear Pty at Fault:1
Rear-End Other Motor Vehicle Unsafe Speed 22350 Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver West Proceeding Straight Female Age: 22 2011 VOLKSWAGEN ECC SPORT Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver West Stopped In Road Male Age: 41 2016 MERCEDES-BENZ G63 Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

918-09915-0451-250 **6/29/2018** **15:37** Friday FIRESTONE BLVD - IMPERIAL HWY 15' Direction: North Daylight Clear Pty at Fault:
Rear-End Other Motor Vehicle Unsafe Speed 22350 Hit & Run: Misde Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver South Proceeding Straight Male Age: 1995 TOYOTA COROLLA Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: Impairment Not Kno Assoc Factor: None Apparent Not Stated
Party 2 Driver South Stopped In Road Male Age: 45 2016 TOYOTA CAMRY Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

918-10146-0451-472 **7/5/2018** **03:39** Thursday FIRESTONE BLVD - ORR AND DAY RD (E) 512' Direction: West Dark - Street Lig Clear Pty at Fault:1
Sideswipe Other Motor Vehicle Improper Turning 22100(a) Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver East Making Right Turn Female Age: 55 2017 HIN 268 Two Axle Truck No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver East Proceeding Straight Female Age: 50 2000 NISSAN ALTIMA Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
918-10289-0451-471 7/7/2018 13:43 Saturday FIRESTONE BLVD - STUDEBAKER RD 640' Direction: East Daylight Clear Pty at Fault:1
Hit Object Fixed Object Improper Turning 22107 Hit & Run: No Other Visible Injury # Inj: 1 # Killed: 0

Party 1 Driver East Other Unsafe Turning Female Age: 19 2003 CHEVROLET TAHOE Sport Utility Vehicle No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
918-11060-0451-471 7/23/2018 14:00 Monday FIRESTONE BLVD - HOXIE AV 77' Direction: West Daylight Clear Pty at Fault:1
Rear-End Other Motor Vehicle Unsafe Speed 22350 Hit & Run: No Complaint of Pain # Inj: 1 # Killed: 0

Party 1 Driver East Proceeding Straight Female Age: 23 2008 TOYOTA CAMRY Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver East Stopped In Road Male Age: 23 2015 VOLKSWAGEN GTI Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 3 Driver East Stopped In Road Male Age: 44 2002 FORD F-250 Pickups & Panels No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
918-11435-0451-250 7/31/2018 11:24 Tuesday FIRESTONE BLVD - ORR AND DAY RD (E) 13' Direction: West Daylight Clear Pty at Fault:1
Rear-End Other Motor Vehicle Following Too Closely 21703 Hit & Run: No Complaint of Pain # Inj: 1 # Killed: 0

Party 1 Driver West Proceeding Straight Male Age: 32 2002 LINCOLN LS Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver West Slowing/Stopping Female Age: 48 2018 TOYOTA RAV4 Sport Utility Vehicle No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
918-11491-0451-471 8/1/2018 12:50 Wednesday FIRESTONE BLVD - HOXIE AV 0' Direction: Not Stated Daylight Clear Pty at Fault:1
Broadside Bicycle Wrong Side of Road 21650.1 Hit & Run: No Complaint of Pain # Inj: 1 # Killed: 0

Party 1 Bicyclist West Traveling Wrong Way Male Age: 50 Bicycle No Injury
Veh Type: Sobriety: HNBD Assoc Factor: Violation Not Stated
Party 2 Driver North Making Right Turn Male Age: 21 2018 AUDI A4 Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: Stop and Go Traffi Lap/Shoulder Harness Used Not Stated
918-11919-0451-472 8/9/2018 17:32 Thursday FIRESTONE BLVD - HOXIE AV 4' Direction: South Daylight Clear Pty at Fault:1
Rear-End Other Motor Vehicle Following Too Closely 21703 Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver West Proceeding Straight Male Age: 19 2005 FORD FOCUS Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver West Stopped In Road Female Age: 60 2008 HONDA CIVIC Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
918-12698-0451-471 8/24/2018 20:04 Friday FIRESTONE BLVD - STUDEBAKER RD 166' Direction: East Dark - Street Lig Clear Pty at Fault:1
Rear-End Other Motor Vehicle Unsafe Speed 22350 Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver East Proceeding Straight Female Age: 49 1998 TOYOTA TACOMA Pickups & Panels No Injury
Veh Type: Sobriety: HNBD Assoc Factor: Stop and Go Traffi Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver East Proceeding Straight Male Age: 57 2011 TOYOTA CAMRY Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: Stop and Go Traffi Lap/Shoulder Harness Used Cell Phone Not In Use

918-12757-0452-255 8/26/2018 15:19 Sunday FIRESTONE BLVD - STUDEBAKER RD 126' Direction: East Daylight Clear Pty at Fault:1
Other Other Motor Vehicle Unsafe Starting or Backing 22106 Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver West Backing Female Age: 33 2009 TOYOTA CAMRY Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver West Entering Traffic Male Age: 28 2014 HONDA ACCORD Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

918-13365-0451-472 9/8/2018 15:45 Saturday FIRESTONE BLVD - RT 605 NBON/R 0' Direction: Not Stated Daylight Clear Pty at Fault:1
Broadside Other Motor Vehicle Traffic Signals and Signs 21453(a) Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver West Proceeding Straight Female Age: 28 2006 CHRYSLER 300B Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver South Proceeding Straight Male Age: 54 2015 CHEVROLET TRAVERSE Mini Van No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

918-13299-0451-472 9/8/2018 20:58 Saturday IMPERIAL HWY - FIRESTONE BLVD 0' Direction: Not Stated Dark - Street Lig Clear Pty at Fault:1
Broadside Other Motor Vehicle Auto R/W Violation 21801(a) Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver West Making Left Turn Male Age: 24 2002 TOYOTA SOLARA Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver East Proceeding Straight Female Age: 45 2004 TOYOTA CAMRY Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

918-13643-0451-250 9/14/2018 12:45 Friday FIRESTONE BLVD - HOXIE AV 75' Direction: East Dark - Street Lig Clear Pty at Fault:
Hit Object Fixed Object Improper Turning 22107 Hit & Run: Misde Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver East Making Left Turn Age: 1999 PONTIAC FIREBIRD Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HBD Impairment Un Assoc Factor: Violation Lap/Shoulder Harness Used Not Stated

918-14048-0451-471 9/21/2018 16:31 Friday FIRESTONE BLVD - STUDEBAKER RD 91' Direction: West Daylight Clear Pty at Fault:1
Rear-End Other Motor Vehicle Unsafe Speed 22350 Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver East Proceeding Straight Female Age: 36 2018 DODGE CHARGER Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver East Stopped In Road Male Age: 77 2002 CHEVROLET SILVERADO Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Unknown Cell Phone Not In Use
Party 3 Driver East Stopped In Road Male Age: 46 2017 FORD F-250 Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

918-14440-0451-472 9/28/2018 18:40 Friday FIRESTONE BLVD - ORR AND DAY RD (E) 20' Direction: West Dark - Street Lig Clear Pty at Fault:1
Sideswipe Other Motor Vehicle Auto R/W Violation 21801(a) Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver North Making Left Turn Female Age: 52 1986 NISSAN Pickups & Panels No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver North Proceeding Straight Male Age: 43 2003 TOYOTA CAMRY Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

918-14466-0453-255 9/29/2018 11:43 Saturday FIRESTONE BLVD - IMPERIAL HWY 49' Direction: South Daylight Clear Pty at Fault:1
Rear-End Other Motor Vehicle Unsafe Speed 22350 Hit & Run: No Complaint of Pain # Inj: 1 # Killed: 0

Party 1 Driver North Proceeding Straight Male Age: 18 2003 TOYOTA SIENNA Mini Van No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

Party 2 Driver North Stopped In Road Female Age: 41 2016 MERCEDES-BENZ G63A Sport Utility Vehicle No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 3 Driver North Stopped In Road Female Age: 44 2012 GMC YUKON Sport Utility Vehicle No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
918-14978-0451-250 **10/8/2018** **10:58** Monday FIRESTONE BLVD - ORR AND DAY RD (E) 975' Direction: West Daylight Clear Pty at Fault:1
Hit Object Fixed Object Improper Turning 22107 Hit & Run: No Other Visible Injury # Inj: 1 # Killed: 0

Party 1 Driver West Other Unsafe Turning Male Age: 26 2004 HONDA ELEMENT Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: Impairment Not Kno Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
918-15435-0453-472 **10/16/2018** **16:20** Tuesday FIRESTONE BLVD - IMPERIAL HWY 129' Direction: South Daylight Clear Pty at Fault:1
Rear-End Other Motor Vehicle Unsafe Speed 22350 Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver North Proceeding Straight Male Age: 2011 FORD CROWN VICTO Emergency Vehicle (On Emergency Run No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver North Stopped In Road Male Age: 58 2003 INFINITI G35 Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 3 Driver North Stopped In Road Female Age: 28 2004 TOYOTA COROLLA Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 4 Driver North Stopped In Road Male Age: 45 2002 FORD FOCUS Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
918-15748-0451-471 **10/22/2018** **05:35** Monday FIRESTONE BLVD - RT 605 NBON/R 0' Direction: Not Stated Dark - Street Lig Clear Pty at Fault:1
Broadside Other Motor Vehicle Traffic Signals and Signs 21453(a) Hit & Run: No Other Visible Injury # Inj: 2 # Killed: 0

Party 1 Driver West Proceeding Straight Female Age: 39 2011 TOYOTA CAMRY Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Shoulder Harness Not Used Cell Phone Not In Use
Party 2 Driver East Making Left Turn Male Age: 28 2013 ALL FLEET INTL Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
918-16510-0451-471 **11/5/2018** **07:23** Monday FIRESTONE BLVD - ORR AND DAY RD (E) 0' Direction: Not Stated Daylight Clear Pty at Fault:1
Broadside Other Motor Vehicle Traffic Signals and Signs 21453(a) Hit & Run: No Complaint of Pain # Inj: 1 # Killed: 0

Party 1 Driver East Proceeding Straight Female Age: 30 2018 TOYOTA CAMRY Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver South Proceeding Straight Male Age: 21 2002 HONDA ACCORD Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
918-16838-0451-471 **11/11/2018** **02:42** Sunday STUDEBAKER RD - FIRESTONE BLVD 0' Direction: Not Stated Dark - Street Lig Clear Pty at Fault:
Broadside Other Motor Vehicle Traffic Signals and Signs 21453(a) Hit & Run: No Complaint of Pain # Inj: 3 # Killed: 0

Party 1 Driver East Making Right Turn Female Age: 41 2014 MAZDA 626 Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver South Proceeding Straight Female Age: 55 2017 DODGE CHALLENGER Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
918-17111-0453-472 **11/16/2018** **14:30** Friday FIRESTONE BLVD - IMPERIAL HWY 10' Direction: South Daylight Clear Pty at Fault:1
Sideswipe Other Motor Vehicle Improper Turning 22100(a) Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver South Making Right Turn Male Age: 85 2016 TOYOTA CAMRY Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver South Proceeding Straight Male Age: 64 2013 GILLIG Public Transit Authority No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

918-17479-0453-472 **11/24/2018** **08:39** Saturday IMPERIAL HWY - FIRESTONE BLVD 0' Direction: Not Stated Daylight Clear Pty at Fault:1
Rear-End Other Motor Vehicle Unsafe Speed 22350 Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver East Proceeding Straight Male Age: 22 2012 HONDA CIVIC Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver East Stopped In Road Female Age: 30 2013 HONDA CR-V Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 3 Driver East Stopped In Road Male Age: 35 1996 DODGE RAM 1500 Pickups & Panels No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

918-17483-0451-251 **11/24/2018** **08:50** Saturday FIRESTONE BLVD - HOXIE AV 0' Direction: Not Stated Daylight Clear Pty at Fault:1
Rear-End Other Motor Vehicle Unsafe Speed 22350 Hit & Run: Felony Complaint of Pain # Inj: 1 # Killed: 0

Party 1 Driver East Slowing/Stopping Age: DODGE CARAVAN Mini Van No Injury
Veh Type: Sobriety: Impairment Not Kno Assoc Factor: None Apparent Not Stated
Party 2 Driver East Stopped In Road Female Age: 69 2017 HONDA CR-V Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

918-17983-0451-471 **12/2/2018** **17:45** Sunday FIRESTONE BLVD - RT 605 NBON/R 0' Direction: Not Stated Dark - Street Lig Clear Pty at Fault:1
Broadside Other Motor Vehicle Traffic Signals and Signs 21453(a) Hit & Run: No Complaint of Pain # Inj: 2 # Killed: 0

Party 1 Driver West Proceeding Straight Male Age: 33 2003 FORD EXPLORER Sport Utility Vehicle No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver South Proceeding Straight Female Age: 28 2005 HONDA ACCORD Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

918-18706-0451-250 **12/16/2018** **18:19** Sunday FIRESTONE BLVD - ORR AND DAY RD (E) 454' Direction: West Dark - Street Lig Clear Pty at Fault:1
Broadside Other Motor Vehicle Traffic Signals and Signs 21453(a) Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver North Proceeding Straight Male Age: HONDA CIVIC Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: Impairment Not Kno Assoc Factor: None Apparent Not Stated
Party 2 Driver West Proceeding Straight Female Age: 65 2004 TOYOTA SIENNA Mini Van No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

918-18962-0451-472 **12/21/2018** **14:30** Friday FIRESTONE BLVD - STUDEBAKER RD 392' Direction: West Daylight Clear Pty at Fault:1
Rear-End Other Motor Vehicle Unsafe Speed 22350 Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver East Proceeding Straight Female Age: 17 2010 VOLKSWAGEN Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver East Stopped In Road Female Age: 38 2016 NISSAN Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

918-19094-0453-472 **12/24/2018** **18:50** Monday IMPERIAL HWY - FIRESTONE BLVD 0' Direction: Not Stated Dark - Street Lig Clear Pty at Fault:1
Broadside Other Motor Vehicle Auto R/W Violation 21801(a) Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver West Making Left Turn Male Age: 24 2004 TOYOTA MATRIX Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver East Proceeding Straight Male Age: 25 1997 FORD F-150 Pickups & Panels No Injury
Veh Type: Pickup Truck Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

919-00108-0451-472 **1/3/2019** **12:05** Thursday FIRESTONE BLVD - ORR AND DAY RD (E) 0' Direction: Not Stated Daylight Clear Pty at Fault:1
Broadside Other Motor Vehicle Other Improper Driving 21453(a) Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver West Proceeding Straight Male Age: 61 1976 CHEVROLET EL CAMINO Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver South Making Right Turn Age: 2007 FORD EXPLORER Sport Utility Vehicle No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
919-01366-0451-241 **1/26/2019** **19:15** Saturday FIRESTONE BLVD - RT 605 NBON/R 30' Direction: West Dark - Street Lig Clear Pty at Fault:1
Rear-End Other Motor Vehicle Driving Under Influence 23152(a) Hit & Run: No Complaint of Pain # Inj: 1 # Killed: 0

Party 1 Driver East Proceeding Straight Male Age: 37 2006 ACURA TSX Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HBD Under Influenc Assoc Factor: Violation Lap/Shoulder Harness Used Cell Phone Not In Use
Party 2 Driver East Stopped In Road Male Age: 48 2017 TOYOTA RAV4 Sport Utility Vehicle No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use
919-02652-0451-472 **2/21/2019** **13:45** Thursday FIRESTONE BLVD - STUDEBAKER RD 380' Direction: East Daylight Clear Pty at Fault:1
Hit Object Fixed Object Improper Turning 22107 Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver East Other Unsafe Turning Female Age: 54 1998 HONDA ACCORD Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: Impairment Not Kno Assoc Factor: None Apparent Lap/Shoulder Harness Used Not Stated
919-02959-0451-472 **2/26/2019** **17:07** Tuesday FIRESTONE BLVD - ORR AND DAY RD (E) 385' Direction: West Daylight Clear Pty at Fault:
Other Other Motor Vehicle Unknown Hit & Run: No Property Damage Only # Inj: 0 # Killed: 0

Party 1 Driver West Backing Male Age: 57 2007 NISSAN ARMADA Sport Utility Vehicle No Injury
Veh Type: Passenger Car Sobriety: Impairment Not Kno Assoc Factor: Other Lap/Shoulder Harness Used Not Stated
Party 2 Driver West Stopped In Road Male Age: 24 2006 AUDI A3 Passenger Car, Station Wagon, Jeep No Injury
Veh Type: Passenger Car Sobriety: HNBD Assoc Factor: None Apparent Lap/Shoulder Harness Used Cell Phone Not In Use

Segment Length: 0.87 miles (4,601')

Settings for Query:

Segment: FIRESTONE BLVD between IMPERIAL HWY and HOXIE AV
Include Intersection Related at Limit 1 (IMPERIAL HWY): True
Include Intersection Related at Limit 2 (HOXIE AV): True
Include Intersection Related at Intermediate Intersections: True
Sorted By: Date and Time

Appendix H
Traffic Index Calculations

Average Annual Daily Truck Traffic on Firestone Boulevard

		2019				2029				2039			
Location	**Direction [1]**	**AADT [2]**	**DHV [3]**	**Truck %**	**AADTT [4]**	**AADT**	**DHV**	**Truck %**	**AADTT**	**AADT**	**DHV**	**Truck %**	**AADTT**
Firestone Boulevard between Elmcroft Ave and	Total	23,638	1,652		728	26,111	2,610		804	28,843	2,885		889
	EB	11,311		3.47%	393	12,494		3.47%	434	13,802		3.47%	480
	WB	12,327		2.72%	335	13,617		2.72%	370	15,041		2.72%	409

Note 1: Truck volume assumes a 50-50 split for both directions.

Note 2 AADT = Average Annual Daily Traffic, AADTT = Average Annual Daily Truck Traffic

Note 3: DHV = Two way design hourly volumes, vehicles. The design hour is chosen as the hour with highest traffic volumes.

Note 4:AADTT = Average Annual Daily Truck Traffic.

Shaded pattern indicates either AADT is greater than 150,000 and/or AADTT is greater than 15,000

Lane Distribution Factors	Eastbound
Lane 1	0.2
Lane 2	0.8
Lane 3	0.8
Total	1.8
	Westbound
Lane 1	0.2
Lane 2	0.8
Lane 3	0.8
Total	1.8

Annual Growth Rate	1%	%/yr

Axle Distribution Factors		2-Axle	3-Axle	4-Axle	5-Axle	Total
	EB	76.3%	10.7%	4.6%	8.4%	100.0%
	WB	83.3%	6.3%	4.8%	5.7%	100.0%

2019

Location	Total Truck Volume	2-Axle	3-Axle	4-Axle	5 or more Axle	Total
Firestone Boulevard between Elmcroft Ave and Orr and Day Road						
EB	393	300	42	18	33	393
WB	335	279	21	16	19	335
	EB	76.3%	10.7%	4.6%	8.4%	100.0%
Axle Distribution Factors	WB	83.3%	6.3%	4.8%	5.7%	100.0%

2029

Location	Total Truck Volume	2-Axle	3-Axle	4-Axle	5 or more Axle	Total
Firestone Boulevard between Elmcroft Ave and Orr and Day Road						
EB	434	331	46	20	36	433
WB	370	308	23	18	21	370
	EB	76.3%	10.7%	4.6%	8.4%	100.0%
Axle Distribution Factors	WB	83.3%	6.3%	4.8%	5.7%	100.0%

2039

Location	Total Truck Volume	2-Axle	3-Axle	4-Axle	5 or more Axle	Total
Firestone Boulevard between Elmcroft Ave and Orr and Day Road						
EB	480	366	51	22	40	479
WB	409	341	26	20	23	411
	EB	76.3%	10.7%	4.6%	8.4%	100.0%
Axle Distribution Factors	WB	83.3%	6.3%	4.8%	5.7%	100.0%

	2-Axle	3-Axle	4-Axle	5-Axle
TI 10-Year Constants	690	1840	2940	6890

2019

Location	2-Axle ESALS	3-Axle ESALS	4 Axle ESALS	5 or More Axle ESALS	Total ESALS
Firestone Boulevard between Elmcroft Ave and Orr and Day Road					
EB	207,000	77,280	52,920	227,370	564,570
WB	192,510	38,640	47,040	130,910	409,100
Total	399,510	115,920	99,960	358,280	973,670
TI 10 Constants	690	1840	2940	6890	

2029

Location	2-Axle ESALS	3-Axle ESALS	4 Axle ESALS	5 or More Axle ESALS	Total ESALS
Firestone Boulevard between Elmcroft Ave and Orr and Day Road					
EB	228,390	84,640	58,800	248,040	619,870
WB	212,624	42,320	52,920	144,690	452,554
Total	441,014	126,960	111,720	392,730	1,072,424
TI 20 Constants	1380	3680	5880	13780	

2039

Location	2-Axle ESALS	3-Axle ESALS	4 Axle ESALS	5 or More Axle ESALS	Total ESALS
Firestone Boulevard between Elmcroft Ave and Orr and Day Road					
EB	505,080	187,680	129,360	551,200	1,373,320
WB	470,069	95,680	117,600	316,940	1,000,289
Total	975,149	283,360	246,960	868,140	2,373,609
TI 30 Constants	2070	5520	8820	20670	